

Advanced Engineering

Indexable
Milling
+Modular Series

MMC Hitachi Tool

No. 321.2

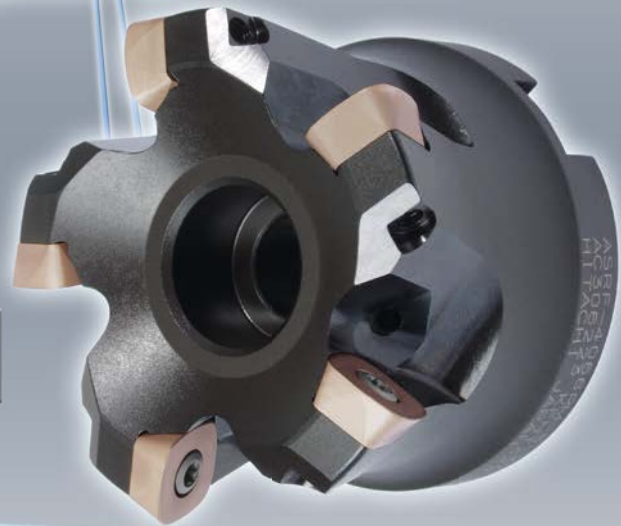
ASRF/M Turbo4

Super Radius Mill Four Corners
for High Performance Cutting



Available Coatings:

GX-Coating
JM-Coating
JS-Coating
JX-Coating
JP-Coating



MMC Hitachi Tool Engineering Europe GmbH
www.high-speed-cutting.com



Indexable Milling Tools

ASRF TURBO4

The ASRF with economical 4-corner specification for increased processing efficiency ensures stable high-performance machining with constant load – even for deep cutting operations.

ASRF TURBO4

Der ASRF mit wirtschaftlicher 4-seitiger Schneidplattengeometrie für höchste Effizienz ermöglicht Hochleistungs-Bearbeitungen mit konstantem Vorschub – auch bei großen Schnitttiefen.

ASRF TURBO4

Il ASRF, nella conveniente versione a 4 angoli per una migliore efficienza di lavoro, assicura una lavorazione stabile di elevate prestazioni con un carico costante, anche per operazioni di taglio profondo.

ASRF TURBO4

El ASRF con especificación económica de 4 esquinas para aumento de eficiencia de procesamiento, asegura un estable funcionamiento de máquina con constante carga – aún para operaciones de corte profundas.

ASRF TURBO4

Le ASRF, avec ses plaquettes spécifiques dotées de quatre arrêtes de coupe, permet des usinages hautes performances grâce à sa stabilité et la constance de la charge requise. Ceci même lors d'usinages avec de forts porte-à-faux.

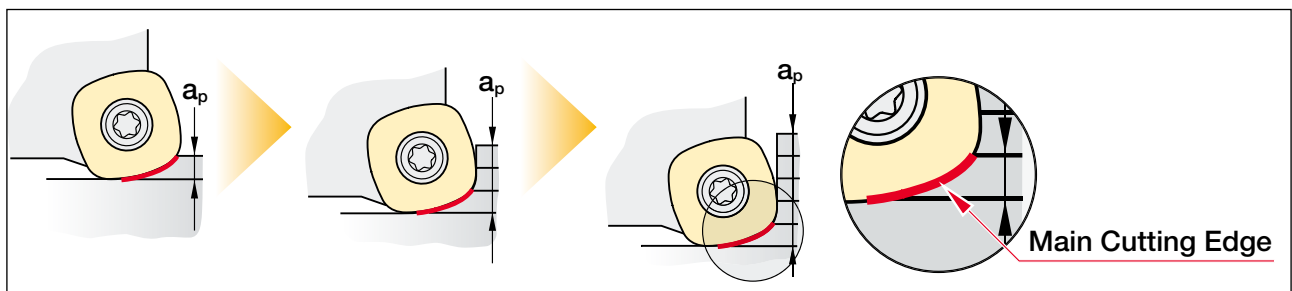
ASRF TURBO4

A ASRF Turbo 4 com a económica especificação de 4 arestas para uma maior eficiência de processamento, assegura um funcionamento estável da máquina com carga constante – até em operações de corte mais profundas.

Recommended Selection of MMC Hitachi's Roughing Series

	ASR Pico D 16–66 mm	ASRF D 35–100 mm	ASF D 63–315 mm
Application Field	HFM High Feed Machining	HPC High Performance Cutting	HVC High Volume Cutting
Machine-spindle	ISO40/HSK63 ASR Pico	ASRF	ISO50/HSK100 ASF
f_z mm	0.5 ~ 1.5	0.5 ~ 2.5	0.5 ~ 3.5
V_f mm/min	2,000 ~ 20,000	1,000 ~ 10,000	500 ~ 5,000
a_p mm	0.35 ~ 0.75 (max. 1)	0.5 ~ 1.5 (max. 2)	0.75 ~ 2 (max. 3)
CAM R	R2	R4.5	R5

