



**KOMET MicroKom<sup>®</sup> BluFlex<sup>™</sup>**  
Precision boring system using Bluetooth<sup>®</sup> technology



# KOMET MicroKom® BluFlex™

## Precision boring system using Bluetooth® technology

The new MicroKom® BluFlex™ fine adjustment head takes advantage of modern wireless networking technology in order to provide operators with increased safety and convenience.

Bluetooth® wireless technology, now a common feature on small mobile devices, was developed to network electronic devices over short distances.

Its integration in the MicroKom® BluFlex™ tool system made it possible to remove the display from the tool head; thereby making it safer, easier and more convenient to read the data. When adjusting the tool, the operator can position the display unit so that it is conveniently located within their field of view. A specially-designed adjustment key, with integral Bluetooth® interface, completes the system.

Thanks to an integrated balancing system, the MicroKom® BluFlex™ can reach rotational speeds of up to 20,000 rpm. The modular ABS® interface makes adjustment easy on both the spindle and the tool side.

### BENEFITS for you:

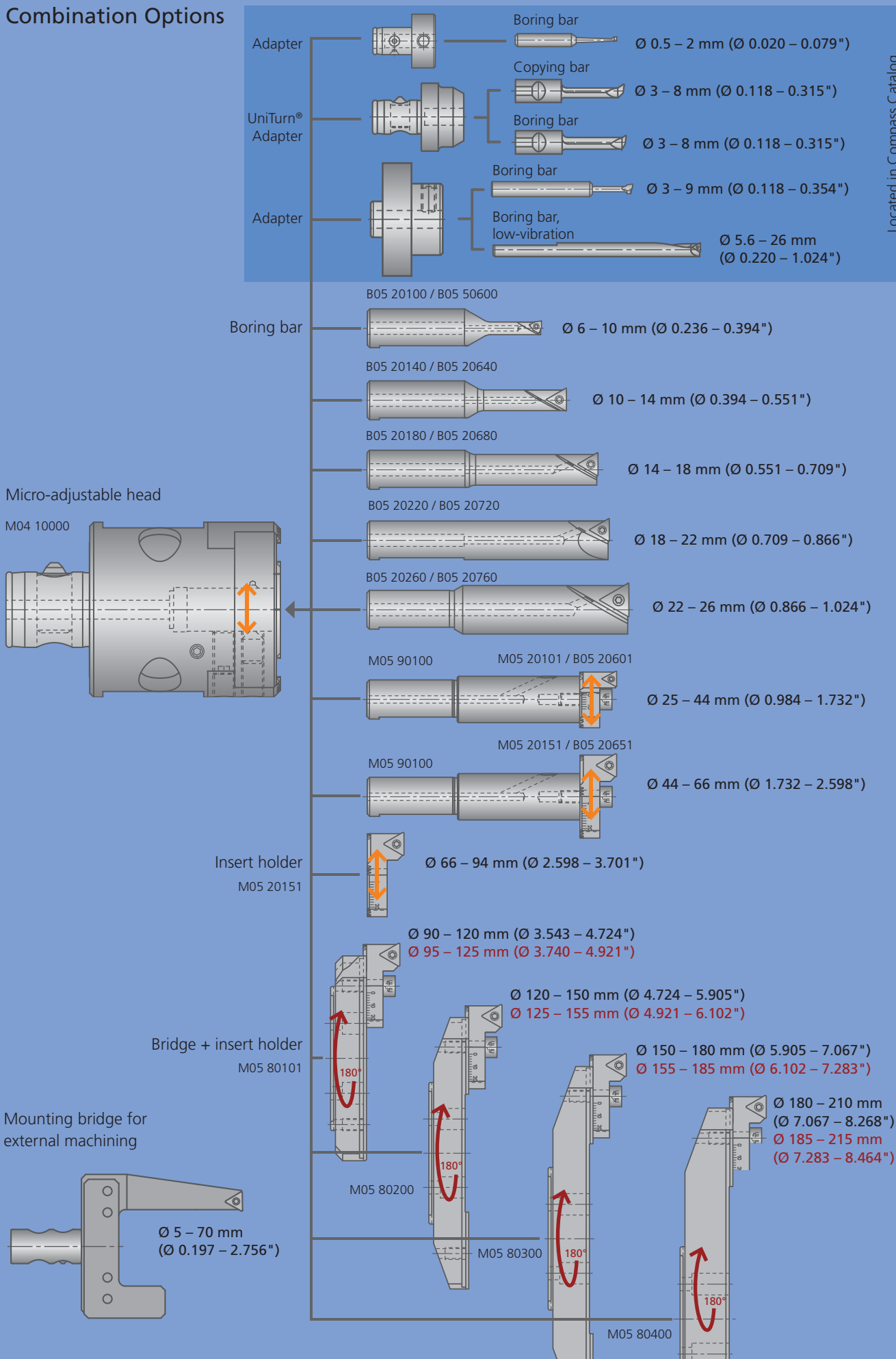
- Magnetic display unit can be positioned anywhere within field of view.
- Easy reading of tool data on oversized display, in mm or inch.
- Same display unit and adjustment key can be used for multiple heads.
- Micro-adjustable head can accommodate boring bars, insert holders or bridges.
- Universal ABS® interface.
- Higher speeds thanks to balancing system (up to 20,000 rpm).
- Uses conventional AAA batteries.



