

AJX Series

HIGH FEED RADIUS
MILLING CUTTER



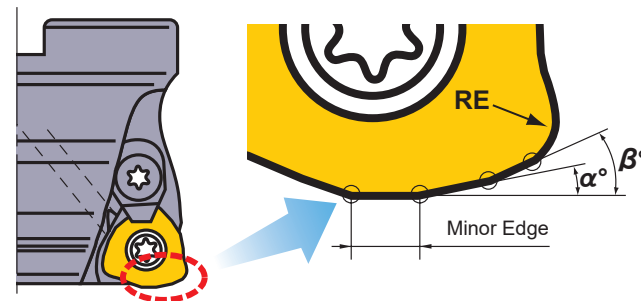
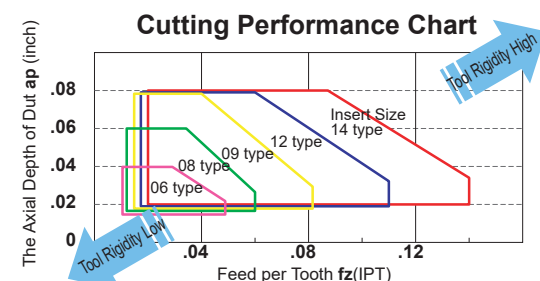
High Feed Radius Milling Cutter

AJX

Features

Ultra High Feed Cutting

Employing a double phased straight cutting edge to form the lead angle α and β with a wiper edge, the AJX can achieve an ultra high feed rate for the ultimate efficiency in rough machining.



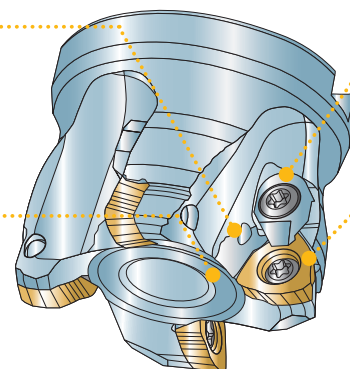
High Reliability Cutter Body

Standard with Coolant Through

All AJX bodies are supplied with through coolant throughs for smooth chip discharge, cutting edge cooling and lubrication.

Durable Tool Body

AJX bodies are made from heat resistant alloys. The special surface treatment applied to the body increases corrosion and friction resistance.



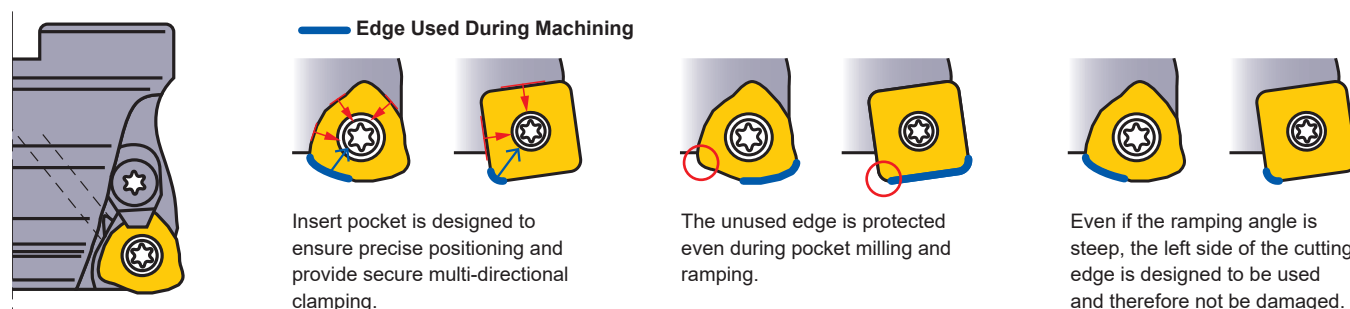
Highly Rigid Clamping

Insert clamp bridges are standard (except in the AJX 06, 08 types, and the super extra fine pitch type). Rigid insert clamping allows for stable and reliable cutting.

Cost-effective Insert

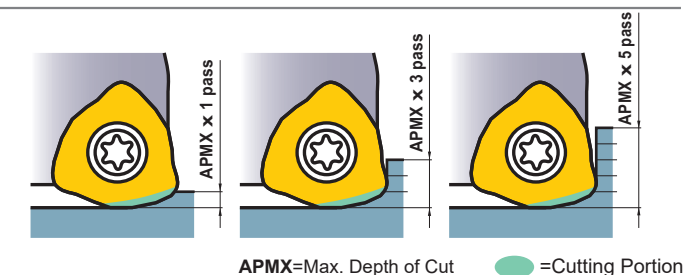
Specially designed triangular style insert geometry for cost effective milling.

Triangular Insert Shape is Ideal for Safe Multi-Functional Milling



Anti-Vibration Properties

The AJX always uses the same portion of the cutting edge thereby maintaining stable cutting even when the tool overhang is long.



Preventing Chip Packing Problems

The indents engineered into the inner and outer cutting edges maintain a large clearance preventing chip packing problems. This provides improved efficiency and a more stable cutting performance when ramping and sinking compared to conventional products.



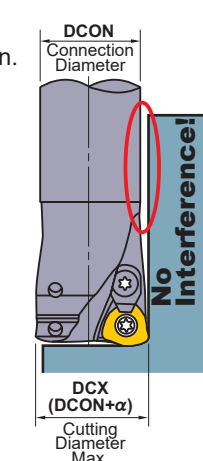
Comparison of Ramping Angles

	Max. Ramping Angle
AJX	3°
4 Corner Insert	1°
Conventional Products	1°

*With DCX=.625" type

No Workpiece Interference

Some AJX shank types are designed with an oversized cutting diameter for workpiece and chip clearance, as shown. Ideal for deep cutting and reduces the need for special long tools.



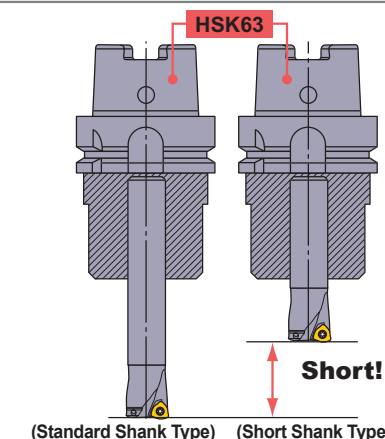
Order Number	DCX	DCONMS
AJXU06R112A10	.688	.625
AJXU08R142A12	.875	.750
AJXU09R182A16	1.125	1.000
AJXU09R244SA20M	1.500	1.250
AJXU12R243A20	1.500	1.250
AJXU14R323WA24S	2.000	1.500

Please refer to page 9 for details of the holder.

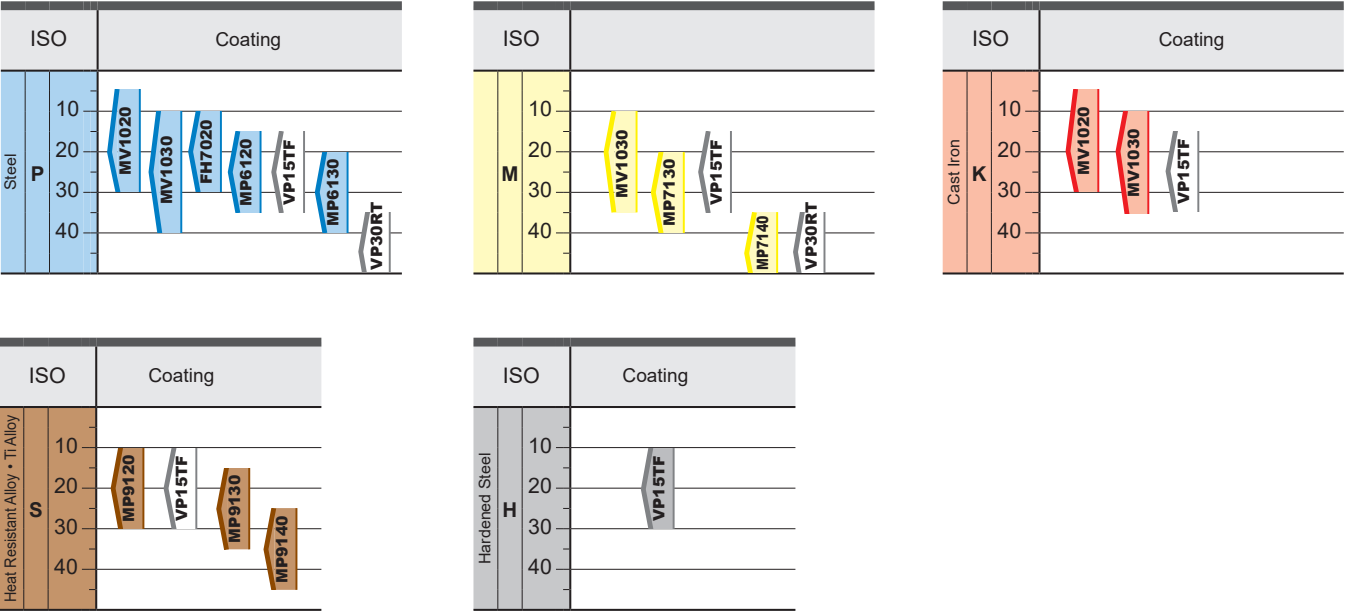
HSK63 Type Short Shanks

Short shank type AJX06 end mills are available. Although HSK63 holders are already short, the use of the short shank type AJX permits minimum overhang for maximum rigidity.

The minimum tool overhang length enables stable, high efficiency machining even on high-speed machining centers.



Inserts Grades for a Wide Range of Materials

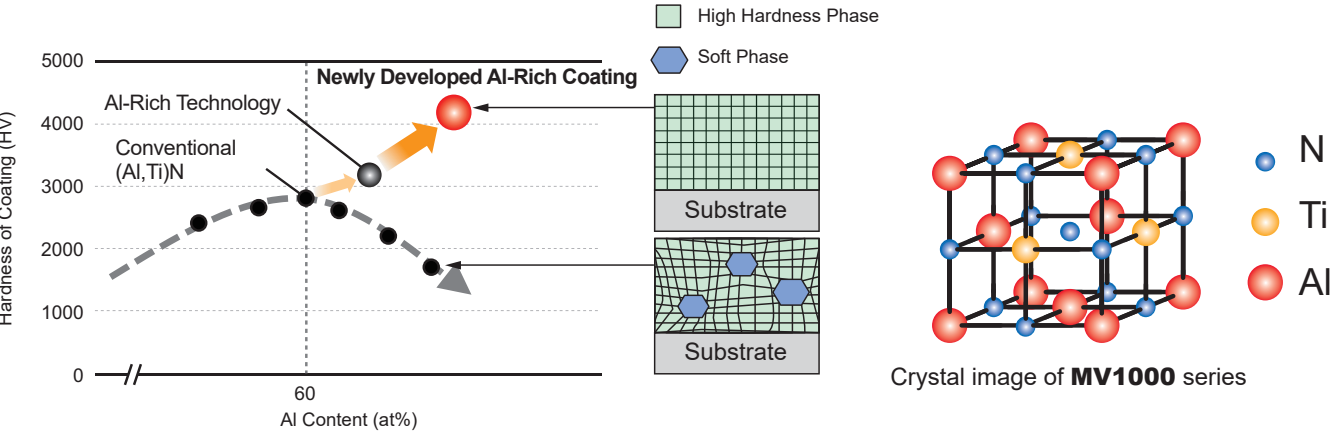


Coated Carbide Grade for Milling
MV1020/MV1030

Newly Developed Al-Rich Coating

Advanced Wear and Thermal Shock Resistance

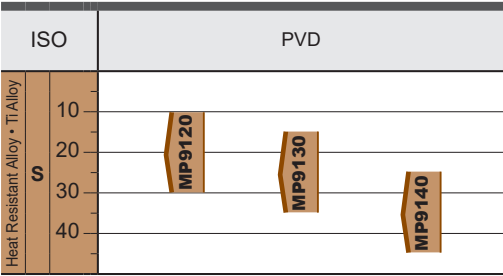
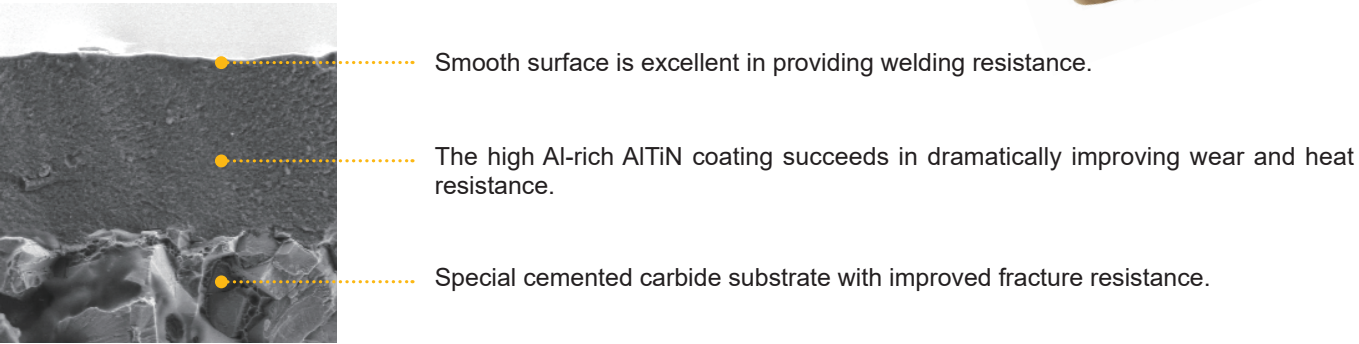
By adopting the newly developed Al-Rich coating technology, the (Al,Ti)N with a high Al content ratio displays a very high hardness. This greatly improves oxidation and wear resistance. The extreme heat resistance of this new series achieves stability not only during dry cutting, but also when wet cutting where inserts are usually prone to thermal cracking. MV1020 offers overwhelmingly superior performance in high-speed cutting, and MV1030 achieves stable performance during interrupted and stainless steel machining.



PVD Coated Grade for Difficult-to-Cut Materials

MP9140

MP9140 provides excellent weld and fracture resistance resulting from a special cemented carbide substrate and a smoothed surface.

