

Modular Tools

H212 to H228

H

Modular
Tools

H

Shoulder
Milling

High-Feed

Radius

Chamfering

Non-ferrous
Metal

		SEC-Modular Tools	H212
Shoulder Milling	For High-precision Milling of Steel, Die Steel, Cast Iron, Stainless Steel and Non-Ferrous Metal	 SEC-WaveMill WEZ Type	H214
	For High-efficiency Milling of Steel, Cast Iron, Stainless Steel and Non-Ferrous Metal	SEC-WaveMill WEX Type	H218
	For Steel, Die Steel, Cast Iron, Stainless Steel and Non-Ferrous Metal	 SEC-WaveMill WFX Type	H220
High-Feed	For High-feed Milling of Steel, Die Steel, Cast Iron, and Stainless Steel	 SEC-Sumi Dual Mill DMSW Type	H221
	For High-feed Milling of Steel, Die Steel, Cast Iron, Stainless Steel and Non-Ferrous Metal	 SEC-WaveMill WFXH Type	H222
	For High-Feed Machining of Steel, Cast Iron and Stainless Steel	SEC-Metal Slash Mill MSX Type	H223
Radius	For Exotic Alloy	SEC-Wave Radius Mill RSX(F) Type	H224
	For Steel, Cast Iron, Stainless Steel and Non-Ferrous Metal	SEC-Wave Radius Mill WRCX Type	H225
Chamfering	For Chamfering of Steel, Die Steel, Cast Iron, Stainless Steel and Non-Ferrous Metal	 SEC-WaveMill WFXC Type	H226
Non-ferrous Metal	For High-speed, High-efficiency Milling of Aluminum Alloy and Non-Ferrous Metal	 ALNEX ANXS Type	H227

Stock Markings and Symbols

- mark: Standard stocked item
- mark: To be replaced with the new item featured on the same page
- ▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability).

- * mark: Semi-standard stock (please confirm stock availability)
- mark: Stock or planned stock (please confirm stock availability)
- Blank: Made-to-order item
- mark: Not available

SEC- Modular Tools

Modular Tools



General Features

- 10 indexable head modular types available!

WEZ Type
WEX Type
WFX Type
DMSW Type
WFXH Type

MSX Type
RSX Type
WRCX Type
WFXC Type
ANXS Type

- In addition to carbide arbors and steel arbors, the lineup of integrated BBT types enables a variety of combinations
- General-purpose grade applicable to any work material. Introducing the new grade ACU2500, which is applicable to a wide variety of processes and work materials such as steel, stainless steel and cast iron.

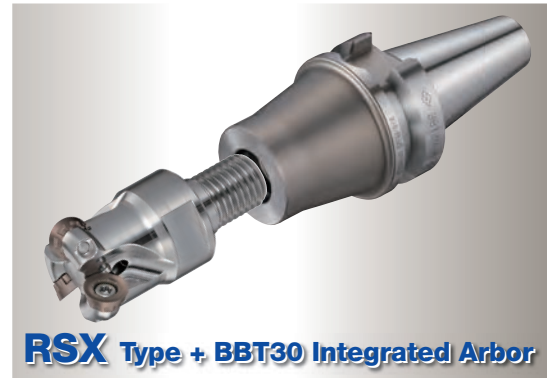
Suitable for milling with **long overhangs** when combined with carbide or steel arbors

Easy-to-replace screw-on design.



WEX Type + Carbide Arbor

When combined with BBT integrated arbors, **high load milling** is supported



RSX Type + BBT30 Integrated Arbor

Shoulder Milling

High-Feed

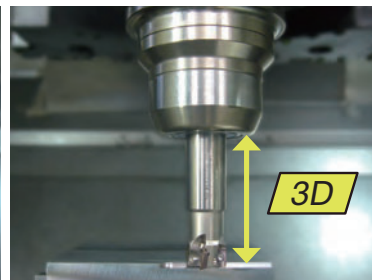
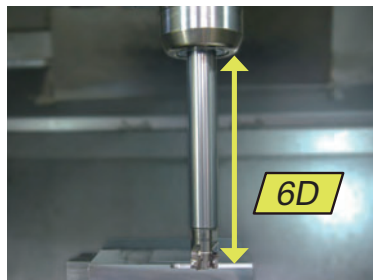
Radius

Chamfering

Non-ferrous Metal

Modular Type + Carbide Arbor

Standard Type (Integrated Arbor)



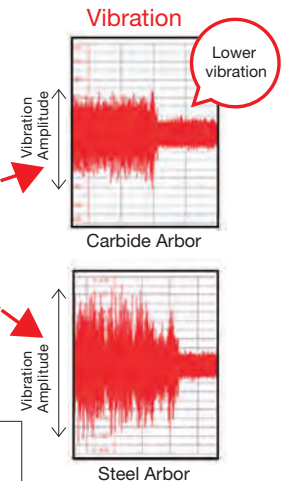
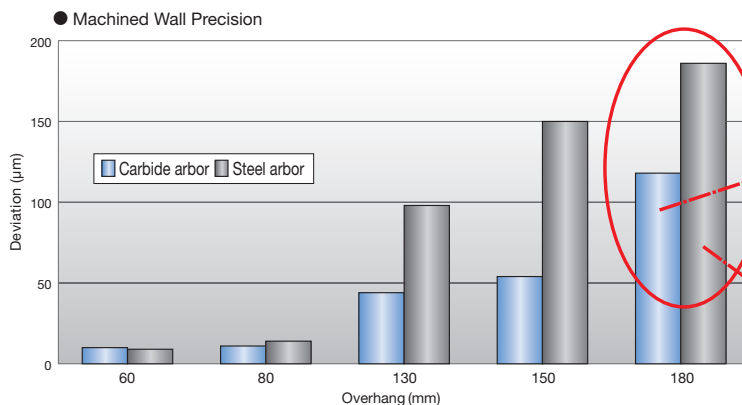
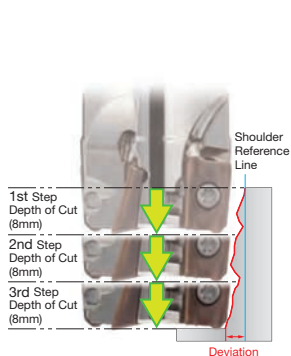
Note: Overhang varies depending on cutting conditions such as the tool used, machine rigidity and work clamp rigidity.

Screw Size and Mounting Cutter Size

Screw CRKS	Applicable Cutter Size (DC)
M8	ø16, ø18
M10	ø20, ø22
M12	ø24, ø28
M16	ø30, ø32, ø35, ø40

Cutting Performance

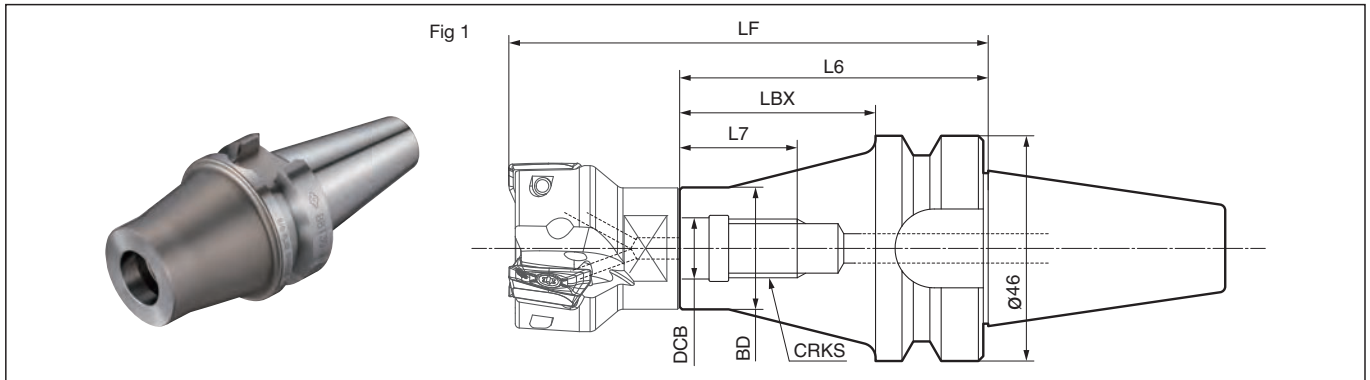
- Carbide arbors achieve greater precision and stable milling compared to steel arbors



Work Material : S50C
Tool : WEX2025M12Z4 (ø25 x 4-teeth)
Cutting Conditions: $v_c = 100\text{m/min}$ $f_z = 0.1\text{mm/t}$ $a_p = 8\text{mm} \times 3\text{times}$ $a_e = 2.0\text{mm}$ Machine: Machining Centre BT50

Modular Tools

BBT Integrated Type - SEC-Modular Tools Special Arbors

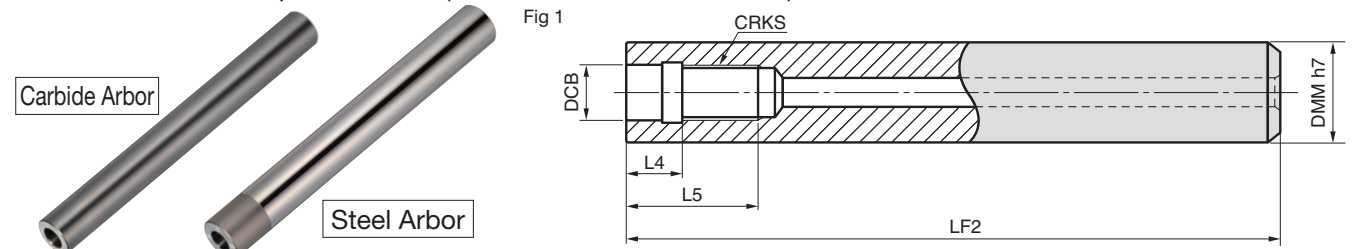


BBT Integrated Arbor

Cat. No.	Stock	Screw CRKS	Bore Dia. DCB	External BD	Body Overhang L6	Length LBX	Thread Depth L7	Overhang LF ¹	Coolant Hole	Fig
BBT30-M8-50	●	M8	8.5	15.9	73	50	18	98	Yes	1
M10-45	●	M10	10.5	19.9	68	45	20	98	Yes	1
M12-40	●	M12	12.5	24.9	63	40	22	98	Yes	1
M16-35	●	M16	17	31.9	58	35	24	98	Yes	1

*1 Overhang length for LF is with head mounted.
Can also be used with BT30 spindle machines.