Bluetooth® technology is a Bluetooth SIG, Inc. brand name  
Patented design (MicroKom BluFlex)

Combination Options

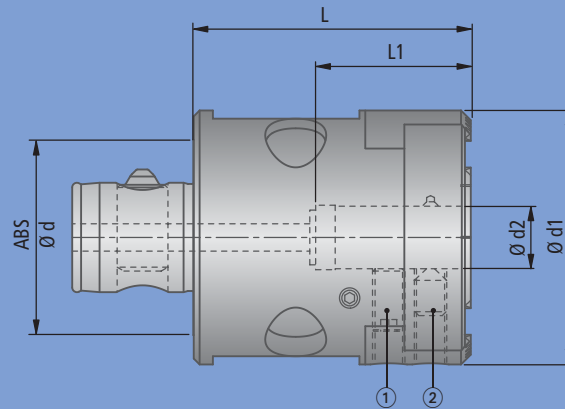
Located in Compass Catalog





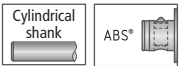


# KOMET MicroKom® BluFlex™


## Micro-Adjustable Head

- ABS® connection



Machine adapter 	Central coolant 	Adjustable 	Rotating tool 	Tool holder 
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(..) = inch

Description	Part No.	ABS Ø d	Ø d1	Ø d2	Radial adjust- ment S	L	L1		Assembly parts	
									Clamping screw ① DIN913 <b>Part No.</b> 55051 08120 M8×1×20	Gripper screw ② <b>Part No.</b> N00 02062 ABS32-F1.1
ABS50/6-215	<b>M04 10000</b>	<b>50</b>	65 (2.560)	<b>ABS32</b> Ø 16 (0.630)	2.5 (0.098)	71 (2.795)	39.7 (1.563)	3.20		

Adjustment must be in line with cutting parameters and spindle speed.

## Display Unit



Display unit	Assembly parts	
	Rubber sleeve with clip ③	
Part No.	Part No.	
<b>E51 00000</b>	<b>E51 00010</b>	

## Adjustment Key



Adjustment key	Assembly parts	
	Sleeve ④	
Part No.	Part No.	
<b>E52 00000</b>	<b>E52 00000.13</b>	

## Basic Set

Part No. M04 10010

Components:

- 1× Micro-adjustable head (M04 10000)
- 1× Display unit (E51 00000)
- 1× Adjustment key (E52 00000)
- 1× Operating instructions

