MITSUBISHI MITSUBISHI MATERIALS TOOL NEWS
2015.10 Update B028A YOUR GLOBAL CRAFTSMAN STUDIO

High Feed Radius Milling Cutter

AJX

Insert Expansion

Reduce costs with ultra high feed milling over a wide range of applications!

MIRACLE SIGMA

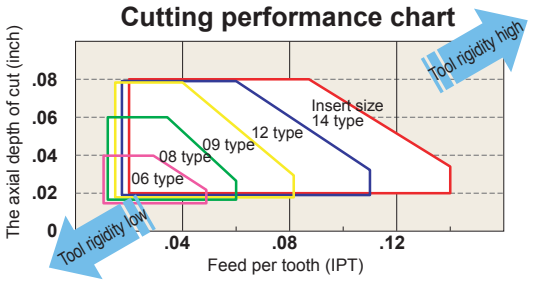
High Feed Radius Milling Cutter

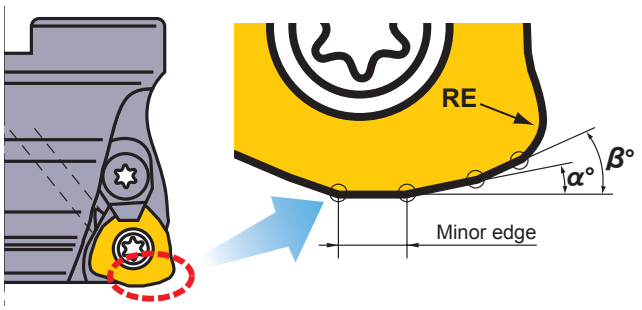
AJX

Features

Ultra High Feed Cutting

Employing a double phased straight cutting edge to form the lead angle α and β with a minor edge, the AJX can achieve an extra high feed rate of up to .138 inch/tooth for the ultimate efficiency in rough machining.





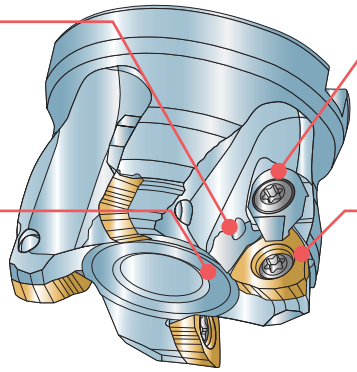
High Reliability Cutter Body

Standard with coolant holes

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

Durable tool body

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



Highly rigid clamping

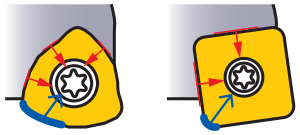
Insert clamp bridges are standard (except AJX 06, 08 type). Rigid insert clamping for stable and reliable cutting.

Cost-effective insert

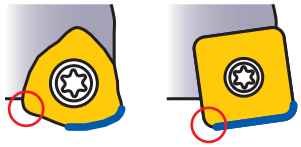
Specially designed triangular style insert geometry for cost effective milling.

Triangular insert shape is ideal for safe multi-functional milling

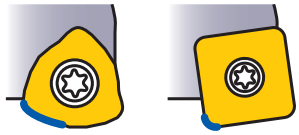
=Edge used during machining



Insert pocket is designed to ensure precise positioning and provide secure multi directional clamping.



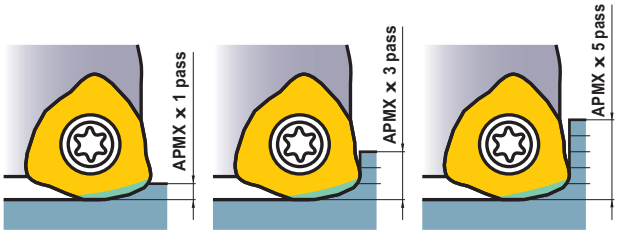
The unused edge is protected even during pocket machining and ramping.



Even if the ramping angle is steep, the left side of the cutting edge is designed to be used and therefore not be damaged.

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.



=Cutting portion

Preventing Chip Packing Problems

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

Large clearance

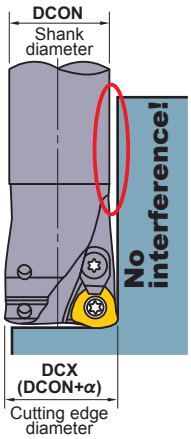
Comparison of ramping angles

	Max. ramping angle
AJX	2.8°
4 Corner Insert	1°
Conventional products	1°

*With ø63 mm 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.



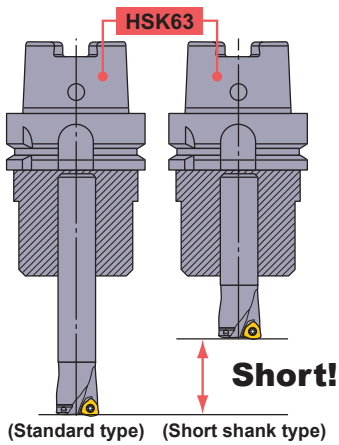
Order Number	DCX (inch)	DCON (inch)
AJXU06R112◌A10◌	.688	.625
AJXU08R142◌A12◌	.875	.750
AJXU09R182◌A16◌	1.125	1.000
AJXU09R244SA20M	1.500	1.250
AJXU12R243◌A20◌	1.500	1.250
AJXU14R323WA24S	2.000	1.500

Please refer to page 5 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.

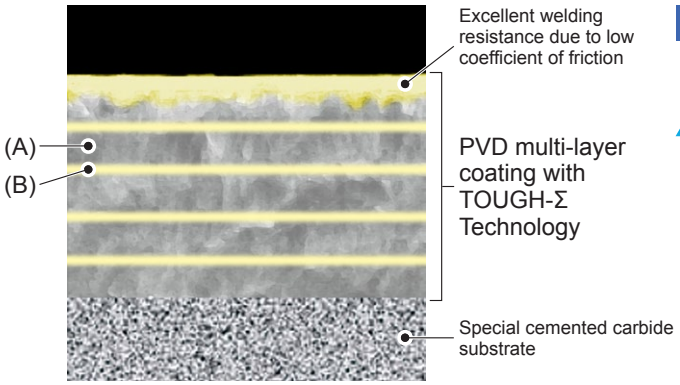


Insert Grades for a Wide Range of Materials

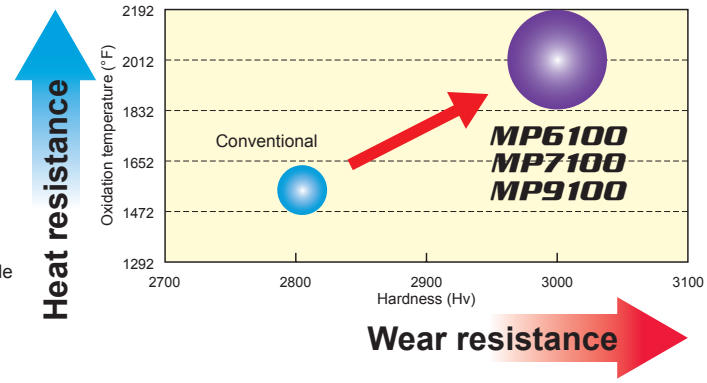
MIRACLE SIGMA accumulated PVD coating

TOUGH-Σ Technology

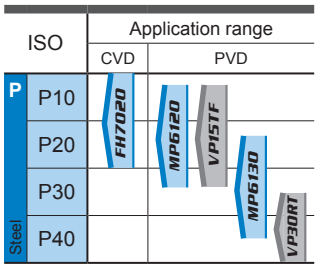
A fusion of the separate coating technologies; PVD and multi-layering provides extra toughness.

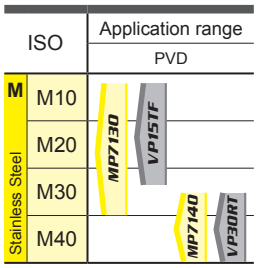


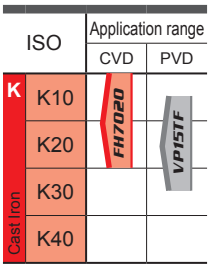
Dramatically improving the heat and wear resistance!

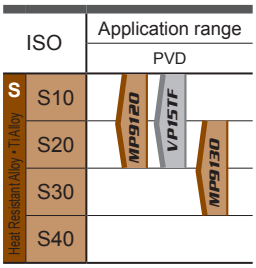


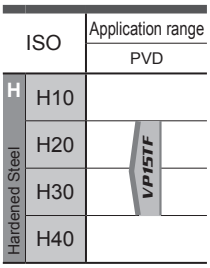
	Work material	Grade	Coating		Coefficient of friction		
			Base layer (A)	Optimized layer for work material (B)	Measured at 1112° F		
					1055	304	Ti-6Al-4V
P	Carbon Steel, Alloy Steel	MP6100	**High Al-(Al, Ti)N** The new technology Al-(Al, Ti)N provides stability of the high hardness phase and succeeds in dramatically improving wear, crater and welding resistance.	(Al, Cr) N based	0.4		
				Tough! Resists Chipping			
M	Stainless Steel	MP7100		TiN based		0.5	
				Tough! Resists Notching			
S	Titanium Alloy, Heat Resistant Alloy	MP9100		CrN based			0.3
				Tough! Resists Thermal Cracking			
				Conventional	0.7	0.7	0.7











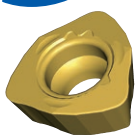
Wide Selection of Inserts

Focus on cutting edge strength

Focus on cutting edge sharpness

ST — Strong Cutting Edge Type Breaker

P M K ~~S~~ H

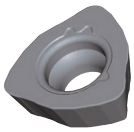


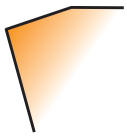
Stable machining even on interrupted workpiece surfaces

With increased fracture resistance during interrupted cutting due to the tougher cutting edges.
For increased reliability and higher efficiency machining to reduce costs.

FT — General Use Type Breaker

P M K S H



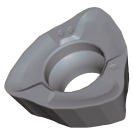


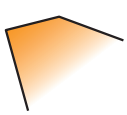
First recommended chipbreaker for general cutting

An optimum balance of sharpness and fracture resistance.
Versatile insert for a wide range of materials and cutting conditions.

JM — Sharp Cutting Edge Type Breaker (For general use)

P M K S H



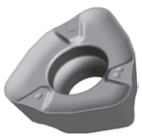


Suitable for use on BT40 and HSK63 machines

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.

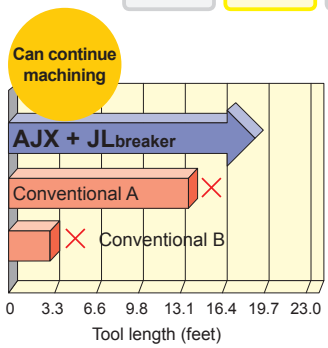
NEW JL — Sharp Cutting Edge Type Breaker (For difficult-to-cut materials)

P M K S H



Optimized for difficult-to-cut materials

The optimized cutting edge of the JL breaker provides the sharpness and low cutting resistance that is ideal for difficult-to-cut materials.
The maximum depth of cut is .047inch.



