



# ALLIED MACHINE & ENGINEERING



Drilling



Reaming



Burnishing



Threading



## Wohlhaupter®

► **BORING**

Large Diameter Boring Tools



Specials



SECTION

# B10-G

Large Diameter Boring

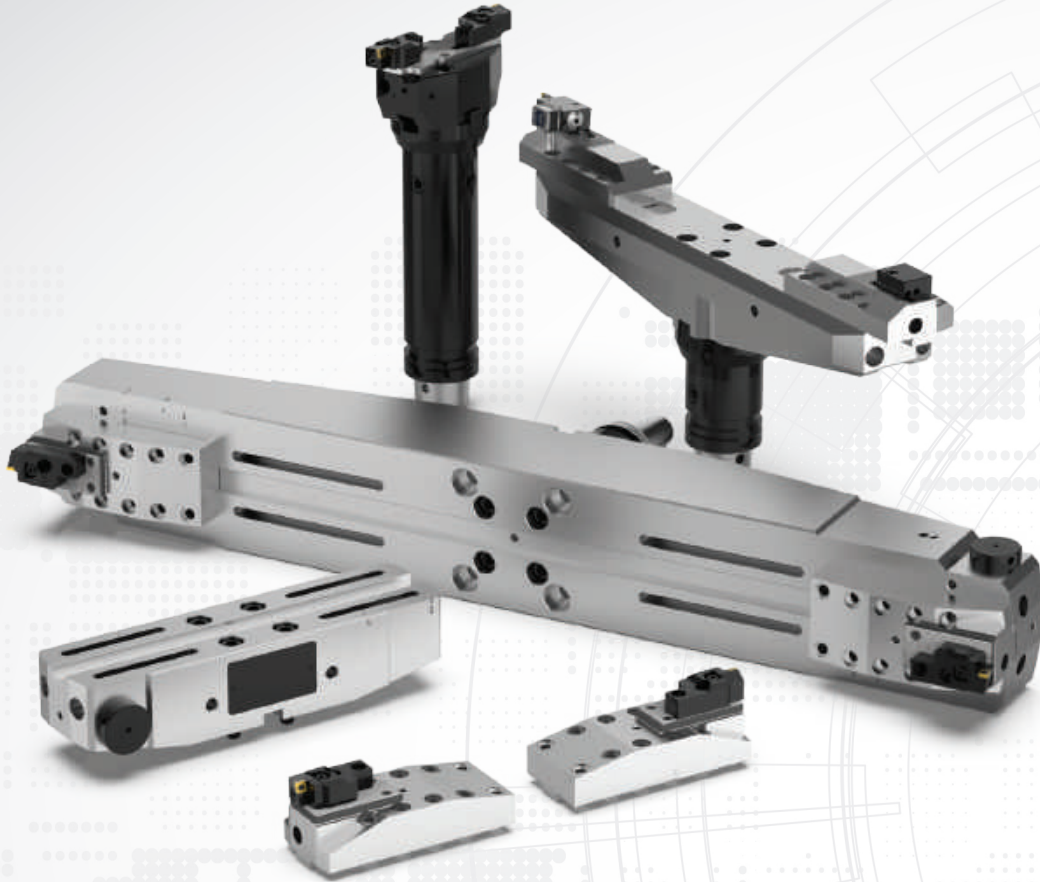


Cobalt Outils Coupants

# Wohlhaupter® Large Diameter Boring

Basic D 40 | Basic D 60 | Eco D 60 | Flex D 60

► Diameter Range: 7.874" - 128.150" (200.00mm - 3255.00mm)



## Boring Big?

Wohlhaupter has continued to expand our large diameter boring capabilities with Alu-Line. Our Alu-Line serrated slides and tool bodies are made of lightweight aluminum alloy to minimize the weight while still getting the heavy boring job done. The versatile serrated slides and serrated tool bodies allow for boring 7.874" (200.00mm) up to 128.150" (3255.00mm), offering the most powerful and versatile tool ranges to our customers.

Your safety and the safety of others is very important. This catalog contains important safety messages. Always read and follow all safety precautions.



This triangle is a safety hazard symbol. It alerts you to potential safety hazards that can cause tool failure and serious injury.

When you see this symbol in the catalog, look for a related safety message that may be near this triangle or referred to in the nearby text.

There are safety signal words also used in the catalog. Safety messages follow these words.

### **WARNING**

**WARNING** (shown above) means that failure to follow the precautions in this message could result in tool failure and serious injury.

**NOTICE** means that failure to follow the precautions in this message could result in damage to the tool or machine but not result in personal injury.

**NOTE** and **IMPORTANT** are also used. These are important that you read and follow but are not safety-related.

Visit [www.alliedmachine.com](http://www.alliedmachine.com) for the most up-to-date information and procedures.

## Applicable Industries



Aerospace



Agriculture



Automotive



Firearms



General  
Machining

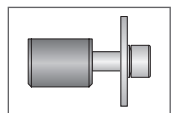


**COC**  
Cobalt Outils Coupants



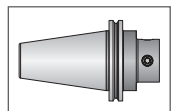
## Reference Icons

The following icons will appear throughout the catalog to help you navigate between products.



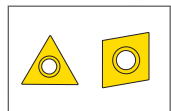
### Clamping Elements

For use with insert holders and boring heads



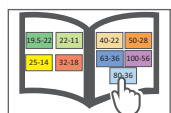
### Shanks

A variety of shanks for different machines



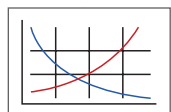
### Inserts

For use with insert holder boring heads and boring bars using indexable inserts



### MVS Connection Color Guide

Detailed instructions and information regarding the MVS connection(s)



### Recommended Cutting Data

Speed and feed recommendations for optimum and safe boring



### Coolant-Through Option

Indicates that the product is coolant through

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Series	Diameter Range	
	Imperial (inch)	Metric (mm)
Basic D 40 Slides	7.874 - 20.472	200.00 - 520.00
Basic D 60 Slides	7.874 - 19.882	200.00 - 505.00
Eco D 60 Slides	18.307 - 40.157	465.00 - 1020.00
Flex D 60 Slides	19.685 - 128.150	500.00 - 3255.00



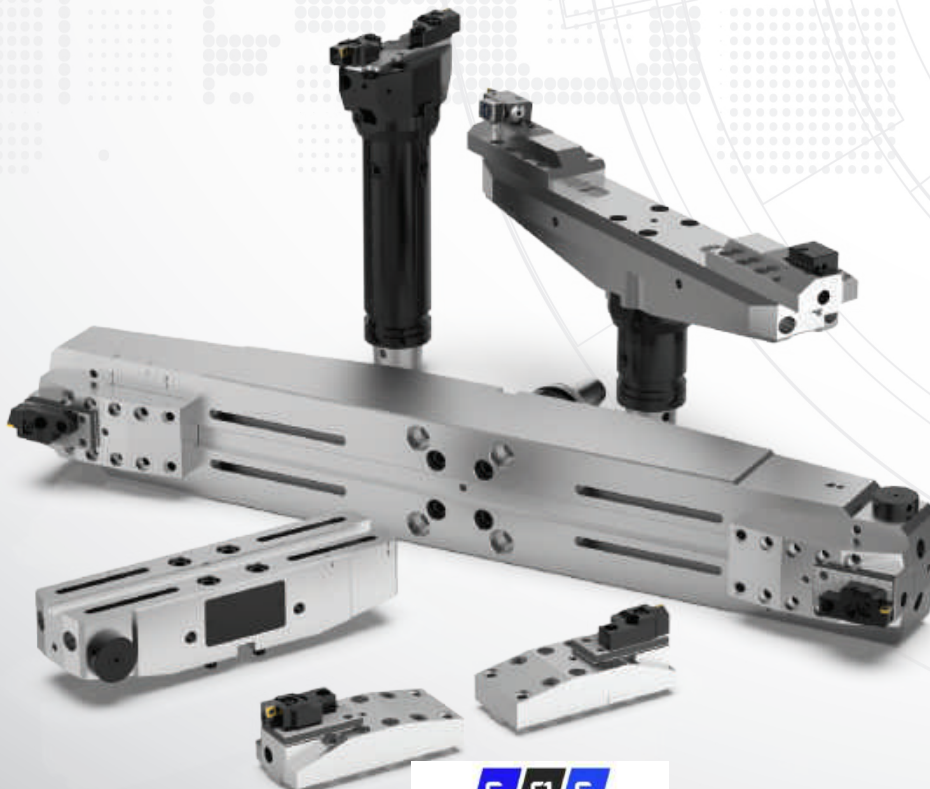
# Large Diameter Boring

## Large Diameter BORING

### Boring big? We've got you covered.

Our versatile tooling system can provide the power and precision your large diameter boring jobs demand. The large diameter boring system offers four different Alu-Line serrated slides, a wide range of rough and finish boring insert holders, vernier and digital cassettes, and combined rough and finish insert holders.

- Diameter range: 7.874" - 128.150" (200.00mm - 3255.00mm)
- Basic, Eco, and Flex serrated slides
- Roughing, finishing, or combined roughing and finishing can be achieved in one pass
- Digital readout cassettes available for quick and easy adjustments
- Alu-Line serrated slides and tool bodies are made of lightweight aluminum



## ► Basic D 40 Serrated Slides for Finish Boring



**350021 (349021)**  
 $\varnothing$  7.874" - 11.023"  
 (Ø 200.00mm - 280.00mm)



**350023 (349023)**  
 $\varnothing$  14.173" - 17.322"  
 (Ø 360.00mm - 440.00mm)



**350022 (349022)**  
 $\varnothing$  11.023" - 14.173"  
 (Ø 280.00mm - 360.00mm)



**350024 (349024)**  
 $\varnothing$  17.322" - 20.472"  
 (Ø 440.00mm - 520.00mm)

## ► Basic D 60 Serrated Slides for Semi Rough Finish and Finish Boring



**350051 (349051)**  
 $\varnothing$  7.874" - 11.023"  
 (Ø 200.00mm - 280.00mm)



**350053 (349053)**  
 $\varnothing$  13.779" - 16.929"  
 (Ø 350.00mm - 430.00mm)



**350052 (349052)**  
 $\varnothing$  10.826" - 13.976"  
 (Ø 275.00mm - 355.00mm)



**350054 (349054)**  
 $\varnothing$  16.732" - 19.881"  
 (Ø 425.00mm - 505.00mm)

## ► Eco D 60 Serrated Slides for Rough and Finish Boring



**350005 (349005)**  
 $\varnothing$  18.307" - 29.330"  
 (Ø 465.00mm - 745.00mm)



**350014 (349014) / 350015 (350015)**  
 Serrated slide for base slides  
 350005 (349005) / 350006 (349006)



**350006 (349006)**  
 $\varnothing$  29.133" - 40.157"  
 (Ø 740.00mm - 1020.00mm)

## ► Flex D 60 Serrated Slides for Rough and Finish Boring



**350031 (349031)**  
 $\varnothing$  19.685" - 41.535"  
 (Ø 500.00mm - 1055.00mm)



**350035 (349035)**  
 Serrated slide for base slides  
 350031 (349031) | 350032 (349032)  
 350033 (349033) | 350034 (349034)



**350032 (349032)**  
 $\varnothing$  29.724" - 63.188"  
 (Ø 755.00mm - 1605.00mm)



**350036 (349036)**  
 Serrated slide for base slides  
 350031 (349031) | 350032 (349032)  
 350033 (349033) | 350034 (349034)



