DIXI
polytool

OUTILS DE PRÉCISION EN MÉTAL DUR ET DIAMANT

18 FR

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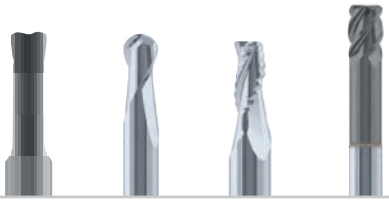
www.dixipolytool.com

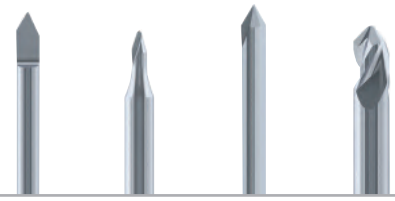
Cobalt Outils Coupants

PERÇAGE 3

FRAISAGE 87



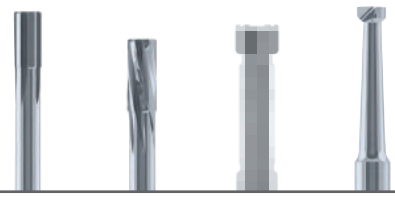
GRAVAGE / ANGLAGE 215



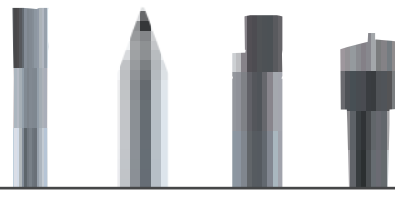
TRONÇONNAGE / TAILLAGE 241

FILETAGE 277

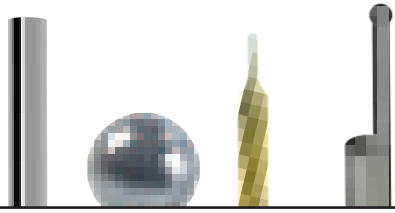
ALÉSAGE 335



OUTILS DIAMANT & PCD 377



PIÈCES D'USURE 413



INFORMATIONS GÉNÉRALES 421

Cobalt Outils Coupants

PERÇAGE

BOHREN

DRILLING

FORATURA

FÚRÁS

TALADRADO

Cobalt Outils Coupants

SÉLECTION DES FORETS 4

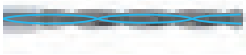
FORETS À CENTRER ET À POINTER 12

MÈCHES À CANON HÉLICOÏDALES Z = 1 18

FORETS HÉLICOÏDAUX CYLINDRIQUES 19

FORETS HÉLICOÏDAUX CORPS RENFORCÉ 26

FORETS HÉLICOÏDAUX AUTO-CENTRANTS 43


FORETS HÉLICOÏDAUX AUTO-CENTRANTS
À TROUS DE LUBRIFICATION 47

FORETS HÉLICOÏDAUX ACIERS TREMPÉS > 45 HRC 51

FORETS HÉLICOÏDAUX Z = 3 53

FORETS POUR MATIÈRES COMPOSITES / KEVLAR® 57

FORETS ÉTAGÉS ET OUTILS SUR DEMANDE 59

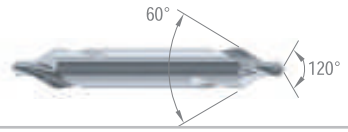
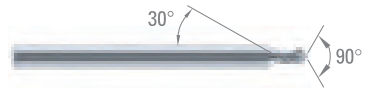
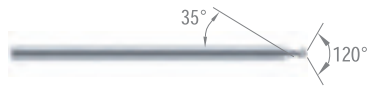
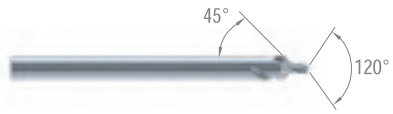
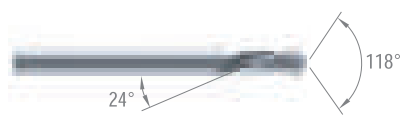
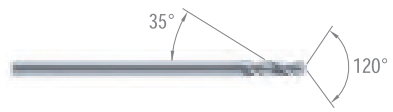
GÉOMÉTRIE, INFORMATIONS 63

CONDITIONS DE COUPE 64

Cobalt Outils Coupants

SÉLECTION DES FORETS

✓ = article de stock

		Z	Page	L. coupe	☐ CARBURE	■ TiAlN	■ DICUT
FORETS À POINTER ET À CENTRER							
DIXI 1101 Ø 0.80 - 4.00		2	12	DIN 333 A	✓		
DIXI 1106 Ø 1.00 - 20.00		2	13		✓	✓	
DIXI 1106 L Ø 4.00 - 6.00		2	14		✓		
DIXI 1107 Ø 1.00 - 20.00		2	14		✓		
DIXI 1108 Ø 0.50 - 2.50		2	15	1 - 2 x Ø	✓	✓	
DIXI 1109 Ø 0.50 - 2.50		2	16	1 - 2 x Ø	✓		✓
DIXI 1110 Ø 0.80 - 1.45		2	17	1 - 2 x Ø	✓	✓	
MÈCHES À CANON HÉLICOÏDALES Z = 1							
DIXI 1111 Ø 0.10 - 2.00		1	18	4 - 9 x Ø	✓		
FORETS HÉLICOÏDAUX CYLINDRIQUES Z = 2							
DIXI 1126 Ø 1.00 - 14.00		2	19	DIN 338 7 - 12 x Ø	✓		✓
DIXI 1130 Ø 0.30 - 14.00		2	20	DIN 6539 2 - 16 x Ø	✓		✓
DIXI 1130 L Ø 0.30 - 8.00		2	22	4 - 16 x Ø	✓		✓
DIXI 1132 Ø 0.40 - 2.00		2	24	4 - 15 x Ø	✓		✓

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
◎	○	○	○		◎	○	○	◎	○	◎		◎
◎	◎	○	◎		◎	○	◎	◎	◎	◎		◎
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◎	◎	○	◎		◎	○	◎	◎	◎	◎		◎
◎	◎	○	◎		◎	○	◎	◎	◎	◎		◎
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◎								◎	◎			

◎	○	○	○		◎	○	○	◎	○	○	○	○
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◎	○	○			◎		○	◎	○	○	○	○
○	◎	○	◎		○	○	◎	○	◎	○	○	○

Cobalt Outils Coupants

SÉLECTION DES FORETS

✓ = article de stock

* = pour matériaux non-ferreux

		Z	Page	L. coupe	☐ CARBURE	TiAlN	DICUT	DLC *
FORETS HÉLICOÏDAUX CYLINDRIQUES Z = 2								
DIXI 1133 Ø 0.50 - 6.00		2	25	4 - 18 x Ø	✓		✓	
FORETS HÉLICOÏDAUX CORPS RENFORCÉ Z = 2								
DIXI 1131 Ø 0.05 - 2.45		2	26	DIN 1899 4 - 9 x Ø	✓		✓	✓*
DIXI 1131 L Ø 0.10 - 2.45		2	29	DIN 1899 4 - 9 x Ø	✓		✓	
DIXI 1134 Ø 0.50 - 1.95		2	32	DIN 1899 6 - 9 x Ø	✓		✓	
DIXI 1135 Ø 0.20 - 2.49		2	33	3 - 8 x Ø	✓		✓	
DIXI 1136 Ø 0.20 - 1.99		2	36	4 - 8 x Ø	✓		✓	
DIXI 1137 Ø 0.15 - 3.00		2	38	5 x Ø	✓			
DIXI 1138 Ø 0.05 - 2.80		2	39	4 - 9 x Ø	✓	✓		
DIXI 1139 Ø 0.50 - 3.00		2	41	12 x Ø	✓	✓		
FORETS HÉLICOÏDAUX AUTO-CENTRANTS Z = 2								
DIXI 1149 Ø 1.00 - 14.00		2	43	DIN 6537K 3 - 4 x Ø		✓		
DIXI 1147 Ø 0.50 - 10.00		2	45	6.5 x Ø		✓		

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
○	○	○	○		○		○	◎	◎	◎		○
◎	○	○	○		◎	○	◎	◎	○	○	◎	○
◎	○	○	○		◎	○	◎	◎	○	○	○	○
○	◎	○	◎		○	○	◎	○	◎	○		
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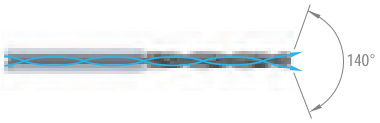
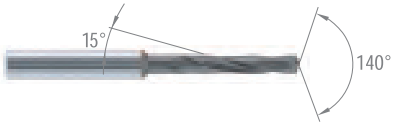
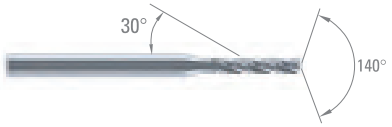
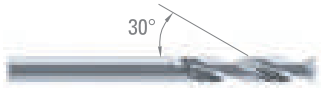
○	◎	○	◎		○	○	◎	○	◎	○		
○	◎	○	◎		○	○	◎	○	◎	○		
○	◎	○	◎		○	○	◎	○	◎	○		
○	○	◎	◎		◎	○	◎		○	○		
◎	◎	◎	○		○	◎	○			○		

SÉLECTION DES FORETS

✓ = article de stock

	Z	Page	L. coupe	☐ CARBURE	■ TiAIN	■ XIDUR
FORETS HÉLICOÏDAUX AUTO-CENTRANTS À TROUS DE LUBRIFICATION Z = 2						
DIXI 1145-HH Ø 0.70 - 14.00 	2	47	DIN 6537L 5 - 7 x Ø		✓	
DIXI 1146-HH Ø 0.80 - 10.00	2	49	10 x Ø		✓	
FORETS HÉLICOÏDAUX ACIERS TREMPÉS > 45 HRC						
DIXI 1280 Ø 0.25 - 12.00 	2	51	3 - 7 x Ø			✓
FORETS HÉLICOÏDAUX Z = 3						
DIXI 1151 Ø 1.00 - 14.00	3	53	3 - 8 x Ø	✓		
DIXI 1152 Ø 0.15 - 2.90 	3	55	6 - 10 x Ø	✓		
FORETS POUR MATIÈRES COMPOSITES / KEVLAR®						
DIXI 1290 Ø 2.50 - 12.70 	2	57	3 - 7 x Ø	✓		

OUTILS SUR DEMANDE

	Z	Page	L. coupe	☐ CARBURE	■ TiAIN	■ XIDUR
FORETS PLATS						
DIXI 1112 R+L Ø 0.08 - 5.99	2	58				
MÈCHES À CANON DEMI-LUNE						
DIXI 1114 R+L Ø 0.08 - 5.99	1	58				
FORETS DENTURE DROITE						
DIXI 1118 R+L Ø 0.08 - 5.99	2	58				

SUR DEMANDE

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
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		○		◎		○						
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Kevlar®
◎

○					○			◎	○	○		○
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○					○			◎	○	○		○

Cobalt Outils Coupants

SÉLECTION DES FORETS

✓ = article de stock

FORETS ÉTAGÉS		Z	Page	L. coupe	☐ CARBURE				
DIXI 1501 R+L			59						
DIXI 1502 R+L			60						
DIXI 1503 R+L			61						
DIXI 1504 R+L			62						
DIXI 1512			59 - 62						
DIXI 1514			59 - 62						
DIXI 1518			59 - 62						

SUR DEMANDE

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
◎	○	○	○		○	○	○	◎	○	◎		○
◎	○	○	○		○	○	○	◎	○	◎		○
◎	○	○	○		○	○	○	◎	○	◎		○
◎	○	○	○		○	○	○	◎	○	◎		○
○					○			◎	○	○		○
◎								◎	◎	○		○
○					○			◎	○	○		○

DIXI 1101 60°

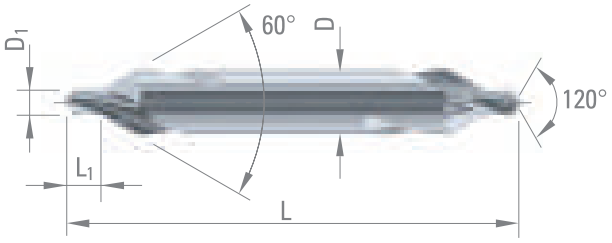
FORETS À CENTRER

Z = 2

P. 64

$D_1 \geq 3.15$

DIN 333 A

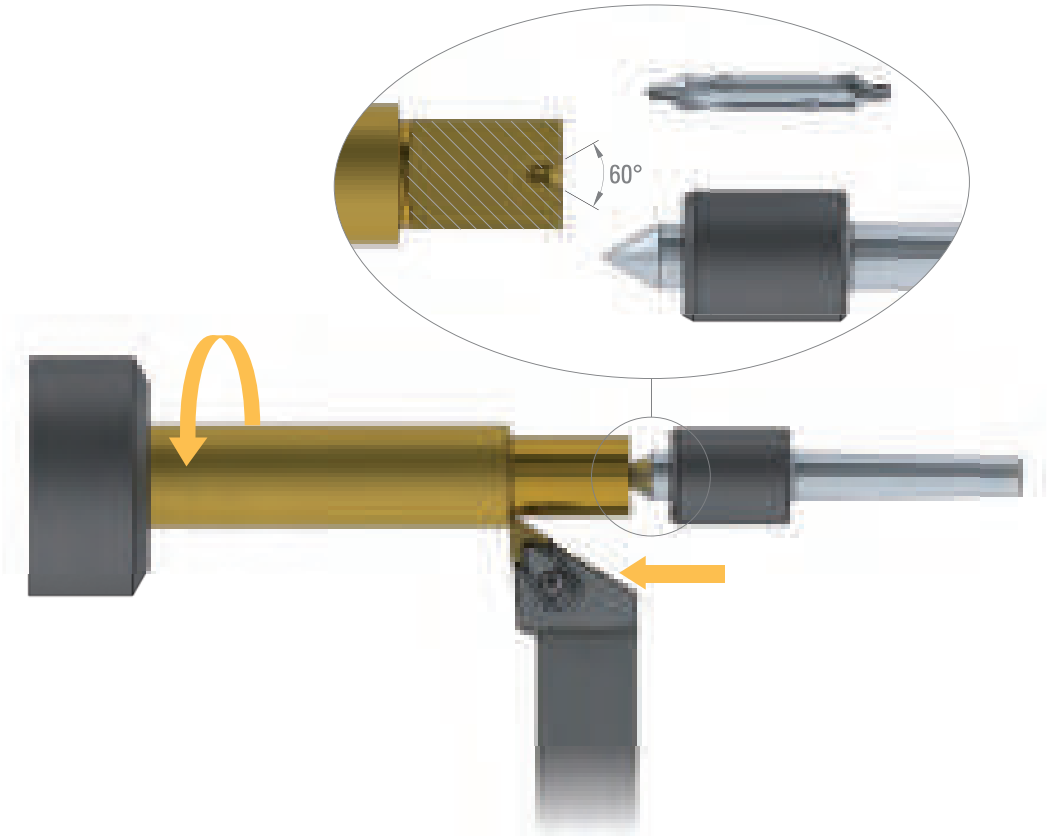


Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

D_1	L_1	D_{h5}	L	CARBURE
0.80 $^{+0.14}_{0}$	1.30 ±0.1	3.15	31.50 ±2	37253
1.00 $^{+0.14}_{0}$	1.60 ±0.2	3.15	31.50 ±2	37254
1.25 $^{+0.14}_{0}$	1.90 ±0.2	3.15	31.50 ±2	37255
1.60 $^{+0.14}_{0}$	2.40 ±0.2	4.00	35.50 ±2	37256
2.00 $^{+0.14}_{0}$	2.90 ±0.2	5.00	40.00 ±2	29156
2.50 $^{+0.14}_{0}$	3.60 ±0.2	6.30	45.00 ±2	37257
3.15 $^{+0.18}_{0}$	4.40 ±0.3	8.00	50.00 ±2	24756
4.00 $^{+0.18}_{0}$	5.60 ±0.4	10.00	56.00 ±3	32950



Cobalt Outils Coupants

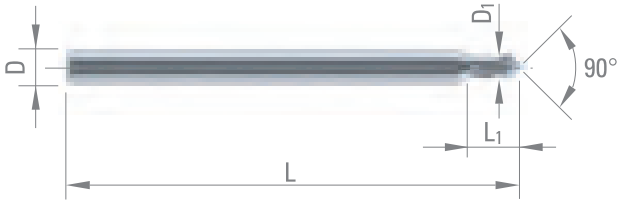
DIXI 1106 90°

FORETS À POINTER NC

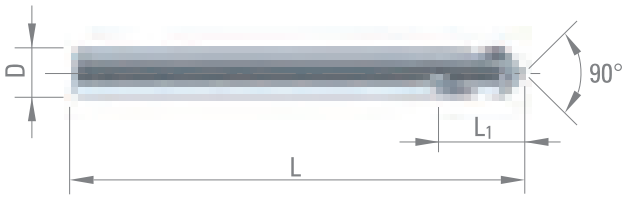
Z = 2

P. 64

Ø 1.00 ≤ Ø 2.00



Ø 1.00 ≤ Ø 20.00

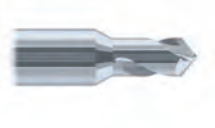


Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

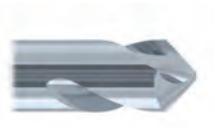
Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

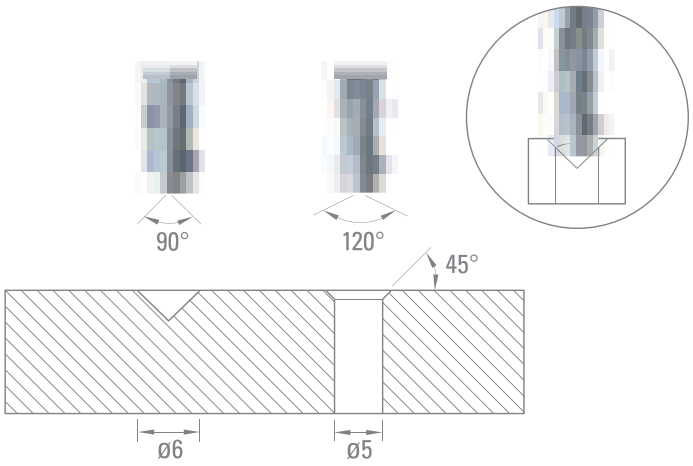
$D_{1\ h6}$	L_1	D_{h5}	L	CARBURE	TiAlN
1.00	3	3	38	956799	957230
1.50	5	3	38	956800	957231
2.00	5	3	38	956801	957232



D_{h5}	L_1	L	CARBURE	TiAlN
1.00	3	32	953781	953780
1.50	5	32	953778	953779
2.00	5	32	47101	62892
3.00	9	38	43231	34090
4.00	10	50	36911	61280
5.00	13	50	47716	63736
* 6.00	13	57	42788	63757
* 8.00	27	63	42789	63758
* 10.00	30	72	43233	61561
* 12.00	35	83	43064	41463
* 16.00	46	92	43234	63759
* 20.00	52	104	43235	63760



* = affûtage logarithmique

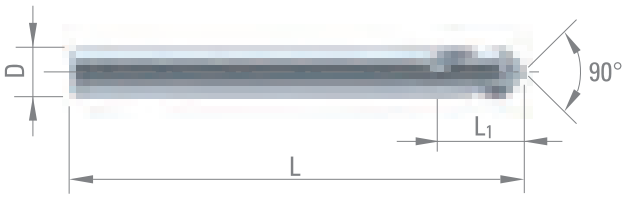


DIXI 1106 L 90°

FORETS À POINTER NC
À GAUCHE

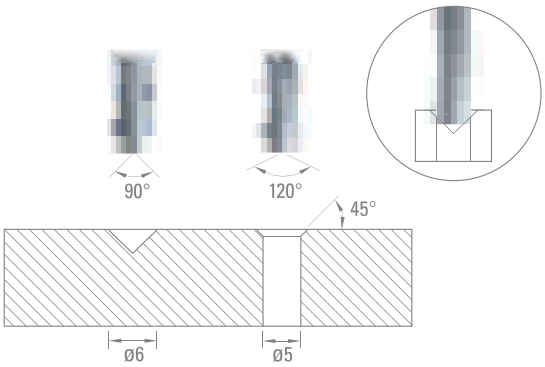
Z = 2

P. 64



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes
Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu
Plastique

D_{h5}	L_1	L	CARBURE
4.00	10	50	47714
5.00	13	50	47715
6.00	13	57	48813

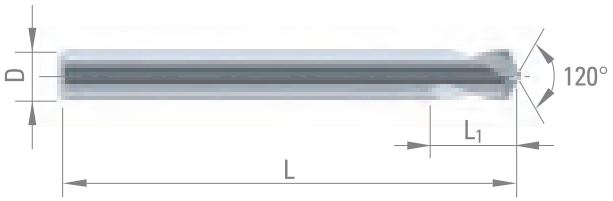


DIXI 1107 120°

FORETS À POINTER NC

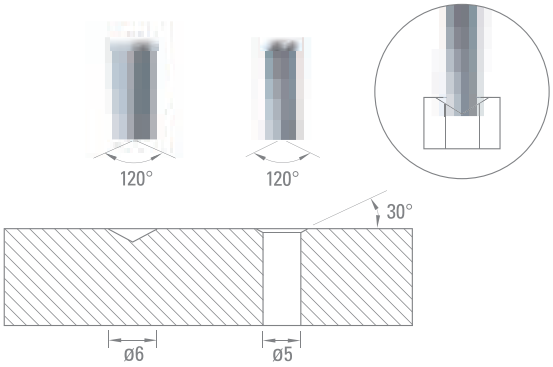
Z = 2

P. 64



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes
Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu
Plastique

D_{h5}	L_1	L	CARBURE
1.00	3	38	985118
2.00	5	38	985120
3.00	9	38	43236
4.00	10	50	36914
6.00	13	57	43238
* 8.00	27	63	43239
* 10.00	30	72	43240
* 12.00	35	83	43241
* 16.00	46	92	43242
* 20.00	52	104	43243



* = affûtage logarithmique

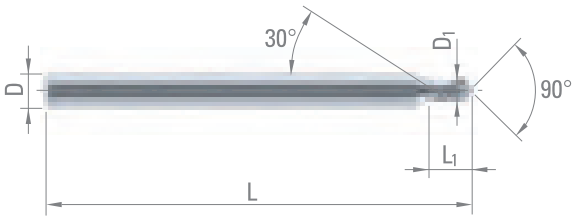
Cobalt Outils Coupants

DIXI 1108 90°

FORETS À POINTER
CORPS RENFORCÉ

Z = 2

P. 64



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

$D_{1\ h6}$	L_1	D_{h5}	L	CARBURE	TiAlN
0.50	1.0	3	38	983702	
0.60	1.0	3	38	964801	
0.65	1.0	3	38	964800	
0.70	1.0	3	38	964799	
0.75	1.0	3	38	964798	
0.80	1.5	3	38	956678	956679
0.82	1.5	3	38	956681	956682
0.85	1.5	3	38	956684	956685
0.87	1.5	3	38	956687	956689
0.90	1.5	3	38	956691	956693
0.92	1.5	3	38	956695	956696
0.95	1.5	3	38	956697	956703
0.97	1.5	3	38	956704	956706
1.00	1.5	3	38	956708	956707
1.02	2.0	3	38	956709	956710
1.05	2.0	3	38	956711	956712
1.07	2.0	3	38	956713	956714
1.10	2.0	3	38	956715	956716
1.12	2.0	3	38	956717	956718
1.15	2.0	3	38	956719	956720
1.17	2.0	3	38	956721	956722
1.20	2.0	3	38	956723	956724
1.22	2.0	3	38	956725	956726
1.25	2.0	3	38	956727	956728
1.27	2.0	3	38	956729	956730
1.30	2.0	3	38	956731	956732
1.32	2.0	3	38	956733	956734
1.35	2.0	3	38	956735	956736
1.37	2.0	3	38	956737	956738
1.40	2.0	3	38	956739	956740
1.42	2.0	3	38	956741	956742
1.45	2.0	3	38	956743	956744
1.47	2.0	3	38	956745	956746
1.50	2.0	3	38	956747	956748
1.52	3.0	3	38	956749	956750
1.55	3.0	3	38	956751	956752
1.57	3.0	3	38	956753	956754
1.60	3.0	3	38	956755	956756
1.62	3.0	3	38	956757	956758
1.65	3.0	3	38	956759	956760
1.67	3.0	3	38	956761	956762

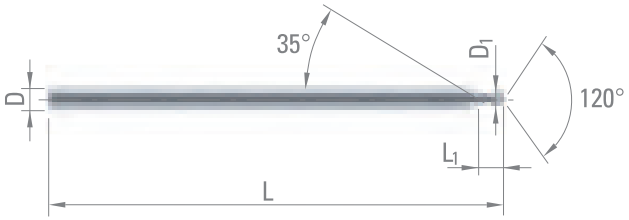
$D_{1\ h6}$	L_1	D_{h5}	L	CARBURE	TiAlN
1.70	3.0	3	38	956763	956764
1.72	3.0	3	38	956765	956766
1.75	3.0	3	38	956767	956768
1.77	3.0	3	38	956769	956770
1.80	3.0	3	38	956771	956772
1.82	3.0	3	38	956773	956774
1.85	3.0	3	38	956775	956776
1.87	3.0	3	38	956777	956778
1.90	3.0	3	38	956779	956780
1.92	3.0	3	38	956781	956782
1.95	3.0	3	38	956783	956784
1.97	3.0	3	38	956785	956786
2.00	3.0	3	38	956803	956804
2.10	3.0	3	38	956812	956813
2.20	3.0	3	38	956820	956821
2.30	3.0	3	38	956828	956830
2.40	3.0	3	38	956837	956838
2.50	3.0	3	38	956845	956846

DIXI 1109 120°

FORETS À POINTER
CORPS RENFORCÉ

Z = 2

P. 64

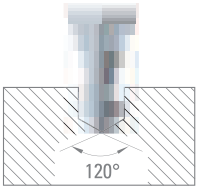


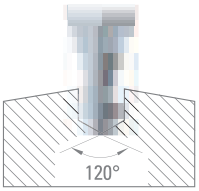
Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

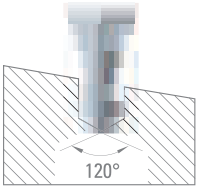
Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
0.50	1.0	1.5	30	62674	67354
0.55	1.0	1.5	30	62675	67355
0.60	1.2	1.5	30	62676	67356
0.65	1.2	1.5	30	62677	67357
0.70	1.5	1.5	30	62678	67358
0.75	1.5	1.5	30	62679	67359
0.80	2.0	1.5	30	52126	60989
0.85	2.0	1.5	30	52127	67360
0.90	2.0	1.5	30	52128	60990
0.95	2.0	1.5	30	52129	67361
1.00	2.0	1.5	30	52130	60991
1.05	2.0	1.5	30	52131	67362
1.10	2.0	1.5	30	52132	60992
1.15	2.4	1.5	30	52133	62487
1.20	2.4	1.5	30	52134	60993
1.25	2.4	1.5	30	52135	67363
1.30	2.4	1.5	30	52136	60994
1.35	2.4	1.5	30	52137	67364
1.40	2.4	1.5	30	52138	63485
1.45	2.4	1.5	30	52139	67365
1.50	3.0	2.0	32	981825	981839
1.55	3.0	2.0	32	981826	981840
1.60	3.0	2.0	32	981827	981841
1.65	3.0	2.0	32	981828	981842
1.70	3.0	2.0	32	981829	981843
1.75	3.5	2.0	32	981830	981844
1.80	3.5	2.0	32	981831	981845
1.85	3.5	2.0	32	981832	981847
1.90	3.5	2.0	32	981833	981848
1.95	3.5	2.0	32	981834	981849
2.00	4.0	2.5	32	981317	981325
2.10	4.0	2.5	32	981835	981850
2.20	4.0	2.5	32	981836	981852
2.30	4.0	2.5	32	981837	981853
2.40	4.0	2.5	32	981838	981854
2.50	4.0	2.5	32	981320	981327







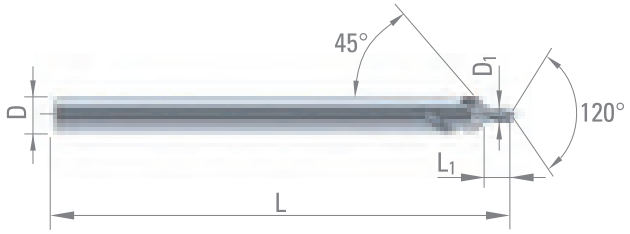
Cobalt Outils Coupants

DIXI 1110 120°

FORETS À POINTER ET CHANFREINER

Z = 2

P. 64



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	TiAIN
0.80	2.0	3	38	60268	64055
0.85	2.0	3	38	60269	67239
0.90	2.0	3	38	60270	64000
0.95	2.0	3	38	60271	67240
1.00	2.0	3	38	60272	64056
1.05	2.0	3	38	60273	67241
1.10	2.0	3	38	60274	63523
1.15	2.4	3	38	60275	67242
1.20	2.4	3	38	60276	64001
1.25	2.4	3	38	60277	67243
1.30	2.4	3	38	60278	67244
1.35	2.4	3	38	60279	67245
1.40	2.4	3	38	60280	64002
1.45	2.4	3	38	60281	67246

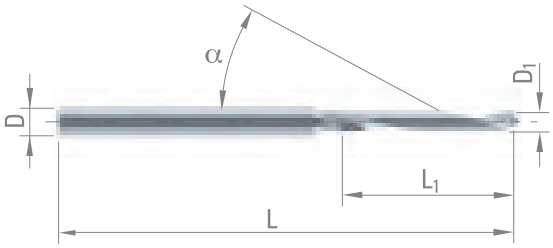
DIXI 1111

MÈCHES À CANON HÉLICOÏDALES

Z = 1

P. 66

Acier + Pb | Alliage Cu Argent Or | Alliage Cu difficile



$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE
0.10	0.7	1.0	30	955371
0.15	1.0	1.0	30	955374
0.20	1.0	1.0	30	955375
0.25	1.0	1.0	30	955377
0.30	1.5	1.0	30	955378
0.35	1.5	1.0	30	955379
0.40	2.0	1.0	30	955380
0.45	3.6	1.0	30	955381
0.50	4.0	1.0	30	955382
0.55	4.5	1.0	30	955383
0.60	4.5	1.0	30	955384
0.65	5.0	1.0	30	955385
0.70	5.6	1.0	30	955386
0.75	5.6	1.0	30	955387
0.80	6.3	1.5	30	955388
0.85	6.3	1.5	30	955389
0.90	7.1	1.5	30	955390
0.95	7.1	1.5	30	955391
1.00	9.0	1.5	30	955392
1.05	9.0	1.5	30	955393
1.10	9.0	1.5	30	955394
1.15	9.0	1.5	30	955395
1.20	10.0	1.5	30	955396
1.30	10.0	1.5	30	965839
1.40	11.2	1.5	30	965840
1.45	11.2	1.5	30	965841
1.50	12.0	2.0	38	961881
1.60	12.0	2.0	38	965842
1.65	12.0	2.0	38	965843
1.70	12.0	2.0	38	961882
1.75	12.0	2.0	38	965844
1.80	12.0	2.0	38	961883
2.00	12.0	2.5	43	959038

D_1 ± 1µm sur demande

Autres diamètres jusqu'à Ø 5.99 sur demande

DIXI 1126

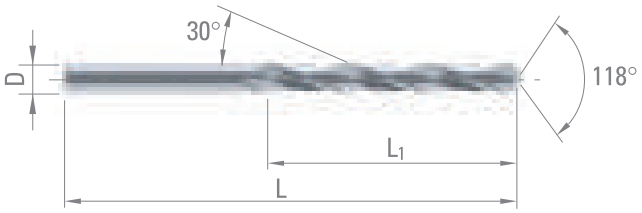
FORETS HÉLICOÏDAUX

Z = 2

P. 63 P. 68

$D_1 \geq 3.1$

DIN 338



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique

D_{h5}	L_1	L	CARBURE	DICUT
1.00	12	34	40244	53697
1.10	14	36	40656	53698
1.20	16	38	40657	53699
1.30	16	38	40658	53700
1.40	18	40	40659	53701
1.50	18	40	40077	53702
1.60	20	43	40703	53703
1.70	20	43	38677	53704
1.80	22	46	41510	53705
1.90	22	46	41370	53706
2.00	24	49	41593	53707
2.10	24	49	40707	53708
2.20	27	53	40125	53709
2.30	27	53	43515	53710
2.40	30	57	45074	53711
2.50	30	57	40978	53712
2.60	30	57	40607	53713
2.70	33	61	41318	53714
2.80	33	61	41024	54284
2.90	33	61	40608	53715
3.00	33	61	40059	53716
3.10	36	65	40173	53717
3.20	36	65	41511	53718
3.30	36	65	40575	53736
3.40	39	70	41247	53737
3.50	39	70	41451	53738
3.60	39	70	40078	53739
3.70	39	70	40174	53740
3.80	43	75	40060	53741
3.90	43	75	43676	53742
4.00	43	75	43497	53743
4.10	43	75	41218	53744
4.20	43	75	41295	53745
4.30	47	80	41452	53746
4.40	47	80	42866	53747
4.50	47	80	40263	53748
4.60	47	80	41991	53749
4.70	47	80	34710	53750
4.80	52	86	40126	53751
4.90	52	86	42661	53752

D_{h5}	L_1	L	CARBURE	DICUT
5.00	52	86	40061	53753
5.10	52	86	42022	53754
5.20	52	86	40062	53755
5.30	52	86	40063	53756
5.40	57	93	40064	53757
5.50	57	93	40065	53758
5.60	57	93	41992	53759
5.70	57	93	43357	53760
5.80	57	93	40864	53761
5.90	57	93	40258	53762
6.00	57	93	39996	53763
6.10	63	101	40704	54264
6.20	63	101	40066	54267
6.30	63	101	40067	54283
6.40	63	101	40068	54287
6.50	63	101	40069	54290
6.60	63	101	40070	54293
6.70	63	101	40071	54304
6.80	69	109	40943	54306
6.90	69	109	41512	54309
7.00	69	109	40072	54312
7.50	69	109	40912	54315
7.70	75	117	53196	54318
7.80	75	117	45792	54321
8.00	75	117	40073	54324
8.50	75	117	40074	54811
9.00	81	125	40075	54778
9.50	81	125	41641	54781
10.00	87	133	40812	54784
10.20	87	133	40944	54787
10.50	87	133	34732	54790
11.00	94	142	40127	54793
11.50	94	142	40865	54795
12.00	101	151	41513	54798
12.50	101	151	41642	54801
13.00	101	151	40660	54804
13.50	108	160	40076	54807
14.00	108	160	40771	54810

Cobalt Outils Coupants

DIXI 1130

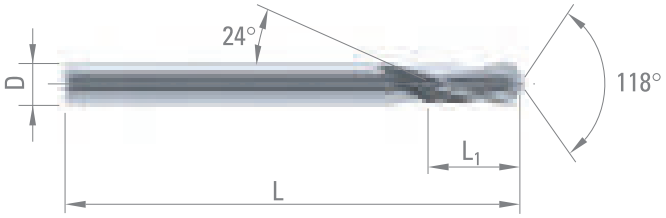
FORETS HÉLICOÏDAUX

Z = 2

P. 63 P. 70

$D_1 \geq 3.1$

DIN 6539



Acier + Pb	Acier faibl. allié	Acier fort. allié	Fontes	Titane, alliage de titane
Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique

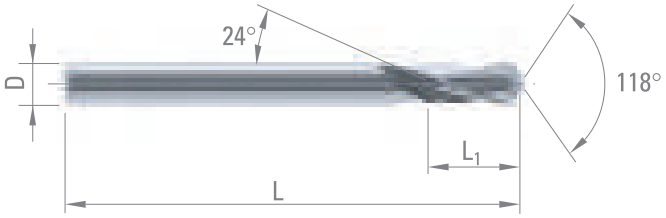
D_{h5}	L_1	L	CARBURE	DICUT
0.30	5	30	24828	953165
0.35	5	30	37861	953167
0.40	6	30	244	953169
0.45	6	30	245	953171
0.50	6	30	246	54480
0.55	6	30	247	54481
0.60	6	30	248	54482
0.65	6	30	249	54483
0.70	6	30	250	54484
0.75	6	30	251	54485
0.80	7	30	252	54487
0.85	7	30	253	54486
0.90	7	30	254	54528
0.95	7	30	255	54488
1.00	7	30	256	54490
1.05	8	30	257	54491
1.10	8	30	258	54492
1.15	8	30	259	54493
1.20	8	30	260	54494
1.25	8	30	261	54495
1.30	8	30	262	54496
1.35	8	30	263	54497
1.40	8	30	264	54498
1.45	8	30	265	54499
1.50	8	30	266	54500
1.55	9	38	267	54501
1.60	9	38	268	54502
1.65	9	38	269	54503
1.70	9	38	270	54504
1.75	9	38	271	54505
1.80	9	38	272	54506
1.85	9	38	32277	54507
1.90	9	38	274	54509
1.95	9	38	275	54508
2.00	9	38	276	54510
2.05	9	38	39575	54511
2.10	9	38	39757	54512
2.15	10	40	33192	54513
2.20	10	40	39655	54514
2.25	10	40	4562	54516
2.30	10	40	43350	54529
2.35	10	40	1756	54530
2.40	11	43	42869	54531
2.45	11	43	4563	54532
2.50	11	43	43351	54533
2.55	11	43	41514	54534
2.60	11	43	41874	54535
2.65	11	43	4564	54536
2.70	12	46	42139	54539
2.75	12	46	4565	54537
2.80	12	46	42339	54538
2.85	12	46	42522	54540
2.90	12	46	41911	54541
2.95	12	46	41501	54542
3.00	12	46	41840	54543
3.05	14	49	4607	54544
3.10	14	49	41456	54545
3.15	14	49	1757	54546
3.20	14	49	42023	54547
3.25	14	49	3356	54548
3.30	14	49	290	54549
3.35	14	49	4567	54550
3.40	15	52	42200	54551
3.45	15	52	4020	54552
3.50	15	52	41534	54553
3.55	15	52	4568	54554
3.60	15	52	41535	54556
3.65	15	52	42523	54557
3.70	15	52	43037	54558
3.75	15	52	4570	54560
3.80	17	55	4610	54562
3.85	17	55	4571	54563
3.90	17	55	4142	54565
3.95	17	55	42870	54567
4.00	17	55	42093	54568
4.05	17	55	42871	54569
4.10	17	55	42652	54570
4.15	17		77	54571

DIXI 1130

P. 63 P. 70

$D_1 \geq 3.1$

DIN 6539



Acier + Pb	Acier faibl. allié	Acier fort. allié	Fontes	Titane, alliage de titane
Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique

D_{h5}	L_1	L	CARBURE	DICUT
4.20	17	55	42340	54572
4.25	17	55	39938	54573
4.30	18	58	301	54574
4.35	18	58	39939	54575
4.40	18	58	29689	54576
4.45	18	58	4616	54577
4.50	18	58	303	54578
4.55	18	58	40790	54579
4.60	18	58	39013	54580
4.65	18	58	19790	54581
4.70	18	58	42170	54582
4.75	18	58	40791	54583
4.80	20	62	29756	54584
4.85	20	62	42524	54585
4.90	20	62	41914	54586
4.95	20	62	39997	54587
5.00	20	62	29758	54588
5.10	20	62	29759	54589
5.20	20	62	29760	54590
5.30	20	62	29761	54593
5.40	21	66	29693	54594
5.50	21	66	29694	54595
5.60	21	66	41594	54596
5.70	21	66	45724	54597
5.80	21	66	316	54599
5.90	21	66	28594	54600
6.00	21	66	42173	54601
6.10	23	70	29762	54602
6.20	23	70	41457	54618
6.30	23	70	29764	54619
6.40	23	70	42171	54620
6.50	23	70	42220	54621
6.60	23	70	41515	54622
6.70	23	70	41680	54623
6.80	25	74	326	54624
6.90	25	74	327	54625
7.00	25	74	328	54626
7.10	25	74	8646	54627
7.20	25	74	50671	54628
7.30	25	74	53054	54629
7.50	25	74	5389	54631
7.60	27	79	53056	54632
7.70	27	79	22351	54633
7.80	27	79	50331	54634
7.90	27	79	53057	54635
8.00	27	79	42821	54636
8.10	27	79	53058	54639
8.20	27	79	25291	54640
8.30	27	79	53479	54641
8.40	27	79	53059	54642
8.50	27	79	42653	54643
8.80	29	84	57852	59399
9.00	29	84	35325	54644
9.20	29	84	57851	59401
9.50	29	84	39660	54645
9.80	31	89	57853	963531
10.00	31	89	7958	54646
10.20	31	89	34340	54647
10.50	31	89	30130	54648
11.00	33	95	28591	54649
11.50	33	95	41092	54650
12.00	35	102	14939	54651
13.00	35	102	21462	54653
13.50	37	107	45725	54654
14.00	37	107	23729	54655

Cobalt Outils Coupants

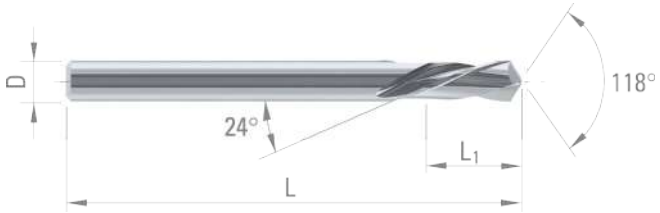
DIXI 1130 L

FORETS HÉLICOÏDAUX À GAUCHE

Z = 2

P. 63 P. 70

$D_1 \geq 3.1$



Acier + Pb	Acier faibl. allié	Acier fort. allié	Fontes	Titane, alliage de titane
Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique

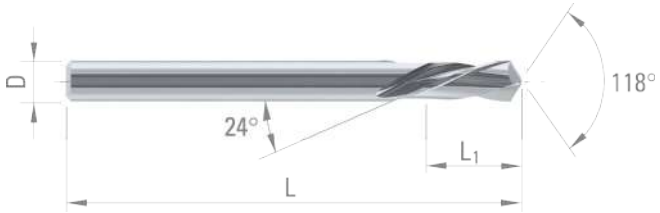
D_{h5}	L_1	L	CARBURE	DICUT
0.30	5	30	37906	953748
0.35	5	30	37907	953752
0.40	6	30	330	953754
0.45	6	30	331	953758
0.50	6	30	332	54659
0.55	6	30	333	54660
0.60	6	30	334	54661
0.65	6	30	335	54662
0.70	6	30	336	54663
0.75	6	30	37908	54664
0.80	8	30	338	54665
0.85	8	30	339	54666
0.90	8	30	340	54667
0.95	8	30	341	54668
1.00	8	30	29560	54669
1.05	10	30	343	54670
1.10	10	30	344	54671
1.15	10	30	345	54672
1.20	10	30	346	54673
1.25	10	30	347	54674
1.30	10	30	348	54675
1.35	10	30	349	54676
1.40	10	30	350	54677
1.45	10	30	351	54678
1.50	10	30	352	54679
1.55	16	38	38634	54680
1.60	16	38	38826	54681
1.65	16	38	39127	54682
1.70	16	38	39126	54683
1.75	16	38	38827	54684
1.80	16	38	395	54685
1.85	16	38	38921	54686
1.90	16	38	30637	54687
1.95	16	38	38997	54688
2.00	16	38	35181	54689
2.05	16	38	27526	54690
2.10	16	38	39657	54691
2.15	16	40	39041	54692
2.20	16	40	38965	54693

D_{h5}	L_1	L	CARBURE	DICUT
2.25	16	40	40245	54694
2.30	16	40	38769	54695
2.35	16	40	26575	54696
2.40	16	43	23429	54698
2.45	16	43	45720	54699
2.50	16	43	43245	54700
2.55	16	43	41034	54701
2.60	16	43	39043	54702
2.65	16	43	4026	54703
2.70	16	46	40247	54704
2.75	16	46	43036	54705
2.80	16	46	370	54706
2.85	16	46	40266	54707
2.90	16	46	40793	54708
2.95	16	46	40511	54709
3.00	16	46	42787	54710
3.05	18	49	40079	54711
3.10	18	49	40661	54712
3.15	18	49	40794	54713
3.20	18	49	40267	54714
3.25	18	49	40080	54715
3.30	18	49	375	54716
3.35	18	49	40296	54717
3.40	20	50	376	54718
3.45	20	50	37957	54719
3.50	20	50	377	54720
3.55	20	50	41596	54721
3.60	20	50	40662	54722
3.65	20	50	40797	54723
3.70	20	50	379	54724
3.75	20	50	38922	54725
3.80	22	50	40172	54726
3.85	22	50	37960	54727
3.90	22	50	38923	54728
3.95	22	50		54729
4.00	22	50	382	54730
4.05	22	50	40801	54731
4.10	22	50	383	54732
4.15	22		76	54733

DIXI 1130 L

P. 63 P. 70

$D_1 \geq 3.1$



Acier + Pb	Acier faibl. allié	Acier fort. allié	Fontes	Titane, alliage de titane
Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique

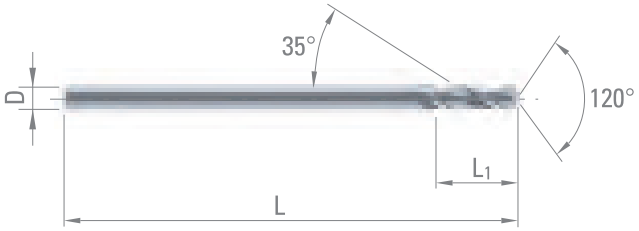
D_{h5}	L_1	L	CARBURE	DICUT
4.20	22	50	384	54734
4.25	22	50	39658	54735
4.30	24	50	385	54736
4.35	24	50	37966	54737
4.45	24	50	27518	54739
4.50	24	50	387	54740
4.55	24	50	37968	
4.60	24	50	388	54742
4.80	25	50	390	54746
4.85	25	50	37971	54747
4.90	25	50		54748
4.95	25	50	37972	54749
5.00	25	50	392	54750
5.20	25	50	4141	
5.50	25	50	27042	54755
5.60	25	50	27041	54756
5.90	25	50	6489	54759
6.00	28	66	43390	54760
6.10	31	70	43915	54761
6.40	31	70	45723	54764
6.50	31	70	37994	54765
6.60	31	70	37996	54766
6.70	31	70		54767
6.90	34	74	43847	

DIXI 1132

FORETS HÉLICOÏDAUX

Z = 2

P. 63 P. 74



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique

D_{h5}	L_1	L	CARBURE	DICUT
0.40	6	30	197	953186
0.45	6	30	198	58925
0.50	6	30	199	53585
0.55	6	30	200	53586
0.60	6	30	201	53582
0.65	6	30	202	53588
0.70	6	30	203	53589
0.75	6	30	204	53587
0.80	7	30	205	53590
0.85	7	30	206	53591
0.90	7	30	207	53592
0.95	7	30	208	53593
1.00	7	30	40275	53583
1.05	8	30	210	53594
1.10	8	30	41502	53595
1.15	8	30	212	53596
1.20	8	30	41150	53597
1.25	8	30	41319	53598
1.30	8	30	215	53599
1.35	8	30	41320	53600
1.40	8	30	217	53584
1.45	8	30	218	53601
1.50	8	30	219	53602
1.55	9	38	220	53604
1.60	9	38	221	53605
1.65	9	38	5418	53606
1.70	9	38	222	53607
1.75	9	38	42537	53608
1.80	9	38	223	53609
1.85	9	38	42538	53610
1.90	9	38	224	53611
1.95	9	38	42539	53612
2.00	9	38	225	53613

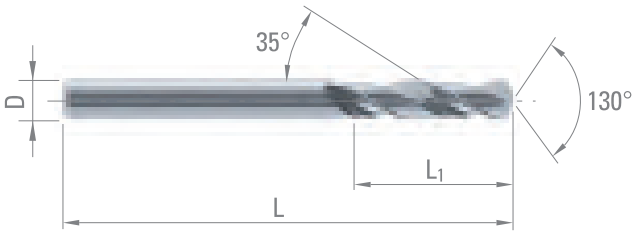
DIXI 1133

FORETS HÉLICOÏDAUX

Z = 2

P. 63 P. 76

$D_1 \geq 3.1$



Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

D_{h5}	L_1	L	CARBURE	DICUT
0.50	9	38	91	57557
0.55	9	38	92	57558
0.60	13	38	93	57559
0.65	13	38	94	57560
0.70	13	38	95	55471
0.75	13	38	96	55473
0.80	13	38	97	55475
0.85	13	38	98	55482
0.90	16	38	99	55599
0.95	16	38	100	55601
1.00	16	38	101	55603
1.05	16	38	102	55605
1.10	16	38	103	55607
1.15	16	38	104	55609
1.20	16	38	105	55611
1.25	16	38	106	55613
1.30	16	38	107	55615
1.35	16	38	108	55617
1.40	16	38	109	55619
1.45	16	38	110	55621
1.50	16	38	111	55623
1.55	16	38	2972	55625
1.60	16	38	112	55627
1.65	16	38	3360	55629
1.70	16	38	113	55631
1.75	16	38	3361	55633
1.80	16	38	114	55635
1.85	16	38	115	55637
1.90	16	38	116	55639
1.95	16	38	3362	55641
2.00	16	38	117	55643
2.10	16	38	118	55645
2.20	16	40	119	55647
2.30	16	40	120	55649
2.40	16	43	121	55651
2.50	16	43	122	55653
2.60	16	43	35575	55655

D_{h5}	L_1	L	CARBURE	DICUT
3.00	16	46	35726	55657
3.30	18	49	35665	55659
3.50	20	50	35727	55661
4.00	22	55	34062	55663
4.20	22	55	35728	55665
4.50	24	58	35729	55667
5.00	26	62	35730	55669
5.50	28	66	45735	55671
6.00	28	66	45736	55673

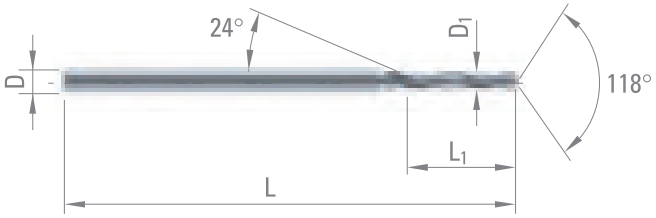
DIXI 1131

FORETS HÉLICOÏDAUX
CORPS RENFORCÉ

Z = 2

P. 63 P. 72

DIN 1899



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT	DLC*
0.05	0.35	1.0	30	962703		
0.06	0.4	1.0	30	962702		
0.07	0.5	1.0	30	962701		
0.08	0.6	1.0	30	962700		
0.09	0.65	1.0	30	962699		
0.10	0.7	1.0	30	36792		
0.11	0.7	1.0	30	40829		
0.12	0.7	1.0	30	40627		
0.13	0.7	1.0	30	40628		
0.14	0.7	1.0	30	40629		
0.15	1.0	1.0	30	35600		
0.16	1.0	1.0	30	38658		
0.17	1.0	1.0	30	38659		
0.18	1.0	1.0	30	38660		
0.19	1.0	1.0	30	38661		
0.20	1.0	1.0	30	26824	952580	955953
0.21	1.0	1.0	30	29609	952581	955954
0.22	1.0	1.0	30	29610	952582	955955
0.23	1.0	1.0	30	29611	950087	955956
0.23 >	2.2	1.0	30	62513	952583	962712
0.24	1.0	1.0	30	25957	952496	955957
0.24 >	2.2	1.0	30	62514	952584	962713
0.25	1.0	1.0	30	28712	950088	955958
0.25 >	2.2	1.0	30	38282	952585	962714
0.26	1.0	1.0	30	38665	952587	955959
0.27	1.0	1.0	30	37358	952588	955960
0.28	1.0	1.0	30	37258	952589	955961
0.29	1.0	1.0	30	30568	952590	955962
0.30	1.5	1.0	30	28713	952591	955963
0.31	1.5	1.0	30	35421	952592	955964
0.32	1.5	1.0	30	38662	952593	955965
0.32 >	3.0	1.0	30	62515	952594	962715
0.33	1.5	1.0	30	38663	952595	955966
0.33 >	3.0	1.0	30	62516	952596	962716
0.34	1.5	1.0	30	29570	952597	955967
0.34 >	3.0	1.0	30	62517	952598	962717
0.35	1.5	1.0	30	31747	952599	955968
0.36	1.5	1.0	30	39018	952600	955970
0.37	1.5	1.0	30	40633	952601	955971
0.38	1.5	1.0	30	40634	952602	955972
0.39	1.5	1.0	30	40635	952603	955973

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT	DLC*
0.40	2.0	1.0	30	25992	63706	955974
0.41	2.0	1.0	30	29571	952604	955975
0.42	2.0	1.0	30	38419	952605	955976
0.43	2.0	1.0	30	35804	950186	955977
0.44	2.0	1.0	30	40636	952606	955978
0.45	3.6	1.0	30	45726	59562	955979
0.46	3.6	1.0	30	45727	952607	955980
0.47	3.6	1.0	30	45728	952497	955981
0.48	3.6	1.0	30	45729	952608	955982
0.49	4.0	1.0	30	45730	952609	955983
0.50	4.0	1.0	30	25994	55141	955984
0.51	4.0	1.0	30	45731	55142	955985
0.52	4.0	1.0	30	45732	55143	955986
0.53	4.0	1.0	30	45733	55144	955987
0.54	4.5	1.0	30	40640	55145	955988
0.55	4.5	1.0	30	28375	55146	955989
0.56	4.5	1.0	30	41925	55147	955990
0.57	4.5	1.0	30	40641	55148	955991
0.58	4.5	1.0	30	40642	55149	955993
0.59	4.5	1.0	30	40643	55150	955997
0.60	4.5	1.0	30	29643	55151	956048
0.61	5.0	1.0	30	37639	55152	956049
0.62	5.0	1.0	30	25270	55153	956050
0.63	5.0	1.0	30	40644	55154	956051
0.64	5.0	1.0	30	40645	55155	956052
0.65	5.0	1.0	30	41679	55156	956053
0.66	5.0	1.0	30	41886	55157	956054
0.67	5.0	1.0	30	42286	55158	956055
0.68	5.6	1.0	30	42287	55159	956056
0.69	5.6	1.0	30	41788	55160	956057
0.70	5.6	1.0	30	32099	55161	956058
0.71	5.6	1.0	30	42288	55162	956059
0.72	5.6	1.0	30	40983	55163	956060
0.73	5.6	1.0	30	35422	55164	956061
0.74	5.6	1.0	30	36102	55165	956062
0.75	5.6	1.0	30	35423	55166	956063
0.76	6.3	1.0	30	18579	55167	956064
0.77	6.3	1.0	30	42706	55168	956065
0.78	6.3	1.0	30	41887	55169	956066
0.79	6.3	1.0			70	956068

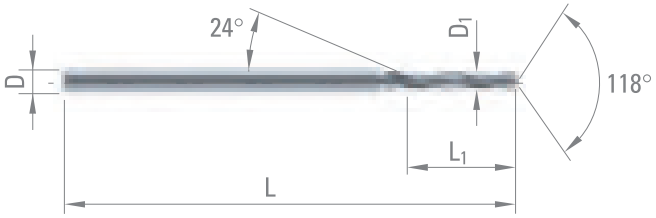
* pour matériaux non-ferre

DIXI 1131

Z = 2

P. 63 P. 72

DIN 1899



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT	DLC*
0.80	6.3	1.5	30	402	55171	956069
0.81	6.3	1.5	30	36144	55172	956070
0.82	6.3	1.5	30	34510	55173	956071
0.83	6.3	1.5	30	42290	55174	956072
0.84	6.3	1.5	30	27400	55175	956074
0.85	6.3	1.5	30	35551	55176	956075
0.86	7.1	1.5	30	29254	55177	956076
0.87	7.1	1.5	30	42291	55178	956077
0.88	7.1	1.5	30	19601	55179	956080
0.89	7.1	1.5	30	41789	55180	956081
0.90	7.1	1.5	30	32100	55181	956082
0.91	7.1	1.5	30	42292	55182	956083
0.92	7.1	1.5	30	36859	55183	956084
0.93	7.1	1.5	30	42293	55184	956085
0.94	7.1	1.5	30	42167	55185	956086
0.95	7.1	1.5	30	35183	55186	956087
0.96	8.0	1.5	30	37741	55188	956088
0.97	8.0	1.5	30	29255	55189	956089
0.98	8.0	1.5	30	42294	55190	956091
0.99	8.0	1.5	30	41790	55191	956092
1.00	9.0	1.5	30	406	55192	956093
1.01	9.0	1.5	30	34996	55193	956094
1.02	9.0	1.5	30	42876	55195	956095
1.03	9.0	1.5	30	34778	55196	956096
1.04	9.0	1.5	30	43984	55200	956097
1.05	9.0	1.5	30	4774	55201	956098
1.06	9.0	1.5	30	43985	55202	956099
1.07	9.0	1.5	30	42228	55203	956100
1.08	9.0	1.5	30	43198	55204	956101
1.09	9.0	1.5	30	28779	55205	956102
1.10	9.0	1.5	30	407	55206	956103
1.11	9.0	1.5	30	43986	55207	956104
1.12	9.0	1.5	30	43347	55208	956105
1.13	9.0	1.5	30	42853	55209	956106
1.14	9.0	1.5	30	43987	55210	956107
1.15	9.0	1.5	30	3530	55211	956108
1.16	9.0	1.5	30	22712	55212	956109
1.17	9.0	1.5	30	4775	55213	956110
1.18	9.0	1.5	30	42230	55214	956111
1.19	10.0	1.5	30	41791	55215	956112

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT	DLC*
1.20	10.0	1.5	30	408	55216	956113
1.21	10.0	1.5	30	42168	55217	956114
1.22	10.0	1.5	30	25751	55218	956115
1.23	10.0	1.5	30	23285	55219	956116
1.24	10.0	1.5	30	45524	55220	956118
1.25	10.0	1.5	30	3531	55221	956119
1.26	10.0	1.5	30	42005	55222	956120
1.27	10.0	1.5	30	3761	55223	956121
1.28	10.0	1.5	30	42169	55224	956122
1.29	10.0	1.5	30	37694	55225	956124
1.30	10.0	1.5	30	409	55226	956125
1.31	10.0	1.5	30	45525	55227	956128
1.32	10.0	1.5	30	29712	55228	956130
1.33	11.2	1.5	30	34695	55229	956131
1.34	11.2	1.5	30	45526	55230	956132
1.35	11.2	1.5	30	3532	55231	956133
1.36	11.2	1.5	30	45527	55232	956134
1.37	11.2	1.5	30	35556	55233	956135
1.38	11.2	1.5	30	45055	55234	956136
1.39	11.2	1.5	30	45297	55235	956137
1.40	11.2	1.5	30	410	55236	956138
1.41	11.2	1.5	30	33499	55237	956139
1.42	11.2	1.5	30	43348	55238	956140
1.43	11.2	1.5	30	45056	55239	956141
1.44	11.2	1.5	30	45528	55240	956142
1.45	11.2	1.5	30	36006	55241	956143
1.46	11.2	1.5	30	45529	55242	956144
1.47	11.2	1.5	30	45530	55243	956145
1.48	11.2	1.5	30	45057	55244	956146
1.49	11.2	1.5	30	35681	55245	956147
1.50	11.2	2.0	38	411	55246	956148
1.51	12.0	2.0	38	27735	55247	956149
1.52	12.0	2.0	38	27736	55248	956150
1.53	12.0	2.0	38	23286	55249	956151
1.54	12.0	2.0	38	45909	55250	956152
1.55	12.0	2.0	38	25686	55251	956153
1.56	12.0	2.0	38	58194	58196	956154
1.57	12.0	2.0	38	55541	58193	956155
1.58	12.0	2.0	38	39953	55252	956156
1.59	12.0	2.0			53	956157

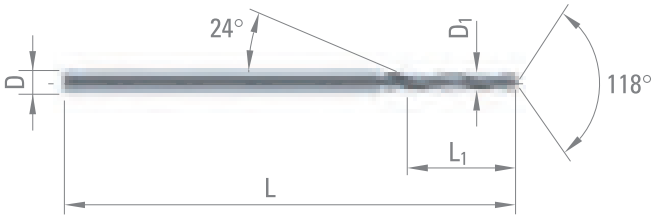
* pour matériaux non-ferre

DIXI 1131

Z = 2

P. 63 P. 72

DIN 1899



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT	DLC*
1.60	12.0	2.0	38	412	55254	956158
1.61	12.0	2.0	38	40288	55255	956159
1.62	12.0	2.0	38	46968	55256	956160
1.63	12.0	2.0	38	45605	55257	956161
1.64	12.0	2.0	38	45910	55258	956162
1.65	12.0	2.0	38	32283	55259	956163
1.66	12.0	2.0	38	47198	55260	956164
1.67	12.0	2.0	38	50763	55261	956165
1.68	12.0	2.0	38	31684	55262	956166
1.69	12.0	2.0	38	45339	55263	956167
1.70	12.0	2.0	38	413	55264	956169
1.71	12.0	2.0	38	45911	55265	956175
1.72	12.0	2.0	38	27925	55266	956177
1.73	12.0	2.0	38	42609	55267	956178
1.74	12.0	2.0	38	45912	55268	956179
1.75	12.0	2.0	38	45734	55269	956180
1.76	12.0	2.0	38	45913	55270	956181
1.77	12.0	2.0	38	38757	61408	956182
1.78	12.0	2.0	38	46957	55271	956183
1.79	12.0	2.0	38	45340	55272	956185
1.80	12.0	2.0	38	31497	55273	956186
1.81	12.0	2.0	38	45914	55274	956187
1.82	12.0	2.0	38	46969	55275	956188
1.83	12.0	2.0	38	58717	61407	956189
1.84	12.0	2.0	38	46970	55276	956190
1.85	12.0	2.0	38	36793	55277	956191
1.86	12.0	2.0	38	50761	55278	956192
1.87	12.0	2.0	38	36487	55279	956195
1.88	12.0	2.0	38	45801	55280	956196
1.89	12.0	2.0	38	45341	55281	956197
1.90	12.0	2.0	38	415	55282	956198
1.91	12.0	2.0	38	45915	55283	956200
1.92	12.0	2.0	38	45916	55284	956201
1.93	12.0	2.0	38	44853	55285	956202
1.94	12.0	2.0	38	45917	55286	956203
1.95	12.0	2.0	38	32284	55287	956204
1.96	12.0	2.0	38	60692	61404	956205
1.97	12.0	2.0	38	50332	61401	956206
1.98	12.0	2.0	38	46959	55288	956207
1.99	12.0	2.0	38	45342	55289	956208

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT	DLC*
2.00	12.0	2.5	43	416	55290	956209
2.01	12.0	2.5	43	45498	55291	956210
2.02	12.0	2.5	43	48962	61399	956211
2.03	12.0	2.5	43	50685	55292	956212
2.04	12.0	2.5	43	60958	60962	956213
2.05	12.0	2.5	43	40813	55293	956214
2.10	12.0	2.5	43	42295	55294	956215
2.15	12.0	2.5	43	40814	55295	956216
2.20	12.0	2.5	43	418	55296	956217
2.25	12.0	2.5	43	40815	55297	956218
2.30	12.0	2.5	43	419	55298	956219
2.34	12.0	2.5	43	955569	955572	956228
2.35	12.0	2.5	43	6341	55299	956220
2.40	12.0	2.5	43	420	55300	956221
2.45	12.0	2.5	43	40816	55301	956222

* pour matériaux non-ferreux

Cobalt Outils Coupants

DIXI 1131 L

FORETS HÉLICOÏDAUX À GAUCHE
CORPS RENFORCÉ

Z = 2

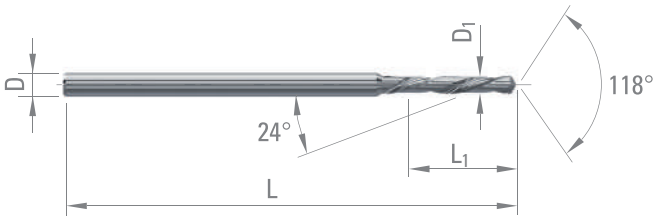
P. 63 P. 72

DIN 1899

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique



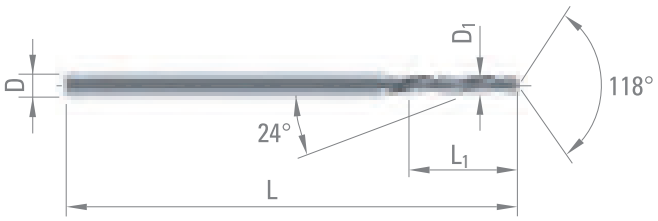
$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
0.10	0.7	1.0	30	36916	
0.12	0.7	1.0	30	36918	
0.13	0.7	1.0	30	36919	
0.14	0.7	1.0	30	36920	
0.15	1.0	1.0	30	36921	
0.16	1.0	1.0	30	36922	
0.17	1.0	1.0	30	38654	
0.18	1.0	1.0	30	36924	
0.19	1.0	1.0	30	36925	
0.20	1.0	1.0	30	36926	952652
0.21	1.0	1.0	30	36927	952653
0.22	1.0	1.0	30	36928	952654
0.23	1.0	1.0	30	36929	952655
0.24	1.0	1.0	30	36930	952656
0.25	1.0	1.0	30	36931	952657
0.26	1.0	1.0	30	36932	952658
0.27	1.0	1.0	30	36933	952659
0.28	1.0	1.0	30	36934	952660
0.29	1.0	1.0	30	36935	952661
0.30	1.5	1.0	30	36936	952662
0.31	1.5	1.0	30	36937	952663
0.32	1.5	1.0	30	36938	952664
0.33	1.5	1.0	30	36939	952665
0.34	1.5	1.0	30	36940	952666
0.35	1.5	1.0	30	36941	952667
0.36	1.5	1.0	30	36942	952669
0.37	1.5	1.0	30	36943	952672
0.38	1.5	1.0	30	36944	952673
0.39	1.5	1.0	30	36945	952674
0.40	2.0	1.0	30	15026	952676
0.41	2.0	1.0	30	35708	952677
0.42	2.0	1.0	30	36946	952678
0.43	2.0	1.0	30	36947	952679
0.44	2.0	1.0	30	36948	952680
0.45	3.6	1.0	30	38054	952681
0.46	3.6	1.0	30	38057	952682
0.47	3.6	1.0	30	38059	952683
0.48	3.6	1.0	30	38062	952684
0.49	4.0	1.0	30	38063	952685
0.50	4.0	1.0	30	38065	55302

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
0.51	4.0	1.0	30	38066	55303
0.52	4.0	1.0	30	38068	55304
0.53	4.0	1.0	30	38069	55305
0.54	4.5	1.0	30	38245	55306
0.55	4.5	1.0	30	38246	55307
0.56	4.5	1.0	30	38190	55308
0.57	4.5	1.0	30	38187	55309
0.58	4.5	1.0	30	38103	55310
0.59	4.5	1.0	30	38070	55311
0.60	4.5	1.0	30	38188	55312
0.61	5.0	1.0	30	38247	55313
0.62	5.0	1.0	30	38364	55314
0.63	5.0	1.0	30	38072	55315
0.64	5.0	1.0	30	38073	55316
0.65	5.0	1.0	30	38075	55317
0.66	5.0	1.0	30	36966	55318
0.67	5.0	1.0	30	36838	55319
0.68	5.6	1.0	30	21766	55320
0.69	5.6	1.0	30	4021	55321
0.70	5.6	1.0	30	450	55322
0.71	5.6	1.0	30	38078	55323
0.72	5.6	1.0	30	38182	55324
0.73	5.6	1.0	30	22294	55325
0.74	5.6	1.0	30	38080	55326
0.75	5.6	1.0	30	36975	55327
0.76	6.3	1.0	30	36976	55328
0.77	6.3	1.0	30	40866	55329
0.78	6.3	1.0	30	36978	55330
0.79	6.3	1.0	30	38082	55331
0.80	6.3	1.5	30	38317	55332
0.81	6.3	1.5	30	36981	55333
0.82	6.3	1.5	30	36982	55334
0.83	6.3	1.5	30	36983	55335
0.84	6.3	1.5	30	38292	55336
0.85	6.3	1.5	30	38293	55337
0.86	7.1	1.5	30	38294	55338
0.87	7.1	1.5	30	38251	55339
0.88	7.1	1.5	30	36988	55340
0.89	7.1	1.5	30	36989	55341

DIXI 1131 L

P. 63 P. 72

DIN 1899



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique

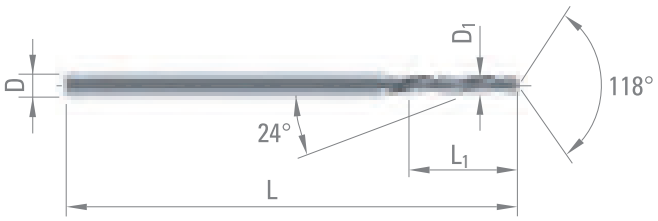
$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
0.90	7.1	1.5	30	24182	55342
0.91	7.1	1.5	30	38295	55343
0.92	7.1	1.5	30	36360	55344
0.93	7.1	1.5	30	35871	55345
0.94	7.1	1.5	30	38086	55346
0.95	7.1	1.5	30	455	55347
0.96	8.0	1.5	30	38296	55348
0.97	8.0	1.5	30	36996	55349
0.98	8.0	1.5	30	36997	55350
0.99	8.0	1.5	30	36998	55351
1.00	9.0	1.5	30	36999	55352
1.01	9.0	1.5	30	37000	55353
1.02	9.0	1.5	30	37001	55354
1.03	9.0	1.5	30	37002	55355
1.04	9.0	1.5	30	37003	55356
1.05	9.0	1.5	30	37004	55357
1.06	9.0	1.5	30	37005	55358
1.07	9.0	1.5	30	37006	55359
1.08	9.0	1.5	30	37007	55360
1.09	9.0	1.5	30	37008	55361
1.10	9.0	1.5	30	457	55362
1.11	9.0	1.5	30	37009	55363
1.12	9.0	1.5	30	37010	55364
1.13	9.0	1.5	30	14573	55365
1.14	9.0	1.5	30	37011	55366
1.15	9.0	1.5	30	19337	55367
1.16	9.0	1.5	30	37012	55368
1.17	9.0	1.5	30	37013	55369
1.18	9.0	1.5	30	37014	55370
1.19	10.0	1.5	30	37015	55371
1.20	10.0	1.5	30	37016	55372
1.21	10.0	1.5	30	26225	55373
1.22	10.0	1.5	30	37017	55374
1.23	10.0	1.5	30	45717	55375
1.24	10.0	1.5	30	37019	55376
1.25	10.0	1.5	30	26763	55377
1.26	10.0	1.5	30	27862	55378
1.27	10.0	1.5	30	6197	55379
1.28	10.0	1.5	30	25663	55380
1.29	10.0	1.5	30	27863	55381

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
1.30	10.0	1.5	30	459	55382
1.31	10.0	1.5	30	37020	55383
1.32	10.0	1.5	30	37021	55384
1.33	11.2	1.5	30	37022	55385
1.34	11.2	1.5	30	45718	55386
1.35	11.2	1.5	30	37024	55387
1.36	11.2	1.5	30	37025	55388
1.37	11.2	1.5	30	37026	55389
1.38	11.2	1.5	30	37027	55390
1.39	11.2	1.5	30	37028	55391
1.40	11.2	1.5	30	460	55392
1.41	11.2	1.5	30	26226	55393
1.42	11.2	1.5	30	37029	55394
1.43	11.2	1.5	30	37030	55395
1.44	11.2	1.5	30	37031	55396
1.45	11.2	1.5	30	26459	55397
1.46	11.2	1.5	30	37032	55398
1.47	11.2	1.5	30	37033	55399
1.48	11.2	1.5	30	37034	55400
1.49	11.2	1.5	30	37035	55401
1.50	11.2	2.0	38	461	55402
1.51	12.0	2.0	38	38089	55403
1.52	12.0	2.0	38	38962	55404
1.53	12.0	2.0	38	38938	55405
1.54	12.0	2.0	38	45531	55406
1.55	12.0	2.0	38	38090	55407
1.56	12.0	2.0	38	45532	55408
1.57	12.0	2.0	38	45351	55409
1.58	12.0	2.0	38	38252	55410
1.59	12.0	2.0	38	45533	55411
1.60	12.0	2.0	38	37234	55412
1.61	12.0	2.0	38	40655	55413
1.62	12.0	2.0	38	29286	55414
1.63	12.0	2.0	38	40910	55415
1.64	12.0	2.0	38	41297	55416
1.65	12.0	2.0	38	37235	55417
1.66	12.0	2.0	38	45534	55418
1.67	12.0	2.0	38	44015	55419
1.68	12.0	2.0	38	38092	55420
1.69	12.0	2.0	38	35	55421

DIXI 1131 L

P. 63 P. 72

DIN 1899



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
1.70	12.0	2.0	38	463	55422
1.71	12.0	2.0	38	45536	55423
1.72	12.0	2.0	38	45075	55424
1.73	12.0	2.0	38	43415	55425
1.74	12.0	2.0	38	45537	55426
1.75	12.0	2.0	38	38093	55427
1.76	12.0	2.0	38	58052	58054
1.77	12.0	2.0	38	42174	55428
1.78	12.0	2.0	38	57881	57888
1.79	12.0	2.0	38	58197	58199
1.80	12.0	2.0	38	464	55429
1.81	12.0	2.0	38	58636	61392
1.82	12.0	2.0	38	26183	55430
1.83	12.0	2.0	38	61388	61390
1.84	12.0	2.0	38	50611	55431
1.85	12.0	2.0	38	38094	55432
1.86	12.0	2.0	38	61385	61387
1.87	12.0	2.0	38	42119	55433
1.88	12.0	2.0	38	61382	61384
1.89	12.0	2.0	38	50657	55434
1.90	12.0	2.0	38	41217	55435
1.91	12.0	2.0	38	61150	61367
1.92	12.0	2.0	38	48963	57890
1.93	12.0	2.0	38	50158	58056
1.94	12.0	2.0	38	60780	60782
1.95	12.0	2.0	38	45719	55436
1.96	12.0	2.0	38	61368	61370
1.97	12.0	2.0	38	61372	61371
1.98	12.0	2.0	38	44254	57892
1.99	12.0	2.0	38	58741	60784
2.00	12.0	2.5	43	466	55437
2.01	12.0	2.5	43	38096	55438
2.02	12.0	2.5	43	47857	55439
2.03	12.0	2.5	43	61256	61375
2.04	12.0	2.5	43	61376	61378
2.05	12.0	2.5	43	61379	61381
2.10	12.0	2.5	43	467	55440
2.12	12.0	2.5	43	47858	55441
2.15	12.0	2.5	43	38097	55442
2.45	12.0	2.5	43	38098	55443

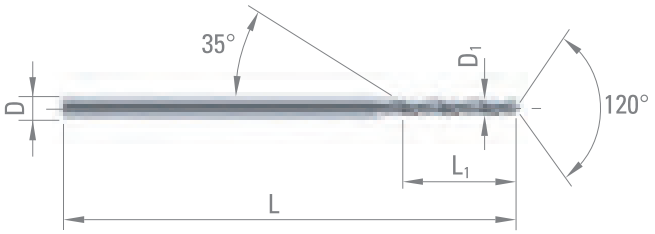
DIXI 1134

FORETS HÉLICOÏDAUX
CORPS RENFORCÉ

Z = 2

P. 63 P. 74

DIN 1899



Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
0.50	4.0	1.0	30	21228	57565
0.55	4.5	1.0	30	39029	57566
0.60	4.5	1.0	30	176	57567
0.65	5.0	1.0	30	39030	57568
0.70	5.6	1.0	30	178	55679
0.75	5.6	1.0	30	39031	55681
0.80	6.3	1.5	30	180	55683
0.81	6.3	1.5	30	957990	957991
0.82	6.3	1.5	30	957040	957994
0.83	6.3	1.5	30	45775	957802
0.84	6.3	1.5	30	45776	957804
0.85	6.3	1.5	30	181	55685
0.86	7.1	1.5	30	957995	957996
0.87	7.1	1.5	30	957998	957999
0.88	7.1	1.5	30	958001	958002
0.89	7.1	1.5	30	56626	957806
0.90	7.1	1.5	30	182	55687
0.91	7.1	1.5	30	958006	958007
0.92	7.1	1.5	30	957949	958004
0.93	7.1	1.5	30	957042	957808
0.94	7.1	1.5	30	957043	957810
0.95	7.1	1.5	30	39032	55689
0.96	9.0	1.5	30	49329	957812
0.97	9.0	1.5	30	957045	957829
0.98	9.0	1.5	30	43498	957831
0.99	9.0	1.5	30	61003	957834
1.00	9.0	1.5	30	184	55691
1.01	9.0	1.5	30	48709	957865
1.02	9.0	1.5	30	58334	957867
1.03	9.0	1.5	30	958010	958011
1.04	9.0	1.5	30	958013	958015
1.05	9.0	1.5	30	39033	55757
1.06	9.0	1.5	30	958017	958018
1.07	9.0	1.5	30	58335	957879
1.08	9.0	1.5	30	57722	957884
1.09	9.0	1.5	30	958020	958021
1.10	9.0	1.5	30	39034	55759
1.11	9.0	1.5	30	45752	957887
1.12	9.0	1.5	30	62921	954726

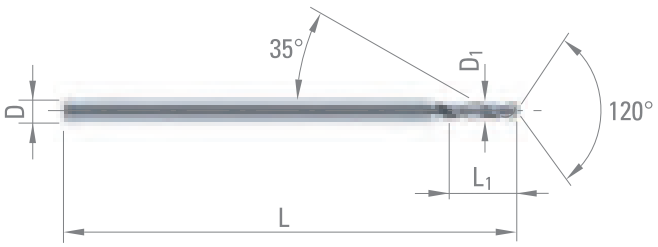
$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
1.13	9.0	1.5	30	957889	954727
1.14	9.0	1.5	30	958023	958024
1.15	9.0	1.5	30	39035	55761
1.16	10.0	1.5	30	50299	957893
1.17	10.0	1.5	30	52449	957895
1.18	10.0	1.5	30	58333	957897
1.19	10.0	1.5	30	958026	958027
1.20	10.0	1.5	30	39036	55762
1.21	10.0	1.5	30	50233	957899
1.22	10.0	1.5	30	59610	957901
1.23	10.0	1.5	30	46797	957902
1.24	10.0	1.5	30	958029	958030
1.25	10.0	1.5	30	39037	55764
1.26	10.0	1.5	30	65858	50057
1.27	10.0	1.5	30	50558	957912
1.28	10.0	1.5	30	958032	958033
1.29	10.0	1.5	30	958035	958037
1.30	10.0	1.5	30	187	55766
1.31	11.2	1.5	30	958199	958200
1.32	11.2	1.5	30	50068	957914
1.33	11.2	1.5	30	44387	957916
1.34	11.2	1.5	30	53518	958203
1.35	11.2	1.5	30	39038	55768
1.36	11.2	1.5	30	58147	957921
1.37	11.2	1.5	30	958205	958206
1.38	11.2	1.5	30	958208	958209
1.39	11.2	1.5	30	958211	958212
1.40	11.2	1.5	30	188	55777
1.45	11.2	1.5	30	39039	55779
1.50	11.2	2.0	38	39040	55780
1.55	12.0	2.0	38	52209	55782
1.60	12.0	2.0	38	52210	55786
1.65	12.0	2.0	38	52211	54986
1.70	12.0	2.0	38	191	55789
1.75	12.0	2.0	38	52212	55791
1.80	12.0	2.0	38	49082	55793
1.85	12.0	2.0	38	52213	55795
1.90	12.0	2.0	38	193	55797
1.95	12.0	2.0	38	52214	55799

DIXI 1135

FORETS HÉLICOÏDAUX
CORPS RENFORCÉ

Z = 2

P. 63 P. 74



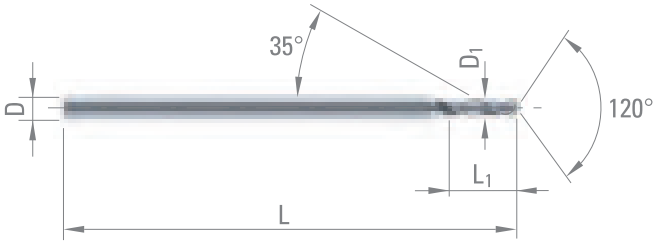
Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
0.20	1.5	1.5	30	950342	950234
0.21	1.5	1.5	30	950235	950248
0.22	1.5	1.5	30	950236	950249
0.23	1.5	1.5	30	950240	950250
0.24	1.5	1.5	30	950241	950251
0.25	2.0	1.5	30	950253	950278
0.26	2.0	1.5	30	950254	950279
0.27	2.0	1.5	30	950255	950280
0.28	2.0	1.5	30	950256	950281
0.29	2.0	1.5	30	950084	950282
0.30	2.0	1.5	30	950276	950283
0.31	2.5	1.5	30	950284	950299
0.32	2.5	1.5	30	950285	950301
0.33	2.5	1.5	30	950286	950302
0.34	2.5	1.5	30	950287	950303
0.35	2.5	1.5	30	950288	950304
0.36	2.5	1.5	30	950085	950305
0.37	2.5	1.5	30	950289	950306
0.38	2.5	1.5	30	950290	950307
0.39	3.0	1.5	30	950308	950330
0.40	3.0	1.5	30	950309	950331
0.41	3.0	1.5	30	950310	950332
0.42	3.0	1.5	30	950311	950333
0.43	3.0	1.5	30	950312	950334
0.44	3.0	1.5	30	950313	950335
0.45	3.0	1.5	30	950314	950336
0.46	3.0	1.5	30	950315	950337
0.47	3.0	1.5	30	950316	950338
0.48	3.0	1.5	30	950317	950339
0.49	3.0	1.5	30	950318	950340
0.50	4.0	1.5	30	60922	61017
0.51	4.0	1.5	30	60923	61018
0.52	4.0	1.5	30	60924	61020
0.53	4.0	1.5	30	60925	61021
0.54	4.0	1.5	30	60926	61022
0.55	4.0	1.5	30	60927	61023
0.56	4.0	1.5	30	60928	61024
0.57	4.0	1.5	30	60929	61025
0.58	4.0	1.5	30	60930	61026
0.59	4.0	1.5	30	60931	61027

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
0.60	4.5	1.5	30	60932	61028
0.61	4.5	1.5	30	60933	61029
0.62	4.5	1.5	30	60934	61030
0.63	4.5	1.5	30	60935	61031
0.64	4.5	1.5	30	60936	61032
0.65	4.5	1.5	30	60937	61033
0.66	4.5	1.5	30	60938	61034
0.67	4.5	1.5	30	60939	61035
0.68	4.5	1.5	30	56623	61036
0.69	4.5	1.5	30	60940	61037
0.70	4.5	1.5	30	56364	57571
0.71	4.5	1.5	30	56365	57573
0.72	4.5	1.5	30	56366	57575
0.73	4.5	1.5	30	56367	57577
0.74	4.5	1.5	30	56368	57587
0.75	4.5	1.5	30	56369	57589
0.76	4.5	1.5	30	56370	57579
0.77	4.5	1.5	30	56371	57581
0.78	4.5	1.5	30	56372	57583
0.79	4.5	1.5	30	56373	57585
0.80	5.0	1.5	30	52140	55801
0.81	5.0	1.5	30	52141	55803
0.82	5.0	1.5	30	52142	55805
0.83	5.0	1.5	30	52143	55807
0.84	5.0	1.5	30	52144	55809
0.85	5.0	1.5	30	52145	55811
0.86	5.0	1.5	30	52146	55813
0.87	5.0	1.5	30	52147	55815
0.88	5.0	1.5	30	52148	55817
0.89	5.0	1.5	30	52149	55819
0.90	5.0	1.5	30	52150	55821
0.91	5.0	1.5	30	52151	55823
0.92	5.0	1.5	30	52152	55825
0.93	5.0	1.5	30	52153	55827
0.94	5.0	1.5	30	52154	55829
0.95	5.0	1.5	30	52155	55831
0.96	5.0	1.5	30	52156	55833
0.97	5.0	1.5	30	52157	55835
0.98	5.0	1.5	30	52158	55837
0.99	5.0	1.5	30	59	55839

DIXI 1135

P. 63 P. 74



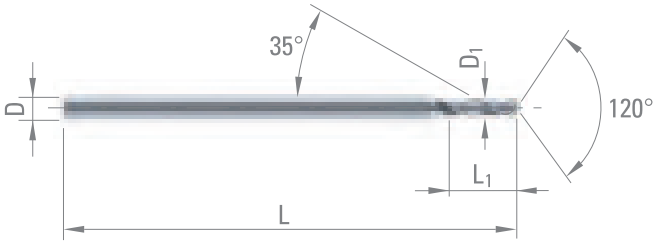
Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
1.00	5.0	1.5	30	52160	55841
1.01	5.0	1.5	30	52161	55842
1.02	5.0	1.5	30	52162	55844
1.03	5.0	1.5	30	52163	55848
1.04	5.0	1.5	30	52164	55850
1.05	5.0	1.5	30	52165	55852
1.06	5.0	1.5	30	52166	55854
1.07	5.0	1.5	30	52167	55856
1.08	5.0	1.5	30	52168	55858
1.09	5.0	1.5	30	52169	55860
1.10	5.0	1.5	30	52170	55861
1.11	5.0	1.5	30	52171	55863
1.12	5.0	1.5	30	52172	55865
1.13	5.0	1.5	30	52173	55871
1.14	5.0	1.5	30	52174	55872
1.15	5.0	1.5	30	52175	55873
1.16	5.0	1.5	30	52176	55875
1.17	5.0	1.5	30	52177	55877
1.18	5.0	1.5	30	52178	55878
1.19	5.0	1.5	30	52179	55893
1.20	6.0	1.5	30	52180	55880
1.21	6.0	1.5	30	52181	55882
1.22	6.0	1.5	30	52182	55884
1.23	6.0	1.5	30	52183	55886
1.24	6.0	1.5	30	52184	55896
1.25	6.0	1.5	30	52185	55898
1.26	6.0	1.5	30	52186	55900
1.27	6.0	1.5	30	52187	55902
1.28	6.0	1.5	30	52188	55904
1.29	6.0	1.5	30	52189	55906
1.30	6.0	1.5	30	52190	55908
1.31	6.0	1.5	30	52191	55910
1.32	6.0	1.5	30	52192	55912
1.33	6.0	1.5	30	52193	55914
1.34	6.0	1.5	30	52194	55916
1.35	6.0	1.5	30	52195	55918
1.36	6.0	1.5	30	52196	55920
1.37	6.0	1.5	30	52197	55922
1.38	6.0	1.5	30	52198	55924
1.39	6.0	1.5	30	52199	55926

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
1.40	6.0	1.5	30	52200	55929
1.41	6.0	1.5	30	52201	55932
1.42	6.0	1.5	30	52202	55934
1.43	6.0	1.5	30	52203	55936
1.44	6.0	1.5	30	52204	55938
1.45	6.0	1.5	30	52205	55940
1.46	6.0	1.5	30	52206	55942
1.47	6.0	1.5	30	52207	55944
1.48	6.0	1.5	30	52208	55946
1.49	6.0	1.5	30	52216	55948
1.50	7.0	2.0	38	56431	57591
1.51	7.0	2.0	38	56374	57593
1.52	7.0	2.0	38	56375	57595
1.53	7.0	2.0	38	56376	57597
1.54	7.0	2.0	38	56377	57599
1.55	7.0	2.0	38	56378	57601
1.56	7.0	2.0	38	56379	57603
1.57	7.0	2.0	38	56380	57605
1.58	7.0	2.0	38	56381	57607
1.59	7.0	2.0	38	56382	57609
1.60	7.0	2.0	38	56383	57611
1.61	7.0	2.0	38	56384	57613
1.62	7.0	2.0	38	56385	57615
1.63	7.0	2.0	38	56386	57617
1.64	7.0	2.0	38	56387	57619
1.65	7.0	2.0	38	56388	57621
1.66	7.0	2.0	38	56389	57623
1.67	7.0	2.0	38	56390	57625
1.68	7.0	2.0	38	56391	57627
1.69	7.0	2.0	38	56392	57629
1.70	7.0	2.0	38	56393	57631
1.71	7.0	2.0	38	56394	57633
1.72	7.0	2.0	38	56395	57635
1.73	7.0	2.0	38	56396	57637
1.74	7.0	2.0	38	56397	57639
1.75	7.0	2.0	38	56398	57641
1.76	8.0	2.0	38	56399	57643
1.77	8.0	2.0	38	56400	57645
1.78	8.0	2.0	38	56401	57647
1.79	8.0	2.0	38	56402	57649

DIXI 1135

P. 63 P. 74



Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
1.80	8.0	2.0	38	56403	57651
1.81	8.0	2.0	38	56404	57653
1.82	8.0	2.0	38	56405	57655
1.83	8.0	2.0	38	56406	57657
1.84	8.0	2.0	38	56407	57659
1.85	8.0	2.0	38	56408	57661
1.86	8.0	2.0	38	56409	57663
1.87	8.0	2.0	38	56410	57665
1.88	8.0	2.0	38	56411	57667
1.89	8.0	2.0	38	56412	57669
1.90	8.0	2.0	38	56413	57671
1.91	8.0	2.0	38	56414	57673
1.92	8.0	2.0	38	56415	57675
1.93	8.0	2.0	38	56416	57677
1.94	8.0	2.0	38	56417	57679
1.95	8.0	2.0	38	56418	57681
1.96	8.0	2.0	38	56419	57683
1.97	8.0	2.0	38	56420	57685
1.98	8.0	2.0	38	56421	57687
1.99	8.0	2.0	38	56422	57689
2.00	9.0	2.5	43	951030	951165
2.01	9.0	2.5	43	951034	951166
2.02	9.0	2.5	43	951035	951167
2.03	9.0	2.5	43	951036	951168
2.04	9.0	2.5	43	951039	951169
2.05	9.0	2.5	43	59122	951170
2.06	9.0	2.5	43	951040	951171
2.07	9.0	2.5	43	951041	951172
2.08	9.0	2.5	43	951042	951173
2.09	9.0	2.5	43	951043	951214
2.10	9.0	2.5	43	951058	951215
2.11	9.0	2.5	43	951059	951216
2.12	9.0	2.5	43	951060	951217
2.13	9.0	2.5	43	951061	951218
2.14	9.0	2.5	43	951062	951219
2.15	9.0	2.5	43	951063	951220
2.16	9.0	2.5	43	951064	951621
2.17	9.0	2.5	43	951065	951622
2.18	9.0	2.5	43	951066	951624
2.19	9.0	2.5	43	951067	951625

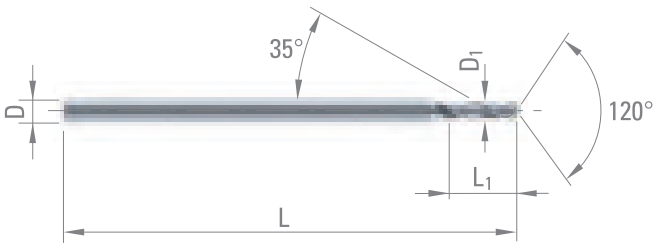
$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
2.20	9.0	2.5	43	951068	951626
2.21	9.0	2.5	43	951069	951627
2.22	9.0	2.5	43	951070	951628
2.23	9.0	2.5	43	951071	951629
2.24	9.0	2.5	43	951072	951630
2.25	9.0	2.5	43	951073	951631
2.26	9.0	2.5	43	951074	951632
2.27	9.0	2.5	43	951075	951633
2.28	9.0	2.5	43	951076	951634
2.29	9.0	2.5	43	951077	951636
2.30	9.0	2.5	43	951078	951637
2.31	9.0	2.5	43	951079	951638
2.32	9.0	2.5	43	951080	951639
2.33	9.0	2.5	43	951081	951640
2.34	9.0	2.5	43	951082	951641
2.35	9.0	2.5	43	951083	951642
2.36	9.0	2.5	43	951084	951643
2.37	9.0	2.5	43	951085	951644
2.38	9.0	2.5	43	951086	951645
2.39	9.0	2.5	43	951087	951646
2.40	9.0	2.5	43	951089	951647
2.41	9.0	2.5	43	951090	951648
2.42	9.0	2.5	43	951091	951649
2.43	9.0	2.5	43	951092	951650
2.44	9.0	2.5	43	951093	951651
2.45	9.0	2.5	43	951094	951652
2.46	9.0	2.5	43	951095	951653
2.47	9.0	2.5	43	951096	951654
2.48	9.0	2.5	43	951097	951655
2.49	9.0	2.5	43	951098	951656

DIXI 1136

FORETS HÉLICOÏDAUX
CORPS RENFORCÉ
TOLÉRANCE 0/+4µm

Z = 2

P. 63 P. 74



Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu

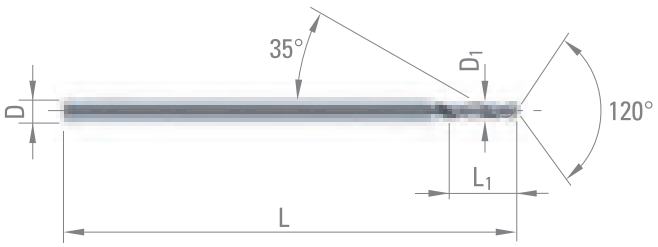
$D_{1\ 0/+0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
0.20	1.5	1.5	30	990662	990642
0.21	1.5	1.5	30	990643	990676
0.22	1.5	1.5	30	990644	990677
0.23	1.5	1.5	30	990674	990678
0.24	1.5	1.5	30	990675	990679
0.25	2.0	1.5	30	990680	990659
0.26	2.0	1.5	30	990681	990660
0.27	2.0	1.5	30	990682	990663
0.28	2.0	1.5	30	990683	990664
0.29	2.0	1.5	30	990631	990665
0.30	2.0	1.5	30	990658	990666
0.31	2.5	1.5	30	990667	990645
0.32	2.5	1.5	30	990668	990646
0.33	2.5	1.5	30	990669	990647
0.34	2.5	1.5	30	990670	990648
0.35	2.5	1.5	30	990671	990649
0.36	2.5	1.5	30	990632	990650
0.37	2.5	1.5	30	990672	990651
0.38	2.5	1.5	30	990673	990652
0.39	3.0	1.5	30	990653	990633
0.40	3.0	1.5	30	990654	990634
0.41	3.0	1.5	30	990655	990635
0.42	3.0	1.5	30	990656	990636
0.43	3.0	1.5	30	990684	990637
0.44	3.0	1.5	30	990685	990638
0.45	3.0	1.5	30	990686	990639
0.46	3.0	1.5	30	990687	990640
0.47	3.0	1.5	30	990688	990641
0.48	3.0	1.5	30	990689	990657
0.49	3.0	1.5	30	990690	990661
0.50	4.0	1.5	30	990616	990605
0.51	4.0	1.5	30	990617	990606
0.52	4.0	1.5	30	990618	990607
0.53	4.0	1.5	30	990619	990608
0.54	4.0	1.5	30	990620	990609
0.55	4.0	1.5	30	990621	990610
0.56	4.0	1.5	30	990622	990630
0.57	4.0	1.5	30	990623	990592
0.58	4.0	1.5	30	990624	990593
0.59	4.0	1.5	30	990625	990594
0.60	4.5	1.5	30	990626	990595
0.61	4.5	1.5	30	990627	990596
0.62	4.5	1.5	30	990628	990597
0.63	4.5	1.5	30	990629	990598
0.64	4.5	1.5	30	990599	990604

$D_{1\ 0/+0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
0.65	4.5	1.5	30	990600	990612
0.66	4.5	1.5	30	990601	990613
0.67	4.5	1.5	30	990602	990614
0.68	4.5	1.5	30	990440	990615
0.69	4.5	1.5	30	990603	990611
0.70	4.5	1.5	30	990523	990576
0.71	4.5	1.5	30	990524	990577
0.72	4.5	1.5	30	990525	990578
0.73	4.5	1.5	30	990526	990579
0.74	4.5	1.5	30	990527	990581
0.75	4.5	1.5	30	990528	990582
0.76	4.5	1.5	30	990529	990588
0.77	4.5	1.5	30	990530	990589
0.78	4.5	1.5	30	990531	990590
0.79	4.5	1.5	30	990532	990591
0.80	5.0	1.5	30	990426	990485
0.81	5.0	1.5	30	990410	990550
0.82	5.0	1.5	30	990411	990551
0.83	5.0	1.5	30	990412	990552
0.84	5.0	1.5	30	990413	990470
0.85	5.0	1.5	30	990414	990471
0.86	5.0	1.5	30	990415	990472
0.87	5.0	1.5	30	990416	990473
0.88	5.0	1.5	30	990417	990504
0.89	5.0	1.5	30	990418	990505
0.90	5.0	1.5	30	990419	990506
0.91	5.0	1.5	30	990420	990507
0.92	5.0	1.5	30	990421	990508
0.93	5.0	1.5	30	990422	990509
0.94	5.0	1.5	30	990423	990510
0.95	5.0	1.5	30	990424	990511
0.96	5.0	1.5	30	990425	990512
0.97	5.0	1.5	30	990444	990474
0.98	5.0	1.5	30	990445	990475
0.99	5.0	1.5	30	990446	990476
1.00	5.0	1.5	30	990447	990477
1.01	5.0	1.5	30	990448	990478
1.02	5.0	1.5	30	990339	990479
1.03	5.0	1.5	30	990340	990480
1.04	5.0	1.5	30	990341	990543
1.05	5.0	1.5	30	990441	990544
1.06	5.0	1.5	30	990442	990449
1.07	5.0	1.5	30	990443	990488
1.08	5.0	1.5	30	990427	990489
1.09	5.0	1.5	30	990428	990490

Cobalt Outils Coupants

DIXI 1136

P. 63 P. 74



Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu

$D_{1\ 0/+0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
1.10	5.0	1.5	30	990429	990491
1.11	5.0	1.5	30	990430	990492
1.12	5.0	1.5	30	990431	990493
1.13	5.0	1.5	30	990432	990494
1.14	5.0	1.5	30	990433	990495
1.15	5.0	1.5	30	990434	990496
1.16	5.0	1.5	30	990435	990497
1.17	5.0	1.5	30	990436	990498
1.18	5.0	1.5	30	990437	990499
1.19	5.0	1.5	30	990438	990466
1.20	6.0	1.5	30	990439	990500
1.21	6.0	1.5	30	990342	990371
1.22	6.0	1.5	30	990343	990372
1.23	6.0	1.5	30	990344	990373
1.24	6.0	1.5	30	990345	990517
1.25	6.0	1.5	30	990346	990518
1.26	6.0	1.5	30	990347	990368
1.27	6.0	1.5	30	990348	990369
1.28	6.0	1.5	30	990349	990370
1.29	6.0	1.5	30	990350	990458
1.30	6.0	1.5	30	990351	990459
1.31	6.0	1.5	30	990352	990460
1.32	6.0	1.5	30	990353	990461
1.33	6.0	1.5	30	990354	990462
1.34	6.0	1.5	30	990355	990463
1.35	6.0	1.5	30	990356	990464
1.36	6.0	1.5	30	990357	990465
1.37	6.0	1.5	30	990358	990467
1.38	6.0	1.5	30	990359	990468
1.39	6.0	1.5	30	990360	990469
1.40	6.0	1.5	30	990361	990393
1.41	6.0	1.5	30	990362	990401
1.42	6.0	1.5	30	990363	990402
1.43	6.0	1.5	30	990364	990403
1.44	6.0	1.5	30	990365	990404
1.45	6.0	1.5	30	990366	990405
1.46	6.0	1.5	30	990367	990406
1.47	6.0	1.5	30	990331	990407
1.48	6.0	1.5	30	990332	990408
1.49	6.0	1.5	30	990333	990409
1.50	7.0	2.0	38	990400	990583
1.51	7.0	2.0	38	990533	990584
1.52	7.0	2.0	38	990534	990560
1.53	7.0	2.0	38	990535	990561
1.54	7.0	2.0	38	990536	990481

$D_{1\ 0/+0.004}$	L_1	D_{h5}	L	CARBURE	DICUT
1.55	7.0	2.0	38	990537	990482
1.56	7.0	2.0	38	990538	990483
1.57	7.0	2.0	38	990539	990484
1.58	7.0	2.0	38	990540	990501
1.59	7.0	2.0	38	990541	990502
1.60	7.0	2.0	38	990542	990503
1.61	7.0	2.0	38	990545	990486
1.62	7.0	2.0	38	990546	990487
1.63	7.0	2.0	38	990547	990513
1.64	7.0	2.0	38	990548	990514
1.65	7.0	2.0	38	990549	990515
1.66	7.0	2.0	38	990519	990516
1.67	7.0	2.0	38	990520	990562
1.68	7.0	2.0	38	990521	990563
1.69	7.0	2.0	38	990522	990564
1.70	7.0	2.0	38	990374	990565
1.71	7.0	2.0	38	990375	990585
1.72	7.0	2.0	38	990376	990586
1.73	7.0	2.0	38	990377	990587
1.74	7.0	2.0	38	990378	990553
1.75	7.0	2.0	38	990394	990554
1.76	8.0	2.0	38	990395	990555
1.77	8.0	2.0	38	990396	990556
1.78	8.0	2.0	38	990397	990557
1.79	8.0	2.0	38	990398	990558
1.80	8.0	2.0	38	990399	990559
1.81	8.0	2.0	38	990379	990566
1.82	8.0	2.0	38	990380	990567
1.83	8.0	2.0	38	990381	990568
1.84	8.0	2.0	38	990334	990569
1.85	8.0	2.0	38	990335	990570
1.86	8.0	2.0	38	990336	990571
1.87	8.0	2.0	38	990337	990572
1.88	8.0	2.0	38	990338	990573
1.89	8.0	2.0	38	990382	990574
1.90	8.0	2.0	38	990383	990575
1.91	8.0	2.0	38	990384	990450
1.92	8.0	2.0	38	990385	990451
1.93	8.0	2.0	38	990386	990452
1.94	8.0	2.0	38	990387	990453
1.95	8.0	2.0	38	990388	990454
1.96	8.0	2.0	38	990389	990455
1.97	8.0	2.0	38	990390	990456
1.98	8.0	2.0	38	990391	990457
1.99	8.0	2.0	38	990392	990580

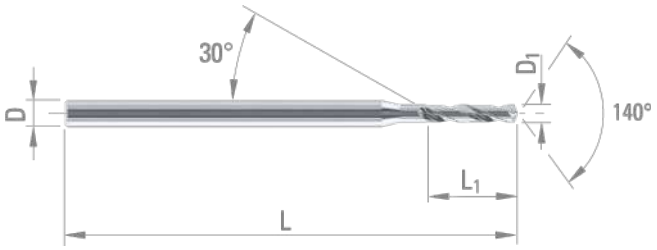
DIXI 1137

FORETS HÉLICOÏDAUX
POUR LAITON SANS PLOMB

Z = 2

P. 63 P. 74

Acier + Pb | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu



$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	DRYCUT*
0.15	0.8	1.0	30	377730	378235
0.16	0.8	1.0	30	377731	378236
0.17	0.9	1.0	30	377732	378237
0.18	0.9	1.0	30	377733	378238
0.19	1.0	1.0	30	377734	378239
0.20	1.0	1.0	30	377735	378240
0.21	1.1	1.0	30	377736	378241
0.22	1.1	1.0	30	377737	378242
0.23	1.2	1.0	30	377738	378243
0.24	1.2	1.0	30	377739	378244
0.25	1.3	1.0	30	377740	378245
0.26	1.3	1.0	30	377741	378246
0.27	1.4	1.0	30	377742	378247
0.28	1.4	1.0	30	377743	378248
0.29	1.5	1.0	30	377744	378249
0.30	1.5	1.0	30	377745	378250
0.31	1.6	1.0	30	377746	378251
0.32	1.6	1.0	30	377747	378252
0.33	1.7	1.0	30	377748	378253
0.34	1.7	1.0	30	377749	378254
0.35	1.8	1.0	30	377750	378255
0.36	1.8	1.0	30	377751	378256
0.37	1.9	1.0	30	377752	378257
0.38	1.9	1.0	30	377753	378258
0.39	2.0	1.0	30	377754	378259
0.40	2.0	1.0	30	377755	378260
0.41	2.1	1.0	30	377756	378261
0.42	2.1	1.0	30	377757	378262
0.43	2.2	1.0	30	377758	378263
0.44	2.2	1.0	30	377759	378264
0.45	2.3	1.0	30	377760	378265
0.46	2.3	1.0	30	377761	378266
0.47	2.4	1.0	30	377762	378267
0.48	2.4	1.0	30	377763	378268
0.49	2.5	1.0	30	377764	378269
0.50	2.5	1.0	30	377765	378270
0.51	2.6	1.0	30	377766	378271
0.52	2.6	1.0	30	377767	378272
0.53	2.7	1.0	30	377768	378273
0.54	2.7	1.0	30	377769	378274
0.55	2.8	1.0	30	377770	378275
0.56	2.8	1.0	30	377771	378276
0.57	2.9	1.0	30	377772	378277
0.58	2.9	1.0	30	377773	378278
0.59	3.0	1.0	30	377774	378279
0.60	3.0	1.0	30	377775	378280
0.61	3.1	1.0	30	377776	378281
0.62	3.1	1.0	30	377777	378282
0.63	3.2	1.0	30	377778	378283
0.64	3.2	1.0	30	377779	378284
0.65	3.3	1.0	30	377780	378285
0.66	3.3	1.0	30	377781	378286
0.67	3.4	1.0	30	377782	378287
0.68	3.4	1.0	30	377783	378288
0.69	3.5	1.0	30	377784	378289
0.70	3.5	1.0	30	377785	378290
0.71	3.6	1.0	30	377786	378291
0.72	3.6	1.0	30	377787	378292
0.73	3.7	1.0	30	377788	378293
0.74	3.7	1.0	30	377789	378294
0.75	3.8	1.0	30	377790	378295
0.76	3.8	1.0	30	377791	378296
0.77	3.9	1.0	30	377792	378297
0.78	3.9	1.0	30	377793	378298
0.79	4.0	1.0	30	377794	378299
0.80	4.0	1.5	30	377795	378300
0.81	4.1	1.5	30	377796	378301
0.82	4.1	1.5	30	377797	378302
0.83	4.2	1.5	30	377798	378303
0.84	4.2	1.5	30	377799	378304
0.85	4.3	1.5	30	377800	378305
0.86	4.3	1.5	30	377801	378306
0.87	4.4	1.5	30	377802	378307
0.88	4.4	1.5	30	377803	378308
0.89	4.5	1.5	30	377804	378309
0.90	4.5	1.5	30	377805	378310
0.91	4.6	1.5	30	377806	378311
0.92	4.6	1.5	30	377807	378312
0.93	4.7	1.5	30	377808	378313
0.94	4.7	1.5	30	377809	378314
0.95	4.8	1.5	30	377810	378315
0.96	4.8	1.5	30	377811	378316
0.97	4.9	1.5	30	377812	378317
0.98	4.9	1.5	30	377813	378318
0.99	5.0	1.5	30	377814	378319
1.00	5.0	1.5	30	377815	378320
1.05	5.3	1.5	30	377816	378321
1.10	5.5	1.5	30	377817	378322
1.15	5.8	1.5	30	377818	378323
1.20	6.0	1.5	30	377819	378324
1.25	6.3	1.5	30	377820	378325
1.30	6.5	1.5	30	377821	378326
1.35	6.8	1.5	30	377822	378327
1.40	7.0	1.5	30	377823	378328
1.45	7.3	1.5	30	377824	378329
1.50	7.5	2.0	32	377825	378330
1.55	7.8	2.0	32	377826	378331
1.60	8.0	2.0	32	377827	378332
1.65	8.3	2.0	32	377828	378333
1.70	8.5	2.0	32	377829	378334
1.75	8.8	2.0	32	377830	378335
1.80	9.0	2.0	32	377831	378336
1.85	9.3	2.0	32	377832	378337
1.90	9.5	2.0	32	377833	378338
1.95	9.8	2.0	32	377834	378339
2.00	10.0	3.0	38	377835	378340
2.10	10.5	3.0	38	377836	378341
2.20	11.0	3.0	38	377837	378342
2.30	11.5	3.0	38	377838	378343
2.40	12.0	3.0	38	377839	378344
2.50	12.5	3.0	38	377840	378345
2.60	13.0	3.0	38	377841	378346
2.70	13.5	3.0	38	377842	378347
2.80	14.0	3.0	38	377843	378348
2.90	14.5	3.0	38	377844	378349
3.00	15.0	3.0	38	377845	378350

* pour matériaux non-ferreux

Cobalt Outils Coupants

DIXI 1138

FORETS HÉLICOÏDAUX
CORPS RENFORCÉ

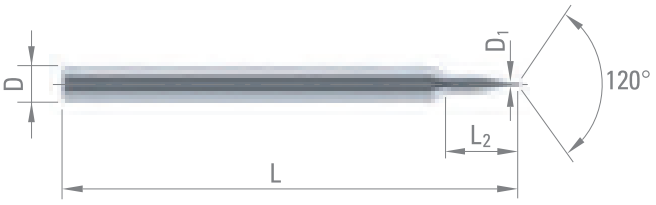
Z = 2

P. 63 P. 74

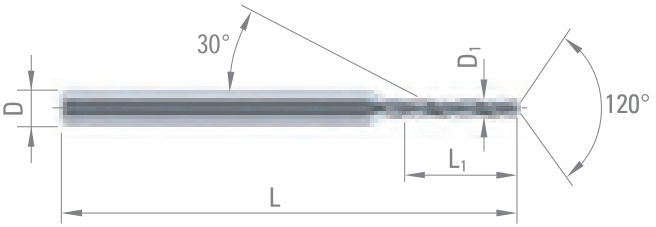
D_1 > 0.8

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu

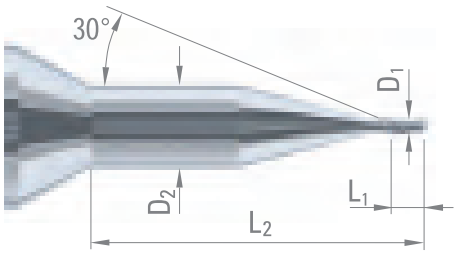
Ø 0.05 < Ø 0.50



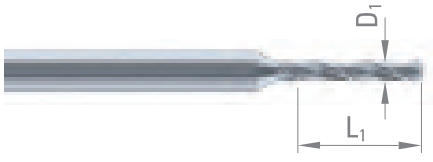
Ø 0.50 ≤ Ø 2.80



$D_{1\ 0/-0.004}$	L_1	D_2	L_2	D_{h5}	L	CARBURE	TiAlN
0.05	0.35	1.5	5.35	3	38	962810	
0.06	0.40	1.5	5.40	3	38	962809	
0.07	0.50	1.5	5.50	3	38	962808	
0.08	0.60	1.5	5.65	3	38	962807	
0.09	0.65	1.5	5.70	3	38	962806	
0.10	0.70	1.5	5.70	3	38	960016	960258
0.15	1.00	1.5	6.00	3	38	960014	200513
0.20	1.00	1.5	6.00	3	38	960013	200512
0.25	1.00	1.5	6.00	3	38	960012	200511
0.30	1.50	1.5	6.50	3	38	960011	200510
0.35	1.50	1.5	6.50	3	38	960010	200509
0.40	2.00	1.5	7.00	3	38	960009	200508
0.45	3.60	1.5	8.60	3	38	960007	200507



$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	TiAlN
0.50	4.0	3	38	200157	200439
0.53	4.5	3	38	960034	200514
0.55	4.5	3	38	200189	200471
0.60	4.5	3	38	200148	200429
0.62	5.0	3	38	960035	200515
0.65	5.0	3	38	200190	200472
0.70	5.6	3	38	200149	200431
0.71	5.6	3	38	960036	200516
0.75	5.6	3	38	200191	200473
0.80	6.3	3	38	200150	200432
0.81	6.3	3	38	200210	200492
0.82	6.3	3	38	200185	200467
0.83	6.3	3	38	200167	200449
0.84	6.3	3	38	200168	200450
0.85	6.3	3	38	200151	200433
0.86	7.1	3	38	200211	200493
0.87	7.1	3	38	200207	200489
0.88	7.1	3	38	200208	200490
0.89	7.1	3	38	200204	200486
0.90	7.1	3	38	200152	200434
0.91	7.1	3	38	200209	200491
0.92	7.1	3	38	200213	200495
0.93	7.1	3	38	200184	200466
0.94	7.1	3	38	200186	200468
0.95	7.1	3	38	200192	200474
0.96	9.0	3	38	200160	200442
0.97	9.0	3	38	200187	200469
0.98	9.0	3	38	200201	200483
0.99	9.0	3	38	200182	200464
1.00	9.0	3	38	959533	200430
1.01	9.0	3	38	200169	200451



Cobalt Outils Coupants

DIXI 1138

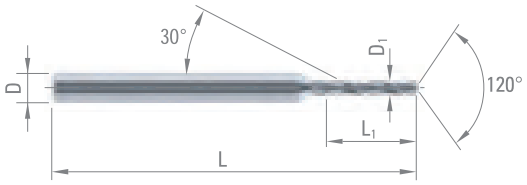
$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	TiAlN
1.02	9.0	3	38	200178	200460
1.03	9.0	3	38	200214	200496
1.04	9.0	3	38	200215	200497
1.05	9.0	3	38	200193	200475
1.06	9.0	3	38	200219	200501
1.07	9.0	3	38	200179	200461
1.08	9.0	3	38	200180	200462
1.09	9.0	3	38	200216	200498
1.10	9.0	3	38	200194	200476
1.11	9.0	3	38	200164	200446
1.12	9.0	3	38	200183	200465
1.13	9.0	3	38	200212	200494
1.14	9.0	3	38	200220	200502
1.15	9.0	3	38	200195	200477
1.16	10.0	3	38	200166	200448
1.17	10.0	3	38	200163	200445
1.18	10.0	3	38	200177	200459
1.19	10.0	3	38	200217	200499
1.20	10.0	3	38	200196	200478
1.21	10.0	3	38	200165	200447
1.22	10.0	3	38	200181	200463
1.23	10.0	3	38	200161	200443
1.24	10.0.	3	38	200221	200503
1.25	10.0	3	38	200197	200479
1.26	10.0	3	38	200206	200488
1.27	10.0	3	38	200203	200485
1.28	10.0	3	38	200218	200500
1.29	10.0	3	38	200222	200504
1.30	10.0	3	38	200153	200435
1.31	11.2	3	38	200188	200470
1.32	11.2	3	38	200176	200458
1.33	11.2	3	38	200162	200444
1.34	11.2	3	38	200202	200484
1.35	11.2	3	38	200198	200480
1.36	11.2	3	38	200205	200487
1.37	11.2	3	38	200158	200440
1.38	11.2	3	38	200223	200505
1.39	11.2	3	38	200224	200506
1.40	11.2	3	38	200154	200436
1.45	11.2	3	38	200199	200481
1.50	11.2	3	38	200200	200482
1.55	12.0	3	38	200170	200452
1.60	12.0	3	38	200171	200453
1.65	12.0	3	38	200172	200454
1.70	12.0	3	38	200155	200437
1.75	12.0	3	38	200173	200455
1.80	12.0	3	38	200159	200441
1.85	12.0	3	38	200174	200456
1.90	12.0	3	38	200156	200438
1.95	12.0	3	38	200175	200457
2.00	12.0	3	38	960037	200517
2.05	15.0	3	38	960038	200518
2.10	15.0	3	38	960039	200519
2.15	15.0	3	38	960040	200520
2.20	15.0	3	38	960041	200521
2.25	15.0	3	38	960042	200522
2.30	15.0	3	38	960043	200523
2.35	15.0	3	38	960044	200524
2.40	15.0	3	38	960045	200525
2.45	15.0	3	38	960046	200526
2.50	15.0	3	38	960047	200527
2.55	15.0	3	38	960048	200528
2.80	16.0	3	38	960049	200529

P. 63

P. 74

$D_1 \geq 0.5$

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu



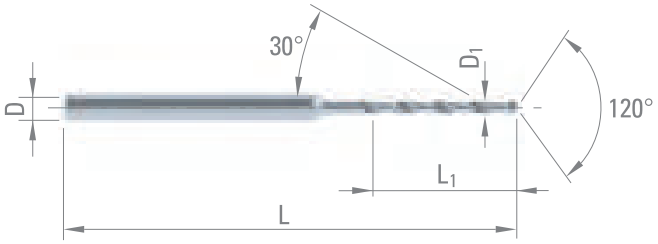
Cobalt Outils Coupants

FORETS HÉLICOÏDAUX
CORPS RENFORCÉ

Z = 2

$L_1 = 12 \times D_1$

P. 63 P. 74



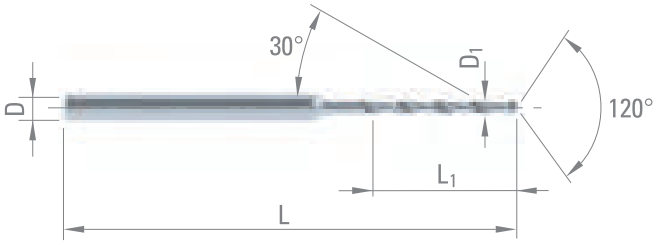
Acier + Pb	Acier faibl. allié	Aciers fort. allié	Acier inox aust.	Fontes
Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	TiAlN
0.50	6.00	3	38	317729	317900
0.51	6.10	3	38	317730	317901
0.52	6.30	3	38	317731	317902
0.53	6.40	3	38	317732	317903
0.54	6.50	3	38	317733	317904
0.55	6.60	3	38	317734	317905
0.56	6.70	3	38	317735	317906
0.57	6.90	3	38	317736	317907
0.58	7.00	3	38	317737	317908
0.59	7.10	3	38	317738	317909
0.60	7.20	3	38	317739	317910
0.61	7.30	3	38	317740	317911
0.62	7.50	3	38	317741	317912
0.63	7.60	3	38	317742	317913
0.64	7.70	3	38	317743	317914
0.65	7.80	3	38	317744	317915
0.66	7.90	3	38	317745	317916
0.67	8.10	3	38	317746	317917
0.68	8.20	3	38	317747	317918
0.69	8.30	3	38	317748	317919
0.70	8.40	3	38	317749	317920
0.71	8.50	3	38	317750	317921
0.72	8.70	3	38	317751	317922
0.73	8.80	3	38	317752	317923
0.74	8.90	3	38	317753	317924
0.75	9.00	3	38	317754	317925
0.76	9.10	3	38	317755	317926
0.77	9.30	3	38	317756	317927
0.78	9.40	3	38	317757	317928
0.79	9.50	3	38	317758	317929
0.80	9.60	3	38	317759	317930
0.81	9.70	3	38	317760	317931
0.82	9.90	3	38	317761	317932
0.83	10.00	3	38	317762	317933
0.84	10.10	3	38	317763	317934
0.85	10.20	3	38	317764	317935
0.86	10.30	3	38	317765	317936
0.87	10.50	3	38	317766	317937
0.88	10.60	3	38	317767	317938
0.89	10.70	3	38	317768	317939
0.90	10.80	3	38	317769	317940
0.91	10.90	3	38	317770	317941
0.92	11.10	3	38	317771	317942
0.93	11.20	3	38	317772	317943
0.94	11.30	3	38	317773	317944

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	TiAlN
0.95	11.40	3	38	317774	317945
0.96	11.50	3	38	317775	317946
0.97	11.70	3	38	317776	317947
0.98	11.80	3	38	317777	317948
0.99	11.90	3	38	317778	317949
1.00	12.00	3	38	317779	317950
1.01	12.10	3	38	317780	317951
1.02	12.30	3	38	317781	317952
1.03	12.40	3	38	317782	317953
1.04	12.50	3	38	317783	317954
1.05	12.60	3	38	317784	317955
1.06	12.70	3	38	317785	317956
1.07	12.90	3	38	317786	317957
1.08	13.00	3	38	317787	317958
1.09	13.10	3	38	317788	317959
1.10	13.20	3	38	317789	317960
1.11	13.30	3	38	317790	317961
1.12	13.50	3	38	317791	317962
1.13	13.60	3	38	317792	317963
1.14	13.70	3	38	317793	317964
1.15	13.80	3	38	317794	317965
1.16	13.90	3	38	317795	317966
1.17	14.10	3	38	317796	317967
1.18	14.20	3	38	317797	317968
1.19	14.30	3	38	317798	317969
1.20	14.40	3	38	317799	317970
1.21	14.50	3	38	317800	317971
1.22	14.70	3	38	317801	317972
1.23	14.80	3	38	317802	317973
1.24	14.90	3	38	317803	317974
1.25	15.00	3	38	317804	317975
1.26	15.10	3	50	317805	317976
1.27	15.30	3	50	317806	317977
1.28	15.40	3	50	317807	317978
1.29	15.50	3	50	317808	317979
1.30	15.60	3	50	317809	317980
1.31	15.70	3	50	317810	317981
1.32	15.90	3	50	317811	317982
1.33	16.00	3	50	317812	317983
1.34	16.10	3	50	317813	317984
1.35	16.20	3	50	317814	317985
1.36	16.30	3	50	317815	317986

DIXI 1139

P. 63 P. 74



Acier + Pb | Acier faibl. allié | Aciers fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	TiAlN
1.37	16.50	3	50	317816	317987
1.38	16.60	3	50	317817	317988
1.39	16.70	3	50	317818	317989
1.40	16.80	3	50	317819	317990
1.41	16.90	3	50	317820	317991
1.42	17.10	3	50	317821	317992
1.43	17.20	3	50	317822	317993
1.44	17.30	3	50	317823	317994
1.45	17.40	3	50	317824	317995
1.46	17.50	3	50	317825	317996
1.47	17.70	3	50	317826	317997
1.48	17.80	3	50	317827	317998
1.49	17.90	3	50	317828	317999
1.50	18.00	3	50	317829	318000
1.51	18.10	3	50	317830	318001
1.52	18.30	3	50	317831	318002
1.53	18.40	3	50	317832	318003
1.54	18.50	3	50	317833	318004
1.55	18.60	3	50	317834	318005
1.56	18.70	3	50	317835	318006
1.57	18.90	3	50	317836	318007
1.58	19.00	3	50	317837	318008
1.59	19.10	3	50	317838	318009
1.60	19.20	3	50	317839	318010
1.61	19.30	3	50	317840	318011
1.62	19.40	3	50	317841	318012
1.63	19.60	3	50	317842	318013
1.64	19.70	3	50	317843	318014
1.65	19.80	3	50	317844	318015
1.66	19.90	3	50	317845	318016
1.67	20.10	3	50	317846	318017
1.68	20.20	3	50	317847	318018
1.69	20.30	3	50	317848	318019
1.70	20.40	3	50	317849	318020
1.71	20.50	3	50	317850	318021
1.72	20.70	3	50	317851	318022
1.73	20.80	3	50	317852	318023
1.74	20.90	3	50	317853	318024
1.75	21.00	3	50	317854	318025
1.76	21.10	3	50	317855	318026
1.77	21.30	3	50	317856	318027
1.78	21.40	3	50	317857	318028
1.79	21.50	3	50	317858	318029

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE	TiAlN
1.80	21.60	3	50	317859	318030
1.81	21.70	3	50	317860	318031
1.82	21.90	3	50	317861	318032
1.83	22.00	3	50	317862	318033
1.84	22.10	3	50	317863	318034
1.85	22.20	3	50	317864	318035
1.86	22.30	3	50	317865	318036
1.87	22.50	3	50	317866	318037
1.88	22.60	3	50	317867	318038
1.89	22.70	3	50	317868	318039
1.90	22.80	3	50	317869	318040
1.91	22.90	3	50	317870	318041
1.92	23.10	3	50	317871	318042
1.93	23.20	3	50	317872	318043
1.94	23.30	3	50	317873	318044
1.95	23.40	3	50	317874	318045
1.96	23.50	3	50	317875	318046
1.97	23.70	3	50	317876	318047
1.98	23.80	3	50	317877	318048
1.99	23.90	3	50	317878	318049
2.00	24.00	3	61	317879	318050
2.05	24.60	3	61	317880	318051
2.10	25.20	3	61	317881	318052
2.15	25.80	3	61	317882	318053
2.20	26.40	3	61	317883	318054
2.25	27.00	3	61	317884	318055
2.30	27.60	3	61	317885	318056
2.35	28.20	3	61	317886	318057
2.40	28.80	3	61	317887	318058
2.45	29.40	3	61	317888	318059
2.50	30.00	3	61	317889	318060
2.55	30.60	3	61	317890	318061
2.60	31.20	3	61	317891	318062
2.65	31.80	3	61	317892	318063
2.70	32.40	3	61	317893	318064
2.75	33.00	3	61	317894	318065
2.80	33.60	3	61	317895	318066
2.85	34.20	3	61	317896	318067
2.90	34.80	3	61	317897	318068
2.95	35.40	3	61	317898	318069
3.00	36.00	3	61	317899	318070

Cobalt Outils Coupants

DIXI 1149 TiAIN

FORETS HÉLICOÏDAUX AUTO-CENTRANTS CORPS RENFORCÉ

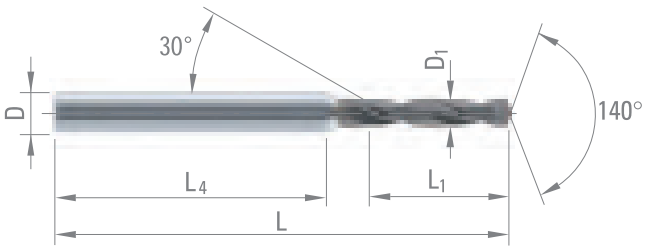
Z = 2

P. 63 P. 78

DIN 6537K

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu difficile | Alu



$D_{1\ h6}$	L_1	L_4	D_{h5}	L	TiAIN
1.00	5	26	3	38	976857
1.10	5	26	3	38	976858
1.20	5	26	3	38	976859
1.30	5	26	3	38	976860
1.40	5	26	3	38	976861
1.50	7	25	3	38	976862
1.60	7	25	3	38	976863
1.70	7	25	3	38	976864
1.80	7	25	3	38	976865
1.90	7	25	3	38	976866
2.00	9	35	3	50	43300
2.10	9	35	3	50	43301
2.20	9	35	3	50	43302
2.30	9	35	3	50	43303
2.40	9	35	3	50	43304
2.50	9	36	3	50	43305
2.60	11	31	4	50	43306
2.70	11	31	4	50	43307
2.80	11	31	4	50	41777
2.90	11	31	4	50	43308
3.00	14	39	6	62	43309
3.10	14	39	6	62	43310
3.175	14	39	6	62	64419
3.20	14	39	6	62	43311
3.30	14	39	6	62	43312
3.40	14	39	6	62	43313
3.50	14	39	6	62	43314
3.60	14	39	6	62	43315
3.70	14	40	6	62	43316
3.80	17	40	6	66	43317
3.90	17	40	6	66	43318
4.00	17	40	6	66	43319
4.10	17	40	6	66	43320
4.20	17	40	6	66	43321
4.30	17	40	6	66	43322
4.40	17	40	6	66	43323
4.50	17	40	6	66	43324
4.60	17	40	6	66	43325
4.70	17	40	6	66	43326

DIXI 1149 TiAIN

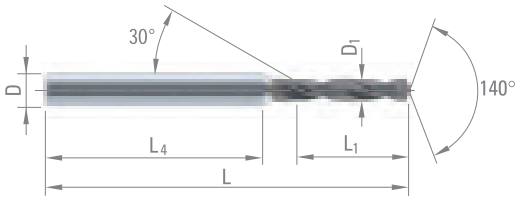
$D_{1\ h6}$	L_1	L_4	D_{h5}	L	TiAIN
4.762	20	37	6	66	43673
4.80	20	37	6	66	43327
4.90	20	38	6	66	43328
5.00	20	38	6	66	43329
5.10	20	38	6	66	966749
5.20	20	38	6	66	43330
5.30	20	38	6	66	43331
5.40	20	38	6	66	966750
5.50	20	38	6	66	43332
5.60	22	37	6	66	960752
5.70	22	37	6	66	966751
5.80	22	37	6	66	43333
5.90	22	37	6	66	966752
6.00	22	37	6	66	43334
6.20	24	43	8	79	43447
6.30	24	43	8	79	43538
6.35	24	43	8	79	44585
6.40	24	43	8	79	63641
6.50	24	43	8	79	39394
6.60	24	43	8	79	43539
6.70	24	43	8	79	966756
6.80	24	44	8	79	43540
6.90	24	44	8	79	966757
7.00	24	43	8	79	43541
7.20	29	38	8	79	56826
7.50	29	38	8	79	43542
7.80	29	38	8	79	43543
8.00	29	39	8	79	43544
8.20	35	40	10	89	43448
8.40	35	40	10	89	55450
8.50	35	40	10	89	42654
8.70	35	41	10	89	54604
8.80	35	41	10	89	56828
9.00	35	41	10	89	43545
9.20	35	41	10	89	55451
9.50	35	41	10	89	43546
9.80	35	41	10	89	43547
10.00	35	42	10	89	43548
10.10	40	47	12	102	978563
10.20	40	47	12	102	43549
10.50	40	47	12	102	43550
10.80	40	48	12	102	59472
11.00	40	48	12	102	43551
11.50	41	47	12	102	43552
12.00	42	47	12	102	43553
13.00	46	47	14	107	43554
14.00	49	45	14	107	43556

P. 63
P. 78

DIN 6537K

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu difficile | Alu



DIXI 1147 TiAIN

FORETS HÉLICOÏDAUX AUTO-CENTRANTS
CORPS RENFORCÉ

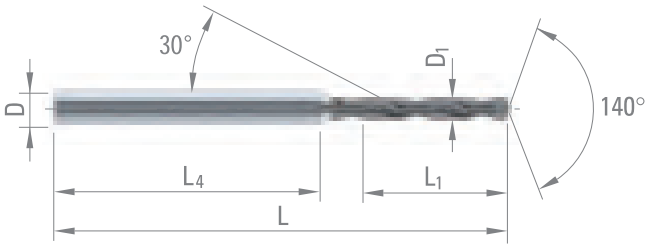
Z = 2

$L_1 = 6.5 \times D_1$

P. 63 P. 80

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alu



$D_{1\ h6}$	L_1	L_4	D_{h5}	L	TiAIN
0.50	3.3	29	3	38	960468
0.55	3.6	29	3	38	960469
0.60	3.9	29	3	38	960470
0.65	4.2	33	3	43	960471
0.70	4.6	33	3	43	960472
0.75	4.9	33	3	43	960473
0.80	5.2	32	3	43	960474
0.85	5.5	32	3	43	960475
0.90	5.9	32	3	43	960476
0.95	6.2	32	3	43	960477
1.00	6.5	31	3	43	960478
1.10	7.2	31	3	43	960479
1.20	7.8	37	3	50	960480
1.30	8.5	37	3	50	960481
1.40	9.1	36	3	50	960482
1.50	9.8	35	3	50	960483
1.60	10.4	35	3	50	960484
1.70	11.1	34	3	50	960485
1.80	11.7	34	3	50	960486
1.90	12.4	33	3	50	960487
2.00	13.0	43	4	62	960137
2.10	13.7	42	4	62	960138
2.20	14.3	42	4	62	960139
2.30	15.0	41	4	62	960140
2.40	15.6	41	4	62	960141
2.50	16.3	40	4	62	960142
2.60	16.9	39	4	62	960143
2.70	17.6	39	4	62	960144
2.80	18.2	38	4	62	960145
2.90	18.9	38	4	62	960146
3.00	19.5	37	4	62	960147
3.10	20.2	53	6	79	960148
3.20	20.8	52	6	79	960149
3.30	21.5	51	6	79	960150
3.40	22.1	51	6	79	960151
3.50	22.8	50	6	79	960152
3.60	23.4	50	6	79	966741
3.75	24.4	49	6	79	960153
3.80	24.7	48	6	79	960154
3.90	25.4	47	6	79	961304

DIXI 1147 TiAIN

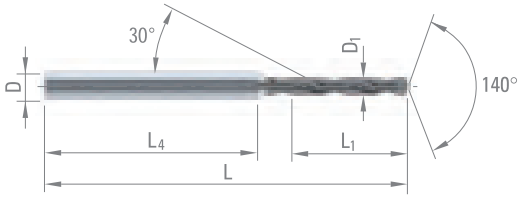
$D_{1\ h6}$	L_1	L_4	D_{h5}	L	TiAIN
4.00	26.0	47	6	79	960155
4.10	26.7	46	6	79	960156
4.20	27.3	45	6	79	960157
4.30	28.0	45	6	79	960158
4.40	28.6	44	6	79	959769
4.50	29.3	43	6	79	960159
4.60	29.9	43	6	79	960160
4.70	30.6	42	6	79	960161
4.80	31.2	42	6	79	960162
4.90	31.9	41	6	79	960163
5.00	32.5	50	6	89	959770
5.10	33.2	49	6	89	960167
5.20	33.8	49	6	89	960169
5.30	33.5	48	6	89	960170
5.40	35.1	48	6	89	966742
5.50	35.8	47	6	89	960171
5.60	36.4	46	6	89	960172
5.70	37.1	46	6	89	966743
5.80	37.7	45	6	89	960173
5.90	38.4	44	6	89	966744
6.00	39.0	44	6	89	960174
6.10	39.7	54	8	102	960175
6.20	40.3	53	8	102	960176
6.30	41.0	53	8	102	960177
6.35	41.3	53	8	102	960178
6.40	41.6	52	8	102	966745
6.50	42.3	51	8	102	960179
6.60	42.9	51	8	102	960180
6.70	43.6	50	8	102	966747
6.80	44.2	50	8	102	960181
6.90	44.9	49	8	102	966748
7.00	45.5	48	8	102	960182
7.20	46.8	47	8	102	960183
7.50	48.8	45	8	102	960184
7.80	50.7	43	8	102	960185
8.00	52.0	42	8	102	960186
8.20	53.3	54	10	118	960187
8.40	54.0	54	10	118	960188
8.50	55.3	52	10	118	960189
8.80	57.2	51	10	118	960190
9.00	58.5	49	10	118	960191
9.50	61.8	46	10	118	960192
9.80	63.7	44	10	118	960193
10.00	65.0	43	10	118	960194

P. 63

P. 80

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alu



Cobalt Outils Coupants

DIXI 1145-HH TiAIN

FORETS HÉLICOÏDAUX AUTO-CENTRANTS À TROUS DE LUBRIFICATION

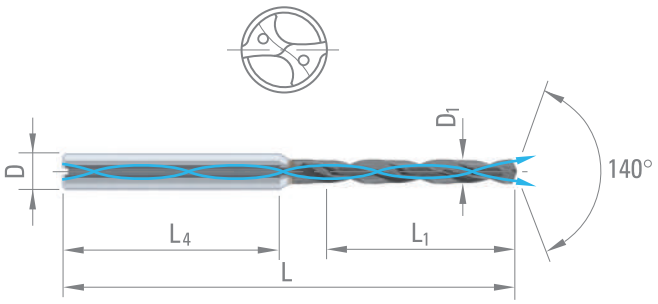
Z = 2

P. 63 P. 78

DIN 6537L

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu difficile | Alu



$D_{1\ h6}$	L_1	L_4	D_{h5}	L	TiAIN
0.80	5	26	3	38	954321
1.40	7	25	3	38	956694
1.50	11	20	3	38	956692
1.60	11	20	3	38	956690
1.70	11	20	3	38	956688
1.80	11	20	3	38	956686
1.90	11	20	3	38	956683
2.00	15	18	3	38	954320
2.10	15	18	3	38	956325
2.20	15	18	3	38	956326
2.30	15	26	4	50	956327
2.40	15	27	4	50	956328
2.50	18	24	4	50	956329
2.60	18	24	4	50	956330
2.70	18	24	4	50	956331
2.80	18	24	4	50	956332
2.90	23	35	6	66	956333
3.00	23	35	6	66	65470
3.10	23	35	6	66	953836
3.20	23	35	6	66	953835
3.30	23	35	6	66	65471
3.40	23	35	6	66	953837
3.50	23	35	6	66	65472
3.60	29	35	6	74	966718
3.70	29	35	6	74	966719
3.75	29	36	6	74	65473
3.80	29	36	6	74	953838
3.90	29	36	6	74	966720
4.00	29	36	6	74	45540
4.10	29	36	6	74	953839
4.20	29	36	6	74	56829
4.30	29	36	6	74	62995
4.40	29	36	6	74	956579
4.50	35	38	6	82	953840
4.60	35	38	6	82	966721
4.70	35	38	6	82	966722
4.80	35	38	6	82	45541
4.90	35	38	6	82	966826

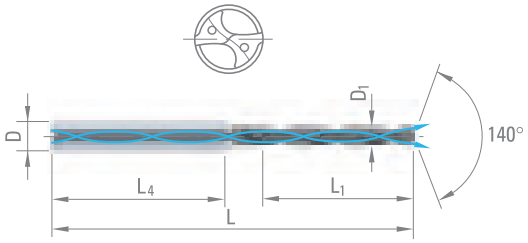
DIXI 1145-HH TiAIN

$D_{1\ h6}$	L_1	L_4	D_{h5}	L	TiAIN
5.00	35	39	6	82	43272
5.10	35	39	6	82	953841
5.20	35	39	6	82	56830
5.30	35	39	6	82	59465
5.40	35	39	6	82	953842
5.50	35	39	6	82	45542
5.60	35	39	6	82	954509
5.70	35	39	6	82	966723
5.80	35	39	6	82	59466
5.90	35	39	6	82	966724
6.00	35	40	6	82	38821
6.10	43	36	8	91	953843
6.20	43	36	8	91	56831
6.30	43	36	8	91	43279
6.35	43	36	8	91	59467
6.40	43	36	8	91	953844
6.50	43	36	8	91	39758
6.60	43	36	8	91	59468
6.70	43	36	8	91	956886
6.80	43	36	8	91	45614
6.90	43	36	8	91	966725
7.00	43	36	8	91	43283
7.20	43	36	8	91	56833
7.30	43	36	8	91	954510
7.40	43	36	8	91	59384
7.50	43	36	8	91	43284
7.60	43	36	8	91	954511
7.80	43	36	8	91	43285
8.00	43	-	8	91	39530
8.10	49	40	10	103	954512
8.20	49	40	10	103	56834
8.30	49	40	10	103	954513
8.40	49	40	10	103	59469
8.50	49	40	10	103	52633
8.60	49	40	10	103	954514
8.80	49	40	10	103	45615
9.00	49	41	10	103	43288
9.20	49	41	10	103	953849
9.40	49	41	10	103	954515
9.50	49	41	10	103	63430
9.60	49	41	10	103	954516
9.70	49	41	10	103	953846
9.80	49	41	10	103	44777
10.00	49	-	10	103	40751
10.10	56	47	12	118	954326
10.20	56	47	12	118	56837
10.30	56	47	12	118	954518
10.50	56	47	12	118	44152
10.60	56	47	12	118	954517
10.80	56	47	12	118	45616
11.00	56	48	12	118	43294
11.30	58	46	12	118	954519
11.50	58	46	12	118	45207
12.00	60	45	12	118	40752
13.00	65	45	14	124	44339
14.00	70	-	14	124	45649