<Cutting Conditions>

Tool	: ϕ2.5" 5-teeth
Work material	: Ti-6AL4V
Revolution	: 202 RPM
Cutting speed	: 130 SFM
Feed	: 23.86 IPM
Feed per Tooth	: .024 IPT
Depth of Cut	: Axial .04 inch Radial 1.77 inch
Cutting mode	: Wet

Work Material	Cutting Conditions
P K H	Light / General / Heavy — JM, FT, ST
M	JL (NEW), JM, FT, ST
S	JL (NEW), JM (NEW), FT (NEW)

HIGH FEED RADIUS MILLING CUTTER

MULTI FUNCTIONAL MILLING

Roughing

Including Flat faces

AJX

P M K N S H

- 13°,15° positive insert.
- Air / coolant through.
- High rigidity due to double clamp structure.
- Suitable for high feed cutting.
- Special insert design with the use of 3 cutting edges.

Fig.1 **"FA" flat shank**

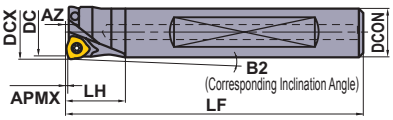


Fig.2

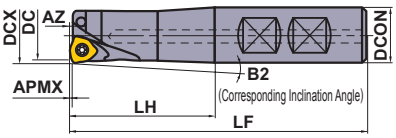


Fig.3

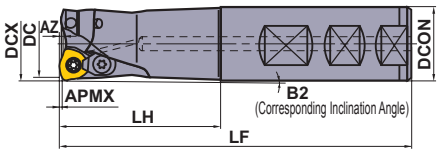
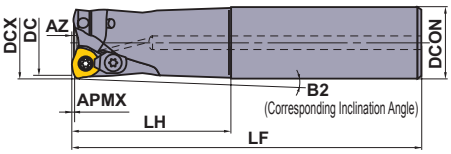


Fig.4



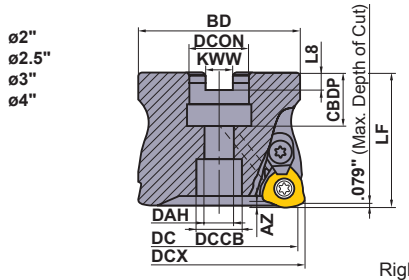
SHANK TYPE

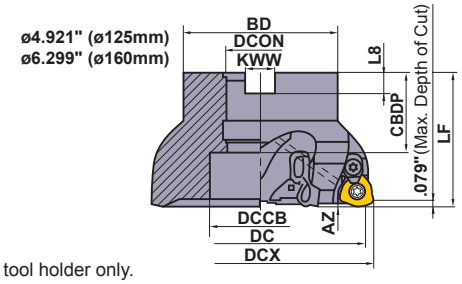
Right hand tool holder only.

Type	Order Number	Stock	Number of Teeth	Dimensions (inch)								Type (Fig.)	Insert Screw *	Clamp Bridge	Clamp Bridge Screw *	Spring	Wrench	Insert
		R		DCX	DCON	DC	LF	LH	APMX	AZ	B2							
Standard	AJXU06R102FA10S	●	2	.625	.625	.346	3.750	1.250	.039	.012	2.12°	1	TS25	–	–	–	①TKY08F	JOM○ 06T2○○ ZZ○R-○○
	AJXU06R112FA10S	●	2	.688	.625	.409	3.750	.750	.039	.012	–	1	TS25	–	–	–	①TKY08F	
	AJXU08R122WA12S	●	2	.750	.750	.417	4.750	2.000	.059	.020	1.31°	2	TS33	–	–	–	②TKY08D	JOM○ 0803○○ ZZ○R-○○
	AJXU08R142FA12S	●	2	.875	.750	.535	4.750	1.250	.059	.020	–	1	TS33	–	–	–	②TKY08D	
	AJXU09R162WA16S	●	2	1.000	1.000	.602	5.625	2.375	.079	.039	1.1°	3	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	JDM○ 09T3○○ ZD○R-○○
	AJXU09R182FA16S	●	2	1.125	1.000	.728	5.625	1.625	.079	.039	–	1	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJXU12R202WA20S	●	2	1.250	1.250	.789	6.000	2.750	.079	.059	0.94°	3	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	JDM○ 1204○○ ZD○R-○○
	AJXU12R243WA20S	●	3	1.500	1.250	1.038	6.000	2.000	.079	.059	–	3	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	
	AJXU14R323WA24S	●	3	2.000	1.500	1.534	6.000	2.000	.079	.079	–	3	TS54	AMS5	AJS5014T25	ASS3	②TKY25D	JDM○ 1405○○ ZD○R-○○
Long	AJXU06R102SA10M	●	2	.625	.625	.346	5.750	1.500	.039	.012	1.75°	4	TS25	–	–	–	①TKY08F	JOM○ 06T2○○ ZZ○R-○○
	AJXU06R102SA10L	●	2	.625	.625	.346	5.750	2.750	.039	.012	0.93°	4	TS25	–	–	–	①TKY08F	
	AJXU06R112SA10L	●	2	.688	.625	.409	5.750	.750	.039	.012	–	4	TS25	–	–	–	①TKY08F	
	AJXU06R123SA12M	●	3	.750	.750	.472	7.000	2.375	.039	.012	1.11°	4	TS25	–	–	–	①TKY08F	
	AJXU08R122SA12L	●	2	.750	.750	.417	7.000	4.000	.059	.020	0.64°	4	TS33	–	–	–	②TKY08D	JOM○ 0803○○ ZZ○R-○○
	AJXU08R142SA12L	●	2	.875	.750	.535	7.000	1.250	.059	.020	–	4	TS33	–	–	–	②TKY08D	
	AJXU08R163SA16M	●	3	1.000	1.000	.661	8.000	2.750	.059	.020	0.94°	4	TS33	–	–	–	②TKY08D	
	AJXU09R162SA16L	●	2	1.000	1.000	.602	8.000	4.750	.079	.039	0.54°	4	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	JDM○ 09T3○○ ZD○R-○○
	AJXU09R182SA16L	●	2	1.125	1.000	.728	8.000	1.625	.079	.039	–	4	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJXU09R203SA20M	●	3	1.250	1.250	.854	8.000	3.125	.079	.039	0.82°	4	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJXU09R244SA20M	●	4	1.500	1.250	1.114	10.000	2.375	.079	.039	–	4	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJXU12R202SA20L	●	2	1.250	1.250	.789	8.000	4.750	.079	.059	0.54°	4	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	JDM○ 1204○○ ZD○R-○○
	AJXU12R243SA20L	●	3	1.500	1.250	1.038	10.000	2.000	.079	.059	–	4	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	
	AJXU12R243SA24L	●	3	1.500	1.500	1.038	10.000	2.750	.079	.059	0.94°	4	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	

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

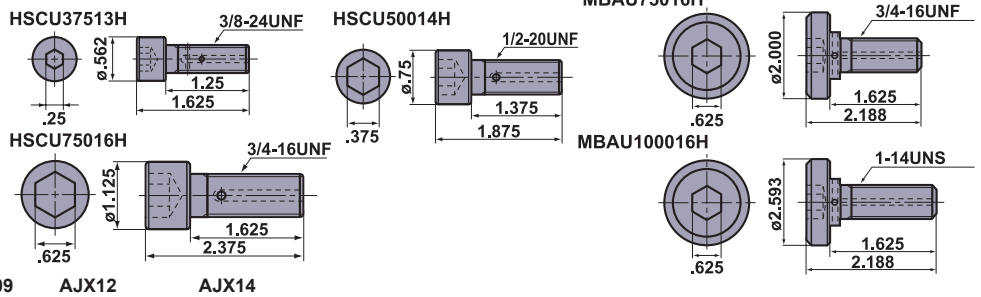
● : Inventory maintained.





Right hand tool holder only.

Coolant thru Set Bolt



AJX09 KAPR :+8° GAMF :-6°

AJX12 KAPR :+8° GAMF :-5°—-4°

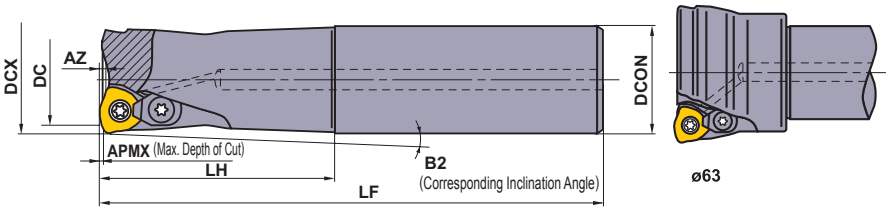
AJX14 KAPR :+8° GAMF :-3°

ARBOR TYPE

Type	Order Number	Stock	Number of Teeth	Dimensions (inch)											Insert Screw *	Clamp Bridge	Clamp Bridge Screw *	Spring	Wrench	Coolant thru Set Bolt	Insert
		R		DCX	DC	LF	DCON	CBDP	DAH	BD	KWW	L8	DCCB	AZ							
Coarse Pitch	**AJXU12R0203**	●	3	2.000	1.539	2.000	.750	.748	.415	1.875	.313	.187	.600	.059	TS43	AMS4	AJS40 12T15	ASS2	①TKY15T	HSCU 37513H	JDM◯1204◯◯ ZD◯R-◯◯
	AJXU**14R2503C**	●	3	2.500	2.032	2.000	1.000	1.024	.539	2.375	.375	.219	.787	.079	TS54	AMS5	AJS50 14T25	ASS3	①TKY25T	HSCU 50014H	JDM◯ 1405◯◯ ZD◯R-◯◯
	AJXU**14R0304C**	●	4	3.000	2.532	2.000	1.000	1.024	.539	2.750	.375	.219	.787	.079							
	AJXU**14R0405E**	●	5	4.000	3.531	2.500	1.500	1.181	.787	3.750	.625	.375	1.181	.079						HSCU 75016H	
	AJX14RA12505E	●	5	4.921	4.457	2.480	1.500	1.575	–	3.937	.625	.375	2.205	.079						MBAU 75016H	
	AJX**14RA16006F**	●	6	6.299	5.835	2.480	2.000	1.693	–	3.937	.750	.437	2.835	.079						MBAU 100016H	
Fine Pitch	**AJXU12R0204**	●	4	2.000	1.539	2.000	.750	.748	.415	1.875	.313	.187	.600	.059	TS43	AMS4	AJS40 12T15	ASS2	①TKY15T	HSCU 37513H	JDM◯1204◯◯ ZD◯R-◯◯
	AJXU**14R2504C**	●	4	2.500	2.032	2.000	1.000	1.024	.539	2.375	.375	.219	.787	.079	TS54	AMS5	AJS50 14T25	ASS3	①TKY25T	HSCU 50014H	JDM◯ 1405◯◯ ZD◯R-◯◯
	AJXU**14R0305C**	●	5	3.000	2.532	2.000	1.000	1.024	.539	2.750	.375	.219	.787	.079							
	AJXU**14R0406E**	●	6	4.000	3.531	2.500	1.500	1.181	.787	3.750	.625	.375	1.181	.079						HSCU 75016H	
	AJX14RA12507E	●	7	4.921	4.457	2.480	1.500	1.575	–	3.937	.625	.375	2.205	.079						MBAU 75016H	
	AJX**14RA16008F**	●	8	6.299	5.835	2.480	2.000	1.693	–	3.937	.750	.437	2.835	.079						MBAU 100016H	
Extra Fine Pitch	**AJXU09R0205**	●	5	2.000	1.606	2.000	.750	.748	.415	1.875	.313	.187	.600	.039	TS351	AMS3	AJS3010 T10	ASS2	②TKY10D	HSCU 37513H	JDM◯09T3◯◯ ZD◯R-◯◯
	AJXU**12R2505C**	●	5	2.500	2.039	2.000	1.000	1.024	.539	2.375	.375	.219	.787	.059	TS43	AMS4	AJS4012 T15		①TKY15T	HSCU 50014H	JDM◯ 1204◯◯ ZD◯R-◯◯
	AJXU**12R0306C**	●	6	3.000	2.543	2.000	1.000	1.024	.539	2.750	.375	.219	.787	.059							
	AJXU**12R0407E**	●	7	4.000	3.539	2.500	1.500	1.181	.787	3.750	.625	.375	1.181	.059						HSCU 75016H	

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

HIGH FEED RADIUS MILLING CUTTER



METRIC Standard

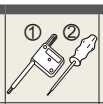
SHANK TYPE

Right hand tool holder only.