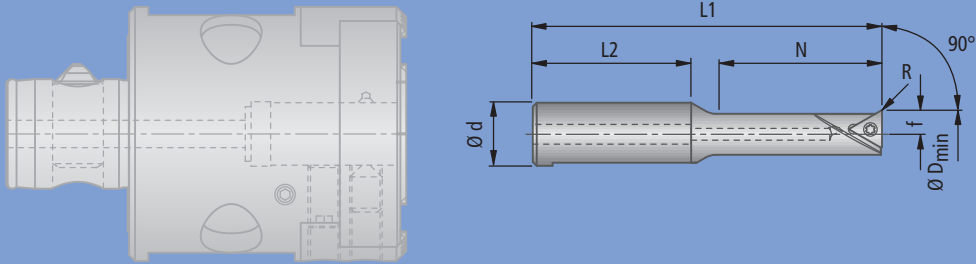


## Features:

- Easy to use
- Diameter range 0.5-215 mm (0.020 – 8.464") with existing KOMET standard tools
- Adjustment range from -0.4 to +4.6 mm (-0.016 to +0.181") on dia.
- Head diameter: 65 mm (2.560")
- Can use either ABS 32 spindle connection or 16 mm (0.630") cylindrical shank
- Can be adapted for any machine tool with standard tool adaptors
- Can be locked if necessary
- Balancing mechanism for balance to 20,000 rpm
- Diameter adjustment in increments of 0.002 mm (0.00008")
- Display in mm or inches
- Can be switched between differential and absolute mode
- Energy saving function, automatically shuts off after 30 seconds
- MQL (minimum quantity lubricant) compatible
- Internal coolant supply over entire range
- Uses conventional AAA batteries

Boring Bar with Cylindrical Shank,  $\kappa = 90^\circ$ , R.H. cutting

L / D	Through hole	Blind hole	Slanted surface	Cross hole	Boring backwards	Through hole HRC > 54	Blind hole HRC > 54	Vibration dampening
3.5xD								
	● highly recommended	● recommended	○ may be suitable	✗ not recommended				



(..) = inch

Ø D min	Part No.	Ø d	L1	L2	N	f	R		Basic recommendations		Assembly parts		Accessories		
									Insert	for workpiece material	Clamping screw	Screwdriver			
									W00 W30 W57-12 W57-14	P M K N S H					
									Part No. ISO Insert Description		Part No. Description	Part No. Description			
6	<b>B05 20100</b>	16	71.7	40	21	3	0.1	0.13	<b>W00 04120.018440</b> WOHX 02T001EL-G12 BK8440 <b>W00 04120.012710</b> WOHX 02T001EL-G12 BK2710 <b>W00 04120.0121</b> WOHX02T001FL-G12 K10			<b>N00 56011</b> S/M1.5x2.9-5IP 3.4 in-lbs	<b>L05 00800</b> 5IP		
(0.236)	<b>B05 20600</b>	(0.630)	(2.823)	(1.575)	(0.827)	(0.118)	(0.004)								
10	<b>B05 20140</b>	16	81.8	40	34	5	0.2	0.18							
(0.394)	<b>B05 20640</b>	(0.630)	(3.220)	(1.575)	(1.338)	(0.197)	(0.008)								
14	<b>B05 20180</b>	16	94.4	40	50	7	0.2	0.22	<b>W57 14140.0460</b> TOGX 090204EN-14 BK60 <b>W30 14060.046110</b> TOHX 090204EL-G06 BK6110 <b>W57 14120.0423</b> TOGX 090204FN-12 K10 <b>W30 14990.0440</b> TOGX 090204TN CBN40			<b>N00 56101</b> S/M2.6x5.2-8IP 11.3 in-lbs	<b>L05 00830</b> 8IP		
(0.551)	<b>B05 20680</b>	(0.630)	(3.716)	(1.575)	(1.968)	(0.275)	(0.008)								
18	<b>B05 20220</b>	16	100	40	60	9	0.2	0.31							
(0.709)	<b>B05 20720</b>	(0.630)	(3.937)	(1.575)	(2.362)	(0.354)	(0.008)								
22	<b>B05 20260</b>	16	108	36	68.5	11	0.2	0.46	<b>W57 26140.0460</b> TOGX 140304EN-14 BK60 <b>W30 26060.046110</b> TOHX 140304EL-G06 BK6110 <b>W57 26120.0423</b> TOGX 140304FN-12 K10 <b>W30 26990.0440</b> TOGX 140304TN CBN40			<b>N00 56211</b> S/M3.5x7.3-10IP 24.8 in-lbs	<b>L05 00850</b> 10IP		
(0.866)	<b>B05 20760</b>	(0.630)	(4.252)	(1.417)	(2.697)	(0.433)	(0.008)								

