

Indexable
Milling
Modular Series

and **Milling**
Chucks

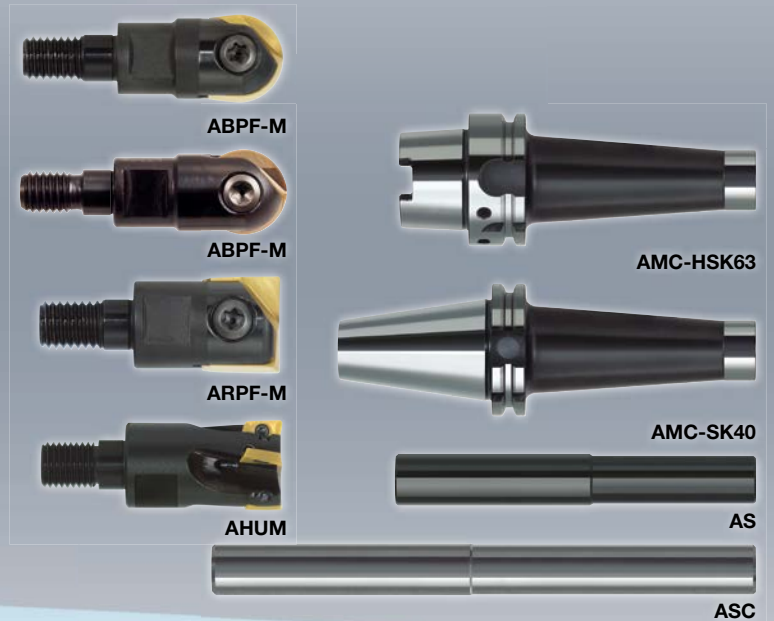
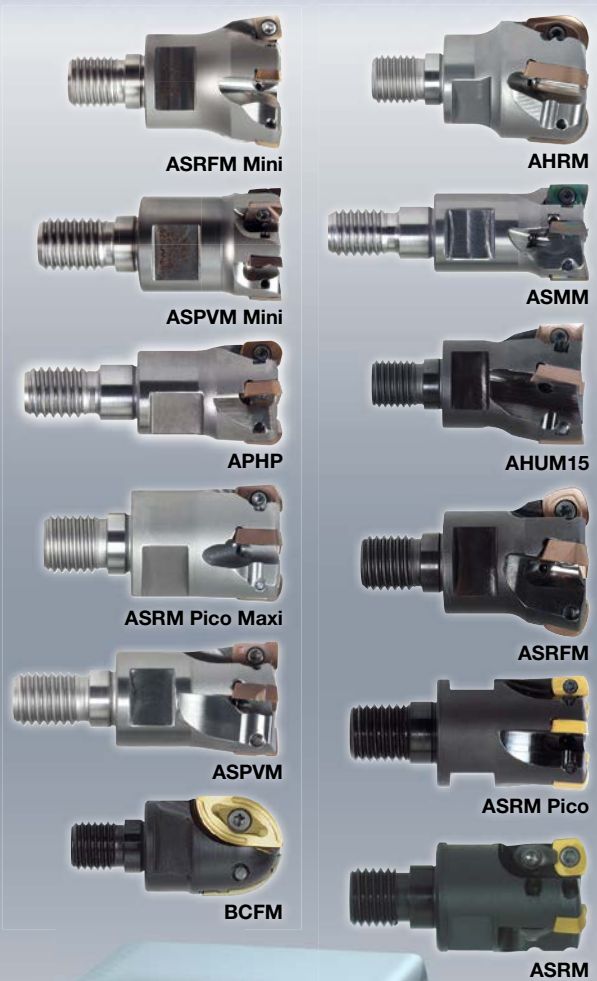
MMC Hitachi Tool

No. 328.2

Indexable Modular Series

D 8 - 42 mm · Roughing - Finishing

Chucks & Extensions



Indexable Milling Tools – Modular Types

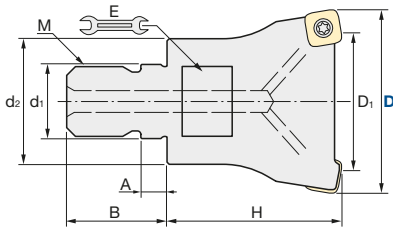
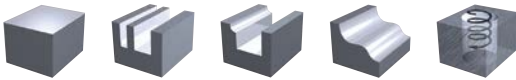
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Indexable Milling Tools – Modular Types

ASRFM | Turbo4 - Mini | Modular Type

Q max High Efficient	Jet Air Hole	▽ Roughing	▽▽ Semi-Finishing	HRC 60	No. of Teeth 2 – 5
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Tolerance Dia.:	CAM Radius:	a _p max	Torque on screw:
-0.1/-0.2mm	2 mm	1.2 mm	2.0 Nm

Modular Type												
ID Code	Item Code	Flutes	D	H	D ₁	d ₁	M	d ₂	A	B	E	Inserts
FH552	ASRFM-3020R-2-M10	2	20	30	8	10.5	M10	17.8	5.5	19	15	SPNW07T2TR SPMT07T2TR SPMT07T2ER-LF
FH553	ASRFM-3025R-3-M12	3	25	35	13	12.5	M12	20.8	5.5	22	17	
FH554	ASRFM-3032R-4-M16	4	32	40	20	17	M16	28.8	6	23	22	
FH555	ASRFM-3035R-4-M16	4	35	40	23	17	M16	28.8	6	23	22	
FH556	ASRFM-3040R-5-M16	5	40	40	28	17	M16	28.8	6	23	22	
FH557	ASRFM-3042R-5-M16	5	42	40	30	17	M16	28.8	6	23	22	

↑ Wrench Size

INSERTS ASRF | Turbo4 - Mini

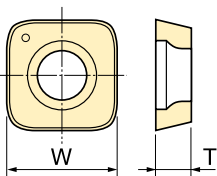


Fig.1 Standard type

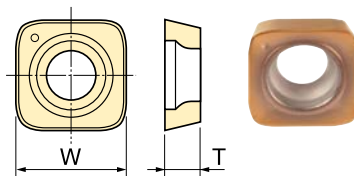


Fig.2 Low-resistance breaker type

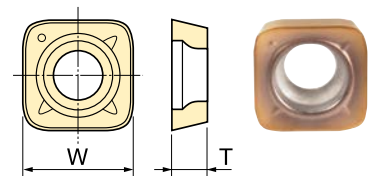


Fig.3 Low-Force type



Inserts	Tolerance Class	Grade					Size (mm)			
		GX2140	JM4060	JS4045	JP4020	JP4005	CAM R	W	T	Shape
Item code		ID-Code								
SPNW07T2TR	M	WF716	WF717	WF715	WF714	WF713	2	7.94	2.78	Fig.1
SPMT07T2TR			WF720	WF719	WF718					Fig.2
SPMT07T2ER-LF			WF721							Fig.3

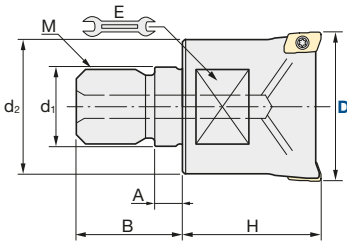
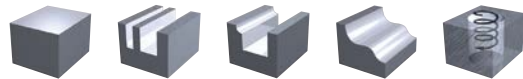
GX2140	CVD · For heavy roughing of mild steels Recommended for dry cutting
JM4060	PVD · For stainless steels
JS4045	PVD · General grade for 30–40 HRC Recommended for dry cutting
JP4020	PVD · For pre-hardened steels 40–55 HRC
JP4005	PVD · For hardened steels > 50 HRC

Clamp Screw		Wrench	
ID-Code	Item-Code	ID-Code	Item-Code
ET176	265-143	ET011	104-T10

Indexable Milling Tools – Modular Types

ASPVM | Super Polish Mill-Mini | Modular Type

Q max High Efficient	Jet Air Hole	▽▽ Semi-Finishing	▽▽▽ Finishing	HRC 60	No. of Teeth 2 – 8
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Tolerance Dia.:	Torque on screw:
-0.02 / -0.122 mm	0.5 Nm

Modular Type													
ID Code	Item Code	Flutes	D	H	d ₁	M	d ₂	A	B	E	Coolant hole	a _p max	
FH220	ASPVM-1010R-2-M6	2	10	20	6.5	M6	9.4	5.5	14.5	7	No coolant hole	2	
FH221	ASPVM-1012R-3-M6	3	12				9.8						
FH222	ASPVM-1016R-4-M8	4	16	25	8.5	M8	12.8						
FH223	ASPVM-1020R-5-M10	5	20	30	10.5	M10	17.8		17	10			With coolant hole
FH224	ASPVM-1025R-6-M12	6	25	12.5	M12	20.8	22		17				
FH225	ASPVM-1032R-8-M16	8	32	17	M16	28.8	6	23	22				

Inserts
MPHT-0402...ZEL...

