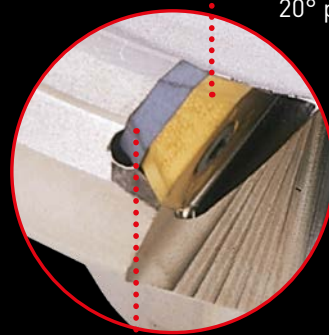


ASX SERIES

FOR STABLE FACE MILLING AND STABLE SHOULDER MILLING EVEN UNDER HEAVY CUTTING CONDITIONS



STABLE FACE MILLING UNDER HIGH-LOAD CONDITIONS



Precision inexpensive
moulded type
20° positive insert

High rigidity due
to carbide shim



Shank type

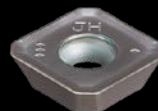
A wide range of chipbreakers



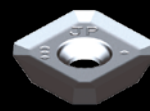
JL BREAKER



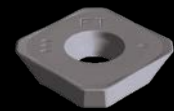
JM BREAKER



JH BREAKER



JP BREAKER



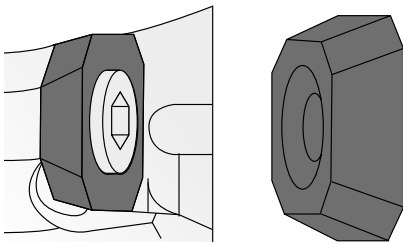
FT BREAKER

ASX 445

FEATURES

STABLE, LONG TOOL LIFE, HIGH ACCURACY BODY

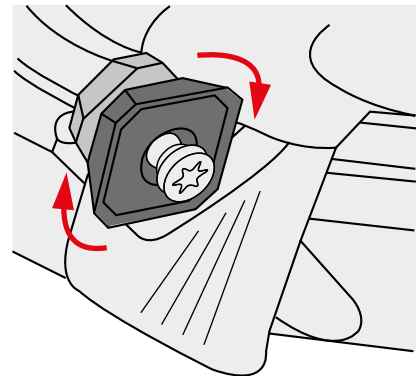
A carbide shim with Mitsubishi's proprietary Anti-Fly Insert (AFI) mechanism provides excellent insert location characteristics, permitting stable cutting even under high load conditions.



The cutter body is made from a special alloy that provides high strength at high temperature. A special surface treatment improves the corrosion resistance.



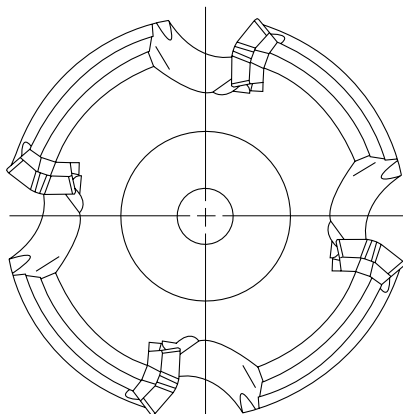
The ASX cutter uses screw-on type inserts that allow easy clamping of the inserts with high location precision. Indexing of the inserts can be performed without completely removing the screw.



EFFECTIVE FOR VARIOUS MACHINING APPLICATIONS

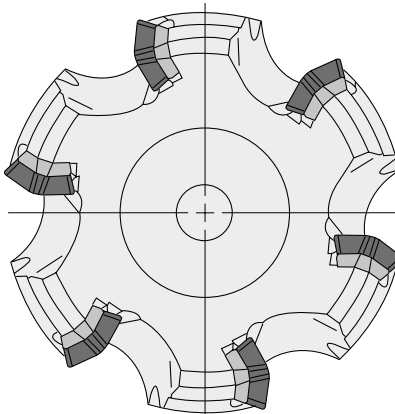
Coarse Pitch Type

1. 1st recommendation for cutting steels and stainless steels.
2. For deep cutting and high feed rates with large-volume chip discharge.
3. Smooth cutting allows longer overhang applications.



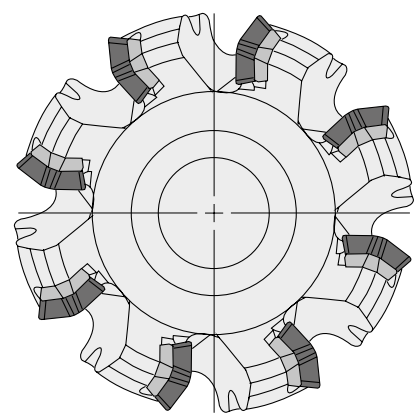
Fine Pitch Type

1. 1st recommendation for cast iron, hardened steel and heat-resistant alloys.
2. For shallow cutting with low feed rates and low-volume chip discharge.



Extra Fine Pitch Type

1. 1st recommendation for cast iron.
2. For cutting operations where chip discharge volume is small and high table feed is desired.