Type	Order Number	Stock	Number of Teeth	Dimensions (mm)								Insert Screw *	Clamp Bridge	Clamp Bridge Screw *	Spring	Wrench	Insert
		R		DCX	DCON	DC	LF	LH	APMX	AZ	B2						
Short	AJX06R162SA16SS	★	2	16	16	8.9	70	20	1.0	0.3	3°30′	TS25	—	—	—	①TKY08F	JOM○ 06T2○○ ZZ○R-○○
	AJX06R172SA16SS	★	2	17	16	9.9	70	20	1.0	0.3	—	TS25	—	—	—	①TKY08F	
Standard	AJX06R162SA16S	★	2	16	16	8.9	110	30	1.0	0.3	2°15′	TS25	—	—	—	①TKY08F	JOM○ 06T2○○ ZZ○R-○○
	AJX06R172SA16S	★	2	17	16	9.9	110	20	1.0	0.3	—	TS25	—	—	—	①TKY08F	
	AJX06R203SA20S	★	3	20	20	12.9	130	50	1.0	0.3	1°18′	TS25	—	—	—	①TKY08F	
	AJX06R223SA20S	★	3	22	20	14.9	130	30	1.0	0.3	—	TS25	—	—	—	①TKY08F	
	AJX08R202SA20S	★	2	20	20	11.4	130	50	1.5	0.5	1°18′	TS33	—	—	—	②TKY08D	JOM○ 0803○○ ZZ○R-○○
	AJX08R222SA20S	★	2	22	20	13.4	130	30	1.5	0.5	—	TS33	—	—	—	②TKY08D	
	AJX08R253SA25S	★	3	25	25	16.4	140	60	1.5	0.5	1°06′	TS33	—	—	—	②TKY08D	
	AJX08R283SA25S	★	3	28	25	19.4	140	40	1.5	0.5	—	TS33	—	—	—	②TKY08D	
	AJX09R252SA25S	★	2	25	25	14.9	140	60	2.0	1.0	1°06′	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	JDM○ 09T3○○ ZD○R-○○
	AJX09R282SA25S	★	2	28	25	17.9	140	40	2.0	1.0	—	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJX09R303SA32S	★	3	30	32	20.0	150	70	2.0	1.0	1°48′	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJX09R323SA32S	★	3	32	32	21.9	150	70	2.0	1.0	0°56′	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJX09R353SA32S	★	3	35	32	24.9	150	50	2.0	1.0	—	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJX09R404SA32S	★	4	40	32	29.9	150	50	2.0	1.0	—	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJX09R404SA42S	★	4	40	42	29.9	150	70	2.0	1.0	1°48′	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJX12R302SA32S	★	2	30	32	18.3	150	70	2.0	1.5	1°48′	TS407	AMS4	AJS4012T15	ASS2	②TKY15D	JDM○ 1204○○ ZD○R-○○
	AJX12R322SA32S	★	2	32	32	20.3	150	70	2.0	1.5	1°	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	
	AJX12R352SA32S	★	2	35	32	23.3	150	50	2.0	1.5	—	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	
	AJX12R403SA32S	★	3	40	32	28.3	150	50	2.0	1.5	—	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	
	AJX12R403SA42S	★	3	40	42	28.3	150	70	2.0	1.5	1°48′	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	
	AJX14R503SA42S	★	3	50	42	38.2	150	50	2.0	2.0	—	TS54	AMS5	AJS5014T25	ASS3	②TKY25D	JDM○ 1405○○ ZD○R-○○
	AJX14R634SA42S	★	4	63	42	51.1	150	50	2.0	2.0	—	TS54	AMS5	AJS5014T25	ASS3	②TKY25D	

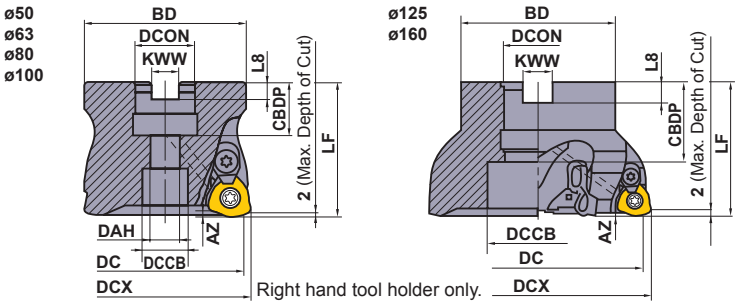
* Clamp Torque (lbf-in) : TS25=8.9, TS33=8.9, TS351=22, TS407=31, TS43=31, TS54=66

★ : Inventory maintained in Japan.

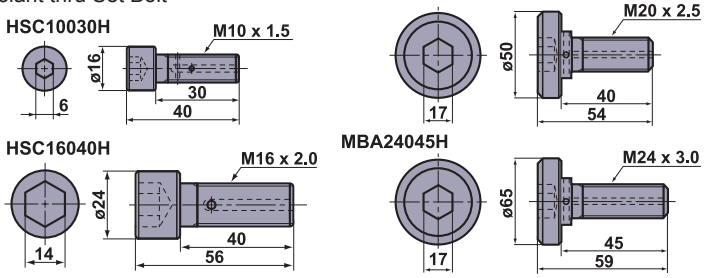
Type	Order Number	Stock	Number of Teeth	Dimensions (mm)													
		R		DCX	DCON	DC	LF	LH	APMX	AZ	B2	Insert Screw	Clamp Bridge	Clamp Bridge Screw	Spring	Wrench	Insert
Long	**AJX06R162SA16L**	★	2	16	16	8.9	150	70	1.0	0.3	0°56′	TS25	—	—	—	①TKY08F	JOM○ 06T2○○ ZZ○R-○○
	AJX06R**172SA16L**	★	2	17	16	9.9	150	20	1.0	0.3	—	TS25	—	—	—	①TKY08F	
	AJX06R**203SA20L**	★	3	20	20	12.9	180	100	1.0	0.3	0°38′	TS25	—	—	—	①TKY08F	
	AJX06R**223SA20L**	★	3	22	20	14.9	180	30	1.0	0.3	—	TS25	—	—	—	①TKY08F	
	AJX08R202SA20L	★	2	20	20	11.4	180	100	1.5	0.5	0°36′	TS33	—	—	—	②TKY08D	JOM○ 0803○○ ZZ○R-○○
	AJX08R**222SA20L**	★	2	22	20	13.4	180	30	1.5	0.5	—	TS33	—	—	—	②TKY08D	
	AJX08R**253SA25L**	★	3	25	25	16.4	200	120	1.5	0.5	0°32′	TS33	—	—	—	②TKY08D	
	AJX08R**283SA25L**	★	3	28	25	19.4	200	40	1.5	0.5	—	TS33	—	—	—	②TKY08D	
	AJX09R252SA25L	★	2	25	25	14.9	200	120	2.0	1.0	0°30′	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	JDM○ 09T3○○ ZD○R-○○
	AJX09R**282SA25L**	★	2	28	25	17.9	200	40	2.0	1.0	—	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJX09R**303SA32L**	★	3	30	32	20.0	200	120	2.0	1.0	1°02′	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJX09R**323SA32L**	★	3	32	32	21.9	200	120	2.0	1.0	0°32′	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJX09R**353SA32L**	★	3	35	32	24.9	200	50	2.0	1.0	—	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJX09R**404SA32L**	★	4	40	32	29.9	250	50	2.0	1.0	—	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJX09R**404SA42L**	★	4	40	42	29.9	250	70	2.0	1.0	1°48′	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
	AJX12R302SA32L	★	2	30	32	18.3	200	120	2.0	1.5	1°	TS407	AMS4	AJS4012T15	ASS2	②TKY15D	JDM○ 1204○○ ZD○R-○○
	AJX12R**322SA32L**	★	2	32	32	20.3	200	120	2.0	1.5	0°36′	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	
	AJX12R**352SA32L**	★	2	35	32	23.3	200	50	2.0	1.5	—	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	
	AJX12R**403SA32L**	★	3	40	32	28.3	250	50	2.0	1.5	—	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	
	AJX12R**403SA42L**	★	3	40	42	28.3	250	70	2.0	1.5	1°48′	TS43	AMS4	AJS4012T15	ASS2	②TKY25D	
	AJX14R503SA42L	★	3	50	42	38.1	250	50	2.0	2.0	—	TS54	AMS5	AJS5014T25	ASS3	②TKY25D	JDM○ 1405○○ ZD○R-○○
	AJX14R**634SA42L**	★	4	63	42	51.1	250	50	2.0	2.0	—	TS54	AMS5	AJS5014T25	ASS3	②TKY25D	
Extra Long	**AJX06R162SA16EL**	★	2	16	16	8.9	200	100	1.0	0.3	0°38′	TS25	—	—	—	①TKY08F	JOM○ 06T2○○ ZZ○R-○○
	AJX06R**172SA16EL**	★	2	17	16	9.9	200	20	1.0	0.3	—	TS25	—	—	—	②TKY08F	
	AJX08R202SA20EL	★	2	20	20	11.4	250	130	1.5	0.5	0°30′	TS33	—	—	—	②TKY08D	JOM○ 0803○○ ZZ○R-○○
	AJX08R**222SA20EL**	★	2	22	20	13.4	250	30	1.5	0.5	—	TS33	—	—	—	②TKY10D	
	AJX09R252SA25EL	★	2	25	25	14.9	300	180	2.0	1.0	0°18′	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	JDM○ 09T3○○ ZD○R-○○
	AJX09R**282SA25EL**	★	2	28	25	17.9	300	40	2.0	1.0	—	TS351	AMS3	AJS3010T10	ASS2	②TKY15D	
	AJX12R302SA32EL	★	2	30	32	18.3	300	180	2.0	1.5	0°42′	TS407	AMS4	AJS4012T15	ASS2	②TKY15D	JDM○ 1204○○ ZD○R-○○
	AJX12R**322SA32EL**	★	2	32	32	20.3	300	180	2.0	1.5	0°24′	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	
	AJX12R**352SA32EL**	★	2	35	32	23.3	300	50	2.0	1.5	—	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	
	AJX12R**402SA32EL**	★	2	40	32	28.3	350	50	2.0	1.5	—	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	
	AJX12R**402SA42EL**	★	2	40	42	28.3	350	70	2.0	1.5	1°48′	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	