INSERTS ASPV | Super Polish Mill-Mini

MPHT-0402...ZEL...

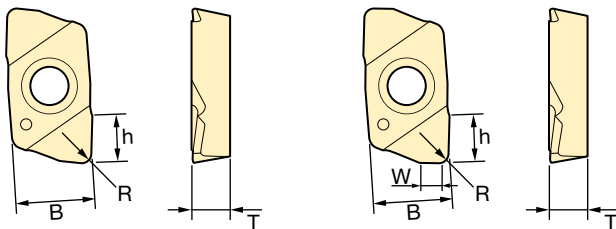


Fig. 1

Fig. 2



Inserts		Tolerance Class	Grade	Size (mm)					Shape
ID Code	Item Code			JP4005	B	W	T	h	
WF322	MPHT-040202ZEL	H	•	4.3	No wiper	2	2.3	0.2	Fig. 1
WF323	MPHT-040202ZEL-0.5								Fig. 2
WF324	MPHT-040205ZEL							0.5	Fig. 1
WF325	MPHT-040205ZEL-0.5								Fig. 2
WF326	MPHT-040205ZEL-1.0							1.0	Fig. 1
WF327	MPHT-040210ZEL								Fig. 2
WF328	MPHT-040210ZEL-0.5							0.5	Fig. 2

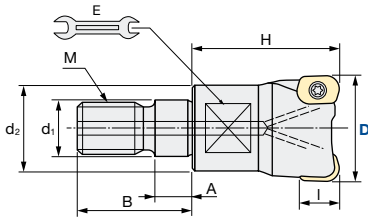
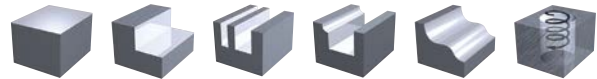
JP4005 PVD · For hardened steels > 50 HRC

Clamp Screw		Screw Driver	
ID-Code	Item-Code	ID-Code	Item-Code
ET052	240-140	ET056	104-T6

Indexable Milling Tools – Modular Types

APHP | Advanced Pico Hard Precision – Modular Type

Q max High Efficient	Jet Air Hole	▽ Roughing	▽▽ Semi-Finishing	HRC 62	No. of Teeth 1 – 8
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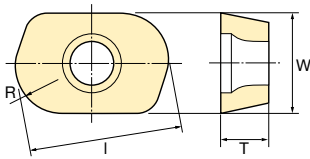


Tolerance Dia.:	CAM Radius:	Torque on screw:
-0.046/-0.096 mm	2mm	0.5 Nm

Modular Type												
ID Code	Item Code	Flutes	D	H	d ₁	M	d ₂	A	B	E	I	Inserts
FH182	APHP-1008R-1-M6	1	8	19	6.5	M6	9.4	5.5	14.5	7	6.215	EPHW0402TN-2
FH183	APHP-1010R-2-M6	2	10	17	6.5		9.4					
FH184	APHP-1012R-3-M6	3	12	17	6.5	9.8						
FH185	APHP-1016R-4-M8	4	16	22	8.5	M8	12.8					
FH186	APHP-1020R-5-M10	5	20	25	10.5	M10	17.8	17	10			
FH187	APHP-1025R-6-M12	6	25	25	12.5	M12	20.8	19	15			
FH188	APHP-1032R-8-M16	8	32	27	17	M16	28.8	22	17			

↑ Wrench Size

INSERTS APHP | Advanced Pico Hard Precision – Modular Type



ID Code	Item Code	Tolerance Class	D Coated	PJP Coated		Size (mm)			
			D08M	PJP15M	PJP08M	R	I	T	W
WF210	EPHW0402TN-2 PJP08M	H			•	2	6.215	2	4.2
WF211	EPHW0402TN-2 PJP15M			•					
WF212	EPHW0402TN-2 D08M		•						

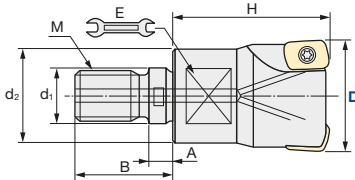
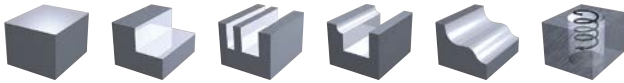
D08M	Diamond Coating for Graphite
PJP15M	Micro Grain PVD Coating – Tough
PJP08M	Micro Grain PVD Coating – Hard

Type	Parts Shape	Clamp Screw		Wrench	
		ID-Code	Item-Code	ID-Code	Item-Code
Modular	APHP-10...	ET052	240-140	ET056	104-T6

Indexable Milling Tools – Modular Types

ASRM | Pico Maxi – Turbo Metric Series – Modular Type

Q max High Efficient	Jet Air Hole	▽ Roughing	▽▽ Semi-Finishing	HRC 60	No. of Teeth 2–6
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Tolerance Dia.:	CAM Radius:	Torque on screw:
-0.1/-0.2mm	3 mm	2.0 Nm

ID Code	Item Code	Flutes	D	H	d ₁	M	d ₂	A	B	E	Inserts
FH180	ASRM-3020R-2-M10	2	20	30	10.5	M10	18	5.5	19	15	EPNW08T3TN-10 EPMT08T3TN-10
FH181	ASRM-3025R-3-M12	3	25	35	12.5	M12	21	5.5	22	17	
FH173	ASRM-3032R-4-M16	4	32	40	17	M16	29	6	23	22	
FH174	ASRM-3035R-4-M16		35								
FH175	ASRM-3042R-6-M16	6	42								

Wrench Size

INSERTS ASRM/ASRB | Pico Maxi – Turbo Metric Series – Modular/Bore Type

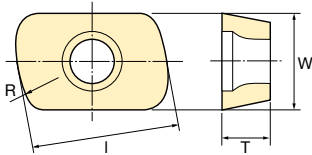


Fig.1: EPNW Standard Shape

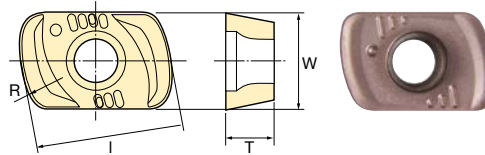
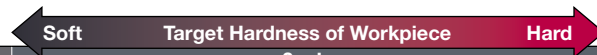


Fig.2: EPMT with Breaker

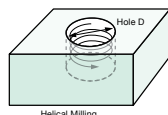
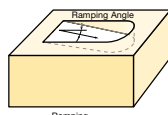


Inserts	Tolerance Class	Grade						Size (mm)				
		GX2140	JM4060	JS4060	JX1045	JP4020	JP4005	R	I	T	W	Shape
EPNW-08T3TN-10	N	WF243		WF204	WF205 ✗	WF203	WF342	10	12.648	3.97	8.25	Fig.1
EPMT-08T3TN-10	M	WF242	WF343	WF201	WF202 ✗	WF200	Fig.2					

GX2140	CVD · For heavy roughing of mild steels Recommended for dry cutting
JM4060	PVD · For stainless steels
JS4060	PVD · General grade for 30–40 HRC Recommended for dry cutting
JX1045	✗ to be replaced by JS4045
JP4020	PVD · For pre-hardened steels 40–55 HRC
JP4005	PVD · For hardened steels > 50 HRC

Type	Cutter body	Clamp Screw		Wrench	
		ID-Code	Item-Code	ID-Code	Item-Code
Modular	ASRM-3020R-2-M10 – ASRM-3042R-6-M16	ET152	265-141	ET011	104-T10
Bore Type	ASRB-3042RM-6-16 – ASRB-3100RM-10-32				

Ramping / Helical Milling

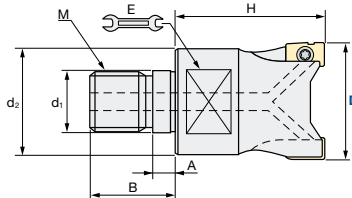
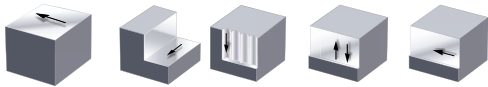