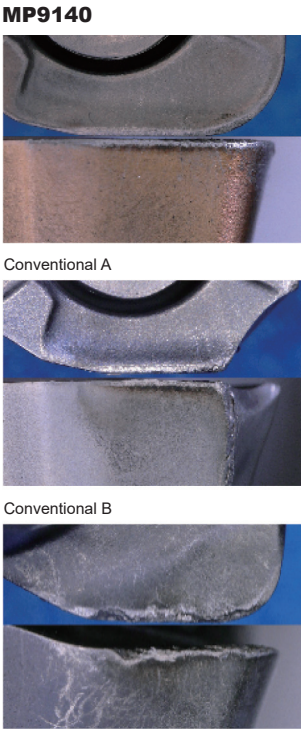
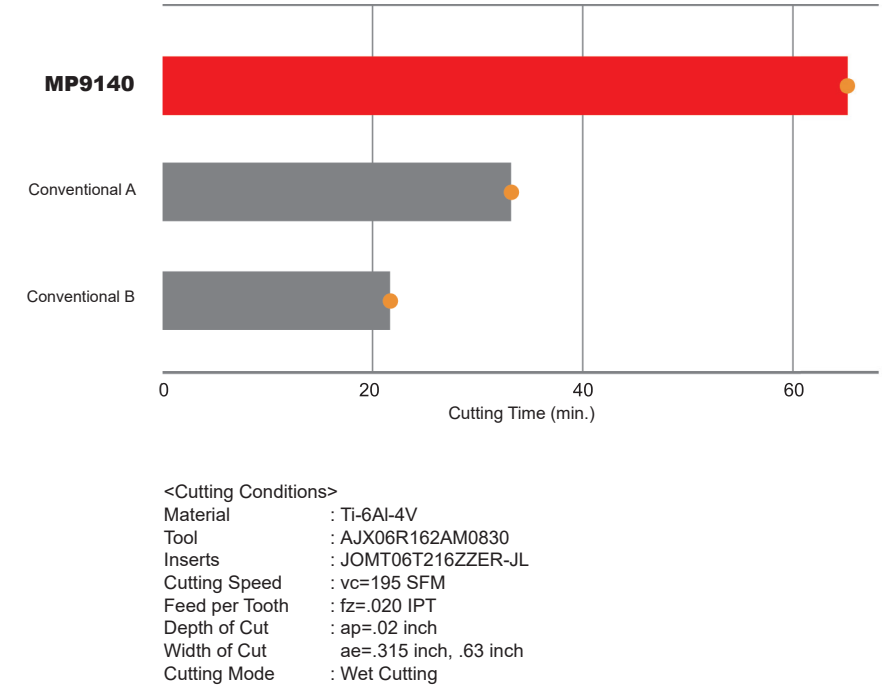


Grade	Features
MP9120	Focus on Wear Resistance
MP9130	Standard Grade
MP9140	Focus on Fracture Resistance

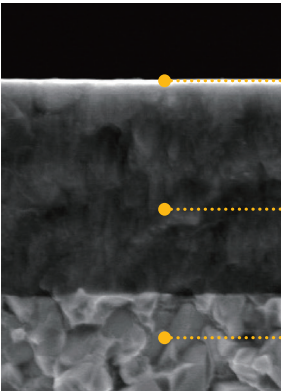
Cutting Performance

Comparison of Fracture Resistance by Titanium Alloy Machining

MP9140 achieved 3X more tool life than conventional product B.



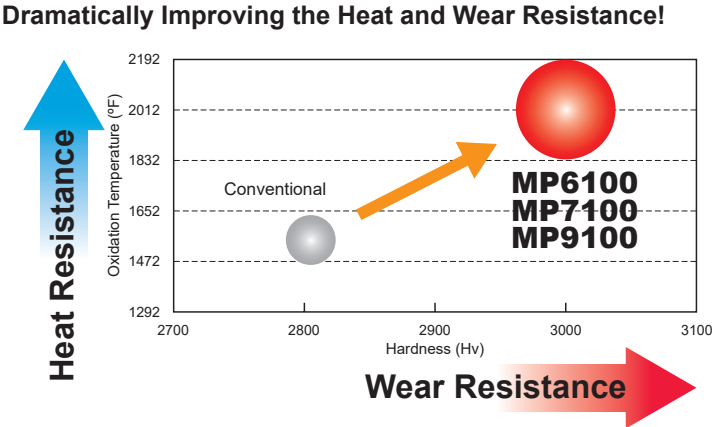
Al-Ti-Cr-N Base PVD Accumulated Coating



Excellent Welding Resistance
Due to Low Coefficient of
Friction

Pvd Accumulated Coating
(Each Damage Measures)

Special Cemented Carbide
Substrate



Excellent Welding Resistance due to Low Coefficient of Friction!

	Material	Grade	Coefficient of Friction		
			Measured at 1112°F		
			1055	304	Ti-6Al-4V
P	Carbon Steel, Alloy Steel	MP6100	.4		
M	Stainless Steel	MP7100		.5	
S	Titanium Alloys, Heat Resistant Alloys	MP9100			.3
	Conventional		.7	.7	.7

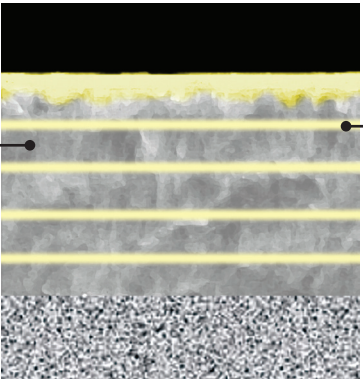
TOUGH-Σ Technology

A fusion of the separate coating technologies; PVD and multi-layering realises extra toughness.

PVD Accumulated Coating

Base Layer
High Al-(Al, Ti)N

The new technology Al-(Al, Ti)N coating provides stabilization of the high hardness phase and succeeds in dramatically improving wear, crater and welding resistance.



*Graphical Representation.

Best Layer of
Each Workpiece Material

P	(Al,Cr)N	Tough! Thermal Cracks
M	TiN	Tough! Notching
S	CrN	Tough! Resists Chipping

Wide Selection of Inserts

Strong Cutting Edge Type Chipbreaker [P] [M] [K] [S] [H]

Stable Machining even on Interrupted Workpiece Material Surfaces
With increased fracture resistance during interrupted cutting due to the tougher cutting edges. For increased reliability and higher efficiency machining to reduce costs.

General Use Type Chipbreaker [P] [M] [K] [S] [H]

First Recommended Chipbreaker for General Cutting
An optimum balance of sharpness and fracture resistance. Versatile insert for a wide range of workpiece materials and cutting conditions.

Sharp Cutting Edge Type Chipbreaker (For General Use) [P] [M] [K] [S] [H]

Suitable for Use on BT40 and HSK63 Machines
Boosts cutting performance with a large rake angle. Effective for anti-vibration machining for long overhang applications at higher than normal feeds for cost saving efficiency.

Sharp Cutting Edge Type Chipbreaker (For Difficult-to-cut Materials) [P] [M] [K] [S] [H]

Optimized for Difficult-to-cut Materials
The optimized cutting edge of the JL chipbreaker provides the sharpness and low cutting resistance that is ideal for difficult-to-cut materials. The maximum depth of cut is different in the insert size. Please refer to page 28.

Can Continue Machining
AJX + JL

Conventional A **Conventional B**

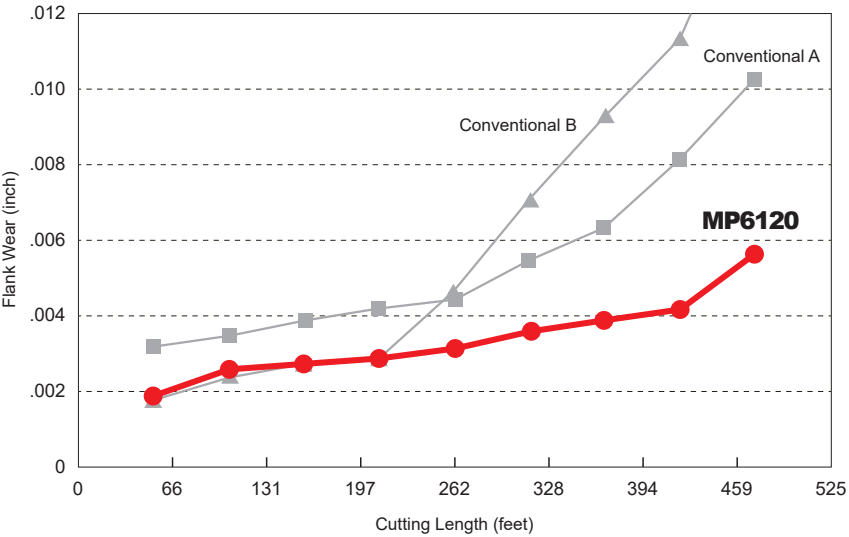
<Cutting Conditions>
Tool : DCX=ø2.5"
5 teeth
Material : Ti-6Al-4V
Revolution : n=202 min⁻¹
Cutting Speed : vc=130 SFM
Table Feed : vf=23.86 IPM
Feed per Tooth : fz=.024 IPT
Depth of Cut : ap=.04 inch
Width of Cut : ae=1.77 inch
Cutting Mode : Wet Cutting

Material	Cutting Conditions		
	Light	General	Interrupted
P K H	JM/JL	FT	ST
M	JL JM	FT	ST
S	JL	JM	FT

Cutting Performance

General Steel Machining

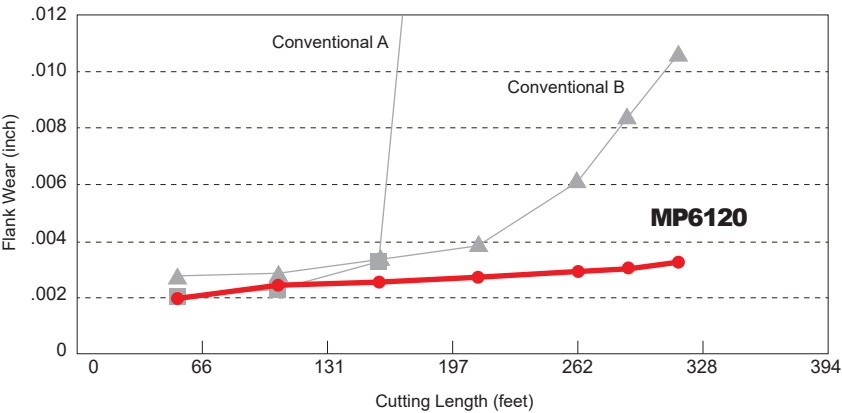
MP6120 Provides Superior Resistance to Thermal Cracking and Welding



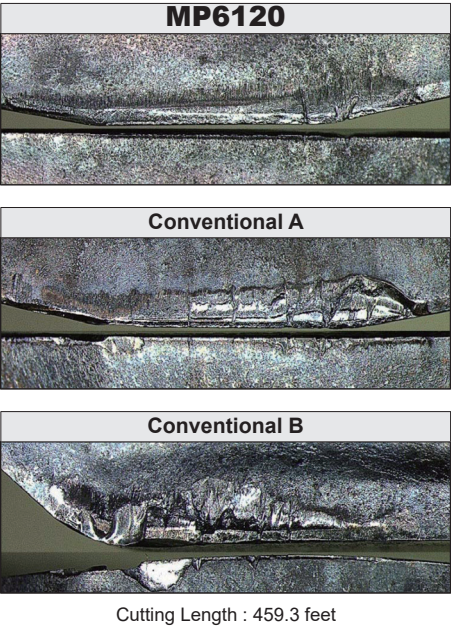
<Cutting Conditions>
Tool : AJX14-063A04R
Inserts : JDMT140520ZDSR-JM
Cutting Speed : vc=655 SFM
Feed per Tooth : fz=.059 IPT
Depth of Cut : ap=.039 inch
Width of Cut : ae=1.969 inch
Cutting Mode : Dry Cutting

MP6120 Achieves Long Tool Life in Low to Middle Speed Cutting

CVD coated FH7020 is recommended for higher speeds that exceed 655 SFM.



<Cutting Conditions>
Material : AISI 4140
Tool : AJX14-063A04R
Inserts : JDMW140520ZDSR-FT
Cutting Speed : vc=655 SFM
Feed per Tooth : fz=.059 IPT
Depth of Cut : ap=.039 inch
Width of Cut : ae=1.969 inch
Cutting Mode : Dry Cutting



MULTI-FUNCTIONAL MILLING
AJX

P M K N S H



Fig.3

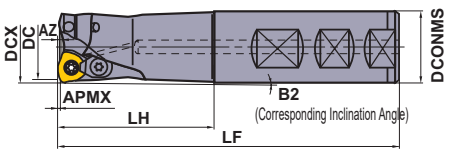


Fig.1 "FA" Flat Shank

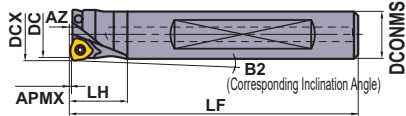


Fig.2

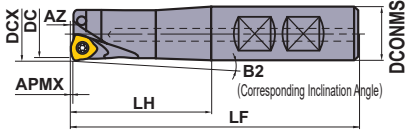
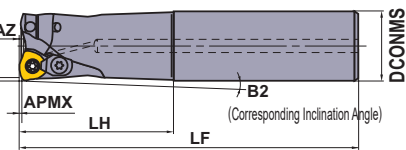


Fig.4



Shank Type

With Coolant Through

Right hand tool holder only.

(inch)												
DCX	Order Number	Stock R	No.T *	LF	DC	LH	DCONMS	B2	APMX	RMPX	Fig.	Insert Type
.625	AJXU06R102FA10S	●	2	3.750	.346	1.250	.625	2.12°	.039	3°	1	JOM06T2
.625	AJXU06R102SA10M	●	2	5.750	.346	1.500	.625	1.75°	.039	3°	4	JOM06T2
.625	AJXU06R102SA10L	●	2	5.750	.346	2.750	.625	0.93°	.039	3°	4	JOM06T2
.688	AJXU06R112FA10S	●	2	3.750	.409	.750	.625	—	.039	2.5°	1	JOM06T2
.688	AJXU06R112SA10L	●	2	5.750	.409	.750	.625	—	.039	2.5°	4	JOM06T2
.750	AJXU08R122WA12S	●	2	4.750	.417	2.000	.750	1.31°	.059	3.5°	2	JOM0803
.750	AJXU06R123SA12M	●	3	7.000	.472	2.375	.750	1.11°	.039	1.7°	4	JOM06T2
.750	AJXU08R122SA12L	●	2	7.000	.417	4.000	.750	0.64°	.059	3.5°	4	JOM0803
.875	AJXU08R142FA12S	●	2	4.750	.535	1.250	.750	—	.059	3°	1	JOM0803
.875	AJXU08R142SA12L	●	2	7.000	.535	1.250	.750	—	.059	3°	4	JOM0803
1.000	AJXU09R162WA16S	●	2	5.625	.602	2.375	1.000	1.1°	.079	4°	3	JDM09T3
1.000	AJXU08R163SA16M	●	3	8.000	.661	2.750	1.000	0.94°	.059	2°	4	JOM0803
1.000	AJXU09R162SA16L	●	2	8.000	.602	4.750	1.000	0.54°	.079	4°	4	JDM09T3
1.125	AJXU09R182FA16S	●	2	5.625	.728	1.625	1.000	—	.079	3°	1	JDM09T3
1.125	AJXU09R182SA16L	●	2	8.000	.728	1.625	1.000	—	.079	3°	4	JDM09T3
1.250	AJXU12R202WA20S	●	2	6.000	.789	2.750	1.250	0.94°	.079	4°	3	JDM1204
1.250	AJXU09R203SA20M	●	3	8.000	.854	3.125	1.250	0.82°	.079	3.3°	4	JDM09T3
1.250	AJXU12R202SA20L	●	2	8.000	.789	4.750	1.250	0.54°	.079	4°	4	JDM1204
1.500	AJXU12R243WA20S	●	3	6.000	1.038	2.000	1.250	—	.079	3°	3	JDM1204
1.500	AJXU09R244SA20M	●	4	10.000	1.114	2.375	1.250	—	.079	2.4°	4	JDM09T3
1.500	AJXU12R243SA20L	●	3	10.000	1.038	2.000	1.250	—	.079	3°	4	JDM1204
1.500	AJXU12R243SA24L	●	3	10.000	1.038	2.750	1.500	0.94°	.079	3°	4	JDM1204
2.000	AJXU14R323WA24S	●	3	6.000	1.534	2.000	1.500	—	.079	4.2°	3	JDM1204

* Number of Teeth

Note 1) Refer to page 32, for the max. depth of cut (APMX) and max. drilling depth (AZ).