**Includes:**

Boring bar with clamping screw.

Please order inserts and accessories separately.

**Note:**

For diameters smaller than 6 mm (0.236"), refer to Compass Catalog

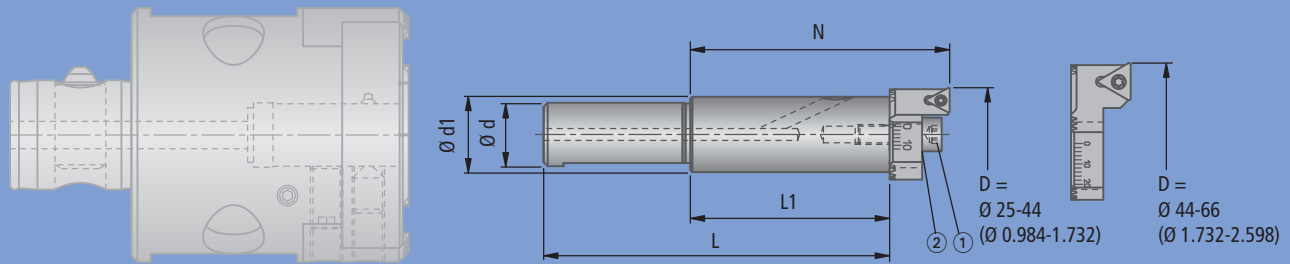
∅ 25 – 66 mm  
(0.984 – 2.598 inch)

KOMET MicroKom® *BluFlex*™

### Serrated Body

L / D 3.5xD	Through hole 	Blind hole 	Slanted surface 	Cross hole 	Boring backwards 	Through hole HRC > 54 	Blind hole HRC > 54 	Vibration dampening 
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● highly recommended ● recommended ○ may be suitable ✗ not recommended



(..) = inch

Serrated body							Assembly parts	
							Location screw ①	Cup spring ②
Part No.	∅ d	∅ d1	N	L	L1		Part No. Description	Part No. Description
<b>M05 90100</b>	16 (0.630)	19 (0.748)	65 (2.559)	88.5 (3.484)	51.5 (2.027)	0.163	<b>55011 05016</b> M5x16 ISO 4762	<b>56771 10053</b> A12.5 Ø 6.2x0.35

Supply includes: Serrated body with assembly parts.

∅ D	Insert holder		Basic recommendations			for workpiece material  P M K N S H	Assembly parts	Accessories
		Part No.					Clamping screw 	Screwdriver 
		Part No.	∇∇ size	ISO Insert Description			Part No. Description	Part No. Description
25 – 44 (0.984-1.732)	0.04	<b>M05 20101</b>	<b>W30 04060.037615</b>	<b>W57 04140.0260</b>	TOGX 06T102EN-14 BK60		<b>N00 56031</b> S/M2x4.9-6IP 5.5 in-lbs	<b>L05 00810</b> 6IP
		<b>M05 20601</b>		<b>W57 04120.0223</b>	TOHX 06T103EL-G06 BK7615 TOGX 06T102FN-12 K10			
44 – 66 (1.732-2.598)	0.06	<b>M05 20151</b>		<b>W30 14060.047615</b>	<b>W57 14140.0460</b>			
		<b>M05 20651</b>	<b>W57 14120.0423</b>	TOHX 090204EL-G06 BK7615 TOGX 090204FN-12 K10				

Includes:

Insert holder with clamping screw.