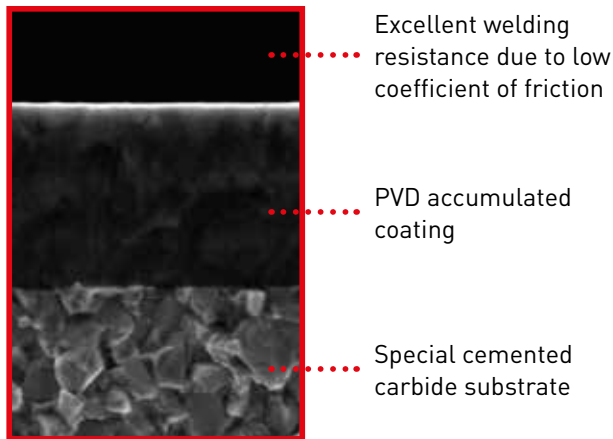


ASX 445

INSERT GRADES FOR A WIDE RANGE OF MATERIALS

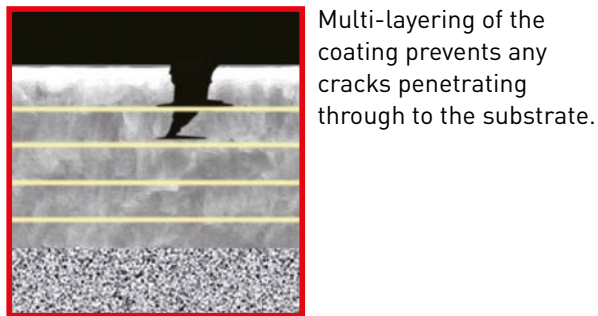
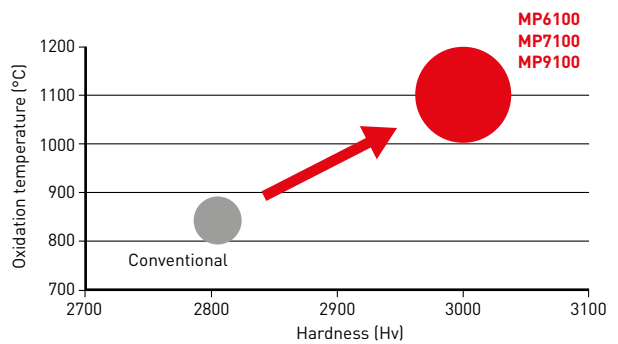
MP6100, MP7100, MP9100 – WITH ACCUMULATED (Al,Ti,Cr,)N BASED PVD COATING

PVD coatings have properties such as toughness, low coefficient of friction and excellent welding, wear and heat resistance. This results in tough, precision grades such as MP6100, MP7100 and MP9100.



TOUGH-Σ Technology

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



* Graphical representation

ASX 445

INSERT GRADES FOR A WIDE RANGE OF MATERIALS

P	CVD	PVD	M	CVD	PVD	K	CVD	S	PVD	H	PVD
P10	MV1020	MP6120	M10			K10		S10		H10	
P20	MV1030	MP6130	M20	MV1030	MP7130	K20	MC5020	S20	MP9120	H20	
P30		MX3030	M30		MP7140	K30	MV1020	S30	MP9130	H30	VP15TF
P40			M40		VP15TF	K40	MV1030	S40	VP15FT	H40	

* When machining steel or stainless steel where the emphasis is on surface finish, use cermet grade NX4545.
 Stable Cutting: Continuous cutting, constant depth of cut, pre-machined securely clamped component cutting.
 Unstable Cutting: Heavy interrupted, irregular depth of cut, low clamping rigidity cutting.

MV1020

This grade has advanced wear and thermal shock resistance and also achieves stable cutting at unprecedented cutting speeds, especially when machining steel and ductile cast iron, thus greatly reducing work time.

MV1030

The new Al-Rich coating also provides excellent wear resistance. An unprecedented performance against sudden breakage was also realised especially during problematic wet cutting and when machining stainless steels.

MP6120

For general milling of steel.

MP6130

For interrupted milling of steel.

MP7130

For general milling of stainless steel.

MP7140

For unstable milling of stainless steel.

MC5020

For general milling of cast iron.

MP9120

For general milling of HRSA and titanium alloy.

MP9130

For interrupted and general milling of HRSA and Titanium alloy.

MX3030

For finishing.

TF15



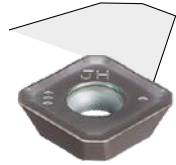
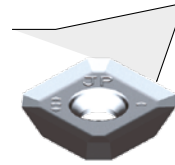
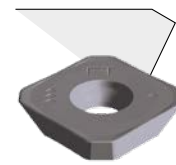
For general milling of aluminium.

VP15TF

For stable machining when the coating is combined with a high wear and fracture resistant carbide substrate.

ASX 445

CHIPBREAKERS FOR A WIDE RANGE OF APPLICATIONS

JL BREAKER	JM BREAKER	JH BREAKER	JP BREAKER	FT BREAKER
Finish to light cutting breaker	Light to semi-heavy cutting breaker	Medium to heavy cutting breaker	Aluminum alloy cutting breaker	Rough cutting for cast iron breaker
				
High accuracy insert with ground-finished periphery. Large rake angle leading to low cutting resistance.	High accuracy M class insert. For a wide range of workpiece materials and cutting conditions.	High accuracy M class insert. Strong cutting edge for high fracture resistance.	High accuracy insert with ground-finished periphery. Large rake angle and mirror-finished rake face for sharp cutting performance and high welding resistance.	High M class inserts. Higher fracture-resistant flat-top inserts.
Workpiece rigidity is low	General cutting	Interrupted cutting Scaling	General cutting of aluminum alloy	For rough accuracy machining of scaled cast iron

MV1000 SERIES

COATED CARBIDE GRADE FOR MILLING

ADVANCED WEAR RESISTANCE

By adopting the newly developed Al-Rich coating technology, the (Al,Ti)N with a high Al content ratio displays very high hardness. This greatly improves oxidation and wear resistance.

ADVANCED THERMAL SHOCK RESISTANCE

The extreme heat resistance of this new series achieves amazing stability, not only during dry cutting, but also when wet cutting where inserts are usually prone to thermal cracking.



..... **EXCELLENT WELDING RESISTANCE**

Smooth surface.

..... **OUTSTANDING WEAR RESISTANCE**

Newly developed Al-Rich coating.

..... **EXCELLENT CHIPPING RESISTANCE FOR STABLE MACHINING**

Newly developed bonding layer.

..... **FRACTURE RESISTANCE FOR THE ULTIMATE STABILITY**

Exclusive cemented carbide substrate.

Graphical representation



MX3030

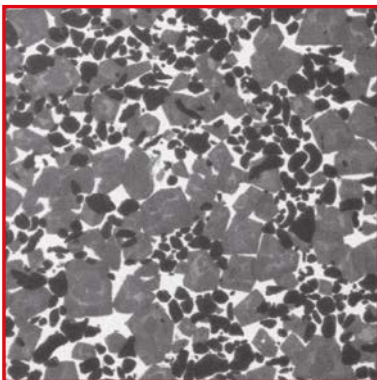
NEW CERMET GRADE FOR A WIDER RANGE OF APPLICATIONS

Enables excellent surface finishes even at high efficiency machining conditions.

