

ASR Pico Turbo Metric Series

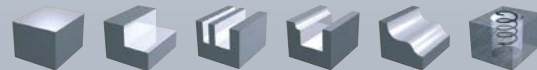
High Feed Cutting (HFC) & High Hardness Cutting (HHC)

D 16 mm ~ D 66 mm

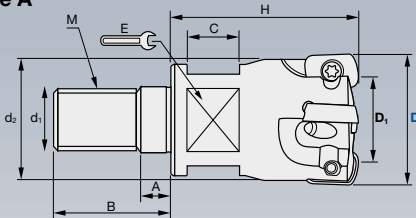


ASR Pico
Insert Radius: **R8**
CAM Radius: **R2**

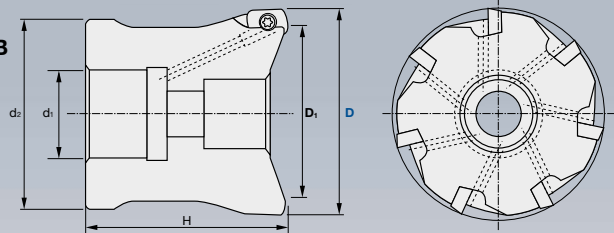
Q max High Efficient	Jet Air Hole	▽ Roughing	HRC 60	No. of Teeth 2-8
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Type A





Type B



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 mm ~ D 66 mm		
Type A	FH 529	ASRM-2016R-2	2	16	6.2	25	8.5	M8	13	5.5	17	10	10	EPNW0603TN-8 EPMT0603TN-8 EPMT0603EN-8LF			
	FH 530	ASRM-2020R-3	3	20	10.2	30	10.5	M10	18	6	19	10	15				
	FH 531	ASRM-2025R-4	4	25	15.2	35	12.5	M12	21	7	22	10	17				
	FH 532	ASRM-2032R-5	5	32	22.2	40	17	M16	29	7	23	12	22				
Type B	FH 533	ASRM-2040R-6	6	40	30.2	50	16	-	32	-	-	-	-				
	FH 537	ASRM-2042RM-6	6	42	32.2	50	16	-	32	-	-	-	-				
	FH 538	ASRM-2052RM-7	7	52	42.2	50	22	-	47	-	-	-	-				
	FH 539	ASRM-2066RM-8	8	66	56.2	50	27	-	60	-	-	-	-				

Clamp Screw 		Wrench 	
ID-Code	Item-Code	ID-Code	Item-Code
ET175	250-141(A)	ET13	104-T8

+ Special Insert: Low Force Type

ASR | Pico – Turbo Metric Series – Modular/Bore Type

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

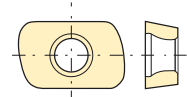


Fig.1: EPNW Standard Shape

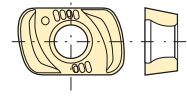


Fig.2: EPMT with Breaker

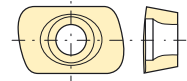


Fig. 3: EPMT-LF Spiral shape (low cutting force)

* 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

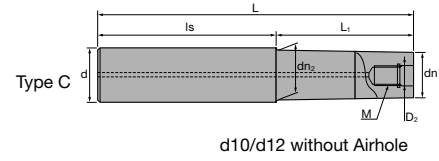
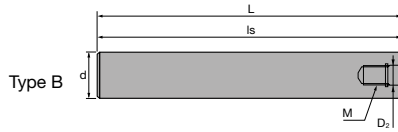
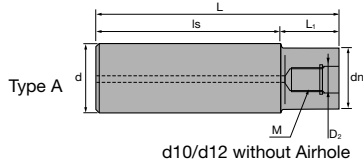
Grades Overview: Page 4