P. 63 P. 78

DIN 6537L

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu difficile	Alu	



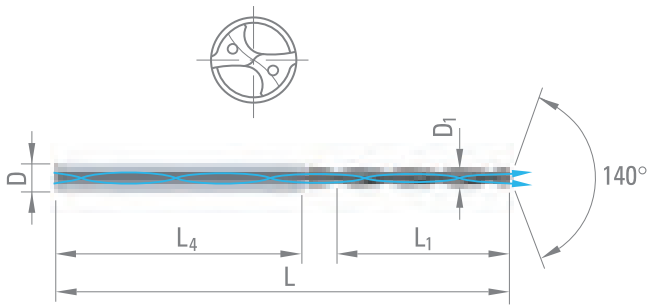
DIXI 1146-HH TiAIN

FORETS HÉLICOÏDAUX AUTO-CENTRANTS À TROUS DE LUBRIFICATION

Z = 2

P. 63 P. 80

$L_1 = 10 \times D_1$



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alu

$D_{1\ h6}$	L_1	L_4	D_{h5}	L	TiAlN
0.80	8.0	37	3	50	960206
0.85	8.5	37	3	50	960208
0.90	9.0	36	3	50	960209
0.95	9.5	36	3	50	960210
1.00	10.0	35	3	50	960211
1.10	11.0	34	3	50	960212
1.20	12.0	33	3	50	960214
1.30	13.0	33	3	50	960215
1.40	14.0	32	3	50	960216
1.50	15.0	43	3	62	960217
1.60	16.0	42	3	62	960218
1.70	17.0	41	3	62	960219
1.80	18.0	40	3	62	960220
1.90	19.0	39	3	62	960221
2.00	20.0	38	3	62	960222
2.10	21.0	37	3	62	960223
2.20	22.0	36	3	62	960224
2.30	23.0	51	4	79	960225
2.40	24.0	50	4	79	960226
2.50	25.0	49	4	79	960227
2.60	26.0	48	4	79	960228
2.70	27.0	47	4	79	960229
2.80	28.0	46	4	79	960230
2.90	29.0	44	6	79	960231
3.00	30.0	43	6	79	960232
3.10	31.0	52	6	89	966726
3.20	32.0	51	6	89	966727
3.30	33.0	50	6	89	960243
3.40	34.0	49	6	89	966728
3.50	35.0	48	6	89	960244
3.60	36.0	47	6	89	966729
3.75	37.5	46	6	89	960245
3.90	39.0	44	6	89	966730
4.00	40.0	56	6	102	960246
4.10	41.0	55	6	102	966731
4.20	42.0	54	6	102	960247
4.30	43.0	53	6	102	960248
4.40	44.0	52	6	102	966732
4.50	45.0	51	6	102	960249

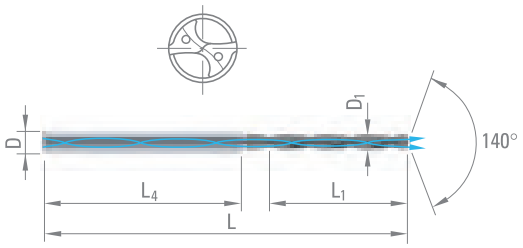
DIXI 1146-HH TiAIN

$D_{1\ h6}$	L_1	L_4	D_{h5}	L	TiAIN
4.60	46.0	50	6	102	966733
4.70	47.0	49	6	102	966734
4.80	48.0	48	6	102	960250
4.90	49.0	47	6	102	966735
5.00	50.0	46	6	102	960251
5.10	51.0	45	6	102	966736
5.20	52.0	44	6	102	960252
5.30	53.0	43	6	102	960253
5.40	54.0	42	6	102	966737
5.50	55.0	41	6	102	960254
5.60	56.0	56	6	118	966738
5.70	57.0	55	6	118	966739
5.80	58.0	54	6	118	960255
5.90	59.0	53	6	118	963660
6.00	60.0	52	6	118	960256
6.10	61.0	49	8	118	966740
6.20	62.0	48	8	118	960257
6.30	63.0	47	8	118	960426
6.35	63.5	47	8	118	960427
6.50	65.0	45	8	118	960428
6.60	66.0	59	8	133	960429
6.80	68.0	57	8	133	960430
6.90	69.0	56	8	133	963661
7.00	70.0	55	8	133	960431
7.20	72.0	53	8	133	960432
7.50	75.0	50	8	133	960433
7.80	78.0	47	8	133	960434
8.00	80.0	45	8	133	960435
8.20	82.0	59	10	151	960436
8.40	84.0	57	10	151	960437
8.50	85.0	56	10	151	960438
8.80	88.0	53	10	151	960439
9.00	90.0	60	10	160	960440
9.20	92.0	58	10	160	960441
9.40	94.0	56	10	160	960442
9.525	95.3	55	10	160	960443
9.80	98.0	52	10	160	960444
10.00	100.0	50	10	160	960445

P. 63
P. 80

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alu



DIXI 1280 XIDUR

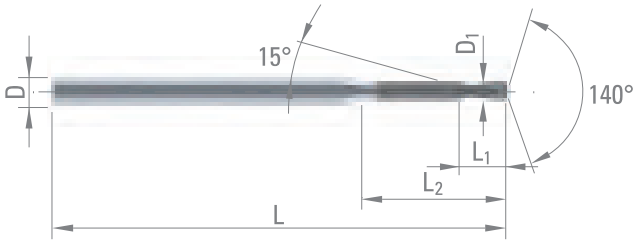
FORETS HÉLICOÏDAUX POUR ACIERS DURS CORPS RENFORCÉ

Z = 2

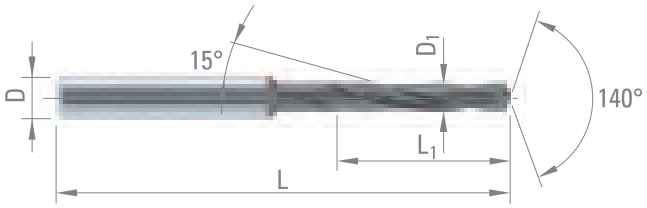
P. 63 P. 82

Acier fort. allié | Aciers Fontes 45-65 HRC | Super alliages Ni / Co

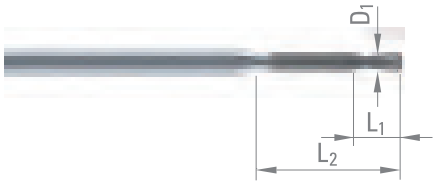
Ø 0.25 < Ø 2.50



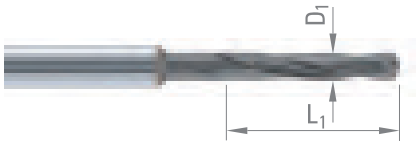
Ø 2.50 ≤ Ø 12.00



$D_{1\ h6}$	L_1	L_2	D_{h5}	L	XIDUR
0.25	0.75	2.0	3	38	957466
0.30	0.90	2.5	3	38	956658
0.40	1.20	3.2	3	38	956659
0.50	1.50	4.0	3	38	956660
0.60	1.80	4.8	3	38	956661
0.70	2.10	5.6	3	38	956662
0.80	2.40	6.5	3	38	956663
0.90	2.70	7.5	3	38	956664
1.00	3.00	8.0	3	38	956665
1.10	3.30	8.0	3	50	957524
1.20	3.60	10.0	3	50	956666
1.30	3.90	12.0	3	50	957525
1.40	4.20	12.0	3	50	957467
1.50	4.50	12.0	3	50	956667
1.60	4.80	15.0	3	50	957526
1.70	5.10	15.0	3	50	957527
1.80	5.40	15.0	3	50	956668
1.90	5.80	15.0	3	50	957528
2.00	6.00	16.0	3	50	956669



$D_{1\ h6}$	L_1	D_{h5}	L	XIDUR
2.50	15	3	62	62529
2.60	15	3	62	62843
2.70	15	3	62	62844
2.80	15	3	62	62845
2.90	15	3	62	62846
3.00	20	4	66	62530
3.175	20	4	66	62848
3.30	20	4	66	62849
3.40	20	4	66	62850
3.50	20	4	66	62531
3.57	20	4	66	62851
3.70	20	4	66	62852
3.80	20	4	66	62853
3.90	20	4	66	62854
4.00	30	6	66	62532
4.10	30	6	66	62855
4.20	30	6	66	62533
4.30	30	6	66	62857
4.365	30	6	66	62858
4.50	30	6	66	62859



Cobalt Outils Coupants

DIXI 1280 XIDUR

$D_{1\ h6}$	L_1	D_{h5}	L	XIDUR
4.60	30	6	66	62860
4.70	30	6	66	62861
4.762	30	6	66	62862
4.90	30	6	66	62863
5.00	30	6	66	62534
5.10	30	6	66	62414
5.16	30	6	66	62864
5.50	30	6	66	62867
5.80	30	6	66	62870
6.00	40	8	79	62872
6.35	40	8	79	62874
6.50	40	8	79	62877
6.80	40	8	79	62535
7.00	40	8	79	62878
7.50	40	8	79	62880
7.80	40	8	79	62881
8.00	50	10	89	62882
8.33	50	10	89	62883
8.50	50	10	89	62536
8.73	50	10	89	62884
9.00	50	10	89	62885
9.525	50	10	89	62886
9.80	50	10	89	62887
10.00	60	12	102	62888
10.20	60	12	102	62889
10.50	60	12	102	62890
10.80	60	12	102	62891
11.00	60	12	102	62895
11.50	60	12	102	62896
12.00	60	12	102	62897

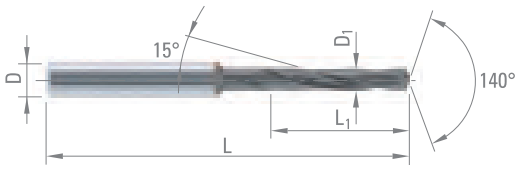
P. 63

P. 82

Acier fort. allié

Aciers Fontes 45-65 HRC

Super alliages Ni / Co



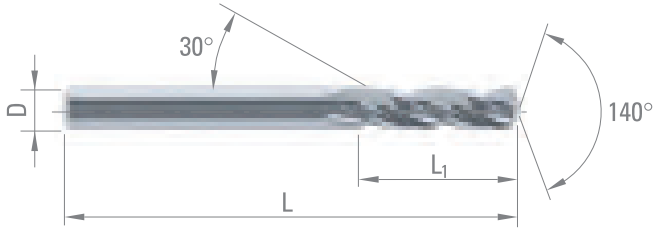
DIXI 1151

FORETS ALÉSEURS

Z = 3

P. 63 P. 82

Acier + Pb | Acier faibl. allié | Fontes | Titane, alliage de titane | Alliage Cu Argent Or | Alu



D_{h5}	L_1	L	CARBURE
1.00	8	30	31446
1.05	8	30	47890
1.10	10	30	31573
1.15	10	30	37288
1.20	10	30	31574
1.25	10	30	34553
1.30	10	30	31575
1.35	10	30	37506
1.40	10	30	31576
1.45	10	30	47039
1.50	10	30	31560
1.55	12	38	47891
1.60	12	38	31577
1.63	12	38	41603
1.64	12	38	58867
1.65	12	38	38467
1.70	12	38	31578
1.75	12	38	43738
1.80	12	38	31579
1.85	12	38	47899
1.90	12	38	31294
1.95	12	38	47040
2.00	12	38	31580
2.04	12	38	954146
2.10	12	38	31581
2.20	13	40	41993
2.30	13	40	31583
2.40	14	43	39320
2.50	14	43	41454
2.60	14	43	42140
2.70	16	46	31295
2.80	16	46	31296
2.90	16	46	31586
3.00	16	46	29106
3.10	18	49	31197
3.20	18	49	31728
3.30	18	49	29107
3.40	20	52	33271
3.50	20	52	29108

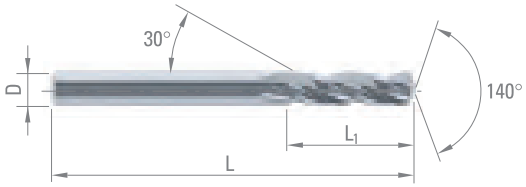
DIXI 1151

D_{h5}	L_1	L	CARBURE
3.60	20	52	31297
3.70	20	52	32311
3.80	22	55	29109
3.90	22	55	42942
4.00	22	55	42305
4.10	22	55	42939
4.20	22	55	29111
4.30	24	58	32871
4.40	24	58	33427
4.50	24	58	29112
4.60	24	58	32862
4.70	24	58	32312
4.80	26	62	29113
4.90	26	62	31590
5.00	26	62	29114
5.10	26	62	41455
5.20	26	62	32639
5.30	26	62	31717
5.40	28	66	34791
5.50	28	66	29115
5.60	28	66	41597
5.70	28	66	32313
5.80	28	66	43809
5.90	28	66	45905
6.00	28	66	41120
6.10	31	70	41620
6.20	31	70	32640
6.30	31	70	34792
6.40	31	70	33105
6.50	31	70	29118
6.60	31	70	34754
6.70	31	70	31506
6.80	34	74	29119
6.90	34	74	32860
7.00	34	74	29120
7.50	34	74	29121
7.80	37	79	29122
8.00	37	79	43769
8.20	37	79	32237
8.50	37	79	41927
8.80	40	84	29125
9.00	40	84	29126
9.50	40	84	29127
9.80	43	89	29128
10.00	43	89	29129
10.20	43	89	29130
10.50	43	89	29131
11.00	47	95	29132
11.50	47	95	29133
12.00	51	102	29134
12.50	51	102	32641
13.00	51	102	29135
13.50	54	107	32642
14.00	54	107	29136

P. 63

P. 82

Acier + Pb | Acier faibl. allié | Fontes | Titane, alliage de titane | Alliage Cu Argent Or | Alu



Cobalt Outils Coupants

DIXI 1152

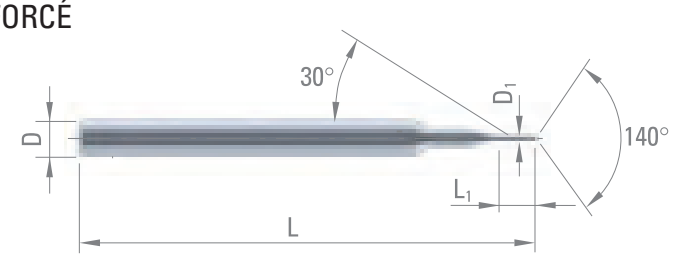
FORETS ALÉSEURS CORPS RENFORCÉ

Z = 3

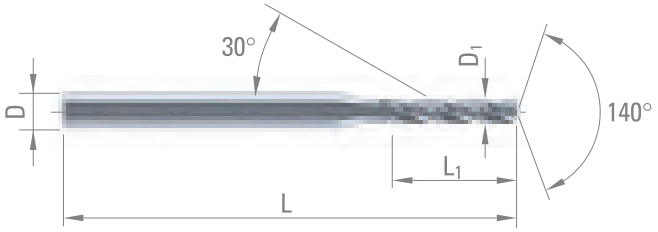
P. 63 P. 82

Acier + Pb | Acier faibl. allié | Fontes | Titane, alliage de titane | Alliage Cu Argent Or | Alu

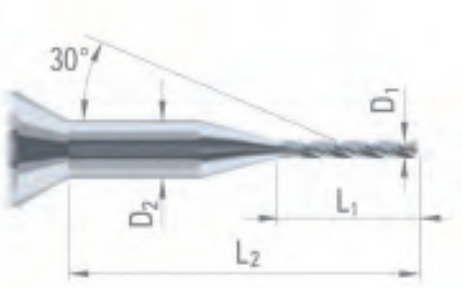
Ø 0.15 < Ø 0.50



Ø 0.50 ≤ Ø 2.90



$D_{1\ 0/-0.004}$	L_1	D_2	L_2	D_{h5}	L	CARBURE
0.15	1.5	1.5	6.80	3	38	962817
0.20	1.5	1.5	6.80	3	38	962818
0.25	2.0	1.5	7.35	3	38	962819
0.30	2.0	1.5	7.35	3	38	962820
0.35	2.0	1.5	7.35	3	38	962821
0.40	2.0	1.5	7.35	3	38	962822
0.45	3.6	1.5	8.95	3	38	962850



$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE
0.50	4.0	3	38	962851
0.53	4.5	3	38	962852
0.55	4.5	3	38	962853
0.60	4.5	3	38	962854
0.62	5.0	3	38	962855
0.65	5.0	3	38	962856
0.70	5.6	3	38	962857
0.71	5.6	3	38	962858
0.75	5.6	3	38	962859
0.80	6.3	3	38	962860
0.81	6.3	3	38	962861
0.82	6.3	3	38	962862
0.83	6.3	3	38	962863
0.84	6.3	3	38	962864
0.85	6.3	3	38	962865
0.86	7.1	3	38	962866
0.87	7.1	3	38	962867
0.88	7.1	3	38	962868
0.89	7.1	3	38	962869
0.90	7.1	3	38	962870
0.91	7.1	3	38	962871
0.92	7.1	3	38	962872
0.93	7.1	3	38	962873
0.94	7.1	3	38	962874
0.95	7.1	3	38	962875
0.96	9.0	3	38	962876
0.97	9.0	3	38	962877
0.98	9.0	3	38	962878
0.99	9.0	3	38	962879
1.00	9.0	3	38	962880
1.01	9.0	3	38	962881
1.02	9.0	3	38	962882
1.03	9.0	3	38	962883
1.04	9.0	3	38	962884
1.05	9.0	3	38	962885
1.06	9.0	3	38	962886
1.07	9.0	3	38	962887

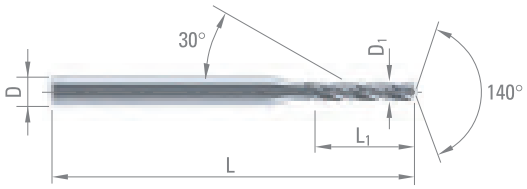
DIXI 1152

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L	CARBURE
1.08	9.0	3	38	962888
1.09	9.0	3	38	962889
1.10	9.0	3	38	962890
1.11	9.0	3	38	962901
1.12	9.0	3	38	962902
1.13	9.0	3	38	962903
1.14	9.0	3	38	962904
1.15	9.0	3	38	962905
1.16	10.0	3	38	962906
1.17	10.0	3	38	962907
1.18	10.0	3	38	962908
1.19	10.0	3	38	962909
1.20	10.0	3	38	962910
1.21	10.0	3	38	962911
1.22	10.0	3	38	962912
1.23	10.0	3	38	962913
1.24	10.0	3	38	962914
1.25	10.0	3	38	962915
1.26	10.0	3	38	962916
1.27	10.0	3	38	962917
1.28	10.0	3	38	962918
1.29	10.0	3	38	962919
1.30	10.0	3	38	962920
1.31	11.2	3	38	962921
1.32	11.2	3	38	962922
1.33	11.2	3	38	962923
1.34	11.2	3	38	962925
1.35	11.2	3	38	962926
1.36	11.2	3	38	962927
1.37	11.2	3	38	962928
1.38	11.2	3	38	962930
1.39	11.2	3	38	962931
1.40	11.2	3	38	962932
1.45	11.2	3	38	962933
1.50	11.2	3	38	962934
1.55	12.0	3	38	962935
1.60	12.0	3	38	962936
1.65	12.0	3	38	962937
1.67	12.0	3	38	969259
1.70	12.0	3	38	962938
1.75	12.0	3	38	962940
1.80	12.0	3	38	962941
1.85	12.0	3	38	962942
1.90	12.0	3	38	962943
1.95	12.0	3	38	962944
2.00	12.0	3	38	962945
2.03	15.0	3	38	969260
2.04	15.0	3	38	969261
2.05	15.0	3	38	963109
2.10	15.0	3	38	963111
2.15	15.0	3	38	963115
2.20	15.0	3	38	963116
2.25	15.0	3	38	963117
2.30	15.0	3	38	963118
2.35	15.0	3	38	963119
2.40	15.0	3	38	963120
2.45	15.0	3	38	963121
2.50	15.0	3	38	963122
2.55	15.0	3	38	963123
2.60	15.0	3	38	963124
2.70	16.0	3	38	963125
2.80	16.0	3	38	963126
2.90	16.0	3	38	963127

P. 63

P. 82

Acier + Pb | Acier faibl. allié | Fontes | Titane, alliage de titane | Alliage Cu Argent Or | Alu



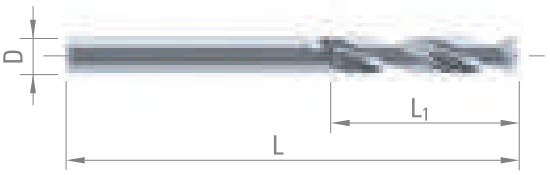
Cobalt Outils Coupants

DIXI 1290

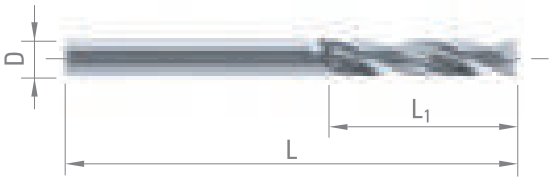
FORETS POUR MATIÈRES COMPOSITES / KEVLAR®

Z = 2

Ø 2.50 ≤ Ø 5.556



Ø 5.60 ≤ Ø 12.70



Kevlar®

Conditions de coupe: Vc = 100 - 150 m/min
f = 0.05 - 0.15 mm/tr

D_{h5}	inches	L_1	L	CARBURE
2.50		18	50	29322
3.00		18	50	26766
3.175	1/8"	18	50	27059
3.20		18	50	27948
3.30		18	50	28660
3.50		20	50	27949
3.80		20	50	26283
3.968	5/32"	22	50	27950
4.00		22	50	26767
4.10		22	50	29224
4.20		25	55	27951
4.50		25	58	27731
4.80		25	62	29324
5.00		25	62	29299
5.20		25	62	29072
5.50		25	66	27952
5.556	7/32"	25	60	26588

D_{h5}	inches	L_1	L	CARBURE
5.60		30	66	29215
6.00		30	66	43244
6.35	1/4"	30	70	27199
6.50		30	70	28661
8.00		35	75	26663
9.00		35	75	27957
9.525	3/8"	35	75	27959
10.00		35	75	27684
11.00		50	100	29493
12.00		50	100	26723
12.70	1/2"	50	100	26661

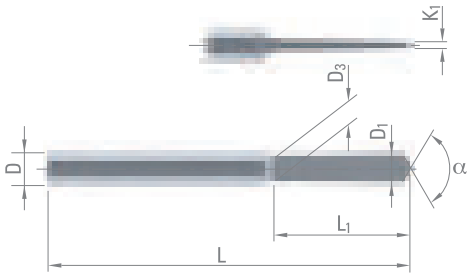
DIXI 1112 R+L

OUTILS SUR DEMANDE

FORETS PLATS

Ø 0.08 - 5.99

Z = 2



P. 66

Acier + Pb | Fontes | Alliage Cu Argent Or | Alliage Cu difficile | Alu | Plastique

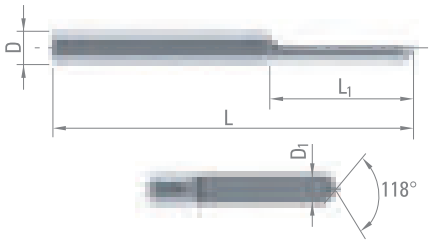
OUTILS SUR DEMANDE

DIXI 1114 R+L

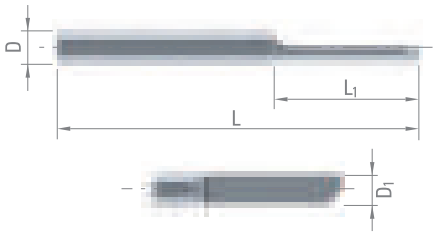
MÈCHES À CANON DEMI-LUNE
EXÉCUTION A OU B

Ø 0.08 - 5.99

Z = 1



A



B

Valeurs indicatives pour définir les forets **DIXI 1112, 1114** et **1118**.

$D_{1\ 0/-0.004}$	L_1	D_{h5}	L
0.08 - 0.14	0.7	1.0	30
0.15 - 0.29	1.0	1.0	30
0.30 - 0.39	1.5	1.0	30
0.40 - 0.44	2.0	1.0	30
0.45 - 0.48	3.6	1.0	30
0.49 - 0.53	4.0	1.0	30
0.54 - 0.60	4.5	1.0	30
0.61 - 0.67	5.0	1.0	30
0.68 - 0.75	5.6	1.0	30
0.76 - 0.79	6.3	1.0	30
0.80 - 0.85	6.3	1.5	30
0.86 - 0.95	7.1	1.5	30
0.96 - 0.99	8.0	1.5	30
1.00 - 1.18	9.0	1.5	30
1.19 - 1.32	10.0	1.5	30
1.33 - 1.49	11.2	1.5	30
1.50 - 1.99	12.0	2.0	38
2.00 - 2.49	12.0	2.5	43
2.50 - 2.99	15.0	3.0	46
3.00 - 3.49	18.0	3.5	50
3.50 - 3.99	18.0	4.0	50
4.00 - 4.49	20.0	4.5	50
4.50 - 4.99	22.0	5.0	50
5.00 - 5.49	25.0	5.5	50
5.50 - 5.99	25.0	6.0	50

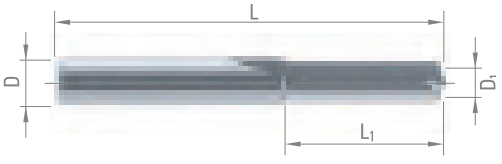
OUTILS SUR DEMANDE

DIXI 1118 R+L

FORETS DENTURE DROITE

Ø 0.08 - 5.99

Z = 2



Cobalt Outils Coupants

DESSINS POUR COMMANDES DE FORETS ÉTAGÉS

P. 66
P. 84

☐ **DIXI 1501**

Angle d'hélice défini par la matière à usiner.

☐ **DIXI 1514 (Z = 1)**

☐ **DIXI 1512 (Z = 2)**

☐ **DIXI 1518 (Z = 2)**

Sauf contre-indication, les tolérances et dimensions standard DIXI seront appliquées.

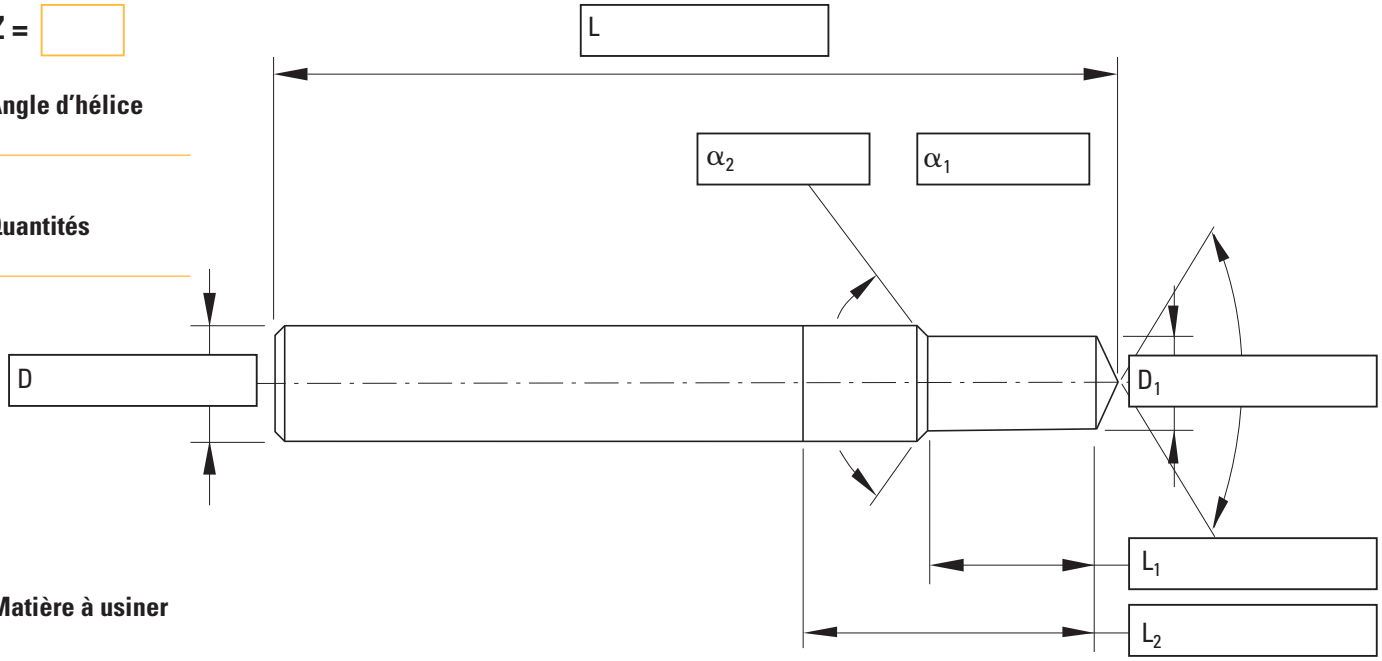
R ☐ **L** ☐

Z =

Angle d'hélice

Quantités

Matière à usiner



Remarques

CONSULTEZ NOTRE FORMULAIRE DE DEMANDE D'OFFRES EN LIGNE SUR
WWW.DIXIPOLYTOOL.COM

Cobalt Outils Coupants

DESSINS POUR COMMANDES DE FORETS ÉTAGÉS

P. 66
P. 84

☐ **DIXI 1502**

Angle d'hélice défini par la matière à usiner.

☐ **DIXI 1514 (Z = 1)**

☐ **DIXI 1512 (Z = 2)**

☐ **DIXI 1518 (Z = 2)**

Sauf contre-indication, les tolérances et dimensions standard DIXI seront appliquées.

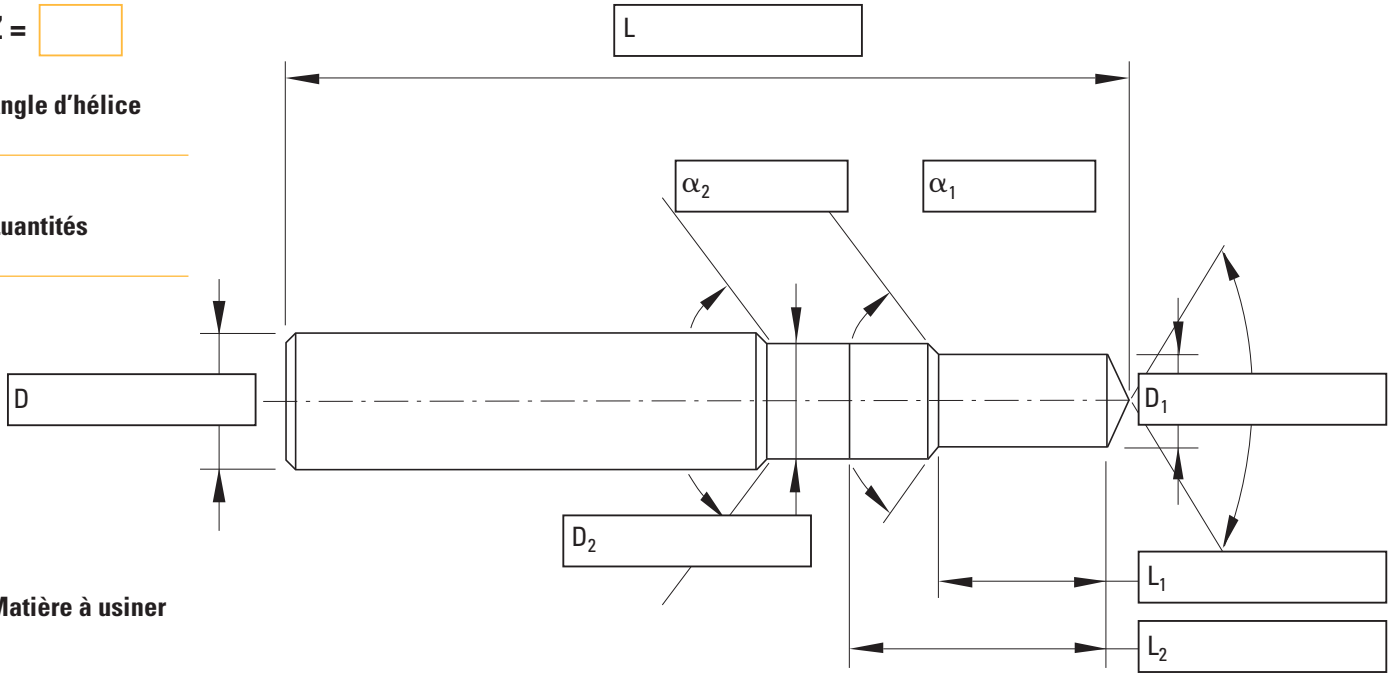
R ☐ **L** ☐

Z =

Angle d'hélice

Quantités

Matière à usiner



Remarques

CONSULTEZ NOTRE FORMULAIRE DE DEMANDE D'OFFRES EN LIGNE SUR
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Cobalt Outils Coupants

DESSINS POUR COMMANDES DE FORETS ÉTAGÉS

P. 66
P. 84

☐ **DIXI 1503**

☐ **DIXI 1514 (Z = 1)**

Angle d'hélice défini par la matière à usiner.

☐ **DIXI 1512 (Z = 2)**

☐ **DIXI 1518 (Z = 2)**

Sauf contre-indication, les tolérances et dimensions standard DIXI seront appliquées.

R ☐ **L** ☐

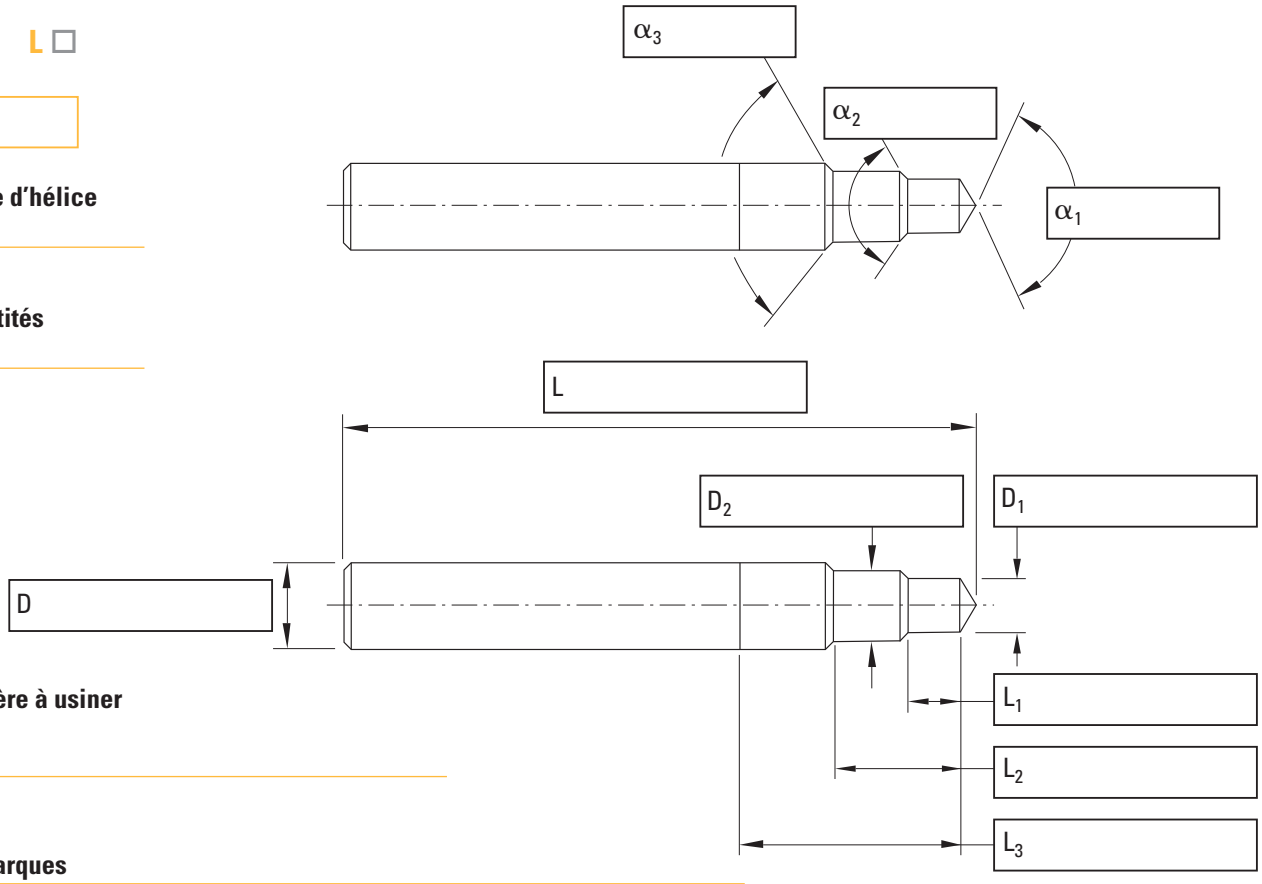
Z =

Angle d'hélice

Quantités

Matière à usiner

Remarques



CONSULTEZ NOTRE FORMULAIRE DE DEMANDE D'OFFRES EN LIGNE SUR
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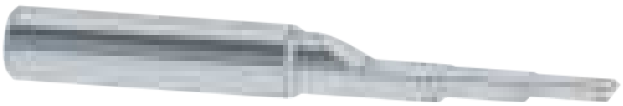
Cobalt Outils Coupants

DESSINS POUR COMMANDES DE FORETS ÉTAGÉS

P. 66
P. 84

☐ **DIXI 1504**

☐ **DIXI 1514 (Z = 1)**



Angle d'hélice défini par la matière à usiner.

☐ **DIXI 1512 (Z = 2)**

☐ **DIXI 1518 (Z = 2)**

Sauf contre-indication, les tolérances et dimensions standard DIXI seront appliquées.

R ☐ **L** ☐

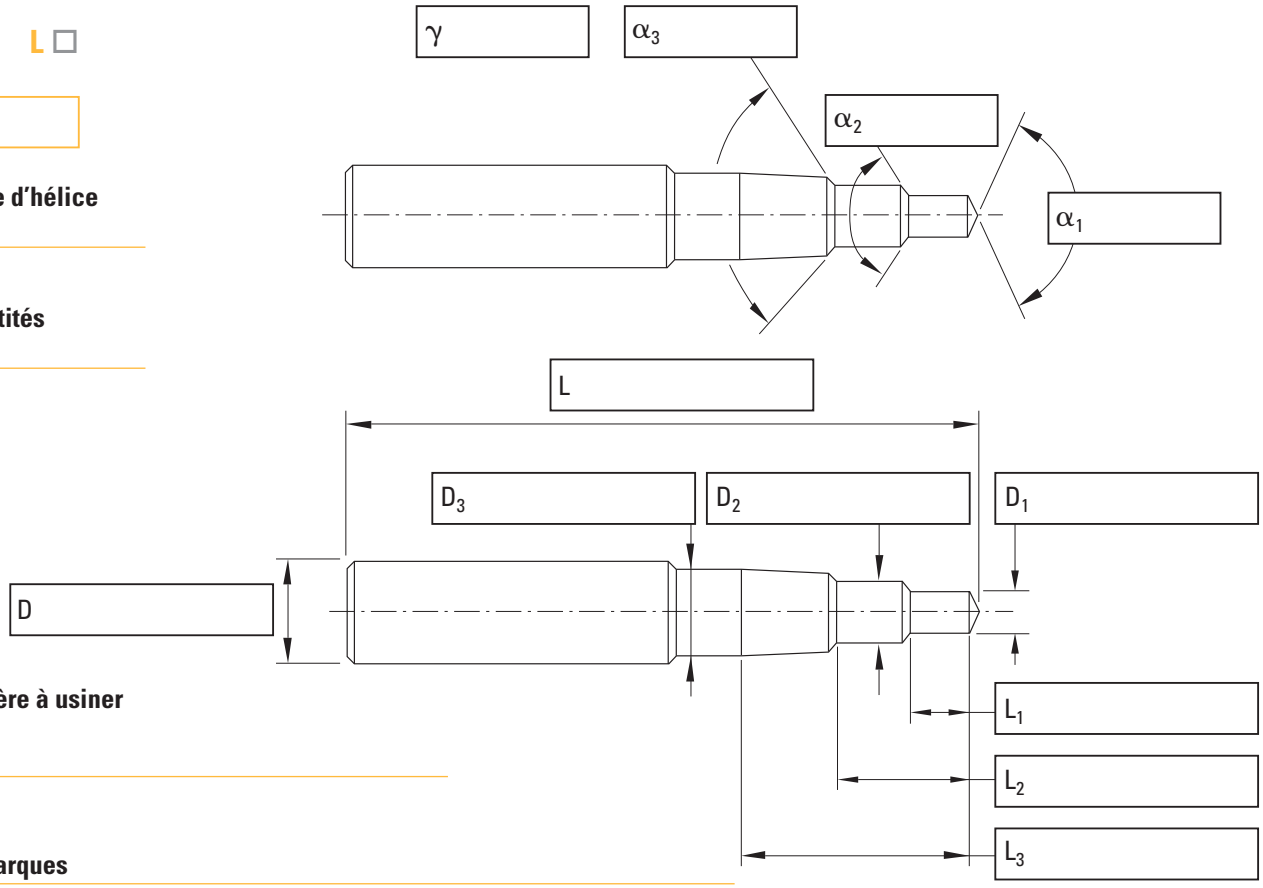
Z =

Angle d'hélice

Quantités

Matière à usiner

Remarques



CONSULTEZ NOTRE FORMULAIRE DE DEMANDE D'OFFRES EN LIGNE SUR
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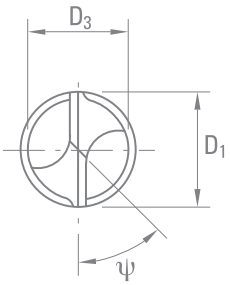
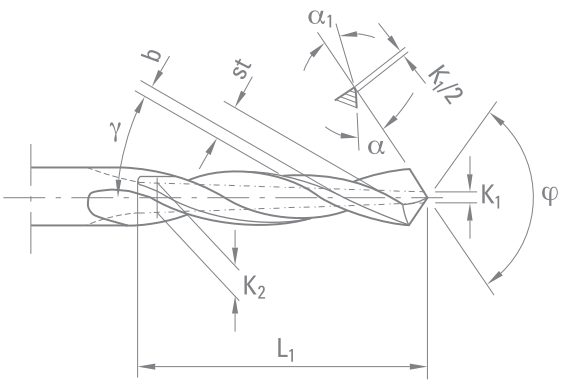
Cobalt Outils Coupants

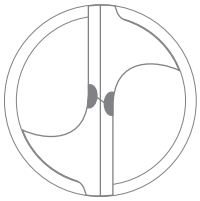
GÉOMÉTRIE DES FORETS

Le foret hélicoïdal d'usage général
est du type que nous illustrons ci-contre.
Il peut être cylindrique ou avoir un corps renforcé.

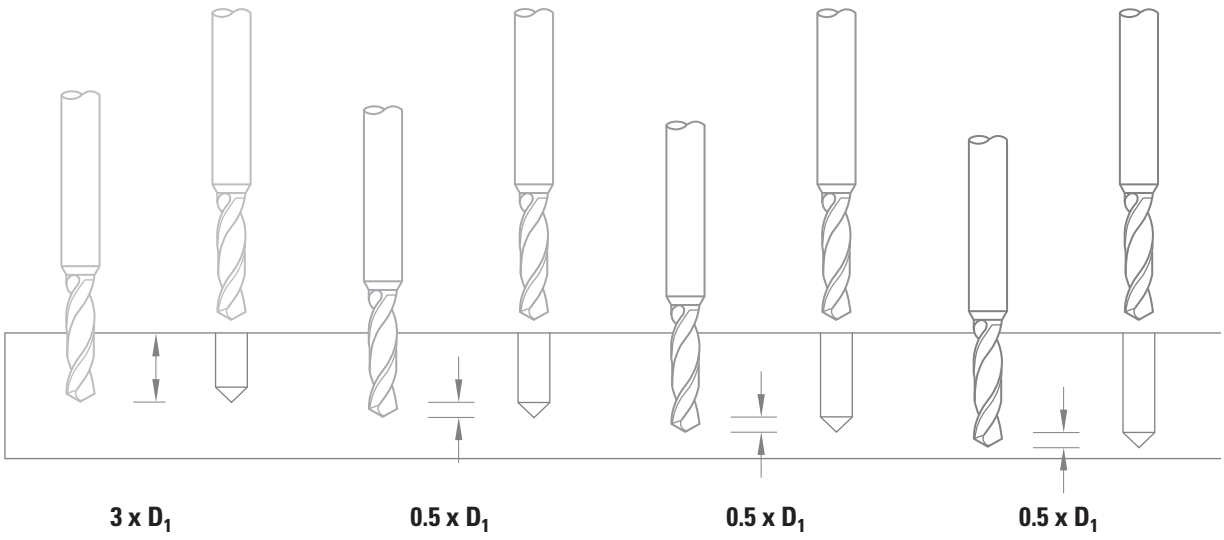




AMINCISSEMENT D'ÂME



SOLUTION POUR LES PERÇAGES DIFFICILES



1re pénétration

Après

Après

Cobalt Outils Coupants

CONDITIONS DE COUPE

Matières à usiner			CARBURE		TiAIN		DICUT	
			Vc [m/min]		Vc [m/min]		Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**40**	60	**50**	70	**50**	70
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**30**	50	**40**	60	**40**	60
P	Acier de décolletage au plomb		**60**	90	**65**	100	**65**	100
P	Acier fortement allié	700 – 1500 N/mm²	**15**	40	**25**	50	**25**	50
M	Acier inoxydable	400 – 700 N/mm²	**35**	50	**40**	60	**40**	60
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**20**	40	**30**	50		
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**30**	50	**40**	60		
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**30**	50	**40**	60		
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**10**	30	**20**	40		
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**10**	25	**20**	50		
S	Titane, alliage de titane		**40**	70				
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**90**	120	**100**	130	**100**	130
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**80**	100	**90**	120		
N	Alliage d'aluminium	Si < 8%	**90**	150	**120**	160		
N	Fonte d'aluminium	Si > 8%	**70**	110	**90**	130		
N	Plastique		**30**	60	**50**	80		
N	Or, argent		**50**	80	**65**	100		

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

Avance par tour **f [mm]**

Ø D_1 0.50 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00	Ø D_1 10.00 - 14.00	Ø D_1 14.00 - 16.00	Ø D_1 16.00 - 20.00
0.009 - 0.020	**0.016** - 0.030	**0.024** - 0.04	**0.03** - 0.05	**0.05** - 0.10	**0.08** - 0.14	**0.11** - 0.20	**0.16** - 0.28	**0.22** - 0.32	**0.26** - 0.40
0.007 - 0.015	**0.013** - 0.023	**0.020** - 0.03	**0.03** - 0.04	**0.04** - 0.08	**0.07** - 0.11	**0.09** - 0.15	**0.13** - 0.21	**0.18** - 0.24	**0.21** - 0.30
0.009 - 0.020	**0.016** - 0.030	**0.024** - 0.04	**0.03** - 0.05	**0.05** - 0.10	**0.08** - 0.14	**0.11** - 0.20	**0.16** - 0.28	**0.22** - 0.32	**0.26** - 0.40
0.006 - 0.015	**0.011** - 0.023	**0.017** - 0.03	**0.02** - 0.04	**0.03** - 0.08	**0.06** - 0.11	**0.08** - 0.15	**0.11** - 0.21	**0.15** - 0.24	**0.18** - 0.30
0.007 - 0.015	**0.013** - 0.023	**0.020** - 0.03	**0.03** - 0.04	**0.04** - 0.08	**0.07** - 0.11	**0.09** - 0.15	**0.13** - 0.21	**0.18** - 0.24	**0.21** - 0.30
0.006 - 0.015	**0.011** - 0.023	**0.017** - 0.03	**0.02** - 0.04	**0.03** - 0.08	**0.06** - 0.11	**0.08** - 0.15	**0.11** - 0.21	**0.15** - 0.24	**0.18** - 0.30
0.006 - 0.015	**0.011** - 0.023	**0.017** - 0.03	**0.02** - 0.04	**0.03** - 0.08	**0.06** - 0.11	**0.08** - 0.15	**0.11** - 0.21	**0.15** - 0.24	**0.18** - 0.30
0.007 - 0.015	**0.013** - 0.023	**0.020** - 0.03	**0.03** - 0.04	**0.04** - 0.08	**0.07** - 0.11	**0.09** - 0.15	**0.13** - 0.21	**0.18** - 0.24	**0.21** - 0.30
0.006 - 0.015	**0.011** - 0.020	**0.017** - 0.03	**0.02** - 0.04	**0.03** - 0.08	**0.06** - 0.11	**0.08** - 0.15	**0.11** - 0.21	**0.15** - 0.24	**0.18** - 0.30
0.006 - 0.015	**0.011** - 0.023	**0.017** - 0.03	**0.02** - 0.04	**0.03** - 0.08	**0.06** - 0.11	**0.08** - 0.15	**0.11** - 0.21	**0.15** - 0.24	**0.18** - 0.30
0.009 - 0.020	**0.016** - 0.030	**0.024** - 0.04	**0.03** - 0.05	**0.05** - 0.10	**0.08** - 0.14	**0.11** - 0.20	**0.16** - 0.28	**0.22** - 0.32	**0.26** - 0.40
0.011 - 0.030	**0.020** - 0.045	**0.030** - 0.06	**0.04** - 0.08	**0.06** - 0.15	**0.10** - 0.21	**0.14** - 0.30	**0.20** - 0.42	**0.28** - 0.48	**0.32** - 0.60
0.011 - 0.030	**0.020** - 0.045	**0.030** - 0.06	**0.04** - 0.08	**0.06** - 0.15	**0.10** - 0.21	**0.14** - 0.30	**0.20** - 0.42	**0.28** - 0.48	**0.32** - 0.60
0.011 - 0.030	**0.020** - 0.045	**0.030** - 0.06	**0.04** - 0.08	**0.06** - 0.15	**0.10** - 0.21	**0.14** - 0.30	**0.20** - 0.42	**0.28** - 0.48	**0.32** - 0.60
0.011 - 0.030	**0.020** - 0.045	**0.030** - 0.06	**0.04** - 0.08	**0.06** - 0.15	**0.10** - 0.21	**0.14** - 0.30	**0.20** - 0.42	**0.28** - 0.48	**0.32** - 0.60
0.013 - 0.045	**0.027** - 0.068	**0.041** - 0.09	**0.05** - 0.11	**0.08** - 0.23	**0.14** - 0.32	**0.19** - 0.45	**0.27** - 0.63	**0.38** - 0.72	**0.43** - 0.90
0.011 - 0.030	**0.020** - 0.045	**0.030** - 0.06	**0.04** - 0.08	**0.06** - 0.15	**0.10** - 0.21	**0.14** - 0.30	**0.20** - 0.42	**0.28** - 0.48	**0.32** - 0.60

DIXI 1111 - 1114 A - 1114 B - 1514

CONDITIONS DE COUPE

Matières à usiner			CARBURE Vc [m/min]	
P	Acier de décolletage au plomb		**40**	60
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**50**	70
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**30**	50
N	Or, argent		**30**	60
N	Plastique		**30**	60

DIXI 1112 - 1118 - 1512 - 1518

			CARBURE Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**20**	40
P	Acier de décolletage au plomb		**40**	60
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**20**	40
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**50**	80
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**30**	50
N	Alliage d'aluminium	Si < 8%	**60**	100
N	Fonte d'aluminium	Si > 8%	**50**	90
N	Plastique		**30**	60

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

Avance par tour **f [mm]**

Ø D_1 0.08 - 0.70	Ø D_1 0.70 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 6.00
0.001 - 0.011	**0.008** - 0.016	**0.012** - 0.02	**0.02** - 0.03	**0.02** - 0.05	**0.04** - 0.06	**0.05** - 0.10
0.001 - 0.018	**0.011** - 0.025	**0.015** - 0.04	**0.02** - 0.05	**0.03** - 0.08	**0.05** - 0.10	**0.06** - 0.15
0.001 - 0.011	**0.008** - 0.016	**0.012** - 0.024	**0.018** - 0.032	**0.024** - 0.048	**0.04** - 0.06	**0.05** - 0.10
0.001 - 0.018	**0.011** - 0.025	**0.015** - 0.04	**0.02** - 0.05	**0.03** - 0.08	**0.05** - 0.10	**0.06** - 0.15
0.002 - 0.004	**0.003** - 0.059	**0.036** - 0.08	**0.05** - 0.10	**0.06** - 0.14	**0.09** - 0.22	**0.13** - 0.29

Avance par tour **f [mm]**

Ø D_1 0.08 - 0.70	Ø D_1 0.70 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 6.00
0.001 - 0.011	**0.008** - 0.016	**0.012** - 0.024	**0.018** - 0.032	**0.024** - 0.048	**0.04** - 0.06	**0.05** - 0.10
0.001 - 0.011	**0.008** - 0.016	**0.012** - 0.024	**0.018** - 0.032	**0.024** - 0.048	**0.04** - 0.06	**0.05** - 0.10
0.001 - 0.009	**0.008** - 0.013	**0.011** - 0.020	**0.017** - 0.026	**0.022** - 0.039	**0.03** - 0.05	**0.04** - 0.08
0.001 - 0.018	**0.011** - 0.025	**0.015** - 0.038	**0.023** - 0.050	**0.030** - 0.075	**0.05** - 0.10	**0.06** - 0.15
0.001 - 0.011	**0.008** - 0.016	**0.012** - 0.024	**0.018** - 0.032	**0.024** - 0.048	**0.04** - 0.06	**0.05** - 0.10
0.001 - 0.018	**0.011** - 0.025	**0.015** - 0.038	**0.023** - 0.050	**0.030** - 0.075	**0.05** - 0.10	**0.06** - 0.15
0.001 - 0.018	**0.011** - 0.025	**0.015** - 0.038	**0.023** - 0.050	**0.030** - 0.075	**0.05** - 0.10	**0.06** - 0.15
0.002 - 0.004	**0.003** - 0.059	**0.036** - 0.08	**0.05** - 0.10	**0.06** - 0.14	**0.09** - 0.22	**0.13** - 0.29

D_1 < 1mm ⇒ Vc - 30 %

CONDITIONS DE COUPE

Matières à usiner			CARBURE Vc [m/min]		DICUT Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**40**	60	**50**	70
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**30**	40
P	Acier de décolletage au plomb		**70**	100		
P	Acier fortement allié	700 – 1500 N/mm²			**25**	40
M	Acier inoxydable	400 – 700 N/mm²			**45**	60
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**30**	50
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**50**	80	**60**	90
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	70	**50**	80
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable				**40**	60
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy			**20**	40
S	Titane, alliage de titane		**30**	50		
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**80**	100		
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**40**	70	**50**	80
N	Alliage d'aluminium	Si < 8%	**90**	110	**120**	130
N	Fonte d'aluminium	Si > 8%	**70**	110	**90**	130
N	Plastique		**30**	60		
N	Or, argent		**50**	80		

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

Avance par tour **f [mm]**

Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 5.00	Ø D_1 5.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 14.00
0.014 - 0.032	**0.027** - 0.041	**0.034** - 0.06	**0.05** - 0.08	**0.06** - 0.09	**0.07** - 0.11	**0.08** - 0.14	**0.11** - 0.18	**0.14** - 0.22	**0.17** - 0.25
0.011 - 0.025	**0.023** - 0.032	**0.029** - 0.05	**0.04** - 0.06	**0.05** - 0.07	**0.06** - 0.08	**0.07** - 0.11	**0.10** - 0.14	**0.12** - 0.17	**0.14** - 0.20
0.014 - 0.032	**0.027** - 0.041	**0.034** - 0.06	**0.05** - 0.08	**0.06** - 0.09	**0.07** - 0.11	**0.08** - 0.14	**0.11** - 0.18	**0.14** - 0.22	**0.17** - 0.25
0.008 - 0.023	**0.020** - 0.030	**0.024** - 0.04	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.06** - 0.10	**0.08** - 0.13	**0.10** - 0.16	**0.12** - 0.18
0.011 - 0.025	**0.023** - 0.032	**0.029** - 0.05	**0.04** - 0.06	**0.05** - 0.07	**0.06** - 0.08	**0.07** - 0.11	**0.10** - 0.14	**0.12** - 0.17	**0.14** - 0.20
0.008 - 0.023	**0.020** - 0.030	**0.024** - 0.04	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.06** - 0.10	**0.08** - 0.13	**0.10** - 0.16	**0.12** - 0.18
0.011 - 0.025	**0.023** - 0.032	**0.029** - 0.05	**0.04** - 0.06	**0.05** - 0.07	**0.06** - 0.08	**0.07** - 0.11	**0.10** - 0.14	**0.12** - 0.17	**0.14** - 0.20
0.008 - 0.023	**0.020** - 0.030	**0.024** - 0.04	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.06** - 0.10	**0.08** - 0.13	**0.10** - 0.16	**0.12** - 0.18
0.008 - 0.023	**0.020** - 0.030	**0.024** - 0.04	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.06** - 0.10	**0.08** - 0.13	**0.10** - 0.16	**0.12** - 0.18
0.008 - 0.023	**0.020** - 0.030	**0.024** - 0.04	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.06** - 0.10	**0.08** - 0.13	**0.10** - 0.16	**0.12** - 0.18
0.011 - 0.025	**0.023** - 0.032	**0.029** - 0.05	**0.04** - 0.06	**0.05** - 0.07	**0.06** - 0.08	**0.07** - 0.11	**0.10** - 0.14	**0.12** - 0.17	**0.14** - 0.20
0.008 - 0.023	**0.020** - 0.030	**0.024** - 0.04	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.06** - 0.10	**0.08** - 0.13	**0.10** - 0.16	**0.12** - 0.18
0.014 - 0.032	**0.027** - 0.041	**0.034** - 0.06	**0.05** - 0.08	**0.06** - 0.09	**0.07** - 0.11	**0.08** - 0.14	**0.11** - 0.18	**0.14** - 0.22	**0.17** - 0.25
0.017 - 0.050	**0.035** - 0.064	**0.043** - 0.09	**0.06** - 0.12	**0.07** - 0.14	**0.09** - 0.17	**0.11** - 0.22	**0.14** - 0.28	**0.18** - 0.34	**0.22** - 0.39
0.017 - 0.050	**0.035** - 0.064	**0.043** - 0.09	**0.06** - 0.12	**0.07** - 0.14	**0.09** - 0.17	**0.11** - 0.22	**0.14** - 0.28	**0.18** - 0.34	**0.22** - 0.39
0.021 - 0.072	**0.049** - 0.092	**0.060** - 0.13	**0.08** - 0.17	**0.10** - 0.20	**0.13** - 0.24	**0.15** - 0.32	**0.20** - 0.40	**0.25** - 0.48	**0.30** - 0.56
0.017 - 0.050	**0.035** - 0.064	**0.043** - 0.09	**0.06** - 0.21	**0.07** - 0.14	**0.09** - 0.17	**0.11** - 0.22	**0.14** - 0.28	**0.18** - 0.34	**0.22** - 0.39

CONDITIONS DE COUPE

Matières à usiner			CARBURE		DICUT		DLC	
			Vc [m/min]		Vc [m/min]		Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**40**	60	**50**	70		
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**30**	40		
P	Acier de décolletage au plomb		**60**	90				
P	Acier fortement allié	700 – 1500 N/mm²			**25**	40		
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**50**	80	**60**	90		
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB			**30**	50		
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable				**40**	60		
S	Titane, alliage de titane		**30**	50				
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**80**	100			**90**	110
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**40**	70	**50**	80	**50**	80
N	Alliage d'aluminium	Si < 8%	**80**	130			**100**	150
N	Fonte d'aluminium	Si > 8%	**70**	110			**90**	130
N	Plastique		**30**	60	**50**	80	**50**	80
N	Or, argent		**50**	80	**70**	100	**70**	100

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

Avance par tour **f [mm]**

Ø D_1 0.10 - 0.30	Ø D_1 0.30 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00	Ø D_1 10.00 - 14.00	Ø D_1 14.00 - 16.00
0.002 - 0.004	**0.003** - 0.028	**0.021** - 0.04	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.11	**0.08** - 0.14	**0.11** - 0.20	**0.15** - 0.28	**0.21** - 0.32
0.002 - 0.004	**0.003** - 0.021	**0.018** - 0.03	**0.03** - 0.04	**0.03** - 0.05	**0.04** - 0.08	**0.07** - 0.11	**0.09** - 0.15	**0.13** - 0.21	**0.18** - 0.24
0.002 - 0.004	**0.003** - 0.028	**0.021** - 0.04	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.11	**0.08** - 0.14	**0.11** - 0.20	**0.15** - 0.28	**0.21** - 0.32
0.002 - 0.004	**0.003** - 0.020	**0.015** - 0.03	**0.02** - 0.03	**0.03** - 0.05	**0.04** - 0.07	**0.06** - 0.10	**0.08** - 0.14	**0.11** - 0.20	**0.15** - 0.22
0.002 - 0.004	**0.003** - 0.021	**0.018** - 0.03	**0.03** - 0.04	**0.03** - 0.05	**0.04** - 0.08	**0.07** - 0.11	**0.09** - 0.15	**0.13** - 0.21	**0.18** - 0.24
0.002 - 0.004	**0.003** - 0.021	**0.015** - 0.03	**0.02** - 0.04	**0.03** - 0.05	**0.04** - 0.07	**0.06** - 0.10	**0.09** - 0.14	**0.11** - 0.20	**0.15** - 0.22
0.002 - 0.004	**0.003** - 0.020	**0.015** - 0.03	**0.02** - 0.03	**0.03** - 0.05	**0.04** - 0.07	**0.06** - 0.10	**0.08** - 0.14	**0.11** - 0.20	**0.15** - 0.22
0.002 - 0.004	**0.003** - 0.021	**0.018** - 0.03	**0.03** - 0.04	**0.03** - 0.05	**0.04** - 0.08	**0.07** - 0.11	**0.09** - 0.15	**0.13** - 0.21	**0.18** - 0.24
0.002 - 0.004	**0.003** - 0.028	**0.021** - 0.04	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.11	**0.08** - 0.14	**0.11** - 0.20	**0.15** - 0.28	**0.21** - 0.32
0.002 - 0.004	**0.003** - 0.020	**0.015** - 0.03	**0.02** - 0.03	**0.03** - 0.05	**0.04** - 0.07	**0.06** - 0.10	**0.08** - 0.14	**0.11** - 0.20	**0.15** - 0.22
0.002 - 0.004	**0.003** - 0.042	**0.27** - 0.05	**0.04** - 0.07	**0.05** - 0.10	**0.06** - 0.16	**0.10** - 0.21	**0.13** - 0.30	**0.19** - 0.42	**0.27** - 0.48
0.002 - 0.004	**0.003** - 0.042	**0.027** - 0.05	**0.04** - 0.07	**0.05** - 0.10	**0.06** - 0.16	**0.10** - 0.21	**0.13** - 0.30	**0.19** - 0.42	**0.27** - 0.48
0.002 - 0.004	**0.003** - 0.059	**0.036** - 0.08	**0.05** - 0.10	**0.06** - 0.14	**0.09** - 0.22	**0.13** - 0.29	**0.18** - 0.42	**0.26** - 0.59	**0.36** - 0.67
0.002 - 0.004	**0.003** - 0.042	**0.027** - 0.05	**0.04** - 0.07	**0.05** - 0.10	**0.06** - 0.16	**0.10** - 0.21	**0.13** - 0.30	**0.19** - 0.42	**0.27** - 0.48

$D_1 < 1mm \Rightarrow Vc - 30\ \%$

CONDITIONS DE COUPE

Matières à usiner			CARBURE		DICUT		DLC	
			Vc [m/min]		Vc [m/min]		Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**40**	60	**50**	70		
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**30**	40		
P	Acier de décolletage au plomb		**60**	90				
P	Acier fortement allié	700 – 1500 N/mm²			**25**	40		
M	Acier inoxydable	400 – 700 N/mm²			**45**	60		
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**30**	50		
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**50**	80	**60**	90		
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB			**30**	50		
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable				**40**	60		
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy			**20**	40		
S	Titane, alliage de titane		**30**	50				
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**80**	100			**90**	110
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**40**	70	**50**	80	**50**	80
N	Alliage d'aluminium	Si < 8%	**80**	130			**100**	150
N	Fonte d'aluminium	Si > 8%	**70**	110			**90**	130
N	Graphite						**60**	100
N	Plastique		**30**	60	**50**	80	**50**	80
N	Or, argent		**50**	80	**70**	100	**70**	100

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

Avance par tour **f [mm]**

Ø D_1 0.05- 0.30	Ø D_1 0.30 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 2.00	Ø D_1 2.00 - 2.45
0.002 - 0.004	**0.003** - 0.028	**0.021** - 0.04	**0.03** - 0.05	**0.04** - 0.07
0.002 - 0.004	**0.003** - 0.021	**0.018** - 0.03	**0.03** - 0.04	**0.03** - 0.05
0.002 - 0.004	**0.003** - 0.028	**0.021** - 0.04	**0.03** - 0.05	**0.04** - 0.07
0.002 - 0.004	**0.003** - 0.020	**0.015** - 0.03	**0.02** - 0.03	**0.03** - 0.05
0.002 - 0.004	**0.003** - 0.021	**0.018** - 0.03	**0.03** - 0.04	**0.03** - 0.05
0.002 - 0.004	**0.003** - 0.020	**0.015** - 0.03	**0.02** - 0.03	**0.03** - 0.05
0.002 - 0.004	**0.003** - 0.021	**0.018** - 0.03	**0.03** - 0.04	**0.03** - 0.05
0.002 - 0.004	**0.003** - 0.021	**0.015** - 0.03	**0.02** - 0.04	**0.03** - 0.05
0.002 - 0.004	**0.003** - 0.020	**0.015** - 0.03	**0.02** - 0.03	**0.03** - 0.05
0.001 - 0.002	**0.002** - 0.010	**0.015** - 0.02	**0.015** - 0.025	**0.02** - 0.04
0.002 - 0.004	**0.003** - 0.021	**0.018** - 0.03	**0.03** - 0.04	**0.03** - 0.05
0.002 - 0.004	**0.003** - 0.028	**0.021** - 0.04	**0.03** - 0.05	**0.04** - 0.07
0.002 - 0.004	**0.003** - 0.020	**0.015** - 0.03	**0.02** - 0.03	**0.03** - 0.05
0.002 - 0.004	**0.003** - 0.042	**0.27** - 0.05	**0.04** - 0.07	**0.05** - 0.10
0.002 - 0.004	**0.003** - 0.042	**0.027** - 0.05	**0.04** - 0.07	**0.05** - 0.10
0.002 - 0.004	**0.003** - 0.059	**0.036** - 0.08	**0.05** - 0.10	**0.06** - 0.14
0.002 - 0.004	**0.003** - 0.059	**0.036** - 0.08	**0.05** - 0.10	**0.06** - 0.14
0.002 - 0.004	**0.003** - 0.042	**0.027** - 0.05	**0.04** - 0.07	**0.05** - 0.10

D_1 < 1mm ⇒ Vc - 30 %

CONDITIONS DE COUPE

Nouvelles conditions de coupe DIXI 1137
Cliquez pour télécharger

Matières à usiner			CARBURE Vc [m/min]		DICUT - TiAlN Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**40**	60	**50**	70
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**40**	60
P	Acier de décolletage au plomb		**60**	90		
P	Acier fortement allié	700 – 1500 N/mm²			**40**	60
M	Acier inoxydable	400 – 700 N/mm²	**40**	60	**50**	70
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**20**	40	**30**	50
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**50**	80	**60**	80
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	60	**50**	70
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**30**	50	**40**	60
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**15**	25	**20**	40
S	Titane, alliage de titane		**35**	55		
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**80**	100		
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**40**	70	**60**	90
N	Alliage d'aluminium	Si < 8%	**80**	100	**90**	130
N	Fonte d'aluminium	Si > 8%	**70**	90	**80**	120
N	Plastique		**30**	60		
N	Or, argent		**50**	80		

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

Avance par tour **f [mm]**

Ø D_1 0.05 - 0.30	Ø D_1 0.30 - 0.60	Ø D_1 0.60 - 0.80	Ø D_1 0.80 - 1.00	Ø D_1 1.00 - 1.20	Ø D_1 1.20 - 1.40	Ø D_1 1.40 - 1.60	Ø D_1 1.60 - 1.80	Ø D_1 1.80 - 2.00	Ø D_1 2.00 - 3.00
0.0006 - 0.007	**0.004** - 0.014	**0.007** - 0.019	**0.010** - 0.024	**0.012** - 0.029	**0.013** - 0.035	**0.014** - 0.037	**0.016** - 0.041	**0.018** - 0.044	**0.020** - 0.066
0.0005 - 0.006	**0.003** - 0.012	**0.006** - 0.015	**0.008** - 0.019	**0.010** - 0.023	**0.011** - 0.028	**0.011** - 0.029	**0.013** - 0.033	**0.014** - 0.035	**0.016** - 0.053
0.0007 - 0.009	**0.004** - 0.017	**0.009** - 0.023	**0.012** - 0.029	**0.014** - 0.035	**0.016** - 0.043	**0.017** - 0.044	**0.019** - 0.050	**0.022** - 0.053	**0.024** - 0.079
0.0004 - 0.005	**0.003** - 0.010	**0.005** - 0.013	**0.007** - 0.017	**0.008** - 0.020	**0.009** - 0.025	**0.010** - 0.026	**0.011** - 0.029	**0.013** - 0.031	**0.014** - 0.046
0.0005 - 0.006	**0.003** - 0.012	**0.006** - 0.015	**0.008** - 0.019	**0.010** - 0.023	**0.011** - 0.028	**0.011** - 0.029	**0.013** - 0.033	**0.014** - 0.035	**0.016** - 0.053
0.0004 - 0.005	**0.002** - 0.009	**0.005** - 0.012	**0.006** - 0.016	**0.008** - 0.019	**0.009** - 0.023	**0.009** - 0.024	**0.010** - 0.027	**0.012** - 0.029	**0.013** - 0.043
0.0008 - 0.009	**0.005** - 0.018	**0.009** - 0.024	**0.012** - 0.030	**0.015** - 0.036	**0.017** - 0.044	**0.018** - 0.046	**0.020** - 0.052	**0.023** - 0.055	**0.025** - 0.083
0.0006 - 0.007	**0.004** - 0.014	**0.007** - 0.019	**0.010** - 0.024	**0.012** - 0.029	**0.013** - 0.035	**0.014** - 0.037	**0.016** - 0.041	**0.018** - 0.044	**0.020** - 0.066
0.0006 - 0.007	**0.004** - 0.014	**0.007** - 0.019	**0.010** - 0.024	**0.012** - 0.029	**0.013** - 0.035	**0.014** - 0.037	**0.016** - 0.041	**0.018** - 0.044	**0.020** - 0.066
0.0003 - 0.004	**0.002** - 0.007	**0.004** - 0.010	**0.005** - 0.012	**0.006** - 0.014	**0.007** - 0.018	**0.007** - 0.018	**0.008** - 0.021	**0.009** - 0.022	**0.010** - 0.033
0.0006 - 0.007	**0.004** - 0.014	**0.007** - 0.019	**0.010** - 0.024	**0.012** - 0.029	**0.013** - 0.035	**0.014** - 0.037	**0.016** - 0.041	**0.018** - 0.044	**0.020** - 0.066
0.0008 - 0.009	**0.005** - 0.018	**0.009** - 0.024	**0.012** - 0.030	**0.015** - 0.036	**0.017** - 0.044	**0.018** - 0.046	**0.020** - 0.052	**0.023** - 0.055	**0.025** - 0.083
0.0006 - 0.007	**0.004** - 0.014	**0.007** - 0.019	**0.010** - 0.024	**0.012** - 0.029	**0.013** - 0.035	**0.014** - 0.037	**0.016** - 0.041	**0.018** - 0.044	**0.020** - 0.066
0.0008 - 0.009	**0.005** - 0.018	**0.009** - 0.024	**0.012** - 0.030	**0.017** - 0.040	**0.018** - 0.050	**0.018** - 0.046	**0.020** - 0.052	**0.023** - 0.055	**0.025** - 0.083
0.0006 - 0.007	**0.004** - 0.014	**0.007** - 0.019	**0.010** - 0.024	**0.012** - 0.029	**0.013** - 0.035	**0.014** - 0.037	**0.016** - 0.041	**0.018** - 0.044	**0.020** - 0.066
0.0008 - 0.009	**0.005** - 0.018	**0.009** - 0.024	**0.012** - 0.030	**0.017** - 0.040	**0.018** - 0.050	**0.018** - 0.046	**0.020** - 0.052	**0.023** - 0.055	**0.025** - 0.083
0.0006 - 0.007	**0.004** - 0.014	**0.007** - 0.019	**0.010** - 0.024	**0.012** - 0.029	**0.013** - 0.035	**0.014** - 0.037	**0.016** - 0.041	**0.018** - 0.044	**0.020** - 0.066

$D_1 < 1mm \Rightarrow Vc - 30\ \%$

CONDITIONS DE COUPE

Matières à usiner			CARBURE Vc [m/min]		DICUT - TiAIN Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**40**	60	**50**	70
P	Acier de décolletage au plomb		**60**	90		
P	Acier fortement allié	700 – 1500 N/mm²	**15**	30	**20**	40
M	Acier inoxydable	400 – 700 N/mm²	**35**	50	**40**	60
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**50**	80	**60**	80
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**30**	50	**40**	60
S	Titane, alliage de titane		**30**	50		
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**80**	100		
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**40**	70	**50**	80
N	Alliage d'aluminium	Si < 8%	**80**	100	**90**	110
N	Plastique		**30**	60		
N	Or, argent		**50**	80		

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

Avance par tour **f [mm]**

Ø D_1 0.20 - 0.70	Ø D_1 0.70 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 5.00	Ø D_1 5.00 - 6.00
0.005 - 0.013	**0.010** - 0.018	**0.014** - 0.04	**0.02** - 0.05	**0.04** - 0.06	**0.04** - 0.09	**0.06** - 0.10	**0.08** - 0.11
0.005 - 0.013	**0.010** - 0.018	**0.014** - 0.04	**0.02** - 0.05	**0.04** - 0.06	**0.04** - 0.09	**0.06** - 0.10	**0.08** - 0.11
0.003 - 0.009	**0.007** - 0.013	**0.010** - 0.03	**0.02** - 0.05	**0.03** - 0.04	**0.03** - 0.06	**0.04** - 0.07	**0.06** - 0.08
0.005 - 0.010	**0.008** - 0.014	**0.012** - 0.03	**0.02** - 0.035	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.07** - 0.08
0.004 - 0.010	**0.008** - 0.014	**0.012** - 0.03	**0.02** - 0.035	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.07** - 0.08
0.004 - 0.010	**0.008** - 0.014	**0.012** - 0.03	**0.02** - 0.04	**0.03** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.07** - 0.08
0.003 - 0.009	**0.007** - 0.013	**0.010** - 0.03	**0.02** - 0.04	**0.03** - 0.04	**0.03** - 0.06	**0.04** - 0.07	**0.06** - 0.08
0.006 - 0.020	**0.013** - 0.028	**0.018** - 0.05	**0.03** - 0.06	**0.05** - 0.09	**0.05** - 0.13	**0.07** - 0.15	**0.10** - 0.17
0.005 - 0.013	**0.010** - 0.018	**0.014** - 0.04	**0.02** - 0.05	**0.04** - 0.06	**0.04** - 0.09	**0.06** - 0.10	**0.08** - 0.11
0.006 - 0.020	**0.013** - 0.028	**0.018** - 0.05	**0.03** - 0.06	**0.05** - 0.09	**0.05** - 0.13	**0.07** - 0.15	**0.10** - 0.17
0.008 - 0.028	**0.018** - 0.040	**0.025** - 0.08	**0.04** - 0.08	**0.07** - 0.13	**0.08** - 0.19	**0.10** - 0.22	**0.14** - 0.24
0.006 - 0.020	**0.013** - 0.028	**0.018** - 0.05	**0.03** - 0.06	**0.05** - 0.09	**0.05** - 0.13	**0.07** - 0.15	**0.10** - 0.17

D_1 < 1mm ⇒ Vc - 30 %

DIXI 1145-HH

CONDITIONS DE COUPE

Matières à usiner			Ø D_1 < 2.00 TiAlN Vc [m/min]		Ø D_1 ≥ 2.00 TiAlN Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**30**	60	**70**	90
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**35**	50	**40**	60
P	Acier fortement allié	700 – 1500 N/mm²	**15**	30	**70**	90
M	Acier inoxydable	400 – 700 N/mm²	**10**	25	**35**	50
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**30**	60	**70**	100
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**10**	25	**50**	80
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**15**	30	**50**	80
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**10**	25	**15**	35
S	Titane, alliage de titane		**20**	45	**40**	70
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**50**	90	**90**	110
N	Alliage d'aluminium	Si < 8%	**90**	120	**100**	130

DIXI 1149

			TiAlN Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**70**	90
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**40**	60
P	Acier fortement allié	700 – 1500 N/mm²	**35**	50
M	Acier inoxydable	400 – 700 N/mm²	**35**	50
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**70**	100
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	60
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**30**	50
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**12**	30
S	Titane, alliage de titane		**30**	60
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**70**	90
N	Alliage d'aluminium	Si < 8%	**130**	160

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

Avance par tour **f [mm]**

Ø D_1 < 1.00	Ø D_1 1.00 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 4.50	Ø D_1 4.50 - 6.00	Ø D_1 6.00 - 7.00	Ø D_1 7.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 14.00
0.02 - 0.03	**0.03** - 0.05	**0.03** - 0.06	**0.04** - 0.10	**0.08** - 0.12	**0.10** - 0.14	**0.11** - 0.16	**0.13** - 0.20	**0.15** - 0.25	**0.20** - 0.30
0.01 - 0.02	**0.015** - 0.04	**0.02** - 0.05	**0.04** - 0.08	**0.07** - 0.09	**0.08** - 0.11	**0.09** - 0.12	**0.10** - 0.15	**0.13** - 0.18	**0.16** - 0.20
0.005 - 0.008	**0.007** - 0.012	**0.01** - 0.04	**0.03** - 0.08	**0.07** - 0.09	**0.08** - 0.11	**0.09** - 0.12	**0.10** - 0.15	**0.13** - 0.18	**0.16** - 0.20
0.005 - 0.008	**0.009** - 0.02	**0.01** - 0.04	**0.03** - 0.08	**0.06** - 0.09	**0.07** - 0.11	**0.08** - 0.12	**0.09** - 0.15	**0.12** - 0.18	**0.15** - 0.20
0.02 - 0.03	**0.03** - 0.04	**0.04** - 0.05	**0.04** - 0.08	**0.07** - 0.09	**0.08** - 0.11	**0.09** - 0.12	**0.10** - 0.15	**0.13** - 0.18	**0.16** - 0.20
0.01 - 0.02	**0.02** - 0.03	**0.03** - 0.04	**0.03** - 0.08	**0.06** - 0.09	**0.07** - 0.11	**0.08** - 0.12	**0.09** - 0.15	**0.12** - 0.18	**0.15** - 0.20
0.02 - 0.03	**0.03** - 0.04	**0.04** - 0.05	**0.04** - 0.08	**0.07** - 0.09	**0.08** - 0.11	**0.09** - 0.12	**0.10** - 0.15	**0.13** - 0.18	**0.16** - 0.20
0.004 - 0.01	**0.005** - 0.015	**0.005** - 0.02	**0.012** - 0.04	**0.02** - 0.05	**0.03** - 0.08	**0.04** - 0.09	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.15
0.008 - 0.02	**0.01** - 0.03	**0.01** - 0.04	**0.03** - 0.08	**0.06** - 0.09	**0.07** - 0.11	**0.08** - 0.12	**0.09** - 0.15	**0.12** - 0.18	**0.15** - 0.20
0.03 - 0.04	**0.04** - 0.05	**0.045** - 0.06	**0.05** - 0.10	**0.08** - 0.12	**0.10** - 0.14	**0.11** - 0.16	**0.13** - 0.20	**0.16** - 0.25	**0.20** - 0.30
0.04 - 0.05	**0.05** - 0.06	**0.06** - 0.08	**0.07** - 0.12	**0.09** - 0.14	**0.11** - 0.16	**0.12** - 0.18	**0.14** - 0.22	**0.18** - 0.28	**0.22** - 0.32

Ø D_1 1.00 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 5.00	Ø D_1 5.00 - 6.00	Ø D_1 6.00 - 7.00	Ø D_1 7.00 - 8.00	Ø D_1 8.00 - 9.00	Ø D_1 9.00 - 10.00	Ø D_1 10.00 - 14.00
0.02 - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.06** - 0.11	**0.08** - 0.12	**0.10** - 0.14	**0.11** - 0.16	**0.13** - 0.18	**0.15** - 0.20	**0.15** - 0.30
0.02 - 0.04	**0.02** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.07** - 0.09	**0.08** - 0.11	**0.09** - 0.12	**0.10** - 0.14	**0.12** - 0.15	**0.13** - 0.20
0.01 - 0.03	**0.01** - 0.40	**0.03** - 0.07	**0.05** - 0.08	**0.07** - 0.09	**0.07** - 0.11	**0.08** - 0.12	**0.09** - 0.14	**0.12** - 0.15	**0.12** - 0.20
0.01 - 0.03	**0.01** - 0.04	**0.03** - 0.07	**0.05** - 0.08	**0.07** - 0.09	**0.08** - 0.11	**0.09** - 0.12	**0.09** - 0.14	**0.12** - 0.15	**0.12** - 0.20
0.02 - 0.04	**0.04** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.07** - 0.09	**0.08** - 0.11	**0.09** - 0.12	**0.10** - 0.14	**0.12** - 0.15	**0.13** - 0.20
0.02 - 0.04	**0.04** - 0.05	**0.04** - 0.07	**0.05** - 0.08	**0.07** - 0.09	**0.08** - 0.11	**0.09** - 0.12	**0.10** - 0.14	**0.12** - 0.15	**0.13** - 0.20
0.02 - 0.04	**0.03** - 0.04	**0.03** - 0.07	**0.05** - 0.08	**0.07** - 0.09	**0.07** - 0.11	**0.08** - 0.12	**0.09** - 0.14	**0.12** - 0.15	**0.12** - 0.20
0.008 - 0.03	**0.01** - 0.03	**0.03** - 0.07	**0.05** - 0.08	**0.07** - 0.09	**0.07** - 0.11	**0.08** - 0.12	**0.09** - 0.14	**0.12** - 0.15	**0.12** - 0.20
0.008 - 0.03	**0.01** - 0.03	**0.03** - 0.07	**0.05** - 0.08	**0.07** - 0.09	**0.07** - 0.12	**0.08** - 0.12	**0.09** - 0.14	**0.12** - 0.15	**0.12** - 0.20
0.02 - 0.04	**0.02** - 0.06	**0.05** - 0.08	**0.06** - 0.10	**0.08** - 0.12	**0.10** - 0.14	**0.11** - 0.16	**0.13** - 0.18	**0.13** - 0.20	**0.16** - 0.30
0.02 - 0.04	**0.02** - 0.06	**0.05** - 0.08	**0.06** - 0.10	**0.08** - 0.12	**0.10** - 0.14	**0.11** - 0.16	**0.13** - 0.18	**0.13** - 0.20	**0.16** - 0.30

DIXI 1146-HH

CONDITIONS DE COUPE

Matières à usiner			TiAlN Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**80**	120
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**70**	100
P	Acier de décolletage au plomb		**80**	120
P	Acier fortement allié	700 – 1500 N/mm²	**40**	70
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**30**	50
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**90**	130
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**80**	120
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	100
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**15**	30
S	Titane, alliage de titane		**50**	100
N	Alliage d'aluminium	Si < 8%	**140**	170

DIXI 1147

			TiAlN Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**70**	100
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**60**	90
P	Acier de décolletage au plomb		**80**	110
P	Acier fortement allié	700 – 1500 N/mm²	**30**	60
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**30**	50
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**90**	130
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**80**	120
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	100
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**15**	30
S	Titane, alliage de titane		**50**	100
N	Alliage d'aluminium	Si < 8%	**130**	

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

Avance par tour **f [mm]**

Ø D_1 0.80 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00
0.03 - 0.11	**0.06** - 0.16	**0.08** - 0.21	**0.11** - 0.25	**0.13** - 0.27	**0.16** - 0.33	**0.19** - 0.35
0.03 - 0.10	**0.06** - 0.15	**0.08** - 0.20	**0.10** - 0.23	**0.12** - 0.25	**0.15** - 0.27	**0.18** - 0.30
0.03 - 0.12	**0.07** - 0.17	**0.09** - 0.23	**0.11** - 0.25	**0.14** - 0.27	**0.17** - 0.30	**0.21** - 0.35
0.03 - 0.10	**0.06** - 0.15	**0.08** - 0.17	**0.12** - 0.22	**0.12** - 0.23	**0.15** - 0.25	**0.18** - 0.28
0.008 - 0.02	**0.01** - 0.04	**0.02** - 0.06	**0.03** - 0.08	**0.04** - 0.10	**0.05** - 0.12	**0.07** - 0.14
0.03 - 0.12	**0.07** - 0.17	**0.09** - 0.23	**0.12** - 0.29	**0.14** - 0.35	**0.17** - 0.40	**0.21** - 0.46
0.03 - 0.12	**0.07** - 0.17	**0.09** - 0.23	**0.12** - 0.29	**0.14** - 0.35	**0.17** - 0.40	**0.21** - 0.46
0.03 - 0.10	**0.06** - 0.15	**0.08** - 0.20	**0.10** - 0.25	**0.12** - 0.30	**0.15** - 0.35	**0.18** - 0.40
0.008 - 0.02	**0.01** - 0.04	**0.02** - 0.06	**0.03** - 0.08	**0.04** - 0.10	**0.05** - 0.12	**0.07** - 0.14
0.008 - 0.02	**0.01** - 0.04	**0.02** - 0.06	**0.03** - 0.08	**0.04** - 0.10	**0.05** - 0.12	**0.07** - 0.14
0.03 - 0.12	**0.07** - 0.17	**0.09** - 0.23	**0.12** - 0.29	**0.14** - 0.35	**0.17** - 0.40	**0.21** - 0.46

Ø D_1 0.50 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00
0.03 - 0.11	**0.06** - 0.16	**0.08** - 0.21	**0.11** - 0.26	**0.13** - 0.32	**0.16** - 0.37	**0.19** - 0.42
0.03 - 0.10	**0.06** - 0.15	**0.08** - 0.20	**0.10** - 0.25	**0.12** - 0.30	**0.15** - 0.35	**0.18** - 0.40
0.03 - 0.12	**0.07** - 0.17	**0.09** - 0.23	**0.12** - 0.29	**0.14** - 0.35	**0.17** - 0.40	**0.21** - 0.46
0.03 - 0.10	**0.06** - 0.15	**0.08** - 0.20	**0.12** - 0.25	**0.12** - 0.30	**0.15** - 0.35	**0.18** - 0.40
0.008 - 0.02	**0.01** - 0.04	**0.02** - 0.06	**0.03** - 0.08	**0.04** - 0.10	**0.05** - 0.12	**0.07** - 0.14
0.03 - 0.12	**0.07** - 0.17	**0.09** - 0.23	**0.12** - 0.29	**0.14** - 0.35	**0.17** - 0.40	**0.21** - 0.46
0.03 - 0.12	**0.07** - 0.17	**0.09** - 0.23	**0.12** - 0.29	**0.14** - 0.35	**0.17** - 0.40	**0.21** - 0.46
0.03 - 0.10	**0.06** - 0.15	**0.08** - 0.20	**0.10** - 0.25	**0.12** - 0.30	**0.15** - 0.35	**0.18** - 0.40
0.008 - 0.02	**0.01** - 0.04	**0.02** - 0.06	**0.03** - 0.08	**0.04** - 0.10	**0.05** - 0.12	**0.07** - 0.14
0.008 - 0.02	**0.01** - 0.04	**0.02** - 0.06	**0.03** - 0.08	**0.04** - 0.10	**0.05** - 0.12	**0.07** - 0.14
0.03 - 0.10	**0.06** - 0.15	**0.08** - 0.20	**0.10** - 0.25	**0.12** - 0.30	**0.15** - 0.35	**0.18** - 0.40

CONDITIONS DE COUPE

	Matières à usiner		CARBURE Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**40**	60
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**35**	50
P	Acier de décolletage au plomb		**60**	90
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**50**	80
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**35**	50
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**40**	55
S	Titane, alliage de titane		**30**	50
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**60**	100
N	Fonte d'aluminium	Si > 8%	**70**	110
N	Or, argent		**50**	80

DIXI 1280

			XIDUR Vc [m/min]	
P	Acier fortement allié	700 – 1500 N/mm²	**30**	30
H	Acier à outils et fontes trempés	> 1500 N/mm² (45 - 65 HRC)	**15**	25
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**15**	30

Cobalt Outils Coupants

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

Avance par tour **f [mm]**

Ø D_1 0.15 - 0.50	Ø D_1 0.50 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00	Ø D_1 10.00 - 14.00
0.0012 - 0.009	**0.004** - 0.018	**0.008** - 0.028	**0.011** - 0.037	**0.011** - 0.05	**0.020** - 0.07	**0.03** - 0.10	**0.04** - 0.14	**0.06** - 0.19
0.001 - 0.007	**0.003** - 0.015	**0.006** - 0.022	**0.010** - 0.029	**0.008** - 0.04	**0.016** - 0.06	**0.03** - 0.08	**0.04** - 0.12	**0.05** - 0.15
0.0014 - 0.011	**0.005** - 0.022	**0.010** - 0.033	**0.014** - 0.044	**0.013** - 0.06	**0.023** - 0.09	**0.04** - 0.12	**0.05** - 0.07	**0.07** - 0.23
0.0015 - 0.012	**0.005** - 0.023	**0.010** - 0.035	**0.015** - 0.046	**0.013** - 0.06	**0.024** - 0.09	**0.04** - 0.13	**0.06** - 0.18	**0.08** - 0.24
0.0012 - 0.009	**0.004** - 0.018	**0.008** - 0.028	**0.011** - 0.037	**0.011** - 0.05	**0.020** - 0.07	**0.03** - 0.10	**0.04** - 0.14	**0.06** - 0.19
0.0012 - 0.009	**0.004** - 0.018	**0.008** - 0.028	**0.011** - 0.037	**0.011** - 0.05	**0.020** - 0.07	**0.03** - 0.10	**0.04** - 0.14	**0.06** - 0.19
0.0012 - 0.009	**0.004** - 0.018	**0.008** - 0.028	**0.011** - 0.037	**0.011** - 0.05	**0.020** - 0.07	**0.03** - 0.10	**0.04** - 0.14	**0.06** - 0.19
0.0015 - 0.012	**0.005** - 0.023	**0.010** - 0.035	**0.015** - 0.046	**0.013** - 0.06	**0.024** - 0.09	**0.04** - 0.13	**0.06** - 0.18	**0.08** - 0.24
0.0017 - 0.013	**0.006** - 0.026	**0.011** - 0.039	**0.017** - 0.052	**0.015** - 0.07	**0.027** - 0.10	**0.04** - 0.14	**0.06** - 0.20	**0.09** - 0.27
0.0012 - 0.009	**0.004** - 0.018	**0.008** - 0.028	**0.011** - 0.037	**0.011** - 0.05	**0.020** - 0.07	**0.03** - 0.10	**0.04** - 0.14	**0.06** - 0.19

D_1 < 1mm ⇒ Vc - 30 %

Ø D_1 0.25 - 0.50	Ø D_1 0.50 - 1.00	Ø D_1 1.00 - 2.50	Ø D_1 2.50 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 5.00	Ø D_1 5.00 - 8.00	Ø D_1 8.00 - 12.00
0.015	0.022	0.03	0.035	0.044	0.055	0.06	0.08
0.01	0.02	0.025	0.03	0.04	0.05	0.05	0.06
0.015	0.022	0.03	0.035	0.044	0.055	0.06	0.08

Cycle de débourage = 0.25 x D_1

CONDITIONS DE COUPE

	Matières à usiner		CARBURE Vc [m/min]		TiAlN Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**40**	60	**50**	70
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**30**	50	**40**	60
P	Acier de décolletage au plomb		**60**	90	**70**	100
P	Acier fortement allié	700 – 1500 N/mm²	**35**	50	**25**	50
M	Acier inoxydable	400 – 700 N/mm²	**15**	40	**40**	60
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**30**	50	**40**	60
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**10**	30	**60**	90
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**50**	80	**40**	60
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**30**	50	**40**	60
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**20**	40	**30**	50
S	Titane, alliage de titane		**30**	50	**40**	60
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**80**	100	**90**	120
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**40**	70	**60**	80
N	Alliage d'aluminium	Si < 8%	**80**	120	**100**	160
N	Fonte d'aluminium	Si > 8%	**70**	110	**90**	130
N	Plastique		**30**	60	**50**	80
N	Or, argent		**50**	80	**65**	100

On utilise généralement le **Ø moyen** du foret étagé pour le calcul de la rotation de la broche (n)

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

Avance par tour **f [mm]**

Ø D_1 0.30 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00	Ø D_1 10.00 - 14.00	Ø D_1 14.00 - 16.00	Ø D_1 16.00 - 20.00
0.003 - 0.018	**0.014** - 0.027	**0.021** - 0.04	**0.03** - 0.05	**0.04** - 0.09	**0.07** - 0.13	**0.10** - 0.18	**0.14** - 0.25	**0.20** - 0.29	**0.22** - 0.36
0.002 - 0.014	**0.012** - 0.021	**0.018** - 0.03	**0.02** - 0.04	**0.04** - 0.07	**0.06** - 0.10	**0.08** - 0.14	**0.12** - 0.20	**0.17** - 0.22	**0.19** - 0.28
0.003 - 0.018	**0.014** - 0.027	**0.021** - 0.04	**0.03** - 0.05	**0.04** - 0.09	**0.07** - 0.13	**0.10** - 0.18	**0.14** - 0.25	**0.20** - 0.29	**0.22** - 0.36
0.002 - 0.014	**0.012** - 0.021	**0.018** - 0.03	**0.02** - 0.04	**0.04** - 0.07	**0.06** - 0.10	**0.08** - 0.14	**0.12** - 0.20	**0.17** - 0.22	**0.19** - 0.28
0.002 - 0.013	**0.010** - 0.020	**0.015** - 0.03	**0.02** - 0.03	**0.03** - 0.07	**0.05** - 0.09	**0.07** - 0.13	**0.10** - 0.18	**0.14** - 0.21	**0.16** - 0.26
0.002 - 0.014	**0.012** - 0.021	**0.018** - 0.03	**0.02** - 0.04	**0.04** - 0.07	**0.06** - 0.10	**0.08** - 0.14	**0.12** - 0.20	**0.17** - 0.22	**0.19** - 0.28
0.002 - 0.013	**0.010** - 0.02	**0.015** - 0.03	**0.02** - 0.03	**0.03** - 0.07	**0.05** - 0.09	**0.07** - 0.13	**0.10** - 0.18	**0.14** - 0.21	**0.16** - 0.26
0.002 - 0.014	**0.012** - 0.021	**0.018** - 0.03	**0.02** - 0.04	**0.04** - 0.07	**0.06** - 0.10	**0.08** - 0.14	**0.12** - 0.20	**0.17** - 0.22	**0.19** - 0.28
0.002 - 0.013	**0.010** - 0.020	**0.015** - 0.03	**0.02** - 0.03	**0.03** - 0.07	**0.05** - 0.09	**0.07** - 0.13	**0.10** - 0.18	**0.14** - 0.21	**0.16** - 0.26
0.001 - 0.008	**0.006** - 0.010	**0.008** - 0.02	**0.01** - 0.03	**0.02** - 0.04	**0.03** - 0.06	**0.04** - 0.08	**0.06** - 0.11	**0.07** - 0.12	**0.08** - 0.14
0.002 - 0.013	**0.010** - 0.020	**0.015** - 0.03	**0.02** - 0.03	**0.03** - 0.07	**0.05** - 0.09	**0.07** - 0.13	**0.10** - 0.18	**0.14** - 0.21	**0.16** - 0.26
0.004 - 0.028	**0.018** - 0.042	**0.027** - 0.06	**0.04** - 0.07	**0.05** - 0.14	**0.09** - 0.20	**0.13** - 0.28	**0.18** - 0.39	**0.25** - 0.45	**0.29** - 0.56
0.003 - 0.018	**0.014** - 0.027	**0.021** - 0.04	**0.03** - 0.05	**0.04** - 0.09	**0.07** - 0.13	**0.10** - 0.18	**0.14** - 0.25	**0.20** - 0.29	**0.22** - 0.36
0.004 - 0.028	**0.018** - 0.042	**0.027** - 0.06	**0.04** - 0.07	**0.05** - 0.14	**0.09** - 0.20	**0.13** - 0.28	**0.18** - 0.39	**0.25** - 0.45	**0.29** - 0.56
0.004 - 0.028	**0.018** - 0.042	**0.027** - 0.06	**0.04** - 0.07	**0.05** - 0.14	**0.09** - 0.20	**0.13** - 0.28	**0.18** - 0.39	**0.25** - 0.45	**0.29** - 0.56
0.005 - 0.040	**0.025** - 0.060	**0.038** - 0.08	**0.05** - 0.10	**0.08** - 0.20	**0.13** - 0.28	**0.18** - 0.40	**0.25** - 0.56	**0.35** - 0.64	**0.40** - 0.80
0.004 - 0.028	**0.018** - 0.042	**0.027** - 0.06	**0.04** - 0.07	**0.05** - 0.14	**0.09** - 0.20	**0.13** - 0.28	**0.18** - 0.39	**0.25** - 0.45	**0.29** - 0.56

$D_1 < 1mm \Rightarrow Vc - 30\ \%$

FRAISAGE

FRÄSEN

MILLING

FRESATURA

MARÁS

FRESADO

Cobalt Outils Coupants

SÉLECTION DES FRAISES 88

FRAISES EN BOUT Z = 1 102

FRAISES EN BOUT Z = 2 107

FRAISES EN BOUT Z = 3 118

FRAISES EN BOUT Z = 4 128

FRAISES MULTIDENTS 132

FRAISES PROFIL ÉBAUCHE 134

FRAISES TORIQUES 137

FRAISES HÉMISPHÉRIQUES 142

FRAISES DIAMANT & PCD 100

FRAISES POUR COMPOSITES / KEVLAR® 151

OUTILS SUR DEMANDE 152

INFORMATIONS 153

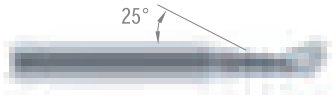
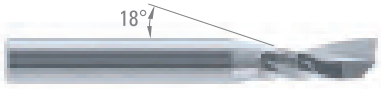
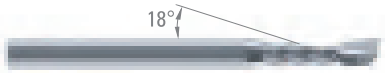
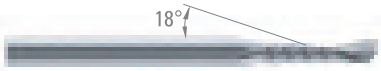
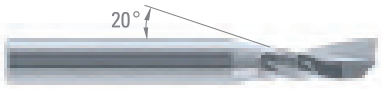
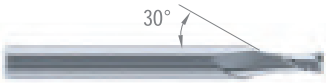
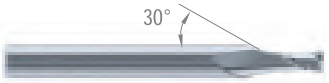
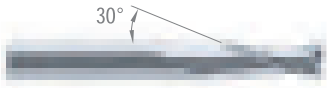
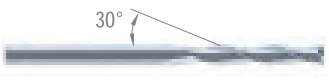
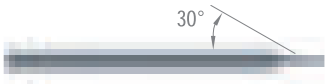
CONDITIONS DE COUPE 154

Cobalt Outils Coupants

✓ = article de stock

* = pour matériaux non-ferreux

SELECTION DES FRAISES

FRAISES EN BOUT Z=1		Z	Page	Ebauche / Finition		CARBURE	TiAIN	C-TOP	DLC*	DIAMANT*
DIXI 7561 Ø 2.00 - 12.00		1	102	Ebauche Finition		✓			✓*	
DIXI 7301 Ø 2.00 - 8.00		1	102	Ebauche Finition		✓				
DIXI 7302 Ø 3.00 - 12.00		1	103	Ebauche Finition		✓				
DIXI 7303 Ø 2.00 - 4.00		1	103	Ebauche Finition		✓				
DIXI 7311 Ø 1.00 - 12.00		1	104	Ebauche Finition		✓				
DIXI 7060 Ø 0.50 - 6.00		1	105	Ebauche Finition		✓				
DIXI 7063 Ø 0.40 - 4.00		1	106	Ebauche Finition		✓				
FRAISES EN BOUT Z=2										
DIXI 7242 Ø 0.10 - 20.00		2	107	Ebauche Finition	$D_1 > 6$ DIN 6527	✓	✓			
DIXI 7342 Ø 0.10 - 12.00		2	108	Ebauche Finition		✓		✓		
DIXI 7202 Ø 1.50 - 12.00		2	109	Ebauche Finition		✓	✓			✓*
DIXI 7222 Ø 3.00 - 20.00		2	110	Ebauche Finition		✓	✓			✓*
DIXI 7240 Ø 0.04 - 5.50		2	111	Ebauche Finition		✓	✓			
DIXI 7237 Ø 0.15 - 3.00		2	112	Ebauche Finition		✓	✓			

Cobalt Outils Coupants

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
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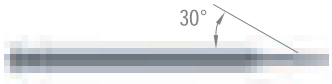
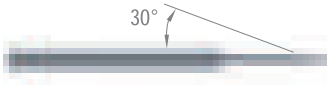
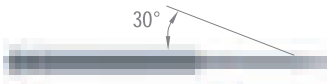
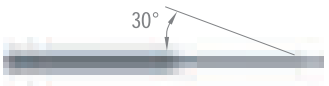
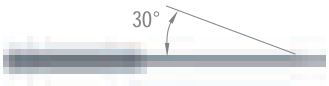
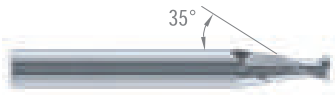
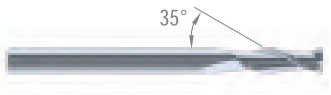
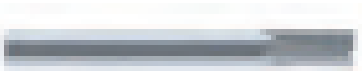
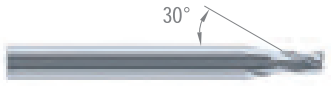
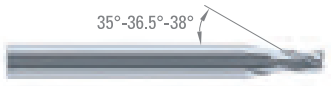
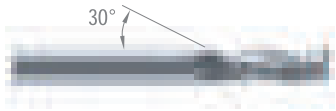
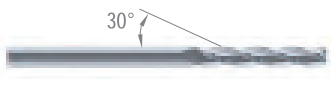
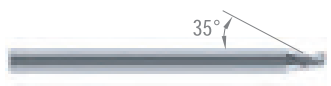
◎	○	○	○		◎	○	○	◎	○	○		○

✓ = article de stock

∗ = pour matériaux non-ferreux

FRAISES EN BOUT Z=2		Z	Page	Ebauche Finition		CARBURE	TiAIN	C-TOP	CUTINOX	DIAMANT*
DIXI 7238 Ø 0.30 - 3.00		2	112	Ebauche Finition		✓	✓			
DIXI 7239 Ø 0.40 - 3.00		2	112	Ebauche Finition		✓	✓			
DIXI 7239-10D Ø 0.50 - 3.00		2	112	Ebauche Finition		✓	✓			
DIXI 7239-12D Ø 0.50 - 1.70		2	112	Ebauche Finition		✓	✓			
DIXI 7239-15D Ø 0.50 - 1.35		2	112	Ebauche Finition		✓	✓			
DIXI 7582 Ø 1.00 - 20.00		2	116	Ebauche Finition	$D_1 \geq 2.8$	✓	✓			
DIXI 7572 Ø 3.00 - 12.00		2	117	Ebauche Finition		✓	✓			✓*
DIXI 7232 Ø 2.00 - 8.00		2	117	Ebauche Finition		✓				
FRAISES EN BOUT Z=3										
DIXI 7243 Ø 0.35 - 20.00		3	118	Ebauche Finition	$D_1 > 6$ DIN 6527	✓	✓			
DIXI 7343 Ø 0.30 - 16.00		3	119	Ebauche Finition		✓		✓		
DIXI 7203 Ø 2.00 - 20.00		3	120	Ebauche Finition		✓	✓			
DIXI 7223 Ø 3.00 - 16.00		3	121	Ebauche Finition		✓	✓			✓*
DIXI 7333 Ø 0.30 - 10.00		3	122	Ebauche Finition		✓			✓	

Cobalt Outils Coupants

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
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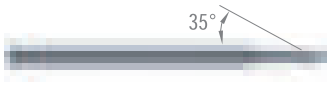
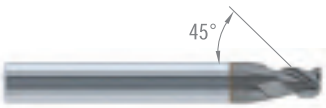
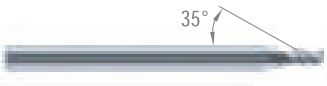
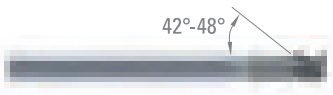
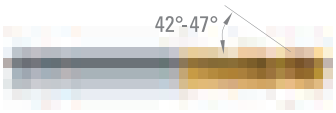
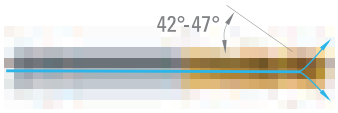
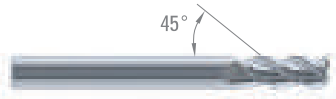
Cobalt Outils Coupants

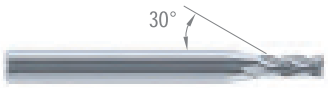
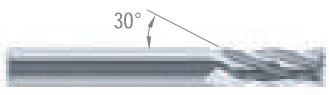
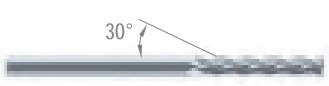
✓ = article de stock

∗ = pour matériaux non-ferreux

FRAISES EN BOUT Z=3

		Z	Page	Ebauche Finition		CARBURE	TiAlN	XIDUR	CUTINOX	DIXAL	DLC*	DIAMANT
DIXI 7333-3D Ø 0.30 - 4.00		3	123	Ebauche Finition		✓			✓			
DIXI 7333-5D Ø 0.30 - 3.00		3	123	Ebauche Finition		✓			✓			
DIXI 7333-8D Ø 0.30 - 3.00		3	123	Ebauche Finition		✓			✓			
DIXI 7543 Ø 1.00 - 12.00		3	124	Ebauche Finition				✓				
DIXI 7583 Ø 0.30 - 6.00		3	125	Ebauche Finition		✓	✓				✓*	
DIXI 7253 Ø 3.00 - 16.00		3	126	Ebauche Finition	$D_1 \geq 10$				✓			
DIXI 7563 Ø 4.00 - 20.00		3	126	Ebauche Finition						✓		
DIXI 7563-FC Ø 6.00 - 20.00		3	126	Ebauche Finition						✓		
DIXI 7273 Ø 3.00 - 20.00		3	127	Ebauche Finition	$D_1 \geq 12$	✓	✓					
DIXI 7593 Ø 6.00 - 20.00		3-4	127	Ebauche Finition	DIN 6527	✓						

FRAISES EN BOUT Z=4

		Z	Page	Ebauche Finition		CARBURE	TiAlN	XIDUR	CUTINOX	DIXAL	DLC*	DIAMANT
DIXI 7244 Ø 0.40 - 20.00		4	128	Ebauche Finition		✓	✓					✓*
DIXI 7204 Ø 2.00 - 6.00		4	129	Ebauche Finition	$D_1 \leq 6$	✓	✓					
DIXI 7224 Ø 3.00 - 20.00		4	129	Ebauche Finition	$D_1 \leq 6$	✓	✓					✓*

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
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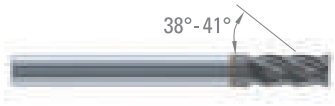
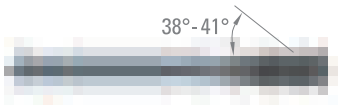
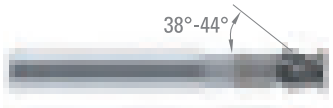
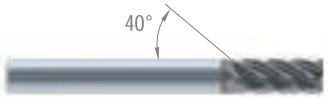
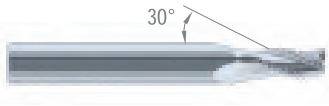
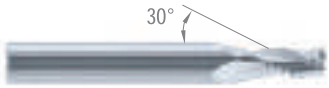
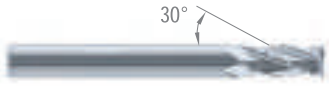
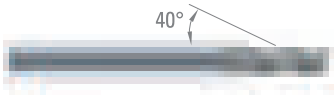
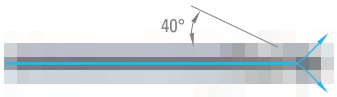
✓ = article de stock

∗ = pour matériaux non-ferreux

		Z	Page	Ebauche / Finition		CARBURE	TiAlN	XIDUR	CUTINOX	DAC	DLC*	
FRAISES EN BOUT Z=4												
DIXI 7264 Ø 1.50 - 20.00		4	130	Ebauche Finition					✓			
DIXI 7264-3D Ø 6.00 - 20.00		4	130	Ebauche Finition					✓			
DIXI 7254 Ø 3.00 - 16.00		4	131	Ebauche Finition					✓			
FRAISES MULTIDENTS												
DIXI 7560 Ø 0.35 - 20.00		3-8	132	Ebauche Finition		✓	✓				✓*	
DIXI 7520 Ø 0.40 - 16.00		3-10	133	Ebauche Finition				✓				
FRAISES PROFIL ÉBAUCHE												
DIXI 7210 Ø 3.00 - 12.00		3	134	Ebauche Finition		✓			✓			
DIXI 7213 Ø 4.00 - 20.00		3	134	Ebauche Finition		✓	✓					
DIXI 7214 Ø 6.00 - 20.00		4	135	Ebauche Finition		✓	✓					
DIXI 7215 Ø 6.00 - 16.00		3	135	Ebauche Finition						✓		
DIXI 7215-FC Ø 6.00 - 16.00		3	135	Ebauche Finition						✓		
FRAISES HAUTE AVANCE												
DIXI 7702 Ø 0.50 - 12.00		2	136	Ebauche Finition				✓				

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
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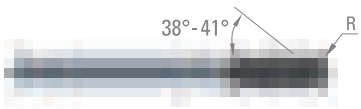
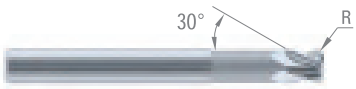
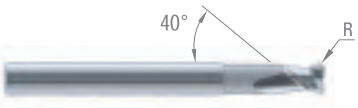
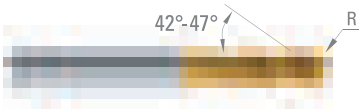
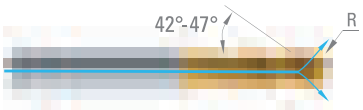
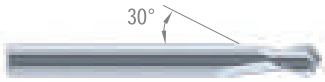
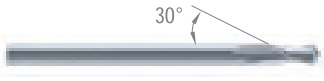
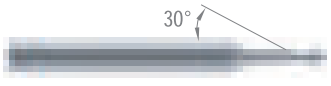
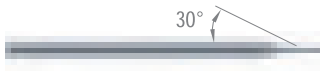
✓ = article de stock

∗ = pour matériaux non-ferreux

SELECTION DES FRAISES

		Z	Page	Ebauche / Finition		CARBURE	TiAlN	DICUT	XIDUR	CUTINOX	DIXAL	DIAMANT*
FRAISES TORIQUES												
DIXI 7237-10 Ø 0.40 - 3.00		2	137	Ebauche Finition		✓	✓					
DIXI 7070 Ø 3.00 - 12.00		4 - 6	138	Ebauche Finition					✓			
DIXI 7265 Ø 2.00 - 12.00		4	139	Ebauche Finition						✓		
DIXI 7554 Ø 2.00 - 12.00		4	140	Ebauche Finition		✓	✓					
DIXI 7552 Ø 3.00 - 16.00		2	140	Ebauche Finition		✓		✓				
DIXI 7565 Ø 4.00 - 20.00		3	141	Ebauche Finition							✓	
DIXI 7565-FC Ø 6.00 - 20.00		3	141	Ebauche Finition							✓	
FRAISES HÉMISPHÉRIQUES												
DIXI 7032 Ø 0.06 - 20.00		2	142	Ebauche Finition		✓	✓	✓				✓*
DIXI 7042 Ø 2.00 - 20.00		2	143	Ebauche Finition		✓	✓					✓*
DIXI 7046 Ø 0.20 - 12.00		2	144	Ebauche Finition		✓	✓	✓				✓*
DIXI 7045 Ø 0.20 - 12.00		2	145	Ebauche Finition		✓	✓	✓				✓*
DIXI 7047-8D Ø 0.20 - 12.00		2	145	Ebauche Finition		✓	✓	✓				✓*
DIXI 7047-10D Ø 0.20 - 12.00		2	145	Ebauche Finition		✓	✓	✓				✓*

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
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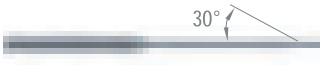
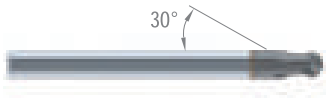
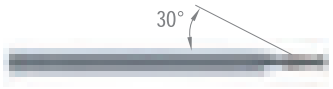
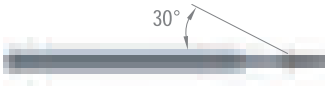
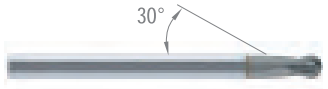
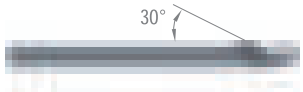
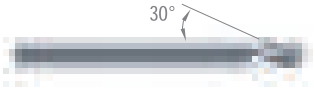
✓ = article de stock

∗ = pour matériaux non-ferreux

FRAISES HÉMISPHÉRIQUES

	Z	Page	Ebauche Finition		☐ CARBURE	TiAIN	DICUT	XIDUR	DIAMANT*
DIXI 7047-12D Ø 0.20 - 5.00	2	145	Ebauche / Finition		✓	✓	✓		✓*
DIXI 7047-15D Ø 0.20 - 4.00	2	145	Ebauche / Finition		✓	✓	✓		✓*
DIXI 7047-18D Ø 0.20 - 3.00 	2	145	Ebauche / Finition		✓	✓	✓		✓*
DIXI 7532 Ø 0.20 - 8.00 	2	147	Ebauche / Finition					✓	
DIXI 7532-3D Ø 0.20 - 10.00 	2	148	Ebauche / Finition					✓	
DIXI 7532-5D Ø 0.20 - 10.00 	2	148	Ebauche / Finition					✓	
DIXI 7532-8D Ø 0.20 - 4.00	2	148	Ebauche / Finition					✓	
DIXI 7532-10D Ø 0.40 - 3.00	2	148	Ebauche / Finition					✓	
DIXI 7532-12D Ø 0.50 - 2.00	2	148	Ebauche / Finition					✓	
DIXI 7532-15D Ø 0.60 - 2.00	2	148	Ebauche / Finition					✓	
DIXI 7542 Ø 1.00 - 12.00 	2	149	Ebauche / Finition					✓	
DIXI 7033 Ø 1.00 - 10.00 	3	150	Ebauche / Finition		✓	✓			
DIXI 7034 Ø 8.00 - 20.00 	4	150	Ebauche / Finition		✓	✓			

Cobalt Outils Coupants

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
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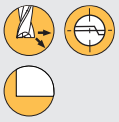
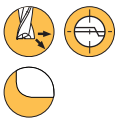
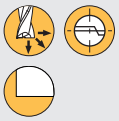
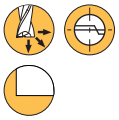
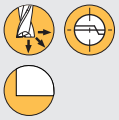
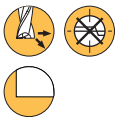
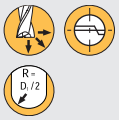
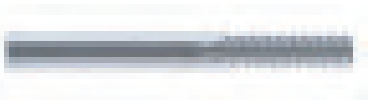
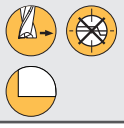
✓ = article de stock

FRAISES DIAMANT & PCD

	Z	Page	Ebauche / Finition		CARBURE	PCD	DIA	
DIXI 72420-SH Ø 1.00 - 20.00	1 - 2	384	Ebauche ●●○○○ Finition ●●●●●			✓		
DIXI 70520-SH Ø 1.00 - 20.00	1 - 2	385	Ebauche ●●●○○ Finition ●●●●●			✓		
DIXI 70600 PCD Ø 1.00 - 10.00	1	386	Ebauche ●●○○○ Finition ●●●●○			✓		
DIXI 70600 DIA Ø 3.00 - 6.00	1	386	Ebauche ○○○○○ Finition ●●●●●				✓	
DIXI 72310 DIA Ø 0.30 - 2.00	1	387	Ebauche ○○○○○ Finition ●●●●●				✓	
DIXI 72421 DIA Ø 6.00 - 12.00	1	388	Ebauche ○○○○○ Finition ●●●●●				✓	
DIXI 70320-SH Ø 2.00 - 20.00	1 - 2	389	Ebauche ●○○○○ Finition ●●●●●			✓		

FRAISES POUR COMPOSITES / KEVLAR®

	Z	Page	Ebauche / Finition		CARBURE	PCD	DIA	
DIXI 7112 Ø 5.00 - 12.70 	2	151	Ebauche ●●●●○ Finition ●●○○○		✓			

◯ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
								◎	◎	◎	◎	◎
								◎	◎	◎	◎	◎
								◎	◎	◎	◎	◎
								◎	◯	◎		◎
								◎	◯	◎		◎
												◎
								◎	◎	◎	◎	◎

Kevlar®
◎

DIXI 7561

FRAISES EN BOUT POUR ALUMINIUM

Z = 1

P. 202

Alliage Cu
Argent
Or

Alu

Plastique

Ebauche

Finition

$D_{1\ e8}$		L_1	D_{h5}	L	CARBURE	DLC*
2.00	0.10 x 45°	4.0	3	38	46560	971284
3.00	0.15 x 45°	6.0	3	38	46561	971285
4.00	0.15 x 45°	12.0	4	50	46562	971286
5.00	0.15 x 45°	14.0	5	50	46563	960345
6.00	0.20 x 45°	16.0	6	50	46564	967038
8.00	0.20 x 45°	20.0	8	60	46565	992675
10.00	0.20 x 45°	22.0	10	70	46566	996345
12.00	0.20 x 45°	25.0	12	70	46567	965525

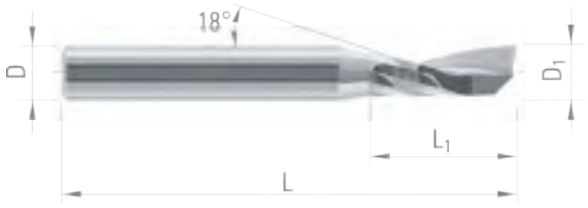
* pour matériaux non-ferreux

DIXI 7301

FRAISES 1 DENT POUR PLASTIQUE - COURTES

Z = 1

P. 184



Plastique

Ebauche

Finition

$D_{1\ e8}$	L_1	D_{h5}	L	CARBURE
2.00	6.0	3	38	965241
3.00	12.0	3	50	963955
4.00	16.0	4	50	964011
5.00	16.0	5	50	964012

Cobalt Outils Coupants

DIXI 7302

FRAISES 1 DENT - LONGUES

Z = 1

P. 184

Plastique

Ebauche ●●●○○

Finition ●●○○○

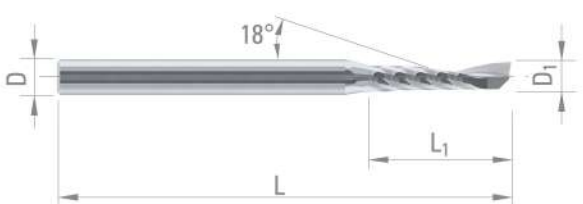
$D_{1\ e8}$	L_1	D_{h5}	L	CARBURE
3.00	17.0	3	61	963956
4.00	23.0	4	61	964031
5.00	23.0	5	61	964032
6.00	23.0	6	75	964033
10.00	33.0	10	75	964093
12.00	33.0	12	100	964094

DIXI 7303

FRAISES 1 DENT - LONGUES
CORPS RENFORCÉ

Z = 1

P. 184



Plastique

Ebauche ●●●○○

Finition ●●○○○

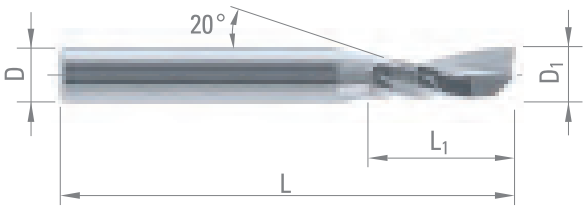
$D_{1\ e8}$	L_1	D_{h5}	L	CARBURE
2.00	8.0	6	50	964147
3.00	18.0	6	75	963957
4.00	23.0	6	75	964079

DIXI 7311

FRAISES 1 DENT POUR PLASTIQUE

Z = 1

P. 184



Plastique

Ebauche ●●●●○

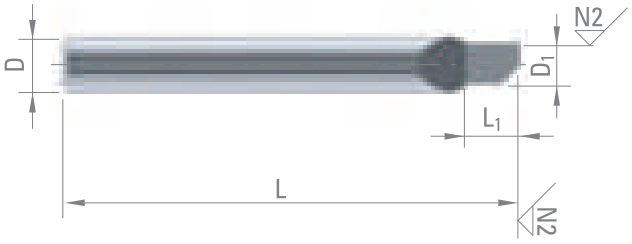
Finition ●●●○○

$D_{1\ e8}$	L_1	D_{h5}	L	CARBURE
1.00	4.0	3	30	305388
1.50	6.0	3	30	305390
2.00	8.0	3	30	305391
	8.0	6	58	974194
	10.0	6	58	974195
2.50	10.0	6	58	974197
3.00	10.0	3	58	974198
	15.0	3	58	974199
	20.0	3	58	305392
	10.0	6	58	974200
	15.0	6	58	974201
	20.0	6	58	305393
4.00	12.0	4	58	974206
	15.0	4	58	305394
	22.0	4	58	974207
	30.0	4	75	305395
	12.0	6	58	974208
	22.0	6	58	974209
5.00	14.0	5	58	974214
	22.0	5	58	974215
	14.0	6	58	974216
	22.0	6	58	974217
6.00	16.0	6	58	974222
	22.0	6	58	305778
	32.0	6	75	974223
	38.0	6	80	305396
8.00	22.0	8	64	974227
	30.0	8	80	974228
	38.0	8	80	974229
	42.0	8	80	305397
10.00	30.0	10	80	974230
12.00	30.0	12	83	974231

FRAISES À DENTURE DROITE

Z = 1

P. 186



Fontes	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

Ebauche ●●○○○

Finition ●●●●○

$D_{1 \pm 0.01}$	L_1	D_{h5}	L	CARBURE
0.50	1.0	4	35	965456
0.60	1.2	4	35	965457
0.70	1.5	4	35	965458
0.80	1.5	4	35	960645
0.90	1.5	4	35	960646
1.00	1.5	4	35	960647
1.00 >	2.5	4	35	964328
1.10	2.0	4	35	960648
1.20	2.0	4	35	960649
1.30	2.0	4	35	960650
1.40	2.0	4	35	960651
1.50	2.0	4	35	960652
1.60	2.0	4	35	960653
1.70	2.5	4	35	960654
1.80	2.5	4	35	960655
1.90	2.5	4	35	960656
2.00	2.5	4	35	960657
2.50	3.0	4	35	960658
3.00	3.5	4	42	960659
3.50	4.0	4	42	960660
4.00	5.0	4	42	960661
4.50	6.0	6	50	960662
5.00	7.0	6	50	960663
6.00	7.0	8	50	960664

DIXI 7063

FRAISES 1 DENT 3/4

Z = 1

P. 186

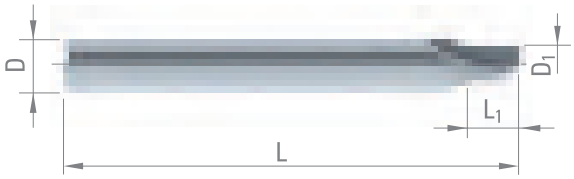
Fontes | Alliage Cu Argent Or | Alliage Cu difficile | Alu | Plastique

Ebauche ●●●○○

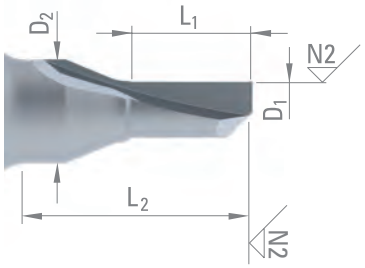
Finition ●●●●●

Ø 0.40 ≤ Ø 1.80

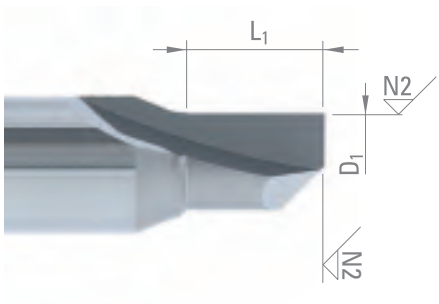
Ø 1.80 ≤ Ø 4.00



$D_{1 \pm 0.01}$	L_1	D_2	L_2	D_{h5}	L	CARBURE
0.40	0.8	1.5	4.6	4	35	987593
0.50	1.0	1.5	4.6	4	35	983250
0.60	1.2	1.5	4.6	4	35	987594
0.70	1.5	1.5	4.6	4	35	987595
0.80	1.5	1.5	4.6	4	35	987596
0.90	1.5	2.0	5.1	4	35	987581
1.00	1.5	2.0	5.1	4	35	983251
1.00 >	2.5	2.0	5.1	4	35	987582
1.10	2.5	2.0	6.0	4	35	987597
1.20	2.5	2.0	6.0	4	35	987598
1.30	2.5	3.0	6.0	4	35	987599
1.40	2.5	3.0	6.0	4	35	987583
1.50	2.5	3.0	6.0	4	35	983252
1.50 >	3.5	3.0	6.5	4	35	987600
1.60	3.5	3.0	6.5	4	35	987585
1.70	3.5	3.0	6.5	4	35	987586



$D_{1 \pm 0.01}$	L_1	D_{h5}	L	CARBURE
1.80	3.5	4	35	987601
1.90	3.5	4	35	987602
2.00	4.0	4	35	983253
2.20	4.0	4	35	987603
2.50	4.0	4	35	987604
2.80	4.0	4	35	987605
3.00	4.0	4	35	983254
4.00	5.0	4	35	987584



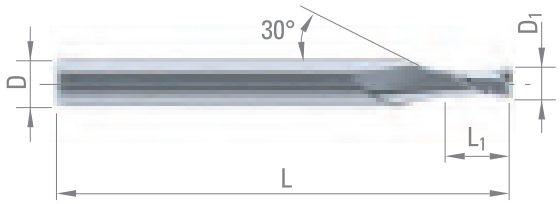
DIXI 7242

FRAISES EN BOUT HÉLICOÏDALES CORPS RENFORCÉ

Z = 2

P. 162

D_1 > 6



Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

Ebauche ●●●○○ Finition ●●●○○

D_1 Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	CARBURE	TiAlN
0.10	0.25	3	38	334534	
0.15	0.3	3	38	52628	64920
0.20	0.4	3	38	45705	60021
0.25	0.6	3	38	47916	64921
0.30	0.6	3	38	42172	60121
0.30 >	1.0	3	38	48850	60122
0.35	0.8	3	38	47917	950699
0.40	0.8	3	38	42126	60123
0.40 >	2.0	3	38	48851	60124
0.45	1.0	3	38	47918	952421
0.50	1.0	3	38	35241	36230
0.50 >	2.5	3	38	48852	60125
0.55	1.2	3	38	47921	952422
0.60	1.2	3	38	35242	36231
0.60 >	3.0	3	38	48853	60126
0.65	1.4	3	38	47922	952423
0.70	1.4	3	38	35243	36232
0.70 >	3.5	3	38	48854	57162
0.75	1.6	3	38	47923	57163
0.80	1.6	3	38	35244	36233
0.80 >	4.0	3	38	48855	57164
0.85	1.8	3	38	47066	57165
0.90	1.8	3	38	35245	36234
0.90 >	4.5	3	38	48856	57166
0.95	2.0	3	38	42846	57167
1.00	2.0	3	38	35246	36235
1.00 >	5.0	3	38	42735	55950
1.05	2.2	3	38	47924	57168
1.10	2.2	3	38	35247	57169
1.15	2.4	3	38	47925	57170
1.20	2.4	3	38	35248	36237
1.20 >	6.0	3	38	48857	57171
1.25	2.6	3	38	47926	57172
1.30	2.6	3	38	35249	57173
1.35	2.8	3	38	47927	57174
1.40	2.8	3	38	35250	36239
1.45	3.0	3	38	47928	57175
1.50	3.0	3	38	38489	36240
1.50 >	7.0	3	38	48858	57176

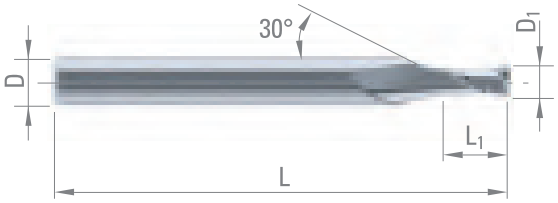
D_1 Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	CARBURE	TiAlN
1.60	3.2	3	38	38490	57177
1.70	3.4	3	38	38491	44939
1.80	3.6	3	38	42096	38613
1.90	4.0	3	38	38493	57178
2.00	6.0	3	38	42784	39577
2.10	7.0	3	38	44058	64794
2.20	7.0	3	38	43956	64795
2.30	7.0	3	38	44877	60627
2.40	7.0	3	38	43527	64796
2.50	7.0	3	38	42201	36242
3.00	7.0	6	57	41806	46440
3.50	7.0	6	57	43353	57179
4.00	8.0	6	57	41856	57180
4.50	8.0	6	57	42202	57181
5.00	10.0	6	57	41996	36247
5.50	10.0	6	57	41807	57182
6.00	10.0	6	57	41907	57183
6.50	13.0	8	63	28932	57184
7.00	13.0	8	63	28933	57185
7.50	16.0	8	63	28934	57186
8.00	16.0	8	63	42271	57187
8.50	16.0	10	72	28936	57195
9.00	16.0	10	72	28937	57196
9.50	19.0	10	72	43038	57197
10.00	19.0	10	72	42352	57198
12.00	22.0	12	83	39944	57199
16.00	26.0	16	92	42354	57201
18.00	26.0	18	92	42355	57202
20.00	32.0	20	104	42356	57203

DIXI 7342

FRAISES EN BOUT CORPS RENFORCÉ

Z = 2

P. 188
P. 190



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile

Ebauche ●●●●○ Finition ●●●●○

D_1 Ø<0.10 - 0/-0.01 Ø<2.00 - 0/-0.02 Ø≥6.00 - e8	L_1	D_{h5}	L	CARBURE	C-TOP
0.10	0.15	4	38	334850	334910
0.15	0.23	4	38	334851	334911
0.20	0.30	4	38	334852	334912
0.25	0.38	4	38	334853	334913
0.30	0.45	4	38	334854	334914
0.35	0.53	4	38	334855	334915
0.40	0.60	4	38	334856	334916
0.50	0.75	4	38	334857	334917
0.60	0.90	4	38	334858	334918
0.70	1.05	4	38	334859	334919
0.80	1.20	4	38	334860	334920
0.90	1.35	4	38	334861	334921
1.00	1.50	4	38	334862	334922
1.10	1.65	4	38	334863	334923
1.20	1.80	4	38	334864	334924
1.30	1.95	4	38	334865	334925
1.40	2.10	4	38	334866	334926
1.50	2.25	4	38	334867	334927
1.60	2.40	4	38	334868	334928
1.70	2.55	4	38	334869	334929
1.80	2.70	4	38	334870	334930
1.90	2.85	4	38	334871	334931
2.00	3.00	4	38	334872	334932
2.50	3.75	4	38	334873	334933
3.00	4.50	6	55	334874	334934
4.00	6.00	6	55	334875	334935
5.00	7.50	6	55	334876	334936
6.00	9.00	6	55	334877	334937
8.00	12.00	8	64	334878	334938
10.00	15.00	10	67	334879	334939
12.00	18.00	12	74	334880	334940

DIXI 7202

FRAISES EN BOUT HÉLICOÏDALES

Z = 2

P. 162

Acier + Pb | Acier faibl. allié | Acier inox aust. | Titane, alliage de titane | Alliage Cu Argent Or

Alliage Cu difficile | Alu | Graphite | Plastique

Ebauche ●○○○○

Finition ●●●●○

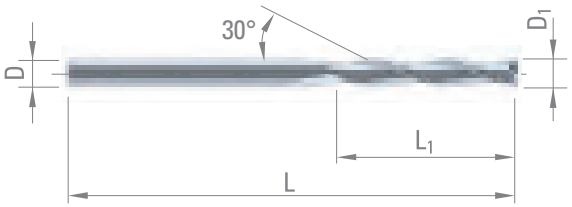
$D_{1\ e8}$ Ø<2.00 - 0/-0.01 Ø≥2.00 - e8	L_1	D_{h5}	L	CARBURE	TiAlN	DIAMANT
1.50	6	2.0	32	690	57063	
2.00	8	2.0	32	691	57064	61616
2.50	8	2.5	32	692	57065	
3.00	10	3.0	38	693	57066	36199
3.50	12	3.5	38	34760	57067	
4.00	12	4.0	50	694	57068	63847
4.50	12	4.5	50	41135	57069	
5.00	14	5.0	50	34623	57070	
6.00	16	6.0	50	34624	57071	
7.00	18	7.0	60	29769	57072	
8.00	20	8.0	63	698	57073	67513
9.00	20	9.0	67	43726		
10.00	22	10.0	72	699	57075	
11.00	22	11.0	73	28686		
12.00	22	12.0	73	30940	57077	

DIXI 7222

FRAISES EN BOUT HÉLICOÏDALES LONGUES

Z = 2

P. 178



Acier + Pb | Acier faibl. allié | Acier inox aust. | Titane, alliage de titane | Alliage Cu Argent Or

Alliage Cu difficile | Alu | Graphite | Plastique

Ebauche ●○○○○

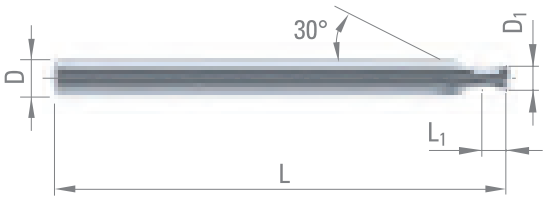
Finition ●●●●○

$D_{1\ e8}$	L_1	D_{h5}	L	CARBURE	TiAlN	DIAMANT
3.00	30.0	3	60	44756	57124	60231
4.00	30.0	4	60	44757	57125	60232
5.00	35.0	5	75	44758	57133	60233
6.00	40.0	6	100	44759	57134	60234
8.00	40.0	8	100	44760	57135	60235
10.00	40.0	10	100	44761	57136	60236
12.00	45.0	12	100	44762	57137	60237
16.00	65.0	16	150	44764		
20.00	65.0	20	150	44766	57140	

FRAISES EN BOUT EXTRA COURTES CORPS RENFORCÉ

Z = 2

P. 162



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

Ebauche ●●●●○ Finition ●●●○○

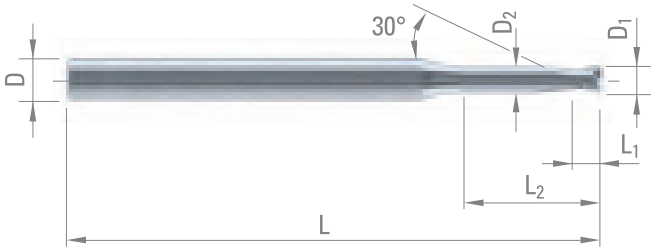
D_1 Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	CARBURE	TiAlN
0.04	0.04	3	38	954084	
0.05	0.05	3	38	954085	
0.06	0.06	3	38	951973	
0.07	0.07	3	38	954087	
0.08	0.08	3	38	954086	
0.09	0.09	3	38	954089	
0.10	0.10	3	38	63609	64354
0.12	0.12	3	38	954090	956316
0.15	0.15	3	38	63608	64355
0.20	0.20	3	38	63610	64356
0.25	0.25	3	38	63678	64357
0.30	0.30	3	38	63679	64253
0.35	0.35	3	38	63680	64358
0.40	0.40	3	38	56551	61443
0.45	0.45	3	38	63681	64359
0.50	0.50	3	38	63682	64254
0.55	0.55	3	38	63683	64360
0.60	0.60	3	38	45571	64361
0.65	0.65	3	38	63684	64362
0.70	0.70	3	38	63685	64363
0.75	0.75	3	38	63686	64364
0.80	0.80	3	38	63687	64255
0.85	0.85	3	38	63688	64365
0.90	0.90	3	38	63689	62538
0.95	0.95	3	38	63690	64366
1.00	1.00	3	38	50547	64367
1.05	1.05	3	38	63691	64368
1.10	1.10	3	38	63692	64369
1.15	1.15	3	38	63805	64370
1.20	1.20	3	38	63806	64371
1.25	1.25	3	38	63807	64372
1.30	1.30	3	38	63808	64373
1.35	1.35	3	38	63809	64374
1.40	1.40	3	38	63810	64375
1.45	1.45	3	38	63811	64376