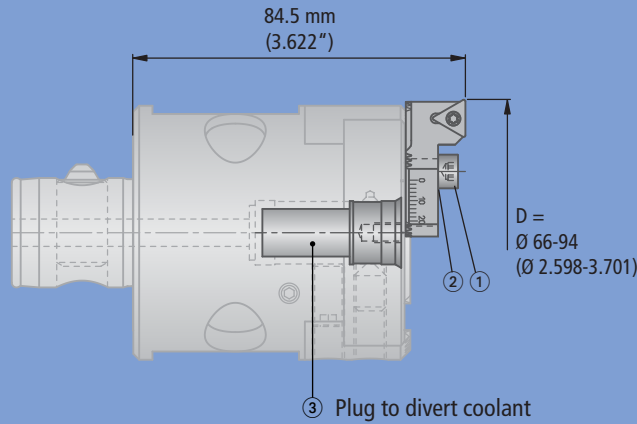
Please order inserts and accessories separately.

Guideline values for fine boring and alternative inserts:

Pages 12-13.

## Insert Holder

L / D	Through hole	Blind hole	Slanted surface	Cross hole	Boring backwards	Through hole	Blind hole	Vibration dampening
3.5xD								
	● highly recommended	● recommended	○ may be suitable	✗ not recommended	✗ not recommended	● recommended	● recommended	✗ not recommended



(..) = inch

Ø D	Insert holder		Basic recommendations			Assembly parts	Accessories
	Part No.	lbs	W30	W57-12	W57-14	Clamping screw	Screwdriver
66 – 94 (2.598 – 3.701)	<b>M05 20151</b>	0.06	<b>W30 14060.047615</b>	TOGX 090204EN-14 BK60 TOHX 090204EL-G06 BK7615 TOGX 090204FN-12 K10	for workpiece material <b>P M K N S H</b>	<b>N00 56111</b> S/M2.6x6.2-8IP 11.3 in-lbs	<b>L05 00830</b> 8IP
	<b>M05 20651</b>		<b>W57 14140.0460</b>	ISO Insert Description			

### Includes:

Insert holder with clamping screw.

Please order inserts and accessories separately.

Accessories		
Location screw ①	Cup spring ②	Plug ③
<b>Part No.</b> Description	<b>Part No.</b> Description	<b>Part No.</b>
<b>55011 05016</b> M5x16 ISO 4762	<b>56771 10053</b> A12.5 Ø 6.2x0.35	<b>M05 90501</b>

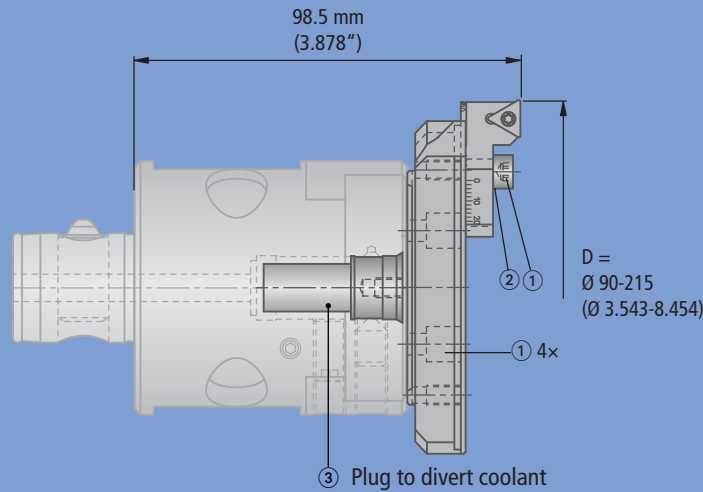


Ø 90 – 215 mm  
(3.543 – 8.464 inch)

KOMET MicroKom® *BluFlex*™

Bridge / Insert Holder

L / D	Through hole	Blind hole	Slanted surface	Cross hole	Boring backwards	Through hole	Blind hole	Vibration dampening
3.5xD								
	● highly recommended	● recommended	○ may be suitable	✗ not recommended				