Dimensions and Symbols (ISO 13399 Compliance)

DCX = Cutting Diameter Max.

DC = Cutting Diameter

LF = Functional Length

LH = Head Length

DCONMS = Connection Diameter Machine Side

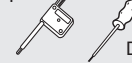
APMX = Depth of Cut Max.

RMPX = Ramping Angle Max.

● : USA Stock

High Feed Radius Milling Cutter

Spare Parts

Tool Holder Type					
	Clamp Screw	Clamp Bridge	Clamp Bridge Screw	Spring	Wrench
AJXU06R	TS25	—	—	—	TKY08F
AJXU08R	TS33	—	—	—	TKY08D
AJXU09R	TS351	AMS3	AJS3010T10	ASS2	TKY10D
AJXU12R	TS43	AMS4	AJS4012T15	ASS2	TKY15D
AJXU14R	TS54	AMS5	AJS5014T25	ASS3	TKY25D

★ Clamp Torque (lbf-in) : TS25=8.9, TS33=8.9, TS351=22, TS43=31, TS54=66, AJS3010T10=22, AJS4012T15=31, AJS5014T25=66



Fig.1

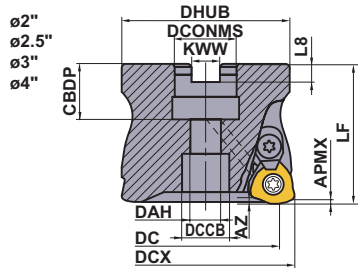
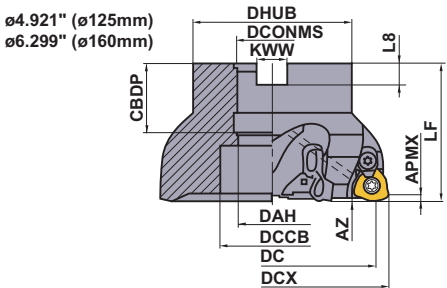
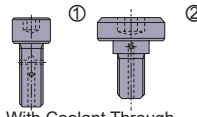


Fig.2



Right hand tool holder only.

(inch)		
DCX	Set Bolt	Geometry
2.000"	HSCU37513H	
2.500", 3.000"	HSCU50014H	
4.000"	HSCU75016H	
4.921"	MBAU75016H	
6.299"	MBAU100016H	

Arbor Type

With Coolant Through
DCX = Inch, DCON = Inch

(inch)											
DCX	Order Number	Stock	* No.T	DC	LF	DCONMS	WT (lbs)	APMX	RMPX	Fig.	Insert Type
		R									
2.000	AJXU12R0203	●	3	1.539	2.000	.750	.888	.059	2°	1	JDM1204
2.000	AJXU12R0204	●	4	1.539	2.000	.750	.866	.059	2°	1	JDM1204
2.000	AJXU09R0205	●	5	1.606	2.000	.750	.925	.039	1.1°	1	JDM09T3
2.500	AJXU14R2503C	●	3	2.032	2.000	1.000	1.393	.079	2.8°	1	JDM1405
2.500	AJXU14R2504C	●	4	2.032	2.000	1.000	1.338	.079	2.8°	1	JDM1405
2.500	AJXU12R2505C	●	5	2.039	2.000	1.000	1.427	.059	1.5°	1	JDM1204
3.000	AJXU14R0304C	●	4	2.532	2.000	1.000	2.133	.079	1.8°	1	JDM1405
3.000	AJXU14R0305C	●	5	2.532	2.000	1.000	2.078	.079	1.8°	1	JDM1405
3.000	AJXU12R0306C	●	6	2.543	2.000	1.000	2.274	.059	1.2°	1	JDM1204
4.000	AJXU14R0405E	●	5	3.531	2.500	1.500	4.806	.079	1.2°	1	JDM1405
4.000	AJXU14R0406E	●	6	3.531	2.500	1.500	4.981	.079	1.2°	1	JDM1405
4.000	AJXU12R0407E	●	7	3.539	2.500	1.500	5.283	.059	0.8°	1	JDM1204
4.921	AJX14RA12505E	●	5	4.457	2.480	1.500	7.275	.079	0.8°	2	JDM1405
4.921	AJX14RA12507E	●	7	4.457	2.480	1.500	7.275	.079	0.8°	2	JDM1405
6.299	AJX14RA16006F	●	6	5.835	2.480	2.000	11.023	.079	0.5°	2	JDM1405
6.299	AJX14RA16008F	●	8	5.835	2.480	2.000	11.023	.079	0.5°	2	JDM1405

★ Number of Teeth
Note 1) Refer to page 32, for the max. depth of cut (APMX) and max. drilling depth (AZ).

Dimensions and Symbols (ISO 13399 Compliance)

- DCX = Cutting Diameter Max.

DC = Cutting Diameter

LF = Functional Length

DCONMS= Connection Diameter Machine Side
- WT = Weight of Item

APMX = Depth of Cut Max.

RMPX = Ramping Angle Max.

CBDP = Connection Bore Depth
- DAH = Diameter Access Hole

DCCB = Counterbore Diameter Connection Bore

DHUB = Hub Diameter

KWW = Keyway Width

● : USA Stock

High Feed Radius Milling Cutter

Mounting Dimensions

DCX= Inch, DCON= Inch (inch)

DCX	Order Number	DCONMS	CBDP	DAH	DCCB	DHUB	KWW	L8	Fig.
2.000	AJXU12R0203	.750	.748	.415	.600	1.875	.313	.187	1
2.000	AJXU12R0204	.750	.748	.415	.600	1.875	.313	.187	1
2.000	AJXU09R0205	.750	.748	.415	.600	1.875	.313	.187	1
2.500	AJXU14R2503C	1.000	1.024	.539	.787	2.375	.375	.219	1
2.500	AJXU14R2504C	1.000	1.024	.539	.787	2.375	.375	.219	1
2.500	AJXU12R2505C	1.000	1.024	.539	.787	2.375	.375	.219	1
3.000	AJXU14R0304C	1.000	1.024	.539	.787	2.750	.375	.219	1
3.000	AJXU14R0305C	1.000	1.024	.539	.787	2.750	.375	.219	1
3.000	AJXU12R0306C	1.000	1.024	.539	.787	2.750	.375	.219	1
4.000	AJXU14R0405E	1.500	1.181	.787	1.181	3.750	.625	.375	1
4.000	AJXU14R0406E	1.500	1.181	.787	1.181	3.750	.625	.375	1
4.000	AJXU12R0407E	1.500	1.181	.787	1.181	3.750	.625	.375	1
4.921	AJX14RA12505E	1.500	1.575	-	2.205	3.937	.625	.375	2
4.921	AJX14RA12507E	1.500	1.575	-	2.205	3.937	.625	.375	2
6.299	AJX14RA16006F	2.000	1.693	-	2.835	3.937	.750	.437	2
6.299	AJX14RA16008F	2.000	1.693	-	2.835	3.937	.750	.437	2

Spare Parts

Tool Holder Type					
	Clamp Screw	Clamp Bridge	Clamp Bridge Screw	Spring	Wrench
AJXU09R	TS351	AMS3	AJS3010T10	ASS2	TKY10D
AJXU12R	TS43	AMS4	AJS4012T15	ASS2	TKY15T
AJXU14R	TS54	AMS5	AJS5014T25	ASS3	TKY25T
AJX14R	TS54	AMS5	AJS5014T25	ASS3	TKY25T

★ Clamp Torque (lbf-in) : TS351=22, TS43=31, TS54=66, AJS3010T10=22, AJS4012T15=31, AJS5014T25=66

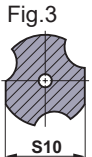
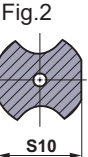
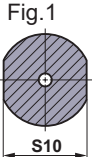
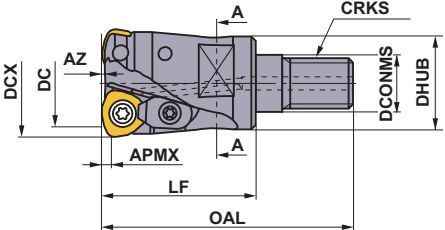
Dimensions and Symbols (ISO 13399 Compliance)

DCX = Cutting Diameter Max.
DC = Cutting Diameter
LF = Functional Length
DCONMS= Connection Diameter Machine Side

WT = Weight of Item
APMX = Depth of Cut Max.
RMPX = Ramping Angle Max.
CBDP = Connection Bore Depth

DAH = Diameter Access Hole
DCCB = Counterbore Diameter Connection Bore
DHUB = Hub Diameter
KWW = Keyway Width

● : USA Stock



A-A Section

Screw-in Type

With Coolant Through

Right hand tool holder only.

DCX	Order Number	Stock	No.T	DC	LF	OAL	DCONMS	DHUB	S10	CRKS	WT (lbs)	APMX	RMPX	Fig.	Shank Arbor Type	Insert Type
		R														
.625	AJXU06R102AM0830	●	2	.346	1.181	1.890	.335	.512	.394	M8	.2	.039	3°	1	SCU10M08	JOM06T2
.750	AJXU08R122AM1030	●	2	.417	1.181	1.929	.413	.709	.551	M10	.2	.059	3.5°	2	SCU12M10	JOM0803
.750	AJXU06R123AM1030	●	3	.472	1.181	1.929	.413	.709	.551	M10	.2	.039	1.7°	3	SCU12M10	JOM06T2
.875	AJXU08R142AM1030	●	2	.535	1.181	1.929	.413	.709	.551	M10	.2	.059	3°	2	SCU12M10	JOM0803
.875	AJXU06R143AM1030	●	3	.595	1.181	1.929	.413	.709	.551	M10	.2	.039	0.7°	3	SCU12M10	JOM06T2
1.000	AJXU09R162AM1235	●	2	.602	1.378	2.244	.492	.827	.748	M12	.4	.079	4°	2	SCU16M12	JDM09T3
1.000	AJXU08R163AM1235	●	3	.661	1.378	2.244	.492	.827	.748	M12	.2	.059	2°	1	SCU16M12	JOM0803
1.125	AJXU09R182AM1235	●	2	.728	1.378	2.244	.492	.827	.748	M12	.4	.079	3°	2	SCU16M12	JDM09T3
1.125	AJXU08R183AM1235	●	3	.784	1.378	2.244	.492	.827	.748	M12	.2	.059	0.5°	1	SCU16M12	JOM0803
1.250	AJXU09R203AM1645	●	3	.854	1.772	2.677	.669	1.142	.945	M16	.4	.079	2.5°	1	SCU20M16	JDM09T3
1.375	AJXU09R223AM1645	●	3	.976	1.772	2.677	.669	1.142	.945	M16	.4	.079	2°	1	SCU20M16	JDM09T3

★ Number of Teeth

Note 1) Refer to page 32, for the max. depth of cut (APMX) and max. drilling depth (AZ).

Note 2) For screw-in type shank arbors, refer to page 21.

Spare Parts

Tool Holder Type					
	Clamp Screw	Clamp Bridge	Clamp Bridge Screw	Spring	Wrench
AJXU06R	TS25	—	—	—	TKY08F
AJXU08R	TS33	—	—	—	TKY08D
AJXU09R	TS351	AMS3	AJS3010T10	ASS2	TKY10D

★ Clamp Torque (lbf-in) : TS25=8.9, TS33=8.9, TS351=22, AJS3010T10=22

Dimensions and Symbols (ISO 13399 Compliance)

DCX = Cutting Diameter Max.
DC = Cutting Diameter
LF = Functional Length

OAL = Overall Length
DCONMS= Connection Diameter Machine Side
DHUB = Hub Diameter

CRKS = Connection Retention Knob Thread Size
APMX = Depth of Cut Max.
RMPX = Ramping Angle Max.

High Feed Radius Milling Cutter



Fig.1

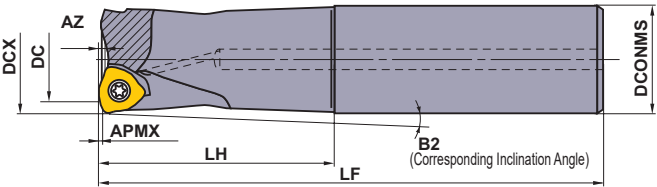


Fig.2

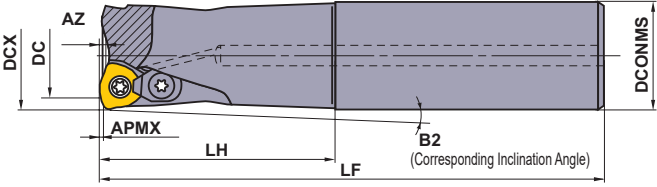
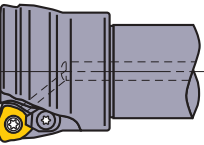


Fig3



Metric Standard

Right hand tool holder only.

