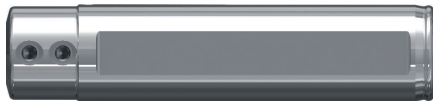
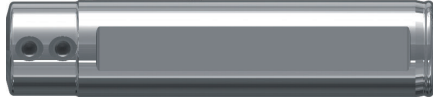
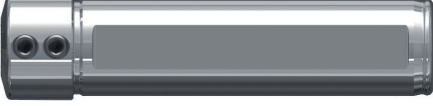
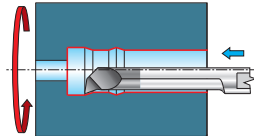
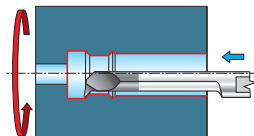
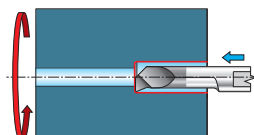
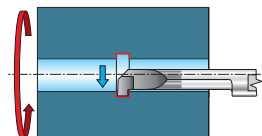
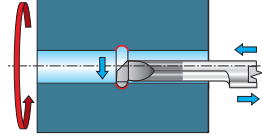
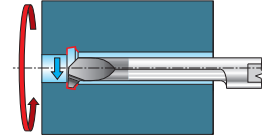
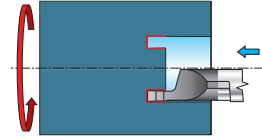
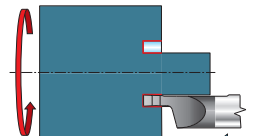
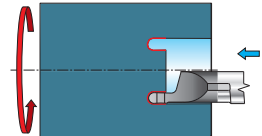
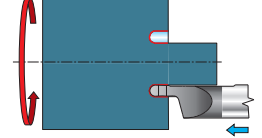




MINITOOL

		ART.	Ød	ØD	Pag.
					
PORTAUTENSILI - TOOL HOLDER					
		S100-TS-04-...	4	12-25	8
		S100-TS-05-...	5	12-25	9
		S100-TS-06-...	6	12-25	10
		S100-TS-07-...	7	16-25	11

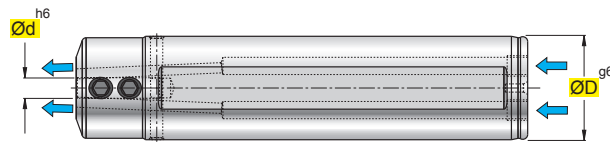
APPLICAZIONE - APPLICATION		ART.	ØD min	Ød	t max	Pag.	
							
TORNITURA INTERNA - INTERNAL TURNING							
			S101-04.9820-...015R/L	1,7-4,2	4	0,2-0,3	12
			S101-05.9820-052-...020R/L	4,9-5,2	5	0,4-0,5	14
			S101-06.9820-062-...020R/L	6,2	6	0,5	16
			S101-07.9820-072-...020R/L	7,2	7	0,5	18
			S101-04.9847-...-...R/L	3,2-4,2	4	0,4-0,8	20
			S101-05.9847-052-...015R/L	5,2	5	1,0	20
			S101-06.9847-062-...015R/L	6,2	5	1,8	20
			S101-07.9847-072-40.020R/L	7,2	7	2,5	20
			S101-05.9020-052-...020R/L	5,2	5	0,5	22

APPLICAZIONE - APPLICATION		ART.	ØD min	Ød	t max	Pag.	
							
SCANALATURA - GROOVING							
			S102-04...000R/L	2,0-4,2	4	0,4-0,8	24
			S102-05...000R/L	5,0-5,2	5	1,0	26
			S102-06...-062-...000R/L	6,2	6	1,8	28
			S102-07...-072-...000R/L	7,2	7	2,5	30
			S102-04.R100-042-15.050R/L	4,2	4	0,8	32
			S102-05.R...-052-20...R/L	5,2	5	1,0	32
			S102-06.R...-062-25...R/L	6,2	6	1,8	32
			S102-07.R...-072-30...R/L	7,2	7	2,5	32
PRETAGLIO E SMUSSATURA - PRE-PART-OFF AND CHAMFERING							
			S105-04.0100-037-...000R/L	3,7-4,2	4	0,7	34
			S105-05.0100-052-...000R/L	5,2	5	0,7	34
			S105-06.0100-062-...000R/L	6,2	6	0,7	34
SCANALATURA FRONTALE - FACE GROOVING							
			S103-06...-I62-15.015R/L	6,2	6	2-6	36
			S103-06...-E62-15.015R/L	6,2	6	2-6	38
			S103-06.R...-I62-15...R/L	6,2	6	2-4	40
			S103-06.R...-E62-15...R/L	6,2	6	2-4	42

[illegible]

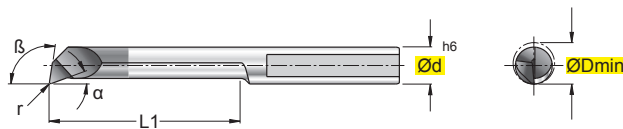
DATI TECNICI - TECHNICAL DATA





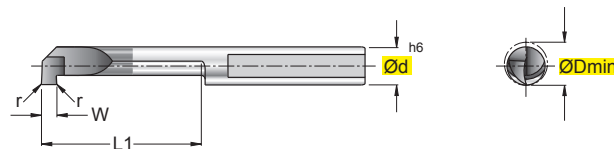
S	1	0	0	-	T	S	-	0	4	.	0	0	1	6
1								2			3			

1	COD. TIPOLOGIA ARTICOLO COD. ITEM TYPE	2	Ød DIAMETRO ATTACCO "MINITOOL" Ød "MINITOOL" ATTACHMENT DIAMETER	3	ØD DIAMETRO ATTACCO PORTA UTENSILE ØD TOOL-HOLDER ATTACHMENT DIAMETER
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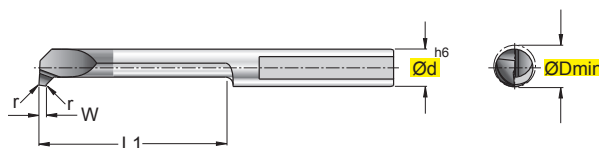
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1				2			3		4			5			6			7		8			

1	COD. TIPOLOGIA ARTICOLO COD. ITEM TYPE	2	Ød DIAMETRO ATTACCO "MINITOOL" Ød "MINITOOL" ATTACHMENT DIAMETER	3	ANGOLO β TESTA β ANGLE - HEAD
4	ANGOLO α TESTA α ANGLE - HEAD	5	ØDmin DIAMETRO MINIMO DI ENTRATA ØDmin MINIMUM PENETRATION DIAMETER	6	L1 PROFONDITÀ MASSIMA DI LAVORO L1 MAXIMUM MACHINING DEPTH
7	r RAGGIO IN TESTA r HEAD RADIUS	8	R/L DIREZIONE DI TAGLIO R/L CUTTING DIRECTION		



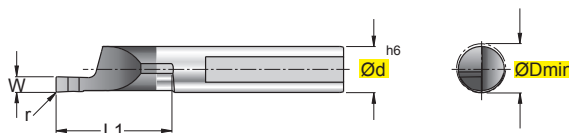
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1				2			3		4			5			6			7		8			

1	COD. TIPOLOGIA ARTICOLO COD. ITEM TYPE	2	Ød DIAMETRO ATTACCO "MINITOOL" Ød "MINITOOL" ATTACHMENT DIAMETER	3	FORMA DELLA GOLA 0=PIANA R=SFERICA SHAPE OF GROOVE 0=FLAT R=SPHERICAL
4	W LARGHEZZA SCANALATURA W GROOVE WIDTH	5	ØDmin DIAMETRO MINIMO DI ENTRATA ØDmin MINIMUM PENETRATION DIAMETER	6	L1 PROFONDITÀ MASSIMA DI LAVORO L1 MAXIMUM MACHINING DEPTH
7	r RAGGIO IN TESTA r HEAD RADIUS	8	R/L DIREZIONE DI TAGLIO R/L CUTTING DIRECTION		



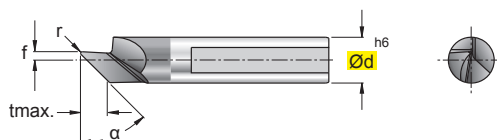
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1					2			3	4				5			6		7			8		

1	COD. TIPOLOGIA ARTICOLO COD. ITEM TYPE	2	Ød DIAMETRO ATTACCO "MINITOOL" Ød "MINITOOL" ATTACHMENT DIAMETER	3	FORMA DELLA GOLA 0=PIANA R=SFERICA SHAPE OF GROOVE 0=FLAT R=SPHERICAL
4	W LARGHEZZA SCANALATURA W GROOVE WIDTH	5	ØDmin DIAMETRO MINIMO DI ENTRATA ØDmin MINIMUM PENETRATION DIAMETER	6	L1 PROFONDITÀ MASSIMA DI LAVORO L1 MAXIMUM MACHINING DEPTH
7	r RAGGIO IN TESTA r HEAD RADIUS	8	R/L DIREZIONE DI TAGLIO R/L CUTTING DIRECTION		



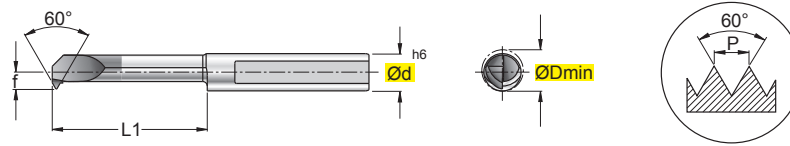
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1					2			3	4			5	6			7			8			9	

1	COD. TIPOLOGIA ARTICOLO COD. ITEM TYPE	2	Ød DIAMETRO ATTACCO "MINITOOL" Ød "MINITOOL" ATTACHMENT DIAMETER	3	FORMA DELLA GOLA 0=PIANA R=SFERICA SHAPE OF GROOVE 0=FLAT R=SPHERICAL
4	W LARGHEZZA SCANALATURA W GROOVE WIDTH	5	TIPO TORNITURA I=INTERNA E=ESTERNA TURNING TYPE I=INTERNAL E=EXTERNAL	6	ØDmin DIAMETRO MINIMO DI ENTRATA ØDmin MINIMUM PENETRATION DIAMETER
7	L1 PROFONDITÀ MASSIMA DI ENTRATA L1 MAXIMUM PENETRATION DEPTH	8	r RAGGIO IN TESTA r HEAD RADIUS	9	R/L DIREZIONE DI TAGLIO R/L CUTTING DIRECTION



S 1 0 1 -	0 6 .	0 0 4 5 -	0 1 1 -	3 5 .	0 2 0	R
1	2	3	4	5	6	7

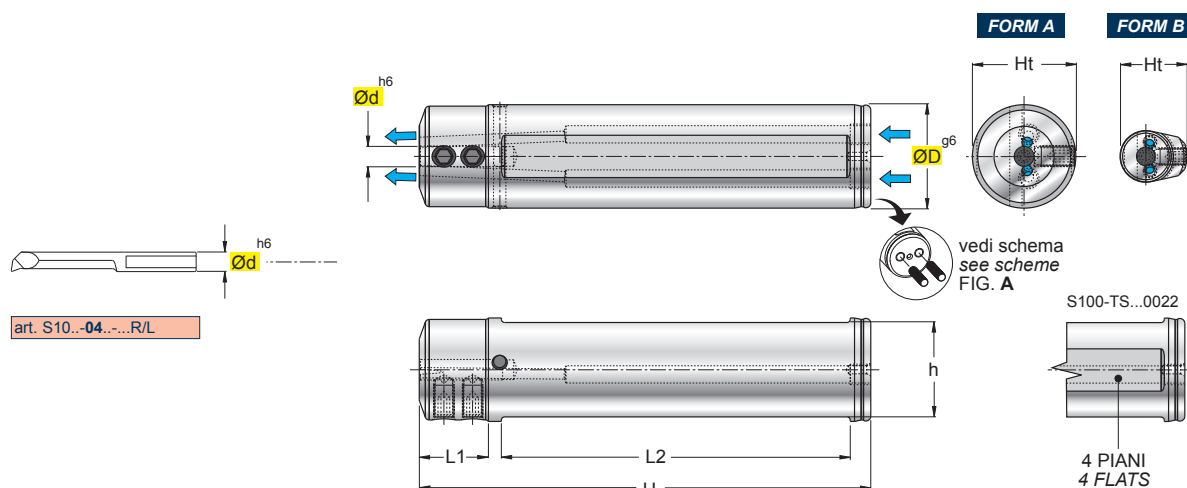
1	COD. TIPOLOGIA ARTICOLO COD. ITEM TYPE	2	Ød DIAMETRO ATTACCO "MINITOOL" Ød "MINITOOL" ATTACHMENT DIAMETER	3	ANGOLO α SMUSSATURA α ANGLE - CHAMFERING
4	f DISTANZA OLTRE CENTRO f OFF-CENTRE DISTANCE	5	tmax MASSIMA PROFONDITÀ DI LAVORO tmax MAXIMUM CUTTING DEPTH	6	r RAGGIO IN TESTA r HEAD RADIUS
7	R/L DIREZIONE DI TAGLIO R/L CUTTING DIRECTION				



S	1	0	4	-	0	6	.	0	0	6	0	-	0	6	2	-	2	5	.	1	2	5	R
	1					2			3					4			5			6			7

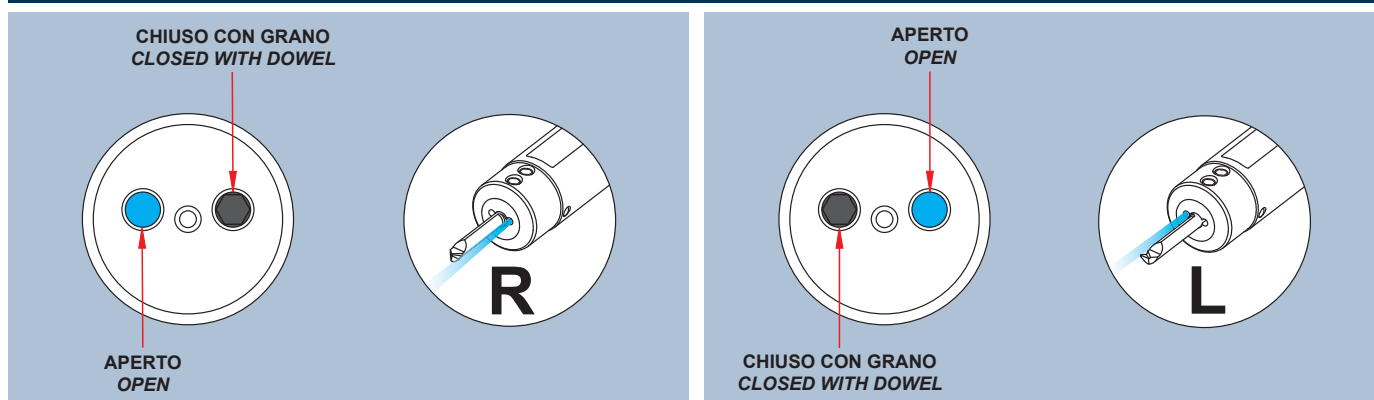
1	COD. TIPOLOGIA ARTICOLO COD. ITEM TYPE	2	Ød DIAMETRO ATTACCO "MINITOOL" Ød "MINITOOL" ATTACHMENT DIAMETER	3	60° ANGOLO FILETTO 60° THREAD ANGLE
4	ØDmin DIAMETRO MINIMO DI ENTRATA ØDmin MINIMUM PENETRATION DIAMETER	5	L1 PROFONDITÀ MASSIMA DI ENTRATA L1 MAXIMUM PENETRATION DEPTH	6	P(min) PASSO MINIMO P(min) MINIMUM PITCH
7	R/L DIREZIONE DI TAGLIO R/L CUTTING DIRECTION				

S100-TS-04-...