ASR | Pico – Recommended Cutting Conditions

Work piece material	Recommend grade & Target hardness (HRC)		Emulsion	Mist	Air	Parameter	D 16 (Z2)					D 20 (Z3)					D 25 (Z4)									
							< 3D		3D-5D	5D-7D	> 7D	< 3D		3D-5D	5D-7D	> 7D	< 3D		3D-5D	5D-7D	> 7D					
	30	40					50	General				High Speed	General				High Speed	General				High Speed				
I Carbon-Steel II Alloy-Steel <30HRC	GX2140					V_c (m/min)	90	180	130	130	90	90	180	130	130	90	90	180	130	130	90	90	180	130	130	90
						n (min ⁻¹)	1790	3580	2590	2590	1790	1430	2860	2070	2070	1430	1150	2290	1660	1660	1150	1150	2290	1660	1660	1150
	JS4060			•	•	f_z feed/tooth	0.8	1.4	0.8	0.8	0.8	1	1.6	1	1	1	1	1.6	1	1	1	1	1.6	1	1	1
	TB6045					V_r (mm/min)	2860	10030	4140	4140	2860	4300	13750	6210	6210	4300	4580	14670	6620	6620	4580	4580	14670	6620	6620	4580
						a_p (mm)	0.8	0.6	0.6	0.5	0.4	1	0.5	0.8	0.6	0.4	1	0.5	0.8	0.6	0.4	1	0.5	0.8	0.6	0.4
						a_e (mm)	12	12	12	12	12	15	15	15	15	15	20	20	20	20	20	20	20	20	20	20
III Alloy-Steel Tool-Steel 30–40HRC	GX2140					V_c (m/min)	90	180	130	130	90	90	180	130	130	90	90	180	130	130	90	90	180	130	130	90
						n (min ⁻¹)	1790	3580	2590	2590	1790	1430	2860	2070	2070	1430	1150	2290	1660	1660	1150	1150	2290	1660	1660	1150
	JS4060			•	•	f_z feed/tooth	0.8	1.4	0.8	0.8	0.8	1	1.6	1	1	1	1	1.6	1	1	1	1	1.6	1	1	1
	TB6045					V_r (mm/min)	2860	10030	4140	4140	2860	4300	13750	6210	6210	4300	4580	14670	6620	6620	4580	4580	14670	6620	6620	4580
						a_p (mm)	0.6	0.4	0.5	0.4	0.3	0.8	0.4	0.6	0.5	0.35	0.8	0.4	0.6	0.5	0.35	0.8	0.4	0.6	0.5	0.35
						a_e (mm)	12	12	12	12	12	15	15	15	15	15	20	20	20	20	20	20	20	20	20	20
IV Pre-Hardened Steel Tool-Steel 40–50HRC						V_c (m/min)	90	130	90	90	90	90	130	90	90	90	130	90	90	90	90	130	90	90	90	90
						n (min ⁻¹)	1790	2590	1790	1790	1790	1430	2070	1430	1430	1430	1150	1660	1150	1150	1150	1150	1660	1150	1150	1150
	TB6020			•	•	f_z feed/tooth	0.6	1.2	0.8	0.8	0.8	0.8	1.4	0.8	0.8	0.8	0.8	1.4	0.8	0.8	0.8	1.4	0.8	0.8	0.8	
	JP4020					V_r (mm/min)	2150	6210	2860	2860	2860	3440	8690	3440	3440	3440	3670	9270	3670	3670	3670	3670	9270	3670	3670	3670
	TB6045					a_p (mm)	0.5	0.35	0.4	0.3	0.2	0.6	0.35	0.5	0.4	0.25	0.6	0.35	0.5	0.4	0.25	0.6	0.35	0.5	0.4	0.25
						a_e (mm)	12	12	12	12	12	15	15	15	15	15	20	20	20	20	20	20	20	20	20	20
V Pre-Hardened Steel Tool-Steel 50–55HRC						V_c (m/min)	80	120	80	80	80	80	120	80	80	80	80	120	80	80	80	80	120	80	80	80
						n (min ⁻¹)	1590	2390	1590	1590	1590	1270	1910	1270	1270	1270	1020	1530	1020	1020	1020	1020	1530	1020	1020	1020
	TB6020			•	•	f_z feed/tooth	0.5	1	0.6	0.6	0.6	0.6	1	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
	JP4020					V_r (mm/min)	1590	4770	1910	1910	1910	2290	5730	2290	2290	2290	2440	6110	2440	2440	2440	2440	6110	2440	2440	2440
	TB6045					a_p (mm)	0.4	0.25	0.35	0.25	0.15	0.4	0.25	0.35	0.25	0.15	0.4	0.25	0.35	0.25	0.15	0.4	0.25	0.35	0.25	0.15
						a_e (mm)	12	12	12	12	12	15	15	15	15	15	20	20	20	20	20	20	20	20	20	20
VI Pre-Hardened Steel Tool-Steel >55HRC						V_c (m/min)	65	90	65	65	65	65	90	65	65	65	65	65	65	65	65	65	65	65	65	
						n (min ⁻¹)	1290	1790	1290	1290	1290	1030	1430	1030	1030	1030	830	1150	830	830	830	830	1150	830	830	
	JP4005			•	•	f_z feed/tooth	0.5	0.8	0.5	0.5	0.5	0.5	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	TB6005					V_r (mm/min)	1290	2860	1290	1290	1290	1550	3440	1550	1550	1550	1660	3670	1660	1660	1660	1660	3670	1660	1660	1660
						a_p (mm)	0.4	0.25	0.35	0.25	0.15	0.4	0.25	0.35	0.25	0.15	0.4	0.25	0.35	0.25	0.15	0.4	0.25	0.35	0.25	0.15
						a_e (mm)	12	12	12	12	12	15	15	15	15	15	20	20	20	20	20	20	20	20	20	20
VII Stainless steel						V_c (m/min)	90	160	120	100	90	90	160	120	100	90	90	160	120	100	90	90	160	120	100	
						n (min ⁻¹)	1790	3180	2390	1990	1790	1430	2550	1910	1590	1430	1150	2040	1530	1270	1150	1150	2040	1530	1270	1150
	JM4060			•	•	f_z feed/tooth	0.6	1	0.6	0.6	0.6	0.6	1	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
	JP4020					V_r (mm/min)	2150	6370	2860	2390	2150	2580	7640	3440	2860	2580	2750	8150	3670	3060	2750	2750	8150	3670	3060	2750
						a_p (mm)	0.8	0.5	0.6	0.5	0.4	0.8	0.5	0.6	0.5	0.4	0.8	0.5	0.6	0.5	0.4	0.8	0.5	0.6	0.5	0.4
						a_e (mm)	12	12	12	12	12	15	15	15	15	15	20	20	20	20	20	20	20	20	20	20
VIII Cast-Iron GG GGG						V_c (m/min)	21	38	21	14	10	31	57	31	21	15	44	82	44	31	22	22	82	44	31	22
						n (min ⁻¹)	90	180	130	130	90	90	180	130	130	90	90	180	130	130	90	90	180	130	130	90
	TB6020			•	•	f_z feed/tooth	1.2	1.6	1.2	1.2	1.2	1.4	1.8	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	
	JP4020					V_r (mm/min)	4300	11460	6210	6210	4300	6020	15470	8690	8690	6020	6420	16500	9270	9270	6420	6420	16500	9270	9270	6420
	TB6045					a_p (mm)	1	0.8	0.8	0.6	0.5	1.25	1	0.8	0.6	0.4	1.25	1	0.8	0.6	0.4	1.25	1	0.8	0.6	0.4
	GX2140					a_e (mm)	12	1																		