(..) = inch

Ø D	Bridge		Insert holder		Basic recommendations					Assembly parts	Accessories
	Part No.	lbs	Part No.	lbs	W30	W57-12	W57-14	for workpiece material	Clamping screw	Screwdriver	
					Part No.	ISO Insert Description			Part No.	Part No.	
					∇ size				Description	Description	
90-125 (3.543-4.921)	<b>M05 80101</b>	0.15	<b>M05 20151</b>	0.06	<b>W57 14140.0460</b> <b>W30 14060.047615</b> <b>W57 14120.0423</b>	TOGX 090204EN-14 BK60 TOHX 090204EL-G06 BK7615 TOGX 090204FN-12 K10	P M K N S H	● ● ● ● ● ●	<b>N00 56111</b> S/M2.6x6.2-8IP 11.3 in-lbs	<b>L05 00830</b> 8IP	
120-155 (4.724-6.102)	<b>M05 80200</b>	0.23									
150-185 (5.905-7.283)	<b>M05 80300</b>	0.33									
180-215 (7.087-8.464)	<b>M05 80400</b>	0.50									

Includes:

Insert holder with clamping screw.  
Please order inserts and accessories separately.

Accessories		
Location screw ① 	Cup spring ② 	Plug ③ 
<b>Part No.</b> Description	<b>Part No.</b> Description	<b>Part No.</b>
<b>55011 05016</b> M5x16 ISO 4762	<b>56771 10053</b> A12.5 Ø 6.2x0.35	<b>M05 90501</b>

Guideline values for fine boring and alternative inserts:  
Pages 12-13.