**350033 (349033)**  
 $\varnothing$  52.165" - 95.669"  
 (Ø 1325.00mm - 2430.00mm)



**350037 (349037)**  
 Serrated slide for base slides  
 350032 (349032) | 350033 (349033)  
 350034 (349034)



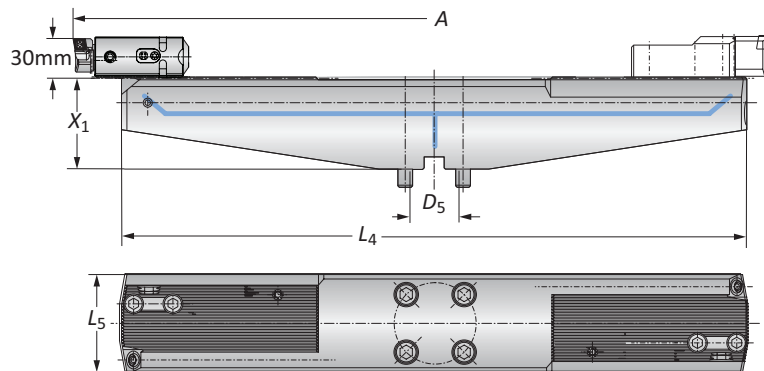
**350034 (349034)**  
 $\varnothing$  84.645" - 128.149"  
 (Ø 2150.00mm - 3255.00mm)



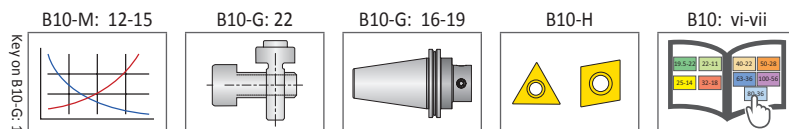
**350038 (349038)**  
 Serrated slide for base slides  
 350033 (349033) | 350034 (349034)

## Alu-Line Basic D 40 Serrated Slides

Diameter Range: 7.874" - 20.472" (200.00mm - 520.00mm)



Connection		Boring Range	Serrated Slide			Weight	Part No.
$D_5$		$A$	$X_1$	$L_4$	$L_5$		
i	D 40	7.874 - 11.024	2.953	7.480	3.149	6.173 (lbs)	350021
	D 40	11.024 - 14.173	2.953	10.620	3.149	8.377 (lbs)	350022
	D 40	14.173 - 17.323	2.953	13.770	3.149	11.023 (lbs)	350023
	D 40	17.323 - 20.472	2.953	16.320	3.149	13.228 (lbs)	350024
m	D 40	200.00 - 280.00	75.00	190.00	80.00	2.80 (kg)	349021
	D 40	280.00 - 360.00	75.00	270.00	80.00	3.80 (kg)	349022
	D 40	360.00 - 440.00	75.00	350.00	80.00	5.00 (kg)	349023
	D 40	440.00 - 520.00	75.00	430.00	80.00	6.00 (kg)	349024



i = Imperial (in)  
m = Metric (mm)

**WARNING** Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

- Consult machine tool builder for machine's weight limitations.
- Refer to example on page B10-M: 11 for calculating tool assembly weight

Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

**WARNING** Tool failure can cause serious injury. To prevent:

- Do not exceed recommended 10xD length-to-diameter ratio or exceed 4 total components (including shank)
- When using tool steel components, do not exceed recommended 6xD length to diameter ratio
- When using a heavy metal reducer, do not exceed recommended 8xD length to diameter ratio
- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter

Factory technical assistance is available for your specific applications through



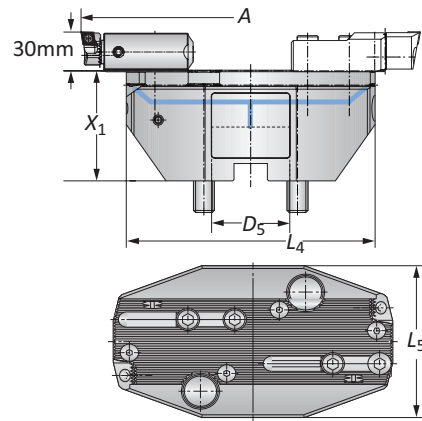
Department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)





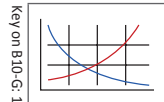
## Alu-Line Basic D 60 Serrated Slides

Diameter Range: 7.874" - 19.882" (200.00mm - 505.00mm)

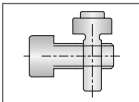


	Connection	Boring Range	Serrated Slide			Weight	Part No.
	$D_5$	$A$	$X_1$	$L_4$	$L_5$		
i	D 60	7.874 - 11.024	3.346	7.520	4.330	9.038 (lbs)	350051
	D 60	10.827 - 13.976	3.346	10.394	4.330	11.464 (lbs)	350052
	D 60	13.780 - 16.929	3.346	13.346	4.921	15.211 (lbs)	350053
	D 60	16.732 - 19.882	3.346	16.299	4.921	17.637 (lbs)	350054
m	D 60	200.00 - 280.00	85.00	191.00	110.00	4.10 (kg)	349051
	D 60	275.00 - 355.00	85.00	264.00	110.00	5.20 (kg)	349052
	D 60	350.00 - 430.00	85.00	339.00	125.00	6.90 (kg)	349053
	D 60	425.00 - 505.00	85.00	414.00	125.00	8.00 (kg)	349054

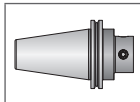
B10-M: 12-15



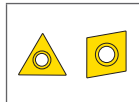
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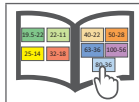
B10-G: 16-19



B10-H



B10: vi-vii



i = Imperial (in)  
m = Metric (mm)

**WARNING** Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

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- When using a heavy metal reducer, do not exceed recommended 8xD length to diameter ratio
- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVITECH module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter ratio

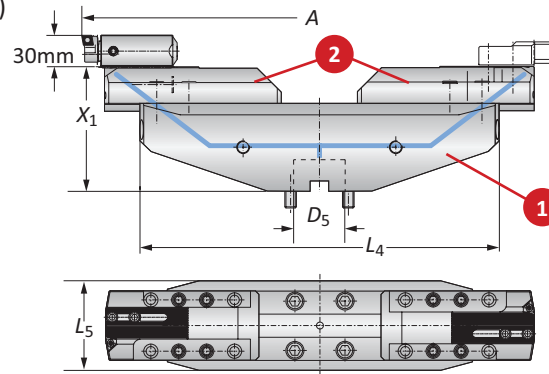
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department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

## Alu-Line Eco D 60 Serrated Slides

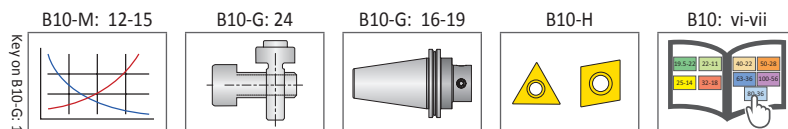
Diameter Range: 18.307" - 40.157" (465.00mm - 1020.00mm)



	Connection	Boring Range	Serrated Slide			1 Base Slide		2 Serrated Slide (Alu-Line)*		2 Serrated Slide (steel)**	
	$D_5$	$A$	$X_1$	$L_4$	$L_5$	Weight	Part No.	Weight	Part No.	Weight	Part No.
i	D 60	18.307 - 29.331	6.102	17.590	5.078	26.010 (lbs)	350005	4.850 (lbs)	350015	12.560 (lbs)	350014
	D 60	29.134 - 40.157	6.102	28.420	5.078	39.680 (lbs)	350006	4.850 (lbs)	350015	12.560 (lbs)	350014
m	D 60	465.00 - 745.00	155.00	447.00	129.00	11.80 (kg)	349005	2.20 (kg)	349015	5.70 (kg)	349014
	D 60	740.00 - 1020.00	155.00	722.00	129.00	18.00 (kg)	349006	2.20 (kg)	349015	5.70 (kg)	349014

\*Finish boring: serrated slide in Alu-Line

\*\*Rough boring: serrated slide in steel



i = Imperial (in)  
m = Metric (mm)

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- Consult machine tool builder for machine's weight limitations.
- Refer to example on page B10-M: 11 for calculating tool assembly weight

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**WARNING** Tool failure can cause serious injury. To prevent:

- Do not exceed recommended 10xD length-to-diameter ratio or exceed 4 total components (including shank)
- When using tool steel components, do not exceed recommended 6xD length to diameter ratio
- When using a heavy metal reducer, do not exceed recommended 8xD length to diameter ratio
- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter

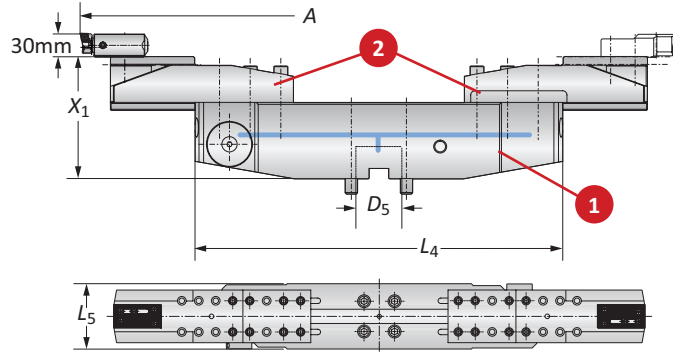
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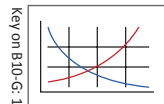
## Alu-Line Flex D 60 Serrated Slides

Diameter Range: 19.685" - 128.150" (500.00mm - 3255.00mm)

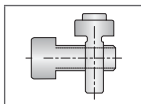


	Connection	Boring Range	Serrated Slide			Weight (1 + 2)	Part No.	
	D <sub>5</sub>	A	X <sub>1</sub>	L <sub>4</sub>	L <sub>5</sub>		1 Base Slide	2 Serrated Slide
i	D 60	19.685 - 30.709	6.299	18.898	5.118	53.360 (lbs)	350031	350035
	D 60	37.402 - 41.535	7.283	18.898	5.118	91.060 (lbs)	350031	350036
	D 60	30.512 - 41.535	7.283	29.724	6.102	93.710 (lbs)	350032	350035
	D 60	41.339 - 52.362	8.268	29.724	6.102	131.400 (lbs)	350032	350036
	D 60	56.772 - 63.189	8.858	29.724	6.102	190.200 (lbs)	350032	350037
	D 60	52.165 - 63.189	8.268	51.378	7.283	194.400 (lbs)	350033	350035
	D 60	52.165 - 74.016	9.252	51.378	7.283	232.100 (lbs)	350033	350036
	D 60	62.992 - 84.843	9.843	51.378	7.283	291.000 (lbs)	350033	350037
	D 60	78.346 - 95.669	10.039	51.378	7.283	374.400 (lbs)	350033	350038
	D 60	84.646 - 95.669	9.252	83.858	8.858	424.400 (lbs)	350034	350035
	D 60	84.646 - 106.496	10.236	83.858	8.858	462.100 (lbs)	350034	350036
	D 60	84.646 - 117.323	10.827	83.858	8.858	520.300 (lbs)	350034	350037
m	D 60	84.646 - 128.150	11.024	83.858	8.858	604.100 (lbs)	350034	350038
	D 60	500.00 - 780.00	160.00	480.00	130.00	24.20 (kg)	349031	349035
	D 60	950.00 - 1055.00	185.00	480.00	130.00	41.30 (kg)	349031	349036
	D 60	775.00 - 1055.00	185.00	755.00	155.00	42.50 (kg)	349032	349035
	D 60	1050.00 - 1330.00	210.00	755.00	155.00	59.60 (kg)	349032	349036
	D 60	1442.00 - 1605.00	225.00	755.00	155.00	86.30 (kg)	349032	349037
	D 60	1325.00 - 1605.00	210.00	1305.00	185.00	88.20 (kg)	349033	349035
	D 60	1325.00 - 1880.00	235.00	1305.00	185.00	105.30 (kg)	349033	349036
	D 60	1600.00 - 2155.00	250.00	1305.00	185.00	132.00 (kg)	349033	349037
	D 60	1990.00 - 2430.00	255.00	1305.00	185.00	169.80 (kg)	349033	349038
	D 60	2150.00 - 2430.00	235.00	2130.00	225.00	192.50 (kg)	349034	349035
	D 60	2150.00 - 2705.00	260.00	2130.00	225.00	209.60 (kg)	349034	349036
	D 60	2150.00 - 2980.00	275.00	2130.00	225.00	236.00 (kg)	349034	349037
	D 60	2150.00 - 3255.00	280.00	2130.00	225.00	274.00 (kg)	349034	349038