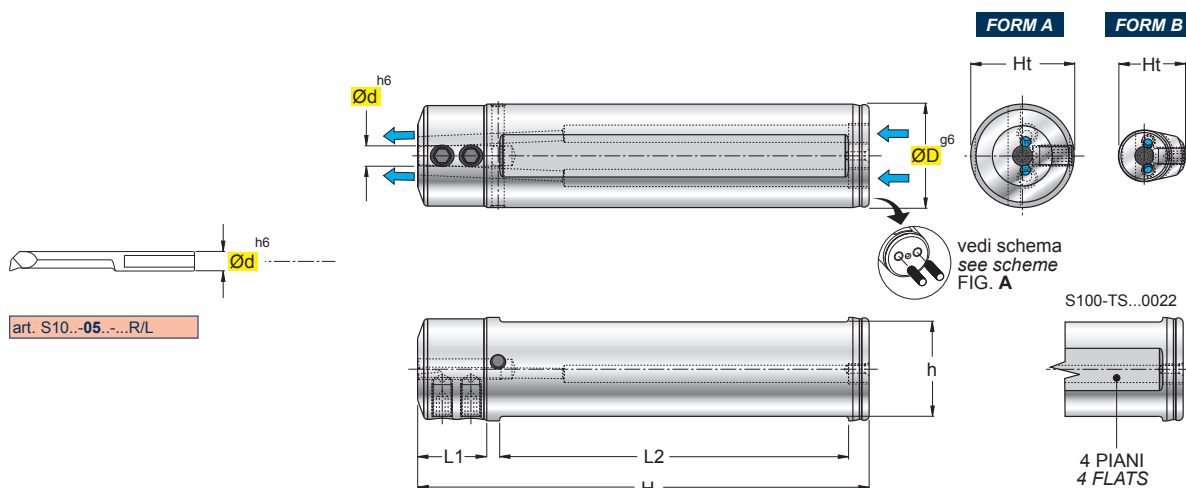


(mm)													
ART.	FORM	ØD	Ød	h	L1	L2	H	Ht					
S100-TS-04.0012	B	12	4	10	14	48	70	15,5	n°2 GR408C	n°1 GR304C	5002		
S100-TS-04.0016	B	16	4	14	14	53	75	17,5	n°2 GR408C	n°1 GR404C	5002		
S100-TS-04.0020	A	20	4	18	15	66	90	19,5	n°2 GR408C	n°1 GR505C	5002		
S100-TS-04.0022	A	22	4	20	15	86	110	21,5	n°2 GR508C	n°1 GR505C	5025		
S100-TS-04.0025	A	25	4	23	15	86	110	24,5	n°2 GR410C	n°1 GR505C	5002		

(FIG. A) SCHEMA REFRIGERAZIONE - (FIG. A) COOLING DIAGRAM - (ABB. A) KÜHLSCHEMA - (FIG. A) SCHEMA REFRIGERATION

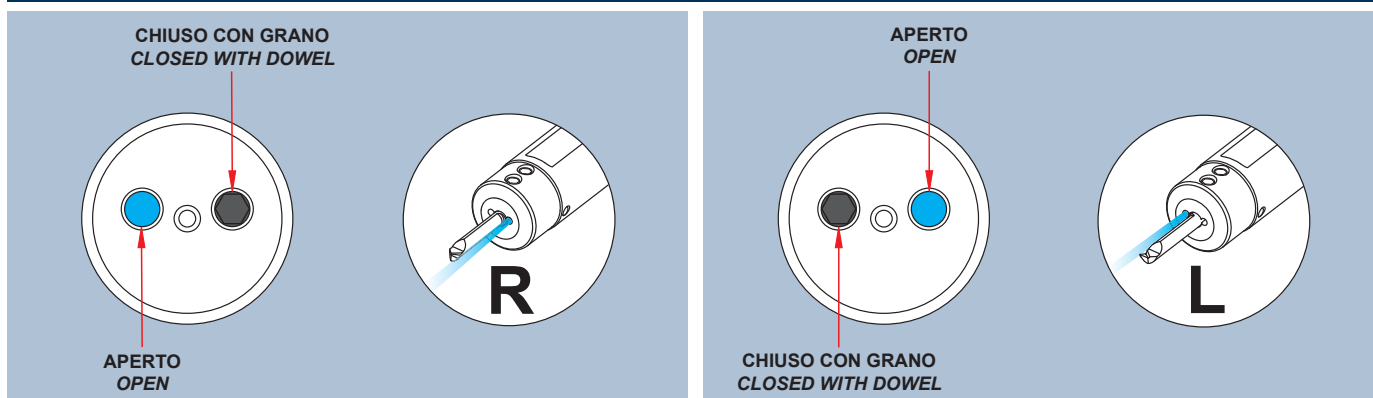


S100-TS-05-...

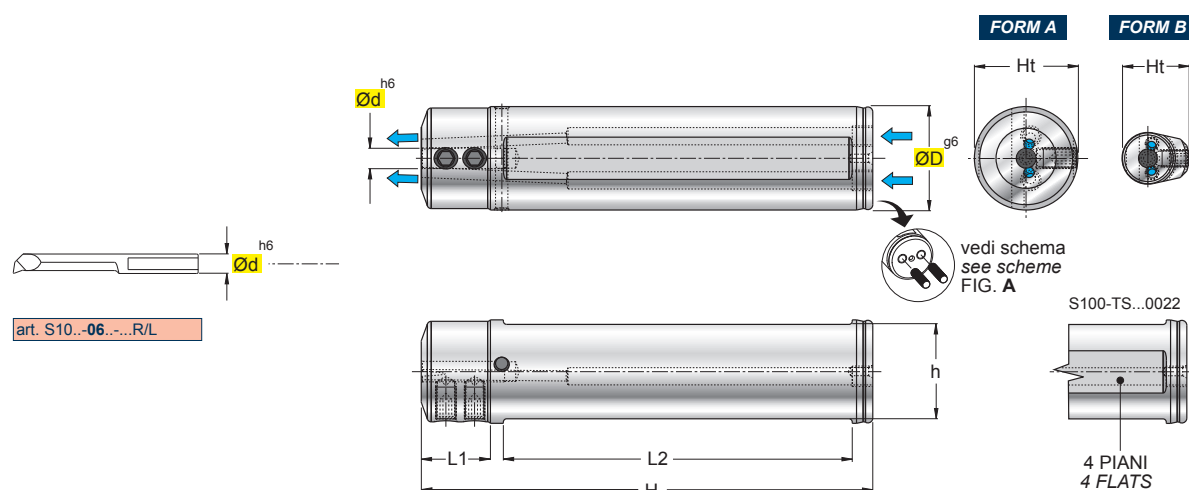


(mm)													
ART.	FORM	ØD	Ød	h	L1	L2	H	Ht					
S100-TS-05.0012	B	12	5	10	15	47	70	16,0	n°2 GR508C	n°1 GR304C	5025		
S100-TS-05.0016	B	16	5	14	15	52	75	18,0	n°2 GR508C	n°1 GR404C	5025		
S100-TS-05.0020	A	20	5	18	15	66	90	19,5	n°2 GR508C	n°1 GR505C	5025		
S100-TS-05.0022	A	22	5	20	15	86	110	21,5	n°2 GR508C	n°1 GR505C	5025		
S100-TS-05.0025	A	25	5	23	15	86	110	24,5	n°2 GR510C	n°1 GR505C	5025		

(FIG. A) SCHEMA REFRIGERAZIONE - (FIG. A) COOLING DIAGRAM - (ABB. A) KÜHLSCHHEMA - (FIG. A) SCHEMA REFRIGERATION

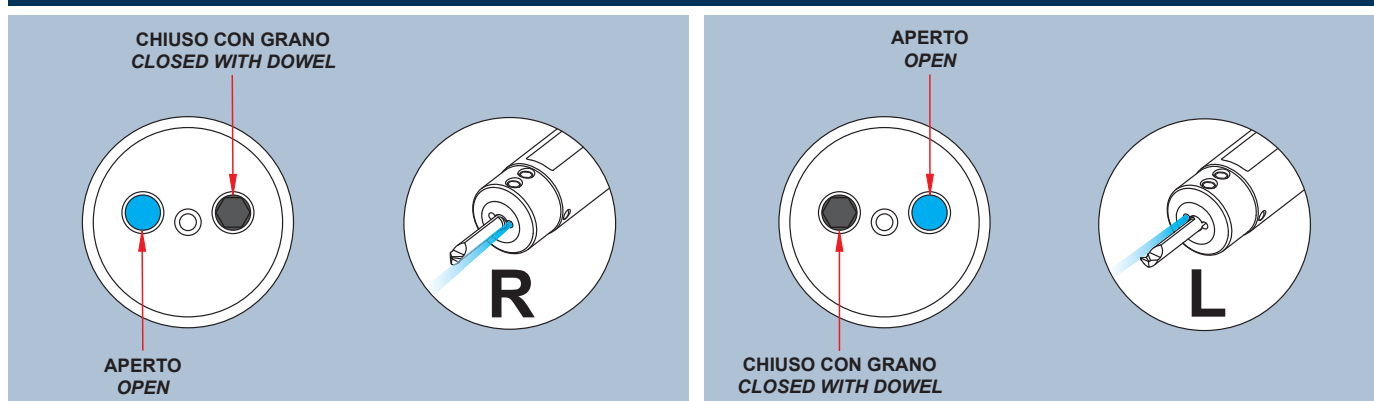


S100-TS-06-...

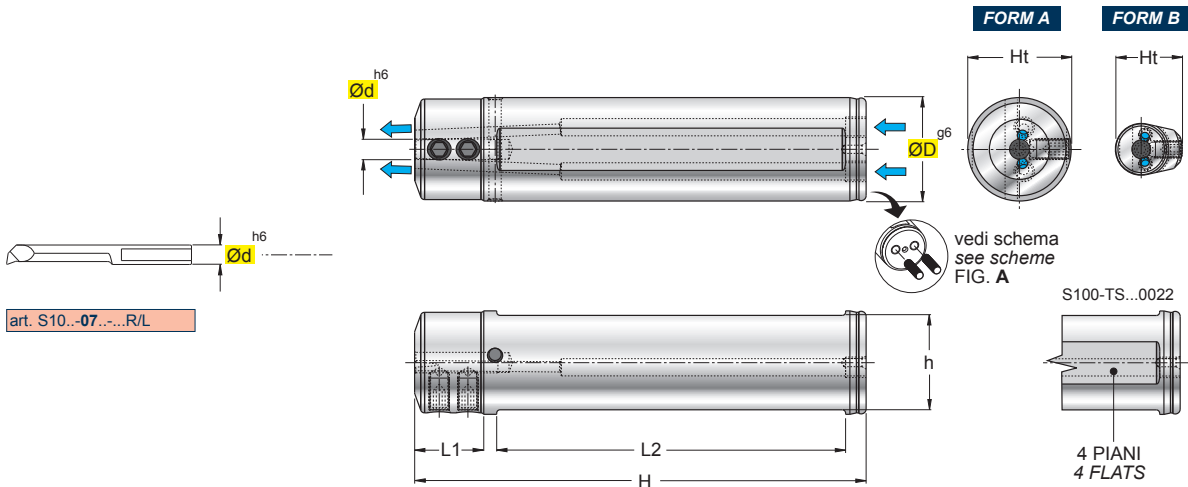


(mm)													
ART.	FORM	ØD	Ød	h	L1	L2	H	Ht					
S100-TS-06.0012	B	12	6	10	15	47	70	16,5	n°2 GR508C	n°1 GR304C	5025		
S100-TS-06.0016	B	16	6	14	15	55	78	18,5	n°2 GR508C	n°1 GR404C	5025		
S100-TS-06.0020	A	20	6	18	15	66	90	19,5	n°2 GR508C	n°1 GR505C	5025		
S100-TS-06.0022	A	22	6	20	15	86	110	21,5	n°2 GR508C	n°1 GR505C	5025		
S100-TS-06.0025	A	25	6	23	15	85	110	24,5	n°2 GR510C	n°1 GR505C	5025		

(FIG. A) SCHEMA REFRIGERAZIONE - (FIG. A) COOLING DIAGRAM - (ABB. A) KÜHLSCHHEMA - (FIG. A) SCHEMA REFRIGERATION

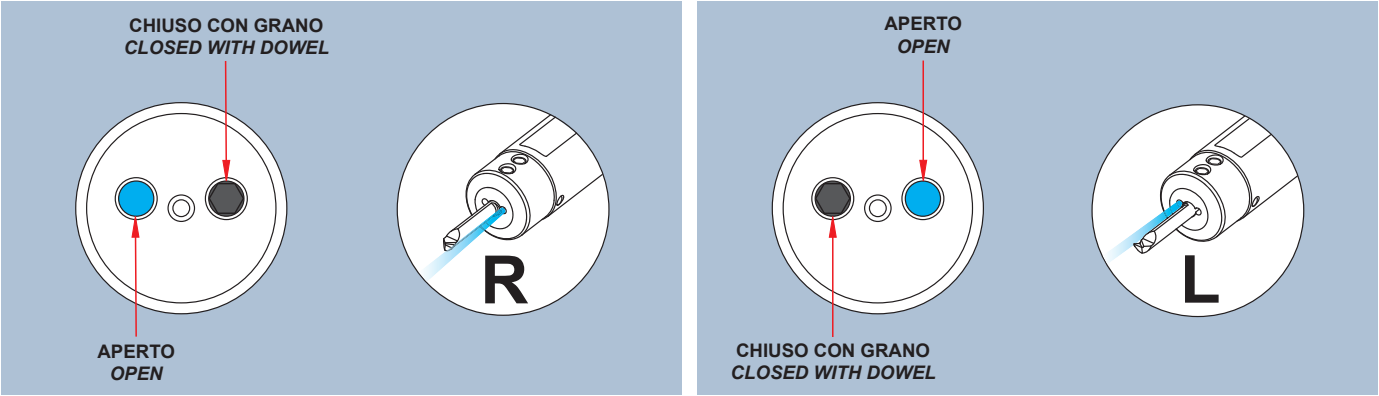


S100-TS-07-...