IMPROVED MACHINING EFFICIENCY BY MAINTAINING EXCELLENT SURFACE FINISHES EVEN AT LARGE DEPTHS OF CUT

Cermet has a low affinity with iron, excellent thermal stability and oxidation resistance, and is therefore a suitable grade for finishing. However, it does not have the same bonding strength as cemented carbide thereby creating the challenge to compensate for fracture resistance.

MX3030 solves the challenge with higher thermal conductivity than conventional products and has excellent thermal cracking resistance. Therefore, it is possible to suppress wear and maintain high quality surface finishes. Also, since MX3030 has excellent toughness, improved machining efficiency even at large depths of cut can be realised.



MX3030

A special alloy is used for the binder material

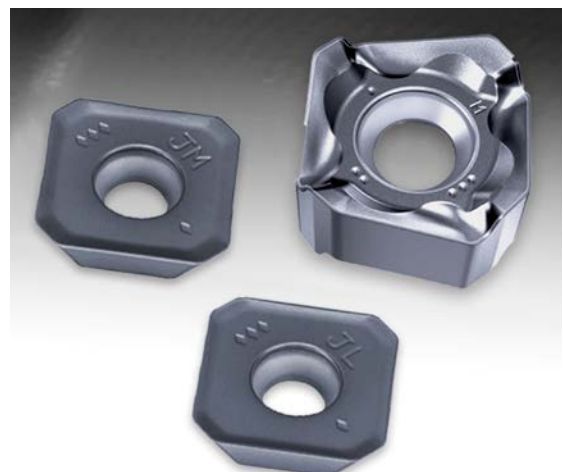


Fracture resistance properties increased

High hardness Ti compound particles are used in the substrate



High wear resistance properties

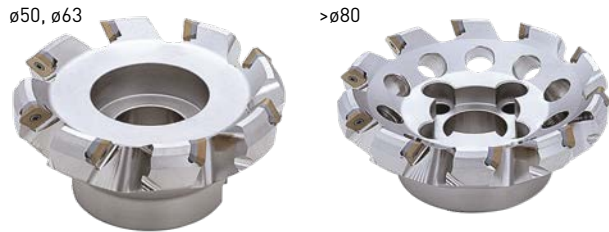


ASX 445

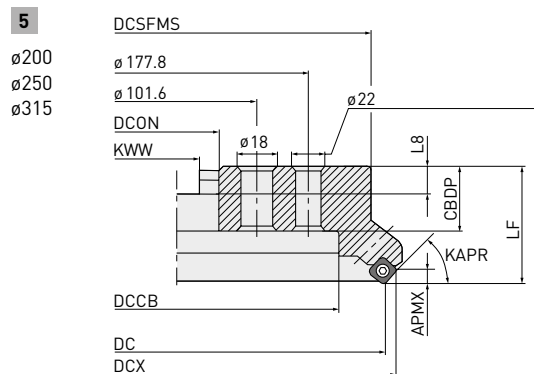
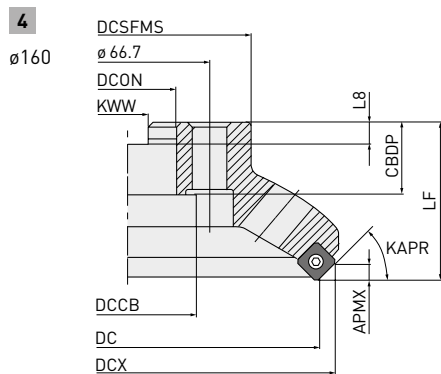
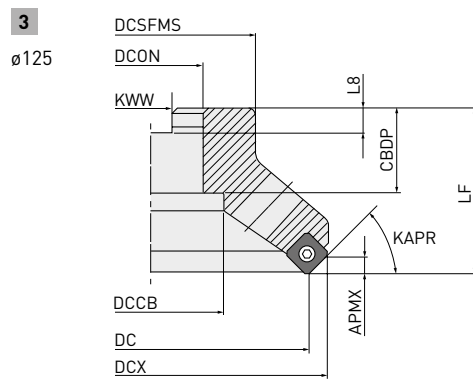
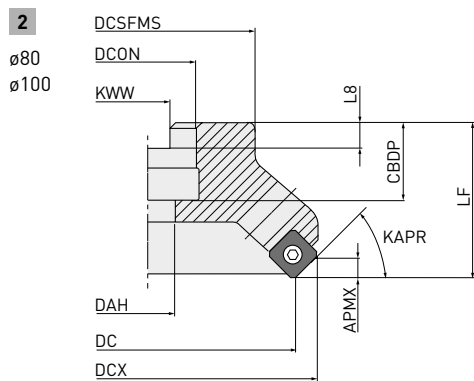
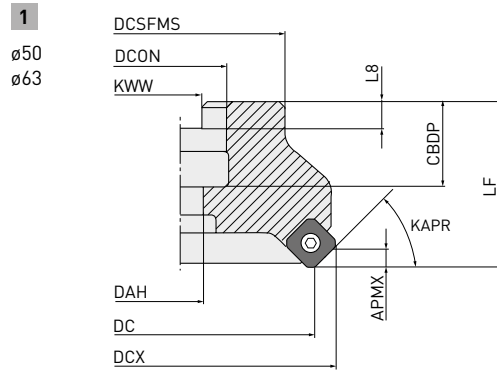


ARBOR TYPE

P **M** **K** **N** **S** **H**



KAPR : 45°
 GAMP : +20° - +23°
 GAMF : -13° - -10°



Right hand tool holder only.

