

Modular Tools

H125 to H132

H

H

Modular
Tools

Radius

Multi-
Purpose

Shoulder
Milling

Groove/
T-Slot

| | | | |
|-------------------------|--|---|-------------|
| | | Modular Tools | H126 |
| Radius | Milling of Exotic Alloy | SEC-Wave Radius Mill RSX Type | H128 |
| | Milling of Steel, Cast Iron, Stainless Steel & Non-Ferrous Metal | SEC-Wave Radius Mill WRCX Type | H131 |
| Shoulder Milling | Shoulder Milling of Steel, Die Steel, Cast Iron, Stainless Steel & Non-Ferrous Metal | SEC-Wave Mill WFX Type | H129 |
| | High Efficiency Milling of Steel, Cast Iron, Stainless Steel & Non-Ferrous Metal | SEC-Wave Mill WEX Type | H130 |
| Multi-Purpose | Ultra-High Feed Milling of Steel, Cast Iron & Stainless Steel | SEC-Metal Slash Mill MSX Type | H132 |

Stock Indications and Symbols

- mark: Standard stocked item
- mark: To be replaced by a new item featured on the same page
- ▲ mark: To be replaced by new item
(Please confirm stock availability)

- * mark: Semi-standard stock (Please confirm stock availability)
- mark: Stock or planned stock (Please confirm stock availability)
- No mark: Made-to-order item
- mark: We cannot produce

H125

SEC- Modular Tools



General Features

- Exchangeable head endmills are available in 3 types!
 - Radius Endmill for Exotic Alloys **RSX Type** *New*
 - Endmill for Shoulder Milling **WFX Type** *New*
 - High Efficiency Endmill **WEX Type**
 - Multi-purpose Radius Endmill **WRCX Type**
 - Ultra-High Feed Endmill **MSX Type**
- A wide variety of possible combinations with carbide arbors (16 items) and steel arbors (4 items)!

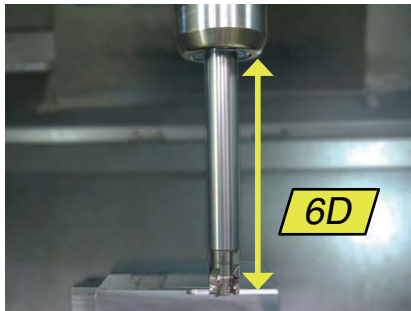
Suitable for milling with **long overhangs** when combined with carbide or steel arbors!

Economically designed exchangeable head!

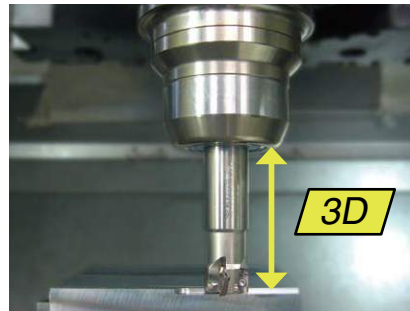


- Characteristics
- Standard type (integrated arbor) capable of 2 to 3D overhang but using carbide arbor supports up to 6D milling overhang.

Modular Type + Carbide Arbors



Standard Type (Integrated unit)

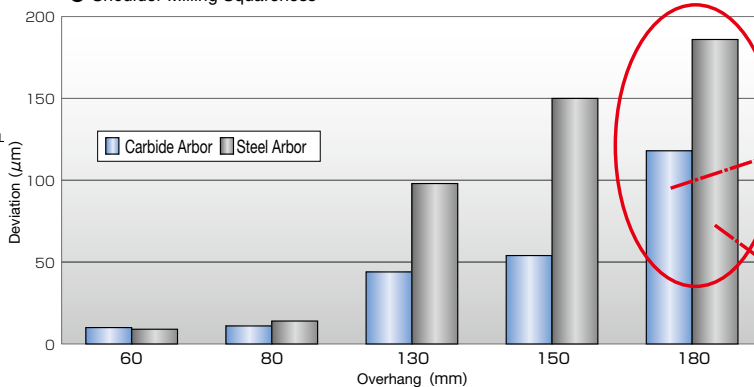
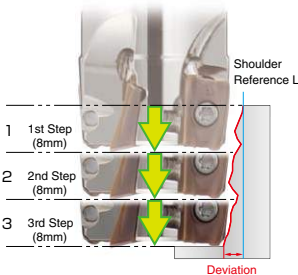


Work Material : S50C
 Tool : WEX2025M12Z4 ($\phi 25 \times 4$ flutes)
 Cutting Conditions : $v_c=100\text{m/min}$ $f_z=0.1\text{mm/t}$ $a_e=8\text{mm} \times 3$ times $a_p=2.0\text{mm}$ Equipment : M/C BT50

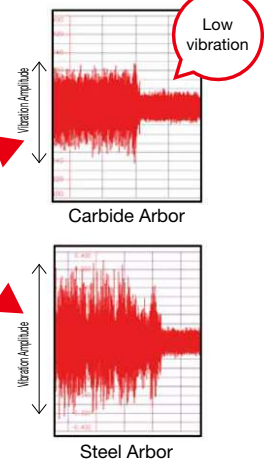
Note : Overhang varies depending on cutting conditions such as the tool used, machine rigidity, and work clamp rigidity.

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

Shoulder Milling Squareness



Vibration



Work Material : S50C
 Tool : WEX2025M12Z4 ($\phi 25 \times 4$ flutes)
 Cutting Conditions : $v_c=100\text{m/min}$ $f_z=0.1\text{mm/t}$ $a_e=8\text{mm} \times 3$ times $a_p=2.0\text{mm}$ Equipment : M/C BT50