SEC-Modular Tools - Special Arbors (Carbide Arbors/Steel Arbors)



Carbide Arbor

Cat. No.	Stock	Screw CRKS	Bore Dia. DCB	Shank DMM	Overall Length LF ²	Depth L4	Thread Depth L5	Overhang LF ²	Fig
MA15M08L120C	●	M8	8.5	15	120	10	18	145	1
15M08L160C	●	M8	8.5	15	160	10	18	185	1
16M08L120C	●	M8	8.5	16	120	10	18	145	1
16M08L160C	●	M8	8.5	16	160	10	18	185	1
MA18M10L150C	●	M10	10.5	18	150	10	20	180	1
18M10L200C	●	M10	10.5	18	200	10	20	230	1
20M10L150C	●	M10	10.5	20	150	10	20	180	1
20M10L200C	●	M10	10.5	20	200	10	20	230	1
MA23M12L200C	●	M12	12.5	23	200	10	22	235	1
23M12L250C	●	M12	12.5	23	250	10	22	285	1
25M12L200C	●	M12	12.5	25	200	10	22	235	1
25M12L250C	●	M12	12.5	25	250	10	22	285	1
MA28M16L200C	●	M16	17	28	200	10	24	240	1
28M16L300C	●	M16	17	28	300	10	24	340	1
32M16L200C	●	M16	17	32	200	10	24	240	1
32M16L300C	●	M16	17	32	300	10	24	340	1

Steel Arbor

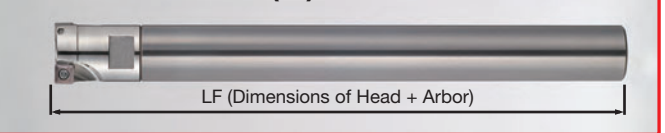
Cat. No.	Stock	Screw CRKS	Bore Dia. DCB	Shank DMM	Overall Length LF ²	Depth L4	Thread Depth L5	Overhang LF ²	Fig
MA16M08L120S	●	M8	8.5	16	120	10	18	145	1
20M10L150S	●	M10	10.5	20	150	10	20	180	1
25M12L200S	●	M12	12.5	25	200	10	22	235	1
32M16L200S	●	M16	17	32	200	10	24	240	1

Identification Code

MA 15 M08 L120 C

Series Shank Dia. Mounting Screw Size Arbor Overall Length Arbor Materials
C: Carbide S: Steel

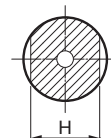
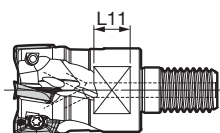
● Set Dimensions (*2)



Recommended Tightening Torque (N·m)

* Take care when tightening the head.

- When mounting the head to an arbor, follow the standard tightening torque in the table below.
- Check the mounting screw size for the head and arbor beforehand.

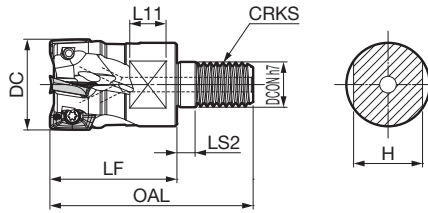


Screw Size	Regulated Tightening Torque (N·m)	Tool Dimensions	
		L11	H
M8	23	8	13
M10	46	8	15
M12	60	10	19
M16	80	10	24

New Rake Angle Radial -7° to -18° Axial 6° to 15° **10mm** 90°



Fig 1



Head Dimensions (mm)

Cat. No.	Stock	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Weight (kg)	Fig
WEZ 11016M08Z2	●	16	8.5	M8	42(41.7)	25(24.7)	5	8	13	2	0.03	1
11018M08Z2	●	18	8.5	M8	42(41.7)	25(24.7)	5	8	13	2	0.03	1
11020M10Z2	●	20	10.5	M10	49(48.7)	30(29.7)	5	8	15	2	0.06	1
11020M10Z3	●	20	10.5	M10	49(48.7)	30(29.7)	5	8	15	3	0.05	1
11022M10Z3	●	22	10.5	M10	49(48.7)	30(29.7)	5	8	15	3	0.06	1
11025M12Z2	●	25	12.5	M12	56(55.7)	35(34.7)	5	10	19	2	0.11	1
11025M12Z3	●	25	12.5	M12	56(55.7)	35(34.7)	5	10	19	3	0.10	1
11025M12Z4	●	25	12.5	M12	56(55.7)	35(34.7)	5	10	19	4	0.10	1
11026M12Z4	●	26	12.5	M12	56(55.7)	35(34.7)	5	10	19	4	0.10	1
11026M12Z5	●	26	12.5	M12	56(55.7)	35(34.7)	5	10	19	5	0.09	1
11028M12Z4	●	28	12.5	M12	56(55.7)	35(34.7)	5	10	19	4	0.11	1
11028M12Z5	●	28	12.5	M12	56(55.7)	35(34.7)	5	10	19	5	0.10	1
11030M16Z2	●	30	17	M16	63(62.7)	40(39.7)	5	10	24	2	0.20	1
11030M16Z4	●	30	17	M16	63(62.7)	40(39.7)	5	10	24	4	0.19	1
11030M16Z5	●	30	17	M16	63(62.7)	40(39.7)	5	10	24	5	0.17	1
11032M16Z2	●	32	17	M16	63(62.7)	40(39.7)	5	10	24	2	0.22	1
11032M16Z3	●	32	17	M16	63(62.7)	40(39.7)	5	10	24	3	0.20	1
11032M16Z4	●	32	17	M16	63(62.7)	40(39.7)	5	10	24	4	0.20	1
11032M16Z5	●	32	17	M16	63(62.7)	40(39.7)	5	10	24	5	0.19	1
11035M16Z2	●	35	17	M16	63(62.7)	40(39.7)	5	10	24	2	0.24	1
11035M16Z5	●	35	17	M16	63(62.7)	40(39.7)	5	10	24	5	0.22	1
11040M16Z2	●	40	17	M16	63(62.7)	40(39.7)	5	10	24	2	0.28	1
11040M16Z4	●	40	17	M16	63(62.7)	40(39.7)	5	10	24	4	0.26	1
11040M16Z5	●	40	17	M16	63(62.7)	40(39.7)	5	10	24	5	0.26	1
11040M16Z6	●	40	17	M16	63(62.7)	40(39.7)	5	10	24	6	0.25	1

The OAL and LF dimensions in parentheses are dimensions using RE = 3.0/3.2 insert. When using RE = 3.0/3.2 inserts, the maximum depth of cut is 9.5. **Arbors P213**

Inserts are sold separately.

Parts

Applicable Cutter	Flat Insert Screw	Wrench	Anti-seizure Cream
	 BFTX0305IP BFTX0306IP	 1.5 TRDR08IP	 SUMI-P

Identification Code

WEZ 11 016 M08 Z2
 Series Insert Size Dia. Mounting Screw Size Number of Teeth

* Modification of the cutter body is required when mounting a corner radius 2.4 or higher insert.



Modify this portion.

WEZ11 Type

- Reworking guidelines
 Corner radius = 2.4: C1 (AOMT11T324PEER)
 Corner radius = 3.0: C1 (AOMT11T330PEER)
 Corner radius = 3.2: C1 (AOMT11T332PEER)

WEZ17 Type

- Reworking guidelines
 Corner radius = 2.4: C1 (AOMT170524PEER)
 Corner radius = 3.0: C1 (AOMT170530PEER)
 Corner radius = 3.2: C1 (AOMT170532PEER)
 Corner radius = 4.0: C2 (AOMT170540PEER)
 Corner radius = 5.0: C5 (AOMT170550PEER)
 Corner radius = 6.4: C5 (AOMT170564PEER)

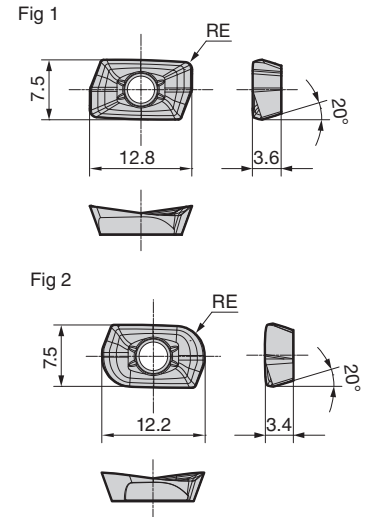
Standard: R1.

Expansion

Insert

Dimensions (mm)

Process	Material Classification		Coated Carbide							Cemented Carbide	DLC	Cermet	Corner Radius RE	Fig	
	High-speed/Light	General-purpose	P	M	K	K	S	S	N	N	P				
	Expansion	Expansion	P	M	K	K	S	S	N	N	P				
	Cat. No.	ACU2500	XCU2500	ACP2000	ACP3000	XCK2000	ACK2000	ACK3000	ACM200	ACM300	H20	DL2000	T2500A		
AOMT	11T302PEER-G	●											●	0.2	1
	11T304PEER-G	●	●	●	●	●	●	●	●	●			●	0.4	1
	11T305PEER-G		●	●	●	●	●	●	●	●				0.5	1
	11T308PEER-G	●	●	●	●	●	●	●	●	●			●	0.8	1
	11T310PEER-G	●						●	●	●				1.0	1
	11T312PEER-G	●			●			●	●	●				1.2	1
	11T316PEER-G	●			●			●	●	●				1.6	1
	11T320PEER-G	●			●			●	●	●				2.0	1
	11T324PEER-G	●			●			●	●	●				2.4	1
	11T330PEER-G	●			●			●	●	●				3.0	2
	11T332PEER-G	●			●			●	●	●				3.2	2
AOMT	11T304PEER-H	●	●	●	●	●	●	●	●	●				0.4	1
	11T308PEER-H	●	●	●	●	●	●	●	●	●				0.8	1
	11T312PEER-H	●						●	●	●				1.2	1
	11T316PEER-H	●						●	●	●				1.6	1
AOET	11T302PEER-F	●												0.2	1
	11T304PEER-F	●												0.4	1
	11T305PEER-F	●												0.5	1
	11T308PEER-F	●												0.8	1
	11T310PEER-F	●												1.0	1
	11T312PEER-F	●												1.2	1
	11T316PEER-F	●												1.6	1
	11T320PEER-F	●												2.0	1
	11T324PEER-F	●												2.4	1
	11T330PEER-F	●												3.0	2
	11T332PEER-F	●												3.2	2
AOET	11T302PEER-P16	●												0.2	1
	11T304PEER-P16	●												0.4	1
	11T305PEER-P16	●												0.5	1
	11T308PEER-P16	●												0.8	1
	11T310PEER-P16	●												1.0	1
	11T312PEER-P16	●												1.2	1
AOET	11T302PEER-P20	●												0.2	1
	11T304PEER-P20	●												0.4	1
	11T305PEER-P20	●												0.5	1
	11T308PEER-P20	●												0.8	1
	11T310PEER-P20	●												1.0	1
	11T312PEER-P20	●												1.2	1
AOET	11T302PEER-P25	●												0.2	1
	11T304PEER-P25	●												0.4	1
	11T305PEER-P25	●												0.5	1
	11T308PEER-P25	●												0.8	1
	11T310PEER-P25	●												1.0	1
	11T312PEER-P25	●												1.2	1
AOET	11T302PEFR-S								●	●				0.2	1
	11T304PEFR-S								●	●				0.4	1
	11T305PEFR-S								●	●				0.5	1
	11T308PEFR-S								●	●				0.8	1
	11T310PEFR-S								●	●				1.0	1
	11T312PEFR-S								●	●				1.2	1
	11T316PEFR-S								●	●				1.6	1
	11T320PEFR-S								●	●				2.0	1
	11T324PEFR-S								●	●				2.4	1
	11T330PEFR-S								●	●				3.0	2
	11T332PEFR-S								●	●				3.2	2