ASX 445 – ARBOR TYPE

Order number	Stock		CICT	APMX	DC	DCON	DCX	LF	CBDP	DAH	DCCB	DCSFMS	KWW	L8	WT	Type
	R	L														
COARSE PITCH																
ASX445-050A03R	●		3	6	50	22	63.0	40	20	11	—	45	10.4	6.3	0.5	1
ASX445-063A04R	●		4	6	63	22	75.9	40	20	11	—	50	10.4	6.3	0.7	1
ASX445-080A04R	●		4	6	80	27	93.2	50	23	13	—	56	12.4	7	1.0	2
ASX445-100A05R	●		5	6	100	32	113.2	50	26	17	—	70	14.4	8	1.6	2
ASX445-125B06R	●		6	6	125	40	138.0	63	32	—	56	80	16.4	9	2.4	3
ASX445-160C07R	●		7	6	160	40	173.0	63	29	—	56	100	16.4	9	3.9	4
ASX445-200C08R	★		8	6	200	60	212.9	63	32	—	135	155	25.7	14.22	6.7	5
ASX445-250C10R	★		10	6	250	60	262.9	63	32	—	174	200	25.7	14.22	10.5	5
ASX445-315C14R	★		14	6	315	60	327.9	80	57	—	256.8	285	25.7	14.22	22.4	5
FINE PITCH																
ASX445-050A04R	●		4	6	50	22	63.0	40	20	11	—	45	10.4	6.3	0.4	1
ASX445-063A05R	●		5	6	63	22	75.9	40	20	11	—	50	10.4	6.3	0.6	1
ASX445-080A06R/L	●	□	6	6	80	27	93.2	50	23	13	—	56	12.4	7	0.9	2
ASX445-100A07R/L	●	□	7	6	100	32	113.2	50	26	17	—	70	14.4	8	1.5	2
ASX445-125B08R/L	●	□	8	6	125	40	138.0	63	32	—	56	80	16.4	9	2.3	3
ASX445-160C10R	●		10	6	160	40	173.0	63	29	—	56	100	16.4	9	3.6	4
ASX445-200C12R/L	●	□	12	6	200	60	212.9	63	32	—	135	155	25.7	14.22	5.8	5
ASX445-250C14R/L	★	□	14	6	250	60	262.9	63	32	—	174	200	25.7	14.22	10.6	5
ASX445-315C18R/L	★	□	18	6	315	60	327.9	80	57	—	256.8	285	25.7	14.22	22.2	5
EXTRA FINE PITCH																
ASX445-050A05R	●		5	6	50	22	63.0	40	20	11	—	45	10.4	6.3	0.4	1
ASX445-063A06R	●		6	6	63	22	75.9	40	20	11	—	50	10.4	6.3	0.6	1
ASX445-080A08R	●		8	6	80	27	93.2	50	23	13	—	56	12.4	7	0.9	2
ASX445-100A10R/L	●	□	10	6	100	32	113.2	50	26	17	—	70	14.4	8	1.5	2
ASX445-125B12R	●		12	6	125	40	138.0	63	32	—	56	80	16.4	9	2.3	3
ASX445-160C16R	●		16	6	160	40	173.0	63	29	—	56	100	16.4	9	3.6	4
ASX445-200C20R	★		20	6	200	60	212.9	63	32	—	135	155	25.7	14.22	6.5	5
ASX445-250C24R	★		24	6	250	60	262.9	63	32	—	174	200	25.7	14.22	10.3	5
ASX445-315C28R	★		28	6	315	60	327.9	80	57	—	256.8	285	25.7	14.22	21.8	5

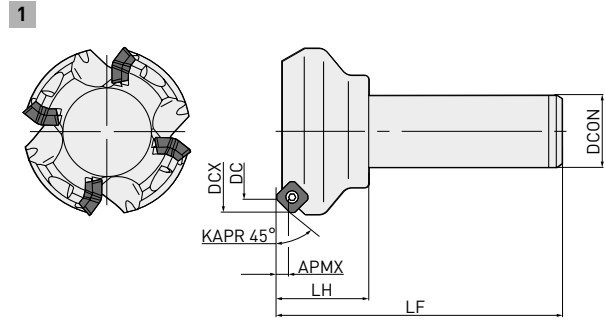
1/1



ASX 445



SHANK TYPE



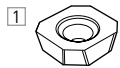




Right hand tool holder only.

Order number	Stock	CICT	APMX	DC	DCON	DCX	LF	LH
	R							
ASX445R503S32	★	3	6	50	32	63.0	125	40
ASX445R634S32	★	4	6	63	32	75.9	125	40

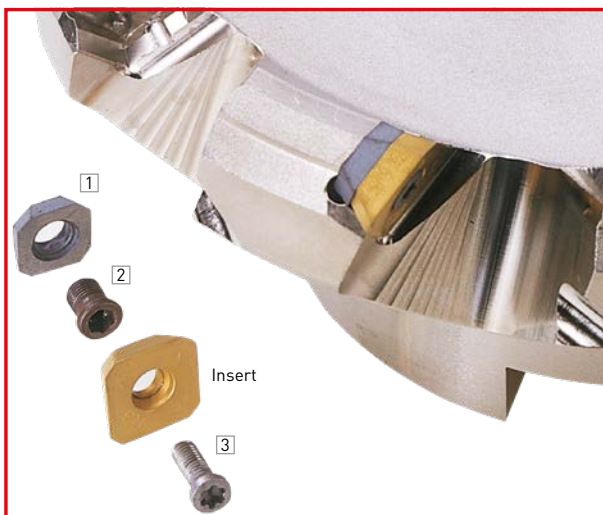
1/1



SPARE PARTS

Tool holder type					
	Shim	Shim screw	Clamp screw	Wrench (Insert)	Wrench (Shim)
ASX445	STASX445N	WCS503507H	TPS35	TIP15T	HKY35R

* Clamp torque (N • m): WCS503507H = 5.0, TPS35 = 3.5



- Wrench:**
 The ASX445 uses a TORXPLUS clamp screw. The attached wrench is for the exclusive use of this screw.
 To ensure the effectiveness of TORXPLUS only use the attached wrench.
- Hexagonal wrench:**
 The attached hexagonal wrench is for use with the seat and the shim. The wrench size is 3.5 mm.
- Spare Parts:**
 Only use the original parts that were supplied when purchased. If other parts are used the performance and safety can not be assured.