∗ Clamp Torque (lbf-in) : TS25=8.9, TS33=8.9, TS351=22, TS407=31, TS43=31, TS54=66

HIGH FEED RADIUS MILLING CUTTER



Coolant thru Set Bolt



METRIC Standard

For inch arbors

AJX09 KAPR :+8° GAMF :-6°
AJX12 KAPR :+8° GAMF :-5°–-4°
AJX14 KAPR :+8° GAMF :-3°

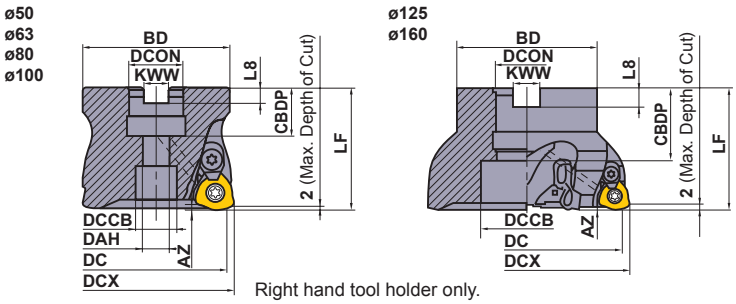
ARBOR TYPE

Type	Order Number	Stock	Number of Teeth	Dimensions (mm) [inch]											*2 WT	* Insert Screw	Clamp Bridge	* Clamp Bridge Screw	Spring	Wrench	Set Bolt	Insert
		R		DCX	DC	LF	DCON	CBDP	DAH	BD	KWW	L8	DCCB	AZ	(kg)							
Coarse Pitch	**AJX12R05003B**	★	3	50	38.3	50	22.225 [.875"]	19	11	47	8.4	5	17	1.5	0.4	TS43	AMS4	AJS40 12T15	ASS2	①TKY15T	HSC100 30H	JDM○1204○○ ZD○R-○○
	AJX14R06303B	★	3	63	51.1	50	22.225 [.875"]	19	11	60	8.4	5	17	2	0.7	TS54	AMS5	AJS50 14T25	ASS3	①TKY25T	HSC100 30H	JDM○1405○○ ZD○R-○○
	AJX14**R08004D**	★	4	80	68.1	63	31.75 [1.25"]	32	17	76	12.7	8	26	2	1.3						HSC160 40H	
	AJX14**R10005D**	★	5	100	88.1	63	31.75 [1.25"]	32	17	96	12.7	8	26	2	2.4							
	AJX14**R12505E**	★	5	125	113.2	63	38.1 [1.5"]	40	56	100	15.9	10	–	2	3.3						MBA200 40H	
	AJX14**R16006F**	★	6	160	148.2	63	50.8 [2.0"]	43	72	100	19.1	11	–	2	5.0						MBA240 45H	
Fine Pitch	**AJX12R05004B**	★	4	50	38.3	50	22.225 [.875"]	19	11	47	8.4	5	17	1.5	0.4	TS43	AMS4	AJS40 12T15	ASS2	①TKY15T	HSC100 30H	JDM○1204○○ ZD○R-○○
	AJX14R06304B	★	4	63	51.1	50	22.225 [.875"]	19	11	60	8.4	5	17	2	0.7	TS54	AMS5	AJS50 14T25	ASS3	①TKY25T	HSC100 30H	JDM○1405○○ ZD○R-○○
	AJX14**R08005D**	★	5	80	68.1	63	31.75 [1.25"]	32	17	76	12.7	8	26	2	1.3						HSC160 40H	
	AJX14**R10006D**	★	6	100	88.1	63	31.75 [1.25"]	32	17	96	12.7	8	26	2	2.4							
	AJX14**R12507E**	★	7	125	113.2	63	38.1 [1.5"]	40	56	100	15.9	10	–	2	3.3						MBA200 40H	
	AJX14**R16008F**	★	8	160	148.2	63	50.8 [2.0"]	43	72	100	19.1	11	–	2	5.0						MBA240 45H	
Extra Fine Pitch	**AJX09R05005B**	★	5	50	40	50	22.225 [.875"]	19	11	47	8.4	5	17	1	0.5	TS351	AMS3	AJS30 10T10	ASS2	②TKY10D	HSC100 30H	JDM○09T3○○ ZD○R-○○
	AJX12R06305B	★	5	63	51.3	50	22.225 [.875"]	19	11	60	8.4	5	17	1.5	0.9	TS43	AMS4	AJS40 12T15	ASS2	①TKY15T	HSC100 30H	JDM○1204○○ ZD○R-○○
	AJX12**R08006D**	★	6	80	68.3	63	31.75 [1.25"]	32	17	76	12.7	8	26	1.5	1.7						HSC160 40H	
	AJX12**R10007D**	★	7	100	88.3	63	31.75 [1.25"]	32	17	96	12.7	8	26	1.5	2.9							

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

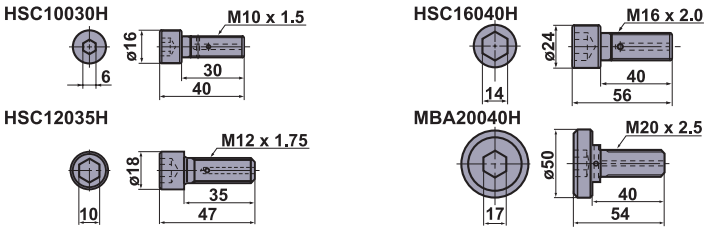
*2 WT : Mass

★ : Inventory maintained in Japan.



Right hand tool holder only.

Coolant thru Set Bolt



METRIC Standard

For metric arbors

AJX09 KAPR :+8° GAMF :-6°
AJX12 KAPR :+8° GAMF :-5°—-4°
AJX14 KAPR :+8° GAMF :-3°

ARBOR TYPE

Type	Order Number	Stock	Number of Teeth	Dimensions (mm)											*2 WT	* Insert Screw	Clamp Bridge	* Clamp Bridge Screw	Spring	①② Wrench	Set Bolt	Insert
		R		DCX	DC	LF	DCON	CBDP	DAH	BD	KWW	L8	DCCB	AZ	(kg)							
Coarse Pitch	**AJX12-050A03R**	★	3	50	38.3	50	22	20	11	47	10.4	6.3	17	1.5	0.4	TS43	AMS4	AJS40 12T15	ASS2	①TKY15T	HSC100 30H	JDM□1204□□ ZD□R-□□
	AJX14-063A03R	★	3	63	51.1	50	22	20	11	60	10.4	6.3	17	2	0.7	TS54	AMS5	AJS50 14T25	ASS3	①TKY25T	HSC100 30H	JDM□ 1405□□ ZD□R-□□
	AJX14-080A04R	★	4	80	68.1	50	27	23	13	76	12.4	7	19	2	1.2						HSC120 35H	
	AJX14-100A05R	★	5	100	88.1	63	32	26	17	96	14.4	8	26	2	2.4						HSC160 40H	
	AJX14-125B05R	★	5	125	113.2	63	40	40	56	100	16.4	9	—	2	3.3						MBA200 40H	
	AJX14-160B06R	★	6	160	148.2	63	40	40	56	100	16.4	9	—	2	5.0							
Fine Pitch	**AJX09-050A05R**	★	5	50	40	50	22	20	11	47	10.4	6.3	17	1	0.4	TS351	AMS3	AJS30 10T10	ASS2	②TKY10D	HSC100 30H	JDM□09T3□□ ZD□R-□□
	AJX12-050A04R	★	4	50	38.3	50	22	20	11	47	10.4	6.3	17	1.5	0.4	TS43	AMS4	AJS40 12T15	ASS2	①TKY15T	HSC100 30H	JDM□ 1204□□ ZD□R-□□
	AJX12-063A05R	★	5	63	51.3	50	22	20	11	60	10.4	6.3	17	1.5	0.7							
	AJX12-080A06R	★	6	80	68.3	50	27	23	13	76	12.4	7	19	1.5	1.2						HSC120 35H	
	AJX12-100A07R	★	7	100	88.3	63	32	26	17	96	14.4	8	26	1.5	2.6						HSC160 40H	
	AJX14-063A04R	★	4	63	51.1	50	22	20	11	60	10.4	6.3	17	2	0.7	TS54	AMS5	AJS50 14T25	ASS3	①TKY25T	HSC100 30H	JDM□ 1405□□ ZD□R-□□
	AJX14-080A05R	★	5	80	68.1	50	27	23	13	76	12.4	7	19	2	1.2						HSC120 35H	
	AJX14-100A06R	★	6	100	88.1	63	32	26	17	96	14.4	8	26	2	2.4						HSC160 40H	
	AJX14-125B07R	★	7	125	113.2	63	40	40	56	100	16.4	9	—	2	3.3						MBA200 40H	
	AJX14-160B08R	★	8	160	148.2	63	40	40	56	100	16.4	9	—	2	5.0							

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

*2 WT : Mass

HIGH FEED RADIUS MILLING CUTTER

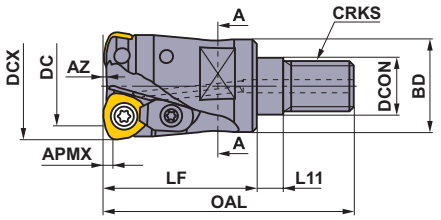


Fig.1

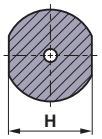


Fig.2

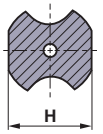
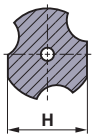


Fig.3



Section **A-A**

METRIC Standard

SCREW-IN TYPE

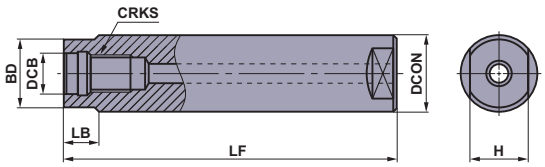
Right hand tool holder only.