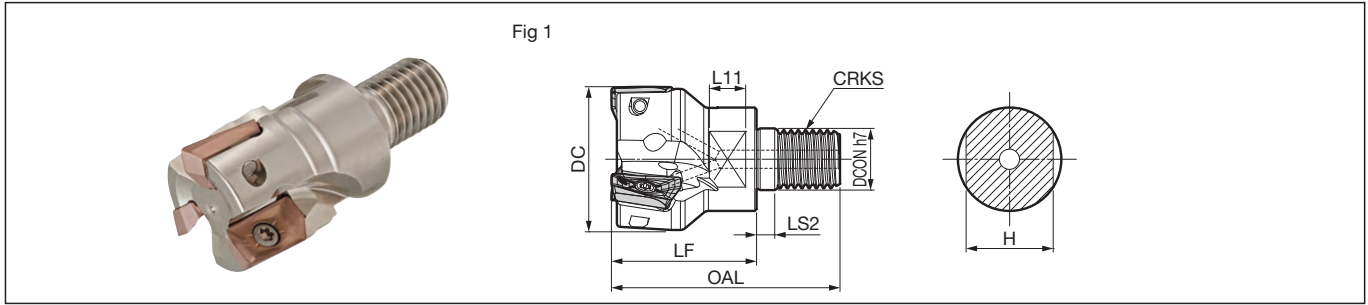
Suffix: -G: General-purpose, -H: Strong Edge, -F: Medium Finishing, -P16/-P20/-P25: High-precision Machining, -S: Non-ferrous metals.

* -P16 is applicable to cutter diameters $\phi 14$ and $\phi 16$. -P20 is applicable to cutter diameters $\phi 18$ and $\phi 20$. -P25 is applicable to cutter diameters $\phi 25$ and $\phi 28$.

Recommended Cutting Conditions **H56**

● mark: Standard stocked item (new product/expanded item)

New Rake Angle: Radial -6° to -12°, Axial 6° to 15° | 15mm | 90°



Head Dimensions (mm)

Cat. No.	Stock	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Weight (kg)	Fig
WEZ 17025M12Z2	●	25	12.5	M12	56(55.3)	35(34.3)	5	10	19	2	0.08	1
17025M12Z3	●	25	12.5	M12	56(55.3)	35(34.3)	5	10	19	3	0.07	1
17028M12Z2	●	28	12.5	M12	56(55.3)	35(34.3)	5	10	19	2	0.10	1
17030M16Z2	●	30	17	M16	63(62.3)	40(39.3)	5	10	24	2	0.17	1
17030M16Z3	●	30	17	M16	63(62.3)	40(39.3)	5	10	24	3	0.15	1
17032M16Z2	●	32	17	M16	63(62.3)	40(39.3)	5	10	24	2	0.19	1
17032M16Z3	●	32	17	M16	63(62.3)	40(39.3)	5	10	24	3	0.16	1
17032M16Z4	●	32	17	M16	63(62.3)	40(39.3)	5	10	24	4	0.14	1
17035M16Z2	●	35	17	M16	63(62.3)	40(39.3)	5	10	24	2	0.21	1
17035M16Z3	●	35	17	M16	63(62.3)	40(39.3)	5	10	24	3	0.19	1
17040M16Z2	●	40	17	M16	63(62.3)	40(39.3)	5	10	24	2	0.25	1
17040M16Z3	●	40	17	M16	63(62.3)	40(39.3)	5	10	24	3	0.23	1
17040M16Z4	●	40	17	M16	63(62.3)	40(39.3)	5	10	24	4	0.21	1

The OAL and LF dimensions in parentheses are dimensions using RE = 5.0/6.4 insert. When using RE = 5.0/6.4 inserts, the maximum depth of cut is 14.5. **Arbors P213**
 Inserts are sold separately.

Applicable Cutter	Flat Insert Screw	Wrench	Anti-seizure Cream	Identification Code				
				WEZ	17	025	M12	Z2
				Series	Insert Size	Dia.	Mounting Screw Size	Number of Teeth
WEZ17025M12Z2 to WEZ17030M16Z3	BFTX0407IP	3.0	TRDR15IP	SUMI-P				
WEZ17032M16Z2 to WEZ17040M16Z4	BFTX0409IP							

* Modification of the cutter body is required when mounting a corner radius 2.4 or higher insert.



Modify this portion.

WEZ11 Type

- Reworking guidelines
- Corner radius = 2.4: C1 (AOMT11T324PEER)
 - Corner radius = 3.0: C1 (AOMT11T330PEER)
 - Corner radius = 3.2: C1 (AOMT11T332PEER)

WEZ17 Type

- Reworking guidelines
- Corner radius = 2.4: C1 (AOMT170524PEER)
 - Corner radius = 3.0: C1 (AOMT170530PEER)
 - Corner radius = 3.2: C1 (AOMT170532PEER)
 - Corner radius = 4.0: C2 (AOMT170540PEER)
 - Corner radius = 5.0: C5 (AOMT170550PEER)
 - Corner radius = 6.4: C5 (AOMT170564PEER)

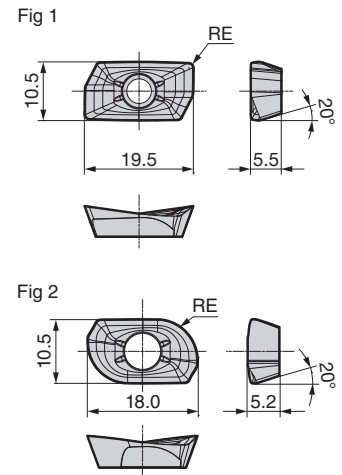
Standard: R1.

Expansion

Insert

Dimensions (mm)

Material Classification	Coated Carbide							Cemented Carbide	DLC	Cermet	Corner Radius RE	Fig			
	High-speed/Light	ACU2500	XCU2500	ACP2000	ACP3000	XCK2000	ACK2000	ACK3000	ACM200	ACM300			H20	DL2000	T2500A
	General-purpose														
Process	Roughing														
Cat. No.															
AOMT 170502PEER-L	●													0.2 1	
170504PEER-L	●													0.4 1	
170508PEER-L	●													0.8 1	
170512PEER-L	●													1.2 1	
170516PEER-L	●													1.6 1	
AOMT 170502PEER-G	●													0.2 1	
170504PEER-G	●													0.4 1	
170505PEER-G	●													0.5 1	
170508PEER-G	●													0.8 1	
170510PEER-G	●													1.0 1	
170512PEER-G	●													1.2 1	
170516PEER-G	●													1.6 1	
170520PEER-G	●													2.0 1	
170524PEER-G	●													2.4 1	
170530PEER-G	●													3.0 1	
170532PEER-G	●													3.2 1	
170540PEER-G	●													4.0 1	
170550PEER-G	●													5.0 2	
170564PEER-G	●													6.4 2	
AOMT 170504PEER-H	●													0.4 1	
170508PEER-H	●													0.8 1	
170512PEER-H	●													1.2 1	
170516PEER-H	●													1.6 1	
AOET 170502PEER-F	●													0.2 1	
170504PEER-F	●													0.4 1	
170505PEER-F	●													0.5 1	
170508PEER-F	●													0.8 1	
170510PEER-F	●													1.0 1	
170512PEER-F	●													1.2 1	
170516PEER-F	●													1.6 1	
170520PEER-F	●													2.0 1	
170524PEER-F	●													2.4 1	
170530PEER-F	●													3.0 1	
170532PEER-F	●													3.2 1	
170540PEER-F	●													4.0 1	
170550PEER-F	●													5.0 2	
170564PEER-F	●													6.4 2	
AOET 170502PEER-P25	●													0.2 1	
170504PEER-P25	●													0.4 1	
170505PEER-P25	●													0.5 1	
170508PEER-P25	●													0.8 1	
170510PEER-P25	●													1.0 1	
170512PEER-P25	●													1.2 1	
AOET 170502PEER-P32	●													0.2 1	
170504PEER-P32	●													0.4 1	
170505PEER-P32	●													0.5 1	
170508PEER-P32	●													0.8 1	
170510PEER-P32	●													1.0 1	
170512PEER-P32	●													1.2 1	
AOET 170502PEFR-S									●	●				0.2 1	
170504PEFR-S									●	●				0.4 1	
170505PEFR-S									●	●				0.5 1	
170508PEFR-S									●	●				0.8 1	
170510PEFR-S									●	●				1.0 1	
170512PEFR-S									●	●				1.2 1	
170516PEFR-S									●	●				1.6 1	
170520PEFR-S									●	●				2.0 1	
170524PEFR-S									●	●				2.4 1	
170530PEFR-S									●	●				3.0 1	
170532PEFR-S									●	●				3.2 1	
170540PEFR-S									●	●				4.0 1	
170550PEFR-S									●	●				5.0 2	
170564PEFR-S									●	●				6.4 2	



-L: Low Cutting Force, -G: General-purpose, -H: Strong Edge, -F: Medium Finishing, -P25/-P32: High-precision Machining, -S: Non-ferrous metals.

* -P25 is applicable to cutter diameters $\phi 25$ and $\phi 28$. -P32 is applicable to cutter diameters $\phi 30$, $\phi 32$ and $\phi 35$.