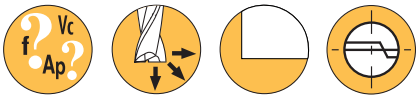
D_1 Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	CARBURE	TiAlN
1.50	1.50	3	38	50548	56840
1.55	1.55	3	38	63812	64377
1.60	1.60	3	38	63813	64378
1.65	1.65	3	38	63814	64379
1.70	1.70	3	38	63815	64380
1.75	1.75	3	38	63816	64381
1.80	1.80	3	38	63817	64382
1.85	1.85	3	38	63818	64383
1.90	1.90	3	38	63819	64384
1.95	1.95	3	38	63820	64385
2.00	2.00	6	50	63821	64386
2.10	2.10	6	50	63823	64387
2.20	2.20	6	50	63824	64388
2.30	2.30	6	50	63825	64389
2.40	2.40	6	50	63826	64390
2.50	2.50	6	50	63827	64391
3.00	3.00	6	50	63828	64392
3.50	3.50	6	50	63829	64393
4.00	4.00	6	50	63830	64394
4.50	4.50	6	50	63831	64395
5.00	5.00	6	50	63832	64397
5.50	5.50	6	50	63833	64398

DIXI 7237 - 7238 - 7239 - 7239-D

FRAISES EN BOUT EXTRA COURTES, DÉGAGÉES

Z = 2





P. 162
P. 164

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

Ebauche ●●●●○ Finition ●●●○○

D_1	L_1	D_2	D_{h5}	L	L_2	DIXI	CARBURE	TiAlN
Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8								
0.15	0.15	0.13	3	38	0.45	7237	66047	66149
0.20	0.20	0.17	3	38	0.60	7237	66068	66150
0.25	0.25	0.22	3	38	0.75	7237	66070	66151
0.30	0.30	0.27	3	38	0.90	7237	66071	66152
					1.50	7238	66196	66254
0.35	0.35	0.32	3	38	1.05	7237	66072	66153
					1.75	7238	66197	66255
0.40	0.40	0.37	3	38	1.20	7237	66073	66154
					2.00	7238	66199	66256
					3.20	7239	66296	66355
0.45	0.45	0.42	3	38	1.35	7237	66074	66155
					2.25	7238	66201	66257
					3.60	7239	66297	66356
0.50	0.50	0.45	3	38	1.50	7237	66075	66156
					2.50	7238	66202	66258
					4.00	7239	66298	66357
					5.00	7239-10D	978569	979371
					6.00	7239-12D	979313	979447
					7.50	7239-15D	979475	979497
0.55	0.55	0.50	3	38	1.65	7237	66076	66157
					2.75	7238	66203	66259
					4.40	7239	66299	66358
					5.50	7239-10D	979332	979373
					6.60	7239-12D	979413	979448
					8.25	7239-15D	979478	979498
0.60	0.60	0.55	3	38	1.80	7237	66077	66158
					3.00	7238	66205	66260
					4.80	7239	66300	66366
					6.00	7239-10D	979333	979374
					7.20	7239-12D	979416	979449
					9.00	7239-15D	979480	979499
0.65	0.65	0.60	3	38	1.95	7237	66078	66159
					3.25	7238	66206	66261
					5.20	7239	66301	66367
					6.50	7239-10D	979334	979375
					7.80	7239-12D	979417	979450
					9.75	7239-15D	979482	979500
0.70	0.70	0.65	3	38	2.10	7237	66079	66160
					3.50	7238	66207	66262
					5.60	7239	66302	66368
					7.00	7239-10D	979335	979376
					8.40	7239-12D	979419	979451
					10.50	7239-15D	979483	979503
0.75	0.75	0.70	3	38	2.25	7237	66080	66161
					3.75	7238	66208	66263
					6.00	7239	66303	66369
					7.50	7239-10D	979336	979377
					9.00	7239-12D	979420	979452
					11.25	7239-15D	979484	979505
0.80	0.80	0.75	3	38	2.40	7237	66081	66162
					4.00	7238	66209	66264
					6.40	7239	66304	66370
					8.00	7239-10D	979337	979378
					9.60	7239-12D	979421	979453
					12.00	7239-15D	979485	979506

DIXI 7237 $L_2 = 3 \times D_1$

DIXI 7238 $L_2 = 5 \times D_1$

DIXI 7239 $L_2 = 8 \times D_1$

DIXI 7239-10D $L_2 = 10 \times D_1$

DIXI 7239-12D $L_2 = 12 \times D_1$

DIXI 7239-15D $L_2 = 15 \times D_1$

DIXI 7237 - 7238 - 7239 - 7239-D

D_1	L_1	D_2	D_{h5}	L	L_2	DIXI	CARBURE	TiAIN
Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8								
0.85	0.85	0.80	3	38	2.55	7237	66082	66164
					4.25	7238	66210	66265
					6.80	7239	66305	66371
					8.50	7239-10D	979338	979409
					10.20	7239-12D	979423	979454
					12.75	7239-15D	979486	979507
0.90	0.90	0.85	3	38	2.70	7237	66083	66165
					4.50	7238	66211	66266
					7.20	7239	66306	66372
					9.00	7239-10D	979339	979379
					10.80	7239-12D	979430	979455
					13.50	7239-15D	979487	979509
0.95	0.95	0.90	3	38	2.85	7237	66084	66166
					4.75	7238	66212	66267
					7.60	7239	66307	66373
					9.50	7239-10D	979340	979380
					11.40	7239-12D	979431	979456
					14.25	7239-15D	979488	979510
1.00	1.00	0.95	3	38	3.00	7237	66110	66167
					5.00	7238	66213	66268
					8.00	7239	66308	66374
					10.00	7239-10D	979341	979381
					12.00	7239-12D	979206	979457
					15.00	7239-15D	979489	979511
1.05	1.05	1.00	3	38	3.15	7237	66113	66168
					5.25	7238	66214	66269
					8.40	7239	66309	66375
					10.50	7239-10D	979342	979382
					12.60	7239-12D	979432	979458
					15.75	7239-15D	979490	979512
1.10	1.10	1.05	3	38	3.30	7237	66115	66169
					5.50	7238	66218	66270
					8.80	7239	66310	66376
					11.00	7239-10D	979343	979383
					13.20	7239-12D	979433	979459
					16.50	7239-15D	979491	979513
1.15	1.15	1.10	3	38	3.45	7237	66116	66170
					5.75	7238	66219	66271
					9.20	7239	66313	66377
					11.50	7239-10D	979344	979384
					13.80	7239-12D	979434	979460
					17.25	7239-15D	979492	979514
1.20	1.20	1.15	3	38	3.60	7237	66117	66171
					6.00	7238	66220	66272
					9.60	7239	66314	66378
					12.00	7239-10D	979345	979385
					14.40	7239-12D	979435	979461
					18.00	7239-15D	979493	979515
1.25	1.25	1.20	3	38	3.75	7237	66118	66172
					6.25	7238	66221	66273
					10.00	7239	66315	66379
					12.50	7239-10D	979346	979386
					15.00	7239-12D	979437	979462
					18.75	7239-15D	979494	979516
1.30	1.30	1.25	3	38	3.90	7237	66119	66173
					6.50	7238	66222	66274
					10.40	7239	66316	66380
					13.00	7239-10D	979347	979387
					15.60	7239-12D	979438	979463
					19.50	7239-15D	979495	979517
1.35	1.35	1.30	3	38	4.05	7237	66120	66174
					6.75	7238	66223	66275
					10.80	7239	66317	66381
					13.50	7239-10D	979348	979388
					16.20	7239-12D	979439	979464
					20.25	7239-15D	979496	979518

P. 162
P. 164

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

Ebauche ●●●●○

Finition ●●●○○

DIXI 7237 $L_2 = 3 \times D_1$

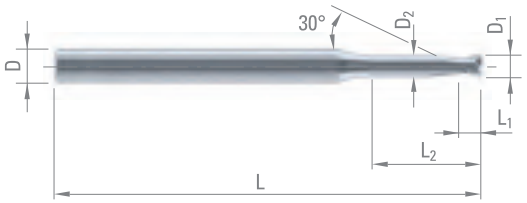
DIXI 7238 $L_2 = 5 \times D_1$

DIXI 7239 $L_2 = 8 \times D_1$

DIXI 7239-10D $L_2 = 10 \times D_1$

DIXI 7239-12D $L_2 = 12 \times D_1$

DIXI 7239-15D $L_2 = 15 \times D_1$



Cobalt Outils Coupants

DIXI 7237 - 7238 - 7239 - 7239-D

D_1	L_1	D_2	D_{h5}	L	L_2	DIXI	CARBURE	TiAlN
Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8								
1.40	1.40	1.35	3	38	4.20	7237	66123	66175
					7.00	7238	66224	66276
					11.20	7239	66318	66382
					14.00	7239-10D	979349	979389
					16.80	7239-12D	979440	979465
1.45	1.45	1.35	3	38	4.35	7237	66124	66176
					7.25	7238	66225	66277
					11.60	7239	66319	66383
					14.50	7239-10D	979350	979390
					17.40	7239-12D	979441	979466
1.50	1.50	1.45	3	38	4.50	7237	66125	66177
					7.50	7238	66226	66278
					12.00	7239	66320	66384
					15.00	7239-10D	979351	979391
					18.00	7239-12D	979442	979467
1.55	1.55	1.50	3	38	4.65	7237	66126	66178
					7.75	7238	66227	66279
					12.40	7239	66323	66385
					15.50	7239-10D	979352	979392
					18.60	7239-12D	979443	979468
1.60	1.60	1.55	3	38	4.80	7237	66127	66179
					8.00	7238	66228	66280
					12.80	7239	66324	66386
					16.00	7239-10D	979353	979393
					19.20	7239-12D	979444	979469
1.65	1.65	1.60	3	38	4.95	7237	66128	66180
					8.25	7238	66229	66281
					13.20	7239	66325	66387
					16.50	7239-10D	979354	979394
					19.80	7239-12D	979445	979470
1.70	1.70	1.65	3	38	5.10	7237	66129	66182
					8.50	7238	66230	66282
					13.60	7239	66326	66388
					17.00	7239-10D	979355	979395
					20.40	7239-12D	979446	979471
1.75	1.75	1.70	3	38	5.25	7237	66130	66183
					8.75	7238	66231	66283
					14.00	7239	66327	66389
					17.50	7239-10D	979356	979396
1.80	1.80	1.75	3	38	5.40	7237	66133	66184
					9.00	7238	66232	66284
					14.40	7239	66328	66390
					18.00	7239-10D	979357	979398
1.85	1.85	1.80	3	38	5.55	7237	66134	66185
					9.25	7238	66233	66285
					14.80	7239	66329	66391
					18.50	7239-10D	979358	979399
1.90	1.90	1.85	3	38	5.70	7237	66135	66186
					9.50	7238	66234	66286
					15.20	7239	66330	66392
					19.00	7239-10D	979359	979400
1.95	1.95	1.90	3	38	5.85	7237	66136	66187
					9.75	7238	66235	66287
					15.60	7239	66333	66393
					19.50	7239-10D	979360	979401
2.00	2.00	1.95	6	50	6.00	7237	66137	66188
					10.00	7238	66236	66288
					16.00	7239	66334	66394
					20.00	7239-10D	979361	979402
2.10	2.10	2.00	6	50	6.30	7237	66138	66189
					10.50	7238	66237	66289
					16.80	7239	66335	66395
					21.00	7239-10D	979362	979403
2.20	2.20	2.10	6	50	6.60	7237	66194	66195
					11.00	7238	66238	66290
					17.60	7239	66350	66396
					22.00	7239-10D	979363	979404

P. 162
P. 164

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

Ebauche ●●●●○

Finition ●●●○○

DIXI 7237 $L_2 = 3 \times D_1$

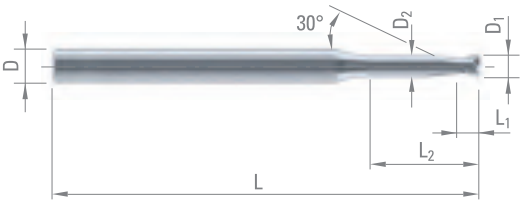
DIXI 7238 $L_2 = 5 \times D_1$

DIXI 7239 $L_2 = 8 \times D_1$

DIXI 7239-10D $L_2 = 10 \times D_1$

DIXI 7239-12D $L_2 = 12 \times D_1$

DIXI 7239-15D $L_2 = 15 \times D_1$



Cobalt Outils Coupants

DIXI 7237 - 7238 - 7239 - 7239-D

P. 162
P. 164

D_1	L_1	D_2	D_{h5}	L	L_2	DIXI	CARBURE	TiAIN
Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8								
2.30	2.30	2.20	6	50	6.90	7237	66139	66190
					11.50	7238	66239	66291
					18.40	7239	66351	66397
					23.00	7239-10D	979364	979405
2.40	2.40	2.30	6	50	7.20	7237	66140	66191
					12.00	7238	66240	66292
					19.20	7239	66352	66398
					24.00	7239-10D	979368	979406
2.50	2.50	2.40	6	50	7.50	7237	66143	66192
					12.50	7238	66241	66293
					20.00	7239	66353	66399
					25.00	7239-10D	979369	979407
3.00	3.00	2.90	6	50	9.00	7237	66144	66193
					15.00	7238	66294	66295
					24.00	7239	66354	66400
					30.00	7239-10D	979370	979408

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

Ebauche ●●●●○

Finition ●●●○○

DIXI 7237 $L_2 = 3 \times D_1$

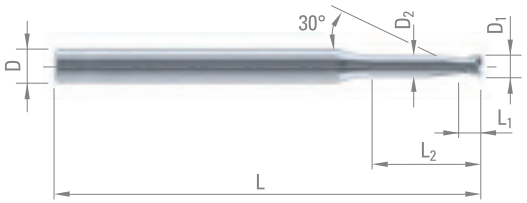
DIXI 7238 $L_2 = 5 \times D_1$

DIXI 7239 $L_2 = 8 \times D_1$

DIXI 7239-10D $L_2 = 10 \times D_1$

DIXI 7239-12D $L_2 = 12 \times D_1$

DIXI 7239-15D $L_2 = 15 \times D_1$



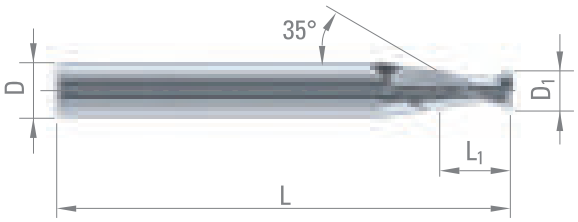
DIXI 7582

FRAISES EN BOUT HÉLICOÏDALES CORPS RENFORCÉ

Z = 2

P. 202

$D_1 \geq 2.8$



Acier + Pb | Fontes | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu | Plastique

Ebauche ●●●○○

Finition ●●●○○

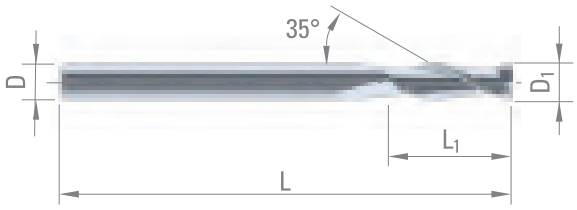
D_1 Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	CARBURE	TiAlN
1.00	2.0	3	38	47357	56304
1.50	3.0	3	38	47358	56305
2.00	4.0	4	50	47359	56306
2.50	5.0	4	50	47360	56307
2.80	6.0	6	50	35734	36304
3.00	6.0	6	50	30298	36305
3.80	8.0	6	50	34973	36306
4.00	8.0	6	50	30299	36607
4.50	10.0	6	50	35709	56983
5.00	10.0	6	50	30300	36309
5.50	10.0	6	50	35735	56303
6.00	10.0	6	50	29100	36299
8.00	15.0	8	60	29101	36300
10.00	18.0	10	66	29102	56334
12.00	20.0	12	73	30521	36302
16.00	25.0	16	82	30523	56318
20.00	35.0	20	104	31858	56335

DIXI 7572

FRAISES EN BOUT HÉLICOÏDALES LONGUES

Z = 2

P. 202



Acier + Pb | Alliage Cu Argent Or | Alliage Cu difficile | Alu | Graphite | Plastique

Ebauche ●●○○○ Finition ●●●○○

$D_{1\ e8}$	L_1	D_{h5}	L	CARBURE	TiAlN	DIAMANT*
3.00	14.0	3	50	32484	56320	57045
4.00	16.0	4	50	32485	56321	57046
5.00	18.0	5	60	32486	56322	57047
6.00	20.0	6	75	32487	56337	57048
7.00	22.0	7	75	32488		
8.00	25.0	8	75	32489	56336	57050
10.00	30.0	10	90	32491	56341	
12.00	36.0	12	100	32492	56342	

* pour matériaux non-ferreux

DIXI 7232

FRAISES À DENTURE DROITE

Z = 2

DIN 6528

P. 186

Fontes | Alliage Cu Argent Or | Alu | Plastique

Ebauche ●●○○○ Finition ●●●○○

$D_{1\ e8}$	L_1	D_{h5}	L	CARBURE
2.00	6.0	2	38	42540
3.00	7.0	3	38	42541
4.00	8.0	4	50	42542
6.00	10.0	6	57	42543
8.00	16.0	8	63	42544

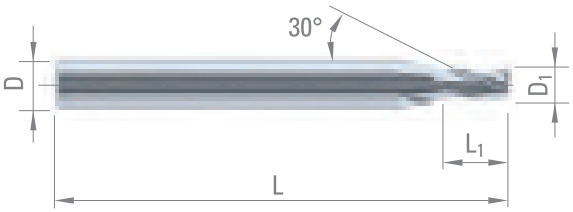
DIXI 7243

FRAISES EN BOUT HÉLICOÏDALES CORPS RENFORCÉ

Z = 3

P. 166

D_1 > 6



Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

Ebauche ●●○○○

Finition ●●●○○

D_1 Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	CARBURE	TiAlN
0.35	1.0	3	38	956955	956956
0.40	1.2	3	38	956957	956958
0.50	1.5	3	38	48089	60914
0.60	1.8	3	38	61842	61841
0.70	2.1	3	38	61843	61844
0.75	2.4	3	38	48090	57205
0.80	2.4	3	38	66799	61845
0.90	2.7	3	38	60383	952308
1.00	3.0	3	38	48091	57206
1.10	3.3	3	38	59356	950790
1.20	3.6	3	38	39932	61352
1.25	3.9	3	38	48092	57207
1.30	3.9	3	38	49835	950044
1.40	4.2	3	38	60201	952191
1.50	4.5	3	38	48093	57208
1.60	4.8	3	38	64985	950045
1.70	5.1	3	38	57785	67283
1.75	5.4	3	38	48094	57209
1.80	5.4	3	38	50297	66988
1.90	5.7	3	38	66798	952309
2.00	6.0	3	38	42203	40868
2.10	7.0	3	38	45168	64847
2.20	7.0	3	38	57873	67276
2.30	7.0	3	38	40848	67277
2.40	7.0	3	38	42329	64809
2.50	7.0	3	38	41909	42105
3.00	7.0	6	57	41855	42106
3.50	7.0	6	57	41928	57210
4.00	8.0	6	57	41880	42341
4.50	8.0	6	57	41808	57211
5.00	10.0	6	57	41858	42107
5.50	10.0	6	57	41910	57690
6.00	10.0	6	57	41908	35589
6.00 >	12.0	8	63	43409	57214

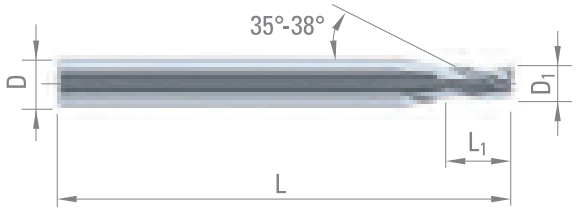
D_1 Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	CARBURE	TiAlN
6.50	13.0	8	63	28948	57691
7.00	13.0	8	63	42562	57217
7.50	16.0	8	63	43920	57218
8.00	16.0	8	63	41809	36267
8.00 >	15.0	10	63	28951	57692
8.50	16.0	10	72	43215	57220
9.00	16.0	10	72	28953	57221
9.50	19.0	10	72	28954	57222
10.00	19.0	10	72	42357	57223
12.00	22.0	12	83	39945	57224
14.00	22.0	14	83	27781	57225
16.00	26.0	16	92	42358	57226
20.00	32.0	20	104	42360	57228

DIXI 7343

FRAISES EN BOUT CORPS RENFORCÉ, HÉLICES DIFFÉRENTES

Z = 3

P. 192
P. 194



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile

Ebauche ●●●●●

Finition ●●●●○

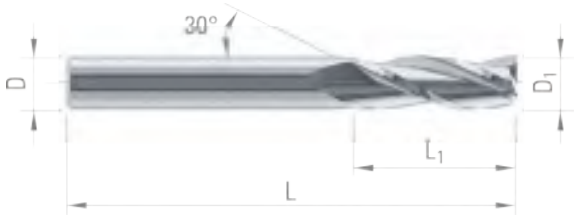
D_1 Ø<0.30 - 0/-0.01 Ø<2.00 - 0/-0.02 Ø≥6.00 - e8	L_1	D_{h5}	L	CARBURE	C-TOP
0.30	0.70	4	38	334881	334941
0.35	0.80	4	38	334882	334942
0.40	0.90	4	38	334883	334943
0.45	1.00	4	38	334884	334944
0.50	1.10	4	38	334885	334945
0.60	1.40	4	38	334886	334946
0.70	1.60	4	38	334887	334947
0.80	1.80	4	38	334888	334948
0.90	2.00	4	38	334889	334949
1.00	2.20	4	38	334890	334950
1.10	2.40	4	38	334891	334951
1.20	2.60	4	38	334892	334952
1.30	2.80	4	38	334893	334953
1.40	3.00	4	38	334894	334954
1.50	3.20	4	38	334895	334955
1.60	3.40	4	38	334896	334956
1.70	3.60	4	38	334897	334957
1.80	3.80	4	38	334898	334958
1.90	4.00	4	38	334899	334959
2.00	4.30	4	38	334900	334960
2.50	5.30	4	38	334901	334961
3.00	6.30	6	55	334902	334962
4.00	8.30	6	55	334903	334963
5.00	10.30	6	55	334904	334964
6.00	13.00	6	55	334905	334965
8.00	18.00	8	64	334906	334966
10.00	22.00	10	67	334907	334967
12.00	26.00	12	74	334908	334968
16.00	30.00	16	83	334909	334969

DIXI 7203

FRAISES EN BOUT HÉLICOÏDALES

Z = 3

P. 166



Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

Ebauche ●●○○○

Finition ●●●●○

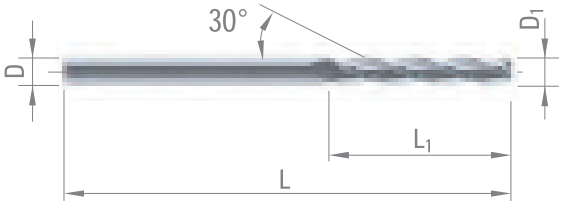
$D_{1\ e8}$	L_1	D_{h5}	L	CARBURE	TiAlN
2.00	8.0	2.0	32	701	57082
2.50	8.0	2.5	32	702	57089
3.00	10.0	3.0	38	703	57090
3.50	12.0	3.5	38	34761	57101
4.00	12.0	4.0	50	704	57102
5.00	15.0	5.0	50	34626	57103
6.00	18.0	6.0	50	34627	57104
7.00	20.0	7.0	60	27097	57105
8.00	25.0	8.0	63	707	57106
9.00	25.0	9.0	67	43184	57107
10.00	30.0	10.0	72	30853	57108
11.00	30.0	11.0	73	30938	57109
12.00	30.0	12.0	73	30854	57110
13.00	30.0	13.0	75	23885	57111
15.00	30.0	15.0	75	23886	57113
16.00	30.0	16.0	92	27072	57114
18.00	40.0	18.0	125	26086	57115
20.00	40.0	20.0	130	26087	57117

DIXI 7223

FRAISES EN BOUT HÉLICOÏDALES LONGUES

Z = 3

P. 178



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu | Graphite

Plastique

Ebauche ●○○○○

Finition ●●●●○

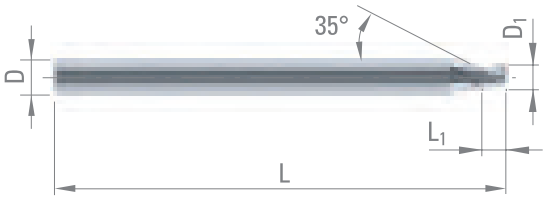
$D_{1\ e8}$	L_1	D_{h5}	L	CARBURE	TiAlN	DIAMANT*
3.00	30.0	3	60	44695	57141	60249
4.00	30.0	4	60	44696	57142	60250
5.00	35.0	5	75	44697	57143	60251
6.00	40.0	6	100	44698	57144	59009
8.00	40.0	8	100	44699	57145	60252
10.00	40.0	10	100	44700	57146	60253
12.00	45.0	12	100	44701	57147	60254

* pour matériaux non-ferreux

FRAISES EN BOUT EXTRA COURTES

Z = 3

P. 180



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

Ebauche ●●●●●

Finition ●●●●○

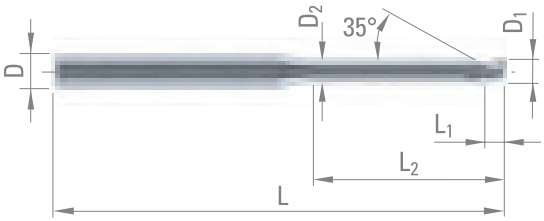
D_1 Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	CARBURE	CUTINOX
0.30	0.3	3	38	977779	977815
0.40	0.4	3	38	977780	977816
0.50	0.5	3	38	977781	977817
0.60	0.6	3	38	977782	977818
0.70	0.7	3	38	977783	977819
0.80	0.8	3	38	977784	977820
0.90	0.9	3	38	977785	977821
1.00	1.0	3	38	977786	977822
1.10	1.1	3	38	977787	977823
1.20	1.2	3	38	977788	977825
1.30	1.3	3	38	977789	977826
1.40	1.4	3	38	977790	977827
1.50	1.5	3	38	977791	977828
1.60	1.6	3	38	977792	977829
1.70	1.7	3	38	977793	977830
1.80	1.8	3	38	977794	977831
1.90	1.9	3	38	977795	977832
2.00	2.0	3	38	977796	977833
2.50	2.5	3	38	977797	977834
3.00	3.0	3	38	977798	977835
4.00	4.0	4	42	977799	977836
5.00	5.0	5	50	977800	977837
6.00	6.0	6	50	977801	977838
8.00	8.0	8	63	977802	977839
10.00	10.0	10	72	977803	977840

DIXI 7333-D

FRAISES EN BOUT EXTRA COURTES, DÉGAGÉES

Z = 3

P. 180



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

Ebauche ●●●●●

Finition ●●●●○

D_1	L_1	D_2	D_{h5}	L	L_2	DIXI	CARBURE	CUTINOX
Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8								
0.30	0.3	0.27	3	38	0.90	7333-3D	978791	978793
					1.50	7333-5D	978895	978896
					2.40	7333-8D	978591	978922
0.40	0.4	0.37	3	38	1.20	7333-3D	978794	978795
					2.00	7333-5D	978897	978898
					3.20	7333-8D	978928	979009
0.50	0.5	0.45	3	38	1.50	7333-3D	978796	978798
					2.50	7333-5D	978899	978900
					4.00	7333-8D	979010	979011
0.60	0.6	0.55	3	38	1.80	7333-3D	978799	978800
					3.00	7333-5D	978901	978902
					4.80	7333-8D	979012	979014
0.70	0.7	0.65	3	38	2.10	7333-3D	978801	978802
					3.50	7333-5D	978903	978904
					5.60	7333-8D	979016	979017
0.80	0.8	0.75	3	38	2.40	7333-3D	978803	978804
					4.00	7333-5D	978905	978906
					6.40	7333-8D	979018	979019
0.90	0.9	0.85	3	38	2.70	7333-3D	978805	978806
					4.50	7333-5D	978907	978908
					7.20	7333-8D	979020	979021
1.00	1.0	0.95	3	38	3.00	7333-3D	978807	978808
					5.00	7333-5D	978909	978910
					8.00	7333-8D	979022	979023
1.10	1.1	1.05	3	38	3.30	7333-3D	978809	978811
					5.50	7333-5D	978911	978912
					8.80	7333-8D	979024	979025
1.20	1.2	1.15	3	38	3.60	7333-3D	978812	978813
					6.00	7333-5D	978913	978914
					9.60	7333-8D	979026	979027
1.30	1.3	1.25	3	38	3.90	7333-3D	978814	978815
					6.50	7333-5D	978915	978916
					10.40	7333-8D	979028	979029
1.40	1.4	1.35	3	38	4.20	7333-3D	978816	978817
					7.00	7333-5D	978917	978918
					11.20	7333-8D	979030	979031
1.50	1.5	1.45	3	38	4.50	7333-3D	978818	978819
					7.50	7333-5D	978919	978920
					12.00	7333-8D	979032	979033
1.60	1.6	1.55	3	38	4.80	7333-3D	978820	978821
					8.00	7333-5D	978921	978923
					12.80	7333-8D	979034	979035
1.70	1.7	1.65	3	38	5.10	7333-3D	978823	978824
					8.50	7333-5D	978924	978925
					13.60	7333-8D	979036	979037
1.80	1.8	1.75	3	38	5.40	7333-3D	978826	978828
					9.00	7333-5D	978926	978927
					14.40	7333-8D	979038	979039
1.90	1.9	1.85	3	38	5.70	7333-3D	978829	978830
					9.50	7333-5D	978929	978930
					15.20	7333-8D	979041	979040

DIXI 7333-3D $L_2 = 3 \times D_1$

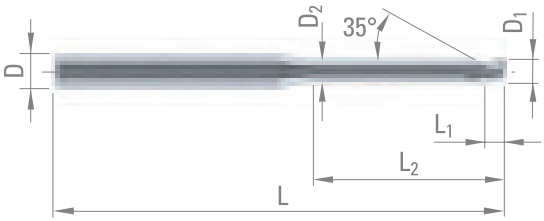
DIXI 7333-5D $L_2 = 5 \times D_1$

DIXI 7333-8D $L_2 = 8 \times D_1$

DIXI 7333-D

Z = 3

P. 180



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

Ebauche ●●●●●

Finition ●●●●○

D_1	L_1	D_2	D_{h5}	L	L_2	DIXI	CARBURE	CUTINOX
Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8								
2.00	2.0	1.90	3	38	6.00	7333-3D	978848	978849
					10.00	7333-5D	978931	978932
					16.00	7333-8D	979042	979043
2.50	2.5	2.40	3	38	7.50	7333-3D	978850	978851
					12.50	7333-5D	978933	978934
					20.00	7333-8D	979044	979045
3.00	2.9	2.90	3	38	9.00	7333-3D	978852	978853
					15.00	7333-5D	978935	978936
					24.00	7333-8D	979046	979047
4.00	4.0	3.80	4	42	12.00	7333-3D	978854	978855

DIXI 7333-3D $L_2 = 3 \times D_1$

DIXI 7333-5D $L_2 = 5 \times D_1$

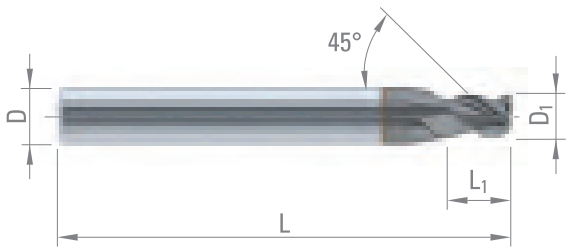
DIXI 7333-8D $L_2 = 8 \times D_1$

DIXI 7543 XIDUR

FRAISES EN BOUT HÉLICOÏDALES
CORPS RENFORCÉ

Z = 3

P. 204



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Titane, alliage de titane

Ebauche ●●●○○

Finition ●●●●○

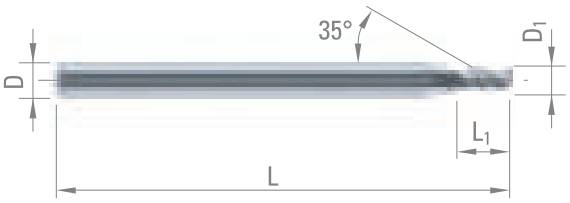
D_1	L_1	D_{h5}	L	XIDUR
Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8				
1.00	2.0	4	50	51704
1.50	3.0	4	50	63945
2.00	3.0	4	50	51705
2.50	3.0	4	50	63946
3.00	4.5	6	57	51706
4.00	6.0	6	57	51707
5.00	7.0	6	57	51708
6.00	8.0	8	63	51709
8.00	10.0	10	72	51710
10.00	12.0	10	72	51711
12.00	15.0	12	83	51712

DIXI 7583

FRAISES EN BOUT HÉLICOÏDALES CORPS RENFORCÉ

Z = 3

P. 166



Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

Ebauche ●●●○○

Finition ●●●●○

D_1 Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	CARBURE	TiAlN	DLC*
0.30	0.6	3	38	972403	972404	975572
0.40	0.8	3	38	972405	972406	982427
0.50	1.0	3	38	52565	963644	977361
0.60	1.2	3	38	963676	963678	982428
0.70	1.4	3	38	963677	963679	973037
0.80	1.6	3	38	954650	963680	982429
0.90	1.8	3	38	951666	963681	983104
1.00	2.0	3	38	31445	44659	960097
1.10	2.2	3	38	66496	66497	983105
1.20	2.4	3	38	66498	66499	973027
1.30	2.6	3	38	66500	66501	983106
1.40	2.8	3	38	66502	66503	983107
1.50	3.0	3	38	29407	40913	957103
1.60	3.2	3	38	41962	66510	983108
1.70	3.4	3	38	66504	66505	983109
1.80	3.6	3	38	66506	66507	983111
1.90	3.8	3	38	66508	66509	983112
2.00	4.0	3	38	39304	40081	61971
2.50	5.0	3	38	39213	40580	61973
3.00	6.0	6	50	40739	41954	61974
4.00	8.0	6	50	34377	53324	984169
5.00	10.0	6	50	48700	53325	984170
6.00	12.0	6	50	978074	978075	984171

* pour matériaux non-ferreux

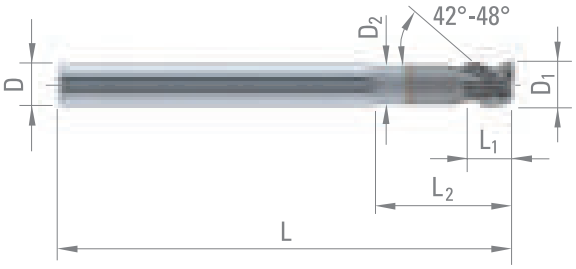
DIXI 7253 CUTINOX

FRAISES À HÉLICES DIFFÉRENTES
DÉGAGÉES

Z = 3

P. 168
P. 170

$D_1 \geq 10$



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane

Ebauche ●●●●●

Finition ●●●●○

$D_{1\ e8}$	L_1	D_2	L_2	D_{h5}	L	CUTINOX
3.00	4.0	2.80	9	6	57	968764
4.00	5.0	3.70	12	6	57	968765
5.00	6.0	4.60	15	6	57	968766
6.00	7.0	5.50	18	8	63	968767
8.00	9.0	7.50	24	10	72	968768
10.00	11.0	9.30	30	10	72	968769
12.00	13.0	11.20	36	12	83	968770
16.00	17.0	15.20	48	16	92	968771

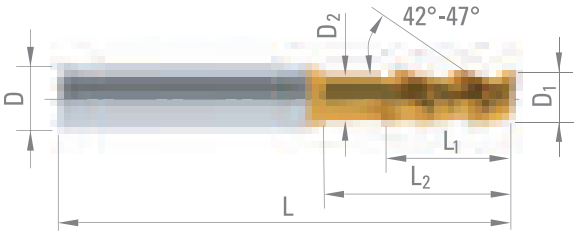
DIXI 7563 - 7563-FC DIXAL

FRAISES À HÉLICES DIFFÉRENTES

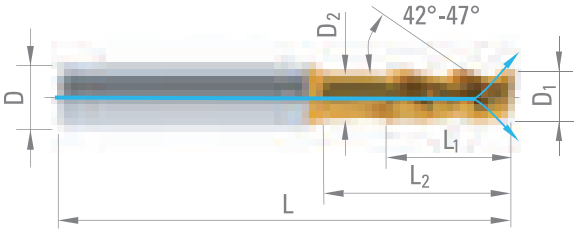
Z = 3

P. 206

7563



7563-FC



Alliage Cu Argent Or | Alliage Cu difficile | Alu | Plastique

Ebauche ●●●●○

Finition ●●●●●

$D_{1\ h10}$	L_1	D_2	L_2	D_{h5}	L	7563 DIXAL	7563-FC DIXAL
4.00	9.0	3.60	14	4	57	991388	
6.00	13.0	5.60	21	6	57	991389	321899
8.00	19.0	7.40	26	8	63	991390	321900
10.00	22.0	9.30	30	10	72	991391	321901
12.00	26.0	11.00	37	12	83	991392	321902
16.00	32.0	15.00	42	16	92	991393	321903
20.00	38.0	19.00	50	20	104	991394	322866

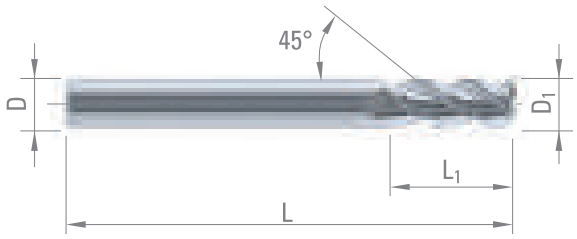
DIXI 7273

FRAISES FINITION

Z = 3

P. 166

$D_1 \geq 12$



Acier + Pb | Acier faibl. allié | Fontes | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu | Plastique

Ebauche ●●●○○ Finition ●●●●●

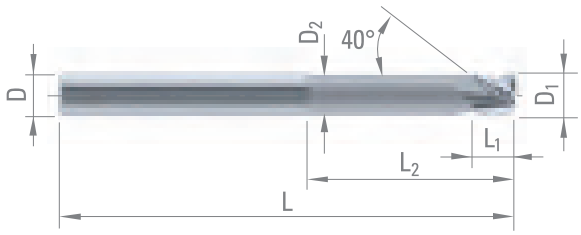
$D_{1\ e8}$	L_1	D_{h5}	L	CARBURE	TiAlN
3.00	10.0	3	38	35741	57254
4.00	12.0	4	50	35742	57255
5.00	14.0	5	50	34225	57256
6.00	16.0	6	57	35743	57258
8.00	20.0	8	63	34227	57259
10.00	22.0	10	72	34228	57260
12.00	22.0	12	73	34229	57261
16.00	27.0	16	82	35745	
20.00	35.0	20	104	35747	

DIXI 7593

FRAISES EN BOUT HÉLICOÏDALES DÉGAGÉES

Z = 3-4

P. 204



Alu

Ebauche ●●●●○ Finition ●●●○○

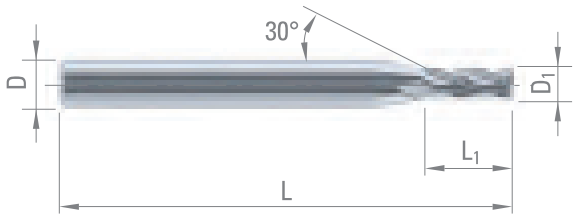
$D_{1\ h5}$	L_1	D_2	L_2	D_{h5}	L	Z	CARBURE
6.00	6.0	5.6	30	6	66	3	49281
8.00	8.0	7.6	45	8	81	3	49282
10.00	10.0	9.6	50	10	90	3	49283
12.00	12.0	11.6	55	12	100	3	49284
16.00	16.0	15.6	72	16	120	3	49285
20.00	20.0	19.6	80	20	130	4	49286

DIXI 7244

FRAISES EN BOUT HÉLICOÏDALES CORPS RENFORCÉ

Z = 4

P. 176



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu | Graphite

Plastique

Ebauche ●●○○○

Finition ●●●●○

D_1 Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	CARBURE	TiAlN	DIAMANT*
0.40	1.2	3	38	45695	61846	
0.50	1.5	3	38	45696	61345	
1.00	3.0	3	38	55964	57230	63697
1.50	4.0	3	38	56731	57231	63698
2.00	7.0	3	38	52357	57232	63699
3.00	8.0	6	57	28959	57233	63700
4.00	11.0	6	57	42123	57239	63701
4.50	11.0	6	57	42124	57241	
5.00	13.0	6	57	41881	57242	63703
6.00	13.0	6	57	28965	57243	36278
7.00	16.0	8	63	28967	57244	
8.00	19.0	8	63	42906	57245	
9.00	19.0	10	72	28971	57246	
10.00	22.0	10	72	42361	57247	
12.00	26.0	12	83	39946	57248	
14.00	26.0	14	83	42362	57249	
16.00	32.0	16	92	42363	57251	
20.00	38.0	20	104	42227	57253	

* pour matériaux non-ferreux

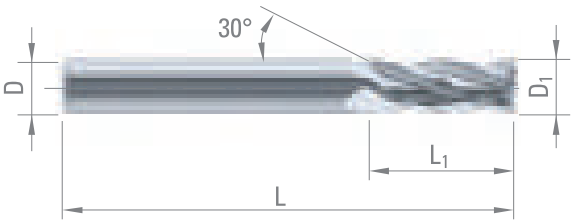
DIXI 7204

FRAISES EN BOUT HÉLICOÏDALES

Z = 4

P. 176

$D_1 \geq 6$



Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

Ebauche ●●○○○ Finition ●●●●○

$D_{1\ e8}$	L_1	D_{h5}	L	CARBURE	TiAlN
2.00	8.0	2.0	32	32944	57118
2.50	8.0	2.5	32	32945	57119
3.00	10.0	3.0	38	710	57120
4.00	12.0	4.0	50	711	57121
5.00	14.0	5.0	50	34629	57122
6.00	16.0	6.0	50	34630	57123

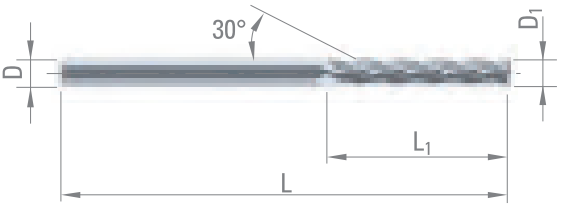
DIXI 7224

FRAISES EN BOUT HÉLICOÏDALES LONGUES

Z = 4

P. 178

$D_1 \geq 6$



Acier + Pb	Acier faibl. allié	Fontes	Titane, alliage de titane	Alliage Cu Argent Or
Alliage Cu difficile	Alu	Graphite	Plastique	

Ebauche ●○○○○ Finition ●●●●○

$D_{1\ e8}$	L_1	D_{h5}	L	CARBURE	TiAlN	DIAMANT*
3.00	30.0	3	60	44769	57152	60255
4.00	30.0	4	60	44770	57154	60258
5.00	35.0	5	75	44771	57155	60259
6.00	40.0	6	100	44706	57156	60260
8.00	40.0	8	100	44772	57157	60003
10.00	40.0	10	100	44707	57158	60004
12.00	45.0	12	100	44773	57159	60261
14.00	65.0	14	150	44708	57160	
16.00	65.0	16	150	44709	55770	
20.00	65.0	20	150	44776	57161	

* pour matériaux non-ferreux

DIXI 7264 - 7264-3D CUTINOX

FRAISES À HÉLICES DIFFÉRENTES ET PAS DÉCALÉ

Z = 4

P. 174

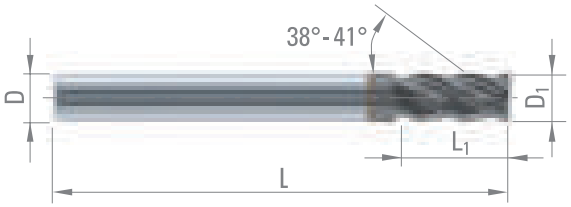
$D_1 \geq 10$

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes | Super alliages Ni / Co | Titane, alliage de titane

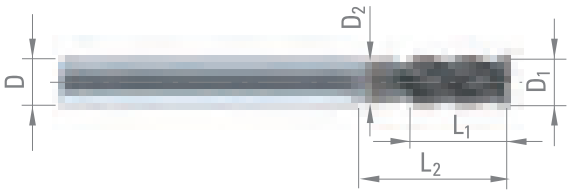
Ebauche ●●●●○

Finition ●●●●●

7264



7264-3D



D_1 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	DIXI	D_2	L_2	CUTINOX
1.50	3.0	3	38	7264	-	-	974805
2.00	4.0	3	38	7264	-	-	974804
3.00	8.0	6	57	7264	-	-	968672
4.00	11.0	6	57	7264	-	-	968678
5.00	13.0	6	57	7264	-	-	968679
6.00	13.0	6	57	7264	-	-	968680
				7264-3D	5.5	18	997930
8.00	19.0	8	63	7264	-	-	968681
				7264-3D	7.5	24	997931
10.00	22.0	10	72	7264	-	-	968682
				7264-3D	9.25	30	997932
12.00	26.0	12	83	7264	-	-	968683
				7264-3D	11.0	36	997933
16.00	32.0	16	92	7264	-	-	968684
				7264-3D	15.0	48	997934
20.00	38.0	20	104	7264	-	-	968685
				7264-3D	19.0	60	997935

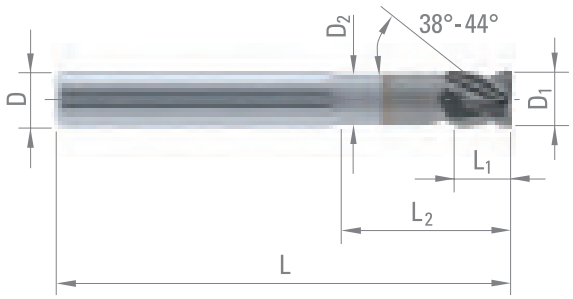
DIXI 7254 CUTINOX

FRAISES À HÉLICES DIFFÉRENTES DÉGAGÉES

Z = 4

P. 170

$D_1 \geq 10$



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane

Ebauche ●●●●●

Finition ●●●●○

$D_{1\ e8}$	L_1	D_2	L_2	D_{h5}	L	CUTINOX
3.00	4.0	2.80	9	6	57	968686
4.00	5.0	3.70	12	6	57	968687
5.00	6.0	4.60	15	6	57	968688
6.00	7.0	5.50	18	8	63	968689
8.00	9.0	7.50	24	10	72	968690
10.00	11.0	9.30	30	10	72	968691
12.00	13.0	11.20	36	12	83	968692
16.00	17.0	15.20	48	16	92	968693

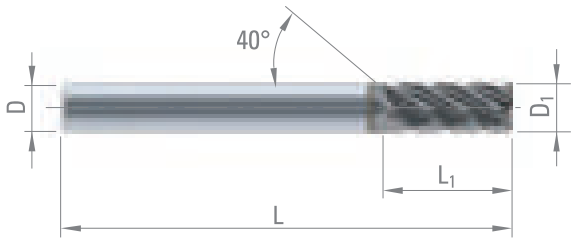
DIXI 7560

FRAISES MULTIDENTS HÉLICOÏDALES

Z = 3-8

P. 182

$D_1 > 6$ **$D_1 \leq 1.90$**



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile

Ebauche ●○○○○ Finition ●●●●●

D_1 Ø<2.00 - 0/-0.01 Ø≥2.00 - e8	L_1	D_{h5}	L	Z	CARBURE	TiAlN	DLC*
0.35	0.90	3.0	38	3	964114	966117	966057
0.40	1.00	3.0	38	3	964115	966118	966058
0.45	1.10	3.0	38	3	964116	966119	966059
0.50	1.25	3.0	38	3	964117	966120	966060
0.55	1.40	3.0	38	3	964118	966121	966061
0.60	1.50	3.0	38	3	964119	966122	966062
0.65	1.70	3.0	38	3	964120	966123	966063
0.70	1.75	3.0	38	3	964121	966124	966064
0.75	1.90	3.0	38	3	964122	966125	966065
0.80	2.00	3.0	38	3	964123	966126	966066
0.85	2.15	3.0	38	3	964124	966127	966067
0.90	2.25	3.0	38	3	964125	966128	966068
0.95	2.40	3.0	38	3	964126	966129	966069
1.00	2.50	3.0	38	3	964127	966130	966070
1.10	2.75	3.0	38	3	964128	966131	966071
1.20	3.00	3.0	38	3	964129	966132	966072
1.30	3.25	3.0	38	3	964130	966133	966073
1.40	3.50	3.0	38	3	964131	966134	966074
1.50	3.75	3.0	38	3	964132	966136	966075
1.60	4.00	3.0	38	3	964133	966138	966076
1.70	4.25	3.0	38	3	964134	966139	966094
1.80	4.50	3.0	38	3	964135	966140	966095
1.90	4.75	3.0	38	3	964136	966142	966096
2.00	8.00	3.0	38	5	964108	964112	964113
2.10	5.25	3.0	38	5	964137	966145	966097
2.20	5.50	3.0	38	5	964140	966146	966098
2.30	5.75	3.0	38	5	964141	966147	966099
2.40	6.00	3.0	38	5	964142	966148	966101
2.50	8.00	3.0	38	5	964109	964110	964111
2.60	6.50	3.0	38	5	964143	966149	966102
2.70	6.75	3.0	38	5	964144	966150	966104
2.80	7.00	3.0	38	5	964145	966151	966105
2.90	7.00	3.0	38	5	964146	966152	966106
3.00	10.00	3.0	38	5	45657	49683	966107
4.00	12.00	4.0	50	5	45658	49684	964325
5.00	14.00	5.0	50	5	45659	49685	966115
6.00	16.00	6.0	57	5	45546	49686	966116
8.00	19.00	8.0	63	5	45547	49688	
9.00	22.00	9.0	67	5	45661	49689	
10.00	22.00	10.0	72	6	45548	49690	
12.00	26.00	12.0	83	6	45662	49691	
16.00	32.00	16.0	92	6	45549	49693	
20.00	38.00	20.0	104	8	45550	49694	

* pour matériaux non-ferreux

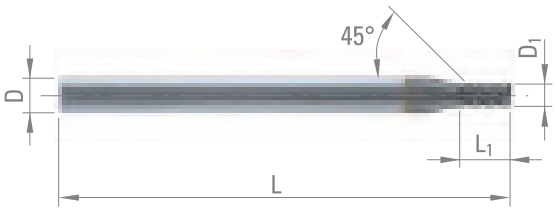
DIXI 7520 XIDUR

FRAISES MULTIDENTS HÉLICOÏDALES

Z = 3-10

P. 210

$D_1 \geq 6$ **$D_1 \leq 1.50$**



Acier fort. allié | Aciers Fontes 45-65 HRC | Super alliages Ni / Co

Ebauche ●○○○○

Finition ●●●●●

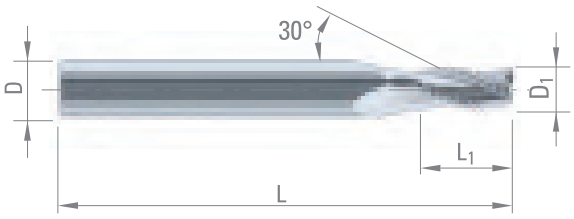
D_1 Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	Z	XIDUR
0.40	0.8	3	38	3	956595
0.50	1.0	3	38	3	956596
0.60	1.2	3	38	3	956597
0.70	1.4	3	38	3	956598
0.80	1.6	3	38	3	956599
0.90	1.8	3	38	3	956600
1.00	2.0	3	38	4	956601
1.50	3.0	3	38	4	956602
2.00	4.0	3	38	5	956603
2.50	5.0	3	38	5	957465
3.00	6.0	3	38	5	49107
4.00	8.0	4	50	5	49108
6.00	12.0	6	57	6	49109
8.00	16.0	8	63	6	49110
10.00	20.0	10	72	6	49111
12.00	24.0	12	83	8	49112
16.00	32.0	16	92	10	49113

DIXI 7210

FRAISES ÉBAUCHE

Z = 3

P. 184



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Ebauche ●●●●●

Finition ○○○○○

$D_{1\ d12}$	L_1	D_{h5}	L	CARBURE	CUTINOX
3.00	8.0	6	57	955178	955179
4.00	10.0	6	57	955092	955091
5.00	13.0	6	57	955089	955090
6.00	13.0	8	63	955088	955087
7.00	16.0	8	63	955086	955085
8.00	16.0	8	63	955082	955033
10.00	22.0	10	72	955093	955094
12.00	25.0	12	83	959048	956993

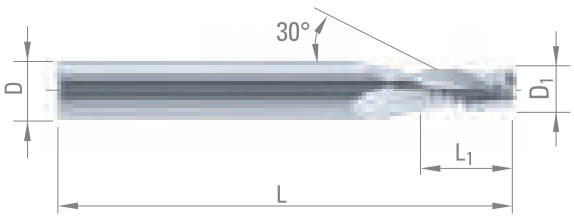
Sur demande

DIXI 7213

FRAISES ÉBAUCHE

Z = 3

P. 186

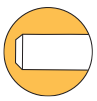


Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Ebauche ●●●●○

Finition ○○○○○



DIN 6535 HA

DIN 6535 HB

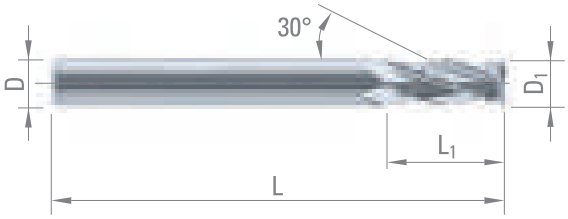
$D_{1\ d12}$	L_1	D_{h5}	L	CARBURE	TiAlN	CARBURE	TiAlN
4.00	10.0	6	57	31451	57018	367642	367638
5.00	13.0	6	57	37136	57019	367629	367633
6.00	13.0	8	63	37137	57020	367640	367630
7.00	16.0	8	63	37138	57021	367632	367645
8.00	16.0	10	72	43218	57022	367634	367625
10.00	22.0	10	72	43214	57024	367636	367631
11.00	22.0	12	83	37142	57025	367646	367626
12.00	25.0	12	83	37143	57026	367644	367635
14.00	27.0	14	83	37144	57027	367643	367641
16.00	36.0	16	100	37145	57028	367628	367627
20.00	40.0	20	104	37588	57(		367639

DIXI 7214

FRAISES ÉBAUCHE

Z = 4

P. 186



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Ebauche ●●●●○ Finition ○○○○○

DIN 6535 HA

DIN 6535 HB

$D_{1\ d12}$	L_1	D_{h5}	L	CARBURE	TiAlN	CARBURE	TiAlN
6.00	15.0	6	57	45798	61412	367642	367638
8.00	16.0	10	72	39954	62426	367629	367633
10.00	22.0	10	72	37146	31133	367640	367630
12.00	25.0	12	83	37148	60949	367632	367645
16.00	36.0	16	100	37151	63333	367634	367625
20.00	40.0	20	104	37152	63334	367636	367631

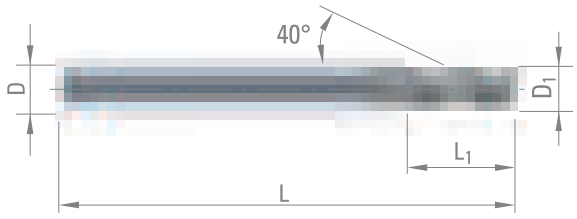
DIXI 7215 - 7215-FC DAC

FRAISES ÉBAUCHE ALU

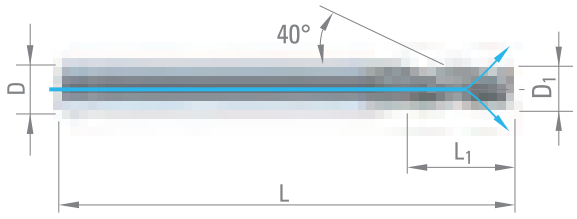
Z = 3

P. 212

7215



7215-FC



Alliage Cu Argent Or | Alliage Cu difficile | Alu

Ebauche ●●●●● Finition ○○○○○

7215

7215-FC

$D_{1\ d12}$	L_1	D_{h6}	L	DAC	DAC
6.00	13.0	6	57	993017	995594
8.00	19.0	8	63	993018	995595
10.00	22.0	10	72	993003	995596
12.00	26.0	12	83	990143	995597
16.00	32.0	16	92	993019	307320

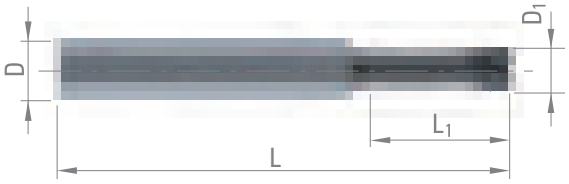
Sur demande

DIXI 7702 XIDUR

FRAISES HAUTE AVANCE

Z = 2

P. 196



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Aciers Fontes 45-65 HRC

Fontes | Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile

Alu

Ebauche ●●●●●

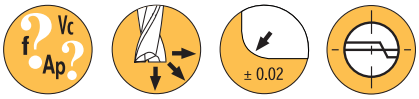
Finition ●●●●●

D_1	L_1	D_{h6}	L	XIDUR
0.50	1.50	6	40	305279
0.80	2.40	6	40	305280
1.00	3.00	6	40	997920
1.50	4.50	6	40	997921
2.00	6.00	6	40	997922
3.00	9.00	6	40	997923
4.00	12.00	6	57	997924
5.00	15.00	6	57	997925
6.00	18.00	8	63	997926
8.00	24.00	10	80	997927
10.00	30.00	10	80	997928
12.00	36.00	12	80	997929

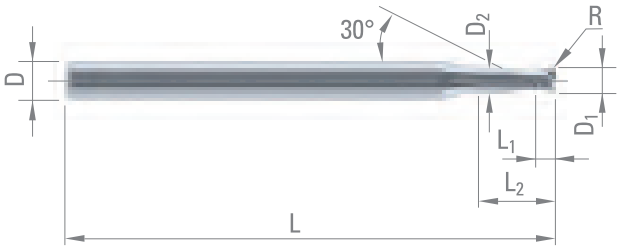
Téléchargez les conditions de coupe (pdf + xls) et les profils dxf sur www.dixipolytool.com

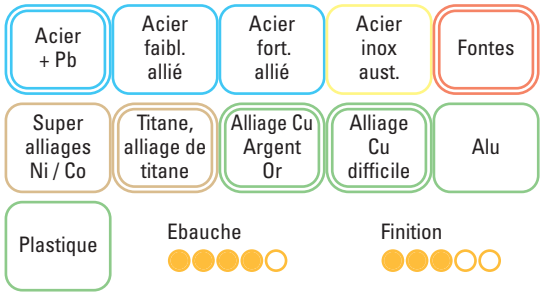
FRAISES TORIQUES EXTRA COURTES, DÉGAGÉES, $L_2 = 3 \times D_1$

Z = 2



P. 162





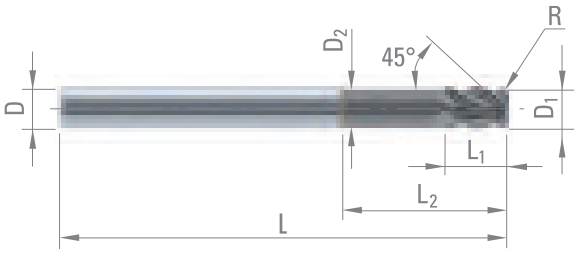
D_1 Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_2	L_2	D_{h5}	L	R	CARBURE	TiAlN
0.40	0.40	0.37	1.20	3	38	0.05	958447	958452
0.45	0.45	0.42	1.35	3	38	0.05	958453	958454
0.50	0.50	0.45	1.50	3	38	0.05	958455	958456
0.55	0.55	0.50	1.65	3	38	0.05	958457	958458
0.60	0.60	0.55	1.80	3	38	0.05	958465	958466
0.65	0.65	0.60	1.95	3	38	0.05	958467	958468
0.70	0.70	0.65	2.10	3	38	0.05	958469	958470
0.75	0.75	0.70	2.25	3	38	0.05	958472	958473
0.80	0.80	0.75	2.40	3	38	0.05	958474	958475
0.85	0.85	0.80	2.55	3	38	0.05	958476	958477
0.90	0.90	0.85	2.70	3	38	0.10	958478	958479
0.95	0.95	0.90	2.85	3	38	0.10	958481	958482
1.00	1.00	0.95	3.00	3	38	0.10	958483	958484
1.05	1.05	1.00	3.15	3	38	0.10	958486	958487
1.10	1.10	1.05	3.30	3	38	0.10	958488	958489
1.15	1.15	1.10	3.45	3	38	0.10	958490	958491
1.20	1.20	1.15	3.60	3	38	0.10	958492	958493
1.25	1.25	1.20	3.75	3	38	0.10	958494	958495
1.30	1.30	1.25	3.90	3	38	0.10	958496	958497
1.35	1.35	1.30	4.05	3	38	0.10	958499	958501
1.40	1.40	1.35	4.20	3	38	0.10	958502	958503
1.45	1.45	1.40	4.35	3	38	0.10	958504	958505
1.50	1.50	1.45	4.50	3	38	0.20	958506	958507
1.55	1.55	1.50	4.65	3	38	0.20	958508	958509
1.60	1.60	1.55	4.80	3	38	0.20	958510	958511
1.65	1.65	1.60	4.95	3	38	0.20	958512	958513
1.70	1.70	1.65	5.10	3	38	0.20	958514	958515
1.75	1.75	1.70	5.25	3	38	0.20	958516	958517
1.80	1.80	1.75	5.40	3	38	0.20	958518	958519
1.85	1.85	1.80	5.55	3	38	0.20	958520	958521
1.90	1.90	1.85	5.70	3	38	0.20	958522	958523
1.95	1.95	1.90	5.85	3	38	0.20	958524	958525
2.00	2.00	1.90	6.00	6	50	0.20	958527	958531
2.10	2.10	2.00	6.30	6	50	0.20	958532	958533
2.20	2.20	2.10	6.60	6	50	0.20	958534	958535
2.30	2.30	2.20	6.90	6	50	0.20	958886	958887
2.40	2.40	2.30	7.20	6	50	0.20	958888	958889
2.50	2.50	2.40	7.50	6	50	0.20	958890	958891
3.00	3.00	2.90	9.00	6	50	0.20	958892	958893

DIXI 7070 XIDUR

FRAISES TORIQUES MULTIDENTS DÉGAGÉES

Z = 4-6

P. 211



Acier fort. allié | Aciers Fontes 45-65 HRC | Super alliages Ni / Co

Ebauche ●●○○○

Finition ●●●●●

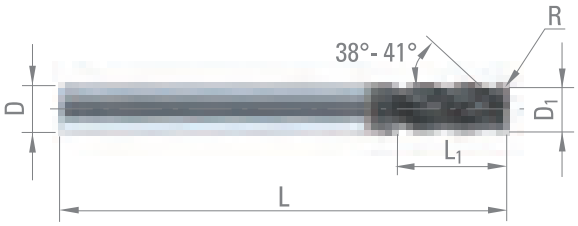
$D_{1\ e8}$	L_1	D_2	L_2	D_{h5}	L	Z	R	XIDUR
3.00	4.5	2.75	12.0	6	57	4	0.5	56643
4.00	6.0	3.70	13.5	6	57	4	0.5	56644
5.00	7.5	4.60	17.5	6	57	4	0.5	56645
6.00	9.0	5.50	24.0	6	66	4	0.5	56627
							0.8	56646
							1.0	56628
							1.5	56647
8.00	10.0	7.50	28.0	8	75	4	0.5	56634
							1.0	56635
							1.5	56648
							2.0	56649
10.00	12.0	9.25	30.0	10	75	6	0.5	56636
							1.0	56637
							1.5	56650
							2.0	56651
							2.5	56652
12.00	12.0	11.00	32.0	12	83	6	1.0	56653
							1.5	56654
							2.0	56655
							3.0	56656

DIXI 7265 CUTINOX

FRAISES À HÉLICES DIFFÉRENTES ET RAYON PARTIEL

Z = 4

P. 172
P. 174



Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

Ebauche ●●●●○

Finition ●●●●●

D_1 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	R	CUTINOX
2.00	4.0	3	38	0.5	997936
3.00	8.0	6	57	0.5	997937
4.00	11.0	6	57	0.5	997938
5.00	13.0	6	57	0.5	997939
6.00	13.0	6	57	0.5	997940
				1.0	997941
8.00	19.0	8	63	0.5	997942
				1.0	997943
10.00	22.0	10	72	0.5	997944
				1.0	997945
12.00	26.0	12	83	0.5	997946
				1.0	997947

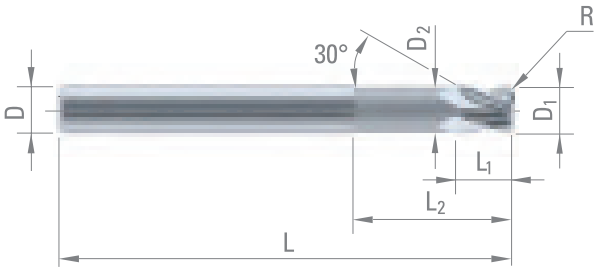
DIXI 7554

FRAISES TORIQUES HÉLICOÏDALES DÉGAGÉES

Z = 4

P. 176

$D_1 \geq 6$



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu | Plastique

Ebauche ●●●○○ Finition ●●●●○

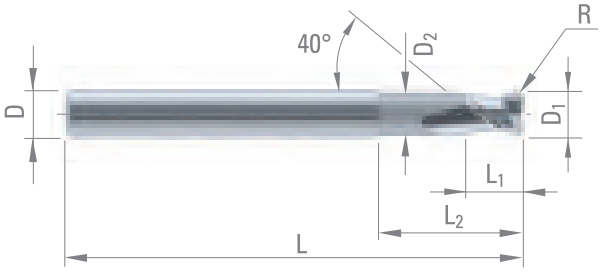
D_1 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_2	L_2	D_{h5}	L	R	CARBURE	TiAlN
2.00	3.0	1.90	10	4	42	0.2	64465	64466
3.00	4.0	2.80	15	6	57	0.2	64467	64468
4.00	5.0	3.80	18	6	57	0.3	64469	64470
6.00	7.0	5.70	20	6	57	0.5	64471	64472
						1.0	64473	64474
8.00	10.0	7.70	30	8	63	0.5	64475	64476
						1.0	64477	64478
10.00	12.0	9.60	35	10	72	0.5	64479	64480
						1.0	64481	64482
12.00	14.0	11.50	40	12	83	0.5	64485	64486
						1.0	64487	64488

DIXI 7552

FRAISES TORIQUES HÉLICOÏDALES DÉGAGÉES

Z = 2

P. 202



Acier + Pb | Acier faibl. allié | Fontes | Titane, alliage de titane | Alliage Cu Argent Or

Alliage Cu difficile | Alu | Plastique

Ebauche ●●●○○ Finition ●●●●○

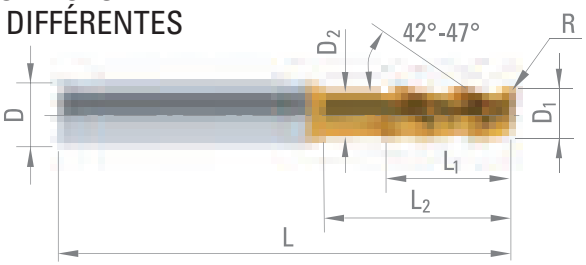
$D_{1\ e8}$	L_1	D_2	L_2	D_{h5}	L	R	CARBURE	DICUT
3.00	4.0	2.75	10	6	57	0.5	60765	63493
4.00	5.0	3.70	12	6	57	0.5	60766	63494
5.00	6.0	4.60	15	6	57	0.5	60767	63495
6.00	7.0	5.50	18	6	57	1.0	60768	63496
8.00	9.0	7.50	23	8	63	1.0	60769	63497
10.00	11.0	9.25	30	10	75	1.5	60770	63498
12.00	13.0	11.00	35	12	83	1.5	60771	63499
16.00	17.0	15.00	44	16	92	2.0	[illegible]	952918

DIXI 7565 - 7565-FC DIXAL

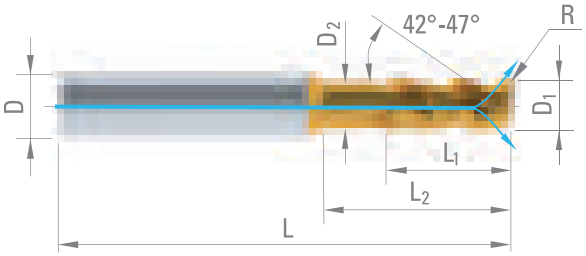
FRAISES TORIQUES
À HÉLICES DIFFÉRENTES

Z = 3

7565



7565-FC



P. 206

Alliage Cu Argent Or | Alliage Cu difficile | Alu | Plastique

Ebauche ●●●●○

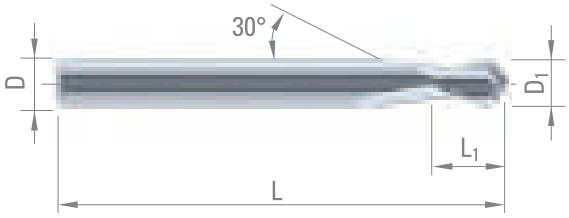
Finition ●●●●●

D_1	L_1	D_2	L_2	D_{h5}	L	R	7565 DIXAL	7565-FC DIXAL
4.00	9.0	3.60	14	4	57	0.5	339042	
						1.0	339043	
6.00	13.0	5.60	21	6	57	0.5	339044	339067
						1.0	339045	339068
						1.5	339046	339069
8.00	19.0	7.40	26	8	63	0.5	339047	339070
						1.0	339048	339071
						2.0	339049	339072
						3.0	339050	339073
10.00	22.0	9.30	30	10	72	0.5	339051	339074
						1.0	339052	339075
						2.0	339053	339076
						3.0	339054	339077
12.00	26.0	11.00	37	12	83	0.5	339055	339078
						1.0	339056	339079
						2.0	339057	339080
						3.0	339058	339081
16.00	32.0	15.00	42	16	92	1.0	339059	339082
						2.0	339060	339083
						3.0	339061	339084
						4.0	339062	339085
20.00	38.0	19.00	50	20	104	1.0	339063	339086
						2.0	339064	339087
						3.0	339065	339088
						4.0	339066	339089

FRAISES HÉMISPHÉRIQUES

Z = 2

P. 154



0.006

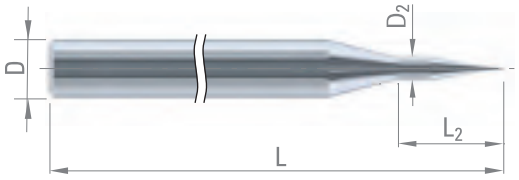
Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

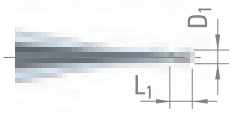
Graphite | Plastique

D_1 Ø<0.30 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	CARBURE	TiAlN	DICUT	DIAMANT*
0.06	0.12	3	38	959060			
0.08	0.16	3	38	959059			
0.10	0.20	3	38	959058			
0.15	0.30	3	38	954665			
0.20	0.30	3	38	952795	952796	952797	952799
0.25	0.40	3	38	952800	952801	952802	952803
0.30	0.50	3	38	952804	952805	952806	58852
0.40	0.60	3	38	952807	952808	952809	952810
0.50	0.80	3	38	952811	952812	952813	952814
0.60	0.90	3	38	952815	952816	952817	952818
0.70	1.10	3	38	952819	952820	952821	950363
0.80	1.20	3	38	952822	952823	950703	950364
0.90	1.40	3	38	952825	952826	952824	950365
1.00	1.50	3	38	952827	952828	952829	952830
1.10	1.70	3	38	952832	952833	952831	950366
1.20	1.80	3	38	952835	952836	952834	950367
1.30	1.90	3	38	952838	952839	952837	950368
1.40	2.10	3	38	952841	952842	952840	950369
1.50	2.30	3	38	952843	952846	952845	952844
1.60	2.50	3	38	55539	955784	956236	956237
1.70	2.50	3	38	60112	956238	956239	956240
1.80	2.75	3	38	48747	956241	956242	956243
1.90	2.75	3	38	57714	956244	956245	956246
2.00	3.00	3	38	44604	56136	64280	59783
2.10	3.00	3	38	55540	956247	956248	956249
2.20	3.50	3	38	48457	956250	956251	956253
2.30	3.50	3	38	66547	62925	956254	956255
2.40	3.50	3	38	60788	62926	956256	956257
2.50	4.00	3	38	44605	56137	64288	60221
3.00	5.00	3	38	43115	56138	63876	59988
3.50	6.00	4	50	44607	56139	64289	950370
4.00	6.00	4	50	34120	56140	64290	59784
4.50	7.00	5	50	44609	56141	64291	950371
5.00	8.00	5	50	34748	36172	64292	60222
5.50	9.00	6	57	44611	56172	64293	950372
6.00	9.00	6	57	34749	56179	63923	46800
7.00	11.00	7	60	34740	56176	64294	66878
8.00	12.00	8	63	43389	36174	64295	58860
10.00	15.00	10	72	42940	56177	63924	36175
12.00	18.00	12	73	32387	56173	64296	60223
16.00	24.00	16	82	32136	56175		

Ebauche ●○○○○ Finition ●●●●○



Pour **$D_1 \leq 0.15$**:
$D_2 = 1.20$
$L_2 = 5.30$



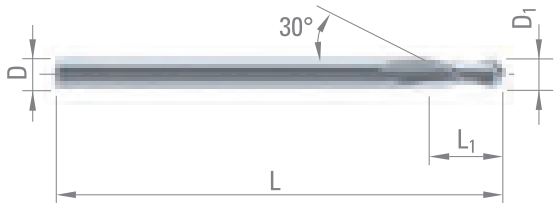
* pour matériaux non-ferreux

DIXI 7042

FRAISES HÉMISPHÉRIQUES

Z = 2

P. 160



0.006

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique

Ebauche ●○○○○

Finition ●●●●○

$D_{1\ e8}$	L_1	D_{h5}	L	CARBURE	TiAlN	DIAMANT*
2.00	10	2	61	41974	56238	60224
3.00	10	3	61	39512	56239	60225
4.00	12	4	75	38639	56240	60226
5.00	14	5	86	38942	56241	60227
6.00	16	6	93	38623	56242	60228
8.00	20	8	100	38640	56243	60229
10.00	24	10	100	38641	56244	58790
12.00	28	12	110	40728	56245	60230
16.00	36	16	120	40730	56247	
20.00	45	20	150	40732	56248	

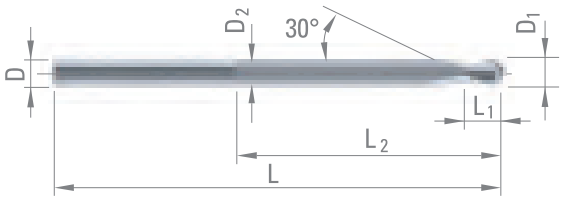
* pour matériaux non-ferreux

DIXI 7046

FRAISES HÉMISPHÉRIQUES DÉGAGÉES

Z = 2

P. 158



0.006

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique

Ebauche ●○○○○ Finition ●●●●○

D_1 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_2	L_2	D_{h5}	L	CARBURE	TiAlN	DICUT	DIAMANT*
0.20	0.5	0.18	1.0	4	55	64714	64719	64724	64729
0.30	0.6	0.27	1.5	4	55	64715	64720	64725	64730
0.40	0.8	0.37	2.0	4	55	64716	64721	64726	64731
0.50	1.0	0.45	3.0	4	55	64542	64556	64572	64584
0.60	1.6	0.55	4.0	4	55	64717	64722	64727	64732
0.80	1.8	0.75	5.0	4	55	64718	64723	64728	64733
1.00	2.0	0.95	6.0	4	55	64544	64557	64573	64585
1.50	2.5	1.45	9.0	4	55	64546	64558	64574	64586
2.00	3.0	1.90	12.0	4	55	64547	64559	64575	64587
2.50	4.0	2.40	12.0	4	55	64548	64560	64576	64588
3.00	5.0	2.80	12.0	6	57	64549	64561	64577	64589
4.00	6.0	3.80	15.0	6	57	64550	64562	64578	64590
5.00	7.0	4.80	15.0	6	57	64551	64567	64579	64591
6.00	8.0	5.70	15.0	6	57	64552	64568	64580	64592
8.00	10.0	7.70	25.0	8	63	64553	64569	64581	64593
10.00	12.0	9.60	30.0	10	72	64554	64570	64582	64594
12.00	14.0	11.60	40.0	12	83	64555	64571	64583	64595

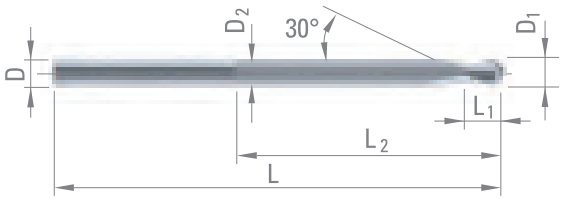
* pour matériaux non-ferreux

DIXI 7045 - 7047-D

FRAISES HÉMISPHÉRIQUES DÉGAGÉES

Z = 2

P. 158



0.006

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique

Ebauche ●○○○○ Finition ●●●●○

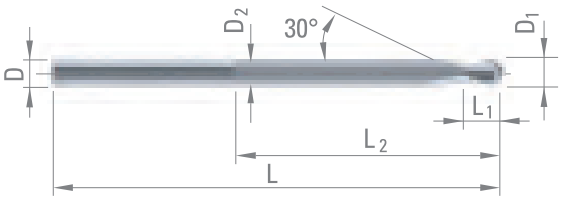
D_1	L_1	D_2	D_{h5}	L	L_2	DIXI	CARBURE	TiAlN	DICUT	DIAMANT*
Ø<3.00 - 0/-0.02 Ø≥3.00 - e8										
0.20	0.5	0.18	4	62	1.0	7045	64694	64699	64704	64709
					1.6	7047-8D	979531	979555	979576	979595
					2.0	7047-10D	64735	64742	64750	64755
					2.4	7047-12D	979613	979626	979639	979664
					3.0	7047-15D	979711	979722	979732	979744
					3.6	7047-18D	979756	979768	979779	979790
0.30	0.6	0.27	4	62	1.5	7045	64695	64700	64705	64710
					2.4	7047-8D	979534	979558	979578	979596
					3.0	7047-10D	64738	64743	64751	64756
					3.6	7047-12D	979614	979627	979640	979652
					4.5	7047-15D	979712	979724	979733	979745
					5.4	7047-18D	979757	979769	979780	979791
0.40	0.8	0.37	4	62	2.0	7045	64696	64701	64706	64711
					3.2	7047-8D	979535	979559	979579	979597
					4.0	7047-10D	64739	64744	64752	64757
					4.8	7047-12D	979615	979628	979641	979653
					6.0	7047-15D	979713	979723	979734	979746
					7.2	7047-18D	979758	979770	979781	979792
0.50	1.0	0.45	4	62	3.0	7045	64491	64503	64515	64527
					4.0	7047-8D	979536	979560	979580	979598
					5.0	7047-10D	64596	64608	64623	64635
					6.0	7047-12D	979616	979629	979642	979654
					7.5	7047-15D	979714	979725	979735	979747
					9.0	7047-18D	979759	979771	979782	979793
0.60	1.6	0.55	4	62	4.0	7045	64697	64702	64707	64712
					4.8	7047-8D	979537	979561	979581	979599
					6.0	7047-10D	64740	64745	64753	64758
					7.2	7047-12D	979617	979630	979643	979655
					9.0	7047-15D	979715	979726	979736	979748
					10.8	7047-18D	979760	979772	979783	979794
0.80	1.8	0.75	4	62	5.0	7045	64698	64703	64708	64713
					6.4	7047-8D	979538	979562	979582	979600
					8.0	7047-10D	64741	64746	64754	64759
					9.6	7047-12D	979618	979631	979644	979656
					12.0	7047-15D	979716	979727	979737	979749
					14.4	7047-18D	979761	979773	979784	979795
1.00	2.0	0.95	4	75	6.0	7045	64492	64504	64516	64528
					8.0	7047-8D	979540	979563	979583	979601
					10.0	7047-10D	64597	64609	64624	64636
					12.0	7047-12D	979619	954101	979314	979657
					15.0	7047-15D	975225	979728	979738	979750
					18.0	7047-18D	979522	979774	979785	979523
1.50	2.5	1.45	4	75	9.0	7045	64493	64505	64517	64529
					12.0	7047-8D	979541	979565	979585	979602
					15.0	7047-10D	64598	64610	64625	64637
					18.0	7047-12D	979620	979632	979645	979658
					22.5	7047-15D	979717	979729	979739	979751
					27.0	7047-18D	979763	979775	979786	979799

* pour matériaux non ferreux

DIXI 7045 - 7047-D

Z = 2

P. 158



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique

Ebauche ●○○○○ Finition ●●●●○

D_1 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_2	D_{h5}	L	L_2	DIXI	CARBURE	TiAlN	DICUT	DIAMANT*
2.00	3.0	1.90	4	75	12.0	7045	64494	64506	64518	64530
					16.0	7047-8D	979542	979566	979588	979603
					20.0	7047-10D	64599	64611	64626	64638
					24.0	7047-12D	979621	979633	979646	979659
					30.0	7047-15D	972993	954105	979740	979752
					36.0	7047-18D	979765	979776	979787	979796
2.50	4.0	2.40	4	75	12.0	7045	64495	64507	64519	64531
					20.0	7047-8D	979544	979567	979589	979604
					25.0	7047-10D	64600	64612	64627	64639
					30.0	7047-12D	979622	979635	979648	979660
					37.5	7047-15D	979719	979718	979741	979753
					45.0	7047-18D	979766	979777	979788	979797
3.00	5.0	2.80	6	102	12.0	7045	64496	64508	64520	64532
					24.0	7047-8D	979545	979568	979590	979605
					30.0	7047-10D	64601	64613	64628	64640
					36.0	7047-12D	979623	979636	979649	979661
					45.0	7047-15D	979720	979730	979742	979754
					54.0	7047-18D	979767	979778	979789	979798
4.00	6.0	3.80	6	102	15.0	7045	64497	64509	64521	64533
					32.0	7047-8D	979547	979569	979591	979607
					40.0	7047-10D	64602	64614	64629	64641
					48.0	7047-12D	979624	979637	979650	979662
					60.0	7047-15D	979721	979731	979743	979755
5.00	7.0	4.80	6	102	15.0	7045	64498	64510	64522	64534
					40.0	7047-8D	979549	979570	979592	979608
					50.0	7047-10D	64603	64615	64630	64642
					60.0	7047-12D	979625	979638	979651	979663
6.00	8.0	5.70	6	102	15.0	7045	64499	64511	64523	64536
					48.0	7047-8D	979550	979571	979593	979609
					60.0	7047-10D	64604	64616	64631	64643
8.00	10.0	7.70	8	117	25.0	7045	64500	64512	64524	64537
					64.0	7047-8D	979551	979572	979594	979610
					80.0	7047-10D	64605	64617	64632	64644
10.00	12.0	9.60	10	133	30.0	7045	64501	64513	64525	64538
					80.0	7047-8D	979552	979573	979586	979611
					90.0	7047-10D	64606	64618	64633	64645
12.00	14.0	11.60	12	151	40.0	7045	64502	64514	64526	64539
					96.0	7047-8D	979553	979574	979587	979612
					110.0	7047-10D	64607	64619	64634	64646

* pour matériaux non-ferreux

DIXI 7045 $L_2 = 2.5\text{-}6 \times D_1$

DIXI 7047-8D $L_2 = 8 \times D_1$

DIXI 7047-10D $L_2 = 10 \times D_1$

DIXI 7047-12D $L_2 = 12 \times D_1$

DIXI 7047-15D $L_2 = 15 \times D_1$

DIXI 7047-18D $L_2 = 18 \times D_1$

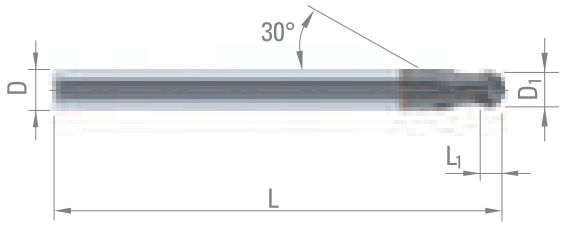
Cobalt Outils Coupants

DIXI 7532 XIDUR

FRAISES HÉMISPHÉRIQUES

Z = 2

P. 208



0.006

Acier fort. allié | Aciers Fontes 45-65 HRC | Super alliages Ni / Co

Ebauche ●○○○○

Finition ●●●●○

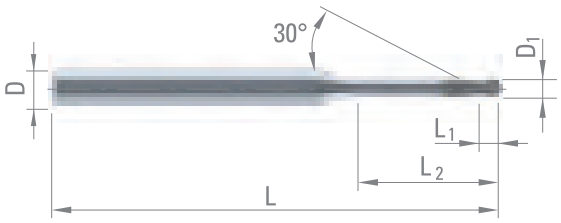
D_1 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	XIDUR
0.20	0.2	4	50	973380
0.30	0.3	4	50	972176
0.40	0.4	4	50	973379
0.50	0.5	4	50	973378
0.60	0.6	4	50	973377
0.70	0.7	4	50	972177
0.80	0.8	4	50	973376
0.90	0.8	4	50	973375
1.00	0.8	4	50	67253
1.50	1.2	4	50	67254
2.00	1.6	4	50	67257
3.00	2.4	6	57	67258
4.00	3.2	6	66	67259
5.00	4.0	6	66	67260
6.00	4.8	6	66	67261
8.00	6.4	8	75	67262

DIXI 7532-D XIDUR

FRAISES HÉMISPHÉRIQUES

Z = 2

P. 208



0.006

Acier fort. allié | Aciers Fontes 45-65 HRC | Super alliages Ni / Co

Ebauche ●○○○○ Finition ●●●●○

D_1 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	L_2	DIXI	XIDUR
0.20	0.2	4	50	0.6	7532-3D	978593
				1.0	7532-5D	979083
				1.6	7532-8D	979102
0.30	0.3	4	50	0.9	7532-3D	979058
				1.5	7532-5D	979084
				2.4	7532-8D	979103
0.40	0.4	4	50	1.2	7532-3D	979059
				2.0	7532-5D	979085
				3.2	7532-8D	979104
				4.0	7532-10D	979116
0.50	0.5	4	50	1.5	7532-3D	979060
				2.5	7532-5D	979086
				4.0	7532-8D	979105
				5.0	7532-10D	979117
				6.0	7532-12D	979136
0.60	0.6	4	50	1.8	7532-3D	979061
				3.0	7532-5D	979087
				4.8	7532-8D	979106
				6.0	7532-10D	979118
				7.2	7532-12D	979137
				9.0	7532-15D	979144
0.70	0.7	4	50	2.1	7532-3D	979062
				3.5	7532-5D	979088
				5.6	7532-8D	979107
				7.0	7532-10D	979119
				8.4	7532-12D	979138
				10.5	7532-15D	979145
0.80	0.8	4	50	2.4	7532-3D	979063
				4.0	7532-5D	979089
				6.4	7532-8D	979108
				8.0	7532-10D	979120
				9.6	7532-12D	979139
				12.0	7532-15D	979146
0.90	0.8	4	50	2.7	7532-3D	979064
				4.5	7532-5D	979091
				7.2	7532-8D	979109
				9.0	7532-10D	979121
				10.8	7532-12D	979140
				13.5	7532-15D	979147
1.00	0.8	4	50	3.0	7532-3D	979065
				5.0	7532-5D	979092
				8.0	7532-8D	979111
				10.0	7532-10D	979122
				12.0	7532-12D	979141
				15.0	7532-15D	979148
1.50	1.2	4	50	4.5	7532-3D	979066
				7.5	7532-5D	979093
				12.0	7532-8D	979112
				15.0	7532-10D	979123
				18.0	7532-12D	979142
				22.5	7532-15D	979149

DIXI 7532-3D $L_2 = 3 \times D_1$

DIXI 7532-5D $L_2 = 5 \times D_1$

DIXI 7532-8D $L_2 = 8 \times D_1$

DIXI 7532-10D $L_2 = 10 \times D_1$

DIXI 7532-12D $L_2 = 12 \times D_1$

DIXI 7532-15D $L_2 = 15 \times D_1$

DIXI 7532-D XIDUR

Z = 2

P. 208

D_1 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	L_2	DIXI	XIDUR
2.00	1.6	4	50	6.0	7532-3D	979067
				10.0	7532-5D	979094
				16.0	7532-8D	979113
				20.0	7532-10D	979124
				24.0	7532-12D	979143
				30.0	7532-15D	979150
3.00	2.4	6	57	9.0	7532-3D	979068
				15.0	7532-5D	979095
				24.0	7532-8D	979114
				30.0	7532-10D	979125
4.00	3.2	6	66	12.0	7532-3D	979069
				20.0	7532-5D	979096
				32.0	7532-8D	979115
5.00	4.0	6	66	15.0	7532-3D	979070
				25.0	7532-5D	979097
6.00	4.8	6	66	18.0	7532-3D	979071
				30.0	7532-5D	979098
8.00	6.4	8	66	24.0	7532-3D	979072
				40.0	7532-5D	979099
10.00	8.0	10	66	30.0	7532-3D	979073
				50.0	7532-5D	979100

Acier fort. allié | Aciers Fontes 45-65 HRC | Super alliages Ni / Co

Ebauche ●○○○○ Finition ●●●●○

DIXI 7532-3D $L_2 = 3 \times D_1$

DIXI 7532-5D $L_2 = 5 \times D_1$

DIXI 7532-8D $L_2 = 8 \times D_1$

DIXI 7532-10D $L_2 = 10 \times D_1$

DIXI 7532-12D $L_2 = 12 \times D_1$

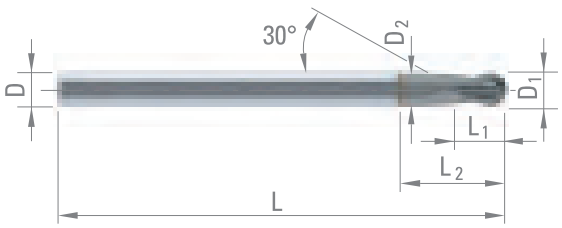
DIXI 7532-15D $L_2 = 15 \times D_1$

DIXI 7542 XIDUR

FRAISES HÉMISPHÉRIQUES DÉGAGÉES

Z = 2

P. 209



0.006

Acier fort. allié | Acier Fontes 45-65 HRC | Super alliages Ni / Co

Ebauche ●○○○○ Finition ●●●●○

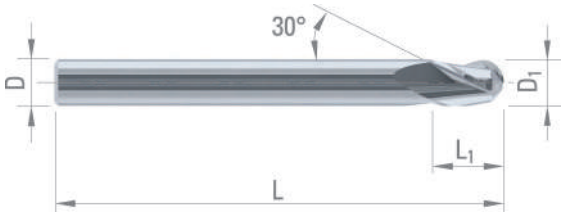
D_1 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_2	L_2	D_{h5}	L	XIDUR
1.00	2.0	0.90	3.2	6	66	61355
1.50	3.0	1.40	4.7	6	66	61356
2.00	3.0	1.85	6.2	6	66	61357
3.00	5.0	2.85	9.2	6	66	61358
4.00	6.0	3.80	12.5	6	80	61359
5.00	7.0	4.70	15.5	6	80	61360
6.00	9.0	5.70	19.0	6	80	61361
8.00	12.0	7.50	25.0	8	90	61362
10.00	15.0	9.50	31.0	10	110	61363
12.00	18.0	11.50	37.0	12	120	61364

DIXI 7033

FRAISES HÉMISPHÉRIQUES

Z = 3

P. 156



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alu | Plastique

Ebauche ●○○○○ Finition ●●●●○

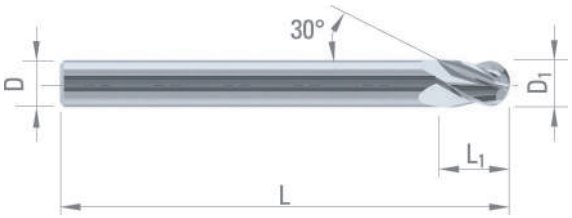
D_1 Ø<3.00 - 0/-0.02 Ø≥3.00 - e8	L_1	D_{h5}	L	CARBURE	TiAlN
1.00	2.0	3	38	45950	56154
1.50	2.5	3	38	45230	56155
2.00	3.0	3	38	45231	56156
2.50	4.0	3	38	45232	56157
3.00	5.0	3	38	43637	56158
4.00	6.0	4	50	43638	56159
5.00	8.0	5	50	43639	56162
6.00	9.0	6	57	42993	56163
8.00	12.0	8	63	32969	56165
10.00	15.0	10	72	32970	56166

DIXI 7034

FRAISES HÉMISPHÉRIQUES

Z = 4

P. 156



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

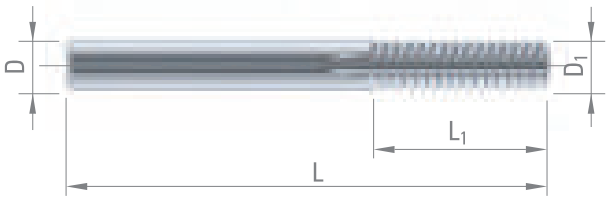
Ebauche ●○○○○ Finition ●●●●○

$D_{1\ e8}$	L_1	D_{h5}	L	CARBURE	TiAlN
12.00	18	12	73	32975	56149
16.00	24	16	82	42827	56151

DIXI 7112

FRAISES À CONTOURNER POUR COMPOSITES / KEVLAR®

Z = 2



Kevlar®

Ebauche

Finition

D_1	inches	L_1	D_{h5}	L	CARBURE
5.00		20	5.00	75	26252
6.00		25	6.00	75	26873
6.35	1/4"	25	6.35	75	26264
8.00		25	8.00	75	27851
10.00		25	10.00	75	28072
12.70	1/2"	27	12.70	75	26254

CONDITIONS DE COUPE:

Contournage	Vc = 250 - 500 m/min
	Vf = 500 - 2000 mm/min

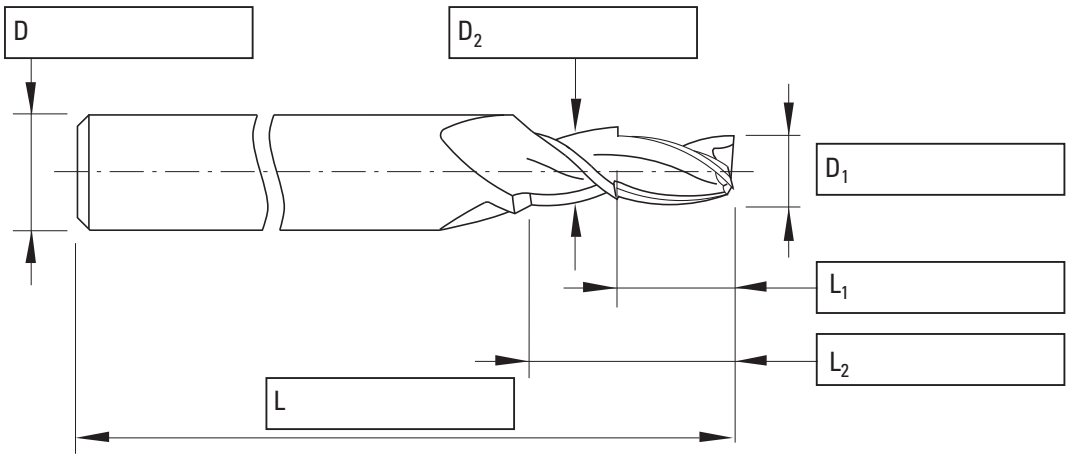
DIXI 7631 SP R ☐ L ☐ Z = ☐
FRAISES ÉTAGÉES

☐

☐

Quantités

Matière à usiner

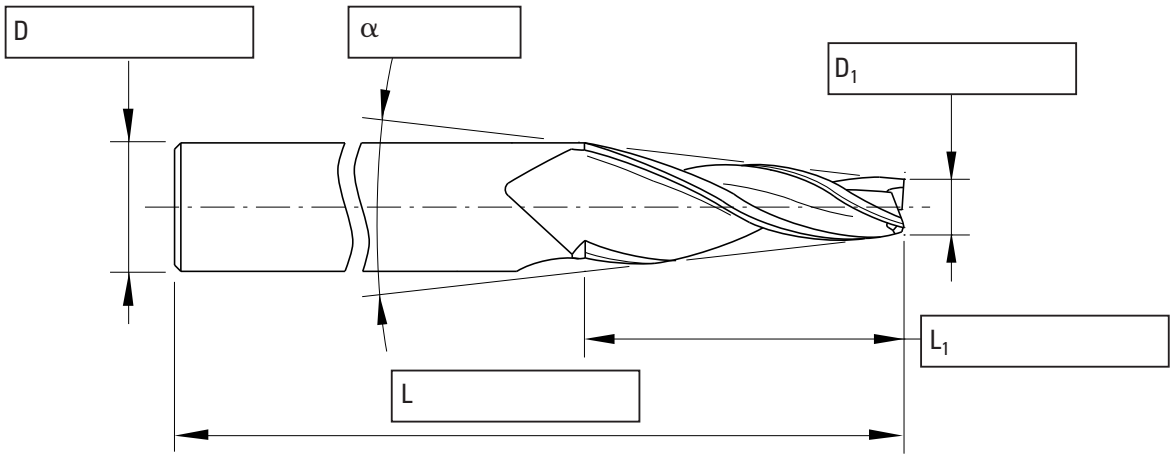


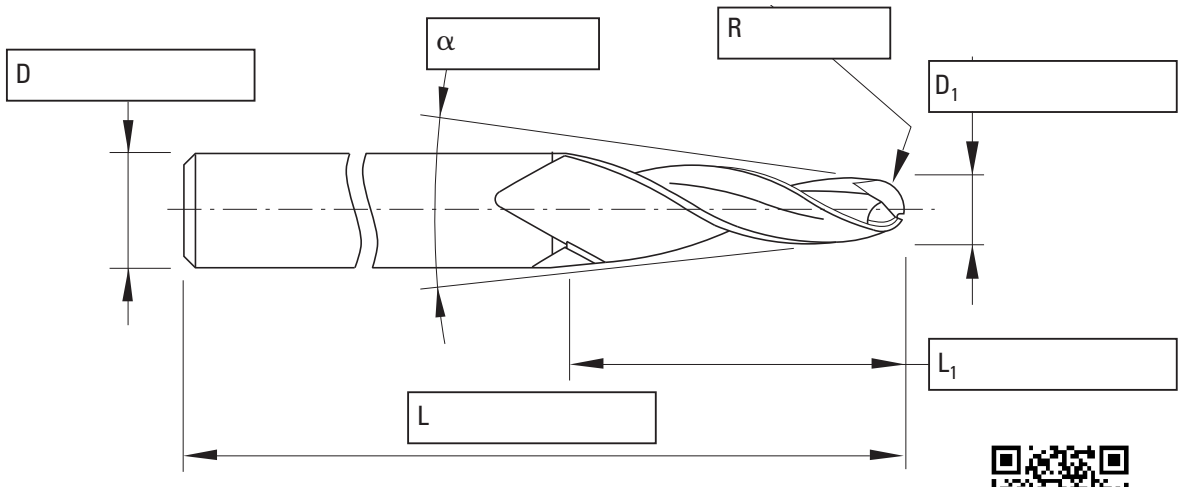
DIXI 7645 SP R ☐ L ☐
FRAISES CONIQUES

Z = ☐

Quantités

Matière à usiner



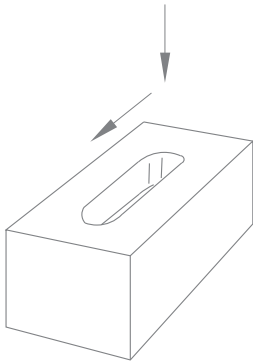


CONSULTEZ NOTRE FORMULAIRE DE DEMANDE D'OFFRES EN LIGNE SUR
WWW.DIXIPOLYTOOL.COM

Cobalt Outils Coupants

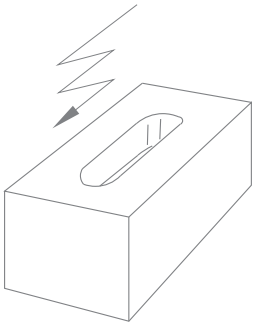
CHOIX DU NOMBRE DE DENTS

1 Rainurage fermé (poche)



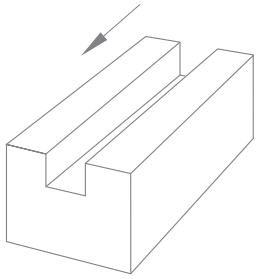
Z 2

2 Rainurage fermé (ramping)



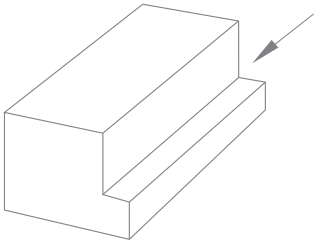
Z 2 - Z 3

3 Rainurage ouvert



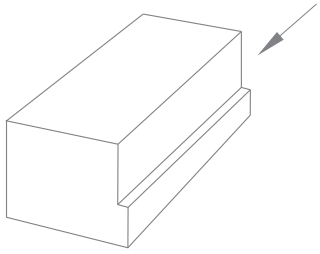
Z 2 - Z 3

Contournage (ébauche)



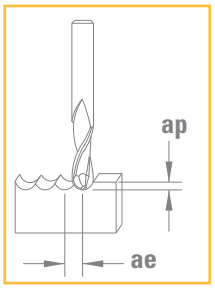
Z 3 - Z 4

Contournage (finition)



Multident

CONDITIONS DE COUPE



Matières à usiner			CARBURE		DICUT		TiAIN		DIAMANT		ap	ae
			Vc [m/min]		Vc [m/min]		Vc [m/min]		Vc [m/min]		[mm]	[mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**70**	100					**90**	110	<0.15 x ØD1	<0.5 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²					**70**	90			<0.15 x ØD1	<0.5 x ØD1
P	Acier de décolletage au plomb		**70**	100							<0.2 x ØD1	<0.5 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²					**40**	70			<0.15 x ØD1	<0.5 x ØD1
M	Acier inoxydable	400 – 700 N/mm²					**70**	90			<0.15 x ØD1	<0.5 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²					**40**	70			<0.1 x ØD1	<0.4 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**70**	100			**90**	110			<0.1 x ØD1	<0.4 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	70			**70**	90			<0.15 x ØD1	<0.5 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	100			**90**	110			<0.1 x ØD1	<0.4 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy					**25**	35			<0.05 x ØD1	<0.25 x ØD1
S	Titane, alliage de titane		**30**	45							<0.15 x ØD1	<0.5 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**140**	160							<0.15 x ØD1	<0.5 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**120**	140	**170**	190	**170**	190			<0.15 x ØD1	<0.5 x ØD1
N	Alliage d'aluminium	Si < 8%	**180**	260			**230**	340			<0.25 x ØD1	<0.5 x ØD1
N	Fonte d'aluminium	Si > 8%	**140**	160			**210**	230			<0.25 x ØD1	<0.5 x ØD1
N	Graphite								**200**	300	<0.3 x ØD1	<0.6 x ØD1
N	Plastique		**240**	260			**300**	340			<0.3 x ØD1	<0.6 x ØD1
N	Or, argent		**140**	160			**200**	220			<0.15 x ØD1	<0.5 x ØD1

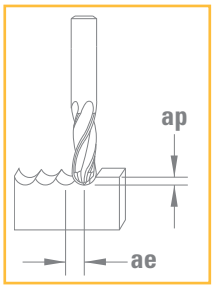
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 0.06 - 0.60	Ø D_1 0.60 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00	Ø D_1 10.00 - 14.00	Ø D_1 14.00 - 16.00	Ø D_1 16.00 - 20.00
0.0016 - 0.005	**0.003** - 0.009	**0.005** - 0.01	**0.008** - 0.02	**0.016** - 0.05	**0.026** - 0.06	**0.036** - 0.09	**0.05** - 0.13	**0.07** - 0.15	**0.08** - 0.18
0.0012 - 0.004	**0.002** - 0.007	**0.004** - 0.01	**0.006** - 0.02	**0.012** - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13
0.0020 - 0.008	**0.004** - 0.013	**0.007** - 0.02	**0.010** - 0.03	**0.020** - 0.07	**0.033** - 0.09	**0.046** - 0.13	**0.07** - 0.18	**0.09** - 0.21	**0.10** - 0.26
0.0012 - 0.004	**0.002** - 0.007	**0.004** - 0.01	**0.006** - 0.02	**0.012** - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13
0.0012 - 0.004	**0.002** - 0.007	**0.004** - 0.01	**0.006** - 0.02	**0.012** - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13
0.0012 - 0.004	**0.002** - 0.007	**0.004** - 0.01	**0.006** - 0.02	**0.012** - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13
0.0016 - 0.005	**0.003** - 0.009	**0.005** - 0.01	**0.008** - 0.02	**0.016** - 0.05	**0.026** - 0.06	**0.036** - 0.09	**0.05** - 0.13	**0.07** - 0.15	**0.08** - 0.18
0.0012 - 0.004	**0.002** - 0.007	**0.004** - 0.01	**0.006** - 0.02	**0.012** - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13
0.0016 - 0.005	**0.003** - 0.009	**0.005** - 0.01	**0.008** - 0.02	**0.016** - 0.05	**0.026** - 0.06	**0.036** - 0.09	**0.05** - 0.13	**0.07** - 0.15	**0.08** - 0.18
		0.004 - 0.01	**0.006** - 0.02	**0.012** - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13
0.0012 - 0.004	**0.002** - 0.007	**0.004** - 0.01	**0.006** - 0.02	**0.012** - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13
0.0020 - 0.008	**0.004** - 0.013	**0.007** - 0.02	**0.010** - 0.03	**0.020** - 0.07	**0.033** - 0.09	**0.046** - 0.13	**0.07** - 0.18	**0.09** - 0.21	**0.10** - 0.26
0.0012 - 0.004	**0.002** - 0.007	**0.004** - 0.01	**0.006** - 0.02	**0.012** - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13
0.0020 - 0.008	**0.004** - 0.013	**0.007** - 0.02	**0.010** - 0.03	**0.020** - 0.07	**0.033** - 0.09	**0.046** - 0.13	**0.07** - 0.18	**0.09** - 0.21	**0.10** - 0.26
0.0020 - 0.008	**0.004** - 0.013	**0.007** - 0.02	**0.010** - 0.03	**0.020** - 0.07	**0.033** - 0.09	**0.046** - 0.13	**0.07** - 0.18	**0.09** - 0.21	**0.10** - 0.26
0.0027 - 0.012	**0.005** - 0.020	**0.009** - 0.03	**0.014** - 0.05	**0.027** - 0.10	**0.046** - 0.14	**0.064** - 0.20	**0.09** - 0.27	**0.13** - 0.31	**0.15** - 0.39
0.0027 - 0.012	**0.005** - 0.020	**0.009** - 0.03	**0.014** - 0.05	**0.027** - 0.10	**0.046** - 0.14	**0.064** - 0.20	**0.09** - 0.27	**0.13** - 0.31	**0.15** - 0.39
0.0020 - 0.008	**0.004** - 0.013	**0.007** - 0.02	**0.010** - 0.03	**0.020** - 0.07	**0.033** - 0.09	**0.046** - 0.13	**0.07** - 0.18	**0.09** - 0.21	**0.10** - 0.26

CONDITIONS DE COUPE



Matières à usiner			CARBURE Vc [m/min]		TiAlN Vc [m/min]				ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**70**	100	**90**	110			<0.15 x ØD1	<0.3 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**70**	90			<0.15 x ØD1	<0.3 x ØD1
P	Acier de décolletage au plomb		**70**	100					<0.2 x ØD1	<0.3 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**40**	70			<0.1 x ØD1	<0.2 x ØD1
M	Acier inoxydable	400 – 700 N/mm²			**70**	90			<0.15 x ØD1	<0.3 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**40**	70			<0.1 x ØD1	<0.2 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**70**	100	**90**	110			<0.15 x ØD1	<0.3 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	70	**70**	90			<0.1 x ØD1	<0.2 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	100	**90**	110			<0.15 x ØD1	<0.3 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy			**25**	35			<0.1 x ØD1	<0.2 x ØD1
S	Titane, alliage de titane		**30**	45					<0.1 x ØD1	<0.2 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**140**	160					<0.15 x ØD1	<0.3 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**120**	140	**170**	190			<0.15 x ØD1	<0.3 x ØD1
N	Alliage d'aluminium	Si < 8%	**180**	260	**230**	340			<0.25 x ØD1	<0.3 x ØD1
N	Fonte d'aluminium	Si > 8%	**140**	160	**210**	230			<0.25 x ØD1	<0.3 x ØD1
N	Plastique		**240**	260	**300**	340			<0.3 x ØD1	<0.4 x ØD1
N	Or, argent		**140**	160	**200**	220			<0.15 x ØD1	<0.3 x ØD1

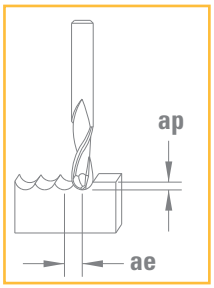
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 20.00
0.016 - 0.05	**0.026** - 0.06	**0.036** - 0.09	**0.05** - 0.13	**0.07** - 0.15	**0.08** - 0.18	**0.11** - 0.22
0.012 - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13	**0.09** - 0.17
0.020 - 0.07	**0.033** - 0.09	**0.046** - 0.13	**0.07** - 0.18	**0.09** - 0.21	**0.10** - 0.26	**0.13** - 0.29
0.012 - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13	**0.09** - 0.17
0.012 - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13	**0.09** - 0.17
0.012 - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13	**0.09** - 0.17
0.016 - 0.05	**0.026** - 0.06	**0.036** - 0.09	**0.05** - 0.13	**0.07** - 0.15	**0.08** - 0.18	**0.11** - 0.21
0.012 - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13	**0.09** - 0.17
0.016 - 0.05	**0.026** - 0.06	**0.036** - 0.09	**0.05** - 0.13	**0.07** - 0.15	**0.08** - 0.18	**0.11** - 0.21
0.012 - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13	**0.09** - 0.17
0.012 - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13	**0.09** - 0.17
0.020 - 0.07	**0.033** - 0.09	**0.046** - 0.13	**0.07** - 0.18	**0.09** - 0.21	**0.10** - 0.26	**0.13** - 0.29
0.012 - 0.03	**0.020** - 0.05	**0.027** - 0.07	**0.04** - 0.09	**0.05** - 0.10	**0.06** - 0.13	**0.09** - 0.17
0.020 - 0.07	**0.033** - 0.09	**0.046** - 0.13	**0.07** - 0.18	**0.09** - 0.21	**0.10** - 0.26	**0.13** - 0.29
0.020 - 0.07	**0.033** - 0.09	**0.046** - 0.13	**0.07** - 0.18	**0.09** - 0.21	**0.10** - 0.26	**0.13** - 0.29
0.027 - 0.10	**0.046** - 0.14	**0.064** - 0.20	**0.09** - 0.27	**0.13** - 0.31	**0.15** - 0.39	**0.18** - 0.42
0.020 - 0.07	**0.033** - 0.09	**0.046** - 0.13	**0.07** - 0.18	**0.09** - 0.21	**0.10** - 0.26	**0.13** - 0.29

CONDITIONS DE COUPE



	Matières à usiner		CARBURE Vc [m/min]	DICUT Vc [m/min]	TiAIN Vc [m/min]	DIAMANT Vc [m/min]	ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**70** 100		**90** 110		<0.15 x ØD1	<0.5 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**70** 90		<0.15 x ØD1	<0.5 x ØD1
P	Acier de décolletage au plomb		**70** 100				<0.2 x ØD1	<0.5 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**40** 70		<0.1 x ØD1	<0.4 x ØD1
M	Acier inoxydable	400 – 700 N/mm²			**70** 90		<0.15 x ØD1	<0.5 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**40** 70		<0.1 x ØD1	<0.4 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**70** 100		**90** 110		<0.15 x ØD1	<0.5 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40** 70		**70** 90		<0.1 x ØD1	<0.4 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70** 100		**90** 110		<0.15 x ØD1	<0.5 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy			**25** 35		<0.1 x ØD1	.<0.1 x ØD1
S	Titane, alliage de titane		**30** 45				<0.1 x ØD1	<0.4 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**140** 160				<0.15 x ØD1	<0.5 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**120** 140	**170** 190	**170** 190		<0.15 x ØD1	<0.5 x ØD1
N	Alliage d'aluminium	Si < 8%	**180** 240		**230** 340		<0.25 x ØD1	<0.5 x ØD1
N	Fonte d'aluminium	Si > 8%	**140** 160			**200** 300	<0.25 x ØD1	<0.5 x ØD1
N	Graphite					**200** 300	<0.3 x ØD1	<0.6 x ØD1
N	Plastique		**240** 260		**300** 340		<0.3 x ØD1	<0.6 x ØD1
N	Or, argent		**140** 160		**200** 220		<0.15 x ØD1	<0.5 x ØD1

Les valeurs n et Vf sont indicatives et devront être ajustées en fonction de la longueur L_2 de l'outil.

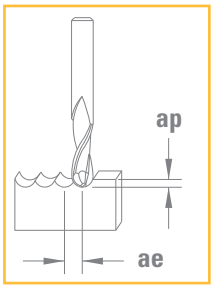
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 0.20 - 0.60	Ø D_1 0.60 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00	Ø D_1 10.00 - 12.00
0.0014 - 0.005	**0.003** - 0.008	**0.005** - 0.01	**0.007** - 0.02	**0.014** - 0.04	**0.023** - 0.06	**0.032** - 0.08	**0.05** - 0.11
0.0010 - 0.003	**0.002** - 0.006	**0.003** - 0.01	**0.005** - 0.015	**0.010** - 0.03	**0.017** - 0.04	**0.024** - 0.06	**0.03** - 0.08
0.0017 - 0.007	**0.003** - 0.012	**0.006** - 0.02	**0.009** - 0.03	**0.017** - 0.06	**0.029** - 0.08	**0.040** - 0.12	**0.06** - 0.16
0.0010 - 0.003	**0.002** - 0.006	**0.003** - 0.01	**0.005** - 0.015	**0.010** - 0.03	**0.017** - 0.04	**0.024** - 0.06	**0.03** - 0.08
0.0010 - 0.003	**0.002** - 0.006	**0.003** - 0.01	**0.005** - 0.015	**0.010** - 0.03	**0.017** - 0.04	**0.024** - 0.06	**0.03** - 0.08
0.0010 - 0.003	**0.002** - 0.006	**0.003** - 0.01	**0.005** - 0.015	**0.010** - 0.03	**0.017** - 0.04	**0.024** - 0.06	**0.03** - 0.08
0.0014 - 0.005	**0.003** - 0.008	**0.005** - 0.01	**0.007** - 0.02	**0.014** - 0.04	**0.023** - 0.06	**0.032** - 0.08	**0.05** - 0.11
0.0010 - 0.003	**0.002** - 0.006	**0.003** - 0.01	**0.005** - 0.015	**0.010** - 0.03	**0.017** - 0.04	**0.024** - 0.06	**0.03** - 0.08
0.0014 - 0.005	**0.003** - 0.008	**0.005** - 0.01	**0.007** - 0.02	**0.014** - 0.04	**0.023** - 0.06	**0.032** - 0.08	**0.05** - 0.11
		0.003 - 0.01	**0.005** - 0.015	**0.010** - 0.03	**0.017** - 0.04	**0.024** - 0.06	**0.03** - 0.08
0.0010 - 0.003	**0.002** - 0.006	**0.003** - 0.01	**0.005** - 0.015	**0.010** - 0.03	**0.017** - 0.04	**0.024** - 0.06	**0.03** - 0.08
0.0017 - 0.007	**0.003** - 0.012	**0.006** - 0.02	**0.009** - 0.03	**0.017** - 0.06	**0.029** - 0.08	**0.040** - 0.12	**0.06** - 0.16
0.0010 - 0.003	**0.002** - 0.006	**0.003** - 0.01	**0.005** - 0.015	**0.010** - 0.03	**0.017** - 0.04	**0.024** - 0.06	**0.03** - 0.08
0.0017 - 0.007	**0.003** - 0.012	**0.006** - 0.02	**0.009** - 0.03	**0.017** - 0.06	**0.029** - 0.08	**0.040** - 0.12	**0.06** - 0.16
0.0017 - 0.007	**0.003** - 0.012	**0.006** - 0.02	**0.009** - 0.03	**0.017** - 0.06	**0.029** - 0.08	**0.040** - 0.12	**0.06** - 0.16
0.0024 - 0.010	**0.005** - 0.017	**0.008** - 0.03	**0.012** - 0.04	**0.024** - 0.09	**0.040** - 0.12	**0.056** - 0.17	**0.08** - 0.24
0.0024 - 0.010	**0.005** - 0.017	**0.008** - 0.03	**0.012** - 0.04	**0.024** - 0.09	**0.040** - 0.12	**0.056** - 0.17	**0.08** - 0.24
0.0017 - 0.007	**0.003** - 0.012	**0.006** - 0.02	**0.009** - 0.03	**0.017** - 0.06	**0.029** - 0.08	**0.040** - 0.12	**0.06** - 0.16

CONDITIONS DE COUPE



Matières à usiner			CARBURE		TiAlN		DIAMANT		ap [mm]	ae [mm]
			Vc [m/min]		Vc [m/min]		Vc [m/min]			
P	Acier non allié / faiblement allié	< 600 N/mm²	**60**	90	**80**	100			<0.1 x ØD1	<0.3 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**60**	80			<0.1 x ØD1	<0.3 x ØD1
P	Acier de décolletage au plomb		**60**	90	**80**	100			<0.15 x ØD1	<0.3 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**30**	60			<0.05 x ØD1	<0.2 x ØD1
M	Acier inoxydable	400 – 700 N/mm²			**60**	80			<0.1 x ØD1	<0.3 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**30**	60			<0.05 x ØD1	<0.2 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**60**	90	**80**	100			<0.1 x ØD1	<0.3 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**30**	50	**60**	80			<0.05 x ØD1	<0.2 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**60**	90	**80**	100			<0.1 x ØD1	<0.3 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy			**20**	30			<0.05 x ØD1	<0.2 x ØD1
S	Titane, alliage de titane		**25**	35	**30**	50			<0.05 x ØD1	<0.2 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**100**	130	**140**	180			<0.1 x ØD1	<0.3 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**90**	110	**130**	160			<0.1 x ØD1	<0.3 x ØD1
N	Alliage d'aluminium	Si < 8%	**130**	180	**150**	250			<0.2 x ØD1	<0.3 x ØD1
N	Fonte d'aluminium	Si > 8%	**100**	130			**200**	300	<0.2 x ØD1	<0.3 x ØD1
N	Graphite						**200**	300	<0.25 x ØD1	<0.4 x ØD1
N	Plastique		**180**	220	**200**	250			<0.25 x ØD1	<0.4 x ØD1
N	Or, argent		**100**	130	**140**	180			<0.1 x ØD1	<0.3 x ØD1

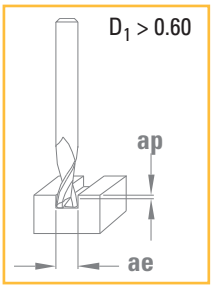
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 2.00 - 2.50	Ø D_1 2.50 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 5.00	Ø D_1 5.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 14.00	Ø D_1 14.00 - 16.00	Ø D_1 16.00 - 20.00
0.010 - 0.021	**0.012** - 0.03	**0.014** - 0.03	**0.019** - 0.04	**0.024** - 0.05	**0.029** - 0.07	**0.038** - 0.08	**0.05** - 0.12	**0.07** - 0.13	**0.08** - 0.17
0.007 - 0.015	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.018** - 0.04	**0.022** - 0.05	**0.029** - 0.06	**0.04** - 0.08	**0.05** - 0.10	**0.06** - 0.12
0.012 - 0.030	**0.015** - 0.04	**0.018** - 0.05	**0.024** - 0.06	**0.030** - 0.07	**0.036** - 0.10	**0.048** - 0.12	**0.06** - 0.17	**0.08** - 0.19	**0.10** - 0.24
0.007 - 0.015	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.018** - 0.04	**0.022** - 0.05	**0.029** - 0.06	**0.04** - 0.08	**0.05** - 0.10	**0.06** - 0.12
0.007 - 0.015	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.018** - 0.04	**0.022** - 0.05	**0.029** - 0.06	**0.04** - 0.08	**0.05** - 0.10	**0.06** - 0.12
0.007 - 0.015	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.018** - 0.04	**0.022** - 0.05	**0.029** - 0.06	**0.04** - 0.08	**0.05** - 0.10	**0.06** - 0.12
0.010 - 0.021	**0.012** - 0.03	**0.014** - 0.03	**0.019** - 0.04	**0.024** - 0.05	**0.029** - 0.07	**0.038** - 0.08	**0.05** - 0.12	**0.07** - 0.13	**0.08** - 0.17
0.007 - 0.015	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.018** - 0.04	**0.022** - 0.05	**0.029** - 0.06	**0.04** - 0.08	**0.05** - 0.10	**0.06** - 0.12
0.010 - 0.021	**0.012** - 0.03	**0.014** - 0.03	**0.019** - 0.04	**0.024** - 0.05	**0.029** - 0.07	**0.038** - 0.08	**0.05** - 0.12	**0.07** - 0.13	**0.08** - 0.17
0.007 - 0.015	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.018** - 0.04	**0.022** - 0.05	**0.029** - 0.06	**0.04** - 0.08	**0.05** - 0.10	**0.06** - 0.12
0.007 - 0.015	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.018** - 0.04	**0.022** - 0.05	**0.029** - 0.06	**0.04** - 0.08	**0.05** - 0.10	**0.06** - 0.12
0.012 - 0.030	**0.015** - 0.04	**0.018** - 0.05	**0.024** - 0.06	**0.030** - 0.07	**0.036** - 0.10	**0.048** - 0.12	**0.06** - 0.17	**0.08** - 0.19	**0.10** - 0.24
0.007 - 0.015	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.018** - 0.04	**0.022** - 0.05	**0.029** - 0.06	**0.04** - 0.08	**0.05** - 0.10	**0.06** - 0.12
0.012 - 0.030	**0.015** - 0.04	**0.018** - 0.05	**0.024** - 0.06	**0.030** - 0.07	**0.036** - 0.10	**0.048** - 0.12	**0.06** - 0.17	**0.08** - 0.19	**0.10** - 0.24
0.012 - 0.030	**0.015** - 0.04	**0.018** - 0.05	**0.024** - 0.06	**0.030** - 0.07	**0.036** - 0.10	**0.048** - 0.12	**0.06** - 0.17	**0.08** - 0.19	**0.10** - 0.24
0.017 - 0.045	**0.021** - 0.05	**0.025** - 0.07	**0.034** - 0.09	**0.042** - 0.11	**0.050** - 0.14	**0.067** - 0.18	**0.08** - 0.25	**0.12** - 0.29	**0.13** - 0.36
0.017 - 0.045	**0.021** - 0.05	**0.025** - 0.07	**0.034** - 0.09	**0.042** - 0.11	**0.050** - 0.14	**0.067** - 0.18	**0.08** - 0.25	**0.12** - 0.29	**0.13** - 0.36
0.012 - 0.030	**0.015** - 0.04	**0.018** - 0.05	**0.024** - 0.06	**0.030** - 0.07	**0.036** - 0.10	**0.048** - 0.12	**0.06** - 0.17	**0.08** - 0.19	**0.10** - 0.24

CONDITIONS DE COUPE



	Matières à usiner		CARBURE Vc [m/min]		TiAlN Vc [m/min]		DIAMANT Vc [m/min]		ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**70**	100	**90**	110			< 1 x ØD1	1 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**70**	90			< 0.6 x ØD1	1 x ØD1
P	Acier de décolletage au plomb		**70**	100					< 1 x ØD1	1 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**40**	70			< 0.5 x ØD1	1 x ØD1
M	Acier inoxydable	400 – 700 N/mm²			**70**	90			< 0.8 x ØD1	1 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**40**	70			< 0.8 x ØD1	1 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**70**	100	**90**	110			< 1 x ØD1	1 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	70	**70**	90			< 0.6 x ØD1	1 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	100	**90**	110			< 0.6 x ØD1	1 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy			**25**	35			< 0.4 x ØD1	1 x ØD1
S	Titane, alliage de titane		**30**	45					< 0.5 x ØD1	1 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**140**	160					< 1 x ØD1	1 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**120**	140	**170**	190			< 0.7 x ØD1	1 x ØD1
N	Alliage d'aluminium	Si < 8%	**180**	260	**230**	340			< 1.2 x ØD1	1 x ØD1
N	Fonte d'aluminium	Si > 8%	**140**	160	**210**	230			< 0.9 x ØD1	1 x ØD1
N	Graphite						**200**	300	<1 x ØD1	1 x ØD1
N	Plastique		**240**	260	**300**	340			< 1.2 x ØD1	1 x ØD1
N	Or, argent		**140**	160	**200**	220			< 0.9 x ØD1	1 x ØD1

$D_1 \leq 0.1$ mm ⇒ (ap & ae) -95 %
$D_1 \leq 0.2$ mm ⇒ (ap & ae) -85 %
$D_1 \leq 0.3$ mm ⇒ (ap & ae) -70 %
$D_1 \leq 0.4$ mm ⇒ (ap & ae) -50 %
$D_1 \leq 0.5$ mm ⇒ (ap & ae) -25 %

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

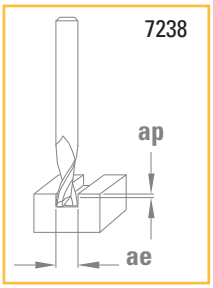
$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

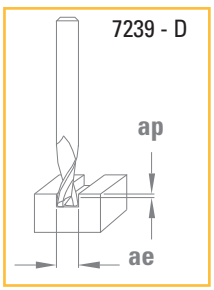
Avance par dent **fz [mm]**

Ø D_1 0.04 - 0.50	Ø D_1 0.50 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00	Ø D_1 10.00 - 13.00	Ø D_1 13.00 - 16.00	Ø D_1 16.00 - 20.00
0.003 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.12	**0.06** - 0.13	**0.07** - 0.14
0.003 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.12	**0.06** - 0.13	**0.07** - 0.14
0.003 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.002 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.12	**0.06** - 0.13	**0.07** - 0.14
0.002 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.12	**0.06** - 0.13	**0.07** - 0.14
0.002 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.12	**0.06** - 0.13	**0.07** - 0.14
0.003 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.12	**0.06** - 0.13	**0.07** - 0.14
0.003 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.12	**0.06** - 0.13	**0.07** - 0.14
0.003 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.12	**0.06** - 0.13	**0.07** - 0.14
		0.012 - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.12	**0.06** - 0.13	**0.07** - 0.14
0.002 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.12	**0.06** - 0.13	**0.07** - 0.14
0.003 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.003 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.12	**0.06** - 0.13	**0.07** - 0.14
0.003 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.003 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.003 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.003 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.21	**0.10** - 0.24	**0.11** - 0.30
0.003 - 0.01	**0.006** - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20

L'avance en plongée (Vfp) d'une fraise Z = 2 (perçage) doit être réduite de 40 à 80 % en fonction de la matière à usiner.

CONDITIONS DE COUPE





Matières à usiner			CARBURE		TiAlN					
			Vc [m/min]		Vc [m/min]		ap [mm]	ae [mm]	ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**70**	100	**90**	110	< 0.1 x ØD1	1 x ØD1	< 0.04 x ØD1	1 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**70**	90	< 0.1 x ØD1	1 x ØD1	< 0.04 x ØD1	1 x ØD1
P	Acier de décolletage au plomb		**70**	100			< 0.12x ØD1	1 x ØD1	< 0.06 x ØD1	1 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**40**	70	< 0.1 x ØD1	1 x ØD1	< 0.04 x ØD1	1 x ØD1
M	Acier inoxydable	400 – 700 N/mm²			**70**	90	< 0.1 x ØD1	1 x ØD1	< 0.04 x ØD1	1 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**40**	70	< 0.1 x ØD1	1 x ØD1	< 0.04 x ØD1	1 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**70**	100	**90**	110	< 0.1 x ØD1	1 x ØD1	< 0.04 x ØD1	1 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	70	**70**	90	< 0.1 x ØD1	1 x ØD1	< 0.04 x ØD1	1 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	100	**90**	110	< 0.1 x ØD1	1 x ØD1	< 0.04 x ØD1	1 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy			**25**	35	< 0.1 x ØD1	1 x ØD1	< 0.04 x ØD1	1 x ØD1
S	Titane, alliage de titane		**30**	45			< 0.1 x ØD1	1 x ØD1	< 0.04 x ØD1	1 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**140**	160			< 0.12 x ØD1	1 x ØD1	< 0.06 x ØD1	1 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**120**	140	**170**	190	< 0.1 x ØD1	1 x ØD1	< 0.04 x ØD1	1 x ØD1
N	Alliage d'aluminium	Si < 8%	**180**	260	**230**	340	< 0.12 x ØD1	1 x ØD1	< 0.06 x ØD1	1 x ØD1
N	Fonte d'aluminium	Si > 8%	**140**	160	**210**	230	< 0.12 x ØD1	1 x ØD1	< 0.06 x ØD1	1 x ØD1
N	Plastique		**240**	260	**300**	340	< 0.15 x ØD1	1 x ØD1	< 0.10 x ØD1	1 x ØD1
N	Or, argent		**140**	160	**200**	220	< 0.12 x ØD1	1 x ØD1	< 0.06 x ØD1	1 x ØD1

$D_1 \leq 0.1$ mm ⇒ (ap & ae) -95 %
$D_1 \leq 0.2$ mm ⇒ (ap & ae) -85 %
$D_1 \leq 0.3$ mm ⇒ (ap & ae) -70 %
$D_1 \leq 0.4$ mm ⇒ (ap & ae) -50 %
$D_1 \leq 0.5$ mm ⇒ (ap & ae) -25 %

Les valeurs n et Vf sont indicatives et devront être ajustées en fonction de la longeur L_2 de l'outil.

L'avance en plongée (Vfp) d'une fraise Z = 2 (perçage) doit être réduite de 40 à 80 % en fonction de la matière à usiner.

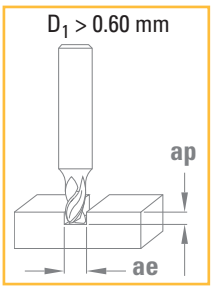
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 0.15 - 0.30	Ø D_1 0.30 - 0.40	Ø D_1 0.40 - 0.60	Ø D_1 0.60 - 0.90	Ø D_1 0.90 - 1.20	Ø D_1 1.20 - 1.50	Ø D_1 1.50 - 1.80	Ø D_1 1.80 - 2.10	Ø D_1 2.10 - 2.50	Ø D_1 2.50 - 3.00
0.002 - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04
0.002 - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04
0.002 - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04
0.0003 - 0.001	**0.002** - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025
0.002 - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04
0.0003 - 0.001	**0.002** - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025
0.002 - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04
0.002 - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04
0.002 - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04
		0.003 - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04
0.002 - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04
0.002 - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04
0.002 - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04
0.002 - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04
0.002 - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04
0.002 - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04
0.002 - 0.003	**0.002** - 0.004	**0.003** - 0.01	**0.008** - 0.012	**0.010** - 0.015	**0.012** - 0.016	**0.013** - 0.02	**0.015** - 0.022	**0.02** - 0.025	**0.022** - 0.04

CONDITIONS DE COUPE



	Matières à usiner		CARBURE Vc [m/min]		TiAlN Vc [m/min]			ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**70**	100	**90**	110		< 1 x ØD1	1 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**50**	80	**70**	90		< 0.6 x ØD1	1 x ØD1
P	Acier de décolletage au plomb		**70**	100				< 1 x ØD1	1 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**40**	70		< 0.5 x ØD1	1 x ØD1
M	Acier inoxydable	400 – 700 N/mm²	**40**	60	**70**	90		< 0.8 x ØD1	1 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**40**	70		< 0.5 x ØD1	1 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**70**	100	**90**	110		< 1 x ØD1	1 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	70	**70**	90		< 0.6 x ØD1	1 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	100	**90**	110		< 0.6 x ØD1	1 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy			**25**	35		< 0.4 x ØD1	1 x ØD1
S	Titane, alliage de titane		**30**	45				< 0.5 x ØD1	1 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**140**	160				< 1 x ØD1	1 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**120**	140	**170**	190		< 0.7 x ØD1	1 x ØD1
N	Alliage d'aluminium	Si < 8%	**180**	260	**230**	340		< 1.2 x ØD1	1 x ØD1
N	Fonte d'aluminium	Si > 8%	**140**	160	**210**	230		< 0.9 x ØD1	1 x ØD1
N	Graphite		**140**	160	**200**	220		< 0.9 x ØD1	1 x ØD1
N	Plastique		**240**	260	**300**	340		< 1.2 x ØD1	1 x ØD1
N	Or, argent		**140**	160	**200**	220		< 0.9 x ØD1	1 x ØD1

$D_1 \leq 0.1$ mm ⇒ (ap & ae) -95 %
$D_1 \leq 0.2$ mm ⇒ (ap & ae) -85 %
$D_1 \leq 0.3$ mm ⇒ (ap & ae) -70 %
$D_1 \leq 0.4$ mm ⇒ (ap & ae) -50 %
$D_1 \leq 0.5$ mm ⇒ (ap & ae) -25 %

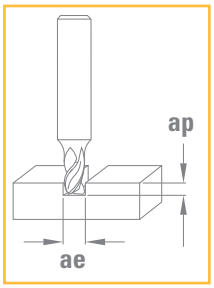
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 0.30 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00	Ø D_1 10.00 - 14.00	Ø D_1 14.00 - 16.00	Ø D_1 16.00 - 20.00
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.14
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
	0.012 - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.005** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.21	**0.10** - 0.24	**0.11** - 0.30
0.006 - 0.015	**0.005** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20

CONDITIONS DE COUPE - RAINURAGE



Matières à usiner			CUTINOX Vc [m/min]		ap [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**100**	170	< 1 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**90**	150	< 1 x ØD1
P	Acier de décolletage au plomb		**120**	180	< 1 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²	**50**	90	< 0.7 x ØD1
M	Acier inoxydable	400 – 700 N/mm²	**60**	95	< 1 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**50**	90	< 0.7 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**140**	180	< 1 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**110**	150	< 1 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**100**	140	< 1 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**20**	40	< 1 x ØD1
S	Titane, alliage de titane		**40**	70	< 0.3 x ØD1

Conditions de coupe basées sur l'huile entière.

Pour les aciers fortement alliés (>12% Chrome), les aciers inoxydables, les alliages de titane, réduire la vitesse de coupe de 20% si le lubrifiant est de l'huile en émulsion.

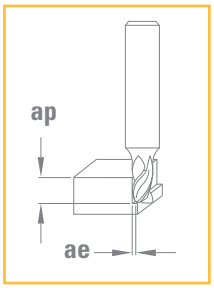
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 16.00
0.010 - 0.017	**0.013** - 0.035	**0.020** - 0.055	**0.023** - 0.070	**0.029** - 0.080	**0.035** - 0.090
0.009 - 0.015	**0.012** - 0.030	**0.017** - 0.045	**0.020** - 0.060	**0.025** - 0.070	**0.030** - 0.080
0.013 - 0.023	**0.017** - 0.045	**0.026** - 0.068	**0.030** - 0.090	**0.038** - 0.105	**0.045** - 0.120
0.007 - 0.013	**0.010** - 0.025	**0.015** - 0.040	**0.017** - 0.050	**0.021** - 0.060	**0.026** - 0.070
0.009 - 0.015	**0.012** - 0.030	**0.017** - 0.045	**0.020** - 0.060	**0.025** - 0.070	**0.030** - 0.080
0.007 - 0.013	**0.010** - 0.025	**0.015** - 0.040	**0.017** - 0.050	**0.021** - 0.060	**0.026** - 0.070
0.013 - 0.023	**0.017** - 0.045	**0.026** - 0.068	**0.030** - 0.090	**0.038** - 0.105	**0.045** - 0.120
0.012 - 0.020	**0.016** - 0.040	**0.023** - 0.060	**0.027** - 0.080	**0.034** - 0.095	**0.041** - 0.110
0.012 - 0.020	**0.016** - 0.040	**0.023** - 0.060	**0.027** - 0.080	**0.034** - 0.095	**0.041** - 0.110
0.004 - 0.010	**0.005** - 0.013	**0.007** - 0.020	**0.010** - 0.023	**0.013** - 0.026	**0.013** - 0.033
0.010 - 0.017	**0.013** - 0.035	**0.020** - 0.055	**0.023** - 0.070	**0.029** - 0.080	**0.035** - 0.090

CONDITIONS DE COUPE - CONTOURNAGE



Matières à usiner			CUTINOX Vc [m/min]			ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**160**	200		< 1 x ØD1	< 0.6 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**130**	170		< 1 x ØD1	< 0.6 x ØD1
P	Acier de décolletage au plomb		**160**	200		< 1 x ØD1	< 0.6 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²	**70**	100		< 1 x ØD1	< 0.5 x ØD1
M	Acier inoxydable	400 – 700 N/mm²	**80**	110		< 1 x ØD1	< 0.5 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**70**	100		< 1 x ØD1	< 0.5 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**160**	200		< 1 x ØD1	< 0.6 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**130**	170		< 1 x ØD1	< 0.6 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**110**	150		< 1 x ØD1	< 0.6 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**20**	50		< 1 x ØD1	< 0.3 x ØD1
S	Titane, alliage de titane		**40**	70		< 1 x ØD1	< 0.6 x ØD1

Conditions de coupe basées sur l'huile entière.