Order Number	Stock	Coolant Thru *3	Number of Teeth	Dimensions (mm)											Type (Fig.)	*1 Insert Screw	Clamp Bridge	*1 Clamp Bridge Screw	Spring	①② Wrench	Insert
	R			DCX	DCON	BD	DC	OAL	LF	L11	H	*2 CRKS	APMX	AZ							
AJX06R162AM0830	★	Y	2	16	8.5	13	8.9	48	30	6	10	M8	1.0	0.3	1	TS25	—	—	—	①TKY08F	
AJX06R**172AM0830**	★	Y	2	17	8.5	13	9.9	48	30	6	10	M8	1.0	0.3	1	TS25	—	—	—	①TKY08F	JOM○ 06T2○○ ZZ○R-○○
AJX06R**203AM1030**	★	Y	3	20	10.5	18	12.9	49	30	6	14	M10	1.0	0.3	3	TS25	—	—	—	①TKY08F	
AJX06R**223AM1030**	★	Y	3	22	10.5	18	14.9	49	30	6	14	M10	1.0	0.3	3	TS25	—	—	—	①TKY08F	
AJX08R202AM1030	★	Y	2	20	10.5	18	11.4	49	30	6	14	M10	1.5	0.5	2	TS33	—	—	—	①TKY08D	
AJX08R**222AM1030**	★	Y	2	22	10.5	18	13.4	49	30	6	14	M10	1.5	0.5	2	TS33	—	—	—	①TKY08D	JOM○ 0803○○ ZZ○R-○○
AJX08R**253AM1235**	★	Y	3	25	12.5	21	16.4	57	35	6	19	M12	1.5	0.5	1	TS33	—	—	—	①TKY08D	
AJX08R**283AM1235**	★	Y	3	28	12.5	21	19.4	57	35	6	19	M12	1.5	0.5	1	TS33	—	—	—	①TKY08D	
AJX09R252AM1235	★	Y	2	25	12.5	21	14.9	57	35	6	19	M12	2.0	1.0	2	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
AJX09R**282AM1235**	★	Y	2	28	12.5	21	17.9	57	35	6	19	M12	2.0	1.0	2	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
AJX09R**303AM1645**	★	Y	3	30	17.0	29	20.0	68	45	6	24	M16	2.0	1.0	1	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	JDM○ 09T3○○ ZD○R-○○
AJX09R**323AM1645**	★	Y	3	32	17.0	29	21.9	68	45	6	24	M16	2.0	1.0	1	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
AJX09R**353AM1645**	★	Y	3	35	17.0	29	24.9	68	45	6	24	M16	2.0	1.0	1	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
AJX09R**404AM1645**	★	Y	4	40	17.0	29	29.9	68	45	6	24	M16	2.0	1.0	1	TS351	AMS3	AJS3010T10	ASS2	②TKY10D	
AJX12R302AM1645	★	Y	2	30	17.0	29	18.3	68	45	6	24	M16	2.0	1.5	2	TS407	AMS4	AJS4012T15	ASS2	②TKY15D	
AJX12R**322AM1645**	★	Y	2	32	17.0	29	20.3	68	45	6	24	M16	2.0	1.5	2	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	JDM○ 1204○○ ZD○R-○○
AJX12R**352AM1645**	★	Y	2	35	17.0	29	23.3	68	45	6	24	M16	2.0	1.5	2	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	
AJX12R**403AM1645**	★	Y	3	40	17.0	29	28.3	68	45	6	24	M16	2.0	1.5	2	TS43	AMS4	AJS4012T15	ASS2	②TKY15D	

*1 Clamp Torque (lbf-in) : TS25=8.9, TS33=8.9, TS351=22, TS407=31, TS43=31, AJS3010T10=22, AJS4012T15=31
*2 Clamp Torque of the Head (lbf-ft) : M8=17.1, M10=33.8, M12=59.2, M16=66.7
*3 Y=Yes

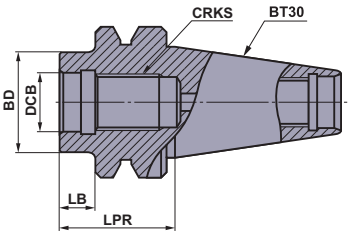
★ : **Inventory maintained in Japan.**

STRAIGHT SHANK ARBOR METRIC Standard



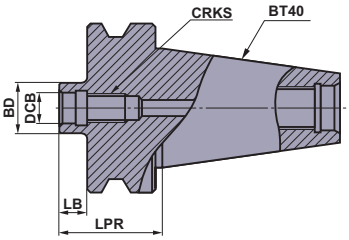
Type	Order Number	Stock	Coolant Thru*1	Dimensions (mm)							*2 WT (kg)
				DCB	DCON	BD	LF	LB	H	CRKS	
STEEL SHANK TYPE	SC16M08S100S	★	Y	8.5	16	14.5	100	10	10	M8	0.1
	SC16M08S200L	★	Y	8.5	16	14.5	200	10	10	M8	0.3
	SC20M10S120S	★	Y	10.5	20	18.5	120	10	14	M10	0.3
	SC20M10S220L	★	Y	10.5	20	18.5	220	10	14	M10	0.5
	SC25M12S125S	★	Y	12.5	25	23.5	125	10	19	M12	0.4
	SC25M12S245L	★	Y	12.5	25	23.5	245	10	19	M12	0.8
	SC32M16S140S	★	Y	17	32	28.5	140	15	24	M16	0.8
	SC32M16S280L	★	Y	17	32	28.5	280	15	24	M16	1.6
CARBIDE SHANK TYPE	SC16M08S100SW	★	Y	8.5	16	14.5	100	10	10	M8	0.2
	SC16M08S200LW	★	Y	8.5	16	14.5	200	10	10	M8	0.5
	SC20M10S120SW	★	Y	10.5	20	18.5	120	10	14	M10	0.5
	SC20M10S220LW	★	Y	10.5	20	18.5	220	10	14	M10	0.9
	SC25M12S125SW	★	Y	12.5	25	23.5	125	10	19	M12	0.8
	SC25M12S245LW	★	Y	12.5	25	23.5	245	10	19	M12	1.5
	SC32M16S140SW	★	Y	17	32	28.5	140	15	24	M16	1.4
	SC32M16S280LW	★	Y	17	32	28.5	280	15	24	M16	2.8

BT30 SHANK ARBOR METRIC Standard



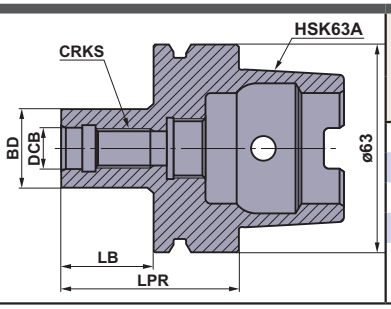
Order Number	Stock	Coolant Thru *1	Dimensions (mm)					*2 WT (kg)
			DCB	BD	LPR	LB	CRKS	
SC16M08S10-BT30	★	Y	8.5	14.5	32	10	M8	0.4
SC20M10S10-BT30	★	Y	10.5	18.5	32	10	M10	0.4
SC25M12S10-BT30	★	Y	12.5	23.5	32	10	M12	0.4
SC32M16S10-BT30	★	Y	17.0	28.5	32	10	M16	0.4

BT40 SHANK ARBOR METRIC Standard



Order Number	Stock	Coolant Thru *1	Dimensions (mm)					*2 WT (kg)
			DCB	BD	LPR	LB	CRKS	
SC16M08S10-BT40	★	Y	8.5	14.5	37	10	M8	1.0
SC20M10S10-BT40	★	Y	10.5	18.5	37	10	M10	1.0
SC25M12S10-BT40	★	Y	12.5	23.5	37	10	M12	1.0
SC32M16S10-BT40	★	Y	17.0	28.5	37	10	M16	1.0

HSK63A SHANK ARBOR METRIC Standard



Order Number	Stock	Coolant Thru *1	Dimensions (mm)					*2 WT (kg)
			DCB	BD	LPR	LB	CRKS	
SC16M08S22-HSK63A	★	Y	8.5	14.5	48	22	M8	0.7
SC20M10S24-HSK63A	★	Y	10.5	18.5	50	24	M10	0.7
SC25M12S27-HSK63A	★	Y	12.5	23.5	53	27	M12	0.7
SC32M16S28-HSK63A	★	Y	17.0	28.5	54	28	M16	0.8

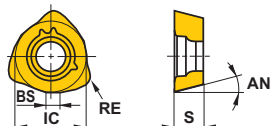
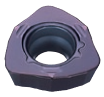
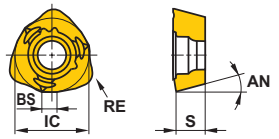
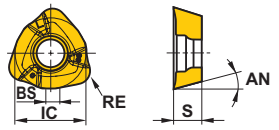
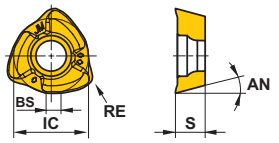
*1 Y=Yes *2 WT : Mass

HIGH FEED RADIUS MILLING CUTTER

INSERTS

Work Material			FH7020	MP6120	MP6130	MP7130	MP7140	MP9120	MP9130	VP15TF	VP30RT
	P	Steel	●	◐	✣					◐	✣
	M	Stainless Steel				◔	✣			◔	✣
	K	Cast Iron	●							✣	
	S	Heat-resistant Alloy, Titanium Alloy						◐	✣	◐	
	H	Hardened Materials								◔	

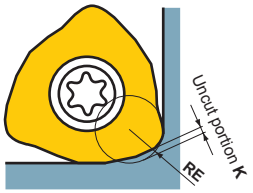
Cutting Conditions :
● : Stable Cutting ◐ : General Cutting ✣ : Unstable Cutting

Shape	Order Number	Class	Coated									Dimensions (inch)					Geometry
			FH7020	MP6120	MP6130	MP7130	MP7140	MP9120 NEW	MP9130 NEW	VP15TF	VP30RT	AN	IC	S	BS	RE	
	**JOMW06T215ZZSR-FT**	M	●	●	●	●	●	●	●	●	●	13°	.250	.109	.047	.059	
	JOMW080320ZZSR-FT	M	●	●	●	●	●	●	●	●	●	13°	.315	.125	.055	.079	
	JDMW09T320ZDSR-FT	M	●	●	●	●	●	●	●	●	●	15°	.375	.156	.071	.079	
	JDMW120420ZDSR-FT	M	●	●	●	●	●	●	●	●	●	15°	.472	.187	.098	.079	
	JDMW140520ZDSR-FT	M	●	●	●	●	●	●	●	●	●	15°	.551	.219	.110	.079	
	**JDMT120420ZDSR-ST**	M	●	●	●	●	●			●	●	15°	.472	.187	.098	.079	
	JDMT140520ZDSR-ST	M	●	●	●	●	●			●	●	15°	.551	.219	.110	.079	
	NEW **JOMT06T216ZZER-JL**	M				●	●	●	●			13°	.250	.109	.047	.063	
	NEW **JOMT080322ZZER-JL**	M				●	●	●	●			13°	.315	.125	.055	.087	
	JDMT09T323ZDER-JL	M				●	●	●	●			15°	.375	.156	.071	.091	
	JDMT120423ZDER-JL	M				●	●	●	●			15°	.472	.187	.098	.091	
	JDMT140523ZDER-JL	M				●	●	●	●			15°	.551	.219	.110	.091	
	**JOMT06T215ZZSR-JM**	M	●	●	●	●	●	●	●	●	●	13°	.250	.109	.047	.059	
	JOMT080320ZZSR-JM	M	●	●	●	●	●	●	●	●	●	13°	.315	.125	.055	.079	
	JDMT09T320ZDSR-JM	M	●	●	●	●	●	●	●	●	●	15°	.375	.156	.071	.079	
	JDMT120420ZDSR-JM	M	●	●	●	●	●	●	●	●	●	15°	.472	.187	.098	.079	
	JDMT140520ZDSR-JM	M	●	●	●	●	●	●	●	●	●	15°	.551	.219	.110	.079	

(Note) Setting heights for ST chipbeaker and the other chipbreakers differ slightly.
If an ST type chipbreaker is used, please check the tool length offset height.

■ = MIRACLE SIGMA

NOTE FOR PROGRAMMING



When using the AJX, please program the approximate radius as indicated.
The approximate uncut portions for the program are as follows.