Recommended Cutting Conditions H56

● mark: Standard stocked item (new product/expanded item)

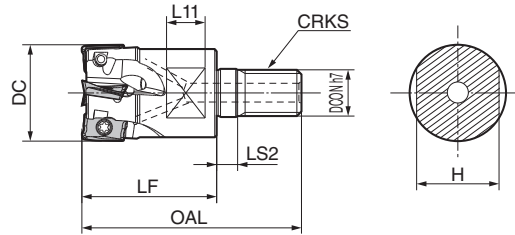
Modular Tools

 Shoulder Milling
 High-Feed
 Radius
 Chamfering
 Non-ferrous Metal

Rake Angle	Radial	10° to 18°	10mm	90°
	Axial	14° to 25°		



Fig 1



Head

Dimensions (mm)

Cat. No.	Stock	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Fig
WEX 2016M08Z2	●	16	8.5	M8	42	25	5	8	13	2	1
2018M08Z2	●	18	8.5	M8	42	25	5	8	13	2	1
2020M10Z3	●	20	10.5	M10	49	30	5	8	15	3	1
2022M10Z3	●	22	10.5	M10	49	30	5	8	15	3	1
2025M12Z4	●	25	12.5	M12	56	35	5	10	19	4	1
2028M12Z4	●	28	12.5	M12	56	35	5	10	19	4	1
2030M16Z4	●	30	17.0	M16	63	40	5	10	24	4	1
2032M16Z5	●	32	17.0	M16	63	40	5	10	24	5	1
2040M16Z6	●	40	17.0	M16	63	40	5	10	24	6	1

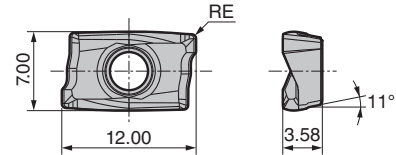
Inserts are sold separately.

Insert

Dimensions (mm)

Grade Classification	Coated Carbide						Carbide	DLC	Corner Radius RE	Fig
	High-speed/Light	General-purpose		Roughing						
Process	P	M	M	K	K	S	N			
Cat. No.	ACP100	ACP200	ACP300	ACK200	ACK300	ACM200	ACM300	H1	DL1000	
AXMT 123504PEER-G	●	●	●	●	●			—	—	
123508PEER-G	●	●	●	●	●			—	—	
123512PEER-G	●	●	●	●	●			—	—	
AXMT 123504PEER-H	●	●	●	●	●			—	—	
123508PEER-H	●	●	●	●	●			—	—	
123512PEER-H	●	●	●	●	●			—	—	
AXMT 123504PEER-E						●	●	—	—	
123508PEER-E						●	●	—	—	
123512PEER-E						●	●	—	—	
AXMT 123508PEER-EH						●	●	—	—	
AXET 123502PEFR-S	—	—	—	—	—	—	—	●	●	
123504PEFR-S	—	—	—	—	—	—	—	●	●	
123508PEFR-S	—	—	—	—	—	—	—	●	●	

Fig 1



-G: General-purpose, -H: Strong Edge, -E, -EH: Exotic Alloy, -S: Aluminum Alloy.

Recommended Cutting Conditions **H76** Arbors **H213**

Identification Code

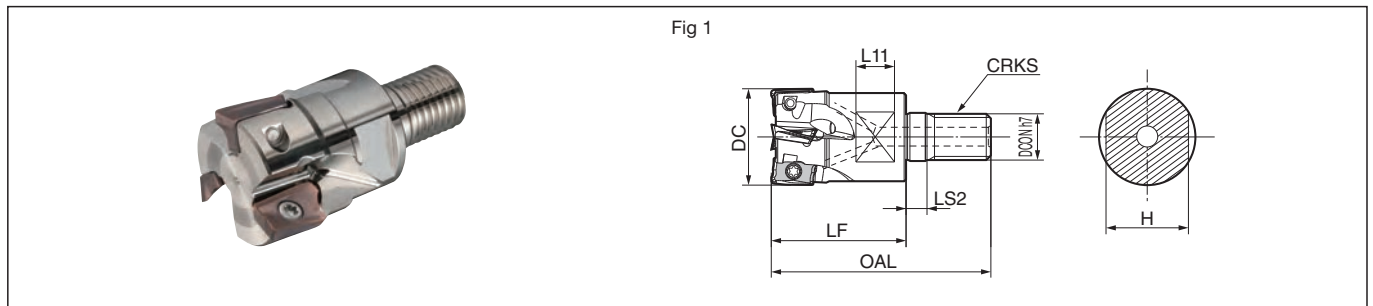
WEX 2 016 M08 Z2

Series Insert Size Dia. Mounting Screw Size Number of Teeth

Parts

Applicable Cutter	Flat Insert Screw		Wrench	Anti-seizure Cream
	WEX2016M, WEX2018M WEX2020M to WEX2040M	BFTX0305IP BFTX0306IP	2.0	TRDR08IP

Rake Angle	Radial	8° to 15°	14mm	90°
	Axial	16° to 24°		



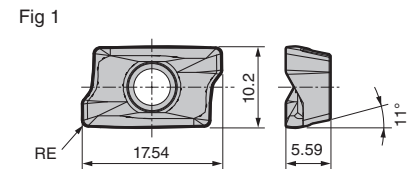
Head

Cat. No.	Stock	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Fig
WEX 3025M12Z2	●	25	12.5	M12	56	35	5	10	19	2	1
3028M12Z2	●	28	12.5	M12	56	35	5	10	19	2	1
3030M16Z3	●	30	17.0	M16	63	40	5	10	24	3	1
3032M16Z3	●	32	17.0	M16	63	40	5	10	24	3	1
3035M16Z3	●	35	17.0	M16	63	40	5	10	24	3	1
3040M16Z4	●	40	17.0	M16	63	40	5	10	24	4	1

Inserts are sold separately.

Insert

Grade Classification	Coated Carbide						Carbide	DLC	Dimensions (mm)		
	P	M	K	N	S	H	N	Corner Radius RE	Fig		
High-speed/Light	●		●		●		●				
General-purpose	●	●	●	●	●	●	●				
Roughing	●	●	●	●	●	●					
Cat. No.	ACP100	ACP200	ACP300	ACK200	ACK300	ACM200	ACM300	H1	DL1000	Corner Radius RE	Fig
AXMT 170508PEER-L	●	●	●	●	●					0.8	1
AXMT 170504PEER-G	●	●	●	●	●					0.4	1
170508PEER-G	●	●	●	●	●					0.8	1
170512PEER-G	●	●	●	●	●					1.2	1
170516PEER-G	●	●	●	●	●					1.6	1
170520PEER-G*	●	●	●	●	●					2.0	1
170530PEER-G*	●	●	●	●	●					3.0	1
AXMT 170508PEER-H	●	●	●	●	●					0.8	1
170512PEER-H	●	●	●	●	●					1.2	1
AXMT 170504PEER-E						●	●			0.4	1
170508PEER-E						●	●			0.8	1
170512PEER-E						●	●			1.2	1
170516PEER-E						●	●			1.6	1
170520PEER-E*						●	●			2.0	1
170530PEER-E*						●	●			3.0	1
AXMT 170508PEER-EH						●	●			0.8	1
AXET 170502PEFR-S								●	●	0.2	1
170504PEFR-S								●	●	0.4	1
170508PEFR-S								●	●	0.8	1



-L: Low Cutting force, -G: General-purpose, -H: Strong Edge, -E, -EH: Exotic Alloy, -S: Aluminum Alloy. * marked inserts require modification of the cutter body.

Recommended Cutting Conditions **H77**

Identification Code

WEX 3 025 M12 Z2

Series Insert Size Dia. Mounting Screw Size Number of Teeth

Parts

Applicable Cutter	Flat Insert Screw		Wrench	Anti-seizure Cream
	WEX3025M to WEX3030M WEX3032M to WEX3040M	BFTX0407IP BFTX0409IP	3.0	TRDR15IP

SUMI-P Anti-seizure Cream is included in the package.

WFX 08000M Type

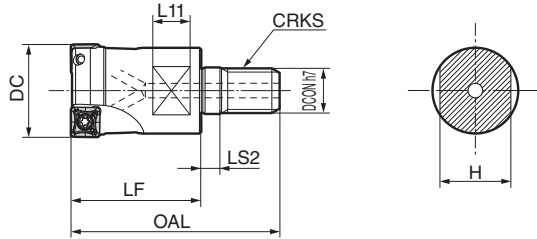
SEC-Modular Tool



Expansion	Rake Angle	Radial	-6°	6mm	90°
		Axial	12°		



Fig 1



Head

Dimensions (mm)

Cat. No.	Stock	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Fig
WFX 08020M10Z2	●	20	10.5	M10	49	30	5	8	15	2	1
08022M10Z2	●	22	10.5	M10	49	30	5	8	15	2	1
08025M12Z2	●	25	12.5	M12	56	35	5	10	19	2	1
08028M12Z2	●	28	12.5	M12	56	35	5	10	19	2	1
08030M16Z3	●	30	17.0	M16	63	40	5	10	24	3	1
08032M16Z3	●	32	17.0	M16	63	40	5	10	24	3	1
08040M16Z3	●	40	17.0	M16	63	40	5	10	24	3	1

Inserts are sold separately.

Insert

Dimensions (mm)

Grade Classification	Coated Carbide								Cemented Carbide	DL	Cermet	Corner Radius RE	Fig
	High-speed/Light	P		K		N		H1	DL1000	T4500A			
	General-purpose	P		K		N							
Process	General-purpose	P		K		N							
	Roughing	P		K		N							
Cat. No.	ACU2500	XCU2500	ACP100	ACP200	ACP300	XCK2000	ACK200	ACK300	ACM200	ACM300			
SOMT 080304PZER-L	●	●	●	●	●	●	●	●	●	●	0.4	1	
080308PZER-L	●	●	●	●	●	●	●	●	●	●	0.8	1	
SOMT 080304PZER-G	●	●	●	●	●	●	●	●	●	●	0.4	1	
080308PZER-G	●	●	●	●	●	●	●	●	●	●	0.8	1	
080312PZER-G	●	●	●	●	●	●	●	●	●	●	1.2	1	
SOMT 080308PZER-H	●	●	●	●	●	●	●	●	●	●	0.8	1	
080312PZER-H	●	●	●	●	●	●	●	●	●	●	1.2	1	
SOET 080304PZER-G	●	●	●	●	●	●	●	●	●	●	0.4	1	
080308PZER-G	●	●	●	●	●	●	●	●	●	●	0.8	1	
080312PZER-G	●	●	●	●	●	●	●	●	●	●	1.2	1	
SOET 080302PZFR-S	●	●	●	●	●	●	●	●	●	●	0.2	1	
080304PZFR-S	●	●	●	●	●	●	●	●	●	●	0.4	1	
080308PZFR-S	●	●	●	●	●	●	●	●	●	●	0.8	1	
XOEW 080308PZTR-W	●	●	●	●	●	●	●	●	●	●	—	2	

Fig 1

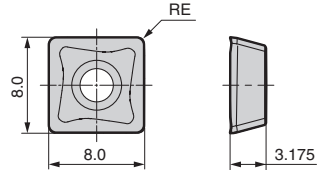
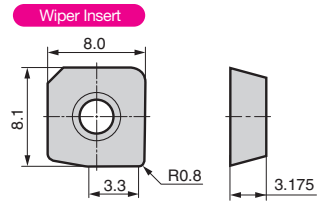


Fig 2



Refer to H91 (Precautions when Using Wiper Inserts) (Mounting Precautions).