Tool diameter D mm	D 32	D 35	D 42	D 52	D 66	D 80	D 100
Max. ramp angle °	4.5°	3.5	2.5°	1.5°	1°	0.5°	0.5°
Helical Milling / Hole Dia. (mm)	50 ~ 62	56 ~ 68	70 ~ 82	90 ~ 102	118 ~ 130	146 ~ 158	186 ~ 198


Indexable Milling Tools – Modular Types

ASPVM | Polish Mill V-Type / Modular

Jet Air Hole	▽ Roughing	▽▽ Finishing	HRC 62	No. of Teeth 2-6	90°
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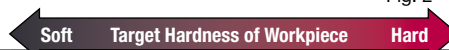
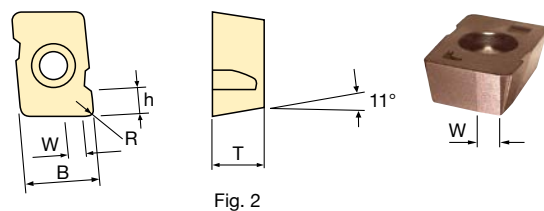
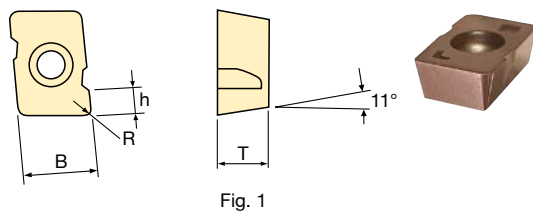


Tolerance D for master insert:	Torque on screw:
0/-0.1 mm	1.1 Nm

ID Code	Item Code	Flutes	D	H	d ₁	M	d ₂	A	B	E	Inserts
FH161	ASPVM-2016R-2-M8	2	16	25	8.5	M8	12.8	5.5	17	10	MPHW06... 
FH162	ASPVM-2020R-3-M10	3	20	30	10.5	M10	17.8		19	15	
FH163	ASPVM-2025R-4-M12	4	25	35	12.5	M12	20.8		22	17	
FH164	ASPVM-2032R-5-M16	5	32	40	17	M16	28.8	6	23	22	
FH165	ASPVM-2035R-5-M16		35								
FH166	ASPVM-2042R-6-M16	6	42								



INSERTS ASPV | Polish Mill V-Type

MPHW0603..ZEL/ZFL



Inserts	Tolerance Class	Grade				Size (mm)						
		SD5010	JX1045	JX1020	ATH08M	B	W	T	h	R	Shape	
R 0.4	H				WF188	6.35	-	3.18	3	0.4	Fig-1	
MPHW060304ZEL-0.5 ATH08M					WF189						0.5	Fig-2
MPHW060304ZFL SD5010		WF190									-	Fig-1
R 0.8	H				WF191	6.35	-	3.18	3	0.8	Fig-1	
MPHW060308ZEL ATH08M					WF192						1.5	Fig-2
MPHW060308ZEL JX1020												
MPHW060308ZEL-1.5 ATH08M					WF194							
MPHW060308ZEL-1.5 JX1020					WF195							
R 2	H				WF196 ×	6.35	-	3.18	3	2	Fig-1	
MPHW060308ZEL SD5010		WF197									-	Fig-1
MPHW060320ZEL ATH08M	H				WF198	6.35	-	3.18	3	2	Fig-1	

SD5010	PVD · For Aluminium
JX1045	× to be replaced by JS4045
JX1020	PVD · For pre-hardened steels 40-55HRC
ATH08M	PVD · General grade from soft to hard

Parts	Clamp Screw		Screw Driver	
Shape				
Cutter body	ID Code	Item Code	ID Code	Item Code
ASPVM20..R-	ET175	250-141	ET13	104-T8

Indexable Milling Tools – Modular Types

BCFM | Roughing Ball - Modular Type

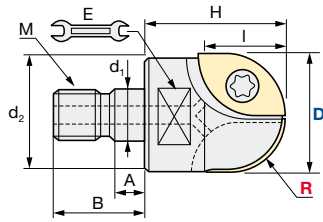
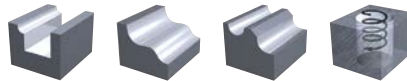
Q max
High Efficient

▽
Roughing

▽▽
Semi-Finishing

HRC
50

No. of Teeth
2

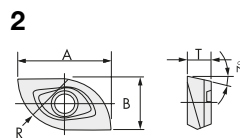
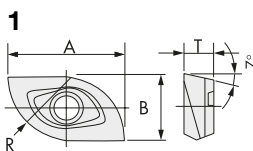


Tolerance R:	Tolerance Dia.:
± 0.05mm	0/-0.15mm

ID Code	Item Code	Flutes	D	R	H	d ₁	M	d ₂	A	B	E	I	Inserts x1	Inserts x1
FH522	BCFM-20	2	20	10	38	10.5	M10	17.8	5.5	19	15	18	ZCEW100CE*	ZCEW100SE*
FH523	BCFM-25		25	12.5		12.5	M12	20.8		22	17	23	ZCEW125CE*	ZCEW125SE*
FH524	BCFM-32		32	16	43	17	M16	28.8	6	23	22	28	ZCET160CE	ZCET160SE

* or ZCET

INSERTS | Roughing Ball - Modular Type



ID Code	Item Code	Grade	G-Coated HC844	C-Coated CY9020	R	A	T	B	Figure
WF583	ZCET100CE	CY9020		•	10	18.3	4.74	10	1a
WF132	ZCEW100CE	HC844	•	1					
WF588	ZCET100SE	CY9020		•		16.7	4.24	8.1	2a
WF135	ZCEW100SE	HC844	•	2					
WF584	ZCET125CE	CY9020		•	12.5	23.1	6.1	12.3	1a
WF138	ZCEW125CE	HC844	•	1					
WF589	ZCET125SE	CY9020		•		20.8	5.4	9.3	2a
WF141	ZCEW125SE	HC844	•	2					
WF586	ZCET160CE	CY9020		•	16	28.8	7.45	15.4	1a
WF539	ZCET160CE	HC844	•	1a					
WF591	ZCET160SE	CY9020		•		26.3	6.96	12.4	2a
WF540	ZCET160SE	HC844	•	2a					

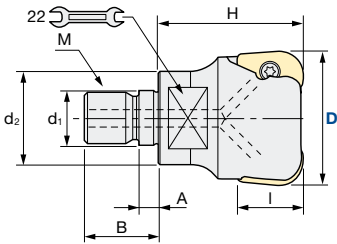
• = Available insert and grade combination

Parts	Clamp Screw			Wrench	
Body	ID Code	Item Code	Torque (Nm)	ID Code	Item Code
BCFM-20	ET034	261-141	2.0	ET011	104-T10
BCFM-25	ET035	262-141	2.9	ET012	104-T15
BCFM-32	ET036	263-141	4.9	ET014	105-T20

Indexable Milling Tools – Modular Types

AHRM | Mini – Advanced Heavy Roughing – Modular

Q max High Efficient	Jet Air Hole	▽ Roughing	HRC 62	No. of Teeth 3~4
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Tolerance Dia.:	Torque on screw:
-0.1/-0.2mm	3.0 Nm

ID Code	Item Code	Flutes	D	H	d ₁	M	d ₂	A	B	E	I	Inserts
FH149	AHRM-4035R-3-M16	3	35	45	17	M16	29	6	23	22	18	ZDNW... ZDMT...
FH150	AHRM-4042R-4-M16	4	42									

↑ Wrench Size

INSERTS AHR | Mini – Advanced Heavy Roughing – Modular

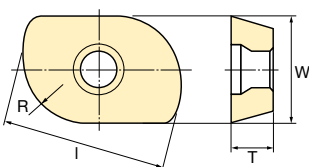


Fig.1: ZDNW Standard Shape

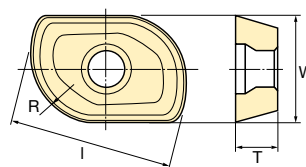


Fig.2: ZDMT with Breaker



Inserts	Tolerance Class	Grade						Size (mm)				Shape
		JX1060	JS4060	JX1045	JP4020	JX1015	JX1005	R	I	T	W	
Item Code		ID Code										
ZDNW1204080TR JX1005	N						WF674	8	21.5	4.76	12.7	Fig.1
ZDNW1204080TR JX1015						WF675						
ZDNW1204080TR JX1045				WF677	×							
ZDNW1204080TR JX1060		WF678										
ZDNW1204080TR JS4060			WF679									
ZDNW1204080TR JP4020					WF680							
ZDMT1204080TR JX1005	M						WF681	8	21.5	4.76	12.7	Fig.2
ZDMT1204080TR JX1015						WF682						
ZDMT1204080TR JX1045				WF684	×							
ZDMT1204080TR JX1060		WF685										
ZDMT1204080TR JS4060			WF686									
ZDMT1204080TR JP4020					WF687							