Modular Tools

Face Milling

Radius

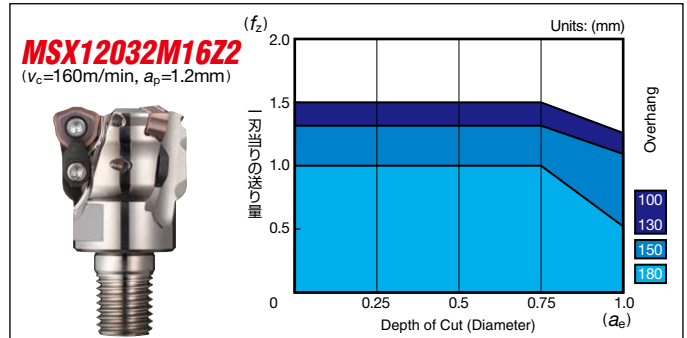
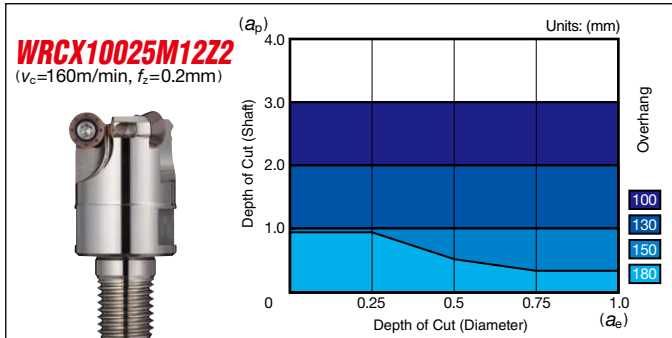
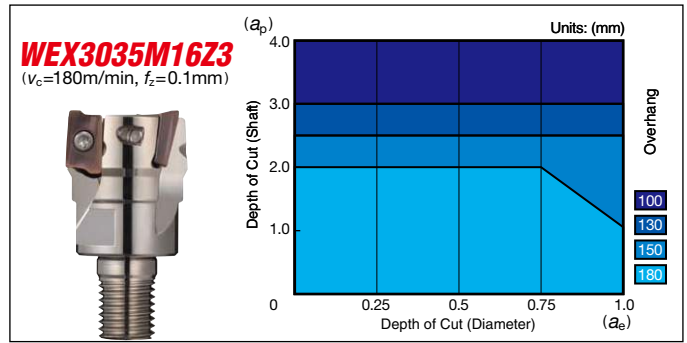
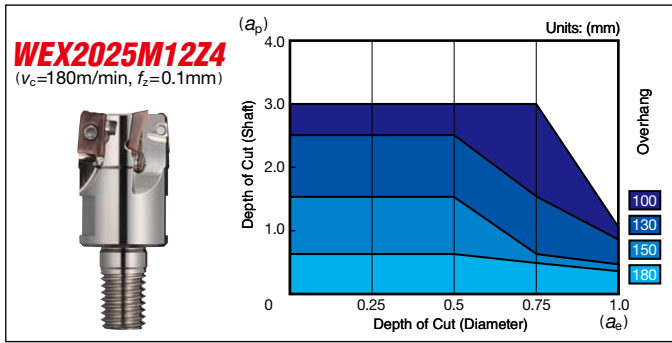
Multi-Purpose

Shoulder Milling

Groove/T-Slot

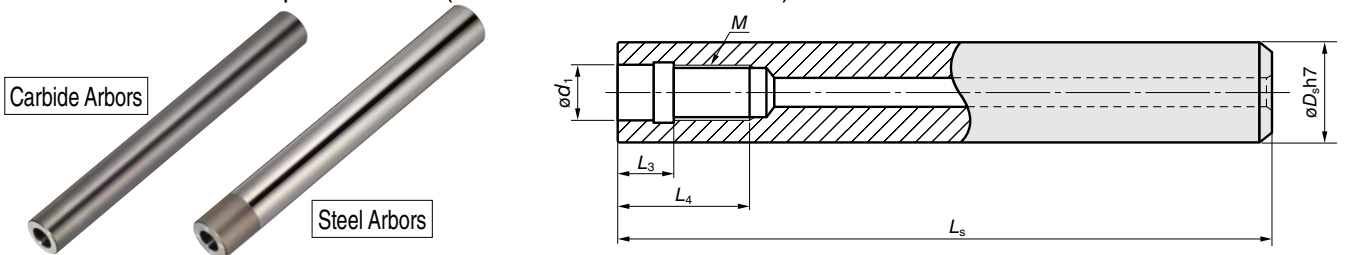
SEC- Modular Tools

Application Range (Work Material : S50C Equipment : Vertical M/C BT50 Dry)



Note: These tables indicate reference machining conditions. Actual machining parameters should be adjusted based on machine rigidity and work clamp rigidity.

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



Carbide Arbors

| Cat. No. | Stock | Dimension (mm) | | | | | | |
|--------------|-------|----------------|------------|------------|-------|-------|-------|---------|
| | | M | ϕd_1 | ϕD_s | L_s | L_3 | L_4 | L_5^* |
| MA15M08L120C | ● | M8 | 8.5 | 15 | 120 | 10 | 18 | 145 |
| 15M08L160C | ● | M8 | 8.5 | 15 | 160 | 10 | 18 | 185 |
| 16M08L120C | ● | M8 | 8.5 | 16 | 120 | 10 | 18 | 145 |
| 16M08L160C | ● | M8 | 8.5 | 16 | 160 | 10 | 18 | 185 |
| MA18M10L150C | ● | M10 | 10.5 | 18 | 150 | 10 | 20 | 180 |
| 18M10L200C | ● | M10 | 10.5 | 18 | 200 | 10 | 20 | 230 |
| 20M10L150C | ● | M10 | 10.5 | 20 | 150 | 10 | 20 | 180 |
| 20M10L200C | ● | M10 | 10.5 | 20 | 200 | 10 | 20 | 230 |
| MA23M12L200C | ● | M12 | 12.5 | 23 | 200 | 10 | 22 | 235 |
| 23M12L250C | ● | M12 | 12.5 | 23 | 250 | 10 | 22 | 285 |
| 25M12L200C | ● | M12 | 12.5 | 25 | 200 | 10 | 22 | 235 |
| 25M12L250C | ● | M12 | 12.5 | 25 | 250 | 10 | 22 | 285 |
| MA28M16L200C | ● | M16 | 17.0 | 28 | 200 | 10 | 24 | 240 |
| 28M16L300C | ● | M16 | 17.0 | 28 | 300 | 10 | 24 | 340 |
| 32M16L200C | ● | M16 | 17.0 | 32 | 200 | 10 | 24 | 240 |
| 32M16L300C | ● | M16 | 17.0 | 32 | 300 | 10 | 24 | 340 |

