

Indexable Milling Tools

ABPF | Ball High Precision Finish

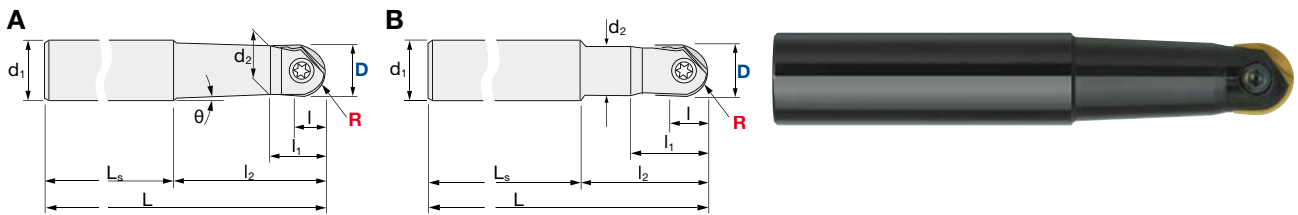
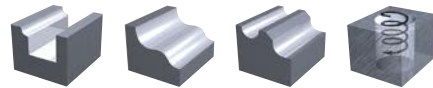
V max
High Speed

V
Semi Finishing

V
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	l	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	110	6.6	15	30	80	-	11.5	B	Z...FG-120...	
FH447	ABPF-16S20			16	8	130	8.8	19	50		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	B	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	l	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°	10.8	15.5	A	Z...FG-120...				
FH451	ABPF-16S20L			16	8	160	8.8	19	65	95	2°			25	Z...FG-160...			
FH452	ABPF-20S25L			200	11	22	80	100	-	20	19.5	B	-	20	19.5	B	Z...FG-200...	
FH453	ABPF-20S20L120																120	150
FH454	ABPF-20S20L150																150	
FH455	ABPF-25S32L			25	12.5	200	13.7	25	90	110	3°	32	24.5	A	Z...FG-250...			
FH456	ABPF-25S32L150			150	100	-	32	32	31.5	-	32	31.5	B	Z...FG-320...				
FH457	ABPF-32S32L			32	16	220	17.6								30	100	120	

■ = Stock | Germany



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

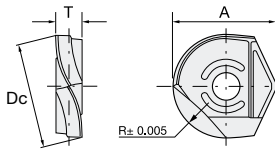


Fig. 1: ZPFG

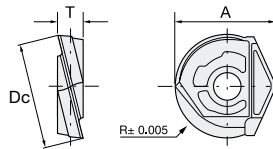


Fig. 2: ZDFG

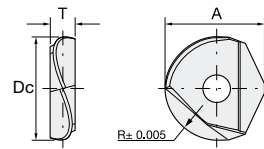
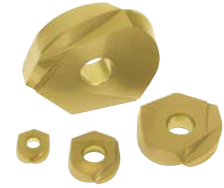


Fig. 3: ZDFG-SF



Item Code	Size				Grade					Shape				
	Dc	R	A	T	PCA12M	ATH10E	PCA08M	PTH08M	ACS05E		ATH80D			
ZPFG-080	8	4	9.7	2.1	WF547		WF594	WF645			Fig-1			
ZPFG-080-GH												WF266	WF267	
ZPFG-080-GF														
ZPFG-100	10	5	12.1	2.7	WF548		WF595	WF646			Fig-1			
ZPFG-100-GH												WF268	WF269	
ZPFG-100-GF														
ZPFG-120	12	6	14.6	3.2	WF549		WF596	WF647			Fig-1			
ZPFG-120-GH												WF270	WF271	
ZPFG-120-GF														
ZPFG-160	16	8	16.6	4.2	WF598		WF597	WF648			Fig-1			
ZPFG-160-GH												WF272	WF273	
ZPFG-160-GF														
ZPFG-200	20	10	20.3	5.2	WF600		WF599	WF649			Fig-1			
ZPFG-200-GH												WF274	WF275	
ZPFG-200-GF														
ZPFG-250	25	12.5	24.1	6.2	WF602		WF601	WF650			Fig-1			
ZPFG-250-GH												WF276	WF277	
ZPFG-250-GF														
ZPFG-320	32	16	30	7.2	WF604		WF603	WF651			Fig-1			
ZPFG-320-GH												WF278	WF279	
ZPFG-320-GF														
ZDFG-080-WH	8	4	9.7	2.1					WF280	WF281	Fig-2 (Full-R)			
ZDFG-080-WF														
ZDFG-100-WH					10	5	12.1	2.7					WF282	WF283
ZDFG-100-WF														
ZDFG-120-WH	12	6	14.6	3.2								WF284	WF285	
ZDFG-120-WF														
ZDFG-160-WH					16	8	16.6	4.2				WF168	WF164	
ZDFG-160-WF														
ZDFG-200-WH	20	10	20.3	5.2								WF169	WF165	
ZDFG-200-WF														
ZDFG-250-WH					25	12.5	24.1	6.2				WF170	WF166	
ZDFG-250-WF														
ZDFG-320-WH	32	16	30	7.2								WF171	WF167	
ZDFG-320-WF														
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								