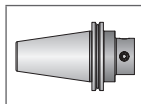
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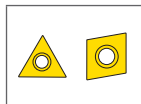
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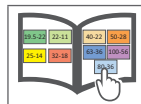
B10-G: 16-19



B10-H



B10: vi-vii



i = Imperial (in)  
m = Metric (mm)

### WARNING

Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

- Consult machine tool builder for machine's weight limitations.
- Refer to example on page B10-M: 11 for calculating tool assembly weight

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### WARNING

Tool failure can cause serious injury. To prevent:

- Do not exceed recommended 10xD length-to-diameter ratio or exceed 4 total components (including shank)
- When using tool steel components, do not exceed recommended 6xD length to diameter ratio
- When using a heavy metal reducer, do not exceed recommended 8xD length to diameter ratio
- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter ratio

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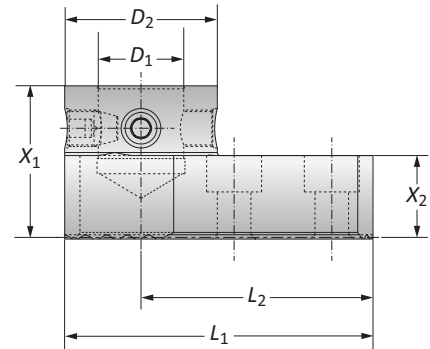


department. ext: 7611 | email: appeng@alliedmachine.com

## Serrated Adapter with MVS Connection

### Mounting Adapter

MVS Connection	Mounting Adapters				Weight	Part No.
$D_2   D_1$	$X_1$	$X_2$	$L_1$	$L_2$		
<b>i</b> 50 - 28	1.969	1.063	3.976	2.992	2.866 (lbs)	<b>349046</b>
<b>m</b> 50 - 28	50.00	27.00	101.00	76.00	1.30 (kg)	<b>349046</b>



### Inside Boring

Slide	Boring Heads	ID Bore Range	
		inch	mm
349/350051	320005/465006/565045	8.465 - 12.323	215.00 - 313.00
349/350052	320005/465006/565045	11.417 - 15.276	290.00 - 388.00
349/350053	320005/465006/565045	14.370 - 18.228	365.00 - 463.00
349/350054	320005/465006/565045	17.323 - 21.181	440.00 - 538.00
349/350005 with 349/350015	320005/465006/565045	18.898 - 30.630	480.00 - 778.00

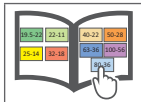
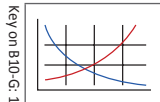
### Outside Boring

Slide	Boring Heads	OD Bore Range	
		inch	mm
349/350051	320005/465006/565045	2.638 - 6.496	67.00 - 165.00
349/350052	320005/465006/565045	5.591 - 9.449	142.00 - 240.00
349/350053	320005/465006/565045	8.543 - 12.402	217.00 - 315.00
349/350054	320005/465006/565045	11.496 - 15.354	292.00 - 390.00
349/350005 with 349/350015	320005/465006/565045	13.071 - 24.803	332.00 - 630.00

**NOTE:** LH only spindle rotation

B10-M: 12-15

B10: vi-vii



**i** = Imperial (in)  
**m** = Metric (mm)

**WARNING** Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

- Consult machine tool builder for machine's weight limitations.
- Refer to example on page B10-M: 11 for calculating tool assembly weight

Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

**WARNING** Tool failure can cause serious injury. To prevent:

- Do not exceed recommended 10xD length-to-diameter ratio or exceed 4 total components (including shank)
- When using tool steel components, do not exceed recommended 6xD length to diameter ratio
- When using a heavy metal reducer, do not exceed recommended 8xD length to diameter ratio
- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter

Factory technical assistance is available for your specific applications through



Department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

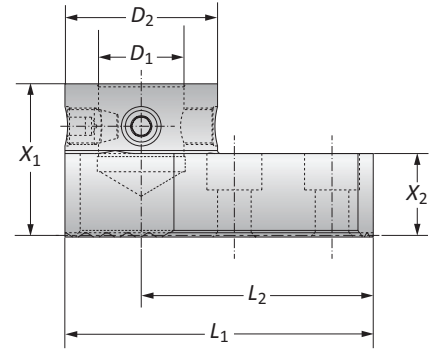




## Serrated Adapter with MVS Connection

### Mounting Adapter

	MVS Connection	Mounting Adapters				Weight	Part No.
	$D_2   D_1$	$X_1$	$X_2$	$L_1$	$L_2$		
<b>i</b>	50 - 28	1.969	1.063	3.976	2.992	2.866 (lbs)	<b>349046</b>
<b>m</b>	50 - 28	50.00	27.00	101.00	76.00	1.30 (kg)	<b>349046</b>



### Inside Boring

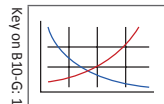
Slide	Boring Heads	ID Bore Range	
		inch	mm
349/350051	320005/465006/565045	2.559 - 5.039	65.00 - 128.00
349/350052	320005/465006/565045	4.134 - 7.992	105.00 - 203.00
349/350053	320005/465006/565045	7.087 - 10.945	180.00 - 278.00
349/350054	320005/465006/565045	10.039 - 13.898	255.00 - 353.00
349/350005 with 349/350015	320005/465006/565045	11.614 - 23.346	295.00 - 593.00

### Outside Boring

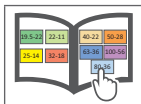
Slide	Boring Heads	OD Bore Range	
		inch	mm
349/350051	320005/465006/565045	—	—
349/350052	320005/465006/565045	0.000 - 2.165	0.00 - 55.00
349/350053	320005/465006/565045	1.260 - 5.118	32.00 - 130.00
349/350054	320005/465006/565045	4.213 - 8.071	107.00 - 205.00
349/350005 with 349/350015	320005/465006/565045	5.787 - 17.520	147.00 - 445.00

**NOTE:** LH only spindle rotation

B10-M: 12-15



B10: vi-vii



**i** = Imperial (in)  
**m** = Metric (mm)

**WARNING** Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

- Consult machine tool builder for machine's weight limitations.
  - Refer to example on page B10-M: 11 for calculating tool assembly weight
- Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

**WARNING** Tool failure can cause serious injury. To prevent:

- Do not exceed recommended 10xD length-to-diameter ratio or exceed 4 total components (including shank)
  - When using tool steel components, do not exceed recommended 6xD length to diameter ratio
  - When using a heavy metal reducer, do not exceed recommended 8xD length to diameter ratio
  - When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
  - When using a NOVITECH module, do not exceed recommended 10xD length to diameter ratio
  - Refer to examples on pages B10-M: 8-10 for calculating length to diameter ratio
- Factory technical assistance is available for your specific applications through our Application Engineering department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

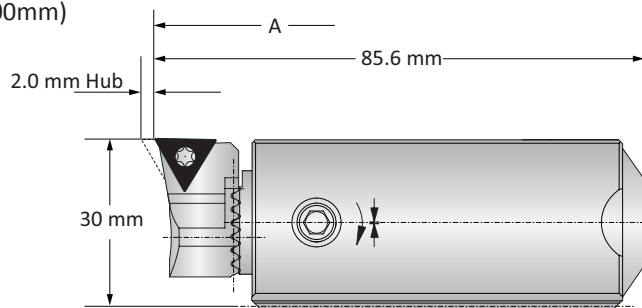


## 538 (537) Analog Cassettes

Diameter Range: 3.937" - 128.150" (100.00mm - 3255.00mm)

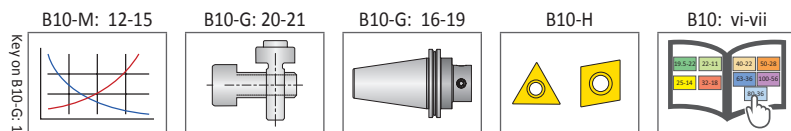


Form 101



Form 20

		Boring Range		Part No.		
Slide Type		A	Weight	Insert Form	Insert Holder	Cassette
i	Serrated Tool Bodies	3.937 - 8.071	1.323 (lbs)	20	210020	137026
		3.937 - 8.071	1.323 (lbs)	101	210063	137026
		3.937 - 8.071	1.323 (lbs)	103	210064	137026
i	Basic / Eco Slides	7.874 - 40.157	1.323 (lbs)	20	210020	137027
		7.874 - 40.157	1.323 (lbs)	101	210063	137027
		7.874 - 40.157	1.323 (lbs)	103	210064	137027
i	Flex Slides	19.685 - 128.150	1.323 (lbs)	20	210020	137019
		19.685 - 128.150	1.323 (lbs)	101	210063	137019
		19.685 - 128.150	1.323 (lbs)	103	210064	137019
m	Serrated Tool Bodies	100.00 - 205.00	0.60 (kg)	20	210020	137026
		100.00 - 205.00	0.60 (kg)	101	210063	137026
		100.00 - 205.00	0.60 (kg)	103	210064	137026
	Basic / Eco Slides	200.00 - 1020.00	0.60 (kg)	20	210020	137027
		200.00 - 1020.00	0.60 (kg)	101	210063	137027
		200.00 - 1020.00	0.60 (kg)	103	210064	137027
	Flex Slides	500.00 - 3255.00	0.60 (kg)	20	210020	137019
		500.00 - 3255.00	0.60 (kg)	101	210063	137019
		500.00 - 3255.00	0.60 (kg)	103	210064	137019



i = Imperial (in)  
m = Metric (mm)

Inserts sold separately

**WARNING** Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

- Consult machine tool builder for machine's weight limitations.
- Refer to example on page B10-M: 11 for calculating tool assembly weight

Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

**WARNING** Tool failure can cause serious injury. To prevent:

- Do not exceed recommended 10xD length to diameter ratio or exceed 4 total components (including shank)
- When using tool steel components, do not exceed recommended 6xD length to diameter ratio
- When using a heavy metal reducer, do not exceed recommended 8xD length to diameter ratio
- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter

Factory technical assistance is available for your specific applications through



Department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

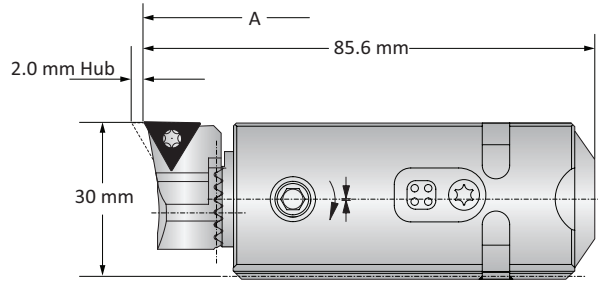


## 538 (537) Cassettes with 3E<sup>TECH</sup>

Diameter Range: 3.937" - 128.150" (100.00mm - 3255.00mm)



Form 101



Form 20

		Boring Range		Part No.		
Slide Type		A	Weight	Insert Form	Insert Holder	Clamping Pieces
i	Serrated Tool Bodies	3.937 - 8.071	1.323 (lbs)	20	210020	137026
		3.937 - 8.071	1.323 (lbs)	101	210063	137026
		3.937 - 8.071	1.323 (lbs)	103	210064	137026
	Basic / Eco Slides	7.874 - 40.157	1.323 (lbs)	20	210020	137027
		7.874 - 40.157	1.323 (lbs)	101	210063	137027
		7.874 - 40.157	1.323 (lbs)	103	210064	137027
	Flex Slides	19.685 - 128.150	1.323 (lbs)	20	210020	137019
		19.685 - 128.150	1.323 (lbs)	101	210063	137019
		19.685 - 128.150	1.323 (lbs)	103	210064	137019
m	Serrated Tool Bodies	100.00 - 205.00	0.60 (kg)	20	210020	137026
		100.00 - 205.00	0.60 (kg)	101	210063	137026
		100.00 - 205.00	0.60 (kg)	103	210064	137026
	Basic / Eco Slides	200.00 - 1020.00	0.60 (kg)	20	210020	137027
		200.00 - 1020.00	0.60 (kg)	101	210063	137027
		200.00 - 1020.00	0.60 (kg)	103	210064	137027
	Flex Slides	500.00 - 3255.00	0.60 (kg)	20	210020	137019
		500.00 - 3255.00	0.60 (kg)	101	210063	137019
		500.00 - 3255.00	0.60 (kg)	103	210064	137019

### 3E<sup>TECH</sup> Digital Readout Module

Part No.*	
i	563010
m	536010

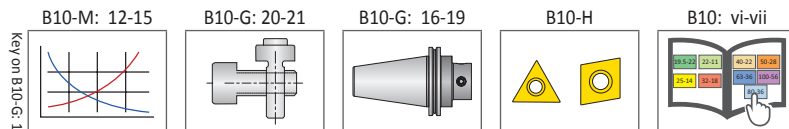
\*WEEE-Reg.-Nr. DE 15820388

NOTE: 3E<sup>TECH</sup> must be ordered separately.