Shank Type

With Coolant Through

DCX	Order Number	Stock	* No.T	LF	DC	LH	DCONMS	B2	APMX	RMPX	Fig.	Insert Type
		R										
16	AJX06R162SA16SS	★	2	70	8.9	20	16	3.5	0.6	3°	1	JOM06T2
16	AJX06R162SA16S	★	2	110	8.9	30	16	2.25	0.6	3°	1	JOM06T2
16	AJX06R162SA16L	★	2	150	8.9	70	16	0.93	0.6	3°	1	JOM06T2
16	AJX06R162SA16EL	★	2	200	8.9	100	16	0.64	0.6	3°	1	JOM06T2
17	AJX06R172SA16SS	★	2	70	9.9	20	16	—	0.6	2.5°	1	JOM06T2
17	AJX06R172SA16S	★	2	110	9.9	20	16	—	0.6	2.5°	1	JOM06T2
17	AJX06R172SA16L	★	2	150	9.9	20	16	—	0.6	2.5°	1	JOM06T2
17	AJX06R172SA16EL	★	2	200	9.9	20	16	—	0.6	2.5°	1	JOM06T2
20	AJX08R202SA20S	★	2	130	11.4	50	20	1.34	0.9	3.5°	1	JOM0803
20	AJX06R203SA20S	★	3	130	12.9	50	20	1.31	0.6	1.5°	1	JOM06T2
20	AJX08R202SA20L	★	2	180	11.4	100	20	0.65	0.9	3.5°	1	JOM0803
20	AJX06R203SA20L	★	3	180	12.9	100	20	0.64	0.6	1.5°	1	JOM06T2
20	AJX08R202SA20EL	★	2	250	11.4	130	20	0.5	0.9	3.5°	1	JOM0803
22	AJX08R222SA20S	★	2	130	13.4	30	20	—	0.9	3°	1	JOM0803
22	AJX06R223SA20S	★	3	130	14.9	30	20	—	0.6	1°	1	JOM06T2
22	AJX08R222SA20L	★	2	180	13.4	30	20	—	0.9	3°	1	JOM0803
22	AJX06R223SA20L	★	3	180	14.9	30	20	—	0.6	1°	1	JOM06T2
22	AJX08R222SA20EL	★	2	250	13.4	30	20	—	0.9	3°	1	JOM0803
25	AJX09R252SA25S	★	2	140	14.9	60	25	1.1	1.2	4°	2	JDM09T3
25	AJX08R253SA25S	★	3	140	16.4	60	25	1.1	0.9	2°	1	JOM0803
25	AJX06R254SA25S	★	4	140	17.9	60	25	1.11	0.6	0.8°	1	JOM06T2
25	AJX09R252SA25L	★	2	200	14.9	120	25	0.54	1.2	4°	2	JDM09T3
25	AJX08R253SA25L	★	3	200	16.4	120	25	0.54	0.9	2°	1	JOM0803
25	AJX06R254SA25L	★	4	200	17.9	120	25	0.54	0.6	0.8°	1	JOM06T2
25	AJX09R252SA25EL	★	2	300	14.9	180	25	0.36	1.2	4°	2	JDM09T3

* Number of Teeth

Note 1) Refer to page 32, for the max. depth of cut (APMX) and maximum drilling depth (AZ).

★ : Stocked in Japan

(mm)

DCX	Order Number	Stock	* No.T	LF	DC	LH	DCONMS	B2	APMX	RMPX	Fig.	Insert Type
		R										
28	AJX09R282SA25S	★	2	140	17.9	40	25	—	1.2	3°	2	JDM09T3
28	AJX08R283SA25S	★	3	140	19.4	40	25	—	0.9	1.7°	1	JOM0803
28	AJX06R284SA25S	★	4	140	20.9	40	25	—	0.6	0.7°	1	JOM06T2
28	AJX09R282SA25L	★	2	200	17.9	40	25	—	1.2	3°	2	JDM09T3
28	AJX08R283SA25L	★	3	200	19.4	40	25	—	0.9	1.7°	1	JOM0803
28	AJX06R284SA25L	★	4	200	20.9	40	25	—	0.6	0.7°	1	JOM06T2
28	AJX09R282SA25EL	★	2	300	17.9	40	25	—	1.2	3°	2	JDM09T3
30	AJX12R302SA32S	★	2	150	18.3	70	32	1.82	1.2	4.5°	2	JDM1204
30	AJX09R303SA32S	★	3	150	20	70	32	1.79	1.2	2.7°	2	JDM09T3
30	AJX12R302SA32L	★	2	200	18.3	120	32	1.04	1.2	4.5°	2	JDM1204
30	AJX09R303SA32L	★	3	200	20	120	32	1.03	1.2	2.7°	2	JDM09T3
30	AJX12R302SA32EL	★	2	300	18.3	180	32	0.69	1.2	4.5°	2	JDM1204
32	AJX12R322SA32S	★	2	150	20.3	70	32	0.96	1.2	4°	2	JDM1204
32	AJX09R323SA32S	★	3	150	21.9	70	32	0.94	1.2	2.5°	2	JDM09T3
32	AJX08R324SA32S	★	4	150	23.4	70	32	0.95	0.9	1.4°	1	JOM0803
32	AJX06R325SA32S	★	5	150	24.9	70	32	0.94	0.6	0.5°	1	JOM06T2
32	AJX06R326SA32S	★	6	150	24.9	70	32	0.94	0.6	0.5°	1	JOM06T2
32	AJX12R322SA32L	★	2	200	20.3	120	32	0.55	1.2	4°	2	JDM1204
32	AJX09R323SA32L	★	3	200	21.9	120	32	0.54	1.2	2.5°	2	JDM09T3
32	AJX08R324SA32L	★	4	200	23.4	120	32	0.55	0.9	1.4°	1	JOM0803
32	AJX06R325SA32L	★	5	200	24.9	120	32	0.54	0.6	0.5°	1	JOM06T2
32	AJX12R322SA32EL	★	2	300	20.3	180	32	0.36	1.2	4°	2	JDM1204
35	AJX12R352SA32S	★	2	150	23.3	50	32	—	1.2	3.5°	2	JDM1204
35	AJX09R353SA32S	★	3	150	24.9	50	32	—	1.2	2°	2	JDM09T3
35	AJX12R352SA32L	★	2	200	23.3	50	32	—	1.2	3.5°	2	JDM1204
35	AJX09R353SA32L	★	3	200	24.9	50	32	—	1.2	2°	2	JDM09T3
35	AJX12R352SA32EL	★	2	300	23.3	50	32	—	1.2	3.5°	2	JDM1204
40	AJX12R403SA32S	★	3	150	28.3	50	32	—	1.2	3°	2	JDM1204
40	AJX09R404SA32S	★	4	150	29.9	50	32	—	1.2	1.5°	2	JDM09T3
40	AJX08R406SA32S	★	6	150	31.4	50	32	—	0.9	1°	1	JOM0803
40	AJX12R403SA32L	★	3	250	28.3	50	32	—	1.2	3°	2	JDM1204
40	AJX09R404SA32L	★	4	250	29.9	50	32	—	1.2	1.5°	2	JDM09T3
40	AJX08R406SA32L	★	6	250	31.4	50	32	—	0.9	1°	1	JOM0803
40	AJX12R402SA32EL	★	2	350	28.3	50	32	—	1.2	3°	2	JDM1204
40	AJX12R403SA42S	★	3	150	28.3	70	42	1.79	1.2	3°	2	JDM1204
40	AJX09R404SA42S	★	4	150	29.9	70	42	1.8	1.2	1.5°	2	JDM09T3
40	AJX12R403SA42L	★	3	250	28.3	70	42	1.79	1.2	3°	2	JDM1204
40	AJX09R404SA42L	★	4	250	29.9	70	42	1.8	1.2	1.5°	2	JDM09T3
40	AJX12R402SA42EL	★	2	350	28.3	70	42	1.79	1.2	3°	2	JDM1204
50	AJX14R503SA42S	★	3	150	38.2	50	42	—	1.2	4.2°	2	JDM1405
50	AJX14R503SA42L	★	3	250	38.1	50	42	—	1.2	4.2°	2	JDM1405
63	AJX14R634SA42S	★	4	150	51.1	50	42	—	1.2	2.8°	3	JDM1405
63	AJX14R634SA42L	★	4	250	51.1	50	42	—	1.2	2.8°	3	JDM1405

* Number of Teeth

Note 1) Refer to page 32, for the max. depth of cut (APMX) and maximum drilling depth (AZ).

Dimensions and Symbols (ISO 13399 Compliance)

DCX = Cutting Diameter Max.

DC = Cutting Diameter

LF = Functional Length

LH = Head Length

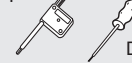
DCONMS = Connection Diameter Machine Side

APMX = Depth of Cut Max.

RMPX = Ramping Angle Max.

High Feed Radius Milling Cutter

Spare Parts

Tool Holder Type					
	Clamp Screw	Clamp Bridge	Clamp Bridge Screw	Spring	Wrench
AJX06R	TS25	—	—	—	TKY08F
AJX08R	TS33	—	—	—	TKY08D
AJX09R	TS351	AMS3	AJS3010T10	ASS2	TKY10D
AJX12R30	TS407	AMS4	AJS4012T15	ASS2	TKY15D
AJX12R32	TS43	AMS4	AJS4012T15	ASS2	TKY15D
AJX12R35	TS43	AMS4	AJS4012T15	ASS2	TKY15D
AJX12R40	TS43	AMS4	AJS4012T15	ASS2	TKY15D
AJX14R	TS54	AMS5	AJS5014T25	ASS3	TKY25D

★ Clamp Torque (N・m) : TS25=1.0, TS33=1.0, TS351=2.5, TS407=3.5, TS43=3.5, TS54=7.5, AJS3010T10=2.5, AJS4012T15=3.5, AJS5014T25=7.5



Metric Standard

Arbor Type

With Coolant Through
DCX=mm size, DCON=inch size

Fig.1

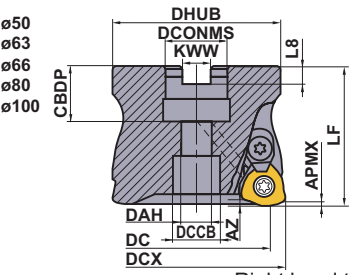
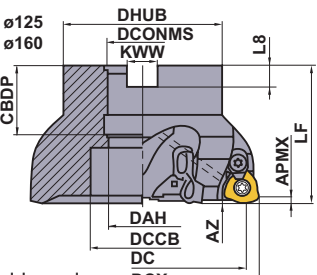
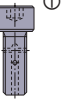
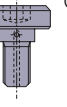
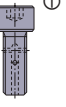
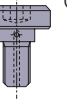


Fig.2



Right hand tool holder only.

DCX		Set Bolt	Geometry	
inch size	mm size			
φ50, φ63	φ50, φ63(DCON=22)	HSC10030H		
	φ63(DCON=27), φ80	HSC12035H		
φ80, φ100	φ100	HSC16040H		
φ125	φ125, φ160	MBA20040H		
φ160		MBA24045H		

(mm)

DCX	Order Number	Stock	No.T	DC	LF	DCONMS	WT (kg)	APMX	RMPX	Fig.	Insert Type
		R									
50	AJX12R05003B	★	3	38.3	50	22.225	0.4	1.2	2°	1	JDM1204
50	AJX12R05004B	★	4	38.3	50	22.225	0.4	1.2	2°	1	JDM1204
50	AJX09R05005B	★	5	40.0	50	22.225	0.5	1.2	1.1°	1	JDM09T3
63	AJX14R06303B	★	3	51.1	50	22.225	0.7	1.2	2.8°	1	JDM1405
63	AJX14R06304B	★	4	51.1	50	22.225	0.7	1.2	2.8°	1	JDM1405
63	AJX12R06305B	★	5	51.3	50	22.225	0.9	1.2	1.5°	1	JDM1204
80	AJX14R08004D	★	4	68.1	63	31.75	1.3	1.2	1.8°	1	JDM1405
80	AJX14R08005D	★	5	68.1	63	31.75	1.3	1.2	1.8°	1	JDM1405
80	AJX12R08006D	★	6	68.3	63	31.75	1.7	1.2	1.1°	1	JDM1204
100	AJX14R10005D	★	5	88.1	63	31.75	2.4	1.2	1.2°	1	JDM1405
100	AJX14R10006D	★	6	88.1	63	31.75	2.4	1.2	1.2°	1	JDM1405
100	AJX12R10007D	★	7	88.3	63	31.75	2.9	1.2	0.8°	1	JDM1204
125	AJX14R12505E	★	5	113.2	63	38.1	3.3	1.2	0.8°	2	JDM1405
125	AJX14R12507E	★	7	113.2	63	38.1	3.3	1.2	0.8°	2	JDM1405
160	AJX14R16006F	★	6	148.2	63	50.8	5.0	1.2	0.5°	2	JDM1405
160	AJX14R16008F	★	8	148.2	63	50.8	5.0	1.2	0.5°	2	JDM1405

DCX=mm size, DCON=mm size

(mm)

DCX	Order Number	Stock	No.T	DC	LF	DCONMS	WT (kg)	APMX	RMPX	Fig.	Insert Type
		R									
50	AJX12-050A03R	★	3	38.3	50	22	0.4	1.2	2°	1	JDM1204
50	AJX12-050A04R	★	4	38.3	50	22	0.4	1.2	2°	1	JDM1204
50	AJX09-050A05R	★	5	40.0	50	22	0.5	1.2	1.1°	1	JDM09T3
63	AJX14-063A03R	★	3	51.1	50	22	0.7	1.2	2.8°	1	JDM1405
63	AJX14-063A04R	★	4	51.1	50	22	0.7	1.2	2.8°	1	JDM1405
63	AJX12-063A05R	★	5	51.3	50	22	0.9	1.2	1.5°	1	JDM1204
63	AJX14-063X03R	★	3	51.1	50	27	0.6	1.2	2.8	1	JDM1405
63	AJX14-063X04R	★	4	51.1	50	27	0.6	1.2	2.8	1	JDM1405
63	AJX12-063X05R	★	5	51.3	50	27	0.6	1.2	1.5	1	JDM1204
66	AJX14-066X03R	★	3	54.1	50	27	0.6	1.2	2.6	1	JDM1405
66	AJX14-066X04R	★	4	54.1	50	27	0.6	1.2	2.6	1	JDM1405
66	AJX12-066X05R	★	5	54.3	50	27	0.7	1.2	1.4	1	JDM1204
80	AJX14-080A04R	★	4	68.1	50	27	1.2	1.2	1.8°	1	JDM1405
80	AJX14-080A05R	★	5	68.1	50	27	1.2	1.2	1.8°	1	JDM1405
80	AJX12-080A06R	★	6	68.3	50	27	1.2	1.2	1.1°	1	JDM1204
100	AJX14-100A05R	★	5	88.1	63	32	2.4	1.2	1.2°	1	JDM1405
100	AJX14-100A06R	★	6	88.1	63	32	2.4	1.2	1.2°	1	JDM1405
100	AJX12-100A07R	★	7	88.3	63	32	2.6	1.2	0.8°	1	JDM1204

Dimensions and Symbols (ISO 13399 Compliance)

DCX = Cutting Diameter Max.

DC = Cutting Diameter

LF = Functional Length

DCONMS= Connection Diameter Machine Side

WT = Weight of Item

APMX = Depth of Cut Max.

RMPX = Ramping Angle Max.