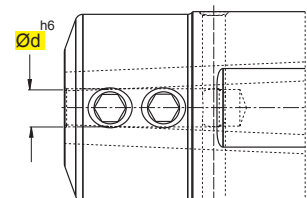
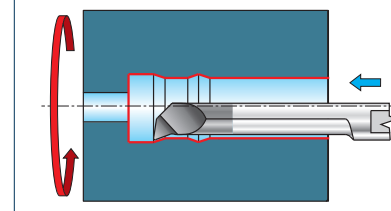
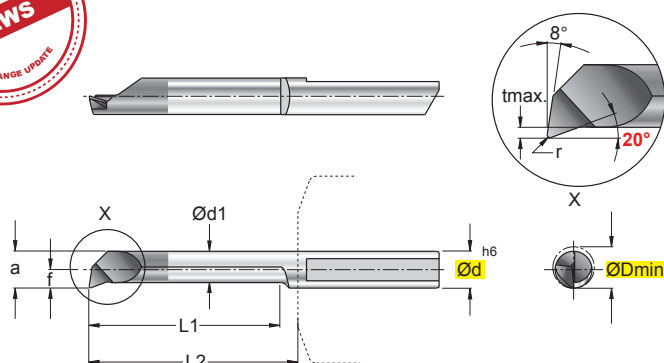
(mm)													
ART.	FORM	ØD	Ød	h	L1	L2	H	Ht					
S100-TS-07.0016	B	16	7	14	15	55	78	19,0	n°2 GR508C	n°1 GR404C	5025		
S100-TS-07.0020	A	20	7	18	15	66	90	22,0	n°2 GR508C	n°1 GR505C	5025		
S100-TS-07.0022	A	22	7	20	15	86	110	21,7	n°2 GR508C	n°1 GR505C	5025		
S100-TS-07.0025	A	25	7	23	15	86	110	24,5	n°2 GR510C	n°1 GR505C	5025		

(FIG. A) SCHEMA REFRIGERAZIONE - (FIG. A) COOLING DIAGRAM - (ABB. A) KÜHLSCHEMA - (FIG. A) SCHEMA REFRIGATION



S101-04.9820-...R/L

Tornitura Interna - Internal Turning



art. S100-TS-04...

In figura utensile destro - Right-hand shown

ART.		(mm)									P	M	K	N	S	H	HW		HC	
		ØDmin	Ød	Ød1	f	a	tmax	r	L1	L2							NON RIV. CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS	
																	N3635		F7835	
S101-04.9820-017-06.010R/L New		1,7	4	1,05	0,7	1,45	0,2	0,10	06	13	●	●	○	●	○		■		■	
S101-04.9820-017-09.010R/L New		1,7	4	1,05	0,7	1,45	0,2	0,10	09	13	●	●	○	●	○		■		■	
S101-04.9820-022-06.010R/L New		2,2	4	1,55	0,95	1,95	0,2	0,10	06	13	●	●	○	●	○		■		■	
S101-04.9820-022-09.010R/L New		2,2	4	1,55	0,95	1,95	0,2	0,10	09	13	●	●	○	●	○		■		■	
S101-04.9820-022-13.010R/L New		2,2	4	1,55	0,95	1,95	0,2	0,10	13	18	●	●	○	●	○		■		■	
S101-04.9820-027-10.005R/L New		2,7	4	2,05	1,2	2,45	0,2	0,05	10	13	●	●	○	●	○		■		■	
S101-04.9820-027-10.015R/L New		2,7	4	2,05	1,2	2,45	0,2	0,15	10	13	●	●	○	●	○		■		■	
S101-04.9820-027-15.005R/L New		2,7	4	2,05	1,2	2,45	0,2	0,05	15	18	●	●	○	●	○		■		■	
S101-04.9820-027-15.015R/L New		2,7	4	2,05	1,2	2,45	0,2	0,15	15	18	●	●	○	●	○		■		■	
S101-04.9820-030-20.015R/L New		3,0	4	2,35	1,35	2,75	0,2	0,15	20	23	●	●	○	●	○		■		■	
S101-04.9820-030-25.005R/L New		3,0	4	2,35	1,35	2,75	0,2	0,05	25	28	●	●	○	●	○		■		■	
S101-04.9820-032-10.015R/L		3,2	4	2,55	1,45	2,95	0,2	0,15	10	13	●	●	○	●	○		■		■	
S101-04.9820-032-15.005R/L New		3,2	4	2,55	1,45	2,95	0,2	0,05	15	18	●	●	○	●	○		■		■	
S101-04.9820-032-15.015R/L		3,2	4	2,55	1,45	2,95	0,2	0,15	15	18	●	●	○	●	○		■		■	
S101-04.9820-032-20.005R/L New		3,2	4	2,55	1,45	2,95	0,2	0,05	20	23	●	●	○	●	○		■		■	
S101-04.9820-032-20.015R/L		3,2	4	2,55	1,45	2,95	0,2	0,15	20	23	●	●	○	●	○		■		■	
S101-04.9820-037-10.015R/L		3,7	4	3,05	1,7	3,45	0,2	0,15	10	13	●	●	○	●	○		■		■	
S101-04.9820-037-15.015R/L		3,7	4	3,05	1,7	3,45	0,2	0,15	15	18	●	●	○	●	○		■		■	
S101-04.9820-037-20.015R/L		3,7	4	3,05	1,7	3,45	0,2	0,15	20	23	●	●	○	●	○		■		■	
S101-04.9820-037-25.015R/L		3,7	4	3,05	1,7	3,45	0,2	0,15	25	28	●	●	○	●	○		■		■	

Parametri di lavoro - Machining parameters Schnittdaten - Paramètres de travail

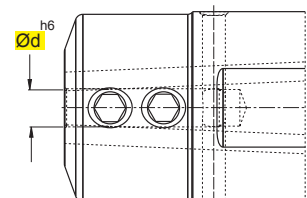
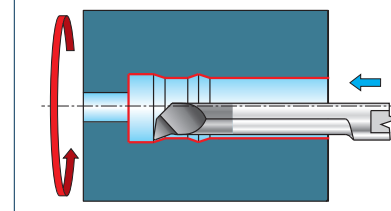
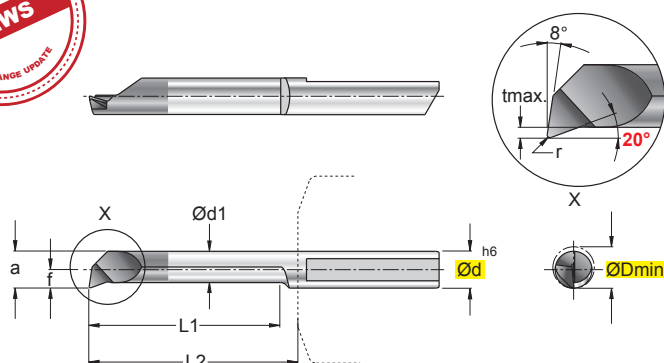
$$n = \frac{V_c \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min^{-1}) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

A large grid of graph paper with 20 columns and 10 rows of squares. The grid is composed of small squares, with each square measuring 1 unit by 1 unit. The grid is used for graphing and drawing.

S101-05.9820-...R/L

Tornitura Interna - Internal Turning



art. S100-TS-05..

In figura utensile destro - Right-hand shown

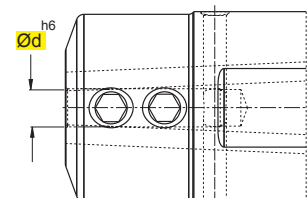
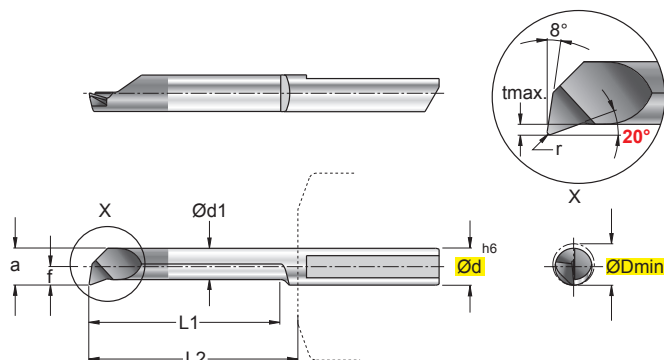
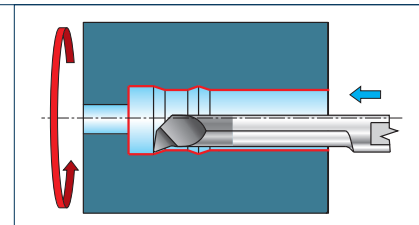
ART.	(mm)																HW		HC	
		ØDmin	Ød	Ød1	f	a	tmax	r	L1	L2							NON RIV. CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS	
																	N3635		F7835	
S101-05.9820-049-20.020R/L New	4,9	5	3,95	2,45	4,65	0,4	0,2	20	23											
S101-05.9820-049-25.020R/L New	4,9	5	3,95	2,45	4,65	0,4	0,2	25	28											
S101-05.9820-049-30.020R/L New	4,9	5	3,95	2,45	4,65	0,4	0,2	30	33											
S101-05.9820-049-35.020R/L New	4,9	5	3,95	2,45	4,65	0,4	0,2	35	38											
S101-05.9820-049-40.020R/L New	4,9	5	3,95	2,45	4,65	0,4	0,2	40	43											
S101-05.9820-052-10.005R/L New	5,2	5	4,25	2,45	4,95	0,5	0,05	10	13											
S101-05.9820-052-10.020R/L	5,2	5	4,25	2,45	4,95	0,5	0,2	10	13											
S101-05.9820-052-15.005R/L New	5,2	5	4,25	2,45	4,95	0,5	0,05	15	18											
S101-05.9820-052-15.020R/L	5,2	5	4,25	2,45	4,95	0,5	0,2	15	18											
S101-05.9820-052-20.005R/L New	5,2	5	4,25	2,45	4,95	0,5	0,05	20	23											
S101-05.9820-052-20.020R/L	5,2	5	4,25	2,45	4,95	0,5	0,2	20	23											
S101-05.9820-052-25.020R/L	5,2	5	4,25	2,45	4,95	0,5	0,2	25	28											
S101-05.9820-052-30.005R/L New	5,2	5	4,25	2,45	4,95	0,5	0,05	30	33											
S101-05.9820-052-30.020R/L	5,2	5	4,25	2,45	4,95	0,5	0,2	30	33											
S101-05.9820-052-35.020R/L	5,2	5	4,25	2,45	4,95	0,5	0,2	35	38											
S101-05.9820-052-40.020R/L	5,2	5	4,25	2,45	4,95	0,5	0,2	40	43											

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

[illegible]

S101-06.9820-...R/L

Tornitura Interna - Internal Turning



art. S100-TS-06..

In figura utensile destro - Right-hand shown

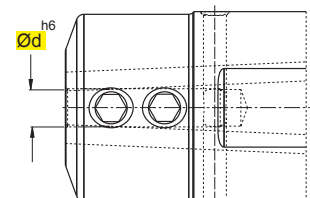
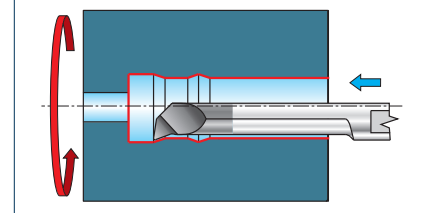
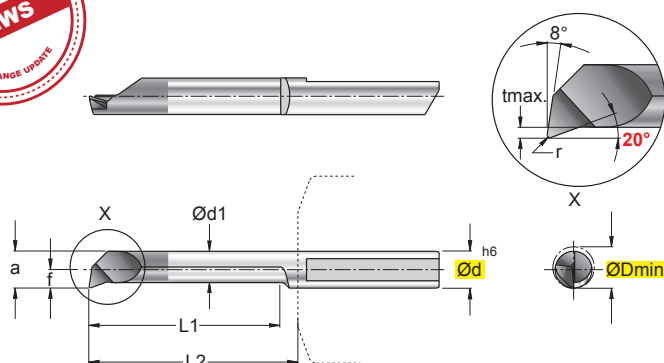
ART.	(mm)										P	M	K	N	S	H	HW		HC	
	 	ØDmin	Ød	Ød1	f	a	tmax	r	L1	L2							NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS		
S101-06.9820-062-15.020R/L		6,2	6	5,25	2,95	5,95	0,5	0,2	15	18	●	●	○	●	○		■		■	
S101-06.9820-062-20.020R/L		6,2	6	5,25	2,95	5,95	0,5	0,2	20	23	●	●	○	●	○		■		■	
S101-06.9820-062-25.020R/L		6,2	6	5,25	2,95	5,95	0,5	0,2	25	28	●	●	○	●	○		■		■	
S101-06.9820-062-30.020R/L		6,2	6	5,25	2,95	5,95	0,5	0,2	30	33	●	●	○	●	○		■		■	
S101-06.9820-062-35.020R/L		6,2	6	5,25	2,95	5,95	0,5	0,2	35	38	●	●	○	●	○		■		■	
S101-06.9820-062-40.020R/L		6,2	6	5,25	2,95	5,95	0,5	0,2	40	43	●	●	○	●	○		■		■	

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

S101-07.9820-...R/L

Tornitura Interna - Internal Turning



art. S100-TS-07..