NOTE: Imperial item pictured

NOTE: Adjustment accuracy of 0.0001" or 0.002mm on diameter



i = Imperial (in)

m = Metric (mm)

Inserts sold separately

**WARNING** Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

- Consult machine tool builder for machine's weight limitations.
- Refer to example on page B10-M: 11 for calculating tool assembly weight

Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: appeng@alliedmachine.com

**WARNING** Tool failure can cause serious injury. To prevent:

- Do not exceed recommended 10xD length to diameter ratio or exceed 4 total components (including shank)
- When using tool steel components, do not exceed recommended 6xD length to diameter ratio
- When using a heavy metal reducer, do not exceed recommended 8xD length to diameter ratio
- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter ratio

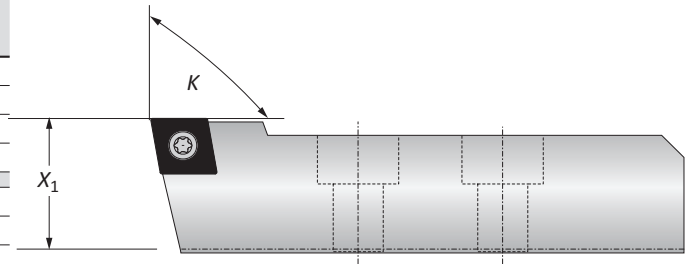
Factory technical assistance is available for your specific applications through our Application Engineering department. ext: 7611 | email: appeng@alliedmachine.com



## Insert Holders for Rough Machining

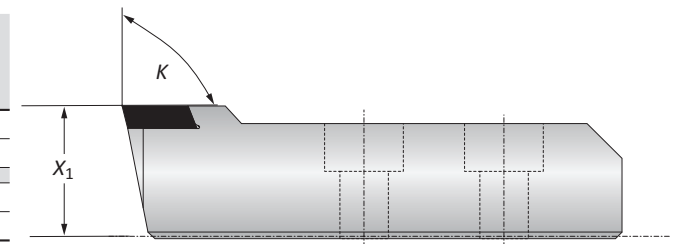
### 90° Insert Holders

Insert Holder		Weight	ISO Code	Insert Form	Part No.
K	X <sub>1</sub>				
i	90°	1.180	1.322 (lbs)	CC..09T3..	103
	90°	1.180	1.322 (lbs)	CC..1204..	104
	90°	1.150	1.322 (lbs)	CC..1204..	104
	90°	1.180	1.322 (lbs)	CC..1605..	105
m	90°	30.00	0.60 (kg)	CC..09T3..	103
	90°	30.00	0.60 (kg)	CC..1204..	104
	90°	29.30	0.60 (kg)	CC..1204..	104
	90°	30.00	0.60 (kg)	CC..1605..	105



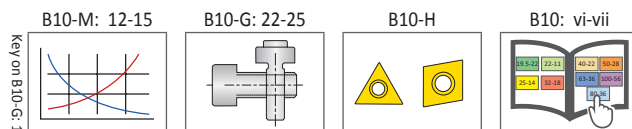
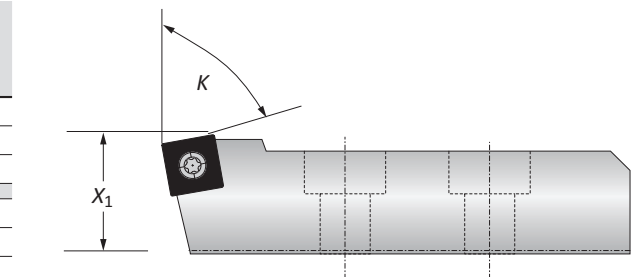
### 90° Tangential Insert Holders

Insert Holder		Weight	ISO Code	Insert Form	Part No.
K	X <sub>1</sub>				
i	90°	1.180	1.322 (lbs)	Tangential	05
	90°	1.150	1.322 (lbs)	Tangential	05
m	90°	30.00	0.60 (kg)	Tangential	05
	90°	29.30	0.60 (kg)	Tangential	05



### 80° Insert Holders

Insert Holder		Weight	ISO Code	Insert Form	Part No.
K	X <sub>1</sub>				
i	80°	1.180	1.322 (lbs)	SC..1204..	113
	80°	1.180	1.322 (lbs)	SC..150512	114
	80°	1.180	1.322 (lbs)	SN..1506..	134
m	80°	30.00	0.60 (kg)	SC..1204..	113
	80°	30.00	0.60 (kg)	SC..150512	114
	80°	30.00	0.60 (kg)	SN..1506..	134



i = Imperial (in)  
m = Metric (mm)

Inserts sold separately

**WARNING** Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

- Do not exceed recommended 10xD length to diameter ratio or exceed 4 total components (including shank)
- When using tool steel components, do not exceed recommended 6xD length to diameter ratio
- When using a heavy metal reducer, do not exceed recommended 8xD length to diameter ratio
- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter

Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

**WARNING** Tool failure can cause serious injury. To prevent:

- Do not exceed recommended 10xD length to diameter ratio or exceed 4 total components (including shank)
- When using tool steel components, do not exceed recommended 6xD length to diameter ratio
- When using a heavy metal reducer, do not exceed recommended 8xD length to diameter ratio
- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter

Factory technical assistance is available for your specific applications through



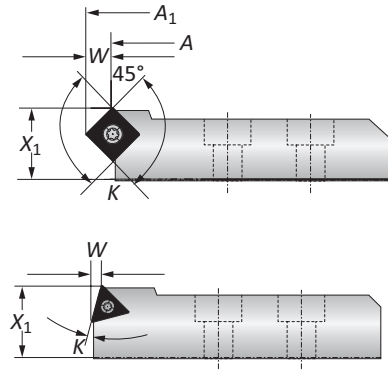
Department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)



# Insert Holders for Rough Machining | Boring Range Example

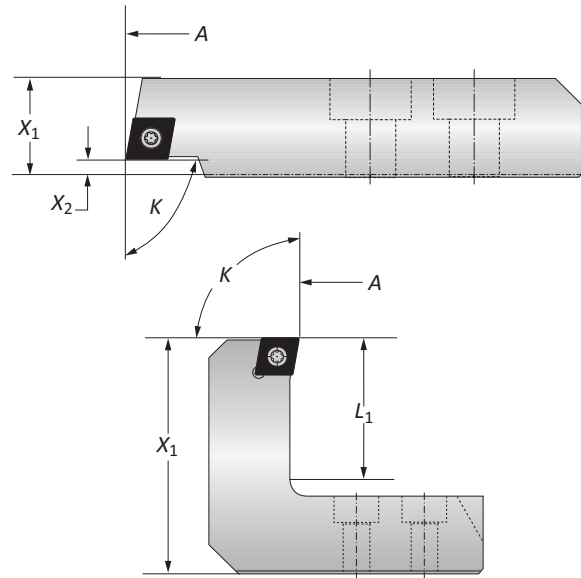
## Chamfering Insert Holders

Insert Holder								
	<i>K</i>	<i>X</i> <sub>1</sub>	<i>A</i> / <i>A</i> <sub>1</sub>	<i>W</i>	Weight	ISO Code	Insert Form	Part No.
<b>i</b>	15°	1.180	+0.275	0.157	1.322 (lbs)	TC..16T3..	163	201065
	20°	1.180	+0.354	0.208	1.322 (lbs)	TC..16T3..	163	201025
	30°	1.180	+0.551	0.303	1.322 (lbs)	TC..16T3..	163	201075
	45°	1.180	+0.787	0.389	1.322 (lbs)	SC..1505..	114	201015
<b>m</b>	15°	30.00	+7.00	4.00	0.60 (kg)	TC..16T3..	163	201065
	20°	30.00	+9.00	5.30	0.60 (kg)	TC..16T3..	163	201025
	30°	30.00	+14.00	7.70	0.60 (kg)	TC..16T3..	163	201075
	45°	30.00	+20.00	9.90	0.60 (kg)	SC..1505..	114	201015



## Back-Boring Insert Holders

Insert Holder								
	<i>K</i>	<i>X</i> <sub>1</sub>	<i>X</i> <sub>2</sub>	<i>A</i>	Weight	ISO Code	Insert Form	Part No.
i	90°	3.540	0.196	+1.574	1.763 (lbs)	CC..1204..	104	251010
	90°	3.540	0.196	+2.952	1.984 (lbs)	CC..1204..	104	251011
m	90°	30.00	5.00	+40.00	0.80 (kg)	CC..1204..	104	251010
	90°	30.00	5.00	+75.00	0.90 (kg)	CC..1204..	104	251011



## OD Turning Insert Holders

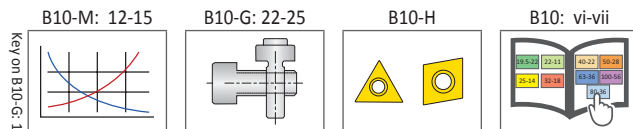
Insert Holder								
	$K$	$X_1$	$L_1$	$A$	Weight	ISO Code	Insert Form	Part No.
i	90°	198.400	2.440	-1.968	2.204 (lbs)	CC..1204..	104	149040
m	90°	90.00	62.00	-50.00	1.00 (kg)	CC..1204..	104	149040

## Boring Range Example

Serrated Slide			Insert Holder		Total Bore Range
Part No.		Bore Range	Part No.	Modified Bore Range	
i	350051	7.874 - 11.023	201065	+0.280	8.150 - 11.300
	350051	7.874 - 11.023	251010	+1.600	9.450 - 12.600
	350051	7.874 - 11.023	149040	-2.000	5.900 - 9.055
m	349051	200.00 - 280.00	201065	+7.00	207.00 - 287.00
	349051	200.00 - 280.00	251010	+40.00	240.00 - 320.00
	349051	200.00 - 280.00	149040	-50.00	150.00 - 230.00

**NOTE:** Boring range for serrated slides or base slides are found on pg. B10-G: 4 - 7

**NOTE:** Additional insert holders available upon request



i = Imperial (in)

m = Metric (mm)

Inserts sold separately

**WARNING** Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

- Consult machine tool builder for machine's weight limitations.
- Refer to example on page B10-M: 11 for calculating tool assembly weight

Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: appeng@alliedmachine.com

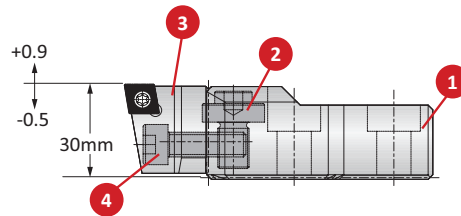
**WARNING** Tool failure can cause serious injury. To prevent:

- Do not exceed recommended 10xD length to diameter ratio or exceed 4 total components (including shank)
- When using tool steel components, do not exceed recommended 6xD length to diameter ratio
- When using a heavy metal reducer, do not exceed recommended 8xD length to diameter ratio
- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter ratio