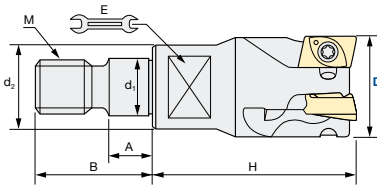
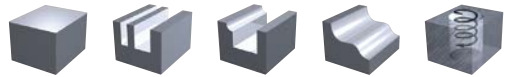
JX1060	PVD · For carbon steels < 35HRC
JS4060	PVD · General grade for 30–40 HRC Recommended for dry cutting
JX1045	× to be replaced by JS4045
JP4020	PVD · For pre-hardened steels 40–55 HRC
JX1015 – JX1005	PVD · Main Grade

Parts	Clamp Screw		Clamp Piece Set		Wrench	
Cutter body	ID Code	Item Code	ID Code	Item Code	ID Code	Item Code
AHRM-40 ...	ET048	262-142	-	-	ET049	105-T15

Indexable Milling Tools – Modular Types

ASM | Modular

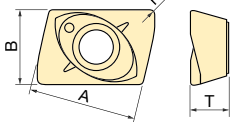
Q max High Efficient	Jet Air Hole	▽ Roughing	▽▽ Semi-Finishing	▽▽▽ Finishing	HRC 50	No. of Teeth 1 – 8
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With Airhole: D 16 – 32	Tolerance Dia.: -0.1/-0.2mm	Torque on screw: 0.5 Nm
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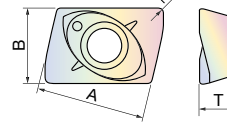
	ID Code	Item Code	Flutes	D	H	d ₁	M	d ₂	A	B	E	Inserts	
Without Airhole	FH126	ASMM-0708R-1	1	8	20	6.5	M6	9.8	5.5	14.5	7	JDMT0702..R EDMT070220R (-T)	
	FH127	ASMM-0710R-2	2	10		6.5		9.4					
	FH128	ASMM-0712R-3	3	12		6.5		9.8					
With Airhole	FH129	ASMM-0716R-4	4	16	30	8.5	M8	12.8	5.5	17	10		
	FH130	ASMM-0720R-5	5	20		10.5		17.8		19	15		
	FH135	ASMM-0725R-6	6	25		12.5		20.8		22	17		
	FH136	ASMM-0732R-8	8	32		17		M16		28.8	23		22
						23					22		

JDMT07020..R



Insert with 5 mm flute length for shoulder cutting ($a_{p\max} = 5.0\text{mm}$)

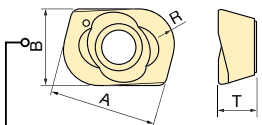
JDMT07020..R DLC Coated



Insert with 5 mm flute length for shoulder cutting ($a_{p\max} = 5.0\text{mm}$)

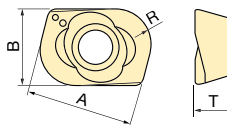
ID Code	Item Code	Tolerance Class	Target Hardness of Workpiece Grade					Size					
			SD5010	JM4060	PTH30E	JP4020	JX1020	A	B	R	T		
WF665	JDMT070202R	M						6.4	4.3	0.8	2.45	<ul style="list-style-type: none"> SD5010 DLC Coating JM4060 JM Coating PTH30E TH Coating JP4020 JP Coating JX1020 PVD Coating / Dry Cutting 	
WF666	JDMT070202R												0.2
WF671	JDMT070202R												0.4
WF667	JDMT070204R												0.8
WF668	JDMT070204R							0.2					
WF672	JDMT070204R							0.4					
WF669	JDMT070208R							0.8					
WF670	JDMT070208R							0.2					
WF673	JDMT070208R							0.4					
WF689	JDMT070202R							0.8					
WF690	JDMT070202R							0.2					
WF691	JDMT070204R							0.4					
WF692	JDMT070204R							0.8					
WF693	JDMT070208R							0.2					
WF694	JDMT070208R							0.4					

EDMT070220R -T Standard Type



Insert with 2.0mm corner R for low-depth, high-feed-rate cutting ($a_{p\max} = 0.3\text{mm}$)

EDMT070220R Low-force breaker type



Insert with 2.0mm corner R for low-depth, high-feed-rate cutting ($a_{p\max} = 0.3\text{mm}$)

ID Code	Item Code	Tolerance Class	Target Hardness of Workpiece Grade			Size				Shape
			JM4060	JP4020	JX1020	A	B	R	T	
WF663	EDMT070220R	M				6.4	4.3	2	2.5	Low-force type
WF664	EDMT070220R-T									Standard type
WF709	EDMT070220R-T									Standard type
WF710	EDMT070220R-T									Standard type
WF711	EDMT070220R									Low-force type
WF712	EDMT070220R									Low-force type

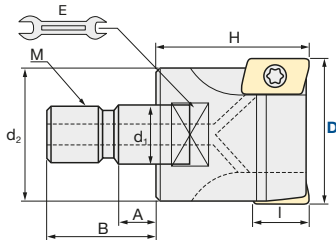
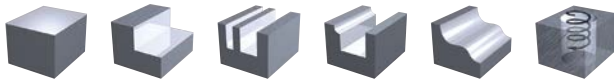
JM4060	JM Coating
JP4020	JP Coating
JX1020	PVD Coating / Dry Cutting

Parts	Clamp Screw	Wrench	Item Code
Body	ID Code	ID Code	Item Code
ASMM-07...	ET052	ET053	106-T6

Indexable Milling Tools – Modular Types

AHUM15 | High Feed Ultra Modular Type

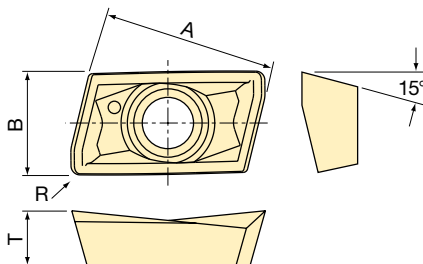
Q max High Efficient	Jet Air Hole	▽ Roughing	▽▽ Finishing	HRC 50	No. of Teeth 2 – 4
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Tolerance Dia.:	Torque on screw:
0/-0.2mm	3.0 Nm

Modular Type		ID Code	Item Code	Flutes	D	H	d ₁	M	d ₂	A	B	E	I	Inserts
FH068	AHUM-1525R-2			2	25	35	12.5	12	20.8		20	17		JDMT1505..R.. JDET-1505..R..
FH066	AHUM-1532R-3-M16			3	32	40	17	16	28.8	6	22	22	14	
FH176	AHUM-1535R-3-M16				35									
FH067	AHUM-1540R-4-M16			4	40									
FH177	AHUM-1542R-4-M16				42									

INSERTS

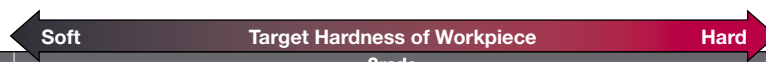


JDMT-150530-R



JDMT-150504-R-FW

- In case of bigger corner-R than R2.0, modification of body is needed.
- Für Eckenradien über R2.0 muss der Halter entsprechend modifiziert werden.
- In caso di raggio torico R maggiore di 2 è necessario modificare opportunamente il corpo fresa.
- Si el radio de placa es superior a R2.0, el soporte debe modificarse.
- Si le rayon de tore est supérieur à R2, une modification du porte plaquettes s'avère nécessaire.
- Se o raio da plaquete for maior que R2.0, precisa de mudar o corpo.