Steel Arbors

| Cat. No. | Stock | Dimension (mm) | | | | | | |
|--------------|-------|----------------|------------|------------|-------|-------|-------|-------|
| | | M | ϕd_1 | ϕD_s | L_s | L_3 | L_4 | L_5 |
| MA16M08L120S | ● | M8 | 8.5 | 16 | 120 | 10 | 18 | 145 |
| 20M10L150S | ● | M10 | 10.5 | 20 | 150 | 10 | 20 | 180 |
| 25M12L200S | ● | M12 | 12.5 | 25 | 200 | 10 | 22 | 235 |
| 32M16L200S | ● | M16 | 17.0 | 32 | 200 | 10 | 24 | 240 |

Endmill Identification

MA 15 M08 L120 C

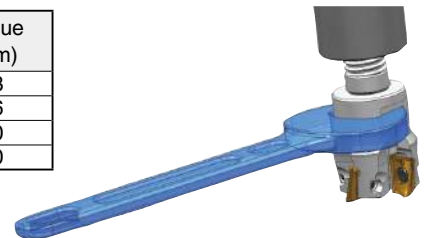
(1) Cutter Series (2) Shank Diameter (3) Mounting Screw (4) Arbor Length (5) Materials
C : Carbide S : Steel

Recommended Tightening Torque (N·m)

*Notes about tightening the head.

- When attaching 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 | Torque (N·m) |
|------------|--------------|
| M8 | 23 |
| M10 | 46 |
| M12 | 60 |
| M16 | 80 |



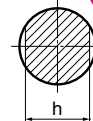
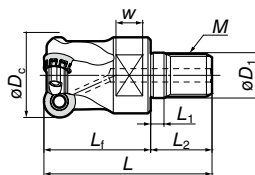
● Set Dimensions (*)



| | | |
|------------|--------|------------|
| Rake Angle | Radial | -5° to -8° |
| | Axial | 10° |



| | | | | | |
|----------|-----------------|-------------|------------------|----------|--------------|
| P | M | K | N | S | H |
| Steel | Stainless Steel | Coated Tool | High-Speed Steel | Aluminum | Exotic Alloy |



New

Head (RSX 10000M) Applicable Insert A = 10 mm Type

| Cat. No. | Stock | Dimensions (mm) | | | | | | | | | | No. of Teeth |
|----------------|-------|-----------------|-----------------|-----|----|----------------|----------------|----------------|----|----|---|--------------|
| | | øD _c | øD ₁ | M | L | L _f | L ₁ | L ₂ | W | h | | |
| RSX 10025M12Z2 | ● | 25 | 12.5 | M12 | 56 | 35 | 5 | 21 | 10 | 19 | 2 | |
| RSX 10032M16Z3 | ● | 32 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 | |

Inserts are not included.

Head (RSX 12000M) Applicable Insert A = 12mm Type

| Cat. No. | Stock | Dimensions (mm) | | | | | | | | | | No. of Teeth |
|----------------|-------|-----------------|-----------------|-----|----|----------------|----------------|----------------|----|----|---|--------------|
| | | øD _c | øD ₁ | M | L | L _f | L ₁ | L ₂ | W | h | | |
| RSX 12032M16Z2 | ● | 32 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 2 | |
| 12040M16Z3 | ● | 40 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 | |

Inserts are not included.

Head (RSXF 10000M) [Fine Pitch Type] Applicable Insert A = 10mm Type

| Cat. No. | Stock | Dimensions (mm) | | | | | | | | | | No. of Teeth |
|-----------------|-------|-----------------|-----------------|-----|----|----------------|----------------|----------------|----|----|---|--------------|
| | | øD _c | øD ₁ | M | L | L _f | L ₁ | L ₂ | W | h | | |
| RSXF 10025M12Z3 | ● | 25 | 12.5 | M12 | 56 | 35 | 5 | 21 | 10 | 19 | 3 | |
| RSXF 10032M16Z4 | ● | 32 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 4 | |

Inserts are not included.

Head (RSXF 12000M) [Fine Pitch Type] Applicable Insert A = 12mm Type

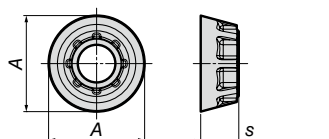
| Cat. No. | Stock | Dimensions (mm) | | | | | | | | | | No. of Teeth |
|-----------------|-------|-----------------|-----------------|-----|----|----------------|----------------|----------------|----|----|---|--------------|
| | | øD _c | øD ₁ | M | L | L _f | L ₁ | L ₂ | W | h | | |
| RSXF 12032M16Z3 | ● | 32 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 | |
| 12040M16Z4 | ● | 40 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 4 | |

Inserts are not included.

Insert

M Stainless Steel **S** Exotic Alloy

| Grade | Coat | | | Dimensions | Applicable Cutter | |
|-----------------|------------------|--------|--------|-------------------|-------------------|-------------------|
| | M | S | M/S | | | |
| Application | High Speed/Light | M/S | M/S | A | s | |
| | General Purpose | M/S | M/S | | | |
| | Roughing | | M/S | | | |
| Cat. No. | ACM100 | ACM200 | ACM300 | Applicable Cutter | | |
| | | | | A | s | |
| RDET 10T3M0EN-G | ● | ● | ● | 10 | 3.97 | RSX(F)10000M Type |
| 10T3M0EN-H | ● | ● | ● | 10 | 3.97 | |
| RDET 1204M0EN-G | ● | ● | ● | 12 | 4.76 | RSX(F)12000M Type |
| 1204M0EN-H | ● | ● | ● | 12 | 4.76 | |



● Cross Section of Cutting Edge



Parts

| Applicable Cutter | Screw | Spanner |
|-------------------|------------------------------|----------|
| RSX(F)10000M Type | BFTX03584IP 3.0 (N·m) | TRDR151P |
| RSX(F)12000M Type | BFTX0409IP 3.0 (N·m) | |

(N·m) Recommended Tightening Torque (N·m) Anti-seizure cream SUMI-P included in the package.