Indexable Milling Tools

ASC | Carbide Shanks for Modular Mills



Carbide Shank

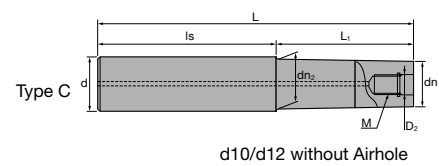
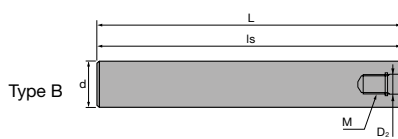
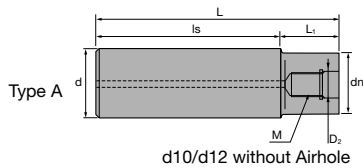
	ID Code	Item Code	D ₂	M	L	L ₁	Is	dn	dn ₂	d	Type					
Without Airhole	FH137	ASC10-6.5-74-24	6.5	M6	74	24	50	9.3	-	10	A					
	FH254	ASC10-6.5-84-34			84	34										
	FH255	ASC10-6.5-114-24			114	24						90				
	FH138	ASC10-6.5-114-49			114	49						65				
	FH139	ASC12-6.5-74-24			74	24	50					11	11.5	12	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	145	65	80	23	-			25			A			
	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.

Indexable Milling Tools

AS | Steel Shanks for Modular Mills



Steel Shank											
	ID Code	Item Code	D ₂	M	L	L ₁	ls	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	A
	FH134	AS20-10.5-100-20	10.5	M10	100	20		18	-	20	
	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 avvitabili 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*

