

Advanced
Engineering

Hitachi Tool

HITACHI
Inspire the Next

**Indexable
Milling**

No. 315

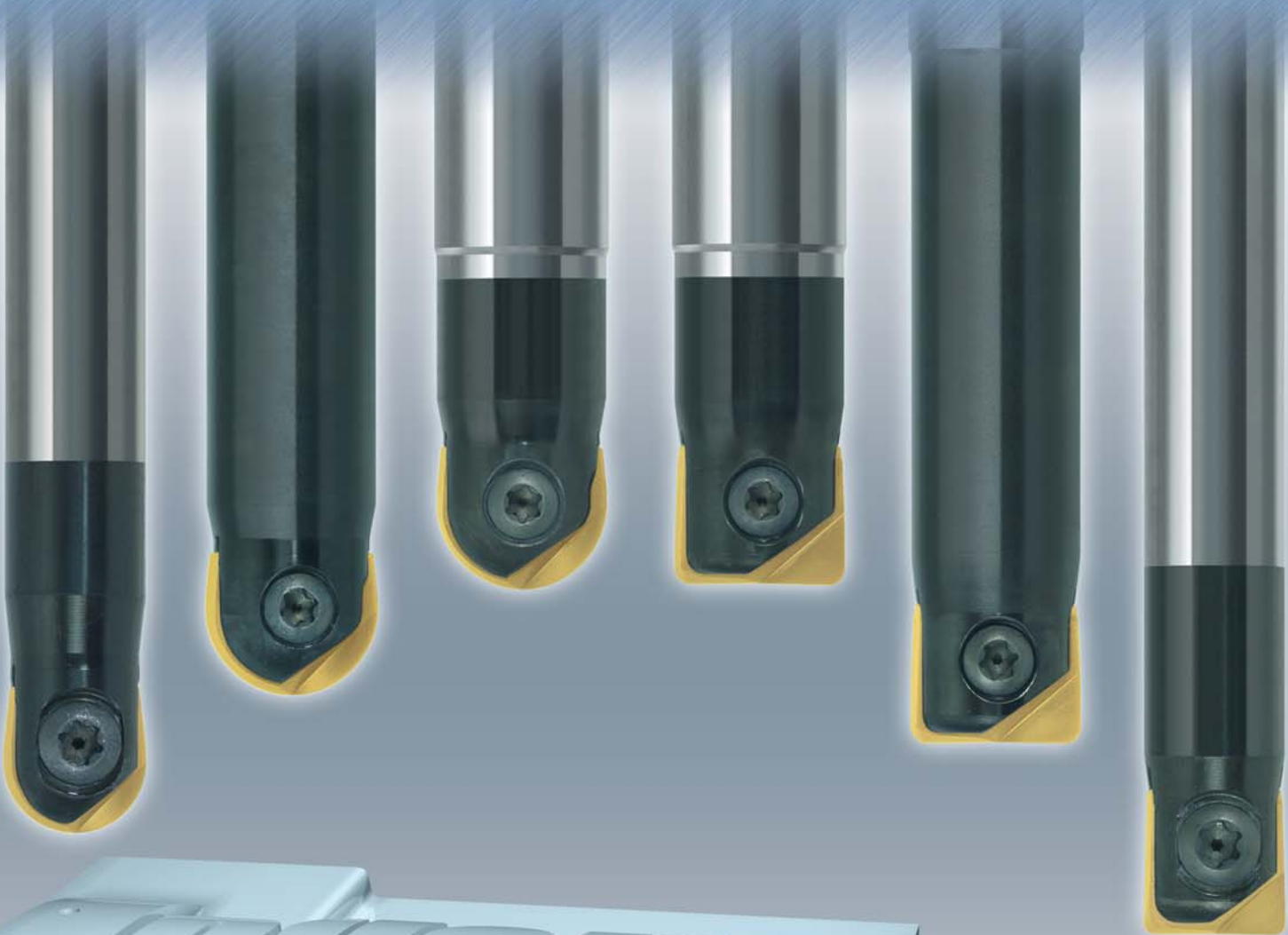
ABPF

Ball High Precision Finish

ARPF

Radius High Precision Finish

$\varnothing 8 \sim \varnothing 32 \cdot \sim \text{HRC } 60$



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Indexable Milling Tools



Ball High Precision Finish - Regular

ABPF-S

8 – 32 mm

4



Ball High Precision Finish - Long Neck

ABPF-L

8 – 32 mm

5



Ball High Precision Finish - Carbide Shank Regular

ABPF-W

8 – 32 mm

6



Ball High Precision Finish - Carbide Shank Long Neck

ABPF-WL

8 – 12 mm

7



Ball High Precision Finish - Carbide Shank Extra Long

ABPF-WE

16 – 32 mm

8



Ball High Precision Finish - MT Shank

ABPF-MT

20 – 32 mm

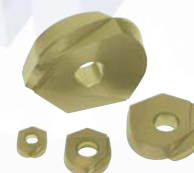
9



Ball High Precision Finish

INSERTS

10



Longer tool life by the latest and superior coating (PCA)