Pour les aciers fortement alliés (>12% Chrome), les aciers inoxydables, les alliages de titane, réduire la vitesse de coupe de 20% si le lubrifiant est de l'huile en émulsion.
Si ae <0.1 x D, augmenter VC et fz de 25%.

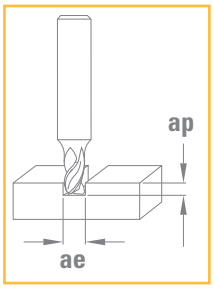
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 16.00
0.019 - 0.045	**0.029** - 0.070	**0.040** - 0.100	**0.052** - 0.115	**0.057** - 0.130	**0.063** - 0.155
0.017 - 0.040	**0.023** - 0.065	**0.035** - 0.085	**0.046** - 0.105	**0.052** - 0.115	**0.058** - 0.135
0.029 - 0.065	**0.035** - 0.100	**0.052** - 0.130	**0.069** - 0.155	**0.081** - 0.175	**0.086** - 0.210
0.014 - 0.035	**0.017** - 0.050	**0.029** - 0.070	**0.040** - 0.085	**0.046** - 0.090	**0.052** - 0.110
0.017 - 0.040	**0.023** - 0.065	**0.035** - 0.085	**0.046** - 0.105	**0.052** - 0.115	**0.058** - 0.135
0.014 - 0.035	**0.017** - 0.050	**0.029** - 0.070	**0.040** - 0.085	**0.046** - 0.090	**0.052** - 0.110
0.029 - 0.065	**0.035** - 0.100	**0.052** - 0.130	**0.069** - 0.155	**0.081** - 0.175	**0.086** - 0.210
0.024 - 0.055	**0.029** - 0.085	**0.044** - 0.111	**0.059** - 0.132	**0.068** - 0.149	**0.073** - 0.179
0.024 - 0.055	**0.029** - 0.085	**0.044** - 0.111	**0.059** - 0.132	**0.068** - 0.149	**0.073** - 0.179
0.007 - 0.017	**0.009** - 0.025	**0.012** - 0.035	**0.017** - 0.040	**0.023** - 0.050	**0.026** - 0.060
0.019 - 0.045	**0.029** - 0.070	**0.040** - 0.100	**0.052** - 0.115	**0.057** - 0.130	**0.063** - 0.155

CONDITIONS DE COUPE - RAINURAGE



Matières à usiner			CUTINOX Vc [m/min]			ap [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**100**	170		< 1 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**90**	150		< 1 x ØD1
P	Acier de décolletage au plomb		**120**	180		< 1 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²	**50**	90		< 0.7 x ØD1
M	Acier inoxydable	400 – 700 N/mm²	**60**	95		< 1 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**50**	90		< 0.7 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**140**	180		< 1 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**110**	150		< 1 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**100**	140		< 1 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**20**	50		< 0.3 x ØD1
S	Titane, alliage de titane		**40**	70		< 1 x ØD1

Conditions de coupe basées sur l'huile entière.

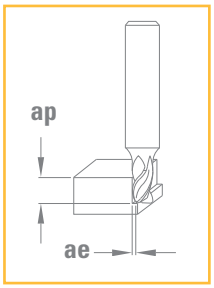
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 16.00	Ø D_1 16.00 - 20.00
0.005 - 0.010	**0.008** - 0.020	**0.011** - 0.030	**0.017** - 0.040	**0.022** - 0.050	**0.025** - 0.055	**0.030** - 0.065	**0.040** - 0.085
0.005 - 0.010	**0.008** - 0.018	**0.010** - 0.025	**0.015** - 0.035	**0.020** - 0.045	**0.023** - 0.050	**0.025** - 0.060	**0.035** - 0.075
0.010 - 0.020	**0.013** - 0.030	**0.015** - 0.045	**0.023** - 0.050	**0.025** - 0.070	**0.030** - 0.075	**0.032** - 0.080	**0.035** - 0.110
0.004 - 0.010	**0.006** - 0.015	**0.008** - 0.020	**0.013** - 0.030	**0.018** - 0.035	**0.020** - 0.040	**0.025** - 0.050	**0.030** - 0.060
0.005 - 0.010	**0.008** - 0.018	**0.010** - 0.025	**0.015** - 0.035	**0.020** - 0.045	**0.023** - 0.050	**0.025** - 0.060	**0.035** - 0.075
0.004 - 0.010	**0.006** - 0.015	**0.008** - 0.020	**0.013** - 0.030	**0.018** - 0.035	**0.020** - 0.040	**0.025** - 0.050	**0.030** - 0.060
0.010 - 0.020	**0.013** - 0.030	**0.015** - 0.045	**0.023** - 0.050	**0.025** - 0.070	**0.030** - 0.075	**0.032** - 0.080	**0.035** - 0.110
0.008 - 0.015	**0.011** - 0.025	**0.013** - 0.040	**0.019** - 0.045	**0.021** - 0.060	**0.026** - 0.065	**0.027** - 0.070	**0.030** - 0.095
0.008 - 0.015	**0.011** - 0.025	**0.013** - 0.040	**0.019** - 0.045	**0.021** - 0.060	**0.026** - 0.065	**0.027** - 0.070	**0.030** - 0.095
0.001 - 0.005	**0.003** - 0.008	**0.004** - 0.010	**0.005** - 0.015	**0.008** - 0.018	**0.010** - 0.020	**0.010** - 0.025	**0.015** - 0.030
0.005 - 0.010	**0.008** - 0.020	**0.011** - 0.030	**0.017** - 0.040	**0.022** - 0.050	**0.025** - 0.055	**0.030** - 0.065	**0.040** - 0.085

CONDITIONS DE COUPE - CONTOURNAGE



Matières à usiner			CUTINOX Vc [m/min]			ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**160**	200		< 2 x ØD1	< 0.4 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**130**	170		< 2 x ØD1	< 0.3 x ØD1
P	Acier de décolletage au plomb		**160**	200		< 2 x ØD1	< 0.4 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²	**70**	100		< 2 x ØD1	< 0.3 x ØD1
M	Acier inoxydable	400 – 700 N/mm²	**80**	110		< 2 x ØD1	< 0.3 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**70**	100		< 2 x ØD1	< 0.3 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**160**	200		< 2 x ØD1	< 0.4 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**130**	170		< 2 x ØD1	< 0.4 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**110**	150		< 2 x ØD1	< 0.3 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**20**	50		< 2 x ØD1	< 0.2 x ØD1
S	Titane, alliage de titane		**40**	70		< 2 x ØD1	< 0.3 x ØD1

Conditions de coupe basées sur l'huile entière.

Si ae <0.1 x D, augmenter Vc et fz de 25%.

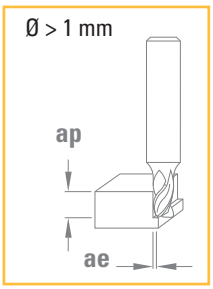
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 16.00	Ø D_1 16.00 - 20.00
0.015 - 0.030	**0.019** - 0.040	**0.025** - 0.060	**0.035** - 0.085	**0.045** - 0.100	**0.050** - 0.110	**0.055** - 0.135	**0.075** - 0.160
0.011 - 0.025	**0.015** - 0.035	**0.020** - 0.055	**0.030** - 0.075	**0.040** - 0.090	**0.045** - 0.100	**0.050** - 0.120	**0.068** - 0.144
0.021 - 0.045	**0.025** - 0.055	**0.030** - 0.085	**0.045** - 0.115	**0.060** - 0.135	**0.070** - 0.150	**0.075** - 0.180	**0.100** - 0.220
0.008 - 0.020	**0.012** - 0.030	**0.015** - 0.045	**0.025** - 0.060	**0.035** - 0.075	**0.040** - 0.080	**0.045** - 0.095	**0.055** - 0.115
0.011 - 0.025	**0.015** - 0.035	**0.020** - 0.055	**0.030** - 0.075	**0.040** - 0.090	**0.045** - 0.100	**0.050** - 0.120	**0.065** - 0.145
0.008 - 0.020	**0.012** - 0.030	**0.015** - 0.045	**0.025** - 0.060	**0.035** - 0.075	**0.040** - 0.080	**0.045** - 0.095	**0.055** - 0.115
0.021 - 0.045	**0.025** - 0.055	**0.030** - 0.085	**0.045** - 0.115	**0.060** - 0.135	**0.070** - 0.150	**0.075** - 0.180	**0.100** - 0.220
0.017 - 0.037	**0.021** - 0.047	**0.026** - 0.072	**0.038** - 0.098	**0.051** - 0.115	**0.060** - 0.128	**0.064** - 0.153	**0.085** - 0.187
0.017 - 0.037	**0.021** - 0.047	**0.026** - 0.072	**0.038** - 0.098	**0.051** - 0.115	**0.060** - 0.128	**0.064** - 0.153	**0.085** - 0.187
0.003 - 0.007	**0.006** - 0.015	**0.008** - 0.020	**0.010** - 0.030	**0.015** - 0.035	**0.020** - 0.040	**0.023** - 0.050	**0.028** - 0.060
0.013 - 0.030	**0.017** - 0.040	**0.025** - 0.060	**0.035** - 0.085	**0.045** - 0.100	**0.050** - 0.110	**0.055** - 0.135	**0.075** - 0.160

CONDITIONS DE COUPE



Matières à usiner			CARBURE Vc [m/min]		TiAlN Vc [m/min]		DIAMANT Vc [m/min]		ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**70**	100	**90**	110			< 1 x ØD1	< 0.3 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**70**	90			< 1 x ØD1	< 0.2 x ØD1
P	Acier de décolletage au plomb		**70**	100					< 1.5 x ØD1	< 0.3 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**40**	55			< 1 x ØD1	< 0.2 x ØD1
M	Acier inoxydable	400 – 700 N/mm²			**70**	90			< 1 x ØD1	< 0.3 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**40**	55			< 1 x ØD1	< 0.2 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**70**	100	**90**	110			< 1 x ØD1	< 0.3 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	70	**70**	90			< 1 x ØD1	< 0.3 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	100	**90**	110			< 1 x ØD1	< 0.3 x ØD1
S	Titane, alliage de titane		**30**	45					< 1 x ØD1	< 0.3 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**140**	160					< 1.5 x ØD1	< 0.3 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**120**	140	**170**	190			< 1 x ØD1	< 0.2 x ØD1
N	Alliage d'aluminium	Si < 8%	**180**	220	**230**	270			< 1.5 x ØD1	< 0.3 x ØD1
N	Fonte d'aluminium	Si > 8%	**140**	160	**210**	230			< 1.5 x ØD1	< 0.3 x ØD1
N	Graphite						**200**	300	< 1.5 x ØD1	< 0.2 x ØD1
N	Plastique		**240**	260	**300**	340			< 1.5 x ØD1	< 0.3 x ØD1	**0.006** - 0.015
N	Or, argent		**140**	160	**200**	220			< 1.5 x ØD1	< 0.3 x ØD1	**0.006** - 0.015

$D_1 \leq 0.1$ mm ⇒ (ap & ae) -95 %
$D_1 \leq 0.2$ mm ⇒ (ap & ae) -85 %
$D_1 \leq 0.3$ mm ⇒ (ap & ae) -70 %
$D_1 \leq 0.4$ mm ⇒ (ap & ae) -50 %
$D_1 \leq 0.5$ mm ⇒ (ap & ae) -25 %

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

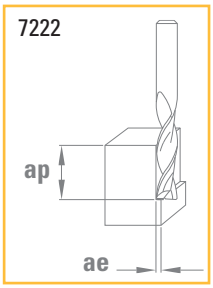
$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

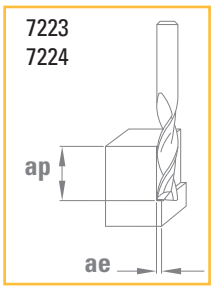
Avance par dent **fz [mm]**

Ø D_1 0.40 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00	Ø D_1 10.00 - 14.00	Ø D_1 14.00 - 16.00	Ø D_1 16.00 - 20.00
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.10	**0.06** - 0.11	**0.07** - 0.14
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.07	**0.06** - 0.08	**0.07** - 0.10
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.13	**0.06** - 0.14	**0.07** - 0.15
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.13	**0.06** - 0.14	**0.07** - 0.15
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.13	**0.06** - 0.14	**0.07** - 0.15
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.13	**0.06** - 0.14	**0.07** - 0.15
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.13	**0.06** - 0.14	**0.07** - 0.15
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.13	**0.06** - 0.14	**0.07** - 0.15
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.07	**0.06** - 0.08	**0.07** - 0.10
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.012** - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20	
0.005 - 0.02	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20	

DIXI 7222 - 7223 - 7224

CONDITIONS DE COUPE





	Matières à usiner		CARBURE Vc [m/min]		TiAlN Vc [m/min]		ap [mm]	ae [mm]	ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**45**	50	**50**	60	3 x ØD1	< 0.3 x ØD1	3 x ØD1	< 0.2 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**35**	45	3 x ØD1	< 0.2 x ØD1	3 x ØD1	< 0.1 x ØD1
P	Acier de décolletage au plomb		**45**	50			3 x ØD1	< 0.3 x ØD1	3 x ØD1	< 0.2 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**30**	45	3 x ØD1	< 0.15 x ØD1	3 x ØD1	< 0.07 x ØD1
M	Acier inoxydable	400 – 700 N/mm²			**35**	45	3 x ØD1	< 0.2 x ØD1	3 x ØD1	< 0.1 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**30**	45	3 x ØD1	< 0.3 x ØD1	3 x ØD1	< 0.07 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**25**	35	**35**	45	3 x ØD1	< 0.15 x ØD1	3 x ØD1	< 0.2 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**25**	35	**35**	45	3 x ØD1	< 0.3 x ØD1	3 x ØD1	< 0.07 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**25**	35	**35**	45	3 x ØD1	< 0.1 x ØD1	3 x ØD1	< 0.2 x ØD1
S	Titane, alliage de titane		**15**	25			3 x ØD1	< 0.15 x ØD1	3 x ØD1	< 0.03 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**80**	100			3 x ØD1	< 0.3 x ØD1	3 x ØD1	< 0.2 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**60**	80	**80**	100	3 x ØD1	< 0.3 x ØD1	3 x ØD1	< 0.2 x ØD1
N	Alliage d'aluminium	Si < 8%	**80**	110	**100**	130	3 x ØD1	< 0.4 x ØD1	3 x ØD1	< 0.3 x ØD1
N	Fonte d'aluminium	Si > 8%	**80**	100	**100**	120	3 x ØD1	< 0.4 x ØD1	3 x ØD1	< 0.3 x ØD1
N	Plastique		**90**	110	**110**	130	3 x ØD1	< 0.4 x ØD1	3 x ØD1	< 0.3 x ØD1
N	Or, argent		**80**	100	**100**	120	3 x ØD1	< 0.4 x ØD1	3 x ØD1	< 0.3 x ØD1

DIXI 7222 - 7223 - 7224 DIAMANT

CONDITIONS DE COUPE

	Matières à usiner	DIAMANT Vc [m/min]			ap [mm]	ae [mm]
N	Graphite	**200**	300		3 x ØD1	< 0.30 x ØD1

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

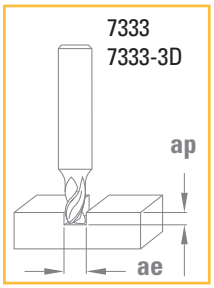
Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 5.00	Ø D_1 5.00 - 6.00	Ø D_1 6.00 - 7.00	Ø D_1 7.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 14.00	Ø D_1 14.00 - 16.00	Ø D_1 16.00 - 20.00
0.006 - 0.01	**0.008** - 0.02	**0.010** - 0.02	**0.012** - 0.02	**0.014** - 0.03	**0.018** - 0.04	**0.02** - 0.04	**0.02** - 0.05	**0.03** - 0.06	**0.03** - 0.07
0.005 - 0.01	**0.006** - 0.01	**0.008** - 0.02	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.02** - 0.03	**0.02** - 0.04	**0.02** - 0.04	**0.02** - 0.05
0.008 - 0.02	**0.010** - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.018** - 0.04	**0.023** - 0.05	**0.03** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.04** - 0.10
0.005 - 0.01	**0.006** - 0.01	**0.008** - 0.02	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.02** - 0.03	**0.02** - 0.04	**0.02** - 0.04	**0.02** - 0.05
0.005 - 0.01	**0.006** - 0.01	**0.008** - 0.02	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.02** - 0.03	**0.02** - 0.04	**0.02** - 0.04	**0.02** - 0.05
0.005 - 0.01	**0.006** - 0.01	**0.008** - 0.02	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.02** - 0.03	**0.02** - 0.04	**0.02** - 0.04	**0.02** - 0.05
0.006 - 0.01	**0.008** - 0.02	**0.010** - 0.02	**0.012** - 0.02	**0.014** - 0.03	**0.018** - 0.04	**0.02** - 0.04	**0.02** - 0.05	**0.03** - 0.06	**0.03** - 0.07
0.005 - 0.01	**0.006** - 0.01	**0.008** - 0.02	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.02** - 0.03	**0.02** - 0.04	**0.02** - 0.04	**0.02** - 0.05
0.006 - 0.01	**0.008** - 0.02	**0.010** - 0.02	**0.012** - 0.02	**0.014** - 0.03	**0.018** - 0.04	**0.02** - 0.04	**0.02** - 0.05	**0.03** - 0.06	**0.03** - 0.07
0.005 - 0.01	**0.006** - 0.01	**0.008** - 0.02	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.02** - 0.03	**0.02** - 0.04	**0.02** - 0.04	**0.02** - 0.05
0.008 - 0.02	**0.010** - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.018** - 0.04	**0.023** - 0.05	**0.03** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.04** - 0.10
0.005 - 0.01	**0.006** - 0.01	**0.008** - 0.02	**0.009** - 0.02	**0.011** - 0.02	**0.014** - 0.03	**0.02** - 0.03	**0.02** - 0.04	**0.02** - 0.04	**0.02** - 0.05
0.008 - 0.02	**0.010** - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.018** - 0.04	**0.023** - 0.05	**0.03** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.04** - 0.10
0.008 - 0.02	**0.010** - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.018** - 0.04	**0.023** - 0.05	**0.03** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.04** - 0.10
0.011 - 0.03	**0.014** - 0.04	**0.018** - 0.05	**0.021** - 0.05	**0.025** - 0.06	**0.032** - 0.08	**0.04** - 0.09	**0.04** - 0.11	**0.05** - 0.12	**0.06** - 0.15
0.008 - 0.02	**0.010** - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.018** - 0.04	**0.023** - 0.05	**0.03** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.04** - 0.10

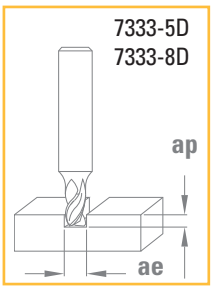
L'avance en plongée (Vfp) d'une fraise Z = 2 (perçage) doit être réduite de 40 à 80 % en fonction de la matière à usiner.

Avance par dent **fz [mm]**

Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 5.00	Ø D_1 5.00 - 6.00	Ø D_1 6.00 - 7.00	Ø D_1 7.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 14.00	Ø D_1 14.00 - 16.00	Ø D_1 16.00 - 20.00
0.011 - 0.03	**0.014** - 0.04	**0.018** - 0.05	**0.021** - 0.05	**0.025** - 0.06	**0.032** - 0.08	**0.04** - 0.09	**0.04** - 0.11	**0.05** - 0.12	**0.06** - 0.15

CONDITIONS DE COUPE





	Matières à usiner		CARBURE Vc [m/min]		CUTINOX Vc [m/min]		CARBURE ap [mm]	CARBURE ae [mm]	CUTINOX ap [mm]	CUTINOX ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**50**	80	**80**	120	1 x ØD1	< 1 x ØD1	0.8 x ØD1	< 1 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**30**	60	**70**	100	1 x ØD1	< 1 x ØD1	0.6 x ØD1	< 1 x ØD1
P	Acier de décolletage au plomb		**80**	120	**100**	180	1 x ØD1	< 1 x ØD1	1 x ØD1	< 1 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²	**30**	50	**40**	70	0.8 x ØD1	< 1 x ØD1	0.5 x ØD1	< 1 x ØD1
M	Acier inoxydable	400 – 700 N/mm²	**40**	60	**60**	90	0.8 x ØD1	< 1 x ØD1	0.5 x ØD1	< 1 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**20**	40	**30**	60	0.7 x ØD1	< 1 x ØD1	0.4 x ØD1	< 1 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**100**	150	**150**	200	1 x ØD1	< 1 x ØD1	1 x ØD1	< 1 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**50**	80	**60**	100	1 x ØD1	< 1 x ØD1	0.8 x ØD1	< 1 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**50**	80	**60**	90	1 x ØD1	< 1 x ØD1	0.8 x ØD1	< 1 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**10**	20	**20**	40	0.4 x ØD1	< 1 x ØD1	0.2 x ØD1	< 1 x ØD1
S	Titane, alliage de titane		**30**	60	**40**	70	1 x ØD1	< 1 x ØD1	0.8 x ØD1	< 1 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**150**	250	**100**	250	1 x ØD1	< 1 x ØD1	1 x ØD1	< 1 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**80**	150	**80**	150	1 x ØD1	< 1 x ØD1	0.8 x ØD1	< 1 x ØD1
N	Alliage d'aluminium	Si < 8%	**150**	300	**150**	300	1 x ØD1	< 1 x ØD1	1 x ØD1	< 1 x ØD1
N	Fonte d'aluminium	Si > 8%	**100**	150	**150**	250	1 x ØD1	< 1 x ØD1	3 x ØD1	< 1 x ØD1
N	Plastique		**100**	150	**100**	150	1 x ØD1	< 1 x ØD1	3 x ØD1	< 1 x ØD1
N	Or, argent		**100**	150	**100**	150	1 x ØD1	< 1 x ØD1	1 x ØD1	< 1 x ØD1

$D_1 \leq 0.1$ mm ⇒ (ap & ae) -95 %
$D_1 \leq 0.2$ mm ⇒ (ap & ae) -85 %
$D_1 \leq 0.3$ mm ⇒ (ap & ae) -70 %
$D_1 \leq 0.4$ mm ⇒ (ap & ae) -50 %
$D_1 \leq 0.5$ mm ⇒ (ap & ae) -25 %

Les valeurs n et Vf sont indicatives et devront être ajustées en fonction de la longeur L_2 de l'outil.

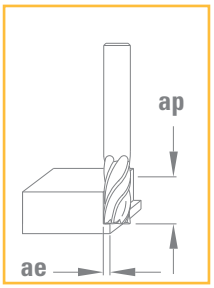
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 0.30 - 0.50	Ø D_1 0.60 - 0.90	Ø D_1 1.00 - 2.00	Ø D_1 2.00 - 4.00	Ø D_1 4.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00
0.0024 - 0.008	**0.0048** - 0.014	**0.008** - 0.028	**0.016** - 0.052	**0.031** - 0.07	**0.05** - 0.09	**0.06** - 0.10
0.0022 - 0.007	**0.0043** - 0.012	**0.007** - 0.025	**0.014** - 0.047	**0.028** - 0.06	**0.04** - 0.08	**0.04** - 0.09
0.0029 - 0.009	**0.0058** - 0.016	**0.010** - 0.034	**0.019** - 0.062	**0.037** - 0.09	**0.06** - 0.11	**0.07** - 0.12
0.0019 - 0.006	**0.0038** - 0.011	**0.006** - 0.022	**0.013** - 0.042	**0.025** - 0.06	**0.04** - 0.07	**0.05** - 0.08
0.0019 - 0.006	**0.0038** - 0.011	**0.006** - 0.022	**0.013** - 0.042	**0.025** - 0.06	**0.04** - 0.07	**0.05** - 0.08
0.0017 - 0.005	**0.0034** - 0.009	**0.006** - 0.020	**0.011** - 0.036	**0.022** - 0.05	**0.03** - 0.06	**0.04** - 0.07
0.003 - 0.009	**0.006** - 0.017	**0.010** - 0.035	**0.02** - 0.065	**0.039** - 0.09	**0.06** - 0.11	**0.08** - 0.13
0.0024 - 0.008	**0.0048** - 0.014	**0.008** - 0.028	**0.016** - 0.052	**0.031** - 0.07	**0.05** - 0.09	**0.06** - 0.10
0.0024 - 0.008	**0.0048** - 0.014	**0.008** - 0.028	**0.016** - 0.052	**0.031** - 0.07	**0.05** - 0.09	**0.06** - 0.10
0.0012 - 0.004	**0.0024** - 0.007	**0.004** - 0.014	**0.008** - 0.026	**0.016** - 0.04	**0.02** - 0.04	**0.03** - 0.05
0.0024 - 0.008	**0.0048** - 0.014	**0.008** - 0.028	**0.016** - 0.052	**0.031** - 0.07	**0.05** - 0.09	**0.06** - 0.10
0.003 - 0.009	**0.006** - 0.017	**0.010** - 0.035	**0.02** - 0.065	**0.039** - 0.09	**0.06** - 0.11	**0.08** - 0.13
0.0034 - 0.011	**0.0067** - 0.019	**0.011** - 0.039	**0.022** - 0.073	**0.044** - 0.10	**0.06** - 0.12	**0.09** - 0.14
0.0034 - 0.011	**0.0067** - 0.019	**0.011** - 0.039	**0.022** - 0.073	**0.044** - 0.10	**0.06** - 0.12	**0.09** - 0.14
0.0031 - 0.010	**0.0062** - 0.018	**0.010** - 0.036	**0.021** - 0.068	**0.041** - 0.09	**0.04** - 0.11	**0.08** - 0.13
0.0034 - 0.011	**0.0067** - 0.019	**0.011** - 0.039	**0.022** - 0.073	**0.044** - 0.10	**0.06** - 0.12	**0.09** - 0.14
0.0031 - 0.010	**0.0062** - 0.018	**0.010** - 0.036	**0.021** - 0.068	**0.041** - 0.09	**0.04** - 0.11	**0.08** - 0.13

CONDITIONS DE COUPE



Matières à usiner			CARBURE		TiAlN		DLC				ap [mm]	ae [mm]
			Vc [m/min]		Vc [m/min]		Vc [m/min]					
P	Acier non allié / faiblement allié	< 600 N/mm²	**90**	110	**110**	130					1.5 x ØD1	< 0.1 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**80**	100					1.5 x ØD1	< 0.1 x ØD1
P	Acier de décolletage au plomb		**80**	110							1.5 x ØD1	< 0.3 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**60**	80					1.5 x ØD1	< 0.05 x ØD1
M	Acier inoxydable	400 – 700 N/mm²			**80**	100					1.5 x ØD1	< 0.05 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**60**	80					1.5 x ØD1	< 0.05 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**80**	110	**110**	140					1.5 x ØD1	< 0.2 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**50**	70	**80**	100					1.5 x ØD1	< 0.05 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**80**	110	**110**	130					1.5 x ØD1	< 0.1 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy			**35**	50					1.5 x ØD1	< 0.05 x ØD1
S	Titane, alliage de titane		**40**	55			**50**	80			1.5 x ØD1	< 0.1 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**160**	200			**200**	300			1.5 x ØD1	< 0.3 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**140**	160	**170**	220	**200**	270			1.5 x ØD1	< 0.1 x ØD1

$D_1 \leq 0.1$ mm ⇒ (ap & ae) -95 %
$D_1 \leq 0.2$ mm ⇒ (ap & ae) -85 %
$D_1 \leq 0.3$ mm ⇒ (ap & ae) -70 %
$D_1 \leq 0.4$ mm ⇒ (ap & ae) -50 %
$D_1 \leq 0.5$ mm ⇒ (ap & ae) -25 %

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

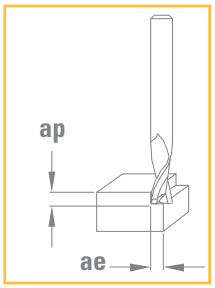
$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

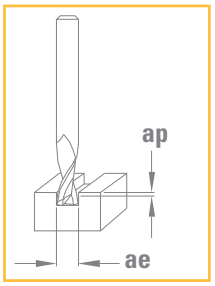
Avance par dent **fz [mm]**

Ø D_1 0.35 - 1.90 (Z = 3)	Ø D_1 2.00 - 3.00 (Z = 5)	Ø D_1 3.00 - 5.00 (Z = 5)	Ø D_1 5.00 - 8.00 (Z = 5)	Ø D_1 8.00 - 10.00 (Z = 6)	Ø D_1 10.00 - 14.00 (Z = 6)	Ø D_1 14.00 - 16.00 (Z = 6)	Ø D_1 16.00 - 20.00 (Z = 6)
0.0021 - 0.03	**0.012** - 0.05	**0.02** - 0.08	**0.03** - 0.12	**0.04** - 0.13	**0.05** - 0.17	**0.07** - 0.18	**0.07** - 0.20
0.0019 - 0.03	**0.011** - 0.04	**0.02** - 0.07	**0.02** - 0.11	**0.04** - 0.12	**0.05** - 0.15	**0.06** - 0.16	**0.06** - 0.18
0.0025 - 0.03	**0.014** - 0.05	**0.02** - 0.09	**0.03** - 0.14	**0.05** - 0.16	**0.06** - 0.20	**0.08** - 0.21	**0.09** - 0.24
0.0017 - 0.02	**0.010** - 0.04	**0.01** - 0.06	**0.02** - 0.10	**0.03** - 0.10	**0.04** - 0.13	**0.05** - 0.14	**0.06** - 0.16
0.0017 - 0.02	**0.010** - 0.04	**0.01** - 0.06	**0.02** - 0.10	**0.03** - 0.10	**0.04** - 0.13	**0.05** - 0.14	**0.06** - 0.16
0.0015 - 0.02	**0.008** - 0.03	**0.01** - 0.05	**0.02** - 0.08	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.12	**0.05** - 0.14
0.0026 - 0.04	**0.015** - 0.06	**0.02** - 0.09	**0.03** - 0.15	**0.05** - 0.16	**0.06** - 0.21	**0.08** - 0.22	**0.09** - 0.25
0.0021 - 0.03	**0.012** - 0.05	**0.02** - 0.08	**0.03** - 0.12	**0.04** - 0.13	**0.05** - 0.17	**0.07** - 0.18	**0.07** - 0.20
0.0021 - 0.03	**0.012** - 0.05	**0.02** - 0.08	**0.03** - 0.12	**0.04** - 0.13	**0.05** - 0.17	**0.07** - 0.18	**0.07** - 0.20
0.0011 - 0.01	**0.006** - 0.02	**0.01** - 0.04	**0.01** - 0.06	**0.02** - 0.07	**0.03** - 0.08	**0.03** - 0.09	**0.04** - 0.10
0.0021 - 0.03	**0.012** - 0.05	**0.02** - 0.08	**0.03** - 0.12	**0.04** - 0.13	**0.05** - 0.17	**0.07** - 0.18	**0.07** - 0.20
0.0026 - 0.04	**0.015** - 0.06	**0.02** - 0.09	**0.03** - 0.15	**0.05** - 0.16	**0.06** - 0.21	**0.08** - 0.22	**0.09** - 0.25
0.0029 - 0.04	**0.017** - 0.06	**0.03** - 0.11	**0.04** - 0.17	**0.06** - 0.18	**0.07** - 0.24	**0.09** - 0.25	**0.10** - 0.28

DIXI 7210

CONDITIONS DE COUPE

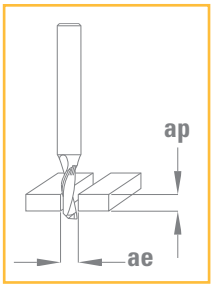




Matières à usiner			CARBURE Vc [m/min]		CUTINOX Vc [m/min]		ap [mm]	ae [mm]	ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**70**	100	**100**	120	1.5 x ØD1	0.5 x ØD1	< 1.3 x ØD1	1 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**80**	100	1.5 x ØD1	0.5 x ØD1	< 1 x ØD1	1 x ØD1
P	Acier de décolletage au plomb		**70**	100			1.5 x ØD1	0.5 x ØD1	< 1 x ØD1	1 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**50**	70	1.5 x ØD1	0.5 x ØD1	< 1 x ØD1	1 x ØD1
M	Acier inoxydable	400 – 700 N/mm²			**80**	100	1.5 x ØD1	0.5 x ØD1	< 1 x ØD1	1 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**70**	100	**100**	120	1.5 x ØD1	0.5 x ØD1	< 1 x ØD1	1 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	70	**80**	100	1.5 x ØD1	0.5 x ØD1	< 1 x ØD1	1 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	100	**100**	120	1.5 x ØD1	0.5 x ØD1	< 1 x ØD1	1 x ØD1
S	Titane, alliage de titane		**30**	45			1.5 x ØD1	0.5 x ØD1	< 1 x ØD1	1 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**160**	180	**220**	240	1 x ØD1	1 x ØD1	< 1.5 x ØD1	0.5 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**100**	130	**120**	150	1 x ØD1	1 x ØD1	< 1.5 x ØD1	0.5 x ØD1
N	Alliage d'aluminium	Si < 8%	**130**	250	**200**	300	1.5 x ØD1	0.5 x ØD1	< 1 x ØD1	1 x ØD1
N	Or, argent		**140**	160	**200**	220	< 1 x ØD1	1 x ØD1	< 1.5 x ØD1	< 0.5 x ØD1

DIXI 7301 - 7302 - 7303 - 7311

CONDITIONS DE COUPE



Matières à usiner			CARBURE Vc [m/min]		ap [mm]	ae [mm]
N	Plastique		**130**	200	< 1.5 x ØD1	1 x ØD1

L'avance en plongée (Vfp) d'une fraise Z = 1 (perçage) doit être réduite de 40 à 80 % en fonction de la matière à usiner.

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

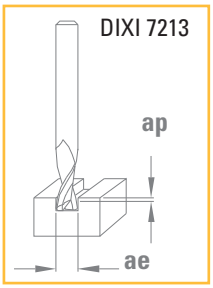
Ø D_1 3.00 - 4.00	Ø D_1 4.00 -5.00	Ø D_1 5.00 - 6.00	Ø D_1 6.00 - 7.00	Ø D_1 7.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00
0.02 - 0.03	**0.025** - 0.04	**0.028** - 0.045	**0.032** - 0.05	**0.035** - 0.06	**0.04** - 0.08	**0.06** - 0.10
0.02 - 0.03	**0.025** - 0.04	**0.028** - 0.045	**0.032** - 0.05	**0.035** - 0.06	**0.04** - 0.08	**0.06** - 0.10
0.02 - 0.03	**0.025** - 0.04	**0.028** - 0.045	**0.032** - 0.05	**0.035** - 0.06	**0.04** - 0.08	**0.06** - 0.10
0.02 - 0.03	**0.025** - 0.04	**0.028** - 0.045	**0.032** - 0.05	**0.035** - 0.06	**0.04** - 0.08	**0.06** - 0.10
0.02 - 0.03	**0.025** - 0.04	**0.028** - 0.045	**0.032** - 0.05	**0.035** - 0.06	**0.04** - 0.08	**0.06** - 0.10
0.02 - 0.03	**0.025** - 0.04	**0.028** - 0.045	**0.032** - 0.05	**0.035** - 0.06	**0.04** - 0.08	**0.06** - 0.10
0.02 - 0.03	**0.025** - 0.04	**0.028** - 0.045	**0.032** - 0.05	**0.035** - 0.06	**0.04** - 0.08	**0.06** - 0.10
0.02 - 0.03	**0.025** - 0.04	**0.028** - 0.045	**0.032** - 0.05	**0.035** - 0.06	**0.04** - 0.08	**0.06** - 0.10
0.02 - 0.03	**0.025** - 0.04	**0.028** - 0.045	**0.032** - 0.05	**0.035** - 0.06	**0.04** - 0.08	**0.06** - 0.10
0.02 - 0.03	**0.025** - 0.04	**0.028** - 0.045	**0.032** - 0.05	**0.035** - 0.06	**0.04** - 0.08	**0.06** - 0.10
0.02 - 0.03	**0.025** - 0.04	**0.028** - 0.045	**0.032** - 0.05	**0.035** - 0.06	**0.04** - 0.08	**0.06** - 0.10
0.02 - 0.03	**0.025** - 0.04	**0.028** - 0.045	**0.032** - 0.05	**0.035** - 0.06	**0.04** - 0.08	**0.06** - 0.10
0.03 - 0.04	**0.04** - 0.06	**0.05** - 0.08	**0.06** - 0.09	**0.07** - 0.1	**0.08** - 0.11	**0.09** - 0.12
0.01 - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.018** - 0.04	**0.020** - 0.05	**0.023** - 0.05	**0.025** - 0.06

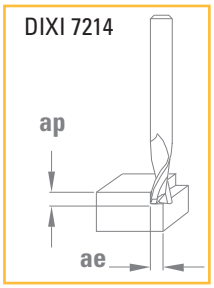
Avance par dent **fz [mm]**

Ø D_1 2.00 - 2.50	Ø D_1 2.50 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 5.00	Ø D_1 5.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00
0.020 - 0.05	**0.025** - 0.06	**0.03** - 0.08	**0.04** - 0.10	**0.05** - 0.12	**0.06** - 0.16	**0.08** - 0.20	**0.10** - 0.28

DIXI 7213 - 7214

CONDITIONS DE COUPE

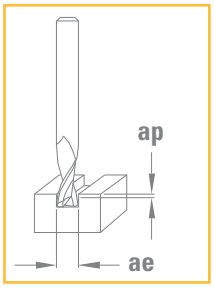




	Matières à usiner		CARBURE Vc [m/min]		TiAlN Vc [m/min]		ap [mm]	ae [mm]	ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**70**	100	**90**	110	< 1 x ØD1	1 x ØD1	< 1 x ØD1	< 0.5 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**70**	90	< 0.5 x ØD1	1 x ØD1	< 1 x ØD1	< 0.3 x ØD1
P	Acier de décolletage au plomb		**70**	100			< 1 x ØD1	1 x ØD1	< 1.5 x ØD1	< 0.5 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**40**	60	< 0.5 x ØD1	1 x ØD1	< 1 x ØD1	< 0.3 x ØD1
M	Acier inoxydable	400 – 700 N/mm²			**80**	100	< 0.5 x ØD1	1 x ØD1	< 1 x ØD1	< 0.3 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**70**	100	**90**	110	< 1 x ØD1	1 x ØD1	< 1 x ØD1	< 0.5 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	70	**70**	90	< 0.4 x ØD1	1 x ØD1	< 1 x ØD1	< 0.4 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	100	**90**	110	< 0.4 x ØD1	1 x ØD1	< 1 x ØD1	< 0.4 x ØD1
S	Titane, alliage de titane		**30**	45			< 0.5 x ØD1	1 x ØD1	< 1 x ØD1	< 0.3 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**140**	160			< 2 x ØD1	1 x ØD1	< 1.5 x ØD1	< 0.5 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**120**	140	**170**	190	< 1 x ØD1	1 x ØD1	< 1 x ØD1	< 0.3 x ØD1
N	Alliage d'aluminium	Si < 8%	**180**	260	**230**	340	< 2 x ØD1	1 x ØD1	< 1.5 x ØD1	< 0.5 x ØD1
N	Fonte d'aluminium	Si > 8%	**140**	160	**210**	230	< 2 x ØD1	1 x ØD1	< 1.5 x ØD1	< 0.5 x ØD1
N	Or, argent		**140**	160	**200**	220	< 1 x ØD1	1 x ØD1	< 1.5 x ØD1	< 0.5 x ØD1

DIXI 7060 - 7063 - 7232

CONDITIONS DE COUPE



	Matières à usiner		CARBURE Vc [m/min]		ap [mm]	ae [mm]
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**100**	150	< 1 x ØD1	1 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**140**	160	< 1 x ØD1	1 x ØD1
N	Plastique		**140**	160	< 0.9 x ØD1	1 x ØD1
N	Or, argent		**240**	260	< 1.2 x ØD1	1 x ØD1
N	Alliage d'aluminium	Si < 8%	**240**	300	)1	1 x ØD1

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

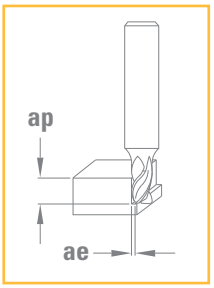
Avance par dent **fz [mm]**

Ø D_1 4.00 - 5.00	Ø D_1 5.00 -6.00	Ø D_1 6.00 - 7.00	Ø D_1 7.00 - 8.00	Ø D_1 8.00 - 9.00	Ø D_1 9.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 14.00	Ø D_1 14.00 - 16.00	Ø D_1 16.00 - 20.00
0.008 - 0.02	**0.010** - 0.02	**0.012** - 0.02	**0.014** - 0.03	**0.016** - 0.03	**0.018** - 0.04	**0.020** - 0.04	**0.02** - 0.05	**0.03** - 0.06	**0.03** - 0.07
0.006 - 0.01	**0.008** - 0.02	**0.009** - 0.02	**0.011** - 0.02	**0.012** - 0.02	**0.014** - 0.03	**0.015** - 0.03	**0.02** - 0.04	**0.02** - 0.04	**0.02** - 0.05
0.010 - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.018** - 0.04	**0.020** - 0.05	**0.023** - 0.05	**0.025** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.04** - 0.10
0.006 - 0.01	**0.008** - 0.02	**0.009** - 0.02	**0.011** - 0.02	**0.012** - 0.02	**0.014** - 0.03	**0.015** - 0.03	**0.02** - 0.04	**0.02** - 0.04	**0.02** - 0.05
0.006 - 0.01	**0.008** - 0.02	**0.009** - 0.02	**0.011** - 0.02	**0.012** - 0.02	**0.014** - 0.03	**0.015** - 0.03	**0.02** - 0.04	**0.02** - 0.04	**0.02** - 0.05
0.008 - 0.02	**0.010** - 0.02	**0.012** - 0.02	**0.014** - 0.03	**0.016** - 0.03	**0.018** - 0.04	**0.020** - 0.04	**0.02** - 0.05	**0.03** - 0.06	**0.03** - 0.07
0.006 - 0.01	**0.008** - 0.02	**0.009** - 0.02	**0.011** - 0.02	**0.012** - 0.02	**0.014** - 0.03	**0.015** - 0.03	**0.02** - 0.04	**0.02** - 0.04	**0.02** - 0.05
0.008 - 0.02	**0.010** - 0.02	**0.012** - 0.02	**0.014** - 0.03	**0.016** - 0.03	**0.018** - 0.04	**0.020** - 0.04	**0.02** - 0.05	**0.03** - 0.06	**0.03** - 0.07
0.006 - 0.01	**0.008** - 0.02	**0.009** - 0.02	**0.011** - 0.02	**0.012** - 0.02	**0.014** - 0.03	**0.015** - 0.03	**0.02** - 0.04	**0.02** - 0.04	**0.02** - 0.05
0.010 - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.018** - 0.04	**0.020** - 0.05	**0.023** - 0.05	**0.025** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.04** - 0.10
0.006 - 0.01	**0.008** - 0.02	**0.009** - 0.02	**0.011** - 0.02	**0.012** - 0.02	**0.014** - 0.03	**0.015** - 0.03	**0.02** - 0.04	**0.02** - 0.04	**0.02** - 0.05
0.010 - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.018** - 0.04	**0.020** - 0.05	**0.023** - 0.05	**0.025** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.04** - 0.10
0.010 - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.018** - 0.04	**0.020** - 0.05	**0.023** - 0.05	**0.025** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.04** - 0.10
0.010 - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.018** - 0.04	**0.020** - 0.05	**0.023** - 0.05	**0.025** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.04** - 0.10

Avance par dent **fz [mm]**

Ø D_1 0.40 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.1

CONDITIONS DE COUPE - CONTOURNAGE



Matières à usiner			CARBURE Vc [m/min]		C-TOP Vc [m/min]		ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²			**100**	200	<1.5 x ØD1	<0.4 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**80**	170	<1.5 x ØD1	<0.3 x ØD1
P	Acier de décolletage au plomb				**120**	200	<1.5 x ØD1	<0.4 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**70**	100	<1.5 x ØD1	<0.3 x ØD1
M	Acier inoxydable	400 – 700 N/mm²			**80**	110	<1.5 x ØD1	<0.3 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**50**	80	<1.5 x ØD1	<0.3 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**120**	150	**160**	200	<1.5 x ØD1	<0.4 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**100**	130	**130**	170	<1.5 x ØD1	<0.3 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**80**	110	**110**	150	<1.5 x ØD1	<0.3 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**20**	45	**30**	60	<1.5 x ØD1	<0.15 x ØD1
S	Titane, alliage de titane		**45**	75	**50**	80	<1.5 x ØD1	<0.3 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**90**	130	**120**	200	<1.5 x ØD1	<0.4 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**70**	120	**80**	140	<1.5 x ØD1	<0.4 x ØD1
N	Or, argent		**140**	190	**150**	200	<1.5 x ØD1	<0.4 x ØD1

$D_1 \leq 0.1$ mm ⇒ (ap & ae) -95 %
$D_1 \leq 0.2$ mm ⇒ (ap & ae) -85 %
$D_1 \leq 0.3$ mm ⇒ (ap & ae) -70 %
$D_1 \leq 0.4$ mm ⇒ (ap & ae) -50 %
$D_1 \leq 0.5$ mm ⇒ (ap & ae) -25 %

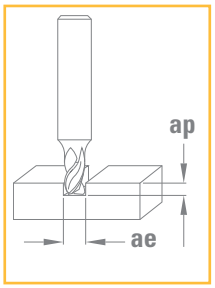
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 0.10 - 0.40	Ø D_1 0.40 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 6.00	Ø D_1 6.00 - 12.00
0.0013 - 0.0075	**0.005** - 0.019	**0.010** - 0.028	**0.014** - 0.053	**0.026** - 0.105	**0.049** - 0.195
0.0011 - 0.0056	**0.004** - 0.017	**0.009** - 0.025	**0.012** - 0.046	**0.023** - 0.092	**0.043** - 0.172
0.0015 - 0.0075	**0.006** - 0.023	**0.012** - 0.034	**0.017** - 0.063	**0.032** - 0.126	**0.059** - 0.234
0.0010 - 0.0070	**0.004** - 0.015	**0.008** - 0.023	**0.011** - 0.042	**0.021** - 0.084	**0.039** - 0.156
0.0010 - 0.0060	**0.004** - 0.015	**0.008** - 0.023	**0.011** - 0.042	**0.021** - 0.084	**0.039** - 0.156
0.0008 - 0.0045	**0.003** - 0.011	**0.006** - 0.017	**0.008** - 0.032	**0.016** - 0.063	**0.029** - 0.117
0.0015 - 0.0075	**0.006** - 0.023	**0.012** - 0.034	**0.017** - 0.063	**0.032** - 0.16	**0.059** - 0.234
0.0011 - 0.0056	**0.004** - 0.017	**0.009** - 0.025	**0.012** - 0.046	**0.023** - 0.092	**0.043** - 0.172
0.0011 - 0.0056	**0.004** - 0.017	**0.009** - 0.025	**0.012** - 0.046	**0.023** - 0.092	**0.043** - 0.172
0.0005 - 0.0030	**0.002** - 0.008	**0.004** - 0.011	**0.006** - 0.021	**0.011** - 0.042	**0.020** - 0.078
0.0013 - 0.0075	**0.005** - 0.019	**0.010** - 0.028	**0.014** - 0.053	**0.026** - 0.105	**0.049** - 0.195
0.0020 - 0.0120	**0.008** - 0.030	**0.016** - 0.045	**0.023** - 0.084	**0.042** - 0.168	**0.078** - 0.312
0.0013 - 0.0075	**0.005** - 0.019	**0.010** - 0.028	**0.014** - 0.053	**0.026** - 0.105	**0.049** - 0.195
0.0013 - 0.0075	**0.005** - 0.019	**0.010** - 0.028	**0.014** - 0.053	**0.026** - 0.105	**0.049** - 0.195

CONDITIONS DE COUPE - RAINURAGE



	Matières à usiner		CARBURE Vc [m/min]		C-TOP Vc [m/min]		ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²			**75**	150	<1.5 x ØD1	<1 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**60**	130	<1.2 x ØD1	<1 x ØD1
P	Acier de décolletage au plomb				**90**	150	<1.5 x ØD1	<1 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**50**	75	<1 x ØD1	<1 x ØD1
M	Acier inoxydable	400 – 700 N/mm²			**60**	80	<1 x ØD1	<1 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**40**	60	<0.8 x ØD1	<1 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**90**	160	**120**	200	<1.5 x ØD1	<1 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**75**	100	**90**	130	<1 x ØD1	<1 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**60**	80	**80**	110	<1 x ØD1	<1 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**20**	30	**25**	45	<0.2 x ØD1	<1 x ØD1
S	Titane, alliage de titane		**35**	60	**35**	60	<1 x ØD1	<1 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**75**	150	**100**	170	<1.5 x ØD1	<1 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**50**	100	**60**	110	<1 x ØD1	<1 x ØD1
N	Or, argent		**100**	150	**110**	150	<1 x ØD1	<1 x ØD1

$D_1 \leq 0.1$ mm ⇒ (ap & ae) -95 %
$D_1 \leq 0.2$ mm ⇒ (ap & ae) -85 %
$D_1 \leq 0.3$ mm ⇒ (ap & ae) -70 %
$D_1 \leq 0.4$ mm ⇒ (ap & ae) -50 %
$D_1 \leq 0.5$ mm ⇒ (ap & ae) -25 %

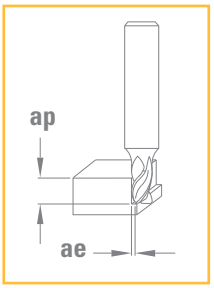
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 0.10 - 0.40	Ø D_1 0.40 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 6.00	Ø D_1 6.00 - 12.00
0.0006 - 0.0038	**0.0025** - 0.009	**0.005** - 0.014	**0.007** - 0.026	**0.013** - 0.053	**0.013** - 0.088
0.0006 - 0.0028	**0.0022** - 0.008	**0.004** - 0.012	**0.006** - 0.023	**0.012** - 0.046	**0.011** - 0.077
0.0008 - 0.0038	**0.0030** - 0.011	**0.006** - 0.017	**0.008** - 0.032	**0.016** - 0.063	**0.015** - 0.105
0.0005 - 0.0035	**0.0020** - 0.008	**0.004** - 0.011	**0.006** - 0.021	**0.011** - 0.042	**0.010** - 0.070
0.0005 - 0.0030	**0.0020** - 0.008	**0.004** - 0.011	**0.006** - 0.021	**0.011** - 0.042	**0.010** - 0.070
0.0004 - 0.0023	**0.0015** - 0.006	**0.003** - 0.008	**0.004** - 0.016	**0.008** - 0.032	**0.008** - 0.053
0.0008 - 0.0038	**0.0030** - 0.011	**0.006** - 0.017	**0.008** - 0.032	**0.016** - 0.063	**0.015** - 0.105
0.0006 - 0.0028	**0.0022** - 0.008	**0.004** - 0.012	**0.006** - 0.023	**0.012** - 0.046	**0.011** - 0.077
0.0006 - 0.0028	**0.0022** - 0.008	**0.004** - 0.012	**0.006** - 0.023	**0.012** - 0.046	**0.011** - 0.077
0.0003 - 0.0015	**0.0010** - 0.004	**0.002** - 0.006	**0.003** - 0.011	**0.005** - 0.021	**0.005** - 0.035
0.0006 - 0.0038	**0.0025** - 0.009	**0.005** - 0.014	**0.007** - 0.026	**0.013** - 0.053	**0.013** - 0.088
0.0010 - 0.0060	**0.004** - 0.015	**0.008** - 0.023	**0.011** - 0.042	**0.021** - 0.084	**0.020** - 0.140
0.0006 - 0.0038	**0.0025** - 0.009	**0.005** - 0.014	**0.007** - 0.026	**0.013** - 0.053	**0.013** - 0.088
0.0006 - 0.0038	**0.0025** - 0.009	**0.005** - 0.014	**0.007** - 0.026	**0.013** - 0.053	**0.013** - 0.088

CONDITIONS DE COUPE - CONTOURNAGE



Matières à usiner			CARBURE Vc [m/min]		C-TOP Vc [m/min]		ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²			**100**	200	<2 x ØD1	<0.4 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**80**	170	<2 x ØD1	<0.3 x ØD1
P	Acier de décolletage au plomb				**120**	200	<2 x ØD1	<0.4 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**70**	100	<2 x ØD1	<0.3 x ØD1
M	Acier inoxydable	400 – 700 N/mm²			**80**	110	<2 x ØD1	<0.3 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**50**	80	<2 x ØD1	<0.3 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**120**	150	**160**	200	<2 x ØD1	<0.4 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**100**	130	**130**	170	<2 x ØD1	<0.3 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**80**	110	**110**	150	<2 x ØD1	<0.3 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**20**	45	**30**	60	<2 x ØD1	<0.15 x ØD1
S	Titane, alliage de titane		**45**	75	**50**	80	<2 x ØD1	<0.3 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**90**	130	**120**	200	<2 x ØD1	<0.4 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**70**	120	**80**	140	<2 x ØD1	<0.4 x ØD1
N	Or, argent		**140**	190	**150**	200	<2 x ØD1	<0.4 x ØD1

$D_1 \leq 0.1$ mm ⇒ (ap & ae) -95 %
$D_1 \leq 0.2$ mm ⇒ (ap & ae) -85 %
$D_1 \leq 0.3$ mm ⇒ (ap & ae) -70 %
$D_1 \leq 0.4$ mm ⇒ (ap & ae) -50 %
$D_1 \leq 0.5$ mm ⇒ (ap & ae) -25 %

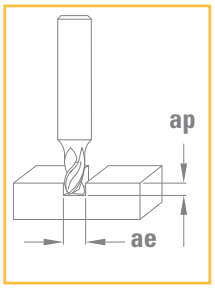
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 0.30 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 6.00	Ø D_1 6.00 - 12.00	Ø D_1 12.00 - 16.00
0.0030 - 0.019	**0.010** - 0.028	**0.014** - 0.053	**0.026** - 0.105	**0.049** - 0.195	**0.090** - 0.260
0.0033 - 0.017	**0.009** - 0.025	**0.012** - 0.046	**0.023** - 0.092	**0.043** - 0.172	**0.079** - 0.229
0.0045 - 0.023	**0.012** - 0.034	**0.017** - 0.063	**0.032** - 0.126	**0.059** - 0.234	**0.108** - 0.312
0.0030 - 0.015	**0.008** - 0.023	**0.011** - 0.042	**0.021** - 0.084	**0.039** - 0.156	**0.072** - 0.208
0.0030 - 0.015	**0.008** - 0.023	**0.011** - 0.042	**0.021** - 0.084	**0.039** - 0.156	**0.072** - 0.208
0.0023 - 0.011	**0.006** - 0.017	**0.008** - 0.032	**0.016** - 0.063	**0.030** - 0.117	**0.048** - 0.156
0.0045 - 0.023	**0.012** - 0.034	**0.017** - 0.063	**0.032** - 0.126	**0.059** - 0.234	**0.108** - 0.312
0.0033 - 0.017	**0.009** - 0.025	**0.012** - 0.046	**0.023** - 0.092	**0.043** - 0.172	**0.079** - 0.229
0.0033 - 0.017	**0.009** - 0.025	**0.012** - 0.046	**0.023** - 0.092	**0.043** - 0.172	**0.079** - 0.229
0.0015 - 0.008	**0.004** - 0.011	**0.006** - 0.021	**0.011** - 0.042	**0.020** - 0.078	**0.036** - 0.104
0.0038 - 0.019	**0.010** - 0.028	**0.014** - 0.053	**0.026** - 0.105	**0.049** - 0.195	**0.090** - 0.260
0.0060 - 0.030	**0.016** - 0.045	**0.023** - 0.084	**0.042** - 0.168	**0.078** - 0.312	**0.144** - 0.416
0.0038 - 0.019	**0.010** - 0.028	**0.014** - 0.053	**0.026** - 0.105	**0.049** - 0.195	**0.090** - 0.260
0.0038 - 0.019	**0.010** - 0.028	**0.014** - 0.053	**0.026** - 0.105	**0.049** - 0.195	**0.090** - 0.260

CONDITIONS DE COUPE - RAINURAGE



Matières à usiner			CARBURE Vc [m/min]		C-TOP Vc [m/min]			ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²			**75**	150		<2 x ØD1	<1 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**60**	130		<1.5 x ØD1	<1 x ØD1
P	Acier de décolletage au plomb				**90**	150		<2 x ØD1	<1 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**50**	75		<1 x ØD1	<1 x ØD1
M	Acier inoxydable	400 – 700 N/mm²			**60**	80		<1 x ØD1	<1 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**40**	60		<0.8 x ØD1	<1 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**90**	160	**120**	200		<2 x ØD1	<1 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**75**	100	**90**	130		<1 x ØD1	<1 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**60**	80	**80**	110		<1 x ØD1	<1 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**20**	30	**25**	45		<0.2 x ØD1	<1 x ØD1
S	Titane, alliage de titane		**35**	60	**35**	60		<1 x ØD1	<1 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**75**	150	**100**	170		<2 x ØD1	<1 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**50**	100	**60**	110		<1.5 x ØD1	<1 x ØD1
N	Or, argent		**100**	150	**110**	150		<1 x ØD1	<1 x ØD1

$D_1 \leq 0.1$ mm ⇒ (ap & ae) -95 %
$D_1 \leq 0.2$ mm ⇒ (ap & ae) -85 %
$D_1 \leq 0.3$ mm ⇒ (ap & ae) -70 %
$D_1 \leq 0.4$ mm ⇒ (ap & ae) -50 %
$D_1 \leq 0.5$ mm ⇒ (ap & ae) -25 %

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

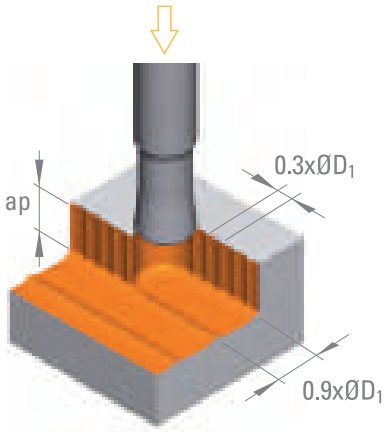
Avance par dent **fz [mm]**

Ø D_1 0.30 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 6.00	Ø D_1 6.00 - 12.00	Ø D_1 12.00 - 16.00
0.0012 - 0.008	**0.004** - 0.011	**0.006** - 0.021	**0.011** - 0.0426	**0.020** - 0.078	**0.036** - 0.104
0.0013 - 0.007	**0.004** - 0.010	**0.005** - 0.018	**0.009** - 0.037	**0.017** - 0.069	**0.032** - 0.092
0.0018 - 0.009	**0.005** - 0.014	**0.007** - 0.025	**0.013** - 0.050	**0.023** - 0.094	**0.043** - 0.125
0.0012 - 0.006	**0.003** - 0.009	**0.005** - 0.017	**0.008** - 0.034	**0.016** - 0.062	**0.029** - 0.083
0.0012 - 0.006	**0.003** - 0.009	**0.005** - 0.017	**0.008** - 0.034	**0.016** - 0.062	**0.029** - 0.083
0.0009 - 0.005	**0.002** - 0.007	**0.003** - 0.013	**0.006** - 0.025	**0.012** - 0.47	**0.019** - 0.062
0.0018 - 0.009	**0.005** - 0.014	**0.007** - 0.025	**0.013** - 0.050	**0.023** - 0.094	**0.043** - 0.125
0.0013 - 0.007	**0.004** - 0.010	**0.005** - 0.018	**0.009** - 0.037	**0.017** - 0.69	**0.032** - 0.092
0.0013 - 0.007	**0.004** - 0.010	**0.005** - 0.018	**0.009** - 0.037	**0.017** - 0.69	**0.032** - 0.092
0.0006 - 0.003	**0.002** - 0.005	**0.002** - 0.008	**0.004** - 0.017	**0.008** - 0.031	**0.014** - 0.042
0.0015 - 0.008	**0.004** - 0.011	**0.006** - 0.021	**0.011** - 0.042	**0.020** - 0.078	**0.036** - 0.104
0.0024 - 0.012	**0.006** - 0.018	**0.009** - 0.034	**0.017** - 0.067	**0.031** - 0.125	**0.058** - 0.166
0.0015 - 0.008	**0.004** - 0.011	**0.006** - 0.021	**0.011** - 0.042	**0.020** - 0.078	**0.036** - 0.104
0.0015 - 0.008	**0.004** - 0.011	**0.006** - 0.021	**0.011** - 0.042	**0.020** - 0.078	**0.036** - 0.104

CONDITIONS DE COUPE

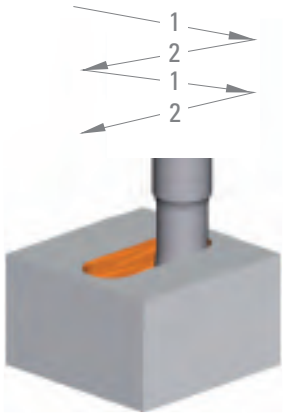
Tréflage

	Matières à usiner	XIDUR Vc [m/min]	ap [mm]
P	Acier non allié / faiblement allié < 600 N/mm²	175	<1xØD_1
P	Acier non allié / faiblement allié 600 – 1500 N/mm²	140	<1xØD_1
P	Acier de décolletage au plomb	175	<1xØD_1
P	Acier fortement allié 700 – 1500 N/mm²	140	<1xØD_1
H	Acier à outils >50HRC	50	<0.8xØD_1
M	Acier inoxydable 400 – 700 N/mm²	80	<0.8xØD_1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel > 800 N/mm²	60	<1xØD_1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique < 250 HB	110	<1xØD_1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique > 250 HB	70	<1xØD_1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable	80	<1xØD_1
S	Super alliages / Acier inox. réfractaire	80	<0.8xØD_1
S	Titane, alliage de titane	70	<0.8xØD_1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)	280	<1xØD_1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	200	<1xØD_1
N	Alliage d'aluminium Si < 8%	300	<1xØD_1
N	Fonte d'aluminium Si > 8%	250	<1xØD_1
N	Or, argent	200	<1xØD_1

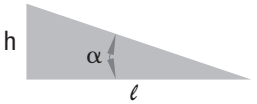


Descente en rampe

	Matières à usiner	XIDUR Vc [m/min]	α [°]
P	Acier non allié / faiblement allié < 600 N/mm²	200	0.75
P	Acier non allié / faiblement allié 600 – 1500 N/mm²	150	0.75
P	Acier de décolletage au plomb	200	0.75
P	Acier fortement allié 700 – 1500 N/mm²	150	0.75
H	Acier à outils >50HRC	200	0.75
M	Acier inoxydable 400 – 700 N/mm²	110	0.50
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel > 800 N/mm²	80	0.50
K	Fonte grise / Fonte à graphite sphéroïdal perlitique < 250 HB	150	0.75
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique > 250 HB	100	0.75
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable	80	0.75
S	Super alliages / Acier inox. réfractaire	60	0.50
S	Titane, alliage de titane	80	0.50
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)	330	1.20
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	250	1.00
N	Alliage d'aluminium Si < 8%	350	1.20
N	Fonte d'aluminium Si > 8%	300	1.00
N	Or, argent	250	1.00



Calcul des valeurs de la rampe:



1. h = ℓ x tan α
2. Retour à l'horizontal ℓ

Avance par dent **fz [mm]**

Ø D_1 0.50	Ø D_1 0.80	Ø D_1 1.00	Ø D_1 1.50	Ø D_1 2.00	Ø D_1 3.00	Ø D_1 4.00	Ø D_1 5.00	Ø D_1 6.00	Ø D_1 8.00	Ø D_1 10.00	Ø D_1 12.00
0.004	0.006	0.008	0.012	0.016	0.024	0.032	0.040	0.048	0.064	0.080	0.096
0.003	0.005	0.006	0.010	0.013	0.019	0.026	0.032	0.038	0.051	0.064	0.077
0.004	0.006	0.008	0.012	0.016	0.024	0.032	0.040	0.048	0.064	0.080	0.096
0.003	0.005	0.006	0.010	0.013	0.019	0.026	0.032	0.038	0.051	0.064	0.077
0.003	0.004	0.006	0.008	0.011	0.017	0.022	0.028	0.034	0.045	0.056	0.067
0.003	0.004	0.006	0.008	0.011	0.017	0.022	0.028	0.034	0.045	0.056	0.067
0.003	0.004	0.006	0.008	0.011	0.017	0.022	0.028	0.034	0.045	0.056	0.067
0.004	0.006	0.008	0.012	0.016	0.024	0.032	0.040	0.048	0.064	0.080	0.096
0.003	0.005	0.006	0.010	0.013	0.019	0.026	0.032	0.038	0.051	0.064	0.077
0.003	0.004	0.006	0.008	0.011	0.017	0.022	0.028	0.034	0.045	0.056	0.067
0.002	0.004	0.005	0.007	0.010	0.014	0.019	0.024	0.029	0.038	0.048	0.058
0.003	0.004	0.006	0.008	0.011	0.017	0.022	0.028	0.034	0.045	0.056	0.067
0.006	0.009	0.012	0.018	0.024	0.036	0.048	0.06	0.072	0.096	0.12	0.144
0.005	0.007	0.010	0.014	0.019	0.029	0.038	0.048	0.058	0.077	0.096	0.115
0.006	0.009	0.012	0.018	0.024	0.036	0.048	0.06	0.072	0.096	0.12	0.144
0.004	0.006	0.008	0.012	0.016	0.024	0.032	0.04	0.048	0.064	0.08	0.096
0.004	0.006	0.008	0.012	0.016	0.024	0.032	0.04	0.048	0.064	0.08	0.096

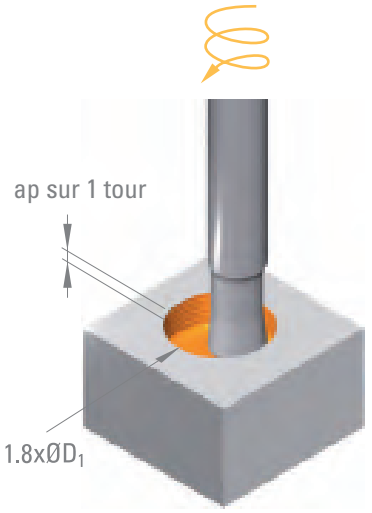
Avance par dent **fz [mm]**

Ø D_1 0.50	Ø D_1 0.80	Ø D_1 1.00	Ø D_1 1.50	Ø D_1 2.00	Ø D_1 3.00	Ø D_1 4.00	Ø D_1 5.00	Ø D_1 6.00	Ø D_1 8.00	Ø D_1 10.00	Ø D_1 12.00
0.013	0.021	0.026	0.040	0.053	0.079	0.106	0.132	0.158	0.211	0.264	0.317
0.012	0.019	0.024	0.036	0.048	0.072	0.096	0.120	0.144	0.192	0.240	0.288
0.013	0.021	0.026	0.040	0.053	0.079	0.106	0.132	0.158	0.211	0.264	0.317
0.012	0.019	0.024	0.036	0.048	0.072	0.096	0.120	0.144	0.192	0.240	0.288
0.004	0.006	0.008	0.012	0.016	0.024	0.032	0.040	0.048	0.064	0.080	0.096
0.010	0.015	0.019	0.029	0.038	0.058	0.077	0.096	0.115	0.154	0.192	0.230
0.010	0.015	0.019	0.029	0.038	0.058	0.077	0.096	0.115	0.154	0.192	0.230
0.010	0.015	0.019	0.029	0.038	0.058	0.077	0.096	0.115	0.154	0.192	0.230
0.007	0.012	0.014	0.022	0.029	0.043	0.058	0.072	0.086	0.115	0.144	0.173
0.006	0.010	0.013	0.019	0.026	0.038	0.051	0.064	0.077	0.102	0.128	0.154
0.007	0.012	0.014	0.022	0.029	0.043	0.058	0.072	0.086	0.115	0.144	0.173
0.008	0.013	0.017	0.025	0.034	0.050	0.067	0.084	0.101	0.134	0.168	0.202
0.020	0.032	0.039	0.060	0.080	0.119	0.159	0.198	0.237	0.317	0.396	0.476
0.016	0.025	0.031	0.048	0.064	0.095	0.127	0.158	0.190	0.253	0.317	0.380
0.020	0.032	0.039	0.060	0.080	0.119	0.159	0.198	0.237	0.317	0.396	0.476
0.013	0.021	0.026	0.040	0.053	0.079	0.106	0.132	0.158	0.211	0.264	0.317
0.013	0.021	0.026	0.040	0.053	0.079	0.106	0.132	0.158	0.211	0.264	0.317

CONDITIONS DE COUPE

Interpolation hélicoïdale

	Matières à usiner		XIDUR Vc [m/min]	α [°]
P	Acier non allié / faiblement allié < 600 N/mm²		250	0.75
P	Acier non allié / faiblement allié 600 – 1500 N/mm²		200	0.75
P	Acier de décolletage au plomb		250	0.75
P	Acier fortement allié 700 – 1500 N/mm²		200	0.75
H	Acier à outils >50HRC		200	0.75
M	Acier inoxydable 400 – 700 N/mm²		150	0.50
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel > 800 N/mm²		110	0.50
K	Fonte grise / Fonte à graphite sphéroïdal perlitique < 250 HB		150	0.75
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique > 250 HB		100	0.75
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		80	0.75
S	Super alliages / Acier inox. réfractaire		80	0.50
S	Titane, alliage de titane		100	0.50
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		380	1.20
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium		300	1.00
N	Alliage d'aluminium	Si < 8%	400	1.20
N	Fonte d'aluminium	Si > 8%	350	1.00
N	Or, argent		300	1.00

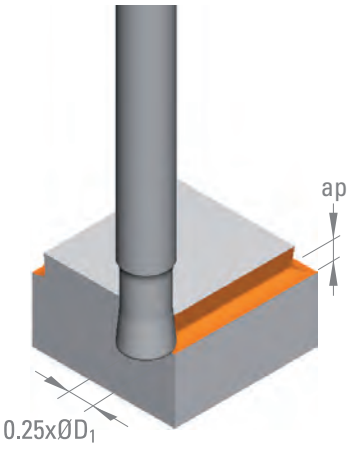


Calcul des valeurs d'hélice:

ap sur 1 tour = π x D_1 x tan α

Contournage

	Matières à usiner		XIDUR Vc [m/min]	ap [mm]
P	Acier non allié / faiblement allié < 600 N/mm²		250	<0.5xØD1
P	Acier non allié / faiblement allié 600 – 1500 N/mm²		200	<0.5xØD1
P	Acier de décolletage au plomb		250	<0.5xØD1
P	Acier fortement allié 700 – 1500 N/mm²		200	<0.5xØD1
H	Acier à outils >50HRC		200	<0.4xØD1
M	Acier inoxydable 400 – 700 N/mm²		150	<0.4xØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel > 800 N/mm²		110	<0.4xØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique < 250 HB		150	<0.5xØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique > 250 HB		100	<0.5xØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		80	<0.5xØD1
S	Super alliages / Acier inox. réfractaire		80	<0.4xØD1
S	Titane, alliage de titane		100	<0.4xØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		350	<0.5xØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium		300	<0.5xØD1
N	Alliage d'aluminium	Si < 8%	400	<0.5xØD1
N	Fonte d'aluminium	Si > 8%	300	<0.5xØD1
N	Or, argent		300	<0.5xØD1



Avance par dent **fz [mm]**

Ø D_1 0.50	Ø D_1 0.80	Ø D_1 1.00	Ø D_1 1.50	Ø D_1 2.00	Ø D_1 3.00	Ø D_1 4.00	Ø D_1 5.00	Ø D_1 6.00	Ø D_1 8.00	Ø D_1 10.00	Ø D_1 12.00
0.018	0.028	0.035	0.053	0.070	0.106	0.141	0.176	0.211	0.282	0.352	0.422
0.016	0.026	0.032	0.048	0.064	0.096	0.128	0.160	0.192	0.256	0.320	0.384
0.018	0.028	0.035	0.053	0.070	0.106	0.141	0.176	0.211	0.282	0.352	0.422
0.016	0.026	0.032	0.048	0.064	0.096	0.128	0.160	0.192	0.256	0.320	0.384
0.005	0.008	0.010	0.014	0.019	0.029	0.038	0.048	0.058	0.077	0.096	0.115
0.013	0.020	0.026	0.038	0.051	0.077	0.102	0.128	0.154	0.205	0.256	0.307
0.013	0.020	0.026	0.038	0.051	0.077	0.102	0.128	0.154	0.205	0.256	0.307
0.013	0.020	0.026	0.038	0.051	0.077	0.102	0.128	0.154	0.205	0.256	0.307
0.010	0.015	0.019	0.029	0.038	0.058	0.077	0.096	0.115	0.154	0.192	0.230
0.010	0.015	0.019	0.029	0.038	0.058	0.077	0.096	0.115	0.154	0.192	0.230
0.008	0.012	0.015	0.023	0.030	0.046	0.061	0.076	0.091	0.122	0.152	0.182
0.011	0.018	0.022	0.034	0.045	0.067	0.090	0.112	0.134	0.179	0.224	0.269
0.027	0.042	0.053	0.080	0.105	0.159	0.212	0.264	0.317	0.423	0.528	0.633
0.022	0.034	0.042	0.064	0.084	0.127	0.169	0.211	0.253	0.338	0.422	0.506
0.027	0.042	0.053	0.080	0.105	0.159	0.212	0.264	0.317	0.423	0.528	0.633
0.018	0.028	0.035	0.053	0.070	0.106	0.141	0.176	0.211	0.282	0.352	0.422
0.018	0.028	0.035	0.053	0.070	0.106	0.141	0.176	0.211	0.282	0.352	0.422

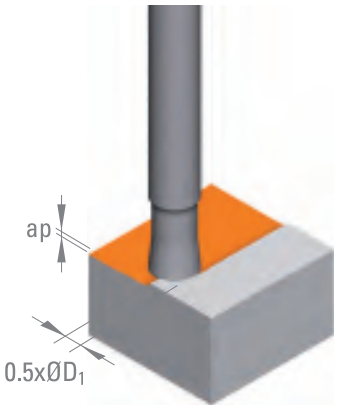
Avance par dent **fz [mm]**

Ø D_1 0.50	Ø D_1 0.80	Ø D_1 1.00	Ø D_1 1.50	Ø D_1 2.00	Ø D_1 3.00	Ø D_1 4.00	Ø D_1 5.00	Ø D_1 6.00	Ø D_1 8.00	Ø D_1 10.00	Ø D_1 12.00
0.010	0.017	0.021	0.031	0.042	0.062	0.083	0.104	0.125	0.166	0.208	0.250
0.010	0.015	0.019	0.029	0.038	0.058	0.077	0.096	0.115	0.154	0.192	0.230
0.010	0.017	0.021	0.031	0.042	0.062	0.083	0.104	0.125	0.166	0.208	0.250
0.010	0.015	0.019	0.029	0.038	0.058	0.077	0.096	0.115	0.154	0.192	0.230
0.005	0.008	0.010	0.014	0.019	0.029	0.038	0.048	0.058	0.077	0.096	0.115
0.008	0.013	0.016	0.024	0.032	0.048	0.064	0.080	0.096	0.128	0.160	0.192
0.008	0.013	0.016	0.024	0.032	0.048	0.064	0.080	0.096	0.128	0.160	0.192
0.008	0.013	0.016	0.024	0.032	0.048	0.064	0.080	0.096	0.128	0.160	0.192
0.006	0.009	0.011	0.017	0.022	0.034	0.045	0.056	0.067	0.090	0.112	0.134
0.005	0.008	0.010	0.016	0.021	0.031	0.042	0.052	0.062	0.083	0.104	0.125
0.006	0.009	0.011	0.017	0.022	0.034	0.045	0.056	0.067	0.090	0.112	0.134
0.007	0.011	0.014	0.020	0.027	0.041	0.054	0.068	0.082	0.109	0.136	0.163
0.012	0.020	0.025	0.037	0.050	0.074	0.100	0.125	0.150	0.199	0.250	0.300
0.010	0.017	0.021	0.031	0.042	0.062	0.083	0.104	0.125	0.166	0.208	0.250
0.012	0.020	0.025	0.037	0.050	0.074	0.100	0.125	0.150	0.199	0.250	0.300
0.010	0.017	0.021	0.031	0.042	0.062	0.083	0.104	0.125	0.166	0.208	0.250
0.010	0.017	0.021	0.031	0.042	0.062	0.083	0.104	0.125	0.166	0.208	0.250

CONDITIONS DE COUPE

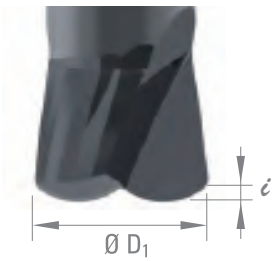
Surfaçage

	Matières à usiner		XIDUR Vc [m/min]	ap [mm]
P	Acier non allié / faiblement allié < 600 N/mm²		250	<1x ¿
P	Acier non allié / faiblement allié 600 – 1500 N/mm²		200	<1x ¿
P	Acier de décolletage au plomb		250	<1x ¿
P	Acier fortement allié 700 – 1500 N/mm²		200	<1x ¿
H	Acier à outils >50HRC		200	<0.8x ¿
M	Acier inoxydable 400 – 700 N/mm²		150	<0.8x ¿
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel > 800 N/mm²		110	<0.8x ¿
K	Fonte grise / Fonte à graphite sphéroïdal perlitique < 250 HB		150	<1x ¿
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique > 250 HB		100	<1x ¿
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		80	<1x ¿
S	Super alliages / Acier inox. réfractaire		80	<0.5x ¿
S	Titane, alliage de titane		100	<0.5x ¿
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		350	<0.5x ¿
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium		300	<1x ¿
N	Alliage d'aluminium	Si < 8%	400	<1x ¿
N	Fonte d'aluminium	Si > 8%	300	<1x ¿
N	Or, argent		300	<1x ¿



Cet outil ne possède pas de coupe au centre.

La valeur ¿, en fonction du diamètre de l'outil, **est un maximum.**



Avance par dent **fz [mm]**

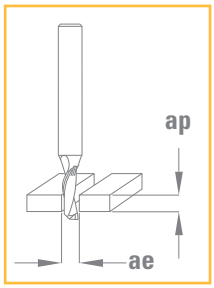
Ø D_1 0.50	Ø D_1 0.80	Ø D_1 1.00	Ø D_1 1.50	Ø D_1 2.00	Ø D_1 3.00	Ø D_1 4.00	Ø D_1 5.00	Ø D_1 6.00	Ø D_1 8.00	Ø D_1 10.00	Ø D_1 12.00
0.022	0.035	0.044	0.066	0.088	0.132	0.176	0.220	0.264	0.352	0.440	0.528
0.020	0.032	0.040	0.060	0.080	0.120	0.160	0.200	0.240	0.320	0.400	0.480
0.022	0.035	0.044	0.066	0.088	0.132	0.176	0.220	0.264	0.352	0.440	0.528
0.020	0.032	0.040	0.060	0.080	0.120	0.160	0.200	0.240	0.320	0.400	0.480
0.006	0.010	0.012	0.018	0.024	0.036	0.048	0.060	0.072	0.096	0.120	0.144
0.016	0.026	0.032	0.048	0.064	0.096	0.128	0.160	0.192	0.256	0.320	0.384
0.016	0.026	0.032	0.048	0.064	0.096	0.128	0.160	0.192	0.256	0.320	0.384
0.016	0.026	0.032	0.048	0.064	0.096	0.128	0.160	0.192	0.256	0.320	0.384
0.012	0.019	0.024	0.036	0.048	0.072	0.096	0.120	0.144	0.192	0.240	0.288
0.012	0.019	0.024	0.036	0.048	0.072	0.096	0.120	0.144	0.192	0.240	0.288
0.010	0.015	0.019	0.029	0.038	0.058	0.077	0.096	0.115	0.154	0.192	0.230
0.014	0.022	0.028	0.042	0.056	0.084	0.112	0.140	0.168	0.224	0.280	0.336
0.026	0.042	0.053	0.079	0.106	0.158	0.211	0.264	0.317	0.422	0.528	0.634
0.022	0.035	0.044	0.066	0.088	0.132	0.176	0.220	0.264	0.352	0.440	0.528
0.026	0.042	0.053	0.079	0.106	0.158	0.211	0.264	0.317	0.422	0.528	0.634
0.022	0.035	0.044	0.066	0.088	0.132	0.176	0.220	0.264	0.352	0.440	0.528
0.022	0.035	0.044	0.066	0.088	0.132	0.176	0.220	0.264	0.352	0.440	0.528
0.025	**0.04**	**0.05**	**0.10**	**0.15**	**0.20**	**0.25**	**0.30**	**0.35**	**0.40**	**0.45**	**0.50**

Valeur *é*

Téléchargez les conditions de coupe (pdf + xls) et les profils dxf

DIXI 7561

CONDITIONS DE COUPE



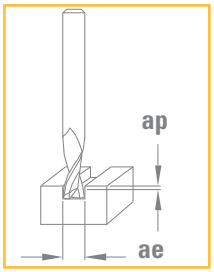
Matières à usiner

			CARBURE Vc [m/min]	DLC Vc [m/min]	ap [mm]	ae [mm]
P	Acier de décolletage au plomb		**80** 100		< 0.7 x ØD1	1 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**100** 130	**100** 130	< 1 x ØD1	1 x ØD1
N	Alliage d'aluminium	Si < 8%	**120** 160	**120** 160	< 1 x ØD1	1 x ØD1
N	Fonte d'aluminium	Si > 8%	**100** 130	**100** 130	< 1 x ØD1	1 x ØD1
N	Plastique		**130** 200	**130** 200	< 1.5 x ØD1	1 x ØD1

L'avance en plongée (Vfp) d'une fraise Z = 1 (perçage) doit être réduite de 40 à 80 % en fonction de la matière à usiner.

DIXI 7552 - 7572 - 7582

CONDITIONS DE COUPE



Matières à usiner

			CARBURE Vc [m/min]	TiAlN Vc [m/min]	DICUT Vc [m/min]	DIAMANT Vc [m/min]	ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**50** 80				< 1 x ØD1	< 1 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²		**70** 100			< 0.5 x ØD1	< 1 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²		**40** 60			< 0.5 x ØD1	< 1 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**100** 170				< 1 x ØD1	< 1 x ØD1
S	Titane, alliage de titane		**60** 80				< 1 x ØD1	< 1 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**80** 120				< 1.5 x ØD1	< 1 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)			**100** 140		< 1 x ØD1	< 1 x ØD1
N	Alliage d'aluminium	Si < 8%	**150** 200				< 1.5 x ØD1	< 1 x ØD1
N	Fonte d'aluminium	Si > 8%	**100** 200				< 1 x ØD1	< 1 x ØD1
N	Graphite					**200** 300	3 x ØD1	< 0.30 x ØD1
N	Plastique		**100** 130				< 2 x ØD1	< 1 x ØD1
N	Or, argent		**90** 130	**100** 140			< 0.5 x ØD1	< 1 x ØD1

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

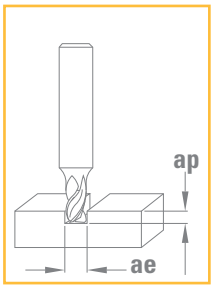
Ø D_1 2.00 - 2.50	Ø D_1 2.50 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 5.00	Ø D_1 5.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00
0.010 - 0.03	**0.013** - 0.04	**0.02** - 0.05	**0.02** - 0.06	**0.03** - 0.07	**0.03** - 0.10	**0.04** - 0.12	**0.05** - 0.17
0.014 - 0.04	**0.018** - 0.05	**0.02** - 0.06	**0.03** - 0.08	**0.04** - 0.09	**0.04** - 0.12	**0.06** - 0.15	**0.07** - 0.21
0.014 - 0.04	**0.018** - 0.05	**0.02** - 0.06	**0.03** - 0.08	**0.04** - 0.09	**0.04** - 0.12	**0.06** - 0.15	**0.07** - 0.21
0.014 - 0.04	**0.018** - 0.05	**0.02** - 0.06	**0.03** - 0.08	**0.04** - 0.09	**0.04** - 0.12	**0.06** - 0.15	**0.07** - 0.21
0.020 - 0.05	**0.025** - 0.06	**0.03** - 0.08	**0.04** - 0.10	**0.05** - 0.12	**0.06** - 0.16	**0.08** - 0.20	**0.10** - 0.28

Avance par dent **fz [mm]**

Ø D_1 1.00 - 2.00	Ø D_1 2.00 -3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00	Ø D_1 10.00 - 13.00	Ø D_1 13.00 - 16.00	Ø D_1 16.00 - 20.00
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.014 - 0.04	**0.018** - 0.05	**0.021** - 0.05	**0.025** - 0.06	**0.032** - 0.08	**0.04** - 0.09	**0.04** - 0.11	**0.05** - 0.12
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.012 - 0.02	**0.018** - 0.04	**0.03** - 0.06	**0.04** - 0.09	**0.07** - 0.12	**0.06** - 0.14	**0.07** - 0.16	**0.08** - 0.20

DIXI 7543

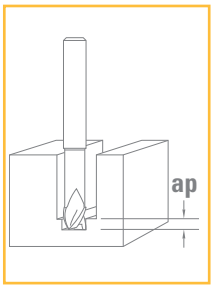
CONDITIONS DE COUPE



Matières à usiner			XIDUR Vc [m/min]			ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**90**	110		< 1.0 x ØD1	1 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**70**	90		< 0.6 x ØD1	1 x ØD1
P	Acier de décolletage au plomb		**90**	110		< 1.0 x ØD1	1 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²	**40**	55		< 0.3 x ØD1	1 x ØD1
M	Acier inoxydable	400 – 700 N/mm²	**70**	90		< 0.8 x ØD1	1 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**90**	110		< 0.7 x ØD1	1 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**70**	90		< 0.4 x ØD1	1 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**90**	110		< 0.4 x ØD1	1 x ØD1
S	Titane, alliage de titane		**40**	60		< 0.3 x ØD1	1 x ØD1

DIXI 7593

CONDITIONS DE COUPE



DIXI 7593 Z = 3-4 **Aluminium** (Vc 400 - 600 m/min)

D_1	Z	Vc [m/min]	n [min -1]	Vf [mm/min]	ap [mm]	ae [mm]	fz [mm]
6	3	400	21220	570	3	6	0.009
8	3	400	15920	570	4	8	0.012
10	3	400	12730	760	5	10	0.02
12	3	400	10610	760	6	12	0.024
16	3	400	7960	760	8	16	0.032
18	3	400	7070	760	9	18	0.036
20	4	400	6370	1020	10	20	0.04

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

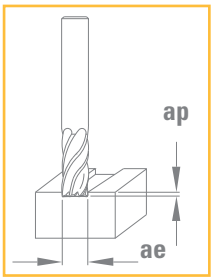
$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 1.00 - 1.50	Ø D_1 1.50 -3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00	Ø D_1 10.00 - 12.00	
0.002 - 0.01	**0.003** - 0.01	**0.006** - 0.02	**0.010** - 0.02	**0.014** - 0.04	**0.02** - 0.05	
0.002 - 0.01	**0.002** - 0.01	**0.005** - 0.01	**0.008** - 0.02	**0.011** - 0.03	**0.02** - 0.04	
0.003 - 0.01	**0.004** - 0.01	**0.008** - 0.03	**0.013** - 0.04	**0.018** - 0.05	**0.03** - 0.07	
0.002 - 0.01	**0.002** - 0.01	**0.005** - 0.01	**0.008** - 0.02	**0.011** - 0.03	**0.02** - 0.04	
0.002 - 0.01	**0.002** - 0.01	**0.005** - 0.01	**0.008** - 0.02	**0.011** - 0.03	**0.02** - 0.04	
0.002 - 0.01	**0.003** - 0.01	**0.006** - 0.02	**0.010** - 0.02	**0.014** - 0.04	**0.02** - 0.05	
0.002 - 0.01	**0.002** - 0.01	**0.005** - 0.01	**0.008** - 0.02	**0.011** - 0.03	**0.02** - 0.04	
0.002 - 0.01	**0.003** - 0.01	**0.006** - 0.02	**0.010** - 0.02	**0.014** - 0.04	**0.02** - 0.05	
0.002 - 0.01	**0.002** - 0.01	**0.005** - 0.01	**0.008** - 0.02	**0.011** - 0.03	**0.02** - 0.04	

DIXI 7563 - 7563-FC - 7565 - 7565-FC

CONDITIONS DE COUPE - RAINURAGE

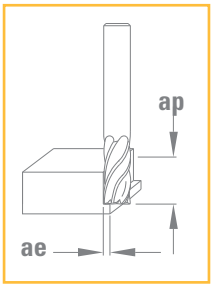


Matières à usiner		DIXAL Vc [m/min]					ap [mm]	ae [mm]
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)	**150**	250				< 1 x ØD1	1 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium (CuAlFe) (Ampco)	**100**	180				< 0.7 x ØD1	1 x ØD1
N	Alliage d'aluminium Si < 8%	**400**	550				< 1 x ØD1	1 x ØD1
N	Fonte d'aluminium Si > 8%	**150**	250				< 1 x ØD1	1 x ØD1
N	Or, argent	**200**	300				< 1 x ØD1	1 x ØD1

DIXI 7563-FC - 7565-FC ⇒ Vc +30%
fz +30%

DIXI 7563 - 7563-FC - 7565 - 7565-FC

CONDITIONS DE COUPE - CONTOURNAGE



Matières à usiner		DIXAL Vc [m/min]					ap [mm]	ae [mm]
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)	**200**	300				< 1.5 x ØD1	0.45 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium (CuAlFe) (Ampco)	**150**	200				< 1.5 x ØD1	0.3 x ØD1
N	Alliage d'aluminium Si < 8%	**450**	650				< 1.5 x ØD1	0.45 x ØD1
N	Fonte d'aluminium Si > 8%	**200**	300				< 1.5 x ØD1	0.35 x ØD1
N	Or, argent	**250**	350				< 1.5 x ØD1	0.45 x ØD1

DIXI 7563-FC - 7565-FC ⇒ Vc +30%
fz +30%

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

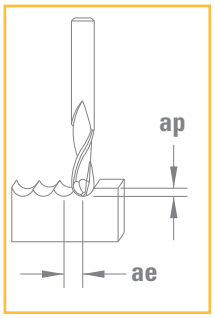
Avance par dent **fz [mm]**

Ø D_1 4.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 16.00
0.024 - 0.066	**0.036** - 0.088	**0.048** - 0.100	**0.050** - 0.108	**0.048** - 0.128
0.019 - 0.053	**0.029** - 0.070	**0.038** - 0.080	**0.040** - 0.086	**0.038** - 0.102
0.024 - 0.066	**0.036** - 0.088	**0.048** - 0.100	**0.050** - 0.108	**0.048** - 0.128
0.020 - 0.056	**0.031** - 0.075	**0.041** - 0.085	**0.043** - 0.092	**0.041** - 0.109
0.024 - 0.066	**0.036** - 0.088	**0.048** - 0.100	**0.050** - 0.108	**0.048** - 0.128

Avance par dent **fz [mm]**

Ø D_1 4.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 16.00
0.030 - 0.083	**0.045** - 0.114	**0.060** - 0.110	**0.063** - 0.132	**0.060** - 0.144
0.024 - 0.066	**0.036** - 0.092	**0.048** - 0.088	**0.050** - 0.106	**0.048** - 0.115
0.030 - 0.083	**0.045** - 0.114	**0.060** - 0.110	**0.063** - 0.132	**0.060** - 0.144
0.026 - 0.070	**0.038** - 0.097	**0.051** - 0.094	**0.053** - 0.112	**0.051** - 0.122
0.030 - 0.083	**0.045** - 0.114	**0.060** - 0.110	**0.063** - 0.132	**0.060** - 0.144

CONDITIONS DE COUPE



DIXI 7532 XIDUR Z = 2	Aciers à outils et fontes trempées				**30-45 HRC**	(Vc 400 - 500 m/min)	
D	Vc [m/min]	n [min -1]	Vf [mm/min]	ap [mm]	ae [mm]	Deff. [mm]	fz [mm]
0.2 - 1		90000	1800	0.02	0.05	0.28	0.01
1.5	400	84890	3400	0.04	0.06	0.48	0.02
2	400	63660	3820	0.05	0.09	0.62	0.03
3	400	42440	3400	0.07	0.13	1.08	0.04
4	400	31830	3180	0.09	0.15	1.20	0.05
5	400	25470	3570	0.15	0.25	1.71	0.07
6	400	21220	3400	0.20	0.30	2.15	0.08
8	400	15920	3180	0.25	0.35	2.78	0.10
10	400	12730	3820	0.30	0.50	3.41	0.15

DIXI 7532 XIDUR Z = 2	Aciers à outils et fontes trempées				**45 - 55 HRC**	(Vc 250 - 350 m/min)	
D	Vc [m/min]	n [min -1]	Vf [mm/min]	ap [mm]	ae [mm]	Deff. [mm]	fz [mm]
0.2 - 1	250	79580	1110	0.02	0.05	0.28	0.007
1.5	250	53050	2120	0.03	0.07	0.42	0.02
2	250	39790	2390	0.04	0.09	0.56	0.03
3	250	26530	2120	0.05	0.11	0.77	0.04
4	250	19890	1990	0.07	0.15	1.04	0.05
5	250	15920	1910	0.12	0.20	1.53	0.06
6	250	13260	1860	0.15	0.25	1.87	0.07
8	250	9950	1790	0.20	0.30	2.50	0.09
10	250	7960	1750	0.25	0.40	3.12	0.11

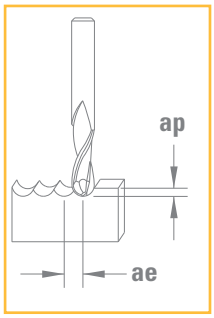
DIXI 7532 XIDUR Z = 2	Aciers à outils et fontes trempées				**55 - 65 HRC**	(Vc 100 - 200 m/min)	
D	Vc [m/min]	n [min -1]	Vf [mm/min]	ap [mm]	ae [mm]	Deff. [mm]	fz [mm]
0.2 - 1	130	41380	330	0.02	0.04	0.28	0.004
1.5	130	27590	390	0.03	0.05	0.42	0.007
2	130	20690	410	0.04	0.06	0.56	0.010
3	130	13790	410	0.05	0.07	0.77	0.015
4	130	10350	520	0.06	0.10	0.97	0.025
5	130	8280	500	0.08	0.16	1.25	0.030
6	130	6900	550	0.10	0.18	1.54	0.040
8	130	5170	520	0.15	0.20	2.17	0.050
10	130	4140	500	0.18	0.22	2.65	0.060

Micropulvérisation recommandée, émulsion déconseillée

Les valeurs n et Vf sont indicatives et devront êttre ajustées en fonction de la longeur L_2 de l'outil

Les valeurs **n** et **Vf** sont un point de départ, en fonction de la qualité de l'empreinte à produire (précision et état de surface) elles pourront être augmentées ou diminuées.
Si la broche ne permet pas la rotation recommandée du tableau, l'avance **Vf** doit être réduite proportionnellement.
Usiner autant que possible en avalant.

CONDITIONS DE COUPE



DIXI 7542 XIDUR Z = 2	Aciers à outils et fontes trempées				**30-45 HRC**	(Vc 400 - 500 m/min)	
D	Vc [m/min]	n [min -1]	Vf [mm/min]	ap [mm]	ae [mm]	Deff. [mm]	fz [mm]
1		90000	1800	0.02	0.05	0.28	0.01
1.5	320	67910	2720	0.04	0.06	0.48	0.02
2	320	50930	3060	0.05	0.09	0.62	0.03
3	320	33950	2720	0.07	0.13	1.08	0.04
4	320	25470	2550	0.09	0.15	1.20	0.05
5	320	20370	2850	0.15	0.25	1.71	0.07
6	320	16980	2720	0.20	0.30	2.15	0.08
8	320	12730	2550	0.25	0.35	2.78	0.10
10	320	10190	3060	0.30	0.50	3.41	0.15
12	320	8490	3400	0.40	0.60	4.31	0.20

DIXI 7532 XIDUR Z = 2	Aciers à outils et fontes trempées				**45 - 55 HRC**	(Vc 250 - 350 m/min)	
D	Vc [m/min]	n [min -1]	Vf [mm/min]	ap [mm]	ae [mm]	Deff. [mm]	fz [mm]
1	200	63660	890	0.02	0.05	0.28	0.007
1.5	200	42440	1700	0.03	0.07	0.42	0.020
2	200	31830	1910	0.04	0.09	0.56	0.030
3	200	21220	1700	0.05	0.11	0.77	0.040
4	200	15920	1590	0.07	0.15	1.04	0.050
5	200	12730	1530	0.12	0.20	1.53	0.060
6	200	10610	1490	0.15	0.25	1.87	0.070
8	200	7960	1430	0.20	0.30	2.50	0.090
10	200	6370	1400	0.25	0.40	3.12	0.110
12	200	5310	1380	0.30	0.50	3.75	0.130

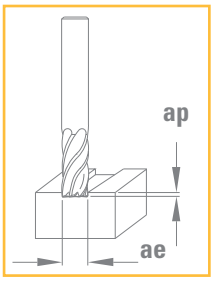
DIXI 7532 XIDUR Z = 2	Aciers à outils et fontes trempées				**55 - 65 HRC**	(Vc 100 - 200 m/min)	
D	Vc [m/min]	n [min -1]	Vf [mm/min]	ap [mm]	ae [mm]	Deff. [mm]	fz [mm]
1	100	31830	250	0.02	0.04	0.28	0.004
1.5	100	21220	300	0.03	0.05	0.42	0.007
2	100	15920	320	0.04	0.06	0.56	0.010
3	100	10610	320	0.05	0.07	0.77	0.015
4	100	7960	400	0.06	0.10	0.97	0.025
5	100	6370	380	0.08	0.16	1.25	0.030
6	100	5310	420	0.10	0.18	1.54	0.040
8	100	3980	400	0.15	0.20	2.17	0.050
10	100	3180	380	0.18	0.22	2.65	0.060
12	100	2650	420	0.20	0.25	3.07	0.080

Micropulvérisation recommandée, émulsion déconseillée

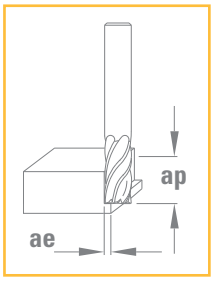
Les valeurs **n** et **Vf** sont un point de départ, en fonction de la qualité de l'empreinte à produire (précision et état de surface) elles pourront être augmentées ou diminuées.
Si la broche ne permet pas la rotation recommandée du tableau, l'avance **Vf** doit être réduite proportionnellement.
Usiner autant que possible en avalant.

CONDITIONS DE COUPE

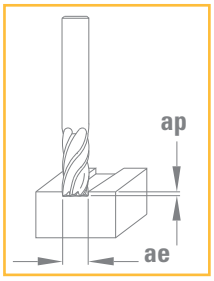
DIXI 7520 XIDUR Z = 3-12		Aciers à outils et fontes trempées			**45 - 55 HRC**	(Vc 30 - 70 m/min)	
D_1	Z	Vc (m/min)	n (min -1)	Vf (mm/min)	ap (mm)	ae (mm)	fz (mm)
0.4 - 0.9	3	30	-	-	0.03 x D_1	1 x D_1	0.001-0.002
1	4	40	12800	125	0.04	1.00	0.002
1.5	4	40	8500	125	0.05	1.50	0.0035
2	5	40	6300	125	0.07	2.00	0.004
3	5	40	4240	150	0.12	3.00	0.007
4	5	40	3180	160	0.15	4.00	0.010
6	6	40	2120	190	0.20	6.00	0.015
8	6	40	1590	190	0.25	8.00	0.020
10	6	40	1270	190	0.30	10.00	0.025
12	8	40	1060	210	0.40	12.00	0.025
16	10	40	800	240	0.60	16.00	0.030



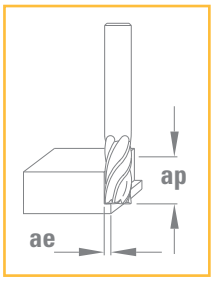
DIXI 7520 XIDUR Z = 3-12		Aciers à outils et fontes trempées			**45 - 55 HRC**	(Vc 150 - 250 m/min)	
Ø	Z	Vc (m/min)	n (min -1)	Vf (mm/min)	ap (mm)	ae (mm)	fz (mm)
0.4 - 0.9	3	150	-	-	1 x D_1	0.03 x D_1	0.001-0.002
1	4	200	63700	640	1.00	0.04	0.002
1.5	4	200	42450	640	1.50	0.05	0.0035
2	5	200	32000	640	2.00	0.07	0.004
3	5	200	21300	750	3.00	0.12	0.007
4	5	200	15920	800	4.00	0.15	0.010
6	6	200	10610	950	6.00	0.20	0.015
8	6	200	7960	960	8.00	0.25	0.020
10	6	200	6370	960	10.00	0.30	0.025
12	8	200	5310	1060	12.00	0.40	0.025
16	10	200	3980	1190	16.00	0.60	0.030



DIXI 7520 XIDUR Z = 3-12		Aciers à outils et fontes trempées			**55 - 65 HRC**	(Vc 12 - 40 m/min)	
Ø	Z	Vc (m/min)	n (min -1)	Vf (mm/min)	ap (mm)	ae (mm)	fz (mm)
0.4 - 0.9	3	12	-	-	0.03 x D_1	1 x D_1	0.001-0.002
1	4	15	4700	45	0.03	1.00	0.002
1.5	4	15	3180	45	0.03	1.50	0.0035
2	5	15	2300	45	0.04	2.00	0.004
3	5	15	1600	55	0.05	3.00	0.007
4	5	15	1190	60	0.06	4.00	0.010
6	6	15	800	70	0.09	6.00	0.015
8	6	15	600	70	0.12	8.00	0.020
10	6	15	480	70	0.15	10.00	0.025
12	8	15	400	80	0.18	12.00	0.025
16	10	15	300	90	0.20	16.00	0.030

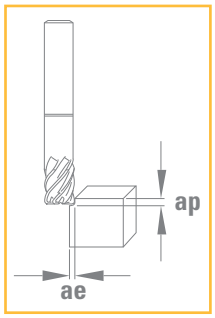


DIXI 7520 XIDUR Z = 3-12		Aciers à outils et fontes trempées			**55 - 65 HRC**	(Vc 60 - 120 m/min)	
Ø	Z	Vc (m/min)	n (min -1)	Vf (mm/min)	ap (mm)	ae (mm)	fz (mm)
0.4 - 0.9	3	60	-	-	1 x D_1	0.03 x D_1	0.001-0.002
1	4	80	25500	250	1.00	0.03	0.002
1.5	4	80	17000	250	1.50	0.035	0.0035
2	5	80	12700	250	2.00	0.04	0.004
3	5	80	8500	290	3.00	0.05	0.007
4	5	80	6370	320	4.00	0.06	0.010
6	6	80	4240	380	6.00	0.09	0.015
8	6	80	3180	380	8.00	0.12	0.020
10	6	80	2550	380	10.00	0.15	0.025
12	8	80	2120	420	12.00	0.18	0.025
16	10	80	1590	480	16.00	0.20	0.030



Micropulvérisation recommandée, émulsion déconseillée

CONDITIONS DE COUPE



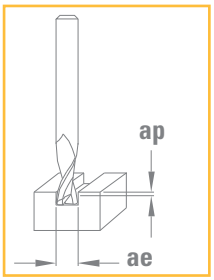
DIXI 7070 XIDUR Z = 4-6		Aciers à outils et fontes trempées			**30-45 HRC**	(Vc 150 - 200 m/min)	
D_1	Z	Vc [m/min]	n [min -1]	Vf [mm/min]	ap [mm]	ae [mm]	fz [mm]
3	4	150	15900	3800	0.20	0.80	0.06
4	4	150	11940	4300	0.25	0.85	0.09
5	4	150	9550	4580	0.30	0.90	0.12
6	4	150	7960	4460	0.35	1.00	0.14
8	6	150	5970	5730	0.40	1.10	0.16
10	6	150	4770	5150	0.45	1.30	0.18
12	6	150	3980	4780	0.50	1.50	0.20

DIXI 7070 XIDUR Z = 4-6		Aciers à outils et fontes trempées			**45 - 55 HRC**	(Vc 130 - 170 m/min)	
D_1	Z	Vc [m/min]	n [min -1]	Vf [mm/min]	ap [mm]	ae [mm]	fz [mm]
3	4	130	13700	2750	0.15	0.70	0.05
4	4	130	10350	3310	0.20	0.75	0.08
5	4	130	8280	3310	0.25	0.75	0.10
6	4	130	6900	3040	0.30	0.80	0.11
8	6	130	5170	3720	0.40	0.80	0.12
10	6	130	4140	3230	0.42	1.00	0.13
12	6	130	3450	2900	0.45	1.20	0.14

DIXI 7070 XIDUR Z = 4-6		Aciers à outils et fontes trempées			**55 - 65 HRC**	(Vc 100 - 130 m/min)	
D_1	Z	Vc [m/min]	n [min -1]	Vf [mm/min]	ap [mm]	ae [mm]	fz [mm]
3	4	100	10600	500	0.08	0.20	0.010
4	4	100	7960	640	0.10	0.25	0.020
5	4	100	6370	890	0.12	0.28	0.035
6	4	100	5310	850	0.15	0.30	0.040
8	6	100	3980	1190	0.18	0.32	0.050
10	6	100	3180	1140	0.20	0.35	0.060
12	6	100	2650	1270	0.25	0.40	0.080

DIXI 7215 - 7215-FC

CONDITIONS DE COUPE - RAINURAGE

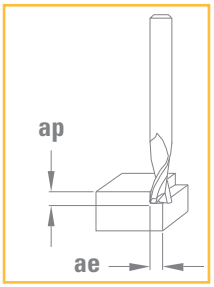


	Matières à usiner		DAC Vc [m/min]					ap [mm]	ae [mm]
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**150**	250				< 1.5 x ØD1	1 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**100**	180				< 1.2 x ØD1	1 x ØD1
N	Alliage d'aluminium	Si < 8%	**400**	550				< 1.5 x ØD1	1 x ØD1
N	Fonte d'aluminium	Si > 8%	**150**	250				< 1.5 x ØD1	1 x ØD1
N	Or, argent		**200**	300				< 1.5 x ØD1	1 x ØD1

DIXI 7215-FC ⇒ Vc +30%
fz +30%

DIXI 7215 - 7215-FC

CONDITIONS DE COUPE - CONTOURNAGE



	Matières à usiner		DAC Vc [m/min]					ap [mm]	ae [mm]
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**200**	300				< 1.2 x ØD1	0.55 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**150**	200				< 1.5 x ØD1	0.35 x ØD1
N	Alliage d'aluminium	Si < 8%	**450**	650				< 1.5 x ØD1	0.55 x ØD1
N	Fonte d'aluminium	Si > 8%	**200**	300				< 1.5 x ØD1	0.45 x ØD1
N	Or, argent		**250**	350				< 1 x ØD1	0.55 x ØD1

DIXI 7215-FC ⇒ Vc +30%
fz +30%

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 4.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 16.00
0.030 - 0.080	**0.040** - 0.100	**0.040** - 0.110	**0.050** - 0.110	**0.050** - 0.140
0.020 - 0.060	**0.030** - 0.080	**0.040** - 0.080	**0.040** - 0.090	**0.040** - 0.110
0.030 - 0.080	**0.040** - 0.100	**0.040** - 0.110	**0.050** - 0.110	**0.050** - 0.140
0.030 - 0.060	**0.030** - 0.090	**0.040** - 0.090	**0.040** - 0.100	**0.050** - 0.120
0.030 - 0.080	**0.040** - 0.100	**0.040** - 0.110	**0.050** - 0.110	**0.050** - 0.140

Avance par dent **fz [mm]**

Ø D_1 4.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 16.00
0.040 - 0.090	**0.050** - 0.130	**0.060** - 0.140	**0.070** - 0.150	**0.070** - 0.180
0.030 - 0.080	**0.040** - 0.100	**0.040** - 0.110	**0.050** - 0.120	**0.050** - 0.140
0.040 - 0.090	**0.050** - 0.130	**0.060** - 0.140	**0.070** - 0.150	**0.070** - 0.180
0.030 - 0.080	**0.040** - 0.111	**0.050** - 0.120	**0.060** - 0.130	**0.060** - 0.150
0.040 - 0.090	**0.050** - 0.130	**0.060** - 0.140	**0.070** - 0.150	**0.070** - 0.180

GRAVAGE

GRAVIEREN

ENGRAVING

INCISIONE

GRAVÍROZÁS

GRAVADO

Cobalt Outils Coupants

SÉLECTION DES FRAISES À GRAVER 216

FRAISES À GRAVER 1/2 220

FRAISES À GRAVER 2/3 221

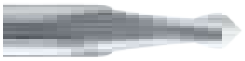
FRAISES À GRAVER 3/4 222

FRAISES DIAMANT & PCD 223

FRAISES À GRAVER HÉLICOÏDALES 224

FRAISES À GRAVER EXÉCUTIONS SEMI-FINIES 224

FRAISES À CHANFREINER ET RAYONNER 227


FRAISES MULTIFONCTIONS 230

INFORMATIONS 231

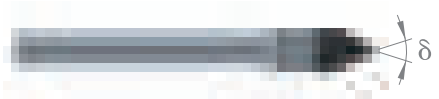
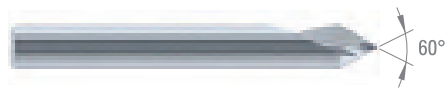
CONDITIONS DE COUPE 232

Cobalt Outils Coupants

SÉLECTION DES FRAISES À GRAVER

✓ = article de stock

∗ = pour matériaux non-ferreux

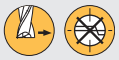
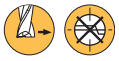
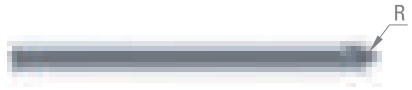
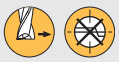
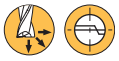
		Page	D / D_1	CARBURE	DLC*	DINAC	DIA	PCD	
EXÉCUTIONS TERMINÉES									
FRAISES 1/2									
DIXI 7017		220	D = 3.00 - 4.00 D_1 = 0.05-0.20	✓	✓*	✓			
FRAISES 2/3									
DIXI 7027		221	D = 3.00 D_1 = 0.05-0.15	✓		✓			
FRAISES 3/4									
DIXI 7007		222	D = 3.00 D_1 = 0.05-0.20 R 0.05 - R 0.20	✓		✓			
FRAISES DIAMANT									
DIXI 70170 DIA		223	D = 6.00 D_1 = 0.05-0.10				✓		
DIXI 70170 PCD		223	D = 6.00 D_1 = 0.10-0.20					✓	
FRAISES HÉLICOÏDALES									
DIXI 7025		224	D = 3.00-4.00 D_1 = 0.10-0.15	✓					
EXÉCUTIONS SEMI-FINIES									
DIXI 7012		224	D = 3.00-8.00 D_1 = 1.00-2.60	✓					
DIXI 7016		225	D = 2.00-8.00	✓					
DIXI 7020		225	D = 2.00-10.00	✓					
DIXI 7024		226	D = 3.00-6.00	✓					

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
◎	○	○	○		◎	○	○	◎	○	◎	◎	○
◎	○	○	◎				◎	◎	◎	◎		◎
○	◎	◎	◎	○	○	◎	◎	○	◎	○	○	○
								◎	◎	◎		◎
								◎	◎	◎	○	◎
					◎			◎		◎		

SÉLECTION DES FRAISES À ANGLER

✓ = article de stock

		Page			☐ CARBURE	TiAlN	CUTINOX	◆ DIA	
FRAISES À CHANFREINER ET RAYONNER									
DIXI 7623 Ø 0.80 - 12.00		227			✓	✓			
DIXI 7625		227			✓				
DIXI 76230 DIA Ø 0.10 - 0.30		228						✓	
DIXI 7624 Ø 0.20 - 5.70		228			✓				
DIXI 7656 R 0.10 - 1.00		229			✓	✓			
FRAISES MULTIFONCTIONS									
DIXI 7632 Ø 0.10 - 12.00		230			✓		✓		

Cobalt Outils Coupants

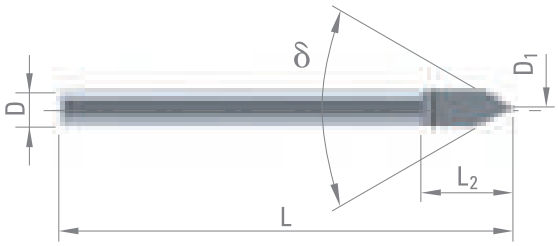
○ bien ◎ excellent

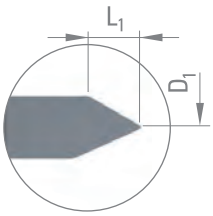
Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
◎	○	○	○		◎	○	◎	◎	◎	◎		◎
◎	○	○	○		◎	○	◎	◎	◎	◎		◎
								◎	○	◎		◎
◎	○	○	○		◎	○	◎	◎	◎	◎		◎
◎	○	○	○		◎	○	◎	◎	◎	◎		◎

○	○	○	○		◎		○	○	○	○		○

FRAISES À GRAVER 1/2
EXÉCUTION TERMINÉE

P. 232



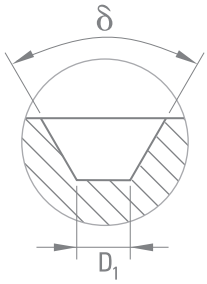


Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique

δ	L_1	L_2	D_{h6}	L	$D_{1\ \pm0.01}$	CARBURE	DINAC	DLC*
30°	4.0	5.2	3	38	0.05	961336	962814	961337
					0.10	961338	962813	961339
					0.15	961340	962812	961342
					0.20	961341	962116	961343
50°	3.0	6	3	38	0.05	961326	961327	
					0.08	961328	961333	
					0.10	961329	961332	
					0.15	961330	961334	
					0.20	961331	961335	
60°	2.4	6	3	38	0.05	43536	959712	
					0.08	972400	972401	
					0.10	40939	959713	
					0.15	953721	960610	
					0.20	954292	960611	
60°	3.3	8	4	50	0.05	43537	959714	
					0.10	45813	959716	
					0.20	45814	959717	
90°	1.45	8	3	38	0.05	961246	961248	
					0.10	961247	961249	
120°	0.84	8	3	38	0.05	961322	961323	
					0.10	961324	961325	



* pour matériaux non-ferreux

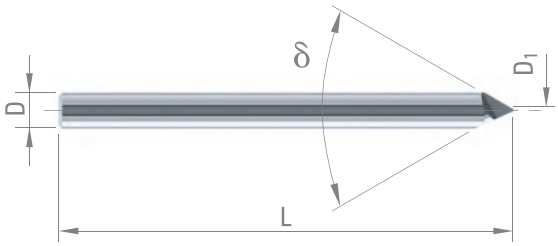
Exemples de commande

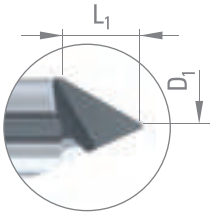
DIXI 7017 / 50° D_1 = 0.10 DINAC ou **Art. 961332** **DIXI 7017 / 30° D_1 = 0.05 DLC** ou **Art. 961337**

DIXI 7027

FRAISES À GRAVER 2/3
EXÉCUTION TERMINÉE

P. 232



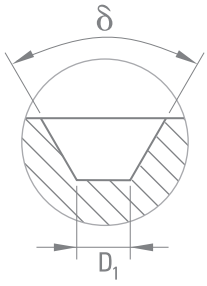


Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique

δ	L_1	D_{h5}	L	$D_{1\ \pm 0.008}$	CARBURE	DINAC
35°	4.6	3	38	0.05	326662	326682
				0.07	326663	326683
				0.08	326664	326684
				0.10	326665	326685
40°	3.9	3	38	0.05	326666	326686
				0.07	326667	326687
				0.08	326668	326688
				0.10	326669	326689
				0.15	326670	326690
50°	3.1	3	38	0.05	326671	326691
				0.07	326672	326692
				0.08	326673	326693
				0.10	326674	326694
				0.15	326675	326695
60°	2.5	3	38	0.05	326676	326696
				0.06	326677	326697
				0.07	326678	326698
				0.08	326679	326699
				0.10	326680	326700
				0.15	326681	326701

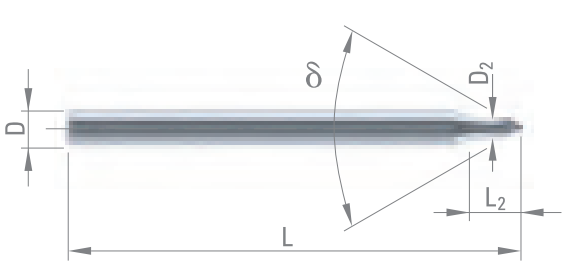


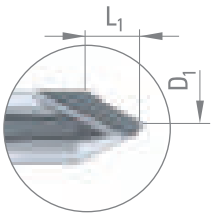
Exemples de commande

DIXI 7027 / 40° D_1 = 0.08 DINAC ou **Art. 326688** **DIXI 7027 / 50° D_1 = 0.07 CARBURE** ou **Art. 326672**

FRAISES À GRAVER 3/4
EXÉCUTION TERMINÉE

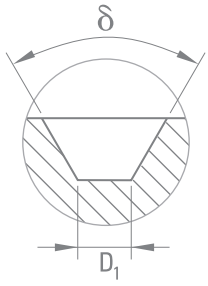
P. 232

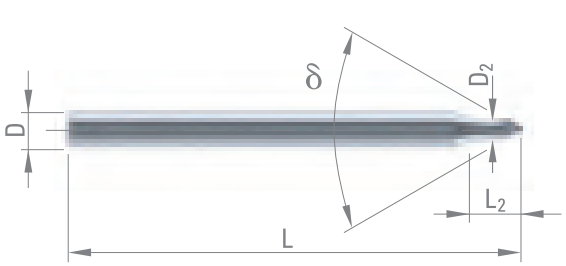


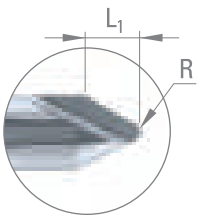


Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-55 HRC
Fontes	Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile
Alu	Graphite	Plastique		

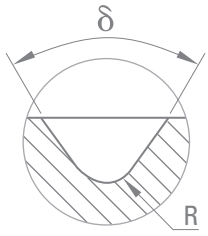
δ	L_1	L_2	D_2	D_{h6}	L	$D_{1\ \pm0.01}$	CARBURE	DINAC
30°	2.5	3.4	1.5	3	38	0.05	976370	976374
						0.08	976371	976375
						0.10	976372	976376
						0.15	976373	976377
35°	2.0	3.4	1.5	3	38	0.05	65846	959722
						0.08	961244	961245
						0.10	65848	959724
						0.15	65850	959725
						0.20	65852	959726
40°	1.7	3.2	1.5	3	38	0.05	961225	961238
						0.08	961242	961243
						0.10	961226	961239
						0.15	961227	961240
						0.20	961228	961241
50°	1.4	2.3	1.5	3	38	0.05	976258	976264
						0.08	976260	976265
						0.10	976261	976266
						0.15	976263	976267
60°	1.1	2.3	1.5	3	38	0.05	976361	976365
						0.08	976362	976366
						0.10	976363	976367
						0.15	976364	976368







δ	L_1	L_2	D_2	D_{h6}	L	$R_{\pm0.01}$	CARBURE	DINAC
35°	1.9	3.4	1.5	3	38	0.05	51736	959718
						0.10	51625	959719
						0.15	51734	959720
						0.20	51735	959721



Exemples de commande

DIXI 7007 / 30° D_1 = 0.08 DINAC ou **Art. 976375** **DIXI 7007 / 35° R = 0.15 CARBURE** ou

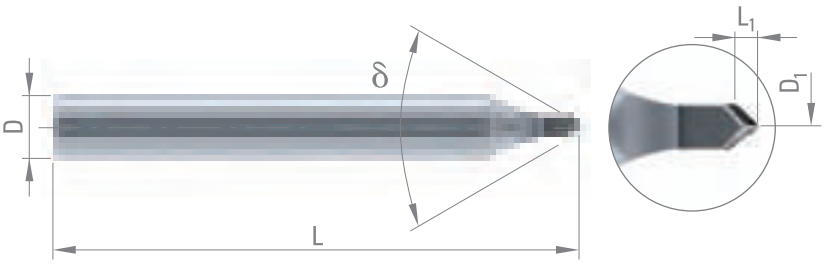
Cobalt Outils Coupants

DIXI 70170 DIA

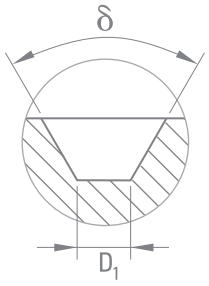
FRAISES À GRAVER
DIAMANT MONOCRISTALLIN

P. 408

Alliage Cu Argent Or | Alliage Cu difficile | Alu | Plastique



δ	L_1	D_{h5}	L	D_1	DIA
60°	1.40	6	50	0.05	302597
				0.10	302598
90°	0.80	6	50	0.05	302599
				0.10	302600

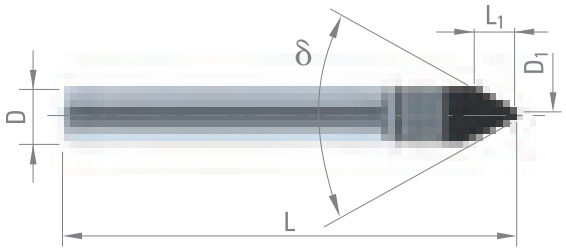


DIXI 70170 PCD

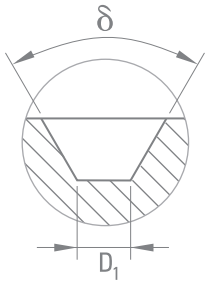
FRAISES À GRAVER PCD

P. 408

Alliage Cu Argent Or | Alliage Cu difficile | Alu | Graphite | Carbure Céramique verte | Plastique | Fibre de carbone



δ	L_1	D_{h5}	L	D_1	PCD
60°	5.0	6	50	0.10	303081
				0.20	303082
90°	2.9	6	50	0.10	303083
				0.20	303084



Exemples de commande

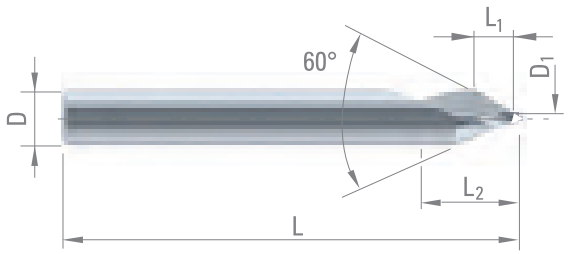
DIXI 70170 / 60° DIA D_1 = 0.05 ou **Art. 302597** **DIXI 70170 / 90° PCD D_1 = 0.10** ou **Art**

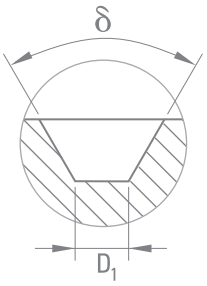
DIXI 7025

FRAISES À GRAVER HÉLICOÏDALES 60°
EXÉCUTION TERMINÉE

P. 233

Fontes | Alliage Cu Argent Or | Alu



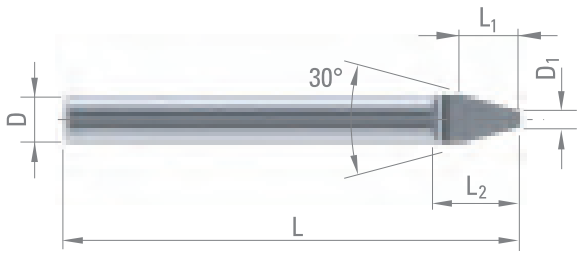


$D_{1\ \pm 0.02}$	L_1	L_2	D_{h5}	L	CARBURE
0.10	2.5	9	3	38	43624
0.15	3.3	12	4	50	45812

DIXI 7012

FRAISES À GRAVER 30°
EXÉCUTION SEMI-FINIE

P. 231



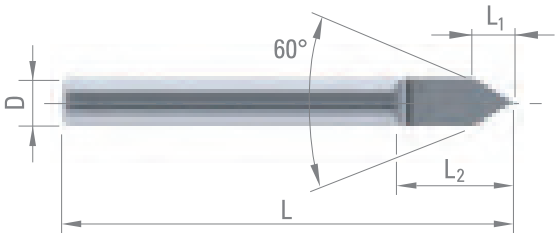
D_1	L_1	L_2	D_{h5}	L	CARBURE
* 1.00	3.7	4	3	38	35505
* 1.30	5.0	5	4	50	35666
* 2.00	7.5	8	6	57	35506
* 2.60	10.0	10	8	63	35668

*non coupant

DIXI 7016

FRAISES À GRAVER 60°
EXÉCUTION SEMIE-FINIE

P. 231

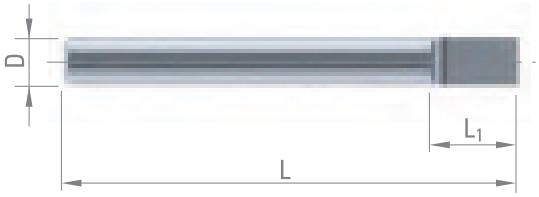


D_{h5}	L_1	L_2	L	CARBURE
2	1.7	4	25	32852
3	2.6	6	38	23585
4	3.5	8	50	23586
5	4.3	10	50	35082
6	5.2	12	57	29726
8	6.9	14	63	29727

DIXI 7020

FRAISES À GRAVER 180°
EXÉCUTION SEMI-FINIE

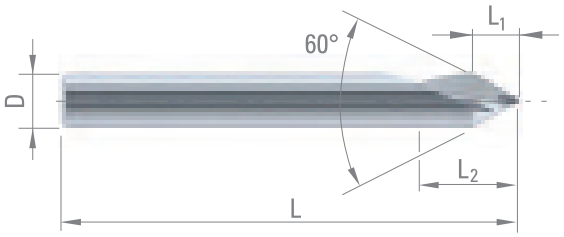
P. 231



D_{h5}	L_1	L	CARBURE
2	3	25	35671
3	4	38	35672
4	5	50	35673
5	6	50	35674
6	8	57	35675
8	10	63	35676
10	12	72	35677

FRAISES À GRAVER HÉLICOÏDALES 60°
EXÉCUTION SEMI-FINIE

P. 231



D_{h5}	L_1	L_2	L	CARBURE
3	2.6	9	38	35678
4	3.5	12	50	35679
6	5.2	15	50	35680

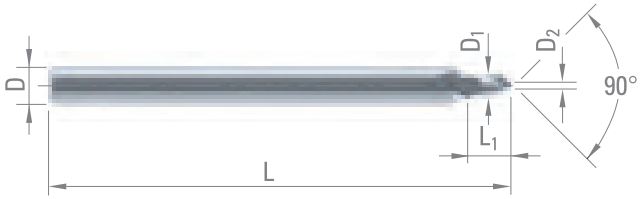
DIXI 7623

FRAISES À ANGLER

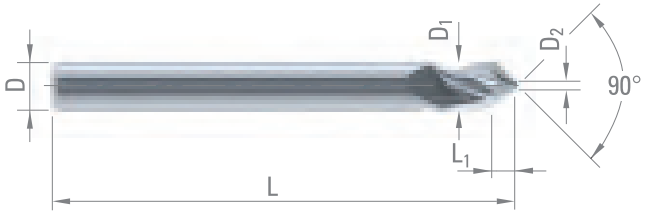
Z = 3

P. 234

Ø 0.80 ≤ Ø 4.00



Ø 5.00 ≤ Ø 12.00



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

$D_{1\ e8}$ Ø<2.00 - 0/-0.01 Ø<3.00 - 0/-0.02 Ø<5.00 - e8	L_1	$D_{2\ \pm 0.05}$	D_{h5}	L	CARBURE	TiAlN
* 0.50	1.5	0.05	3	38	983778	
* 0.80	1.5	0.08	3	38	956868	956870
* 1.00	2.0	0.10	3	38	956867	956869
* 2.00	3.0	0.20	3	38	956865	956866
* 3.00	5.0	0.30	3	38	956861	956862
* 4.00	6.0	0.40	4	50	956863	956864

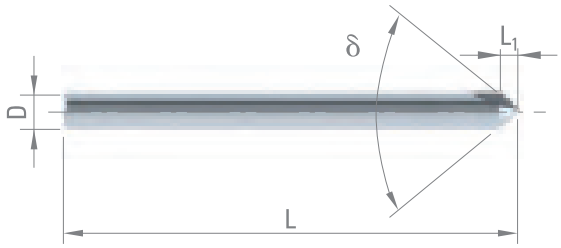
* coupant

$D_{1\ h5}$	L_1	$D_{2\ \pm 0.05}$	D_{h5}	L	CARBURE	TiAlN
5.00	2.25	0.50	5	50	49019	952294
6.00	2.7	0.60	6	57	49020	63603
8.00	3.6	0.80	8	63	49021	950927
10.00	4.5	1.00	10	72	49022	63604
12.00	5.4	1.20	12	73	49023	952295

DIXI 7625

FRAISES À ANGLER ANGLES RENTRANTS

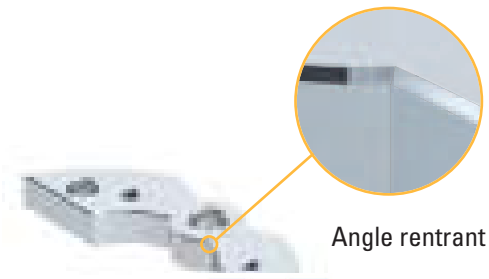
Z = 3



Acier + Pb | Acier faibl. allié | Fontes | Alliage Cu Argent Or | Alliage Cu difficile

Alu | Plastique

δ	L_1	D_{h5}	L	CARBURE
60°	2.6	3	38	310782
90°	1.5	3	38	306130
120°	0.9	3	38	312243



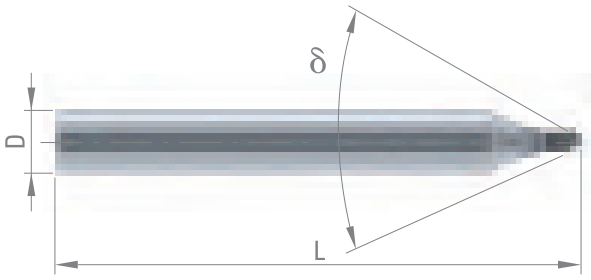
Angle rentrant

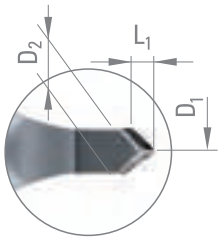
Cobalt Outils Coupants

DIXI 76230 DIA

FRAISES À ANGLER
DIAMANT MONOCRISTALLIN

Z = 1





Alliage Cu Argent Or | Alliage Cu difficile | Alu | Plastique

δ	L_1	D_2	D_1	D_{h5}	L	DIA
30°	2.80	2	* 0.30	6	50	978382
60°	1.40	3	* 0.10	6	50	302596
	1.30	3	* 0.30	6	50	978381
90°	0.80	3	* 0.10	6	50	302595
	0.70	3	* 0.30	6	50	977871

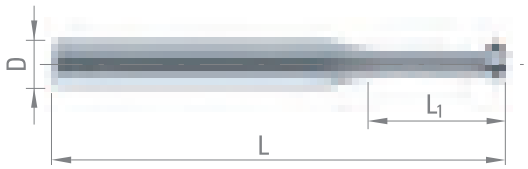
*non coupant

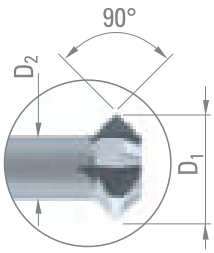
DIXI 7624

FRAISES À ANGLER BICONIQUE

Z = 1-4

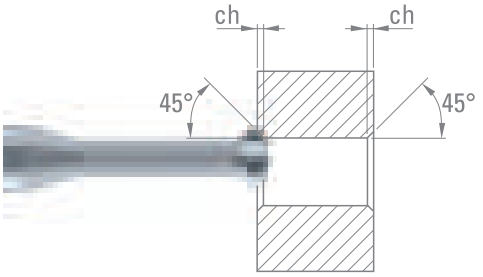
P. 234

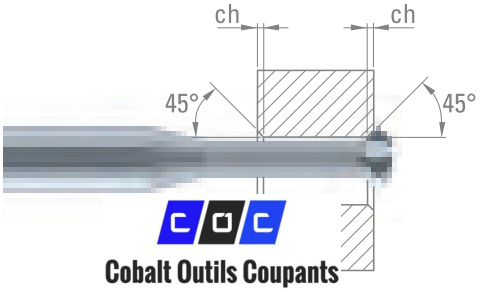




Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes
Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu
Plastique

D_1	L_1	D_2	ch	D_{h5}	L	Z	CARBURE
0.20	0.4	0.12	0.04	3	38	1	997990
0.25	0.5	0.15	0.05	3	38	1	997991
0.30	0.6	0.18	0.06	3	38	1	997992
0.40	0.8	0.24	0.08	3	38	1	997993
0.50	1.0	0.30	0.10	3	38	1	997994
0.60	1.2	0.36	0.12	3	38	3	997995
0.70	1.4	0.42	0.14	3	38	3	997996
0.80	1.6	0.48	0.16	3	38	3	997997
0.90	1.8	0.54	0.18	3	38	3	997998
1.00	2.0	0.60	0.20	3	38	3	997999
1.20	2.4	0.70	0.25	3	38	4	998000
1.30	2.6	0.70	0.30	3	38	4	998001
1.80	5.4	1.00	0.40	3	38	4	998002
2.80	8.4	1.60	0.60	3	38	4	998003
3.70	11.1	2.10	0.80	6	57	4	998004
5.70	17.1	3.30	1.20	6	57	4	998005



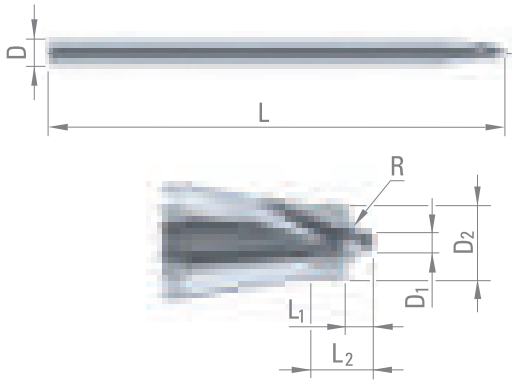


Cobalt Outils Coupants

FRAISES À RAYONNER

Z = 2

P. 234



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

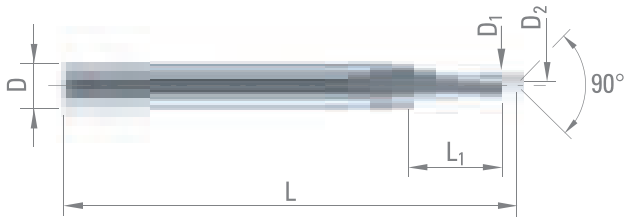
$R_{\pm 0.02}$	D_1	L_1	D_2	L_2	D_{h5}	L	CARBURE	TiAlN
0.10	0.50	0.12	0.74	0.8	3	38	969577	969578
0.15	0.50	0.18	0.86	0.8	3	38	969586	969597
0.20	0.50	0.24	0.98	0.8	3	38	969587	969598
0.25	0.50	0.30	1.10	1.0	3	38	969588	969599
0.30	0.50	0.36	1.22	1.0	3	38	969589	969600
0.40	0.50	0.48	1.46	1.0	3	38	969590	969601
0.50	0.50	0.60	1.70	1.5	3	38	969591	969602
0.60	0.50	0.70	1.90	1.5	3	38	969592	969603
0.70	0.50	0.80	2.10	1.5	3	38	969593	969604
0.80	0.80	0.90	2.60	2.0	3	38	969594	969605
0.90	0.80	1.00	2.80	2.0	3	38	969595	969606
1.00	0.80	1.10	-	-	3	38	969596	969607

DIXI 7632

FRAISES MULTIFONCTIONS

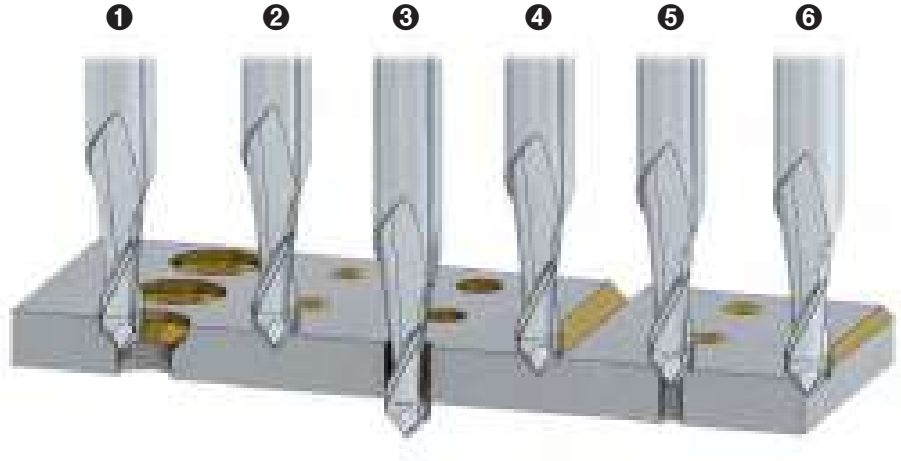
Z = 2

P. 236



Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

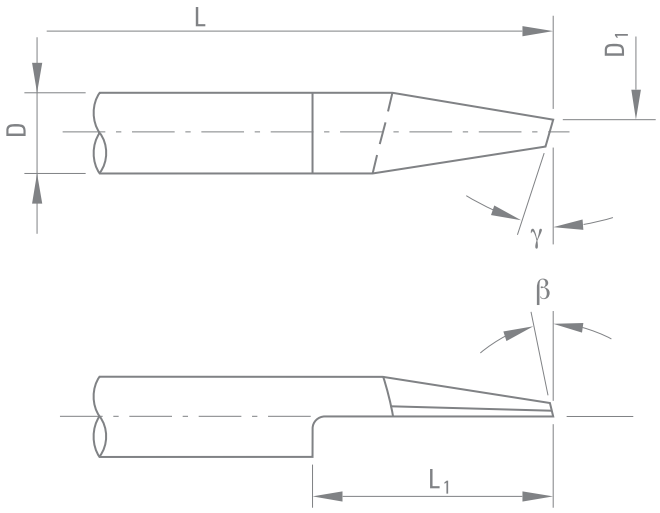
$D_{1\ e8}$	L_1	D_2	D_{h5}	L	CARBURE	CUTINOX
0.10	0.2	0.01	3	38	333883	333907
0.20	0.4	0.02	3	38	333884	333908
0.30	0.6	0.03	3	38	333885	333909
0.40	0.8	0.04	3	38	333886	333910
0.50	1.0	0.05	3	38	333887	333911
0.60	1.2	0.06	3	38	333888	333912
0.70	1.4	0.07	3	38	333889	333913
0.80	1.6	0.08	3	38	333890	333914
0.90	1.8	0.09	3	38	333891	333915
1.00	2.0	0.10	3	38	333892	333916
1.10	2.2	0.11	3	38	333893	333917
1.20	2.4	0.12	3	38	333894	333918
1.30	2.6	0.13	3	38	333895	333919
1.40	2.8	0.14	3	38	333896	333920
1.50	3.0	0.15	3	38	333897	333921
2.00	4.0	0.20	3	38	333898	333922
2.50	5.0	0.25	3	38	333899	333923
3.00	6.0	0.30	4	50	333900	333924
4.00	8.0	0.40	5	50	333901	333925
5.00	10.0	0.50	6	50	333902	333926
6.00	12.0	0.60	8	60	333903	333927
8.00	16.0	0.80	10	70	333904	333928
10.00	18.0	1.00	12	70	333905	333929
12.00	20.0	1.20	12	70	333906	333930



❶ Noyure
❷ Pointage
❸ Perçage
❹ Rainurage
❺ ❻ Chanfreinage

Cobalt Outils Coupants

GÉOMÉTRIE DES FRAISES À GRAVER



Matériaux	β	γ
Aciers à outils	10°	3° - 5°
Aciers	15°	3° - 5°
Inox	15°	3° - 5°
Fontes	15°	3° - 5°
Cuivre	20°	3° - 5°
Laiton	15°	3° - 5°
Maillechort	15°	3° - 5°
Duralumin	20°	3° - 5°
Aluminium	20°	3° - 5°
Or	15°	3° - 5°
Titane pur	15°	3° - 5°
Celluloïde	25°	3° - 5°
Plastiques	20°	3° - 5°
Bois	25°	3° - 5°

Utilisées essentiellement pour le gravage de symboles et textes divers, ces fraises servent également à l'usinage de contours (découpage de formes) ainsi que pour des travaux de copiage pour moules et étampes.