Insert size	Breaker	Approx. **RE**(inch)	Uncut portion **K**(inch)
JOM○06T2○○ZZ○R-○○	**FT / JM**	.079	.013
	JL	.098	.013
JOM○0803○○ZZ○R-○○	**FT / JM**	.098	.018
	JL	.079	.016
JOM○09T3○○ZD○R-○○	**FT / JM**	.118	.019
	JL	.118	.018
JOM○1204○○ZD○R-○○	**FT / JM / ST**	.118	.025
	JL	.118	.021
JOM○1405○○ZD○R-○○	**FT / JM / ST**	.118	.025
	JL	.118	.022

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

● : Inventory maintained.
(10 inserts in one case)

RECOMMENDED CUTTING CONDITIONS

CUTTING SPEED

	Work Material	Hardness	Cutting speed (SFM) for different grades			
P			FH7020	MP6120	MP6130	VP30RT
	Mild Steel	≤180HB	850 (700—1000)	750 (580—910)	685 (515—845)	620 (450—880)
	Carbon Steel	180—280HB	550 (400—700)	480 (320—630)	415 (255—565)	350 (190—500)
	Alloy Steel	280—350HB	450 (300—600)	350 (190—500)	285 (125—435)	220 (60—370)
	Alloy Tool Steel	≤350HB	450 (300—600)	350 (190—500)	285 (125—435)	220 (60—370)
	Pre-hardened Steel	35—45HRC	—	330 (230—425)	265 (165—360)	200 (100—295)
M			MP7130	MP7140		
	Stainless Steel	≤270HB	450 (300—600)	385 (235—535)	—	—
K			FH7020	VP15TF		
	Gray Cast Iron	Tensile Strength ≤350MPa	850 (700—1000)	—	—	—
	Ductile Cast Iron	Tensile Strength ≤800MPa	—	550 (400—700)	—	—
S			MP9120	MP9130		
	Heat Resistant Alloy	≤350HB	100 (65—130)	80 (65—115)	—	—
	Titanium Alloy	—	165 (130—195)	150 (100—180)	—	—
H			VP15TF			
	Hardened Steel	40—55HRC	230 (165—295)	—	—	—

RECOMMENDED CUTTING CONDITIONS

DEPTH OF CUT/FEED

	Work Material	Hardness	ϕ.625", ϕ.688" (ϕ16mm, ϕ17mm) (Shank type)			ϕ.750", ϕ.875" (ϕ20mm, ϕ22mm) (Shank type)			ϕ.750" (ϕ20mm) (Shank type)		
			AJXU06 Type			AJXU08 Type			AJXU06 Type		
			2 (Number of Teeth)			2 (Number of Teeth)			3 (Number of Teeth)		
			Over-hang (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)	Over-hang (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)	Over-hang (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)
P	Mild Steel	≤180HB	5.5	.031	.031	6.3	.039	.039	6.3	.035	.035
			7.0	.024	.024	8.3	.031	.031	8.3	.028	.028
			8.2	.016	.016	9.4	.024	.024	9.4	.020	.020
	Carbon Steel	180—280HB	5.5	.031	.031	6.3	.039	.039	6.3	.035	.035
			7.0	.024	.024	8.3	.031	.031	8.3	.028	.028
			8.2	.016	.016	9.4	.024	.024	9.4	.020	.020
	Alloy Steel	280—350HB	5.5	.028	.031	6.3	.031	.039	6.3	.028	.035
			7.0	.020	.024	8.3	.024	.031	8.3	.020	.028
			8.2	.012	.016	9.4	.016	.024	9.4	.016	.020
	Alloy Tool Steel	≤350HB	5.5	.028	.031	6.3	.031	.039	6.3	.028	.035
			7.0	.020	.024	8.3	.024	.031	8.3	.020	.028
			8.2	.012	.016	9.4	.016	.024	9.4	.016	.020
	Pre-hardened Steel	≤35HRC	5.5	.028	.028	6.3	.031	.031	6.3	.028	.028
			7.0	.020	.020	8.3	.024	.024	8.3	.020	.020
			8.2	.012	.012	9.4	.016	.016	9.4	.016	.012
M	Stainless Steel	≤270HB	5.5	.031	.028	6.3	.039	.031	6.3	.035	.028
			7.0	.024	.020	8.3	.031	.024	8.3	.028	.020
			8.2	.016	.012	9.4	.024	.016	9.4	.020	.012
K	Gray Cast Iron	Tensile Strength ≤350MPa	5.5	.031	.039	6.3	.039	.047	6.3	.035	.039
			7.0	.024	.031	8.3	.031	.039	8.3	.028	.031
			8.2	.016	.024	9.4	.024	.031	9.4	.020	.024
	Ductile Cast Iron	Tensile Strength ≤450MPa	5.5	.028	.031	6.3	.031	.039	6.3	.028	.035
			7.0	.020	.024	8.3	.024	.031	8.3	.020	.028
			8.2	.012	.016	9.4	.016	.024	9.4	.016	.020
S	Heat Resistant Alloy	≤350HB	5.5	.024	.024	6.3	.031	.024	5.5	.024	.024
			7.0	.016	.016	8.2	.024	.016	7.0	.016	.016
	Titanium Alloy	—	8.2	.012	.012	9.4	.016	.012	8.2	.012	.012
H	Hardened Steel	43—55HRC	5.5	.020	.020	6.3	.020	.024	6.3	.020	.020
			7.0	.016	.012	8.3	.016	.016	8.3	.016	.016
			8.2	.012	.008	9.4	.012	.008	9.4	.012	.008

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

	ϕ1.000", ϕ1.125" (ϕ25mm, ϕ28mm) (Shank type)			**ϕ1.000" (ϕ25mm)** (Shank type)			**ϕ1.250" (ϕ32mm)** (Shank type)			**ϕ1.250" (ϕ32mm)** (Shank type)			**ϕ1.500" (ϕ40mm)** (ϕ1.250"shank)			**ϕ1.500" (ϕ40mm)** (ϕ1.250"shank)		
	AJXU09 Type			AJXU08 Type			AJXU12 Type			AJXU09 Type			AJXU12 Type			AJXU09 Type		
	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 (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)	Over-hang (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)	Over-hang (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)	Over-hang (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)	Over-hang (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)	Over-hang (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)
	6.7	.039	.047	6.7	.035	.039	7.0	.047	.055	7.0	.043	.047	7.0	.047	.055	7.0	.043	.047
	9.0	.031	.039	9.0	.028	.031	9.0	.039	.047	9.0	.035	.039	9.5	.039	.047	9.5	.035	.039
	11.5	.024	.031	11.5	.020	.024	11.0	.031	.039	11.5	.028	.031	12.0	.031	.039	12.0	.028	.031
	6.7	.039	.047	6.7	.035	.039	7.0	.047	.055	7.0	.043	.047	7.0	.047	.055	7.0	.043	.047
	9.0	.031	.039	9.0	.028	.031	9.0	.039	.047	9.0	.035	.039	9.5	.039	.047	9.5	.035	.039
	11.5	.024	.031	11.5	.020	.024	11.0	.031	.039	11.5	.028	.031	12.0	.031	.039	12.0	.028	.031
	6.7	.031	.047	6.7	.028	.039	7.0	.039	.055	7.0	.035	.047	7.0	.039	.055	7.0	.035	.047
	9.0	.024	.039	9.0	.020	.031	9.0	.031	.047	9.0	.028	.039	9.5	.031	.047	9.5	.028	.039
	11.5	.016	.031	11.5	.016	.024	11.0	.024	.039	11.5	.020	.031	12.0	.024	.039	12.0	.020	.031
	6.7	.031	.047	6.7	.028	.039	7.0	.039	.055	7.0	.035	.047	7.0	.039	.055	7.0	.035	.047
	9.0	.024	.039	9.0	.020	.031	9.0	.031	.047	9.0	.028	.039	9.5	.031	.047	9.5	.028	.039
	11.5	.016	.031	11.5	.016	.024	11.0	.024	.039	11.5	.020	.031	12.0	.024	.039	12.0	.020	.031
	6.7	.031	.039	6.7	.028	.035	7.0	.039	.047	7.0	.035	.039	7.0	.039	.047	7.0	.035	.039
	9.0	.024	.031	9.0	.020	.028	9.0	.031	.039	9.0	.028	.031	9.5	.031	.039	9.5	.028	.031
	11.5	.016	.024	11.5	.016	.020	11.0	.024	.031	11.5	.020	.024	12.0	.024	.031	12.0	.020	.024
	6.7	.039	.039	6.7	.035	.035	7.0	.047	.047	7.0	.043	.039	7.0	.047	.047	7.0	.043	.039
	9.0	.031	.031	9.0	.028	.028	9.0	.039	.039	9.0	.035	.031	9.5	.039	.039	9.5	.035	.031
	11.5	.024	.024	11.5	.020	.020	11.0	.031	.031	11.5	.028	.024	12.0	.031	.031	12.0	.028	.024
	6.7	.039	.055	6.7	.035	.047	7.0	.047	.063	7.0	.043	.055	7.0	.047	.063	7.0	.043	.055
	9.0	.031	.047	9.0	.028	.039	9.0	.039	.055	9.0	.035	.047	9.5	.039	.055	9.5	.035	.047
	11.5	.024	.039	11.5	.020	.031	11.0	.031	.047	11.5	.028	.035	12.0	.031	.047	12.0	.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
	9.0	.024	.039	9.0	.020	.031	9.0	.031	.047	9.0	.028	.039	9.5	.031	.047	9.5	.028	.039
	11.5	.016	.031	11.5	.016	.024	11.0	.024	.039	11.5	.020	.031	12.0	.024	.039	12.0	.020	.031
	6.7	.047	.024	6.3	.031	.024	7.0	.047	.024	7.0	.047	.024	7.0	.047	.024	7.0	.047	.024
	9.0	.039	.016	8.2	.024	.016	9.0	.039	.016	9.0	.039	.016	9.5	.039	.016	9.5	.039	.016
	11.5	.031	.012	9.4	.016	.012	11.0	.031	.012	11.5	.031	.012	12.0	.031	.012	12.0	.031	.012
	6.7	.020	.031	6.7	.020	.028	7.0	.024	.039	7.0	.020	.035	7.0	.024	.039	7.0	.020	.035
	9.0	.016	.024	9.0	.016	.020	9.0	.020	.031	9.0	.016	.028	9.5	.020	.031	9.5	.016	.028
	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 breaker is up to .047inch.(09, 12, 14 sizes)