Längste Standzeiten mit der neu

entwickelten Beschichtung (PCA)



Mayor duración de la herramienta gracias a un recubrimiento de

última generación (PCA)



Elevata durata dell'inserto grazie alla qualità superiore del rivestimento (PCA)



Plus grande durée de vie grâce au dernier et meilleur revêtement (PCA)

Indexable Milling Tools



Radius High Precision Finish - Regular

ARPF-S

8 – 32 mm

12



Radius High Precision Finish - Long Neck

ARPF-L

8 – 32 mm

13



Radius High Precision Finish - Extra Long

ARPF-E

16 – 32 mm

14



Radius High Precision Finish - Carbide Shank Regular

ARPF-W

8 – 32 mm

15



Radius High Precision Finish - Carbide Shank Long Neck

ARPF-WL

8 – 12 mm

16



Radius High Precision Finish - Carbide Shank Extra Long

ARPF-WE

16 – 32 mm

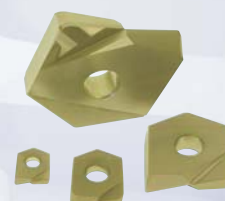
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Radius High Precision Finish

INSERTS

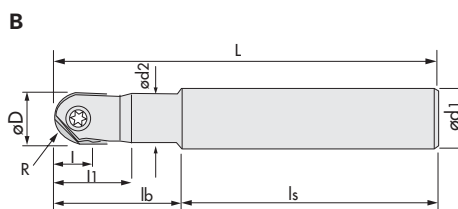
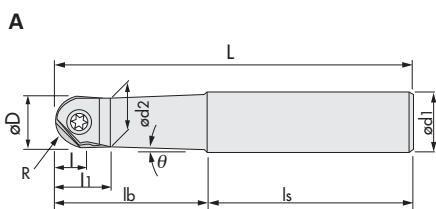
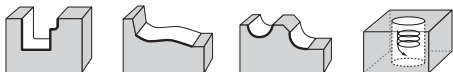
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Indexable Milling Tools

ABPF | Ball High Precision Finish - Regular

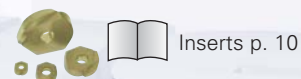
V max High Speed	▽▽ Semi-Finishing	▽▽▽ Finishing	HRC 60	No. of Teeth 2
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R	±0.005
Set-up	±0.010

ID Code	Item No.	Stock	Flutes	ØD	R	L	l	l ₁	lb	ls	θ	Ød ₁	Ød ₂	Type	Inserts x1
FH 387	ABPF-08S12	■	2	8	4	100	4.4	10	22	78	9.5°	12	7.5	A	ZPFG080
FH 388	ABPF-10S12	■	2	10	5	100	5.5	13	25	75	5°	12	9.5	A	ZPFG100
FH 389	ABPF-12S12	■	2	12	6	110	6.6	15	30	80		12	11.5	B	ZPFG120
FH 447	ABPF-16S20	■	2	16	8	130	8.8	19	50	80	2.5°	20	15.5	A	ZPFG160
FH 448	ABPF-20S25	■	2	20	10	140	11	22	60	80	2.5°	25	19.5	A	ZPFG200
FH 449	ABPF-25S32	■	2	25	12.5	150	13.7	25	70	80	3°	32	24.5	A	ZPFG250
FH 450	ABPF-32S32	■	2	32	16	160	17.6	30	80	80		32	31.5	B	ZPFG320