In figura utensile destro - Right-hand shown

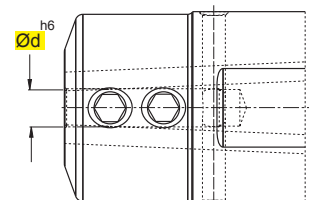
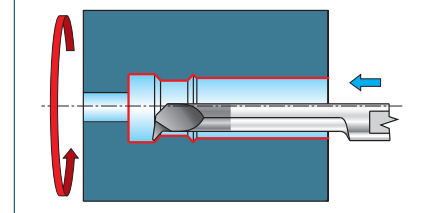
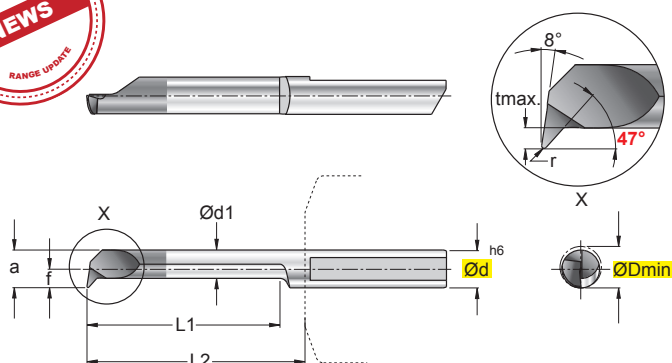
ART.	(mm)										P	M	K	N	S	H	HW		HC	
	L R	ØDmin	Ød	Ød1	f	a	tmax	r	L1	L2							NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS		
S101-07.9820-072-25.020R/L		7,2	7	6,25	3,45	6,95	0,5	0,2	25	28	●	●	○	●	○		■		■	
S101-07.9820-072-30.020R/L		7,2	7	6,25	3,45	6,95	0,5	0,2	30	33	●	●	○	●	○		■		■	
S101-07.9820-072-35.020R/L		7,2	7	6,25	3,45	6,95	0,5	0,2	35	38	●	●	○	●	○		■		■	
S101-07.9820-072-40.020R/L		7,2	7	6,25	3,45	6,95	0,5	0,2	40	43	●	●	○	●	○		■		■	
S101-07.9820-072-45.020R/L New		7,2	7	6,25	3,45	6,95	0,5	0,2	45	48	●	●	○	●	○		■		■	
S101-07.9820-072-50.020R/L		7,2	7	6,25	3,45	6,95	0,5	0,2	50	53	●	●	○	●	○		■		■	

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

S101-...9847-...R/L

Tornitura Interna - Internal Turning



art. S100-TS-...

In figura utensile destro - Right-hand shown

ART.	(mm)										P	M	K	N	S	H	HW		HC	
	 	ØDmin	Ød	Ød1	f	a	tmax	r	L1	L2							NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES	BESCHICHTET RECOUVERTS	
S101-04.9847-022-10.010R/L NEW		2,2	4	1,35	0,95	1,95	0,4	0,1	10	13	●	●	○	●	○		■		■	
S101-04.9847-027-15.010R/L NEW		2,7	4	1,75	1,2	2,45	0,5	0,1	15	18	●	●	○	●	○		■		■	
S101-04.9847-032-15.010R/L		3,2	4	2,15	1,45	2,95	0,6	0,1	15	18	●	●	○	●	○		■		■	
S101-04.9847-042-20.015R/L		4,2	4	2,95	1,95	3,95	0,8	0,15	20	23	●	●	○	●	○		■		■	
S101-05.9847-052-15.015R/L		5,2	5	3,75	2,45	4,95	1,0	0,15	15	18	●	●	○	●	○		■		■	
S101-05.9847-052-25.015R/L		5,2	5	3,75	2,45	4,95	1,0	0,15	25	28	●	●	○	●	○		■		■	
S101-06.9847-062-20.015R/L		6,2	6	3,95	2,95	5,95	1,8	0,15	20	23	●	●	○	●	○		■		■	
S101-06.9847-062-30.015R/L		6,2	6	3,95	2,95	5,95	1,8	0,15	30	33	●	●	○	●	○		■		■	
S101-07.9847-072-40.020R/L		7,2	7	4,15	3,45	6,95	2,5	0,2	40	43	●	●	○	●	○		■		■	

$$n = \frac{V_c \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

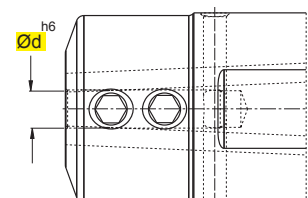
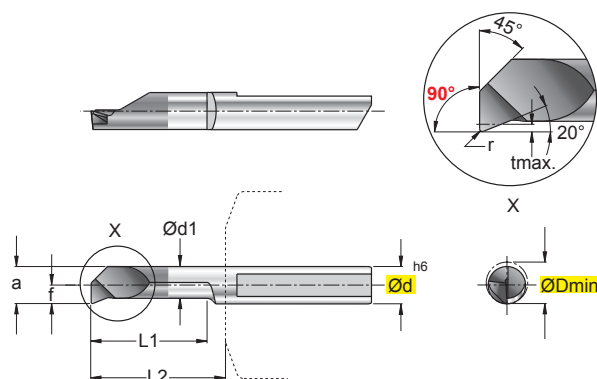
$$V_f = f_n \cdot n = \text{mm/min}$$

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min^{-1}) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

Tornitura Interna - Internal Turning

A schematic diagram of a rotating drill bit. A red curved arrow on the left indicates the drill bit is rotating. A blue arrow on the right indicates the direction of the cutting fluid jet. The jet is shown as a light blue stream emerging from a nozzle and hitting the drill bit's cutting edge, which is highlighted with a red rectangular box.



art. S100-TS-05..

[illegible]

$$n = \frac{V_c \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

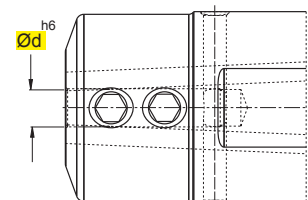
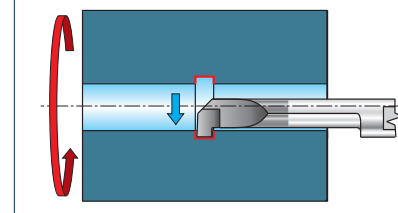
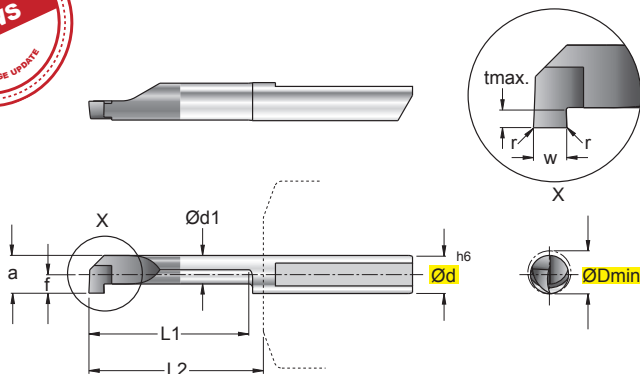
$$V_f = f_n \cdot n = \text{mm/min}$$

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

S102-04...-...R/L

Scanalatura - Grooving



art. S100-TS-04...

In figura utensile destro - Right-hand shown

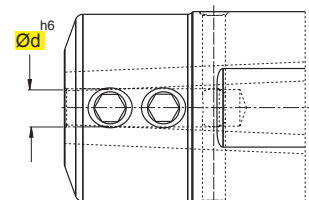
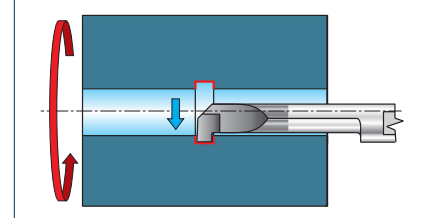
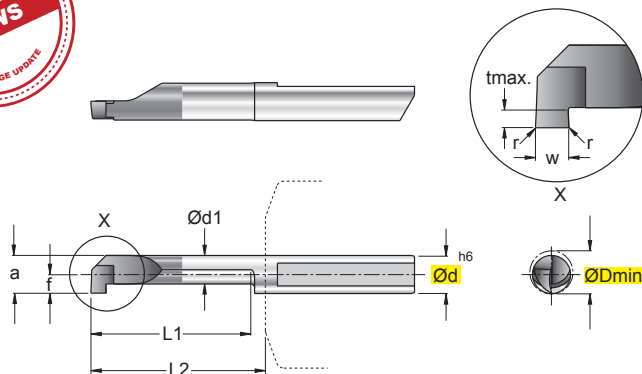
ART.	(mm)										P	M	K	N	S	H	HW		HC	
	ØDmin	Ød	Ød1	f	a	tmax	r	^{+0.03} ₀ w	L1	L2							NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS		
S102-04.0050-020-09.000R/L New	2,0	4	1,15	0,85	1,75	0,4	-	0,5	9	13	●	●	○	●	○		■		■	
S102-04.0070-030-08.000R/L	3,0	4	1,95	1,35	2,75	0,6	-	0,7	8	13	●	●	○	●	○		■		■	
S102-04.0079-042-10.000R/L New	4,2	4	2,95	1,95	3,95	0,8	-	0,79	10	13	●	●	○	●	○		■		■	
S102-04.0100-042-10.000R/L	4,2	4	2,95	1,95	3,95	0,8	-	1,0	10	13	●	●	○	●	○		■		■	
S102-04.0100-042-15.000R/L New	4,2	4	2,95	1,95	3,95	0,8	-	1,0	15	18	●	●	○	●	○		■		■	
S102-04.0100-042-20.000R/L	4,2	4	2,95	1,95	3,95	0,8	-	1,0	20	23	●	●	○	●	○		■		■	

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

This image shows a full page of blank graph paper. The grid consists of thin, light gray horizontal and vertical lines that intersect to form small squares across the entire surface. There are no margins, text, or other markings on the paper.

S102-05...-...R/L

Scanalatura - Grooving



art. S100-TS-05..

In figura utensile destro - Right-hand shown

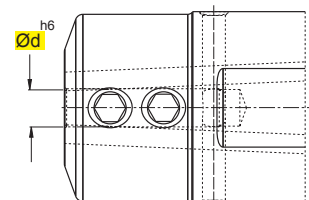
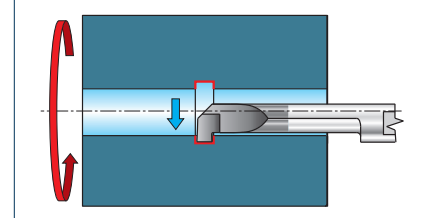
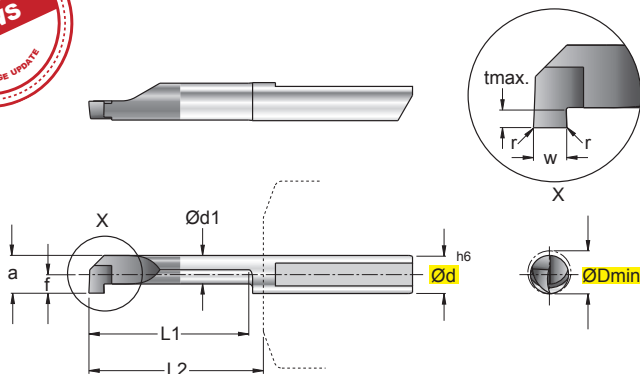
ART.	(mm)										P	M	K	N	S	H	HW		HC	
	ØDmin	Ød	Ød1	f	a	tmax	r	^{+0.03} ₀ w	L1	L2							NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS		
S102-05.0150-050-10.000R/L	5,0	5	3,30	1,9	4,40	1,0	-	1,5	10	13	●	●	○	●	○		■		■	
S102-05.0079-052-10.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	0,79	10	13	●	●	○	●	○		■		■	
S102-05.0079-052-20.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	0,79	20	23	●	●	○	●	○		■		■	
S102-05.0100-052-10.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	1,0	10	13	●	●	○	●	○		■		■	
S102-05.0100-052-15.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	1,0	15	18	●	●	○	●	○		■		■	
S102-05.0100-052-20.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	1,0	20	23	●	●	○	●	○		■		■	
S102-05.0100-052-30.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	1,0	30	33	●	●	○	●	○		■		■	
S102-05.0150-052-10.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	1,5	10	13	●	●	○	●	○		■		■	
S102-05.0150-052-15.000R/L New	5,2	5	3,75	2,45	4,95	1,0	-	1,5	15	18	●	●	○	●	○		■		■	
S102-05.0150-052-20.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	1,5	20	23	●	●	○	●	○		■		■	
S102-05.0150-052-25.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	1,5	25	28	●	●	○	●	○		■		■	
S102-05.0150-052-30.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	1,5	30	33	●	●	○	●	○		■		■	
S102-05.0150-052-35.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	1,5	35	38	●	●	○	●	○		■		■	
S102-05.0200-052-10.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	2,0	10	13	●	●	○	●	○		■		■	
S102-05.0200-052-15.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	2,0	15	18	●	●	○	●	○		■		■	
S102-05.0200-052-20.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	2,0	20	23	●	●	○	●	○		■		■	
S102-05.0200-052-25.000R/L New	5,2	5	3,75	2,45	4,95	1,0	-	2,0	25	28	●	●	○	●	○		■		■	
S102-05.0200-052-30.000R/L	5,2	5	3,75	2,45	4,95	1,0	-	2,0	30	33	●	●	○	●	○		■		■	

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

S102-06...-...R/L

Scanalatura - Grooving



art. S100-TS-06...