Insert Holder

Guidelines for fine boring				v <sub>c</sub> m/min (ft/min)	Feed f mm/rev (in/rev)						
Material group	Strength Rm (lbf/in <sup>2</sup> )	Hardness HB	Material example ANSI / SAE		Cutting speed	3.5xD					
						Ø 6 - 7.9 (Ø 0.236 - 0.311)	Ø 8 - 11.9 (Ø 0.312 - 0.468)	Ø 12 - 25 (Ø 0.469 - 0.984)	Ø 25 - 44 (Ø 0.984 - 1.732)	Ø 44 - 94 (Ø 1.732 - 3.701)	Ø 90-215 (Ø 3.543 - 8.464)
P	1.0	≤ 72,500	non-alloy steels	1010 1144 1213	300 (980)	0.04 (0.001)	0.07 (0.003)	0.10 (0.004)	0.08 (0.003)	0.10 (0.004)	0.10 (0.004)
	2.0	72,500 - 130,000	non-alloy / low alloy steels	1055 5115 5120	250 (820)	0.04 (0.001)	0.06 (0.002)	0.12 (0.005)	0.08 (0.003)	0.12 (0.005)	0.12 (0.005)
	2.1	< 72,500	lead alloys	12L14	300 (980)	0.04 (0.001)	0.07 (0.003)	0.12 (0.005)	0.10 (0.004)	0.15 (0.006)	0.15 (0.006)
	3.0	>130,000	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1064 4140	240 (785)	0.03 (0.001)	0.06 (0.002)	0.10 (0.004)	0.07 (0.003)	0.10 (0.004)	0.10 (0.004)
	4.0	>130,000	high alloy steels	H13 H21	200 (660)	0.03 (0.001)	0.05 (0.002)	0.10 (0.004)	0.06 (0.002)	0.10 (0.004)	0.10 (0.004)
	4.1		HSS	M10 T4	120 (390)	0.02 (0.0008)	0.04 (0.001)	0.08 (0.003)	0.06 (0.002)	0.08 (0.003)	0.08 (0.003)
S	5.0		250 special alloys: Inconel, Hastelloy, Nimonic, stc.	Inconel® 718 Nimonic® 80A	50 (165)	0.01 (0.0004)	0.04 (0.001)	0.08 (0.003)	0.06 (0.002)	0.08 (0.003)	0.08 (0.003)
	5.1	58,000	titanium, titanium alloys	Ti-6Al-4V	30 (100)	0.01 (0.0004)	0.04 (0.001)	0.08 (0.003)	0.06 (0.002)	0.08 (0.003)	0.08 (0.003)
M	6.0	≤ 87,000	stainless steels	304L 316	200 (660)	0.01 (0.0004)	0.05 (0.002)	0.10 (0.004)	0.08 (0.003)	0.10 (0.004)	0.10 (0.004)
	6.1	<130,000	stainless steels	630	180 (590)	0.01 (0.0004)	0.05 (0.002)	0.10 (0.004)	0.06 (0.002)	0.10 (0.004)	0.10 (0.004)
	7.0	>130,000	stainless / fireproof steels	403 420	120 (390)	0.01 (0.0004)	0.04 (0.001)	0.08 (0.003)	0.06 (0.002)	0.10 (0.004)	0.10 (0.004)
K	8.0		180 gray cast iron	Class 25 G3000	240 (785)	0.05 (0.002)	0.10 (0.004)	0.15 (0.006)	0.15 (0.006)	0.20 (0.008)	0.20 (0.008)
	8.1		250 alloy gray cast iron	A436 Type 2	200 (660)	0.05 (0.002)	0.10 (0.004)	0.15 (0.006)	0.15 (0.006)	0.20 (0.008)	0.20 (0.008)
	9.0	≤ 87,000	130 ductile cast iron, ferritic	60-40-18 D4512	180 (590)	0.04 (0.001)	0.08 (0.003)	0.15 (0.006)	0.10 (0.004)	0.15 (0.006)	0.15 (0.006)
	9.1		230 ductile cast iron, ferritic / perlitic	80-55-06 D5506	180 (590)	0.04 (0.001)	0.08 (0.003)	0.15 (0.006)	0.10 (0.004)	0.15 (0.006)	0.15 (0.006)
	10.0	> 87,000	250 spheroidal graphite cast iron, perlitic malleable iron	100-70-03 07003	160 (520)	0.04 (0.001)	0.08 (0.003)	0.15 (0.006)	0.10 (0.004)	0.15 (0.006)	0.15 (0.006)
	10.1		200 alloyed spheroidal graphite cast iron	A43D2	140 (460)	0.03 (0.001)	0.07 (0.002)	0.12 (0.005)	0.10 (0.004)	0.15 (0.006)	0.15 (0.006)
N	10.2		300 vermicular cast iron		120 (390)	0.03 (0.001)	0.10 (0.004)	0.15 (0.006)	0.10 (0.004)	0.15 (0.006)	0.15 (0.006)
	12.0		90 copper alloy, brass, lead-alloy bronze, lead bronze: good cut	316	400 (1310)	0.02 (0.0008)	0.04 (0.001)	0.08 (0.003)	0.10 (0.004)	0.15 (0.006)	0.15 (0.006)
	12.1		100 copper alloy, brass, bronze: average cut		300 (980)	0.05 (0.002)	0.08 (0.003)	0.15 (0.006)	0.10 (0.004)	0.15 (0.006)	0.15 (0.006)
	13.0		60 wrought aluminum alloys	6151 7075	500 (1640)	0.02 (0.0008)	0.06 (0.002)	0.10 (0.004)	0.08 (0.003)	0.12 (0.005)	0.12 (0.005)
	13.1		75 cast aluminum alloy: Si-content <10% magnesium alloy	380 A356.0	350 (1150)	0.05 (0.002)	0.08 (0.003)	0.12 (0.005)	0.10 (0.004)	0.15 (0.006)	0.15 (0.006)
H	14.0		100 cast aluminum alloy: Si-content > 10%	383 A413.0	300 (980)	0.05 (0.002)	0.08 (0.003)	0.12 (0.005)	0.10 (0.004)	0.15 (0.006)	0.15 (0.006)
	15.0	203,000	hardened steels < 45 HRC		80 (260)		0.05 (0.002)	0.08 (0.003)	0.08 (0.003)	0.08 (0.003)	0.08 (0.003)
	16.0	261,000	hardened steels > 45 HRC, ≤ 55 HRC		60 (195)		0.05 (0.002)	0.08 (0.003)	0.06 (0.002)	0.08 (0.003)	0.08 (0.003)