RECOMMENDED CUTTING CONDITIONS

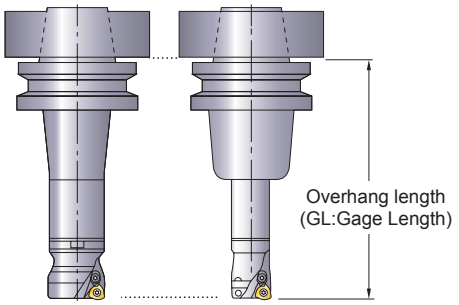
DEPTH OF CUT/FEED

	Work Material	Hardness	ϕ1.500" (ϕ40mm) (ϕ1.500"shank) AJXU12 Type 3 (Number of Teeth)			ϕ2.000" (ϕ50mm) (Shank type) AJXU14 Type 3 (Number of Teeth)			ϕ2.000", ϕ2.500" (ϕ50mm, ϕ63mm) (Arbor type) AJXU12 Type (ϕ2.000") AJXU14 Type (ϕ2.500") 3 or 4 (Number of Teeth)		
			Over-hang (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)	Over-hang (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)	Over-hang (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)
P	Mild Steel	≤180HB	7.0	.047	.059	7.0	.055	.059	6.0	.059	.059
			9.5	.039	.051	9.5	.047	.051	10.0	.051	.051
			12.0	.031	.043	—	—	—	14.0	.043	.043
	Carbon Steel	180—280HB	7.0	.047	.059	7.0	.055	.059	6.0	.059	.059
			9.5	.039	.051	9.5	.047	.051	10.0	.051	.051
			12.0	.031	.043	—	—	—	14.0	.043	.043
	Alloy Steel	280—350HB	7.0	.039	.059	7.0	.047	.059	6.0	.051	.059
			9.5	.031	.051	9.5	.039	.051	10.0	.043	.051
			12.0	.024	.043	—	—	—	14.0	.035	.043
	Alloy Tool Steel	≤350HB	7.0	.039	.059	7.0	.047	.059	6.0	.051	.059
			9.5	.031	.051	9.5	.039	.051	10.0	.043	.051
			12.0	.024	.043	—	—	—	14.0	.035	.043
	Pre-hardened Steel	≤35HRC	7.0	.039	.051	7.0	.047	.051	6.0	.051	.051
			9.5	.031	.043	9.5	.039	.043	10.0	.043	.043
			12.0	.024	.035	—	—	—	14.0	.035	.035
M	Stainless Steel	≤270HB	7.0	.047	.051	7.0	.055	.051	6.0	.059	.051
			9.5	.039	.043	9.5	.047	.043	10.0	.051	.043
			12.0	.031	.035	—	—	—	14.0	.043	.035
K	Gray Cast Iron	Tensile Strength ≤350MPa	7.0	.047	.067	7.0	.055	.067	6.0	.059	.067
			9.5	.039	.059	9.5	.047	.059	10.0	.051	.059
			12.0	.031	.051	—	—	—	14.0	.043	.051
	Ductile Cast Iron	Tensile Strength ≤450MPa	7.0	.039	.059	7.0	.047	.059	6.0	.051	.059
			9.5	.031	.051	9.5	.039	.051	10.0	.043	.051
			12.0	.024	.043	—	—	—	14.0	.035	.043
S	Heat Resistant Alloy	≤350HB	7.0	.047	.024	7.0	.047	.024	6.0	.047	.024
			9.5	.039	.016	9.5	.039	.016	10.0	.039	.016
	Titanium Alloy	—	12.0	.031	.012	—	—	—	14.0	.031	.012
H	Hardened Steel	43—55HRC	7.0	.024	.043	7.0	.031	.043	6.0	.035	.043
			9.5	.020	.035	9.5	.024	.035	10.0	.028	.035
			12.0	.016	.028	—	—	—	—	—	—

	φ2.000", φ2.500" (φ50mm, φ63mm) (Arbor type)			φ3.000", φ4.000", φ4.921", φ6.299" (φ80mm, φ100mm, φ125mm, φ160mm) (Arbor type)			φ3.000", φ4.000" (φ80mm, φ100mm) (Arbor type)		
	AJXU09 Type (φ2.000") AJXU12 Type (φ2.500")			AJXU14 Type AJX14 Type			AJXU12 Type		
	5 (Number of Teeth)			4 or 5 or 6 or 7 or 8 (Number of Teeth)			6 or 7 (Number of Teeth)		
	Over-hang (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)	Over-hang (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)	Over-hang (inch)	Axial Depth of Cut (inch)	Feed per Tooth (IPT)
	6.0	.053	.051	7.0	.059	.059	7.0	.053	.051
	10.0	.046	.043	12.0	.051	.051	12.0	.046	.043
	14.0	.039	.035	18.0	.039	.039	18.0	.035	.031
	6.0	.053	.051	7.0	.059	.059	7.0	.053	.051
	10.0	.046	.043	12.0	.051	.051	12.0	.046	.043
	14.0	.039	.035	18.0	.039	.039	18.0	.035	.031
	6.0	.046	.051	7.0	.051	.059	7.0	.046	.051
	10.0	.039	.043	12.0	.043	.051	12.0	.039	.043
	14.0	.032	.035	18.0	.031	.039	18.0	.028	.031
	6.0	.046	.051	7.0	.051	.059	7.0	.046	.051
	10.0	.039	.043	12.0	.043	.051	12.0	.039	.043
	14.0	.032	.035	18.0	.031	.039	18.0	.028	.031
	6.0	.046	.043	7.0	.051	.051	7.0	.046	.043
	10.0	.039	.035	12.0	.043	.043	12.0	.039	.035
	14.0	.032	.028	18.0	.031	.031	18.0	.028	.024
	6.0	.053	.043	7.0	.059	.051	7.0	.053	.043
	10.0	.046	.035	12.0	.051	.043	12.0	.046	.035
	14.0	.039	.028	18.0	.039	.031	18.0	.035	.024
	6.0	.053	.059	7.0	.059	.067	7.0	.053	.059
	10.0	.046	.051	12.0	.051	.059	12.0	.046	.051
	14.0	.039	.039	18.0	.039	.047	18.0	.035	.035
	6.0	.046	.051	7.0	.051	.059	7.0	.046	.051
	10.0	.039	.043	12.0	.043	.051	12.0	.039	.043
	14.0	.032	.035	18.0	.031	.039	18.0	.028	.031
	6.0	.047	.024	7.0	.047	.024	7.0	.047	.024
	10.0	.039	.016	12.0	.039	.016	12.0	.039	.016
	14.0	.031	.012	18.0	.031	.012	18.0	.031	.012
	6.0	.032	.039	7.0	.035	.043	7.0	.032	.039
	10.0	.025	.031	12.0	.028	.035	12.0	.025	.031
	—	—	—	—	—	—	—	—	—

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

①Overhang length



②Main spindle speed
$N(min^{-1})$=(Recommended cutting speed x 12)÷(outer tool diameter x 3.14)

③Table feed rate
vf(inch/min)=N x feed per tooth x number of teeth

④Recommended width of cut (ae) is more than 60% of cutter diameter.

⑤The above cutting conditions are a 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. For tough applications,MP7140 is recommended.

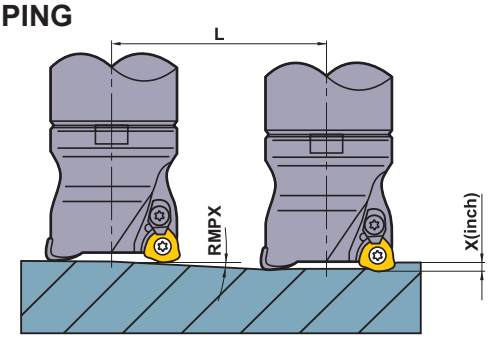
⑦A cutter body with a coarse pitch is recommended for use in unstable conditions such as a long tool overhang.

⑧Use “sharp” JM chipbreaker to lower cutting forces or when there is a long tool overhang.

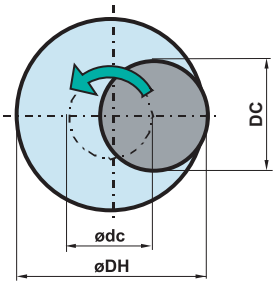
⑨Large chips are generated when machining with the AJX. To avoid chip jamming-related problems, machine using an air blow to disperse the chips effectively.

MAXIMUM CAPACITIES BY MODE

RAMPING



HELICAL CUTTING



- How to calculate the theoretical center of the tool path.

$$\text{ødc} = \text{øDH} - \text{DC}$$

ødc: Theoretical center of the tool
øDH: Desired hole diameter
DC: Cutting edge diameter

- Please set the depth of cut per cycle under max. depth of cut (APMX).
- Please machine in a down cutting direction (climb milling).

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

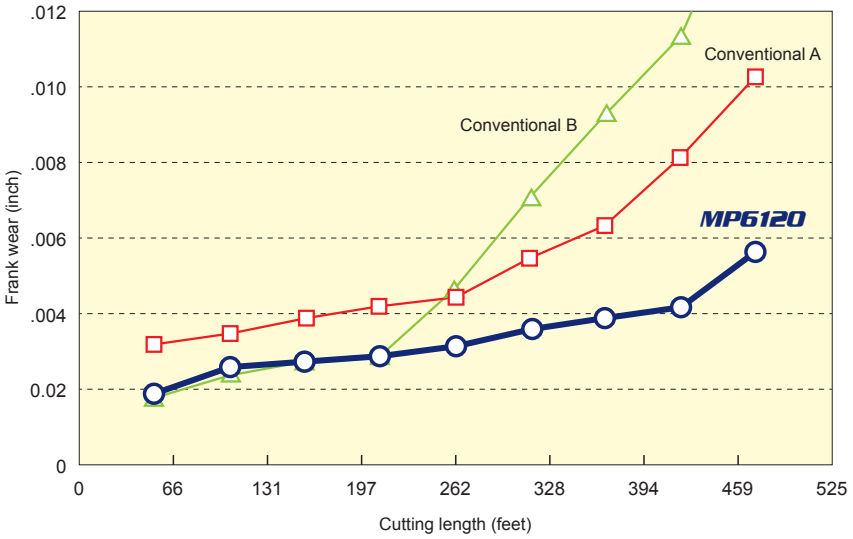
	Holder Type	Tool Diameter (inch)	Width of Face Cut (inch)	Max. Depth of Cut **APMX** (inch)		Ramp machining					Helical Cutting		Max. Drilling Depth **AZ** (inch)
						RMPX	Required "L" distance for "Z" inch depth (inch)				Min. Hole Diameter (inch)	Max. Hole Diameter (inch)	
				FT/JM/ ST	JL		Z=.039	Z=.047	Z=.059	Z=.079			
Shank Type	**AJXU06R102**	.63	.34	.039	.024	3.0°	.744	—	—	—	.90	1.13	.012
	AJXU**06R112**	.69	.40	.039	.024	2.5°	.893	—	—	—	1.02	1.26	.012
	AJXU**06R123**	.75	.47	.039	.024	1.7°	1.314	—	—	—	1.15	1.38	.012
	AJXU**08R122**	.75	.41	.059	.035	3.5°	.638	.768	.965	—	.99	1.34	.020
	AJXU**08R142**	.88	.53	.059	.035	3.0°	.744	.897	1.126	—	1.24	1.59	.020
	AJXU**08R163**	1.00	.66	.059	.035	2.0°	1.117	1.346	1.690	—	1.49	1.84	.020
	AJXU**09R162**	1.00	.59	.079	.047	4.0°	.558	.672	.844	1.130	1.33	1.84	.039
	AJXU**09R182**	1.13	.72	.079	.047	3.0°	.744	.897	1.126	1.507	1.58	2.09	.039
	AJXU**09R203**	1.25	.85	.079	.047	3.3°	.676	.815	1.023	1.370	1.83	2.34	.039
	AJXU**09R244**	1.50	1.11	.079	.047	2.4°	.931	1.121	1.408	1.885	2.33	2.84	.039
	AJXU**12R202**	1.25	.79	.079	.047	4.0°	.558	.672	.844	1.130	1.59	2.34	.059
	AJXU**12R243**	1.50	1.04	.079	.047	3.0°	.744	.897	1.126	1.507	2.09	2.84	.059
	AJXU**14R323**	2.00	1.53	.079	.047	4.2°	.531	.640	.803	1.076	2.90	3.84	.079
Arbor Type	**AJXU09R02**	2.00	1.61	.079	.047	1.1°	2.031	2.448	3.073	4.114	3.33	3.84	.039
	AJXU**12R02**	2.00	1.54	.079	.047	2.0°	1.117	1.346	1.690	2.262	3.09	3.84	.059
	AJXU**12R2505**	2.50	2.04	.079	.047	1.5°	1.489	1.795	2.253	3.017	4.09	4.84	.059
	AJXU**12R0306**	3.00	2.54	.079	.047	1.2°	1.862	2.244	2.817	3.771	5.09	5.84	.059
	AJXU**12R0407**	4.00	3.54	.079	.047	.8°	2.793	3.366	4.225	5.658	7.09	7.84	.059
	AJXU**14R25**	2.50	2.03	.079	.047	2.8°	.797	.961	1.206	1.615	3.90	4.84	.079
	AJXU**14R03**	3.00	2.53	.079	.047	1.8°	1.241	1.496	1.877	2.514	4.90	5.84	.079
	AJXU**14R04**	4.00	3.53	.079	.047	1.2°	1.862	2.244	2.817	3.771	6.90	7.84	.079
	AJX14RA125	4.92	4.53	.079	.047	.8°	2.793	3.366	4.225	5.658	8.74	9.68	.079
	AJX**14RA160**	6.30	5.83	.079	.047	.5°	4.469	5.386	6.761	9.053	11.50	12.44	.079