In figura utensile destro - Right-hand shown

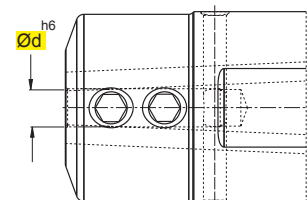
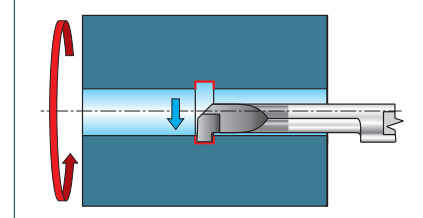
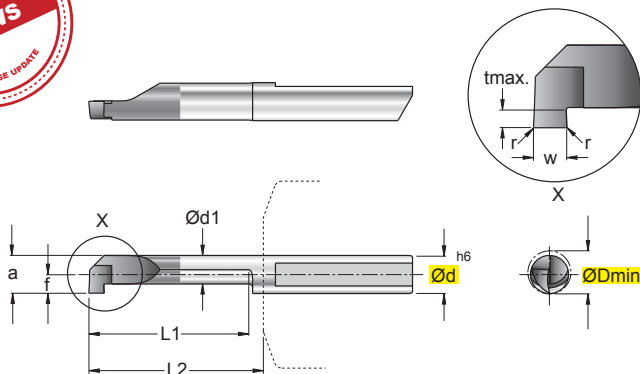
ART.	(mm)										P	M	K	N	S	H	HW		HC	
		ØDmin	Ød	Ød1	f	a	tmax	r	^{+0.03} ₀ w	L1	L2						NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS		
S102-06.0100-062-10.000R/L		6,2	6	3,95	2,95	5,95	1,8	-	1,0	10	13	●	●	○	●		■		■	
S102-06.0100-062-15.000R/L		6,2	6	3,95	2,95	5,95	1,8	-	1,0	15	18	●	●	○	●		■		■	
S102-06.0100-062-20.000R/L New		6,2	6	3,95	2,95	5,95	1,8	-	1,0	20	23	●	●	○	●		■		■	
S102-06.0100-062-25.000R/L		6,2	6	3,95	2,95	5,95	1,8	-	1,0	25	28	●	●	○	●		■		■	
S102-06.0100-062-35.000R/L		6,2	6	3,95	2,95	5,95	1,8	-	1,0	35	38	●	●	○	●		■		■	
S102-06.0150-062-10.000R/L New		6,2	6	3,95	2,95	5,95	1,8	-	1,5	10	13	●	●	○	●		■		■	
S102-06.0150-062-15.000R/L		6,2	6	3,95	2,95	5,95	1,8	-	1,5	15	18	●	●	○	●		■		■	
S102-06.0150-062-20.000R/L New		6,2	6	3,95	2,95	5,95	1,8	-	1,5	20	23	●	●	○	●		■		■	
S102-06.0150-062-25.000R/L		6,2	6	3,95	2,95	5,95	1,8	-	1,5	25	28	●	●	○	●		■		■	
S102-06.0150-062-35.000R/L		6,2	6	3,95	2,95	5,95	1,8	-	1,5	35	38	●	●	○	●		■		■	
S102-06.0200-062-10.000R/L New		6,2	6	3,95	2,95	5,95	1,8	-	2,0	10	13	●	●	○	●		■		■	
S102-06.0200-062-15.000R/L		6,2	6	3,95	2,95	5,95	1,8	-	2,0	15	18	●	●	○	●		■		■	
S102-06.0200-062-20.000R/L		6,2	6	3,95	2,95	5,95	1,8	-	2,0	20	23	●	●	○	●		■		■	
S102-06.0200-062-25.000R/L		6,2	6	3,95	2,95	5,95	1,8	-	2,0	25	28	●	●	○	●		■		■	
S102-06.0200-062-30.000R/L New		6,2	6	3,95	2,95	5,95	1,8	-	2,0	30	33	●	●	○	●		■		■	
S102-06.0200-062-35.000R/L		6,2	6	3,95	2,95	5,95	1,8	-	2,0	35	38	●	●	○	●		■		■	

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

S102-07...-...R/L

Scanalatura - Grooving



art. S100-TS-07..

In figura utensile destro - Right-hand shown

ART.	(mm)										P	M	K	N	S	H	HW		HC	
	ØDmin	Ød	Ød1	f	a	tmax	r	$+0.03$ 0	L1	L2							NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS		
S102-07.0100-072-15.000R/L	7,2	7	4,25	3,45	6,95	2,5	-	1,0	15	18	●	●	○	●	○		■		■	
S102-07.0100-072-20.000R/L New	7,2	7	4,25	3,45	6,95	2,5	-	1,0	20	23	●	●	○	●	○		■		■	
S102-07.0100-072-25.000R/L	7,2	7	4,25	3,45	6,95	2,5	-	1,0	25	28	●	●	○	●	○		■		■	
S102-07.0100-072-35.000R/L	7,2	7	4,25	3,45	6,95	2,5	-	1,0	35	38	●	●	○	●	○		■		■	
S102-07.0150-072-10.000R/L New	7,2	7	4,25	3,45	6,95	2,5	-	1,5	10	13	●	●	○	●	○		■		■	
S102-07.0150-072-15.000R/L	7,2	7	4,25	3,45	6,95	2,5	-	1,5	15	18	●	●	○	●	○		■		■	
S102-07.0150-072-20.000R/L New	7,2	7	4,25	3,45	6,95	2,5	-	1,5	20	23	●	●	○	●	○		■		■	
S102-07.0150-072-25.000R/L	7,2	7	4,25	3,45	6,95	2,5	-	1,5	25	28	●	●	○	●	○		■		■	
S102-07.0150-072-30.000R/L New	7,2	7	4,25	3,45	6,95	2,5	-	1,5	30	33	●	●	○	●	○		■		■	
S102-07.0150-072-35.000R/L	7,2	7	4,25	3,45	6,95	2,5	-	1,5	35	38	●	●	○	●	○		■		■	
S102-07.0150-072-40.000R/L New	7,2	7	4,25	3,45	6,95	2,5	-	1,5	40	43	●	●	○	●	○		■		■	
S102-07.0157-072-10.000R/L	7,2	7	4,25	3,45	6,95	2,5	-	1,57	10	13	●	●	○	●	○		■		■	
S102-07.0200-072-10.000R/L	7,2	7	4,25	3,45	6,95	2,5	-	2,0	10	13	●	●	○	●	○		■		■	
S102-07.0200-072-15.000R/L	7,2	7	4,25	3,45	6,95	2,5	-	2,0	15	18	●	●	○	●	○		■		■	
S102-07.0200-072-20.000R/L	7,2	7	4,25	3,45	6,95	2,5	-	2,0	20	23	●	●	○	●	○		■		■	
S102-07.0200-072-25.000R/L	7,2	7	4,25	3,45	6,95	2,5	-	2,0	25	28	●	●	○	●	○		■		■	
S102-07.0200-072-30.000R/L	7,2	7	4,25	3,45	6,95	2,5	-	2,0	30	33	●	●	○	●	○		■		■	
S102-07.0200-072-35.000R/L	7,2	7	4,25	3,45	6,95	2,5	-	2,0	35	38	●	●	○	●	○		■		■	

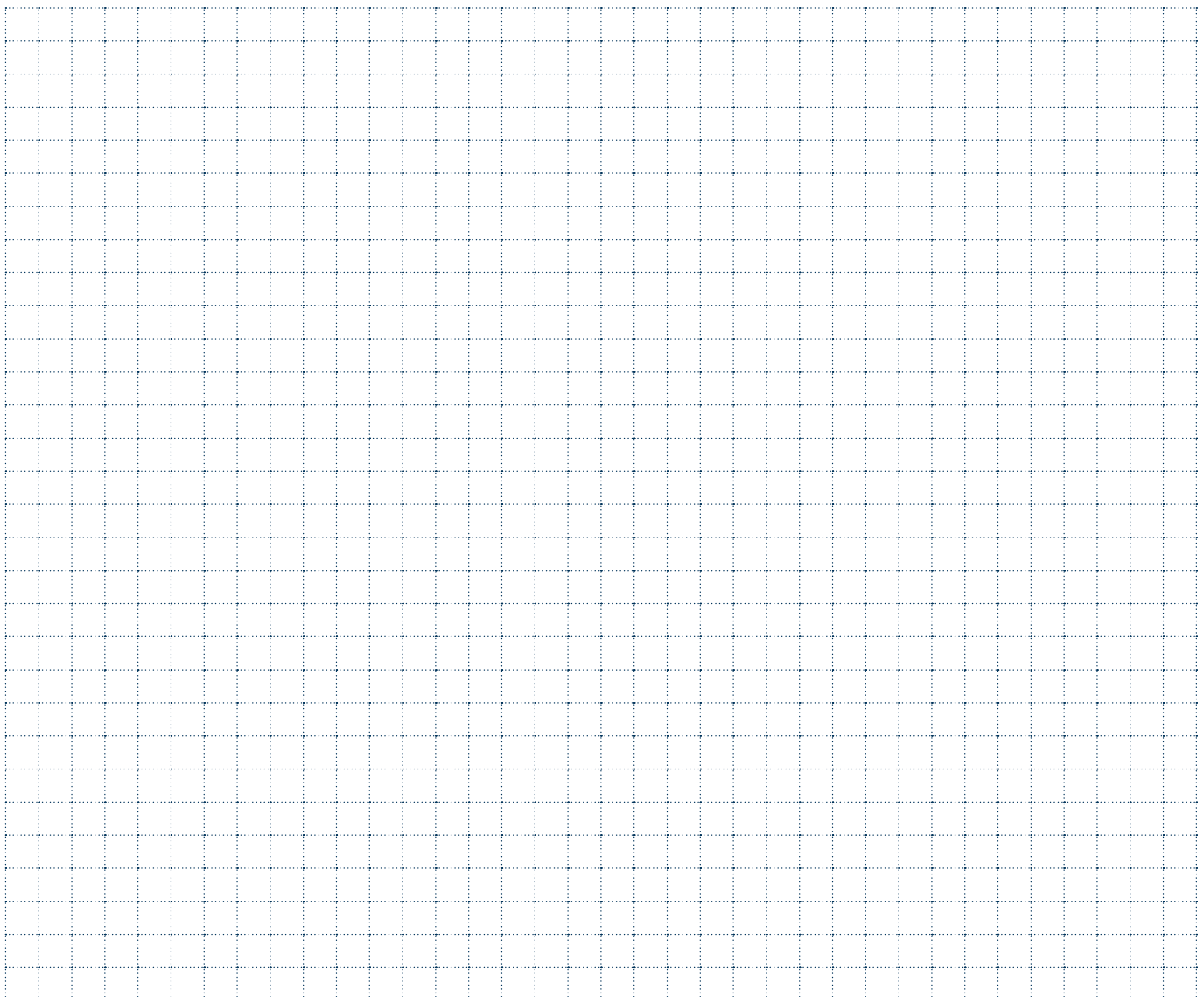
MATERIALI - MATERIALS Pag. 1199		VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	Vc m/min				fn mm
				N3635	F7835			
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1-5	125-300		80-160			0,01-0,03
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350		80-110			0,01-0,03
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325		60-100			0,01-0,03
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240		50-100			0,01-0,03
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230		20-80			0,01-0,03
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	30-90	30-150			0,01-0,03
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	25-80	30-130			0,01-0,03
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	30-90	30-100			0,01-0,03
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21-25	60-130	80-150				0,01-0,03
	RAME E SUE LEGHE - COPPER	26-28	90-110	50-110				0,01-0,03
	NON METALLICI - PLASTICS	29-30	/	20-80				0,01-0,03
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31-35	200-320		30-80			0,01-0,03
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ¹⁾		30-80			0,01-0,03
H	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 ²⁾					

$$n = \frac{Vc \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$Vf = fn \cdot n = \text{mm/min}$$

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

NOTE - NOTES

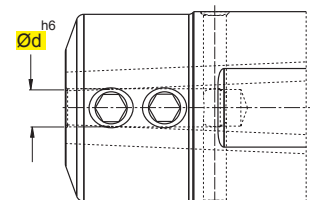
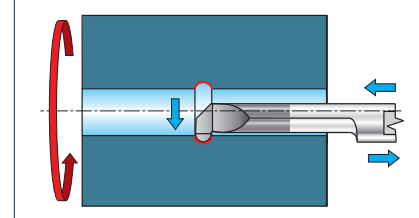
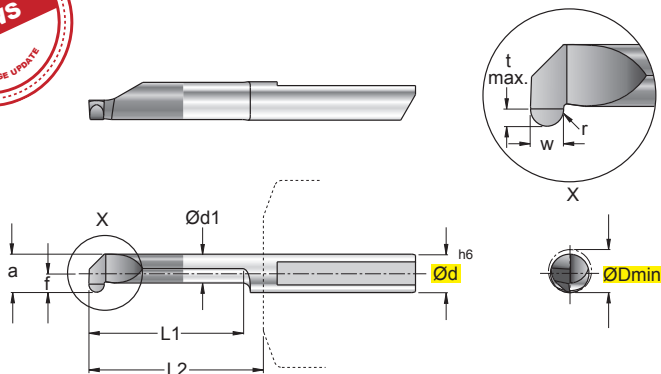


S102-...R...-...R/L

Scanalatura - Grooving



NEW



art. S100-TS-...

In figura utensile destro - Right-hand shown

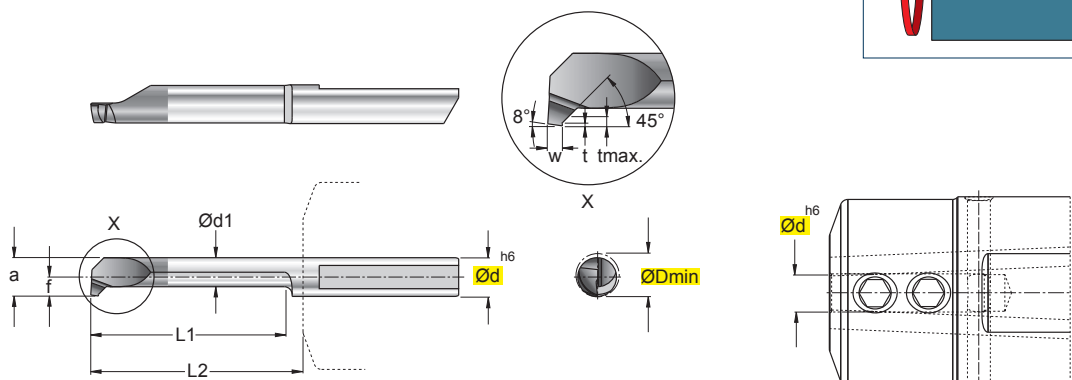
ART.	(mm)										P	M	K	N	S	H	HW		HC	
	ØDmin	Ød	Ød1	f	a	tmax	r	^{+0.03} ₀ w	L1	L2							NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS		
S102-04.R100-042-15.050R/L New	4,2	4	2,95	1,95	3,95	0,8	0,5	1	15	18	●	●	●	●	○		■		■	
S102-05.R100-052-20.050R/L	5,2	5	3,75	2,45	4,95	1,0	0,5	1	20	23	●	●	●	●	○		■		■	
S102-05.R200-052-20.100R/L	5,2	5	3,75	2,45	4,95	1,0	1,0	2	20	23	●	●	●	●	○		■		■	
S102-06.R100-062-25.050R/L	6,2	6	3,95	2,95	5,95	1,8	0,5	1	25	28	●	●	●	●	○		■		■	
S102-06.R150-062-25.075R/L New	6,2	6	3,95	2,95	5,95	1,8	0,75	1,5	25	28	●	●	●	●	○		■		■	
S102-06.R200-062-20.100R/L New	6,2	6	3,95	2,95	5,95	1,8	1,0	2	20	23	●	●	●	●	○		■		■	
S102-06.R200-062-25.100R/L	6,2	6	3,95	2,95	5,95	1,8	1,0	2	25	28	●	●	●	●	○		■		■	
S102-07.R100-072-30.050R/L New	7,2	7	4,25	3,45	6,95	2,5	0,5	1	30	33	●	●	●	●	○		■		■	
S102-07.R150-072-30.075R/L New	7,2	7	4,25	3,45	6,95	2,5	0,75	1,5	30	33	●	●	●	●	○		■		■	
S102-07.R200-072-30.100R/L New	7,2	7	4,25	3,45	6,95	2,5	1,0	2	30	33	●	●	●	●	○		■		■	

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

Pretaglio e smussatura

Pre-part-Off and Chamfering



In figura utensile destro - Right-hand shown

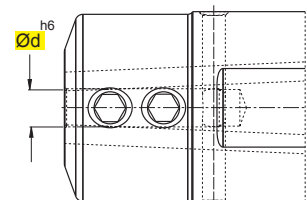
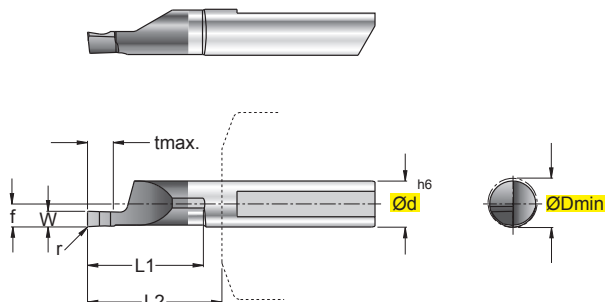
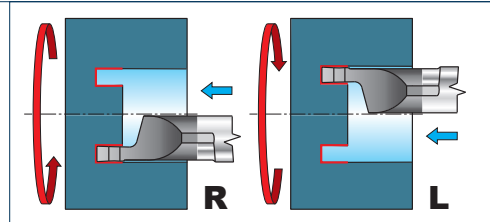
■ DISPONIBILI - IN STOCK - LIEFERBAR - DISPONIBLES / ■ **NEW** □ A RICHIESTA - ON REQUEST - AUF ANFRAGE - SUR DEMANDE / □ **NEW**
 ● APPLICAZIONE CONSIGLIATA-RECOMMENDED APPLICATION ○ ○ APPLICAZIONE POSSIBILE - POSSIBLE APPLICATION
 EMPFOHLENER EINSATZ - APPLICATION CONSEILLÉE MÖGLICHE ANWENDUNG - APPLICATION POSSIBLE

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

This image shows a full page of blank graph paper. The grid consists of small, evenly spaced squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

S103-06...-I62-15.015R/L

Scanalatura Frontale - Face Grooving



art. S100-TS-06...