EXÉCUTION TERMINÉE

Sur demande, DIXI POLYTOOL livre ces outils affûtés en fonction des matières à usiner qu'il conviendra de préciser lors de la commande.
Les angles d'affûtage correspondront au tableau ci-contre.
Indiquez D_1 ainsi que la matière à usiner lors de la commande.

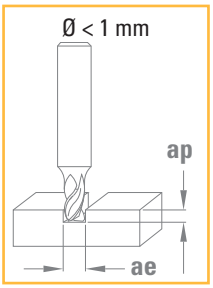
CONDITIONS DE COUPE

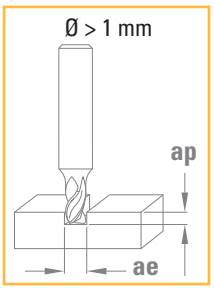
Matières à usiner			CARBURE n [tr/min]	DINAC n [tr/min]	Ø D_1 0.05 - 0.10 Vf[mm/min]	Ø D_1 0.05 - 0.10 ap[mm]	Ø D_1 0.15 - 0.50 Vf[mm/min]	Ø D_1 0.15 - 0.50 ap[mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**20** - 35'000	**20** - 35'000	**50** - 250	**0.05** - 0.30	**100** - 300	**0.10** - 0.40
P	Acier non allié / faiblement allié	600 – 1500 N/mm²		**20** - 35'000	**50** - 200	**0.05** - 0.25	**80** - 250	**0.10** - 0.35
P	Acier de décolletage au plomb			**20** - 35'000	**50** - 250	**0.05** - 0.30	**100** - 300	**0.10** - 0.40
P	Acier fortement allié	700 – 1500 N/mm²		**20** - 35'000	**50** - 150	**0.05** - 0.15	**80** - 250	**0.10** - 0.30
M	Acier inoxydable	400 – 700 N/mm²		**20** - 35'000	**50** - 150	**0.05** - 0.20	**80** - 250	**0.10** - 0.30
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²		**20** - 35'000	**50** - 150	**0.05** - 0.15	**80** - 250	**0.10** - 0.30
H	Acier à outils et fontes trempées	> 1500 N/mm² (45 - 55 HRC)		**20** - 35'000			**80** - 250	**0.02** - 0.05
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**20** - 35'000	**20** - 35'000	**50** - 250	**0.05** - 0.30	**100** - 300	**0.10** - 0.40
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**20** - 35'000	**20** - 35'000	**50** - 200	**0.05** - 0.25	**80** - 250	**0.10** - 0.35
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**20** - 35'000	**20** - 35'000	**50** - 200	**0.05** - 0.25	**80** - 250	**0.10** - 0.35
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy		**15** - 25'000			**80** - 200	**0.03** - 0.10
S	Titane, alliage de titane		**20** - 35'000	**20** - 35'000	**50** - 200	**0.05** - 0.25	**100** - 250	**0.10** - 0.35
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**20** - 35'000	**20** - 35'000	**50** - 300	**0.05** - 0.30	**150** -450	**0.10** - 0.40
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**20** - 35'000	**20** - 35'000	**50** - 200	**0.05** - 0.30	**100** - 300	**0.10** - 0.45
N	Alliage d'aluminium	Si < 8%	**20** - 35'000	**20** - 35'000	**50** - 300	**0.05** - 0.30	**150** - 450	**0.10** - 0.45
N	Fonte d'aluminium	Si > 8%	**20** - 35'000	**20** - 35'000	**50** - 300	**0.05** - 0.30	**150** - 450	**0.10** - 0.45
N	Graphite		**20** - 35'000	**20** - 35'000	**50** - 300	**0.05** - 0.30	**150** - 450	**0.10** - 0.45
N	Plastique		**20** - 35'000	**20** - 35'000	**50** - 300	**0.05** - 0.30	**150** - 450	**0.10** - 0.45
N	Or, argent		**20** - 35'000	**20** - 35'000	**50** - 300	**0.05** - 0.30	**150** - 450	**0.10** - 0.45

CONDITIONS DE COUPE

Matières à usiner			CARBURE n [tr/min]	DINAC n [tr/min]	Ø D_1 0.05 - 0.10 Vf[mm/min]	Ø D_1 0.05 - 0.10 ap[mm]	Ø D_1 0.15 - 0.50 Vf[mm/min]	Ø D_1 0.15 - 0.50 ap[mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**25** - 35'000		**75** - 250	**0.05** - 0.35	**100** - 350	**0.10** - 0.45
P	Acier non allié / faiblement allié	600 – 1500 N/mm²		**25** - 35'000	**60** - 250	**0.05** - 0.30	**80** - 300	**0.10** - 0.40
P	Acier de décolletage au plomb		**30** - 35'000		**75** - 250	**0.05** - 0.35	**100** - 350	**0.10** - 0.45
P	Acier fortement allié	700 – 1500 N/mm²		**15** - 35'000	**50** - 200	**0.05** - 0.10	**80** - 300	**0.10** - 0.35
M	Acier inoxydable	400 – 700 N/mm²		**20** - 35'000	**50** - 200	**0.05** - 0.25	**80** - 300	**0.10** - 0.35
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²		**15** - 35'000	**50** - 200	**0.05** - 0.20	**80** - 300	**0.10** - 0.35
H	Acier à outils et fontes trempées	> 1500 N/mm² (45 - 55 HRC)		**20** - 35'000			**80** - 250	**0.02** - 0.07
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**25** - 35'000		**50** - 300	**0.05** - 0.35	**100** - 350	**0.10** - 0.45
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**15** - 35'000	**15** - 35'000	**50** - 250	**0.05** - 0.30	**80** - 300	**0.10** - 0.40
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**15** - 35'000	**15** - 35'000	**50** - 250	**0.05** - 0.30	**80** - 300	**0.10** - 0.40
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy		**10** - 15'000			**80** - 250	**0.05** - 0.10
S	Titane, alliage de titane		**20** - 35'000		**75** - 200	**0.05** - 0.20	**100** - 300	**0.10** - 0.40
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**30** - 35'000		**75** - 300	**0.05** - 0.20	**150** - 450	**0.20** - 0.30
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**20** - 35'000		**75** - 350	**0.05** - 0.15	**150** - 300	**0.10** - 0.20
N	Alliage d'aluminium	Si < 8%	**25** - 35'000		**75** - 300	**0.05** - 0.30	**150** - 450	**0.15** - 0.50
N	Fonte d'aluminium	Si > 8%	**20** - 35'000		**75** - 350	**0.05** - 0.20	**150** - 450	**0.15** - 0.45
N	Graphite		**20** - 35'000		**75** - 350	**0.05** - 0.20	**150** - 450	**0.15** - 0.40
N	Plastique		**30** - 35'000		**100** - 350	**0.05** - 0.30	**180** - 450	**0.15** - 0.50
N	Or, argent		**25** - 35'000		**75** - 350	**0.05** - 0.20	**150** - 450	**0.15** - 0.40

CONDITIONS DE COUPE





Matières à usiner			CARBURE		TiAlN					
			Vc [m/min]		Vc [m/min]		ap [mm]	ae [mm]	ap [mm]	ae [mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**70**	100	**90**	110	< 0.5 x ØD1	1 x ØD1	< 1 x ØD1	1 x ØD1
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**50**	80	**70**	90	< 0.3 x ØD1	1 x ØD1	< 0.6 x ØD1	1 x ØD1
P	Acier de décolletage au plomb		**70**	100			< 0.5 x ØD1	1 x ØD1	< 1 x ØD1	1 x ØD1
P	Acier fortement allié	700 – 1500 N/mm²			**40**	70	< 0.2 x ØD1	1 x ØD1	< 0.5 x ØD1	1 x ØD1
M	Acier inoxydable	400 – 700 N/mm²	**40**	60	**70**	90	< 0.5 x ØD1	1 x ØD1	< 0.8 x ØD1	1 x ØD1
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**40**	70	< 0.2 x ØD1	1 x ØD1	< 0.5 x ØD1	1 x ØD1
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**70**	100	**90**	110	< 0.5 x ØD1	1 x ØD1	< 1 x ØD1	1 x ØD1
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	70	**70**	90	< 0.3 x ØD1	1 x ØD1	< 0.6 x ØD1	1 x ØD1
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	100	**90**	110	< 0.3 x ØD1	1 x ØD1	< 0.6 x ØD1	1 x ØD1
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy			**25**	35			< 0.4 x ØD1	1 x ØD1
S	Titane, alliage de titane		**30**	45			< 0.3 x ØD1	1 x ØD1	< 0.5 x ØD1	1 x ØD1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**140**	160			< 0.5 x ØD1	1 x ØD1	< 1 x ØD1	1 x ØD1
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**120**	140	**170**	190	< 0.3 x ØD1	1 x ØD1	< 0.7 x ØD1	1 x ØD1
N	Alliage d'aluminium	Si < 8%	**180**	260	**230**	340	< 0.6 x ØD1	1 x ØD1	< 1.2 x ØD1	1 x ØD1
N	Fonte d'aluminium	Si > 8%	**140**	160	**210**	230	< 0.4 x ØD1	1 x ØD1	< 0.9 x ØD1	1 x ØD1
N	Graphite		**140**	160	**200**	220	< 0.6 x ØD1	1 x ØD1	< 0.9 x ØD1	1 x ØD1
N	Plastique		**240**	260	**300**	340	< 0.6 x ØD1	1 x ØD1	< 1.2 x ØD1	1 x ØD1
N	Or, argent		**140**	160	**200**	220	< 0.6 x ØD1	1 x ØD1	< 0.9 x ØD1	1 x ØD1

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 0.30 - 1.00	Ø D_1 1.00 - 1.50	Ø D_1 1.50 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 7.00	Ø D_1 7.00 - 10.00	Ø D_1 10.00 - 14.00	Ø D_1 14.00 - 16.00	Ø D_1 16.00 - 20.00
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.14
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
	0.012 - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.11	**0.05** - 0.11	**0.06** - 0.12	**0.07** - 0.13
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.005** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20
0.006 - 0.015	**0.012** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.21	**0.10** - 0.24	**0.11** - 0.30
0.006 - 0.015	**0.005** - 0.020	**0.016** - 0.04	**0.02** - 0.06	**0.03** - 0.09	**0.04** - 0.12	**0.05** - 0.14	**0.07** - 0.16	**0.08** - 0.20

CONDITIONS DE COUPE

Centrage - Perçage - Anglage

Matières à usiner			CARBURE		CUTINOX	
			Vc [m/min]		Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**40**	60	**60**	75
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**30**	50	**40**	60
P	Acier de décolletage au plomb		**54**	60	**60**	75
P	Acier fortement allié	700 – 1500 N/mm²	**30**	40	**35**	50
M	Acier inoxydable	400 – 700 N/mm²	**20**	30	**30**	35
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**20**	25	**25**	30
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**45**	60	**60**	75
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**28**	40	**35**	50
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**28**	40	**35**	50
S	Super alliages / Acier inox. réfractaire		**20**	24	**25**	30
S	Titane, alliage de titane		**32**	48	**40**	60
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**80**	120	**90**	130
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium		**50**	80	**60**	90
N	Alliage d'aluminium	Si < 8%	**80**	150	**90**	160
N	Fonte d'aluminium	Si > 8%	**60**	110	**70**	120
N	Plastique		**100**	200	**110**	220
N	Or, argent		**50**	80	**60**	90

Rainurage en "V" - Anglage (contournage)

Matières à usiner			CARBURE		CUTINOX	
			Vc [m/min]		Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**30**	50	**60**	75
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**54**	60	**40**	60
P	Acier de décolletage au plomb		**30**	40	**60**	75
P	Acier fortement allié	700 – 1500 N/mm²	**20**	30	**35**	50
M	Acier inoxydable	400 – 700 N/mm²	**20**	25	**30**	35
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**45**	60	**25**	30
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**28**	40	**60**	75
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**28**	40	**35**	50
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**20**	24	**35**	50
S	Super alliages / Acier inox. réfractaire		**32**	48	**25**	30
S	Titane, alliage de titane		**80**	120	**40**	60
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**50**	80	**90**	130
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium		**80**	150	**60**	90
N	Alliage d'aluminium	Si < 8%	**60**	110	**90**	160
N	Fonte d'aluminium	Si > 8%	**100**	200	**70**	120
N	Plastique		**50**	80	**110**	220
N	Or, argent		**80**	150	**60**	90

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm] \times Z$$

Avance par tour **f [mm]**

Ø D_1 0.30 - 0.50	Ø D_1 0.50 - 1.00	Ø D_1 1.00 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 8.00	Ø D_1 8.00 - 12.00
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38
0.002 - 0.005	**0.003** - 0.009	**0.004** - 0.047	**0.019** - 0.09	**0.04** - 0.14	**0.06** - 0.28
0.002 - 0.005	**0.003** - 0.009	**0.004** - 0.047	**0.019** - 0.09	**0.04** - 0.14	**0.06** - 0.28
0.002 - 0.005	**0.003** - 0.009	**0.004** - 0.047	**0.019** - 0.09	**0.04** - 0.14	**0.06** - 0.28
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38
0.002 - 0.005	**0.003** - 0.009	**0.004** - 0.047	**0.019** - 0.09	**0.04** - 0.14	**0.06** - 0.28
0.002 - 0.005	**0.003** - 0.009	**0.004** - 0.047	**0.019** - 0.09	**0.04** - 0.14	**0.06** - 0.28
0.002 - 0.004	**0.002** - 0.008	**0.003** - 0.038	**0.015** - 0.08	**0.03** - 0.11	**0.05** - 0.23
0.002 - 0.005	**0.003** - 0.009	**0.004** - 0.047	**0.019** - 0.09	**0.04** - 0.14	**0.06** - 0.28
0.004 - 0.008	**0.005** - 0.016	**0.006** - 0.078	**0.031** - 0.16	**0.06** - 0.23	**0.09** - 0.47
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38
0.005 - 0.009	**0.006** - 0.019	**0.008** - 0.094	**0.038** - 0.19	**0.08** - 0.28	**0.11** - 0.5
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38

Avance par dent **fz [mm]** $Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$

Ø D_1 0.30 - 0.50	Ø D_1 0.50 - 1.00	Ø D_1 1.00 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 8.00	Ø D_1 8.00 - 12.00
0.002 - 0.003	**0.002** - 0.006	**0.003** - 0.031	**0.013** - 0.06	**0.03** - 0.09	**0.04** - 0.19
0.002 - 0.003	**0.002** - 0.006	**0.003** - 0.031	**0.013** - 0.06	**0.03** - 0.09	**0.04** - 0.19
0.002 - 0.003	**0.002** - 0.006	**0.003** - 0.031	**0.013** - 0.06	**0.03** - 0.09	**0.04** - 0.19
0.001 - 0.002	**0.002** - 0.005	**0.002** - 0.023	**0.009** - 0.05	**0.02** - 0.07	**0.03** - 0.14
0.001 - 0.002	**0.002** - 0.005	**0.002** - 0.023	**0.009** - 0.05	**0.02** - 0.07	**0.03** - 0.14
0.001 - 0.002	**0.002** - 0.005	**0.002** - 0.023	**0.009** - 0.05	**0.02** - 0.07	**0.03** - 0.14
0.002 - 0.003	**0.002** - 0.006	**0.003** - 0.031	**0.013** - 0.06	**0.03** - 0.09	**0.04** - 0.19
0.001 - 0.002	**0.002** - 0.005	**0.002** - 0.023	**0.009** - 0.05	**0.02** - 0.07	**0.03** - 0.14
0.001 - 0.002	**0.002** - 0.005	**0.002** - 0.023	**0.009** - 0.05	**0.02** - 0.07	**0.03** - 0.14
0.001 - 0.002	**0.001** - 0.004	**0.002** - 0.019	**0.008** - 0.04	**0.02** - 0.06	**0.02** - 0.11
0.001 - 0.002	**0.002** - 0.005	**0.002** - 0.023	**0.009** - 0.05	**0.02** - 0.07	**0.03** - 0.14
0.002 - 0.004	**0.003** - 0.008	**0.003** - 0.039	**0.016** - 0.08	**0.03** - 0.12	**0.05** - 0.23
0.002 - 0.003	**0.002** - 0.006	**0.003** - 0.031	**0.013** - 0.06	**0.03** - 0.09	**0.04** - 0.19
0.002 - 0.003	**0.002** - 0.006	**0.003** - 0.031	**0.013** - 0.06	**0.03** - 0.09	**0.04** - 0.19
0.002 - 0.003	**0.002** - 0.006	**0.003** - 0.031	**0.013** - 0.06	**0.03** - 0.09	**0.04** - 0.19
0.002 - 0.005	**0.003** - 0.009	**0.004** - 0.047	**0.019** - 0.09	**0.04** - 0.14	**0.06** - 0.28
0.002 - 0.003	**0.002** - 0.006	**0.003** - 0.031	**0.013** - 0.06	**0.03** - 0.09	**0.04** - 0.19

DIXI 7632

CONDITIONS DE COUPE

Contournage - Lamage (interpolation) - Gravage

	Matières à usiner		CARBURE Vc [m/min]		CUTINOX Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**30**	50	**60**	75
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**54**	60	**40**	60
P	Acier de décolletage au plomb		**30**	40	**60**	75
P	Acier fortement allié	700 – 1500 N/mm²	**20**	30	**35**	50
M	Acier inoxydable	400 – 700 N/mm²	**20**	25	**30**	35
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**45**	60	**25**	30
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**28**	40	**60**	75
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**28**	40	**35**	50
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**20**	24	**35**	50
S	Super alliages / Acier inox. réfractaire		**32**	48	**25**	30
S	Titane, alliage de titane		**80**	120	**40**	60
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**50**	80	**90**	130
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium		**80**	150	**60**	90
N	Alliage d'aluminium	Si < 8%	**60**	110	**90**	160
N	Fonte d'aluminium	Si > 8%	**100**	200	**70**	120
N	Plastique		**50**	80	**110**	220
N	Or, argent		**80**	150	**60**	90

DIXI 7625

CONDITIONS DE COUPE

	Matières à usiner		CARBURE n [tr/min]	GRAVAGE Vf[mm/min]	GRAVAGE ap[mm]	CONTOURNAGE Vf[mm/min]	CONTOURNAGE ap[mm]
P	Acier non allié / faiblement allié	< 600 N/mm²	**10 -** 35'000	50 - 200	< 0.05	80 - 250	< 0.1
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**10 -** 35'000	50 - 250	< 0.08	100 - 280	< 0.15
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium		**10 -** 35'000	50 - 250	< 0.05	80 - 250	< 0.1
N	Alliage d'aluminium	Si < 8%	**10 -** 35'000	50 - 250	< 0.08	100 - 280	< 0.15
N	Or, argent		**10 -** 35'000	50 - 250	< 0.08	100 - 280	< 0.15

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 0.30 - 0.50	Ø D_1 0.50 - 1.00	Ø D_1 1.00 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 8.00	Ø D_1 8.00 - 12.00
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38
0.002 - 0.005	**0.003** - 0.009	**0.004** - 0.047	**0.019** - 0.09	**0.04** - 0.14	**0.06** - 0.28
0.002 - 0.005	**0.003** - 0.009	**0.004** - 0.047	**0.019** - 0.09	**0.04** - 0.14	**0.06** - 0.28
0.002 - 0.005	**0.003** - 0.009	**0.004** - 0.047	**0.019** - 0.09	**0.04** - 0.14	**0.06** - 0.28
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38
0.002 - 0.005	**0.003** - 0.009	**0.004** - 0.047	**0.019** - 0.09	**0.04** - 0.14	**0.06** - 0.28
0.002 - 0.005	**0.003** - 0.009	**0.004** - 0.047	**0.019** - 0.09	**0.04** - 0.14	**0.06** - 0.28
0.002 - 0.004	**0.002** - 0.008	**0.003** - 0.038	**0.015** - 0.08	**0.03** - 0.11	**0.05** - 0.23
0.002 - 0.005	**0.003** - 0.009	**0.004** - 0.047	**0.019** - 0.09	**0.04** - 0.14	**0.06** - 0.28
0.004 - 0.008	**0.005** - 0.016	**0.006** - 0.078	**0.031** - 0.16	**0.06** - 0.23	**0.09** - 0.47
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38
0.005 - 0.009	**0.006** - 0.019	**0.008** - 0.094	**0.038** - 0.19	**0.08** - 0.28	**0.11** - 0.5
0.003 - 0.006	**0.004** - 0.013	**0.005** - 0.063	**0.025** - 0.13	**0.05** - 0.19	**0.08** - 0.38

TRONÇONNAGE

ABTRENNEN

SLITTING

TRONCATURA

DARABOLÁS

TRONZADO

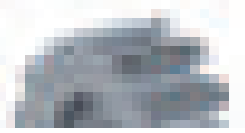
Cobalt Outils Coupants

SÉLECTION DES FRAISES À FENDRE 242

FRAISES À FENDRE 246

TASSEAUX PORTE-FRAISES 256

FRAISES À T 257


FRAISES-MÈRES 260

CIBLES DE ROULAGE 263

OUTILS SUR DEMANDE 264

CONDITIONS DE COUPE 268

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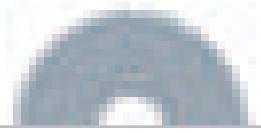
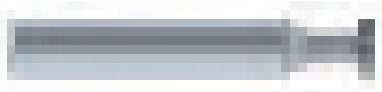
SÉLECTION DES FRAISES

✓ = article de stock

		Page		☐ CARBURE	■ CUTINOX			
FRAISES À FENDRE								
DIXI 1531 Ø 15 - 125		246	ISO 2296 DIN 1840 A	✓				
DIXI 1533 Ø 15 - 160		248	DIN 1837 DIN 1840 A	✓				
DIXI 1539 Ø 10 - 50		251		✓				
DIXI 1534 Ø 20 - 100		253	DIN 1838 DIN 1840 B	✓				
DIXI 1537 Ø 50 - 100		254			✓			
DIXI 1640 Ø 50 - 100		255		✓				
TASSEAUX PORTE-FRAISES								
DIXI 2713 Ø 3 - 16		256						
DIXI 2714 Ø 5 - 16		256						
FRAISES À T								
DIXI 1525 Ø 2 - 30		257		✓	✓			
DIXI 1528 Ø 4 - 30		258		✓	✓			
DIXI 1527 Ø 4 - 16		259		✓	✓			

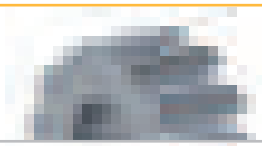
Cobalt Outils Coupants

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
◎	◎	◎	○		◎	◎	◎	○	○	○		○
○	○	○	○		◎	○	○	○	○	○		○
○	○	○	○		◎	○	○	○	○			
○	○	○	◎		○	○	○	◎	◎	◎		◎
○	○	◎	◎			◎	◎	○	○	○		○
○	○	○	○		◎	○	○	◎	○	○		○
◎	◎	○	○		◎	○	○	◎	○	◎		○
◎	◎	○	○		◎	○	○	◎	○	◎		○
◎	◎	○	○		◎	○	○	◎	○	◎		○

SÉLECTION DES FRAISES-MÈRES

✓ = article de stock

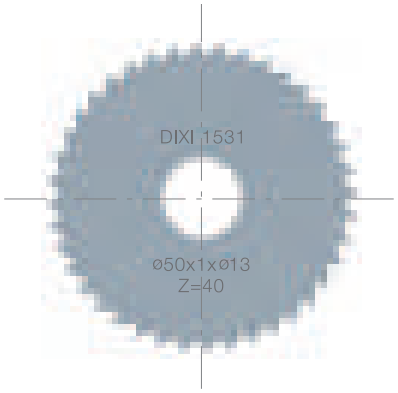
FRAISES-MÈRES		Page		☐ CARBURE				
DIXI 1675 Ø 6 - 24		260		✓				
DIXI 1680 Ø 6 - 24		260		✓				
DIXI 1685 Ø 6 - 24		261		✓				
DIXI 1690 Ø 10 - 12		262		✓				
DIXI 1674 Ø 6 - 24		262		✓				
DIXI 1672 Ø 4 - 6		261		✓				
DIXI 1673 Ø 4 - 6		261		✓				
CIBLES DE ROULAGE								
DIXI 0700 **DIXI 0710**		263		✓				

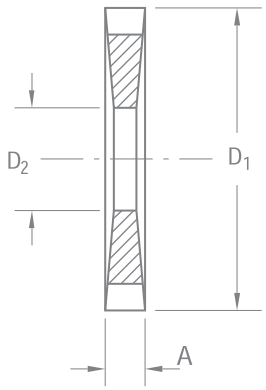
○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
◎	◎	○	○				○	◎	○	◎		
◎	◎	○	○				○	◎	○	◎		
◎	◎	○	○				○	◎	○	◎		
◎	◎	○	○				○	◎	○	◎		
◎	◎	○	○				○	◎	○	◎		
◎	◎	○	○				○	◎	○	◎		
◎	◎	○	○				○	◎	○	◎		

FRAISES À FENDRE
DENTURE LARGE

P. 268





Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

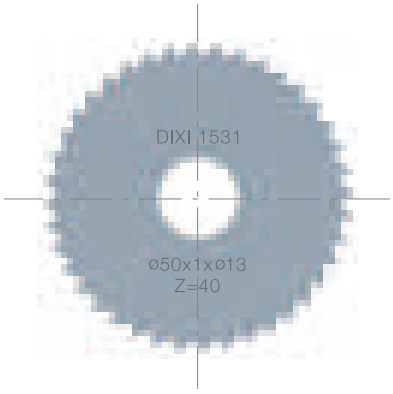
Plastique

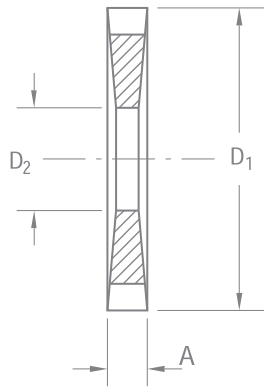
$D_{1\ js12}$	$A_{\pm 0.01}$	$D_{2\ H6}$	Z	CARBURE
15	0.20	5	32	37180
15	0.30	5	24	37182
15	0.40	5	24	35382
15	0.50	5	24	35383
15	0.60	5	20	601
15	0.70	5	20	603
15	0.80	5	20	2532
15	0.90	5	20	7707
15	1.00	5	20	602
15	1.20	5	16	38947
15	1.50	5	16	38948
15	1.60	5	16	42457
15	1.80	5	16	42536
15	2.00	5	16	38949
20	0.20	5	40	35384
20	0.30	5	32	35385
20	0.40	5	32	3281
20	0.50	5	24	31481
20	0.60	5	24	604
20	0.70	5	24	605
20	0.80	5	24	37080
20	0.90	5	20	3282
20	1.00	5	20	3283
20	1.20	5	20	2425
20	1.50	5	20	3287
20	1.60	5	20	3288
20	1.80	5	20	3290
20	2.00	5	16	42458
20	2.50	5	16	42459
25	0.30	8	40	37740
25	0.40	8	32	42461
25	0.50	8	32	42376
25	0.60	8	24	42377
25	0.70	8	24	42378
25	0.80	8	24	2479
25	0.90	8	24	42379
25	1.00	8	24	42380
25	1.20	8	24	42462
25	1.50	8	20	3299
25	1.60	8	20	3300
25	1.80	8	20	3301
25	2.00	8	20	3303
25	2.50	8	20	3305

$D_{1\ js12}$	$A_{\pm 0.01}$	$D_{2\ H6}$	Z	CARBURE
30	0.30	8	40	37845
30	0.40	8	40	37841
30	0.50	8	40	35386
30	0.60	8	32	30662
30	0.70	8	32	3309
30	0.80	8	32	41350
30	0.90	8	32	41351
30	1.00	8	32	36413
30	1.20	8	24	1327
30	1.50	8	24	3316
30	1.60	8	24	3317
30	1.80	8	24	3319
30	2.00	8	24	3321
30	2.50	8	20	42466
30	3.00	8	20	42467
30	4.00	8	20	42468
40	0.40	10	48	42470
40	0.50	10	40	2662
40	0.60	10	40	6348
40	0.70	10	40	17953
40	0.80	10	40	42471
40	0.90	10	32	38817
40	1.00	10	32	3034
40	1.20	10	32	3307
40	1.50	10	32	3326
40	1.60	10	32	3798
40	1.80	10	24	39499
40	2.00	10	24	42472
40	2.50	10	24	42473
40	3.00	10	24	42474
40	4.00	10	20	42475
50	0.40	13	48	26023
50	0.50	13	48	42477
50	0.60	13	48	42478
50	0.70	13	48	14681
50	0.80	13	40	3330
50	0.90	13	40	41064
50	1.00	13	40	8636
50	1.20	13	40	8637
50	1.40	13	32	3336
50	1.50			25731
50	1.60			3337
50	1.80			3657

DIXI 1531

P. 268





Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

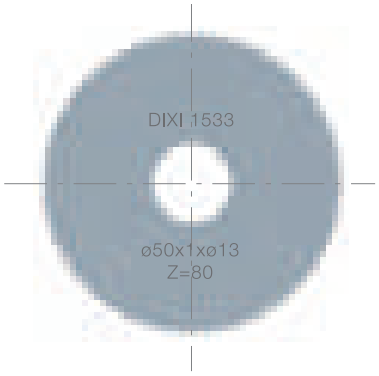
Plastique

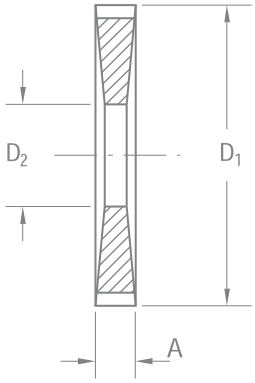
$D_{1\ js12}$	$A_{\pm 0.01}$	$D_{2\ H6}$	Z	CARBURE
50	2.00	13	32	2533
50	2.50	13	32	3339
50	3.00	13	24	42479
63	0.80	16	48	3342
63	0.90	16	48	49467
63	1.00	16	48	609
63	1.20	16	40	3658
63	1.50	16	40	3345
63	1.60	16	40	3346
63	1.80	16	40	3347
63	2.00	16	40	610
63	2.50	16	32	42483
63	3.00	16	32	611
80	0.80	22	64	6070
80	0.90	22	64	49665
80	1.00	22	48	3054
80	1.20	22	48	4016
80	1.50	22	48	3349
80	1.60	22	48	34808
80	1.80	22	40	22178
80	2.00	22	40	2807
80	2.50	22	40	42484
80	3.00	22	40	21847
100	1.00	22	64	38542
100	1.20	22	64	38543
100	1.50	22	48	35387
100	1.60	22	48	39146
100	1.80	22	48	38927
100	2.00	22	48	38928
100	2.50	22	48	36588
100	3.00	22	48	38713
125	1.00	22	80	42489
125	1.20	22	64	42490
125	1.50	22	64	38480
125	1.60	22	64	42492
125	1.80	22	64	42493
125	2.00	22	64	39005

DIXI 1533

FRAISES À FENDRE
DENTURE FINE

P. 268





Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

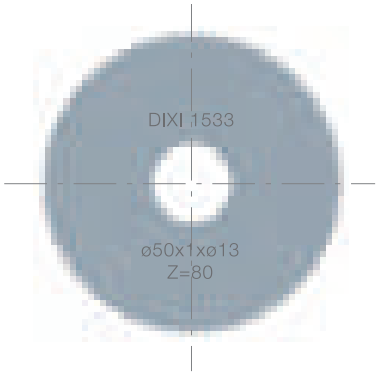
$D_{1\ js12}$	$A_{\pm 0.01}$	$D_{2\ H6}$	Z	CARBURE
15	0.20	5	64	36382
15	0.25	5	64	35635
15	0.30	5	48	3707
15	0.40	5	48	3708
15	0.50	5	48	613
15	0.60	5	40	5453
15	0.70	5	40	6183
15	0.80	5	40	3244
15	0.90	5	40	3245
15	1.00	5	40	614
15	1.10	5	32	43250
15	1.20	5	32	37174
15	1.50	5	32	40710
15	1.60	5	32	40711
15	1.70	5	32	40712
15	1.80	5	32	40713
15	2.00	5	32	37175
20	0.20	5	80	617
20	0.25	5	64	618
20	0.30	5	64	34590
20	0.40	5	64	1659
20	0.50	5	48	18560
20	0.60	5	48	36647
20	0.70	5	48	39659
20	0.80	5	48	627
20	0.90	5	48	623
20	1.00	5	40	35565
20	1.10	5	40	2689
20	1.20	5	40	38141
20	1.30	5	40	3407
20	1.40	5	40	3408
20	1.50	5	40	624
20	1.60	5	40	3010
20	1.80	5	40	23600
20	2.00	5	32	625
20	2.50	5	32	36690
20	3.00	5	32	626
25	0.15	8	80	42274
25	0.20	8	80	1660
25	0.25	8	80	3249
25	0.30	8	80	2421
25	0.35	8	80	1688

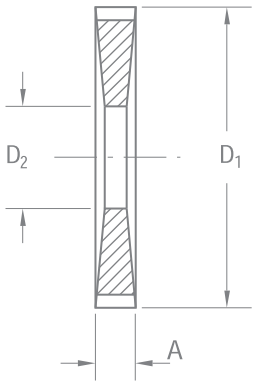
$D_{1\ js12}$	$A_{\pm 0.01}$	$D_{2\ H6}$	Z	CARBURE
25	0.40	8	64	37661
25	0.50	8	64	14254
25	0.60	8	64	630
25	0.70	8	64	36365
25	0.80	8	48	632
25	0.90	8	48	633
25	1.00	8	48	634
25	1.10	8	48	2422
25	1.20	8	48	3250
25	1.30	8	48	3410
25	1.40	8	48	3412
25	1.50	8	40	35450
25	1.60	8	40	3413
25	1.80	8	40	3414
25	2.00	8	40	636
25	2.50	8	40	637
25	3.00	8	32	38971
25	4.00	8	32	3728
30	0.20	8	100	14689
30	0.25	8	100	4262
30	0.30	8	80	638
30	0.40	8	80	639
30	0.50	8	80	18429
30	0.60	8	64	18375
30	0.70	8	64	37731
30	0.80	8	64	35516
30	0.90	8	64	36052
30	1.00	8	64	2376
30	1.10	8	48	35420
30	1.20	8	48	36384
30	1.30	8	48	3417
30	1.40	8	48	2424
30	1.50	8	48	2924
30	1.60	8	48	3418
30	1.70	8	48	5948
30	1.80	8	48	6362
30	2.00	8	48	645
30	2.50	8	40	
30	2.50	8	40	6361
30	3.00	8	40	3419
30	4.00	8	40	33482
30	5.00			35095

Cobalt Outils Coupants

DIXI 1533

P. 268





Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

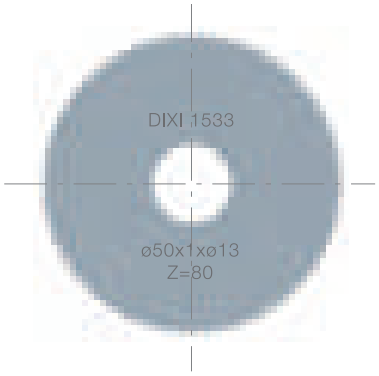
Plastique

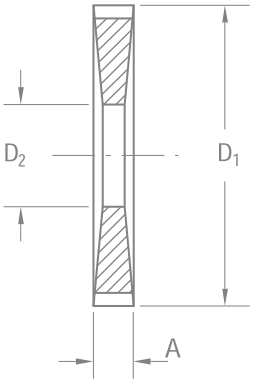
$D_{1\ js12}$	$A_{\pm 0.01}$	$D_{2\ H6}$	Z	CARBURE
40	0.20	10	128	24084
40	0.25	10	100	22049
40	0.30	10	100	35370
40	0.40	10	100	4690
40	0.50	10	80	648
40	0.60	10	80	677
40	0.70	10	80	649
40	0.80	10	80	35444
40	0.90	10	80	35369
40	1.00	10	64	653
40	1.10	10	64	3253
40	1.20	10	64	36049
40	1.30	10	64	43352
40	1.40	10	64	3422
40	1.50	10	64	36050
40	1.60	10	64	36051
40	1.70	10	64	6170
40	1.80	10	64	3424
40	2.00	10	48	656
40	2.50	10	48	36648
40	3.00	10	48	658
40	4.00	10	40	3737
40	5.00	10	40	35097
50	0.20	13	128	36385
50	0.25	13	128	3426
50	0.30	13	128	659
50	0.40	13	100	35234
50	0.50	13	100	31880
50	0.60	13	100	3030
50	0.70	13	100	2957
50	0.80	13	80	661
50	0.90	13	80	3255
50	1.00	13	80	662
50	1.10	13	80	1663
50	1.20	13	80	2536
50	1.30	13	80	3429
50	1.40	13	80	43114
50	1.50	13	64	37517
50	1.60	13	64	663
50	1.70	13	64	8001
50	1.80	13	64	36336
50	2.00	13	64	37806

$D_{1\ js12}$	$A_{\pm 0.01}$	$D_{2\ H6}$	Z	CARBURE
50	2.50	13	64	37732
50	3.00	13	48	35636
50	4.00	13	48	667
50	5.00	13	48	35109
63	0.30	16	128	5398
63	0.40	16	128	669
63	0.50	16	128	2969
63	0.60	16	100	2634
63	0.70	16	100	3207
63	0.80	16	100	36739
63	0.90	16	100	36386
63	1.00	16	100	671
63	1.20	16	80	35233
63	1.40	16	80	5093
63	1.50	16	80	2774
63	1.60	16	80	676
63	1.70	16	80	3432
63	1.80	16	80	3433
63	2.00	16	80	672
63	2.50	16	64	673
63	3.00	16	64	674
63	4.00	16	64	3748
63	5.00	16	48	31882
80	0.80	22	128	35817
80	0.90	22	128	46466
80	1.00	22	100	679
80	1.20	22	100	680
80	1.50	22	100	35721
80	1.60	22	100	19241
80	1.80	22	100	14115
80	2.00	22	80	17745
80	2.50	22	80	4030
80	3.00	22	80	684
80	4.00	22	64	21256
80	5.00	22	64	35122

DIXI 1533

P. 268





Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

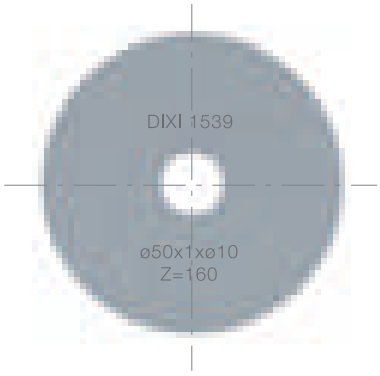
Plastique

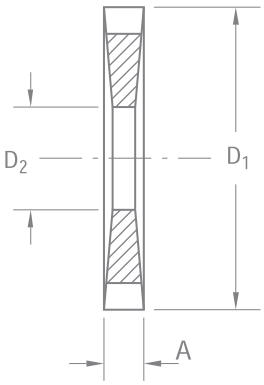
$D_{1\ js12}$	$A_{\pm 0.01}$	$D_{2\ H6}$	Z	CARBURE
100	0.80	22	128	685
100	1.00	22	128	35816
100	1.20	22	128	38383
100	1.50	22	100	36363
100	1.60	22	100	3438
100	1.80	22	100	6057
100	2.00	22	100	36048
100	2.50	22	100	689
100	3.00	22	80	36364
100	4.00	22	80	35138
100	5.00	22	80	35136
125	1.00	22	160	30687
125	1.20	22	128	35141
125	1.50	22	128	34954
125	2.00	22	128	34827
125	3.00	22	100	35294
160	1.20	32	160	34523
160	1.50	32	160	35299

DIXI 1539

FRAISES À FENDRE
DENTURE EXTRA-FINE

P. 270





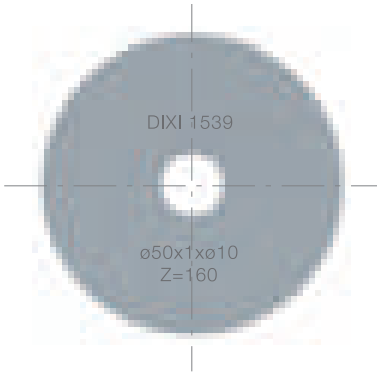
Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

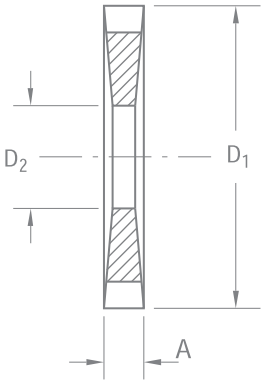
Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile

$D_{1\ \pm0.03}$	$A_{\ \pm0.005}$	$D_{2\ H6}$	Z	CARBURE
10	0.10	3	60	964494
10	0.11	3	60	964499
10	0.12	3	60	964500
10	0.13	3	60	964501
10	0.14	3	60	964502
10	0.15	3	60	964503
10	0.16	3	60	964504
10	0.17	3	60	964505
10	0.18	3	60	964506
10	0.19	3	60	964507
10	0.20	3	60	964508
10	0.22	3	60	965568
10	0.24	3	60	963179
15	0.08	5	80	45005
15	0.10	5	80	40599
15	0.11	5	80	57238
15	0.12	5	80	23559
15	0.13	5	80	46325
15	0.14	5	80	38354
15	0.15	5	80	40588
15	0.16	5	80	28784
15	0.17	5	80	57240
15	0.18	5	80	27224
15	0.19	5	80	46858
15	0.20	5	80	19385
15	0.21	5	80	66021
15	0.22	5	80	60191
15	0.23	5	80	58358
15	0.24	5	80	950356
15	0.25	5	80	19823
15	0.30	5	80	26517
15	0.35	5	80	40299
15	0.40	5	80	19825
15	0.50	5	80	19826
15	0.60	5	80	40300
15	0.70	5	80	40301
15	0.80	5	80	40302
15	0.90	5	80	40303
15	1.00	5	80	26518
15	1.10	5	80	40304
15	1.20	5	80	40305
15	1.40	5	80	40306
15	1.50	5	80	33843

$D_{1\ \pm0.03}$	$A_{\ \pm0.005}$	$D_{2\ H6}$	Z	CARBURE
20	0.12	5	100	40314
20	0.14	5	100	40307
20	0.15	5	100	43684
20	0.16	5	100	4913
20	0.18	5	100	16032
20	0.20	5	100	4914
20	0.25	5	100	28665
20	0.30	5	100	28340
20	0.35	5	100	40317
20	0.40	5	100	38355
20	0.50	5	100	35628
20	0.60	5	100	40320
20	0.70	5	100	40322
20	0.80	5	100	40324
20	0.90	5	100	40326
20	1.00	5	100	40328
20	1.10	5	100	40330
20	1.20	5	100	40332
20	1.40	5	100	40334
20	1.50	5	100	40336
20	0.12	6	100	40315
20	0.14	6	100	40308
20	0.16	6	100	40309
20	0.18	6	100	40310
20	0.20	6	100	40311
20	0.25	6	100	40312
20	0.30	6	100	40313
20	0.35	6	100	40316
20	0.40	6	100	40318
20	0.50	6	100	40319
20	0.60	6	100	40321
20	0.70	6	100	40323
20	0.80	6	100	40325
20	0.90	6	100	40327
20	1.00	6	100	40329
20	1.10	6	100	40331
20	1.40	6	100	40335
20	1.50	6	100	40337

DIXI 1539





P. 270

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile

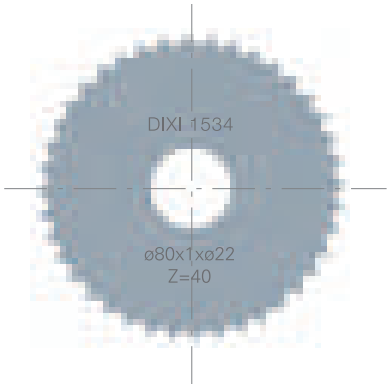
$D_{1\ js10}$	$A_{\pm 0.01}$	$D_{2\ H6}$	Z	CARBURE
25	0.20	6	120	3649
25	0.25	6	120	40339
25	0.30	6	120	40341
25	0.35	6	120	40343
25	0.40	6	120	40345
25	0.50	6	120	40347
25	0.60	6	120	40349
25	0.70	6	120	40351
25	0.80	6	120	40353
25	0.90	6	120	40355
25	1.00	6	120	40357
25	1.10	6	120	40359
25	1.20	6	120	40361
25	1.40	6	120	40363
25	1.50	6	120	40365
25	0.20	8	120	40338
25	0.25	8	120	40340
25	0.30	8	120	40342
25	0.35	8	120	40344
25	0.40	8	120	40346
25	0.50	8	120	40348
25	0.60	8	120	40350
25	0.70	8	120	40352
25	0.80	8	120	40354
25	0.90	8	120	40356
25	1.00	8	120	40358
25	1.10	8	120	40360
25	1.20	8	120	40362
25	1.40	8	120	40364
25	1.50	8	120	40366
30	0.30	8	128	40367
30	0.35	8	128	40368
30	0.40	8	128	40369
30	0.50	8	128	40370
30	0.60	8	128	40371
30	0.70	8	128	40372
30	0.80	8	128	40373
30	0.90	8	128	40374
30	1.00	8	128	40375
30	1.10	8	128	40376
30	1.20	8	128	40377
30	1.40	8	128	40378
30	1.50	8	128	40379

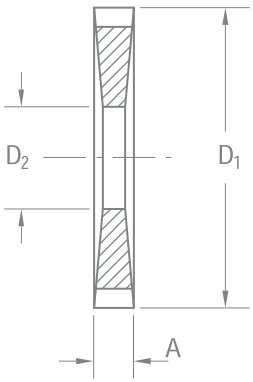
$D_{1\ js10}$	$A_{\pm 0.01}$	$D_{2\ H6}$	Z	CARBURE
40	0.30	8	160	40393
40	0.35	8	160	40395
40	0.40	8	160	40397
40	0.50	8	160	40399
40	0.60	8	160	40401
40	0.70	8	160	40403
40	0.80	8	160	40405
40	0.90	8	160	40407
40	1.00	8	160	40409
40	1.20	8	160	40413
40	1.40	8	160	40415
40	1.50	8	160	40417
40	0.30	10	160	40394
40	0.35	10	160	40396
40	0.40	10	160	40398
40	0.50	10	160	40400
40	0.60	10	160	40402
40	0.70	10	160	40404
40	0.80	10	160	40406
40	0.90	10	160	40408
40	1.00	10	160	40410
40	1.10	10	160	40412
40	1.20	10	160	40414
40	1.50	10	160	40418
50	0.30	10	160	40445
50	0.40	10	160	40447
50	0.50	10	160	40448
50	0.60	10	160	40449
50	0.70	10	160	40450
50	0.80	10	160	40451
50	0.90	10	160	40452
50	1.00	10	160	40453
50	1.20	10	160	40455
50	1.50	10	160	40457

Cobalt Outils Coupants

DIXI 1534

FRAISES À FENDRE
DENTURE HELLER





P. 268

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

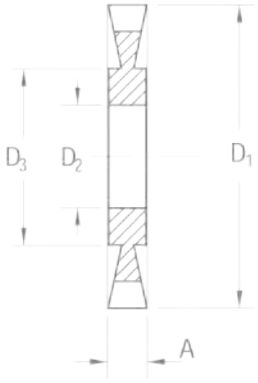
$D_{1\ js12}$	$A_{\pm 0.01}$	$D_{2\ H6}$	Z	CARBURE
20	0.30	5	32	34869
20	0.50	5	24	29836
20	0.60	5	24	29541
20	0.70	5	24	29282
20	0.80	5	24	31598
20	1.00	5	20	39176
20	1.20	5	20	42582
20	1.50	5	20	31267
20	2.00	5	16	39550
25	0.30	8	40	29785
25	0.50	8	32	42427
25	0.60	8	32	42428
25	0.80	8	24	29542
25	0.90	8	24	42430
25	1.00	8	24	30411
25	1.30	8	24	42431
25	1.50	8	20	38204
30	0.30	8	40	42434
30	0.40	8	40	42435
30	0.50	8	40	28826
30	0.60	8	32	3308
30	0.80	8	32	38804
30	1.00	8	32	38806
30	1.20	8	24	36576
30	1.30	8	24	38114
30	1.50	8	24	36577
30	1.60	8	24	38756
30	2.00	8	24	35379
40	0.50	10	40	34152
40	0.80	10	40	29793
40	1.00	10	32	32137
40	2.00	10	24	35310
50	0.50	13	48	14901
50	0.80	13	40	29704
50	1.00	13	40	5111
50	1.50	13	40	39153
50	2.00	13	32	37281

$D_{1\ js12}$	$A_{\pm 0.01}$	$D_{2\ H6}$	Z	CARBURE
63	0.40	16	64	34999
63	0.50	16	64	2872
63	0.60	16	48	37364
63	0.80	16	48	29794
63	1.00	16	48	28979
63	1.30	16	40	40597
63	1.50	16	40	28990
63	1.60	16	40	41638
63	1.80	16	40	37787
63	2.00	16	40	28845
63	2.50	16	32	35380
63	3.00	16	32	28828
80	0.80	22	64	36043
80	1.00	22	48	29219
80	1.20	22	48	35967
80	1.50	22	48	18568
80	2.00	22	40	28829
100	0.80	22	64	35381
100	1.00	22	64	35429
100	1.20	22	64	35431
100	1.50	22	48	25267
100	1.60	22	48	25335
100	2.00	22	48	29408

DIXI 1537 CUTINOX

FRAISES À FENDRE
POUR ACIERS INOXYDABLES

P. 272

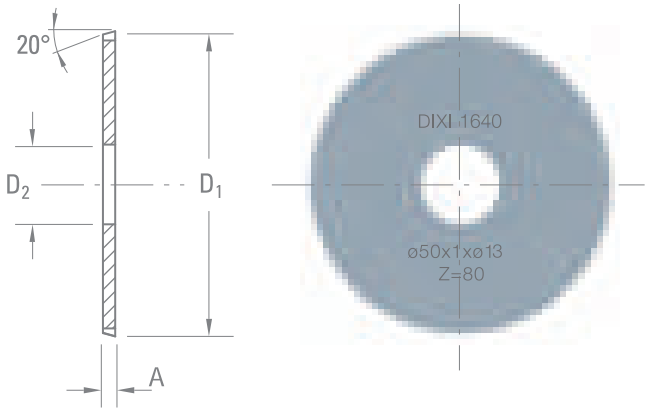


Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Super alliages Ni / Co
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

$D_{1\ js12}$	$A_{\pm 0.01}$	D_3	$D_{2\ H6}$	Z	CUTINOX
50	0.80	30	13	68	954330
50	1.00	30	13	68	954331
63	0.60	40	16	80	60407
63	0.70	40	16	80	995182
63	0.80	40	16	80	60408
63	1.00	40	16	80	60409
80	0.60	50	22	100	60410
80	0.80	50	22	100	60411
80	1.00	50	22	100	60414
100	0.80	60	22	120	60412
100	1.00	60	22	120	60413

DIXI 1640 R + L

FRAISES À TRONÇONNER
À DROITE ET À GAUCHE

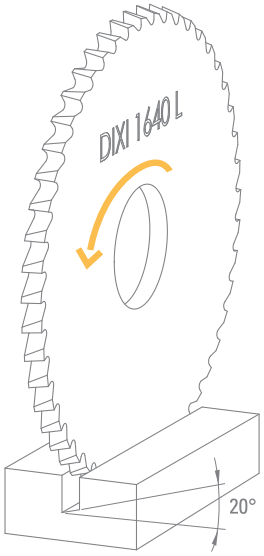


P. 268

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu
Plastique				

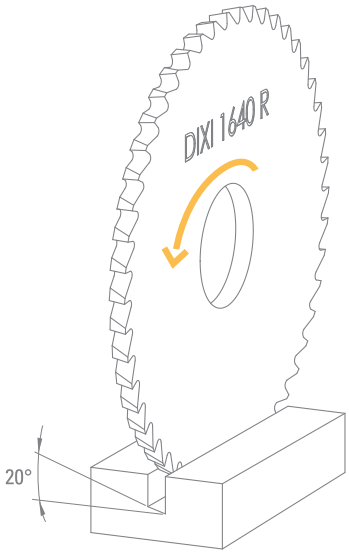
DIXI 1640 L

$D_{1\ js12}$	$A_{\pm 0.01}$	$D_{2\ H6}$	Z	CARBURE	CUTINOX
50	0.50	13	100	977529	977548
50	0.80	13	80	977530	957215
50	1.00	13	80	977531	977549
63	0.50	16	128	977532	977552
63	0.80	16	100	954255	977553
63	1.00	16	100	977533	955787
80	0.80	22	128	975393	975569
80	1.00	22	100	977534	977554
100	0.80	22	100	977535	977555
100	1.00	22	100	977536	977556



DIXI 1640 R

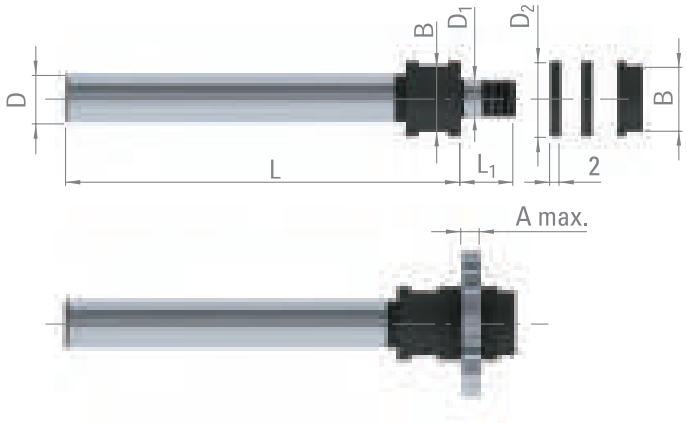
$D_{1\ js12}$	$A_{\pm 0.01}$	$D_{2\ H6}$	Z	CARBURE	CUTINOX
50	0.50	13	100	977520	977537
50	0.80	13	80	977521	977538
50	1.00	13	80	59024	977539
63	0.50	16	128	977522	977540
63	0.80	16	100	977523	977541
63	1.00	16	100	977524	977542
80	0.80	22	128	977525	977543
80	1.00	22	100	977526	977544
100	0.80	22	100	977527	977545
100	1.00	22	100	977528	977547



Cobalt Outils Coupants

DIXI 2713

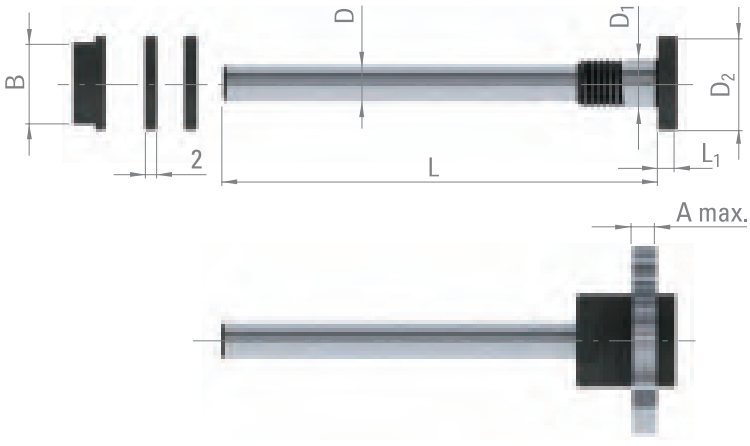
TASSEAUX PORTE-FRAISES AVEC SERRAGE AVANT

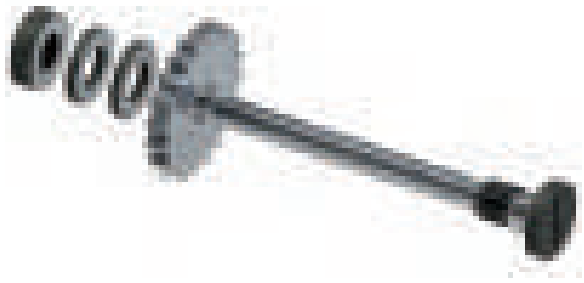


$D_{1\ h6}$	D_{h6}	D_2	L	L_1	B	$A_{max.}$	Art.
3.00	5	5	60	7.0	4	3	968329
5.00	6	10	70	10.0	8	6	953911
5.00	10	10	80	10.0	8	6	953917
6.00	10	12	80	10.5	10	6	953918
8.00	10	15	80	10.0	13	6	954975
8.00	12	15	90	11.0	13	6	953919
10.00	10	18	80	10.5	15	6	954976
10.00	16	18	100	11.5	15	6	953920
13.00	16	22	110	12.0	19	6	953921
16.00	20	26	120	13.0	22	6	953922

DIXI 2714

TASSEAUX PORTE-FRAISES AVEC SERRAGE ARRIÈRE

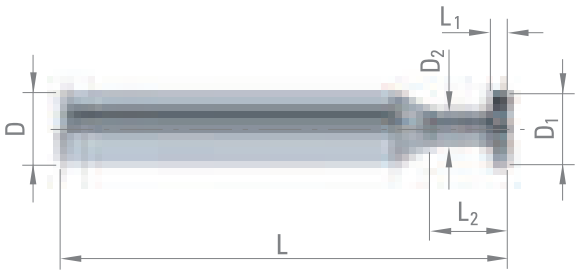




$D_{1\ h6}$	D_{h6}	D_2	L	L_1	B	$A_{max.}$	Art.
5.00	4	10	50	3.0	8	6	953923
6.00	5	12	60	3.0	10	6	953924
8.00	6	15	70	3.0	13	6	953925
8.00	7	15	80	3.0	13	6	953926
10.00	6	18	70	3.5	15	6	953927
10.00	8	18	90	3.5	15	6	953928
13.00	10	22	110	3.5	19	6	953929
16.00	12	26	120	3.5	22	6	953930

FRAISES À T
DENTURE DROITE

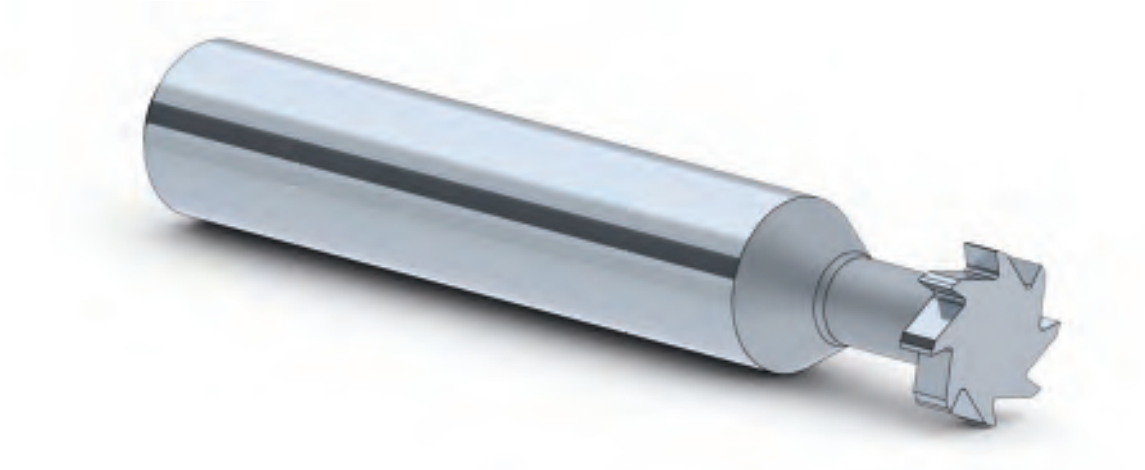
P. 274



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes
Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu
Plastique

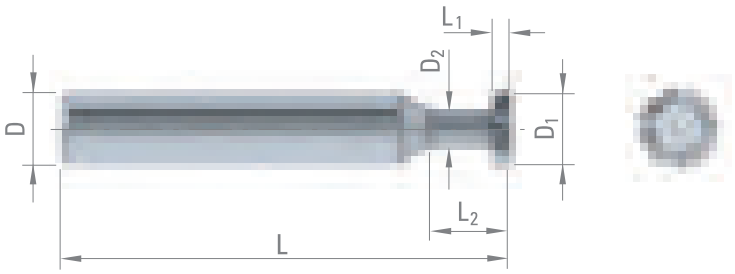
D_1 Ø < 4.0 ±0.01 Ø ≥ 4.0 -0.05/-0.10	L_1	D_2 0/-0.20	L_2 ±0.2	D_{h5}	L	Z	CARBURE	CUTINOX
2.0	0.2 - 1.0	1.0	3.0	4	42	3 - 6	☐	■
3.0	0.2 - 1.5	1.5	3.5	4	42	3 - 6	☐	■
4.0	0.2 - 1.5	2.5	6.0	4	42	3 - 6	☐	■
5.0	0.5 - 1.5	3.0	6.0	5	42	3 - 6	☐	■
6.0	0.5 - 2.5	3.5	7.0	6	42	4 - 8	☐	■
8.0	0.5 - 3.0	4.0	9.0	8	50	5 - 10	☐	■
10.0	0.5 - 4.0	5.0	9.0	10	50	5 - 12	☐	■
12.0	0.5 - 3.5	5.0	11.5	6	50	6 - 16	☐	■
12.0	0.5 - 4.0	6.0	14.0	10	50	6 - 16	☐	■
15.0	0.5 - 5.0	8.0	14.0	10	60	8 - 18	☐	■
16.0	0.5 - 2.9	8.0	14.0	10	60	8 - 20	☐	■
16.0	3.0 - 6.0	8.0	14.0	10	60	8 - 20	☐	■
18.0	0.5 - 2.9	8.0	14.0	10	60	10 - 24	☐	■
18.0	3.0 - 6.0	8.0	14.0	10	60	10 - 24	☐	■
20.0	0.5 - 2.9	8.0	11.0	10	60	10 - 24	☐	■
20.0	3.0 - 6.0	8.0	14.0	10	60	10 - 24	☐	■
25.0	0.5 - 3.9	8.0	13.0	10	60	10 - 32	☐	■
25.0	4.0 - 8.0	8.0	18.0	10	60	10 - 32	☐	■
30.0	0.5 - 3.9	8.0	13.0	10	60	10 - 36	☐	■
30.0	4.0 - 8.0	8.0	18.0	10	60	10 - 36	☐	■

Produit semi-fini, disponible de stock, adaptable selon vos besoins.



FRAISES À T
DENTURE ALTERNÉE

P. 274



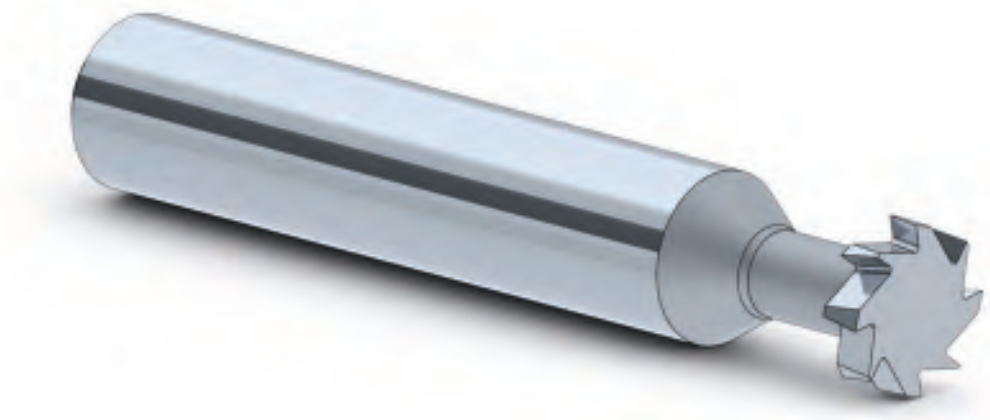
Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

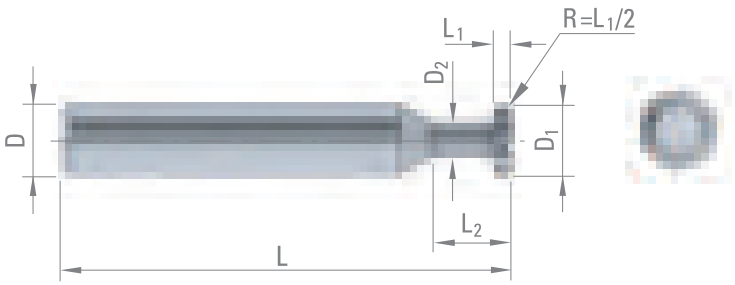
D_1 Ø < 4.0 ±0.01 Ø ≥ 4.0 -0.05/-0.10	L_1	D_2 0/-0.20	L_2 ±0.2	D_{h5}	L	Z	CARBURE	CUTINOX
4.0	0.5 - 3.0	2.5	6.0	4	42	4 - 6	☐	■
5.0	0.5 - 3.0	3.0	6.0	5	42	4 - 6	☐	■
6.0	0.5 - 3.0	3.5	7.0	6	42	4 - 6	☐	■
8.0	1.0 - 4.0	4.0	9.0	8	50	4 - 8	☐	■
10.0	1.0 - 4.0	5.0	9.0	10	50	6 - 10	☐	■
12.0	0.5 - 3.5	5.0	11.5	6	50	6 - 10	☐	■
12.0	1.0 - 5.0	6.0	14.0	10	50	6 - 10	☐	■
15.0	1.5 - 6.0	8.0	14.0	10	60	8 - 14	☐	■
16.0	1.5 - 3.9	8.0	14.0	10	60	8 - 14	☐	■
16.0	4.0 - 6.0	8.0	14.0	10	60	8 - 14	☐	■
18.0	1.5 - 3.9	8.0	14.0	10	60	10 - 16	☐	■
18.0	4.0 - 6.0	8.0	14.0	10	60	10 - 16	☐	■
20.0	1.5 - 3.9	8.0	11.0	10	60	10 - 18	☐	■
20.0	4.0 - 6.0	8.0	14.0	10	60	10 - 18	☐	■
25.0	1.5 - 4.9	8.0	13.0	10	60	10 - 24	☐	■
25.0	5.0 - 10.0	8.0	18.0	10	60	14 - 24	☐	■
30.0	1.5 - 4.9	8.0	13.0	10	60	18 - 28	☐	■
30.0	5.0 - 10.0	8.0	18.0	10	60	18 - 28	☐	■

Produit semi-fini, disponible de stock, adaptable selon vos besoins.



FRAISES À T
1/2 RONDES, CONVEXES

P. 274



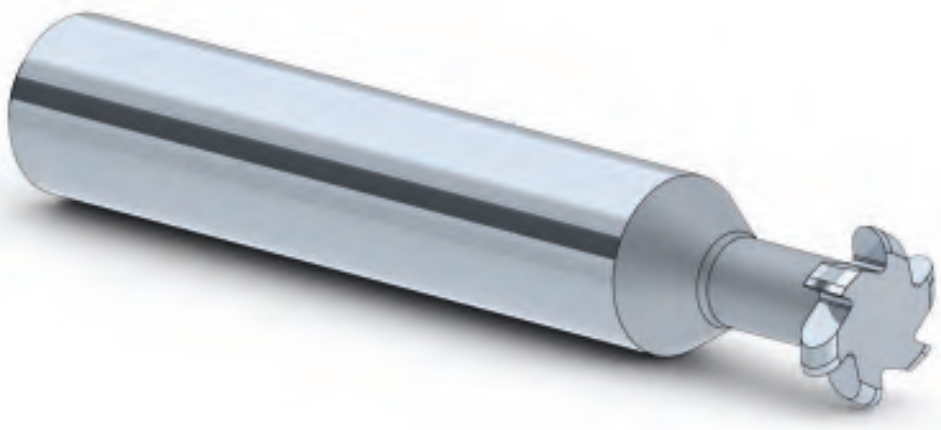
Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

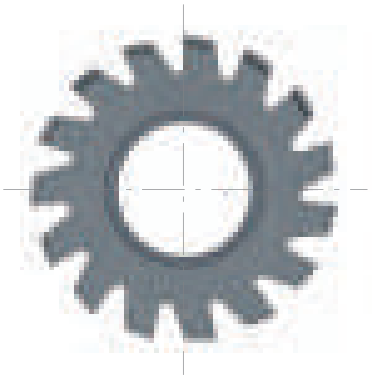
D_1 Ø < 4.0 ±0.03 Ø ≥ 4.0 -0.05/-0.10	L_1	D_2 0/-0.20	L_2 ±0.2	D_{h5}	L	Z	CARBURE	CUTINOX
4.0	0.4 - 1.5	1.5	6.0	4	42	4	☐	■
6.0	0.5 - 2.0	3.5	7.0	6	42	6	☐	■
8.0	1.0 - 3.0	4.0	9.0	8	50	6	☐	■
10.0	1.0 - 4.0	5.0	9.0	10	50	8	☐	■
12.0	0.5 - 3.5	5.0	11.5	6	50	10	☐	■
12.0	1.0 - 5.0	6.0	14.0	10	50	10	☐	■
16.0	1.0 - 6.0	8.0	14.0	10	60	12	☐	■

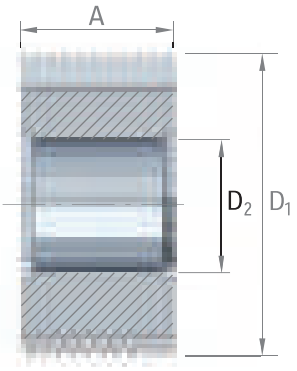
Produit semi-fini, disponible de stock, adaptable selon vos besoins.



Autres possibilités de dentures et formes page 267

FRAISES-MÈRES
EPICYCLOÏDALES ET DÉVELOPPANTES





Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Titane, alliage de titane

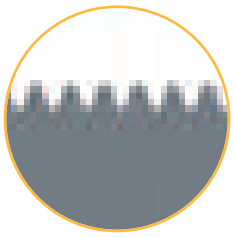
Alliage Cu Argent Or | Alliage Cu difficile | Alu

D_1	A	$D_{2\ H3}$	Z	CARBURE
	4	3.5	12	☐
6	5	3.5	12	☐
	6	3.5	12	☐
	4	3.5	15	☐
8	5	3.5	12	☐
	6	3.5	12	☐
	4	3.5	15	☐
	5	3.5	12	☐
10	6	3.5	12	☐
	6	4.5	12	☐
	6	4.5	15	☐
	6	3.5	15	☐
	6	4.5	12	☐
	6	4.5	15	☐
	6	5.0	12	☐
	6	5.0	15	☐
12	6	6.0	12	☐
	6	6.0	15	☐
	8	4.5	15	☐
	8	5.0	15	☐
	8	6.0	15	☐
	10	8.0	12	☐
	6	8.0	12	☐
	6	8.0	15	☐
	8	8.0	12	☐
16	8	8.0	15	☐
	10	8.0	12	☐
	10	8.0	15	☐
	16	8.0	12	☐
	6	6.0	12	☐
	6	8.0	12	☐
	6	8.0	15	☐
	8	8.0	12	☐
18	8	8.0	15	☐
	10	8.0	12	☐
	10	8.0	15	☐
	12	8.0	12	☐
	12	8.0	15	☐
	6	8.0	12	☐
	6	8.0	15	☐
	8	8.0	12	☐
	8	8.0	15	☐
	10	8.0	12	☐
24	10	8.0	15	☐
	12	8.0	12	☐
	12	8.0	15	☐
	16	8.0	12	☐
	16	8.0	15	☐
	16	10.0	12	☐

Module (m) = 0.04 - 1.00

DIXI 1675
Epicycloïdale

DIXI 1680
Développante

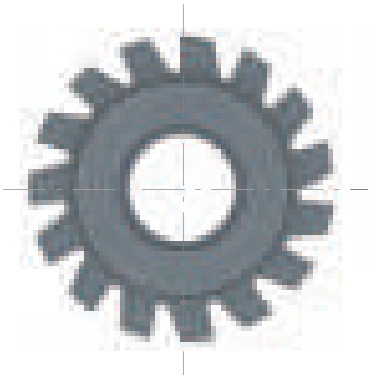


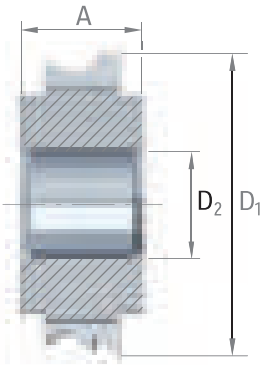
Profil logarithmique réaffûtable

Revêtements sur demande

Cobalt Outils Coupants

FRAISES-MÈRES
INDEX





Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Titane, alliage de titane

Alliage Cu Argent Or | Alliage Cu difficile | Alu

D_1	A	$D_{2\ H3}$	Z	CARBURE
6	4	3.5	12	☐
6	5	3.5	12	☐
6	6	3.5	12	☐
8	5	3.5	12	☐
8	6	3.5	12	☐
10	5	3.5	12	☐
10	6	3.5	12	☐
10	6	4.5	12	☐
12	6	4.5	12	☐
12	6	5.0	12	☐
12	6	6.0	12	☐
16	6	8.0	12	☐
16	8	8.0	12	☐
16	10	8.0	12	☐
18	6	6.0	12	☐
18	8	8.0	12	☐
18	10	8.0	12	☐
24	6	8.0	12	☐
24	8	8.0	12	☐
24	10	8.0	12	☐
24	12	8.0	12	☐

Revêtements sur demande

FRAISES-MÈRES

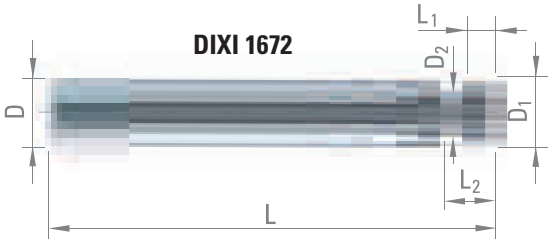
Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Titane, alliage de titane

Alliage Cu Argent Or | Alliage Cu difficile | Alu

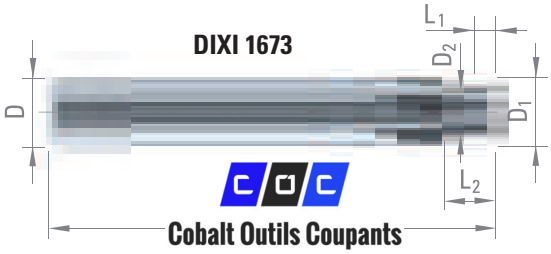
D_1	L_1	D_2	L_2	D_{h5}	L	Z	CARBURE
4.0	4.0	2.4	4.0	4	40	6-10	☐
5.0	4.0	3.0	4.0	5	40	6-10	☐
5.0	4.0	4.0	4.0	6	40	6-10	☐
6.0	4.0	4.0	4.0	6	40	6-10	☐

D_1	L_1	D_2	L_2	D_{h5}	L	Z	CARBURE
4.0	2.0	2.4	4.0	4	40	5	☐
5.0	2.0	3.0	4.0	5	40	6	☐
5.0	2.0	4.0	4.0	6	40	6	☐
6.0	2.0	4.0	4.0	6	40	6	☐

DIXI 1672

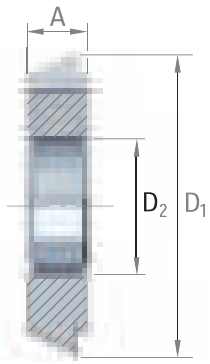


DIXI 1673



Cobalt Outils Coupants

FRAISES-MÈRES
TAILLAGE FRONTAL

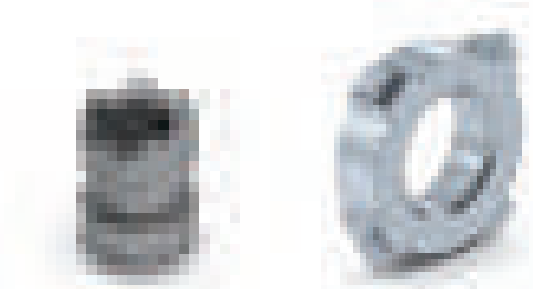


Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Titane, alliage de titane

Alliage Cu Argent Or | Alliage Cu difficile | Alu

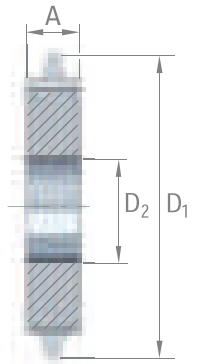
D_1	A	$D_{2\ H3}$	Z	CARBURE
10	2	4.5	4	☐
10	2	4.5	5	☐
10	2	4.5	6	☐
12	2	4.5	2	☐
12	2	4.5	3	☐
12	2	4.5	4	☐
12	2	4.5	5	☐
12	2	4.5	6	☐

Module (m) = 0.03 - 1.00



Revêtements sur demande

FRAISES MODULE
TAILLAGE DENT PAR DENT

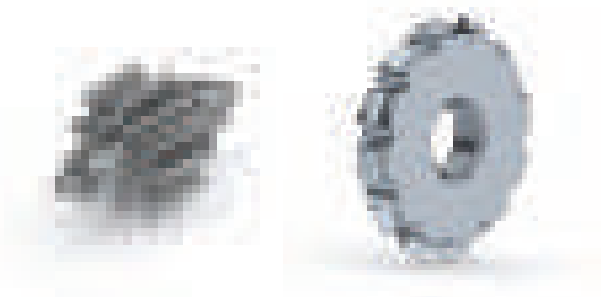


Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Titane, alliage de titane

Alliage Cu Argent Or | Alliage Cu difficile | Alu

D_1	A	$D_{2\ H3}$	Z	CARBURE
6	4	3.5	12	☐
8	5	3.5	12	☐
8	6	3.5	12	☐
10	2	3.5	12	☐
10	2	4.5	12	☐
10	2	5.0	12	☐
10	5	3.5	12	☐
10	6	3.5	12	☐
12	2	3.5	12	☐
12	2	4.5	12	☐
12	6	5.0	12	☐
16	6	8.0	12	☐
18	6	8.0	12	☐
24	6	8.0	12	☐

Module (m) = 0.03 - 1.00

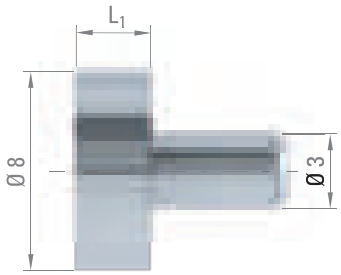


Revêtements sur demande

Cobalt Outils Coupants

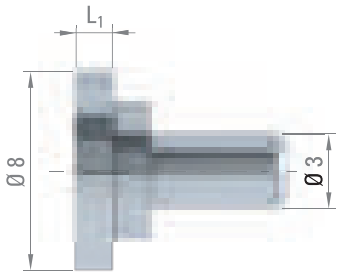
CIBLES DE ROULAGE

DIXI 0700-A



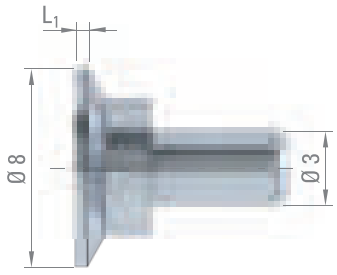
Epaisseur L_1 de 3 à 5 mm
Jusqu'à 8 encoches

DIXI 0700-B



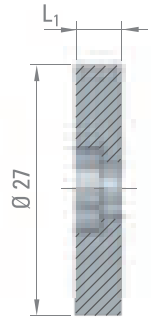
Epaisseur L_1 de 1 à 2.99 mm
Jusqu'à 8 encoches

DIXI 0700-C



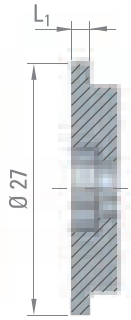
Epaisseur L_1 de 0.05 à 0.99 mm
Jusqu'à 8 encoches

DIXI 0710-D



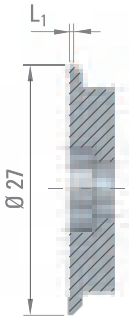
Epaisseur L_1 5 mm
Jusqu'à 24 encoches

DIXI 0710-E



Epaisseur L_1 de 1 à 4 mm
Jusqu'à 24 encoches

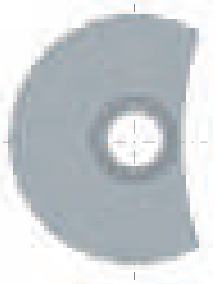
DIXI 0710-F



Epaisseur L_1 de 0.05 à 0.99 mm
Jusqu'à 24 encoches

Formes de cibles spéciales pour DIXI 0710

G



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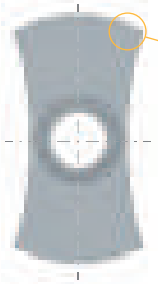
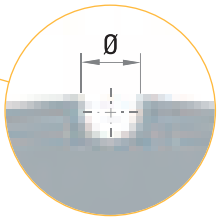


Formes d'encoches

U



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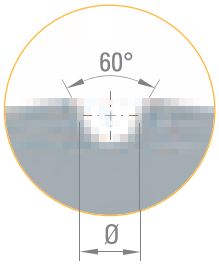


A remplir pour la commande, svp.

	Nombre de cibles	Réf. DIXI	Epaisseur L_1	Forme de cible **G** ou **H**	Forme d'encoche **U** ou **V**	Ø encoches	Nombre d'encoches
Ex.	1	0710-E	1	G	U	0.20	3
					V	0.24	5

INFOS DE LA PIÈCE À TAILLER

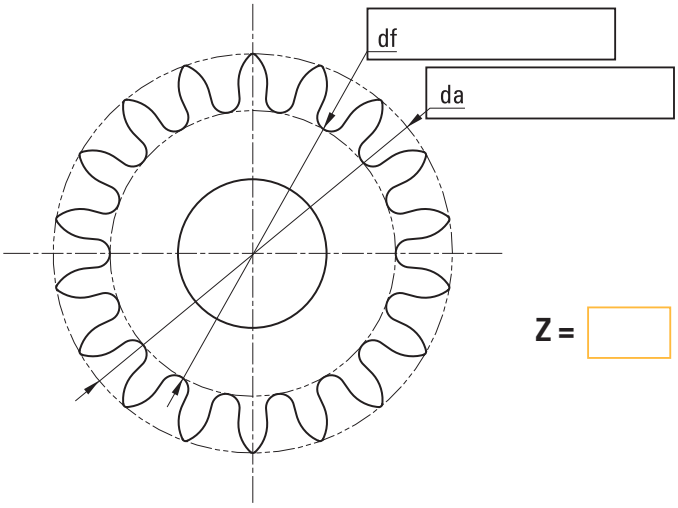
Norme

Plan

DXF

Matière à usiner

Module (m)



Z =

DIXI 1675

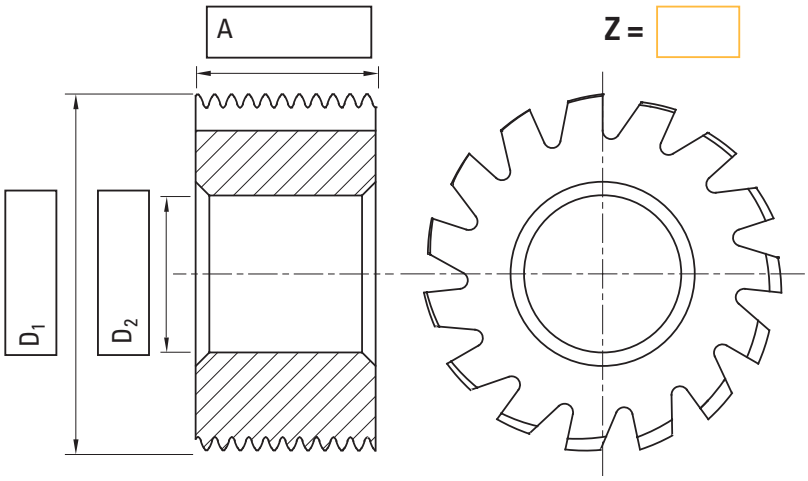
Z =

Angle d'hélice (profil) **R** ☐ **L** ☐

Nombre de filets

Revêtement

Quantité



DIXI 1672

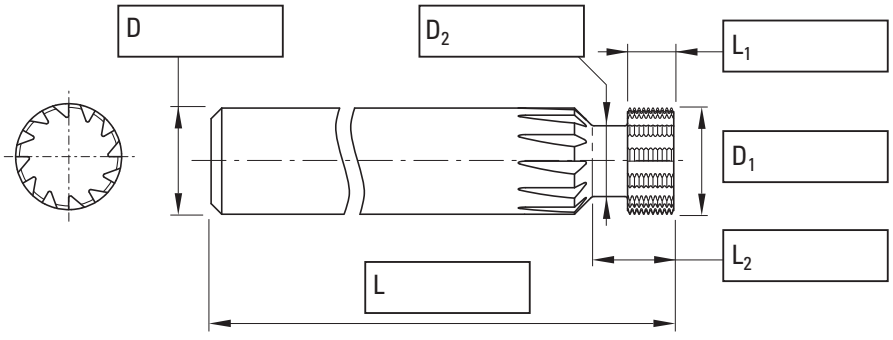
Z =

Angle d'hélice (profil) **R** ☐ **L** ☐

Nombre de filets

Revêtement

Quantité



Remarques

INFOS DE LA PIÈCE À TAILLER

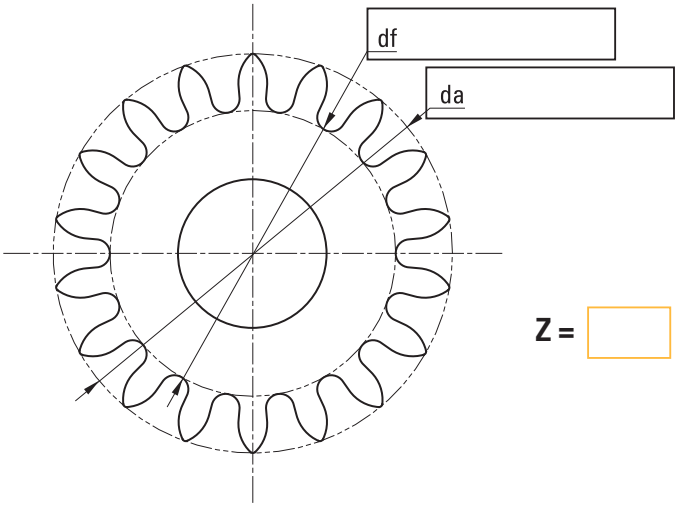
Norme

Plan

DXF

Matière à usiner

Module (m)

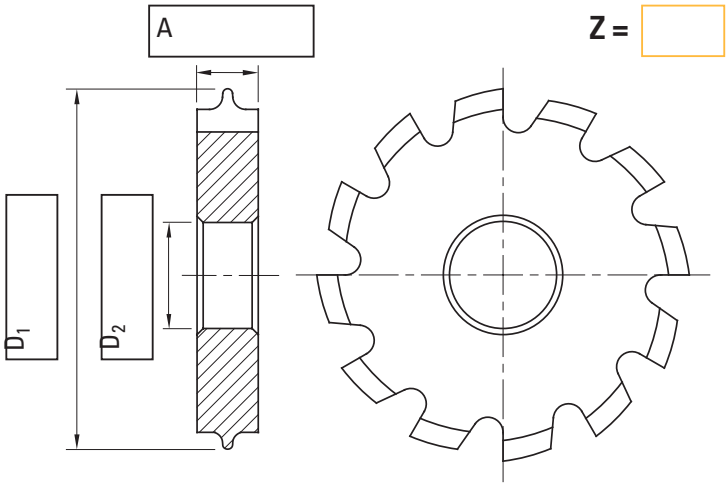


Z =

DIXI 1674

Revêtement

Quantité



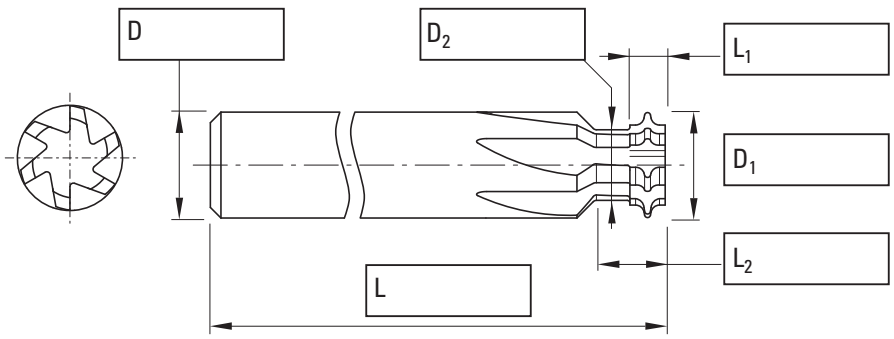
Z =

DIXI 1673

Z =

Revêtement

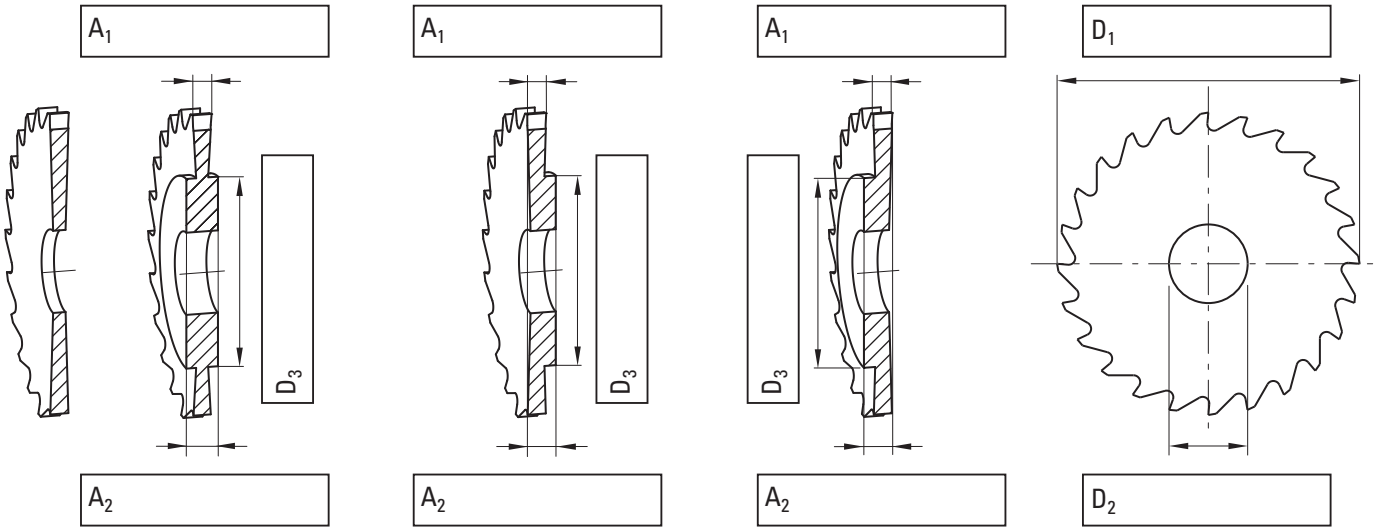
Quantité



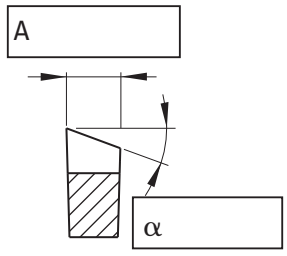
Remarques

Quantités

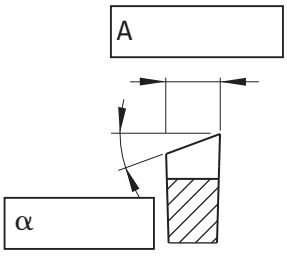
Matière à usiner



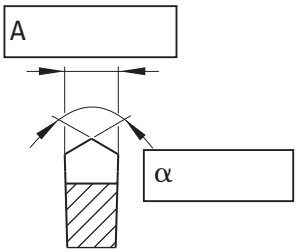
1640 L



1640 R



1643



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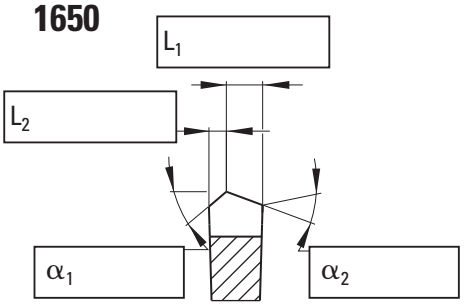

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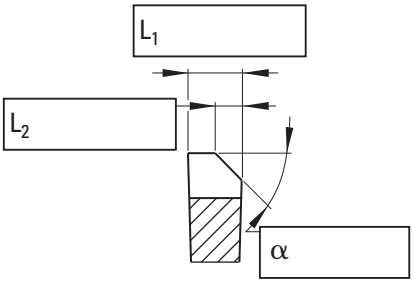

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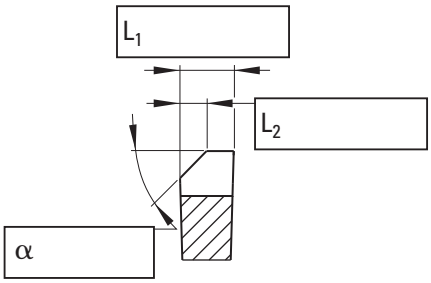

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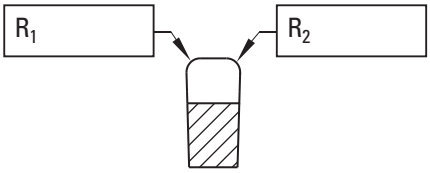

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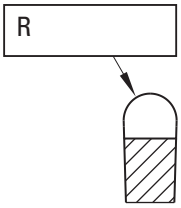

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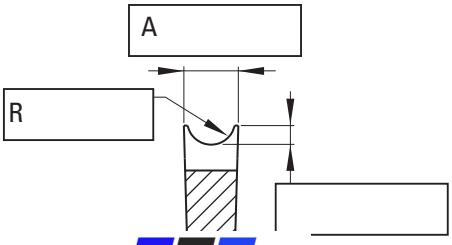

Cobalt Outils Coupants

FRAISES À T

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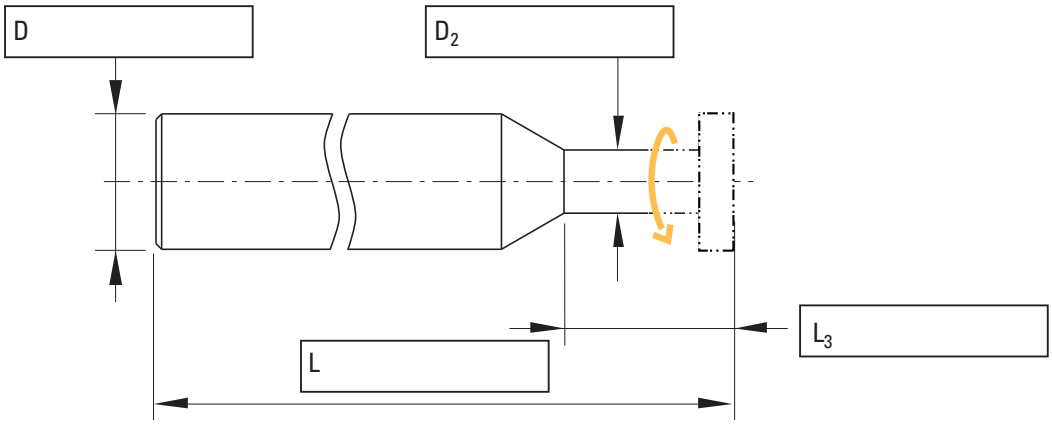
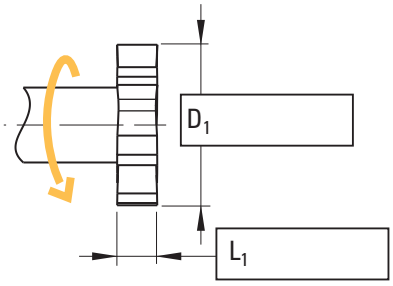
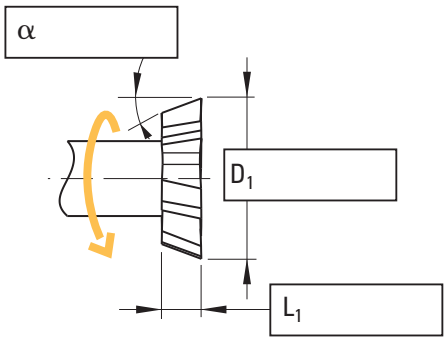
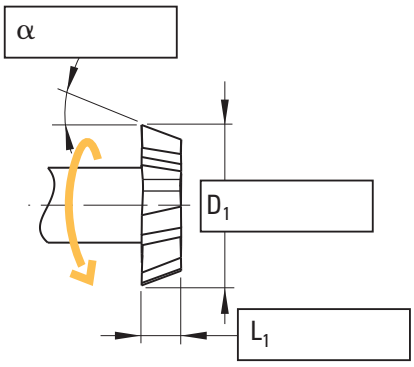
Quantités

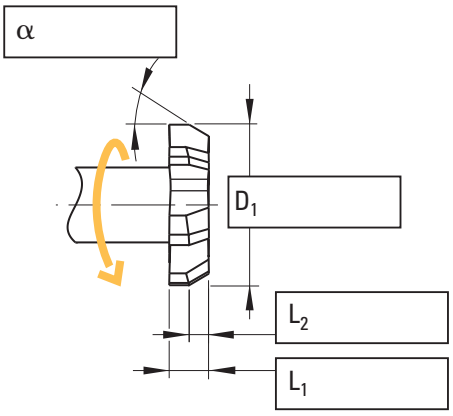
Matière à usiner

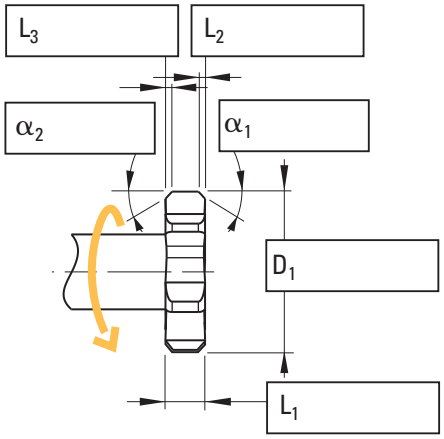


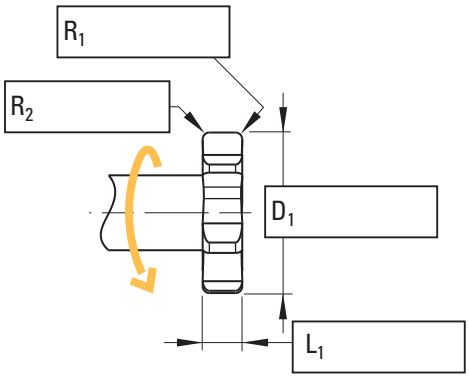


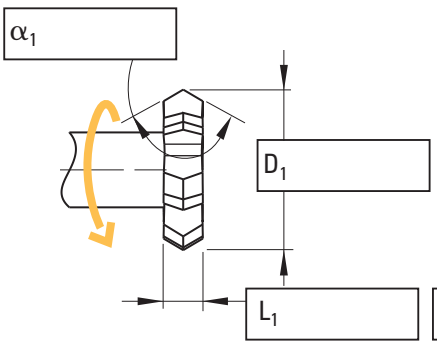


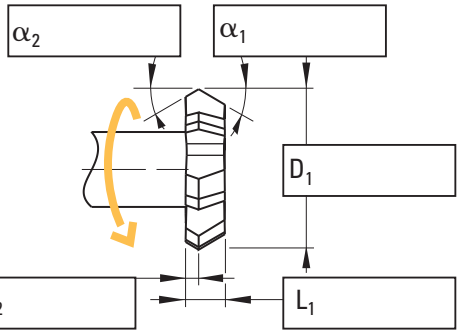


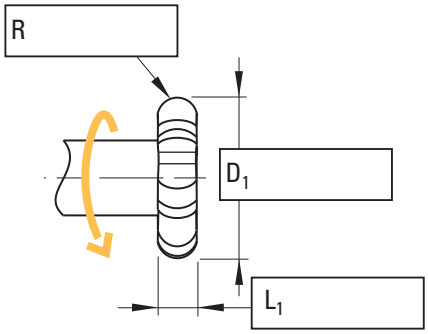












CONSULTEZ NOTRE FORMULAIRE DE DEMANDE D'OFFRES EN LIGNE SUR
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Cobalt Outils Coupants

CONDITIONS DE COUPE

Matières à usiner			CARBURE Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**80**	140
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**50**	80
P	Acier de décolletage au plomb		**120**	160
P	Acier fortement allié	700 – 1500 N/mm²	**50**	80
M	Acier inoxydable	400 – 700 N/mm²	**80**	120
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**50**	80
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**80**	140
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**50**	80
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**50**	80
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**20**	30
S	Titane, alliage de titane		**30**	70
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**200**	450
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**150**	300
N	Alliage d'aluminium	Si < 8%	**200**	500
N	Fonte d'aluminium	Si > 8%	**200**	450
N	Plastique		**130**	200
N	Or, argent		**140**	180

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times z$$

Avance par dent **fz [mm]**

Ø D_1 15 - 30	Ø D_1 30 - 50	Ø D_1 50 - 80	Ø D_1 80 - 125	Ø D_1 125 - 160
0.002 - 0.004	**0.003** - 0.007	**0.004** - 0.008	**0.004** - 0.012	**0.004** - 0.012
0.001 - 0.004	**0.002** - 0.005	**0.002** - 0.008	**0.003** - 0.012	**0.003** - 0.012
0.003 - 0.007	**0.004** - 0.008	**0.005** - 0.010	**0.005** - 0.010	**0.005** - 0.012
0.001 - 0.004	**0.002** - 0.005	**0.002** - 0.008	**0.003** - 0.012	**0.003** - 0.012
0.001 - 0.004	**0.002** - 0.005	**0.002** - 0.008	**0.003** - 0.012	**0.003** - 0.012
0.001 - 0.004	**0.002** - 0.005	**0.002** - 0.008	**0.003** - 0.012	**0.003** - 0.012
0.002 - 0.004	**0.003** - 0.007	**0.004** - 0.01	**0.004** - 0.01	**0.004** - 0.01
0.001 - 0.004	**0.002** - 0.005	**0.002** - 0.008	**0.003** - 0.012	**0.003** - 0.012
0.002 - 0.004	**0.003** - 0.007	**0.004** - 0.01	**0.004** - 0.01	**0.004** - 0.01
0.001 - 0.004	**0.002** - 0.005	**0.002** - 0.008	**0.003** - 0.012	**0.003** - 0.012
0.001 - 0.004	**0.002** - 0.005	**0.002** - 0.008	**0.003** - 0.012	**0.003** - 0.012
0.003 - 0.007	**0.004** - 0.008	**0.005** - 0.010	**0.005** - 0.010	**0.005** - 0.012
0.001 - 0.004	**0.002** - 0.005	**0.002** - 0.008	**0.003** - 0.012	**0.003** - 0.012
0.003 - 0.007	**0.004** - 0.008	**0.005** - 0.010	**0.005** - 0.010	**0.005** - 0.012
0.003 - 0.007	**0.004** - 0.008	**0.005** - 0.010	**0.005** - 0.010	**0.005** - 0.012
0.003 - 0.010	**0.004** - 0.010	**0.005** - 0.012	**0.005** - 0.012	**0.005** - 0.015
0.003 - 0.007	**0.004** - 0.008	**0.005** - 0.010	**0.005** - 0.010	**0.005** - 0.012

CONDITIONS DE COUPE

Matières à usiner			CARBURE Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**80**	140
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**50**	80
P	Acier de décolletage au plomb		**120**	160
P	Acier fortement allié	700 – 1500 N/mm²	**50**	80
M	Acier inoxydable	400 – 700 N/mm²	**80**	120
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**50**	80
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**80**	140
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**50**	80
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**50**	80
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**20**	30
S	Titane, alliage de titane		**30**	70
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**200**	450
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**150**	300

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times z$$

Avance par dent **fz [mm]**

Ø D_1 15 - 30	Ø D_1 30 - 40	Ø D_1 40 - 50	
0.0003 - 0.003	**0.0003** - 0.003	**0.0003** - 0.003	
0.0003 - 0.003	**0.0003** - 0.003	**0.0003** - 0.003	
0.0004 - 0.004	**0.0004** - 0.004	**0.0004** - 0.004	
0.0002 - 0.002	**0.0002** - 0.002	**0.0002** - 0.002	
0.0002 - 0.002	**0.0002** - 0.002	**0.0002** - 0.002	
0.0002 - 0.002	**0.0002** - 0.002	**0.0002** - 0.002	
0.0004 - 0.004	**0.0004** - 0.004	**0.0004** - 0.004	
0.0003 - 0.003	**0.0003** - 0.003	**0.0003** - 0.003	
0.0003 - 0.003	**0.0003** - 0.003	**0.0003** - 0.003	
0.0002 - 0.002	**0.0002** - 0.002	**0.0002** - 0.002	
0.0003 - 0.003	**0.0003** - 0.003	**0.0003** - 0.003	
0.0005 - 0.005	**0.0005** - 0.005	**0.0005** - 0.005	
0.0004 - 0.004	**0.0004** - 0.004	**0.0004** - 0.004	

CONDITIONS DE COUPE

Matières à usiner			CUTINOX Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**150**	200
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**120**	170
P	Acier de décolletage au plomb		**150**	200
P	Acier fortement allié	700 – 1500 N/mm²	**100**	150
M	Acier inoxydable	400 – 700 N/mm²	**180**	250
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**100**	150
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**250**	350
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**180**	250
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**150**	250
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**50**	100
S	Titane, alliage de titane		**80**	150
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**250**	400
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**180**	300
N	Alliage d'aluminium	Si < 8%	**250**	400
N	Fonte d'aluminium	Si > 8%	**200**	350
N	Plastique		**100**	250
N	Or, argent		**180**	300

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times z$$

Avance par dent **fz [mm]**

Ø D_1 50	Ø D_1 63	Ø D_1 80	Ø D_1 100	
0.002 - 0.008	**0.002** - 0.008	**0.002**- 0.008	**0.002** - 0.008	
0.002 - 0.007	**0.002** - 0.007	**0.002** - 0.007	**0.002** - 0.007	
0.002 - 0.009	**0.002** - 0.009	**0.002** - 0.009	**0.002** - 0.009	
0.002 - 0.006	**0.002** - 0.006	**0.002** - 0.006	**0.002** - 0.006	
0.002 - 0.006	**0.002** - 0.006	**0.002** - 0.006	**0.002** - 0.006	
0.001 - 0.005	**0.001** - 0.005	**0.001** - 0.005	**0.001** - 0.005	
0.003 - 0.009	**0.003** - 0.009	**0.003** - 0.009	**0.003** - 0.009	
0.002 - 0.008	**0.002** - 0.008	**0.002** - 0.008	**0.002** - 0.008	
0.002 - 0.008	**0.002** - 0.008	**0.002** - 0.008	**0.002** - 0.008	
0.001 - 0.004	**0.001** - 0.004	**0.001** - 0.004	**0.001** - 0.004	
0.002 - 0.008	**0.002** - 0.008	**0.002** - 0.008	**0.002** - 0.008	
0.003 - 0.011	**0.003** - 0.011	**0.003** - 0.011	**0.003** - 0.011	
0.003 - 0.010	**0.003** - 0.010	**0.003** - 0.010	**0.003** - 0.010	
0.003 - 0.011	**0.0033** - 0.011	**0.003** - 0.011	**0.003** - 0.011	
0.002 - 0.009	**0.002** - 0.009	**0.002** - 0.009	**0.002** - 0.009	
0.003 - 0.010	**0.004** - 0.010	**0.005** - 0.012	**0.005** - 0.012	
0.002 - 0.009	**0.002** - 0.009	**0.002** - 0.009	**0.002** - 0.009	

CONDITIONS DE COUPE

Matières à usiner			CARBURE Vc [m/min]		CUTINOX Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**70**	100		
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**70**	90		
P	Acier de décolletage au plomb				**70**	100
P	Acier fortement allié	700 – 1500 N/mm²			**40**	70
M	Acier inoxydable	400 – 700 N/mm²			**60**	90
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**40**	70
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**70**	100	**90**	110
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	70	**70**	90
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	100	**90**	110
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy			**25**	35
S	Titane, alliage de titane		**30**	45		
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**140**	160		
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**120**	140	**170**	190
N	Alliage d'aluminium	Si < 8%	**180**	260	**230**	340
N	Fonte d'aluminium	Si > 8%	**140**	160	**210**	230
N	Plastique		**240**	260	**300**	340
N	Or, argent		**140**	160	**200**	220

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times Z$$

Avance par dent **fz [mm]**

Ø D_1 2.00 - 5.00	Ø D_1 5.00 - 8.00	Ø D_1 8.00 - 12.00	Ø D_1 12.00 - 15.00	Ø D_1 15.00 - 20.00	Ø D_1 20.00 - 25.00	Ø D_1 25.00 - 30.00
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060
0.003 - 0.007	**0.005** - 0.011	**0.007** - 0.015	**0.010** - 0.019	**0.015** - 0.028	**0.020** - 0.040	**0.030** - 0.060

FILETAGE

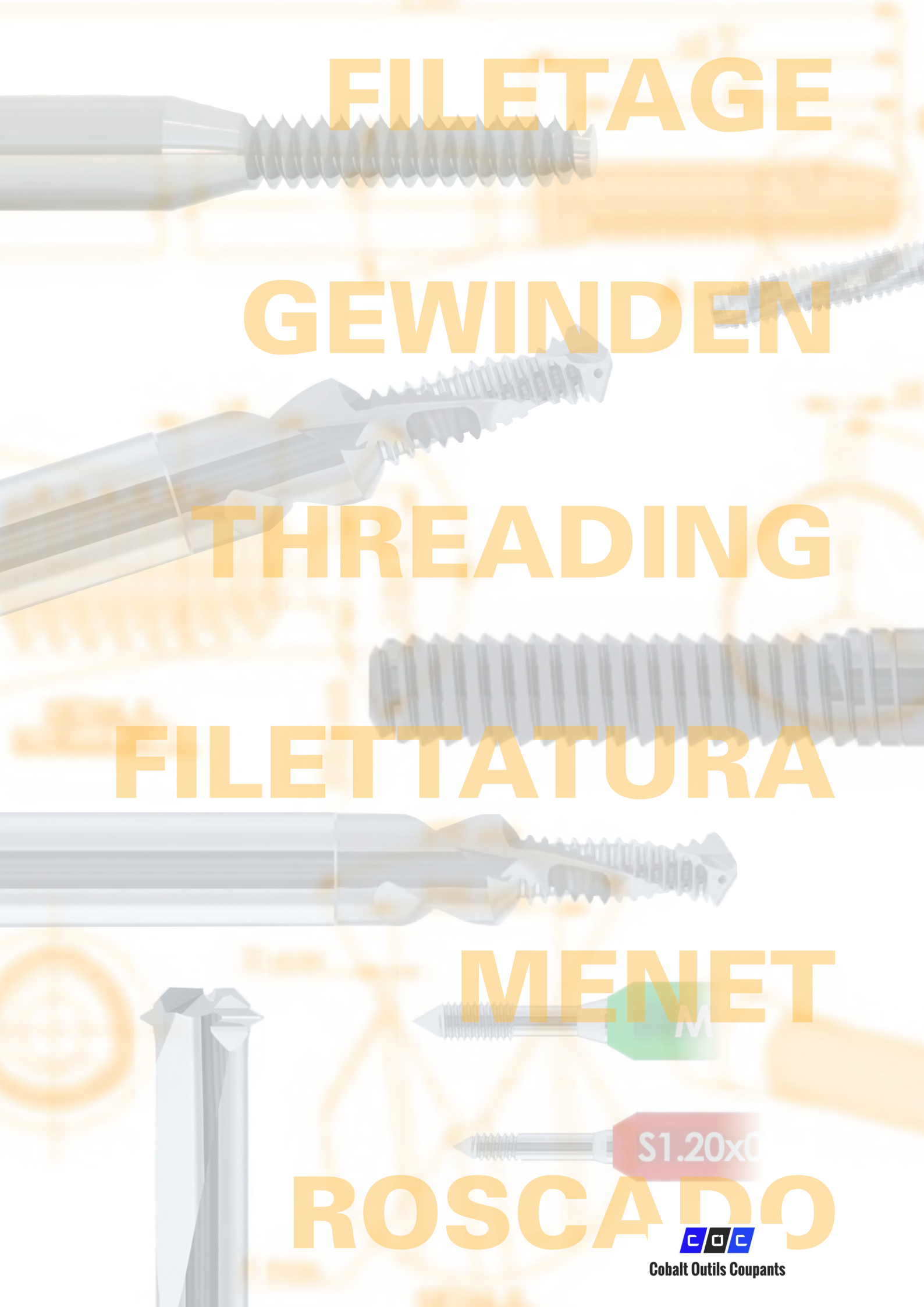
GEWINDEN

THREADING

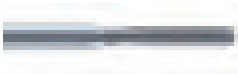
FILETTATURA

MENET

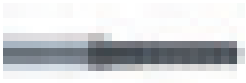
ROSCADO



Cobalt Outils Coupants


SÉLECTION DES OUTILS À FILETER 278

MICRO-TARAUDS COUPANTS 286


MICRO-TARAUDS À REFOULER 289

OUTILS À TOURBILLONNER 291

TOURBILLONNEURS-PERCEURS 295

FILETAGE AUTOFREIN 297

FRAISES À POLYGONER 300

FRAISES À FILETER 301

JAUGES FILETÉES 311

TAMPONS LISSES 313

SETS DE JAUGES 314

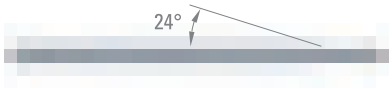
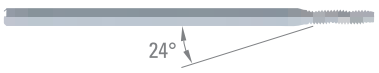
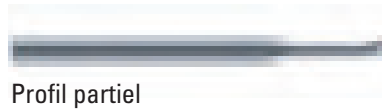
INFORMATIONS 315

CONDITIONS DE COUPE 322

Cobalt Outils Coupants

SÉLECTION DES OUTILS À FILETER

✓ = article de stock

		Z	Page		☐ CARBURE	TiAIN	CUTINOX	DI-TOP	
MICRO-TARAUDS COUPANTS									
DIXI 1712 R S 0.30 - M 2.00		3	286	NIHS 06, ISO 60°	✓				
DIXI 1712 L S 0.60 - S 1.00		3	286	NIHS 06	✓				
DIXI 1713 S 0.40 - S 1.40		3	287	NIHS 06	✓				
DIXI 1708 S 0.30 - S 1.40		3	287	NIHS 06	✓			✓	
DIXI 1710 S 0.30 - S 1.40		3	288	NIHS 06	✓				
MICRO-TARAUDS À REFOULER									
DIXI 1715 S 0.40 - S 1.40 M 1.00 - M 2.20		-	289	NIHS 06, ISO 60°				✓	
DIXI 1716 S 0.40 - S 1.40 M 1.00 - M 1.40		-	290	NIHS 06, ISO 60°				✓	
OUTILS À TOURBILLONNER									
DIXI 1739 S 0.30 - S 1.40		1	291	NIHS 06	✓				
DIXI 1738 S 0.50 - M 3.00		3	292	NIHS 06, ISO 60°	✓		✓		
DIXI 1730-D M 0.80 - M 10.00		3 - 6	293	ISO 60°	✓	✓			
DIXI 1735-D UNF N°1 - UNC 1/2"		3 - 6	294	UN 60°	✓	✓			

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
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SÉLECTION DES OUTILS À FILETER

✓ = article de stock

		Z	Page		☐ CARBURE	CUTINOX	DAC	DI-TOP	
TOURBILLONNEURS-PERCEURS									
DIXI 1740 S 0.80 - M 10.00		1 - 3	295	NIHS 06 ISO 60°	✓	✓			
DIXI 1742-TC M 5.00 - M 12.00		2	296	ISO 60°			✓		
DIXI 1744-TC M 5.00 - M 12.00		4	296	ISO 60°		✓			
FILETAGE AUTOFREIN									
DIXI 1712-AF/BT S 0.70 - M 1.40		3	297	DIXI NORM	✓				
DIXI 1716-AF/BT S 0.70 - M 1.40		-	297	DIXI NORM				✓	
DIXI 1738-AF/BT S 0.70 - M 3.00 Profil partiel		3	298	DIXI NORM	✓				
DIXI 1740-AF/BT S 0.80 - M 3.00		1 - 2	298	DIXI NORM	✓				
DIXI 1718-AF/BT S 0.70 - M 3.00		-	299	DIXI NORM	✓				
DIXI 1719-AF/BT S 0.70 - M 3.00		-	299	DIXI NORM	✓				
FRAISES À FILETER PAR POLYGONAGE									
DIXI 1660 S 0.40 - S 1.40	Fond plat 	94	300	NIHS 06	✓				
DIXI 1661 S 0.40 - S 1.40	Fond rayonné 	94	300	NIHS 06	✓				

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
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SÉLECTION DES OUTILS À FILETER

✓ = article de stock

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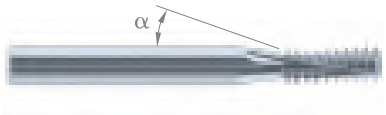
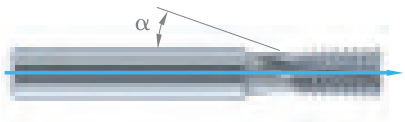
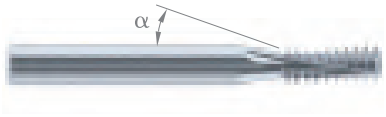
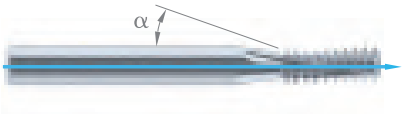
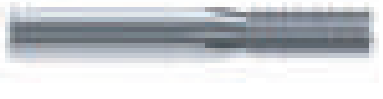
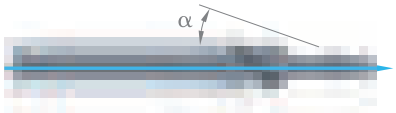
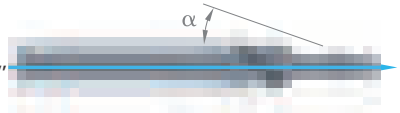
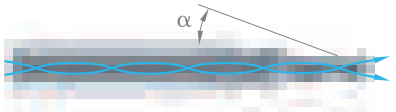
FRAISES À FILETER									
DIXI 7910 M 1.4 - M 24.0		2 - 4	301	ISO 60°	✓	✓			
DIXI 7908 M 2.0 - M 24.0		3 - 6	302	ISO 60°	✓	✓			
DIXI 7913-TC M 10 - M 30		3 - 4	303	ISO 60°	✓		✓		
DIXI 7920 UNC N°2 - UNC 3/4"		2 - 4	304	UN 60°	✓	✓			
DIXI 7918 UNF N°2 - UNC 3/4"		3 - 5	305	UN 60°	✓	✓			
DIXI 7923-TC UNJF N°10 - UNJF 1/2"		3 - 4	306	UNJ 60°	✓				
DIXI 7940 G1/16" - G1"		3 - 4	306	BSP 55°	✓				
DIXI 7946 R1/16" - R2-1/2"		3 - 4	307	BSPT 55°	✓				
DIXI 7950 NPT 1/4" - NPT 2"		3 - 4	307	NPT 60°	✓				
DIXI 7956 NPTF 1/16" - NPTF 2"		3 - 4	308	NPTF 60°	✓				
FRAISES À FILETER ET CHANFREINER									
DIXI 7915-TC M 4.0 - M 16.0		3 - 4	308	ISO 60°	✓		✓		
DIXI 7925-TC UNC N°8 - UNC 5/8"		3 - 4	309	UN 60°	✓		✓		
FRAISES À PERCER, FILETER ET CHANFREINER									
DIXI 7985-HH M 4.0 - M 16.0		2	310	ISO 60°	✓		✓		

Cobalt Outils Coupants

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
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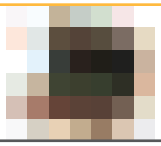
SÉLECTION DES OUTILS À FILETER

✓ = article de stock

		Z	Page		☐ CARBURE				
JAUGES FILETÉES									
DIXI 1718-NT R+L **R** S 0.30 - S 1.40 **L** S 0.50 - S 1.20		-	311	NIHS 06	✓				
DIXI 1718-RT S 0.30 - S 1.40		-	311	NIHS 06	✓				
DIXI 1719-NT/RT R+L **R** S 0.30 - S 1.40 **L** S 0.50 - S 1.20		-	311	NIHS 06	✓				
DIXI 1718-M M 1.00 - M 3.00		-	312	ISO 1502	✓				
DIXI 1719-M M 1.00 - M 3.00		-	312	ISO 1502	✓				
TAMPONS LISSES									
DIXI 0418 S 0.30 - S 1.40		-	313	NIHS 06	✓				
DIXI 0419 S 0.30 - S 1.40		-	313	NIHS 06	✓				
SET DE JAUGES									
		-	314	NIHS 06					

○ bien ◎ excellent

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique

DIXI 1712

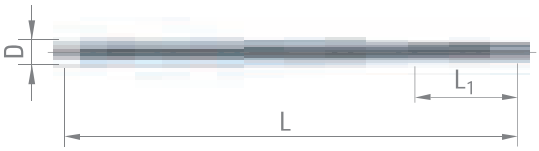
MICRO-TARAUDS COUPANTS

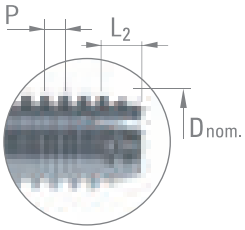
Z = 3

NIHS 06 | ISO 60°

P. 316
P. 320

Acier + Pb | Alliage Cu Argent Or





D nom.	Pas P	Ø perç. laiton (noyau 5H)	Ø perç. acier (noyau 6H)	L_1	L_2	D_{h5}	L	NIHS-3G CARBURE	NIHS-3G+ CARBURE	ISO2-6H CARBURE
S 0.30	0.08	0.23	0.24	1.0	0.25	1.5	30	62326		
S 0.35	0.09	0.27	0.28	1.5	0.27	1.5	30	965642		
S 0.40	0.10	0.32	0.33	2.0	0.30	1.5	30	62327	62328	
S 0.50	0.125	0.40	0.42	2.5	0.38	1.5	30	62329	62330	
S 0.60	0.15	0.48	0.50	3.0	0.45	1.5	30	62331	62332	
S 0.70	0.175	0.56	0.58	3.0	0.52	1.5	30	62334	62335	
S 0.80	0.20	0.64	0.66	3.5	0.60	1.5	30	62337	62338	
S 0.90	0.225	0.72	0.74	4.0	0.67	1.5	30	62342	62343	
S 1.00	0.25	0.80	0.82	4.0	0.76	1.5	30	62345	62346	
S 1.20	0.25	1.00	1.02	5.0	0.76	1.5	30	62348		
S 1.40	0.30	1.15	1.17	5.0	0.85	1.5	30	62351		
M 1.50	0.30	1.26	1.28	6.0	0.85	2.0	38			62353
M 2.00	0.40	1.65	1.68	11.0	1.00	2.5	43			62354

n Vitesse de rotation [tr/min] **500 - 2500**

DIXI 1712 L

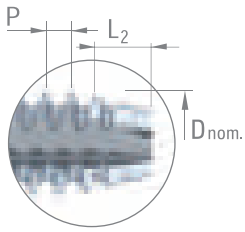
MICRO-TARAUDS COUPANTS COUPE À GAUCHE

Z = 3

NIHS 06

P. 316
P. 320

Acier + Pb | Alliage Cu Argent Or



D nom.	Pas P	Ø perç. laiton (noyau 5H)	Ø perç. acier (noyau 6H)	L_1	L_2	D_{h5}	L	NIHS-3G CARBURE
S 0.60	0.15	0.49	0.51	4.0	0.45	1.5	30	969369
S 0.70	0.175	0.57	0.59	4.0	0.52	1.5	30	969370
S 0.80	0.20	0.65	0.67	4.0	0.60	1.5	30	969371
S 0.90	0.225	0.73	0.75	4.0	0.67	1.5	30	969372
S 1.00	0.25	0.81	0.83	4.0	0.75	1.5	30	969373

n Vitesse de rotation [tr/min] **500 - 2500**

DIXI 1713

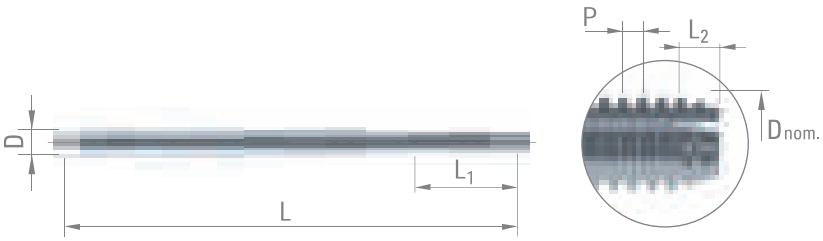
MICRO-TARAUDS COUPANTS
HAUTE PERFORMANCE

Z = 3

P. 316
P. 320

NIHS 06

Acier + Pb | Alliage Cu Argent Or | Alliage Cu difficile | Alu



D nom.	Pas P	Ø perç. laiton (noyau 5H)	Ø perç. acier (noyau 6H)	L_1	L_2	D_{h5}	L	NIHS-3G CARBURE
S 0.40	0.10	0.33	0.34	2.5	0.30	2.0	30	969795
S 0.50	0.125	0.41	0.43	3.5	0.38	2.0	30	969474
S 0.60	0.15	0.49	0.51	4.0	0.45	2.0	30	969497
S 0.70	0.175	0.57	0.59	4.0	0.52	2.0	30	969498
S 0.80	0.20	0.65	0.67	4.0	0.60	2.0	30	969499
S 0.90	0.225	0.73	0.75	4.0	0.67	2.0	30	969500
S 1.00	0.25	0.81	0.83	4.0	0.76	2.0	30	969501
S 1.20	0.25	1.01	1.03	5.0	0.76	2.0	30	969502
S 1.40	0.30	1.16	1.18	5.0	0.85	2.0	30	969503

n Vitesse de rotation [tr/min] **500 - 2500**

DIXI 1708

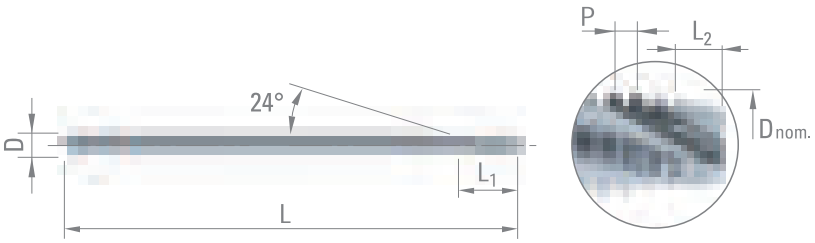
MICRO-TARAUDS COUPANTS
HÉLICE À DROITE, COUPE À DROITE

Z = 3

P. 316
P. 320

NIHS 06

Acier de décolletage | Alliage Cu Argent Or | Alliage Cu difficile



D nom.	Pas P	Ø perç. laiton (noyau 5H)	Ø perç. acier (noyau 6H)	L_1	L_2	D_{h5}	L	NIHS-3G CARBURE	NIHS-3G DI-TOP
S 0.30	0.08	0.23	0.24	1.0	0.25	1.5	30	986881	303483
S 0.35	0.09	0.27	0.28	1.5	0.27	1.5	30	986882	303484
S 0.40	0.10	0.32	0.33	2.5	0.30	1.5	30	986883	303485
S 0.50	0.125	0.40	0.42	3.5	0.38	1.5	30	984405	303486
S 0.60	0.15	0.48	0.50	4.0	0.45	1.5	30	983633	303487
S 0.70	0.175	0.56	0.58	4.0	0.52	1.5	30	986884	303488
S 0.80	0.20	0.64	0.66	4.0	0.60	1.5	30	986885	303489
S 0.90	0.225	0.72	0.74	4.0	0.67	1.5	30	986886	303490
S 1.00	0.25	0.80	0.82	4.0	0.76	1.5	30	986887	303491
S 1.20	0.25	1.00	1.02	5.0	0.76	1.5	30	986888	303492
S 1.40	0.30	1.15	1.17	5.0	0.85	1.5	30	986889	303493

n Vitesse de rotation [tr/min] **500 - 2500**

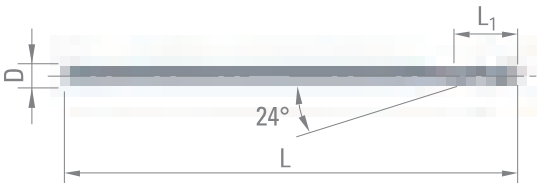
DIXI 1710

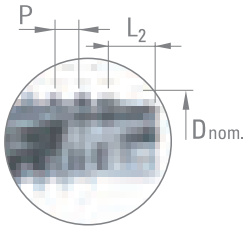
MICRO-TARAUDS COUPANTS
HÉLICE À GAUCHE, COUPE À DROITE

Z = 3

P. 316
P. 320

NIHS 06





Acier de décolletage | Alliage Cu Argent Or | Alliage Cu difficile

D nom.	Pas P	Ø perç. laiton (noyau 5H)	Ø perç. acier (noyau 6H)	L_1	L_2	D_{h5}	L	NIHS-3G CARBURE
S 0.30	0.08	0.23	0.24	1.0	0.25	1.5	30	986890
S 0.35	0.09	0.27	0.28	1.5	0.27	1.5	30	986891
S 0.40	0.10	0.32	0.33	2.5	0.30	1.5	30	986892
S 0.50	0.125	0.40	0.42	3.5	0.38	1.5	30	986893
S 0.60	0.15	0.48	0.50	4.0	0.45	1.5	30	986894
S 0.70	0.175	0.56	0.58	4.0	0.52	1.5	30	986895
S 0.80	0.20	0.64	0.66	4.0	0.60	1.5	30	986896
S 0.90	0.225	0.72	0.74	4.0	0.67	1.5	30	986897
S 1.00	0.25	0.80	0.82	4.0	0.76	1.5	30	986898
S 1.20	0.25	1.00	1.02	5.0	0.76	1.5	30	986899
S 1.40	0.30	1.15	1.17	5.0	0.85	1.5	30	986900

n Vitesse de rotation [tr/min] **500 - 2500**

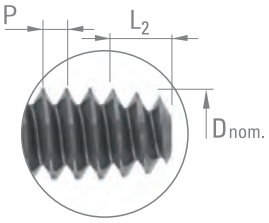
DIXI 1715 DI-TOP

MICRO-TARAUDS À REFOULER

P. 316
P. 320

NIHS 06

ISO 60°



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Alliage Cu Argent Or | Alliage Cu difficile | Alu

D nom.	Pas P	Ø perç. laiton	Ø perç. acier	L_1	L_2	D_{h5}	L	NIHS-3GX DI-TOP
S 0.40	0.10	0.36 - 0.37	0.37 - 0.38	2.0	0.30	1.5	30	974654
S 0.50	0.125	0.45 - 0.46	0.46 - 0.47	2.0	0.37	1.5	30	972407
S 0.60	0.15	0.54 - 0.55	0.55 - 0.56	2.4	0.45	1.5	30	970899
S 0.70	0.175	0.62 - 0.63	0.63 - 0.64	2.8	0.52	1.5	30	970900
S 0.80	0.20	0.70 - 0.71	0.71 - 0.72	3.2	0.60	1.5	30	970901
S 0.90	0.225	0.81 - 0.82	0.82 - 0.83	3.6	0.67	1.5	30	970902
S 1.00	0.25	0.89 - 0.90	0.90 - 0.91	4.0	0.75	1.5	30	305793
S 1.20	0.20	1.11 - 1.12	1.12 - 1.13	4.8	0.60	1.5	30	305794
S 1.20	0.25	1.08 - 1.09	1.09 - 1.10	4.8	0.75	1.5	30	305795
S 1.40	0.20	1.30 - 1.32	1.32 - 1.33	5.6	0.60	1.5	30	305796
S 1.40	0.30	1.27 - 1.28	1.28 - 1.29	5.6	0.90	1.5	30	305797

D nom.	Pas P	Ø perç. laiton	Ø perç. acier	L_1	L_2	D_{h5}	L	4HX DI-TOP	5HX DI-TOP	6HX DI-TOP
M 1.00	0.25	0.89 - 0.90	0.90 - 0.91	4.0	0.75	1.5	30		970903	
M 1.20	0.20	1.11 - 1.12	1.12 - 1.13	4.8	0.60	1.5	30	978772		
M 1.20	0.25	1.09 - 1.10	1.10 - 1.11	4.8	0.75	1.5	30		970904	
M 1.40	0.20	1.31 - 1.32	1.32 - 1.33	5.6	0.60	1.5	30	973645		
M 1.40	0.30	1.27 - 1.28	1.28 - 1.29	5.6	0.90	1.5	38		970905	
M 1.50	0.30	1.37 - 1.38	1.38 - 1.39	6.0	0.90	2.0	38			971650
M 1.60	0.35	1.45 - 1.46	1.46 - 1.47	6.0	1.05	2.0	38			970906
M 1.80	0.20	1.71 - 1.72	1.72 - 1.73	7.0	0.60	2.0	38	975090		
M 2.00	0.20	1.91 - 1.92	1.92 - 1.93	8.0	0.60	2.5	43	976259		
M 2.00	0.40	1.83 - 1.84	1.83 - 1.84	8.0	1.20	2.5	43			970907
M 2.20	0.25	2.09 - 2.10	2.10 - 2.11	8.0	0.75	2.5	43		974959	

n Vitesse de rotation [tr/min] **500 - 2500**

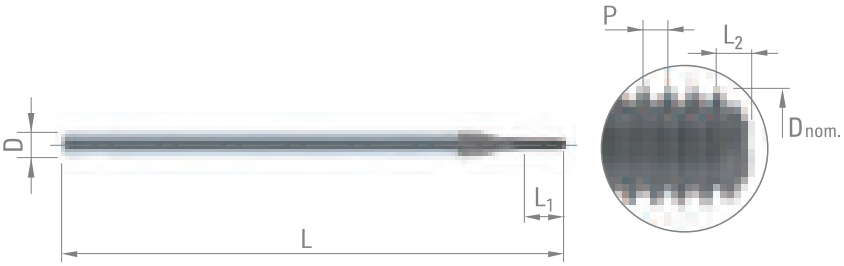
DIXI 1716 DI-TOP

MICRO-TARAUDS À REFOULER

P. 316
P. 320

NIHS 06 | ISO 60°

Acier + Pb | Alliage Cu Argent Or | Alliage Cu difficile | Alu



D nom.	Pas P	Ø perç. laiton	Ø perç. acier	L_1	L_2	D_{h5}	L	NIHS-3GX DI-TOP
S 0.40	0.10	0.36 - 0.37	0.37 - 0.38	1.6	0.20	1.5	30	992498
S 0.50	0.125	0.45 - 0.46	0.46 - 0.47	2.0	0.25	1.5	30	992509
S 0.60	0.15	0.54 - 0.55	0.55 - 0.56	2.4	0.30	1.5	30	992514
S 0.70	0.175	0.62 - 0.63	0.63 - 0.64	2.8	0.35	1.5	30	992515
S 0.80	0.20	0.70 - 0.71	0.71 - 0.72	3.2	0.40	1.5	30	992516
S 0.90	0.225	0.81 - 0.82	0.82 - 0.83	3.6	0.45	1.5	30	992517
S 1.00	0.25	0.89 - 0.90	0.90 - 0.91	4.0	0.50	1.5	30	305799
S 1.20	0.20	1.11 - 1.12	1.12 - 1.13	4.8	0.40	1.5	30	305800
S 1.20	0.25	1.08 - 1.09	1.09 - 1.10	4.8	0.50	1.5	30	305801
S 1.40	0.20	1.31 - 1.32	1.32 - 1.33	5.6	0.40	1.5	30	305802
S 1.40	0.30	1.27 - 1.28	1.28 - 1.29	5.6	0.60	1.5	30	305804

D nom.	Pas P	Ø perç. laiton	Ø perç. acier	L_1	L_2	D_{h5}	L	4HX DI-TOP	5HX DI-TOP
M 1.00	0.25	0.89 - 0.90	0.90 - 0.91	4.0	0.50	1.5	30		992518
M 1.20	0.20	1.11 - 1.12	1.12 - 1.13	4.8	0.40	1.5	30	992519	
M 1.20	0.25	1.08 - 1.09	1.09 - 1.10	4.8	0.50	1.5	30		992520
M 1.40	0.20	1.31 - 1.32	1.32 - 1.33	5.6	0.40	1.5	30	992521	
M 1.40	0.30	1.27 - 1.28	1.28 - 1.29	5.6	0.60	1.5	38		992522

n Vitesse de rotation [tr/min] **500 - 2500**

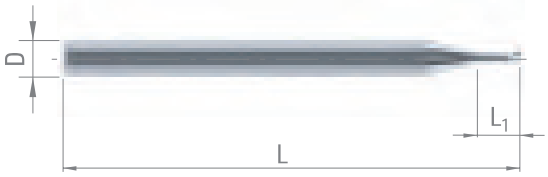
DIXI 1739

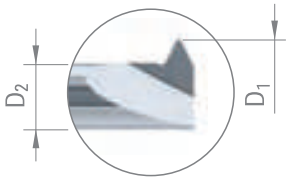
OUTILS À TOURBILLONNER
PROFIL PARTIEL

Z = 1

P. 320 P. 322

NIHS 06





Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Titane, alliage de titane

Alliage Cu Argent Or | Alliage Cu difficile | Alu | Plastique

D nom.	Pas	Ø perçage	D_1	L_1	D_2	D_{h5}	L	CARBURE
S 0.30	0.08	0.23	0.21	0.70	0.12	3	38	961147
S 0.35	0.09	0.27	0.25	0.90	0.15	3	38	984299
S 0.40	0.10	0.32	0.29	0.90	0.18	3	38	961149
S 0.50	0.125	0.40	0.37	1.20	0.23	3	38	961163
S 0.60	0.15	0.48	0.44	1.50	0.27	3	38	961164
S 0.70	0.175	0.56	0.52	1.80	0.32	3	38	961165
S 0.80	0.20	0.64	0.59	2.00	0.36	3	38	961166
S 0.90	0.225	0.72	0.67	2.20	0.41	3	38	961167
S 1.00	0.25	0.80	0.74	2.40	0.46	3	38	961168
S 1.20	0.25	1.00	0.94	3.00	0.66	3	38	961169
S 1.40	0.30	1.15	1.08	3.30	0.74	3	38	961170

DIXI 1738

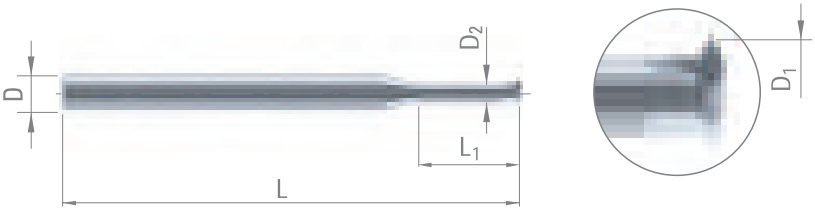
OUTILS À TOURBILLONNER
PROFIL PARTIEL

Z = 3

P. 320 P. 322

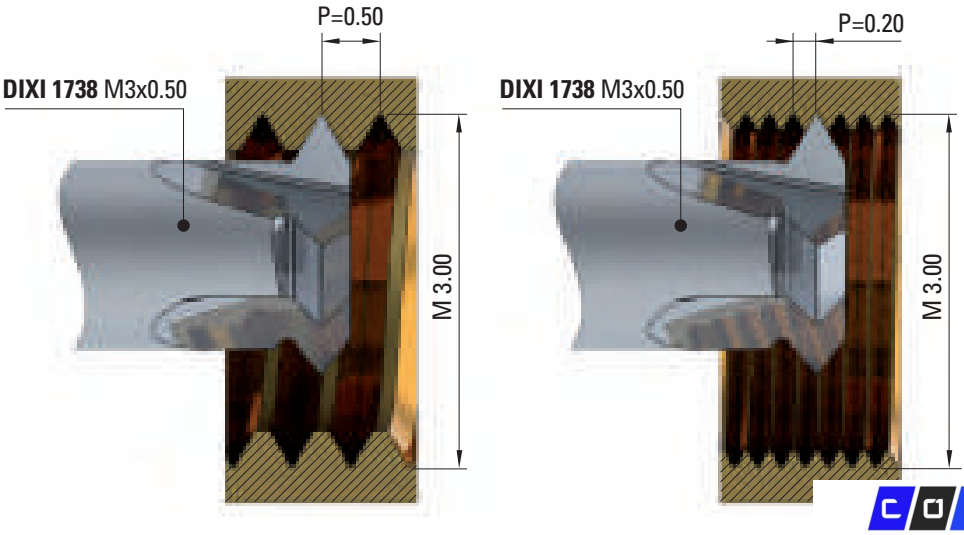
NIHS 06 ISO 60°

Acier fort. allié | Acier inox aust. | Super alliages Ni / Co | Titane, alliage de titane



D nom.		Pas	Ø perçage ISO	Ø perçage NIHS	D_1	L_1	D_2	D_{h5}	L	CARBURE	CUTINOX
	S 0.50	0.125		0.40	0.37	0.85	0.23	3	38	306969	318544
	S 0.60	0.150		0.48	0.44	1.25	0.27	3	38	318623	318545
	S 0.70	0.175		0.56	0.52	1.80	0.31	3	38	984319	985156
	S 0.80	0.20		0.64	0.59	2.30	0.35	3	38	965997	966008
	S 0.90	0.225		0.72	0.67	2.50	0.38	3	38	965996	966007
M 1.00	S 1.00	0.25	0.75	0.80	0.71	2.80	0.37	3	38	964485	966006
M 1.20	S 1.20	0.25	0.95	1.00	0.91	3.40	0.57	3	38	965664	965943
M 1.40	S 1.40	0.30	1.10	1.15	1.05	4.00	0.64	3	38	965988	965998
M 1.40		0.20	1.22		1.15	4.00	0.77	3	38	965989	965999
M 1.60		0.35	1.30		1.19	4.50	0.65	3	38	965990	966000
M 1.80		0.35 (0.20)	1.50 1.60		1.39	5.10	0.71	3	38	965991	966001
M 2.00		0.40 (0.20)	1.65 1.80		1.53	5.60	0.78	3	38	965992	966002
M 2.20		0.45 (0.25)	1.80 1.95		1.67	6.20	0.88	3	38	965993	966003
M 2.50		0.45 (0.35) (0.25) (0.20)	2.10 2.15 2.25 2.30		1.97	7.00	1.17	3	38	965994	966004
M 3.00		0.50 (0.35) (0.25) (0.20)	2.50 2.65 2.75 2.80		2.40	8.40	1.60	3	38	965995	966005

Un seul outil pour usiner plusieurs pas (exemple, de 0.20 à 0.50)



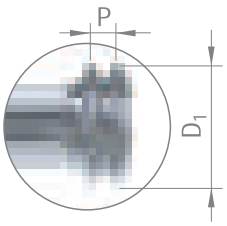
OUTILS À TOURBILLONNER
PROFIL COMPLET

Z = 3-6

P. 320 P. 322

ISO 60°

DIXI 1730-2D L_1 = 2 x D nom.
DIXI 1730-3D L_1 = 3 x D nom.



Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes
Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu
Graphite | Plastique

D nom.	Pas P	D_1	D_2	D_{h5}	L	Z	L_1	DIXI	CARBURE	TiAlN
M 0.80	0.20	0.57	0.25	3	38	3	1.85	1730-2D	958853	960446
							2.60	1730-3D	961148	961176
M 0.90	0.225	0.64	0.29	3	38	3	2.10	1730-2D	953216	960117
							2.90	1730-3D	961150	961177
M 1.00	0.25	0.71	0.32	3	38	3	2.30	1730-2D	953217	960118
							3.20	1730-3D	961151	961178
M 1.20	0.25	0.91	0.51	3	38	3	2.80	1730-2D	953218	960450
							3.85	1730-3D	961152	961179
M 1.40	0.30	1.05	0.58	3	38	3	3.20	1730-2D	953219	960451
							4.50	1730-3D	961153	961180
M 1.60	0.35	1.19	0.64	3	38	3	3.70	1730-2D	953220	960453
							5.10	1730-3D	961154	961181
M 1.80	0.20	1.55	1.23	3	38	3	4.10	1730-2D	961128	961130
							5.80	1730-3D	961155	961182
M 1.80	0.35	1.39	0.84	3	38	3	4.10	1730-2D	953221	960454
							5.80	1730-3D	961156	961183
M 2.00	0.40	1.53	1.10	3	38	3	4.60	1730-2D	953222	960455
							6.40	1730-3D	961157	961184
M 2.20	0.20	1.94	1.63	3	38	3	5.10	1730-2D	961129	961132
							7.10	1730-3D	961158	961185
M 2.20	0.45	1.67	0.96	3	38	3	5.10	1730-2D	953223	960456
							7.10	1730-3D	961159	961186
M 2.50	0.25	2.18	1.79	3	38	3	5.80	1730-2D	960062	960459
							8.00	1730-3D	961160	961187
M 2.50	0.35	2.07	1.52	3	38	3	5.80	1730-2D	960063	960460
							8.00	1730-3D	961161	961188
M 2.50	0.45	1.97	1.26	3	38	3	5.80	1730-2D	953225	960461
							8.00	1730-3D	961162	961189
M 3.00	0.50	2.40	1.62	4	42	3	7.00	1730-2D	955698	960462
							9.60	1730-3D	961171	961190
M 4.00	0.70	3.17	2.07	4	42	3	9.30	1730-2D	955699	960463
							12.80	1730-3D	961172	961191
M 5.00	0.80	4.05	2.78	6	57	4	11.50	1730-2D	957925	960464
							16.00	1730-3D	961173	961192
M 6.00	1.00	4.81	3.23	6	57	4	13.80	1730-2D	957982	960465
							19.20	1730-3D	961174	961193
M 8.00	1.25	6.51	4.53	8	75	6	18.40	1730-2D	958039	960466
							25.60	1730-3D	961175	961194
M 10.00	1.50	7.90	5.53	8	75	6	23.00	1730-2D	958040	960467
							32.00	1730-3D	960883	961195

DIXI 1735-D

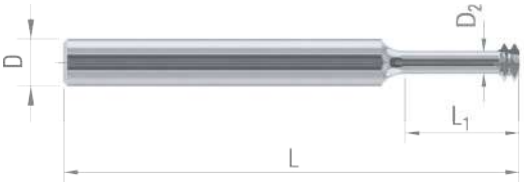
OUTILS À TOURBILLONNER
PROFIL COMPLET

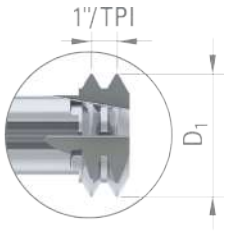
Z = 3-6

P. 320 P. 322

UN 60°

DIXI 1735-2D L_1 = 2 x D nom.
DIXI 1735-3D L_1 = 3 x D nom.





Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes
Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu
Graphite | Plastique

UNC	UNF	UNEF	UN	TPI	D_1	D_2	D_{h5}	L	Z	L_1	DIXI	CARBURE	TiAlN
	N°1			72	1.44	0.88	3	38	3	4.30	1735-2D	966664	966833
										6.00	1735-3D	966653	966852
N°1	N°2			64	1.39	0.77	3	38	3	4.30	1735-2D	966663	966834
										6.00	1735-3D	966652	966851
N°2	N°3			56	1.65	0.94	3	38	3	5.00	1735-2D	966662	966835
										7.00	1735-3D	966651	966850
N°3	N°4			48	1.90	1.06	3	38	3	5.80	1735-2D	966661	966836
										8.10	1735-3D	966650	966849
	N°5			44	2.49	1.58	3	38	3	7.30	1735-2D	966660	966837
										10.20	1735-3D	966649	966848
N°4				40	2.11	1.11	4	42	3	6.60	1735-2D	966659	966838
										9.10	1735-3D	966648	966847
N°5	N°6			40	2.43	1.43	4	42	3	7.30	1735-2D	966658	966839
										10.20	1735-3D	966647	966846
	N°8			36	3.33	2.21	4	42	3	9.60	1735-2D	966657	966841
										13.40	1735-3D	966646	966845
N°6				32	2.59	1.33	4	42	3	8.10	1735-2D	966656	966840
										11.30	1735-3D	966645	966844
N°8	N°10	N°12		32	3.24	1.98	4	55	3	9.60	1735-2D	960205	960628
										13.40	1735-3D	961020	961062
	N°12	7/16"	5/16"	28	4.41	2.97	6	63	4	12.60	1735-2D	966655	966842
										17.60	1735-3D	966644	966643
	1/4"	7/16"	5/16"	28	5.26	3.82	6	63	4	14.60	1735-2D	966654	966843
										20.30	1735-3D	966641	966642
N°10				24	3.60	1.93	4	55	3	11.10	1735-2D	960395	960629
										15.50	1735-3D	961052	961063
N°12	5/16"			24	4.25	2.57	6	57	4	12.60	1735-2D	960396	
1/4"			5/16"	20	4.87	2.86	6	57	4	14.60	1735-2D	960397	960631
										20.30	1735-3D	961054	961085
5/16"	9/16"			18	6.28	4.04	8	63	6	18.20	1735-2D	960398	960635
										25.40	1735-3D	961055	961086
3/8"			7/16"	16	7.65	5.13	8	63	6	21.90	1735-2D	960399	960636
										30.50	1735-3D	961056	961087
7/16"	7/8"			14	8.96	6.08	10	75	6	25.60	1735-2D	960400	960637
										35.50	1735-3D	961057	961088
1/2"				13	10.37	7.27	12	75	6	29.20	1735-2D	960402	960638
										40.60	1735-3D	961058	961060

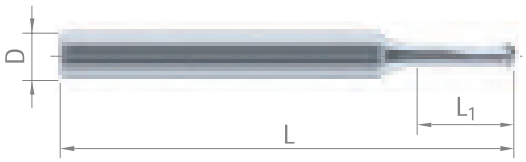
DIXI 1740

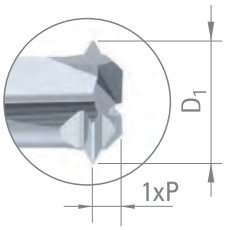
TOURBILLONNEURS-PERCEURS

Z = 1-3

P. 320 P. 324

NIHS 06 ISO 60°





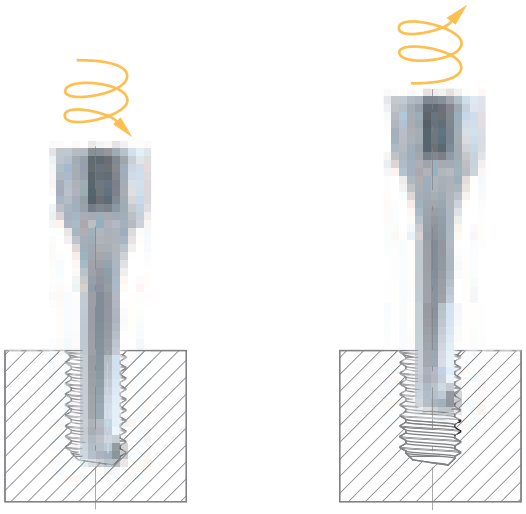
Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Graphite | Plastique

D nom.	Pas P	D_1	L_1	D_{h5}	L	Z	CARBURE	CUTINOX
S 0.80	0.20	0.60	2.4	3	38	1	977703	977716
S 0.90	0.225	0.66	2.7	3	38	1	977704	977717
M 1.00	0.20	0.80	3.0	3	38	1	985121	985134
M 1.00	0.25	0.73	3.0	3	38	1	977656	977698
M 1.20	0.20	1.00	3.6	3	38	1	985136	985143
M 1.20	0.25	0.92	3.6	3	38	1	977705	977718
M 1.40	0.20	1.20	4.2	3	38	1	985144	985145
M 1.40	0.30	1.05	4.2	3	38	1	977706	977719
M 1.60	0.35	1.21	4.8	3	38	1	977707	977720
M 2.00	0.40	1.55	6.0	3	38	2	977708	977721
M 2.50	0.45	2.00	7.5	3	38	2	977709	977722
M 3.00	0.50	2.44	9.0	6	57	2	977710	977723
M 4.00	0.70	3.20	12.0	6	57	2	977711	977724
M 5.00	0.80	4.00	15.0	6	57	2	977712	977725
M 6.00	1.00	4.85	18.0	6	57	3	977713	977726
M 8.00	1.25	6.50	24.0	8	75	3	977714	977727
M 10.00	1.50	7.90	30.0	8	75	3	977715	977728

Exemple pour usinage de matières difficiles (titane, acier inox).
Pour les matières faciles à usiner, l'opération n° 2 n'est pas nécessaire.



❶ Plongée en spirale au Ø d'ébauche (Ø fini -2%)

❷ Usinage au Ø fini du filetage en remontant

DIXI 1742-TC DAC

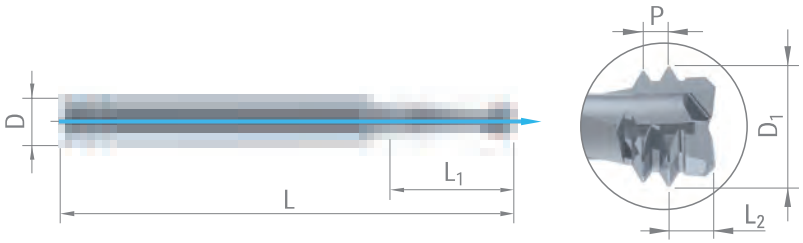
TOURBILLONNEURS-PERCEURS
À TROU DE LUBRIFICATION

Z = 2

P. 320 P. 326

ISO 60°

Alliage Cu Argent Or | Alliage Cu difficile | Alu | Graphite | Plastique



D nom.	Pas P	D_1	L_1	L_2	D_{h5}	L	DAC
M 5.00	0.80	4.00	12.5	1.50	8	60	303475
M 6.00	1.00	4.80	15.0	1.85	8	60	303476
M 8.00	1.25	6.40	20.0	2.30	8	75	303477
M 10.00	1.50	7.80	25.0	2.75	8	75	303478
M 12.00	1.75	9.50	30.0	3.10	10	100	308709

DIXI 1744-TC CUTINOX

TOURBILLONNEURS-PERCEURS
À TROU DE LUBRIFICATION

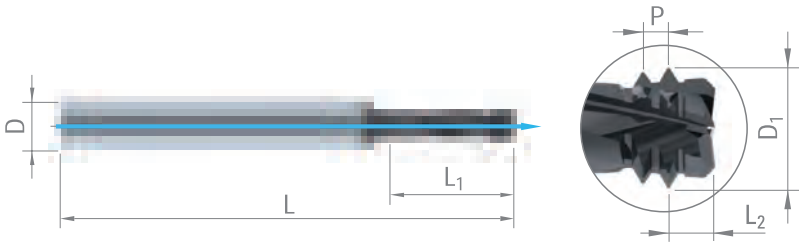
Z = 4

P. 320 P. 326

ISO 60°

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane



D nom.	Pas P	D_1	L_1	L_2	D_{h5}	L	CUTINOX
M 5.00	0.80	4.00	12.5	1.50	8	60	303479
M 6.00	1.00	4.80	15.0	1.85	8	60	303480
M 8.00	1.25	6.40	20.0	2.30	8	75	303481
M 10.00	1.50	7.80	25.0	2.75	8	75	303482
M 12.00	1.75	9.50	30.0	3.10	10	100	308710

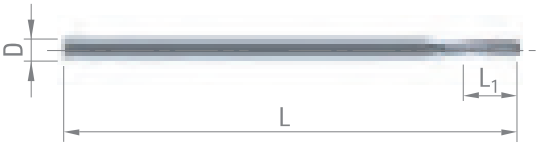
DIXI 1712-AF/BT

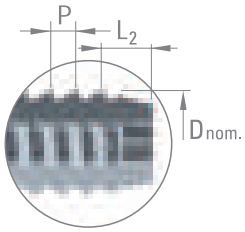
MICRO-TARAUDS COUPANTS
PROFIL AUTOFREIN AF/BT

Z = 3

P. 319

DIXI NORM





Acier + Pb | Alliage Cu Argent Or

D nom.	Pas P	Ø perç.	L_1	L_2	D_{h5}	L	CARBURE
S 0.70	0.175	0.59	3.0	0.35	1.5	30	995574
S 0.80	0.20	0.68	3.5	0.40	1.5	30	995676
S 0.90	0.225	0.76	4.0	0.45	1.5	30	995677
M 1.00	0.25	0.84	4.0	0.50	1.5	30	995678
M 1.20	0.25	1.04	5.0	0.50	1.5	30	995679
M 1.40	0.30	1.21	5.0	0.60	1.5	30	995680

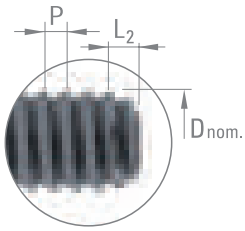
n Vitesse de rotation [tr/min] **500 - 2500**

DIXI 1716-AF/BT DI-TOP

MICRO-TARAUDS À REFOULER
PROFIL AUTOFREIN AF/BT

P. 319

DIXI NORM



Acier + Pb | Alliage Cu Argent Or | Alliage Cu difficile | Alu

D nom.	Pas P	Ø perç.	L_1	L_2	D_{h5}	L	DI-TOP
S 0.70	0.175	0.65	2.8	0.35	1.5	30	995723
S 0.80	0.20	0.74	3.2	0.40	1.5	30	995745
S 0.90	0.225	0.83	3.6	0.45	1.5	30	995746
M 1.00	0.25	0.92	4.0	0.50	1.5	30	995747
M 1.20	0.25	1.12	4.8	0.50	1.5	30	995748
M 1.40	0.30	1.31	5.6	0.60	1.0	30	995749

n Vitesse de rotation [tr/min] **500 - 2500**

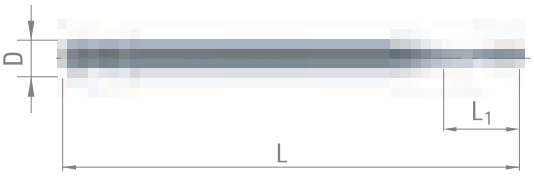
DIXI 1738-AF/BT

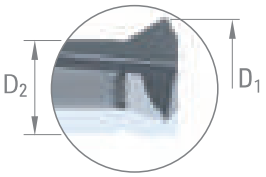
OUTILS À TOURBILLONNER
PROFIL PARTIEL
PROFIL AUTOFREIN AF/BT

Z = 3

P. 319 P. 322

DIXI NORM





Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Super alliages Ni / Co
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

D nom.	Pas	Ø perç.	D_1	L_1	D_2	D_{h5}	L	CARBURE
S 0.70	0.175	0.59	0.54	1.8	0.34	3	38	995725
S 0.80	0.20	0.68	0.62	2.3	0.39	3	38	995880
S 0.90	0.225	0.76	0.70	2.5	0.44	3	38	995881
M 1.00	0.25	0.84	0.80	2.8	0.51	3	38	995882
M 1.20	0.25	1.04	0.98	3.4	0.69	3	38	995883
M 1.40	0.30	1.21	1.12	4.0	0.77	3	38	995884
M 1.60	0.35	1.38	1.26	4.5	0.86	3	38	995885
M 2.00	0.40	1.75	1.60	5.6	1.14	3	38	995886
M 2.20	0.45	1.91	1.70	6.2	1.18	3	38	995887
M 3.00	0.50	2.68	2.40	8.4	1.82	3	38	995888

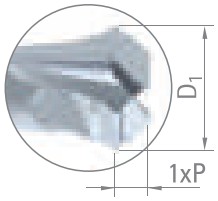
DIXI 1740-AF/BT

TOURBILLONNEURS-PERCEURS
PROFIL AUTOFREIN AF/BT

Z = 1-2

P. 319 P. 324

DIXI NORM



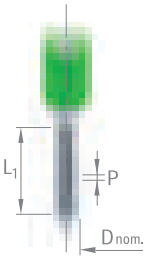
Acier + Pb	Acier faibl. allié	Aciers fort. allié	Acier inox aust.	Fontes
Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu
Graphite	Plastique			

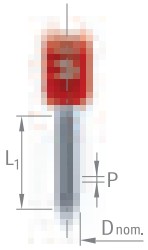
D nom.	Pas P	D_1	L_1	D_{h5}	L	Z	CARBURE
S 0.80	0.20	0.60	2.4	3	38	1	300295
S 0.90	0.225	0.66	2.7	3	38	1	300435
M 1.00	0.25	0.73	3.0	3	38	1	300436
M 1.20	0.25	0.92	3.6	3	38	1	300437
M 1.40	0.30	1.05	4.2	3	38	1	300438
M 1.60	0.35	1.21	4.8	3	38	1	300439
M 2.00	0.40	1.55	6.0	3	38	2	300440
M 2.20	0.45	1.70	6.6	3	38	2	300441
M 2.50	0.45	2.00	7.5	3	38	2	300444
M 3.00	0.50	2.44	9.0	6	57	2	300445

JAUGES FILETÉES
"GO" - "NO GO"
PROFIL AUTOFREIN AF/BT

P. 319

DIXI NORM





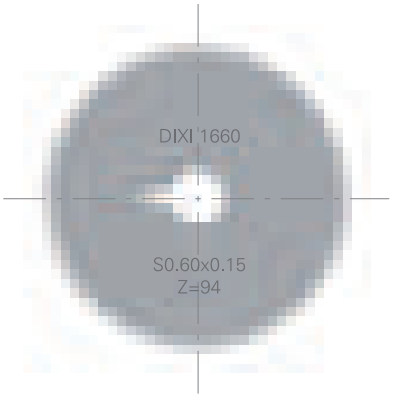
D nom.	Pas P	L_1	1718-AF/BT GO	1719-AF/BT NO GO
S 0.70	0.175	3.0	995572	995573
S 0.80	0.20	3.5	995615	995664
S 0.90	0.225	4.0	995616	995665
M 1.00	0.25	4.0	995617	995666
M 1.20	0.25	5.0	995619	995667
M 1.40	0.30	5.0	995620	995668
M 1.60	0.35	6.0	995621	995669
M 1.80	0.35	6.0	995622	995670
M 2.00	0.40	6.0	995623	995671
M 2.20	0.45	8.0	995624	995672
M 2.50	0.45	8.0	995631	995674
M 3.00	0.50	8.0	995626	995675

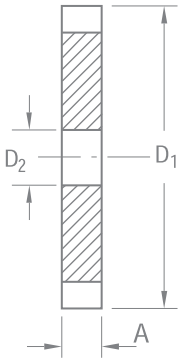
DIXI 1660 - 1661

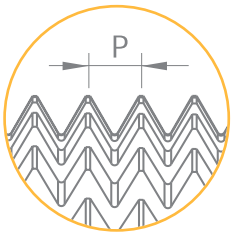
FRAISES À FILETER PAR POLYGONAGE POUR VIS HORLOGÈRES NIHS

Z = 94

NIHS 06





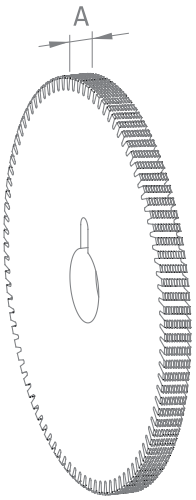


Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Titane, alliage de titane

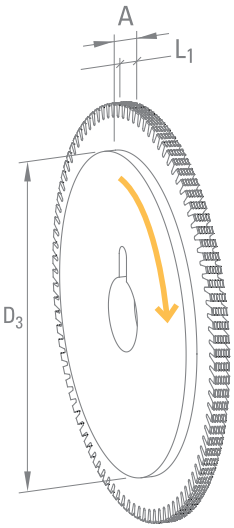
Alliage Cu Argent Or | Alliage Cu difficile

D nom.	Pas P	$D_{1\ \pm0.03}$	$D_{2\ H5}$	D_3	Z	A	L_1	Réf.	Fond plat **DIXI 1660** CARBURE	Fond rayonné **DIXI 1661** CARBURE
S0.40	0.100	45	8	35	94	3	1.00	B	301926	334510
							1.00	C	301927	327631
S0.50	0.125	45	8	35	94	3	1.10	B	301928	334511
							1.10	C	301929	334512
S0.60	0.150	45	8	35	94	3	1.35	B	301930	334513
							1.35	C	301305	334514
							3.00	A	301931	334515
S0.70	0.175	45	8	35	94	3	1.60	B	301932	334516
							1.60	C	301943	334517
							3.00	A	301945	334518
S0.80	0.200	45	8	35	94	3	1.80	B	301946	334519
							1.80	C	301947	334520
							3.00	A	301948	334521
S0.90	0.225	45	8	35	94	3	2.00	B	301949	334522
							2.00	C	301950	334523
							3.00	A	301951	334524
S1.00	0.250	45	8	35	94	3	3.00	A	301952	334525
S1.40	0.300	45	8	35	94	3	3.00	A	301953	334526

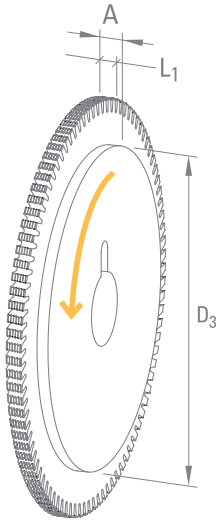
Réf. A



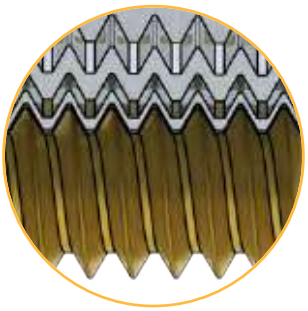
Réf. B



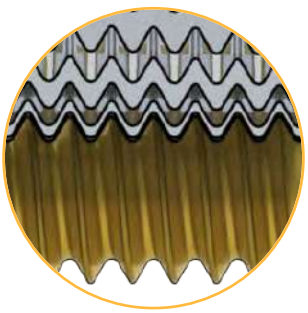
Réf. C



Fond plat **DIXI 1660**



Fond rayonné **DIXI 1661**



Cobalt Outils Coupants

DIXI 7910

FRAISES À FILETER, DENTURE DROITE

Z = 2-4

P. 320 P. 328

ISO 60°

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

D nom.	Pas P	D_1	L_1	D_{h5}	L	Z	CARBURE	TiAlN
M 1.4	0.30	0.90	2.10	3	38	2	41565	56990
M 1.6	0.35	1.00	2.45	3	38	2	41566	56991
M 2.0	0.40	1.30	3.20	3	38	2	41568	56993
M 2.3	0.40	1.50	3.20	3	38	2	41569	56994
M 2.5	0.35	1.30	2.80	3	38	2	41567	56992
M 2.5	0.45	1.50	3.60	3	38	2	41570	56995
M 3.0	0.50	2.10	4.50	3	38	3	41571	56996
M 4.0	0.50	2.60	5.50	3	38	3	41572	56997
M 4.0	0.70	2.60	6.30	3	38	3	41573	56998
M 4.5	0.75	3.00	6.75	4	42	3	41574	56999
M 5.0	0.80	3.60	8.00	4	42	3	41576	57001
M 6.0	1.00	4.00	9.00	6	57	3	42578	55510
M 8.0	0.75	5.90	15.00	6	57	3	42577	57000
M 8.0	1.25	5.00	12.50	6	57	3	42579	57003
M 10.0	1.50	5.90	15.00	6	57	3	42580	57004
M 12.0	1.00	7.90	20.00	8	63	4	42554	57002
M 12.0	1.75	7.90	19.25	8	63	4	42590	57007
M 14.0	1.50	9.90	24.00	10	72	4	42561	57005
M 14.0	2.00	9.90	24.00	10	72	4	42591	57008
M 18.0	1.50	11.90	30.00	12	83	4	42589	57006
M 24.0	3.00	15.90	36.00	16	92	4	42594	

DIXI 7910 E = Extérieur

D nom.	Pas P	D_1	L_1	D_{h5}	L	Z	CARBURE	TiAlN
M 3.0	0.50	5.90	15.00	6	57	3	42597	57013
M 4.5	0.75	7.90	19.50	8	63	4	42598	57014
M 6.0	1.00	9.90	24.00	10	72	4	41471	57015
M 10.0	1.50	11.90	30.00	12	83	4	41472	

DIXI 7908

FRAISES À FILETER HÉLICOÏDALES

Z = 3-6

P. 320 P. 330

ISO 60°

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

D nom.	Pas P	D_1	L_1	D_{h5}	L	Z	CARBURE	TiAlN
M 3.0	0.50	2.10	4.50	3	38	3	67420	952938
M 4.0	0.50	2.60	5.50	3	38	3	951594	952939
M 4.0	0.70	2.60	6.30	3	38	3	67452	952940
M 4.5	0.75	3.00	6.75	4	42	3	67453	952941
M 5.0	0.80	3.60	8.00	4	42	3	67454	952942
M 6.0	1.00	4.00	9.00	6	57	3	67455	952013
M 8.0	0.75	5.90	15.00	6	57	5	67461	952944
M 8.0	1.25	5.00	12.50	6	57	3	67274	952014
M 10.0	1.50	5.90	15.00	6	57	5	67456	952015
M 12.0	0.50	9.90	10.00	10	50	5	957036	957037
M 12.0	1.75	7.90	19.25	8	63	5	67457	952016
M 14.0	1.50	9.90	24.00	10	72	5	67463	952948
M 14.0	2.00	9.90	24.00	10	72	5	67459	952949
M 18.0	1.50	11.90	30.00	12	83	5	67464	952951
M 18.0	2.00	11.90	30.00	12	83	5	67465	952956
M 18.0	2.50	11.90	30.00	12	83	5	67458	952851
M 24.0	3.00	15.90	36.00	16	92	6	67460	952953

DIXI 7908 E = Extérieur

D nom.	Pas	D_1	L_1	D_{h5}	L	Z	CARBURE	TiAlN
M 3.0	0.50	5.90	15.00	6	57	5	67466	952943
M 10.0	1.50	11.90	30.00	12	83	5	67469	952950
M 14.0	2.00	11.90	30.00	12	83	5	67470	952952

DIXI 7913-TC

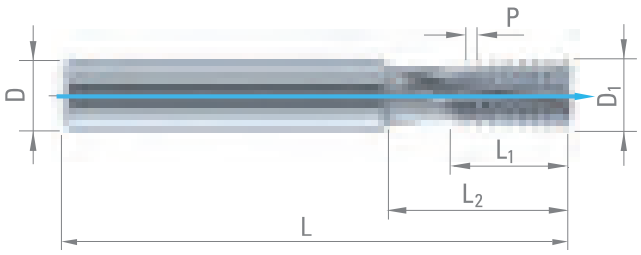
FRAISES À FILETER ISO, PAS FIN
À TROU DE LUBRIFICATION

Z = 4-5

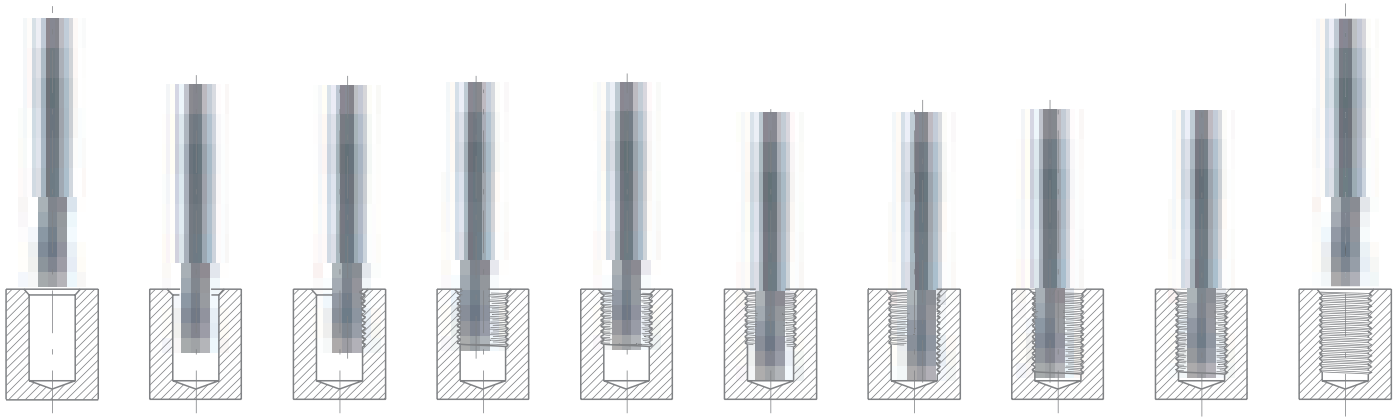
P. 320 P. 330

ISO 60°

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique



Pas P	D nom.	D_1	L_1	L_2	D_{h5}	L	Z	CARBURE	CUTINOX
0.50	M 10	7.95	16	-	8	64	4	303435	303455
	M 14	11.95	20	31	12	80	4	303436	303456
0.75	M 10	7.95	16	-	8	64	4	303437	303457
	M 12	9.95	16	25	10	70	4	303438	303458
	M 14	11.95	20	31	12	80	4	303439	303459
1.00	M 12	9.95	16	25	10	70	4	303440	303460
	M 16	11.95	20	31	12	80	4	303441	303461
	M 20	15.95	25	40	16	90	5	303442	303462
	M 24	19.95	33	50	20	105	5	303443	303463
1.25	M 14	9.95	16	25	10	70	4	303444	303464
	M 16	11.95	20	31	12	80	4	303445	303465
1.50	M 14	9.95	16	25	10	70	4	303446	303466
	M 16	11.95	20	31	12	80	4	303447	303467
	M 22	15.95	25	40	16	90	5	303448	303468
	M 26	19.95	33	50	20	105	5	303449	303469
2.00	M 16	11.95	20	31	12	80	4	303450	303470
	M 22	15.95	25	40	16	90	5	303451	303471
	M 27	19.95	33	50	20	105	5	303452	303472
2.50	M 22	15.95	25	40	16	90	5	303453	303473
	M 30	19.95	33	50	20	105	5	303454	303474



DIXI 7920

FRAISES À FILETER, DENTURE DROITE

Z = 2-4

P. 320 P. 328

UN 60°

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes

Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu | Plastique

UNC	UNF	UNEF	UN	TPI	D_1	L_1	D_{h5}	L	Z	CARBURE	TiAlN
N°2	N°3			56	1.50	3.17	3	38	2	41581	953797
N°5	N°6			40	2.10	4.44	3	38	3	41582	953798
	N°8			36	3.00	6.35	4	42	3	39811	953799
N°8	N°10	N°12		32	3.00	6.35	4	42	3	41583	65997
		5/16"	7/16"	32	5.90	14.28	6	57	3	39813	953806
	N°12		5/16"	28	3.60	8.16	4	42	3	41584	64133
		7/16"	9/16"	28	7.90	19.95	8	63	4	39815	953812
N°12	5/16"			24	4.00	8.46	6	57	3	41585	953802
5/16"				18	5.00	12.70	6	57	3	41587	953803
	9/16"			18	9.90	23.98	10	72	4	41476	
3/8"			7/16"	16	5.90	14.28	6	57	3	42600	953804
			5/8"	16	11.90	28.57	12	83	4	42601	63605
1/2"				13	7.90	19.53	8	63	4	39824	953807
3/4"				10	11.90	27.94	12	83	4	39828	953820

DIXI 7920 E = Extérieur

D nom.	TPI	D_1	L_1	D_{h5}	L	Z	CARBURE	TiAlN
UNC N°6	32	5.90	14.28	6	57	3	39850	953805
UNF N°12	28	7.90	19.95	8	63	4	39851	953810
UNC 1/4"	20	9.90	22.86	10	72	4	39852	953818
UNC 5/16"	18	9.90	23.98	10	72	4	39853	953816

DIXI 7918

FRAISES À FILETER HÉLICOÏDALES

Z = 3-5

P. 320 P. 330

UN 60°

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

UNC	UNF	UNEF	UN	TPI	D_1	L_1	D_{h5}	L	Z	CARBURE	TiAlN
	N°2			64	1.50	3.17	3	38	3	951595	952964
N°2	N°3			56	1.50	3.17	3	38	3	67489	952963
		N°5		44	2.10	4.62	3	38	3	951482	952966
N°5	N°6			40	2.10	4.44	3	38	3	67491	952965
N°8	N°10	N°12		32	3.00	6.35	4	42	3	67493	952967
		5/16"	7/16"	32	5.90	14.28	6	57	5	67497	952975
	N°12		5/16"	28	3.60	8.16	4	42	3	67494	952969
		7/16"	9/16"	28	7.90	19.95	8	63	5	67498	952979
N°12	5/16"	5/8"		24	4.00	8.46	6	57	3	67495	952971
1/4"			5/16"	20	4.00	10.16	6	57	3	67496	952970
	1/2"	3/4"	9/16"	20	9.90	22.86	10	72	5	67499	952985
5/16"				18	5.00	12.70	6	57	3	67500	952972
	9/16"			18	9.90	23.98	10	72	5	67501	952983
3/8"			7/16"	16	5.90	14.28	6	57	5	67502	952973
			5/8"	16	11.90	28.57	12	83	5	67503	952990
1/2"				13	7.90	19.53	8	63	5	67505	952976
9/16"				12	9.90	23.28	10	72	5	67512	952981
	1"		1-1/16"	12	11.90	29.63	12	83	5	67506	952988
5/8"				11	9.90	23.09	10	72	5	951597	952980
3/4"				10	11.90	27.94	12	83	5	951667	952986

DIXI 7918 E = Extérieur

D nom.	TPI	D_1	L_1	D_{h5}	L	Z	CARBURE	TiAlN
UNC N°6	32	5.90	14.28	6	57	5	67507	952974
UNF N°12	28	7.90	19.95	8	63	5	67508	952978
UNC 1/4"	20	9.90	22.86	10	72	5	67509	952984
UNC 5/16"	18	9.90	23.98	10	72	5	67510	952982
UNC 3/8"	16	11.90	28.57	12	83	5	67511	952989

DIXI 7923-TC

FRAISES À FILETER HÉLICOÏDALES
À TROU DE LUBRIFICATION

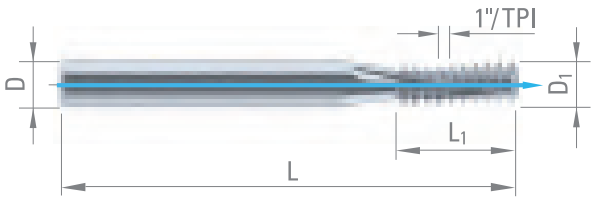
L_1 = 2 x Ø nom.

Z = 3-4

P. 321 P. 330

UNJ 60°

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes
Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu | Plastique



UNJF	TPI	D1	L1	Dh5	L	Z	CARBURE
N°10	32	3.90	11.50	6	54	3	303381
1/4"	28	5.20	14.00	6	54	3	303382
5/16"	24	5.95	17.40	6	54	3	303383
3/8"	24	7.95	20.60	8	64	4	303384
7/16"	20	7.95	24.70	8	64	4	303385
1/2"	20	9.95	27.30	10	74	4	303386

DIXI 7940

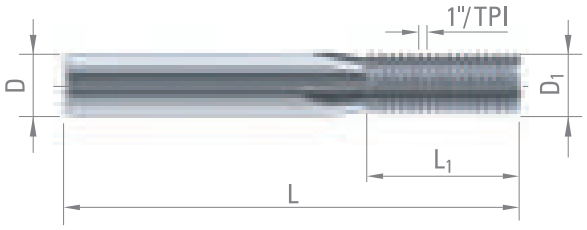
FRAISES À FILETER, DENTURE DROITE

Z = 3-4

P. 321 P. 328

BSP 55°

Acier + Pb | Acier faibl. allié | Acier fort. allié | Acier inox aust. | Fontes
Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu | Plastique



BSP	TPI	D1	L1	Dh5	L	Z	CARBURE
G1/16" – G1/8"	28	5.90	14.51	6	57	3	42603
G1/4" – G3/8"	19	7.90	18.71	8	63	4	42604
G1/2" – G5/8"– G3/4"– G7/8"	14	11.90	29.02	12	83	4	42605
G1"	11	15.90	34.63	16	92	4	42606

Pour filetages intérieurs et extérieurs

DIXI 7946

FRAISES À FILETER, DENTURE DROITE

Z = 3-4

P. 328

BSPT 55°

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

BSPT	TPI	D_1	L_1	D_{h5}	L	Z	CARBURE
R1/4" – R3/8"	19	7.07	14.70	8	63	4	42608
R1 " => R2-1/2"	11	14.32	27.70	16	92	4	42610

Pour filetages intérieurs et extérieurs

DIXI 7950

FRAISES À FILETER, DENTURE DROITE

Z = 3-4

P. 328

NPT 60°

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

NPT	TPI	D_1	L_1	D_{h5}	L	Z	CARBURE
1/4" – 3/8"	18	7.10	14.11	8	63	4	41592
1/2" – 3/4"	14	10.65	19.95	12	83	4	42611

Pour filetages intérieurs et extérieurs

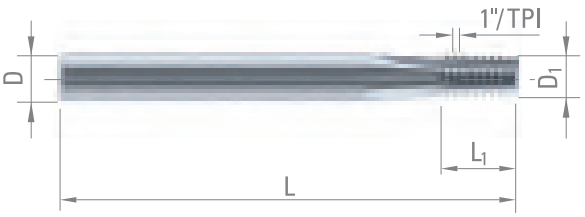
DIXI 7956

FRAISES À FILETER, DENTURE DROITE

Z = 3-4

P. 328

NPTF 60°



Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

NPTF	TPI	D_1	L_1	D_{h5}	L	Z	CARBURE
1/4" – 3/8"	18	7.10	14.11	8	63	4	39795
1/2" – 3/4"	14	10.65	19.95	12	83	4	39796
1" – 1-1/4" – 1-1/2" – 2"	11.5	14.38	26.50	16	92	4	41591

Pour filetages intérieurs et extérieurs

DIXI 7915-TC

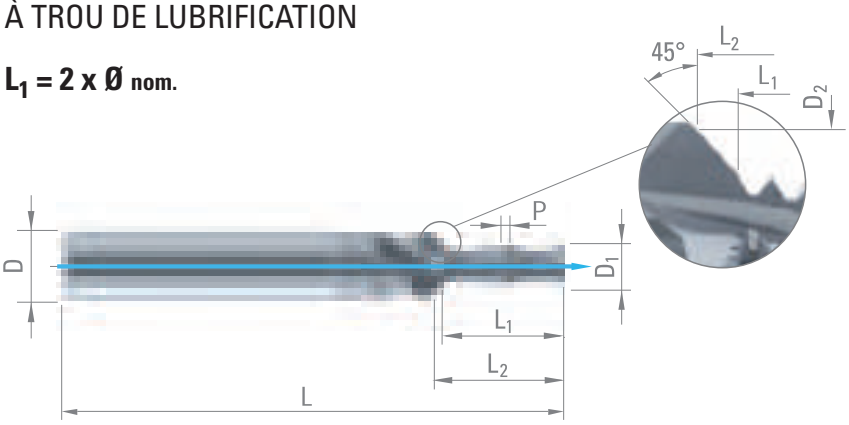
FRAISES À FILETER ET CHANFREINER
À TROU DE LUBRIFICATION

L_1 = 2 x Ø nom.

Z = 3-4

P. 320 P. 330

ISO 60°



Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

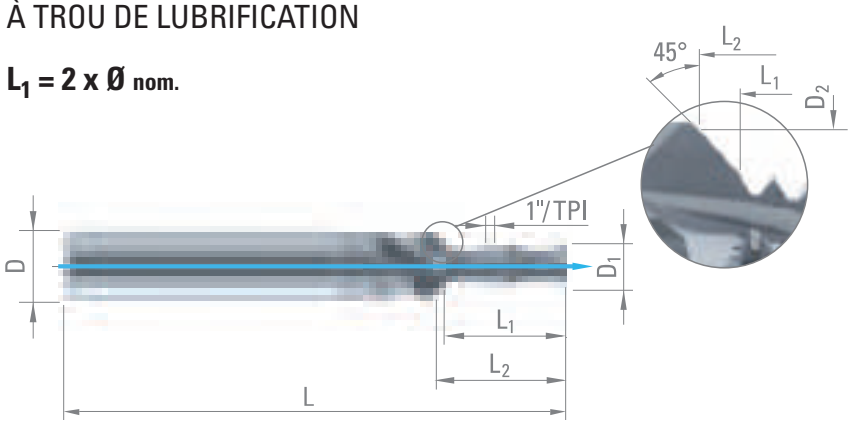
D nom.	Pas P	D_1	D_2	L_1	L_2	D_{h5}	L	Z	CARBURE	CUTINOX
M 4.0	0.70	3.10	4.2	8.70	9.3	6	48	3	303387	303394
M 5.0	0.80	3.90	5.3	10.70	11.5	6	54	3	303388	303395
M 6.0	1.00	4.70	6.3	13.40	14.3	8	62	3	303389	303396
M 8.0	1.25	6.40	8.4	18.10	19.1	10	74	3	303390	303397
M 10.0	1.50	8.10	10.5	21.70	22.9	12	80	4	303391	303398
M 12.0	1.75	9.95	12.6	25.30	26.7	14	90	4	303392	303399
M 16.0	2.00	13.40	16.8	34.90	36.6	18	102	4	303393	303400

DIXI 7925-TC

FRAISES À FILETER ET CHANFREINER À TROU DE LUBRIFICATION

L_1 = 2 x Ø nom.

Z = 3-4

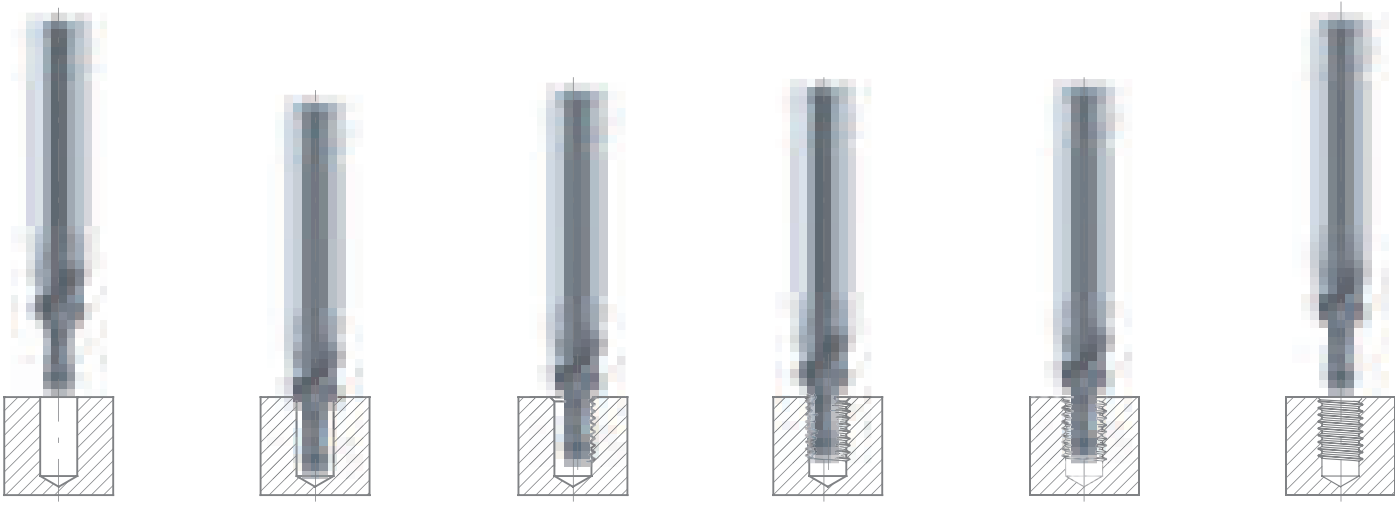


P. 320 P. 330

UN 60°

Acier + Pb	Acier faibl. allié	Acier fort. allié	Acier inox aust.	Fontes
Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Plastique

UNC	TPI	D_1	D_2	L_1	L_2	D_{h5}	L	Z	CARBURE	CUTINOX
N°8	32	3.10	4.4	9.10	9.7	6	48	3	303401	303411
N°10	24	3.60	5.1	11.00	11.9	6	54	3	303402	303412
N°12	24	4.10	5.8	12.10	13.0	6	54	3	303403	303413
1/4"	20	4.80	6.7	14.50	15.6	8	62	3	303404	303414
5/16"	18	5.95	8.3	17.60	18.7	10	74	3	303405	303415
3/8"	16	7.50	10.0	21.40	22.6	12	80	4	303406	303416
7/16"	14	8.80	11.7	24.40	25.9	12	80	4	303407	303417
1/2"	13	10.30	13.3	28.20	29.8	14	90	4	303408	303418
9/16"	12	10.80	15.0	30.60	32.3	16	102	4	303409	303419
5/8"	11	11.90	16.7	35.70	37.6	18	102	4	303410	303420



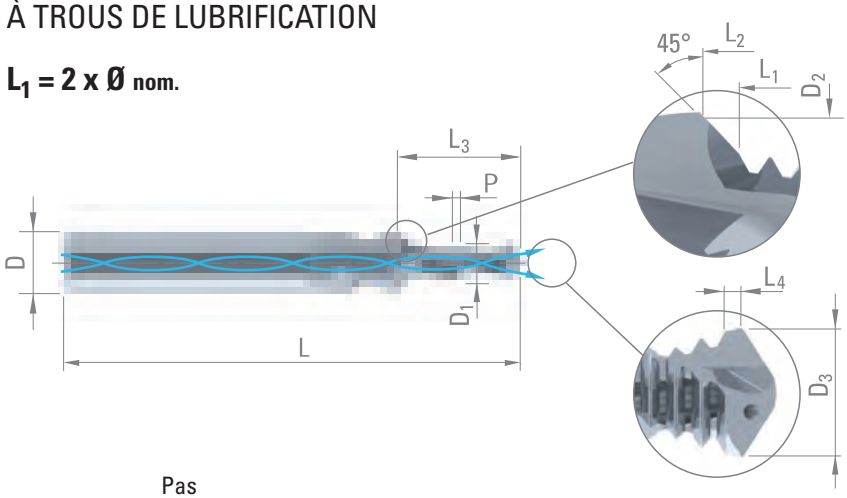
1 2 3 4 5 6

DIXI 7985-HH

FRAISES À PERCER, FILETER ET CHANFREINER À TROUS DE LUBRIFICATION

Z = 2

L_1 = 2 x Ø nom.

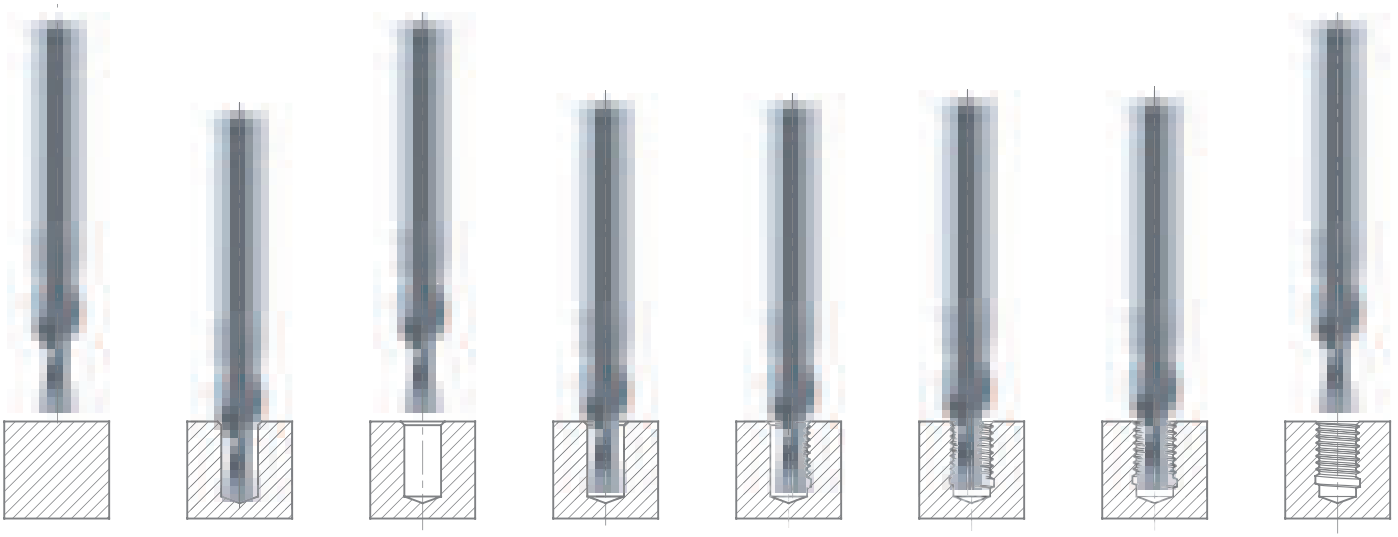


P. 320
P. 332

ISO 60°

Fontes | Alliage Cu Argent Or | Alliage Cu difficile | Alu

D nom.	Pas P	D_1	D_2	D_3	L_1	L_2	L_3	L_4	D_{h5}	L	CARBURE	CUTINOX
M 4.0	0.70	3.20	4.2	3.30	8.90	8.9	9.5	0.7	6	48	303421	303428
M 5.0	0.80	4.00	5.3	4.20	11.10	11.0	11.8	0.8	6	54	303422	303429
M 6.0	1.00	4.75	6.3	5.00	13.85	13.7	14.6	1.0	8	62	303423	303430
M 8.0	1.25	6.35	8.4	6.75	18.60	18.4	19.6	1.3	10	74	303424	303431
M 10.0	1.50	7.95	10.5	8.50	22.40	22.2	23.7	1.5	12	80	303425	303432
M 12.0	1.75	9.95	12.6	10.25	26.00	25.5	27.4	1.5	14	90	303426	303433
M 16.0	2.00	13.20	16.8	14.00	35.90	35.1	37.6	1.5	18	102	303427	303434



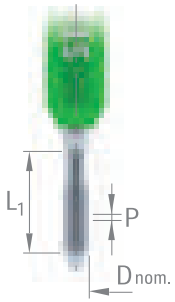
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

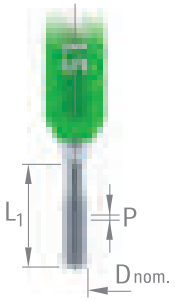
DIXI 1718-NT, -RT - DIXI 1719-NT/RT

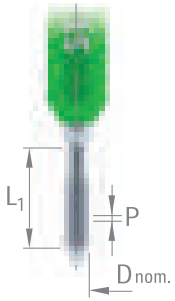
JAUGES FILETÉES NIHS
"GO" - "NO GO"

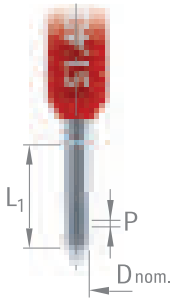
P. 317

NIHS 06









D nom.	Pas P	L_1	1718-NT 4H GO	1718-NT (fond plat) 4H GO	1718-RT 3G GO	1719-NT/RT 3G/4H NO GO
S 0.30	0.08	1.0	965295	978958	983114	965312
S 0.35	0.09	1.3	965296	978959	983468	965313
S 0.40	0.10	2.0	965297	978960	983115	965314
S 0.50	0.125	2.5	965298	978961	983116	965315
S 0.60	0.15	3.0	965299	978962	983117	965316
S 0.70	0.175	3.0	965300	978963	983236	965317
S 0.80	0.20	3.5	965301	978964	983118	965318
S 0.90	0.225	4.0	965302	978965	983119	965319
S 1.00	0.25	4.0	965303	978966	983120	965320
S 1.20	0.25	5.0	965304	978967	983121	965321
S 1.40	0.30	5.0	965305	978968	983122	965322

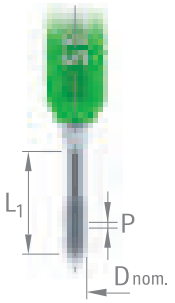
Chaque jauge est livrée avec sa valeur de diamètre sur flancs

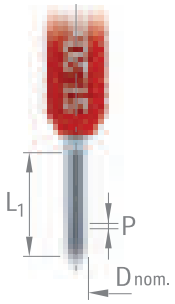
DIXI 1718-NT L - DIXI 1719-NT/RT L

JAUGES FILETÉES NIHS
"GO" - "NO GO"
POUR FILETAGE À GAUCHE

P. 317

NIHS 06





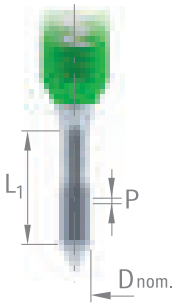
D nom.	Pas P	L_1	1718-NT L 4H GO	1719-NT/RT L 3G/4H NO GO
S 0.50	0.125	2.5	968369	968370
S 0.60	0.15	3.0	968345	968346
S 0.70	0.175	3.0	968344	968347
S 0.80	0.20	3.5	968343	968348
S 0.90	0.225	4.0	968925	968926
S 1.00	0.25	4.0	969395	969396
S 1.20	0.25	5.0	982638	982639

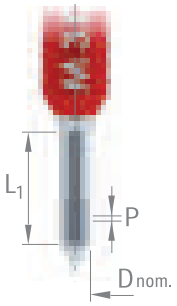
Chaque jauge est livrée avec sa valeur de diamètre sur flancs

JAUGES FILETÉES ISO
"GO" - "NO GO"

P. 317

ISO 1502





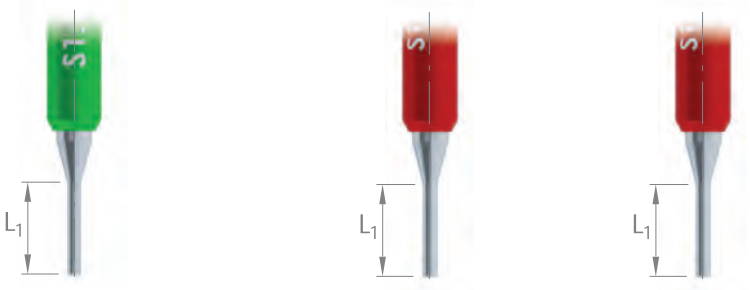
D nom.	Pas P	L_1	Tol.	1718-M GO	1719-M NO GO
M 1.00	0.25	5.0	5H	976633	976635
M 1.20	0.20	5.0	4H	305894	305900
M 1.20	0.25	5.0	5H	976634	976636
M 1.40	0.20	5.0	4H	305895	305901
M 1.40	0.30	6.0	5H	976693	976710
M 1.50	0.30	6.0	6H	976694	976711
M 1.60	0.20	5.0	4H	976695	305902
M 1.60	0.35	6.0	6H	975716	975717
M 1.80	0.20	5.0	4H	305897	305903
M 1.80	0.35	6.0	6H	976024	976026
M 2.00	0.20	5.0	4H	305898	305904
M 2.00	0.40	6.0	6H	976699	976716
M 2.20	0.20	5.0	4H	305899	305905
M 2.20	0.25	5.0	5H	976701	976718
M 2.20	0.45	8.0	6H	976702	976719
M 2.50	0.35	6.0	6H	303652	303653
M 2.50	0.45	8.0	6H	976704	976721
M 3.00	0.50	8.0	6H	976705	976722

Chaque jauge est livrée avec sa valeur de diamètre sur flancs

TAMPONS LISSES “GO” - “NO GO” POUR LE CONTRÔLE DES DIAMÈTRES INTÉRIEURS DES FILETAGES NIHS

P. 317

NIHS 06



D nom.	Pas	L_1	0418 5H/6H GO (Laiton / Acier)	0419 5H NO GO (Laiton)	0419 6H NO GO (Acier)
S 0.30	0.08	2.0	308301	308307	-
S 0.35	0.09	2.0	308300	308306	-
S 0.40	0.10	3.5	308299	308305	308310
S 0.50	0.125	3.5	308298	308304	308309
S 0.60	0.15	3.5	308297	308302	308308
S 0.70	0.175	5.0	306719	306818	306824
S 0.80	0.20	5.0	306813	306819	306825
S 0.90	0.225	5.0	306814	306820	306826
S 1.00	0.25	5.0	306815	306821	306827
S 1.20	0.25	5.0	306816	306822	306828
S 1.40	0.30	5.0	306817	306823	306829

DIXI 1718 - SET

SET DE JAUGES FILETÉES NIHS

P. 317

NIHS 06

Contenu	Art.
DIXI 1718-NT GO (S0.30-S1.40) **DIXI 1719-NT/RT NO GO** (S0.30-S1.40)	305989
Coffret vide (NIHS NT)	307437

Contenu	Art.
DIXI 1718-RT GO (S0.30-S1.40) **DIXI 1719-NT/RT NO GO** (S0.30-S1.40)	305990
Coffret vide (NIHS RT)	307438

Contenu	Art.
DIXI 1718-NT GO (S0.30-S1.40) **DIXI 1718-RT GO** (S0.30-S1.40) **DIXI 1719-NT/RT NO GO** (S0.30-S1.40)	305991
Coffret vide (NIHS NT & RT)	307439

SET DE JAUGES FILETÉES ET TAMPONS LISSES POUR LE CONTRÔLE COMPLET DES FILETAGES NIHS

NIHS 06

Contenu	Art.
DIXI 1718-NT GO (S0.30-S1.40) **DIXI 1718-RT GO** (S0.30-S1.40) **DIXI 1719-NT/RT NO GO** (S0.30-S1.40)	308313
DIXI 0418-H5/H6 GO (laiton / acier) (S0.30-S1.40) **DIXI 0419-H5 NO GO** (laiton) (S0.30-S1.40) **DIXI 0419-H6 NO GO** (acier) (S0.40-S1.40)	
Coffret vide	312619

Cobalt Outils Coupants

VÉRIFICATION DE FILETAGES INTÉRIEURS (source: ISO 1502)

Figure 1

DIXI 1718

Figure 2

DIXI 1719

Figure 3

DIXI 0418

Figure 4

DIXI 0419

La vérification de filetages intérieurs doit être effectuée avec des tampons filetés et lisses, chacun ayant sa propre fonction, sa méthode d'utilisation et son mode d'interprétation des résultats.

Figure 1: Tampon fileté GO (DIXI 1718)

Un tampon fileté **GO** vérifie la dimension limite minimale du diamètre sur flancs, y compris les erreurs de pas, d'inclinaison de flanc, et écarts de forme, produisant une diminution apparente du diamètre sur flancs de la pièce.

De plus, il contrôle la dimension minimale du diamètre extérieur et vérifie également si la longueur du flanc droit est suffisante, c'est-à-dire si l'arrondi à fond de filet n'empiète pas trop sur le flanc du profil.

Le tampon fileté **GO** doit pouvoir, sans forcer particulièrement, se visser à la main sur toute la longueur du filetage de la pièce. Si tel n'est pas le cas, le filetage de la pièce ne répond pas aux prescriptions.

L'usure du tampon fileté **GO** doit être contrôlée à des intervalles de temps plus ou moins longs selon son utilisation.

NB : Ce tampon ne vérifie pas le diamètre intérieur du filetage intérieur.

Figure 2: Tampon fileté NO GO (DIXI 1719)

Un tampon fileté **NO GO** vérifie si le diamètre sur flancs dépasse la dimension maximale spécifiée.

Le tampon fileté **NO GO** ne doit pas pouvoir, sans forcer particulièrement, se visser à la main ni d'un côté ni de l'autre de la partie filetée, de plus de deux tours. S'il se laisse visser de plus de deux tours, le filetage de la pièce ne répond pas aux prescriptions. Le tampon fileté **NO GO** ne doit pas traverser complètement une pièce ayant une longueur de trois filets ou moins.

Il est recommandé de contrôler régulièrement l'usure du tampon fileté **NO GO**.

NB : Ce tampon ne vérifie pas le diamètre intérieur du filetage intérieur.

Figure 3: Tampon lisse GO (DIXI 0418)

Un tampon lisse **GO** vérifie la dimension limite minimale du diamètre intérieur (diamètre de noyau) du filetage.

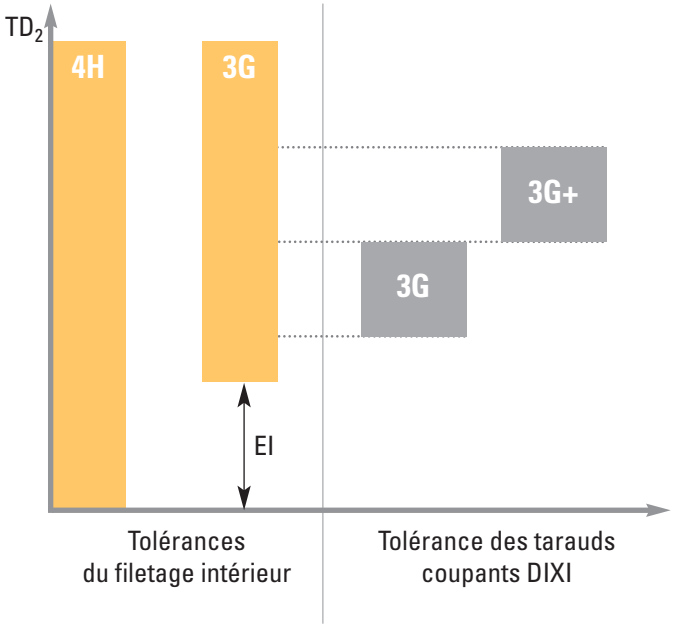
Introduit à la main, le tampon lisse **GO** doit pouvoir, sans forcer particulièrement, traverser le filetage de la pièce.

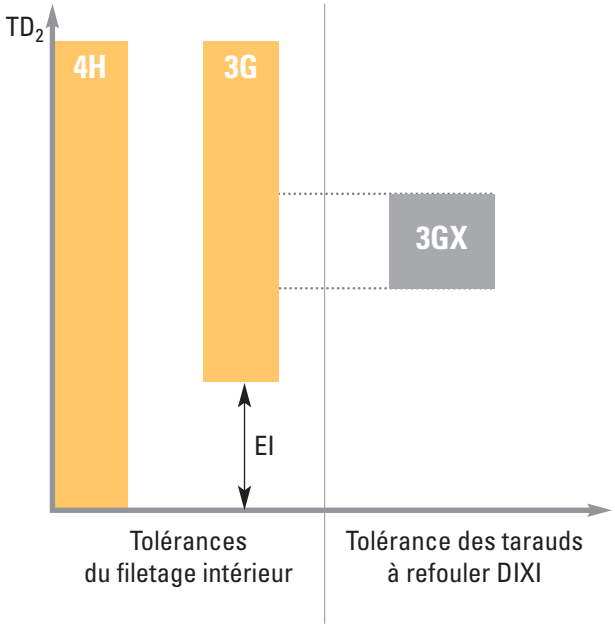
Figure 4: Tampon lisse NO GO (DIXI 0419)

Un tampon lisse **NO GO** vérifie si le diamètre intérieur (diamètre de noyau) du filetage dépasse la dimension maximale spécifiée.

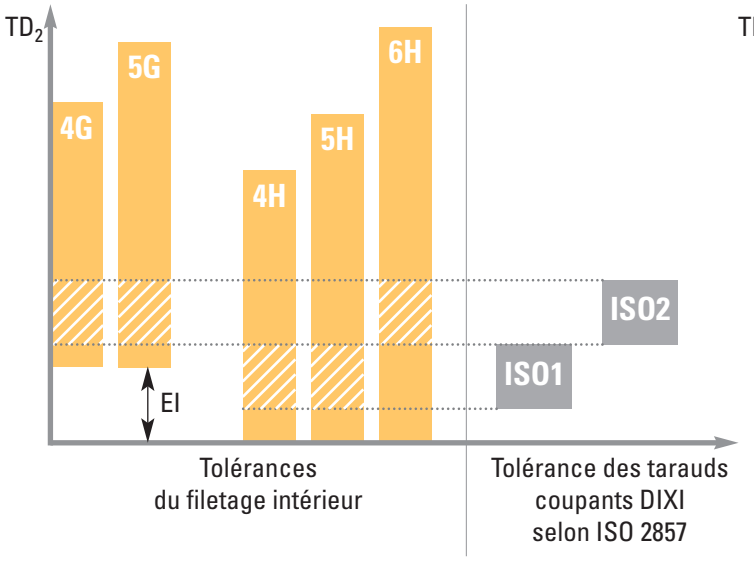
Le tampon lisse **NO GO** peut pénétrer aux deux extrémités de la pièce filetée mais seulement dans une zone qui s'étend sur un pas au plus depuis le départ du filetage.

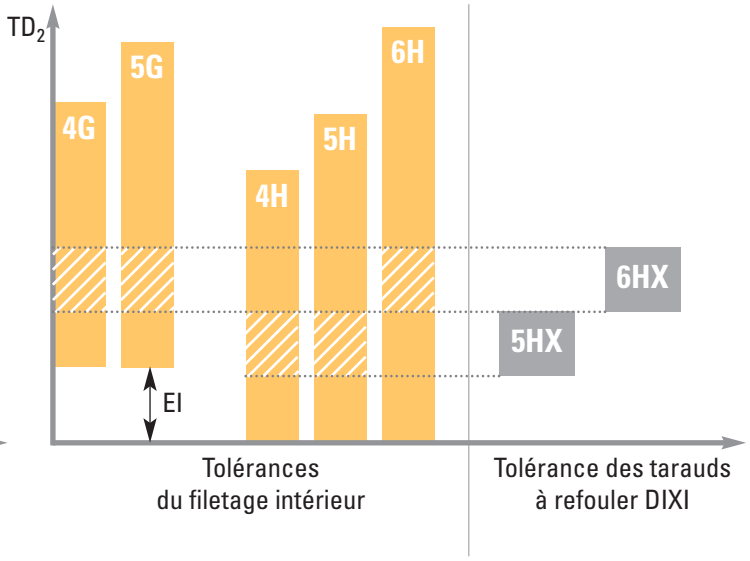
POSITIONNEMENT DES TOLÉRANCES DE DIAMÈTRES SUR FLANCS POUR LES FILETAGES MINIATURES S (ISO 1501 / NIHS 06-10 / DIN 14)



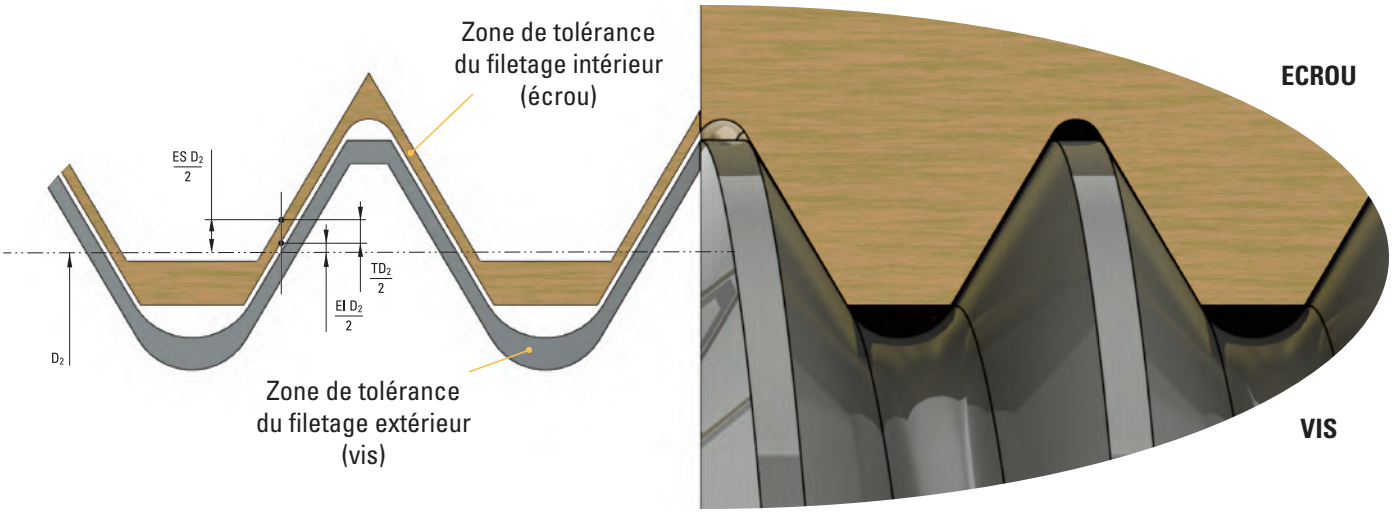


POSITIONNEMENT DES TOLÉRANCES DE DIAMÈTRES SUR FLANCS POUR LES FILETAGES INTÉRIEURS MÉTRIQUES M (ISO 965 / NIHS 06-06 / DIN 13)

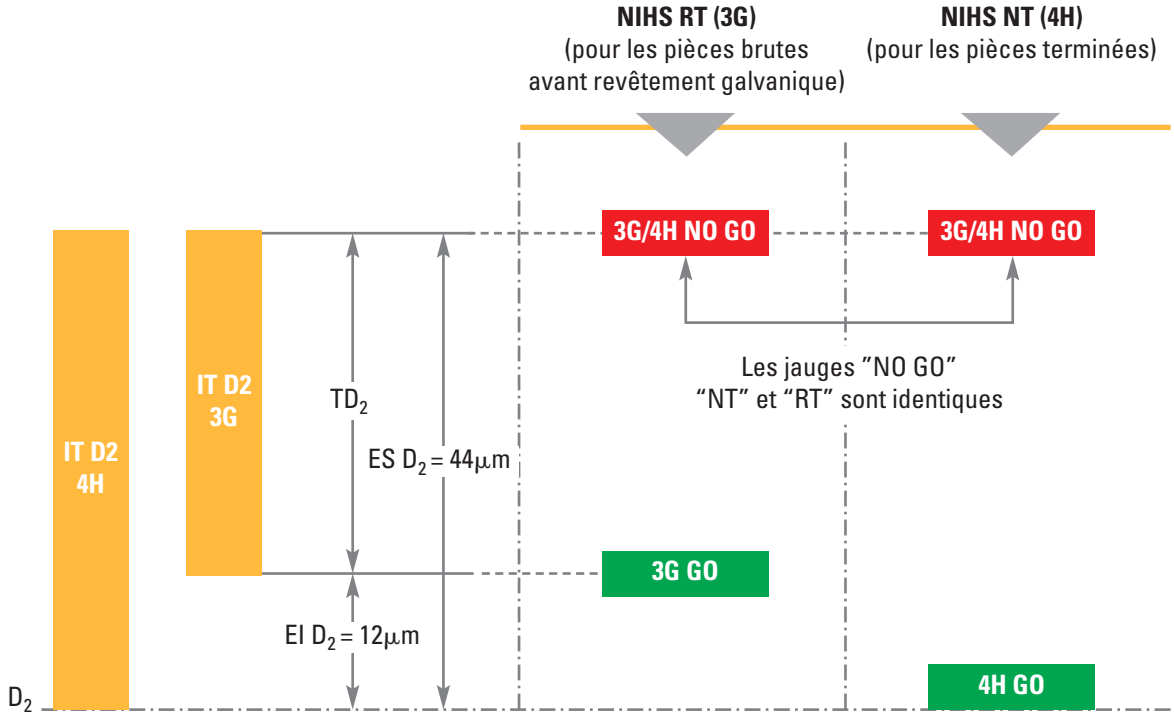




LEXIQUE TECHNIQUE
JAUGES NIHS



D_2	Diamètre sur flancs.
Ecart EI D_2	Ecart inférieur du diamètre sur flancs D_2.
Ecart ES D_2	Ecart supérieur du diamètre sur flancs D_2.
Tolérance TD_2	Tolérance du diamètre sur flancs D_2. Elle est égale à ES D_2 - EI D_2.
Critère de tolérance NIHS NT	NT est l'abréviation de "Normal Tolerance". Ce critère est utilisé pour le contrôle des taraudages S de pièces terminées (avec ou sans revêtement galvanique). Les jauges NIHS NT GO sont utilisées pour le contrôle des filetages NIHS 06-10 en tolérance 4H.
Critère de tolérance NIHS RT	RT est l'abréviation de "Reduced Tolerance" ou tolérance réduite. Ce critère est utilisé pour le contrôle des taraudages S de pièces brutes en production (avant revêtement galvanique). Les jauges NIHS RT GO sont utilisées pour le contrôle des filetages NIHS 06-10 en tolérance 3G.
Jauges NO GO	Les jauges NO GO sont identiques, que ce soit en critère de tolérance NT ou RT. Elles sont utilisées pour le contrôle de pièces brutes (au stade de la production) ou de pièces finies (avec ou sans revêtement galvanique). Les jauges NIHS NT/RT NO GO sont utilisées pour le contrôle des filetages NIHS 06-10 en tolérances 3G et 4H.



Position des jauges GO et NO GO - Exemple pour un pas de 0.25

Cobalt Outils Coupants

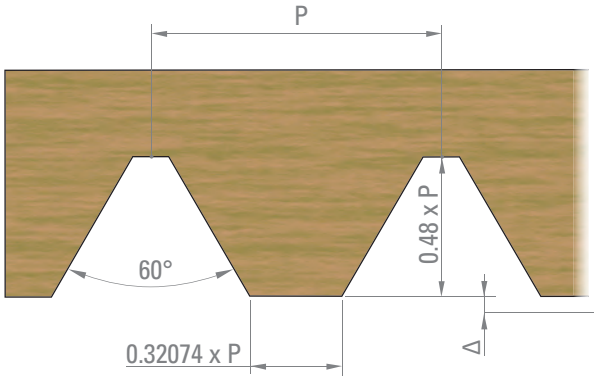
AVANTAGES TECHNIQUES DES JAUGES CARBURE

DIXI Polytool réalise toutes ses jauges en carbure de tungstène.

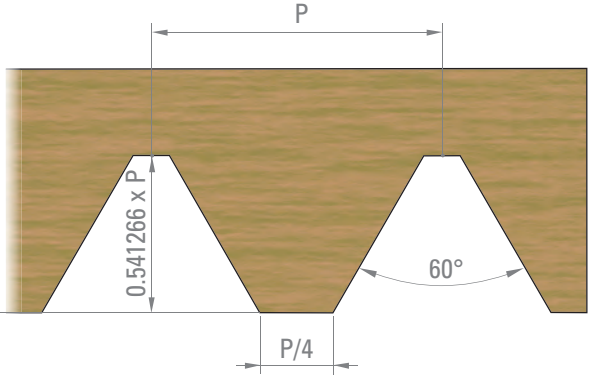
	ACIER	CARBURE	
Résistance à l'usure	☹	☺	Une jauge en acier sera plus vite usée et donc "fausse".
Précision de forme	☹	☺	La rectification du carbure garantit de meilleures précisions.
Stabilité dimensionnelle	☹	☺	Influence de la température ambiante négligeable pour le carbure.
Tenue à l'oxydation	☹	☺	Une jauge carbure ne rouille pas.
Résistance élastique	☹	☺	Une jauge carbure ne plie pas. Une déformation engendre une jauge faussée.

FILETAGES "S" ET "M"

FILETAGE MINIATURE (PROFIL DE BASE)

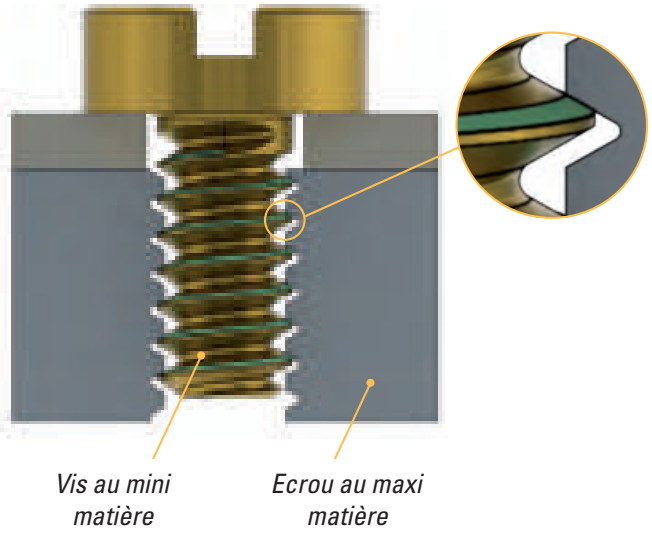


FILETAGE MÉTRIQUE (PROFIL DE BASE)

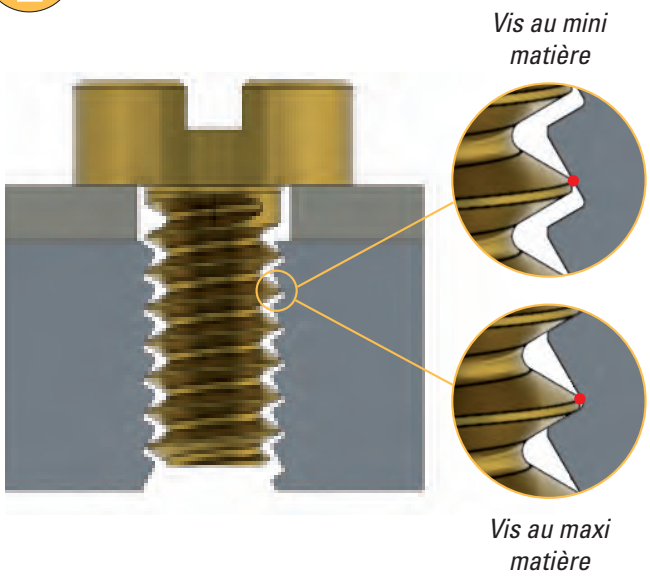


	Filetage miniature				Filetage métrique ISO
Norme	ISO 1501	NIHS 06-10 (Suisse)	ASM B1.10M (USA)	DIN 14 (Allemagne)	ISO 965
Symbole de filetage	"S"		"UNM"	"M"	"M"
Exemple de désignation	S 0.60 x 0.15		UNM 0.60 x 0.15	M 0.60 x 0.15	M 6.00 x 1.00
Plage des Ø nominaux	0.30mm à 1.40mm			0.30mm à 0.90mm	1.00mm à 355mm
Plage des pas	0.08mm à 0.30mm			0.08mm à 0.225mm	0.20mm à 8.00mm

FILETAGE AF - AVANTAGES TECHNIQUES



Au jeu des tolérances, sur un assemblage S 1.00x0.25, il peut y avoir jusqu'à 0.05 mm au rayon d'espace libre entre le Ø extérieur de la vis et le Ø extérieur de l'écrou. Tout cet espace laisse un degré de liberté à la vis qui, sous l'effet de vibrations, peut se desserrer. Le phénomène est d'autant plus accentué que la surface de contact théorique entre la vis et l'écrou est faible. Pour éviter les phénomènes de vibrations et ainsi le desserrage, il est possible d'utiliser du frein-filet. Mais cette solution n'est pas appropriée pour les assemblages dont l'aspect visuel a une grande importance (horlogerie, ...).

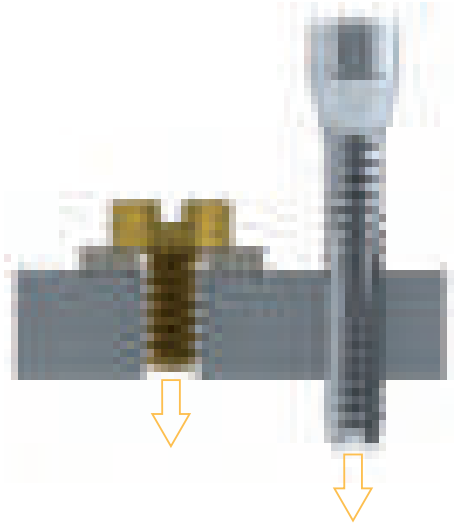


Avec un filetage autofrein AF, que la vis soit au maxi ou au mini matière, le contact entre la vis et l'écrou ne varie pas. Les tolérances de fabrication n'ont donc aucune influence sur la qualité de l'assemblage.

Avec un filetage autofrein AF,
nul besoin d'utiliser de frein filet.

SENS DE PROFIL - SENS DE TRAVAIL

Le profil du filetage AF n'est pas symétrique comme peut l'être un filetage ISO à 60°.
Selon le sens de travail de l'outil, le profil coupant est inversé.



AF/BT

L'outil et la vis entrent dans le même sens de vissage.
OUTILS STOCKÉS

AF/TT

L'outil et la vis entrent dans une direction de vissage inversée.
OUTILS SUR DEMANDE

Cobalt Outils Coupants

Ø DE PERÇAGE AVANT TARAUDAGE OU FILETAGE

NIHS 06-10 (ISO 1501 / DIN 14)

Ø nominal	Pas	Laiton (3G5) Ø noyau min.	Laiton (3G5) Ø noyau max.	Laiton (3G5) Ø perçage	Acier (3G6) Ø noyau min.	Acier (3G6) Ø noyau max.	Acier (3G6) Ø perçage
S 0.30	0.08	0.223	0.240	**0.23**	-	-	-
S 0.35	0.09	0.264	0.286	**0.275**	-	-	-
S 0.40	0.10	0.304	0.330	**0.32**	0.304	0.342	**0.34**
S 0.45	0.10	0.354	0.380	**0.37**	0.354	0.392	**0.39**
S 0.50	0.125	0.380	0.415	**0.40**	0.380	0.435	**0.42**
S 0.55	0.125	0.430	0.465	**0.45**	0.430	0.485	**0.47**
S 0.60	0.15	0.456	0.502	**0.48**	0.456	0.522	**0.50**
S 0.70	0.175	0.532	0.585	**0.56**	0.532	0.605	**0.58**
S 0.80	0.20	0.608	0.665	**0.64**	0.608	0.685	**0.66**
S 0.90	0.225	0.684	0.745	**0.72**	0.684	0.765	**0.74**
S 1.00	0.25	0.760	0.825	**0.80**	0.760	0.845	**0.82**
S 1.10	0.25	0.860	0.925	**0.90**	0.860	0.945	**0.92**
S 1.20	0.25	0.960	1.025	**1.00**	0.960	1.045	**1.02**
S 1.30	0.30	1.012	1.085	**1.05**	1.012	1.105	**1.07**
S 1.40	0.30	1.112	1.185	**1.15**	1.112	1.205	**1.17**

ISO 965 (DIN 13)

Ø nominal	Pas	Tolérance	Ø noyau min.	Ø noyau max.	Ø perçage
M 0.8	0.20	-	0.608	0.685	**0.65**
M 0.9	0.225	-	0.684	0.765	**0.70**
M 1.0	0.25	5H	0.729	0.785	**0.75**
M 1.1	0.25	5H	0.829	0.885	**0.85**
M 1.2	0.25	5H	0.929	0.985	**0.95**
M 1.4	0.30	6H	1.075	1.142	**1.10**
M 1.6	0.35	6H	1.221	1.321	**1.25**
M 1.7	0.35	6H	1.321	1.421	**1.35**
M 1.8	0.35	6H	1.421	1.521	**1.45**
M 2.0	0.40	6H	1.567	1.679	**1.60**
M 2.2	0.45	6H	1.713	1.838	**1.75**
M 2.5	0.45	6H	2.013	2.138	**2.05**
M 3.0	0.50	6H	2.459	2.599	**2.50**
M 3.5	0.60	6H	2.850	3.010	**2.90**
M 4.0	0.70	6H	3.242	3.422	**3.30**
M 4.5	0.75	6H	3.688	3.878	**3.70**
M 5.0	0.80	6H	4.134	4.334	**4.20**
M 6.0	1.00	6H	4.917	5.153	**5.00**
M 7.0	1.00	6H	5.917	6.153	**6.00**
M 8.0	1.25	6H	6.647	6.912	**6.80**
M 9.0	1.25	6H	7.647	7.912	**7.80**
M 10.0	1.50	6H	8.376	8.676	**8.50**
M 11.0	1.50	6H	9.376	9.676	**9.50**
M 12.0	1.75	6H	10.106	10.441	**10.20**
M 14.0	2.00	6H	11.835	12.210	**12.00**
M 16.0	2.00	6H	13.835	14.210	**14.00**
M 18.0	2.50	6H	15.294	15.744	**15.50**
M 20.0	2.50	6H	17.294	17.744	**17.50**
M 22.0	2.50	6H	19.294	19.744	**19.50**
M 24.0	3.00	6H	20.752	21.252	**21.00**
M 27.0	3.00	6H	23.752	24.252	**24.00**

UNC (ANSI B1.1 / ISO 5854)

Ø nominal	Pas	Tolérance	Ø noyau min.	Ø noyau max.	Ø perçage
N°1	64	2B	1.425	1.582	**1.50**
N°2	56	2B	1.695	1.871	**1.80**
N°3	48	2B	1.941	2.146	**2.00**
N°4	40	2B	2.157	2.385	**2.25**
N°5	40	2B	2.487	2.697	**2.60**
N°6	32	2B	2.645	2.895	**2.75**
N°8	32	2B	3.302	3.530	**3.50**
N°10	24	2B	3.683	3.962	**3.80**
N°12	24	2B	4.344	4.597	**4.50**
1/4''	20	2B	4.979	5.257	**5.10**
5/16''	18	2B	6.401	6.731	**6.50**
3/8''	16	2B	7.798	8.153	**7.90**
7/16''	14	2B	9.144	9.550	**9.30**
1/2''	13	2B	10.592	11.023	**10.70**
9/16''	12	2B	11.989	12.446	**12.30**
5/8''	11	2B	13.386	13.868	**13.50**
3/4''	10	2B	16.307	16.840	**16.50**

UNF (ANSI B1.1 / ISO 5854)

Ø nominal	Pas	Tolérance	Ø noyau min.	Ø noyau max.	Ø perçage
N°1	72	2B	1.474	1.612	**1.50**
N°2	64	2B	1.756	1.912	**1.80**
N°3	56	2B	2.025	2.197	**2.10**
N°4	48	2B	2.271	2.458	**2.35**
N°5	44	2B	2.551	2.740	**2.60**
N°6	40	2B	2.820	3.022	**2.90**
N°8	36	2B	3.404	3.606	**3.50**
N°10	32	2B	3.963	4.165	**4.05**
N°12	28	2B	4.496	4.724	**4.60**
1/4''	28	2B	5.360	5.588	**5.50**
5/16''	24	2B	6.782	7.035	**6.90**
3/8''	24	2B	8.382	8.636	**8.50**
7/16''	20	2B	9.729	10.033	**9.80**
1/2''	20	2B	11.329	11.607	**11.40**
9/16''	18	2B	12.751	13.081	**12.90**
5/8''	18	2B	14.351	14.681	**14.50**
3/4''	16	2B	17.323	17.678	**17.50**
7/8''	14	2B	20.270	20.675	**20.40**

UN (ANSI B1.1 / ISO 5854)

Ø nominal	Pas	Tolérance	Ø noyau min.	Ø noyau max.	Ø perçage
5/16''	28	2B	6.955	7.169	**7.10**
5/16''	20	2B	6.563	6.855	**6.70**
3/8''	28	2B	8.543	8.756	**8.60**
3/8''	20	2B	8.150	8.442	**8.30**
7/16''	32	2B	10.253	10.441	**10.30**
7/16''	16	2B	9.394	9.752	**9.60**
1/2''	32	2B	11.841	12.029	**11.90**
1/2''	16	2B	10.981	11.340	**11.20**
9/16''	32	2B	13.428	13.616	**13.50**
9/16''	28	2B	13.305	13.519	**13.40**
9/16''	20	2B	12.913	13.205	**13.10**
9/16''	16	2B	12.569	12.927	**12.70**
5/8''	32	2B	15.016	15.204	**15.10**
5/8''	28	2B	14.893	15.106	**15.00**
5/8''	20	2B	14.500	14.792	**14.60**
5/8''	16	2B	14.156	14.515	**14.30**
5/8''	12	2B	13.584	14.043	**13.80**
11/16''	32	2B	16.603	16.791	**16.70**
11/16''	28	2B	16.480	16.694	**16.60**
11/16''	20	2B	16.088	16.380	**16.20**
11/16''	16	2B	15.744	16.102	**15.90**
11/16''	12	2B	15.171	15.631	**15.40**
3/4''	32	2B	18.191	18.379	**18.30**
3/4''	28	2B	18.068	18.281	**18.20**
3/4''	12	2B	16.759	17.218	**17.00**
13/16''	32	2B	19.778	19.966	**19.90**
13/16''	28	2B	19.655	19.869	**19.80**
13/16''	16	2B	18.919	19.277	**19.10**
13/16''	12	2B	18.346	18.806	**18.60**
7/8''	32	2B	21.366	21.554	**21.50**
7/8''	28	2B	21.243	21.456	**21.30**
7/8''	16	2B	20.506	20.865	**20.70**
7/8''	12	2B	19.934	20.393	**20.20**
15/16''	32	2B	22.953	23.141	**23.00**
15/16''	28	2B	22.830	23.044	**22.90**
15/16''	16	2B	22.094	22.452	**22.30**
15/16''	12	2B	21.521	21.981	**21.80**
1''	32	2B	24.541	24.729	**24.60**
1''	28	2B	24.418	24.631	**24.50**
1''	16	2B	23.681	24.040	**23.90**
1 1/16''	28	2B	26.005	26.219	**26.10**
1 1/16''	20	2B	25.613	25.905	**25.80**
1 1/16''	18	2B	25.460	25.783	**25.60**
1 1/16''	16	2B			**25.40**
1 1/16''	12	2B			**24.90**

Ø DE PERÇAGE AVANT TARAUDAGE OU FILETAGE

UNEF (ANSI B1.1 / ISO 5854)

Ø nominal	Pas	Tolérance	Ø noyau min.	Ø noyau max.	Ø perçage
N°12	32	2B	4.623	4.826	**4.70**
1/4"	32	2B	5.487	5.689	**5.60**
5/16"	32	2B	7.087	7.264	**7.20**
3/8"	32	2B	8.662	8.864	**8.75**
7/16"	28	2B	10.135	10.337	**10.25**
1/2"	28	2B	11.710	11.938	**11.85**
9/16"	24	2B	13.132	13.385	**13.20**
5/8"	24	2B	14.732	14.986	**14.80**
11/16"	24	2B	16.307	16.560	**16.40**
3/4"	20	2B	17.679	17.957	**17.80**

UNJF (ISO 3161)

Ø nominal	Pas	Tolérance	Ø noyau min.	Ø noyau max.	Ø perçage
N°10	32	3B	4.054	4.255	**4.10**
1/4"	28	3B	5.466	5.662	**5.55**
5/16"	24	3B	6.906	7.109	**7.00**
3/8"	24	3B	8.494	8.679	**8.60**
7/16"	20	3B	9.876	10.084	**10.00**
1/2"	20	3B	11.463	11.661	**11.55**

BSP (ISO 228)

Ø nominal	Pas	Ø noyau min.	Ø noyau max.	Ø perçage
G 1/16"	28	6.561	6.843	**6.75**
G 1/8"	28	8.566	8.848	**8.75**
G 1/4"	19	11.445	11.890	**11.60**
G 3/8"	19	14.950	15.395	**15.20**
G 1/2"	14	18.631	19.172	**18.90**
G 5/8"	14	20.587	21.128	**20.90**
G 3/4"	14	24.117	24.658	**24.40**
G 7/8"	14	27.877	28.418	**28.20**
hG 1"	11	30.291	30.931	**30.70**

COMBINAISONS DE DIAMÈTRES NOMINAUX ET PAS SELON NORME ANSI B1.1 / ISO 5854

Ø nom.		**80**	**72**	**64**	**56**	**48**	**44**	**40**	**36**	**32**	**28**	**24**	**20**	**18**	**16**	**14**	**13**	**12**	**11**	**10**	**TPI**
inch	mm	0.318	0.353	0.397	0.454	0.529	0.577	0.635	0.706	0.794	0.907	1.058	1.270	1.411	1.588	1.814	1.954	2.117	2.309	2.54	mm
N°0	1.524	UNF																			
N°1	1.854		UNF	UNC																	
N°2	2.184			UNF	UNC																
N°3	2.515				UNF	UNC															
N°4	2.845					UNF		UNC													
N°5	3.175						UNF	UNC													
N°6	3.505							UNF		UNC											
N°8	4.166								UNF	UNC											
N°10	4.826									UNF		UNC									
N°12	5.486									UNEF	UNF	UNC									
1/4"	6.350									UNEF	UNF		UNC								
5/16"	7.938									UNEF	UN	UNF	UN	UNC							
3/8"	9.525									UNEF	UN	UNF	UN		UNC						
7/16"	11.113									UN	UNEF	UNF			UN	UNC					
1/2"	12.700									UN	UNEF		UNF		UN		UNC				
9/16"	14.288									UN	UN	UNEF	UN	UNF	UN			UNC			
5/8"	15.875									UN	UN	UNEF	UN	UNF	UN			UN	UNC		
11/16"	17.463									UN	UN	UNEF	UN		UN			UN			
3/4"	19.050									UN	UN		UNEF		UNF			UN		UNC	
13/16"	20.638									UN	UN		UNEF		UN			UN			
7/8"	22.225									UN	UN		UNEF		UN	UNF		UN			
15/16"	23.813									UN	UN		UNEF		UN			UN			
1''	25.400									UN	UN		UNEF		UN			UNF			
1-1/16"	26.988										UN		UN	UN	UN			UN			

CONDITIONS DE COUPE

USINAGE AVEC PIÈCE FIXE

Matières à usiner			CARBURE Vc [m/min]		TiALN Vc [m/min]		CUTINOX Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**65**	80	**90**	130		
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**70**	100		
P	Acier fortement allié	700 – 1500 N/mm²			**75**	105	**80**	110
M	Acier inoxydable	400 – 700 N/mm²	**35**	50	**70**	100		
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**55**	80	**60**	85
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**80**	100	**90**	110		
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**65**	80	**75**	90		
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**60**	75	**70**	85		
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy			**25**	50	**30**	55
S	Titane, alliage de titane		**50**	90				
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**80**	200				
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**70**	150				
N	Or, argent		**80**	200				

USINAGE AVEC DÉCOLLETEUSE - la pièce tourne

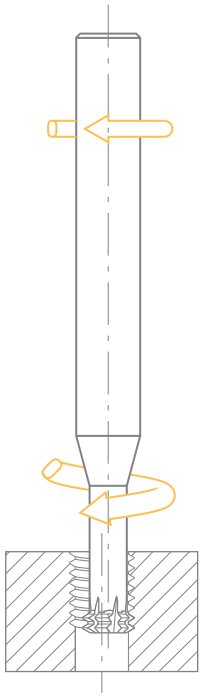
Matières à usiner		CARBURE Vc [m/min]	fz [mm] pas 0.20 - 0.25	fz [mm] pas 0.30 - 0.35	fz [mm] pas 0.40 - 0.50	fz [mm] pas 0.70 - 1.00
P	Aciers	**50** - 100	**0.002** - 0.004	**0.002** - 0.004	**0.003** - 0.006	**0.005** - 0.013
M	Acier inoxydable	**40** - 80	**0.002** - 0.003	**0.002** - 0.004	**0.002** - 0.005	**0.004** - 0.01
S	Titane, alliage de titane	**50** - 90	**0.002** - 0.003	**0.002** - 0.004	**0.002** - 0.005	**0.004** - 0.01
N	Alliage de cuivre	**60** - 150	**0.002** - 0.005	**0.002** - 0.006	**0.003** - 0.007	**0.005** - 0.013

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times z$$

Avance par dent **fz [mm]**

Ø D_1 0.20 - 0.60	Ø D_1 0.60 - 1.20	Ø D_1 1.20 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 5.00	Ø D_1 5.00 - 8.00
0.001 - 0.006	**0.004** - 0.016	**0.010** - 0.026	**0.017** - 0.04	**0.03** - 0.06	**0.04** - 0.10
0.001 - 0.006	**0.004** - 0.015	**0.009** - 0.024	**0.015** - 0.04	**0.02** - 0.06	**0.04** - 0.09
0.001 - 0.005	**0.003** - 0.013	**0.008** - 0.022	**0.014** - 0.03	**0.02** - 0.05	**0.03** - 0.08
0.001 - 0.005	**0.003** - 0.013	**0.008** - 0.022	**0.014** - 0.03	**0.02** - 0.05	**0.03** - 0.08
0.001 - 0.004	**0.003** - 0.011	**0.007** - 0.018	**0.011** - 0.03	**0.02** - 0.04	**0.03** - 0.06
0.002 - 0.011	**0.007** - 0.026	**0.017** - 0.044	**0.028** - 0.07	**0.04** - 0.10	**0.07** - 0.16
0.002 - 0.008	**0.005** - 0.020	**0.013** - 0.033	**0.021** - 0.05	**0.03** - 0.08	**0.05** - 0.12
0.002 - 0.008	**0.005** - 0.020	**0.013** - 0.033	**0.021** - 0.05	**0.03** - 0.08	**0.05** - 0.12
0.001 - 0.003	**0.002** - 0.007	**0.004** - 0.011	**0.007** - 0.02	**0.01** - 0.03	**0.02** - 0.04
0.001 - 0.007	**0.004** - 0.017	**0.011** - 0.028	**0.018** - 0.04	**0.03** - 0.07	**0.04** - 0.10
0.002 - 0.011	**0.007** - 0.026	**0.017** - 0.044	**0.082** - 0.07	**0.04** - 0.10	**0.07** - 0.16
0.001 - 0.007	**0.004** - 0.017	**0.011** - 0.028	**0.018** - 0.04	**0.03** - 0.07	**0.04** - 0.10
0.002 - 0.008	**0.005** - 0.020	**0.013** - 0.033	**0.021** - 0.05	**0.03** - 0.08	**0.05** - 0.12



Exemple pour M2 x 0.40 dans le titane, DIXI 1730 Ø D_1 = 1.55

❶ **Rotation outil n (min^{-1})** = $\frac{1000 \times Vc}{\pi \times Ø\ D_1}$

$\frac{1000 \times 90}{(\pi \times 1.55)}$ ⇒ 19'000 min^{-1}

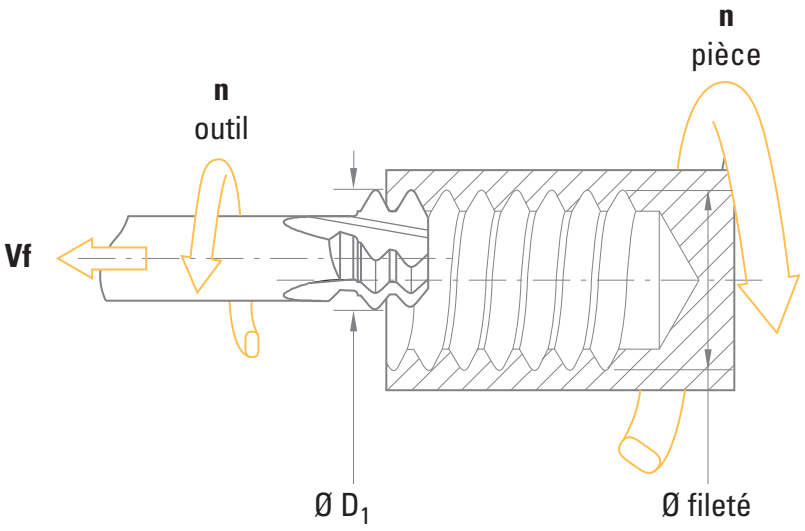
❷ **Avance Vf mm/min** = n x fz x z

19'000 x 0.004 x 3 = 223 mm/min

❸ **Rotation pièce min^{-1}** = $\frac{Vf}{Ø\ \text{fileté} \times \pi}$

$\frac{223}{M2 \times \pi}$ ⇒ 36 min^{-1}

Si nécessaire, convertir en degrés nb° = min^{-1} x 360° ⇒ 36 min^{-1} x 360° = 12960°



CONDITIONS DE COUPE

Matières à usiner			CARBURE		CUTINOX	
			Vc [m/min]		Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**100**	150	**120**	180
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**90**	130	**110**	150
P	Acier de décolletage au plomb		**100**	180	**120**	200
P	Acier fortement allié	700 – 1500 N/mm²	**40**	70	**50**	80
M	Acier inoxydable	400 – 700 N/mm²	**50**	80	**60**	110
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**35**	60	**45**	75
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**100**	200	**150**	250
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**100**	140	**120**	160
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	110	**80**	140
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**20**	45	**30**	60
S	Titane, alliage de titane		**40**	65	**40**	65
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**100**	200	**100**	200
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**80**	150	**80**	150
N	Alliage d'aluminium	Si < 8%	**100**	250	**100**	250
N	Fonte d'aluminium	Si > 8%	**100**	200	**100**	200
N	Graphite		**100**	200	**100**	200
N	Plastique		**100**	250	**100**	250
N	Or, argent		**100**	200	**100**	200

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times z$$

Avance par dent **fz [mm]**

Ø D_1 0.60 - 1.00	Ø D_1 1.00 -1.50	Ø D_1 1.50 - 2.00	Ø D_1 2.00 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 6.00	Ø D_1 6.00 - 10.00
0.004 - 0.013	**0.006** - 0.020	**0.009** - 0.026	**0.012** - 0.039	**0.011** - 0.044	**0.022** - 0.054	**0.031** - 0.070
0.003 - 0.012	**0.005** - 0.018	**0.008** - 0.023	**0.011** - 0.035	**0.010** - 0.040	**0.019** - 0.049	**0.028** - 0.063
0.004 - 0.016	**0.007** - 0.023	**0.011** - 0.031	**0.014** - 0.047	**0.014** - 0.053	**0.026** - 0.065	**0.037** - 0.084
0.003 - 0.010	**0.005** - 0.016	**0.007** - 0.021	**0.010** - 0.031	**0.009** - 0.035	**0.017** - 0.043	**0.024** - 0.056
0.003 - 0.010	**0.005** - 0.016	**0.007** - 0.021	**0.010** - 0.031	**0.009** - 0.035	**0.017** - 0.043	**0.024** - 0.056
0.003 - 0.009	**0.004** - 0.014	**0.006** - 0.018	**0.008** - 0.027	**0.008** - 0.031	**0.015** - 0.038	**0.021** - 0.049
0.005 - 0.016	**0.008** - 0.024	**0.011** - 0.033	**0.015** - 0.049	**0.014** - 0.055	**0.027** - 0.068	**0.038** - 0.088
0.004 - 0.013	**0.006** - 0.020	**0.009** - 0.026	**0.012** - 0.039	**0.011** - 0.044	**0.022** - 0.054	**0.031** - 0.070
0.004 - 0.013	**0.006** - 0.020	**0.009** - 0.026	**0.012** - 0.039	**0.011** - 0.044	**0.022** - 0.054	**0.031** - 0.070
0.002 - 0.007	**0.003** - 0.010	**0.005** - 0.013	**0.006** - 0.020	**0.006** - 0.022	**0.011** - 0.027	**0.015** - 0.035
0.004 - 0.013	**0.006** - 0.020	**0.009** - 0.026	**0.012** - 0.039	**0.011** - 0.044	**0.022** - 0.054	**0.031** - 0.070
0.005 - 0.020	**0.009** - 0.029	**0.014** - 0.039	**0.018** - 0.059	**0.017** - 0.066	**0.032** - 0.081	**0.046** - 0.105
0.005 - 0.017	**0.008** - 0.025	**0.012** - 0.034	**0.016** - 0.051	**0.015** - 0.057	**0.028** - 0.070	**0.040** - 0.091
0.007 - 0.026	**0.012** - 0.018	**0.018** - 0.052	**0.024** - 0.078	**0.023** - 0.088	**0.043** - 0.108	**0.061** - 0.140
0.005 - 0.020	**0.009** - 0.014	**0.014** - 0.039	**0.018** - 0.059	**0.017** - 0.066	**0.032** - 0.081	**0.046** - 0.105
0.005 - 0.018	**0.008** - 0.013	**0.013** - 0.036	**0.017** - 0.055	**0.016** - 0.062	**0.030** - 0.076	**0.043** - 0.098
0.005 - 0.018	**0.008** - 0.013	**0.013** - 0.036	**0.017** - 0.055	**0.016** - 0.062	**0.030** - 0.076	**0.043** - 0.098
0.005 - 0.020	**0.009** - 0.029	**0.014** - 0.039	**0.018** - 0.059	**0.017** - 0.066	**0.032** - 0.081	**0.046** - 0.105

DIXI 1742-TC

CONDITIONS DE COUPE

Matières à usiner			DAC
			Vc [m/min]
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		200
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	150
N	Alliage d'aluminium	Si < 8%	250
N	Fonte d'aluminium	Si > 8%	200
N	Graphite		200
N	Plastique		250
N	Or, argent		200

DIXI 1744-TC

CONDITIONS DE COUPE

Matières à usiner			CUTINOX
			Vc [m/min]
P	Acier non allié / faiblement allié	< 600 N/mm²	150
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	120
P	Acier de décolletage au plomb		160
P	Acier fortement allié	700 – 1500 N/mm²	70
M	Acier inoxydable	400 – 700 N/mm²	90
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	60
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	200
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	130
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		110
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	50
S	Titane, alliage de titane		60

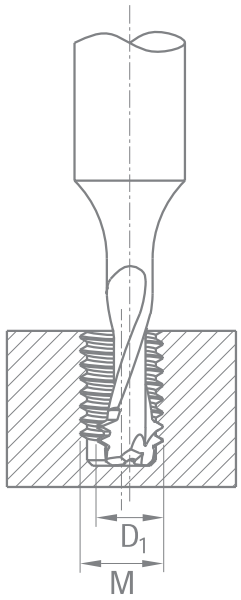
$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times z$$

Avance centre outil **Vf [mm/min]**

M5	M6	M8	M10	M12
1020	1275	1360	1360	1120
800	1000	1100	1100	990
1200	1500	1600	1600	1440
800	1000	1100	1100	990
800	1000	1100	1100	990
1200	1500	1600	1600	1440
800	1000	1100	1100	990

$$Vf\ centre\ outil = Vf \times \left(1 - \frac{D_1}{M}\right)$$



Avance centre outil **Vf [mm/min]**

M5	M6	M8	M10	M12
800	600	500	500	450
600	500	350	350	300
1200	1000	800	800	700
450	400	250	250	200
500	450	350	350	280
400	300	200	200	150
1000	800	500	500	460
600	500	350	350	300
550	450	300	300	250
250	200	150	150	100
300	250	200	200	150

CONDITIONS DE COUPE

Matières à usiner			CARBURE		TiALN	
			Vc [m/min]		Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**70**	100	**90**	110
P	Acier non allié / faiblement allié	600 – 1500 N/mm²			**70**	90
P	Acier de décolletage au plomb		**70**	100	**90**	110
P	Acier fortement allié	700 – 1500 N/mm²			**40**	55
M	Acier inoxydable	400 – 700 N/mm²	**40**	60	**70**	90
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²			**40**	55
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**70**	100	**90**	110
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	70	**70**	90
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	100	**90**	110
S	Titane, alliage de titane		**30**	45	**40**	60
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**140**	160	**200**	220
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**120**	140	**170**	190
N	Alliage d'aluminium	Si < 8%	**180**	260	**230**	340
N	Fonte d'aluminium	Si > 8%	**140**	160	**210**	230
N	Plastique		**240**	260	**300**	340
N	Or, argent		**140**	160	**200**	220

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times z$$

Avance par dent **fz [mm]**

Ø D_1 0.90 - 1.50	Ø D_1 1.50 -2.00	Ø D_1 2.00 - 2.50	Ø D_1 2.50 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 16.00
		0.008 - 0.02	**0.010** - 0.02	**0.012** - 0.03	**0.016** - 0.04	**0.024** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.11
		0.006 - 0.01	**0.008** - 0.01	**0.009** - 0.02	**0.012** - 0.03	**0.018** - 0.04	**0.02** - 0.05	**0.03** - 0.06	**0.04** - 0.08
0.005 - 0.015	**0.008** - 0.020	**0.010** - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.020** - 0.06	**0.030** - 0.08	**0.04** - 0.10	**0.05** - 0.12	**0.06** - 0.16
			0.008 - 0.01	**0.009** - 0.02	**0.012** - 0.03	**0.018** - 0.04	**0.02** - 0.05	**0.03** - 0.06	**0.04** - 0.08
		0.006 - 0.01	**0.008** - 0.01	**0.009** - 0.02	**0.012** - 0.03	**0.018** - 0.04	**0.02** - 0.05	**0.03** - 0.06	**0.04** - 0.08
			0.008 - 0.01	**0.009** - 0.02	**0.012** - 0.03	**0.018** - 0.04	**0.02** - 0.05	**0.03** - 0.06	**0.04** - 0.08
		0.008 - 0.02	**0.010** - 0.02	**0.012** - 0.03	**0.016** - 0.04	**0.024** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.11
			0.008 - 0.01	**0.009** - 0.02	**0.012** - 0.03	**0.018** - 0.04	**0.02** - 0.05	**0.03** - 0.06	**0.04** - 0.08
	0.006 - 0.014	**0.008** - 0.02	**0.010** - 0.02	**0.012** - 0.03	**0.016** - 0.04	**0.024** - 0.06	**0.03** - 0.07	**0.04** - 0.08	**0.05** - 0.11
		0.006 - 0.01	**0.008** - 0.01	**0.009** - 0.02	**0.012** - 0.03	**0.018** - 0.04	**0.02** - 0.05	**0.03** - 0.06	**0.04** - 0.08
0.005 - 0.015	**0.008** - 0.020	**0.010** - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.020** - 0.06	**0.030** - 0.08	**0.04** - 0.10	**0.05** - 0.12	**0.06** - 0.16
0.003 - 0.008	**0.005** - 0.010	**0.006** - 0.01	**0.008** - 0.01	**0.009** - 0.02	**0.012** - 0.03	**0.018** - 0.04	**0.02** - 0.05	**0.03** - 0.06	**0.04** - 0.08
0.005 - 0.015	**0.008** - 0.020	**0.010** - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.020** - 0.06	**0.030** - 0.08	**0.04** - 0.10	**0.05** - 0.12	**0.06** - 0.16
0.005 - 0.015	**0.008** - 0.020	**0.010** - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.020** - 0.06	**0.030** - 0.08	**0.04** - 0.10	**0.05** - 0.12	**0.06** - 0.16
0.006 - 0.023	**0.011** - 0.030	**0.014** - 0.04	**0.018** - 0.04	**0.021** - 0.06	**0.028** - 0.09	**0.042** - 0.12	**0.06** - 0.15	**0.07** - 0.18	**0.08** - 0.24
0.005 - 0.015	**0.008** - 0.020	**0.010** - 0.03	**0.013** - 0.03	**0.015** - 0.04	**0.020** - 0.06	**0.030** - 0.08	**0.04** - 0.10	**0.05** - 0.12	**0.06** - 0.16

CONDITIONS DE COUPE

Matières à usiner			CARBURE		TiALN	
			Vc [m/min]		Vc [m/min]	
P	Acier non allié / faiblement allié	< 600 N/mm²	**70**	100	**90**	110
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**40**	60	**70**	90
P	Acier de décolletage au plomb		**70**	100	**90**	110
P	Acier fortement allié	700 – 1500 N/mm²	**40**	60	**70**	90
M	Acier inoxydable	400 – 700 N/mm²	**30**	45	**40**	55
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**40**	60	**70**	90
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**70**	100	**90**	110
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**40**	70	**70**	90
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**70**	100	**90**	110
S	Titane, alliage de titane		**30**	45	**40**	60
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**140**	160	**200**	220
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**120**	140	**170**	190
N	Alliage d'aluminium	Si < 8%	**180**	260	**230**	270
N	Fonte d'aluminium	Si > 8%	**140**	160	**210**	230
N	Plastique		**240**	260	**300**	340
N	Or, argent		**140**	160	**200**	220

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times z$$

Avance par dent **fz [mm]**

Ø D_1 0.90 - 1.50	Ø D_1 1.50 -2.00	Ø D_1 2.00 - 2.50	Ø D_1 2.50 - 3.00	Ø D_1 3.00 - 4.00	Ø D_1 4.00 - 6.00	Ø D_1 6.00 - 8.00	Ø D_1 8.00 - 10.00	Ø D_1 10.00 - 12.00	Ø D_1 12.00 - 16.00
0.005 - 0.012	**0.009** - 0.016	**0.012** - 0.02	**0.015** - 0.02	**0.018** - 0.03	**0.024** - 0.05	**0.036** - 0.06	**0.05** - 0.08	**0.06** - 0.10	**0.07** - 0.13
0.004 - 0.009	**0.006** - 0.012	**0.008** - 0.02	**0.010** - 0.02	**0.012** - 0.02	**0.016** - 0.04	**0.024** - 0.05	**0.03** - 0.06	**0.04** - 0.07	**0.05** - 0.10
0.006 - 0.018	**0.011** - 0.024	**0.014** - 0.03	**0.018** - 0.03	**0.021** - 0.05	**0.028** - 0.07	**0.042** - 0.10	**0.06** - 0.12	**0.07** - 0.14	**0.08** - 0.19
0.004 - 0.009	**0.006** - 0.012	**0.008** - 0.02	**0.010** - 0.02	**0.012** - 0.02	**0.016** - 0.04	**0.024** - 0.05	**0.03** - 0.06	**0.04** - 0.07	**0.05** - 0.10
0.004 - 0.009	**0.006** - 0.012	**0.008** - 0.02	**0.010** - 0.02	**0.012** - 0.02	**0.016** - 0.04	**0.024** - 0.05	**0.03** - 0.06	**0.04** - 0.07	**0.05** - 0.10
0.004 - 0.009	**0.006** - 0.012	**0.008** - 0.02	**0.010** - 0.02	**0.012** - 0.02	**0.016** - 0.04	**0.024** - 0.05	**0.03** - 0.06	**0.04** - 0.07	**0.05** - 0.10
0.005 - 0.012	**0.009** - 0.016	**0.012** - 0.02	**0.015** - 0.02	**0.018** - 0.03	**0.024** - 0.05	**0.036** - 0.06	**0.05** - 0.08	**0.06** - 0.10	**0.07** - 0.13
0.004 - 0.009	**0.006** - 0.012	**0.008** - 0.02	**0.010** - 0.02	**0.012** - 0.02	**0.016** - 0.04	**0.024** - 0.05	**0.03** - 0.06	**0.04** - 0.07	**0.05** - 0.10
0.005 - 0.012	**0.009** - 0.016	**0.012** - 0.02	**0.015** - 0.02	**0.018** - 0.03	**0.024** - 0.05	**0.036** - 0.06	**0.05** - 0.08	**0.06** - 0.10	**0.07** - 0.13
0.004 - 0.009	**0.006** - 0.012	**0.008** - 0.02	**0.010** - 0.02	**0.012** - 0.02	**0.016** - 0.04	**0.024** - 0.05	**0.03** - 0.06	**0.04** - 0.07	**0.05** - 0.10
0.006 - 0.018	**0.011** - 0.024	**0.014** - 0.03	**0.018** - 0.03	**0.021** - 0.05	**0.028** - 0.07	**0.042** - 0.10	**0.06** - 0.12	**0.07** - 0.14	**0.08** - 0.19
0.004 - 0.009	**0.006** - 0.012	**0.008** - 0.02	**0.010** - 0.02	**0.012** - 0.02	**0.016** - 0.04	**0.024** - 0.05	**0.03** - 0.06	**0.04** - 0.07	**0.05** - 0.10
0.006 - 0.018	**0.011** - 0.024	**0.014** - 0.03	**0.018** - 0.03	**0.021** - 0.05	**0.028** - 0.07	**0.042** - 0.10	**0.06** - 0.12	**0.07** - 0.14	**0.08** - 0.19
0.006 - 0.018	**0.011** - 0.024	**0.014** - 0.03	**0.018** - 0.03	**0.021** - 0.05	**0.028** - 0.07	**0.042** - 0.10	**0.06** - 0.12	**0.07** - 0.14	**0.08** - 0.19
0.007 - 0.027	**0.012** - 0.036	**0.016** - 0.05	**0.020** - 0.05	**0.024** - 0.07	**0.032** - 0.11	**0.048** - 0.14	**0.06** - 0.18	**0.08** - 0.22	**0.10** - 0.29
0.006 - 0.018	**0.011** - 0.024	**0.014** - 0.03	**0.018** - 0.03	**0.021** - 0.05	**0.028** - 0.07	**0.042** - 0.10	**0.06** - 0.12	**0.07** - 0.14	**0.08** - 0.19

CONDITIONS DE COUPE

Matières à usiner			CARBURE Vc [m/min]		CUTINOX Vc [m/min]	
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**80**	140	**100**	200
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**100**	250	**150**	350
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**100**	250	**150**	350
N	Alliage d'aluminium	Si < 8%	**100**	200	**150**	350
N	Fonte d'aluminium	Si > 8%			**150**	350

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

PERÇAGE

Vf [mm/min] = n [tr/min] x f [mm]

Avance par tour (**f**)

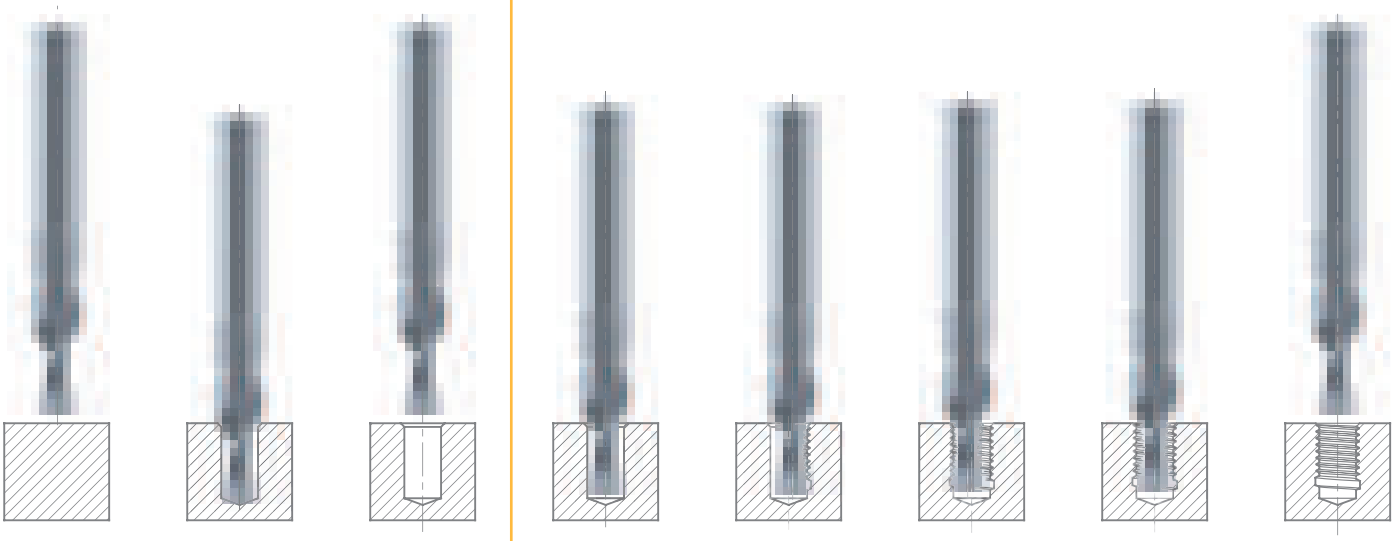
Ø D_1 3.00 -700	Ø D_1 7.00 - 14.00
0.08 - 0.24	**0.18** - 0.40
0.08 - 0.18	**0.14** - 0.30
0.14 - 0.28	**0.18** - 0.40
0.14 - 0.28	**0.18** - 0.40
0.14 - 0.28	**0.18** - 0.40

FILETAGE

Vf [mm/min] = n [tr/min] x fz [mm] x z

Avance par dent (**fz**)

Ø D_1 3.00 -700	Ø D_1 7.00 - 14.00
0.03 - 0.07	**0.05** - 0.12
0.04 - 0.07	**0.06** - 0.15
0.04 - 0.07	**0.05** - 0.15
0.03 - 0.07	**0.06** - 0.15
0.03 - 0.07	**0.06** - 0.15



❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

ALÉSAGE

REIBEN

REAMING

ALESATURA

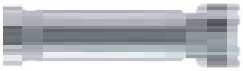
FURAT

ESCARIADO

Cobalt Outils Coupants

SÉLECTION DES ALÉSOIRS ET OUTILS À ALÉSER 336

ALÉSOIRS EN CARBURE MONOBLOC 340



ALÉSOIRS EXPANSIBLES 355

ALÉSOIRS À PLAQUETTES SUR DEMANDE 359

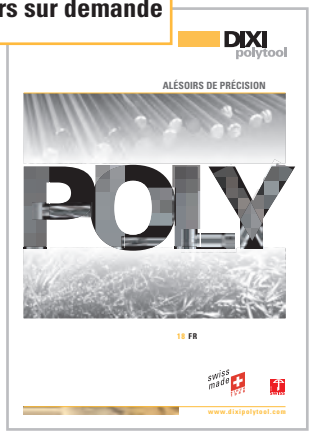
OUTILS À ALÉSER ET CHANFREINER 363

OUTILS À ALÉSER 365

CONDITIONS DE COUPE 369

OUTILS SUR DEMANDE 374

Consultez notre catalogue spécifique dédié aux alésoirs sur demande



Cobalt Outils Coupants

SELECTION DES ALÉSOIRS
ET OUTILS À ALÉSER

✓ = article de stock

ALÉSOIRS EN CARBURE MONOBLOC

	Z	Page		☐ CARBURE	■ TiAlN	□ CERMET		Tolérance trou à usiner
POLY 4001 Ø 0.40 - 12.02 avec trou central > Ø 2.98	3 - 6	340		✓				IT 7
POLY 4005 Ø 2.97 - 6.50 avec trou central > Ø 2.98	4 - 6	347		✓				IT 7
POLY 4007 Ø 0.37 - 12.02	3 - 6	348		✓				IT 7

ALÉSOIRS EXPANSIBLES À PLAQUETTES CARBURE OU CERMET

Utiliser le CERMET dans les groupes de matières p. 372

	Z	Page		☐ CARBURE	■ TiAlN	□ CERMET		Tolérance trou à usiner
POLY 4361 Ø 6.00 - 24.00	4 - 6	355		✓	✓	✓		IT 5 IT 6 IT 7
POLY 4371 Ø 6.00 - 24.00	4 - 6	357		✓	✓	✓		IT 5 IT 6 IT 7

ALÉSOIRS SUR DEMANDE - PLAQUETTES CARBURE OU CERMET

ALÉSOIRS FIXES

Utiliser le CERMET dans les groupes de matières p. 372

	Z	Page		☐ CARBURE	■ TiAlN	□ CERMET		Tolérance trou à usiner
POLY 4261 Ø 5.80 - 120.00	4 - 6	359						IT 7
POLY 4271 Ø 5.80 - 120.00	4 - 6	360						IT 7
POLY 4264 Ø 5.80 - 120.00	4 - 6	359		SUR DEMANDE				IT 7
POLY 4274 Ø 5.80 - 120.00	4 - 6	360						IT 7

ALÉSOIRS EXPANSIBLES

	Z	Page		☐ CARBURE	■ TiAlN	□ CERMET		Tolérance trou à usiner
POLY 4361 Ø 5.80 - 55.00	4 - 6	361						IT 5 IT 6 IT 7
POLY 4371 Ø 5.80 - 55.00	4 - 6	362		SUR DEMANDE				IT 5 IT 6 IT 7

○ bien ◎ excellent

Acier + Pb	Acier > 600MPa	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
◎	◎	○	○		◎	○	◎	◎	◎	◎		◎
◎	◎	○	○		◎	○	◎	◎	◎	◎		◎
◎	◎	○	○		◎	○	◎	◎	◎	◎		◎
◎	◎	○	○		◎	○	◎	◎	◎	◎		
◎	◎	○	○		◎	○	◎	◎	◎	◎		
◎	◎	○	○	◎	◎	○	◎	◎	◎	◎		
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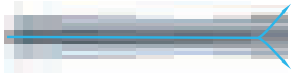
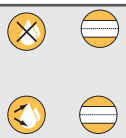
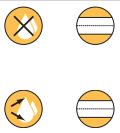
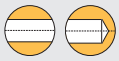
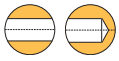
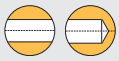
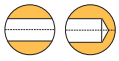
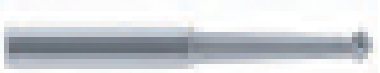
◎	◎	○	○	◎	◎	○	◎	◎	◎	◎		
◎	◎	○	○	◎	◎	○	◎	◎	◎	◎		
◎	◎	○	○	◎	◎	○	◎	◎	◎	◎		

SELECTION DES ALÉSOIRS ET OUTILS À ALÉSER

✓ = article de stock

		Z	Page		☐ CARBURE	■ TiAlN	☐ CERMET		Tolérance trou à usiner
ALÉSOIRS EXPANSIBLES									
POLY 4364 Ø 5.80 - 55.00		4 - 6	361					SUR DEMANDE	IT 5 IT 6 IT 7
POLY 4374 Ø 5.80 - 55.00		4 - 6	362						IT 5 IT 6 IT 7
OUTILS À ALÉSER ET CHANFREINER									
DIXI 2577 Ø 0.26 - 0.86		-	363		✓				
DIXI 2567 Ø 0.20 - 1.00		-	364		✓				
OUTILS À ALÉSER									
DIXI 2578 Ø 0.30 - 1.00		-	365		✓				
DIXI 2579 Ø 0.60 - 3.00		-	366		✓				
DIXI 2580 Ø 0.50 - 20.00		-	367		✓				
DIXI 2581 Ø 0.50 - 18.00		-	368		✓				
PORTE-BURINS									
DIXI 2764		-	365						

Cobalt Outils Coupants

○ bien ◎ excellent

Acier + Pb	Acier > 600MPa	Acier fort. allié	Acier inox aust.	Aciers Fontes 45-65 HRC	Fontes	Super alliages Ni / Co	Titane, alliages de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu	Graphite	Plastique
◎	◎	○	○	◎	◎	○	◎	◎	◎	◎		
◎	◎	○	○	◎	◎	○	◎	◎	◎	◎		
◎	◎	○	○		◎	○	◎	◎	◎	◎		◎
◎	◎	○	○		◎	○	◎	◎	◎	◎		◎
◎	◎	○	○		◎	○	◎	◎	◎	◎		◎
◎	◎	○	○		◎	○	◎	◎	◎	◎		◎
◎	◎	○	○		◎	○	◎	◎	◎	◎		◎
◎	◎	○	○		◎	○	◎	◎	◎	◎		◎

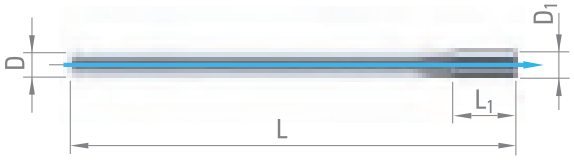
POLY 4001 - 4001-TC

ALÉSOIRS DENTURE IRRÉGULIÈRE DROITE

P. 370

> Ø 2.98

Ref. A



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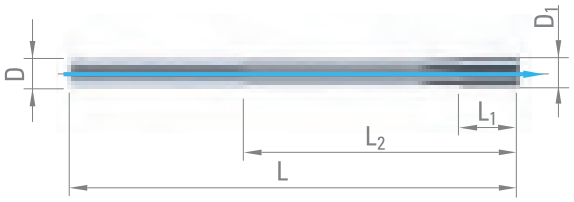


Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

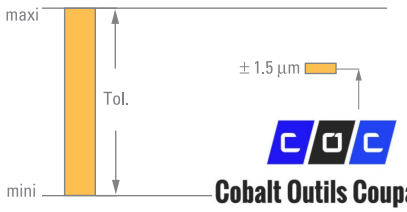
Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