Identification Details

| | | | | | |
|-------------------|-----------------|--------------|------------|--------------------|-------------------|
| RSX | F | 10 | 025 | M12 | Z2 |
| (1) Cutter Series | (2) Insert Size | (3) Diameter | (4) Cutter | (5) Mounting Screw | (6) No. of Flutes |

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. | Grade | |
|----------|----------------------|--|---|--|----------------|------------------|
| M | Stainless Steel | Cr Ferritic | 200HB | 150-180-200 | 0.15-0.25-0.35 | ACM300 |
| | | Martensitic | 200 to 330HB | 80-120-180 | 0.15-0.25-0.35 | ACM300 |
| | | Austenitic | 200HB | 150-180-200 | 0.15-0.25-0.35 | ACM300 |
| | Cr-Ni | 2 Phase Structures (Austenitic + Ferritic) | 230 to 270HB | 80-120-180 | 0.15-0.25-0.35 | ACM200 |
| | | Deposition Hardened Structures | 330HB | 60-100-160 | 0.15-0.25-0.35 | ACM200 |
| S | Heat-Resistant Alloy | Ni-Based Material | 250 to 350HB | 20-30-40 | 0.10-0.20-0.30 | ACM100 ACM200 |
| | Titanium | Pure Titanium (99.5%) | (Rm400) | 60-80-100 | 0.10-0.20-0.30 | |
| | | Alloy α+β | (Rm1050) | 40-50-60 | 0.10-0.20-0.30 | |

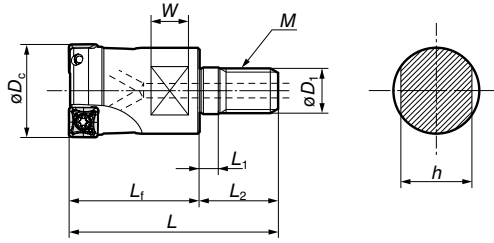
Note The cutting conditions above are a guide. Actual conditions will need to be adjusted according to machine rigidity, work clamp rigidity, cutting depth, and other factors.

| | | | | | | | | | | | | | | | | | | | |
|------------|-----------------|-----------|-------------------|-------------------|---|----------------|---|---|---|---|---|---|-------|-----------------|-----------|-------------------|-------------------|--------------|----------------|
| Rake Angle | Radial | -6° | 6mm | 90° | <table border="1"> <tr> <td>P</td><td>M</td><td>K</td><td>N</td><td>N</td><td>S</td><td>H</td> </tr> <tr> <td>Steel</td><td>Stainless Steel</td><td>Cast Iron</td><td>Non-Ferrous Metal</td><td>Non-Ferrous Metal</td><td>Exotic Alloy</td><td>Hardened Steel</td> </tr> </table> | P | M | K | N | N | S | H | Steel | Stainless Steel | Cast Iron | Non-Ferrous Metal | Non-Ferrous Metal | Exotic Alloy | Hardened Steel |
| | P | M | | | | K | N | N | S | H | | | | | | | | | |
| Steel | Stainless Steel | Cast Iron | Non-Ferrous Metal | Non-Ferrous Metal | Exotic Alloy | Hardened Steel | | | | | | | | | | | | | |
| Axial | 12° | | | | | | | | | | | | | | | | | | |

SEC-Wave Mill

WFX08000M Type

SEC-Modular Tools



New

Head

| Cat. No. | Stock | Dimensions (mm) | | | | | | | | No. of Teeth | |
|----------------|-------|-----------------|-----------------|-----|----|----------------|----------------|----|----|--------------|---|
| | | øD _c | øD ₁ | M | L | L ₁ | L ₂ | W | h | | |
| WFX 08020M10Z2 | ● | 20 | 10.5 | M10 | 49 | 30 | 5 | 19 | 8 | 15 | 2 |
| 08022M10Z2 | ● | 22 | 10.5 | M10 | 49 | 30 | 5 | 19 | 8 | 15 | 2 |
| WFX 08025M12Z2 | ● | 25 | 12.5 | M12 | 56 | 35 | 5 | 21 | 10 | 19 | 2 |
| 08028M12Z2 | ● | 28 | 12.5 | M12 | 56 | 35 | 5 | 21 | 10 | 19 | 2 |
| WFX 08030M16Z3 | ● | 30 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 |
| 08032M16Z3 | ● | 32 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 |
| 08040M16Z3 | ● | 40 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 |

Inserts are not included.

Identification Details

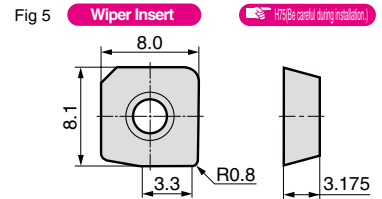
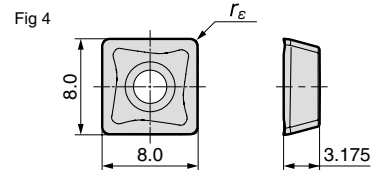
WFX 08 020 M10 Z2

(1) Cutter Series (2) Insert Size (3) Diameter (4) Mounting Screw (5) No. of Flutes

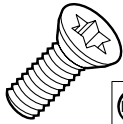
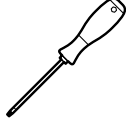
Insert

P Steel **M** Stainless Steel **K** Cast Iron **N** Non-Ferrous Metal **S** Exotic Alloy **H** Hardened Steel

| Grade | Coated Carbide | | | | | | Cermet | DLC | Cermet | Dimensions (mm) | Fig | |
|-------------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------|-----|--------|-----------------|----------------|---|
| | High Speed/Light | General Purpose | General Purpose | General Purpose | General Purpose | General Purpose | | | | | | |
| Application | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Cat. No. | ACP100 | ACP200 | ACP300 | ACK200 | ACK300 | ACM200 | ACM300 | H1 | DL1000 | T4500A | r _ε | |
| SOMT 080304PZER-L | ● | ● | ● | ● | ● | ● | ● | | | | 0.4 | 4 |
| 080308PZER-L | ● | ● | ● | ● | ● | ● | ● | | | | 0.8 | 4 |
| SOMT 080304PZER-G | ● | ● | ● | ● | ● | ● | ● | | | | 0.4 | 4 |
| 080308PZER-G | ● | ● | ● | ● | ● | ● | ● | | | | 0.8 | 4 |
| 080312PZER-G | ● | ● | ● | ● | ● | ● | ● | | | | 1.2 | 4 |
| SOMT 080308PZER-H | ● | ● | ● | ● | ● | ● | ● | | | | 0.8 | 4 |
| 080312PZER-H | ● | ● | ● | ● | ● | ● | ● | | | | 1.2 | 4 |
| SOET 080304PZER-G | ● | ● | ● | ● | ● | ● | ● | | | ● | 0.4 | 4 |
| 080308PZER-G | ● | ● | ● | ● | ● | ● | ● | | | ● | 0.8 | 4 |
| 080312PZER-G | ● | ● | ● | ● | ● | ● | ● | | | ● | 1.2 | 4 |
| SOET 080302PZFR-S | | | | | | | | ● | ● | | 0.2 | 4 |
| 080304PZFR-S | | | | | | | | ● | ● | | 0.4 | 4 |
| 080308PZFR-S | | | | | | | | ● | ● | | 0.8 | 4 |
| XOEW 080308PZTR-W | | | | ● | | | | | | ● | - | 5 |



