

Indexable Milling Tools

ABPF | Ball High Precision Finish

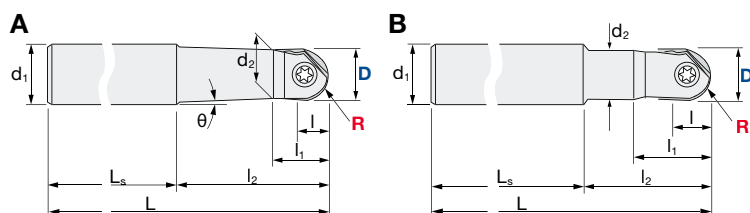
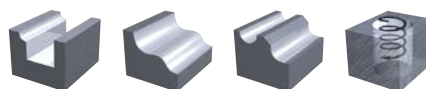
V max
High Speed

Semi Finishing

Finishing

HRC
65

No. of Teeth
2



R	± 0.005
Set-up	± 0.010

ABPF-S Ball High Precision Finish - Regular

ID Code	Item Code	Stock	Flutes	D	R	L	I	I ₁	I ₂	L _s	θ	d ₁	d ₂	Type	Inserts
FH387	ABPF-08S12	■	2	8	4	100	4.4	10	22	78	9.5°	12	7.5	A	Z...FG-080...
FH388	ABPF-10S12			10	5		5.5	13	25	75	5°		9.5		Z...FG-100...
FH389	ABPF-12S12			12	6		6.6	15	30		–		11.5		Z...FG-120...
FH447	ABPF-16S20			16	8	130	8.8	19	50	80	2.5°	20	15.5	A	Z...FG-160...
FH448	ABPF-20S25			20	10	140	11	22	60		3°	25	19.5		Z...FG-200...
FH449	ABPF-25S32			25	12.5	150	13.7	25	70		–	32	24.5		Z...FG-250...
FH450	ABPF-32S32			32	16	160	17.6	30	80		–		31.5		Z...FG-320...



ABPF-L Ball High Precision Finish - Long Neck

ID Code	Item Code	Stock	Flutes	D	R	L	I	I ₁	I ₂	L _s	θ	d ₁	d ₂	Type	Inserts
FH390	ABPF-08S12L	■	2	8	4	130	4.4	10	50	80	3°	12	7.5	A	Z...FG-080...
FH391	ABPF-10S16L			10	5	150	5.5	13		100	5°	16	9.5		Z...FG-100...
FH392	ABPF-12S16L			12	6	160	6.6	20	60	3°	16	10.8	Z...FG-120...		
FH451	ABPF-16S20L			16	8	160	8.8	19	65	95	2°	20	15.5	B	Z...FG-160...
FH452	ABPF-20S25L					180			80			25			
FH453	ABPF-20S20L120			20	10	220	11	22	120	100	–	20	19.5	B	Z...FG-200...
FH454	ABPF-20S20L150					250			150						
FH455	ABPF-25S32L			25	12.5	200	13.7	25	90	110	3°	32	24.5	A	Z...FG-250...
FH456	ABPF-25S32L150					250			150	100	–	32		B	
FH457	ABPF-32S32L			32	16	220	17.6	30	100	120	–	32	31.5	B	Z...FG-320...

■ = Stock | Germany



Inserts p. 7

Cutting Conditions		Page		Page	Clamp Screws & Wrenches	Page
ABPF D8 – 32	Semi Finishing 	12–13	Finishing 	12–13		10

Indexable Milling Tools | Grades Overview

INSERTS | Ball High Precision Finish

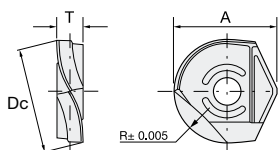


Fig. 1: ZPFG

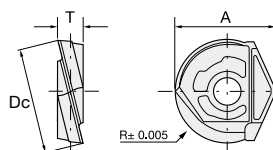


Fig. 2: ZDFG

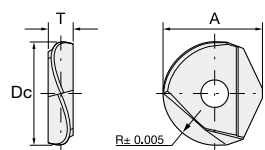
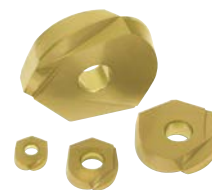


Fig. 3: ZDFG-SF



Item Code	Size				Grade						Shape
					PCA12M	ATH10E	PCA08M	PTH08M	ACS05E	ATH80D	
	Dc	R	A	T	ID-Code						
ZPFG-080	8	4	9.7	2.1	WF547		WF594	WF645			Fig-1
ZPFG-080-GH										WF267	
ZPFG-080-GF									WF266		
ZPFG-100	10	5	12.1	2.7	WF548		WF595	WF646			
ZPFG-100-GH										WF269	
ZPFG-100-GF									WF268		
ZPFG-120	12	6	14.6	3.2	WF549		WF596	WF647			
ZPFG-120-GH										WF271	
ZPFG-120-GF									WF270		
ZPFG-160	16	8	16.6	4.2	WF598		WF597	WF648			
ZPFG-160-GH										WF273	
ZPFG-160-GF									WF272		
ZPFG-200	20	10	20.3	5.2	WF600		WF599	WF649			
ZPFG-200-GH										WF275	
ZPFG-200-GF									WF274		
ZPFG-250	25	12.5	24.1	6.2	WF602		WF601	WF650			
ZPFG-250-GH										WF277	
ZPFG-250-GF									WF276		
ZPFG-320	32	16	30	7.2	WF604		WF603	WF651			
ZPFG-320-GH										WF279	
ZPFG-320-GF									WF278		
ZDFG-080-WH	8	4	9.7	2.1						WF281	Fig-2 (Full-R)
ZDFG-080-WF									WF280		
ZDFG-100-WH	10	5	12.1	2.7						WF283	
ZDFG-100-WF									WF282		
ZDFG-120-WH	12	6	14.6	3.2						WF285	
ZDFG-120-WF									WF284		
ZDFG-160-WH	16	8	16.6	4.2						WF164	
ZDFG-160-WF									WF168		
ZDFG-200-WH	20	10	20.3	5.2						WF165	
ZDFG-200-WF									WF169		
ZDFG-250-WH	25	12.5	24.1	6.2						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		WF263					Fig-3 (High-helix)
ZDFG-200-SF	20	10	20.3	5.2		WF264					
ZDFG-250-SF	25	12.5	24.1	6.2		WF265					