D nom. H7	D_1 ± 1.5µm	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
0.40	(0.407)	3	5	3	38	3	B	959801
0.41	(0.417)	3	5	3	38	3	B	964623
0.42	(0.427)	3	5	3	38	3	B	959802
0.43	(0.437)	3	5	3	38	3	B	978100
0.44	(0.447)	3	5	3	38	3	B	959803
0.45	(0.457)	3	5	3	38	3	B	954360
0.46	(0.467)	3	5	3	38	3	B	959804
0.47	(0.477)	3	5	3	38	3	B	963057
0.48	(0.487)	3	5	3	38	3	B	959805
0.49	(0.497)	3	5	3	38	3	B	954359
0.50	(0.507)	3	5	3	38	3	B	959662
0.51	(0.517)	4	6	3	38	3	B	200007
0.52	(0.527)	4	6	3	38	3	B	200000
0.53	(0.537)	4	6	3	38	3	B	200004
0.54	(0.547)	4	6	3	38	3	B	200005
0.55	(0.557)	4	6	3	38	3	B	200001
0.56	(0.567)	4	6	3	38	3	B	966312
0.57	(0.577)	4	6	3	38	3	B	326970
0.58	(0.587)	4	6	3	38	3	B	200003
0.59	(0.597)	4	6	3	38	3	B	200006
0.60	(0.607)	4	6	3	38	3	B	200002
0.61	(0.617)	4	7	3	38	3	B	964889
0.62	(0.627)	4	7	3	38	3	B	200010
0.63	(0.637)	4	7	3	38	3	B	965815
0.64	(0.647)	4	7	3	38	3	B	200015
0.65	(0.657)	4	7	3	38	3	B	200008
0.66	(0.667)	4	7	3	38	3	B	200012
0.67	(0.677)	4	7	3	38	3	B	200013
0.68	(0.687)	4	7	3	38	3	B	200011
0.69	(0.697)	4	7	3	38	3	B	200014
0.70	(0.707)	4	7	3	38	3	B	200009
0.71	(0.717)	4	8	3	38	3	B	955902
0.72	(0.727)	4	8	3	38	3	B	200018
0.73	(0.737)	4	8	3	38	3	B	959571
0.74	(0.747)	4	8	3	38	3	B	200022
0.75	(0.757)	4	8	3	38	3	B	200016
0.76	(0.767)	4	8	3	38	3	B	961872
0.77	(0.777)	4	8	3	38	3	B	200020
0.78	(0.787)	4	8	3	38	3	B	200019
0.79	(0.797)	4	8	3	38	3	B	200021
0.80	(0.807)	4	8	3	38	3	B	200017

D nom. H7	D_1 ± 1.5µm	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
0.81	(0.817)	5	9	3	38	3	B	964624
0.82	(0.827)	5	9	3	38	3	B	200025
0.83	(0.837)	5	9	3	38	3	B	200029
0.84	(0.847)	5	9	3	38	3	B	200028
0.85	(0.857)	5	9	3	38	3	B	200023
0.86	(0.867)	5	9	3	38	3	B	200030
0.87	(0.877)	5	9	3	38	3	B	200031
0.88	(0.887)	5	9	3	38	3	B	200026
0.89	(0.897)	5	9	3	38	3	B	200027
0.90	(0.907)	5	9	3	38	3	B	200024
0.91	(0.917)	5	10	3	38	3	B	200039
0.92	(0.927)	5	10	3	38	3	B	200035
0.93	(0.937)	5	10	3	38	3	B	960023
0.94	(0.947)	5	10	3	38	3	B	963188
0.95	(0.957)	5	10	3	38	3	B	200034
0.96	(0.967)	5	10	3	38	3	B	200036
0.97	(0.977)	5	10	3	38	3	B	200037
0.98	(0.987)	5	10	3	38	3	B	200032
0.99	(0.997)	5	10	3	38	3	B	200033
1.00	(1.007)	5	10	3	38	3	B	200038
1.01	(1.017)	5	11	3	38	3	B	959800
1.02	(1.027)	5	11	3	38	3	B	200040
1.03	(1.037)	5	11	3	38	3	B	966908
1.04	(1.047)	5	11	3	38	3	B	962626
1.05	(1.057)	5	11	3	38	3	B	200041
1.06	(1.067)	5	11	3	38	3	B	966799
1.07	(1.077)	5	11	3	38	3	B	968047
1.08	(1.087)	5	11	3	38	3	B	200042
1.09	(1.097)	5	12	3	38	3	B	955685
1.10	(1.107)	5	12	3	38	3	B	200045
1.11	(1.117)	5	12	3	38	3	B	951529
1.12	(1.127)	5	12	3	38	3	B	951598
1.13	(1.137)	5	12	3	38	3	B	968503
1.14	(1.147)	5	12	3	38	3	B	968504
1.15	(1.157)	5	12	3	38	3	B	200043
1.16	(1.167)	5	12	3	38	3	B	967147
1.17	(1.177)	5	12	3	38	3	B	956647
1.18	(1.187)	5	12	3	38	3	B	67307
1.19	(1.197)	5	12	3	38	3	B	960753
1.20	(1.207)	5	12	3	38	3	B	200044
1.21	(1.217)	6	13	3	38	3	B	67308

Tout Ø avec tolérance ±2µm livrable sur demande via notre service rapide



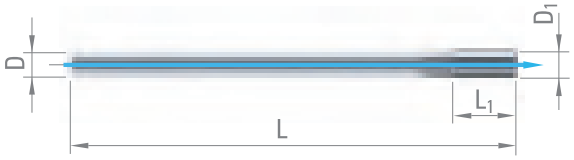
Cobalt Outils Coupants

POLY 4001 - 4001-TC

P. 370

> Ø 2.98

Ref. A



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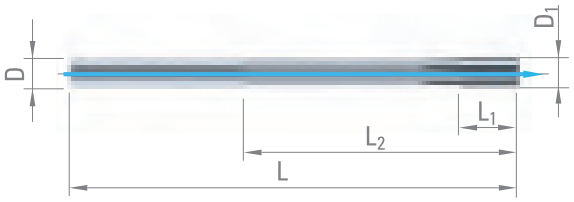


Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

D nom. H7	D_1 ± 1.5µm	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
1.22	(1.227)	6	13	3	38	3	B	968605
1.23	(1.237)	6	13	3	38	3	B	968606
1.24	(1.247)	6	13	3	38	3	B	968607
1.25	(1.257)	6	13	3	38	3	B	200046
1.26	(1.267)	6	13	3	38	3	B	968608
1.27	(1.277)	6	13	3	38	3	B	964024
1.28	(1.287)	6	13	3	38	3	B	200048
1.29	(1.297)	6	13	3	38	3	B	950915
1.30	(1.307)	6	13	3	38	3	B	200047
1.31	(1.317)	6	13	3	38	3	B	959472
1.32	(1.327)	6	13	3	38	3	B	961369
1.33	(1.337)	6	13	3	38	3	B	961963
1.34	(1.347)	6	13	3	38	3	B	326971
1.35	(1.357)	6	13	3	38	3	B	200049
1.36	(1.367)	6	13	3	38	3	B	968242
1.37	(1.377)	6	13	3	38	3	B	960591
1.38	(1.387)	6	13	3	38	3	B	966541
1.39	(1.397)	6	13	3	38	3	B	960202
1.40	(1.407)	6	13	3	38	3	B	200050
1.41	(1.417)	7	15	3	38	3	B	957425
1.42	(1.427)	7	15	3	38	3	B	955757
1.43	(1.437)	7	15	3	38	3	B	955746
1.44	(1.447)	7	15	3	38	3	B	961345
1.45	(1.457)	7	15	3	38	3	B	200053
1.46	(1.467)	7	15	3	38	3	B	66791
1.47	(1.477)	7	15	3	38	3	B	961456
1.48	(1.487)	7	15	3	38	3	B	200051
1.49	(1.497)	7	15	3	38	3	B	200052
1.50	(1.507)	7	15	3	38	3	B	200054
1.51	(1.517)	7	15	3	50	3	B	200104
1.52	(1.527)	7	15	3	50	3	B	200105
1.53	(1.537)	7	15	3	50	3	B	960836
1.54	(1.547)	7	15	3	50	3	B	63795
1.55	(1.557)	7	15	3	50	3	B	200125
1.56	(1.567)	7	15	3	50	3	B	973910
1.57	(1.577)	7	15	3	50	3	B	963006
1.58	(1.587)	7	15	3	50	3	B	961472
1.59	(1.597)	7	15	3	50	3	B	959620
1.60	(1.607)	7	15	3	50	3	B	200111
1.61	(1.617)	7	16	3	50	3	B	59391
1.62	(1.627)	7	16	3	50	3	B	955366
1.63	(1.637)	7	16	3	50	3	B	326972
1.64	(1.647)	7	16	3	50	3	B	326973
1.65	(1.657)	7	16	3	50	3	B	200124
1.66	(1.667)	7	16	3	50	3	B	991141
1.67	(1.677)	7	16	3	50	3	B	965451
1.68	(1.687)	7	16	3	50	3	B	326974

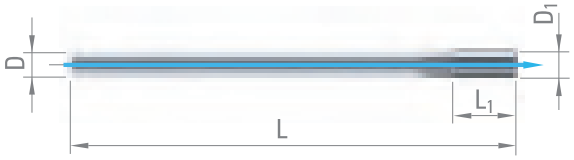
D nom. H7	D_1 ± 1.5µm	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
1.69	(1.697)	7	16	3	50	3	B	952172
1.70	(1.707)	7	16	3	50	3	B	200126
1.71	(1.717)	7	17	3	50	3	B	66359
1.72	(1.727)	7	17	3	50	3	B	959573
1.73	(1.737)	7	17	3	50	3	B	326975
1.74	(1.747)	7	17	3	50	3	B	968498
1.75	(1.757)	7	17	3	50	3	B	200127
1.76	(1.767)	7	17	3	50	3	B	974605
1.77	(1.777)	7	17	3	50	3	B	961458
1.78	(1.787)	7	17	3	50	3	B	63459
1.79	(1.797)	7	17	3	50	3	B	200146
1.80	(1.807)	7	17	3	50	3	B	200112
1.81	(1.817)	8	17	3	50	3	B	962183
1.82	(1.827)	8	17	3	50	3	B	960953
1.83	(1.837)	8	17	3	50	3	B	951867
1.84	(1.847)	8	17	3	50	3	B	326976
1.85	(1.857)	8	17	3	50	3	B	200113
1.86	(1.867)	8	17	3	50	3	B	964274
1.87	(1.877)	8	17	3	50	3	B	326977
1.88	(1.887)	8	17	3	50	3	B	954731
1.89	(1.897)	8	17	3	50	3	B	200137
1.90	(1.907)	8	17	3	50	3	B	200114
1.91	(1.917)	8	18	3	50	3	B	982028
1.92	(1.927)	8	18	3	50	3	B	326978
1.93	(1.937)	8	18	3	50	3	B	326979
1.94	(1.947)	8	18	3	50	3	B	67301
1.95	(1.957)	8	18	3	50	3	B	200115
1.96	(1.967)	8	18	3	50	3	B	200145
1.97	(1.977)	8	18	3	50	3	B	200106
1.98	(1.987)	8	18	3	50	3	B	200107
1.99	(1.997)	8	18	3	50	3	B	200108
2.00	(2.007)	8	18	3	50	3	B	200102
2.01	(2.017)	8	18	3	50	3	B	200109
2.02	(2.027)	8	18	3	50	3	B	200110
2.03	(2.037)	8	18	3	50	3	B	63271
2.04	(2.047)	8	18	3	50	3	B	200147
2.05	(2.057)	8	18	3	50	3	B	200121
2.06	(2.067)	8	18	3	50	3	B	954744
2.07	(2.077)	8	18	3	50	3	B	63796
2.08	(2.087)	8	18	3	50	3	B	57717
2.09	(2.097)	8	18	3	50	3	B	957058
2.10	(2.107)	8	18	3	50	3	B	200144
2.11	(2.117)	8	18	3	50	3	B	952428
2.12	(2.127)	8	18	3	50	3	B	952429
2.13	(2.137)	8	18	3	50	3	B	967590
2.14	(2.147)	8	18	3	50	3	B	968815
2.15	(2.157)	8	18	3	50	3	B	200120

POLY 4001 - 4001-TC

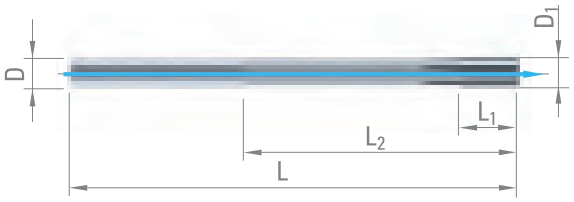
P. 370

> Ø 2.98

Ref. A



Ref. B



Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

D nom. H7	D_1 ± 1.5µm	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
2.16	(2.167)	8	18	3	50	3	B	968156
2.17	(2.177)	8	18	3	50	3	B	959096
2.18	(2.187)	8	18	3	50	3	B	968449
2.19	(2.197)	8	18	3	50	3	B	952213
2.20	(2.207)	8	18	3	50	3	B	200139
2.21	(2.217)	8	18	3	50	3	B	968816
2.22	(2.227)	8	18	3	50	3	B	953362
2.23	(2.237)	8	18	3	50	3	B	326980
2.24	(2.247)	8	18	3	50	3	B	326981
2.25	(2.257)	8	18	3	50	3	B	200119
2.26	(2.267)	8	18	3	50	3	B	326982
2.27	(2.277)	8	18	3	50	3	B	956015
2.28	(2.287)	8	18	3	50	3	B	326983
2.29	(2.297)	8	18	3	50	3	B	985826
2.30	(2.307)	8	18	3	50	3	B	200131
2.31	(2.317)	10	20	3	50	3	B	951944
2.32	(2.327)	10	20	3	50	3	B	200135
2.33	(2.337)	10	20	3	50	3	B	957326
2.34	(2.347)	10	20	3	50	3	B	956298
2.35	(2.357)	10	20	3	50	3	B	200130
2.36	(2.367)	10	20	3	50	3	B	955027
2.37	(2.377)	10	20	3	50	3	B	958068
2.38	(2.387)	10	20	3	50	3	B	962361
2.39	(2.397)	10	20	3	50	3	B	965907
2.40	(2.407)	10	20	3	50	3	B	200129
2.41	(2.417)	10	20	3	50	3	B	950038
2.42	(2.427)	10	20	3	50	3	B	950039
2.43	(2.437)	10	20	3	50	3	B	955020
2.44	(2.447)	10	20	3	50	3	B	962239
2.45	(2.457)	10	20	3	50	3	B	200128
2.46	(2.467)	10	20	3	50	3	B	326984
2.47	(2.477)	10	20	3	50	3	B	959535
2.48	(2.487)	10	20	3	50	3	B	200140
2.49	(2.497)	10	20	3	50	3	B	200141
2.50	(2.507)	10	20	3	50	3	B	200103
2.51	(2.517)	10	20	3	61	4	B	200142
2.52	(2.527)	10	20	3	61	4	B	200143
2.53	(2.537)	10	20	3	61	4	B	954733
2.54	(2.547)	10	20	3	61	4	B	955042
2.55	(2.557)	10	20	3	61	4	B	200118
2.56	(2.567)	10	20	3	61	4	B	326985
2.57	(2.577)	10	20	3	61	4	B	326986
2.58	(2.587)	10	20	3	61	4	B	958772
2.59	(2.597)	10	20	3	61	4	B	971141
2.60	(2.607)	10	20	3	61	4	B	200117
2.61	(2.617)	10	25	3	61	4	B	970909
2.62	(2.627)	10	25	3	61	4	B	952158

D nom. H7	D_1 ± 1.5µm	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
2.63	(2.637)	10	25	3	61	4	B	326987
2.64	(2.647)	10	25	3	61	4	B	962551
2.65	(2.657)	10	25	3	61	4	B	200116
2.66	(2.667)	10	25	3	61	4	B	954075
2.67	(2.677)	10	25	3	61	4	B	200136
2.68	(2.687)	10	25	3	61	4	B	954450
2.69	(2.697)	10	25	3	61	4	B	991586
2.70	(2.707)	10	25	3	61	4	B	200123
2.71	(2.717)	10	25	3	61	4	B	954783
2.72	(2.727)	10	25	3	61	4	B	326988
2.73	(2.737)	10	25	3	61	4	B	326989
2.74	(2.747)	10	25	3	61	4	B	969786
2.75	(2.757)	10	25	3	61	4	B	200122
2.76	(2.767)	10	25	3	61	4	B	326990
2.77	(2.777)	10	25	3	61	4	B	326991
2.78	(2.787)	10	25	3	61	4	B	954734
2.79	(2.797)	10	25	3	61	4	B	965219
2.80	(2.807)	10	25	3	61	4	B	200138
2.81	(2.817)	10	25	3	61	4	B	953881
2.82	(2.827)	10	25	3	61	4	B	960888
2.83	(2.837)	10	25	3	61	4	B	326992
2.84	(2.847)	10	25	3	61	4	B	326993
2.85	(2.857)	10	25	3	61	4	B	200132
2.86	(2.867)	10	25	3	61	4	B	326994
2.87	(2.877)	10	25	3	61	4	B	326995
2.88	(2.887)	10	25	3	61	4	B	326996
2.89	(2.897)	10	25	3	61	4	B	953937
2.90	(2.907)	10	25	3	61	4	B	200133
2.91	(2.917)	10	25	3	61	4	B	964090
2.92	(2.927)	10	25	3	61	4	B	66683
2.93	(2.937)	10	25	3	61	4	B	326997
2.94	(2.947)	10	25	3	61	4	B	326998
2.95	(2.957)	10	25	3	61	4	B	200134
2.96	(2.967)	10	25	3	61	4	B	961012
2.97	(2.977)	10	25	3	61	4	B	959664
2.98	(2.987)	10	25	3	70	6	B	321202
2.99	(2.997)	10	25	3	70	6	B	321203
3.00	(3.007)	10	25	3	70	6	B	321204
3.01	(3.018)	10	25	3	70	6	B	321205
3.02	(3.028)	10	25	3	70	6	B	321206
3.03	(3.038)	10	25	3	70	6	B	321207
3.04	(3.048)	10	25	3	70	6	B	321208
3.05	(3.058)	10	25	3	70	6	B	321209
3.06	(3.068)	10	25	3	70	6	B	321210
3.07	(3.078)	10	25	3	70	6	B	321211
3.08	(3.088)	10	25	3	70	6	B	321212
3.09	(3.098)	10	25	3	70	6	B	321213

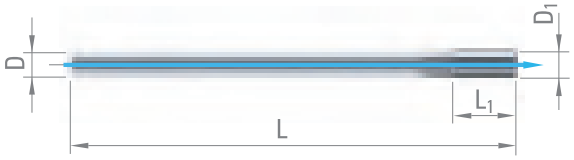
Cobalt Outils Coupants

POLY 4001 - 4001-TC

P. 370

> Ø 2.98

Ref. A



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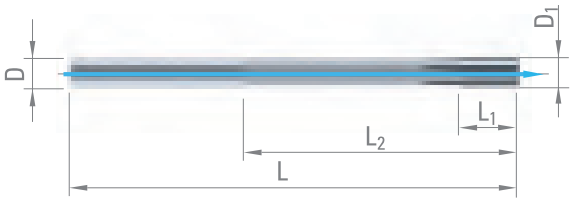


Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

D nom. H7	D_1 ± 1.5µm	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
3.10	(3.108)	10	-	3	70	6	A	321214
3.11	(3.118)	10	-	3	70	6	A	321215
3.12	(3.128)	10	-	3	70	6	A	321216
3.13	(3.138)	10	-	3	70	6	A	321217
3.14	(3.148)	10	-	3	70	6	A	321218
3.15	(3.158)	10	-	3	70	6	A	321219
3.16	(3.168)	10	-	3	70	6	A	321220
3.17	(3.178)	10	-	3	70	6	A	321221
3.18	(3.188)	10	-	3	70	6	A	321222
3.19	(3.198)	10	-	3	70	6	A	321223
3.20	(3.208)	10	-	3	70	6	A	321224
3.21	(3.218)	10	-	3	70	6	A	321225
3.22	(3.228)	10	-	3	70	6	A	321226
3.23	(3.238)	10	-	3	70	6	A	321227
3.24	(3.248)	10	-	3	70	6	A	321228
3.25	(3.258)	10	-	3	70	6	A	321229
3.26	(3.268)	10	-	3	70	6	A	321230
3.27	(3.278)	10	-	3	70	6	A	321231
3.28	(3.288)	10	-	3	70	6	A	321232
3.29	(3.298)	10	-	3	70	6	A	321233
3.30	(3.308)	10	-	3	70	6	A	321234
3.31	(3.318)	10	-	3	70	6	A	321235
3.32	(3.328)	10	-	3	70	6	A	321236
3.33	(3.338)	10	-	3	70	6	A	321237
3.34	(3.348)	10	-	3	70	6	A	321238
3.35	(3.358)	10	-	3	70	6	A	321239
3.36	(3.368)	10	-	3	70	6	A	321240
3.37	(3.378)	10	-	3	70	6	A	321241
3.38	(3.388)	10	-	3	70	6	A	321242
3.39	(3.398)	10	-	3	70	6	A	321243
3.40	(3.408)	10	-	3	70	6	A	321244
3.41	(3.418)	10	-	3	70	6	A	321245
3.42	(3.428)	10	-	3	70	6	A	321246
3.43	(3.438)	10	-	3	70	6	A	321247
3.44	(3.448)	10	-	3	70	6	A	321248
3.45	(3.458)	10	-	3	70	6	A	321249
3.46	(3.468)	10	-	3	70	6	A	321250
3.47	(3.478)	10	-	3	70	6	A	321251
3.48	(3.488)	10	-	3	70	6	A	321252
3.49	(3.498)	10	-	3	70	6	A	321253
3.50	(3.508)	10	-	3	70	6	A	321254
3.51	(3.518)	10	-	3	70	6	A	321255
3.52	(3.528)	10	-	3	70	6	A	321256
3.53	(3.538)	10	-	3	70	6	A	321257
3.54	(3.548)	10	-	3	70	6	A	321258
3.55	(3.558)	10	-	3	70	6	A	321259
3.56	(3.568)	10	-	3	70	6	A	321260

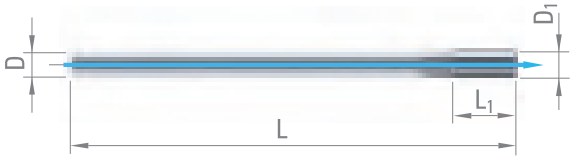
D nom. H7	D_1 ± 1.5µm	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
3.57	(3.578)	10	-	3	70	6	A	321261
3.58	(3.588)	10	-	3	70	6	A	321262
3.59	(3.598)	10	-	3	70	6	A	321263
3.60	(3.608)	10	-	3	70	6	A	321264
3.61	(3.618)	10	-	3	70	6	A	321265
3.62	(3.628)	10	-	3	70	6	A	321266
3.63	(3.638)	10	-	3	70	6	A	321267
3.64	(3.648)	10	-	3	70	6	A	321268
3.65	(3.658)	10	-	3	70	6	A	321269
3.66	(3.668)	10	-	3	70	6	A	321270
3.67	(3.678)	10	-	3	70	6	A	321271
3.68	(3.688)	10	-	3	70	6	A	321272
3.69	(3.698)	10	-	3	70	6	A	321273
3.70	(3.708)	10	-	3	70	6	A	321274
3.71	(3.718)	10	-	3	70	6	A	321275
3.72	(3.728)	10	-	3	70	6	A	321276
3.73	(3.738)	10	-	3	70	6	A	321277
3.74	(3.748)	10	-	3	70	6	A	321278
3.75	(3.758)	10	-	3	70	6	A	321279
3.76	(3.768)	10	-	3	70	6	A	321280
3.77	(3.778)	10	-	3	70	6	A	321281
3.78	(3.788)	10	-	3	70	6	A	321282
3.79	(3.798)	10	-	3	70	6	A	321283
3.80	(3.808)	10	-	3	70	6	A	321284
3.81	(3.818)	10	-	3	70	6	A	321285
3.82	(3.828)	10	-	3	70	6	A	321286
3.83	(3.838)	10	-	3	70	6	A	321287
3.84	(3.848)	10	-	3	70	6	A	321288
3.85	(3.858)	10	-	3	70	6	A	321289
3.86	(3.868)	10	-	3	70	6	A	321290
3.87	(3.878)	10	-	3	70	6	A	321291
3.88	(3.888)	10	-	3	70	6	A	321292
3.89	(3.898)	10	-	3	70	6	A	321293
3.90	(3.908)	10	-	3	70	6	A	321294
3.91	(3.918)	10	-	3	70	6	A	321295
3.92	(3.928)	10	-	3	70	6	A	321296
3.93	(3.938)	10	-	3	70	6	A	321297
3.94	(3.948)	10	-	3	70	6	A	321298
3.95	(3.958)	10	-	3	70	6	A	321299
3.96	(3.968)	10	-	3	70	6	A	321300
3.97	(3.978)	10	-	3	70	6	A	321301
3.98	(3.988)	10	-	3	70	6	A	321302
3.99	(3.998)	10	-	3	70	6	A	321303
4.00	(4.008)	10	-	3	70	6	A	321304
4.01	(4.018)	10	-	3	70	6	A	321305
4.02	(4.028)	10	-	3	70	6	A	321306
4.03	(4.038)	10	-	3	70	6	A	321307

POLY 4001 - 4001-TC

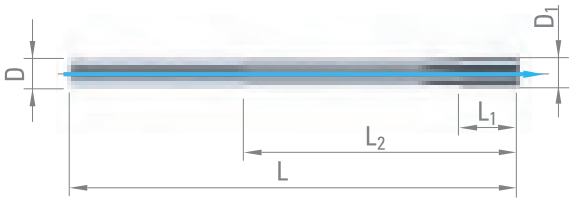
P. 370

> Ø 2.98

Ref. A



Ref. B



Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

D nom. H7	D_1 ± 1.5µm	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
4.04	(4.048)	10	-	3	70	6	A	321308
4.05	(4.058)	10	-	3	70	6	A	321309
4.06	(4.068)	10	-	3	70	6	A	321310
4.07	(4.078)	10	-	3	70	6	A	321311
4.08	(4.088)	10	-	3	70	6	A	321312
4.09	(4.098)	10	-	3	70	6	A	321313
4.10	(4.108)	12	-	4	80	6	A	321314
4.11	(4.118)	12	-	4	80	6	A	321315
4.12	(4.128)	12	-	4	80	6	A	321316
4.13	(4.138)	12	-	4	80	6	A	321317
4.14	(4.148)	12	-	4	80	6	A	321318
4.15	(4.158)	12	-	4	80	6	A	321319
4.16	(4.168)	12	-	4	80	6	A	321320
4.17	(4.178)	12	-	4	80	6	A	321321
4.18	(4.188)	12	-	4	80	6	A	321322
4.19	(4.198)	12	-	4	80	6	A	321323
4.20	(4.208)	12	-	4	80	6	A	321324
4.21	(4.218)	12	-	4	80	6	A	321325
4.22	(4.228)	12	-	4	80	6	A	321326
4.23	(4.238)	12	-	4	80	6	A	321327
4.24	(4.248)	12	-	4	80	6	A	321328
4.25	(4.258)	12	-	4	80	6	A	321329
4.26	(4.268)	12	-	4	80	6	A	321330
4.27	(4.278)	12	-	4	80	6	A	321331
4.28	(4.288)	12	-	4	80	6	A	321332
4.29	(4.298)	12	-	4	80	6	A	321333
4.30	(4.308)	12	-	4	80	6	A	321334
4.31	(4.318)	12	-	4	80	6	A	321335
4.32	(4.328)	12	-	4	80	6	A	321336
4.33	(4.338)	12	-	4	80	6	A	321337
4.34	(4.348)	12	-	4	80	6	A	321338
4.35	(4.358)	12	-	4	80	6	A	321339
4.36	(4.368)	12	-	4	80	6	A	321340
4.37	(4.378)	12	-	4	80	6	A	321341
4.38	(4.388)	12	-	4	80	6	A	321342
4.39	(4.398)	12	-	4	80	6	A	321343
4.40	(4.408)	12	-	4	80	6	A	321344
4.41	(4.418)	12	-	4	80	6	A	321345
4.42	(4.428)	12	-	4	80	6	A	321346
4.43	(4.438)	12	-	4	80	6	A	321347
4.44	(4.448)	12	-	4	80	6	A	321348
4.45	(4.458)	12	-	4	80	6	A	321349
4.46	(4.468)	12	-	4	80	6	A	321350
4.47	(4.478)	12	-	4	80	6	A	321351
4.48	(4.488)	12	-	4	80	6	A	321352
4.49	(4.498)	12	-	4	80	6	A	321353
4.50	(4.508)	12	-	4	80	6	A	321354

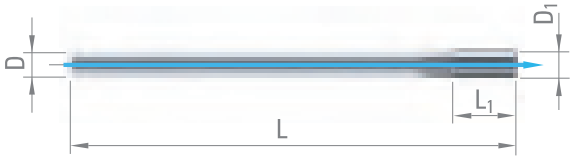
D nom. H7	D_1 ± 1.5µm	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
4.51	(4.518)	12	-	4	80	6	A	321355
4.52	(4.528)	12	-	4	80	6	A	321356
4.53	(4.538)	12	-	4	80	6	A	321357
4.54	(4.548)	12	-	4	80	6	A	321358
4.55	(4.558)	12	-	4	80	6	A	321359
4.56	(4.568)	12	-	4	80	6	A	321360
4.57	(4.578)	12	-	4	80	6	A	321361
4.58	(4.588)	12	-	4	80	6	A	321362
4.59	(4.598)	12	-	4	80	6	A	321363
4.60	(4.608)	12	-	4	80	6	A	321364
4.61	(4.618)	12	-	4	80	6	A	321365
4.62	(4.628)	12	-	4	80	6	A	321366
4.63	(4.638)	12	-	4	80	6	A	321367
4.64	(4.648)	12	-	4	80	6	A	321368
4.65	(4.658)	12	-	4	80	6	A	321369
4.66	(4.668)	12	-	4	80	6	A	321370
4.67	(4.678)	12	-	4	80	6	A	321371
4.68	(4.688)	12	-	4	80	6	A	321372
4.69	(4.698)	12	-	4	80	6	A	321373
4.70	(4.708)	12	-	4	80	6	A	321374
4.71	(4.718)	12	-	4	80	6	A	321375
4.72	(4.728)	12	-	4	80	6	A	321376
4.73	(4.738)	12	-	4	80	6	A	321377
4.74	(4.748)	12	-	4	80	6	A	321378
4.75	(4.758)	12	-	4	80	6	A	321379
4.76	(4.768)	12	-	4	80	6	A	321380
4.77	(4.778)	12	-	4	80	6	A	321381
4.78	(4.788)	12	-	4	80	6	A	321382
4.79	(4.798)	12	-	4	80	6	A	321383
4.80	(4.808)	12	-	4	80	6	A	321384
4.81	(4.818)	12	-	4	80	6	A	321385
4.82	(4.828)	12	-	4	80	6	A	321386
4.83	(4.838)	12	-	4	80	6	A	321387
4.84	(4.848)	12	-	4	80	6	A	321388
4.85	(4.858)	12	-	4	80	6	A	321389
4.86	(4.868)	12	-	4	80	6	A	321390
4.87	(4.878)	12	-	4	80	6	A	321391
4.88	(4.888)	12	-	4	80	6	A	321392
4.89	(4.898)	12	-	4	80	6	A	321393
4.90	(4.908)	12	-	4	80	6	A	321394
4.91	(4.918)	12	-	4	80	6	A	321395
4.92	(4.928)	12	-	4	80	6	A	321396
4.93	(4.938)	12	-	4	80	6	A	321397
4.94	(4.948)	12	-	4	80	6	A	321398
4.95	(4.958)	12	-	4	80	6	A	321399
4.96	(4.968)	12	-	4	80	6	A	321400
4.97	(4.978)	12	-	4	80	6	A	321401

POLY 4001 - 4001-TC

P. 370

> Ø 2.98

Ref. A



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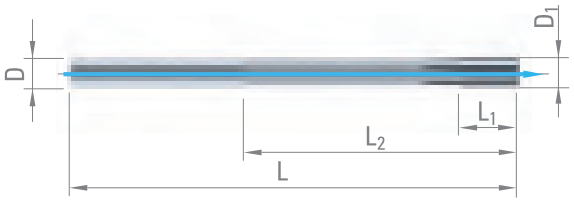


Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

D nom. H7	D_1 ± 1.5µm	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
4.98	(4.988)	12	-	4	80	6	A	321402
4.99	(4.998)	12	-	4	80	6	A	321403
5.00	(5.008)	12	-	4	80	6	A	321404
5.01	(5.018)	12	-	4	80	6	A	321405
5.02	(5.028)	12	-	4	80	6	A	321406
5.03	(5.038)	12	-	4	80	6	A	321407
5.04	(5.048)	12	-	4	80	6	A	321408
5.05	(5.058)	12	-	4	80	6	A	321409
5.06	(5.068)	12	-	4	80	6	A	321410
5.07	(5.078)	12	-	4	80	6	A	321411
5.08	(5.088)	12	-	4	80	6	A	321412
5.09	(5.098)	12	-	4	80	6	A	321413
5.10	(5.108)	12	-	4	80	6	A	321414
5.11	(5.118)	12	-	4	80	6	A	321415
5.12	(5.128)	12	-	4	80	6	A	321416
5.13	(5.138)	12	-	4	80	6	A	321417
5.14	(5.148)	12	-	4	80	6	A	321418
5.15	(5.158)	12	-	4	80	6	A	321419
5.16	(5.168)	12	-	4	80	6	A	321420
5.17	(5.178)	12	-	4	80	6	A	321421
5.18	(5.188)	12	-	4	80	6	A	321422
5.19	(5.198)	12	-	4	80	6	A	321423
5.20	(5.208)	12	-	4	80	6	A	321424
5.21	(5.218)	12	-	4	80	6	A	321425
5.22	(5.228)	12	-	4	80	6	A	321426
5.23	(5.238)	12	-	4	80	6	A	321427
5.24	(5.248)	12	-	4	80	6	A	321428
5.25	(5.258)	12	-	4	80	6	A	321429
5.26	(5.268)	12	-	4	80	6	A	321430
5.27	(5.278)	12	-	4	80	6	A	321431
5.28	(5.288)	12	-	4	80	6	A	321432
5.29	(5.298)	12	-	4	80	6	A	321433
5.30	(5.308)	12	-	4	80	6	A	321434
5.31	(5.318)	12	-	4	80	6	A	321435
5.32	(5.328)	12	-	4	80	6	A	321436
5.33	(5.338)	12	-	4	80	6	A	321437
5.34	(5.348)	12	-	4	80	6	A	321438
5.35	(5.358)	12	-	4	80	6	A	321439
5.36	(5.368)	12	-	4	80	6	A	321440
5.37	(5.378)	12	-	4	80	6	A	321441
5.38	(5.388)	12	-	4	80	6	A	321442
5.39	(5.398)	12	-	4	80	6	A	321443
5.40	(5.408)	12	-	4	80	6	A	321444
5.41	(5.418)	12	-	4	80	6	A	321445
5.42	(5.428)	12	-	4	80	6	A	321446
5.43	(5.438)	12	-	4	80	6	A	321447
5.44	(5.448)	12	-	4	80	6	A	321448

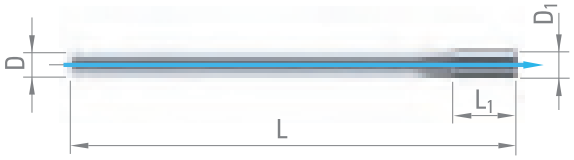
D nom. H7	D_1 ± 1.5µm	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
5.45	(5.458)	12	-	4	80	6	A	321449
5.46	(5.468)	12	-	4	80	6	A	321450
5.47	(5.478)	12	-	4	80	6	A	321451
5.48	(5.488)	12	-	4	80	6	A	321452
5.49	(5.498)	12	-	4	80	6	A	321453
5.50	(5.508)	12	-	4	80	6	A	321454
5.51	(5.518)	12	-	4	80	6	A	321455
5.52	(5.528)	12	-	4	80	6	A	321456
5.53	(5.538)	12	-	4	80	6	A	321457
5.54	(5.548)	12	-	4	80	6	A	321458
5.55	(5.558)	12	-	4	80	6	A	321459
5.56	(5.568)	12	-	4	80	6	A	321460
5.57	(5.578)	12	-	4	80	6	A	321461
5.58	(5.588)	12	-	4	80	6	A	321462
5.59	(5.598)	12	-	4	80	6	A	321463
5.60	(5.608)	12	-	4	80	6	A	321464
5.61	(5.618)	12	-	4	80	6	A	321465
5.62	(5.628)	12	-	4	80	6	A	321466
5.63	(5.638)	12	-	4	80	6	A	321467
5.64	(5.648)	12	-	4	80	6	A	321468
5.65	(5.658)	12	-	4	80	6	A	321469
5.66	(5.668)	12	-	4	80	6	A	321470
5.67	(5.678)	12	-	4	80	6	A	321471
5.68	(5.688)	12	-	4	80	6	A	321472
5.69	(5.698)	12	-	4	80	6	A	321473
5.70	(5.708)	12	-	4	80	6	A	321474
5.71	(5.718)	12	-	4	80	6	A	321475
5.72	(5.728)	12	-	4	80	6	A	321476
5.73	(5.738)	12	-	4	80	6	A	321477
5.74	(5.748)	12	-	4	80	6	A	321478
5.75	(5.758)	12	-	4	80	6	A	321479
5.76	(5.768)	12	-	4	80	6	A	321480
5.77	(5.778)	12	-	4	80	6	A	321481
5.78	(5.788)	12	-	4	80	6	A	321482
5.79	(5.798)	12	-	4	80	6	A	321483
5.80	(5.808)	12	-	4	80	6	A	321484
5.81	(5.818)	12	-	4	80	6	A	321485
5.82	(5.828)	12	-	4	80	6	A	321486
5.83	(5.838)	12	-	4	80	6	A	321487
5.84	(5.848)	12	-	4	80	6	A	321488
5.85	(5.858)	12	-	4	80	6	A	321489
5.86	(5.868)	12	-	4	80	6	A	321490
5.87	(5.878)	12	-	4	80	6	A	321491
5.88	(5.888)	12	-	4	80	6	A	321492
5.89	(5.898)	12	-	4	80	6	A	321493
5.90	(5.908)	12	-	4	80	6	A	321494
5.91	(5.918)	12	-	4	80	6	A	321495

POLY 4001 - 4001-TC

P. 370

> Ø 2.98

Ref. A



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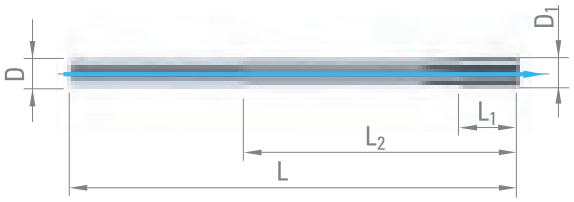


Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

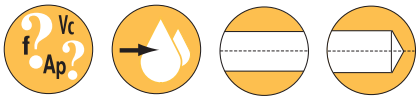
D nom. H7	D_1 ± 1.5µm	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
5.92	(5.928)	12	-	4	80	6	A	321496
5.93	(5.938)	12	-	4	80	6	A	321497
5.94	(5.948)	12	-	4	80	6	A	321498
5.95	(5.958)	12	-	4	80	6	A	321499
5.96	(5.968)	12	-	4	80	6	A	321500
5.97	(5.978)	12	-	4	80	6	A	321501
5.98	(5.988)	12	-	4	80	6	A	321502
5.99	(5.998)	12	-	4	80	6	A	321503
6.00	(6.008)	12	-	4	80	6	A	321504
6.01	(6.020)	12	-	4	80	6	A	321505
6.02	(6.030)	12	-	4	80	6	A	321506
6.03	(6.040)	12	-	4	80	6	A	321507
6.04	(6.050)	12	-	4	80	6	A	321508
6.05	(6.060)	12	-	4	80	6	A	321509
6.06	(6.070)	12	-	4	80	6	A	321510
6.07	(6.080)	12	-	4	80	6	A	321511
6.08	(6.090)	12	-	4	80	6	A	321512
6.09	(6.100)	12	-	4	80	6	A	321513
6.10	(6.110)	12	-	4	80	6	A	321514
6.11	(6.120)	12	-	4	80	6	A	321515
6.12	(6.130)	12	-	4	80	6	A	321516
6.13	(6.140)	12	-	4	80	6	A	321517
6.14	(6.150)	12	-	4	80	6	A	321518
6.15	(6.160)	12	-	4	80	6	A	321519
6.16	(6.170)	12	-	4	80	6	A	321520
6.17	(6.180)	12	-	4	80	6	A	321521
6.18	(6.190)	12	-	4	80	6	A	321522
6.19	(6.200)	12	-	4	80	6	A	321523
6.20	(6.210)	16	-	6	101	6	A	341670
6.30	(6.310)	16	-	6	101	6	A	341680
6.35	(6.360)	16	-	6	101	6	A	341685
6.40	(6.410)	16	-	6	101	6	A	341690
6.48	(6.490)	16	-	6	101	6	A	341698
6.49	(6.500)	16	-	6	101	6	A	341699
6.50	(6.510)	16	-	6	101	6	A	341700
6.51	(6.520)	16	-	6	101	6	A	341701
6.52	(6.530)	16	-	6	101	6	A	341702
6.55	(6.560)	16	-	6	101	6	A	341705
6.60	(6.610)	16	-	6	101	6	A	341710
6.70	(6.710)	16	-	6	101	6	A	341720
6.80	(6.810)	16	-	6	101	6	A	341730
6.90	(6.910)	16	-	6	101	6	A	341740
7.00	(7.010)	16	-	6	101	6	A	341750
7.01	(7.020)	16	-	6	101	6	A	341751
7.02	(7.030)	16	-	6	101	6	A	341752
7.10	(7.110)	16	-	6	101	6	A	341760
7.20	(7.210)	16	-	6	101	6	A	341770

D nom. H7	D_1 ± 1.5µm	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
7.30	(7.310)	16	-	6	101	6	A	341780
7.40	(7.410)	16	-	6	101	6	A	341790
7.50	(7.510)	16	-	6	101	6	A	341800
7.60	(7.610)	16	-	6	101	6	A	341810
7.70	(7.710)	16	-	6	101	6	A	341820
7.80	(7.810)	16	-	6	101	6	A	341830
7.90	(7.910)	16	-	6	101	6	A	341840
7.98	(7.990)	16	-	6	101	6	A	341848
7.99	(8.000)	16	-	6	101	6	A	341849
8.00	(8.010)	16	-	6	101	6	A	341850
8.01	(8.020)	16	-	6	101	6	A	341851
8.02	(8.030)	16	-	6	101	6	A	341852
8.05	(8.060)	16	-	6	101	6	A	341855
8.10	(8.110)	16	-	6	117	6	A	341860
8.20	(8.210)	16	-	6	117	6	A	341870
8.30	(8.310)	16	-	6	117	6	A	341880
8.40	(8.410)	16	-	6	117	6	A	341890
8.50	(8.510)	16	-	6	117	6	A	341900
8.70	(8.710)	16	-	6	117	6	A	341920
9.00	(9.010)	16	-	6	117	6	A	341950
9.30	(9.310)	16	-	6	117	6	A	341980
9.50	(9.510)	16	-	6	117	6	A	342000
9.70	(9.710)	16	-	6	117	6	A	342020
9.98	(9.990)	16	-	6	117	6	A	342048
9.99	(10.000)	16	-	6	117	6	A	342049
10.00	(10.010)	16	-	6	117	6	A	342050
10.01	(10.020)	16	-	6	117	6	A	342051
10.02	(10.032)	19	87	10	133	6	B	952322
10.04	(10.052)	19	87	10	133	6	B	962649
10.05	(10.062)	19	87	10	133	6	B	962568
10.10	(10.112)	19	87	10	133	6	B	952765
10.40	(10.412)	19	87	10	133	6	B	968160
10.50	(10.512)	19	87	10	133	6	B	952766
10.60	(10.612)	19	87	10	133	6	B	952767
11.00	(11.012)	19	96	12	142	6	B	952768
11.50	(11.512)	19	96	12	142	6	B	952769
11.80	(11.812)	19	96	12	142	6	B	952770
12.00	(12.012)	19	105	12	151	6	B	952771
12.02	(12.032)	19	105	12	151	6	B	952772

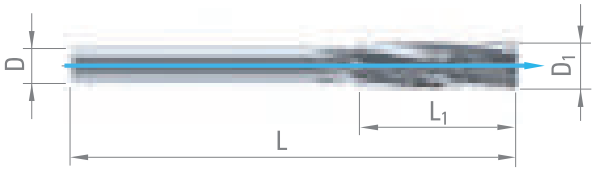
Tout Ø avec tolérance ±2µm livrable sur demande via notre service rapide

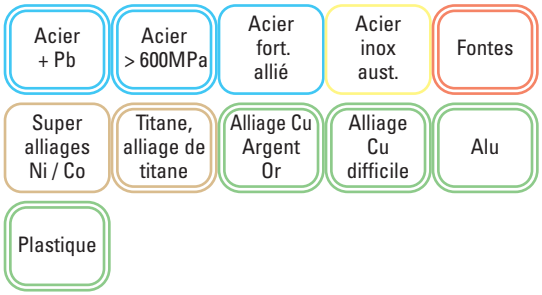
Cobalt Outils Coupants

ALÉSOIRS HÉLICOÏDAUX, HÉLICE À DROITE, COUPE À DROITE



P. 370

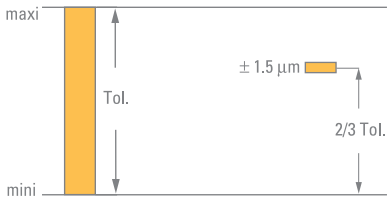




D nom. H7	D_1 ± 1.5µm	L_1	D_{h5}	L	Z	CARBURE
2.97	(2.977)	20	2.5	56	4	969074
2.99	(2.997)	20	2.5	56	4	969379
3.00	(3.007)	20	2.5	56	4	969382
3.01	(3.018)	20	2.5	56	4	969398
3.02	(3.028)	20	2.5	56	4	969399
3.05	(3.058)	20	2.5	56	4	969400
3.08	(3.088)	20	2.5	56	4	969401
3.10	(3.108)	20	2.5	56	4	969402
3.11	(3.118)	20	2.5	56	4	969403
3.15	(3.158)	20	2.5	56	4	969404
3.18	(3.188)	20	2.5	56	4	969405
3.20	(3.208)	20	2.5	56	4	969406
3.21	(3.218)	20	2.5	56	4	969407
3.25	(3.258)	20	2.5	56	4	969408
3.28	(3.288)	20	2.5	56	4	969409
3.30	(3.308)	20	2.5	56	4	969410
3.31	(3.318)	20	2.5	56	4	969411
3.35	(3.358)	20	2.5	56	4	969412
3.38	(3.388)	20	2.5	56	4	969413
3.40	(3.408)	20	2.5	56	4	969414
3.41	(3.418)	20	2.5	56	4	969415
3.45	(3.458)	20	2.5	56	4	969416
3.49	(3.498)	20	2.5	56	4	969417
3.50	(3.508)	20	3.0	56	4	969418
3.51	(3.518)	20	3.0	56	4	969421
3.55	(3.558)	20	3.0	56	4	969422
3.58	(3.588)	20	3.0	56	4	969423
3.60	(3.608)	20	3.0	56	4	969424
3.61	(3.618)	20	3.0	56	4	969425
3.65	(3.658)	20	3.0	56	4	969426
3.68	(3.688)	20	3.0	56	4	969427
3.70	(3.708)	20	3.0	56	4	969428
3.71	(3.718)	20	3.0	56	4	969429

D nom. H7	D_1 ± 1.5µm	L_1	D_{h5}	L	Z	CARBURE
3.75	(3.758)	20	3.0	56	4	969430
3.78	(3.788)	20	3.0	56	4	969431
3.80	(3.808)	20	3.0	56	4	969432
3.85	(3.858)	20	3.0	56	4	969433
3.90	(3.908)	20	3.0	56	4	969434
3.95	(3.958)	20	3.0	56	4	969435
4.00	(4.008)	20	3.0	56	4	969436
4.04	(4.048)	22	3.5	63	6	993718
4.10	(4.108)	22	3.5	63	6	969437
4.20	(4.208)	22	3.5	63	6	969438
4.30	(4.308)	22	3.5	63	6	969439
4.40	(4.408)	22	3.5	63	6	969440
4.50	(4.508)	22	4.0	63	6	969441
4.60	(4.608)	22	4.0	63	6	969442
4.70	(4.708)	22	4.0	63	6	969443
4.80	(4.808)	22	4.0	63	6	969444
4.90	(4.908)	22	4.0	63	6	969445
5.00	(5.008)	22	4.0	63	6	969446
5.10	(5.108)	22	4.0	63	6	969447
5.20	(5.208)	22	4.0	63	6	969448
5.30	(5.308)	22	4.0	63	6	969449
5.40	(5.408)	22	4.0	63	6	969450
5.50	(5.508)	22	5.0	63	6	969451
5.60	(5.608)	22	5.0	63	6	969452
5.70	(5.708)	22	5.0	63	6	969453
5.80	(5.808)	22	5.0	63	6	969454
5.90	(5.908)	22	5.0	63	6	969455
6.00	(6.008)	22	5.0	63	6	969456
6.10	(6.110)	22	5.0	63	6	969457
6.20	(6.210)	22	5.0	63	6	969458
6.30	(6.310)	22	5.0	63	6	969459
6.40	(6.410)	22	5.0	63	6	969460
6.50	(6.510)	22	5.0	63	6	969461

Tout Ø avec tolérance ±2µm livrable sur demande via notre service rapide



Cobalt Outils Coupants

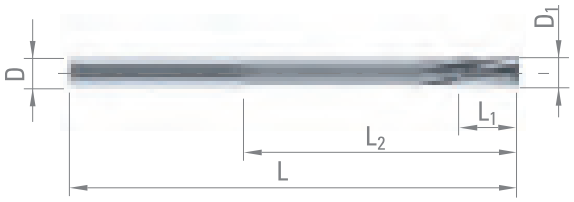
POLY 4007 - 4007-TC

ALÉSOIRS HÉLICOÏDAUX
HÉLICE À GAUCHE, COUPE À DROITE

P. 370

Ref. A

Ref. B



Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

$D_{1\ 0/+0.003}$	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
0.37	3	5	3	38	3	B	983079
0.38	3	5	3	38	3	B	326999
0.39	3	5	3	38	3	B	969543
0.40	3	5	3	38	3	B	200716
0.41	3	5	3	38	3	B	963823
0.42	3	5	3	38	3	B	200717
0.43	3	5	3	38	3	B	327000
0.44	3	5	3	38	3	B	200718
0.45	3	5	3	38	3	B	965207
0.46	3	5	3	38	3	B	200719
0.47	3	5	3	38	3	B	327001
0.48	3	5	3	38	3	B	200720
0.49	3	5	3	38	3	B	963716
0.50	3	5	3	38	3	B	200746
0.51	4	6	3	38	3	B	200745
0.52	4	6	3	38	3	B	200738
0.53	4	6	3	38	3	B	200742
0.54	4	6	3	38	3	B	200743
0.55	4	6	3	38	3	B	200739
0.56	4	6	3	38	3	B	968834
0.57	4	6	3	38	3	B	973253
0.58	4	6	3	38	3	B	200741
0.59	4	6	3	38	3	B	200744
0.60	4	6	3	38	3	B	200740
0.61	4	7	3	38	3	B	964652
0.62	4	7	3	38	3	B	200750
0.63	4	7	3	38	3	B	327002
0.64	4	7	3	38	3	B	200755
0.65	4	7	3	38	3	B	200748
0.66	4	7	3	38	3	B	200752
0.67	4	7	3	38	3	B	200753
0.68	4	7	3	38	3	B	200751
0.69	4	7	3	38	3	B	200754
0.70	4	7	3	38	3	B	200749
0.71	4	8	3	38	3	B	965167
0.72	4	8	3	38	3	B	200758
0.73	4	8	3	38	3	B	327003
0.74	4	8	3	38	3	B	200762
0.75	4	8	3	38	3	B	200756
0.76	4	8	3	38	3	B	327004
0.77	4	8	3	38	3	B	200760
0.78	4	8	3	38	3	B	200759
0.79	4	8	3	38	3	B	200761
0.80	4	8	3	38	3	B	200757
0.81	5	9	3	38	3	B	965168

$D_{1\ 0/+0.003}$	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
0.82	5	9	3	38	3	B	200765
0.83	5	9	3	38	3	B	200769
0.84	5	9	3	38	3	B	200768
0.85	5	9	3	38	3	B	200763
0.86	5	9	3	38	3	B	200770
0.87	5	9	3	38	3	B	200771
0.88	5	9	3	38	3	B	200766
0.89	5	9	3	38	3	B	200767
0.90	5	9	3	38	3	B	200764
0.91	5	10	3	38	3	B	200733
0.92	5	10	3	38	3	B	200729
0.93	5	10	3	38	3	B	327005
0.94	5	10	3	38	3	B	327006
0.95	5	10	3	38	3	B	200728
0.96	5	10	3	38	3	B	200730
0.97	5	10	3	38	3	B	200731
0.98	5	10	3	38	3	B	200726
0.99	5	10	3	38	3	B	200727
1.00	5	10	3	38	3	B	200732
1.01	5	11	3	38	3	B	200715
1.02	5	11	3	38	3	B	200772
1.03	5	11	3	38	3	B	967191
1.04	5	11	3	38	3	B	327007
1.05	5	11	3	38	3	B	200773
1.06	5	11	3	38	3	B	327008
1.07	5	11	3	38	3	B	327009
1.08	5	11	3	38	3	B	200774
1.09	5	11	3	38	3	B	965169
1.10	5	11	3	38	3	B	200777
1.11	5	12	3	38	3	B	327010
1.12	5	12	3	38	3	B	327011
1.13	5	12	3	38	3	B	327012
1.14	5	12	3	38	3	B	327013
1.15	5	12	3	38	3	B	200775
1.16	5	12	3	38	3	B	327014
1.17	5	12	3	38	3	B	327015
1.18	5	12	3	38	3	B	63965
1.19	5	12	3	38	3	B	327016
1.20	5	12	3	38	3	B	200776
1.21	6	13	3	38	3	B	965171
1.22	6	13	3	38	3	B	327017
1.23	6	13	3	38	3	B	327018
1.24	6	13	3	38	3	B	327019
1.25	6	13	3	38	3	B	200778
1.26	6	13	3	38	3	B	963588

Tout Ø avec tolérance ±2µm livrable sur demande via notre service rapide

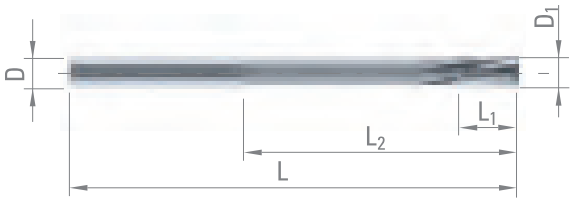
Cobalt Outils Coupants

POLY 4007 - 4007-TC

P. 370

Ref. A

Ref. B



Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

$D_{1\ 0/+0.003}$	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
1.27	6	13	3	38	3	B	972014
1.28	6	13	3	38	3	B	200780
1.29	6	13	3	38	3	B	327020
1.30	6	13	3	38	3	B	200779
1.31	6	13	3	38	3	B	967299
1.32	6	13	3	38	3	B	327021
1.33	6	13	3	38	3	B	327022
1.34	6	13	3	38	3	B	973390
1.35	6	13	3	38	3	B	200734
1.36	6	13	3	38	3	B	327023
1.37	6	13	3	38	3	B	327024
1.38	6	13	3	38	3	B	327025
1.39	6	13	3	38	3	B	327026
1.40	6	13	3	38	3	B	200735
1.41	7	15	3	38	3	B	327027
1.42	7	15	3	38	3	B	327028
1.43	7	15	3	38	3	B	327029
1.44	7	15	3	38	3	B	327030
1.45	7	15	3	38	3	B	200783
1.46	7	15	3	38	3	B	327031
1.47	7	15	3	38	3	B	327032
1.48	7	15	3	38	3	B	200781
1.49	7	15	3	38	3	B	200782
1.50	7	15	3	38	3	B	200784
1.51	7	15	3	50	3	B	200787
1.52	7	15	3	50	3	B	200788
1.53	7	15	3	50	3	B	327033
1.54	7	15	3	50	3	B	327034
1.55	7	15	3	50	3	B	200692
1.56	7	15	3	50	3	B	976176
1.57	7	15	3	50	3	B	964655
1.58	7	15	3	50	3	B	63966
1.59	7	15	3	50	3	B	965174
1.60	7	15	3	50	3	B	200794
1.61	7	16	3	50	3	B	965175
1.62	7	16	3	50	3	B	327035
1.63	7	16	3	50	3	B	327036
1.64	7	16	3	50	3	B	327037
1.65	7	16	3	50	3	B	200691
1.66	7	16	3	50	3	B	327038
1.67	7	16	3	50	3	B	327039
1.68	7	16	3	50	3	B	327040
1.69	7	16	3	50	3	B	965209
1.70	7	16	3	50	3	B	200693
1.71	7	17	3	50	3	B	327041
1.72	7	17	3	50	3	B	327042
1.73	7	17	3	50	3	B	327043

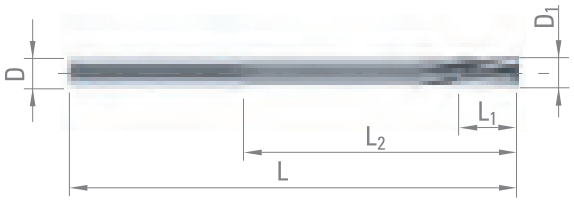
$D_{1\ 0/+0.003}$	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
1.74	7	17	3	50	3	B	327044
1.75	7	17	3	50	3	B	200694
1.76	7	17	3	50	3	B	327045
1.77	7	17	3	50	3	B	327046
1.78	7	17	3	50	3	B	327047
1.79	7	17	3	50	3	B	200713
1.80	7	17	3	50	3	B	200795
1.81	8	17	3	50	3	B	327048
1.82	8	17	3	50	3	B	327049
1.83	8	17	3	50	3	B	971471
1.84	8	17	3	50	3	B	327050
1.85	8	17	3	50	3	B	200796
1.86	8	17	3	50	3	B	972720
1.87	8	17	3	50	3	B	964530
1.88	8	17	3	50	3	B	971918
1.89	8	17	3	50	3	B	200704
1.90	8	17	3	50	3	B	20079
1.91	8	18	3	50	3	B	965177
1.92	8	18	3	50	3	B	327051
1.93	8	18	3	50	3	B	327052
1.94	8	18	3	50	3	B	327053
1.95	8	18	3	50	3	B	200682
1.96	8	18	3	50	3	B	200712
1.97	8	18	3	50	3	B	200789
1.98	8	18	3	50	3	B	200790
1.99	8	18	3	50	3	B	200791
2.00	8	18	3	50	3	B	200785
2.01	8	18	3	50	3	B	200792
2.02	8	18	3	50	3	B	200793
2.03	8	18	3	50	3	B	327054
2.04	8	18	3	50	3	B	200714
2.05	8	18	3	50	3	B	200688
2.06	8	18	3	50	3	B	327055
2.07	8	18	3	50	3	B	327056
2.08	8	18	3	50	3	B	327057
2.09	8	18	3	50	3	B	968093
2.10	8	18	3	50	3	B	200711
2.11	8	18	3	50	3	B	327058
2.12	8	18	3	50	3	B	968735
2.13	8	18	3	50	3	B	327059
2.14	8	18	3	50	3	B	968737
2.15	8	18	3	50	3	B	200687
2.16	8	18	3	50	3	B	327060
2.17	8	18	3	50	3	B	327061
2.18	8	18	3	50	3	B	327062
2.19	8	18	3	50	3	B	967119
2.20	8	18	3	50	3	B	200706

POLY 4007 - 4007-TC

P. 370

Ref. A

Ref. B



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Plastique

$D_{1\ 0/+0.003}$	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
2.21	8	18	3	50	3	B	327063
2.22	8	18	3	50	3	B	327064
2.23	8	18	3	50	3	B	327065
2.24	8	18	3	50	3	B	327066
2.25	8	18	3	50	3	B	200686
2.26	8	18	3	50	3	B	327067
2.27	8	18	3	50	3	B	327068
2.28	8	18	3	50	3	B	327069
2.29	8	18	3	50	3	B	327070
2.30	8	18	3	50	3	B	200698
2.31	10	20	3	50	3	B	327071
2.32	10	20	3	50	3	B	200702
2.33	10	20	3	50	3	B	327072
2.34	10	20	3	50	3	B	327073
2.35	10	20	3	50	3	B	200697
2.36	10	20	3	50	3	B	327074
2.37	10	20	3	50	3	B	327075
2.38	10	20	3	50	3	B	327076
2.39	10	20	3	50	3	B	327077
2.40	10	20	3	50	3	B	200696
2.41	10	20	3	50	3	B	972007
2.42	10	20	3	50	3	B	327078
2.43	10	20	3	50	3	B	327079
2.44	10	20	3	50	3	B	327080
2.45	10	20	3	50	3	B	200695
2.46	10	20	3	50	3	B	327081
2.47	10	20	3	50	3	B	327082
2.48	10	20	3	50	3	B	200707
2.49	10	20	3	50	3	B	200708
2.50	10	20	3	50	3	B	200786
2.51	10	20	3	61	4	B	200709
2.52	10	20	3	61	4	B	200710
2.53	10	20	3	61	4	B	327083
2.54	10	20	3	61	4	B	327084
2.55	10	20	3	61	4	B	200685
2.56	10	20	3	61	4	B	327085
2.57	10	20	3	61	4	B	327086
2.58	10	20	3	61	4	B	327087
2.59	10	20	3	61	4	B	327088
2.60	10	20	3	61	4	B	200684
2.61	10	25	3	61	4	B	327089
2.62	10	25	3	61	4	B	327090
2.63	10	25	3	61	4	B	327091
2.64	10	25	3	61	4	B	327092
2.65	10	25	3	61	4	B	200683
2.66	10	25	3	61	4	B	327093
2.67	10	25	3	61	4	B	200703

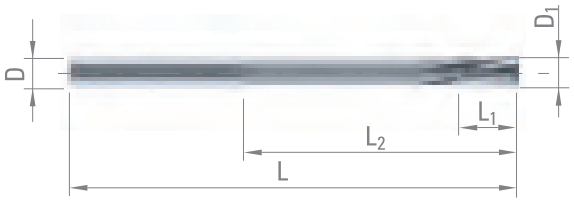
$D_{1\ 0/+0.003}$	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
2.68	10	25	3	61	4	B	327094
2.69	10	25	3	61	4	B	327095
2.70	10	25	3	61	4	B	200690
2.71	10	25	3	61	4	B	327096
2.72	10	25	3	61	4	B	327097
2.73	10	25	3	61	4	B	327098
2.74	10	25	3	61	4	B	327099
2.75	10	25	3	61	4	B	200689
2.76	10	25	3	61	4	B	327100
2.77	10	25	3	61	4	B	327101
2.78	10	25	3	61	4	B	327102
2.79	10	25	3	61	4	B	327103
2.80	10	25	3	61	4	B	200705
2.81	10	25	3	61	4	B	327104
2.82	10	25	3	61	4	B	327105
2.83	10	25	3	61	4	B	327106
2.84	10	25	3	61	4	B	327107
2.85	10	25	3	61	4	B	200699
2.86	10	25	3	61	4	B	327108
2.87	10	25	3	61	4	B	327109
2.88	10	25	3	61	4	B	327110
2.89	10	25	3	61	4	B	327111
2.90	10	25	3	61	4	B	200700
2.91	10	25	3	61	4	B	327112
2.92	10	25	3	61	4	B	327113
2.93	10	25	3	61	4	B	327114
2.94	10	25	3	61	4	B	327115
2.95	10	25	3	61	4	B	200701
2.96	10	25	3	61	4	B	327116
2.97	10	25	3	61	4	B	200747
2.98	10	25	3	70	6	B	321524
2.99	10	25	3	70	6	B	321525
3.00	10	25	3	70	6	B	321526
3.01	10	25	3	70	6	B	321527
3.02	10	25	3	70	6	B	321528
3.03	10	25	3	70	6	B	321529
3.04	10	25	3	70	6	B	321530
3.05	10	25	3	70	6	B	321531
3.06	10	25	3	70	6	B	321532
3.07	10	25	3	70	6	B	321533
3.08	10	25	3	70	6	B	321534
3.09	10	25	3	70	6	B	321535
3.10	10	-	3	70	6	A	321536
3.11	10	-	3	70	6	A	321537
3.12	10	-	3	70	6	A	321538
3.13	10	-	3	70	6	A	321539
3.14	10	-	3				321540

POLY 4007 - 4007-TC

P. 370

Ref. A

Ref. B



Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

$D_{1\ 0/+0.003}$	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
3.15	10	-	3	70	6	A	321541
3.16	10	-	3	70	6	A	321542
3.17	10	-	3	70	6	A	321543
3.18	10	-	3	70	6	A	321544
3.19	10	-	3	70	6	A	321545
3.20	10	-	3	70	6	A	321546
3.21	10	-	3	70	6	A	321547
3.22	10	-	3	70	6	A	321548
3.23	10	-	3	70	6	A	321549
3.24	10	-	3	70	6	A	321550
3.25	10	-	3	70	6	A	321551
3.26	10	-	3	70	6	A	321552
3.27	10	-	3	70	6	A	321553
3.28	10	-	3	70	6	A	321554
3.29	10	-	3	70	6	A	321555
3.30	10	-	3	70	6	A	321556
3.31	10	-	3	70	6	A	321557
3.32	10	-	3	70	6	A	321558
3.33	10	-	3	70	6	A	321559
3.34	10	-	3	70	6	A	321560
3.35	10	-	3	70	6	A	321561
3.36	10	-	3	70	6	A	321562
3.37	10	-	3	70	6	A	321563
3.38	10	-	3	70	6	A	321564
3.39	10	-	3	70	6	A	321565
3.40	10	-	3	70	6	A	321566
3.41	10	-	3	70	6	A	321567
3.42	10	-	3	70	6	A	321568
3.43	10	-	3	70	6	A	321569
3.44	10	-	3	70	6	A	321570
3.45	10	-	3	70	6	A	321571
3.46	10	-	3	70	6	A	321572
3.47	10	-	3	70	6	A	321573
3.48	10	-	3	70	6	A	321574
3.49	10	-	3	70	6	A	321575
3.50	10	-	3	70	6	A	321576
3.51	10	-	3	70	6	A	321577
3.52	10	-	3	70	6	A	321578
3.53	10	-	3	70	6	A	321579
3.54	10	-	3	70	6	A	321580
3.55	10	-	3	70	6	A	321581
3.56	10	-	3	70	6	A	321582
3.57	10	-	3	70	6	A	321583
3.58	10	-	3	70	6	A	321584
3.59	10	-	3	70	6	A	321585
3.60	10	-	3	70	6	A	321586
3.61	10	-	3	70	6	A	321587

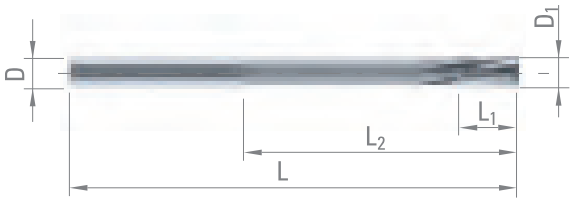
$D_{1\ 0/+0.003}$	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
3.62	10	-	3	70	6	A	321588
3.63	10	-	3	70	6	A	321589
3.64	10	-	3	70	6	A	321590
3.65	10	-	3	70	6	A	321591
3.66	10	-	3	70	6	A	321592
3.67	10	-	3	70	6	A	321593
3.68	10	-	3	70	6	A	321594
3.69	10	-	3	70	6	A	321595
3.70	10	-	3	70	6	A	321596
3.71	10	-	3	70	6	A	321597
3.72	10	-	3	70	6	A	321598
3.73	10	-	3	70	6	A	321599
3.74	10	-	3	70	6	A	321600
3.75	10	-	3	70	6	A	321601
3.76	10	-	3	70	6	A	321602
3.77	10	-	3	70	6	A	321603
3.78	10	-	3	70	6	A	321604
3.79	10	-	3	70	6	A	321605
3.80	10	-	3	70	6	A	321606
3.81	10	-	3	70	6	A	321607
3.82	10	-	3	70	6	A	321608
3.83	10	-	3	70	6	A	321609
3.84	10	-	3	70	6	A	321610
3.85	10	-	3	70	6	A	321611
3.86	10	-	3	70	6	A	321612
3.87	10	-	3	70	6	A	321613
3.88	10	-	3	70	6	A	321614
3.89	10	-	3	70	6	A	321615
3.90	10	-	3	70	6	A	321616
3.91	10	-	3	70	6	A	321617
3.92	10	-	3	70	6	A	321618
3.93	10	-	3	70	6	A	321619
3.94	10	-	3	70	6	A	321620
3.95	10	-	3	70	6	A	321621
3.96	10	-	3	70	6	A	321622
3.97	10	-	3	70	6	A	321623
3.98	10	-	3	70	6	A	321624
3.99	10	-	3	70	6	A	321625
4.00	10	-	3	70	6	A	321626
4.01	10	-	3	70	6	A	321627
4.02	10	-	3	70	6	A	321628
4.03	10	-	3	70	6	A	321629
4.04	10	-	3	70	6	A	321630
4.05	10	-	3	70	6	A	321631
4.06	10	-	3	70	6	A	321632
4.07	10	-	3	70	6	A	321633
4.08	10	-	3	70	6	A	321634

POLY 4007 - 4007-TC

P. 370

Ref. A

Ref. B



Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

$D_{1\ 0/+0.003}$	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
4.09	10	-	3	70	6	A	321635
4.10	12	-	4	80	6	A	321636
4.11	12	-	4	80	6	A	321637
4.12	12	-	4	80	6	A	321638
4.13	12	-	4	80	6	A	321639
4.14	12	-	4	80	6	A	321640
4.15	12	-	4	80	6	A	321641
4.16	12	-	4	80	6	A	321642
4.17	12	-	4	80	6	A	321643
4.18	12	-	4	80	6	A	321644
4.19	12	-	4	80	6	A	321645
4.20	12	-	4	80	6	A	321646
4.21	12	-	4	80	6	A	321647
4.22	12	-	4	80	6	A	321648
4.23	12	-	4	80	6	A	321649
4.24	12	-	4	80	6	A	321650
4.25	12	-	4	80	6	A	321651
4.26	12	-	4	80	6	A	321652
4.27	12	-	4	80	6	A	321653
4.28	12	-	4	80	6	A	321654
4.29	12	-	4	80	6	A	321655
4.30	12	-	4	80	6	A	321656
4.31	12	-	4	80	6	A	321657
4.32	12	-	4	80	6	A	321658
4.33	12	-	4	80	6	A	321659
4.34	12	-	4	80	6	A	321660
4.35	12	-	4	80	6	A	321661
4.36	12	-	4	80	6	A	321662
4.37	12	-	4	80	6	A	321663
4.38	12	-	4	80	6	A	321664
4.39	12	-	4	80	6	A	321665
4.40	12	-	4	80	6	A	321666
4.41	12	-	4	80	6	A	321667
4.42	12	-	4	80	6	A	321668
4.43	12	-	4	80	6	A	321669
4.44	12	-	4	80	6	A	321670
4.45	12	-	4	80	6	A	321671
4.46	12	-	4	80	6	A	321672
4.47	12	-	4	80	6	A	321673
4.48	12	-	4	80	6	A	321674
4.49	12	-	4	80	6	A	321675
4.50	12	-	4	80	6	A	321676
4.51	12	-	4	80	6	A	321677
4.52	12	-	4	80	6	A	321678
4.53	12	-	4	80	6	A	321679
4.54	12	-	4	80	6	A	321680
4.55	12	-	4	80	6	A	321681

$D_{1\ 0/+0.003}$	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
4.56	12	-	4	80	6	A	321682
4.57	12	-	4	80	6	A	321683
4.58	12	-	4	80	6	A	321684
4.59	12	-	4	80	6	A	321685
4.60	12	-	4	80	6	A	321686
4.61	12	-	4	80	6	A	321687
4.62	12	-	4	80	6	A	321688
4.63	12	-	4	80	6	A	321689
4.64	12	-	4	80	6	A	321690
4.65	12	-	4	80	6	A	321691
4.66	12	-	4	80	6	A	321692
4.67	12	-	4	80	6	A	321693
4.68	12	-	4	80	6	A	321694
4.69	12	-	4	80	6	A	321695
4.70	12	-	4	80	6	A	321696
4.71	12	-	4	80	6	A	321697
4.72	12	-	4	80	6	A	321698
4.73	12	-	4	80	6	A	321699
4.74	12	-	4	80	6	A	321700
4.75	12	-	4	80	6	A	321701
4.76	12	-	4	80	6	A	321702
4.77	12	-	4	80	6	A	321703
4.78	12	-	4	80	6	A	321704
4.79	12	-	4	80	6	A	321705
4.80	12	-	4	80	6	A	321706
4.81	12	-	4	80	6	A	321707
4.82	12	-	4	80	6	A	321708
4.83	12	-	4	80	6	A	321709
4.84	12	-	4	80	6	A	321710
4.85	12	-	4	80	6	A	321711
4.86	12	-	4	80	6	A	321712
4.87	12	-	4	80	6	A	321713
4.88	12	-	4	80	6	A	321714
4.89	12	-	4	80	6	A	321715
4.90	12	-	4	80	6	A	321716
4.91	12	-	4	80	6	A	321717
4.92	12	-	4	80	6	A	321718
4.93	12	-	4	80	6	A	321719
4.94	12	-	4	80	6	A	321720
4.95	12	-	4	80	6	A	321721
4.96	12	-	4	80	6	A	321722
4.97	12	-	4	80	6	A	321723
4.98	12	-	4	80	6	A	321724
4.99	12	-	4	80	6	A	321725
5.00	12	-	4	80	6	A	321726
5.01	12	-	4	80	6	A	321727
5.02	12	-	4	80	6	A	321728

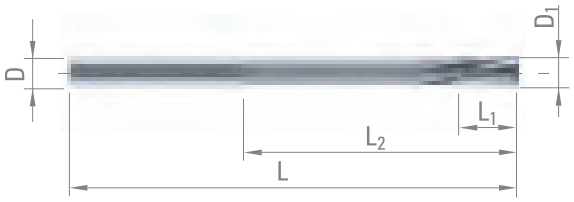
Cobalt Outils Coupants

POLY 4007 - 4007-TC

P. 370

Ref. A

Ref. B



Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

$D_{1\ 0/+0.003}$	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
5.03	12	-	4	80	6	A	321729
5.04	12	-	4	80	6	A	321730
5.05	12	-	4	80	6	A	321731
5.06	12	-	4	80	6	A	321732
5.07	12	-	4	80	6	A	321733
5.08	12	-	4	80	6	A	321734
5.09	12	-	4	80	6	A	321735
5.10	12	-	4	80	6	A	321736
5.11	12	-	4	80	6	A	321737
5.12	12	-	4	80	6	A	321738
5.13	12	-	4	80	6	A	321739
5.14	12	-	4	80	6	A	321740
5.15	12	-	4	80	6	A	321741
5.16	12	-	4	80	6	A	321742
5.17	12	-	4	80	6	A	321743
5.18	12	-	4	80	6	A	321744
5.19	12	-	4	80	6	A	321745
5.20	12	-	4	80	6	A	321746
5.21	12	-	4	80	6	A	321747
5.22	12	-	4	80	6	A	321748
5.23	12	-	4	80	6	A	321749
5.24	12	-	4	80	6	A	321750
5.25	12	-	4	80	6	A	321751
5.26	12	-	4	80	6	A	321752
5.27	12	-	4	80	6	A	321753
5.28	12	-	4	80	6	A	321754
5.29	12	-	4	80	6	A	321755
5.30	12	-	4	80	6	A	321756
5.31	12	-	4	80	6	A	321757
5.32	12	-	4	80	6	A	321758
5.33	12	-	4	80	6	A	321759
5.34	12	-	4	80	6	A	321760
5.35	12	-	4	80	6	A	321761
5.36	12	-	4	80	6	A	321762
5.37	12	-	4	80	6	A	321763
5.38	12	-	4	80	6	A	321764
5.39	12	-	4	80	6	A	321765
5.40	12	-	4	80	6	A	321766
5.41	12	-	4	80	6	A	321767
5.42	12	-	4	80	6	A	321768
5.43	12	-	4	80	6	A	321769
5.44	12	-	4	80	6	A	321770
5.45	12	-	4	80	6	A	321771
5.46	12	-	4	80	6	A	321772
5.47	12	-	4	80	6	A	321773
5.48	12	-	4	80	6	A	321774
5.49	12	-	4	80	6	A	321775

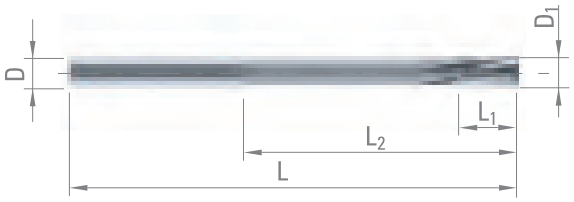
$D_{1\ 0/+0.003}$	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
5.50	12	-	4	80	6	A	321776
5.51	12	-	4	80	6	A	321777
5.52	12	-	4	80	6	A	321778
5.53	12	-	4	80	6	A	321779
5.54	12	-	4	80	6	A	321780
5.55	12	-	4	80	6	A	321781
5.56	12	-	4	80	6	A	321782
5.57	12	-	4	80	6	A	321783
5.58	12	-	4	80	6	A	321784
5.59	12	-	4	80	6	A	321785
5.60	12	-	4	80	6	A	321786
5.61	12	-	4	80	6	A	321787
5.62	12	-	4	80	6	A	321788
5.63	12	-	4	80	6	A	321789
5.64	12	-	4	80	6	A	321790
5.65	12	-	4	80	6	A	321791
5.66	12	-	4	80	6	A	321792
5.67	12	-	4	80	6	A	321793
5.68	12	-	4	80	6	A	321794
5.69	12	-	4	80	6	A	321795
5.70	12	-	4	80	6	A	321796
5.71	12	-	4	80	6	A	321797
5.72	12	-	4	80	6	A	321798
5.73	12	-	4	80	6	A	321799
5.74	12	-	4	80	6	A	321800
5.75	12	-	4	80	6	A	321801
5.76	12	-	4	80	6	A	321802
5.77	12	-	4	80	6	A	321803
5.78	12	-	4	80	6	A	321804
5.79	12	-	4	80	6	A	321805
5.80	12	-	4	80	6	A	321806
5.81	12	-	4	80	6	A	321807
5.82	12	-	4	80	6	A	321808
5.83	12	-	4	80	6	A	321809
5.84	12	-	4	80	6	A	321810
5.85	12	-	4	80	6	A	321811
5.86	12	-	4	80	6	A	321812
5.87	12	-	4	80	6	A	321813
5.88	12	-	4	80	6	A	321814
5.89	12	-	4	80	6	A	321815
5.90	12	-	4	80	6	A	321816
5.91	12	-	4	80	6	A	321817
5.92	12	-	4	80	6	A	321818
5.93	12	-	4	80	6	A	321819
5.94	12	-	4	80	6	A	321820
5.95	12	-	4	80	6	A	321821
5.96	12	-	4	80	6	A	321822

POLY 4007 - 4007-TC

P. 370

Ref. A

Ref. B



Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

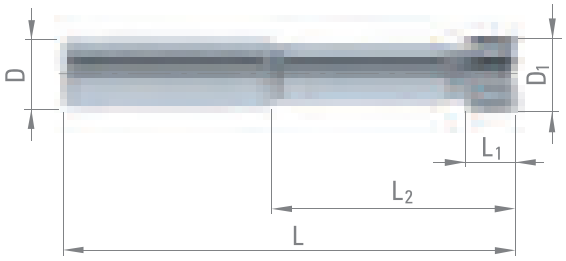
$D_{1\ 0/+0.003}$	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
5.97	12	-	4	80	6	A	321823
5.98	12	-	4	80	6	A	321824
5.99	12	-	4	80	6	A	321825
6.00	12	-	4	80	6	A	321826
6.01	12	-	4	80	6	A	321827
6.02	12	-	4	80	6	A	321828
6.03	12	-	4	80	6	A	321829
6.04	12	-	4	80	6	A	321830
6.05	12	-	4	80	6	A	321831
6.06	12	-	4	80	6	A	321832
6.07	12	-	4	80	6	A	321833
6.08	12	-	4	80	6	A	321834
6.09	12	-	4	80	6	A	321835
6.10	12	-	4	80	6	A	321836
6.11	12	-	4	80	6	A	321837
6.12	12	-	4	80	6	A	321838
6.13	12	-	4	80	6	A	321839
6.14	12	-	4	80	6	A	321840
6.15	12	-	4	80	6	A	321841
6.16	12	-	4	80	6	A	321842
6.17	12	-	4	80	6	A	321843
6.18	12	-	4	80	6	A	321844
6.19	12	-	4	80	6	A	321845
6.20	16	-	6	101	6	A	342052
6.30	16	-	6	101	6	A	342062
6.40	16	-	6	101	6	A	342072
6.50	16	-	6	101	6	A	342082
6.51	16	-	6	101	6	A	342083
6.52	16	-	6	101	6	A	342084
6.60	16	-	6	101	6	A	342092
6.70	16	-	6	101	6	A	342102
6.80	16	-	6	101	6	A	342112
6.90	16	-	6	101	6	A	342122
7.00	16	-	6	101	6	A	342132
7.01	16	-	6	101	6	A	342133
7.02	16	-	6	101	6	A	342134
7.10	16	-	6	101	6	A	342142
7.20	16	-	6	101	6	A	342152
7.30	16	-	6	101	6	A	342162
7.40	16	-	6	101	6	A	342172
7.50	16	-	6	101	6	A	342182
7.51	16	-	6	101	6	A	342183
7.52	16	-	6	101	6	A	342184
7.60	16	-	6	101	6	A	342192
7.70	16	-	6	101	6	A	342202
7.80	16	-	6	101	6	A	342212
7.90	16	-	6	101	6	A	342222

$D_{1\ 0/+0.003}$	L_1	L_2	D_{h5}	L	Z	Ref.	CARBURE
7.98	16	-	6	101	6	A	342230
7.99	16	-	6	101	6	A	342231
8.00	16	-	6	101	6	A	342232
8.01	16	-	6	101	6	A	342233
8.02	16	-	6	101	6	A	342234
8.10	16	-	6	117	6	A	342242
8.20	16	-	6	117	6	A	342252
8.30	16	-	6	117	6	A	342262
8.40	16	-	6	117	6	A	342272
8.50	16	-	6	117	6	A	342282
8.51	16	-	6	117	6	A	342283
8.52	16	-	6	117	6	A	342284
8.70	16	-	6	117	6	A	342302
8.90	16	-	6	117	6	A	342322
9.00	16	-	6	117	6	A	342332
9.01	16	-	6	117	6	A	342333
9.02	16	-	6	117	6	A	342334
9.10	16	-	6	117	6	A	342342
9.50	16	-	6	117	6	A	342382
9.70	16	-	6	117	6	A	342402
10.00	16	-	6	117	6	A	342432
10.01	16	-	6	117	6	A	342433
10.02	19	87	10	133	6	B	200661
10.03	19	87	10	133	6	B	964048
10.10	19	87	10	133	6	B	200641
10.48	19	87	10	133	6	B	963732
10.49	19	87	10	133	6	B	963733
10.50	19	87	10	133	6	B	200642
10.51	19	87	10	133	6	B	963734
10.52	19	87	10	133	6	B	963735
10.60	19	87	10	133	6	B	200643
10.98	19	96	12	142	6	B	963736
10.99	19	96	12	142	6	B	963737
11.00	19	96	12	142	6	B	200644
11.01	19	96	12	142	6	B	963738
11.02	19	96	12	142	6	B	963739
11.48	19	96	12	142	6	B	963740
11.49	19	96	12	142	6	B	963741
11.50	19	96	12	142	6	B	200645
11.51	19	96	12	142	6	B	963742
11.52	19	96	12	142	6	B	963743
11.80	19	96	12	142	6	B	200646
11.98	19	105	12	151	6	B	963744
11.99	19	105	12	151	6	B	963745
12.00	19	105	12	151	6	B	200647
12.01	19	105	12	151	6	B	963746
12.02	19	105	12	151	6	B	200648

Tout Ø avec tolérance ±2µm livrable sur Cobalt Outils Coupants - service rapide

ALÉSOIRS EXPANSIBLES

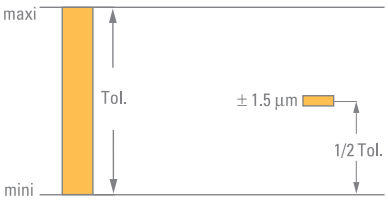
P. 372



Acier + Pb	Acier > 600MPa	Acier fort. allié	Acier inox aust.	Fontes
Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu

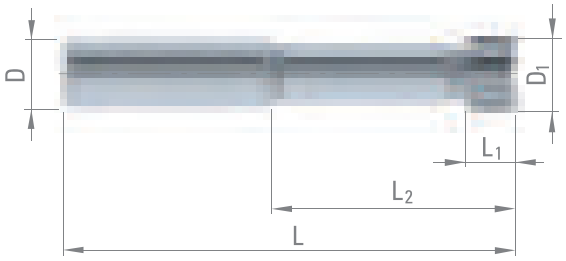
POLY 4361 — POLY 4361-TC — POLY 4361-FC

D nom. H7	D_1 ± 1.5µm	L	L_1	L_2	D_{h6}	Z	POLY	CARBURE	TiAIN	CERMET
6.00	(6.006)	80	10	40	12	4	4361	61859	965576	963287
							4361-TC	61883	341107	964213
							4361-FC	326753	955517	955527
7.00	(7.007)	80	10	40	12	4	4361	63863	341096	341122
							4361-TC	341082	341108	964215
							4361-FC	977363	955518	955528
8.00	(8.007)	80	10	40	12	4	4361	61860	341097	61594
							4361-TC	61884	958621	62263
							4361-FC	966766	955519	955529
9.00	(9.007)	90	10	50	12	4	4361	954994	341098	341123
							4361-TC	974647	341109	61671
							4361-FC	969137	955520	955530
10.00	(10.007)	100	10	50	12	6	4361	61666	987470	971287
							4361-TC	61885	985270	305651
							4361-FC	970436	955521	955531
11.00	(11.009)	100	10	50	12	6	4361	953002	341099	341124
							4361-TC	341083	341110	952860
							4361-FC	341089	982623	957205
12.00	(12.009)	100	10	50	12	6	4361	61862	953717	956390
							4361-TC	61886	957400	61823
							4361-FC	961924	955522	955532
13.00	(13.009)	100	10	50	12	6	4361	953441	953899	341125
							4361-TC	951466	62899	951704
							4361-FC	956383	994806	341139
14.00	(14.009)	100	10	50	12	6	4361	61709	950932	341126
							4361-TC	61045	957939	64881
							4361-FC	965308	955523	955533
15.00	(15.009)	100	14	50	12	6	4361	952323	953408	66609
							4361-TC	955048	341111	62055
							4361-FC	964856	341118	961253
16.00	(16.009)	110	14	50	16	6	4361	61863	953900	990911
							4361-TC	61044	341112	60455
							4361-FC	959763	955524	955534



POLY 4361

P. 372

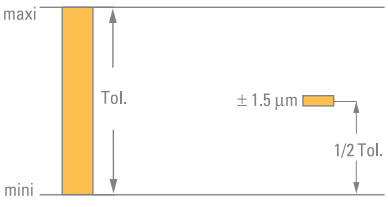


Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

POLY 4361 — POLY 4361-TC — POLY 4361-FC

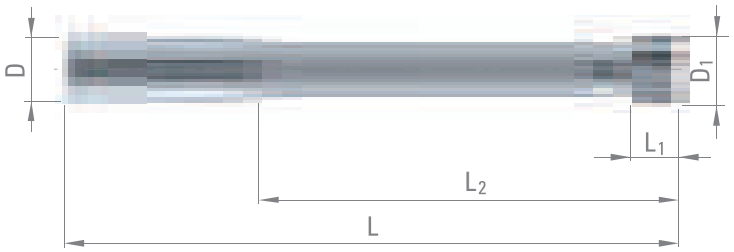
D nom. H7	D_1 ± 1.5µm	L	L_1	L_2	D_{h6}	Z	POLY	CARBURE	TiAlN	CERMET
17.00	(17.010)	110	14	50	16	6	4361	67322	341100	341127
							4361-TC	320133	308083	341132
							4361-FC	341090	964572	959907
18.00	(18.010)	110	14	50	16	6	4361	61864	341101	965018
							4361-TC	61887	341113	341133
							4361-FC	964631	955525	955535
19.00	(19.010)	130	14	60	20	6	4361	971893	341102	341128
							4361-TC	341084	341114	341134
							4361-FC	341091	969769	985097
20.00	(20.010)	130	14	60	20	6	4361	61866	341103	965020
							4361-TC	61888	65708	341135
							4361-FC	965283	955526	955536
21.00	(21.010)	130	14	60	20	6	4361	959277	341104	341129
							4361-TC	341085	341115	341136
							4361-FC	983187	341119	959112
22.00	(22.010)	130	14	60	20	6	4361	61867	953901	965019
							4361-TC	341086	341116	341137
							4361-FC	341093	959097	965586
23.00	(23.010)	130	14	60	20	6	4361	956588	341105	341130
							4361-TC	341087	341117	341138
							4361-FC	341094	341120	341140
24.00	(24.010)	130	14	60	20	6	4361	61868	341106	341131
							4361-TC	341088	968505	969504
							4361-FC	341095	341121	962965



Cobalt Outils Coupants

ALÉSOIRS EXPANSIBLES

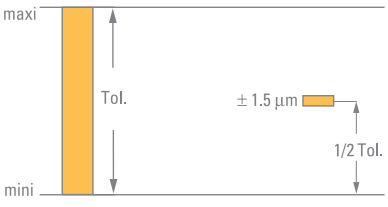
P. 372



Acier + Pb	Acier > 600MPa	Acier fort. allié	Acier inox aust.	Fontes
Super alliages Ni / Co	Titane, alliage de titane	Alliage Cu Argent Or	Alliage Cu difficile	Alu

POLY 4371 — POLY 4371-TC — POLY 4371-FC

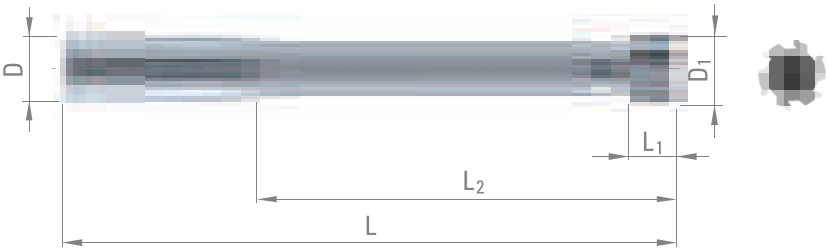
D nom. H7	D_1 ± 1.5µm	L	L_1	L_2	D_{h6}	Z	POLY	CARBURE	TiAlN	CERMET
6.00	(6.006)	120	10	80	12	4	4371	61869	341156	341186
							4371-TC	958107	965969	341204
							4371-FC	976190	955537	955547
7.00	(7.007)	120	10	80	12	4	4371	950528	341157	341187
							4371-TC	968331	341166	341205
							4371-FC	956371	955538	955548
8.00	(8.007)	120	10	80	12	4	4371	61870	341158	341188
							4371-TC	341141	341167	967206
							4371-FC	973938	955539	955549
9.00	(9.007)	130	10	90	12	4	4371	954860	341159	341189
							4371-TC	950120	341168	341206
							4371-FC	976838	955540	955550
10.00	(10.007)	130	10	90	12	6	4371	61871	310374	341190
							4371-TC	341142	341169	341207
							4371-FC	962768	955541	955551
11.00	(11.009)	150	10	100	12	6	4371	972464	982208	341191
							4371-TC	341143	341170	341208
							4371-FC	312249	959071	341221
12.00	(12.009)	150	10	100	12	6	4371	61872	310375	341192
							4371-TC	962624	341171	341209
							4371-FC	986143	955542	955552
13.00	(13.009)	150	10	100	12	6	4371	952545	341160	341193
							4371-TC	341144	341172	341210
							4371-FC	972342	977697	341222
14.00	(14.009)	150	10	100	12	6	4371	61873	310950	965516
							4371-TC	341145	341173	341211
							4371-FC	964796	955543	955553
15.00	(15.009)	150	14	100	12	6	4371	64404	304409	341194
							4371-TC	341146	341174	341212
							4371-FC	965648	976749	341223
16.00	(16.009)	160	14	100	16	6	4371	61874	964387	341195
							4371-TC	977762	341175	341213
							4371-FC	982330	955544	955554



Cobalt Outils Coupants

POLY 4371

P. 372

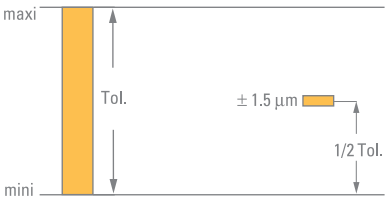


Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

POLY 4371 — POLY 4371-TC — POLY 4371-FC

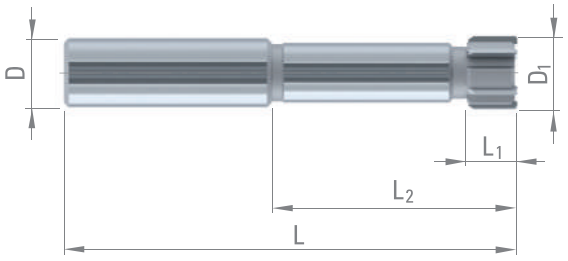
D nom. H7	D_1 ± 1.5µm	L	L_1	L_2	D_{h6}	Z	POLY	CARBURE	TiAlN	CERMET
17.00	(17.010)	160	14	100	16	6	4371	960993	59895	341196
							4371-TC	341147	341176	341214
							4371-FC	341152	341184	341224
18.00	(18.010)	160	14	100	16	6	4371	61875	310376	341197
							4371-TC	961483	341177	341215
							4371-FC	962767	955545	955555
19.00	(19.010)	190	14	120	20	6	4371	66588	341161	341198
							4371-TC	319972	341178	320656
							4371-FC	955676	967797	341225
20.00	(20.010)	190	14	120	20	6	4371	61876	341162	341199
							4371-TC	400483	341179	341216
							4371-FC	341153	955546	955556
21.00	(21.010)	190	14	120	20	6	4371	334784	341163	341200
							4371-TC	341148	341180	341217
							4371-FC	994332	310771	983957
22.00	(22.010)	190	14	120	20	6	4371	963583	964388	341201
							4371-TC	341149	341181	341218
							4371-FC	341154	965966	341226
23.00	(23.010)	190	14	120	20	6	4371	963174	341164	341202
							4371-TC	341150	341182	341219
							4371-FC	962757	310773	341227
24.00	(24.010)	190	14	120	20	6	4371	62827	341165	341203
							4371-TC	341151	341183	341220
							4371-FC	341155	341185	341228



Cobalt Outils Coupants

ALÉSOIRS FIXES COURTS

P. 372



Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Aciers Fontes 45-65 HRC

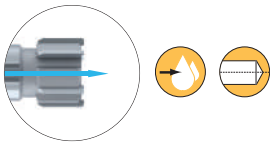
Fontes | Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile

Alu

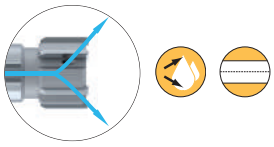
D_1	L_1	L_2	D_{h6}	L	Z	HM	TiAlN	POLYCUT	C-TOP	CERMET
5.800 - 7.609	10	40	12	80	4	☐	■	■	■	☐
7.610 - 8.609	10	40	12	80	4	☐	■	■	■	☐
8.610 - 9.609	10	50	12	90	4	☐	■	■	■	☐
9.610 - 10.609	10	50	12	90	6	☐	■	■	■	☐
10.610 - 14.609	10	50	12	100	6	☐	■	■	■	☐
14.610 - 15.609	14	50	12	100	6	☐	■	■	■	☐
15.610 - 18.609	14	50	16	110	6	☐	■	■	■	☐
18.610 - 21.109	14	60	20	130	6	☐	■	■	■	☐
21.110 - 25.109	14	60	20	130	6	☐	■	■	■	☐
25.110 - 26.109	14	75	25	145	6	☐	■	■	■	☐
26.110 - 28.109	18	75	25	145	6	☐	■	■	■	☐
28.110 - 33.109	18	75	25	145	6	☐	■	■	■	☐
33.110 - 45.109	18	75	25	145	6	☐	■	■	■	☐
45.110 - 65.109	18	90	32	160	8	☐	■	■	■	☐
65.110 - 90.109	18	90	32	160	10	☐	■	■	■	☐
90.110 - 130.000	18	90	32	160	12	☐	■	■	■	☐

POLY 4261

POLY 4261-TC

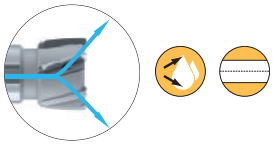


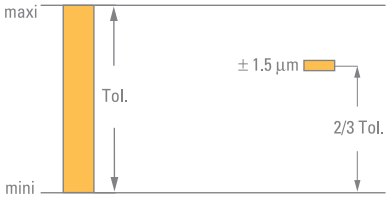
POLY 4261-FC



POLY 4264

POLY 4264-FC

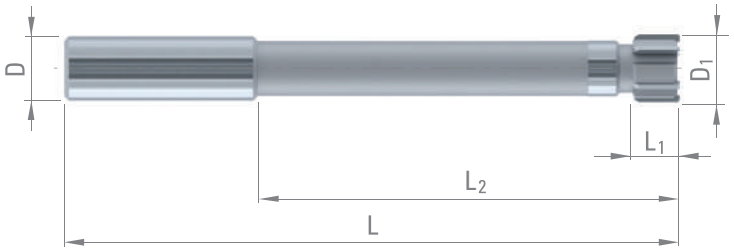




Cobalt Outils Coupants

ALÉSOIRS FIXES LONGS

P. 372



Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Aciers Fontes 45-65 HRC

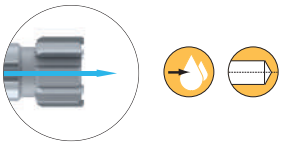
Fontes | Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile

Alu

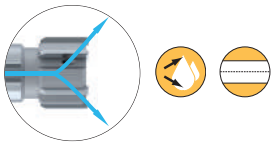
D_1	L_1	L_2	D_{h6}	L	Z	HM	TiAlN	POLYCUT	C-TOP	CERMET
5.800 - 7.609	10	80	12	120	4	☐	■	■	■	☐
7.610 - 8.609	10	80	12	120	4	☐	■	■	■	☐
8.610 - 9.609	10	90	12	130	4	☐	■	■	■	☐
9.610 - 10.609	10	90	12	130	6	☐	■	■	■	☐
10.610 - 14.609	10	100	12	150	6	☐	■	■	■	☐
14.610 - 15.609	14	100	12	150	6	☐	■	■	■	☐
15.610 - 18.609	14	100	16	160	6	☐	■	■	■	☐
18.610 - 21.109	14	120	20	190	6	☐	■	■	■	☐
21.110 - 25.109	14	120	20	190	6	☐	■	■	■	☐
25.110 - 26.109	14	150	25	220	6	☐	■	■	■	☐
26.110 - 28.109	18	150	25	220	6	☐	■	■	■	☐
28.110 - 33.109	18	150	25	220	6	☐	■	■	■	☐
33.110 - 45.109	18	150	25	220	6	☐	■	■	■	☐
45.110 - 65.109	18	150	32	250	8	☐	■	■	■	☐
65.110 - 90.109	18	150	32	250	10	☐	■	■	■	☐
90.110 - 130.000	18	180	32	250	12	☐	■	■	■	☐

POLY 4271

POLY 4271-TC

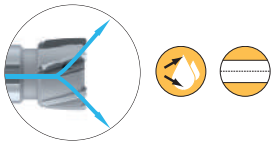


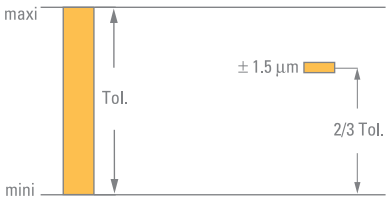
POLY 4271-FC



POLY 4274

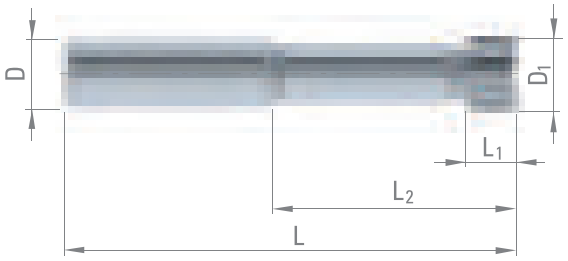
POLY 4274-FC





Cobalt Outils Coupants

ALÉSOIRS EXPANSIBLES COURTS



P. 372

Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Aciers Fontes 45-65 HRC

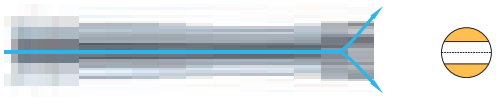
Fontes | Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile

Alu

D_1	L	L_1	L_2	D_{h6}	Z	CARBURE	TiAlN	CERMET
5.80 - 7.60	80	10	40	12	4	☐	■	☐
7.61 - 8.60	80	10	40	12	4	☐	■	☐
8.61 - 9.60	90	10	50	12	4	☐	■	☐
9.61 - 10.60	90	10	50	12	6	☐	■	☐
10.61 - 14.60	100	10	50	12	6	☐	■	☐
14.61 - 15.60	100	14	50	12	6	☐	■	☐
15.61 - 18.60	110	14	50	16	6	☐	■	☐
18.61 - 21.10	130	14	60	20	6	☐	■	☐
21.11 - 25.10	130	14	60	20	6	☐	■	☐
25.11 - 28.10	145	18	75	25	6	☐	■	☐
28.11 - 45.00	145	18	75	25	6	☐	■	☐
45.00 - 55.00	160	18	90	32	8	☐	■	☐

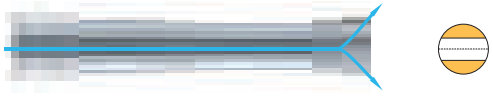
POLY 4361-TC

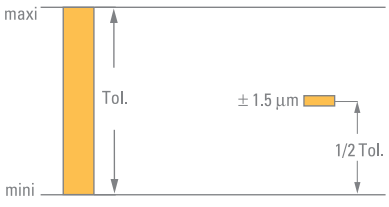
POLY 4361-FC



POLY 4364

POLY 4364-FC

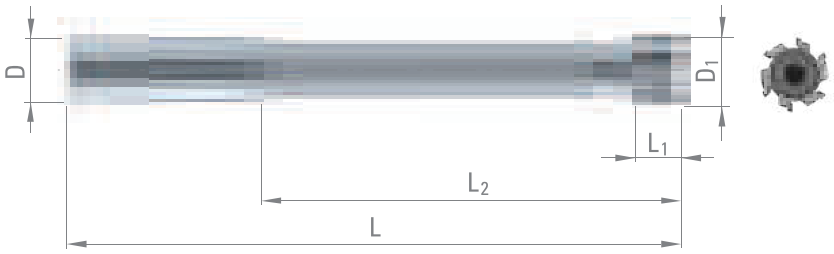




Cobalt Outils Coupants

ALÉSOIRS EXPANSIBLES LONGS

P. 372



Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Aciers Fontes 45-65 HRC

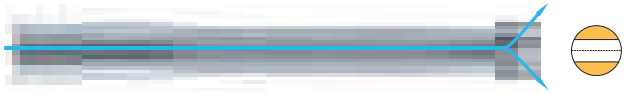
Fontes | Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile

Alu

D_1	L	L_1	L_2	D_{h6}	Z	CARBURE	TiAlN	CERMET
5.80 - 7.60	120	10	80	12	4	☐	■	☐
7.61 - 8.60	120	10	80	12	4	☐	■	☐
8.61 - 9.60	130	10	90	12	4	☐	■	☐
9.61 - 10.60	130	10	90	12	6	☐	■	☐
10.61 - 14.60	150	10	100	12	6	☐	■	☐
14.61 - 15.60	150	14	100	12	6	☐	■	☐
15.61 - 18.60	160	14	100	16	6	☐	■	☐
18.61 - 21.10	190	14	120	20	6	☐	■	☐
21.11 - 25.10	190	14	120	20	6	☐	■	☐
25.11 - 28.10	220	18	150	25	6	☐	■	☐
28.11 - 45.00	220	18	150	25	6	☐	■	☐
45.00 - 55.00	250	18	180	32	8	☐	■	☐

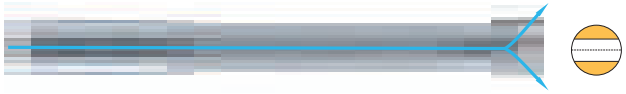
POLY 4371-TC

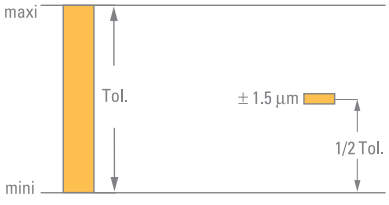
POLY 4371-FC



POLY 4374

POLY 4374-FC

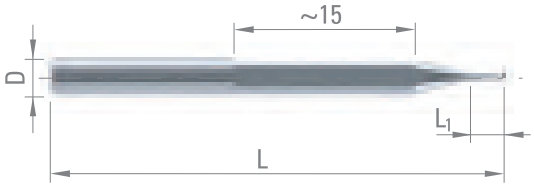


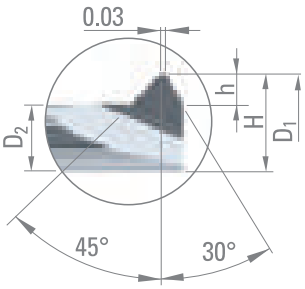


Cobalt Outils Coupants

OUTILS À ALÉSER ET CHANFREINER

P. 369





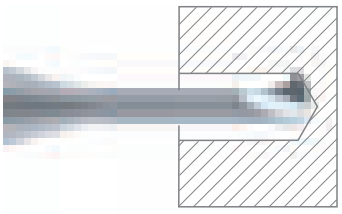
Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

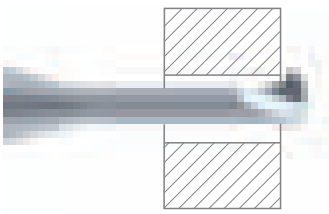
Plastique

D_1	L_1	D_2	h	H	D_{h5}	L	pour...	CARBURE
0.26	0.84	0.14	0.06	0.20	3	46	S 0.30	968880
0.35	1.04	0.21	0.07	0.28	3	46	S 0.40	969086
0.44	1.35	0.28	0.08	0.36	3	46	S 0.50	969087
0.53	1.66	0.33	0.10	0.43	3	46	S 0.60	969088
0.66	2.04	0.36	0.15	0.51	3	46	S 0.70	969089
0.75	2.30	0.43	0.16	0.58	3	46	S 0.80	969090
0.86	2.72	0.46	0.20	0.66	3	46	S 0.90	969091

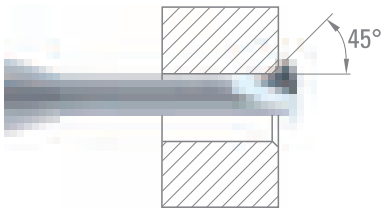
Alésage trou borgne



Alésage trou passant



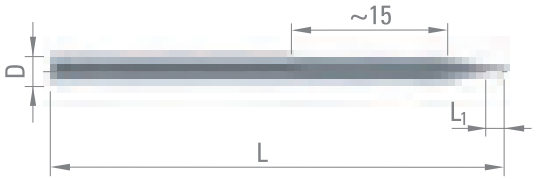
Anglage

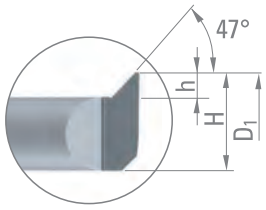


tasseaux p. 365

BURINS À ALÉSER ET CHANFREINER

P. 369





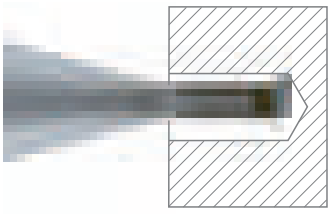
Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

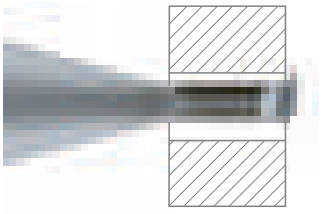
Plastique

D_1	L_1	h	H	D_{h5}	L	CARBURE
0.20	0.2 0.4	0.04	0.16	3	46	997972 997973
0.30	0.3 0.6	0.06	0.24	3	46	997974 997975
0.40	0.4 0.8	0.08	0.32	3	46	997976 997977
0.50	0.5 1.0	0.10	0.40	3	46	997978 997979
0.60	0.6 1.2	0.12	0.48	3	46	997980 997981
0.70	0.7 1.4	0.14	0.56	3	46	997982 997983
0.80	0.8 1.6	0.16	0.64	3	46	997984 997985
0.90	0.9 1.8	0.18	0.72	3	46	997986 997987
1.00	1.0 2.0	0.20	0.80	3	46	997988 997989

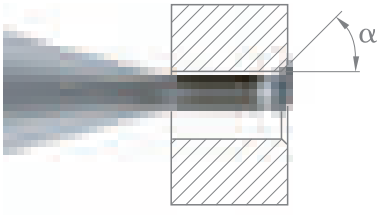
Alésage trou borgne



Alésage trou passant



Anglage

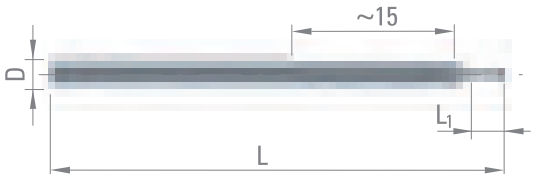


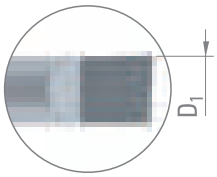
tasseaux p. 365

DIXI 2578

BURINS À ALÉSER

P. 369



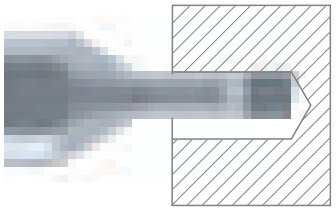


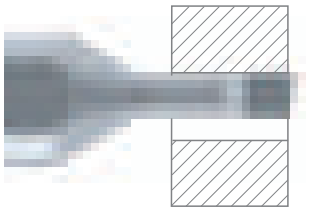
Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

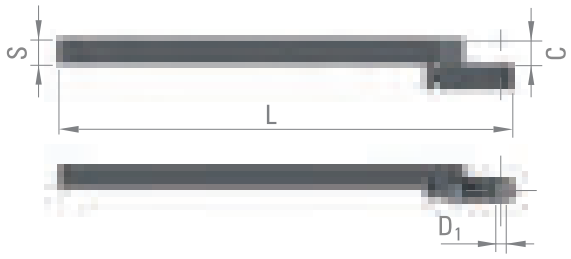
D_1	L_1	D_{h5}	L	CARBURE
0.30	0.6	3	46	997948
	0.9			997949
	1.2			997950
0.40	0.8	3	46	997951
	1.2			997952
	1.6			997953
0.50	1.0	3	46	997954
	1.5			997955
	2.0			997956
0.60	1.2	3	46	997957
	1.8			997958
	2.4			997959
0.70	1.4	3	46	997960
	2.1			997961
	2.8			997962
0.80	1.6	3	46	997963
	2.4			997964
	3.6			997965
0.90	1.8	3	46	997966
	2.7			997967
	3.6			997968
1.00	2.0	3	46	997969
	3.0			997970
	4.0			997971





DIXI 2764

PORTE-BURINS

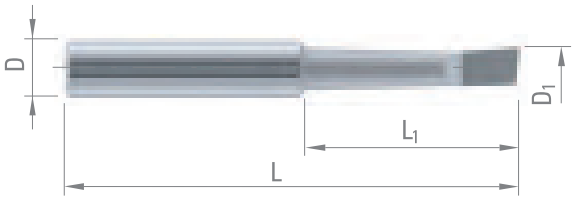


S	L	D_1	C	Art.
7 x 7	146	3	7	305008
8 x 8	146	3	8	305009
10 x 10	150	3	10	305010

Cobalt Outils Coupants

OUTILS À ALÉSER

P. 369



Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

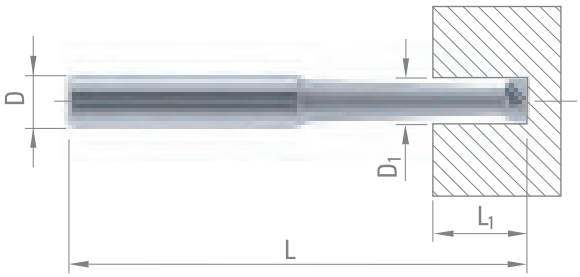
Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

D_1	L_1	D_{h5}	L	CARBURE
0.60	3	4	25	53197
0.80	4	4	25	53198
1.00	5	4	25	53199
1.20	6	4	25	53200
1.50	8	4	32	53201
1.80	9	4	32	53202
2.00	10	4	32	53203
2.50	12	4	32	53204
3.00	15	4	32	53205

OUTILS À ALESER
TROU BORGNE

P. 369



Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

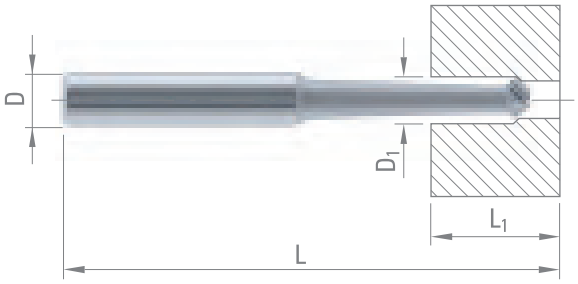
D_1	L_1	D_{h5}	L	CARBURE
0.50	3	4	25	36091
0.80	4	4	25	36092
1.00	4	4	25	33855
1.20	6	4	25	33856
1.50	7	4	28	33857
1.70	7	4	28	33858
2.00	9	4	30	33859
2.20	9	4	30	33860
2.50	12	4	33	33861
3.00	14	4	35	33862
3.50	14	4	35	33863
4.00	17	4	38	33864
5.00	23	4	38	794
2.00	9	6	38	33865
2.50	12	6	40	33866
3.00	14	6	42	33867
4.00	17	6	45	33868
5.00	22	6	52	795
6.00	24	6	52	796
7.00	30	6	52	797
8.00	32	6	52	798
10.00	40	6	60	800
3.00	17	8	47	790
4.00	21	8	51	791
5.00	22	8	52	801
6.00	25	8	55	802
7.00	28	8	60	803
10.00	45	8	65	804
12.00	54	8	70	805
13.00	54	8	78	5603

D_1	L_1	D_{h5}	L	CARBURE
3.00	17	10	45	792
4.00	21	10	49	793
5.00	22	10	50	806
6.00	25	10	54	807
7.00	28	10	56	808
9.00	32	10	65	809
10.00	32	10	65	810
12.00	45	10	70	811
13.00	55	10	80	812
15.00	75	10	100	813
18.00	75	10	100	814
8.00	30	12	70	815
10.00	40	12	80	816
13.00	60	12	90	817
15.00	70	12	100	818
18.00	70	12	100	819
13.00	60	16	115	820
15.00	60	16	115	821
18.00	75	16	115	822
20.00	75	16	115	824

DIXI 2581

OUTILS À ALÉSER
TROU PASSANT

P. 369



Acier + Pb | Acier > 600MPa | Acier fort. allié | Acier inox aust. | Fontes

Super alliages Ni / Co | Titane, alliage de titane | Alliage Cu Argent Or | Alliage Cu difficile | Alu

Plastique

D_1	L_1	D_{h5}	L	CARBURE
0.50	3	4	25	36093
0.80	4	4	25	36094
1.00	4	4	25	33869
1.20	6	4	25	33870
1.50	7	4	28	33871
1.70	7	4	28	33872
2.00	9	4	30	33873
2.20	9	4	30	33874
2.50	12	4	33	33875
3.00	14	4	35	33876
3.50	14	4	35	33877
4.00	17	4	38	33878
5.00	23	4	38	745
2.00	9	6	38	33879
2.50	12	6	40	33880
3.00	14	6	42	33881
4.00	17	6	45	33882
5.00	22	6	52	746
6.00	24	6	52	747
8.00	32	6	52	749
10.00	40	6	60	751
3.00	17	8	47	740
4.00	21	8	51	741
5.00	22	8	52	752
6.00	25	8	55	753
7.00	28	8	60	754
9.00	45	8	65	755
11.00	54	8	70	756
13.00	54	8	78	5661

D_1	L_1	D_{h5}	L	CARBURE
3.00	17	10	45	742
4.00	21	10	49	743
5.00	22	10	50	757
6.00	25	10	54	758
7.00	28	10	56	759
9.00	32	10	65	760
10.00	32	10	65	761
12.00	45	10	70	762
13.00	55	10	80	763
15.00	75	10	100	764
18.00	75	10	100	765
8.00	30	12	70	766
10.00	40	12	80	767
13.00	60	12	90	768
15.00	70	12	100	769
18.00	70	12	100	770
20.00	80	12	110	825
13.00	60	16	115	771
15.00	60	16	115	772
18.00	75	16	115	773

CONDITIONS DE COUPE

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

	Matières à usiner		Outil fixe Vc [m/min]	Outil tournant Vc [m/min]	Avance f [mm/tr]
P	Acier non allié / faiblement allié	< 600 N/mm²	**100** - 150	**70** - 120	**0.05** - 0.15
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	**70** - 120	**50** - 90	**0.04** - 0.10
P	Acier de décolletage au plomb		**120** - 160	**90** - 130	**0.05** - 0.15
P	Acier fortement allié	700 – 1500 N/mm²	**30** - 70	**20** - 50	**0.03** - 0.10
M	Acier inoxydable	400 – 700 N/mm²	**60** - 80	**40** - 60	**0.04** - 0.10
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	**30** - 70	**20** - 50	**0.03** - 0.10
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	**60** - 150	**40** - 120	**0.05** - 0.15
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	**20** - 80	**15** - 50	**0.04** - 0.10
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		**30** - 90	**20** - 60	**0.03** - 0.10
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	**10** - 20	**8** - 15	**0.03** - 0.10
S	Titane, alliage de titane		**15** - 30	**10** - 25	**0.03** - 0.10
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**150** - 250	**120** - 180	**0.08** - 0.20
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**120** - 160	**100** - 140	**0.04** - 0.10
N	Alliage d'aluminium	Si < 8%	**200** - 400	**150** - 300	**0.05** - 0.15
N	Fonte d'aluminium	Si > 8%	**180** - 350	**150** - 250	**0.05** - 0.155
N	Plastique		**200** - 300	**150** - 250	**0.10** - 0.30
N	Or, argent		**150** - 250	**120** - 180	**0.08** - 0.20

CONDITIONS DE COUPE

Matières à usiner			CARBURE Vc [m/min]
P	Acier non allié / faiblement allié	< 600 N/mm²	14 **16** 20
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	12 **14** 16
P	Acier de décolletage au plomb		25 **50** 70
P	Acier fortement allié	700 – 1500 N/mm²	8 **10** 12
M	Acier inoxydable	400 – 700 N/mm²	10 **12** 16
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	8 **10** 12
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	20 **30** 40
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	12 **18** 24
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		14 **20** 32
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy	8 **10** 12
S	Titane, alliage de titane		10 **12** 16
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		20 **30** 40
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	16 **24** 30
N	Alliage d'aluminium	Si < 8%	20 **40** 60
N	Fonte d'aluminium	Si > 8%	20 **36** 50
N	Plastique		20 **40** 60
N	Plastique avec fibres		10 **20** 30
N	Or, argent		20 **30** 40

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

Avance par tour **f [mm]**

Ø D_1 < 2.00	Ø D_1 2.00 - 4.03	Ø D_1 4.03 - 7.51	Ø D_1 7.51 - 12.02	
0.05	0.10	0.30	0.40	
0.15	**0.20**	**0.50**	**0.60**	
0.20	0.30	0.70	0.80	
0.05	0.10	0.25	0.30	
0.15	**0.20**	**0.40**	**0.50**	
0.20	0.30	0.65	0.70	
0.05	0.20	0.40	0.60	
0.15	**0.40**	**0.60**	**0.80**	
0.20	0.50	0.80	1.00	
0.05	0.10	0.20	0.30	
0.15	**0.15**	**0.30**	**0.40**	
0.20	0.25	0.40	0.50	
0.05	0.10	0.20	0.30	
0.15	**0.15**	**0.30**	**0.40**	
0.20	0.20	0.40	0.50	
0.05	0.10	0.20	0.30	
0.15	**0.15**	**0.30**	**0.40**	
0.20	0.25	0.40	0.50	
0.05	0.10	0.40	0.60	
0.15	**0.15**	**0.50**	**0.70**	
0.20	0.25	0.60	0.80	
0.05	0.10	0.30	0.40	
0.15	**0.15**	**0.40**	**0.50**	
0.20	0.20	0.50	0.60	
0.05	0.10	0.30	0.40	
0.15	**0.20**	**0.40**	**0.50**	
0.20	0.30	0.50	0.60	
0.05	0.10	0.20	0.30	
0.15	**0.15**	**0.30**	**0.40**	
0.20	0.20	0.40	0.50	
0.05	0.10	0.20	0.30	
0.15	**0.15**	**0.30**	**0.40**	
0.20	0.20	0.40	0.50	
0.05	0.10	0.30	0.40	
0.15	**0.20**	**0.40**	**0.50**	
0.20	0.30	0.50	0.60	
0.05	0.10	0.30	0.40	
0.15	**0.20**	**0.40**	**0.50**	
0.20	0.30	0.50	0.60	
0.05	0.10	0.40	0.60	
0.20	**0.25**	**0.60**	**0.80**	
0.30	0.40	0.80	1.00	
0.05	0.10	0.40	0.60	
0.20	**0.25**	**0.60**	**0.80**	
0.30	0.40	0.80	1.00	
0.05	0.10	0.40	0.50	
0.20	**0.25**	**0.50**	**0.60**	
0.30	0.40	0.60	0.70	
0.05	0.10	0.30	0.40	
0.20	**0.25**	**0.40**	**0.50**	
0.30	0.40	0.50	0.60	
0.05	0.10	0.40	0.60	
0.15	**0.20**	**0.60**	**0.80**	
0.20	0.30	0.80	1.00	
0.05	0.10	0.10	0.10	
0.10	**0.15**	**0.15**	**0.15**	Surépaisseur Ø [mm]
0.15	0.20	0.20	0.20	

CONDITIONS DE COUPE

Matières à usiner			CARBURE	TiAlN	CERMET
			Vc [m/min]	Vc [m/min]	Vc [m/min]
P	Acier non allié / faiblement allié	< 600 N/mm²	6 **8** 10	60 **90** 120	100 **130** 150
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	6 **8** 10	60 **80** 100	80 **100** 120
P	Acier de décolletage au plomb		20 **40** 50	60 **80** 100	100 **130** 150
P	Acier fortement allié	700 – 1500 N/mm²	4 **5** 7	30 **40** 50	
M	Acier inoxydable	400 – 700 N/mm²	5 **6** 8	30 **40** 50	
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	4 **5** 6	10 **20** 30	
K	Fonte grise	< 250 HB	12 **15** 18	90 **120** 140	
K	Alliages fonte grise	> 250 HB	10 **12** 15	50 **60** 80	
K	Fonte à graphite sphéroïdal ferritique	< 600 HB	8 **12** 15	90 **120** 140	110 **140** 160
K	Fonte à graphite sphéroïdal ferritique / perlitique		6 **9** 12	90 **120** 140	110 **140** 160
K	Fonte à graphite sphéroïdal perlitique / Fonte malléable	> 600 HB	10 **12** 15	90 **120** 140	100 **120** 140
K	Alliages fonte sphéroïdale		8 **9** 12	50 **60** 80	
K	Fonte vermiculaire		8 **9** 12	50 **60** 80	
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy		10 **15** 20	
S	Titane, alliage de titane		8 **10** 12		
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		15 **22** 30	100 **120** 150	
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	12 **16** 20	60 **80** 100	
N	Alliage d'aluminium	Si < 8%	15 **22** 30		
N	Fonte d'aluminium	Si > 8%	12 **16** 20		

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times f\ [mm]$$

Avance par tour **f [mm]**

Ø D_1 5.70 - 10.60	Ø D_1 10.70 - 18.60	Ø D_1 18.70 - 44.90	Ø D_1 45 - 120	
0.20	0.40	0.60	0.80	
0.30	**0.50**	**0.70**	**0.90**	
0.50	0.70	0.90	1.10	
0.20	0.40	0.60	0.80	
0.30	**0.50**	**0.70**	**0.90**	
0.50	0.70	0.90	1.10	
0.20	0.40	0.60	0.80	
0.30	**0.50**	**0.70**	**0.90**	
0.50	0.70	0.90	1.10	
0.15	0.25	0.35	0.45	
0.20	**0.30**	**0.40**	**0.50**	
0.30	0.40	0.50	0.60	
0.20	0.30	0.40	0.50	
0.30	**0.40**	**0.50**	**0.60**	
0.40	0.50	0.60	0.70	
0.20	0.30	0.40	0.50	
0.30	**0.40**	**0.50**	**0.60**	
0.40	0.50	0.60	0.70	
0.30	0.50	0.70	0.90	
0.40	**0.60**	**0.80**	**1.00**	
0.50	0.70	0.90	1.10	
0.20	0.40	0.60	0.80	
0.30	**0.50**	**0.70**	**0.90**	
0.50	0.70	0.90	1.10	
0.30	0.50	0.70	0.90	
0.40	**0.60**	**0.80**	**1.00**	
0.50	0.70	0.90	1.10	
0.30	0.50	0.70	0.90	
0.40	**0.60**	**0.80**	**1.00**	
0.50	0.70	0.90	1.10	
0.20	0.40	0.60	0.80	
0.30	**0.50**	**0.70**	**0.90**	
0.40	0.60	0.80	1.00	
0.20	0.30	0.40	0.50	
0.30	**0.40**	**0.50**	**0.60**	
0.40	0.50	0.60	0.70	
0.20	0.30	0.40	0.50	
0.30	**0.40**	**0.50**	**0.60**	
0.40	0.50	0.60	0.70	
0.15	0.25	0.35	0.45	
0.20	**0.30**	**0.40**	**0.50**	
0.30	0.40	0.50	0.60	
0.20	0.30	0.40	0.50	
0.30	**0.40**	**0.50**	**0.60**	
0.40	0.50	0.60	0.70	
0.30	0.50	0.70	0.90	
0.40	**0.60**	**0.80**	**1.00**	
0.50	0.70	0.90	1.10	
0.20	0.40	0.60	0.80	
0.30	**0.50**	**0.70**	**0.90**	
0.40	0.50	0.60	0.70	
0.30	0.50	0.70	0.90	
0.40	**0.60**	**0.80**	**1.00**	
0.50	0.70	0.90	1.10	
0.30	0.50	0.70	0.90	
0.40	**0.60**	**0.80**	**1.00**	
0.50	0.70	0.90	1.10	

0.10	0.15	0.15	0.20	
0.15	**0.20**	**0.20**	**0.30**	Surépaisseur Ø [mm]
0.20	0.30	0.30	0.40	

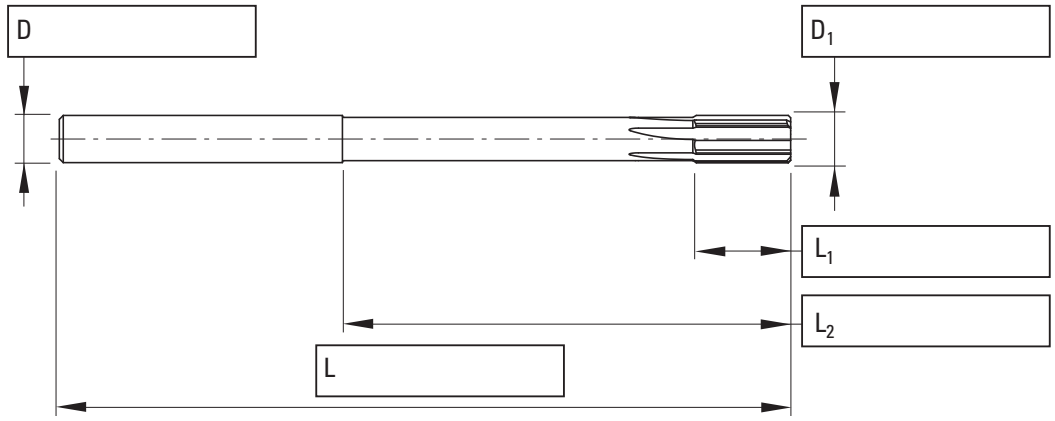
POLY 4001 SP

Z =

Quantités

Dimensions et tolérance du trou à usiner

Matière à usiner



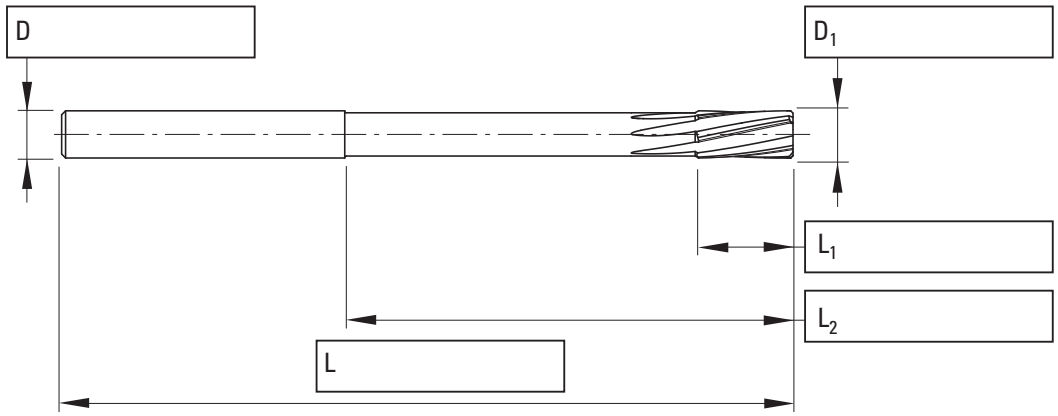
POLY 4007 SP

Z =

Quantités

Dimensions et tolérance du trou à usiner

Matière à usiner



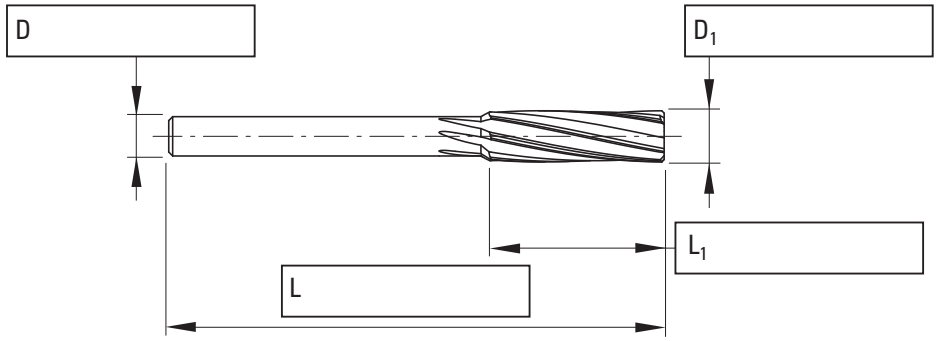
POLY 4005 SP

Z =

Quantités

Dimensions et tolérance du trou à usiner

Matière à usiner



CONSULTEZ NOTRE FORMULAIRE DE DEMANDE D'OFFRES EN LIGNE SUR
WWW.DIXIPOLYTOOL.COM

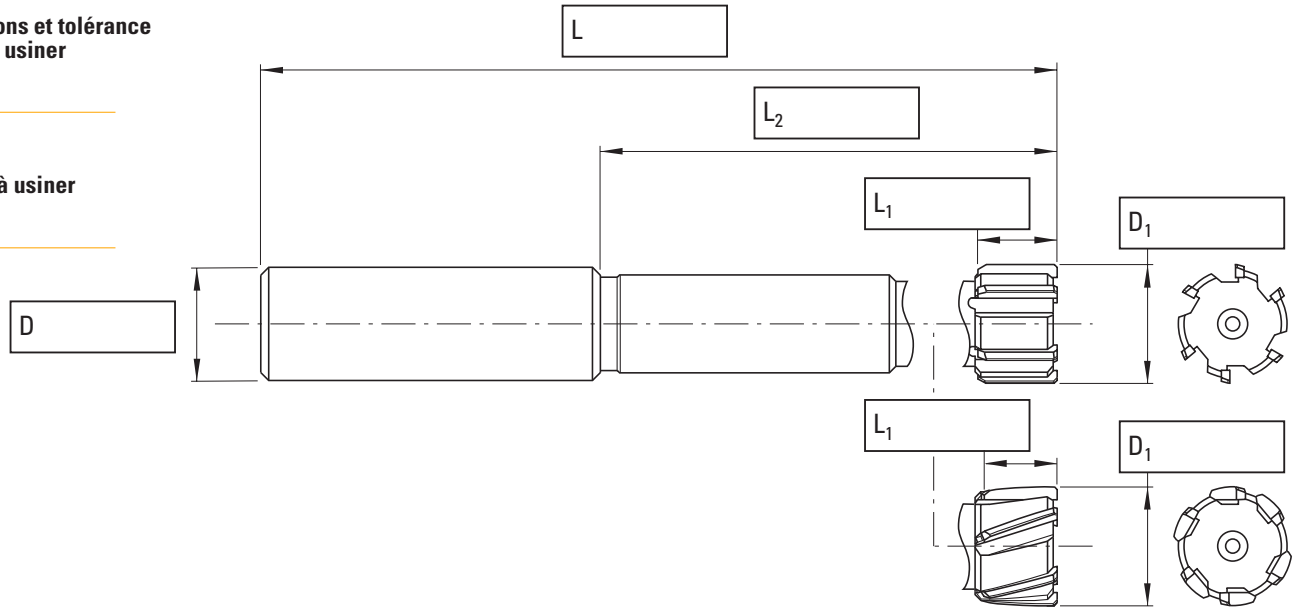
Cobalt Outils Coupants

ALÉSOIRS À PLAQUETTES

Quantités

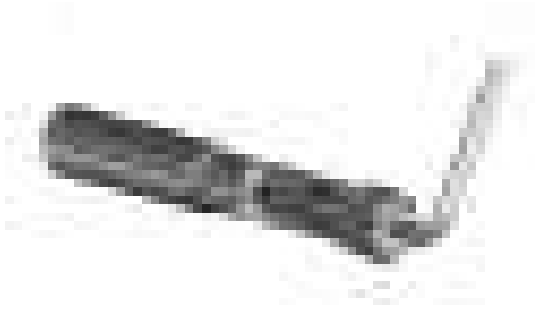
Dimensions et tolérance du trou à usiner

Matière à usiner



☐ Expansible

☐ Fixe

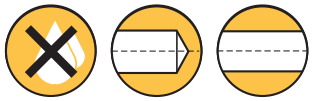


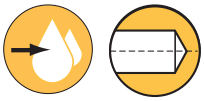
D_1	Expansion
5.80 - 9.60	+10° = D1 + 0.0025
9.61 - 21.10	+10° = D1 + 0.0035
21.11 - 51.1	+10° = D1 + 0.0050

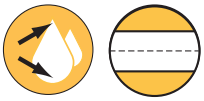
Matière de coupe

☐ HM ☐ HM + TiAlN ☐ CERMET ☐ Autre:

Arrosage

☐ 

☐ 

☐ 

CONSULTEZ NOTRE FORMULAIRE DE DEMANDE D'OFFRES EN LIGNE SUR
WWW.DIXIPOLYTOOL.COM

Cobalt Outils Coupants

DIAMANT

DIAMANT

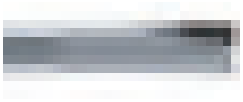
DIAMOND

DIAMANTE

GYÉMÁNT

DIAMANTE

Cobalt Outils Coupants


SÉLECTION DES OUTILS DIAMANT 378

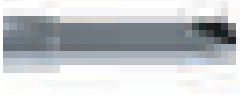
FRAISES 384

FRAISES À ANGLER 390

FRAISES À GRAVER 391

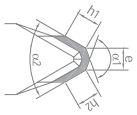
FRAISES SPÉCIALES 392

FRAISES À SURFACER 394


FORETS 395

ALÉSAGE 396

OUTILS DE TOURNAGE 398


POSSIBILITÉS DE FORMES SP 401

DRESSE-MEULES DIADIX® 403

CONDITIONS DE COUPE 406

Cobalt Outils Coupants

✓ = article de stock

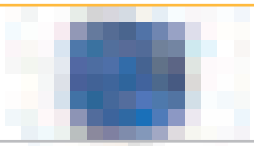
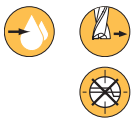
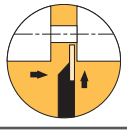
FRAISES	Z	Page		PCD ●	CVD ▮	DIA ◆		
DIXI 72420-SH Ø 2.00 - 20.00	1 - 2	384		✓	✓			
DIXI 70520-SH Ø 1.00 - 20.00	1 - 2	385		✓	✓			
DIXI 70600 PCD Ø 1.00 - 10.00	1	386		✓				
DIXI 70600 DIA Ø 3.00 - 6.00	1	386				✓		
DIXI 72310 DIA Ø 0.40 - 2.00	1	387				✓		
DIXI 72421 DIA Ø 6.00 - 12.00	1	388				✓		
DIXI 70320-SH Ø 2.00 - 20.00	1 - 2	389		✓				
DIXI 70320 DIA Ø 2.00 - 20.00	1	388				✓		
FRAISES À ANGLER								
DIXI 76230 DIA Ø 0.10 - 0.30	1	390				✓		
DIXI 76231 DIA	1	390				✓		
FRAISES À GRAVER								
DIXI 70170 DIA Ø 0.05 - 0.10	1	391				✓		
DIXI 70170 PCD Ø 0.10 - 0.20	1	391		✓				