Parts

| Insert Screw | Spanner |
|---|---|
|  |  |
| BFTX0306IP | TRDR08IP |

(N·m) Recommended Tightening Torque (N·m)

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 (mm) | Grade |
|----------|-------------------|--------------|---|--|-------------------|------------------|
| P | General Steel | 180 to 280HB | 150-200-250 | 0.08-0.12-0.18 | <6 | ACP200 ACP300 |
| | Soft Steel | ≤180HB | 180-250-350 | 0.10-0.15-0.20 | <6 | ACP200 ACP300 |
| | Die Steel | 200 to 220HB | 100-150-200 | 0.08-0.12-0.18 | <4 | ACP200 ACP300 |
| M | Stainless Steel | - | 160-200-250 | 0.10-0.15-0.20 | <6 | ACM300 |
| K | Cast Iron | 250HB | 100-175-250 | 0.10-0.15-0.20 | <6 | ACK200 ACK300 |
| | | | | | | H1 DL1000 |
| N | Non-Ferrous Metal | - | 300-500-1000 | 0.10-0.15-0.20 | <6 | |

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

Modular Tools
Face Milling
Radius
Multi-Purpose
Shoulder Milling
Groove/T-Slot

WEX2000M/3000M Type

SEC-Modular Tools

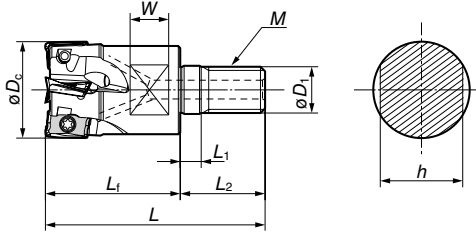
| | | | | | | | | | | | | | | | | | | | | | |
|------------|-----------------|---------------------------|-------------------|--------------|----------------|-------------------|------|-----|---|---|---|---|---|---|---|-------|-----------------|-----------|-------------------|--------------|----------------|
| Rake Angle | Radial | 10° to 18°, 8° to 15° | Max. Depth of Cut | 10mm | 90° | Max. Depth of Cut | 14mm | 90° | <table border="1"> <tr> <td>P</td><td>M</td><td>K</td><td>N</td><td>S</td><td>H</td> </tr> <tr> <td>Steel</td><td>Stainless Steel</td><td>Cast Iron</td><td>Non-Ferrous Metal</td><td>Exotic Alloy</td><td>Hardened Steel</td> </tr> </table> | P | M | K | N | S | H | Steel | Stainless Steel | Cast Iron | Non-Ferrous Metal | Exotic Alloy | Hardened Steel |
| | P | M | K | N | S | H | | | | | | | | | | | | | | | |
| Steel | Stainless Steel | Cast Iron | Non-Ferrous Metal | Exotic Alloy | Hardened Steel | | | | | | | | | | | | | | | | |
| Axial | | 14° to 25°, 16° to 24° | | | | | | | | | | | | | | | | | | | |
| | | (2000M Type) (3000M Type) | | (2000M Type) | | (3000M Type) | | | | | | | | | | | | | | | |



WEX2000M Type



WEX3000M Type



Head (WEX 2000M)

| Cat. No. | Stock | Dimension (mm) | | | | | | | | | | No. of Teeth |
|---------------|-------|-----------------|-----------------|-----|----|----------------|----------------|----------------|----|----|---|--------------|
| | | øD _c | øD ₁ | M | L | L _f | L ₁ | L ₂ | W | h | | |
| WEX 2016M08Z2 | ● | 16 | 8.5 | M8 | 42 | 25 | 5 | 17 | 8 | 13 | 2 | |
| 2018M08Z2 | ● | 18 | 8.5 | M8 | 42 | 25 | 5 | 17 | 8 | 13 | 2 | |
| WEX 2020M10Z3 | ● | 20 | 10.5 | M10 | 49 | 30 | 5 | 19 | 8 | 15 | 3 | |
| 2022M10Z3 | ● | 22 | 10.5 | M10 | 49 | 30 | 5 | 19 | 8 | 15 | 3 | |
| WEX 2025M12Z4 | ● | 25 | 12.5 | M12 | 56 | 35 | 5 | 21 | 10 | 19 | 4 | |
| 2028M12Z4 | ● | 28 | 12.5 | M12 | 56 | 35 | 5 | 21 | 10 | 19 | 4 | |
| WEX 2030M16Z4 | ● | 30 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 4 | |
| 2032M16Z5 | ● | 32 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 5 | |
| 2040M16Z6 | ● | 40 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 6 | |

Inserts are not included.

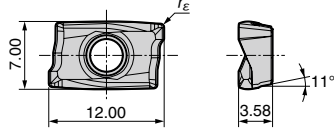
Head (WEX 3000M)

| Cat. No. | Stock | Dimension (mm) | | | | | | | | | | No. of Teeth |
|---------------|-------|-----------------|-----------------|-----|----|----------------|----------------|----------------|----|----|---|--------------|
| | | øD _c | øD ₁ | M | L | L _f | L ₁ | L ₂ | W | h | | |
| WEX 3025M12Z2 | ● | 25 | 12.5 | M12 | 56 | 35 | 5 | 21 | 10 | 19 | 2 | |
| 3028M12Z2 | ● | 28 | 12.5 | M12 | 56 | 35 | 5 | 21 | 10 | 19 | 2 | |
| WEX 3030M16Z3 | ● | 30 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 | |
| 3032M16Z3 | ● | 32 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 | |
| 3035M16Z3 | ● | 35 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 | |
| WEX 3040M16Z4 | ● | 40 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 4 | |

Inserts are not included.