## Alternative Inserts

Alternative inserts					
	Ø D	Insert			for workpiece material
		Part No. ▽ size	ISO Insert Description		
For better chip control	6 – 7.9	–			
	8 – 9.9	<b>W30 04120.3232</b> <b>W30 04120.3977</b>	TOHX 06T102EL-US12 CK32 TOHX 06T1ZZEL-39G12 BK77		
	10– 18	<b>W30 14120.3232</b> <b>W30 14120.3977</b>	TOHX 090202EL-US12 CK32 TOHX 0902ZZEL-39G12 BK77		
	22	<b>W30 26120.3232</b> <b>W30 26120.3977</b>	TOHX 140304-US12 CK32 TOHX 1403ZZEL-39G12 BK77		
	44 – 215	<b>W30 14120.3232</b> <b>W30 14120.3977</b>	TOHX 090202EL-US12 CK32 TOHX 0902ZZEL-39G12 BK77		
For higher cutting speed	6 – 7.9	–			
	8 – 9.9	<b>W57 04140.0232</b> <b>W30 04120.0238</b> <b>W30 04990.0257</b> <b>W30 04990.0255</b>	TOGX 06T102EN-14 CK32 TOHX 06T102EL-G12 CK38 TOGX 06T102TN CBN57 TOGX 06T102FN PKD55		
	10– 18	<b>W57 14140.0432</b> <b>W30 14120.0238</b> <b>W30 14990.0457</b> <b>W30 14990.0455</b>	TOGX 090204EN-14 CK32 TOHX 090202EL-G12 CK38 TOGX 090204TN CBN57 TOGX 090204FN PKD55		
	22	<b>W57 26140.0432</b> <b>W30 26120.0438</b> <b>W30 26990.0457</b> <b>W30 26990.0455</b>	TOGX 140304EN-14 CK32 TOHX 140304EL-G12 CK38 TOGX 140304TN CBN57 TOGX 140304FN PKD55		
	44 – 215	<b>W57 14140.0432</b> <b>W30 14120.0238</b> <b>W30 14990.0457</b> <b>W30 14990.0455</b>	TOGX 090204EN-14 CK32 TOHX 090202EL-G12 CK38 TOGX 090204TN CBN57 TOGX 090204FN PKD55		
For better surface finish	6 – 7.9	–			
	8 – 9.9	<b>W57 04140.0232</b> <b>W30 04060.036110</b> <b>W30 04200.0321</b> <b>W30 04990.0255</b>	TOGX 06T102EN-14 CK32 TOHX 06T103EL-G06 BK6110 TOHX 06T103FL-G20 K10 TOGX 06T102FN PKD55		
	10– 18	<b>W57 14140.0432</b> <b>W30 14060.046110</b> <b>W30 14200.0421</b> <b>W30 04990.0255</b>	TOGX 090204EN-14 CK32 TOHX 090204EL-G06 BK6110 TOHX 090204FL-G20 K10 TOGX 090204FN PKD55		
	22	<b>W57 26140.0432</b> <b>W30 26060.046110</b> <b>W30 26200.0521</b> <b>W30 26990.0455</b>	TOGX 140304EN-14 CK32 TOHX 140304EL-G06 BK6110 TOHX 140305FL-G20 K10 TOGX 140304FN PKD55		
	44 – 215	<b>W57 14140.0432</b> <b>W30 14060.046110</b> <b>W30 14200.0421</b> <b>W30 04990.0255</b>	TOGX 090204EN-14 CK32 TOHX 090204EL-G06 BK6110 TOHX 090204FL-G20 K10 TOGX 090204FN PKD55		

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