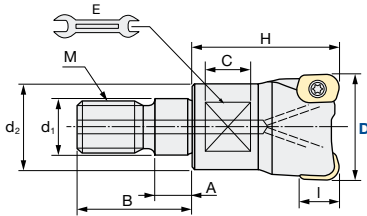
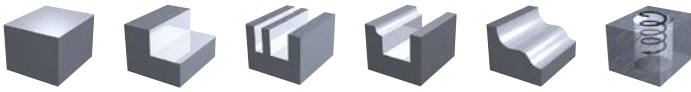


APHP | Advanced Pico Hard Precision – Modular Type

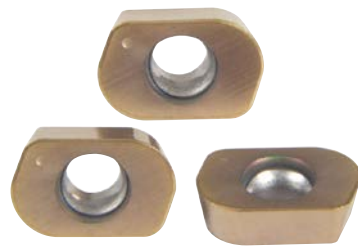
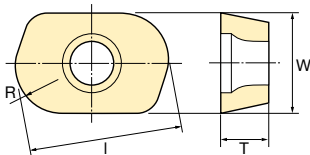
Q max High Efficient	Jet Air Hole	▽ Roughing	▽▽ Semi-Finishing	HRC 62	No. of Teeth 1-8
--------------------------------	------------------------	----------------------	-----------------------------	------------------	----------------------------



Diameter Holder only [mm]	Fastening Torque [Nm]
-0.046/-0.096 mm	0.5 Nm

Modular Type													
ID Code	Item Code	Flutes	D	H	d ₁	M	d ₂	A	B	C	E	I	Inserts
FH182	APHP-1008R-1-M6	1	8	19	6.5	M6	9.4	5.5	14.5	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						
FH187	APHP-1025R-6-M12	6	25	25	12.5	M12	20.8	22	10	15	17		
FH188	APHP-1032R-8-M16	8	32	27	17	M16	28.8	6	23	12	22		

Wrench Size

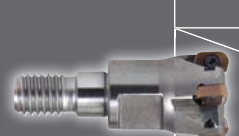


INSERTS APHP | Advanced Pico Hard Precision – Modular Type


Micro Grain PVD Coating
Hard Tough



Diamond Coating
for Graphite

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

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

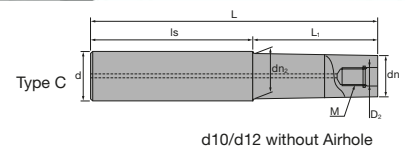
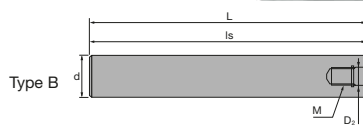
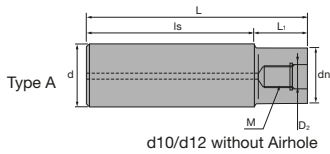
Cutting Conditions | Schnittwerte | Condizioni di taglio | Condiciones de Corte | Conditions de coupe | Valores de corte:

D 8 (Z1) – D 32 (Z8):

Page 4



ASC | Carbide Shanks for Modular Mills



d10/d12 without Airhole

d10/d12 without Airhole

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									
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	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	-
	FH269	ASC32-17-260-140	260	140			120								
	FH148	ASC32-17-310-80	310	80			230								
FH270	ASC32-17-360-240	360	240	120											

- UK SUPER Lock milling chucks or shrink-fit holders can be used.
- DE SUPER Lock Aufnahmen oder Schrumpffutter können verwendet werden.
- IT Possono essere utilizzati mandrini a forte serraggio SUPER Lock.

- ES Aptos para amarrar en portapinzas SUPER Lock.
- FR Les attachements SUPER Lock peuvent être utilisés.
- PT 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	

- UK SUPER Lock milling chucks can be used.
- DE SUPER Lock Aufnahmen können verwendet werden.
- IT Possono essere utilizzati mandrini a forte serraggio SUPER Lock.

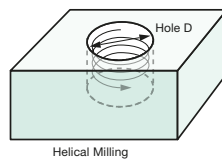
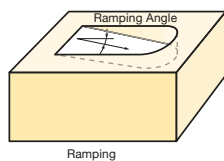
- ES Aptos para amarrar en portapinzas SUPER Lock.
- FR Les attachements SUPER Lock peuvent être utilisés.
- PT Cones hidráulicos de grande aperto e aperto térmico podem ser usados.

- UK For further information about modular chucks please see our brochure *Indexable Modular Series No. 328*
- DE Weitere Informationen über modulare Werkzeugaufnahmen finden Sie in unserem Prospekt: *Indexable Modular Series No. 328*
- ES Para obtener más información sobre conos modulares consulte nuestro folleto *Indexable Modular Series No. 328*
- IT Per maggiori informazioni riguardanti la gamma dei mandrini avvitali consultate il catalogo *Indexable Modular Series No. 328*

- FR Pour de plus amples informations concernant les attachements modulaires, voyez SVP notre brochure *Indexable Modular Series No. 328*
- PT Para mais informações sobre Conos Modulares consulte o nosso folheto *Indexable Modular Series No. 328*



Ramping / Helical Milling



Tool diameter D mm	D8	D10	D12	D16	D20	D25	D32
Max. ramp angle °	less than 0.5° (max. 1.0°)						
Helical Milling / Hole Dia. (mm)	10-15	13-19	17-23	25-31	33-39	43-49	57-63