Inserts	Corner-R	Grade							Size (mm)			
		SD5010	JM4060	JX1060	JS4060	JX1045 X	JS4045	JP4020	JX1020	A	B	T
JDMT-1505-R04-FW	0.4-FW		WF358		WF357	WF182 X	WF367 *	WF356		16	9.12	5
JDMT-1505-R08-FW	0.8-FW		WF361	WF185	WF360	WF184 X	WF368 *	WF359	WF183			
JDMT-1505-R20	2.0		WF364		WF363	WF186 X	WF369 *	WF362				
JDMT-1505-R20-FW	2.0-FW					WF199 X	*					
JDMT-1505-R30	3.0					WF187 X	*					
JDET-1505-R04-FA	0.4-FA	WF365										

* coming soon

SD5010	PVD · For Aluminium
JM4060	PVD · For stainless steels & carbon steels < 35HRC
JX1060	PVD · For carbon steels < 35HRC
JS4060	PVD · For carbon steels < 35HRC

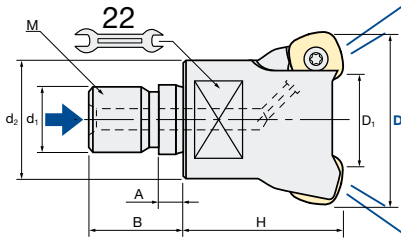
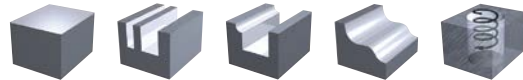
JX1045	X to be replaced by JS4045
JS4045	PVD · For general steels 30 – 40HRC
JP4020	PVD · For pre-hardened steels 40 – 55 HRC
JX1020	PVD · For pre-hardened steels 40 – 55HRC

Parts	Clamp Screw		Wrench	
	ID Code	Item Code	ID Code	Item Code
AHUM-15	ET038	412-141	ET049	105-T15

Indexable Milling Tools – Modular Types

ASRFM | Turbo4 Modular

Q max High Efficient	Jet Air Hole	▽ Roughing	▽▽ Semi-Finishing	HRC 60	No. of Teeth 3 – 4
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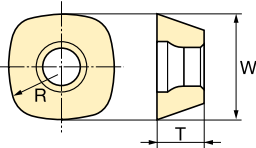


Tolerance Dia.:	CAM Radius:	Torque on screw:	Runout:
0/-0.2 mm	4.5 mm	2.0 Nm	0.02 mm

ID Code	Item Code	Flutes	D	D ₁	H	d ₁	M	d ₂	A	B	Inserts
FH114	ASRFM-4035R-3-M16	3	35	17	40	17	16	29	6	23	SD..1205ZDTN-R15
FH115	ASRFM-4042R-4-M16	4	42	24							

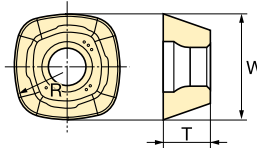
INSERTS ASRF / M | Turbo4/Turbo4 Modular

Type A



Standard type

Type B



Low-resistance breaker type



Inserts	Grade										Size (mm)			Chip-breaker	Type
	GX2140	JX1060	JM4060	JS4060	JX1045	JS4045	JP4020	JX1020	JX1005	JP4005	R	T	W		
Item Code	ID Code														
SDNW-1205ZDTN-R15	WF239	WF175	WF366	WF332	WF174 ✗	WF375*	WF331	WF173	WF172	WF330	15	5.56	12.7	no	A
SDMT-1205ZDTN-R15	WF238	WF180	WF335	WF334	WF179 ✗	WF374*	WF333	WF178	WF177					yes	B

* coming soon

GX2140	CVD · For heavy roughing of mild steels Recommended for dry cutting
JX1060	PVD · For carbon steels < 35HRC
JM4060	PVD · For stainless steels & carbon steels < 35HRC
JS4060	PVD · For carbon steels < 35HRC

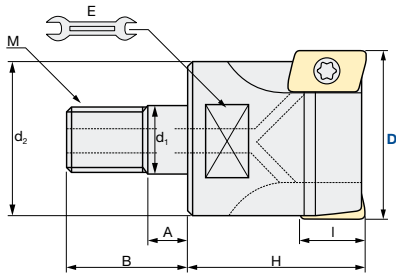
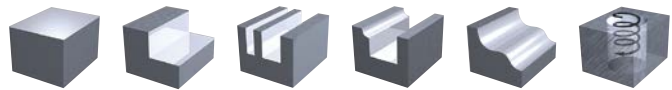
JX1045	✗ to be replaced by JS4045
JS4045	PVD · For general steels 30 – 40HRC
JP4020	PVD · For pre-hardened steels 40 – 55 HRC
JX1020	PVD · For pre-hardened steels 40 – 55HRC
JX1005	PVD · PVD Coating
JP4005	PVD · For hardened steels > 50 HRC

Parts	Clamp Screw		Wrench	
Shape				
Body	ID Code	Item Code	ID Code	Item Code
ASRFM	ET048	262-142	ET049	105-T15

Indexable Milling Tools – Modular Types

AHUM | High-Feed Ultra End Mill Modular

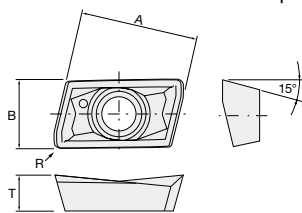
Q max High Efficient	Jet Air Hole	▽ Roughing	HRC 50	No. of Teeth 2 – 5
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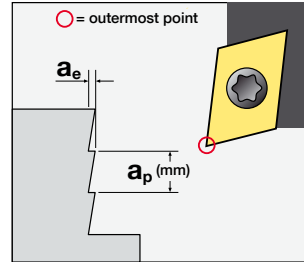
Tolerance Dia.:	Tolerance CR:	Torque on screw:
-0.05 / -0.2 mm	+0.08 / -0.08 mm	1.3 Nm

ID Code	Item Code	Flutes	D	I	H	d ₁	M	d ₂	A	B	E	Inserts
FH525	AHUM-1016R-2	2	16	9	30	8.5	M8	13	5.5	17	10	JDMT1003..R
FH526	AHUM-1020R-3	3	20			10.5	M10	18				JDMT1003..R
FH527	AHUM-1025R-4	4	25			12.5	M12	21				JDMT1003..R
FH528	AHUM-1032R-5	5	32			17	M16	29				JDMT1003..R

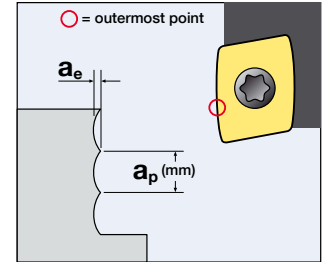
INSERTS AHUM | Improved cutting surface



Conventional (JDMT.....R)



Fine Wall type **JDMT.....R-FW**



Inserts	Tolerance Class	Corner-R	Grade							Size (mm)			
			SD5010	JM4060	JS4060	PTH40H	PTH30E	TB6045	PTH13S	JP4020	A	B	T
JDMT-1003-R04	M	0.4					WF633	WF634	WF637		11	6.1	3.5
JDMT-1003-R04-FW		0.4-FW		WF696						WF695			
JDMT-1003-R08		0.8		WF702	WF701	WF636	WF631	WF635	WF638	WF700			
JDMT-1003-R08-FW		0.8-FW		WF699	WF698					WF697			
JDMT-1003-R20		2.0		WF705	WF704			WF632		WF703			
JDET-1003-R04-FA	E	0.4-FA	WF706										
JDET-1003-R08-FA		0.8-FA	WF707										
JDET-1003-R20-FA		2.0-FA	WF708										

SD5010: DLC coated grade for Aluminium

SD5010	PVD · For Aluminium
JM4060	PVD · For stainless steels & carbon steels < 35HRC
JS4060	PVD · For carbon steels < 35HRC
PTH40H	PVD · For carbon steels < 35HRC
PTH30E	PVD · General steels for 30–40 HRC
TB6045	PVD · General steels for 30–40 HRC / Recommended for dry cutting
PTH13S	PVD · For pre-hardened steels 40–55 HRC
JP4020	PVD · For pre-hardened steels 40–55 HRC

Clamp Screw		Wrench	
ID Code ET175	Item-Code 250-141	ID Code ET013	Item-Code 104-T8

Tool Diameter D mm	D 16	D 20	D 25	D 32
Max Ramp Angle°	4°	3°	2.5°	2°
Hole D (mm)	21–29	29–37	39–47	53–61

Indexable Milling Tools – Modular Types

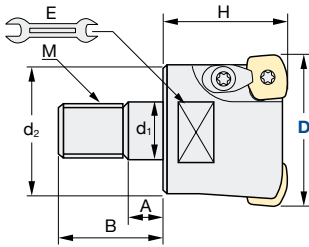
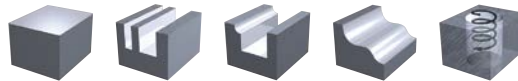
ASRM | Turbo Maximum Volume End Mill – Modular