Factory technical assistance is available for your specific applications through our Application Engineering department. ext: 7611 | email: appeng@alliedmachine.com

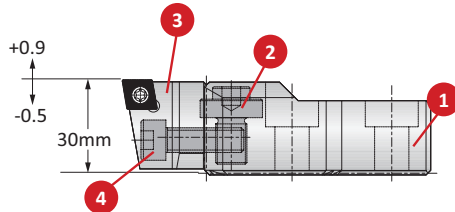


## Insert Holders for Height Adjustments and Axial Grooving



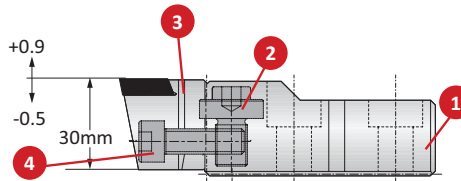
Insert Form 103

	1 Support	2 Adjusting Screw		3 Insert Holder		4 Fixing Screw		Complete Part No.
Boring Range	Part No.	Part No.	Service Key	Insert Form	Part No.	Part No.	Service Key	
<b>i</b> 7.874 - 128.150	149055	315355	s6 / B	103	149058	070369	s6 / B	<b>149059</b>
<b>m</b> 200.00 - 3255.00	149055	315355	s6 / B	103	149058	070369	s6 / B	<b>149059</b>



Insert Form 104

	1 Support	2 Adjusting Screw		3 Insert Holder		4 Fixing Screw		Complete Part No.
Boring Range	Part No.	Part No.	Service Key	Insert Form	Part No.	Part No.	Service Key	
<b>i</b> 7.874 - 128.150	149055	315355	s6 / B	104	149056	070369	s6 / B	<b>149057</b>
<b>m</b> 200.00 - 3255.00	149055	315355	s6 / B	104	149056	070369	s6 / B	<b>149057</b>

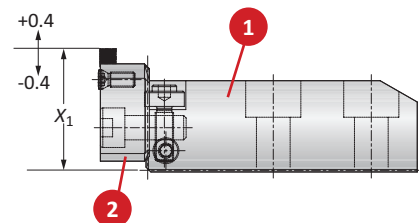


Insert Form 05

	1 Support	2 Adjusting Screw		3 Insert Holder		4 Fixing Screw		Complete Part No.
Boring Range	Part No.	Part No.	Service Key	Insert Form	Part No.	Part No.	Service Key	
<b>i</b> 7.874 - 128.150	149055	315355	s6 / B	05	149085	070369	s6 / B	<b>149086</b>
<b>m</b> 200.00 - 3255.00	149055	315355	s6 / B	05	149085	070369	s6 / B	<b>149086</b>

### Insert Holders for Axial Grooving

Insert Holder	1 Support Module	2 Insert Holder			Complete Part No.
X <sub>1</sub>	Part No.	Part No.	Weight	Insert Form	
<b>i</b> 1.574	226014	226031	0.661 (lbs)	304	<b>226029</b>
<b>m</b> 40.00	226014	226031	0.30 (kg)	304	<b>226029</b>



**i** = Imperial (in)  
**m** = Metric (mm)

Inserts sold separately

**WARNING** Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

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- Refer to example on page B10-M: 11 for calculating tool assembly weight

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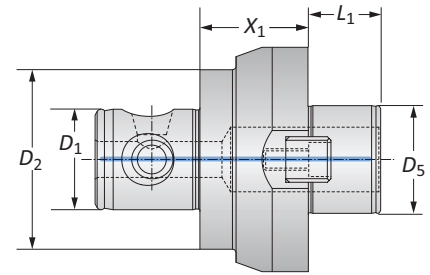
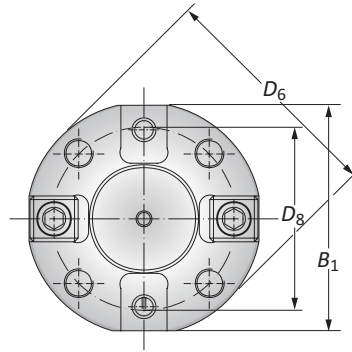
- Do not exceed recommended 10xD length to diameter ratio or exceed 4 total components (including shank)
- When using tool steel components, do not exceed recommended 6xD length to diameter ratio
- When using a heavy metal reducer, do not exceed recommended 8xD length to diameter ratio
- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter

Factory technical assistance is available for your specific applications through



Department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

## MVS Holding Arbors



MVS Connection		Holding Arbor Connection	Holding Arbor						Weight	Part No.
$D_2 \mid D_1$			$X_1$	$L_1$	$D_5$	$D_6$	$D_8$	$B_1$		
i	80 - 36	D 40 Alu-Line	0.748	1.181	1.575	3.503	2.625	3.150	1.102 (lbs)	309001 <sup>(1)(2)</sup>
	80 - 36	D 60	2.362	1.574	2.362	5.082	4.000	4.921	9.038 (lbs)	209060 <sup>(1)</sup>
	100 - 56	D 40 Alu-Line	1.181	1.181	1.575	3.503	2.625	3.149	2.204 (lbs)	309041 <sup>(2)</sup>
	100 - 56	D 60	2.362	1.575	2.362	5.082	4.000	4.921	13.880 (lbs)	209043
	100 - 56	D 60 Alu-Line	2.362	1.575	2.362	5.082	4.000	4.921	4.850 (lbs)	309043 <sup>(2)</sup>
m	80 - 36	D 40 Alu-Line	19.00	30.00	40.00	89.00	66.70	80.00	0.50 (kg)	309001 <sup>(1)(2)</sup>
	80 - 36	D 60	60.00	40.00	60.00	129.10	101.60	125.00	4.10 (kg)	209060 <sup>(1)</sup>
	100 - 56	D 40 Alu-Line	30.00	30.00	40.00	89.00	66.70	80.00	1.00 (kg)	309041 <sup>(2)</sup>
	100 - 56	D 60	60.00	40.00	60.00	129.10	101.60	125.00	6.30 (kg)	209043
	100 - 56	D 60 Alu-Line	60.00	40.00	60.00	129.10	101.60	125.00	2.20 (kg)	309043 <sup>(2)</sup>

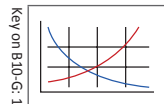
(1) For light machining only

(2) Lightweight aluminum construction only in connection with our serrated slides

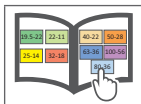
Basic D 40 Serrated Slides: Ø 7.874" - 20.472" (200.00 - 520.00mm) (Page B10-E: 4)

Basic D 60 Serrated Slides: Ø 7.874" - 19.882" (200.00 - 505.00mm) (Page B10-E: 5)

B10-M: 12-15



B10: vi-vii



i = Imperial (in)

m = Metric (mm)

**WARNING** Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

-Consult machine tool builder for machine's weight limitations.

-Refer to example on page B10-M: 11 for calculating tool assembly weight

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-When using a carbide shank, do not exceed recommended 9xD length to diameter ratio

-When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio

-Refer to examples on pages B10-M: 8-10 for calculating length to diameter ratio

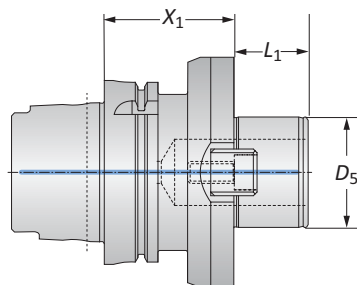
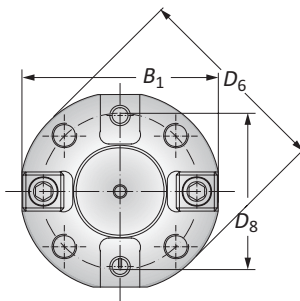
Factory technical assistance is available for your specific applications through our Application Engineering department. ext: 7611 | email: appeng@alliedmachine.com



department. ext: 7611 | email: appeng@alliedmachine.com

## Master Shanks D 40 / D 60

HSK-A (DIN 69 893) Shanks

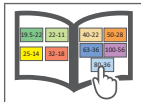
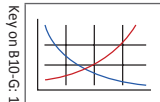


HSK-A (DIN 69 893) Shanks

			Shank							
Taper Size		Connection	$X_1$	$L_1$	$D_5$	$D_6$	$D_8$	$B_1$	Weight	Part No.
i	63	D 40	2.362	1.181	1.575	3.504	2.626	3.150	4.200 (lbs)	358015
	100	D 40	2.362	1.181	1.575	3.504	2.626	3.150	7.900 (lbs)	258021
	100	D 60	2.756	1.575	2.362	5.083	4.000	4.921	11.500 (lbs)	258061
	100	D 60	2.756	1.575	2.362	5.083	4.000	4.331	11.000 (lbs)	258098
m	63	D 40	60.00	30.00	40.00	89.00	66.70	80.00	1.90 (kg)	358015
	100	D 40	60.00	30.00	40.00	89.00	66.70	80.00	3.60 (kg)	258021
	100	D 60	70.00	40.00	60.00	129.10	101.60	125.00	5.20 (kg)	258061
	100	D 60	70.00	40.00	60.00	129.10	101.60	110.00	5.00 (kg)	258098

B10-M: 12-15

B10: vi-vii



i = Imperial (in)  
m = Metric (mm)

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- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio
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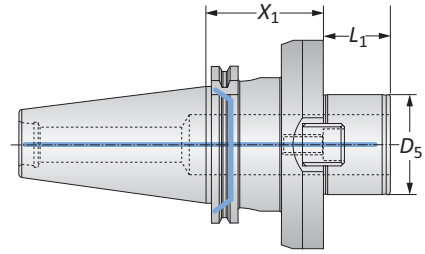
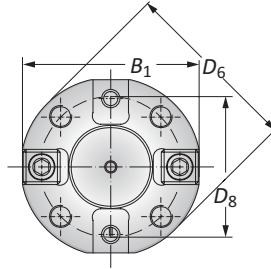
Department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)





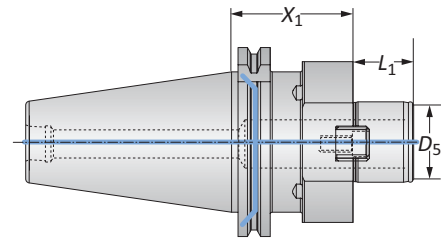
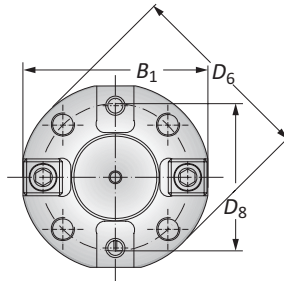
## Master Shanks D 40 / D 60

CAT 40 / 50 Shanks with Imperial Threads | CAT 50 Shank with Metric Threads



### CAT 40 / 50 Shanks with Imperial Threads

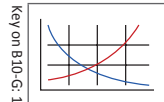
	Taper Size	Connection	Shank						Weight	Part No.
			$X_1$	$L_1$	$D_5$	$D_6$	$D_8$	$B_1$		
i	40	D 40	1.970	1.181	1.575	3.504	2.626	3.150	4.000 (lbs)	357004
	50	D 40	1.970	1.181	1.575	3.504	2.626	3.150	8.400 (lbs)	357001
	50	D 60	2.756	1.575	2.362	5.083	4.000	4.331	11.700 (lbs)	357002
	50	D 60	2.756	1.575	2.362	5.083	4.000	4.921	12.100 (lbs)	357003



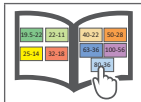
### CAT 50 Shanks with Metric Threads

	Taper Size	Connection	Shank						Weight	Part No.
			$X_1$	$L_1$	$D_5$	$D_6$	$D_8$	$B_1$		
m	50	D 40	60.00	30.00	40.00	89.00	66.70	80.00	4.60 (kg)	326083

B10-M: 12-15



B10: vi-vii



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m = Metric (mm)

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- When using a NOVITECH module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter ratio