CBDP = Connection Bore Depth

DAH = Diameter Access Hole

DCCB = Counterbore Diameter Connection Bore

DHUB = Hub Diameter

KWW = Keyway Width

★ : Stocked in Japan

High Feed Radius Milling Cutter

DCX	Order Number	Stock	* No.T	DC	LF	DCONMS	WT (kg)	APMX	RMPX	Fig.	Insert Type
		R									
125	AJX14-125B05R	★	5	113.2	63	40	3.3	1.2	0.8°	2	JDM1405
125	AJX14-125B07R	★	7	113.2	63	40	3.3	1.2	0.8°	2	JDM1405
160	AJX14-160B06R	★	6	148.2	63	40	5.0	1.2	0.5°	2	JDM1405
160	AJX14-160B08R	★	8	148.2	63	40	5.0	1.2	0.5°	2	JDM1405



Arbor Type Super Extra Fine Pitch

With Coolant Through
DCX=mm size, DCON=mm size

DCX	Order Number	Stock	* No.T	DC	LF	DCONMS	WT (kg)	APMX	RMPX	Fig.	Insert Type
		R									
32	AJX06-032A05R	★	5	24.9	40	16	0.1	0.6	0.5°	3	JOM06T2
32	AJX06-032A06R	★	6	24.9	40	16	0.1	0.6	0.5°	3	JOM06T2
40	AJX08-040A06R	★	6	31.4	40	16	0.2	0.9	1°	3	JOM0803
42	AJX08-042A06R	★	6	33.4	40	16	0.2	0.9	0.9°	3	JOM0803
50	AJX09-050A06R	★	6	39.3	50	22	0.4	1.2	1.1°	3	JDM09T3
50	AJX08-050A07R	★	7	41.4	50	22	0.4	0.9	0.7°	3	JOM0803
52	AJX09-052A06R	★	6	41.9	50	22	0.4	1.2	1°	3	JDM09T3
52	AJX08-052A07R	★	7	43.4	50	22	0.5	0.9	0.7°	3	JOM0803
63	AJX12-063A06R	★	6	51.3	50	22	0.7	1.2	1.5°	3	JDM1204
63	AJX09-063A07R	★	7	52.9	50	22	0.7	1.2	0.8°	3	JDM09T3
63	AJX12-063X06R	★	6	51.3	50	27	0.6	1.2	1.5°	3	JDM1204
63	AJX09-063X07R	★	7	52.9	50	27	0.7	1.2	0.8°	3	JDM09T3
66	AJX12-066A06R	★	6	54.3	50	22	0.7	1.2	1.4°	3	JDM1204
66	AJX09-066A07R	★	7	55.9	50	22	0.8	1.2	0.8°	3	JDM09T3
66	AJX12-066X06R	★	6	54.3	50	27	0.7	1.2	1.4°	3	JDM1204
66	AJX09-066X07R	★	7	55.9	50	27	0.8	1.2	0.8°	3	JDM09T3
80	AJX12-080A08R	★	8	68.3	50	27	1.1	1.2	1.1°	3	JDM1204
100	AJX12-100A09R	★	9	88.3	63	32	2.5	1.2	0.8°	3	JDM1204
125	AJX14-125B09R	★	9	113.2	63	40	3.0	1.2	0.8°	4	JDM1405

* Number of Teeth

Note 1) Refer to page 32, for the max. depth of cut (APMX) and maximum drilling depth (AZ).

Dimensions and Symbols (ISO 13399 Compliance)

DCX = Cutting Diameter Max.

DC = Cutting Diameter

LF = Functional Length

DCONMS = Connection Diameter Machine Side

WT = Weight of Item

APMX = Depth of Cut Max.

RMPX = Ramping Angle Max.

CBDP = Connection Bore Depth

DAH = Diameter Access Hole

DCCB = Counterbore Diameter Connection Bore

DHUB = Hub Diameter

KWW = Keyway Width

Mounting Dimensions

Fig.1

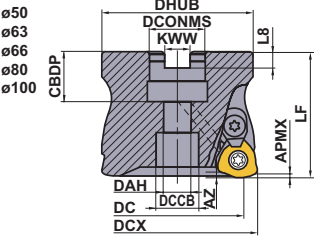


Fig.2

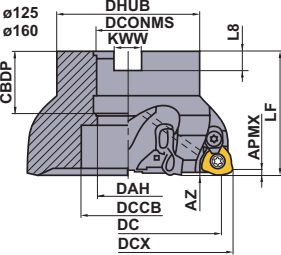


Fig.3

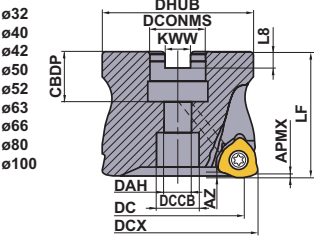
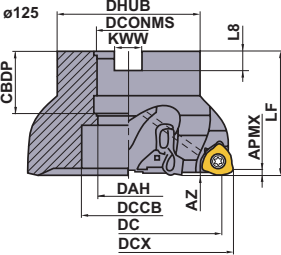


Fig.4



DCX = mm size, DCON = inch size

DCX	Order Number	DCONMS	CBDP	DAH	DCCB	DHUB	KWW	L8	Fig.
50	AJX12R050	22.225	19	11	17	47	8.4	5	1
50	AJX09R050	22.225	19	11	17	47	8.4	5	1
63	AJX14R063	22.225	19	11	17	60	8.4	5	1
63	AJX12R063	22.225	19	11	17	60	8.4	5	1
80	AJX14R080	31.75	32	17	26	76	12.7	8	1
80	AJX12R080	31.75	32	17	26	76	12.7	8	1
100	AJX14R100	31.75	32	17	26	96	12.7	8	1
100	AJX12R100	31.75	32	17	26	96	12.7	8	1
125	AJX14R125	38.1	40	—	56	100	15.9	10	2
160	AJX14R160	50.8	43	—	72	100	19.1	11	2

DCX = mm size, DCON = mm size

DCX	Order Number	DCONMS	CBDP	DAH	DCCB	DHUB	KWW	L8	Fig.
32	AJX06-032A	16	18	9	14	30	8.4	5.6	3
40	AJX08-040A	16	18	9	14	37	8.4	5.6	3
42	AJX08-042A	16	18	9	14	37	8.4	5.6	3
50	AJX12-050A	22	20	11	17	47	10.4	6.3	1
50	AJX09-050A	22	20	11	17	47	10.4	6.3	1, 3
52	AJX09-052A	22	20	11	17	47	10.4	6.3	3
52	AJX08-052A	22	20	11	17	47	10.4	6.3	3
63	AJX14-063A	22	20	11	17	60	10.4	6.3	1
63	AJX12-063A	22	20	11	17	60	10.4	6.3	1, 3
63	AJX09-063A	22	20	11	17	60	10.4	6.3	3
63	AJX12-063X	27	23	13	20	60	12.4	7.0	3
63	AJX09-063X	27	23	13	20	60	12.4	7.0	3
66	AJX12-066A	22	20	11	17	60	10.4	6.3	3
66	AJX09-066A	22	20	11	17	60	10.4	6.3	3
66	AJX14-066X	27	23	13	20	60	12.4	7.0	1
66	AJX12-066X	27	23	13	20	60	12.4	7.0	1, 3
66	AJX09-066X	27	23	13	20	60	12.4	7.0	3
80	AJX14-080A	27	23	13	19	76	12.4	7.0	1
80	AJX12-080A	27	23	13	19	76	12.4	7.0	1, 3
100	AJX14-100A	32	26	17	26	96	14.4	8.0	1
100	AJX12-100A	32	26	17	26	96	14.4	8.0	1, 3
125	AJX14-125B	40	40	—	56	100	16.4	9.0	2, 4
160	AJX14-160B	40	40	—	56	100	16.4	9.0	2

Spare Parts

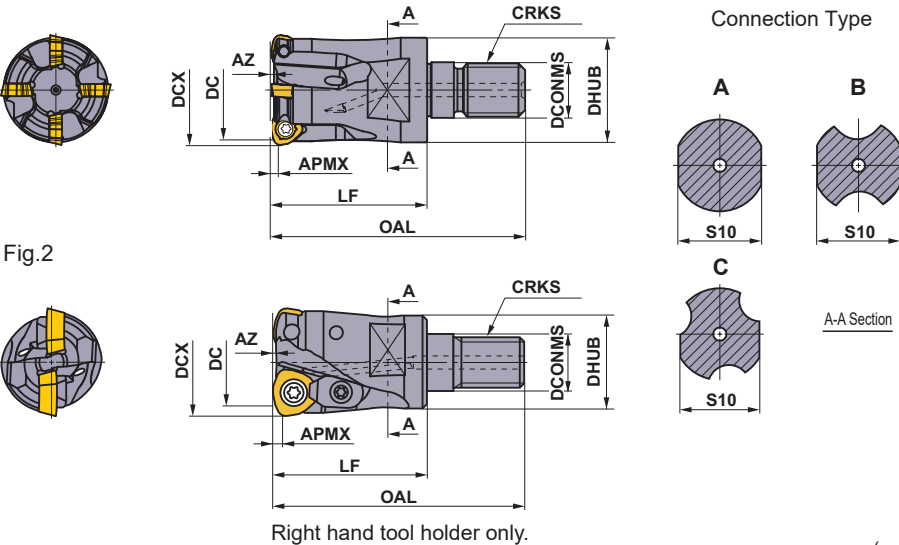
Tool Holder Type	* 	* 	* 		F
	Clamp Screw	Clamp Bridge	Clamp Bridge Screw	Spring	Wrench
AJX06 Super Extra Fine Pitch	TS25	—	—	—	TKY08F
AJX08 Super Extra Fine Pitch	TS33	—	—	—	TKY08D
AJX09	TS351	AMS3	AJS3010T10	ASS2	TKY10D
AJX09 Super Extra Fine Pitch	TS351	—	—	—	TKY10D
AJX12	TS43	AMS4	AJS4012T15	ASS2	TKY15T
AJX12 Super Extra Fine Pitch	TS43	—	—	—	TKY15T
AJX14	TS54	AMS5	AJS5014T25	ASS3	TKY25T
AJX14 Super Extra Fine Pitch	TS54	—	—	—	TKY25T

* Clamp Torque (N · m) : TS25=1.0, TS33=1.5, TS351=2.5, TS43=3.5, TS54=7.5, AJS3010T10=2.5, AJS4012T15=3.5, AJS5014T25=7.5

High Feed Radius Milling Cutter



Fig.1



Screw-in Type

With Coolant Through

DCX	Order Number	Stock	* No.T	DC	LF	OAL	DCONMS	WT (kg)	APMX	RMPX	Fig.	Insert Type
		R										
16	AJX06R162AM0830	★	2	8.9	30	48	8.5	0.1	0.6	3°	1	JOM06T2
17	AJX06R172AM0830	★	2	9.9	30	48	8.5	0.1	0.6	2.5°	1	JOM06T2
20	AJX08R202AM1030	★	2	11.4	30	49	10.5	0.1	0.9	3.5°	1	JOM0803
20	AJX06R203AM1030	★	3	12.9	30	49	10.5	0.1	0.6	1.5°	1	JOM06T2
22	AJX08R222AM1030	★	2	13.4	30	49	10.5	0.1	0.9	3°	1	JOM0803
22	AJX06R223AM1030	★	3	14.9	30	49	10.5	0.1	0.6	1°	1	JOM06T2
25	AJX09R252AM1235	★	2	14.9	35	57	12.5	0.2	1.2	4°	2	JDM09T3
25	AJX08R253AM1235	★	3	16.4	35	57	12.5	0.1	0.9	2°	1	JOM0803
25	AJX06R254AM1235	★	4	17.9	35	57	12.5	0.1	0.6	0.8°	1	JOM06T2
28	AJX09R282AM1235	★	2	17.9	35	57	12.5	0.2	1.2	3°	2	JDM09T3
28	AJX08R283AM1235	★	3	19.4	35	57	12.5	0.1	0.9	1.7°	1	JOM0803
28	AJX06R284AM1235	★	4	20.9	35	57	12.5	0.1	0.6	0.7°	1	JOM06T2
30	AJX12R302AM1645	★	2	18.3	45	68	17.0	0.3	1.2	4.5°	2	JDM1204
30	AJX09R303AM1645	★	3	20	45	68	17.0	0.2	1.2	2.7°	2	JDM09T3
32	AJX12R322AM1645	★	2	20.3	45	68	17.0	0.3	1.2	4°	2	JDM1204
32	AJX09R323AM1645	★	3	21.9	45	68	17.0	0.2	1.2	2.5°	2	JDM09T3
32	AJX08R324AM1645	★	4	23.4	45	68	17.0	0.2	0.9	1.4°	1	JOM0803
35	AJX12R352AM1645	★	2	23.3	45	68	17.0	0.3	1.2	3.5°	2	JDM1204
35	AJX09R353AM1645	★	3	24.9	45	68	17.0	0.2	1.2	2°	2	JDM09T3
35	AJX08R354AM1645	★	4	26.4	45	68	17.0	0.2	0.9	1.2°	1	JOM0803
40	AJX12R403AM1645	★	3	28.3	45	68	17.0	0.3	1.2	3°	2	JDM1204
40	AJX09R404AM1645	★	4	29.9	45	68	17.0	0.2	1.2	1.5°	2	JDM09T3
40	AJX08R406AM1645	★	6	31.4	45	68	17.0	0.3	0.9	1°	1	JOM0803

* Number of Teeth

Note 1) Refer to page 32, for the max. depth of cut (APMX) and maximum drilling depth (AZ).

Note 2) For screw-in type arbors, refer to page 21.

Spare Parts

Tool Holder Type	★	★	★	★	F	D
	Clamp Screw	Clamp Bridge	Clamp Bridge Screw	Spring	Wrench	
AJX06R	TS25	—	—	—	TKY08F	
AJX08R	TS33	—	—	—	TKY08D	
AJX09R	TS351	AMS3	AJS3010T10	ASS2	TKY10D	
AJX12R30	TS407	AMS4	AJS4012T15	ASS2	TKY15D	
AJX12R32	TS43	AMS4	AJS4012T15	ASS2	TKY15D	
AJX12R35	TS43	AMS4	AJS4012T15	ASS2	TKY15D	
AJX12R40	TS43	AMS4	AJS4012T15	ASS2	TKY15D	

* Clamp Torque (N · m) : TS25=1.0, TS33=1.0, TS351=2.5, TS407=3.5, TS43=3.5, AJS3010T10=2.5, AJS4012T15=3.5, AJS5014T25=7.5

★ : Stocked in Japan

Mounting Dimensions

DCX	Order Number	DCONMS	DHUB	S10	CRKS	Connection Type	Shank Arbor Type
16	AJX06R162AM0830	8.5	13	10	M8	A	SC16M08
17	AJX06R172AM0830	8.5	13	10	M8	A	SC16M08
20	AJX08R202AM1030	10.5	18	14	M10	B	SC20M10
20	AJX06R203AM1030	10.5	18	14	M10	C	SC20M10
22	AJX08R222AM1030	10.5	18	14	M10	B	SC20M10
22	AJX06R223AM1030	10.5	18	14	M10	C	SC20M10
25	AJX09R252AM1235	12.5	21	19	M12	B	SC25M12
25	AJX08R253AM1235	12.5	21	19	M12	A	SC25M12
25	AJX06R254AM1235	12.5	23.5	19	M12	A	SC25M12
28	AJX09R282AM1235	12.5	21	19	M12	B	SC25M12
28	AJX08R283AM1235	12.5	21	19	M12	A	SC25M12
28	AJX06R284AM1235	12.5	23.5	19	M12	A	SC25M12
30	AJX12R302AM1645	17.0	29	24	M16	B	SC32M16
30	AJX09R303AM1645	17.0	29	24	M16	A	SC32M16
32	AJX12R322AM1645	17.0	29	24	M16	B	SC32M16
32	AJX09R323AM1645	17.0	29	24	M16	A	SC32M16
32	AJX08R324AM1645	17.0	29	24	M16	A	SC32M16
35	AJX12R352AM1645	17.0	29	24	M16	B	SC32M16
35	AJX09R353AM1645	17.0	29	24	M16	A	SC32M16
35	AJX08R354AM1645	17.0	29	24	M16	A	SC32M16
40	AJX12R403AM1645	17.0	29	24	M16	B	SC32M16
40	AJX09R404AM1645	17.0	29	24	M16	A	SC32M16
40	AJX08R406AM1645	17.0	29	24	M16	A	SC32M16

How to Install the Screw-in Head

- ①Thoroughly clean the clamp section of the head and the arbor with an air blower or brush before installation.
- ②Tighten the head at the recommended torque and ensure that there is no gap between the head and arbor.