◯ bien ◎ excellent

Alliage Cu Argent Or	Alliage Cu difficile	Alu 4 - 8% Si	Alu 8 - 13% Si	Graphite	Carbure Céramique verte	Plastique	Fibre de carbone	
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯			◎		
◎	◎	◎	◯			◎		
◎	◎	◎	◯			◎		
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯			◎		
◎	◎	◎	◯			◎		
◎	◎	◎	◯			◎		
◎	◎	◎	◯			◎		
◎	◎	◎	◯	◯	◯	◎	◯	

SÉLECTION DES OUTILS DIAMANT

✓ = article de stock ? Sur demande

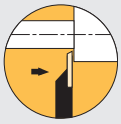
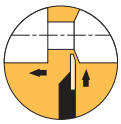
		Z	Page		PCD ●	CVD ▮	DIA ◆		
FRAISES À SURFACER									
DIXI 81000 Ø 40 - 100		2	394						
DIXI 80000 Ø 40 - 125		6 - 16	395						
FORETS									
DIXI 11140		1	395						
DIXI 11180		2	395			SUR DEMANDE			
ALÉSAGE									
POLY 40010-TC Ø 8.00 - 22.10		4	396						
POLY 40010-FC Ø 8.00 - 22.10		4	396						
DIXI 25800		-	396			SUR DEMANDE			
DIXI 25810		-	396						
OUTILS DE TOURNAGE									
DIXI 20610		-	397						
DIXI 20770		-	397			SUR DEMANDE			
DIXI 26500 TR		-	398		✓				
DIXI 26500 FT		-	398		✓				

◯ bien ◎ excellent

Alliage Cu Argent Or	Alliage Cu difficile	Alu 4 - 8% Si	Alu 8 - 13% Si	Graphite	Carbure Céramique verte	Plastique	Fibre de carbone	
◎	◎	◎	◯			◎		
◎	◎	◎	◯					
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯	◯	◯	◎	◯	

SÉLECTION DES OUTILS DIAMANT

✓ = article de stock

OUTILS DE TOURNAGE		Z	Page		PCD ●	CVD ▮	DIA ◆		
DIXI 26500 AV		-	398		✓				
DIXI 26500 AR		-	398		✓				
DIXI 264X0		-	397						
DRESSE-MEULES DIADIX®									
DIXI 1973		-	403						
DIXI 1978		-	404		✓	✓			

SUR DEMANDE

Cobalt Outils Coupants

◯ bien ◎ excellent

Alliage Cu Argent Or	Alliage Cu difficile	Alu 4 - 8% Si	Alu 8 - 13% Si	Graphite	Carbure Céramique verte	Plastique	Fibre de carbone	
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯	◯	◯	◎	◯	
◎	◎	◎	◯	◯	◯	◎	◯	

DIXI 72420 - 72420-SH

FRAISES EN BOUT
AVEC COUPE AU CENTRE
ET TROUS DE LUBRICATION

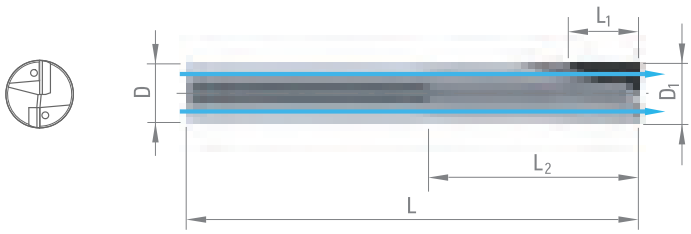
Z = 1-2

P. 406

$D_1 \geq Ø\ 6$

Alliage Cu Argent Or | Alliage Cu difficile | Alu 4-8% Si | Alu 8-13% Si | Graphite

Carbure Céramique verte | Plastique | Fibre de carbone



$D_{1\ h10}$	L_1	L_2	D_{h5}	L	Z	PCD	CVD
1.00	2.0	-	6	42	1	979179	
1.50	3.0	-	6	42	1	977382	
2.00	3.0	6	6	42	1	66785	
2.00 >	3.0	20	6	75	1	970175	
3.00	4.0	6	6	42	1	67540	301958
3.00 >	4.0	6	6	42	2		305549
3.00 >	4.0	15	6	75	2	970176	
3.00 >	4.0	20	6	75	2	970177	
4.00	4.0	8	6	50	1	957593	
4.00 >	6.5	10	6	50	1	67541	
4.00 >	6.5	15	6	75	2	970178	301959
4.00 >	6.5	25	6	75	2	970179	
5.00	5.0	10	6	50	2	957595	
5.00 >	6.5	10	6	50	2	53153	
5.00 >	6.5	35	6	75	2	970166	
6.00	6.0	12	6	57	2	976391	301960
6.00 >	8.0	34	6	75	2	976392	301961
6.00 >	8.0	50	6	100	2	976393	
7.00	8.0	34	8	75	2	976394	
8.00	7.0	14	8	63	2	976395	301962
8.00 >	10.0	34	8	75	2	976396	301963
8.00 >	10.0	50	8	100	2	976397	
8.00 >	10.0	75	8	125	2	976398	
9.00	10.0	35	10	75	2	976399	
10.00	8.0	16	10	75	2	976410	
10.00 >	12.0	35	10	75	2	976411	301965
10.00 >	12.0	75	10	125	2	976412	
11.00	12.0	38	12	83	2	976413	
12.00	10.0	20	12	83	2	976414	
12.00 >	12.0	38	12	83	2	976415	301966
12.00 >	12.0	75	12	125	2	976416	
14.00	12.0	24	14	83	2	976417	338991
14.00 >	12.0	38	14	83	2	976418	
14.00 >	12.0	75	14	125	2	976419	
16.00	14.0	28	16	92	2	976420	338992
16.00 >	14.0	42	16	92	2	976421	
16.00 >	14.0	75	16	125	2	976422	
20.00	18.0	36	20	104	2	976423	
20.00 >	18.0	50	20	125	2	976424	

Sur demande

DIXI 70520 - 70520-SH

FRAISES TORIQUES AVEC COUPE AU CENTRE ET TROUS DE LUBRICATION

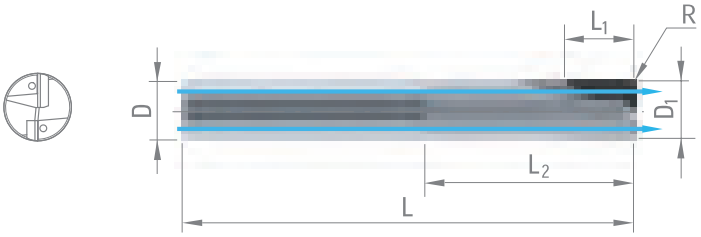
Z = 1-2

P. 406

$D_1 \geq Ø\ 6$

Alliage Cu Argent Or | Alliage Cu difficile | Alu 4-8% Si | Alu 8-13% Si | Graphite

Carbure Céramique verte | Plastique | Fibre de carbone

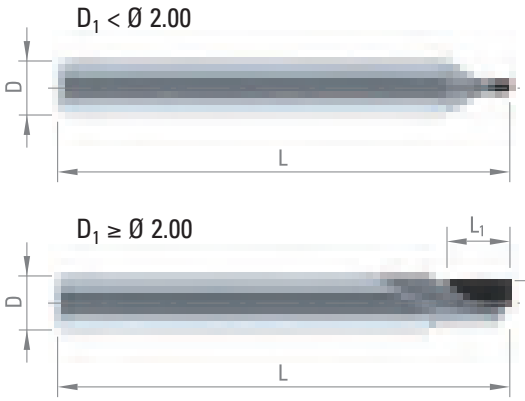


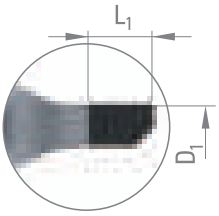
$D_{1\ h10}$	L_1	L_2	D_{h5}	L	R	Z	PCD	CVD
1.00	2.0	-	6	42	0.1	1	984384	
2.00	3.0	6	6	42	0.1	1	967923	
2.00 >	3.0	6	6	42	0.2	1	973528	
3.00	4.0	15	6	75	0.1	2	987438	338995
3.00 >	4.0	15	6	75	0.3	2	305810	
4.00	4.0	8	6	50	0.1	1	967925	
4.00 >	6.5	10	6	50	0.5	1	971465	
4.00 >	6.5	15	6	75	0.1	2	305811	
4.00 >	6.5	15	6	75	0.5	2	302378	
5.00	5.0	10	6	50	0.1	2	305812	
5.00 >	5.0	10	6	50	0.5	2	975839	
6.00	6.0	12	6	57	0.1	2	967926	338996
6.00 >	6.0	12	6	57	0.5	2	968992	
6.00 >	8.0	34	6	75	0.1	2	995208	
6.00 >	8.0	34	6	75	0.5	2	974475	
6.00 >	8.0	34	6	75	1.0	2	974476	
8.00	7.0	14	8	63	0.1	2	967927	339000
8.00 >	10.0	34	8	75	0.5	2	974477	
8.00 >	10.0	34	8	75	1.0	2	974478	
10.00	12.0	35	10	75	0.1	2	953153	339001
10.00 >	12.0	35	10	75	0.5	2	974479	
10.00 >	12.0	35	10	75	1.0	2	974480	
10.00 >	12.0	75	10	125	0.5	2	974482	
10.00 >	12.0	75	10	125	1.0	2	974481	
12.00	10.0	20	12	83	0.1	2	984083	339004
12.00 >	12.0	38	12	83	0.5	2	974483	
12.00 >	12.0	38	12	83	1.0	2	974484	
12.00 >	12.0	75	12	125	0.5	2	974485	
12.00 >	12.0	75	12	125	1.0	2	974486	
14.00	12.0	24	14	83	0.1	2	305814	
14.00 >	12.0	24	14	83	0.5	2	305816	339012
14.00 >	12.0	24	14	83	1.0	2	305817	
16.00	14.0	28	16	92	0.1	2	993052	
16.00 >	14.0	42	16	92	0.5	2	305818	339014
16.00 >	14.0	42	16	92	1.0	2	305139	
20.00	18.0	36	20	104	0.1	2	987718	
20.00 >	18.0	36	20	104	0.5	2	305819	
20.00 >	18.0	36	20	104	1.0	2	305820	

DIXI 70600 PCD

FRAISES EN BOUT DE FINITION
AVEC COUPE AU CENTRE

Z = 1





P. 406

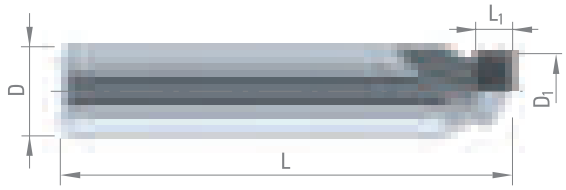
Alliage Cu Argent Or | Alliage Cu difficile | Alu 4-8% Si | Alu 8-13% Si | Graphite
Carbure Céramique verte | Plastique | Fibre de carbone

$D_{1\ h10}$	L_1	L_2	D_{h5}	L	PCD
1.00	2.0	-	6	35	302387
2.00	3.0	6	6	35	302388
3.00	4.0	6	6	42	302389
4.00	6.5	10	6	42	302390
5.00	6.5	10	6	50	302391
6.00	8.0	15	6	50	302393
8.00	10.0	15	8	60	339191
10.00	12.0	20	10	60	339192

DIXI 70600 DIA

FRAISES EN BOUT
DIAMANT MONOCRISTALLIN
AVEC COUPE AU CENTRE

Z = 1



P. 406

Alliage Cu Argent Or | Alliage Cu difficile | Alu 4-8% Si | Alu 8-13% Si | Plastique

D_1	L_1	D_{h5}	L	DIA
3.00	2.5	6	30	302394
4.00	2.5	6	30	302395
5.00	2.5	6	30	302396
6.00	2.5	6	30	302397

Cobalt Outils Coupants

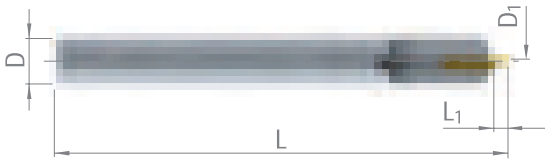
DIXI 72310 DIA

MICRO-FRAISES
DIAMANT MONOCRISTALLIN

Z = 1

P. 406

Alliage Cu Argent Or | Alliage Cu difficile | Alu 4-8% Si | Alu 8-13% Si | Plastique



D_1	L_1	D_{h5}	L	DIA
0.40	0.8	3	30	953424
0.50	1.0	3	30	953425
0.60	1.2	3	30	953426
0.70	1.4	3	30	953427
0.80	1.6	3	30	953428
0.90	1.8	3	30	953429
1.00	2.5	3	30	953430
1.10	2.5	3	30	953431
1.20	2.5	3	30	953432
1.30	2.5	3	30	953433
1.40	2.5	3	30	953434
1.50	2.5	3	30	953435
1.60	2.5	3	30	953436
1.70	2.5	3	30	953437
1.80	2.5	3	30	953438
1.90	2.5	3	30	953439
2.00	2.5	6	30	953440

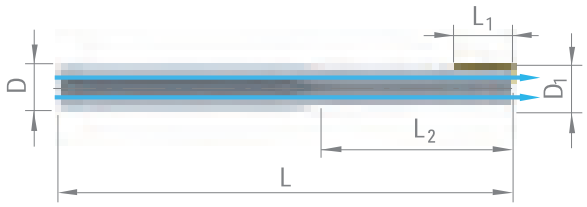
DIXI 72421-SH DIA

FRAISES EN BOUT
DIAMANT MONOCRISTALLIN

Z = 1

P. 406

Alliage Cu Argent Or | Alliage Cu difficile | Alu 4-8% Si | Alu 8-13% Si | Plastique



D_1	L_2	D_{h5}	L_1	L	DIA Plastique	DIA
6.00	25	6	4	57	970120	341428
			6	57	970122	341429
			8	57	974360	341430
8.00	25	8	4	63	970126	341432
			6	63	970128	341434
			8	63	970129	341435
10.00	25	10	4	75	974317	341436
			6	75	974318	341437
			8	75	974319	341438
12.00	25	12	4	83	974321	341439
			6	83	974322	341440
			8	83	974323	341441

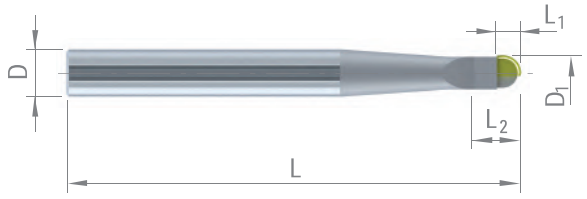
DIXI 70320 DIA

FRAISES HÉMISPHÉRIQUES
DIAMANT MONOCRISTALLIN

Z = 1

P. 406

Alliage Cu Argent Or | Alliage Cu difficile | Alu 4-8% Si | Alu 8-13% Si | Plastique



D_1	L_1	L_2	D_{h5}	L	DIA
2.00	2.0	4	6	57	341443
3.00	2.5	6	6	75	341445
4.00	3.0	8	6	75	341447
6.00	4.0	12	8	75	341449
8.00	5.0	16	10	75	341450
10.00	6.0	20	12	75	341451

DIXI 70320-SH PCD

FRAISES HÉMISPHÉRIQUES AVEC TROUS DE LUBRICATION

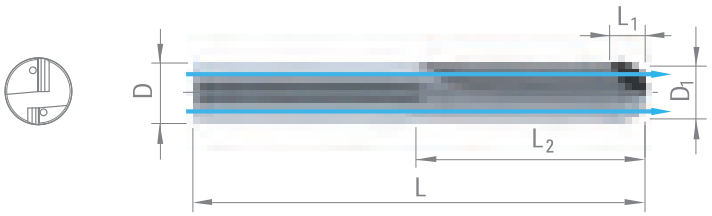
Z = 1-2

P. 406

> Ø 6

Alliage Cu Argent Or | Alliage Cu difficile | Alu 4-8% Si | Alu 8-13% Si | Graphite

Carbure Céramique verte | Plastique | Fibre de carbone



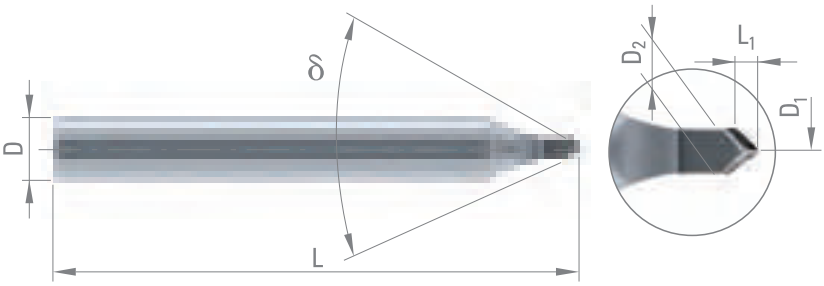
$D_{1\ h10}$	L_1	D	L_2	L	Z	PCD
2.00	2.0	6	6.0	42	1	953442
			25.0	75	1	970874
3.00	2.5	6	6.0	42	1	953443
			25.0	75	1	970875
			25.0	75	2	970876
4.00	3.0	6	8.0	50	1	959468
			10.0	50	1	953444
			10.0	50	2	970877
			25.0	75	2	970878
			35.0	75	2	981585
5.00	4.0	6	10.0	50	2	953445
			25.0	75	2	970883
6.00	4.0	6	12.0	57	2	976433
			34.0	75	2	976434
			50.0	100	2	976435
8.00	5.0	8	14.0	63	2	976436
			34.0	75	2	976437
			75.0	125	2	976438
10.00	6.0	10	16.0	72	2	976439
			35.0	75	2	976440
			75.0	125	2	976441
12.00	7.0	12	20.0	83	2	976442
			38.0	83	2	976443
12.00	7.0	12	75.0	125	2	976444
14.00	8.0	14	24.0	83	2	305821
16.00	9.0	16	28.0	92	2	300800
20.00	11.0	20	36.0	104	2	305822

DIXI 76230 DIA

FRAISES À ANGLER
DIAMANT MONOCRISTALLIN

Z = 1

Alliage Cu Argent Or | Alliage Cu difficile | Alu 4-8% Si | Alu 8-13% Si | Plastique



δ	L_1	D_2	D_1	D_{h5}	L	DIA
30°	2.80	2	* 0.30	6	50	978382
60°	1.40	3	* 0.10	6	50	302596
	1.30	3	* 0.30	6	50	978381
90°	0.80	3	* 0.10	6	50	302595
	0.70	3	* 0.30	6	50	977871

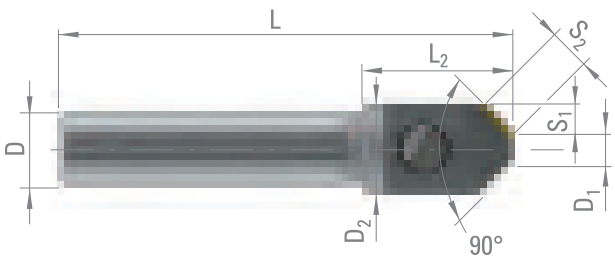
*non coupant

DIXI 76231 DIA

FRAISES À ANGLER
DIAMANT MONOCRISTALLIN

Z = 1

Alliage Cu Argent Or | Alliage Cu difficile | Alu 4-8% Si | Alu 8-13% Si | Plastique

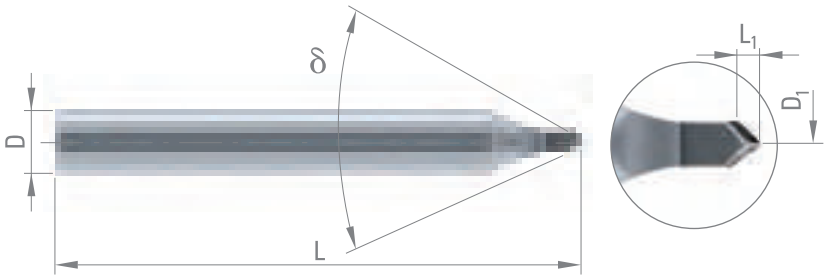


D_1	D_2	L_2	S_1	S_2	D_{h5}	L	DIA
4	10	-	3	4.10	10	60	974354
4	12	20	4	5.50	10	60	974355
4	14	20	5	7.00	10	60	974356
4	16	20	6	8.50	10	60	974357

DIXI 70170 DIA

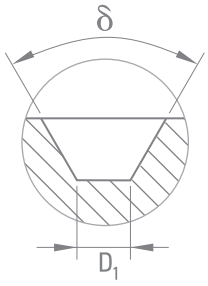
FRAISES À GRAVER
DIAMANT MONOCRISTALLIN

P. 408



Alliage Cu Argent Or | Alliage Cu difficile | Alu 4-8% Si | Alu 8-13% Si | Plastique

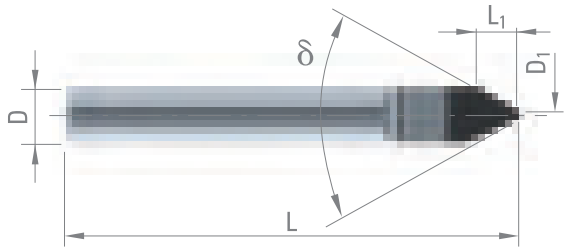
δ	L_1	D_{h5}	L	D_1	DIA
60°	1.40	6	50	0.05	302597
				0.10	302598
90°	0.80	6	50	0.05	302599
				0.10	302600



DIXI 70170 PCD

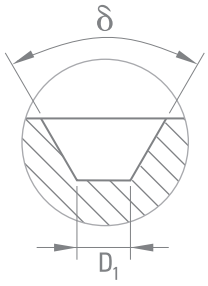
FRAISES À GRAVER PCD

P. 408



Alliage Cu Argent Or | Alliage Cu difficile | Alu 4-8% Si | Alu 8-13% Si | Graphite | Carbure Céramique verte | Plastique | Fibre de carbone

δ	L_1	D_{h5}	L	D_1	PCD
60°	5	6	50	0.10	303081
				0.20	303082
90°	3	6	50	0.10	303083
				0.20	303084



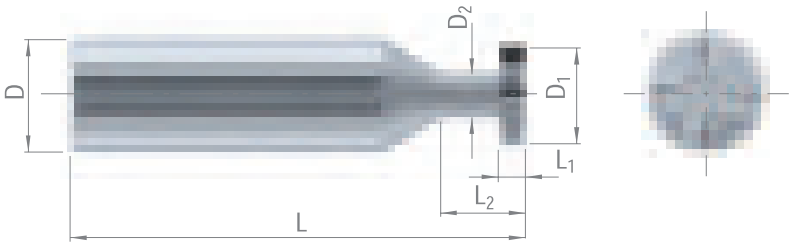
Matière de la partie coupante ☐ **PCD** ☐ **CVD** ☐ **DIA**

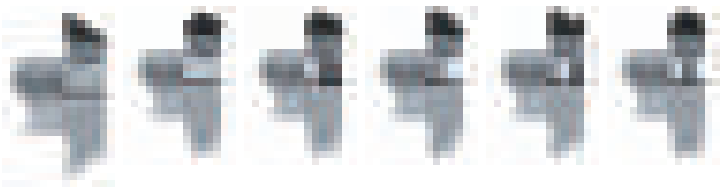
Matière à usiner:

DIXI 15150 OUTILS SUR DEMANDE

FRAISES À T

Z = _____
D = _____
D_1 = _____
D_2 = _____
L = _____
L_1 = _____
L_2 = _____
R = _____

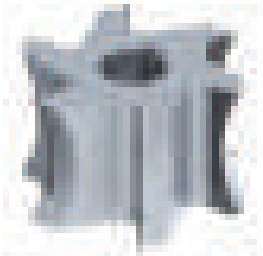


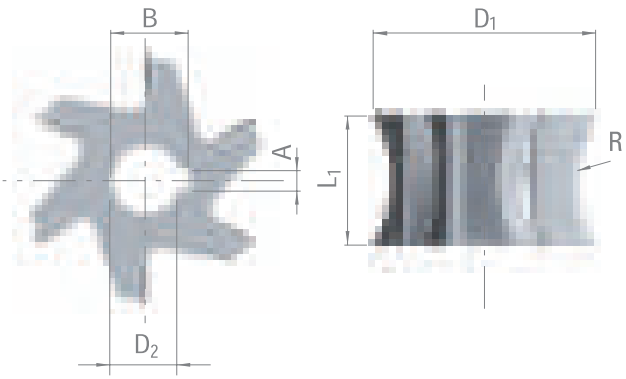


DIXI 16560 OUTILS SUR DEMANDE

FRAISES SCIES DE FORME CONCAVE

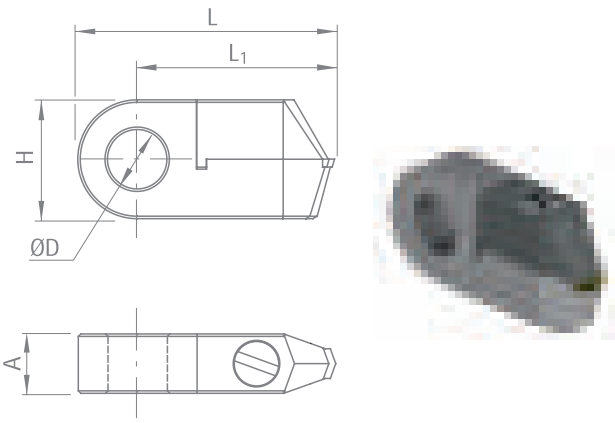
D_1 = _____
D_2 = _____
L_1 = _____
R = _____
A = _____
B = _____



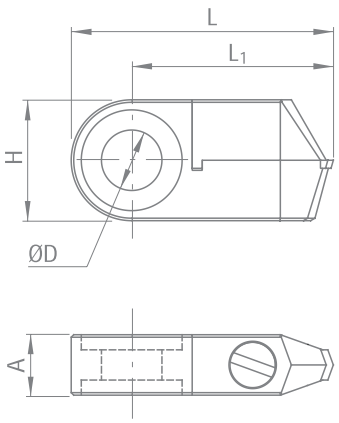


OUTILS DIAMANT DE TOURNAGE ET FRAISAGE

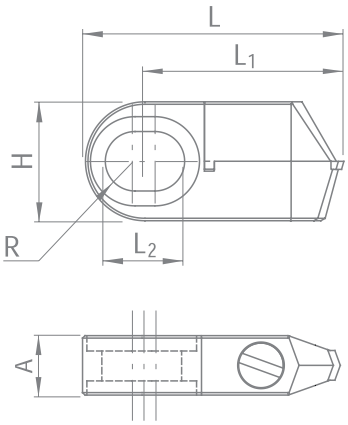
Ref. A



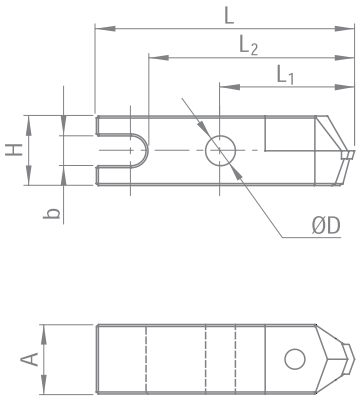
Ref. B



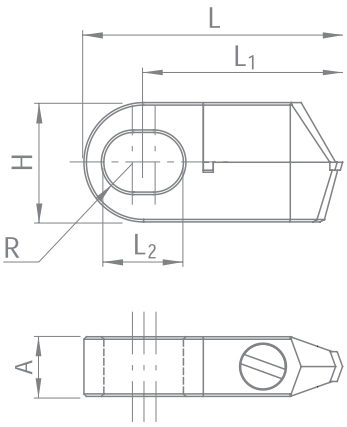
Ref. C



Ref. D



Ref. E



Une grande variété de formes d'outils diamant pour tournage et fraisage sur demande.
Lors de la commande, préciser la matière de coupe (PCD - DIA - CVD).
Pour l'éventail de formes, se reporter aux pages **401-402**.

DIXI 81000

TASSEAU PORTE-OUTIL DE FRAISAGE POUR SURFAÇAGE DE SUPER FINITION

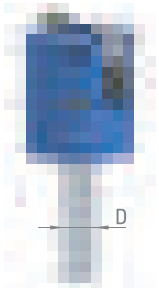
P. 409

Tête de surfaçage avec réglage d'inclinaison

D_1	D	L	Art.
60	22	50	996583
85	27	55	962824
100	27	55	964272
125	40	58	994652

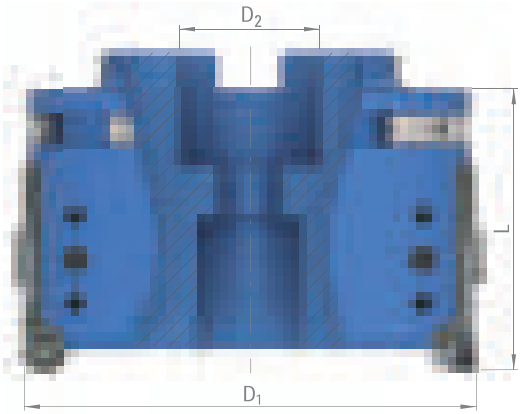
Tête de surfaçage

D_1	D	L	Art.
40	16	55	970446
50	16	45	971872
60	22	40	962823



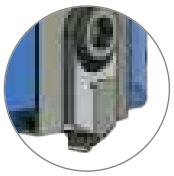
Tête de surfaçage avec queue de serrage

D_1	D	L	Art.
40	12	55	964273



Insert de finition (diamant monocristallin)

Matière à usiner	DIA
Plastique	968111
Aluminium / Cuivre	969556
Titane	968526
Laiton	969557



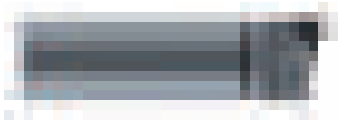
Insert d'ébauche (PCD)

Matière à usiner	PCD
Toutes matières non-ferreuses	968117

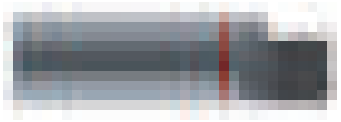
DIXI 20370

CRAYONS Ø 8 x 31 POUR MACHINES BERMAQ

Ref. 1

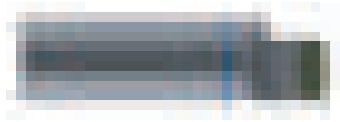


Ref. 2



Ref. 3

Ref. 4



	Description	Matière	Couleur	Art.
Ref. 1	Outil de fraisage ébauche	PCD	noir	968179
Ref. 2	Outil de fraisage finition brillante	PCD	rouge	968181
Ref. 3	Outil de fraisage finition satinée	PCD	vert	974193
Ref. 4	Outil de fraisage finition transparente	DIA	bleu	9681

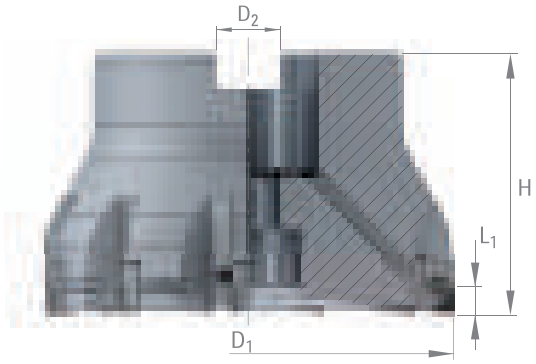
Cobalt Outils Coupants

DIXI 80000

TASSEAUX POUR PLAQUETTES ISO AJUSTABLES POUR TRAVAUX DE SURFAÇAGE

Z = 6-16

P. 409



D_1	L_1	H	D_2	Z	Poids [kg]	Art.
40.00	3.0	40	16	6	0.20	955446
50.00	3.0	40	22	7	0.35	955447
63.00	3.0	40	22	8	0.60	955448
80.00	3.0	50	27	11	1.20	955449
100.00	3.0	50	32	13	2.00	955451
125.00	3.0	50	32	16	2.20	955452

DIXI 2642 - 26420

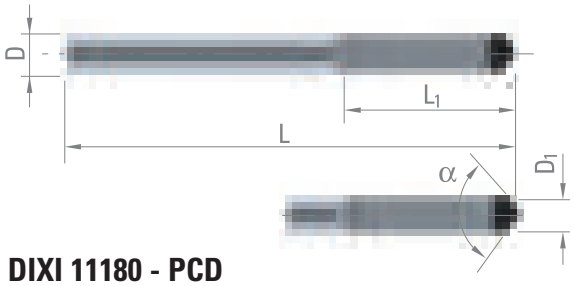
PLAQUETTES ISO POUR DIXI 80000

Description	Art.
APKT 100305 PDER AK 10F poli	996517
APKT 100305 PDER-S AM5040 revêtu TiAlN	996516
APKT 100305 PDER-S AP20F revêtu TiAlN	996518
APKT100305 PDER-U AP5020F revêtu TiAlN	996519
APKT 100305 PCD	955606

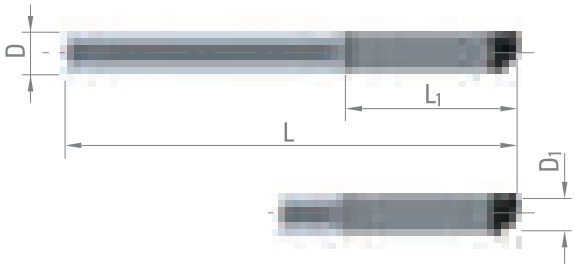
DIXI 11140 - 11180 OUTILS SUR DEMANDE

FORETS DENTURE DROITE PCD

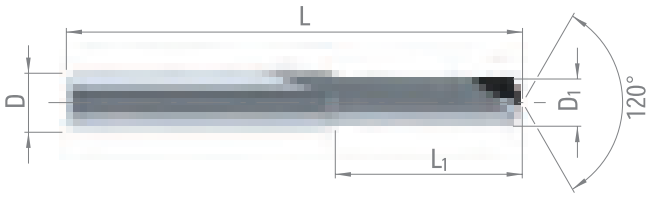
DIXI 11140 A - PCD



DIXI 11140 B - PCD



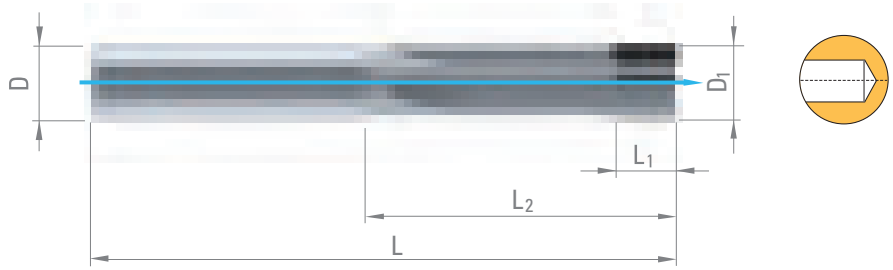
DIXI 11180 - PCD



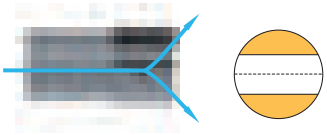
Cobalt Outils Coupants

ALÉSOIRS

POLY 40010-TC



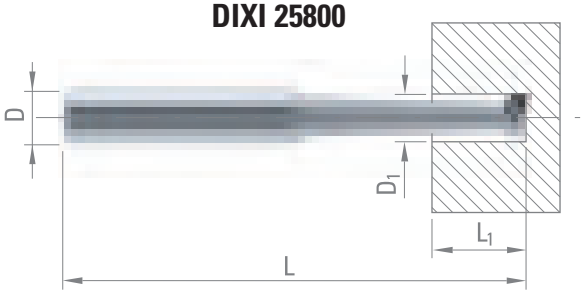
POLY 40010-FC



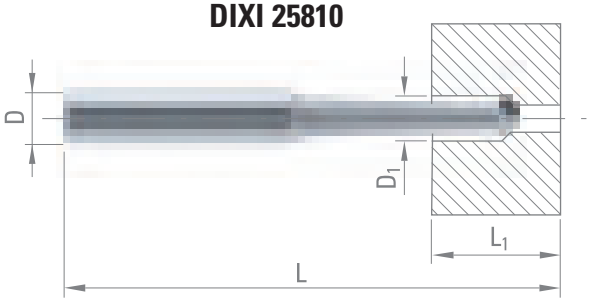
D_1	L_1	L_2	D_{h5}	L	Z	PCD
8.000 - 9.100	7	34	8	64	4	●
9.102 - 10.100	7	44	10	80	4	●
10.101 - 11.100	7	44	10	80	4	●
11.101 - 12.300	7	63	12	108	4	●
12.300 - 13.100	7	63	12	108	4	●
13.101 - 14.500	7	58	16	108	4	●
14.501 - 16.100	7	58	16	108	4	●
16.101 - 18.100	7	58	16	108	4	●
18.101 - 20.500	7	58	20	108	4	●
20.501 - 22.100	7	58	20	108	4	●

OUTILS À ALESER

DIXI 25800



DIXI 25810

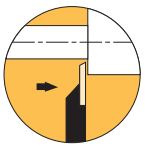


DIXI 20610-20770 OUTILS SUR DEMANDE

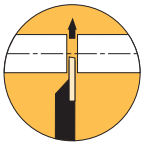
OUTILS DE TOURNAGE MONOBLOCS

P. 410

DIXI 20610



DIXI 20770

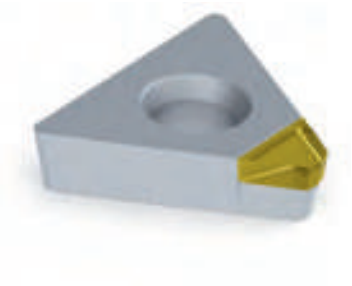


Disponible en corps cylindrique sous les références **DIXI 20611 / 20771**

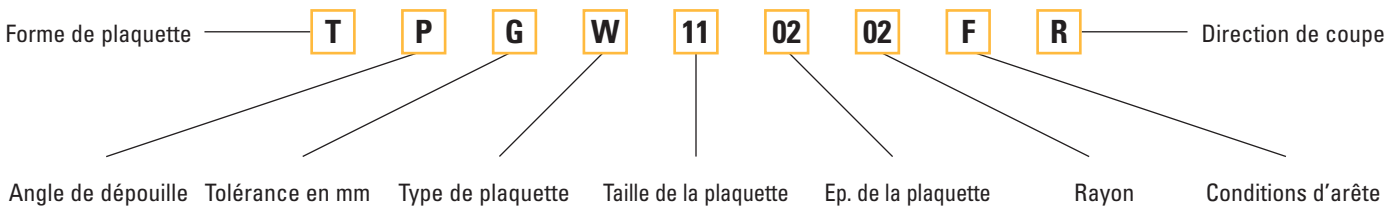
DIXI 264X0 OUTILS SUR DEMANDE

PLAQUETTES SELON DIN 4987 / ISO 1832

Lors de la commande, veuillez joindre un croquis de la plaquette représentant la partie en diamant. Il conviendra également de préciser la désignation ISO complète, la matière de coupe (PCD - DIA - CVD).
Formes spéciales sur base de plaquettes ISO sur demande.
Pour un éventail de formes, se reporter aux pages **401-402**.



Exemple de désignation (selon DIN 4987 / ISO 1832) **DIXI 26400 TPGW 110202 FR**



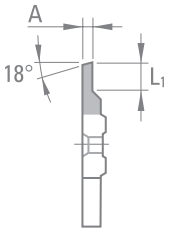
PLAQUETTES DE DÉCOLLETAGE
COUPE À DROITE

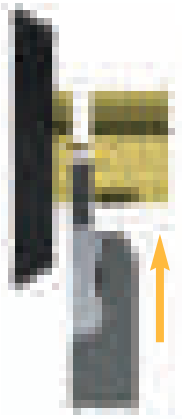
P. 410

TRONÇONNEUR

DIXI 26500 TR

R	A	L_1	PCD	PCD finition
TR06R-0.8	0.8	3.0	976284	303109
TR06R-1.0	1.0	4.0	976286	303111
TR06R-1.2	1.2	5.0	976288	303113
TR06R-1.5	1.5	5.0	976290	303115
TR06R-1.8	1.8	6.0	976292	303117
TR06R-2.0	2.0	6.0	976294	303119

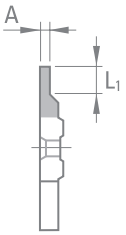


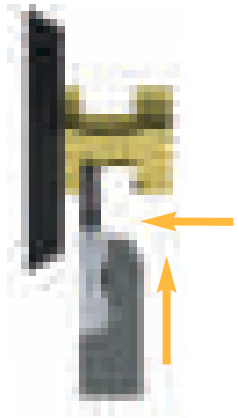


FONCEUR TOURNEUR

DIXI 26500 FT

R	A	L_1	PCD	PCD finition
FT06R-2.0	2.0	4.0	976278	303103

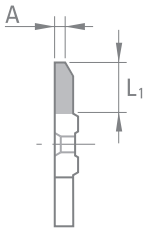


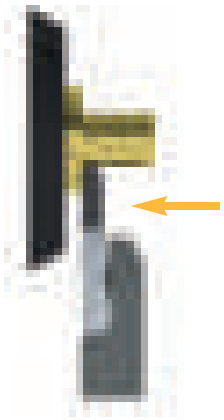


TOURNEUR AVANT

DIXI 26500 AV

R	A	L_1	PCD	PCD finition
AV06R-1.5	1.5	5.0	976280	303105

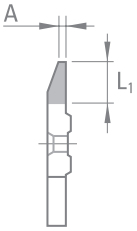


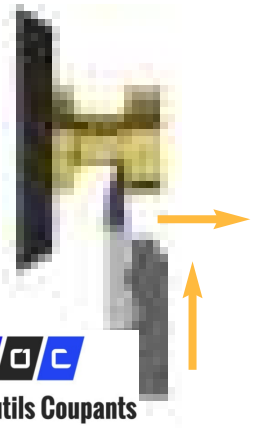


TOURNEUR ARRIÈRE

DIXI 26500 AR

R	A	L_1	PCD	PCD finition
AR06R-1.0	1.0	5.0	976282	303107





Cobalt Outils Coupants

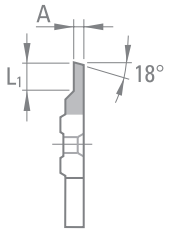
PLAQUETTES DE DÉCOLLETAGE
COUPE À GAUCHE

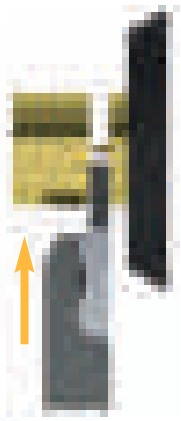
P. 410

TRONÇONNEUR

DIXI 26500 TR

L	A	L_1	PCD	PCD finition
TR06L-0.8	0.8	3.0	976285	303110
TR06L-1.0	1.0	4.0	976287	303112
TR06L-1.2	1.2	5.0	976289	303114
TR06L-1.5	1.5	5.0	976291	303116
TR06L-1.8	1.8	6.0	976293	303118
TR06L-2.0	2.0	6.0	976295	303120

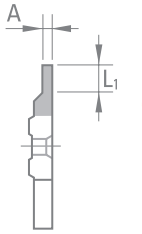


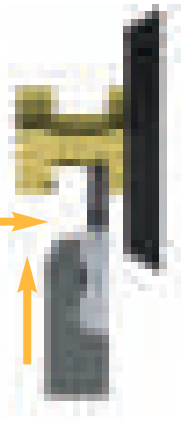


FONCEUR TOURNEUR

DIXI 26500 FT

L	A	L_1	PCD	PCD finition
FT06L-2.0	2.0	4.0	976279	303104

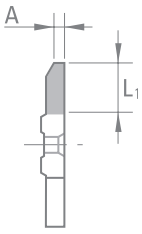


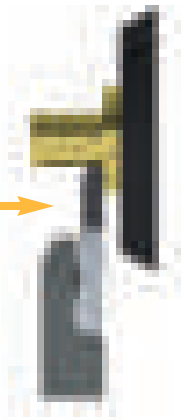


TOURNEUR AVANT

DIXI 26500 AV

L	A	L_1	PCD	PCD finition
AV06L-1.5	1.5	5.0	976281	303106

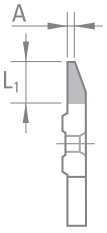


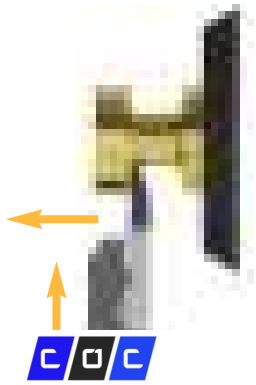


TOURNEUR ARRIÈRE

DIXI 26500 AR

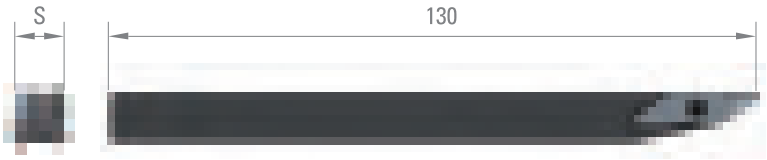
L	A	L_1	PCD	PCD finition
AR06L-1.0	1.0	5.0	976283	303108



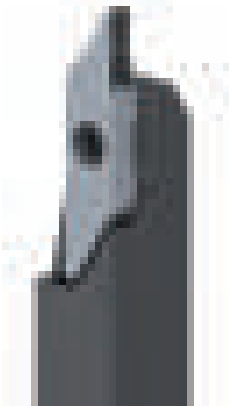


Cobalt Outils Coupants

PORTE-OUTILS

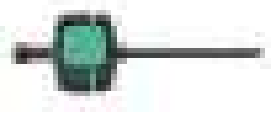


R	S	Type plaquette	Art.
0606R-130	6	06	64940
0706R-130	7	06	64942
0806R-130	8	06	64944
1006R-130	10	06	64946
1206R-130	12	06	64948
1606R-130	16	06	64950



L	S	Type plaquette	Art.
0606L-130	6	06	64941
0706L-130	7	06	64943
0806L-130	8	06	64945
1006L-130	10	06	64947
1206L-130	12	06	64949
1606L-130	16	06	64959

Vis M2.50x6 Art. 66586



Torx 8 Art. 65785

POSSIBILITÉS DE FORMES SP

Cobalt Outils Coupants

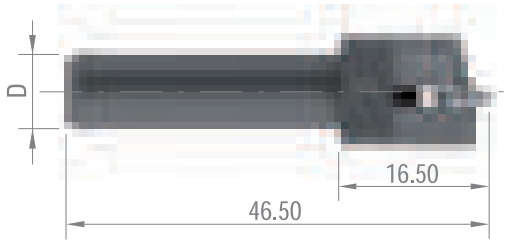
POSSIBILITÉS DE FORMES SP

Cobalt Outils Coupants

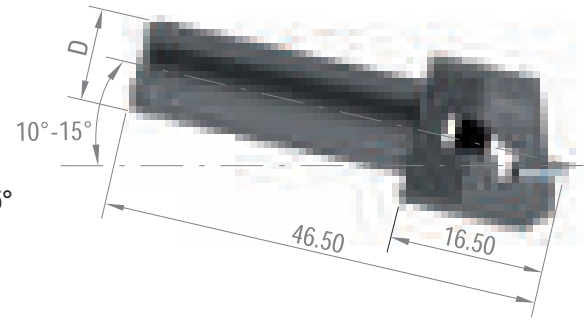
DIXI 1973

DRESSE-MEULES DIADIX®
TASSEAUX D'AVIVAGE

DIXI 1973.0823	8	19459
DIXI 1973.1023	10	18512
DIXI 1973.1223	12	19979

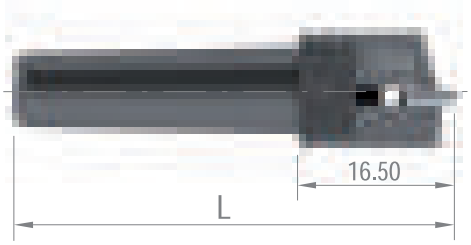


DIXI 1973.1013	10	23707

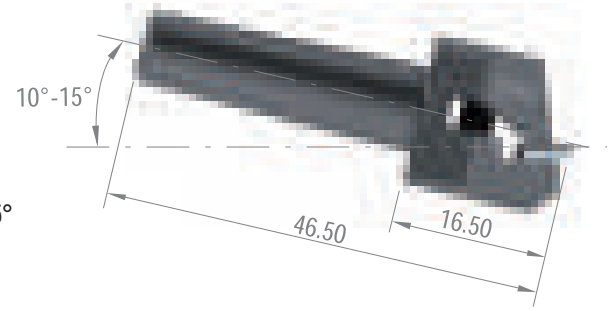


Ce dresse-meules compense l'inclinaison négative de 10° à 15° du porte-diamant de certaines machines, permettant ainsi de respecter l'angle d'attaque de 0°.

Ref.	Cône morse	L	Art.
DIXI 1973.0023	CM0	46.5	18737
DIXI 1973.0123	CM1	59.5	18514



Ref.	Cône morse	Art.
DIXI 1973.0013	CM0	23850
DIXI 1973.0113	CM1	23727



Ce dresse-meules compense l'inclinaison négative de 10° à 15° du porte-diamant de certaines machines, permettant ainsi de respecter l'angle d'attaque de 0°.

DIXI 1978

PLAQUETTES D'AVIVAGE

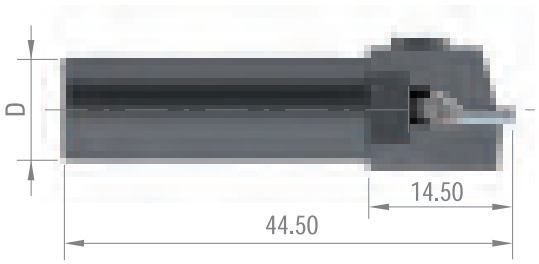
Ref.	PCD
DIXI 1978.360°	23829

Ref.	PCD
DIXI 1978.23	18814

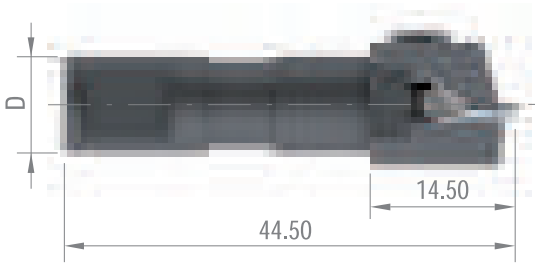
DIXI 1973

DRESSE-MEULES DIADIX®
TASSEAUX DE PROFILAGE
AVEC DISPOSITIF DE CENTRAGE

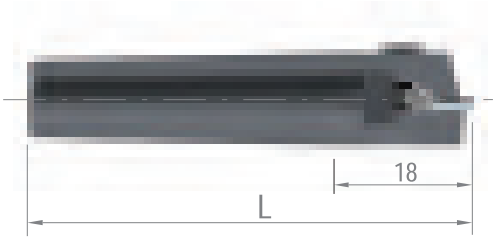
DIXI 1973.1025	10	24550

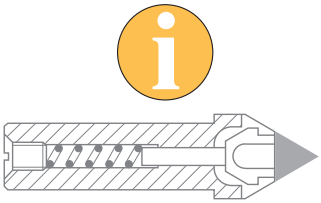


DIXI 1973.0925-1	9.525 (3/8'')	24549



Ref.	Cône morse	L	Art.
DIXI 1973.0125	CM1	36.5	26549
DIXI 1973.0125	CM1	58.5	24551





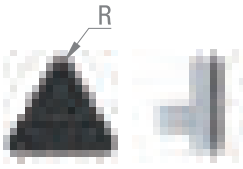
Tous nos dresse-meules de profilage DIADIX® sont équipés d'un système de centrage automatique de la plaquette.

DIXI développe, sur demande, des tasseaux spéciaux pour différentes machines telles que: Agathon, Kellenberger, Studer, Tripet, Tschudin (HTT), Voumard, etc...

DIXI 1978

PLAQUETTES DE PROFILAGE

Ref.	PCD	CVD
DIXI 1978.2500	24623	973739



Ref.	R	PCD	CVD
DIXI 1978.2512	0.125	24624	973736
DIXI 1978.2520	0.200	24625	973732
DIXI 1978.2525	0.250	24626	973737
DIXI 1978.2550	0.500	24627	973738

Cobalt Outils Coupants

DIADIX®, APPLICATION

DRESSE-MEULES DIADIX®

PARTICULARITÉS

Associées à un pivot en carbure de tungstène, les plaquettes mobiles sont intégralement rentabilisées par l'utilisation des trois pointes et de l'arc de cercle.
Le diamant polycristallin, ne s'émoussant pas, garde son mordant jusqu'à l'usure complète.
Le dresse-meules DIADIX® fracture les cristaux de la meule au lieu de les aplanir, ce qui permet d'obtenir un plus grand nombre d'arêtes vives.

AVANTAGES

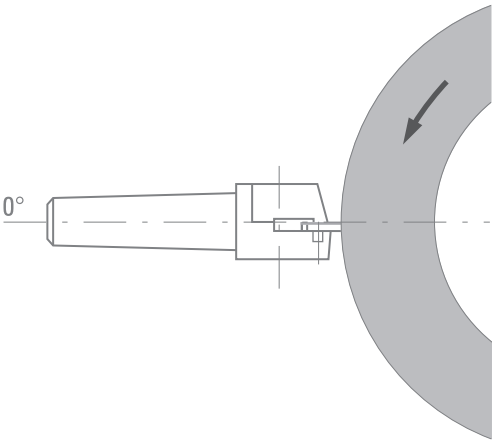
Les meules avivées de la sorte réalisent une plus grande quantité de pièces, plus précises, et d'un état de surface nettement supérieur.
Le nombre de passes d'avivage est réduit, ce qui diminue les temps morts.
La conjugaison de ces avantages amène une importante amélioration de la productivité.

CONDITIONS D'UTILISATION

Meules:	en oxyde d'aluminium (Al_2O_3) et dans certains cas en carbure de silicium (SiC).
Dureté:	jusqu'à L, éventuellement M, voir tableau.
Structure:	de 3 à 20, selon les cas, voir tableau.
Granulométrie:	moyenne, en principe entre 46 et 220.
Rectifieuses:	plane, d'intérieur, d'extérieur. Toutes marques de machines.

I 1	J 1	K 1	L 1	M 1
I 2	J 2	K 2	L 2	M 2
I 3	J 3	K 3	L 3	M 3
I 4	**J 4**	**K 4**	L 4	M 4
I 5	**J 5**	**K 5**	L 5	M 5
I 6	**J 6**	**K 6**	**L 6**	M 6
I 7	**J 7**	**K 7**	**L 7**	M 7
I 8	**J 8**	**K 8**	**L 8**	M 8
I 9	**J 9**	**K 9**	**L 9**	M 9
I 10	**J 10**	**K 10**	**L 10**	M 10
●	●	●	●	●
●	●	●	●	●
●	●	●	●	●

Caractères maigres = Domaine incertain
Caractères gras = Domaine sûr

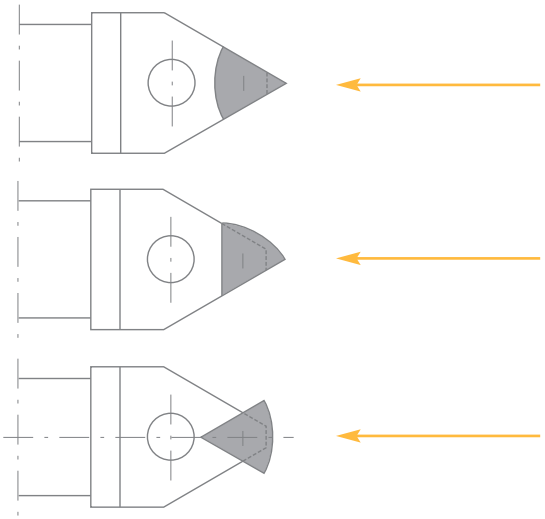


DRESSE-MEULES DIADIX®

CONDITIONS DE TRAVAIL

Le dresse-meules doit être placé à la hauteur de l'axe de la meule.

Angle d'avivage:	0°
Avance:	supérieure à un diamant naturel à pointe unique
Fonçage:	possible jusqu'à 0.50 mm
Lubrification:	nécessaire



Exemples de positionnement de la plaquette.

Pour les travaux d'**ébauche**.
La meule devient plus mordante en utilisant l'avance adéquate.

Pour les travaux de **finition**.
En employant tout ou partie du rayon, la même meule permet d'obtenir un fini impeccable.

Cobalt Outils Coupants

DIXI 72310 DIA

CONDITIONS DE COUPE

	Matières à usiner		DIA Vc [m/min]	
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**400**	800
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**300**	700
N	Alliage d'aluminium-alliage de magnésium		**500**	2000
N	Alliage d'aluminium	4 - 8% Si	**400**	1800
N	Fonte d'aluminium	8 - 13% Si	**400**	1500
N	Plastique		**500**	1500
N	Or, argent		**200**	750

DIXI 70600 - 70320 - 70520 - 72420 - 72421

CONDITIONS DE COUPE

	Matières à usiner		PCD Vc [m/min]	CVD Vc [m/min]	DIA Vc [m/min]
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**200** 1000	**400** 1200	**400** 800
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**100** 1500	**200** 1700	**300** 700
N	Alliage d'aluminium-alliage de magnésium		**700** 3000	**400** 1200	**500** 2000
N	Alliage d'aluminium	4 - 8% Si	**300** 3500	**400** 1200	**400** 1800
N	Fonte d'aluminium	8 - 13% Si	**100** 3000	**200** 900	**400** 1200
N	Graphite		**200** 1000	**400** 1200	
N	Carbures et céramiques verts		**200** 1000	**400** 1200	
N	Plastique		**500** 2000	**400** 1200	**500** 1500
N	Fibres de carbone		**1000** 3000	**400** 1200	
N	Or, argent		**300** 1000	**400** 1200	**200** 750

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times z$$

Avance par dent **fz [mm]**

Ø D_1 0.30 - 1.00	Ø D_1 1.00 - 2.00
0.0005 - 0.005	**0.005** - 0.03
0.0005 - 0.005	**0.005** - 0.03
0.0005 - 0.005	**0.005** - 0.03
0.0005 - 0.005	**0.005** - 0.03
0.0005 - 0.005	**0.005** - 0.03
0.0005 - 0.005	**0.005** - 0.03
0.0005 - 0.005	**0.005** - 0.03

	Ebauche		Finition		Finition
	PCD -CVD		PCD -CVD		DIA
fz [mm]	ap [mm]	ae [mm]	ap [mm]	ae [mm]	ap + ae [mm]
0.05 - 0.25	≤ 1 x D	≤ 1 x D	**0.10** - 0.30	**0.10** - 0.30	
0.05 - 0.20	≤ 0.6 x D	≤ 0.6 x D	**0.10** - 0.30	**0.10** - 0.30	
0.05 - 0.25	≤ 1 x D	≤ 1 x D	**0.10** - 0.30	**0.10** - 0.30	
0.05 - 0.20	≤ 1 x D	≤ 1 x D	**0.10** - 0.30	**0.10** - 0.40	
0.05 - 0.20	≤ 1 x D	≤ 1 x D	**0.10** - 0.30	**0.10** - 0.30	
0.05 - 0.20	≤ 1 x D	≤ 1 x D	**0.10** - 0.30	**0.10** - 0.30	**max. = 0.05**
0.025 - 0.125	≤ 1 x D	≤ 1 x D	**0.10** - 0.30	**0.10** - 0.30	
0.05 - 0.30	≤ 1 x D	≤ 1 x D	**0.10** - 0.30	**0.10** - 0.30	
0.05 - 0.30	≤ 1 x D	≤ 1 x D	**0.10** - 0.30	**0.10** - 0.30	
0.05 - 0.25	≤ 0.6 x D	≤ 0.6 x D	**0.10** - 0.30	**0.10** - 0.30	

CONDITIONS DE COUPE

Matières à usiner

DIA

			n [tr/min]	Ø D_1 0.05 - 0.10 Vf [mm/min]	Ø D_1 0.05 - 0.10 ap [mm]	Ø D_1 0.20 - 0.30 Vf [mm/min]	Ø D_1 0.20 - 0.30 ap [mm]
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**15'000** - 30'000	**50** - 125	**0.05** - 0.10	**75** - 200	**0.05** - 0.10
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**15'000** - 30'000	**50** - 115	**0.05** - 0.10	**75** - 150	**0.05** - 0.10
N	Alliage d'aluminium	Si < 8%	**15'000** - 30'000	**50** - 125	**0.05** - 0.10	**75** - 200	**0.05** - 0.10
N	Plastique		**15'000** - 30'000	**50** - 125	**0.05** - 0.10	**75** - 200	**0.05** - 0.10
N	Or, argent		**15'000** - 30'000	**50** - 125	**0.05** - 0.10	**75** - 200	**0.05** - 0.10

Matières à usiner

PCD

			n [tr/min]	Ø D_1 0.05 - 0.10 Vf [mm/min]	Ø D_1 0.05 - 0.10 ap [mm]	Ø D_1 0.20 - 0.30 Vf [mm/min]	Ø D_1 0.20 - 0.30 ap [mm]
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**12'500** - 17'500	**75** - 250	**0.05** - 0.20	**150** - 400	**0.10** - 0.40
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**12'500** - 17'500	**75** - 250	**0.05** - 0.20	**150** - 350	**0.10** - 0.40
N	Alliage d'aluminium	Si < 8%	**12'500** - 17'500	**75** - 250	**0.05** - 0.20	**150** - 400	**0.10** - 0.40
N	Plastique		**12'500** - 17'500	**75** - 250	**0.05** - 0.20	**150** - 400	**0.10** - 0.40
N	Or, argent		**12'500** - 17'500	**75** - 250	**0.05** - 0.20	**150** - 400	**0.10** - 0.40

DIXI 80000

CONDITIONS DE COUPE

Matières à usiner			PCD Vc [m/min]	CVD Vc [m/min]	ap [mm]	fz [mm]
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		< 3000	< 3000	**0.10** - 3.50	**0.05** - 0.25
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	< 3000	< 3000	**0.10** - 3.50	**0.05** - 0.25
N	Alliage d'aluminium - alliage de magnésium		< 7000	< 7000	**0.10** - 3.50	**0.05** - 0.25
N	Alliage d'aluminium	4 - 8% Si	< 6000	< 6000	**0.10** - 3.50	**0.05** - 0.25
N	Fonte d'aluminium	8 - 13% Si	< 5000	< 5000	**0.10** - 3.50	**0.05** - 0.25

DIXI 81000

CONDITIONS DE COUPE

Matières à usiner			PCD + DIA Vc [m/min]		ap [mm]	fz [mm]
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**400**	800	< 2	**0.02** - 0.2
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**300**	700	< 2	**0.02** - 0.2
N	Alliage d'aluminium - alliage de magnésium		**500**	2000	< 2	**0.02** - 0.2
N	Alliage d'aluminium	4 - 8% Si	**400**	1800	< 2	**0.02** - 0.2
N	Fonte d'aluminium	8 - 13% Si	**400**	1200	< 2	**0.02** - 0.2
N	Plastique		**500**	1500	< 2	**0.02** - 0.2
N	Or, argent		**200**	750	< 2	**0.02** - 0.2

CONDITIONS DE COUPE

	Matières à usiner		PCD		CVD		DIA	
			Vc [m/min]		Vc [m/min]		Vc [m/min]	
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)		**300**	1000	**300**	1000	**300**	1000
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)	**250**	800	**250**	800	**250**	800
N	Alliage d'aluminium-alliage de magnésium		**300**	1000	**300**	1000	**300**	1000
N	Alliage d'aluminium	4 - 8% Si	**300**	1000	**300**	1000	**300**	1000
N	Fonte d'aluminium	8 - 13% Si	**250**	800	**250**	800	**250**	800
N	Graphite		**80**	1500	**80**	1500		
N	Carbures et céramiques verts		**100**	800	**100**	800		
N	Plastique		**100**	600	**100**	600	**100**	600
N	Fibres de carbone		**100**	600	**100**	600		
N	Or, argent		**300**	1000	**300**	1000	**300**	1000

$$n\ [tr/min] = \frac{Vc\ [m/min] \times 1000}{\pi \times D_1\ [mm]}$$

$$Vf\ [mm/min] = n\ [tr/min] \times fz\ [mm] \times z$$

PCD -CVD		DIA	
Prof. de passe	Avance	Prof. de passe	Avance
(mm)	(mm/tour)	(mm)	(mm/tour)
< 10	**0.05** - 0.50	< 0.05	**0.05** - 0.50
< 6	**0.05** - 0.50	< 0.05	**0.05** - 0.50
< 10	**0.05** - 0.50	< 0.05	**0.05** - 0.50
< 10	**0.05** - 0.50	< 0.05	**0.05** - 0.50
< 6	**0.05** - 0.50	< 0.05	**0.05** - 0.50
< 10	**0.05** - 0.50		
< 5	**0.05** - 0.20		
< 10	**0.10** - 0.60	< 0.05	**0.10** - 0.60
< 3	**0.05** - 0.60		
< 6	**0.05** - 0.50	< 0.05	**0.05** - 0.50

USURE

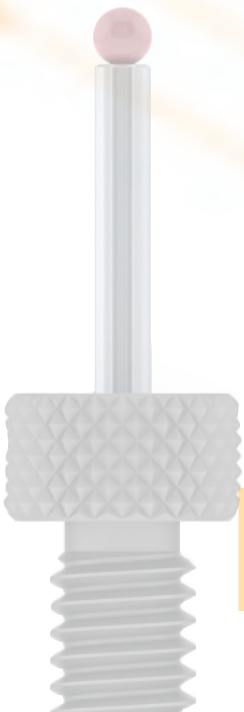
VERSCHLEISS

WEAR PARTS

USURA

EGYÉB

DESGASTE



Cobalt Outils Coupants

CYLINDRES RECTIFIÉS 414

BILLES 416

INFORMATIONS 417

JAUGES LISSES 418

PALPEURS ET JAUGES 419

Cobalt Outils Coupants

CYLINDRES RECTIFIÉS EN CARBURE DE TUNGSTÈNE

D h5	L		CARBURE
0.30	30		201016
0.35	30		200825
0.40	30		200968
0.45	30		200851
0.50	30		200912
0.50	38		200917
0.55	30		200861
0.55	38		200869
0.60	30		201064
0.60	38		200976
0.65	30		200969
0.65	38		201069
0.70	30	✓	200913
0.70	38	✓	200918
0.75	30	✓	200970
0.75	38		200865
0.80	30	✓	200862
0.80	38	✓	200977
0.80	102		200950
0.85	30	✓	201065
0.85	38	✓	200978
0.90	30		200914
0.90	38	✓	200919
0.95	30	✓	200971
0.95	38	✓	201070
1.00	30	✓	201066
1.00	30		323054
1.00	32	✓	981529
1.00	38		200979
1.00	50		967589
1.00	102		200907
1.05	30		200972
1.05	38		200866
1.10	30		200915
1.10	38		200920
1.10	102		200902
1.15	30		200863
1.15	38		201071
1.20	30		200973
1.20	38		200980
1.20	102		200947
1.25	30		201067
1.25	38		201072
1.30	30	✓	200916
1.30	102		200949

D h5	L		CARBURE
1.40	102		201055
1.45	38		200982
1.50	30	✓	200975
1.50	30		323055
1.50	32	✓	981528
1.50	40		963071
1.50	102		200961
1.55	102		38577
1.60	102		201076
1.70	43		200884
1.70	102		201032
1.80	46		201050
1.80	102		200870
1.85	102		46203
1.90	46		200948
1.90	102		200852
2.00	25		201058
2.00	32		200988
2.00	38	✓	200986
2.00	38		323064
2.00	102		201057
2.10	102		200925
2.15	40		201013
2.20	53		200954
2.20	102		201077
2.30	53		200856
2.30	102		200871
2.35	102		47709
2.40	57		201075
2.40	102		200899
2.45	102		46772
2.50	32	✓	201078
2.50	43		323057
2.50	102		200906
2.60	57		200959
2.60	102		200991
2.65	102		38733
2.70	61		200987
2.70	102		200992
2.75	102		201096
2.80	102		200872
2.85	102		201015
2.90	61		200885
2.90	102		200926
2.95	102		201097

D h5	L		CARBURE
3.00	32	✓	962285
3.00	38		961825
3.00	38	✓	960503
3.00	46	✓	301757
3.00	50	✓	977075
3.00	61	✓	201011
3.00	102		200960
3.05	102		200824
3.10	65		201053
3.10	102		201079
3.15	102		201019
3.175	30	✓	303056
3.175	38	✓	201010
3.175	102		966109
3.20	65		200854
3.20	102		200993
3.25	65		971627
3.25	102		200956
3.30	65		200897
3.30	102		200927
3.35	102		200887
3.40	52		200836
3.40	70		200924
3.40	102		201080
3.45	52		200941
3.50	40		200859
3.50	52		201025
3.50	70		201060
3.50	102		200873
3.55	52		200837
3.60	52		201034
3.60	70		200908
3.60	102		200994
3.65	52		201103
3.70	52		200890
3.70	70		200964
3.70	102		200879
3.75	52		200838
3.80	55		201022
3.80	75		201040
3.80	102		201005
3.85	55		201044
3.90	55		201026
3.90	75		200818

DIXI 6801

D h5	L		CARBURE
3.90	102		200804
3.95	55		200835
4.00	35	✓	200938
4.00	38	✓	335046
4.00	42		201054
4.00	51	✓	332349
4.00	55		200833
4.00	62		201017
4.00	75		200817
4.00	102		200857
4.00	130		956629
4.05	55		200889
4.10	55		201024
4.10	75		201094
4.10	102		200874
4.15	55		201104
4.20	55		201085
4.20	75		200830
4.20	102		201098
4.25	55		201100
4.25	102		973861
4.30	58		201001
4.30	80		201062
4.30	102		200827
4.35	58		200939
4.40	58		201036
4.40	80		200904
4.40	102		201018
4.45	58		200831
4.50	58		200798
4.50	80		200900
4.50	102		200909
4.55	58		201027
4.60	58		200877
4.60	80		201059
4.60	102		200828
4.65	58		200839
4.70	58		201086
4.70	80		200901
4.70	102		201099
4.75	58		201020
4.80	62		200799
4.80	86		200819
4.80	102		201042
4.85	62		200840
4.90	62		200928
4.90	86		201041
4.90	102		200829
4.95	62		200891
5.00	62		201002
5.00	75		200996
5.00	86		200850
5.00	102		200962
5.10	62		200931
5.10	86		201012
5.10	102		200844
5.20	62		200800
5.20	86		200963
5.20	102		200952

D h5	L		CARBURE
5.30	62		201087
5.30	86		200858
5.30	102		200878
5.40	66		200942
5.40	93		200953
5.40	102		200955
5.50	66		200801
5.50	102		200848
5.60	66		201043
5.60	102		200932
5.70	66		201003
5.70	102		200802
5.80	66		201004
5.80	102		201088
5.90	66		200803
5.90	102		201037
6.00	32	✓	994215
6.00	42	✓	962222
6.00	50	✓	960544
6.00	55	✓	332354
6.00	57	✓	960545
6.00	66		10665
6.00	66	✓	200832
6.00	75		201082
6.00	81		975718
6.00	93		200883
6.00	102		200958
6.10	70		200898
6.10	102		200892
6.20	70		200911
6.20	102		201048
6.30	70		201051
6.30	102		200845
6.35	63		201056
6.35	76		200933
6.40	70		200967
6.40	102		201047
6.50	70		200943
6.50	102		200944
6.60	70		201081
6.60	102		201052
6.70	70		201063
6.70	102		201030
6.80	74		200997
6.80	109		966959
6.90	75		201061
6.90	109		200951
7.00	60		200805
7.00	75		200929
7.00	109		200895
7.20	75		200881
7.50	74		201031
7.50	109		200811
7.80	79		200806
8.00	63	✓	960546
8.00	75		200875
8.00	79	✓	201007
8.00	102		200893
8.00	117		200934

D h5	L		CARBURE
8.50	79		200965
8.50	117		967426
8.80	84		201038
9.00	67		201008
9.00	84		200995
9.00	102		201046
9.00	125		200946
9.50	84		200826
9.50	125		201091
10.00	67	✓	335048
10.00	72		49215
10.00	73	✓	332053
10.00	75		201083
10.00	90		200807
10.00	102		200945
10.00	133		200812
10.20	89		968835
10.20	133		200808
10.50	89		200810
10.50	133		201009
11.00	75		200998
11.00	102		200849
11.50	102		201035
11.50	142		201092
12.00	74	✓	333502
12.00	84	✓	960550
12.00	102		200894
12.00	110		200905
12.00	151		201039
12.50	102		201090
12.50	151		200814
12.70	76		200999
13.00	75		201006
13.00	102		200876
13.00	151		200882
13.50	107		201028
14.00	75		200930
14.00	76	✓	960552
14.00	84	✓	960551
14.00	107		200888
14.00	152		201045
14.00	160		201093
15.00	75		200880
15.00	111		200935
16.00	83	✓	335049
16.00	92	✓	49217
16.00	102		201000
16.00	120		201105
16.00	152		201029
18.00	93	✓	960557
18.00	152		200843
20.00	105	✓	960558
20.00	130		200816
20.00	152		201106
25.00	105	✓	955903

DIXI 6820

BILLES POLIES EN CARBURE DE TUNGSTÈNE

[mm]	inches	CARBURE
0.79375	1/32"	13962
0.800		11332
1.000		11333
1.19025	3/64"	12735
1.200		12739
1.500		11336
1.587	1/16"	13617
1.750		11337
2.000		11338
2.3815	3/32"	13963
2.500		11339
2.750		12786
2.77825	7/64"	12788
3.000		11340
3.175	1/8"	11328
3.200		12602
3.500		11341
3.9685	5/32"	13964
4.000		11342
4.500		11343
4.762	3/16"	13586
5.000		11344
5.500		12226

[mm]	inches	CARBURE
5.5565	7/32"	13965
6.000		11345
6.350	1/4"	13957
6.500		10496
7.000		11346
7.1435	9/32"	13966
7.500		11347
7.937	5/16"	13535
8.000		11348
8.500		13956
8.7315	11/32"	12920
9.000		11349
9.525	3/8"	13959
10.000		11350
11.000		11351
11.112	7/16"	13536
11.906	15/32"	13854
12.000		12671
12.700	1/2"	13550
13.000		12672
14.000		12673
14.287	9/16"	12985
15.000		11352

[mm]	inches	CARBURE
15.081	19/32"	13983
15.875	5/8"	13960
16.000		12674
16.6688	21/32"	22063
17.000		12675
17.462	11/16"	13961
18.000		12676
19.050	3/4"	13958
20.000		12678
21.431	27/32"	28751
22.000		14179
23.000		13038
24.000		13012
25.000		13639
25.400	1"	13017
30.000		13024

DIXI 6961

BILLES POLIES $Al_2 0_3$ - SiC

[mm]	inches	CÉRAMIQUE
1.50		19035
3.00		19036
3.175	1/8"	21267
4.00		19037
4.50		15864

[mm]	inches	CÉRAMIQUE
5.00		22280
8.00		28994
10.00		29401
12.00		37932

BILLES POLIES EN RUBIS / SAPHIR

[mm]	inches	RUBIS
0.40		21366
0.53		36320
0.70		19603
0.7931	1/32''	23153
0.80		17774
1.00		13996
1.1906	3/64''	30249
1.20		29360
1.50		13997
1.587	1/16"	19626
1.75		21380
2.00		13998

[mm]	inches	RUBIS
2.381	3/32"	19023
2.50		13091
3.00		14048
3.175	1/8"	16644
4.00		14063
5.00		14811
6.00		16320
6.35	1/4"	17706
7.00		17211
8.00		15716

[mm]	inches	SAPHIR
0.25		21925
0.60		24823
1.00		13859
1.50		19024
1.5875	1/16''	60423
2.00		15144
2.50		19025
3.00		13282
3.175	1/8''	17052
4.00		16962
7.143	9/32''	19026
9.00		29417

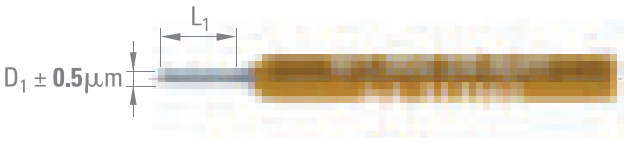
BILLES

PROPRIÉTÉS DES MATIÈRES UTILISÉES

	Carbure de tungstène	Rubis / Saphir	Céramique	Carbure de silicium
Composition	94 WC+6 Co	$Al_2 0_3$	$Al_2 0_3$	SiC
Poids spécifique	14.90	3.98	3.90	3.1
Dureté HV 50	1700	-	-	2500
Dureté Knoop	-	1800/2200	2000	-
Module d'élasticité E (kN/mm²)	640	420	350	400
Résistance à la compression (kN/mm²)	5.7	2.1	2.4	4.1
Résistance à la traction (kN/mm²)	1.7	0.019	0.025	0.4
Point de ramollissement (°C)	600	1800	1725	1400
Point de fonte ou de dissociation (°C)	2600	2050	2050	1900
Dilatation thermique (10^{-6}/°C)	5	5.3-6.2	6.6	4.3
Chaleur spécifique (j/g/°C)	0.20	0.043	0.06	0.8
Porosité	pores	nulle	pores	pores
Résistance aux attaques acides	relative	infinie	infinie	excellente
Résistance aux attaques alcalines	relative	infinie	infinie	excellente

TAMPONS LISSES
EN CARBURE DE TUNGSTÈNE

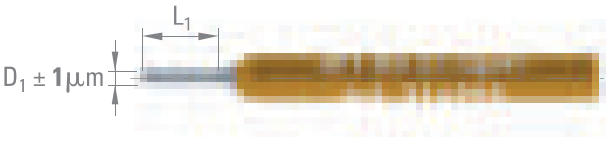
DIXI 0420 (± 0.5µm)



D_1 ±0.0005	L_1
0.100 - 0.199	1.5
0.200 - 0.299	2.0
0.300 - 0.499	3.5
0.500 - 1.499	5.0
1.500 - 1.950	6.0
1.951 - 3.499	8.0
3.500 - 3.999	10.0

Standard tous les 0.001mm
Disponibles sous 72h.

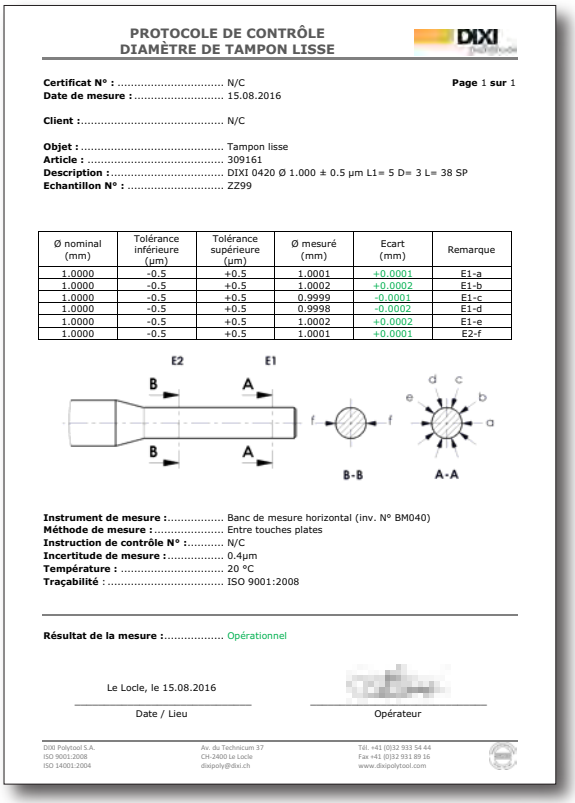
DIXI 0421 (± 1.0µm)



D_1 ±0.001	L_1
0.10 - 0.19	1.5
0.20 - 0.29	2.0
0.30 - 0.49	3.5
0.50 - 1.49	5.0
1.50 - 1.95	6.0
1.96 - 3.49	8.0
3.50 - 3.99	10.0

De stock tous les 0.01mm

Produits livrables avec protocole de contrôle interne ou par laboratoire accrédité.



PROTOCOLE DE CONTRÔLE
DIAMÈTRE DE TAMPON LISSE

DIXI

Certificat N° : ..... N/C
Page 1 **sur** 1
Date de mesure : 15.08.2016

Client : ..... N/C

Objet : ..... Tampon lisse
Article : 309161
Description : ..... DIXI 0420 Ø 1.000 ± 0.5 µm L1= 5 D= 3 L= 38 SP
Echantillon N° : ZZ99

Ø nominal (mm)	Tolérance inférieure (µm)	Tolérance supérieure (µm)	Ø mesuré (mm)	Ecart (mm)	Remarque
1.0000	-0.5	+0.5	1.0001	+0.0001	E1-a
1.0000	-0.5	+0.5	1.0002	+0.0002	E1-b
1.0000	-0.5	+0.5	0.9999	-0.0001	E1-c
1.0000	-0.5	+0.5	0.9998	-0.0002	E1-d
1.0000	-0.5	+0.5	1.0002	+0.0002	E1-e
1.0000	-0.5	+0.5	1.0001	+0.0001	E2-f

Instrument de mesure : ..... Banc de mesure horizontal (inv. N° BM040)
Méthode de mesure : ..... Entre touches plates
Instruction de contrôle N° : ..... N/C
Incertitude de mesure : 0.4µm
Température : ..... 20 °C
Traçabilité : ..... ISO 9001:2008

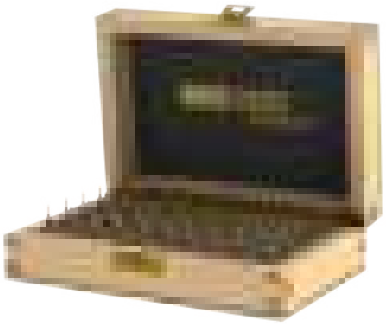
Résultat de la mesure : ..... Opérationnel

Le Locle, le 15.08.2016
Date / Lieu
Opérateur

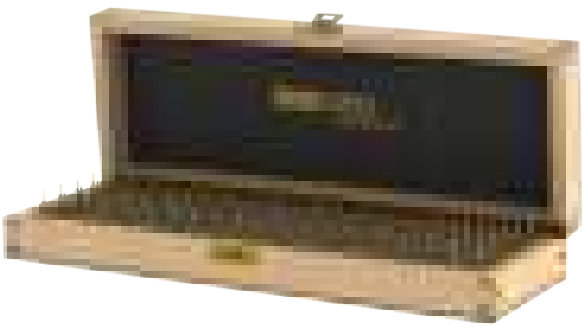
DIXI Polytool S.A. ISO 9001:2008 ISO 14001:2004 — Av. du Technicum 37 CH-2400 Le Locle dixipoly@dixi.ch — Tél. +41 (0)32 933 54 44 Fax +41 (0)32 931 89 16 www.dixipolytool.com

Contactez-nous
pour toute autre composition de set

COFFRET 50 PIÈCES

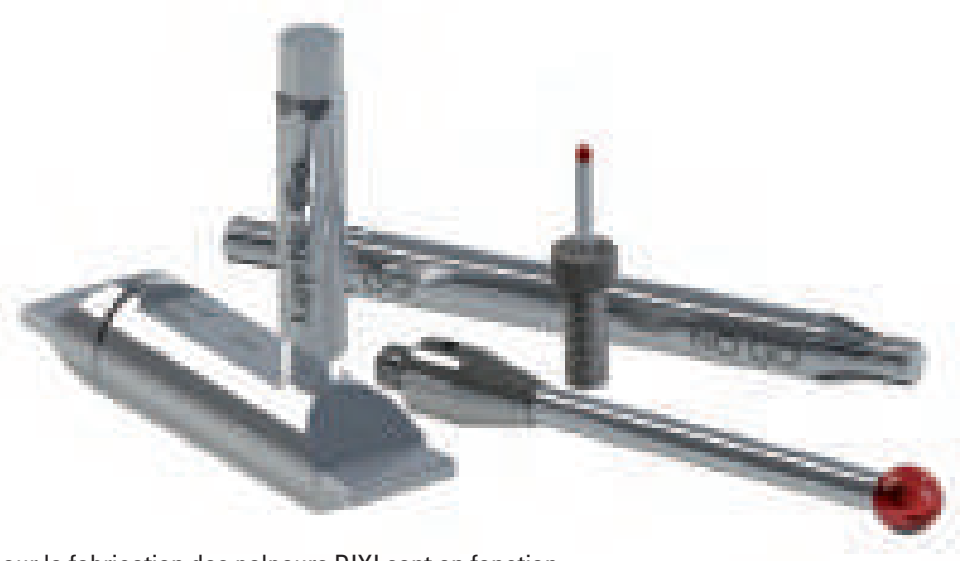


COFFRET 100 PIÈCES



Cobalt Outils Coupants

PALPEURS ET JAUGES



Les matériaux utilisés pour la fabrication des palpeurs DIXI sont en fonction des buts visés, de même que la géométrie de la partie entrant en contact avec la pièce à mesurer.

- Inertie minimale
- Flexion minimale
- Résistance à l'usure et/ou au milieu
- Géométrie spécifique
- Précision

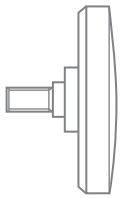
Les dimensions, diamètres et matériaux sont à préciser lors de la commande.

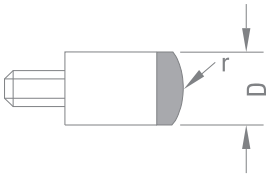
TOUCHES EN CARBURE DE TUNGSTÈNE MONOBLOC

Indispensables comme base de références, les touches DIXI sont parfaitement polies et leur planéité est comprise dans des tolérances très étroites.
Des touches en PCD et CBN sont également réalisables.

Les dimensions et tolérances sont à préciser lors de la commande.

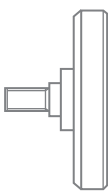
rayonnée

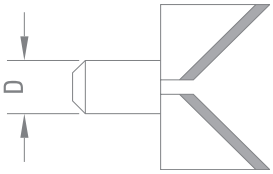




PCD
CBN

plate





PCD
CBN

PCD
CBN

Cobalt Outils Coupants

INFORMATIONS

INFORMATIONEN

INFORMATION

INFORMAZIONI

INFORMÁCIÓK

INFORMACIONES

Cobalt Outils Coupants

PICTOGRAMMES ET INFORMATIONS 422

TABELLE DES TOLÉRANCES 424

TABELLE DES DURETÉS 425

TABELLE DES RUGOSITÉS 426

GROUPES DES MATIÈRES 427

CHAMPS D'APPLICATION DES REVÊTEMENTS 432

SERVICES 434

PROFIL DE L'ENTREPRISE 435

INDEX DES OUTILS 436

Cobalt Outils Coupants

PICTOGRAMMES

Conseils d'utilisation

Conditions de coupe

Tout sens possible

Contournage uniquement

Contournage et plongée angulaire

Contournage et plongée

Normes DIN

Normes ISO

Normes DIXI

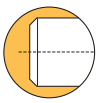
Tronçonnage

Rainurage

Hélices différentes

Pas décalé

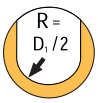
Avec plat de serrage


Avec chanfrein

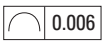
Chanfrein

Rayon

Angle vif



Tolérance du rayon



Tolérance de la forme de ligne

Amincissement d'âme

Coupe au centre

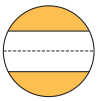
Coupe au centre pour Ø > …

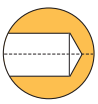
Pas de coupe au centre

Pas d'arrosage

Arrosage TC

Arrosage FC


Pour trou débouchant


Pour trou borgne

P M H K S N Groupe de matière

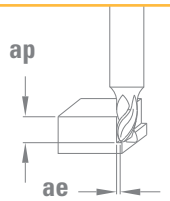
>1500 N/mm² Dureté de matière

Cobalt Outils Coupants

INFORMATIONS

Matières de coupe

	□	Carbure de tungstène
PCD	●	Diamant polycristallin
CVD	▮	Diamant polycristallin CVD
DIA	◆	Diamant monocristallin (ND/MDC)



ap	Profondeur de passe
ae	Largeur de passe

Revêtements

TiAIN	■	Avec revêtement TiAIN
DICUT	■	Avec revêtement DICUT
XIDUR	■	Avec revêtement XIDUR
C-TOP	■	Avec revêtement C-TOP
CUTINOX	■	Avec revêtement CUTINOX
DAC	■	Avec revêtement DAC
DIXAL	■	Avec revêtement DIXAL
DLC	■	Avec revêtement DLC
DIAMANT	■	Avec revêtement diamant
DINAC	■	Avec revêtement DINAC
DI-TOP	■	Avec revêtement DI-TOP

Z	Nombre de dents
Vc	Vitesse de coupe [m/min]
f	Avance/tour [mm/tr]
Vf	Avance en [mm/min]
n	Vitesse de rotation [tr/min]
Rm	Résistance à la traction [N/mm²]
fz	Avance par dent [mm]
R	Coupe à droite
L	Coupe à gauche
P.	Page

TYPES D'ARROSAGE

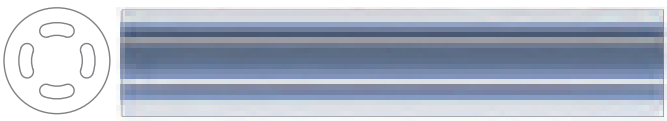
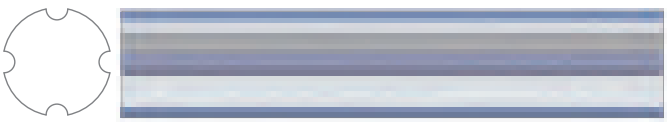
	Symbole	Descriptif	Utilisation typique	Exemple
	-HH	Trous hélicoïdaux	Forets hélicoïdaux Fraises hélicoïdales	DIXI 1145-HH
	-SH	Trous droits	Fraises denture droite	DIXI 72420-SH
	-TC	Trou central	Alésoirs monoblocs	POLY 4001-TC
	-FC	Trous droits - sortie radiale	Fraises en bout avec arrosage dans les goujures	DIXI 7563-FC
	**-PH**	Arrosage périphérique	Micro-fraises	DIXI 1738-PH
	**-SC**	Rainure d'arrosage	Fraises denture droite Alésoirs monoblocs	POLY 4005-SC

TABELLE DES TOLÉRANCES

DIN 7160

[µm]

[mm]	D10	E9	F7	F8	G7	G9	H6	H7	H8	H9	H10	H11	H12	H13	JS7	JS9	K6	K7	M6	M7	N7	N9	P7	P9
- 3	+ 60 + 20	+ 39 + 14	+ 16 + 6	+ 20 + 6	+ 12 + 2	+ 27 + 2	+ 6 0	+ 10 0	+ 14 0	+ 25 0	+ 40 0	+ 60 0	+100 0	+140 0	± 5	±12.5	0 - 6	0 - 10	- 2 - 8	- 2 - 12	- 4 - 14	- 4 - 29	- 6 - 16	- 6 - 31
3 > Ø ≥ 6	+ 78 + 30	+ 50 + 20	+ 22 + 10	+ 28 + 10	+ 16 + 4	+ 34 + 4	+ 8 0	+ 12 0	+ 18 0	+ 30 0	+ 48 0	+ 75 0	+120 0	+180 0	± 6	± 15	+ 2 - 6	+ 3 - 9	- 1 - 9	0 - 12	- 4 - 16	0 - 30	- 8 - 20	- 12 - 42
6 10	+ 98 + 40	+ 61 + 25	+ 28 + 13	+ 35 + 13	+ 20 + 5	+ 41 + 5	+ 9 0	+ 15 0	+ 22 0	+ 36 0	+ 58 0	+ 90 0	+150 0	+220 0	± 7.5	± 18	+ 2 - 7	+ 5 - 10	- 3 - 12	- 0 - 15	- 4 - 19	0 - 36	- 9 - 24	- 15 - 51
10 18	+120 + 50	+ 75 + 32	+ 34 + 16	+ 43 + 16	+ 24 + 6	+ 49 + 6	+ 11 0	+ 18 0	+ 27 0	+ 43 0	+ 70 0	+110 0	+180 0	+270 0	± 9	±21.5	+ 2 - 9	+ 6 - 12	- 4 - 15	0 - 18	- 5 - 23	0 - 43	- 11 - 29	- 18 - 61
18 30	+149 + 65	+ 92 + 40	+ 41 + 20	+ 53 + 20	+ 28 + 7	+ 59 + 7	+ 13 0	+ 21 0	+ 33 0	+ 52 0	+ 84 0	+130 0	+210 0	+330 0	±10.5	± 26	+ 2 - 11	+ 6 - 15	- 4 - 17	0 - 21	- 7 - 28	0 - 52	- 14 - 35	- 22 - 74
30 50	+180 + 80	+112 + 50	+ 50 + 25	+ 64 + 25	+ 34 + 9	+ 71 + 9	+ 16 0	+ 25 0	+ 39 0	+ 62 0	+100 0	+160 0	+250 0	+390 0	±12.5	± 31	+ 3 - 13	+ 7 - 18	- 4 - 20	0 - 25	- 8 - 33	0 - 62	- 17 - 42	- 26 - 88
50 80	+220 +100	+134 + 60	+ 60 + 30	+ 76 + 30	+ 40 + 10		+ 19 0	+ 30 0	+ 46 0	+ 74 0	+120 0	+190 0	+300 0	+460 0	± 15	± 37	+ 4 - 15	+ 9 - 21	- 5 - 24	0 - 30	- 9 - 39	0 - 74	- 21 - 51	- 32 - 106
80 120	+260 +120	+159 + 72	+ 71 + 36	+ 90 + 36	+ 47 + 12		+ 22 0	+ 35 0	+ 54 0	+ 87 0	+140 0	+220 0	+350 0	+540 0	±17.5	±43.5	+ 4 - 18	+ 10 - 15	- 6 - 28	0 - 35	- 10 - 45	0 - 87	- 24 - 59	- 37 - 124
120 180	+305 +145	+185 + 85	+ 83 + 43	+106 + 43	+ 54 + 14		+ 25 0	+ 40 0	+ 63 0	+100 0	+160 0	+250 0	+400 0	+630 0	± 20	± 50	+ 4 - 21	+ 12 - 28	- 8 - 33	0 - 40	- 12 - 52	0 - 100	- 28 - 68	- 43 - 143
180 250	+355 +170	+215 +110	+ 96 + 50	+122 + 50	+ 61 + 15		+ 29 0	+ 46 0	+ 72 0	+115 0	+185 0	+290 0	+460 0	+720 0	± 23	±57.5	+ 5 - 24	+ 13 - 33	- 8 - 37	0 - 46	- 14 - 60	0 - 115	- 33 - 79	- 50 - 165
250 315	+400 +190	+240 +110	+108 + 56	+137 + 56	+ 69 + 17		+ 32 0	+ 52 0	+ 81 0	+130 0	+210 0	+320 0	+520 0	+810 0	± 26	± 65	+ 5 - 27	+ 16 - 36	- 9 - 41	0 - 52	- 14 - 66	0 - 130	- 36 - 88	- 56 - 186
315 400	+440 +210	+265 +125	+119 + 62	+151 + 62	+ 75 + 18		+ 36 0	+ 57 0	+ 89 0	+140 0	+230 0	+360 0	+570 0	+890 0	±28.5	± 70	+ 7 - 29	+ 17 - 40	- 10 - 46	0 - 57	- 16 - 73	0 - 140	- 41 - 98	- 62 - 202

[µm]

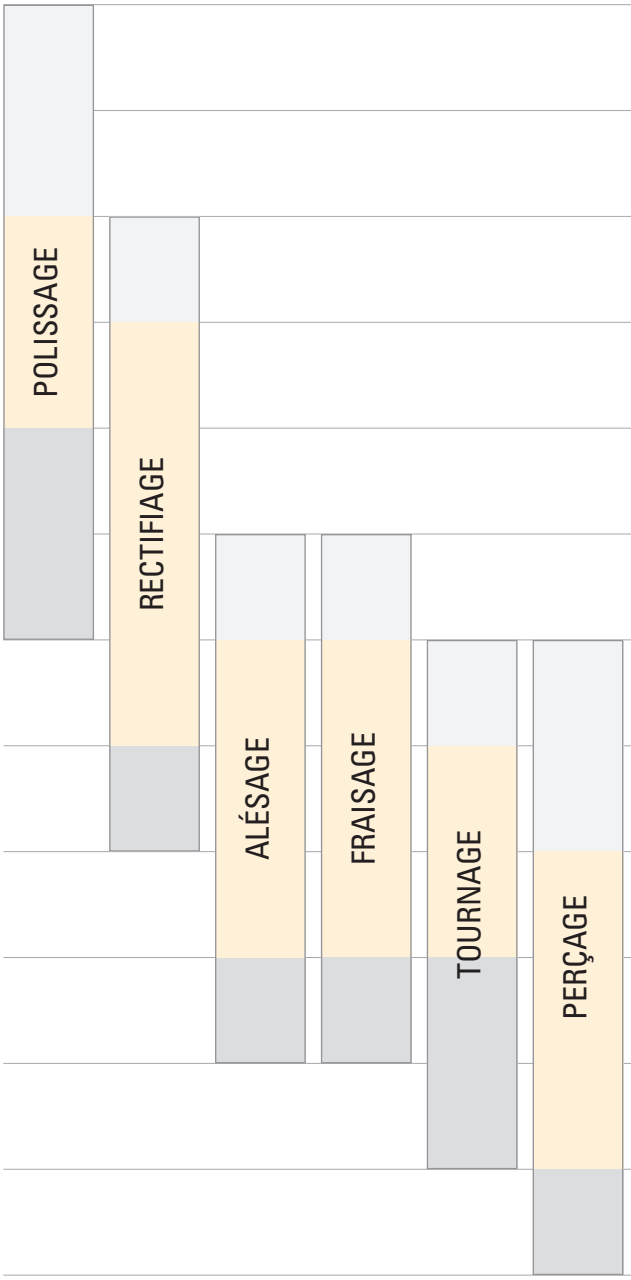
[mm]	d9	e8	f7	g6	h5	h6	h7	h8	h9	h10	h11	js5	js6	js12	js13	js14	k5	k6	m5	m6	n5	n6	p6
- 3	- 20 - 45	- 14 - 28	- 6 - 16	- 2 - 8	0 - 4	0 - 6	0 - 10	0 - 14	0 - 25	0 - 40	0 - 60	± 2	± 3	± 50	± 70	± 125	+ 4 0	+ 6 0	+ 6 + 2	+ 8 + 2	+ 8 + 4	+ 10 + 4	+ 12 + 6
3 > Ø ≥ 6	- 30 - 60	- 20 - 38	- 10 - 22	- 4 - 12	0 - 5	0 - 8	0 - 12	0 - 18	0 - 30	0 - 48	0 - 75	± 2.5	± 4	± 60	± 90	± 150	+ 6 + 1	+ 9 + 1	+ 9 + 4	+ 12 + 4	+ 13 + 8	+ 16 + 8	+ 20 + 12
6 10	- 40 - 76	- 25 - 47	- 13 - 28	- 5 - 14	0 - 6	0 - 9	0 - 15	0 - 22	0 - 36	0 - 58	0 - 90	± 3	± 4.5	± 75	± 110	± 180	+ 7 + 1	+ 10 + 1	+ 12 + 6	+ 15 + 6	+ 16 + 10	+ 19 + 10	+ 24 + 15
10 18	- 50 - 93	- 32 - 59	- 16 - 34	- 6 - 17	0 - 8	0 - 11	0 - 18	0 - 27	0 - 43	0 - 70	0 - 110	± 4	± 5.5	± 90	± 135	± 215	+ 9 + 1	+ 12 + 1	+ 15 + 7	+ 18 + 7	+ 20 + 12	+ 23 + 12	+ 29 + 18
18 30	- 65 - 117	- 40 - 73	- 20 - 41	- 7 - 20	0 - 9	0 - 13	0 - 21	0 - 33	0 - 52	0 - 84	0 - 130	± 4.5	± 6,5	± 105	± 165	± 260	+ 11 + 2	+ 15 + 2	+ 17 + 8	+ 21 + 8	+ 24 + 15	+ 28 + 15	+ 35 + 22
30 50	- 80 - 142	- 50 - 89	- 25 - 50	- 9 - 25	0 - 11	0 - 16	0 - 25	0 - 39	0 - 62	0 - 100	0 - 160	± 5.5	± 8	± 125	± 195	± 310	+ 13 + 2	+ 18 + 2	+ 20 + 9	+ 25 + 9	+ 28 + 17	+ 33 + 17	+ 42 + 26
50 80	- 100 - 174	- 60 - 106	- 30 - 60	- 10 - 29	0 - 13	0 - 19	0 - 30	0 - 46	0 - 74	0 - 120	0 - 190	± 6.5	± 9.5	± 150	± 230	± 370	+ 15 + 2	+ 21 + 2	+ 24 + 11	+ 30 + 11	+ 33 + 20	+ 39 + 20	+ 51 + 32
80 120	- 120 - 207	- 72 - 126	- 36 - 71	- 12 - 34	0 - 15	0 - 22	0 - 35	0 - 54	0 - 87	0 - 140	0 - 220	± 7.5	± 11	± 175	± 270	± 435	+ 18 + 3	+ 25 + 3	+ 28 + 13	+ 35 + 13	+ 38 + 23	+ 45 + 23	+ 59 + 37
120 180	- 145 - 245	- 85 - 148	- 43 - 83	- 14 - 39	0 - 18	0 - 25	0 - 40	0 - 63	0 - 100	0 - 160	0 - 250	± 9	±12.5	± 200	± 315	± 500	+ 21 + 3	+ 28 + 3	+ 33 + 15	+ 40 + 15	+ 45 + 27	+ 52 + 27	+ 68 + 43
180 250	- 170 - 285	- 100 - 172	- 50 - 96	- 15 - 44	0 - 20	0 - 29	0 - 46	0 - 72	0 - 115	0 - 185	0 - 290	± 10	±14.5	± 230	± 360	± 575	+ 24 + 4	+ 33 + 4	+ 37 + 17	+ 46 + 17	+ 51 + 31	+ 50 + 31	+ 79 + 50
250 315	- 190 - 320	- 110 - 191	- 56 - 108	- 17 - 49	0 - 23	0 - 32	0 - 52	0 - 81	0 - 130	0 - 210	0 - 320	±11.5	± 16	± 260	± 405	± 650	+ 27 + 4	+ 36 + 4	+ 43 + 20	+ 52 + 20	+ 57 + 34	+ 66 + 34	+ 88 + 56
315 400	- 210 - 350	- 125 - 214	- 62 - 119	- 18 - 54	0 - 25	0 - 36	0 - 57	0 - 89	0 - 140	0 - 230	0 - 360	±12.5	± 18	± 285	± 445	± 700	+ 29 + 4	+ 40 + 4	+ 46 + 21	+ 57 + 21	+ 62 + 37	+ 73 + 37	+ 98 + 62

TABELLE DES DURETÉS

Rm	Brinell	Vickers	Rockwell	
[N/mm²]	[HB]	[HV 30]	[HRB]	[HRC]
370	109	115		
385	114	120	66.7	
400	119	125		
415	124	130	71.2	
430	128	135		
450	133	140	75	
465	138	145		
480	143	150	78.7	
495	147	155		
510	152	160	81.7	
530	156	165		
545	162	170	85	
560	166	175		
575	171	180	87.1	
595	176	185		
610	181	190	89.5	
625	185	195		
640	190	200	91.5	
660	195	205	92.5	
675	199	210	93.5	
690	204	215	94	
705	209	220	95	
720	214	225	96	
740	219	230	96.7	
755	223	235		
770	228	240	98.1	20.3
785	233	245		21.3
800	238	250	99.5	22.2
820	242	255		23.1
835	247	260	101	24
850	252	265		24.8
865	257	270	102	25.6
880	261	275		26.4
900	266	280	104	27.1
915	271	285		27.8
930	276	290	105	28.5

Rm	Brinell	Vickers	Rockwell
[N/mm²]	[HB]	[HV 30]	[HRC]
950	280	295	29.2
965	285	300	29.8
995	295	310	31
1030	304	320	32.2
1060	314	330	33.3
1095	323	340	34.4
1125	333	350	35.5
1155	342	360	36.6
1190	352	370	37.7
1220	361	380	38.8
1255	371	390	39.8
1290	380	400	40.8
1320	390	410	41.8
1350	399	420	42.7
1385	409	430	43.6
1420	418	440	44.5
1455	428	450	45.3
1485	437	460	46.1
1520	447	470	46.9
1555	456	480	47.7
1630	475	500	49.1
1700	494	520	50.5
1775	513	540	51.7
1845	532	560	53
1920	551	580	54.1
1995	570	600	55.2
2070	589	620	56.3
2145	608	640	57.3
		660	58.3
		680	58.3
		700	60.1
		720	61
		740	61.8
		760	62.5
		780	63.3
		800	64

TABELLE DES RUGOSITÉS



	Ra [µm]	Rt [µm]	Rz [µm]
N1 ▼▼▼▼	0.025	0.50	0.40
N2 ▼▼▼▼	0.05	0.80	0.63
N3 ▼▼▼▼	0.10	1.25	1.00
N4 ▼▼▼	0.20	2.50	2.00
N5 ▼▼▼	0.40	5.00	4.00
N6 ▼▼▼	0.80	8.00	6.30
N7 ▼▼	1.60	16.00	10.00
N8 ▼▼	3.20	32.00	16.00
N9 ▼▼	6.30	-	40.00
N10 ▼	12.50	-	63.00
N11 ▼	25.00	-	100.00
N12 ▼	50.00	-	160.00

Usinage

fin normal grossier

Cobalt Outils Coupants

	Groupes		W.Nr.	DIN	AISI/ATSM	AFNOR	Nom commercial
P	Aciers de décolletage au plomb	Acier + Pb	1.0715	9 SMn 28	1213	S250Pb	
			1.0718	9 SMnPb 28	12 L 13	S 250 Pb	
			1.0722	10 SPb 20	11 L 08	10 PbF 2	
			1.0727	11SmPb30	12L13	S250Pb	
			1.0736	9 SMn 36	1215	S 300	
			1.0737	9 SMnPb 36	12 L14	S 300 Pb	
			1.4197	X22CrNiMo13 1 1	420F		4C27A FINEMAC
P	Aciers non alliés / faiblement alliés < 600N/mm²	Acier < 600MPa	1.0201	St36	1006	Fd 5	
			1.0401	C 15	M 1015	AF 37 C 12	
			1.0402	C 22	M1020	AF 42 C 20	
			1.0406	C 25	(M) 1025	C 25	
P	Aciers non alliés / faiblement alliés >600 N/mm²	Acier faibl. allié	1.0473	19 Mn 6	A 537 Cl. 1	A 52 CP ; AP	
			1.0481	17 Mn 4	A 516 Gr. 70	A 48 CP ; AP	
			1.0501	C 35	1035	1 C 35	
			1.0503	C 45	1045	1 C 45	
			1.0511	C 40	1040	1 C 40	
			1.0535	C 55	1055	1 C 55	
			1.0562	StE 355	A 633 Gr. C	FeE 355 KG N	
			1.0601	C 60	1060	1 C 60	
			1.1121	Ck 10	1010	XC 10	
			1.0605	C 75	1074		
			1.1133	20 Mn 5	1022	20 M 5	
			1.1141	Ck 15	1015	XC 12	
			1.1151	Ck 22	1020	2 C 22	
			1.1158	Ck 25	1025	2 C 25	
			1.1181	Ck 35	1035	2 C 35	
			1.1186	Ck 40	1040	2 C 40	
			1.1191	Ck 45	1045	2 C 45	V945
			1.1167	36 Mn 5	1335	35 M 5	
			1.1203	Ck 55	1055	2 C 55	
			1.1221	Ck 60	1060	2 C 60	
			1.1248	Ck 75	1074	XC 75	
			1.1274	Ck 101	1095	XC 100	
			1.2067	100 Cr 6	L1 L 3	Y 100 C 6	
			1.2162	21 MnCr 5	~ P 2	20 MC 5	
			1.2311	40 CrMnMo 7	~ P 20	40 CMD 8	
			1.251	100 MnCrW 4	O 1	90 MWCV 5	
			1.2516	120 WV 4		120 WV 10	
			1.2542	45 WCrV 7	S 1	55 WC 20	
			1.255	60 WCrV 7	S 1	55 WCS 20	
			1.2711	54 NiCrMo V6		55 NCDV 6	
			1.2718	55 NiCr 10	~ 6 F 5	55 NC 10	
			1.2738	40 CrMnNiMo 8			
			1.2744	57 NiCrMoV 7 7			
			1.2762	75 CrMoNiW 6 7			
			1.2826	60 MnSiCr 4	~ S 4		
			1.2842	90 MnCrV 8	~ O 2	90 MCV 8	
			1.5415	15 Mo 3	A 204 Gr. A	15 D 3	
			1.5419	22 Mo 4	4419		
			1.5637	10 Ni 14	A 350-LF 3	12 N 14	
			1.5752	15 NiCr 13	3310	12 NC 15	E200
			1.5919	15 CrNi 6	3115	16 NC 6	
			1.6523	21 NiCrMo 2	8620	20 NCD 2	
			1.6582	34 CrNiMo 6	4337	34 CrNiMo 8	
			1.6587	17 CrNiMo 6		18 NCD 6	
			1.6657	14 NiCrMo 13 4	9310	16 NCD 13	
			1.7103	67 SiCr 5	5115		
			1.7147	20 MnCr 5	5120		

	Groupes		W.Nr.	DIN	AISI/ATSM	AFNOR	Nom commercial
		Acier faibl. allié	1.7218	25 CrMo 4	4130	25 CD 4	
			1.7225	42 CrMo 4	4140	42 CD 4	
			1.7228	50 CrMo 4	4150	50 CrMo 4	
			1.7258	24 CrMo 5			
			1.7335	13 CrMo 4 4	A 182-F11 ; F12	15 CD 3.5	
			1.7361	32 CrMo 12		30 CD 12	
			1.738	10 CrMo 9 10	A 182 F22	12 CD 9.10	
			1.7709	21CrMoV5 7			
			1.7715	14 MoV 6 3			
			1.8159	50 CrV 4	6145	50 CV 4	
			1.8507	34 CrAlMo 5	A 355 Cl.D	30 CAD 6.12	
			1.8515	31 CrMo 12		30 CD 12	
			1.8519	31CrMoV9			
			1.8550	34CrAlNi7			
P	Aciers fortement alliés	Acier fort. allié	1.2080	X 210 Cr 12	~ D 3	Z 200 C 12	K100
			1.2083	X 42 Cr 13	420	Z 40 C 14	
			1.2341	X 6 CrMo 4	~ P 4		
			1.2343	X 38 CrMoV 5 1	~ H 11	Z 38 CDV 5	
			1.2344	X 40 CrMoV 5 1	~ H 13	Z 40 CDV 5	W300
			1.2363	X 100 CrMoV 5 1	A 2	Z 100 CDV 5	
			1.2365	X 32 CrMoV 3 3	~ H 10	30 CDV 12-28	
			1.2367	~ X 40 CrMoV 5 3		Z 38 CDV 5-3	
			1.2379	X 155 CrVMo 12 1	~ D 2	Z 210 CW 12	K110
			1.2581	X 30 WCrV 9 3	~ H 21	Z 30 WCV 9-3	
			1.2709	X 3 NiCoMoTi 18 9 5		Z 2 NKDT 18-10-5	
			1.2764	X 19 NiCrMo 4	~ P 21		M130
			1.2767	X 45 NiCrMo 4	6 F 7	- 45 NCD 17	
			1.2885	X 32 CrMoCoV 3 3 3	(H 10 A)	30 CKDV 28	
			1.3343				S600
			1.3351				S690PM
			1.4000	X 6 Cr 13	403	Z 8 C 12	
			1.4001	X 7 Cr 14	410 S	Z 8 C 13 FF	
			1.4016	X 6 Cr 17	430	Z 8 C 17	
			1.4021	X 20 Cr 13	420	Z 20 C 13	
			1.4028	X 30 Cr 13	420 F	Z29CF13	
			1.4115	X90 CrMoV 18			
			1.4510	X 6 CrTi 17	XM 8	Z 4 CT 17	
			1.4718	X 45 CrSi 9 3	HNV 3	Z 45 CS 9	
			1.4724	X 10 CrAl 13		Z 10 C 13	
			1.4731	X 40 CrSiMo 10 2		Z 40 CSD 10	
			1.4742	X 10 CrAl 18		Z 10 CAS 18	
			1.4762	X 10 CrAl 24	-446	Z 10 CAS 24	
			1.6358	X2 NiCoMo18 9 5			DURNICO
			1.6908	X2NiCrMoTi10 10 5			ULTRAFORT
M	Aciers inox austénitiques	Acier inox. aust.	1.4301	X 5 CrNi 18 10	304	Z 6 CN 18-09	
			1.4305	X 10 CrNiS 18 9	303		
			1.4306	X 2 CrNi 1911	304 L	Z 1 CN 18-12	
			1.4308	G-X 6 CrNi 18 9	CF-8	Z 6 CN 18-10 M	
			1.4310	X 12 CrNi17 7	301		
			1.4372				
			1.4401	X 5 CrNiMo 17 12 2	316	Z 3 CND 17-11-01	
			1.4404	X 2 CrNiMo 17 13 2	316 L	Z 2 CND 17-2	
			1.4408	G-X 6 CrNiMo 18 10	CF-8M		
			1.4418	X4CrNiMo16-5-1		Z6CND16-05-01	
			1.4429	X 2 CrNiMo 17 13 3	316 LN	Z 3 CND 17-12 Az	
			1.4435	X 2 CrNiMo 18 14 3	316 L	Z 3 CND 17-12-03	
			1.4438	X 2 CrNiMo 18 16 4	317 L	Z 2 CND 19-15-04	
			1.4441	X 2 CrNiMo 18 15 3	316 VLM		
			1.4529	X1 NiCrMoCuN 25 20 7	904		
			1.4539	X1NiCrMoCu 25 20 5	904-L		

GROUPES DES MATIÈRES

	Groupes		W.Nr.	DIN	AISI/ATSM	AFNOR	Nom commercial
M		Acier inox. aust.	1.4571	X 6 CrNiMoTi 17 12 2	316 Ti	Z 6 CNDT 17-12	
			1.4162	X2CrMnNiN22-5-2			
			1.4362	X 2 CrNiN 23.4			
			1.4410	G-X10CrNiMo 18 9			
			1.4452	X8 CrMnMoN 23 21 1			Biodur 108
			1.4462	X2CrNiMoN22 5 3		Z3CND22-05Az	
K	Fontes grises	Fontes	0.601	GG 10	A48-20 B	Ft 10 D	
			0.6015	GG 15	A48-25 B	Ft 15 D	
			0.602	GG 20	A48-30 B	Ft 20 D	
			0.6025	GG 25	A48-35 B	Ft 25 D	
			0.6030	GG 30	A48-45 B	Ft 30 D	
			0.6035	GG 35	A48-50 B	Ft 35 D	
			0.6040	GG40	A48-55 B	Ft 40 D	
K	Fontes à graphite sphéroïdal ferritiques	Fontes	0.6652	GGL-NiMn 13 7		L-NM 13 7	
			0.6655	GGL-NiCuCr 15 6 2	A436 Type 1	L-NUC 15 6 2	
			0.6656	GGL-NiCuCr 15 6 3	A436 Type 1b	L-NUC 15 6 3	
			0.6660	GGL-NiCr 20 2	A436 Type 2	L-NC 20 2	
			0.6661	GGL-NiCr 20 3	A436 Type 2b	L-NC 20 3	
			0.6667	GGL-NiSiCr 20 5 3		L-NSC 20 5 3	
			0.6680	GGL-NiSiCr 30 5 5	A436 Type 4	L-NSC 30 5 5	
			0.7033	GGG-35.3			
			0.7040	GGG-40	60-40-18	FGS 400-12	
			0.7043	GGG 40.3		FGS 370-17	
K	Fontes à graphite sphéroïdal perlitiques	Fontes	0.7050	GGG-50	65-45-12	FGS 500-7	
			0.7060	GGG 60	80-55-06	FGS 600-3	
			0.7070	GGG-70	100-70-03	FGS 700-2	
			0.7080	GGG-80	120-90-02	FGS 800-2	
K	Fontes alliées (à graphite sphéroïdal austénitique)	Fontes	0.7652	GGG-NiMn 13 7		S-NM 13 7	
			0.7659	GGG-NiCrNb 20 2			
			0.7660	GGG-NiCr 20 2	A 439 Type D-2	S-NC 20 2	
			0.7661	GGG-NiCr 20 3	A 439 Type D-2B	S-NC 20 3	
			0.7665	GGG-NiSiCr 20 5 2		S-NSC 20 5 2	
			0.7670	GGG-Ni 22	A 439 Type D-2C	S-N 22	
			0.7673	GGG-NiMn 23 4	A 571 Type D-2M	S-NM 23 4	
			0.7676	GGG-NiCr 30 3	A 439 Type D-3	S-NC 30 3	
			0.7677	GGG-NiCr 30 1	A 439 Type D-3A	S-NC 30 1	
			0.7679	GGG-NiSiCr 30 5 2			
			0.7680	GGG-NiSiCr 30 5 5	A 439 Type D-4	S-NSC 30 5 5	
			0.7683	GGG-Ni 35	A 439 Type D-5	S-N 35	
			0.7685	GGG-NiCr 35 3	A 439 Type D-5B	S-NC 35 3	
			0.7688	GGG-NiSiCr 35 5 2			
K	Fontes malléables	Fontes	0.8035	GTW-35-04			
			0.8038	GTW-35-04			
			0.8040	GTW-40-05			
			0.8045	GTW-45-07			
			0.8170	GTS-70-02	A220-80002	Mn700-2	
			0.8135	GTS-35-10	32510	MN 35-10	
			0.8165	GTS-65-02	70003	MP 60-3	
K	Fontes fortement alliées	Fontes	0.9610	G-X 300 NiMo 3 Mg			
			0.9620	G-X 260 NiCr 4 2			
			0.9625	G-X 330 NiCr 4 2			
			0.9630	G-X 300 CrNiSi 9 5 2			
			0.9635	G-X 300 CrMo 15 3			
			0.9640	G-X 300 CrMoNi 15 2 1			
			0.9645	G-X 260 CrMoNi 20 2 1			
			0.9650	G-X 260 Cr 27			
			0.9655	G-X 300 CrMo 27 1			
S	Aciers inox réfractaires	Allliage réfract.	1.4718	X 45 CrSi 9 3	HNV 3		
			1.4724	X 10 CrAl 13			
			1.4731	X 40 CrSiMo 10 2			

	Groupes		W.Nr.	DIN	AISI/ATSM	AFNOR	Nom commercial
		Allliage réfract.	1.4742	X 10 CrAl 18		Z 10 CAS 18	
			1.4762	X 10 CrAl 24	-446	Z 10 CAS 24	
			1.4828	X 15 CrNiSi 20 12	309	Z 15 CNS 20-12	
			1.4828 (2)	X18CrNiSi20-12		Z 17 CNS 20-12	
			1.4833	X 7 CrNi 23 14	309 S	Z 15 CN 24-13	
			1.4837	G-X 40 CrNiSi 25 12			
			1.4841	X 15 CrNiSi 25 20	314	Z 12 CNS 25-20	
			1.4845	X 12 CrNi 25 21	310 S	Z 8 CN 25-20	
			1.4848	G-X 40 CrNiSi 25 20	HK		
			1.4864	X 12 NiCrSi 36 16	330	Z 12 NCS 37-18	
			1.4865	G-X 40 NiCrSi 38 18			
			1.4871	X 53 CrMnNiN 21 9	EV 8	Z 52 CMN 21-09	
			1.4873	X 45 CrNiW 18 9		Z 35 CNWS 14-14	
			1.4876	X 10 NiCrAlTi 32 20	B 163	Z 8 NC 32-21	
			1.4878	X 12 CrNiTi 18 9	321	Z 6 CNT 18-12 (B)	
			1.4922	X 20 CrMoV 12 1		Z 20 CDV 12	
			1.4980	X 5 NiCrTi 26 5			A286
			2.4375	NiCu30Al	4676		MONEL K500
S	Alliage de nickel	Allliage réfract.	2.4603		5390A	NC22FeD	HASTELLOY G30
			2.4631	NiCr20TiAl		NC20TA	NIMONIC 80 A
			2.4066				NICKEL 200
			2.4654				WASPALLOY
			2.4663	NiFe35Cr14MoTi	5660	ZSNCDT42	INCONEL 617
			2.4668	NiCr19Fe19NbMo	5383	NC19eNB	INCONEL 718
			2.4669		N 07750		INCONEL X470
			2.4816	NiCr 15 Fe	AMS 5540		INCONEL 600
			2.4856	NiCr22Mo9Nb	5666	NC22FeDNB	INCONEL625
			2.4969	NiCr 20 Co 18 Ti			NIMONIC 90
				NiCr16Co10WAlTi	5712, 5713		MAR-M 421
				NiCo15Cr15MoAlTi	687		UDIMET 700
				NiCr19Fe19NbMo	5583		UDIMET 720
S	Alliage de cobalt	Allliage réfract.		CoCrW10TaZrB			MAR-M 302
				CoCr24Ni10WtaZrB			MAR M-509
				CoCr20W15Ni	670		HS 25
					F75		STELLITE 21
							STELLITE 30
				CoCr20Ni16Mo7			PHYNOX
			2.4964	CoCr20W15Ni	5537C	KC20WN	HAYNES 25
S	Titanes, alliage de titane	Titane, alliage de Ti	3.7025	Ti99.2	Grade1		
			3.7035	Ti99.4	Grade2		
			3.7055	Ti99.4	Grade3		
			3.7065		Grade4		
			3.7025 Pd				
			3.7035 Pd				
			3.7105		Grade12		
			3.7165	TiAl6V4	Grade5	T-A6V	
			3.7145.7	TiAl6Sn2Zr4Mo2Si			
			3.7175	TiAl6V6Sn2			
N	Alliage de cuivre à bonne usinabilité	Au CuZn Ag	2.0331	Cu Zn 36 Pb 1.5		Cu Zn 35 Pb 2	
			2.0331	Cu Zn 36 Pb 1.5			
			2.0332	Cu Zn 37 Pb 0.5			
			2.0371	Cu Zn 38 Pb 1.5		Cu Zn 38 Pb 2	
			2.0371	Cu Zn 38 Pb 1.5		Cu Zn 36 Pb 3	
			2.0375	Cu Zn 36 Pb 3		Cu Zn 39 Pb 2	
			2.0380	Cu Zn 39 Pb 2		Cu Zn 40 Pb 3	
			2.0401	Cu Zn 39 Pb 3		Cu Zn 39 Pb 2	
			2.0402	Cu Zn 40 Pb 2			

	Groupes		W.Nr.	DIN	AISI/ATSM	AFNOR	Nom commercial
		Au CuZn Ag	2.058	Cu Zn 40 Mn Pb 1		Cu Ni 18 Zn 2	
			2.0740	Cu Ni 18 Zn 20			
			2.0771	Cu Ni Zn 39			
			2.0771	Cu Ni 7 Zn 39			
			2.0780	Cu Ni 12 Zn 30 Pb 1			
			2.0790	Cu Ni 18 Zn 19 Pb 1			
			2.1546	Cu Te P		C 109	
			2.1016	CuSn4Pb4Zn4			
N	Cuivre non allié, alliage de cuivre à usinabilité difficile	Alliage Cu difficile	2.0040	OF-Cu			
			2.0060	E-Cu57			
			2.0065	E-Cu58			
			2.0321	CuZn37			
			2.0920	Cu Al8			
				CuZn42			
			2.1247	CuBe2			
				CuNi7.5Sn5Te			DECLAFOR 1015
N	Aluminium < 8% Si	Alu < 8% Si	3.0205	Al 99.5	A5		
			3.0257	E-AL	1350		
			3.0515	AlMn1	3103		
			3.3315	AlMg1	5005		
			3.3525	AlMg2Mn0.3	5251		
			3.3535	AlMg3	5754		
			3.3537	AlMg2.7Mn	5454		
			3.3545	AlMg4Mn	5086		
			3.3547	AlMg4.5Mn	5083		
			3.3211	AlMg1SiCu	6061		
			3.2315	AlMgSi1	6082		
			3.1355	AlCuMg2	2024		
			3.4335	AlZn4.5Mg1	7020		
			3.4365	AlZnMgCu1.5	7075		
N	Aluminium > 8% Si	Alu > 8% Si	3.2373	AlSi9Mg	A-S9G		
			3.2381	AlSi10Mg	A-S10G		
			3.2581	AlSi12CuFe	A-S13G		
			3.2291	AlSi20	A-S20		

CHAMPS D'APPLICATION DES REVÊTEMENTS

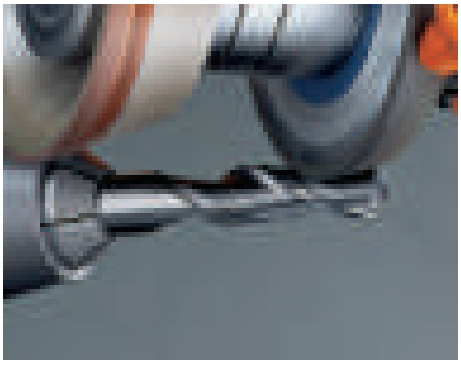
	Matière à usiner		TiAlN Dureté (HV0.05) 3'100	TiAlN Temp. max 800°C	DICUT Dureté (HV0.05) 3'000	DICUT Temp. max 800°C	XIDUR Dureté (HV0.05) 3'100	XIDUR Temp. max 900°C	C-TOP Dureté (HV0.05) 3'400	C-TOP Temp. max 1'100°C
P	Acier non allié / faiblement allié	< 600 N/mm²	○		○		○		◎	
P	Acier non allié / faiblement allié	600 – 1500 N/mm²	○		○		○		◎	
P	Acier de décolletage au plomb		○		○					
P	Acier fortement allié	700 – 1500 N/mm²	○		○		○		◎	
H	Acier à outils >50 HRC		○				◎		◎	
M	Acier inoxydable	400 – 700 N/mm²	○		◎		○		◎	
M	Acier inox. DUPLEX, acier austénitique inox. sans nickel	> 800 N/mm²	○		○		○		◎	
K	Fonte grise / Fonte à graphite sphéroïdal perlitique	< 250 HB	○		○					
K	Fonte alliée / Fonte à graphite sphéroïdal perlitique	> 250 HB	○		○					
K	Fonte à graphite sphéroïdal ferritique / Fonte malléable		○		○					
S	Super alliages / Acier inox. réfractaire	Inconel Nimonic Hastelloy			○		◎		◎	
S	Titane, alliage de titane								○	
N	Alliage de cuivre / bonne usinabilité (laiton – bronze)									
N	Alliage de cuivre / usinabilité difficile / Bronze à l'aluminium	(CuAlFe) (Ampco)							○	
N	Alliage d'aluminium	Si < 8%								
N	Fonte d'aluminium	Si > 8%								
N	Graphite									
N	Plastique									
N	Polymère renforcé aux fibres de carbone									
N	Or, argent								○	
N	Platine									

✕ Non applicable
○ Bien
◎ Excellent

Cobalt Outils Coupants

											Gravage		Taraudage	
CUTINOX		**DAC**		**DIXAL**		**DLC**		**DIAMANT**		**DINAC**		**DI-TOP**		
Dureté (HV0.05) 3'200	Temp. max 1'000°C	Dureté (HV0.05) 1'900	Temp. max 700°C	Dureté (HV0.05) 2'100	Temp. max 550°C	Dureté (HV0.05) 4'800	Temp. max 500°C	Dureté (HV0.05) 10'000	Temp. max 500°C	Dureté (HV0.05) 3'250	Temp. max 450°C	Dureté (HV0.05) 3'200	Temp. max 450°C	
◎						×		×		◎		◎		
◎						×		×		◎				
○						×		×		◎		◎		
◎						×		×		◎				
						×		×						
◎						×		×		◎				
◎						×		×		◎				
						×		×		○				
						×		×		○				
						×		×		○				
○						×		×						
						○				○				
		○		○		◎				○		◎		
		○		○		◎		○		○		◎		
		◎		◎		◎		○						
						○		◎						
								◎						
						○								
						○		◎						
						○		○		○				
						○		◎						

RÉAFFÛTAGE



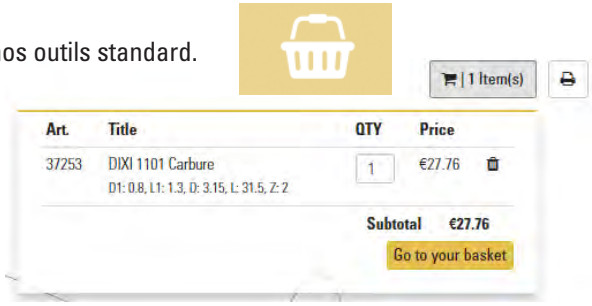
DIXI Polytool offre à sa clientèle un service de réaffûtage de tout type d'outils carbure monobloc, HSS, PCD et diamant naturel.

Ce service est disponible pour les outils DIXI mais également pour les assortiments concurrents.
Le réaffûtage est réalisé sur des affûteuses 5 axes afin de garantir une géométrie parfaite.
Le contrôle est quant à lui effectué avec des moyens ultra modernes.

Notre rapidité d'exécution permet une planification flexible à notre clientèle.

E-SHOP

Commandez en ligne nos outils standard.



DEMANDE D'OFFRE D'OUTILS SPÉCIAUX

Utilisez notre formulaire en ligne.

www.dixipolytool.com

Cobalt Outils Coupants

DIXI POLYTOOL S.A.

DIXI Polytool S.A., créateur d'outils de coupe de précision en carbure monobloc, diamant, outils de forme et alésoirs de précision, est installé au Locle (Suisse) depuis 1946. Ses locaux ont été totalement rénovés et agrandis en 2014.

La mise en place d'un projet Lean depuis 2013 et des investissements conséquents dans l'appareil de production viennent appuyer les efforts des 250 collaborateurs.

Soucieux de garantir la qualité de ses produits tout en préservant l'environnement, DIXI Polytool S.A. a mis en place un système de management certifié conforme aux normes ISO 9001 et ISO 14001.

UNE ATTITUDE ÉCOLOGIQUEMENT RESPONSABLE

Depuis plusieurs années, DIXI Polytool S.A. s'est engagé à n'utiliser que du papier recyclé à 100% et l'encre pour les imprimés n'est constituée que de colorants naturels.

Précurseur également dans ce domaine, depuis janvier 2015, DIXI Polytool S.A. consomme exclusivement de l'énergie verte pour tout l'entretien du bâtiment et le fonctionnement de la fabrication.

Notre engagement pour le développement durable…

Areuse

INDEX DES OUTILS

DIXI	Chapitre	Page
0418 / 0419	FILETAGE	313
0420 / 0421	USURE	418
0700 / 0710	TRONÇONNAGE	263
1101	PERÇAGE	12
1106	PERÇAGE	13
1106 L	PERÇAGE	14
1107	PERÇAGE	14
1108	PERÇAGE	15
1109	PERÇAGE	16
1110	PERÇAGE	17
1111	PERÇAGE	18
1112 / 1114 / 1118	PERÇAGE	58
11140 / 11180	DIAMANT	395
1126	PERÇAGE	19
1130	PERÇAGE	20
1130 L	PERÇAGE	22
1131	PERÇAGE	26
1131 L	PERÇAGE	29
1132	PERÇAGE	24
1133	PERÇAGE	25
1134	PERÇAGE	32
1135	PERÇAGE	33
1136	PERÇAGE	36
1137	PERÇAGE	38
1138	PERÇAGE	39
1139	PERÇAGE	41
1145	PERÇAGE	47
1146	PERÇAGE	49
1147	PERÇAGE	45
1149	PERÇAGE	43
1151	PERÇAGE	53
1152	PERÇAGE	55
1280	PERÇAGE	51
1290	PERÇAGE	57
1501	PERÇAGE	59
1502	PERÇAGE	60
1503	PERÇAGE	61
1504	PERÇAGE	62
15150	DIAMANT	392
1512 / 1514 / 1518	PERÇAGE	59
1525	TRONÇONNAGE	257
1527	TRONÇONNAGE	259
1528	TRONÇONNAGE	258
1531	TRONÇONNAGE	246
1533	TRONÇONNAGE	248
1534	TRONÇONNAGE	253
1537	TRONÇONNAGE	254
1539	TRONÇONNAGE	251
1640	TRONÇONNAGE	255
1643 / 1650 / 1654	TRONÇONNAGE	266
16560	DIAMANT	392
1660 / 1661	FILETAGE	300
1672	TRONÇONNAGE	261
1673	TRONÇONNAGE	261
1674	TRONÇONNAGE	262
1675 / 1680	TRONÇONNAGE	260
1685	TRONÇONNAGE	261
1690	TRONÇONNAGE	262
1708	FILETAGE	287
1710	FILETAGE	288
1712 R / L	FILETAGE	286
1712-AF/BT	FILETAGE	297
1713	FILETAGE	287
1715	FILETAGE	289
1716	FILETAGE	290
1716-AF/BT	FILETAGE	297
1718-AF/BT	FILETAGE	299
1718-M	FILETAGE	312

DIXI	Chapitre	Page
1718-NT / 1718-RT	FILETAGE	311
1718-SET	FILETAGE	314
1719-AF/BT	FILETAGE	299
1719-M	FILETAGE	312
1719-NT/RT	FILETAGE	311
1730-D	FILETAGE	293
1735-D	FILETAGE	294
1738	FILETAGE	292
1738-AF/BT	FILETAGE	298
1739	FILETAGE	291
1740	FILETAGE	295
1740-AF/BT	FILETAGE	298
1742 / 1744	FILETAGE	296
1973 / 1978	DIAMANT	403
2567	ALÉSAGE	364
2577	ALÉSAGE	363
2578	ALÉSAGE	365
2579	ALÉSAGE	366
2580	ALÉSAGE	367
2581	ALÉSAGE	368
20370	DIAMANT	394
20610 / 20770	DIAMANT	397
25800 / 25810	DIAMANT	396
2642 / 26420	DIAMANT	395
264X0	DIAMANT	397
26500	DIAMANT	398
2713 / 2714	TRONÇONNAGE	256
2753	DIAMANT	400
2764	ALÉSAGE	365
4001	ALÉSAGE	340
40010	DIAMANT	396
4005	ALÉSAGE	347
4007	ALÉSAGE	348
4261 / 4264	ALÉSAGE	359
4271 / 4274	ALÉSAGE	360
4361	ALÉSAGE	355
4364	ALÉSAGE	361
4371	ALÉSAGE	357
4374	ALÉSAGE	362
6801	USURE	414
6820	USURE	416
6960	USURE	417
6961	USURE	416
7007	GRAVAGE	222
7012	GRAVAGE	224
7016	GRAVAGE	225
7017	GRAVAGE	220
70170	DIAMANT	391
7020	GRAVAGE	225
7024	GRAVAGE	226
7025	GRAVAGE	224
7027	GRAVAGE	221
70320	DIAMANT	389
7032	FRAISAGE	142
7033 / 7034	FRAISAGE	150
7042	FRAISAGE	143
7045 / 7047-D	FRAISAGE	145
7046	FRAISAGE	144
70520	DIAMANT	385
7060	FRAISAGE	105
70600	DIAMANT	386
7063	FRAISAGE	106
7070	FRAISAGE	138
7112	FRAISAGE	151
7202	FRAISAGE	109
7203	FRAISAGE	120
7204	FRAISAGE	129
7210 / 7213	FRAISAGE	134

DIXI	Chapitre	Page
7214 / 7215	FRAISAGE	135
7222	FRAISAGE	110
7223	FRAISAGE	121
7224	FRAISAGE	129
72310	DIAMANT	387
7232	FRAISAGE	117
7237	FRAISAGE	112
7237-10	FRAISAGE	137
7238	FRAISAGE	112
7239 / 7239-D	FRAISAGE	112
7240	FRAISAGE	111
7242	FRAISAGE	107
72420	DIAMANT	384
72421	DIAMANT	388
7243	FRAISAGE	118
7244	FRAISAGE	128
7253	FRAISAGE	126
7254	FRAISAGE	131
7264 / 7264-D	FRAISAGE	130
7265	FRAISAGE	139
7273	FRAISAGE	127
7301	FRAISAGE	102
7302 / 7303	FRAISAGE	103
7311	FRAISAGE	104
7333	FRAISAGE	122
7333-D	FRAISAGE	123
7342	FRAISAGE	108
7343	FRAISAGE	119
7520	FRAISAGE	133
7532	FRAISAGE	147
7532-D	FRAISAGE	148
7542	FRAISAGE	149
7543	FRAISAGE	124
7552 / 7554	FRAISAGE	140
7560	FRAISAGE	132
7561	FRAISAGE	102
7563	FRAISAGE	126
7565	FRAISAGE	141
7572	FRAISAGE	117
7582	FRAISAGE	116
7583	FRAISAGE	125
7593	FRAISAGE	127
7623	GRAVAGE	227
76230	GRAVAGE	228
76230 / 76231	DIAMANT	390
7624	GRAVAGE	228
7625	GRAVAGE	227
7631	FRAISAGE	152
7632	GRAVAGE	230
7645	FRAISAGE	152
7656	GRAVAGE	229
7702	FRAISAGE	136
7908	FILETAGE	302
7910	FILETAGE	301
7913	FILETAGE	303
7915	FILETAGE	308
7918	FILETAGE	305
7920	FILETAGE	304
7923	FILETAGE	306
7925	FILETAGE	309
7940	FILETAGE	306
7946 / 7950	FILETAGE	307
7956	FILETAGE	308
7985	FILETAGE	310
80000	DIAMANT	395
81000	DIAMANT	394

Cobalt Outils Coupants