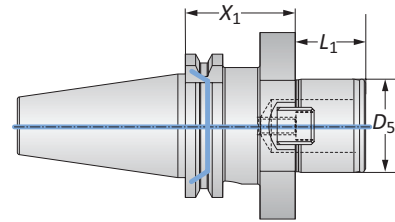
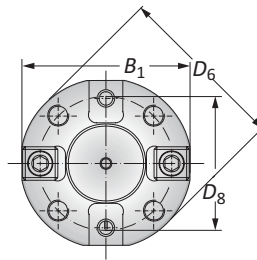
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## Master Shanks D 40 / D 60

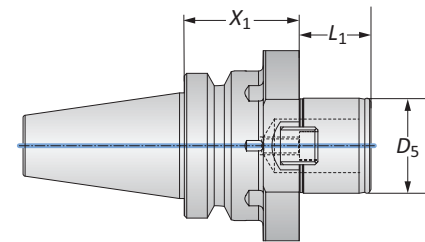
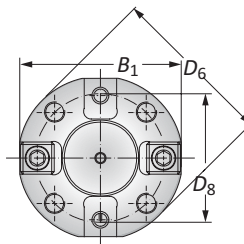
SK (DIN 69 871-AD/B) | BT / JIS B 6339 Shanks



SK (DIN 69 871-AD/B) Shanks

	Taper Size	Connection	Shank						Weight	Part No.
			$X_1$	$L_1$	$D_5$	$D_6$	$D_8$	$B_1$		
i	40	D 40	1.969	1.181	1.575	3.504	2.626	3.150	4.190 (lbs)	326080*
	50	D 40	1.969	1.181	1.575	3.504	2.626	3.150	9.040 (lbs)	326081
	50	D 60	2.756	1.575	2.362	5.083	4.000	4.921	12.790 (lbs)	198054T019539
	50	D 60	2.756	1.575	2.362	5.083	4.000	4.331	12.130 (lbs)	198081T019539
m	40	D 40	50.00	30.00	40.00	89.00	66.70	80.00	1.90 (kg)	326080*
	50	D 40	50.00	30.00	40.00	89.00	66.70	80.00	4.10 (kg)	326081
	50	D 60	70.00	40.00	60.00	129.10	101.60	125.00	5.80 (kg)	198054T019539
	50	D 60	70.00	40.00	60.00	129.10	101.60	110.00	5.50 (kg)	198081T019539

\*For light machining only

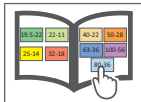
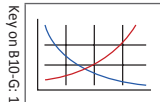


BT / JIS B 6339 Shanks

	Taper Size	Connection	Shank						Weight	Part No.
			$X_1$	$L_1$	$D_5$	$D_6$	$D_8$	$B_1$		
i	40	D 40	1.969	1.181	1.575	3.504	2.626	3.150	4.000 (lbs)	326084
	50	D 40	2.165	1.181	1.575	3.504	2.626	3.150	9.900 (lbs)	326082
	50	D 60	3.150	1.575	2.362	5.083	4.000	–	17.600 (lbs)	326062
m	40	D 40	50.00	30.00	40.00	89.00	66.70	80.00	1.80 (kg)	326084
	50	D 40	55.00	30.00	40.00	89.00	66.70	80.00	4.50 (kg)	326082
	50	D 60	80.00	40.00	60.00	19.10	101.60	–	8.00 (kg)	326062

B10-M: 12-15

B10: vi-vii



i = Imperial (in)  
m = Metric (mm)

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- Refer to examples on pages B10-M: 8-10 for calculating length to diameter

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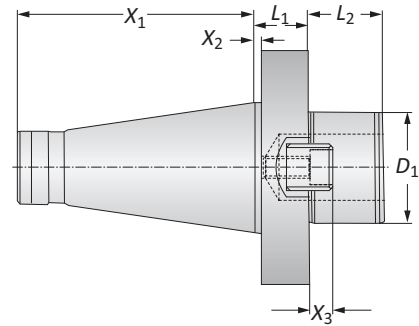
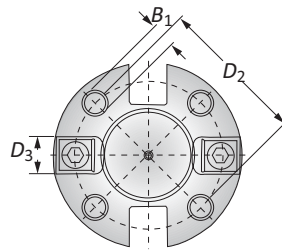


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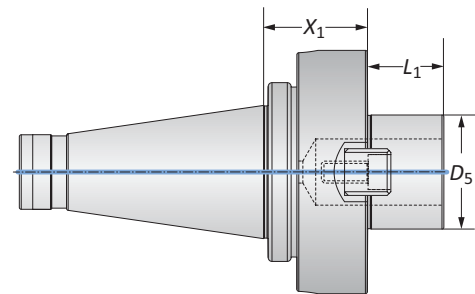
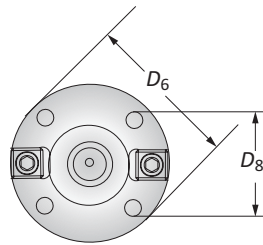
## Master Shanks D 40 / D 60

NMTB Shanks | DIN 2080 Shanks



### NMTB Shanks

	Taper Size	Connection	Shank								Weight	Part No.	
			$X_1$	$X_2$	$L_1$	$L_2$	$D_1$	$X_3$	$D_2$	$D_3$			$B_1$
i	50	D 60	4.992	0.126	1.142	1.575	2.362	0.492	4.000	1.000	M16	17.637 (lbs)	198051T004480
m	50	D 60	126.80	3.20	29.00	40.00	60.00	12.50	101.60	25.40	M16	8.00 (kg)	198051T004480

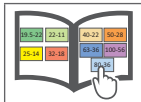
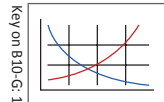


### DIN 2080 Shanks

	Taper Size	Connection	Shank						Weight	Part No.
			$X_1$	$L_1$	$D_5$	$D_6$	$D_8$	$B_1$		
i	50	D 60	2.165	1.575	2.362	5.039	4.000	—	14.991 (lbs)	326035
m	50	D 60	55.00	40.00	60.00	128.00	101.60	—	6.80 (kg)	326035

B10-M: 12-15

B10: vi-vii



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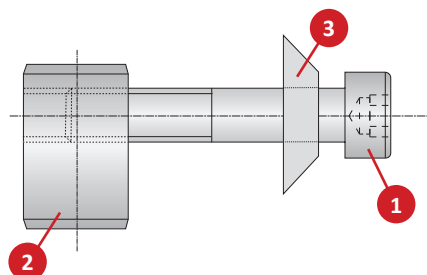
## 538 (537) Accessories

Clamping Pieces | Counter Weight | Insert Holders for Abrasive Materials

### 538 (537) Clamping Pieces

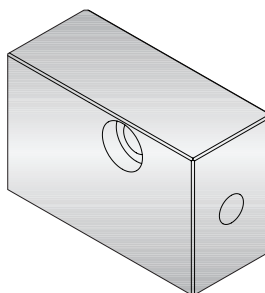
Slide Type	Complete Part No.	Service Key	Replacement Components		
			1 Cap Screw	2 Clamping Nut	3 Disk Spring
Serrated Tool Bodies	<b>137026</b>	115578	215101	140118	337105
Basic and Eco Slides	<b>137027</b>		215102	215105	337105
Flex Slides	<b>137019</b>		415900	215105	337105

NOTE: Clamping pieces sold separately



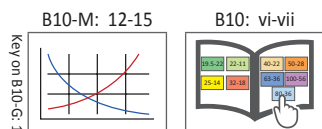
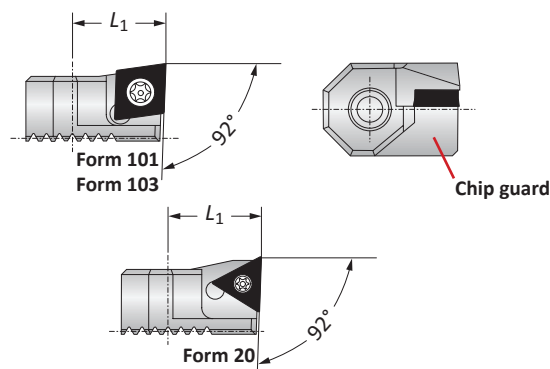
### 538 (537) Counter Weights

Boring Range	Part No.
<b>i</b> 3.937 - 128.15	<b>538055</b>
<b>m</b> 100.00 - 3255.00	<b>537055</b>



### Insert Holders for Abrasive Materials

Boring Range	L <sub>1</sub>	Weight	Insert Form	Part No.
<b>i</b> 3.937 - 128.150	0.708	0.066 (lbs)	20	<b>211061</b>
<b>i</b> 3.937 - 128.150	0.708	0.066 (lbs)	101	<b>211063</b>
<b>i</b> 3.937 - 128.150	0.708	0.066 (lbs)	103	<b>211065</b>
<b>m</b> 100.00 - 3255.00	18.00	0.03 (kg)	20	<b>211061</b>
<b>m</b> 100.00 - 3255.00	18.00	0.03 (kg)	101	<b>211063</b>
<b>m</b> 100.00 - 3255.00	18.00	0.03 (kg)	103	<b>211065</b>



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**m** = Metric (mm)

Inserts sold separately

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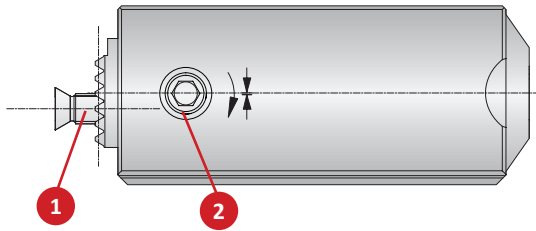
Department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)



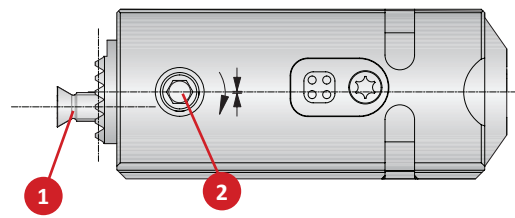


## 538 (537) Accessories | 3E<sup>TECH</sup> Accessories

### Accessories



538 (537) Analog Cassette



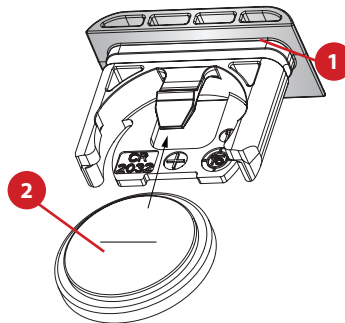
538 (537) Cassette

### 538 (537) Accessories

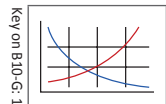
	Cassette Part No.	1 Countersunk Screw		2 Clamping Screw	
		Part No.	Service Key	Part No.	Service Key
i	538051	215462	T20 / H	115249	s4 / F
	538052	215462	T20 / H	315789	s4 / F
m	537051	215462	T20 / H	115249	s4 / F
	537052	215462	T20 / H	315789	s4 / F

### 3E<sup>TECH</sup> Accessories

1 Sealing Ring	2 Battery CR2032
Part No.	Part No.
215483	515491



B10-M: 12-15



B10: vi-vii



i = Imperial (in)

m = Metric (mm)

Inserts sold separately

**WARNING** Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

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- Refer to example on page B10-M: 11 for calculating tool assembly weight

Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

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- When using tool steel components, do not exceed recommended 6xD length to diameter ratio
- When using a heavy metal reducer, do not exceed recommended 8xD length to diameter ratio
- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter ratio