Arbors H213

Identification Code

WFX 08 020 M10 Z2

Series Insert Size Dia. Mounting Screw Size Number of Teeth

Parts

Flat Insert Screw	Wrench	Anti-seizure Cream
BFTX0306IP	2.0	TRDR08IP SUMI-P

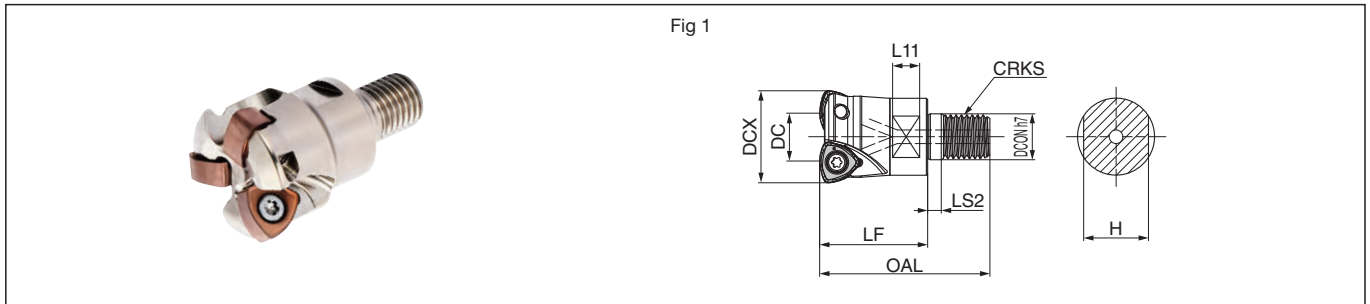
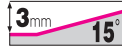
Recommended Cutting Conditions

ISO	Work Material	Hardness	Cutting Speed v_c (m/min) Min. - Optimum - Max.	Feed Rate f_z (mm/t) Min. - Optimum - Max.	Depth of Cut a_p (mm)	Insert Grade
P	General Steel	180 to 280 HB	150-200-250	0.08-0.12-0.18	< 6	ACU2500 ACP200 ACP300 XCU2500
	Mild Steel	≤ 180HB	180-250-350	0.10-0.15-0.20	< 6	
	Die Steel	200 to 220 HB	100-150-200	0.08-0.12-0.18	< 4	
M	Stainless Steel	—	160-200-250	0.10-0.15-0.20	< 6	ACU2500 ACM300
K	Cast Iron	250HB	100-175-250	0.10-0.15-0.20	< 6	ACU2500 ACK200 ACK300 XCU2500 XCK2000
N	Non-ferrous Metal	—	300-500-1,000	0.10-0.15-0.20	< 6	H1 DL1000
S	Exotic Alloy	—	30-50-80	0.08-0.13-0.18	< 6	ACU2500 ACM200 ACM300

Note: The cutting conditions above are a guide. Actual conditions will need to be adjusted according to machine rigidity, work clamp rigidity, depth of cut and other factors.

New

Rake Angle	Radial	-11° to -13°
	Axial	-6°



Head

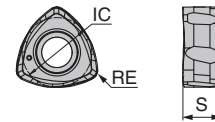
Cat. No.	Stock	Max. Dia. DCX	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Weight (kg)	Fig
DMSW 08035M16Z2	○	35	18.6	17	M16	63	40	5	10	24	2	0.18	1
08040M16Z3	○	40	23.5	17	M16	63	40	5	10	24	3	0.20	1
08042M16Z3	○	42	25.5	17	M16	63	40	5	10	24	3	0.22	1

Inserts are sold separately.

Insert

Grade Classification		Coated Carbide			
Process	High-speed/Light				
	General-purpose				
	Rough Cutting				
Cat. No.	ACU2500	Inscribed Circle IC	Thickness S	Corner Radius RE	Fig
WNMU 0807ZNER-G	○	13	7	1.6	1

Fig 1



Identification Code

DMSW 08 040 M16 Z3

Series Insert Size Dia. Mounting Screw Size Number of Teeth

Parts

Flat Insert Screw	Integrated Wrench	Anti-seizure Cream
BFTX0513IP	5.0	TRDR20IP SUMI-P

Recommended Cutting Conditions

ISO	Work Material	Hardness	Cutting Speed V_c (m/min) Min. - Optimum - Max.	Feed Rate f_z (mm/t) Min. - Optimum - Max.
P	General Steel	Below 280HB	100 - 160 - 250	1.0 - 1.5 - 2.0
	Alloy Steel	Below 280HB	100 - 160 - 200	1.0 - 1.5 - 1.8
	Alloy Steel	Below 42HRC	100 - 150 - 180	0.8 - 1.0 - 1.2
M	Stainless Steel	—	80 - 120 - 150	0.8 - 1.0 - 1.2
K	Cast Iron	—	100 - 160 - 250	1.0 - 1.5 - 1.8
H	Hardened Steel	Below 52HRC	80 - 100 - 120	0.3 - 0.5 - 0.7

Note · The above figures are guidelines for use with BT50 machine tools at depth of cut (a_p) of 1.5mm.
· The above recommended cutting conditions may require adjustment depending on machine rigidity and work rigidity.

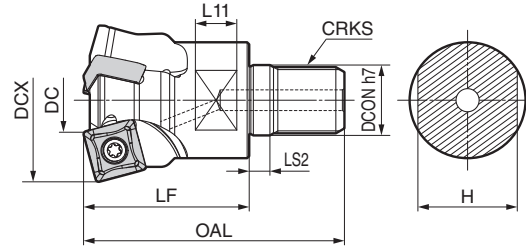
WFXH 08000M/12000M Type



Expansion	Rake Angle	Radial	-6°
	Axial		6°
		1.5mm	15°
		2.5mm	15°
		(08000M Type)	(12000M Type)



Fig 1



Head (Applicable Insert SOMT08 Type)

Dimensions (mm)

Cat. No.	Stock	Max. Dia. DCX	Dia. DC	Mount. Dia. DCON	Screw CRKS	Overall Length OAL	Insert Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Weight (kg)	Fig
WFXH 08025M12Z2	●	25	11.5	12.5	M12	56	35	5	10	19	2	0.1	1
08032M16Z3	●	32	18.5	17.0	M16	63	40	5	10	24	3	0.2	1

Head (Applicable Insert SOMT12 Type)

Dimensions (mm)

Cat. No.	Stock	Max. Dia. DCX	Dia. DC	Mount. Dia. DCON	Screw CRKS	Overall Length OAL	Insert Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Weight (kg)	Fig
WFXH 12040M16Z3	●	40	18.1	17.0	M16	63	40	5	10	24	3	0.2	1

Inserts are sold separately.

* indicates value with corner radius 1.6 inserts mounted. Refer to H149 for details.

* indicates value with corner radius 1.2 inserts mounted. Refer to H149 for details.

Insert

Dimensions (mm)

Grade Classification	Coated Carbide							Cemented Carbide	DLC	Cermet	Corner Radius RE	Fig
	High-speed/Light	General-purpose	Roughing					H1	DL1000	T4500A		
Process	●	●	●	●	●	●	●	●	●	●		
Cat. No.	ACU2500	XCU2500	ACP100	ACP200	ACP300	XCK2000	ACK200	ACK300	ACM200	ACM300		
SOMT 080304PZER-L	●	●	●	●	●	●	●	●	●	●	0.4	1
080308PZER-L	●	●	●	●	●	●	●	●	●	●	0.8	1
SOMT 080304PZER-G	●	●	●	●	●	●	●	●	●	●	0.4	1
080308PZER-G	●	●	●	●	●	●	●	●	●	●	0.8	1
080312PZER-G	●	●	●	●	●	●	●	●	●	●	1.2	1
SOMT 080308PZER-H	●	●	●	●	●	●	●	●	●	●	0.8	1
080312PZER-H	●	●	●	●	●	●	●	●	●	●	1.2	1
SOET 080304PZER-G	●	●	●	●	●	●	●	●	●	●	0.4	1
080308PZER-G	●	●	●	●	●	●	●	●	●	●	0.8	1
080312PZER-G	●	●	●	●	●	●	●	●	●	●	1.2	1
SOET 080302PZFR-S	●	●	●	●	●	●	●	●	●	●	0.2	1
080304PZFR-S	●	●	●	●	●	●	●	●	●	●	0.4	1
080308PZFR-S	●	●	●	●	●	●	●	●	●	●	0.8	1
SOMT 120408PDER-L	●	●	●	●	●	●	●	●	●	●	0.8	2
SOMT 120404PDER-G	●	●	●	●	●	●	●	●	●	●	0.4	2
120408PDER-G	●	●	●	●	●	●	●	●	●	●	0.8	2
120412PDER-G	●	●	●	●	●	●	●	●	●	●	1.2	2
120416PDER-G	●	●	●	●	●	●	●	●	●	●	1.6	2
120408PDER-H	●	●	●	●	●	●	●	●	●	●	0.8	2
SOET 120408PDRF-S	●	●	●	●	●	●	●	●	●	●	0.8	2

Fig 1

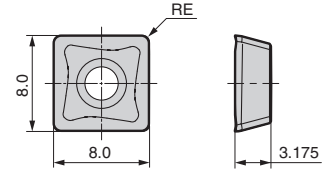
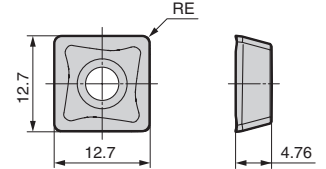


Fig 2



Identification Code

WFXH 08 025 M12 Z2

Series Insert Size Dia. Mounting Screw Size Number of Teeth

Precautions for Use H149 Arbors H213

Parts

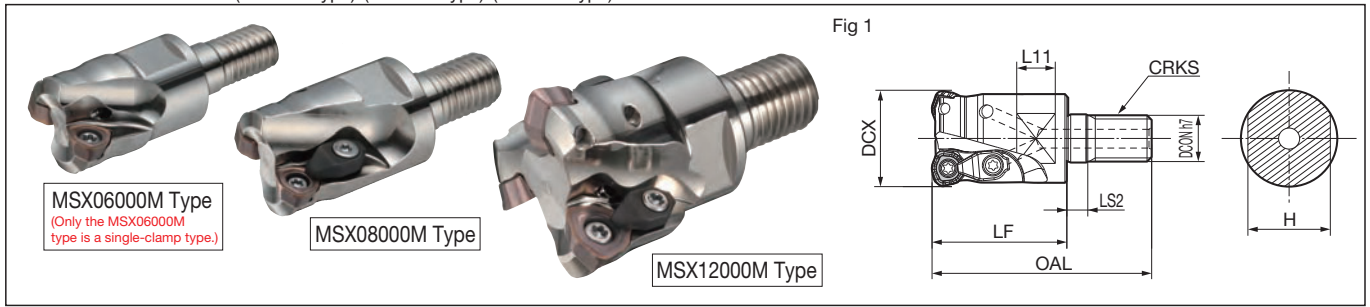
Applicable Cutter	Flat Insert Screw	Wrench	Anti-seize Cream
WFXH08000M	BFTX0306IP	2.0 TRDR08IP	SUMI-P
WFXH12000M	BFTX03512IP	3.0 TRDR15IP	