Screw Size	Recommended Torque (N · m)	Wrench Size
M8	23	10
M10	46	14
M12	80	19
M16	90	24



- Cutting tools become extremely hot during cutting. Never touch them with bare hands after operation as this may produce risk of injuries or burns.
- Do not handle the cutting tools with bare hands as this may cause injuries.

Dimensions and Symbols (ISO 13399 Compliance)

DCX = Cutting Diameter Max.

DC = Cutting Diameter

LF = Functional Length

OAL = Overall Length

DCONMS = Connection Diameter Machine Side

DHUB = Hub Diameter

CRKS = Connection Retention Knob Thread Size

APMX = Depth of Cut Max.

RMPX = Ramping Angle Max.

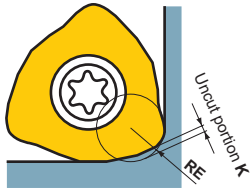
High Feed Radius Milling Cutter

Inserts

Material	P	Steel	◆ ◆
----------	---	-------	---

Note 1) When using ST chipbreaker, please check the height setting as it differs from other chipbreakers.

Note for Programming

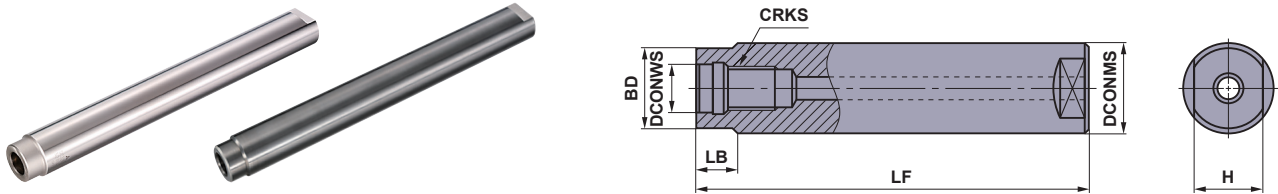


When using the AJAX, please program the approximate radius as indicated.
The approximate uncut portions for the program are as in the right table.

Insert Size	Chipbreaker	Approx. RE	Uncut Portion K
JOM06T200ZZR00	FT / JM	.079	.013
	JL	.098	.013
JOM080300ZZR00	FT / JM	.098	.018
	JL	.079	.016
JOM09T300ZDR00	FT / JM	.118	.019
	JL	.118	.018
JOM120400ZDR00	FT / JM / ST	.118	.025
	JL	.118	.021
JOM140500ZDR00	FT / JM / ST	.118	.025
	JL	.118	.022

Note) The uncut portion may change slightly depending on cutting conditions.

SCREW-IN HOLDERS
STRAIGHT SHANK TYPE



Steel Shank Type

With Coolant Through

CRKS	Order Number	Stock	DCONMS	LF	BD	DCSFWS	LB	H	WT (lbs)
M8	SCU10M08S100S	●	.625	3.937	.335	.571	.394	.394	.2
M8	SCU10M08S200L	●	.625	7.874	.335	.571	.394	.394	.7
M10	SCU12M10S120S	●	.750	4.724	.413	.728	.394	.551	.4
M10	SCU12M10S220L	●	.750	8.661	.413	.728	.394	.551	.9
M12	SCU16M12S125S	●	1.000	4.921	.492	.925	.394	.748	.9
M12	SCU16M12S245L	●	1.000	9.646	.492	.925	.394	.748	2.0
M16	SCU20M16S140S	●	1.250	5.512	.669	1.122	.591	.945	1.8
M16	SCU20M16S280L	●	1.250	11.024	.669	1.122	.591	.945	3.5

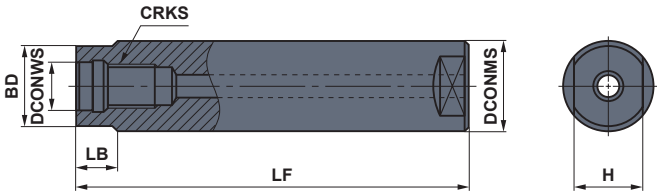
Metric Standard

With Coolant Through

CRKS	Order Number	Stock	DCONMS	LF	BD	DCSFWS	LB	H	WT (kg)
M8	SC16M08S100S	★	16	100	8.5	14.5	10	10	0.1
M8	SC16M08S200L	★	16	200	8.5	14.5	10	10	0.3
M10	SC20M10S120S	★	20	120	10.5	18.5	10	14	0.3
M10	SC20M10S220L	★	20	220	10.5	18.5	10	14	0.5
M12	SC25M12S125S	★	25	125	12.5	23.5	10	19	0.4
M12	SC25M12S245L	★	25	245	12.5	23.5	10	19	0.8
M16	SC32M16S140S	★	32	140	17	28.5	15	24	0.8
M16	SC32M16S280L	★	32	280	17	28.5	15	24	1.6

● : USA Stock ★ : Stocked in Japan

SCREW-IN HOLDERS



Carbide Shank Type

With Coolant Through

(inch)

CRKS	Order Number	Stock	DCONMS	LF	BD	DCSFWS	LB	H	WT (lbs)
M8	SCU10M08S100SW	●	.625	3.937	.335	.571	.394	.394	.4
M8	SCU10M08S200LW	●	.625	7.874	.335	.571	.394	.394	1.1
M10	SCU12M10S120SW	●	.750	4.724	.413	.728	.394	.551	.9
M10	SCU12M10S220LW	●	.750	8.661	.413	.728	.394	.551	1.8
M12	SCU16M12S125SW	●	1.000	4.921	.492	.925	.394	.748	1.8
M12	SCU16M12S245LW	●	1.000	9.646	.492	.925	.394	.748	3.5
M16	SCU20M16S140SW	●	1.250	5.512	.669	1.122	.591	.945	3.1
M16	SCU20M16S280LW	●	1.250	11.024	1.250	1.122	.591	.945	6.4

Metric Standard

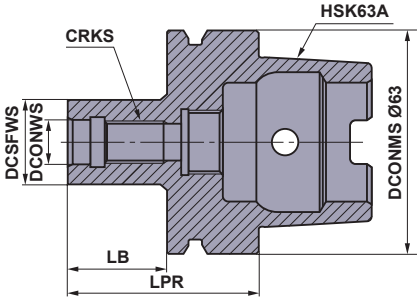
With Coolant Through

(mm)

CRKS	Order Number	Stock	DCONMS	LF	BD	DCSFWS	LB	H	WT (kg)
M8	SC16M08S100SW	★	16	100	8.5	14.5	10	10	0.2
M8	SC16M08S200LW	★	16	200	8.5	14.5	10	10	0.5
M10	SC20M10S120SW	★	20	120	10.5	18.5	10	14	0.5
M10	SC20M10S220LW	★	20	220	10.5	18.5	10	14	0.9
M12	SC25M12S125SW	★	25	125	12.5	23.5	10	19	0.8
M12	SC25M12S245LW	★	25	245	12.5	23.5	10	19	1.5
M16	SC32M16S140SW	★	32	140	17	28.5	15	24	1.4
M16	SC32M16S280LW	★	32	280	17	28.5	15	24	2.8

● : USA Stock ★ : Stocked in Japan

HSK63A Shank Arbor



Metric Standard

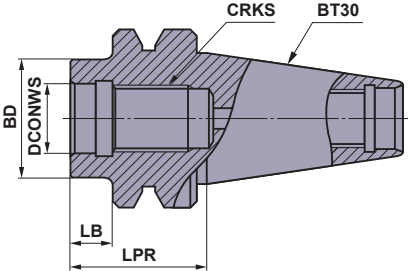
With Coolant Through

(mm)

CRKS	Order Number	Stock	DCONWS	DCSFWS	LPR	LB	WT (kg)
M8	SC16M08S22-HSK63A	★	8.5	14.5	48	22	0.7
M10	SC20M10S24-HSK63A	★	10.5	18.5	50	24	0.7
M12	SC25M12S27-HSK63A	★	12.5	23.5	53	27	0.7
M16	SC32M16S28-HSK63A	★	17	28.5	54	28	0.8

Note 1) The HSK63A shank type has a built-in coolant pipe for installation.

BT30 Shank Arbor



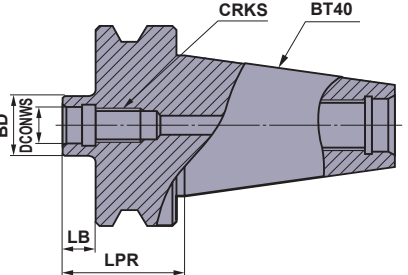
Metric Standard

With Coolant Through

(mm)

CRKS	Order Number	Stock	DCONWS	BD	LPR	LB	WT (kg)
M8	SC16M08S10-BT30	★	8.5	14.5	32	10	0.4
M10	SC20M10S10-BT30	★	10.5	18.5	32	10	0.4
M12	SC25M12S10-BT30	★	12.5	23.5	32	10	0.4
M16	SC32M16S10-BT30	★	17	28.5	32	10	0.4

BT40 Shank Arbor



Metric Standard

With Coolant Through

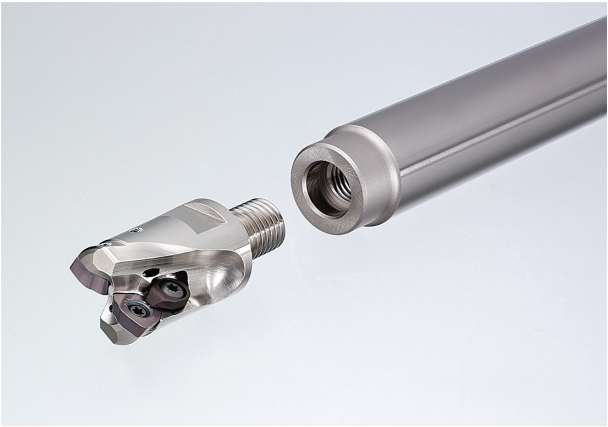
(mm)

CRKS	Order Number	Stock	DCONWS	BD	LPR	LB	WT (kg)
M8	SC16M08S10-BT40	★	8.5	14.5	37	10	1
M10	SC20M10S10-BT40	★	10.5	18.5	37	10	1
M12	SC25M12S10-BT40	★	12.5	23.5	37	10	1
M16	SC32M16S10-BT40	★	17	28.5	37	10	1

How To Install the Screw-in Head

- ①Thoroughly clean the clamp section of the head and the arbor with an air blower or brush before installation.
- ②Tighten the head at the recommended torque and ensure that there is no gap between the head and arbor.

Screw Size	Recommended Torque (lbf-ft)	Wrench Size (inch)
M8	17.0	.394
M10	33.9	.551
M12	59.0	.748
M16	66.4	.945



- Cutting tools become extremely hot during cutting. Never touch them with bare hands after operation as this may produce risk of injuries or burns.
- Do not handle the cutting tools with bare hands as this may cause injuries.

Recommended Cutting Conditions

Cutting Speed

Material	Properties	Cutting Speed v_c (SFM)					
P	Grade	MV1020	MV1030	FH7020	MP6120	MP6130	VP30RT
	Mild Steel	755 (590—920)	525 (330—720)	560 (395—720)	490 (330—655)	425 (260—590)	360 (195—525)
	Carbon Steel Alloy Steel	720 (560—885)	490 (260—720)	490 (330—655)	425 (260—590)	360 (195—525)	295 (130—460)
	Carbon Steel Alloy Steel	590 (330—820)	460 (230—690)	425 (260—590)	330 (165—490)	260 (100—425)	195 (65—360)
	Alloy Tool Steel	590 (330—820)	460 (230—690)	425 (260—590)	330 (165—490)	260 (100—395)	195 (65—295)
M	Pre-hardened Steel	Hardness 35—45HRC		—	330 (230—425)	260 (165—360)	260 (100—295)
	Grade	MV1030	MP7130	MP7140			
	Stainless Steel	Hardness $\leq 200\text{HB}$	525 (425—655)	460 (330—590)	395 (260—525)	—	—
K		Hardness >200HB					
	Grade	MV1020	MV1030	FH7020	VP15TF		
	Gray Cast Iron	Tensile Strength $\leq 350\text{MPa}$	690 (525—850)	525 (395—690)	490 (330—655)	—	—
S	Ductile Cast Iron	Tensile Strength $\leq 800\text{MPa}$	620 (460—785)	425 (295—560)	—	395 (260—525)	—
	Grade	MP9120	MP9130	MP9140			
	Heat Resistant Alloys	Hardness $\leq 350\text{HB}$	100 (65—130)	80 (65—115)	65 (50—100)	—	—
H	Titanium Alloys	—	165 (130—195)	150 (100—180)	130 (100—165)	—	—
	Grade	VP15TF					
	Hardened Steel	Hardness 40—55HRC	230 (165—295)	—	—	—	—

Recommended Cutting Conditions

Depth of Cut/Feed

(inch)