ASX 445

INSERTS

Order number	Class	Honing	F7030	MC5020	MP6120	MP6130	MP7130	MP7140	MP9120	MP9130	MV1020	MV1030	MX3030	VP15TF	VP30RT	VP45N	NX4545	HTi10	IC	S	BS	RE	Geometry
SEET13T3AGEN-JL	E	E	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	13.4	3.97	1.9	1.5	
SEMT13T3AGSN-JM	M	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	13.4	3.97	1.9	1.5	
SEMT13T3AGSN-JH	M	S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	13.4	3.97	1.9	1.5	
SEMT13T3AGSN-FT	M	S	●								●	●							13.4	3.97	1.9	1.5	
SEGT13T3AGFN-JP	G	F																●	13.4	3.97	2.2	—	

Cutting conditions :

● : Stable cutting ● : General cutting

✦ : Unstable cutting

Honing:

E: Round F: Sharp edge S: Chamfer + round

T: Chamfer Z: Stable

Geometry
Right hand insert only.

*Instructions for use of the JP breaker

1. The JP breaker has sharp cutting edges. Wear gloves when handling.
2. When machining aluminium alloy, welding to the cutting edge tends to occur, often leading to insert failure.
3. Wet cutting is recommended.

ASX 445

INSERTS

WIPER INSERTS

P	Steel	●	●	●	●	●	●	●	●	●	●	Cutting conditions : ●: Stable cutting ●: General cutting ✖: Unstable cutting Honing: E: Round F: Sharp edge S: Chamfer + round T: Chamfer Z: Stable
M	Stainless steel	●	●	●	●	●	●	●	●	●	●	
K	Cast iron	●	✖	●	●	●	●	●	●	●	●	
N	Non-ferrous material	●	●	●	●	●	●	●	●	●	●	
S	Heat resistant alloy, Titanium	●	●	●	●	●	●	●	●	●	●	
H	Hardened steel	●	●	●	●	●	●	●	●	●	●	

Order number	Class	Honing	MC5020	VP15TF	NX2525	VP25N	HT105T	MB710	MD220	L	LE	W1	S	BS	RE	Geometry
WEEW13T3AGER8C	E	E	●	●			●			16.6	—	16.48	3.97	7.5	1.5	
WEEW13T3AGTR8C	E	T			●	●				16.6	—	16.48	3.97	7.5	1.5	
WEEW13T3AGFR3C	E	F						●		16.6	1.8	16.48	3.97	3.0	1.5	
WEEW13T3AGTR3C	E	T					●			16.6	1.8	16.48	3.97	3.0	1.5	

1/1

1. Wiper inserts are single-cornered.
2. CBN grade MB710 is for cast iron.
3. PCD grade MD220 is for aluminium alloy.



INSTRUCTIONS FOR USE OF WIPER INSERTS



Fig.1









Fig.2

1. These wiper inserts are single-cornered.
2. Install the insert so that the cutting edge is located as shown in Fig. 1.
Do not install the wiper insert as shown in Fig. 2. (The insert may be damaged by a too heavy cutting load.)
3. Recommended depth of cut is $a_p = 0.2 - 0.5$ (mm). (Be aware of the cutting load if the depth of cut is over the recommendation.)
4. The major cutting edge of a wiper insert is set further inside than a standard insert.
This is to prevent heavy loads on the wiper insert. (To prevent fracture set the feed under 0.2 mm/t.)
5. Excellent finished surface can be obtained with one wiper insert.
6. When the feed per revolution is larger than the width of the wiper edge, install 2 or more wiper inserts equally spaced inside the cutting body.

ASX 445

RECOMMENDED CUTTING CONDITIONS

Material	Properties	Grade	Vc						
				ft		ft		ft	
P Mild steel	≤180HB	MV1020	300 [200-400]	0.15 [0.1-0.2]	JL	0.2 [0.1-0.3]	JM	0.3 [0.2-0.4]	JH
		F7030	280 [210-350]						
		MV1030	275 [200-350]						
		MP6120	250 [200-300]						
		VP15FT	250 [200-300]						
		MP6130	240 [190-290]						
		VP30RT	230 [180-280]						
		MX3030	180 [130-250]						
NX4545	180 [130-230]	—	—						
P Carbon steel Alloy steel	180-280HB	MV1020	260 [170-350]	0.15 [0.1-0.2]	JL	0.2 [0.1-0.3]	JM	0.3 [0.2-0.4]	JH
		F7030	250 [200-300]						
		MV1030	235 [170-300]						
		MP6120	220 [170-270]						
		VP15FT	220 [170-270]						
		MP6130	200 [150-230]						
		VP30RT	150 [120-180]						
		MX3030	150 [120-180]						
NX4545	150 [120-180]	—	—						
M Stainless steel	≤270HB	MV1020	180 [100-250]	0.15 [0.1-0.2]	JL	0.2 [0.1-0.3]	JM	0.3 [0.2-0.4]	JH
		F7030	180 [130-230]						
		MV1030	165 [100-230]						
		MP6120	140 [100-180]						
		VP15FT	140 [100-180]						
		MP6130	120 [90-150]						
		VP30RT	100 [80-160]						
		MX3030	100 [80-160]						
NX4545	100 [80-160]	—	—						
K Cast iron Ductile cast iron	Tensile strength <450MPa	MP7130	220 [170-270]	0.15 [0.1-0.2]	JL	0.2 [0.1-0.3]	JM	0.3 [0.2-0.4]	JH
		MV1030	220 [170-270]						
		VP15TF	200 [150-250]						
		MP7140	200 [150-250]						
		VP30RT	200 [150-250]						
		MX3030	150 [120-180]						
		NX4545	150 [120-180]						
		MV1020	240 [130-350]						
MC5020	200 [150-250]	—	—						
MV1030	190 [130-250]	0.15 [0.1-0.2]	JL						
VP15TF	180 [130-250]	0.15 [0.1-0.2]	JL						
MX3030	130 [100-160]	0.15 [0.1-0.2]	JL						
MV1020	220 [80-350]	0.15 [0.1-0.2]	JL						
MV1030	110 [80-150]	0.15 [0.1-0.2]	JL						
MC5020	110 [80-150]	—	—						
N Aluminium alloy	—	HTi10	650 [300-1000]	0.15 [0.1-0.2]	JP	0.2 [0.1-0.3]	JP	0.3 [0.2-0.4]	JP
S Titanium alloy Heat resistant alloy	—	MP9120	50 [40- 60]	0.15 [0.1-0.2]	JL	0.2 [0.1-0.3]	JM	0.3 [0.2-0.4]	JH
		VP15TF	50 [40- 60]						
		MP9130	45 [30- 55]						
		MP9120	40 [20- 50]						
		VP15TF	40 [20- 50]						
MP9130	35 [15- 45]								
H Hardened Steel	40-55HRC	VP15TF	80 [60-100]	0.10 [0.05-0.15]		0.15 [0.1-0.2]		0.2 [0.1-0.3]	