In figura utensile destro - Right-hand shown

ART.	(mm)															HW		HC	
		ØDmin	Ød	f	tmax	r	$\begin{smallmatrix} +0.05 \\ 0 \end{smallmatrix}$ w	L1	L2							NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS		
S103-06.0100-I62-15.015R/L		6,2	6	2,95	2	0,15	1,0	15	18	P	M	K	N	S	H	N3635	F7835		
S103-06.0150-I62-15.015R/L		6,2	6	2,95	3	0,15	1,5	15	18	●	●	○	●	○		■		■	
S103-06.0200-I62-15.015R/L		6,2	6	2,95	4	0,15	2,0	15	18	●	●	○	●	○		■		■	
S103-06.0239-I62-15.015R/L		6,2	6	2,95	5	0,15	2,39	15	18	●	●	○	●	○		■		■	
S103-06.0250-I62-15.015R/L		6,2	6	2,95	5	0,15	2,5	15	18	●	●	○	●	○		■		■	
S103-06.0300-I62-15.015R/L		6,2	6	2,95	6	0,15	3,0	15	18	●	●	○	●	○		■		■	

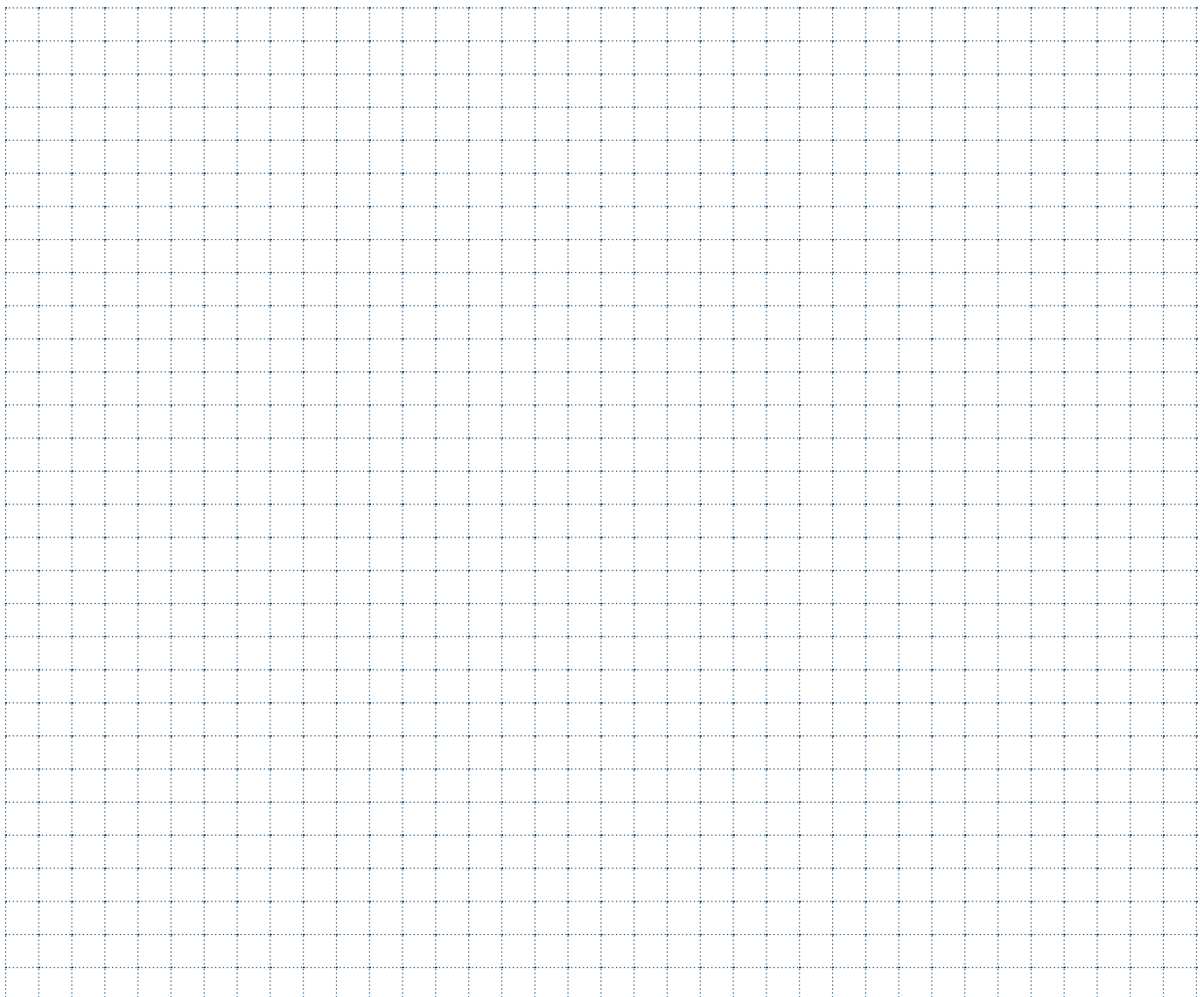
MATERIALI - MATERIALS Pag. 1199		VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	Vc m/min				fn mm
				N3635	F7835			
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1-5	125-300		80-160			0,01-0,05
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350		80-110			0,01-0,05
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325		60-100			0,01-0,05
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240		50-100			0,01-0,05
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230		20-80			0,01-0,05
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	30-90	30-150			0,01-0,05
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	25-80	30-130			0,01-0,05
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	30-90	30-100			0,01-0,05
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21-25	60-130	80-150				0,01-0,05
	RAME E SUE LEGHE - COPPER	26-28	90-110	50-110				0,01-0,05
	NON METALLICI - PLASTICS	29-30	/	20-80				0,01-0,05
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31-35	200-320		30-80			0,01-0,05
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ¹⁾		30-80			0,01-0,05
H	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 ²⁾					

$$n = \frac{Vc \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$Vf = fn \cdot n = \text{mm/min}$$

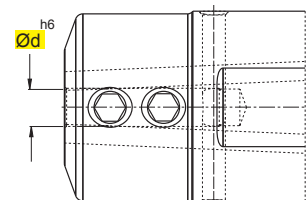
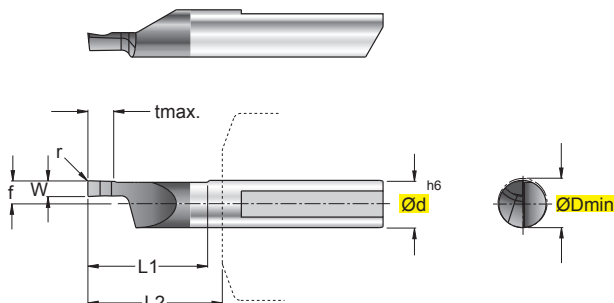
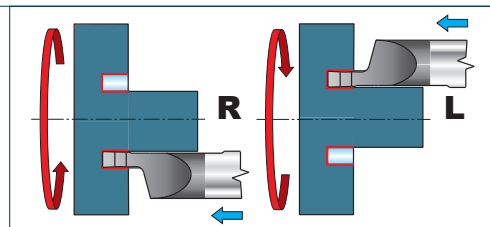
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

NOTE - NOTES



S103-06...-E62-15.015R/L

Scanalatura Frontale - Face Grooving



art. S100-TS-06..

In figura utensile destro - Right-hand shown

ART.	(mm)															HW		HC	
		ØDmin	Ød	f	tmax	r	$\begin{smallmatrix} +0.05 \\ 0 \end{smallmatrix}$ w	L1	L2							NON RIV. CEMENTED CARBIDE GRADES	RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS		
S103-06.0100-E62-15.015R/L		6,2	6	2,95	2	0,15	1,0	15	18	P	M	K	N	S	H	N3635	F7835		
S103-06.0150-E62-15.015R/L		6,2	6	2,95	3	0,15	1,5	15	18	●	●	○	●	○		■		■	
S103-06.0200-E62-15.015R/L		6,2	6	2,95	4	0,15	2,0	15	18	●	●	○	●	○		■		■	
S103-06.0239-E62-15.015R/L		6,2	6	2,95	5	0,15	2,39	15	18	●	●	○	●	○		■		■	
S103-06.0250-E62-15.015R/L		6,2	6	2,95	5	0,15	2,5	15	18	●	●	○	●	○		■		■	
S103-06.0300-E62-15.015R/L		6,2	6	2,95	6	0,15	3,0	15	18	●	●	○	●	○		■		■	

MATERIALI - MATERIALS Pag. 1199		VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	Vc m/min				fn mm
				N3635	F7835			
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1-5	125-300		80-160			0,01-0,05
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350		80-110			0,01-0,05
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325		60-100			0,01-0,05
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240		50-100			0,01-0,05
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230		20-80			0,01-0,05
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	30-90	30-150			0,01-0,05
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	25-80	30-130			0,01-0,05
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	30-90	30-100			0,01-0,05
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21-25	60-130	80-150				0,01-0,05
	RAME E SUE LEGHE - COPPER	26-28	90-110	50-110				0,01-0,05
	NON METALLICI - PLASTICS	29-30	/	20-80				0,01-0,05
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31-35	200-320		30-80			0,01-0,05
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ¹⁾		30-80			0,01-0,05
H	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 ²⁾					

$$n = \frac{Vc \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$Vf = fn \cdot n = \text{mm/min}$$

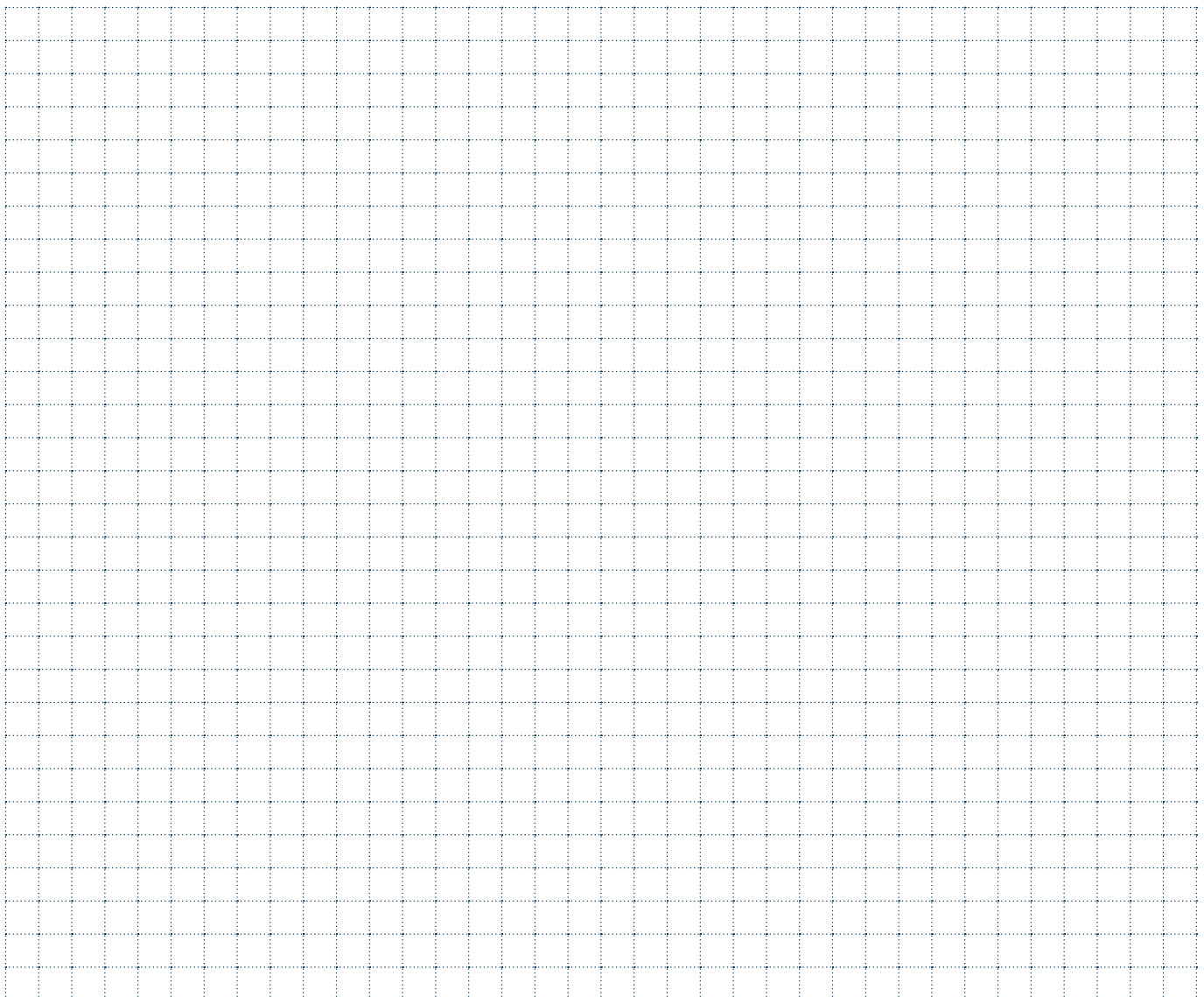
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED

n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS

fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION

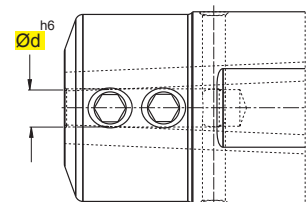
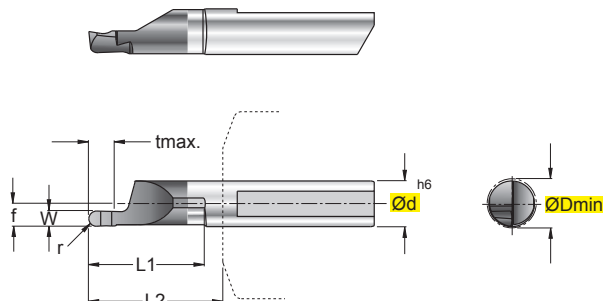
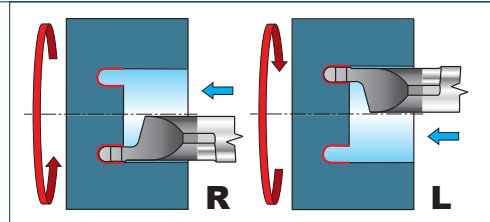
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

NOTE - NOTES



S103-06.R...-I62-15...R/L

Scanalatura Frontale - Face Grooving



art. S100-TS-06...