Inserts

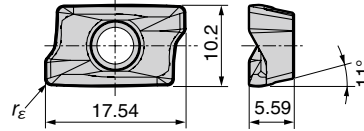
P Steel M Stainless Steel K Cast Iron N Non-Ferrous Metal S Exotic Alloy H Hardened Steel



| Application | Grade | | | | | | | | | | Carbide | DLC |
|--------------------|----------------|--------|--------|--------|--------|--------|--------|----|--------|--|----------------|-----|
| | Coated Carbide | | | | | | | | | | | |
| | ACP100 | ACP200 | ACP300 | ACK200 | ACK300 | ACM200 | ACM300 | H1 | DL1000 | | | |
| High Speed/Light | P | | | K | | M | S | | | | K | N |
| General Purpose | | M | M | K | | M | S | | | | | N |
| Roughing | | M | M | K | | M | S | | | | | N |
| Cat. No. | | | | | | | | | | | Dimensions | |
| | | | | | | | | | | | r _ε | |
| AXMT 123504PEER-G | ● | ● | ● | ● | ● | | | | | | | 0.4 |
| 123508PEER-G | ● | ● | ● | ● | ● | | | | | | | 0.8 |
| 123512PEER-G | ● | ● | ● | ● | ● | | | | | | | 1.2 |
| AXMT 123504PEER-H | ● | ● | ● | ● | ● | | | | | | | 0.4 |
| 123508PEER-H | ● | ● | ● | ● | ● | | | | | | | 0.8 |
| 123512PEER-H | ● | ● | ● | ● | ● | | | | | | | 1.2 |
| AXMT 123504PEER-E | | | | | | ● | ● | | | | | 0.4 |
| 123508PEER-E | | | ▲ | | | ● | ● | | | | | 0.8 |
| 123512PEER-E | | | | | | ● | ● | | | | | 1.2 |
| AXMT 123508PEER-EH | | | ▲ | | | ● | ● | | | | | 0.8 |
| AXET 123502PEFR-S | | | | | | | | ● | ● | | | 0.2 |
| 123504PEFR-S | | | | | | | | ● | ● | | | 0.4 |
| 123508PEFR-S | | | | | | | | ● | ● | | | 0.8 |

Inserts (Common)

P Steel M Stainless Steel K Cast Iron N Non-Ferrous Metal S Exotic Alloy H Hardened Steel



| Application | Grade | | | | | | | | | | Carbide | DLC |
|--------------------|----------------|--------|--------|--------|--------|--------|--------|----|--------|--|----------------|-----|
| | Coated Carbide | | | | | | | | | | | |
| | ACP100 | ACP200 | ACP300 | ACK200 | ACK300 | ACM200 | ACM300 | H1 | DL1000 | | | |
| High Speed/Light | P | | | K | | M | S | | | | K | N |
| General Purpose | | M | M | K | | M | S | | | | | N |
| Roughing | | M | M | K | | M | S | | | | | N |
| Cat. No. | | | | | | | | | | | Dimensions | |
| | | | | | | | | | | | r _ε | |
| AXMT 170508PEER-L | ● | ● | ● | ● | ● | | | | | | | 0.8 |
| AXMT 170504PEER-G | ● | ● | ● | ● | ● | | | | | | | 0.4 |
| 170508PEER-G | ● | ● | ● | ● | ● | | | | | | | 0.8 |
| 170512PEER-G | ● | ● | ● | ● | ● | | | | | | | 1.2 |
| 170516PEER-G | ● | ● | ● | ● | ● | | | | | | | 1.6 |
| 170520PEER-G * | ● | ● | ● | ● | ● | | | | | | | 2.0 |
| 170530PEER-G * | ● | ● | ● | ● | ● | | | | | | | 3.0 |
| AXMT 170508PEER-H | ● | ● | ● | ● | ● | | | | | | | 0.8 |
| 170512PEER-H | ● | ● | ● | ● | ● | | | | | | | 1.2 |
| AXMT 170504PEER-E | | | | | | ● | ● | | | | | 0.4 |
| 170508PEER-E | | | ▲ | | | ● | ● | | | | | 0.8 |
| 170512PEER-E | | | | | | ● | ● | | | | | 1.2 |
| 170516PEER-E | | | | | | ● | ● | | | | | 1.6 |
| 170520PEER-E * | | | | | | ● | ● | | | | | 2.0 |
| 170530PEER-E * | | | | | | ● | ● | | | | | 3.0 |
| AXMT 170508PEER-EH | | | ▲ | | | ● | ● | | | | | 0.8 |
| AXET 170502PEFR-S | | | | | | | | ● | ● | | | 0.2 |
| 170504PEFR-S | | | | | | | | ● | ● | | | 0.4 |
| 170508PEFR-S | | | | | | | | ● | ● | | | 0.8 |

* Cutter body modification is required.

Endmill Identification

WEX 2 016 M08 Z2

(1) Cutter Series (2) Insert size (3) Diameter (4) Mounting Screw (5) No. of Flutes

Spare Parts (WEX2000M)

| Spanner | Screw | Applicable Endmill |
|----------------|----------|----------------------|
| BFTX03051P 2.0 | TRDR081P | WEX2016M, WEX2018M |
| BFTX03061P 2.0 | | WEX2020M to WEX2040M |

Recommended Tightening Torque (N·m) Anti-seizure cream SUMI-P included in the package.

Spare Parts (WEX3000M)

| Spanner | Screw | Applicable Endmill |
|----------------|----------|----------------------|
| BFTX04071P 3.0 | TRDR151P | WEX3025M to WEX3030M |
| BFTX04091P 3.0 | | WEX3032M to WEX3040M |

Recommended Tightening Torque (N·m) Anti-seizure cream SUMI-P included in the package.