Memo

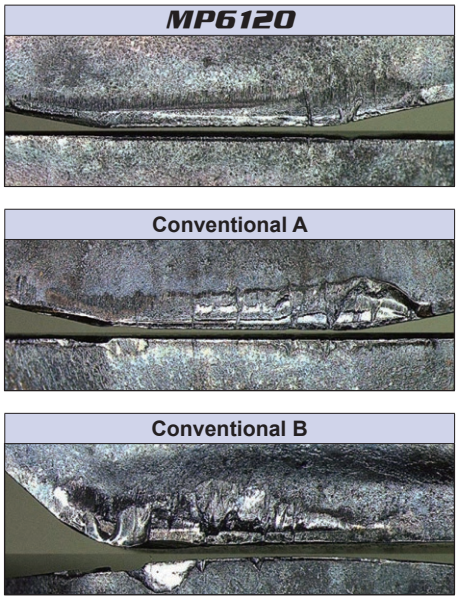
Cutting Performance

General steel machining

MP6120 provides superior resistance to thermal cracking and welding



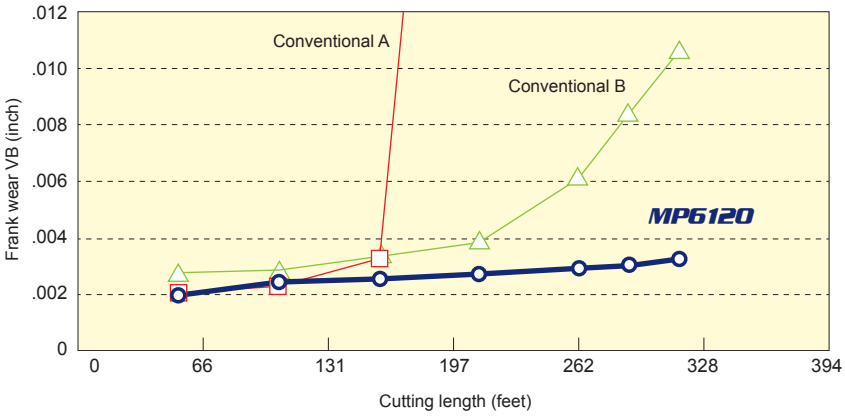
<Cutting conditions>
Tool : AJX14-063A04R
Insert : JDMT140520ZDSR-JM
Cutting speed : 655 SFM
Feed per tooth : .059 IPT
Depth of cut : ap=.039 inch ae=1.97 inch
Cutting mode : Dry



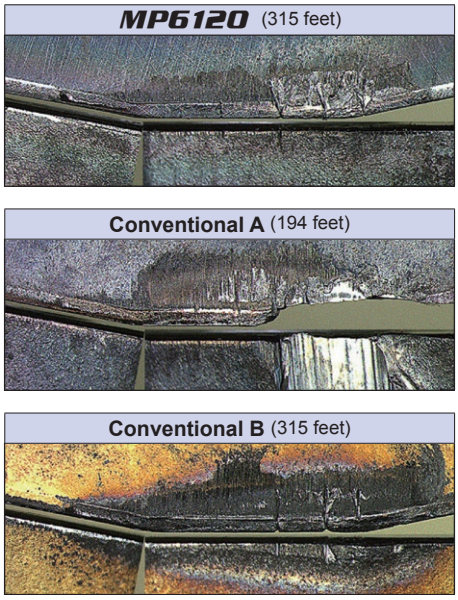
Cutting length : 459.3 feet

MP6120 achieves long tool life in low to middle speed cutting

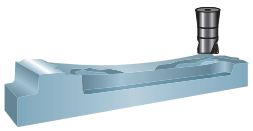
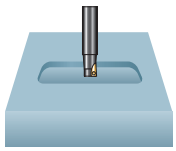
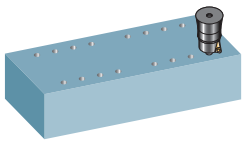
CVD coated FH7020 is recommended for higher speeds that exceed 655 SFM.

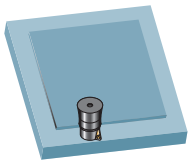
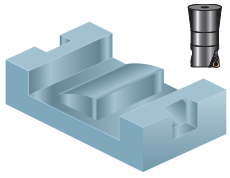
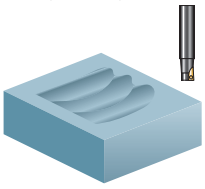


<Cutting conditions>
Work material : AISI 4140
Tool : AJX14-063A04R
Insert : JDMW140520ZDSR-FT
Cutting speed : 655 SFM
Feed per tooth : .059 IPT
Depth of cut : ap=.039 inch ae=1.969 inch
Cutting mode : Dry

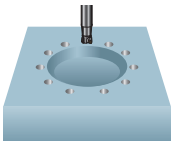
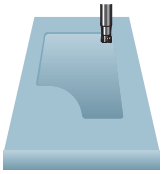
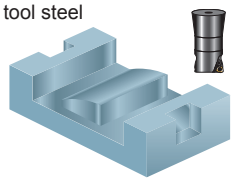


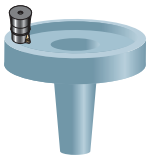
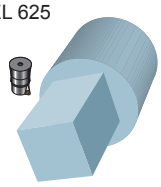
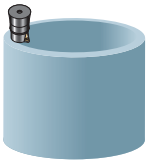
APPLICATION EXAMPLES

Tool (Grade)		AJXU14R2504C FT breaker (FH7020)	AJXU06R112FA10S FT breaker (VP15TF)	AJXU14R0304C ST breaker (FH7020)
Workpiece		AISI 1055 (220HB) 	ATSM H13 (40HRC) 	AISI 1049 (200HB) 
Component		Resin mold	Resin mold (Pocketing for bushes)	Resin mold
Cutting speed		589 SFM (900 RPM)	504 SFM (2800 RPM)	471 SFM (600 RPM)
Feed		160 IPM (.045 IPT)	157 IPM (.028 IPT)	192 IPM (.08 IPT)
Depth of Cut (inch)	**ap** (Axial)	.060	.020	.060
	ae (Radial)	1.8	.315	2.0
Overhang length (inch)		9.8	7.0(GL)	8.4(GL)
Cutting mode		Air blow	Air blow	Air blow
Result		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 pocketing, 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 un-manned machining possible.

Tool (Grade)		AJXU14R0406E FT breaker (VP30RT)	AJXU14R0305C FT breaker (FH7020)	AJXU12R243WA20S ST breaker (VP15TF)
Workpiece		304SS (200HB) 	Cast iron, Class45 	ASTM H13 (50HRC) 
Component		Electronics part manufacturing device component	Press mold	Forging mold
Cutting speed		419 SFM (400 RPM)	628 SFM (800 RPM)	190 SFM (490 RPM)
Feed		100 IPM (.042 IPT)	160 IPM (.040 IPT)	47 IPM (.032 IPT)
Depth of Cut (inch)	**ap** (Axial)	.040	.080	.040
	ae (Radial)	2.4	2.1	1.2
Overhang length (inch)		5.4 (GL)	11.7 (GL)	7.9 (GL)
Cutting mode		Wet	Air blow	Air blow
Result		Although the work was a thin stainless plate, the AJX displayed stable cutting performance without suffering from vibrations. The AJX achieved 3 times 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.

APPLICATION EXAMPLES

Tool (Grade)		AJX09R162WA16S JM breaker (FH7020)	AJXU08R122WA12S FT breaker (VP15TF)	AJX14R10006D JM breaker (MP6120)
Workpiece		ASTM52100 	P20 (45HRC) 	Alloy tool steel 
Component		Automotive part	Die casting mold	Press mold
Cutting Speed		600 SFM (2300 RPM)	196 SFM (1000 RPM)	330 SFM (320 RPM)
Feed		184 IPM (.040 IPT)	64 IPM (.032 IPT)	46 IPM (.024 IPT)
Depth of Cut (inch)	**ap** (Axial)	.039	.039	.059
	ae (Radial)	.710	.35	2.756
Overhang length (inch)		3.8(GL)	4.2(GL)	3.150
Cutting mode		Air blow	Air blow	Air blow
Result		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 twice longer tool life compared to conventional product.

Tool (Grade)		AJX12R08006D JL breaker (MP9130)	AJX12-080A06R JL breaker (MP9120)	AJX12-080A06R JL breaker (MP9130)
Workpiece		Co-Cr Alloy 	INCONEL 625 	Ti-6Al-4V 
Component		Medical component	Aerospace component	Aerospace component
Cutting Speed		165 SFM (240 RPM)	115 SFM (140 RPM)	165 SFM (240 RPM)
Feed		34.0 IPM (.024 IPT)	19.7 IPM (.024 IPT)	17.9 IPM (.015 IPT)
Depth of Cut (inch)	**ap** (Axial)	.02	.031	.04
	ae (Radial)	2.36	2.56	1.97
Overhang length (inch)		—	—	—
Cutting mode		Wet	Wet	Wet
Result		The reduced wear displayed by MP9130 grade with JL breaker gave an increase in efficiency of 40%.	JL breaker + MP9120 achieves 1.5 times longer tool life compared to conventional products.	The increased tool life and reduced wear displayed by MP9130 grade with JL breaker 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.

For your safety
●Don't touch breakers and chips without gloves. ●Please machine within recommended application range, and exchange expired tools with new parts in advance. ●Please use safety cover and wear safety glasses. ●When using compounded cutting oils, please take fire prevention. ●When attaching chips or spare parts, please use the attached wrench or driver. ●When using tools in revolution machining, please make a trial run to check run-out, vibration, abnormal sounds etc.

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(Tools specifications subject to change without notice.)

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