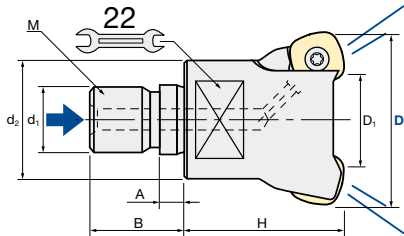
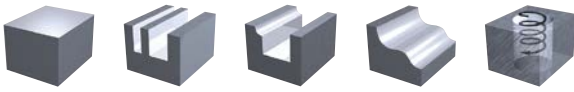
Way to achieve Q (cm ³)		
V_c	Less	More
f_z	Less	More
a_p	Less	More



Indexable Milling Tools

ASRFM | Turbo4 Modular

Q max High Efficient	Jet Air Hole	▽ Roughing	▽▽ Semi-Finishing	HRC 60	No. of Teeth 3 ~ 4
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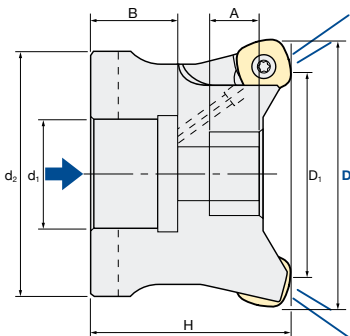
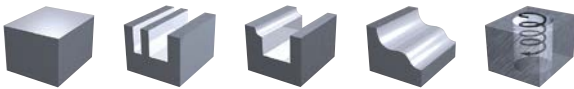
Tolerance Dia.:	CAM Radius:	Torque on screw:	Runout:
0/-0.2 mm	4.5 mm	3.0 Nm	0.02 mm

Modular Type												
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								

ASC | Carbide Shanks for Modular Mills & AS | Steel Shanks for Modular Mills: page 8

ASRF | Turbo4

Q max High Efficient	Jet Air Hole	▽ Roughing	▽▽ Semi-Finishing	HRC 60	No. of Teeth 4 ~ 8
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Tolerance Dia.:	CAM Radius:	Torque on screw:	Runout:
0/-0.2 mm	4.5 mm	3.0 Nm	0.02 mm

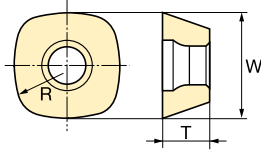
Bore Type												
ID Code	Item Code	Flutes	D	D ₁	H	d ₁	M	d ₂	A	B	Inserts	
FH108	ASRF-4042RM-4-16	4	42	24	40	16	8*	35	3	18	SD..1205ZDTN-R15	
FH217	ASRF-4050RM-4-22		50	32			10	47				
FH109	ASRF-4052RM-5-22	5	52	34	50	27	12	40	16.5	20		
FH113	ASRF-4052RM-5-27		45	15.5				22				
FH219	ASRF-4063RM-5-27		60	13								
FH110	ASRF-4066RM-5-27		48	27								
FH111	ASRF-4080RM-6-27	6	80	62	70	32	16	70	27	25		
FH112	ASRF-4100RM-8-32	8	100	82				70	25	25.5		