Recommended Cutting Conditions

Work Material	Insert Grade	Cutting Speed v _c (m/min)	Insert Cat. No.	ø25		ø32		ø40		ø50		ø63	
				a _p (mm)	f _z (mm/rev)	a _p (mm)	f _z (mm/rev)	a _p (mm)	f _z (mm/rev)	a _p (mm)	f _z (mm/rev)	a _p (mm)	f _z (mm/rev)
P General Steel Below 200HB	ACP200	100-150-200	SOMT08	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
			SOMT12	—	—	—	—	1.0	1.0	1.0	1.0	1.0	1.0
P Alloy Steel Above HRC45	ACP200	80-130-180	SOMT08	0.7	0.8	0.7	0.8	0.7	0.8	0.7	0.8	0.7	0.8
			SOMT12	—	—	—	—	0.8	1.0	0.8	1.0	0.8	1.0
M Stainless Steel SUS304, etc.	ACM300	80-120-150	SOMT08	0.8	0.7	0.8	0.7	0.8	0.7	0.8	0.7	0.8	0.7
			SOMT12	—	—	—	—	1.0	0.8	1.0	0.8	1.0	0.8
K Cast Iron FC, FCD	ACK300	100-150-200	SOMT08	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0
			SOMT12	—	—	—	—	1.0	1.2	1.0	1.2	1.0	1.2
H Hardened Steel Below HRC50	ACK300	40- 80-100	SOMT08	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
			SOMT12	—	—	—	—	0.6	0.8	0.6	0.8	0.6	0.8

- The above recommended cutting conditions may require adjustment depending on machine rigidity and work rigidity.
- The above figures are guidelines for use with BT50 machine tools.
- The above recommended cutting conditions assume a tool overhang length of L/D=3 (i.e. overhang length of 3 times tool diameter) or less. When tool overhang is more than L/D=3 and less than or equal to L/D=5, settings should be adjusted to approximately 70 to 80% of those indicated in the above recommended cutting conditions (a_p, f_z).
- When tool overhang is more than L/D=5 and less than or equal to L/D=8, settings should be adjusted to approximately 50 to 60% of those indicated in the above recommended cutting conditions (a_p, f_z).

Rake Angle	Radial Axial	-3° to -6° 8°	1.0mm 20° (06000M Type)	1.5mm 20° (08000M Type)	2.0mm 20° (12000M Type)
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Head (Applicable Insert WDMT06 Type)

Cat. No.	Stock	Dimensions (mm)									
		Max. Dia. DCX	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Fig
MSX 06016M08Z2	●	16	8.5	M8	42	25	5	8	13	2	1
06018M08Z2	●	18	8.5	M8	42	25	5	8	13	2	1
MSX 06020M10Z3	●	20	10.5	M10	49	30	5	8	15	3	1
06022M10Z3	●	21.7	10.5	M10	49	30	5	8	15	3	1
06025M12Z3	●	24.7	12.5	M12	56	35	5	10	19	3	1

Inserts are sold separately.

Head (Applicable Insert WDMT08 Type)

Cat. No.	Stock	Dimensions (mm)									
		Max. Dia. DCX	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Fig
MSX 08025M12Z2	●	25	12.5	M12	56	35	5	10	19	2	1
08028M12Z2	●	28	12.5	M12	56	35	5	10	19	2	1
MSX 08030M16Z3	●	30	17.0	M16	63	40	5	10	24	3	1
08032M16Z3	●	32	17.0	M16	63	40	5	10	24	3	1
08035M16Z3	●	35	17.0	M16	63	40	5	10	24	3	1

Inserts are sold separately.

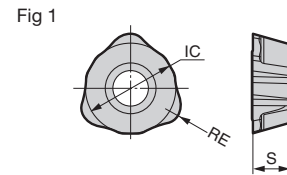
Head (Applicable Insert WDMT12 Type)

Cat. No.	Stock	Dimensions (mm)									
		Max. Dia. DCX	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Fig
MSX 12032M16Z2	●	32	17.0	M16	63	40	5	10	24	2	1
12035M16Z2	●	35	17.0	M16	63	40	5	10	24	2	1
12040M16Z3	●	40	17.0	M16	63	40	5	10	24	3	1

Inserts are sold separately.

Insert

Grade Classification		Coated Carbide				Dimensions (mm)										
Process	High-speed/Light					Applications	Cat. No.	ACP200	ACP300	ACK200	ACK300	Inscribed Circle IC	Thickness S	Corner Radius RE	Applicable Cutter	Fig
	General-purpose															
	Roughing															
General-purpose	WDMT 0603ZDTR	●	●	●	●	6.35	3.0	1.5	MSX06000M Type	1						
	0804ZDTR	●	●	●	●	8.5	4.0	2.0	MSX08000M Type	1						
	1205ZDTR	●	●	●	●	12.00	5.0	2.0	MSX12000M Type	1						
Honed Type	WDMT 0603ZDTR-H	●	●	●	●	6.35	3.0	1.5	MSX06000M Type	1						
	0804ZDTR-H	●	●	●	●	8.5	4.0	2.0	MSX08000M Type	1						
	1205ZDTR-H	●	●	●	●	12.00	5.0	2.0	MSX12000M Type	1						



Recommended Cutting Conditions H155 Arbors H213

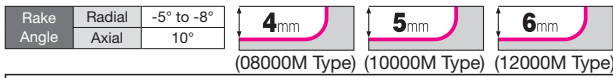
Identification Code

MSX 06 016 M08 Z2

Series Insert Size Dia. Mounting Screw Size Number of Teeth

Parts

Applicable Cutter	Flat Insert Screw	Wrench	Clamp Plate	C-Ring	Clamp Screw	Anti-seizure Cream
MSX06000M Type	BFTX02505IP 1.5	TRDR08IP	—	—	—	—
MSX08000M Type	BFTX0306IP 2.0	TRDR08IP	CCH3.5	CR03	BFTX03510IP08	SUMI-P
MSX12000M Type	BFTX0409IP 3.0	TRDR15IP	CCH3.5	CR03	BFTX03510IP15	—



Modular Tools

H

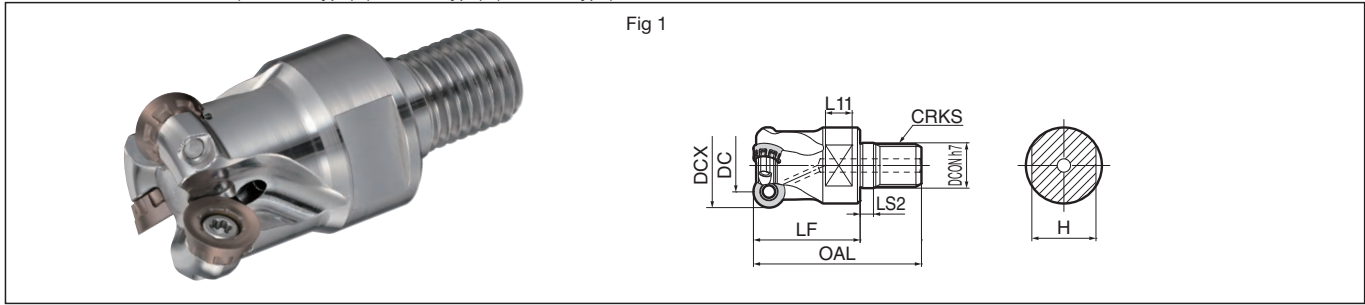
Shoulder Milling

High-Feed

Radius

Chamfering

Non-ferrous Metal



Head (Standard Pitch) Applicable Insert IC = 8mm Type Dimensions (mm)

Cat. No.	Stock	Max. Dia. DCX	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Insert Length LF	Backlash Length LS2	Length L11	Chamfer H	Width	Number of Teeth	Weight (kg)	Fig
RSX 08020M10Z2	●	20	12	10.5	M10	49	30	5	8	15	2	0.1	1	1
08025M12Z3	●	25	17	12.5	M12	56	35	5	10	19	3	0.1	1	1
08032M16Z4	●	32	24	17.0	M16	63	40	5	10	24	4	0.2	1	1

Head (Extra Fine Pitch) Applicable Insert IC = 8mm Type Dimensions (mm)

Cat. No.	Stock	Max. Dia. DCX	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Insert Length LF	Backlash Length LS2	Length L11	Chamfer H	Width	Number of Teeth	Weight (kg)	Fig
RSXF 08020M10Z3	●	20	12	10.5	M10	49	30	5	8	15	3	0.1	1	1
08025M12Z4	●	25	17	12.5	M12	56	35	5	10	19	4	0.1	1	1
08032M16Z5	●	32	24	17.0	M16	63	40	5	10	24	5	0.2	1	1

Head (Standard Pitch) Applicable Insert IC = 10mm Type Dimensions (mm)

Cat. No.	Stock	Max. Dia. DCX	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Insert Length LF	Backlash Length LS2	Length L11	Chamfer H	Width	Number of Teeth	Weight (kg)	Fig
RSX 10025M12Z2	●	25	15	12.5	M12	56	35	5	10	19	2	0.1	1	1
10032M16Z3	●	32	22	17.0	M16	63	40	5	10	24	3	0.2	1	1

Head (Extra Fine Pitch) Applicable Insert IC = 10mm Type Dimensions (mm)

Cat. No.	Stock	Max. Dia. DCX	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Insert Length LF	Backlash Length LS2	Length L11	Chamfer H	Width	Number of Teeth	Weight (kg)	Fig
RSXF 10025M12Z3	●	25	15	12.5	M12	56	35	5	10	19	3	0.1	1	1
10032M16Z4	●	32	22	17.0	M16	63	40	5	10	24	4	0.2	1	1

Head (Standard Pitch) Applicable Insert IC = 12mm Type Dimensions (mm)

Cat. No.	Stock	Max. Dia. DCX	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Insert Length LF	Backlash Length LS2	Length L11	Chamfer H	Width	Number of Teeth	Weight (kg)	Fig
RSX 12032M16Z2	●	32	20	17.0	M16	63	40	5	10	24	2	0.2	1	1
12040M16Z3	●	40	28	17.0	M16	63	40	5	10	24	3	0.3	1	1

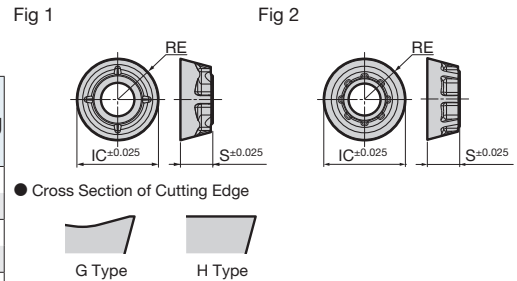
Head (Extra Fine Pitch) Applicable Insert IC = 12mm Type Dimensions (mm)

Cat. No.	Stock	Max. Dia. DCX	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Insert Length LF	Backlash Length LS2	Length L11	Chamfer H	Width	Number of Teeth	Weight (kg)	Fig
RSXF 12032M16Z3	●	32	20	17.0	M16	63	40	5	10	24	3	0.2	1	1
12040M16Z4	●	40	28	17.0	M16	63	40	5	10	24	4	0.3	1	1

Inserts are sold separately.