1. Revolution (min⁻¹) = (1000 x Cutting Speed) u (3.14 x DC)
 2. Table Feed (mm/min) = Feed per Tooth x Number of Teeth x Cutter Revolution

ASX 445

RECOMMENDED CUTTING CONDITIONS WHEN USING A WIPER INSERT

	Grade	Vc
P	VP25N	200 (80- 250)
	VP15TF	180 (80- 250)
M	VP15TF	145 (120- 270)
K	MC5020	
	VP15TF	190 (130- 250)
	MB710	
S	VP15TF	35 (20- 50)
H	VP15TF	160 (40- 80)
N	MD220	650 (300-1000)

1. Recommended depth of cut (ap) is 0.2 mm – 0.5 mm and feed per tooth (fz) is up to 0.2 mm/t.

ASX 400



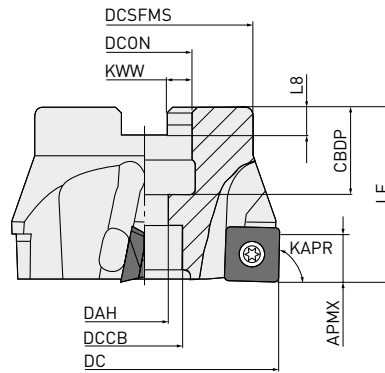
ARBOR TYPE

P **M** **K** **N** **S** **H**



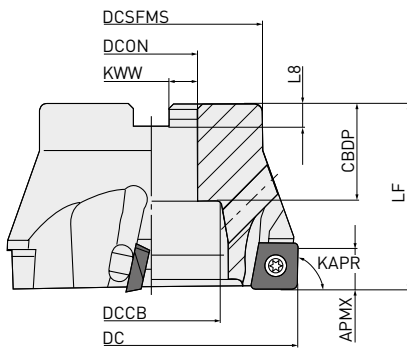
KAPR : 90°
 GAMP : +11°
 GAMF : -9° - -11°

1
 ø50
 ø63



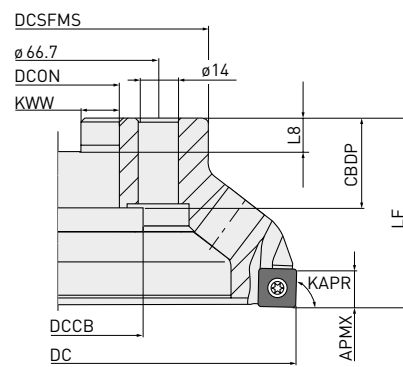
2

ø80
 ø100
 ø125



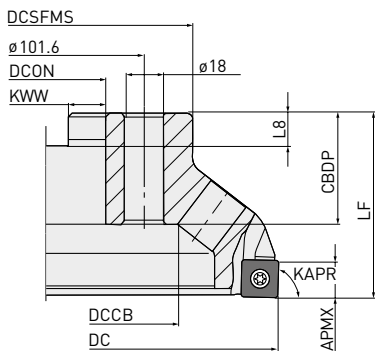
3

ø160



4

ø200
 ø250



Right hand tool holder only.

ASX 400 – ARBOR TYPE

Order number	Stock	CICT	APMX	DC	DCON	LF	CBDP	DAH	DCCB	DCSFMS	KWW	L8	WT	Type
	R													
COARSE PITCH														
ASX400-050A03R	●	3	10	50	22	40	20	11	17	41	10.4	6.3	0.3	1
ASX400-063A04R	●	4	10	63	22	40	20	11	17	50	10.4	6.3	0.5	1
ASX400-080B04R	●	4	10	80	27	50	29	—	38	60	12.4	7	0.9	2
ASX400-100B05R	●	5	10	100	32	50	32	—	45	70	14.4	8	1.4	2
ASX400-125B06R	●	6	10	125	40	63	32	—	60	80	16.4	9	2.3	2
ASX400-160C08R	●	8	10	160	40	63	29	—	56	100	16.4	9	3.6	3
ASX400-200C10R	●	10	10	200	60	63	32	—	135	160	25.7	14.22	6.3	4
ASX400-250C12R	●	12	10	250	60	63	32	—	180	210	25.7	14.22	10.8	4
FINE PITCH														
ASX400-050A04R	●	4	10	50	22	40	20	11	17	41	10.4	6.3	0.3	1
ASX400-063A05R	●	5	10	63	22	40	20	11	17	50	10.4	6.3	0.5	1
ASX400-080B06R	●	6	10	80	27	50	29	—	38	60	12.4	7	0.9	2
ASX400-100B07R	●	7	10	100	32	50	32	—	45	70	14.4	8	1.4	2
ASX400-125B08R	●	8	10	125	40	63	32	—	60	80	16.4	9	2.2	2
ASX400-160C12R	●	12	10	160	40	63	29	—	56	100	16.4	9	3.5	3
ASX400-200C16R	●	16	10	200	60	63	32	—	135	160	25.7	14.22	6.2	4
ASX400-250C18R	●	18	10	250	60	63	32	—	180	210	25.7	14.22	10.7	4
EXTRA FINE PITCH														
ASX400-050A05R	●	5	10	50	22	40	20	11	17	41	10.4	6.3	0.3	1
ASX400-063A06R	●	6	10	63	22	40	20	11	17	50	10.4	6.3	0.5	1
ASX400-080B08R	●	8	10	80	27	50	29	—	38	60	12.4	7	0.9	2
ASX400-100B10R	●	10	10	100	32	50	32	—	45	70	14.4	8	1.4	2
ASX400-125B12R	●	12	10	125	40	63	32	—	60	80	16.4	9	2.1	2
ASX400-160C15R	●	15	10	160	40	63	29	—	56	100	16.4	9	3.4	3
ASX400-200C19R	★	19	10	200	60	63	32	—	135	160	25.7	14.22	6.2	4
ASX400-250C22R	★	22	10	250	60	63	32	—	180	210	25.7	14.22	10.5	4