Recommended Cutting Conditions H87

| | | | | | | | | | |
|------------|--------|-----|-------------------|---------------|-------------------|-----|-------------------|-----|--|
| Rake Angle | Radial | 0° | Max. Depth of Cut | 4mm | Max. Depth of Cut | 5mm | Max. Depth of Cut | 6mm | P Steel M Stainless Steel K Cast Iron N Non-Ferrous Metal S Exotic Alloy H Hardened Steel |
| | Axial | -3° | (08000M Type) | (10000M Type) | (12000M Type) | | | | |

SEC-Wave Radius Mill

WRCX08000M/10000M/12000M Type

SEC-Modular Tools



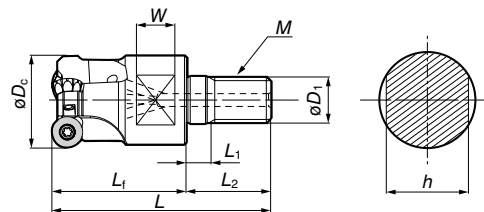
WRCX08000M Type



WRCX10000M Type



WRCX12000M Type



Head (WRCX 08000M) Applicable Insert A = 8 mm Type

| Cat. No. | Stock | Dimensions (mm) | | | | | | | | | | No. of Teeth |
|-----------------|-------|-----------------|-----------------|-----|----|----------------|----------------|----------------|----|----|---|--------------|
| | | øD _c | øD ₁ | M | L | L _f | L ₁ | L ₂ | W | h | | |
| WRCX 08020M10Z2 | ● | 20 | 10.5 | M10 | 49 | 30 | 5 | 19 | 8 | 15 | 2 | |
| 08025M12Z3 | ● | 25 | 12.5 | M12 | 56 | 35 | 5 | 21 | 10 | 19 | 3 | |

Inserts are not included.

Head (WRCX 10000M) Applicable Insert A = 8 mm Type

| Cat. No. | Stock | Dimensions (mm) | | | | | | | | | | No. of Teeth |
|-----------------|-------|-----------------|-----------------|-----|----|----------------|----------------|----------------|----|----|---|--------------|
| | | øD _c | øD ₁ | M | L | L _f | L ₁ | L ₂ | W | h | | |
| WRCX 10025M12Z2 | ● | 25 | 12.5 | M12 | 56 | 35 | 5 | 21 | 10 | 19 | 2 | |
| 10028M12Z2 | ● | 28 | 12.5 | M12 | 56 | 35 | 5 | 21 | 10 | 19 | 2 | |
| WRCX 10030M16Z3 | ● | 30 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 | |
| 10032M16Z3 | ● | 32 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 | |

Inserts are not included.

Head (WRCX 12000M) Applicable Insert A = 8 mm Type

| Cat. No. | Stock | Dimensions (mm) | | | | | | | | | | No. of Teeth |
|-----------------|-------|-----------------|-----------------|-----|----|----------------|----------------|----------------|----|----|---|--------------|
| | | øD _c | øD ₁ | M | L | L _f | L ₁ | L ₂ | W | h | | |
| WRCX 12040M16Z4 | ● | 40 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 4 | |

Inserts are not included.

Spare Parts

| Spanner | Screw | Applicable Head | |
|-------------|----------|-----------------|------------|
| | | | |
| BFTX02506IP | TRDR08IP | | WRCX08000M |
| BFTX03584IP | TRDR15IP | | WRCX10000M |
| BFTX0409IP | | WRCX12000M | |

Recommended Tightening Torque (N·m) Anti-seizure cream SUMI-P included in the package.

Identification Details

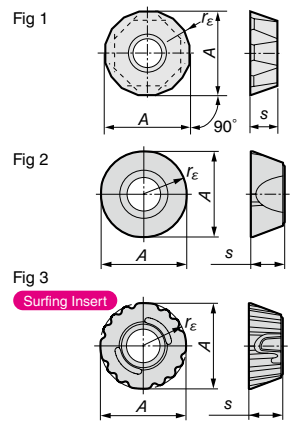
WRCX 08 020 M10 Z2

(1) Cutter Series (2) Insert size (3) Diameter (4) Mounting Screw (5) No. of Flutes

Inserts

P Steel **M** Stainless Steel **K** Cast Iron **N** Non-Ferrous Metal **S** Exotic Alloy **H** Hardened Steel

| Application | Grade | Coated Carbide | | | | Carbide | DLC | Dimensions (mm) | | | Fig | Applicable Cutters |
|-------------------|--------------------|------------------|-----------------|----------|---|---------|-----|-----------------|------|---|-----------------|--------------------|
| | | High Speed/Light | General Purpose | Roughing | | | A | r _ε | s | | | |
| General Purpose | QPMT 080330 PPEN | ● | ● | ● | ● | ● | 8 | 3.0 | 3.18 | 1 | WRCX08000M Type | |
| | 080330 PPEN-H | ● | ● | ● | ● | ● | 8 | 3.0 | 3.18 | 1 | WRCX08000M Type | |
| General Purpose | QPMT 10T335 PPEN | ● | ● | ● | ● | ● | 10 | 3.5 | 3.97 | 1 | WRCX10000M Type | |
| | 10T335 PPEN-H | ● | ● | ● | ● | ● | 10 | 3.5 | 3.97 | 1 | WRCX10000M Type | |
| General Purpose | QPMT 120440 PPEN | ● | ● | ● | ● | ● | 12 | 4.0 | 4.76 | 1 | WRCX12000M Type | |
| | 120440 PPEN-H | ● | ● | ● | ● | ● | 12 | 4.0 | 4.76 | 1 | WRCX12000M Type | |
| Non-Ferrous Metal | QPET 10T350 PPFR-S | — | — | — | — | ● | 10 | 5.0 | 3.97 | 2 | WRCX10000M Type | |
| Non-Ferrous Metal | QPET 120460 PPFR-S | — | — | — | — | ● | 12 | 6.0 | 4.76 | 2 | WRCX12000M Type | |
| Surfing | QPMT 120460 PPER-R | ● | ● | — | — | — | 12 | 6.0 | 4.76 | 3 | WRCX12000M Type | |



*1-H: Strong edge.

Recommended Cutting Conditions

External Diameter: ø20 to ø32mm

| ISO | Work Material | Hardness | Cutting Speed v _c (m/min) Min. - Optimum - Max. | Feed Rate f _z (mm/t) Min. - Optimum - Max. | Grade |
|----------|-------------------|--------------|---|--|--------|
| P | Carbon Steel | 180 to 280HB | 80-120-160 | 0.10-0.30-0.40 | ACP200 |
| | Alloy Steel | 180 to 280HB | 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 | — | 200-500-1000 | 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, cutting depth, and other factors.