Insert

Grade Classification		Coated Carbide									Dimensions (mm)			
Process	High-speed/Light													
	General-purpose													
	Roughing													
Cat. No.	ACP200	ACK300	ACM100	ACM200	ACM300	Inscribed Circle IC	Corner Radius RE	Thickness S	Applicable Cutter	Fig				
RDET 0803M0EN-G	●	●	●	●	●	8	4.0	3.18	RSX(F)08000ES/M Type	1				
0803M0EN-H	●	●	●	●	●	8	4.0	3.18		1				
RDET 10T3M0EN-G	●	●	●	●	●	10	5.0	3.97	RSX(F)10000RS/ES/M Type	1				
10T3M0EN-H	●	●	●	●	●	10	5.0	3.97		1				
RDET 1204M0EN-G	●	●	●	●	●	12	6.0	4.76	RSX(F)12000RS/ES/M Type	2				
1204M0EN-H	●	●	●	●	●	12	6.0	4.76		2				



Recommended Cutting Conditions **H169** Precautions for Mounting Inserts **H164** Arbors **H213**

Identification Code

RSX F 10 025 M12 Z2

Series: RSX, Extra Fine Pitch: F, Insert Size: 10, Cutter Dia.: 025, Mounting Screw Size: M12, Number of Teeth: Z2

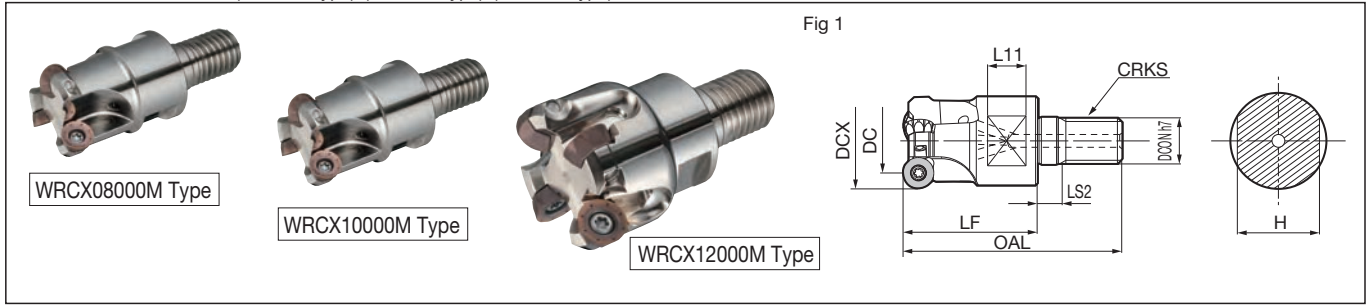
Parts

Applicable Cutter	Flat Insert Screw		Wrench	Anti-seizure Cream
RSX(F)08000M	BFTX02506IP	1.5	TRDR08IP	SUMI-P
RSX(F)10000M Type	BFTX03584IP	3.0	TRDR15IP	
RSX(F)12000M Type	BFTX0409IP	3.0		

WRCX 08000M/10000M/12000M Type



Rake Angle	Radial Axial	-3° to 0° -3°
		4mm (08000M Type)
		5mm (10000M Type)
		6mm (12000M Type)



Head (Applicable Insert IC = 8mm Type)

Cat. No.	Stock	Max. Dia. DCX	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Fig
WRCX 08020M10Z2	●	25	12	10.5	M10	49	30	5	8	15	2	1
08025M12Z3	●	20	17	12.5	M12	56	35	5	10	19	3	1

Inserts are sold separately.

Head (Applicable Insert IC = 10mm Type)

Cat. No.	Stock	Max. Dia. DCX	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Fig
WRCX 10025M12Z2	●	25	15	12.5	M12	56	35	5	10	19	2	1
10028M12Z2	●	28	18	12.5	M12	56	35	5	10	19	2	1
10030M16Z3	●	30	20	17.0	M16	63	40	5	10	24	3	1
10032M16Z3	●	32	22	17.0	M16	63	40	5	10	24	3	1

Inserts are sold separately.

Head (Applicable Insert IC = 12mm Type)

Cat. No.	Stock	Max. Dia. DCX	Dia. DC	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Fig
WRCX 12040M16Z4	●	40	28	17.0	M16	63	40	5	10	24	4	1

Inserts are sold separately.

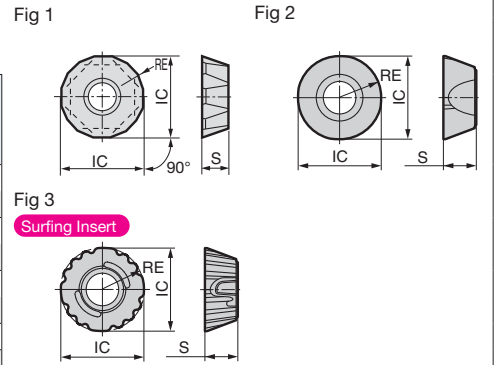
Identification Code

WRCX 08 020 M10 Z2

Series Insert Size Dia. Mounting Screw Size Number of Teeth

Insert

Grade Classification		Coated Carbide			Cemented Carbide	DLC	Dimensions (mm)						
Process	High-speed/Light	P											
	General-purpose		P	P	K								
	Roughing		P	P	K								
Applications	Cat. No.	ACP100	ACP200	ACP300	ACK200	ACK300	H1	DL1000	Inscribed Circle IC	Corner Radius RE	Thickness S	Applicable Cutter	Fig
	General-purpose ¹	QPMT 080330 PPEN	●	●	●	●	●	—	—	8	3.0	3.18	WRCX08000M Type
080330 PPEN-H		●	●	●	●	●	—	—	—	—	—	—	1
QPMT 10T335 PPEN		●	●	●	●	●	—	—	10	3.5	3.97	WRCX10000M Type	1
10T335 PPEN-H		●	●	●	●	●	—	—	—	—	—	—	1
Non-Ferrous Metals	QPMT 120440 PPEN	●	●	●	●	●	—	—	12	4.0	4.76	WRCX12000M Type	1
	120440 PPEN-H	●	●	●	●	●	—	—	—	—	—	—	1
Surfing	QPET 10T350 PPFR-S	—	—	—	—	—	●	●	10	5.0	3.97	WRCX10000M Type	2
	QPET 120460 PPFR-S	—	—	—	—	—	●	●	12	6.0	4.76	WRCX12000M Type	2
Surfing	QPMT 120460 PPER-R	●	●				—	—	12	6.0	4.76	WRCX12000M Type	3



*1 -H at the end means the strong edge type.

Arbors H213

Recommended Cutting Conditions

Diameter ø20 to ø32 mm

ISO	Work Material	Hardness	Cutting Speed v_c (m/min) Min. - Optimum - Max.	Feed Rate f_z (mm/t) Min. - Optimum - Max.	Insert Grade
P	Carbon Steel	180 to 280 HB	80-120-160	0.10-0.30-0.40	ACP200
	Alloy Steel	180 to 280 HB	60-100-140	0.10-0.20-0.30	ACP200
M	Stainless Steel	—	60-100-120	0.10-0.15-0.20	ACP300
K	Cast Iron	250HB	60-80-120	0.10-0.20-0.30	ACK200
N	Non-ferrous Metal	—	200-500-1,000	0.10-0.20-0.30	DL1000

Note: The cutting conditions above are a guide. Actual conditions will need to be adjusted according to machine rigidity, work clamp rigidity, depth of cut and other factors.

Diameter ø40mm

ISO	Work Material	Hardness	Cutting Speed v_c (m/min) Min. - Optimum - Max.	Feed Rate f_z (mm/t) Min. - Optimum - Max.	Insert Grade
P	Carbon Steel	180 to 280 HB	100-160-200	0.20-0.40-0.60	ACP200
	Alloy Steel	180 to 280 HB	100-140-180	0.20-0.30-0.40	ACP200
M	Stainless Steel	—	80-120-160	0.10-0.20-0.30	ACP300
K	Cast Iron	250HB	80-120-160	0.10-0.20-0.40	ACK200
N	Non-ferrous Metal	—	200-500-1,000	0.10-0.30-0.40	DL1000

Note: The cutting conditions above are a guide. Actual conditions will need to be adjusted according to machine rigidity, work clamp rigidity, depth of cut and other factors.

Parts

Applicable Cutter	Flat Insert Screw		Wrench	Anti-seizure Cream
	WRCX08000M	BFTX02506IP	1.5	TRDR08IP
WRCX10000M	BFTX03584IP	3.0	TRDR15IP	
WRCX12000M	BFTX0409IP	3.0	TRDR15IP	

WFXC 08000M/12000M Type



Expansion	Rake Angle	Radial	0°
	Angle	Axial	0°

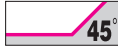
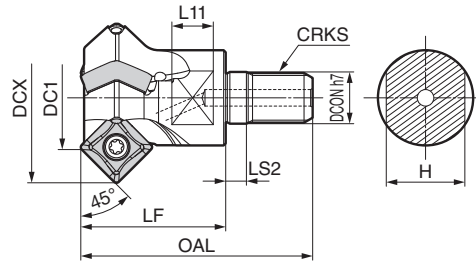


Fig 1



Head (Applicable Insert SOMT08 Type)

Dimensions (mm)

Cat. No.	Stock	Min. Chamfer Dia. DC1	Max. Dia. DCX	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Weight (kg)	Fig
WFXC 08016M08Z2	●	16	25.5	8.5	M8	42	25	5	8	13	2	0.1	1

DC1 and DCX dimensions are values with an insert with 0.8 corner radius mounted.

Head (Applicable Insert SOMT12 Type)

Dimensions (mm)

Cat. No.	Stock	Min. Chamfer Dia. DC1	Max. Dia. DCX	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LS2	Chamfer L11	Width H	Number of Teeth	Weight (kg)	Fig
WFXC 12025M12Z3	●	25	41.0	12.5	M12	56	32	5	10	19	3	0.1	1
12032M16Z3	●	32	48.0	17.0	M16	63	40	5	10	24	3	0.2	1

DC1 and DCX dimensions are values with an insert with 0.8 corner radius mounted.