Material		Properties		DCX=φ.625", φ.688" (φ16mm, φ17mm) (Shank Type)			DCX=φ.750", φ.875" (φ20mm, φ22mm) (Shank Type)			DCX=φ.750" (φ20mm, φ22mm) (Shank Type)						DCX=φ1.000", φ1.125" (φ25mm, φ28mm) (Shank Type)			DCX=φ1.000" (φ25mm) (Shank Type)			DCX=φ1.250" (φ32mm) (Shank Type)			DCX=φ1.250" (φ32mm) (Shank Type)			DCX=φ1.500" (φ40mm) (φ1.250"Shank)			DCX=φ1.500" (φ40mm) (φ1.250"Shank)		
				AJXU06 Type			AJXU08 Type			AJXU06 Type						AJXU09 Type			AJXU08 Type			AJXU12 Type			AJXU09 Type			AJXU12 Type			AJXU09 Type		
				2 (Number of Teeth)			2 (Number of Teeth)			3 (Number of Teeth)						2 (Number of Teeth)			3 (Number of Teeth)			2 (Number of Teeth)			3 (Number of Teeth)			3 (Number of Teeth)			4 (Number of Teeth)		
				Over-hang	Axial Depth of Cut	Feed per Tooth (IPT)	Over-hang	Axial Depth of Cut	Feed per Tooth (IPT)	Over-hang	Axial Depth of Cut	Feed per Tooth (IPT)	Over-hang	Axial Depth of Cut	Feed per Tooth (IPT)		Over-hang	Axial Depth of Cut	Feed per Tooth (IPT)	Over-hang	Axial Depth of Cut	Feed per Tooth (IPT)	Over-hang	Axial Depth of Cut	Feed per Tooth (IPT)	Over-hang	Axial Depth of Cut	Feed per Tooth (IPT)	Over-hang	Axial Depth of Cut	Feed per Tooth (IPT)	Over-hang	Axial Depth of Cut
P	Mild Steel	Hardness ≤180HB	5.5	.031	.031	6.3	.039	.039	6.3	.035	.035			6.7	.039	.047	6.7	.035	.039	7.0	.047	.055	7.0	.043	.047	7.0	.047	.055	7.0	.043	.047		
			7.0	.024	.024	8.3	.031	.031	8.3	.028	.028			9.0	.031	.039	9.0	.028	.031	9.0	.039	.047	9.0	.035	.039	9.5	.039	.047	9.5	.035	.039		
			8.2	.016	.016	9.4	.024	.024	9.4	.020	.020			11.5	.024	.031	11.5	.020	.024	11.0	.031	.039	11.5	.028	.031	12.0	.031	.039	12.0	.028	.031		
	Carbon Steel Alloy Steel	Hardness 180—280HB	5.5	.031	.031	6.3	.039	.039	6.3	.035	.035			6.7	.039	.047	6.7	.035	.039	7.0	.047	.055	7.0	.043	.047	7.0	.047	.055	7.0	.043	.047		
			7.0	.024	.024	8.3	.031	.031	8.3	.028	.028			9.0	.031	.039	9.0	.028	.031	9.0	.039	.047	9.0	.035	.039	9.5	.039	.047	9.5	.035	.039		
			8.2	.016	.016	9.4	.024	.024	9.4	.020	.020			11.5	.024	.031	11.5	.020	.024	11.0	.031	.039	11.5	.028	.031	12.0	.031	.039	12.0	.028	.031		
	Carbon Steel Alloy Steel	Hardness 280—350HB	5.5	.028	.031	6.3	.031	.039	6.3	.028	.035			6.7	.031	.047	6.7	.028	.039	7.0	.039	.055	7.0	.035	.047	7.0	.039	.055	7.0	.035	.047		
			7.0	.020	.024	8.3	.024	.031	8.3	.020	.028			9.0	.024	.039	9.0	.020	.031	9.0	.031	.047	9.0	.028	.039	9.5	.031	.047	9.5	.028	.039		
			8.2	.012	.016	9.4	.016	.024	9.4	.016	.020			11.5	.016	.031	11.5	.016	.024	11.0	.024	.039	11.5	.020	.031	12.0	.024	.039	12.0	.020	.031		
	Alloy Tool Steel	Hardness ≤350HB (Annealing)	5.5	.028	.031	6.3	.031	.039	6.3	.028	.035			6.7	.031	.047	6.7	.028	.039	7.0	.039	.055	7.0	.035	.047	7.0	.039	.055	7.0	.035	.047		
			7.0	.020	.024	8.3	.024	.031	8.3	.020	.028			9.0	.024	.039	9.0	.020	.031	9.0	.031	.047	9.0	.028	.039	9.5	.031	.047	9.5	.028	.039		
			8.2	.012	.016	9.4	.016	.024	9.4	.016	.020			11.5	.016	.031	11.5	.016	.024	11.0	.024	.039	11.5	.020	.031	12.0	.024	.039	12.0	.020	.031		
	Pre-hardened Steel	Hardness 35—45HRC	5.5	.028	.028	6.3	.031	.031	6.3	.028	.028			6.7	.031	.039	6.7	.028	.035	7.0	.039	.047	7.0	.035	.039	7.0	.039	.047	7.0	.035	.039		
			7.0	.020	.020	8.3	.024	.024	8.3	.020	.020			9.0	.024	.031	9.0	.020	.028	9.0	.031	.039	9.0	.028	.031	9.5	.031	.039	9.5	.028	.031		
			8.2	.012	.012	9.4	.016	.016	9.4	.016	.012			11.5	.016	.024	11.5	.016	.020	11.0	.024	.031	11.5	.020	.024	12.0	.024	.031	12.0	.020	.024		
M	Stainless Steel	Hardness ≤270HB	5.5	.031	.028	6.3	.039	.031	6.3	.035	.028			6.7	.039	.039	6.7	.035	.035	7.0	.047	.047	7.0	.043	.039	7.0	.047	.047	7.0	.043	.039		
			7.0	.024	.020	8.3	.031	.024	8.3	.028	.020			9.0	.031	.031	9.0	.028	.028	9.0	.039	.039	9.0	.035	.031	9.5	.039	.039	9.5	.035	.031		
			8.2	.016	.012	9.4	.024	.016	9.4	.020	.012			11.5	.024	.024	11.5	.020	.020	11.0	.031	.031	11.5	.028	.024	12.0	.031	.031	12.0	.028	.024		
K	Gray Cast Iron	Tensile Strength ≤350MPa	5.5	.031	.039	6.3	.039	.047	6.3	.035	.039			6.7	.039	.055	6.7	.035	.047	7.0	.047	.063	7.0	.043	.055	7.0	.047	.063	7.0	.043	.055		
			7.0	.024	.031	8.3	.031	.039	8.3	.028	.031			9.0	.031	.047	9.0	.028	.039	9.0	.039	.055	9.0	.035	.047	9.5	.039	.055	9.5	.035	.047		
			8.2	.016	.024	9.4	.024	.031	9.4	.020	.024			11.5	.024	.039	11.5	.020	.031	11.0	.031	.047	11.5	.028	.035	12.0	.031	.047	12.0	.028	.035		
	Ductile Cast Iron	Tensile Strength ≤800MPa	5.5	.028	.031	6.3	.031	.039	6.3	.028	.035			6.7	.031	.047	6.7	.028	.039	7.0	.039	.055	7.0	.035	.047	7.0	.039	.055	7.0	.035	.047		
			7.0	.020	.024	8.3	.024	.031	8.3	.020	.028			9.0	.024	.039	9.0	.020	.031	9.0	.031	.047	9.0	.028	.039	9.5	.031	.047	9.5	.028	.039		
			8.2	.012	.016	9.4	.016	.024	9.4	.016	.020			11.5	.016	.031	11.5	.016	.024	11.0	.024	.039	11.5	.020	.031	12.0	.024	.039	12.0	.020	.031		
S	Heat Resistant Alloy	Hardness ≤350HB	5.5	.024	.024	6.3	.031	.024	5.5	.024	.024			6.7	.047	.024	6.3	.031	.024	7.0	.047	.024	7.0	.047	.024	7.0	.047	.024	7.0	.047	.024		
			7.0	.016	.016	8.2	.024	.016	7.0	.016	.016			9.0	.039	.016	8.2	.024	.016	9.0	.039	.016	9.0	.039	.016	9.5	.039	.016	9.5	.039	.016		
	Titanium Alloys	—	8.2	.012	.012	9.4	.016	.012	8.2	.012	.012			11.5	.031	.012	9.4	.016	.012	11.0	.031	.012	11.5	.031	.012	12.0	.031	.012	12.0	.031	.012		
H	Hardened Steel	Hardness 40—55HRC	5.5	.020	.020	6.3	.020	.024	6.3	.020	.020			6.7	.020	.031	6.7	.020	.028	7.0	.024	.039	7.0	.020	.035	7.0	.024	.039	7.0	.020	.035		
			7.0	.016	.012	8.3	.016	.016	8.3	.016	.016			9.0	.016	.024	9.0	.016	.020	9.0	.020	.031	9.0	.016	.028	9.5	.020	.031	9.5	.016	.028		
			8.2	.012	.008	9.4	.012	.008	9.4	.012	.008			11.5	.012	.016	11.5	.012	.012	11.0	.016	.024	11.5	.012	.020	12.0	.016	.024	12.0	.012	.020		

* Depth of cut of JL chipbreaker is up to .024 inch. (06 size)
* Depth of cut of JL chipbreaker is up to .035 inch. (08 size)

* Depth of cut of JL chipbreaker is up to .047 inch. (09, 12, 14 sizes)

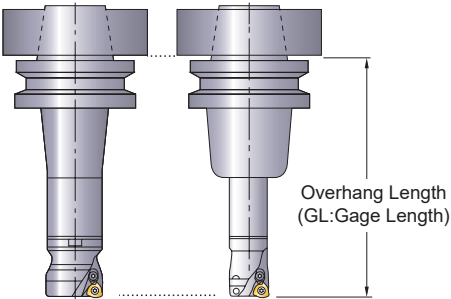
Recommended Cutting Conditions

Depth of Cut/Feed

Material	Properties	DCX=φ1.500" (φ40mm) (φ1.500"Shank)			DCX=φ2.000" (φ50mm) (Shank Type)			DCX=φ2.000", φ2.500" (φ50mm, φ63mm, φ66mm) (Arbor Type)				DCX=φ2.000", φ2.500" (φ50mm, φ63mm, φ66mm) (Arbor Type)			DCX=φ3.000", φ4.000", φ4.921", φ6.299" (φ80mm, φ100mm, φ125mm, φ160mm) (Arbor Type)			DCX=φ3.000", φ4.000" (φ80mm, φ100mm) (Arbor Type)		
		AJXU12 Type			AJXU14 Type			AJXU09, 12 (φ2.000") AJXU12, 14 (φ2.500")				AJXU09 Type (φ2.000") AJXU12 Type (φ2.500")			AJXU14 Type AJX14 Type			AJXU12 Type		
		3 (Number of Teeth)			3 (Number of Teeth)			3, 4, 5 (Number of Teeth)				5 (Number of Teeth)			4 or 5 or 6 or 7 or 8 (Number of Teeth)			6 or 7 (Number of Teeth)		
		Over- hang	Axial Depth of Cut	Feed per Tooth (IPT)	Over- hang	Axial Depth of Cut	Feed per Tooth (IPT)	Over- hang	Axial Depth of Cut	Feed per Tooth (IPT)		Over- hang	Axial Depth of Cut	Feed per Tooth (IPT)	Over- hang	Axial Depth of Cut	Feed per Tooth (IPT)	Over- hang	Axial Depth of Cut	Feed per Tooth (IPT)
Mild Steel	Hardness ≤180HB	7.0	.047	.059	7.0	.055	.059	6.0	.059	.059		6.0	.053	.051	7.0	.059	.059	7.0	.053	.051
		9.5	.039	.051	9.5	.047	.051	10.0	.051	.051		10.0	.046	.043	12.0	.051	.051	12.0	.046	.043
		12.0	.031	.043	—	—	—	14.0	.043	.043		14.0	.039	.035	18.0	.039	.039	18.0	.035	.031
Carbon Steel Alloy Steel	Hardness 180—280HB	7.0	.047	.059	7.0	.055	.059	6.0	.059	.059		6.0	.053	.051	7.0	.059	.059	7.0	.053	.051
		9.5	.039	.051	9.5	.047	.051	10.0	.051	.051		10.0	.046	.043	12.0	.051	.051	12.0	.046	.043
		12.0	.031	.043	—	—	—	14.0	.043	.043		14.0	.039	.035	18.0	.039	.039	18.0	.035	.031
Carbon Steel Alloy Steel	Hardness 280—350HB	7.0	.039	.059	7.0	.047	.059	6.0	.051	.059		6.0	.046	.051	7.0	.051	.059	7.0	.046	.051
		9.5	.031	.051	9.5	.039	.051	10.0	.043	.051		10.0	.039	.043	12.0	.043	.051	12.0	.039	.043
		12.0	.024	.043	—	—	—	14.0	.035	.043		14.0	.032	.035	18.0	.031	.039	18.0	.028	.031
Alloy Tool Steel	Hardness ≤350HB (Annealing)	7.0	.039	.059	7.0	.047	.059	6.0	.051	.059		6.0	.046	.051	7.0	.051	.059	7.0	.046	.051
		9.5	.031	.051	9.5	.039	.051	10.0	.043	.051		10.0	.039	.043	12.0	.043	.051	12.0	.039	.043
		12.0	.024	.043	—	—	—	14.0	.035	.043		14.0	.032	.035	18.0	.031	.039	18.0	.028	.031
Pre-hardened Steel	Hardness 35—45HRC	7.0	.039	.051	7.0	.047	.051	6.0	.051	.051		6.0	.046	.043	7.0	.051	.051	7.0	.046	.043
		9.5	.031	.043	9.5	.039	.043	10.0	.043	.043		10.0	.039	.035	12.0	.043	.043	12.0	.039	.035
		12.0	.024	.035	—	—	—	14.0	.035	.035		14.0	.032	.028	18.0	.031	.031	18.0	.028	.024
Stainless Steel	Hardness ≤270HB	7.0	.047	.051	7.0	.055	.051	6.0	.059	.051		6.0	.053	.043	7.0	.059	.051	7.0	.053	.043
		9.5	.039	.043	9.5	.047	.043	10.0	.051	.043		10.0	.046	.035	12.0	.051	.043	12.0	.046	.035
		12.0	.031	.035	—	—	—	14.0	.043	.035		14.0	.039	.028	18.0	.039	.031	18.0	.035	.024
Gray Cast Iron	Tensile Strength ≤350MPa	7.0	.047	.067	7.0	.055	.067	6.0	.059	.067		6.0	.053	.059	7.0	.059	.067	7.0	.053	.059
		9.5	.039	.059	9.5	.047	.059	10.0	.051	.059		10.0	.046	.051	12.0	.051	.059	12.0	.046	.051
		12.0	.031	.051	—	—	—	14.0	.043	.051		14.0	.039	.039	18.0	.039	.047	18.0	.035	.035
Ductile Cast Iron	Tensile Strength ≤800MPa	7.0	.039	.059	7.0	.047	.059	6.0	.051	.059		6.0	.046	.051	7.0	.051	.059	7.0	.046	.051
		9.5	.031	.051	9.5	.039	.051	10.0	.043	.051		10.0	.039	.043	12.0	.043	.051	12.0	.039	.043
		12.0	.024	.043	—	—	—	14.0	.035	.043		14.0	.032	.035	18.0	.031	.039	18.0	.028	.031
Heat Resistant Alloys	Hardness ≤350HB	7.0	.047	.024	7.0	.047	.024	6.0	.047	.024		6.0	.047	.024	7.0	.047	.024	7.0	.047	.024
		9.5	.039	.016	9.5	.039	.016	10.0	.039	.016		10.0	.039	.016	12.0	.039	.016	12.0	.039	.016
Titanium Alloys	—	12.0	.031	.012	—	—	—	14.0	.031	.012		14.0	.031	.012	18.0	.031	.012	18.0	.031	.012
Hardened Steel	Hardness 40—55HRC	7.0	.024	.043	7.0	.031	.043	6.0	.035	.043		6.0	.032	.039	7.0	.035	.043	7.0	.032	.039
		9.5	.020	.035	9.5	.024	.035	10.0	.028	.035		10.0	.025	.031	12.0	.028	.035	12.0	.025	.031
		12.0	.016	.028	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—

* Depth of cut of JL chipbreaker is up to .047 inch.