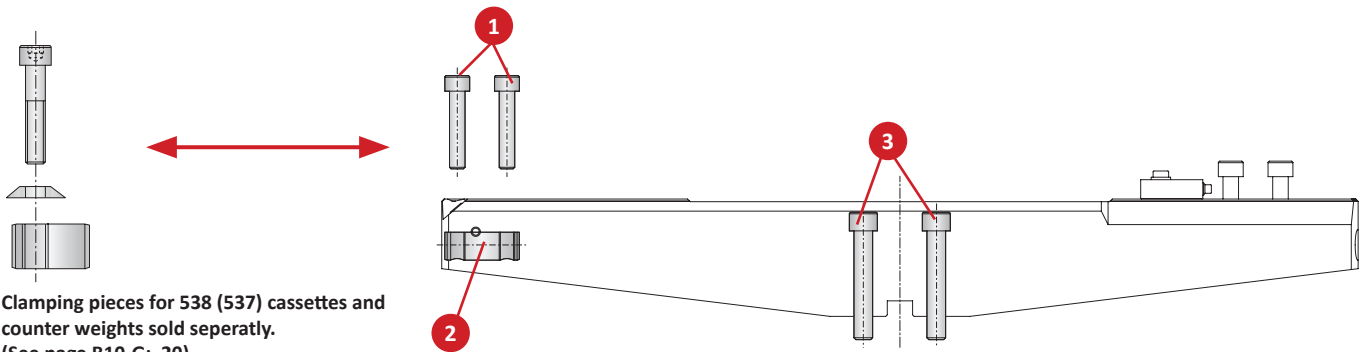
Factory technical assistance is available for your specific applications through our Application Engineering department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)



department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

## Serrated Slide Basic D 40 Accessories

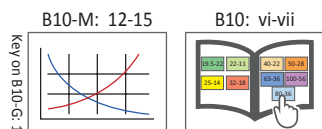
### Clamping Pieces



Clamping pieces for 538 (537) cassettes and counter weights sold separately.  
(See page B10-G: 20)

### Clamping Pieces

		Serrated Slide	1 Cap Screw		2 Clamping Nut	3 Thread Pin		Cap Screw	
Connection		Part No.	Part No.	Service Key	Part No.	Part No.	Service Key	Part No.	Service Key
i	D 40	350021	115118	s8 / B	115669	349010	s4 / F	315186	s10 / C
	D 40	350022	115118	s8 / B	115669	349011	s4 / F	315186	s10 / C
	D 40	350023	115118	s8 / B	115669	349012	s4 / F	315186	s10 / C
	D 40	350024	115118	s8 / B	115669	349013	s4 / F	315186	s10 / C
m	D 40	349021	115118	s8 / B	115669	349010	s4 / F	315186	s10 / C
	D 40	349022	115118	s8 / B	115669	349011	s4 / F	315186	s10 / C
	D 40	349023	115118	s8 / B	115669	349012	s4 / F	315186	s10 / C
	D 40	349024	115118	s8 / B	115669	349013	s4 / F	315186	s10 / C



i = Imperial (in)  
m = Metric (mm)

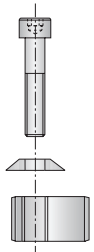
**WARNING** Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:  
-Consult machine tool builder for machine's weight limitations.  
-Refer to example on page B10-M: 11 for calculating tool assembly weight  
Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

**WARNING** Tool failure can cause serious injury. To prevent:  
-Do not exceed recommended 10xD length to diameter ratio or exceed 4 total components (including shank)  
-When using tool steel components, do not exceed recommended 6xD length to diameter ratio  
-When using a heavy metal reducer, do not exceed recommended 8xD length to diameter ratio  
-When using a carbide shank, do not exceed recommended 9xD length to diameter ratio  
-When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio  
-Refer to examples on pages B10-M: 8-10 for calculating length to diameter  
Factory technical assistance is available for your specific applications through our Application Engineering department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

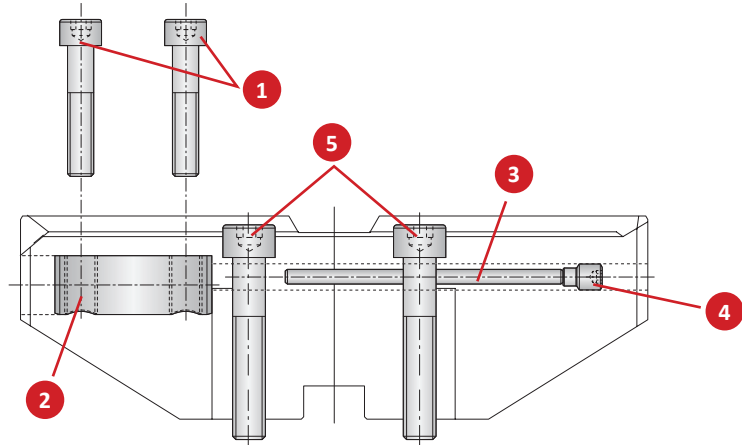


## Serrated Slide Basic D 60 Accessories

### Clamping Pieces | Cover Plates



Clamping pieces for 538 (537) cassettes and counter weights sold separately.  
(See page B10-G: 20)

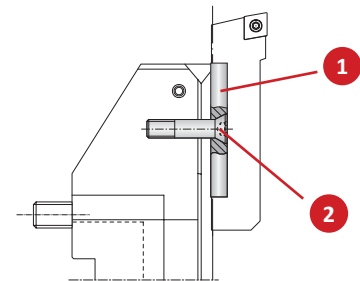


#### Clamping Pieces

	Connection	Serrated Slide Part No.	1 Cap Screw		2 Clamping Nut Part No.	3 Adjustment Pin Part No.	4 Thread Pin		5 Cap Screw	
			Part No.	Service Key			Part No.	Service Key	Part No.	Service Key
i	D 60	350051	115118	s8 / B	115669	114112	115196	s4 / F	115170	s14 / C
	D 60	350052	115118	s8 / B	115669	114113	115196	s4 / F	115170	s14 / C
	D 60	350053	115118	s8 / B	115669	114114	115196	s4 / F	115170	s14 / C
	D 60	350054	115118	s8 / B	115669	114115	115196	s4 / F	115170	s14 / C
m	D 60	349051	115118	s8 / B	115669	114112	115196	s4 / F	115170	s14 / C
	D 60	349052	115118	s8 / B	115669	114113	115196	s4 / F	115170	s14 / C
	D 60	349053	115118	s8 / B	115669	114114	115196	s4 / F	115170	s14 / C
	D 60	349054	115118	s8 / B	115669	114115	115196	s4 / F	115170	s14 / C

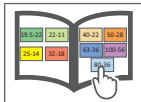
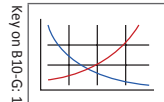
#### Cover Plates for Basic D 60 Serrated Slides

	Connection	Serrated Slide Part No.	1 Cover Plate		2 Countersunk Screw Part No.	Service Key
			Part No.	Part No.		
i	D 60	350051	349016	063106	s4 / B	
	D 60	350052	349017	063106	s4 / B	
	D 60	350053	349017	063106	s4 / B	
	D 60	350054	349017	063106	s4 / B	
m	D 60	349051	349016	063106	s4 / B	
	D 60	349052	349017	063106	s4 / B	
	D 60	349053	349017	063106	s4 / B	
	D 60	349054	349017	063106	s4 / B	



B10-M: 12-15

B10: vi-vii



i = Imperial (in)  
m = Metric (mm)

**WARNING** Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

- Consult machine tool builder for machine's weight limitations.
- Refer to example on page B10-M: 11 for calculating tool assembly weight

Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

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- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter ratio

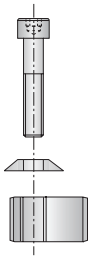
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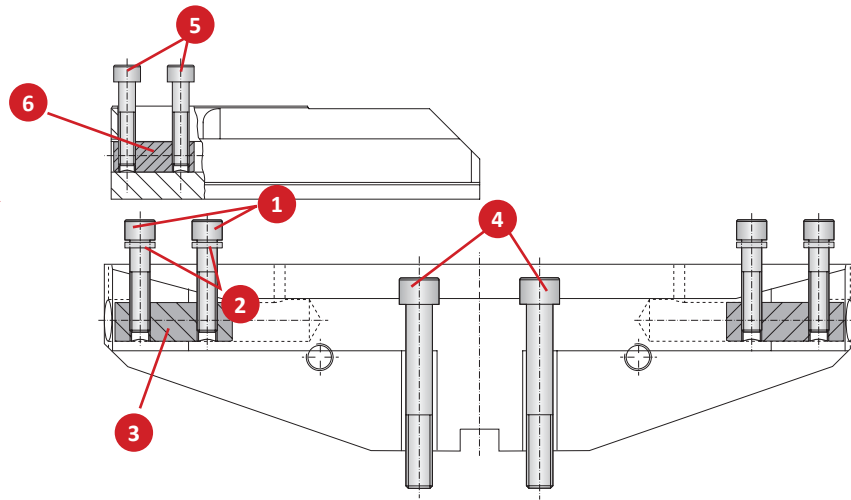
department. ext: 7611 | email: [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

## Serrated Slide Eco D 60 Accessories

### Clamping Pieces



Clamping pieces for 538 (537) cassettes and counter weights sold separately.  
(See page B10-G: 20)

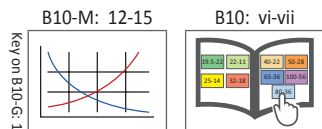


### Base Slide Clamping Pieces

	Connection	Base Slide	1 Cap Screw		2 Disc	3 Clamping Nut	4 Cap Screw	
		Part No.	Part No.	Service Key	Part No.	Part No.	Part No.	Service Key
i	D 60	350005	115771	s10 / C	115737	415181	077128	s14 / C
	D 60	350006	115771	s10 / C	115737	415181	077128	s14 / C
m	D 60	349005	115771	s10 / C	115737	415181	077128	s14 / C
	D 60	349006	115771	s10 / C	115737	415181	077128	s14 / C

### Serrated Slide Clamping Pieces

	Serrated Slide	5 Cap Screw		6 Clamping Nut
	Part No.	Part No.	Service Key	Part No.
i	350014	115118	s8 / B	115669
	350015	115118	s8 / B	115669
m	349014	115118	s8 / B	115669
	349015	115118	s8 / B	115669



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- When using a carbide shank, do not exceed recommended 9xD length to diameter ratio
- When using a NOVI<sup>TECH</sup> module, do not exceed recommended 10xD length to diameter ratio
- Refer to examples on pages B10-M: 8-10 for calculating length to diameter

Factory technical assistance is available for your specific applications through

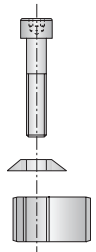


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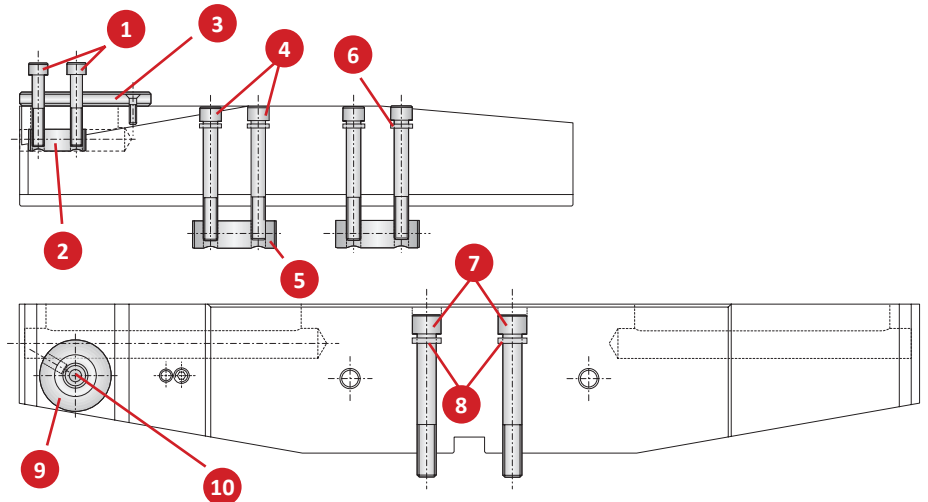
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## Serrated Slide Flex D 60 Accessories

### Clamping Pieces



Clamping pieces for 538 (537) cassettes and counter weights sold separately.  
(See page B10-G: 20)