Insert

Dimensions (mm)

Grade Classification	Coated Carbide								Cemented Carbide	DLC	Cermet	Corner Radius RE	Fig
	High-speed/Light	P		K		M		N	N	P			
	General-purpose	P		K		M		N	N	P			
Process	P		K		M		N	N	N	P			
	P		K		M		N	N	N	P			
Cat. No.	ACU2500	XCU2500	ACP100	ACP200	ACP300	XCK2000	ACK200	ACK300	ACM200	ACM300	H1	DL1000	T4500A
SOMT 080304PZER-L	●	●	●	●	●	●	●	●	●	●	—	—	—
080308PZER-L	●	●	●	●	●	●	●	●	●	●	—	—	—
SOMT 080304PZER-G	●	●	●	●	●	●	●	●	●	●	—	—	—
080308PZER-G	●	●	●	●	●	●	●	●	●	●	—	—	—
080312PZER-G	●	●	●	●	●	●	●	●	●	●	—	—	—
SOMT 080308PZER-H	●	●	●	●	●	●	●	●	●	●	—	—	—
080312PZER-H	●	●	●	●	●	●	●	●	●	●	—	—	—
SOET 080304PZER-G	●	●	●	●	●	●	●	●	●	●	—	●	—
080308PZER-G	●	●	●	●	●	●	●	●	●	●	—	●	—
080312PZER-G	●	●	●	●	●	●	●	●	●	●	—	●	—
SOET 080302PZFR-S	—	—	—	—	—	—	—	—	—	—	●	—	—
080304PZFR-S	—	—	—	—	—	—	—	—	—	—	●	—	—
080308PZFR-S	—	—	—	—	—	—	—	—	—	—	●	—	—
SOMT 120408PDER-L	●	●	●	●	●	●	●	●	●	●	—	—	—
SOMT 120404PDER-G	●	●	●	●	●	●	●	●	●	●	—	—	—
120408PDER-G	●	●	●	●	●	●	●	●	●	●	—	—	—
120412PDER-G	●	●	●	●	●	●	●	●	●	●	—	—	—
120416PDER-G	●	●	●	●	●	●	●	●	●	●	—	—	—
SOMT 120408PDER-H	●	●	●	●	●	●	●	●	●	●	—	—	—
SOET 120408PDFR-S	—	—	—	—	—	—	—	—	—	—	●	●	—

Fig 1

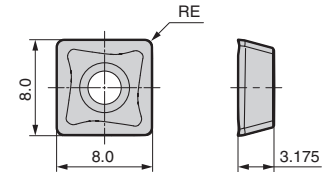
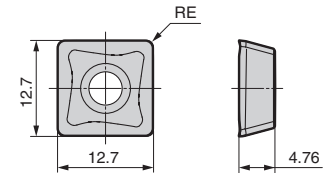


Fig 2



Precautions for Use H181 Arbors H213

Identification Code

WFXC 08 016 M08 Z2

Series	Insert Size	Dia.	Mounting Screw Size	Number of Teeth
WFXC08000M	08	16	M08	2

Parts

Applicable Cutter	Flat Insert Screw	Wrench	Anti-seizure Cream
	WFXC08000M	BFTX0306IP 1.5	TRDR08IP
WFXC12000M	BFTX03512IP 3.0	TRDR15IP	

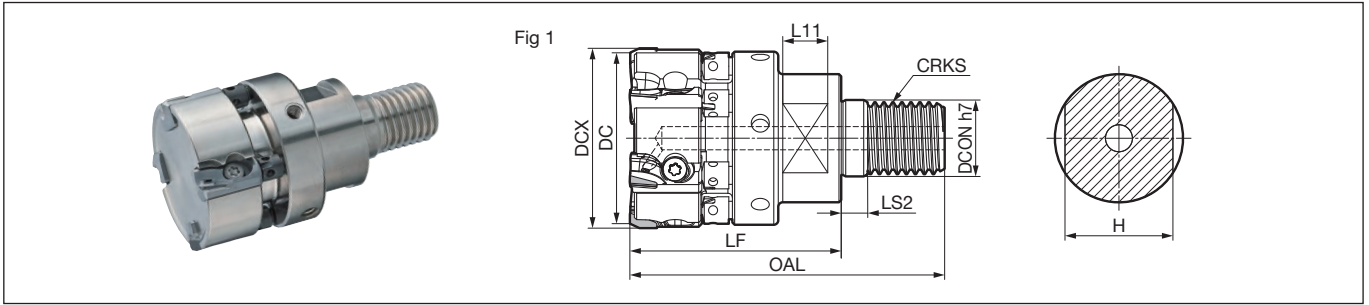
Recommended Cutting Conditions

ISO	Work Material	Hardness	Cutting Speed v_c (m/min) Min. - Optimum - Max.	Feed Rate f_z (mm/t) Min. - Optimum - Max.
P	General Steel	180 to 280 HB	150-200-250	0.05-0.10-0.15
	Mild Steel	≤ 180HB	180-265-350	0.10-0.15-0.20
M	Die Steel	200 to 220 HB	100-150-200	0.05-0.10-0.15
	Stainless Steel	—	150-200-250	0.05-0.10-0.15
K	Cast Iron	250HB	100-175-250	0.05-0.10-0.15
N	Non-ferrous Metal	—	300-500-1,000	0.10-0.15-0.20
S	Exotic Alloy	—	30-50-80	0.10-0.15-0.20

Note The cutting conditions above are a guide. Actual conditions will need to be adjusted according to machine rigidity, work clamp rigidity, depth of cut and other factors.

New

Rake Angle	Radial	-2° to 0°	3mm	90°
	Axial	+5°		



Body (Steel)

Dimensions (mm)

Metric	Cat. No.	Stock	Dia. DC	Max. Dia. DCX	Mounting Dia. DCON	Screw CRKS	Overall Length OAL	Effective Length LF	Length LF2	Chamfer L11	Width H	Number of Teeth	Weight (kg)	Fig
		ANXS 16025M12Z02	●	23	25	12.5	M12	61	40	5	10	19	2	0.1
	16030M16Z03	●	28	30	17.0	M16	70	47	5	10	24	3	0.2	1
	16030M16Z04	●	28	30	17.0	M16	70	47	5	10	24	4	0.2	1
	16032M16Z03	●	30	32	17.0	M16	70	47	5	10	24	3	0.3	1
	16032M16Z04	●	30	32	17.0	M16	70	47	5	10	24	4	0.3	1
	16040M16Z04	●	38	40	17.0	M16	70	47	5	10	24	4	0.4	1
	16040M16Z06	●	38	40	17.0	M16	70	47	5	10	24	6	0.4	1

Blades are sold separately.

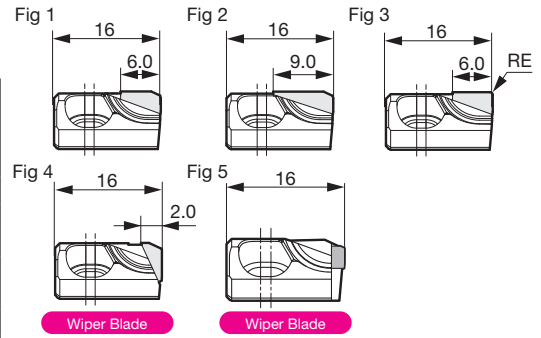
If using blades with corner radius (ANB1604R/ANB1608R), DC = DCX.

Weight indicated includes the weight with blades and other spare parts.

Blade

Dimensions (mm)

Grade Classification		SUMIDIA	CVD Single-crystal Diamond					
Process	High-speed/Light	N	N					
	General-purpose	N						
	Roughing	N						
Cat. No.	DA1000	SCV10	Cutting Edge Length	Corner Radius RE	Wiper Flat Shape	Applications	Fig	
ANB 1600R-L	●	—	6.0	—	Linear	Low Resistance	1	
1600R-G	●	—	6.0	—	Arc-Shaped	General-purpose	1	
1600R-H	●	—	6.0	—	Arc-Shaped	Strong Edge	1	
1600R-GX	●	—	9.0	—	Arc-Shaped	Long Edge	2	
1604R	●	—	6.0	0.4	Linear	Corner Radius	3	
1608R	●	—	6.0	0.8	Linear	Corner Radius	3	
1600R-W	●	—	2.0	—	Arc-Shaped	Wiper	4	
1600R-WS	—	○	—	—	Arc-Shaped	Wiper	5	



Parts

Cap Screw	Adjustment Screw	Wrench	Adjustment Wrench
BXA0310IP	2.0 HFJ	TRXW10IP	ANT

The adjustment wrench (ANT) can also be used for height adjustment of the High-speed Cutter RF Type and High-efficiency Cutter HF Type.

Recommended Cutting Conditions

Si content of 12.6% or less

ISO	Work Material	Cutting Speed v_c (m/min)	Feed Rate f_z (mm/t)	Blade Grade
N	Aluminum Alloy	2,000 - 2,500 - 3,000	0.05 - 0.13 - 0.20	DA1000

Note The cutting conditions above are a guide. Actual conditions will need to be adjusted according to machine rigidity, work clamp rigidity, depth of cut and other factors.

Si content of over 12.6%

ISO	Work Material	Cutting Speed v_c (m/min)	Feed Rate f_z (mm/t)	Blade Grade
N	Aluminum Alloy	400 - 600 - 800	0.05 - 0.13 - 0.20	DA1000

Note The cutting conditions above are a guide. Actual conditions will need to be adjusted according to machine rigidity, work clamp rigidity, depth of cut and other factors.

Identification Code

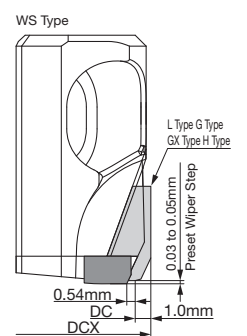
ANX S 16 032 M16 Z03

Series Steel Body Blade Size Cutter Dia. Screw Size Number of Teeth

Maximum Allowable Spindle Speed

Cat. No.	n max(min^{-1})
ANXS 16025M12Z02	10,000
16030M16Z03	10,000
16030M16Z04	10,000
16032M16Z03	10,000
16032M16Z04	10,000
16040M16Z04	10,000
16040M16Z06	10,000

SCV10 Wiper Blade Step Amount



CAUTIONS (For more details, refer to the instruction manual included with the product)

When using the WS Type (SCV10 wiper blade), in order to maintain balance, be sure to use a cutter with an even number of cutting edges and place the WS Type blades at opposite positions.

MEMO