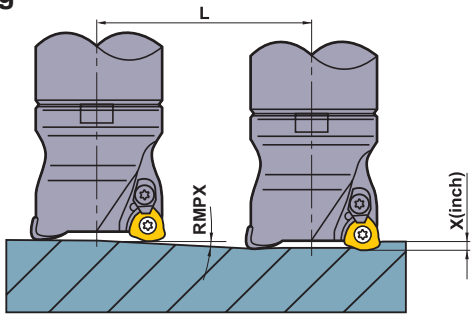
①Overhang Length



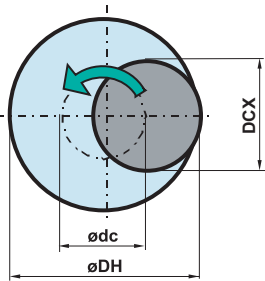
- ②Main Spindle Speed
 $n(\text{min}^{-1}) = (\text{Recommended Cutting Speed} \times 12) \div (\text{DCX} \times 3.14)$
- ③Table Feed Rate
 $v_f(\text{IPM}) = n \times \text{feed per tooth } f_z \times \text{number of teeth}$
- ④Recommended width of cut (ae) is more than 60% of cutting edge diameter.
- ⑤The cutting condition on the left are guide when using a CAT50 size holder. In case of CAT40 and HSK63 machines, a cutter diameter of under 1.5 inch is recommended. In this case, reduce the depth of cut and table feed rate.
- ⑥Use of ST chipbreaker with a tougher cutting edge is recommended for interrupted cutting.
- ⑦A cutter body with a coarse pitch is recommended for use in unstable conditions such as a long tool overhang.
- ⑧Use “sharp” JM chipbreaker to lower cutting forces or when there is a long tool overhang.
- ⑨Large chips are generated when machining with the AJX. To avoid chip jamming-related problems, machine using an air blow to disperse the chips effectively.
- ⑩The maximum depth of cut JL chipbreaker is different in the insert size. 06 size is up to .024 inch, 08 size is up to .035 inch, and 09, 12, 14 size is up to .047 inch.

Maximum Capacities by Mode

Ramping



Helical Milling and Drilling



- How to calculate the theoretical center of the tool path.
 $\phi_{dc} = \phi_{DH} - DCX$
Theoretical Center of the Tool Desired Hole Diameter Cutting Diameter Max.
- Please set the depth of cut per cycle under max. depth of cut (APMX).
- Please machine in a down (Climb) cutting direction.

When ramping and helical milling, it is recommended to reduce the feed rate by 40%.
When drilling, please set the feed in the axial direction .008 IPR or less.
The long chips generated can discharge in any direction, so ensure that adequate safety precautions are taken.

(inch)

Tool Holder Type		DCX	DC	Max. Depth of Cut		Ramping machining					Helical Milling		AZ
				APMX	RMPX	L Required Distance for X Inch Depth				Min. Hole Diameter	Max. Hole Diameter		
						FT/JM/ST	JL	Z=.039	Z=.047			Z=.059	
Shank Type	AJXU06R102	.625	.340	.039	.024	3°	.744	—	—	—	.90	1.13	.012
	AJXU06R112	.688	.400	.039	.024	2.5°	.893	—	—	—	1.02	1.26	.012
	AJXU06R123	.750	.472	.039	.024	1.7°	1.314	—	—	—	1.15	1.38	.012
	AJXU06R143	.875	.595	.039	.024	0.7°	3.192	—	—	—	1.40	1.63	.012
	AJXU08R122	.750	.410	.059	.035	3.5°	.638	.768	.965	—	.99	1.34	.020
	AJXU08R142	.875	.530	.059	.035	3°	.744	.897	1.126	—	1.24	1.59	.020
	AJXU08R163	1.000	.661	.059	.035	2°	1.117	1.346	1.690	—	1.49	1.84	.020
	AJXU08R183	1.125	.784	.059	.035	0.5°	4.469	5.386	6.761	—	1.74	2.09	.020
	AJXU09R162	1.000	.590	.079	.047	4°	.558	.672	.844	1.130	1.33	1.84	.039
	AJXU09R182	1.125	.720	.079	.047	3°	.744	.897	1.126	1.507	1.58	2.09	.039
	AJXU09R203	1.250	.854	.079	.047	3.3°	.676	.815	1.023	1.370	1.83	2.34	.039
	AJXU09R223	1.375	.976	.079	.047	2°	1.117	1.346	1.690	2.262	2.08	2.59	.039
	AJXU09R244	1.500	1.114	.079	.047	2.4°	.931	1.121	1.408	1.885	2.33	2.84	.039
	AJXU12R202	1.250	.790	.079	.047	4°	.558	.672	.844	1.130	1.59	2.34	.059
	AJXU12R243	1.500	1.040	.079	.047	3°	.744	.897	1.126	1.507	2.09	2.84	.059
AJXU14R323	2.000	1.530	.079	.047	4.2°	.531	.640	.803	1.076	2.90	3.84	.079	
Arbor Type	AJXU09R02	2.000	1.606	.079	.047	1.1°	2.031	2.448	3.073	4.114	3.33	3.84	.039
	AJXU12R02	2.000	1.540	.079	.047	2°	1.117	1.346	1.690	2.262	3.09	3.84	.059
	AJXU12R2505	2.500	2.039	.079	.047	1.5°	1.489	1.795	2.253	3.017	4.09	4.84	.059
	AJXU12R0306	3.000	2.543	.079	.047	1.2°	1.862	2.244	2.817	3.771	5.09	5.84	.059
	AJXU12R0407	4.000	3.539	.079	.047	0.8°	2.793	3.366	4.225	5.658	7.09	7.84	.059
	AJXU14R25	2.500	2.030	.079	.047	2.8°	.797	.961	1.206	1.615	3.90	4.84	.079
	AJXU14R03	3.000	2.530	.079	.047	1.8°	1.241	1.496	1.877	2.514	4.90	5.84	.079
	AJXU14R04	4.000	3.530	.079	.047	1.2°	1.862	2.244	2.817	3.771	6.90	7.84	.079
	AJX14RA125	4.920	4.530	.079	.047	0.8°	2.793	3.366	4.225	5.658	8.74	9.68	.079
	AJX14RA160	6.300	5.830	.079	.047	0.5°	4.469	5.386	6.761	9.053	11.50	12.44	.079

DCX = Cutting Diameter Max. DC = Cutting Diameter DH = Desired Hole Diameter
APMX = Depth of Cut Max. RMPX = Ramping Angle Max. AZ = Max. Drilling Depth

Application Examples

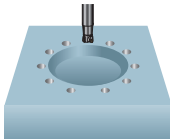
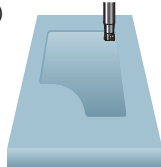
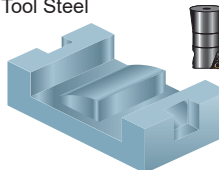
Tool (Grade)		AJXU14R2504C FT Chipbreaker (FH7020)	AJXU06R112FA10S FT Chipbreaker (VP15TF)	AJXU14R0304C ST Chipbreaker (FH7020)
Workpiece		AISI 1055 (220HB) 	ATSM H13 (40HRC) 	AISI 1049 (200HB)
Component		Resin Mold	Resin Mold (Pocket Milling for Bushes)	Resin Mold
Cutting Conditions	Cutting Speed vc (SFM)	589 SFM (900 min ⁻¹)	504 SFM (2800 min ⁻¹)	471 SFM (600 min ⁻¹)
	Table Feed vf (Feed per T. fz)	160 IPM (.045 IPT)	157 IPM (.028 IPT)	192 IPM (.08 IPT)
	Depth of Cut ap (inch)	.060	.020	.060
	Width of Cut ae (inch)	1.8	.315	2.0
	Overhang Length (inch)	9.8	7.0(GL)	8.4(GL)
Cutting Mode		Air Blow	Air Blow	Air Blow
Results		Compared to a conventional product whose tool life was 2 hours, the AJX improved tool life by 3 hours. Realization of long tool life achieves great cost reductions.	Conventional solid end mills were used for pocket milling, but low efficiency and high costs were problematic. The use of the ø.688"AJX achieved high efficiency and cut costs.	The workpiece was perforated and conventional inserts suffered from fracturing. The ST chipbreaker with tougher cutting edges did not fracture, making unmanned machining possible.

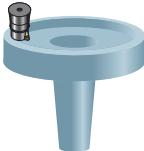
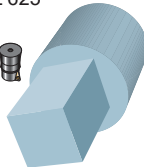
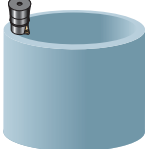
Tool (Grade)		AJXU14R0406E FT Chipbreaker (VP30RT)	AJXU14R0305C FT Chipbreaker (FH7020)	AJXU12R243WA20S ST Chipbreaker (VP15TF)
Workpiece		304SS (200HB) 	Cast iron, Class45 	ASTM H13 (50HRC)
Component		Electronics Part Manufacturing Device Component	Press Mold	Forging Mold
Cutting Conditions	Cutting Speed vc (SFM)	419 SFM (400 min ⁻¹)	628 SFM (800 min ⁻¹)	190 SFM (490 min ⁻¹)
	Table Feed vf (Feed per T. fz)	100 IPM (.042 IPT)	160 IPM (.040 IPT)	47 IPM (.032 IPT)
	Depth of Cut ap (inch)	.040	.080	.040
	Width of Cut ae (inch)	2.4	2.1	1.2
	Overhang Length (inch)	5.4 (GL)	11.7 (GL)	7.9 (GL)
Cutting Mode		Wet Cutting	Air Blow	Air Blow
Results		Although the workpiece was a thin stainless plate, the AJX displayed stable cutting performance without suffering from vibrations. The AJX achieved 3X longer tool life than a conventional product.	Enabled a stable cutting performance despite an uneven machining allowance. FH7020 achieved a longer tool life due to less crater wear of the insert.	Machining recycled molds with holes or welds, conventional inserts suffered from fracturing. The ST chipbreaker with tougher cutting edges suffered no sudden fracturing.

Please note that the machining performed in the application examples is dependent on the rigidity of the machine used and the rigidity of the workpiece and clamping.

High Feed Radius Milling Cutter

Application Examples

Tool (Grade)		AJX09R252SA25S JM Chipbreaker (FH7020)	AJXU08R122WA12S FT Chipbreaker (VP15TF)	AJX14R10006D JM Chipbreaker (MP6120)
Workpiece		ASTM52100 	P20 (45HRC) 	Alloy Tool Steel 
Component		Automotive Part	Die Casting Mold	Press Mold
Cutting Conditions	Cutting Speed vc (SFM)	600 SFM (2300 min ⁻¹)	196 SFM (1000 min ⁻¹)	330 SFM (320 min ⁻¹)
	Table Feed vf (Feed per T. fz)	184 IPM (.040 IPT)	64 IPM (.032 IPT)	46 IPM (.024 IPT)
	Depth of Cut ap (inch)	.039	.039	.059
	Width of Cut ae (inch)	.710	.35	2.756
	Overhang Length (inch)	3.8(GL)	4.2(GL)	3.150
Cutting Mode		Air Blow	Air Blow	Air Blow
Results		Possible to use an HSK63 high-speed machining center to full capacity. No fear of workpiece distortion thanks to low cutting resistance and low heat generation of the JM chipbreaker.	High efficiency machining possible even on a high speed machining center with a CAT40 main spindle. Manufacturing costs have been slashed by directly machining quenched steel.	Achieved 2X longer tool life compared to conventional product.

Tool (Grade)		AJX12R08006D JL Chipbreaker (MP9130)	AJX12-080A06R JL Chipbreaker (MP9120)	AJX12-080A06R JL Chipbreaker (MP9130)
Workpiece		Co-Cr Alloy 	INCONEL 625 	Ti-6Al-4V 
Component		Medical Component	Aerospace Component	Aerospace Component
Cutting Conditions	Cutting Speed vc (SFM)	165 SFM (240 min ⁻¹)	115 SFM (140 min ⁻¹)	165 SFM (240 min ⁻¹)
	Table Feed vf (Feed per T. fz)	34.0 IPM (.024 IPT)	19.7 IPM (.024 IPT)	17.9 IPM (.015 IPT)
	Depth of Cut ap (inch)	.02	.031	.04
	Width of Cut ae (inch)	2.36	2.56	1.97
	Overhang Length (inch)	—	—	—
Cutting Mode		Wet Cutting	Wet Cutting	Wet Cutting
Results		The reduced wear displayed by MP9130 grade with JL chipbreaker gave an increase in efficiency of 40%.	JL chipbreaker + MP9120 achieves 1.5X longer tool life compared to conventional product.	The increased tool life and reduced wear displayed by MP9130 grade with JL chipbreaker gave an increase in efficiency of 40%.

Please note that the machining performed in the application examples is dependent on the rigidity of the machine used and the rigidity of the workpiece and clamping.

Memo



MITSUBISHI MATERIALS U.S.A. CORPORATION

California Office (Headquarters)

3535 Hyland Avenue, Suite 200
Costa Mesa, CA 92626
Customer Service: 800.523.0800
Technical Service: 800.486.2341

Chicago Office (Engineering)

300 N. Martingale Road, Suite 500
Schaumburg, IL 60173
Main: 847.252.6300
Fax: 847.519.1732

MMC Metal de Mexico, S.A. DE C.V.

Av. La Cañada No.16,
Parque Industrial Bernardo
Quintana, El Marques,
Queretaro C.P. 76246 MEXICO
Main: +52.442.221.61.36
Fax: +52.442.221.61.34

North Carolina-MTEC (Marketing & Technical Center)

105 Corporate Center Drive, Suite A
Mooresville, NC 28117
Main: 980.312.3100
Fax: 704.746.9292

Toronto Office (Canada Branch)

600 Matheson Blvd. Unit 5 (Office)
Mississauga, ON L5R 4C1
Main: 905.814.0240
Fax: 905.814.0245

Detroit Office (Moldino CS)

41700 Gardenbrook Road, Suite 120
Novi, MI 48375
Main: 248.308.2620
Fax: 248.308.2627

FOR YOUR SAFETY

- Don't handle inserts and chips without gloves.
- Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage.
- Please use safety covers and wear safety glasses.
- When using compounded cutting oils, please take fire precautions.
- When attaching inserts or spare parts, please use only the correct wrench or driver.
- When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

www.mmc-carbide.com/us

Tools specifications subject to change without notice.

B028A-US-2025.8