In figura utensile destro - Right-hand shown

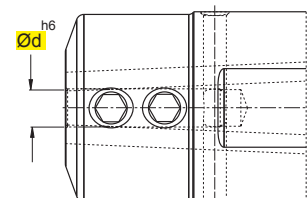
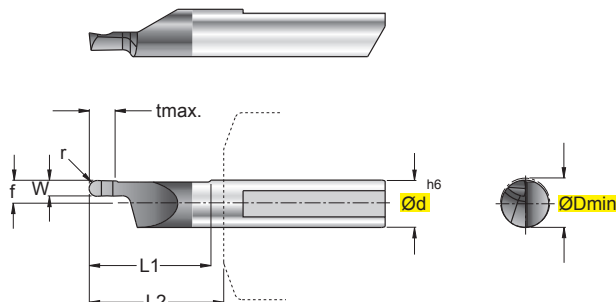
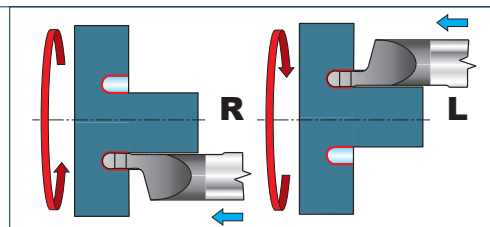
ART.	(mm)															HW		HC	
		ØDmin	Ød	f	tmax	r	$\begin{smallmatrix} +0.05 \\ 0 \end{smallmatrix}$ w	L1	L2							NON RIV. CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS	
S103-06.R100-I62-15.050R/L		6,2	6	2,95	2	0,5	1	15	18	P	M	K	N	S	H	■		■	
S103-06.R160-I62-15.080R/L		6,2	6	2,95	3	0,8	1,6	15	18	●	●	○	●	○		■		■	
S103-06.R200-I62-15.100R/L		6,2	6	2,95	4	1,0	2	15	18	●	●	○	●	○		■		■	
										●	●	○	●	○				■	

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min^{-1}) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

S103-06.R...-E62-15...R/L

Scanalatura Frontale - Face Grooving



art. S100-TS-06...

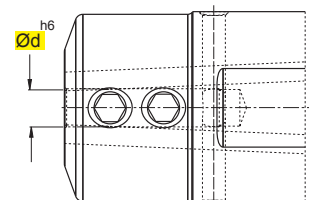
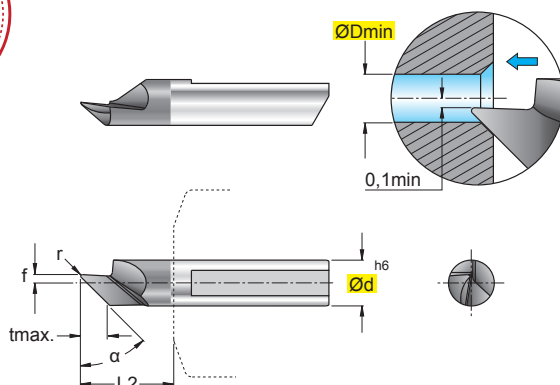
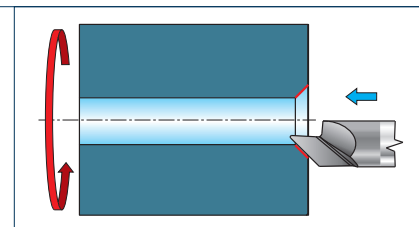
In figura utensile destro - Right-hand shown

ART.	(mm)															HW		HC	
	 	ØDmin	Ød	f	tmax	r	$\begin{smallmatrix} +0.05 \\ 0 \end{smallmatrix}$ w	L1	L2							NON RIV. CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADES BESCHICHTET RECOUVERTS	
S103-06.R100-E62-15.050R/L		6,2	6	2,95	2	0,5	1	15	18	P	M	K	N	S	H	N3635		F7835	
S103-06.R160-E62-15.080R/L		6,2	6	2,95	3	0,8	1,6	15	18	●	●	○	●	○		■		■	
S103-06.R200-E62-15.100R/L		6,2	6	2,95	4	1,0	2	15	18	●	●	○	●	○		■		■	
										●	●	●	●	○				■	

Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

This image shows a full page of blank graph paper. The grid consists of small, evenly spaced squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.

Smussatura - Chamfering



art. S100-TS-06..

In figura utensile destro - Right-hand shown

[illegible]

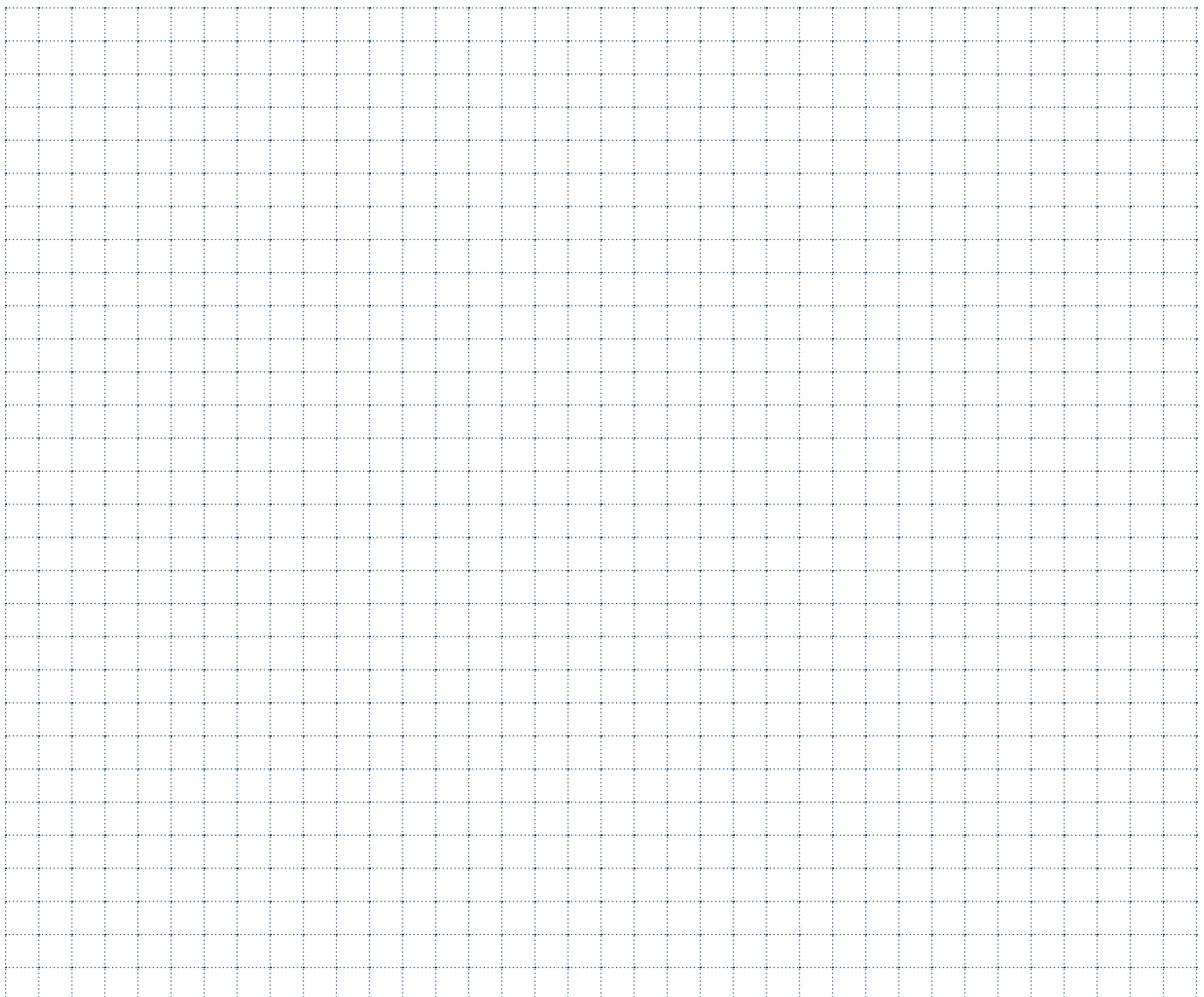
MATERIALI - MATERIALS Pag. 1199		VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	Vc m/min				fn mm
				N3635	F7835			
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1-5	125-300		80-160			0,01-0,05
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350		80-110			0,01-0,05
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325		60-100			0,01-0,05
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240		50-100			0,01-0,05
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230		20-80			0,01-0,05
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	30-90	30-150			0,01-0,05
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	25-80	30-130			0,01-0,05
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	30-90	30-100			0,01-0,05
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21-25	60-130	80-150				0,01-0,05
	RAME E SUE LEGHE - COPPER	26-28	90-110	50-110				0,01-0,05
	NON METALLICI - PLASTICS	29-30	/	20-80				0,01-0,05
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31-35	200-320		30-80			0,01-0,05
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ¹⁾		30-80			0,01-0,05
H	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 ²⁾					

$$n = \frac{Vc \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$Vf = fn \cdot n = \text{mm/min}$$

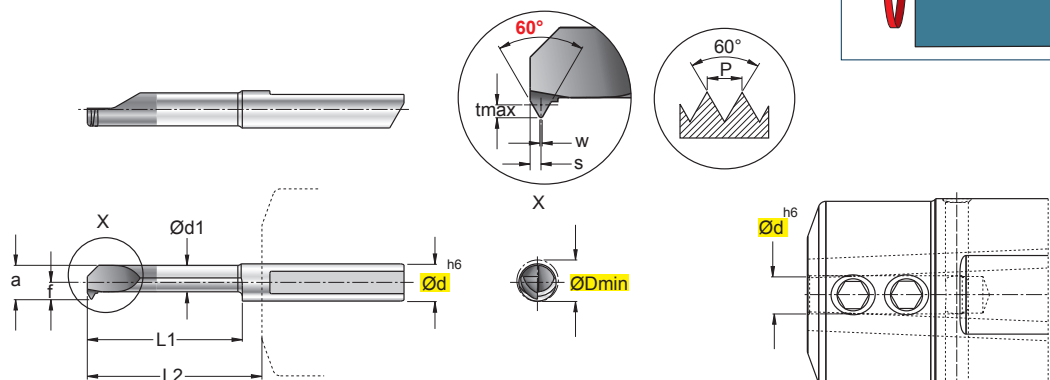
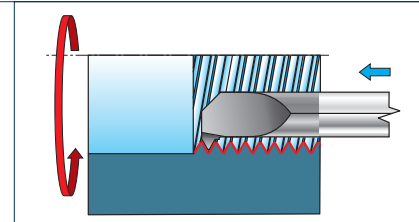
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

NOTE - NOTES



S104-...0060-...R/L

Filettatura ISO Profilo Parziale **ISO Threading, Partial Profile**



art. S100-TS-..