Q max
High Efficient

▽
Roughing

HRC
50

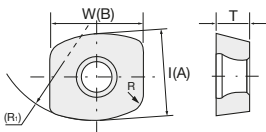
No. of Teeth
2 – 4



Tolerance Dia.:	Torque on screw:
0/-0.2mm	2.9 Nm

ID Code	Item Code	Flutes	D	H	d ₁	d ₂	A	B	E	M	Inserts x1
FH494	ASRM0020-2	2	20	30	10.5	18	6	19	15	M10	EPNW-0803TN-10
FH495	ASRM0025-2		25	35	12.5	21		22	17	M12	EDNW-10T3TN-10
FH496	ASRM0032-3	3	32	40	17	29	7	23	22	M16	
FH497	ASRM0040-4		40								

INSERTS ASRM | Turbo Maximum Volume End Mill – Modular



ID Code	Item Code	C-Coated	TiBON Coating	R	R ₁	I	T	W
		CY250	TB6045					
WF569	EPNW-0803TN-10	•		3	10	8.1	3.18	7.94
WF572	EDNW-10T3TN-10	•				10	3.97	10
WF627	EDNW-13T4TN-10		•		15	5.56	12.7	
WF576	EDNW-13T4TN-15	•			10	5.56	14	
WF629	EDNW-15T4TN-10		•		15			
WF578	EDNW-15T4TN-15	•						

Programming Radius →



INSERTS FOR INTERRUPT CUTTING

ID Code	Item Code	TB6045	R	R ₁	I(A)	T	W(B)
WF628	EDNW-13T4TN-15Z	•	3	15	13.5	5.56	12.7
WF630	EDNW-15T4TN-15Z	•			15		14

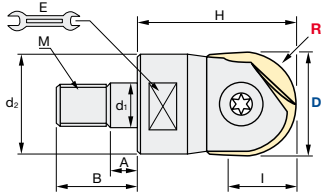
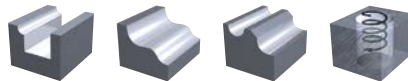
Programming Radius →

Parts	Clamp Screw		Clamp Piece Set		Wrench	
Shape						
Body	ID Code	Item Code	ID Code	Item Code	ID Code	Item Code
ASRM-0020-2	ET32	242-141	-	-	ET12	104-T15
ASRM-0025-2	ET38	412-141	ET163	CM3,5-141		
ASRM-0032-3						
ASRM-0040-4						

Indexable Milling Tools – Modular Types

ABPFM | Ball High Precision Finish Modular

V max High Speed	▽▽ Semi Finishing	▽▽▽ Finishing	HRC 65	No. of Teeth 2
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Tolerance R:	Tolerance Dia.:
± 0.005 mm	± 0.01 mm

ID Code	Item Code	Flutes	D	R	I	H	d ₁	M	d ₂	A	B	E	Inserts						
FH 510	ABPFM-10	2	10	5	5.5	26	6.5	M6	9.8	5	14.5	7	ZPFG100						
FH 511	ABPFM-12		12	6	6.6								ZPFG120						
FH 512	ABPFM-16		16	8	8.8								32	8.5	M8	12.8	6	17	10
FH 513	ABPFM-20		20	10	11	38	10.5	M10	17.8	6	19	15	ZPFG200						
FH 514	ABPFM-25		25	12.5	13.7								12.5	M12	20.8	7	22	17	ZPFG250
FH 515	ABPFM-32		32	16	17.6								43	17	M16	28.8	23	22	ZPFG320

INSERTS | Ball High Precision Finish Modular

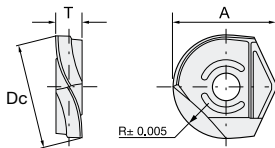


Fig. 1: ZPFG

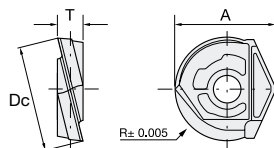


Fig. 2: ZDFG

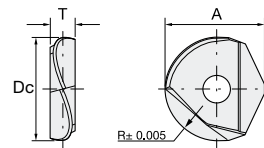


Fig. 3: ZDFG-SF



Item Code	Size				Grade				Shape
	Dc	R	A	T	ACS05E	PCA12M	PCA08M	PTH08M	
ZPFG-080	8	4	9.7	2.1	WF547	WF594	WF645		WF267
ZPFG-080-GH									
ZPFG-080-GF					WF266				
ZPFG-100	10	5	12.1	2.7	WF548	WF595	WF646		WF269
ZPFG-100-GH									
ZPFG-100-GF					WF268				
ZPFG-120	12	6	14.6	3.2	WF549	WF596	WF647		WF271
ZPFG-120-GH									
ZPFG-120-GF					WF270				
ZPFG-160	16	8	16.6	4.2	WF598	WF597	WF648		WF273
ZPFG-160-GH									
ZPFG-160-GF					WF272				
ZPFG-200	20	10	20.3	5.2	WF600	WF599	WF649		WF275
ZPFG-200-GH									
ZPFG-200-GF					WF274				
ZPFG-250	25	12.5	24.1	6.2	WF602	WF601	WF650		WF277
ZPFG-250-GH									
ZPFG-250-GF					WF276				
ZPFG-320	32	16	30	7.2	WF604	WF603	WF651		WF279
ZPFG-320-GH									
ZPFG-320-GF					WF278				

Item Code	Size				Grade			Shape
	Dc	R	A	T	ATH10E	ACS05E	ATH80D	
ZDFG-080-WH	8	4	9.7	2.1			WF281	
ZDFG-080-WF						WF280		
ZDFG-100-WH							WF283	
ZDFG-100-WF	10	5	12.1	2.7		WF282		
ZDFG-120-WH							WF285	
ZDFG-120-WF						WF284		
ZDFG-160-WH	16	8	16.6	4.2			WF164	
ZDFG-160-WF						WF168		
ZDFG-200-WH							WF165	
ZDFG-200-WF	20	10	20.3	5.2		WF169		
ZDFG-250-WH							WF166	
ZDFG-250-WF						WF170		
ZDFG-320-WH	32	16	30	7.2			WF167	
ZDFG-320-WF						WF171		
ZDFG-160-SF					16	8	16.6	4.2
ZDFG-200-SF	20	10	20.3	5.2	WF264			
ZDFG-250-SF	25	12.5	24.1	6.2	WF265			

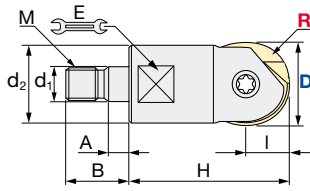
Parts	Clamp Screw			Wrench	
Shape					
Cutter body	ID Code	Item Code	Torque (Nm)	ID Code	Item Code
ABPFM-10	ET154	581-142	2.2	ET11	104-T10
ABPFM-12	ET155	581-143	4.9	ET14	105-T20
ABPFM-16	ET156	581-144			
ABPFM-20	ET157	581-145	6.9	ET9	101-T25S
ABPFM-25	ET168	581-146	9.8	ET167	105-T30A
ABPFM-32	ET169	581-147			

Item	Dc	ATH80D	ACS05E
		Pre hardened steel, Hardened steel	Mild steel Cast iron
ZPFG	8	GH-type: Negative rake angle Strong chisel	GF-type: Negative rake angle Sharp chisel
	10		
	12		
	16		
	20		
	25		
ZDFG (Full-R)	8	WH-type: Positive rake angle Strong chisel	WF-type: Positive rake angle Sharp chisel
	10		
	12		

Indexable Milling Tools – Modular Types

ABPEM | Precision Eco Series

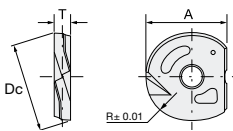
V max High Speed	▽▽ Semi Finishing	▽▽▽ Finishing	HRC 65	No. of Teeth 2	
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Tolerance Dia.:	Set-up:
± 0.01 mm	± 0.015 mm

ID Code	Item Code	Z	D	R	H	I	M	d ₁	d ₂	A	B	Wrench
FH249	ABPEM-10	2	10	5	26	5	M6	6.5	9.8	5.5	14.5	7
FH250	ABPEM-12		12	6		6						
FH251	ABPEM-16		16	8	8	M8	8.5	12.8	17		10	
FH252	ABPEM-20		20	10	10	M10	10.5	17.8	19		15	
FH253	ABPEM-25		25	12.5	12.5	M12	12.5	20.8	22		17	

INSERTS ABPEM | Precision Eco Series



NOTE: To keep high-accuracy, please put marked side onto head side of the screw.
BCHG-Inserts for ABPE cannot be clamped onto ABPF body!