1/1



ASX 400

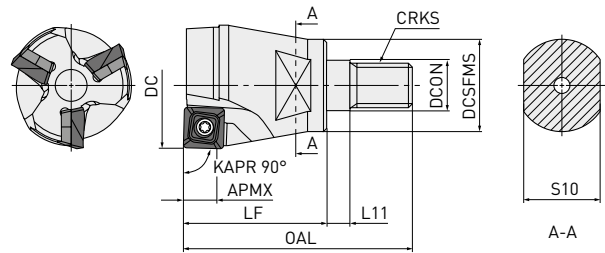


SCREW-IN TYPE

P M K N S H



1



Right hand tool holder only.

Order number	Stock	CICT	APMX	DC	DCON	LF	DCSFMS	OAL	CRKS	L11	WT	S10	Type
	R												
ASX400R322M16	●	3	10	32	17	42	29	65	M16	6	0.3	22	1

1/1

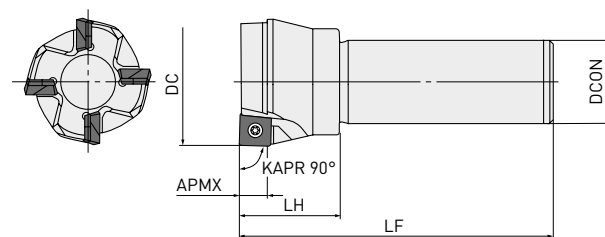


SHANK TYPE

P M K N S H



1



Right hand tool holder only.







Order number	Stock	CICT	APMX	DC	DCON	LF	LH	Type
	R							
COARSE PITCH								
ASX400R403S32	★	3	10	40	32	125	40	1
FINE PITCH								
ASX400R504S32	★	4	10	50	32	125	40	1
ASX400R635S32	★	5	10	63	32	125	40	1

1/1



ASX 400

RECOMMENDED CUTTING CONDITIONS

Material	Properties	Grade	Vc							
				ft		ft		ft		
P	Mild steel	≤180HB	MV1020	300 (200-400)	0.18 (0.08-0.28)	JL	0.20 (0.10-0.30)	JM	0.25 (0.10-0.35)	JH
			F7030	280 (210-350)						JH/FT
			MV1030	275 (200-350)						JH
			MP6120	250 (200-300)						JH/FT
			VP15FT							JH
			MP6130	240 (190-290)						JH
			VP30RT	230 (180-280)						JH
			MX3030	180 (130-250)						0.15 (0.07-0.23)
NX4545	180 (130-230)	0.15 (0.07-0.23)	0.18 (0.10-0.28)	—	—					
P	Carbon steel Alloy steel	180-280HB	MV1020	260 (170-350)	0.15 (0.07-0.23)	JL	0.18 (0.10-0.28)	JM	0.20 (0.10-0.30)	JH
			F7030	250 (200-300)						JH/FT
			MV1030	235 (170-300)						JH
			MP6120	220 (170-270)						JH/FT
			VP15FT							JH
			MP6130	180 (150-230)						JH
			VP30RT	150 (120-180)						JH
		MX3030	150 (120-180)	0.13 (0.06-0.20)	0.15 (0.10-0.25)	—	—			
		NX4545	150 (120-180)	0.13 (0.06-0.20)	0.15 (0.10-0.25)	—	—			
		280-350HB	MV1020	180 (100-250)	0.13 (0.06-0.20)	JL	0.15 (0.10-0.25)	JM	0.18 (0.10-0.28)	JH
			F7030	180 (130-230)						JH/FT
			MV1030	165 (100-230)						JH
			MP6120	140 (100-180)						JH/FT
			VP15FT							JH
MP6130	120 (90-150)		JH							
VP30RT	100 (80-160)		JH							
MX3030	100 (80-160)	0.10 (0.05-0.15)	0.13 (0.10-0.20)	—	—					
NX4545	100 (80-160)	0.10 (0.05-0.15)	0.13 (0.10-0.20)	—	—					
M	Stainless steel	≤270HB	MV1030		0.15 (0.07-0.23)	JL	0.18 (0.10-0.28)	JM	0.20 (0.10-0.30)	JH
			MP7130	220 (170-270)						JH/FT
			VP15TF							JH
			MP7140	200 (150-250)						JH/FT
			VP30RT							JH
			MX3030	150 (120-180)						—
NX4545	150 (120-180)	—	—							
K	Cast iron Ductile cast iron	Tensile strength <450MPa	MV1020	240 (130-350)	0.18 (0.10-0.28)	JL	0.20 (0.10-0.30)	JM	0.25 (0.10-0.35)	JH/FT
			MC5020	200 (150-250)	—	—				JH/FT
			MV1030	190 (130-250)	0.18 (0.10-0.28)	JL				JH/FT
		Tensile strength >450MPa	VP15TF	180 (130-230)	0.15 (0.10-0.20)	JL	—	—		
			MX3030	150 (120-180)	0.15 (0.10-0.20)	JL	0.20 (0.10-0.30)	JM	0.25 (0.10-0.35)	JH/FT
			MV1020	220 (80-350)	0.18 (0.10-0.28)	JL	0.20 (0.10-0.30)	JM	0.25 (0.10-0.35)	JH/FT
MV1030	110 (80-150)	0.18 (0.10-0.28)	JL	0.20 (0.10-0.30)	JM	0.25 (0.10-0.35)	JH/FT			
N	Aluminium alloy	—	HTi10	650 (300-1000)	0.15 (0.10-0.20)	JP	0.20 (0.10-0.30)	JP	0.30 (0.20-0.40)	JP
S	Titanium alloy	—	MP9120	50 (40- 60)	0.12 (0.05-0.20)	JL	0.15 (0.05-0.20)	JM	0.18 (0.10-0.28)	JH/FT
			VP15TF		JL	0.15 (0.05-0.20)	JM	0.18 (0.10-0.28)	JH/FT	
	Heat resistant alloy	—	MP9130	45 (30- 55)	0.10 (0.05-0.20)	JL	0.15 (0.05-0.20)	JM	0.18 (0.10-0.28)	JH/FT
			VP15TF		JL	0.15 (0.05-0.20)	JM	0.18 (0.10-0.28)	JH/FT	
H	Hardened steel	40-55HRC	MP9120	40 (20- 50)	0.12 (0.05-0.20)	JL	0.15 (0.05-0.20)	JM	0.18 (0.10-0.28)	JH/FT
			VP15TF		JL	0.15 (0.05-0.20)	JM	0.18 (0.10-0.28)	JH/FT	
H	Hardened steel	40-55HRC	MP9130	35 (15- 45)	0.10 (0.05-0.20)	JL	0.10 (0.05-0.15)	JM	0.12 (0.07-0.17)	JH/FT
			VP15TF	80 (60-100)	0.08 (0.04-0.13)	JL	0.10 (0.05-0.15)	JM	0.12 (0.07-0.17)	JH/FT