In figura utensile destro - Right-hand shown

ART.	(mm)																			HW		HC	
	 	ØDmin	Ød	P _(min)	P _(max)	Ød1	f	a	tmax	s	w	L1	L2							NON RIV. CEMENTED CARBIDE GRADES		RIVESTITI COATED GRADE BESCHICHTET RECOUVERTS	
																				N3635		F7835	
S104-04.0060-042-15.050R	4,2	4	0,50	0,70	2,95	1,95	3,95	0,4	0,35	0,06	15	18											
S104-05.0060-048-15.100R/L	4,8	5	1,00	1,25	3,55	2,25	4,55	0,7	0,55	0,12	15	18											
S104-05.0060-048-20.100R/L	4,8	5	1,00	1,25	3,55	2,25	4,55	0,7	0,55	0,12	20	23											
S104-06.0060-062-15.125R	6,2	6	1,25	1,50	3,95	2,95	5,95	0,84	0,75	0,16	15	18											
S104-06.0060-062-25.125R	6,2	6	1,25	1,50	3,95	2,95	5,95	0,84	0,75	0,16	25	28											
S104-06.0060-062-15.150R	6,2	6	1,50	1,75	3,95	2,95	5,95	0,98	0,80	0,18	15	18											
S104-06.0060-062-25.150R	6,2	6	1,50	1,75	3,95	2,95	5,95	0,98	0,80	0,18	25	28											

MATERIALI - MATERIALS Pag. 1199		VDI 3323 GR.	HB Rm ⁽¹⁾ HRC ⁽²⁾	Vc m/min			
				N3635	F7835		
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1-5	125-300		80-160		
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350		80-110		
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325		60-100		
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240		50-100		
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230		20-80		
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	30-90	30-150		
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	25-80	30-130		
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	30-90	30-100		
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21-25	60-130	80-150			
	RAME E SUE LEGHE - COPPER	26-28	90-110	50-110			
	NON METALLICI - PLASTICS	29-30	/	20-80			
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31-35	200-320		30-80		
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ⁽¹⁾		30-80		
H	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 ⁽²⁾				

$$n = \frac{Vc \cdot 1000}{\varnothing D \cdot 3,14} = \text{giri/min (min}^{-1}\text{)}$$

$$Vf = fn \cdot n = \text{mm/min}$$

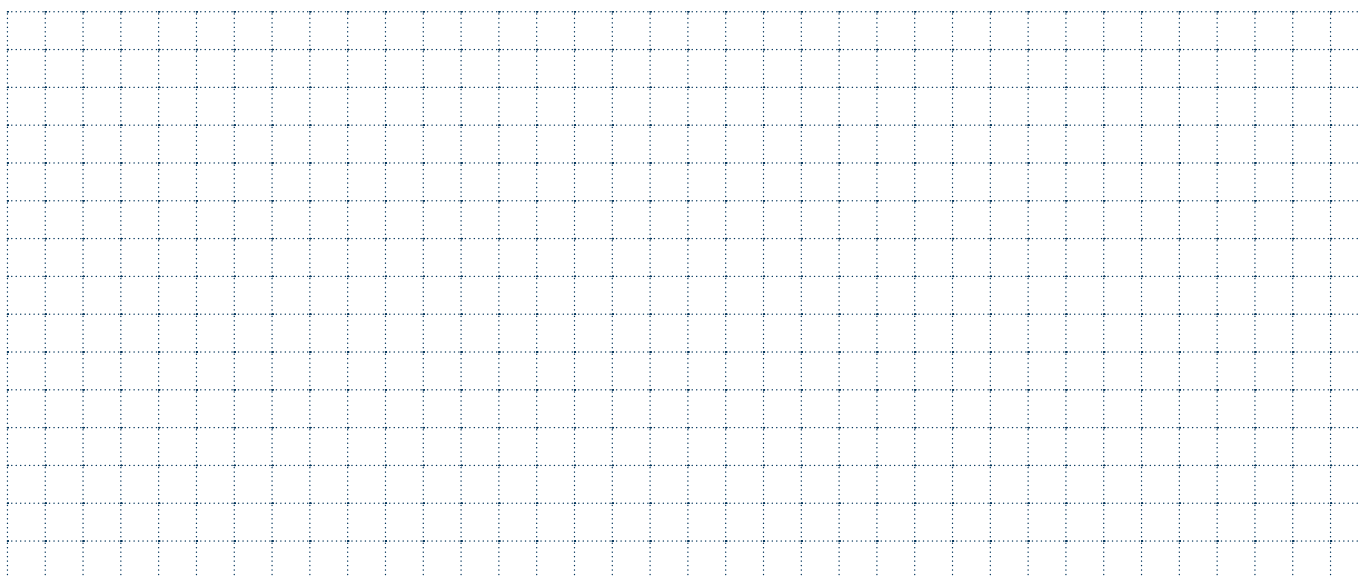
Vc = m/min VELOCITÀ DI TAGLIO - CUTTING SPEED
n = giri/min (min⁻¹) NUMERO DI GIRI - NUMBER OF REVOLUTIONS
fn = mm AVANZAMENTO AL GIRO - FEED / REVOLUTION
Vf = mm/min VELOCITÀ DI AVANZAMENTO - FEED SPEED

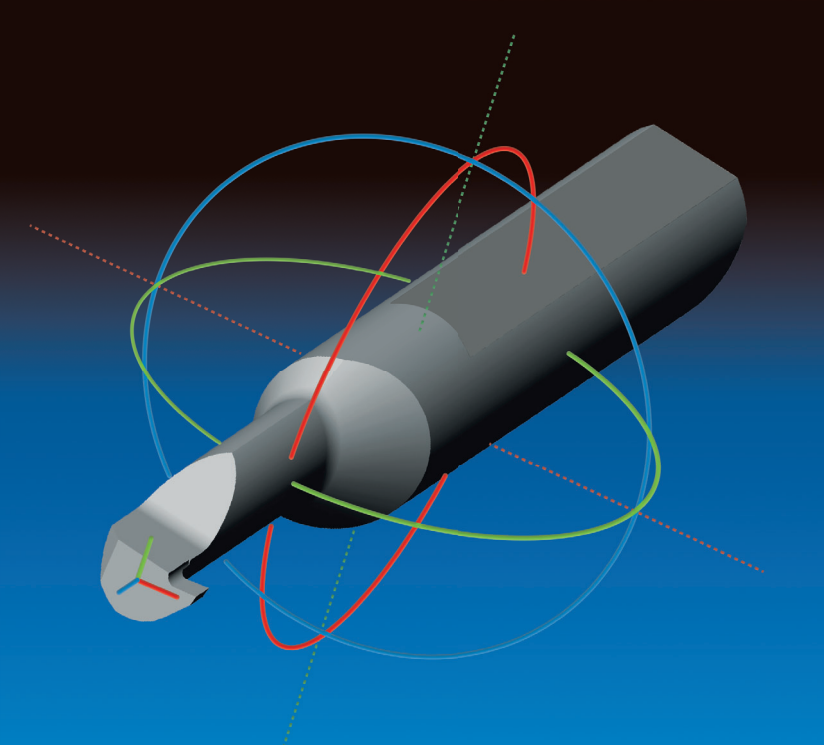
PASSO - PITCH		NUMERO DI PASSATE - NUMBER OF PASSES								
		P (Resistenza alla trazione N/mm ²) - (Tensile strenght N/mm ²)					M	K	N	S
mm	Gg/"TPI	400-500	500-700	700-850	850-1150	>1150				
0,5	48	5	5	5	5	8	8	5	8	5
0,8	32	6	6	6	6	8	8	6	8	6
1	24	7	7	7	7	8	8	7	8	7
1,25	20-19	8	8	8	8	10	10	8	10	8
1,5	16	10	10	10	10	12	12	10	12	10
1,75	14	12	12	12	12	14	14	12	14	12
2	12-11	13	13	13	13	15	15	13	15	13
2,5	10	15	15	16	16	18	18	16	18	15
3,0-3,5	8	16	16	17	17	20	20	17	20	16

IL NUMERO DI PASSATE E' UN VALORE DA CONSIDERARE PURAMENTE INDICATIVO
THE NUMBER OF PASSES IS TO BE CONSIDERED PURELY INDICATIVE

LE PASSATE DI FINITURA NON SONO CONSIDERATE IN TABELLA
THE FINISHING PASSES ARE NOT INCLUDED IN THE CHART

NOTE - NOTES





Panoramica qualità - General view - Qualitätsübersicht - Vue d'ensemble qualité

DIN ISO 513	P ACCIAI STEELS STAHL ACIERS					M ACCIAI INOSSIDABILI STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE				K GHISE CAST IRON GRAUGUSS FONTE GRISE					N NON FERROSI NONFERROUS NICHTEISENMA PAS FERREUX				S MAT.DIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERILIEN MAT.DIFFICILES					H MATERIALI DURI HARD MATERIALS HARTE MATERILIEN MATÉRIAUX DURS					
	01	10	20	30	40	50	10	20	30	40	01	10	20	30	40	10	20	30	40	01	10	20	30	40	10	20	30	40	
HW																													
HC																													
	TENACITÀ - TOUGHNESS - ZÄHIGKEIT - TÉNACITÉ																												
																													
	RESISTENZA ALL'USURA - RESISTANCE TO WEAR - VERSCHLEISSFESTIGKEIT - RÉSISTANCE À L'USURE																												
	AVANZAMENTO - FEED - VORSCHUB - AVANCE																												
																													
	VELOCITÀ - SPEED - GESCHWINDIGKEIT - VITESSE																												
HT	CERMET					HW METALLO DURO NON RICOPERTO UNCOATED CARBIDE UNBESCHICHTETES HARTMETALL MÉTAL DUR PAS RECOUVERT										HC METALLO DURO RICOPERTO COATED CARBIDE BESCHICHTETES HARTMETALL MÉTAL DUR RECOUVERT													

Impiego delle qualità - Application of the grade - Einsatz der verschiedenen sorten - Utilisation de les qualités

SHG	DIN ISO 513		MATERIALE - MATERIAL MATERIALIEN - MATÉRIAUX						QUICK PICK	INDICAZIONI - USO	
			P ACCIAI STEELS STAHL ACIER	M ACCIAI INOX STAINLESS STEELS ROSTFREIER STAHL ACIER INOXYDABLE	K GHISA CAST IRON GRAUGUSS FONTE GRISE	N MATNON FERROSI NONFERROUS MAT. NICHTEISENMATERIALIEN MAT.FERREUX	S MATDIFFICILI DIFFICULT MATERIAL SCHWIERIGE MATERILIEN MAT.DIFFICILES	H MATERIALI DURI HARD MATERIALS HARTE MATERILIEN MATÉRIAUX DURS			
N3635	HW	K30-40 N30-40			○	●					- QUALITÀ ADATTA PER MATERIALI NON FERROSI - METALLO DURO DI ALTA TENACITÀ, IDEALE ANCHE IN CONDIZIONI DI TAGLIO DIFFICILI - GRADE SUITABLE FOR NON-FERROUS MATERIALS - VERY TOUGH HARD METAL, IDEALLY SUITED ALSO UNDER DIFFICULT CUTTING CONDITIONS - SORTE FÜR NICHTEISENMATERIALIEN - HARTMETALL MIT HOHER ZÄHIGKEIT, AUCH UNTER SCHWEREN SCHNITTBEDINGUNGEN BESTENS GEEIGNET - QUALITE INDIQUEE POUR DES MATERIAUX NON FERREUX. - METAL DUR D'UNE HAUTE TENACITE, IDEAL MEME DANS DES CONDITIONS DE COUPE DIFFICILES
F7835	HC	P30-40 M30-40 K30-40	●	●	●		○				- BUONA RESISTENZA ALL'USURA - ELEVATA STABILITÀ ALLO SHOCK TERMICO - MOLTO TENACE, ADATTO ANCHE IN CONDIZIONI DI TAGLIO DIFFICILI - GOOD RESISTANCE TO WEAR - HIGH THERMAL SHOCK RESISTANCE - VERY TOUGH, ALSO SUITABLE UNDER DIFFICULT CUTTING CONDITIONS - GUTE VERSCHLEISSFESTIGKEIT - HOHE TEMPERATURWECHSELBESTÄNDIGKEIT - SEHR ZÄH, AUCH UNTER SCHWEREN SCHNITTBEDINGUNGEN GEEIGNET - BONNE RESISTANCE A L'USURE - STABILITE ELEVÉE AU CHOC THERMIQUE - TRES TENACE, INDIQUE MEME DANS DES CONDITIONS DE COUPE DIFFICILES
	PVD	S30-40 H30-40									

● APPLICAZIONE CONSIGLIATA
RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ
APPLICATION CONSEILLÉE

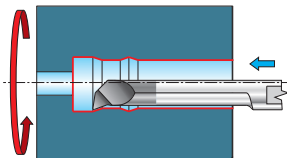
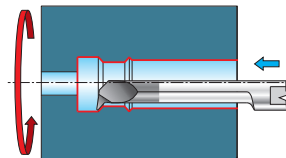
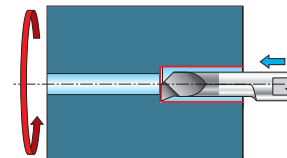
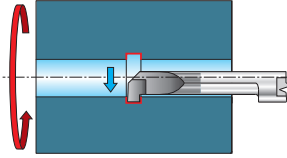
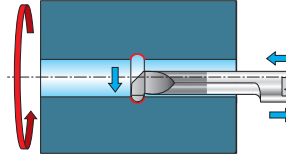
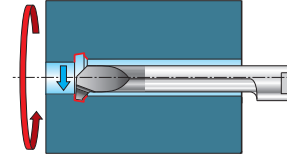
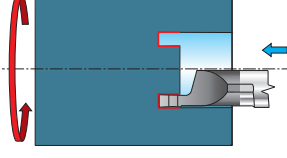
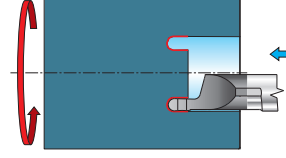
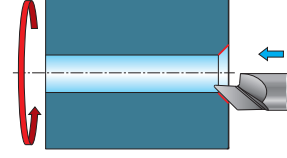
○ APPLICAZIONE POSSIBILE
POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG
APPLICATION POSSIBLE

● APPLICAZIONE CONSIGLIATA
RECOMMENDED APPLICATION
EMPFOHLENER EINSATZ
APPLICATION CONSEILLÉE

○ APPLICAZIONE POSSIBILE
POSSIBLE APPLICATION
MÖGLICHE ANWENDUNG
APPLICATION POSSIBLE

PARAMETRI DI TAGLIO - CUTTING DATA
SCHNITTPARAMETER - PARAMETRES DE COUPE

MATERIALI - MATERIALS Pag. 1199		VDI 3323 GR.	HB Rm ¹⁾ HRC ²⁾	Vc m/min			
				N3635	F7835		
P	ACCIAIO NON LEGATO - NOT ALLOY STEEL	1-5	125-300		80-160		
	ACCIAIO POCO LEGATO - LOW ALLOY STEEL	6-9	180-350		80-110		
	ACCIAIO ALTO LEGATO - ALLOY STEEL	10-11	200-325		60-100		
	INOX MARTENS. - STAINLESS STEEL MART	12-13	200-240		50-100		
M	INOX AUST. DUPLEX - STAINLESS STEEL AUST	14.1-14.2	180-230		20-80		
K	GHISA GRIGIA - GREY CAST IRON	15-16	180-260	30-90	30-150		
	GHISA SFEROIDALE - SPHEROIDAL GRAPHITE	17-18	160-250	25-80	30-130		
	GHISA MALLEABILE - MALLEABLE CAST IRON	19-20	130-230	30-90	30-100		
N	ALLUMINIO E SUE LEGHE - ALUMINIUM	21-25	60-130	80-150			
	RAME E SUE LEGHE - COPPER	26-28	90-110	50-110			
	NON METALLICI - PLASTICS	29-30	/	20-80			
S	LEGHE RESIST. CALORE - HIG. TEMP. ALLOY	31-35	200-320		30-80		
	TITANIO E SUE LEGHE - TITANIUM	36-37	400-1050 ¹⁾		30-80		
H	ACCIAIO TEMPRATO - HARDENED STEEL	38-41	45-60 ²⁾				

LAVORAZIONI MACHINING				AVANZAMENTO f (mm/giro) FEED f (mm/rev.)
COPIATURA COPY				0,02 - 0,08
SCANALATURA GROOVING				0,01 - 0,03
SCANALATURA FRONTALE FACE GROOVING				0,01 - 0,05