* Special Screw

Indexable Milling Tools

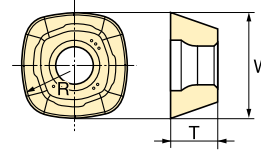
INSERTS ASRF/M | Turbo4/Turbo4 Modular

Type A

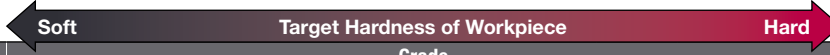


Standard type

Type B



Low-resistance breaker type

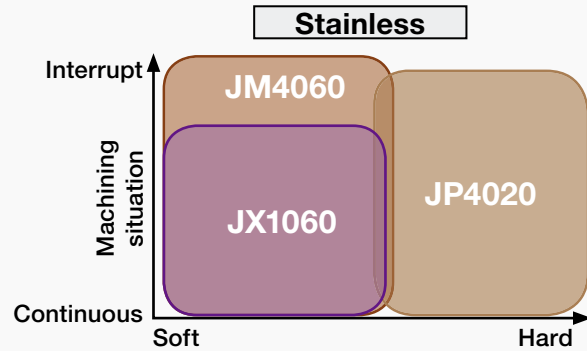
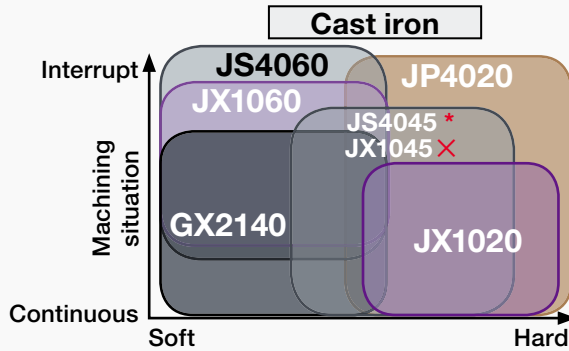
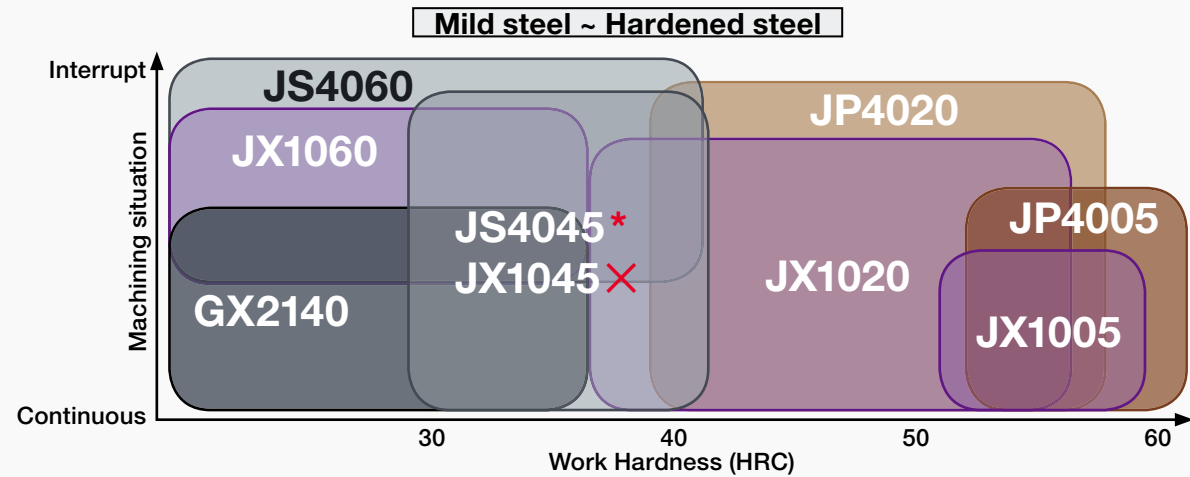






Inserts	Grade										Size (mm)			Chip-breaker	Type
	GX2140	JX1060	JM4060	JS4060	JX1045 X	JS4045	JX1020	JP4020	JX1005	JP4005	R	T	W		
Item Code	ID Code														
SDNW-1205ZDTN-R15	WF239	WF175	WF366	WF332	WF174 X	WF375 *	WF173	WF331	WF172	WF330	15	5.56	12.7	no	A
SDMT-1205ZDTN-R15	WF238	WF180	WF335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

* coming soon

GX2140	CVD · For heavy roughing of mild steels Recommended for dry cutting	JX1045	X to be replaced by JS4045
JX1060	PVD · For carbon steels < 35HRC	JS4045	PVD · For general steels 30–40HRC
JM4060	PVD · For stainless steels & carbon steels < 35HRC	JX1020	PVD · For pre-hardened steels 40–55HRC
JS4060	PVD · For carbon steels < 35HRC	JP4020	PVD · For pre-hardened steels 40–55HRC
		JX1005	PVD · PVD Coating
		JP4005	PVD · For hardened steels > 50HRC

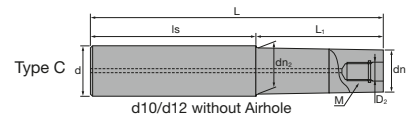
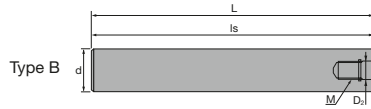
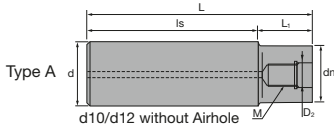
ASRF Insert grade – target material



Cutter Body / Parts	Clamp Screw	Item-Code	Wrench	Item-Code
	ID-Code		ID-Code	
ASRFM  ASRF 	ET048	262-142	ET049	105-T15
ASRF-4042RM-4-16 	Special screw			
	ID-Code	Item-Code		
	ET050	K06-676		

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		20	C				
	FH263	ASC20-10.5-270-150Z			270	150	120									
	FH264	ASC20-10.5-270-50Z	270	50	220											
	FH145	ASC25-12.5-145-65	12.5	M12	145	65	80	23	-	25	A					
	FH146	ASC25-12.5-265-65			265		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
	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
With Airhole	FH133	AS16-8.5-95-15	8.5	M8	95	15	80	14.5	15.5	16	C
	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.

🇬🇧 For further information about modular chucks please see our brochure *Indexable Modular Series No. 328.2*

🇩🇪 Weitere Informationen über modulare Werkzeugaufnahmen finden Sie in unserem Prospekt: *Indexable Modular Series No. 328.2*

🇪🇸 Para obtener más información sobre conos modulares consulte nuestro folleto *Indexable Modular Series No. 328.2*

🇮🇹 Per maggiori informazioni riguardanti la gamma dei mandrini avvitali consultate il catalogo *Indexable Modular Series No. 328.2*

🇫🇷 Pour de plus amples informations concernant les attachements modulaires, voyez SVP notre brochure *Indexable Modular Series No. 328.2*

🇵🇹 Para mais informações sobre Conos Modulares consulte o nosso folheto *Indexable Modular Series No. 328.2*



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