Item Code	Tolerance	Grade		Size			
		JP15E	JP08E	R	A	Dc	T
		ID-Code					
BCHG080	H class	WF350	WF344	4	9.5	8	2
BCHG100		WF351	WF345	5	11.5	10	2.5
BCHG120		WF352	WF346	6	12	12	2.5
BCHG160		WF353	WF347	8	14	16	3
BCHG200		WF354	WF348	10	16	20	3
BCHG250		WF355	WF349	12.5	21.5	25	4

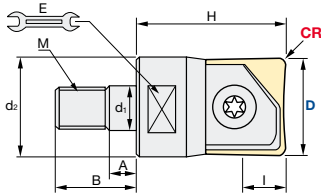
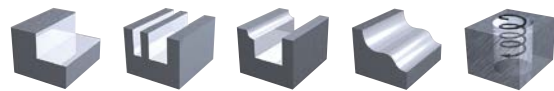
- JP08E** High adhesion PVD coat + Micro grain substrate
Target: Tool steel, Hardened steel, Cast iron
- JP15E** High adhesion PVD coat + Micro grain substrate
Target: Tool steel, Pre-hardened steel, Cast iron

Parts	Clamp Screw			Wrench		
	Diameter	ID Code	Item Code	Torque (Nm)	ID Code	Item code
	8	ET153	581-141	1.1	ET13	104-T8
	10	ET154	581-142	2.2	ET11	104-T10
	12	ET155	581-143	4.9	ET14	105-T20
	16 & 20	ET156	581-144	4.9	ET14	105-T20
	25	ET168	581-146	9.8	ET167	105-T30A

Indexable Milling Tools – Modular Types

ARPFM | Radius High Precision Finish Modular

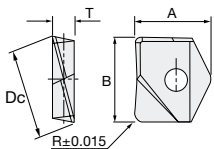
V max High Speed	▽▽ Semi Finishing	▽▽▽ Finishing	HRC 62	No. of Teeth 2
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Tolerance CR:	Set-up:
± 0.015mm	± 0.010mm

ID Code	Item Code	Flutes	D	I	H	d ₁	M	d ₂	A	B	C	E	Inserts
FH 516	ARPFM-10	2	10	3	26	6.5	M6	9.8	5	14.5	5	7	ZCFW100-R...
FH 517	ARPFM-12		12	4				9.8					ZCFW120-R...
FH 518	ARPFM-16		16	5	32	8.5	M8	12.8	6	17	8	10	ZCFW160-R...
FH 519	ARPFM-20		20	6	38	10.5	M10	17.8					19
FH 520	ARPFM-25		25	8		12.5	M12	20.8	7	22	10	17	ZCFW250-R...
FH 521	ARPFM-32		32	10	43	17	M16	28.8					23

INSERTS | Radius High Precision Finish Modular



Item Code	Size				Grade	
	Dc	R	A	T	PCA12M	PTH08M
ZCFW-080-03	8	0.3	9.7	2.1	WF551	WF286
ZCFW-080-05		0.5			WF605	WF287
ZCFW-080-10		1.0			WF552	WF288
ZCFW-100-03	10	0.3	12	2.7	WF553	WF289
ZCFW-100-05		0.5			WF606	WF290
ZCFW-100-10		1.0			WF554	WF291
ZCFW-100-15	10	1.5	12	2.7	WF555	WF292
ZCFW-100-20		2.0			WF556	WF293
ZCFW-120-03		12			0.3	14.6
ZCFW-120-05	0.5		WF607	WF295		
ZCFW-120-10	1.0		WF558	WF296		
ZCFW-120-15	12	1.5	14.6	3.2	WF559	WF297
ZCFW-120-20		2.0			WF560	WF298
ZCFW-120-30		3.0			WF652	WF299
ZCFW-160-03	16	0.3	16.6	4.2	WF561	WF300
ZCFW-160-05		0.5			WF608	WF301
ZCFW-160-10		1.0			WF562	WF302
ZCFW-160-15	16	1.5	16.6	4.2	WF563	WF303
ZCFW-160-20		2.0			WF564	WF304
ZCFW-160-30		3.0			WF653	WF305

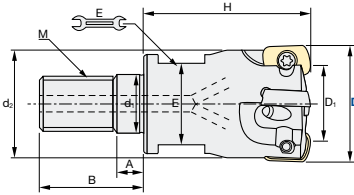
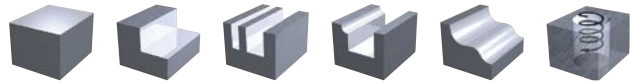
Item Code	Size				Grade	
	Dc	R	A	T	PCA12M	PTH08M
ZCFW-200-03	20	0.3	19.9	5.2	WF565	WF306
ZCFW-200-05		0.5			WF609	WF307
ZCFW-200-10		1.0			WF566	WF308
ZCFW-200-15	20	1.5	19.9	5.2	WF567	WF309
ZCFW-200-20		2.0			WF568	WF310
ZCFW-200-30		3.0			WF654	WF311
ZCFW-250-03	25	0.3	22.6	6.2	WF610	WF312
ZCFW-250-05		0.5			WF611	WF313
ZCFW-250-10		1.0			WF612	WF314
ZCFW-250-20	25	2.0	22.6	6.2	WF613	WF315
ZCFW-250-30		3.0			WF655	WF316
ZCFW-320-03		32			0.3	27.2
ZCFW-320-05	0.5		WF615	WF318		
ZCFW-320-10	1.0		WF616	WF319		
ZCFW-320-20	32	2.0	27.2	7.2	WF617	WF320
ZCFW-320-30		3.0			WF656	WF321

Parts Shape	Clamp Screw			Wrench	
Cutter body	ID Code	Item Code	Torque (Nm)	ID Code	Item Code
ARPFM-10	ET154	581-142	2.2	ET11	104-T10
ARPFM-12	ET155	581-143	4.9	ET14	105-T20
ARPFM-16	ET156	581-144			
ARPFM-20	ET157	581-145	6.9	ET9	101-T25S
ARPFM-25	ET168	581-146	9.8	ET167	105-T30A
ARPFM-32	ET169	581-147			

Indexable Milling Tools – Modular Types

ASR PICO | Turbo Metric Series – Modular

Q max High Efficient	▽ Roughing	▽▽ Semi-Finishing	HRC 60	No. of Teeth 2-6
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Tolerance Dia.:	CAM Radius:	Torque on screw:
0/-0.2mm	2 mm	1.3 Nm

ID Code	Item Code	Flutes	D	D ₁	H	d ₁	M	d ₂	A	B	C	E	Inserts	One Insert-size for all diameters D 16 – 40 mm	
FH 529	ASRM-2016R-2	2	16	6.2	25	8.5	M8	13	5.5	17		10			
FH 530	ASRM-2020R-3	3	20	10.2	30	10.5	M10	18	6	19	10	15			EPNW0603TN-8
FH 531	ASRM-2025R-4	4	25	15.2	35	12.5	M12	21		22		17			EPMT0603TN-8
FH 532	ASRM-2032R-5	5	32	22.2	40	17	M16	29	7	23	12	22			EPMT0603EN-8LF
FH 533	ASRM-2040R-6	6	40	30.2											

INSERTS ASR PICO | – Turbo Metric Series – Modular

Inserts	Target Hardness of Workpiece								R	Insert Shape	
	GX2140	JM4060	JS4060	TB6045	JP4020	TB6020	TB6005	JP4005			
Item Code	ID Code										
EPNW0603TN-8	WF235									2	Fig.1
EPNW0603TN-8		WF236									
EPNW0603TN-8								WF237			
EPNW0603TN-8							WF641	WF642			
EPNW0603TN-8				WF643							
EPNW0603TN-8					WF208					2	Fig.2
EPNW0603TN-8			WF209								
EPMT0603TN-8					WF206						
EPMT0603TN-8			WF207								
EPMT0603TN-8	WF232										
EPMT0603TN-8		WF233								2	Fig.3
EPMT0603TN-8								WF234			
EPMT0603EN-8LF*		WF231									

* LF = Low Force

GX2140	CVD · For heavy roughing of mild steels Recommended for dry cutting
JM4060	PVD · For stainless steels & carbon steels < 35HRC
JS4060	PVD · For carbon steels < 35HRC
TB6045	PVD · General steels for 30-40 HRC / Recommended for dry cutting
JP4020	PVD · For pre-hardened steels 40-55 HRC
TB 6020 - 6005	PVD · Hybrid Coating
JP4005	PVD · For hardened steels > 50 HRC