1/1

1. Revolution (min⁻¹) = (1000 x Cutting Speed) ÷ (3.14 x DC)
2. Table Feed (mm/min) = Feed per Tooth x Number of Teeth x Cutter Revolution

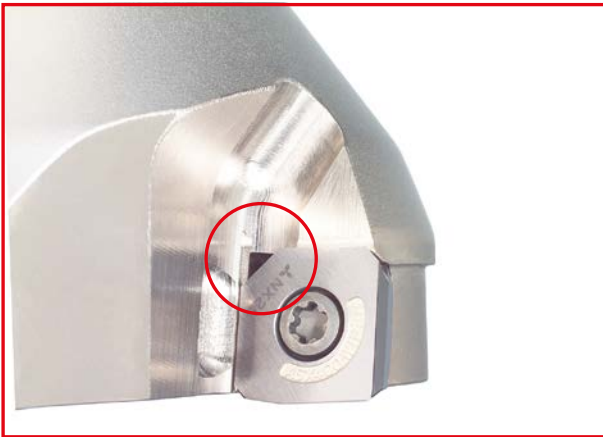
ASX 400

INSTRUCTIONS FOR USING INSERTS

INSTRUCTIONS FOR USE OF THE JP BREAKER

- The JP breaker has sharp cutting edges. Wear gloves when handling.
- When machining aluminium alloy, welding to the cutting edge tends to occur, often leading to insert failure. To prevent this, wet cutting is recommended.

INSTRUCTIONS FOR USE OF WIPER INSERTS



- Wiper inserts for the ASX400 are single-cornered.
- When installing the wiper insert, place the insert so that the small chamfer is located as shown.
- The peripheral cutting edge of the wiper insert is located further back than general inserts. Beware of wear of the insert just behind the wiper insert.
- When using the wiper, set the following standard conditions.
Depth of cut (ap) < 0.5 mm,
Feed per tooth (fz) < 0.2 mm/t.

EUROPEAN SALES COMPANIES

GERMANY

MMC HARTMETALL GMBH
Comeniusstr. 2 . 40670 Meerbusch
Phone +49 2159 91890 . Fax +49 2159 918966
Email admin@mmchg.de

U.K.

MMC HARDMETAL U.K. LTD.
Mitsubishi House . Galena Close . Tamworth . Staffs. B77 4AS
Phone +44 1827 312312
Email sales@mitsubishicarbide.co.uk

SPAIN

MITSUBISHI MATERIALS ESPAÑA, S.A.
Calle Emperador 2 . 46136 Museros/Valencia
Phone +34 96 1441711 . Fax +34 96 1443786
Email comercial@mmevalencia.es

FRANCE

MMC METAL FRANCE S.A.R.L.
6, Rue Jacques Monod . 91400 Orsay
Phone +33 1 69 35 53 53 . Fax +33 1 69 35 53 50
Email mmfsales@mmc-metal-france.fr

POLAND

MMC HARDMETAL POLAND SP. Z O.O
Al. Armii Krajowej 61 . 50-541 Wrocław
Phone +48 71335 1620 . Fax +48 71335 1621
Email sales@mitsubishicarbide.com.pl

ITALY

MMC ITALIA S.R.L.
Viale Certosa 144 . 20156 Milano
Phone +39 0293 77031 . Fax +39 0293 589093
Email info@mmc-italia.it

TURKEY

MMC HARTMETALL GMBH ALMANYA - İZMİR MERKEZ ŞUBESİ
Adalet Mahallesi Anadolu Caddesi No: 41-1 . 15001 35530 Bayraklı / İzmir
Phone +90 232 5015000 . Fax +90 232 5015007
Email info@mmchg.com.tr

www.mmc-carbide.com

DISTRIBUTED BY:

□

□

└

└

B188E 

Published by: MMC Hartmetall GmbH – A Sales Company of  MITSUBISHI MATERIALS | 2024.03