External Diameter: ø40mm

| ISO | Work Material | Hardness | Cutting Speed v _c (m/min) Min. - Optimum - Max. | Feed Rate f _z (mm/t) Min. - Optimum - Max. | Grade |
|----------|-------------------|--------------|---|--|--------|
| P | Carbon Steel | 180 to 280HB | 100-160-200 | 0.20-0.40-0.60 | ACP200 |
| | Alloy Steel | 180 to 280HB | 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 | — | 200-500-1000 | 0.10-0.30-0.40 | DL1000 |

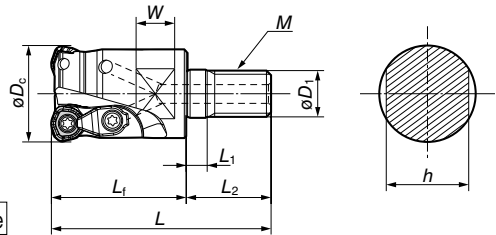
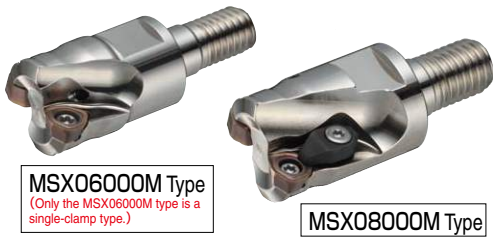
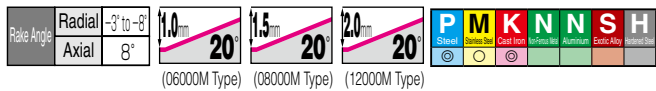
Note The cutting conditions above are a guide. Actual conditions will need to be adjusted according to machine rigidity, work clamp rigidity, cutting depth, and other factors.

H Modular Tools

Face Milling
Radius
Multi-Purpose
Shoulder Milling
Groove/T-Slot

SEC-Metal Slash Mill MSX06000M/08000M/12000M Type

SEC-Modular Tools



Head (WSX 06000M) Applicable Insert A = 6 mm Type

| Cat. No. | Stock | Dimensions (mm) | | | | | | | | | No. of Teeth |
|----------------|-------|-----------------|------------|-----|----|-------|-------|-------|----|----|--------------|
| | | ϕD_c | ϕD_1 | M | L | L_f | L_1 | L_2 | W | h | |
| MSX 06016M08Z2 | ● | 16 | 8.5 | M8 | 42 | 25 | 5 | 17 | 8 | 13 | 2 |
| 06018M08Z2 | ● | 18 | 8.5 | M8 | 42 | 25 | 5 | 17 | 8 | 13 | 2 |
| MSX 06020M10Z3 | ● | 20 | 10.5 | M10 | 49 | 30 | 5 | 19 | 8 | 15 | 3 |
| 06022M10Z3 | ● | 22 | 10.5 | M10 | 49 | 30 | 5 | 19 | 8 | 15 | 3 |
| MSX 06025M12Z3 | ● | 25 | 12.5 | M12 | 56 | 35 | 5 | 21 | 10 | 19 | 3 |

Inserts are not included.

Head (WSX 12000M) Applicable Insert A = 12mm Type

| Cat. No. | Stock | Dimensions (mm) | | | | | | | | | No. of Teeth |
|----------------|-------|-----------------|------------|-----|----|-------|-------|-------|----|----|--------------|
| | | ϕD_c | ϕD_1 | M | L | L_f | L_1 | L_2 | W | h | |
| MSX 12032M16Z2 | ● | 32 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 2 |
| 12035M16Z2 | ● | 35 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 2 |
| 12040M16Z3 | ● | 40 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 |

Inserts are not included.

Head (WSX 08000M) Applicable Insert A = 8 mm Type

| Cat. No. | Stock | Dimensions (mm) | | | | | | | | | No. of Teeth |
|----------------|-------|-----------------|------------|-----|----|-------|-------|-------|----|----|--------------|
| | | ϕD_c | ϕD_1 | M | L | L_f | L_1 | L_2 | W | h | |
| MSX 08025M12Z2 | ● | 25 | 12.5 | M12 | 56 | 35 | 5 | 21 | 10 | 19 | 2 |
| 08028M12Z2 | ● | 28 | 12.5 | M12 | 56 | 35 | 5 | 21 | 10 | 19 | 2 |
| MSX 08030M16Z3 | ● | 30 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 |
| 08032M16Z3 | ● | 32 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 |
| 08035M16Z3 | ● | 35 | 17.0 | M16 | 63 | 40 | 5 | 23 | 10 | 24 | 3 |

Inserts are not included.

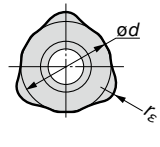
Identification Details

MSX 06 016 M08 Z2

① Cutter Series ② Insert Size ③ Diameter ④ Mounting Screw ⑤ No. of Flutes

Inserts

| Application | Grade | | | | Coated Carbide | | | Dimensions (mm) | Applicable Cutter |
|-----------------|------------------|--------|--------|--------|----------------|----------|-----|-----------------|-------------------|
| | General Purpose | P | M | K | P | M | K | | |
| Usage | Cat. No. | ACP200 | ACP300 | ACK200 | ACK300 | ϕd | s | r_E | |
| General Purpose | WDMT 0603 ZDTR | ● | ● | ● | ● | 6.35 | 3.0 | 1.5 | MSX06000M Type |
| | 0804 ZDTR | ● | ● | ● | ● | 8.50 | 4.0 | 2.0 | MSX08000M Type |
| | 1205 ZDTR | ● | ● | ● | ● | 12.00 | 5.0 | 2.0 | MSX12000M Type |
| Strong Edged | WDMT 0603 ZDTR-H | ● | ● | ● | ● | 6.35 | 3.0 | 1.5 | MSX06000M Type |
| | 0804 ZDTR-H | ● | ● | ● | ● | 8.50 | 4.0 | 2.0 | MSX08000M Type |
| | 1205 ZDTR-H | ● | ● | ● | ● | 12.00 | 5.0 | 2.0 | MSX12000M Type |



Spare Parts

| Screws | Spanner | Clamp | C Ring | Clamp Screw | Applicable Body |
|------------------------|----------|--------|--------|---------------|-----------------|
| BFTX02505IP 1.5 N·m | TRDR08IP | — | — | — | MSX06000M Type |
| BFTX0306IP 2.0 N·m | — | CCH3.5 | CR03 | BFTX03510IP08 | MSX08000M Type |
| BFTX0409IP 3.0 N·m | TRDR15IP | CCH3.5 | CR03 | BFTX03510IP15 | MSX12000M Type |

(N·m) Recommended Tightening Torque (N·m)

Recommended Cutting Conditions H65