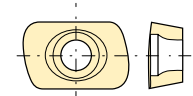
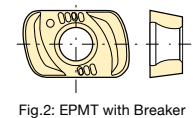
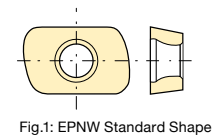
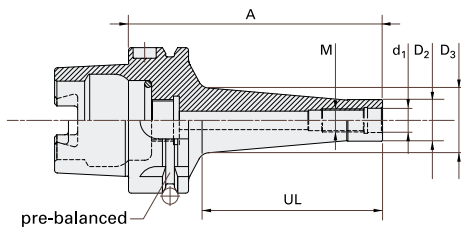


Fig. 3: EPMT-LF Spiral shape (low cutting force)

Parts	Clamp Screw		Wrench	
Body	ID Code	Item Code	ID Code	Item Code
ASRM-20...	ET175	250-141(A)	ET13	104-T8

Indexable Milling Tools – Modular Types

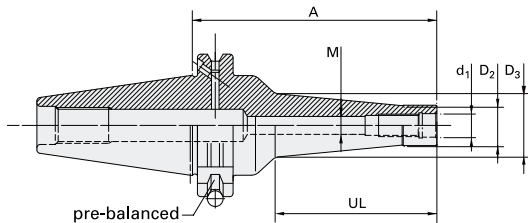
HSK 63 MD | DIN 69893 HSK



d₁	+0
	+0.005

ID Code	Item Code	M	A	UL	d ₁	D ₂	D ₃
NT168	HKA063MD008025	8	60	25	8.5	13	15
NT184	HKA063MD008050		85	50			19
NT169	HKA063MD008075		110	75			22
NT185	HKA063MD008100		135	100			24
NT170	HKA063MD010025	10	60	25	10.5	18	23
NT186	HKA063MD010050		85	50			25
NT171	HKA063MD010075		110	75			28
NT187	HKA063MD010100		135	100			30
NT188	HKA063MD012025	12	60	25	12.5	21	24
NT172	HKA063MD012050		85	50			30
NT189	HKA063MD012075		110	75			32
NT173	HKA063MD012100		135	100			35
NT190	HKA063MD016025	16	60	25	17	29	29
NT174	HKA063MD016050		85	50			34
NT191	HKA063MD016075		110	75			37
NT175	HKA063MD016100		135	100			41

SK 40 MD | DIN 69871

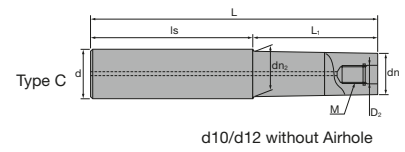
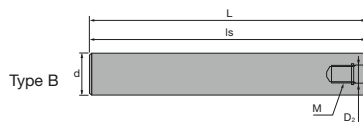
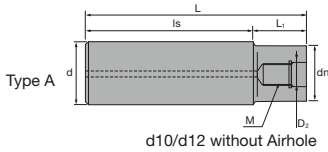


d₁	+0
	+0.005

ID Code	Item Code	M	A	UL	d ₁	D ₂	D ₃
NT192	SKB040MD008010	8	50	10	8.5	13	13
NT176	SKB040MD008030		70	30			15
NT193	SKB040MD008050		90	50			20
NT177	SKB040MD008070		110	70			22
NT194	SKB040MD010010	10	50	10	10.5	18	18
NT178	SKB040MD010030		70	30			20
NT195	SKB040MD010050		90	50			25
NT179	SKB040MD010070		110	70			28
NT196	SKB040MD012010	12	50	10	12.5	21	21
NT197	SKB040MD012030		70	30			24
NT180	SKB040MD012050		90	50			28
NT198	SKB040MD012070		110	70			31
NT181	SKB040MD012090	130	90	33			
NT199	SKB040MD016010	16	50	10	17	29	29
NT200	SKB040MD016030		70	30			34
NT182	SKB040MD016050		90	50			37
NT201	SKB040MD016070		110	70			40
NT183	SKB040MD016090	130	90				

MMC Hitachi Tool

ASC | Carbide Shanks for Modular Mills



Carbide Shank																
	ID Code	Item Code	D ₂	M	L	L ₁	Is	dn	dn ₂	d	Type					
Without Airhole	FH137	ASC10-6.5-74-24	6.5	M6	74	24	50	9.3	-	10	A					
	FH254	ASC10-6.5-84-34			84	34										
	FH255	ASC10-6.5-114-24			114	24						90				
	FH138	ASC10-6.5-114-49			114	49						65				
	FH139	ASC12-6.5-74-24			74	24	50					11	11.5	12	C	
	FH256	ASC12-6.5-94-44			94	44										
	FH257	ASC12-6.5-129-24			129	24										105
	FH140	ASC12-6.5-129-64			129	64										65
With Airhole	FH141	ASC16-8.5-95-30	8.5	M8	95	30	65	14.5	15.5	16	C					
	FH258	ASC16-8.5-120-55			120	55										
	FH142	ASC16-8.5-140-75			140	75										
	FH260	ASC16-8.5-160-30			160	30										130
	FH259	ASC16-8.5-160-95	160	95	65											
	FH143	ASC20-10.5-120-50	10.5	M10	120	50	70	18	-	20	A					
	FH261	ASC20-10.5-170-90Z			170	90	80	18.5	19.5		C					
	FH144	ASC20-10.5-220-50			220	50	170	18	-		A					
	FH262	ASC20-10.5-220-120Z			220	120	100	18.5	19.5		C					
	FH263	ASC20-10.5-270-150Z			270	150	120	23	-	25	A					
	FH264	ASC20-10.5-270-50Z			270	50	220									
	FH145	ASC25-12.5-145-65			145	65	80									
	FH146	ASC25-12.5-265-65			265	65	200									
	FH265	ASC25-12.5-215-115	215	115	100											
	FH266	ASC25-12.5-265-145	265	145	120											
	FH268	ASC25-12.5-315-65	315	65	250											
	FH267	ASC25-12.5-315-195	315	195	120											
	FH147	ASC32-17-160-80	17	M16	160	80	80	28	-	32	A					
	FH269	ASC32-17-260-140			260	140	120									
	FH148	ASC32-17-310-80			310	80	230									
FH270	ASC32-17-360-240	360			240	120										

- 🇬🇧 SUPER Lock milling chucks or shrink-fit holders can be used.
- 🇩🇪 SUPER Lock Aufnahmen oder Schrumpffutter können verwendet werden.
- 🇮🇹 Possono essere utilizzati mandrini a forte serraggio SUPER Lock.

- 🇪🇸 Aptos para amarrar en portapinzas SUPER Lock.
- 🇫🇷 Les attachements SUPER Lock peuvent être utilisés.
- 🇵🇹 Cones hidráulicos de grande aperto e aperto térmico podem ser usados.

AS | Steel Shanks for Modular Mills



Steel Shank											
	ID Code	Item Code	D ₂	M	L	L ₁	Is	dn	dn ₂	d	Type
Without Airhole	FH131	AS10-6.5-74-0	6.5	M6	74	-	74	-	-	10	B
	FH132	AS12-6.5-84-4			84	4	80	11	-	12	A
	FH133	AS16-8.5-95-15			95	15	80	14.5	15.5	16	C
With Airhole	FH134	AS20-10.5-100-20	10.5	M10	100	20		18	-	20	A
	FH271	AS25-12.5-115-35	12.5	M12	115	35		23	23	25	
	FH272	AS32-17-110-30	17	M16	110	30		28	28	32	

- 🇬🇧 SUPER Lock milling chucks can be used.
- 🇩🇪 SUPER Lock Aufnahmen können verwendet werden.
- 🇮🇹 Possono essere utilizzati mandrini a forte serraggio SUPER Lock.

- 🇪🇸 Aptos para amarrar en portapinzas SUPER Lock.
- 🇫🇷 Les attachements SUPER Lock peuvent être utilisés.
- 🇵🇹 Cones hidráulicos de grande aperto e aperto térmico podem ser usados.

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MMC Hitachi Tool Engineering Europe GmbH

Itterpark 12 · 40724 Hilden · Germany · Phone +49 (0) 21 03-24 82-0 · Fax +49 (0) 21 03-24 82-30
 E-Mail info@mmc-hitachitool-eu.com · Internet www.mmc-hitachitool-eu.com
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