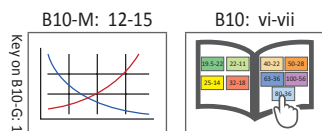


### Serrated Slide Clamping Pieces

Serrated Slide		1 Cap Screw		2 Clamping Nut	3 Adapter		4 Cap Screw		5 Clamping Nut	6 Disk
Part No.		Part No.	Service Key	Part No.	Part No.	Service Key	Part No.	Service Key	Part No.	Part No.
i	350035	115307	s8 / B	115669	349043	s4 / B	315186	s10 / C	349202	115737
	350036	115307	s8 / B	115669	349043	s4 / B	077110	s10 / C	415181	115737
	350037	115307	s8 / B	115669	349043	s4 / B	315403	s10 / C	415181	115737
	350038	115307	s8 / B	115669	349043	s4 / B	315415	s10 / C	415181	115737
m	349035	115307	s8 / B	115669	349043	s4 / B	315186	s10 / C	349202	115737
	349036	115307	s8 / B	115669	349043	s4 / B	077110	s10 / C	415181	115737
	349037	115307	s8 / B	115669	349043	s4 / B	315403	s10 / C	415181	115737
	349038	115307	s8 / B	115669	349043	s4 / B	315415	s10 / C	415181	115737

### Base Slide Clamping Pieces

		Base Slide	7 Cap Screw		8 Disk	9 Injector	10 Countersunk Screw	
Connection		Part No.	Part No.	Service Key	Part No.	Part No.	Part No.	Service Key
i	D 60	350031	115736	s14 / C	068168	349201	415898	s6 / B
	D 60	350032	415913	s14 / C	068168	349201	415898	s6 / B
	D 60	350033	215509	s14 / C	068168	349201	415898	s6 / B
	D 60	350034	415636	s14 / C	068168	349201	415898	s6 / B
m	D 60	349031	115736	s14 / C	068168	349201	415898	s6 / B
	D 60	349032	415913	s14 / C	068168	349201	415898	s6 / B
	D 60	349033	215509	s14 / C	068168	349201	415898	s6 / B
	D 60	349034	415636	s14 / C	068168	349201	415898	s6 / B



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## Notes

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## Interactive Experience

Visit our digital platform.

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- See our training and engineering departments
- Get a glimpse of our state-of-the-art logistical and machining equipment
- Virtually meet our customer service and marketing teams
- Access digital resources like literature, videos, and online tools and training



[experience.alliedmachine.com](http://experience.alliedmachine.com)



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- Direct access to 2D drawings and 3D models
- Assemble and view tool images in your browser
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- Browse products, search item numbers, and save assemblies for future use

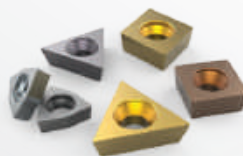
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## WOHLHAUPTER®

Boring Insert Selector

Find the best insert for your application.

- Generate the correct boring insert for your job in just six easy steps
- Choose type, shape, substrate, insert form, nose radius, and material
- Order easily by adding the item to your cart



# Insta-Code®

**Eliminate the wait. Get your program now.**

- Choose the best thread mill for your application
- Create program code for your machine
- Available as a PC download app (that can be used offline)
- Website app available 24/7



Insta-Code also has a  
**Cycle Time Calculator**

[alliedmachine.com/InstaCode](http://alliedmachine.com/InstaCode)

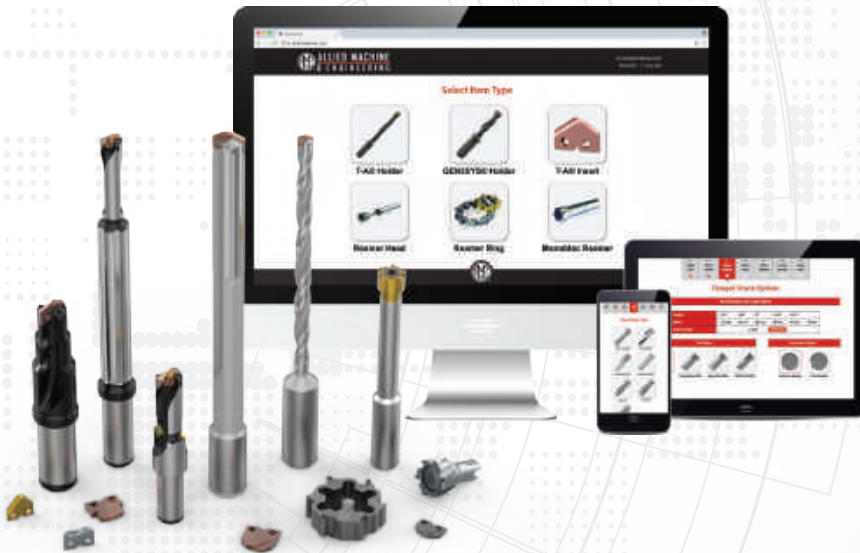


# Insta-Quote®

**Design your custom tooling and receive a drawing and quote...all within minutes.**

- Design and quote your own tooling
- Generate the solution you need in just a few steps
- Features the following products:

- T-A® Inserts
- T-A® Holders
- GEN3SYS® XT Holders
- ALVAN® Reamers



[iq.alliedmachine.com](http://iq.alliedmachine.com)

## Solution Hub App

**All Allied all the time.**

- Quickly look up product information
- Links to our free online tools
- Locate distributors
- Stay up to date on news and events



**Cobalt Utills Coupants**

## Machinist Tool App

**Quickly convert cutting tool parameters for the machine inputs you need.**

- Input data to calculate the RPM and speed and feed rates
- Also features the Boring Insert Selector
- Access product literature right at your fingertips





## Customer Support

### Support You Can Count On

Allied Machine has many lines of support to ensure we're available to assist you at all times. It's important to establish relationships with new customers, but we also know it's equally important to strengthen and support relationships with existing customers. Whether you need help with an order or you need someone to come assist you at the spindle, we have the right people to get you what you need.



1

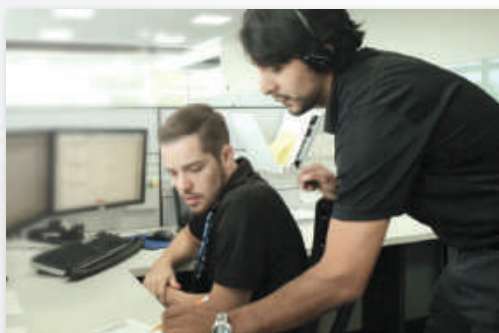
#### Inside Sales Support

Our inside sales team is trained to handle your account information and general inquiries. We are happy to assist you and find the answers to your questions.

☎ 1.330.343.4283 ext. 8610

☎ 1.800.321.5537 (toll free United States and Canada)

✉ [insidesales@alliedmachine.com](mailto:insidesales@alliedmachine.com)



2

#### Engineering Support

Our highly trained and skilled Application Engineers are here to assist you. If you are experiencing technical difficulties, our engineers will recommend the best solutions to the problem. Speeds and feeds, coolant pressure, and other machining components all affect the performance of our tooling. Our AEs are experienced in working with difficult materials in many different environments. Give us a call and put our knowledge to the test.

☎ 1.330.343.4283 ext. 7611

☎ 1.800.321.5537 (toll free United States and Canada)

✉ [appeng@alliedmachine.com](mailto:appeng@alliedmachine.com)

3

#### Field Support

Allied Machine provides local engineering support all over the world. Our Field Sales Engineers (FSEs) spend months training in-house before going to the field. This support line allows us to provide assistance to our customers right at the spindle. They are available to visit your facility, run demos and tests, and work hand-in-hand with machine operators and engineers to find the best possible tooling solutions.

Visit [www.alliedmachine.com/fse](http://www.alliedmachine.com/fse) to get in touch with your local Field Sales Engineer.

☎ 1.330.343.4283

☎ 1.800.321.5537 (toll free United States and Canada)

✉ [info@alliedmachine.com](mailto:info@alliedmachine.com)







# Allied Tool Academy

Online | On-site Technical Education Seminar (TES) | LIVE (Broadcasting)

## Online Training

Get **all** the tooling training of our 3-day in-person Technical Education Seminar (TES) through the online **Allied Tool Academy** training platform. Level up your tooling IQ through a series of product overviews, demos, and short quizzes.

- Online TES Certification as well as other training modules
- On demand
- On YOUR schedule



Register online today:  
[www.alliedtoolacademy.com](http://www.alliedtoolacademy.com)



Register online today:  
[www.alliedmachine.com/live](http://www.alliedmachine.com/live)

## Allied LIVE (Broadcasting)

Join us for **LIVE broadcast** training events where you will have the ability to learn about our tooling, watch live demos, and ask our trainers questions.

- Online
- Quick brief presentation provides basic knowledge of our products
- Watch live demos of tools at the spindle at different speeds and feeds

## On-site Technical Education Seminar (TES)

Allied Machine's **Technical Education Seminar (TES)** puts the attendees in front of the machines. When you attend our three day TES program, you'll gain first-hand experience in **real-life** application situations. Test and experiment with different speeds and feeds, observe the results, and discover the best solution.

- Training Lab: In-depth training at the spindle allows you to choose speeds and feeds
- Learning Lab: Quick, brief sessions provide basic knowledge of our products
- Facility Tours: Take guided tours of our two manufacturing facilities located in Dover, Ohio



Register online today:  
[www.alliedmachine.com/TES](http://www.alliedmachine.com/TES)



Allied Machine  
Training Facility  
485 West 3rd Street  
Dover, OH 44622



# Guaranteed Test / Demo Application Form

Distributor PO #

The following must be filled out completely before your test will be considered

**IMPORTANT:** For processing, send Purchase Order to your Allied Field Sales Engineer (FSE). Please clearly mark the paperwork as "Test Order."

## Distributor Information

Company Name: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Account Number: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Email: \_\_\_\_\_

## End User Information

Company Name: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Industry: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Email: \_\_\_\_\_

**Current Process** List all tooling, coatings, substrates, speeds and feeds, tool life, and any problems you are experiencing

**Test Objective** List what would make this a successful test (i.e. penetration rate, finish, tool life, hole size, etc.)

## Application Information

Hole Diameter: \_\_\_\_\_ in/mm Tolerance: \_\_\_\_\_ Material: \_\_\_\_\_  
(4150 / A36 / Cast Iron / etc.)  
Preexisting Diameter: \_\_\_\_\_ in/mm Depth of Cut: \_\_\_\_\_ in/mm Hardness: \_\_\_\_\_  
(BHN / Rc)  
Required Finish: \_\_\_\_\_ RMS State: \_\_\_\_\_  
(Casting / Hot rolled / Forging)

## Machine Information

Machine Type: \_\_\_\_\_ Builder: \_\_\_\_\_ Model #: \_\_\_\_\_  
(Lathe / Screw machine / Machine center / etc.) (Haas, Mori Seiki, etc.)  
Shank Required: \_\_\_\_\_ Power: \_\_\_\_\_ HP/KW  
(CAT50 / Morse taper, etc.)  
Rigidity: Orientation: Tool Rotating: Thrust: \_\_\_\_\_ lbs/N  
☐ Excellent ☐ Vertical ☐ Yes  
☐ Good ☐ Horizontal ☐ No  
☐ Poor

## Coolant Information

Coolant Delivery: \_\_\_\_\_ Coolant Pressure: \_\_\_\_\_ PSI / bar  
(Through tool / Flood)  
Coolant Type: \_\_\_\_\_ Coolant Volume: \_\_\_\_\_ GPM / LPM  
(Air mist, oil, synthetic, water soluble, etc.)

## Requested Tooling

QTY	Item Number

QTY	Item Number

  
**Cobalt Outils Coupants**



**Allied Machine & Engineering**  
120 Deeds Drive  
Dover, OH 44622

Telephone: (330) 343-4283  
Toll Free USA & Canada: (800) 321-5537  
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