■ = Stock | Germany

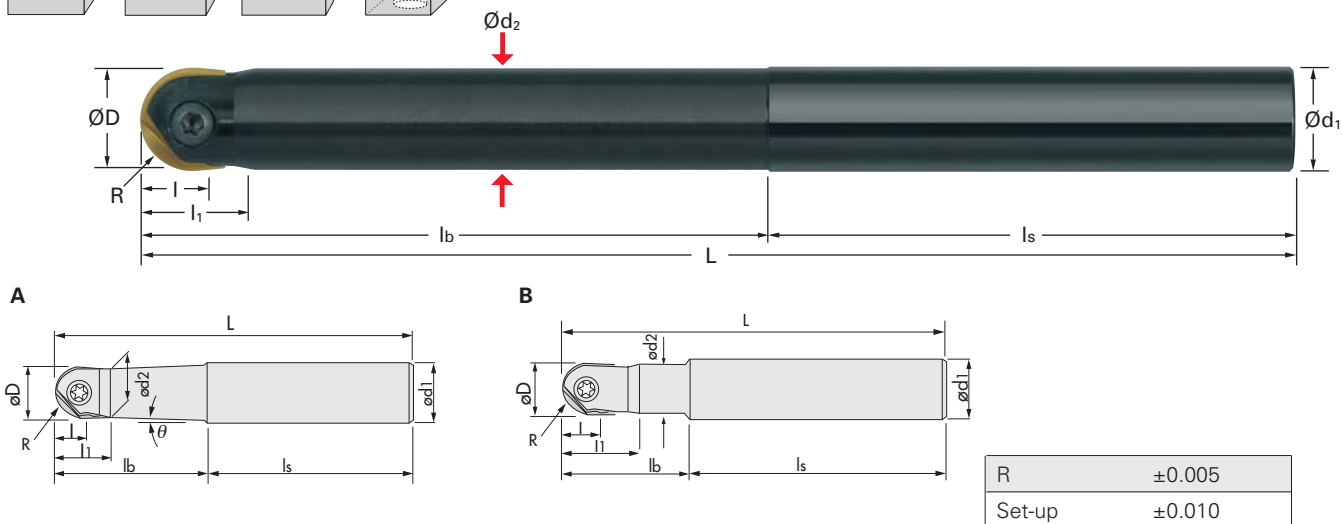
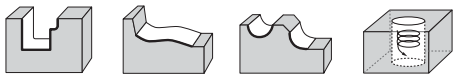


PARTS		Clamp Screw		Wrench	
Body	ID-Code	Item-Code	ID-Code	Item-Code	
ABPF-08S12	ET 153	581-141	ET 13	104-T8	
ABPF-10S12	ET 154	581-142	ET 11	104-T10	
ABPF-12S12	ET 155	581-143	ET 14	105-T20	
ABPF-16S20	ET 156	581-144	ET 14	105-T20	
ABPF-20S25	ET 157	581-145	ET 9	101-T25S	
ABPF-25S32	ET 168	581-146	ET 167	105-T30A	
ABPF-32S32	ET 169	581-147	ET 167	105-T30A	

Indexable Milling Tools

ABPF-L | Ball High Precision Finish - Long Neck

V max			HRC	No. of Teeth
High Speed	Semi-Finishing	Finishing	60	2



ID Code	Item No.	Stock	Flutes	ØD	R	L	l	l ₁	l _b	l _s	θ	Ød ₁	Ød ₂	Type	Inserts x1
FH 390	ABPF-08S12L	■	2	8	4	130	4.4	10	50	80	3°	12	7.5	A	ZPFG080
FH 391	ABPF-10S16L	■	2	10	5	150	5.5	13	50	100	5°	16	9.5	A	ZPFG100
FH 392	ABPF-12S16L	■	2	12	6	160	6.6	20	60	100	3°	16	10.8	A	ZPFG120
FH 451	ABPF-16S20L	■	2	16	8	160	8.8	19	65	95	2°	20	15.5	A	ZPFG160
FH 452	ABPF-20S25L	■	2	20	10	180	11	22	80	100	2°	25	19.5	A	ZPFG200
FH 453	ABPF-20S20L120	■	2	20	10	220	11	22	120	100		20	19.5	B	ZPFG200
FH 454	ABPF-20S20L150	■	2	20	10	250	11	22	150	100		20	19.5	B	ZPFG200
FH 455	ABPF-25S32L	■	2	25	12.5	200	13.7	25	90	110	3°	32	24.5	A	ZPFG250
FH 456	ABPF-25S32L150	■	2	25	12.5	250	13.7	25	150	100		32	24.5	B	ZPFG250
FH 493	ABPF-32S32L200	■	2	32	16	300	17.6	30	200	100		32	31.5	B	ZPFG320
FH 457	ABPF-32S32L	■	2	32	16	220	17.6	30	100	120		32	31.5	B	ZPFG320

■ = Stock | Germany

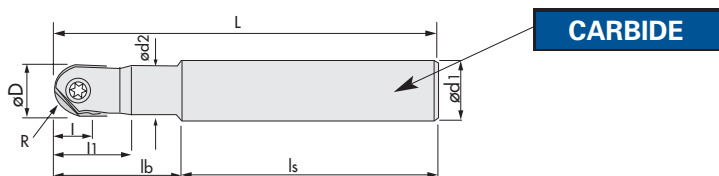
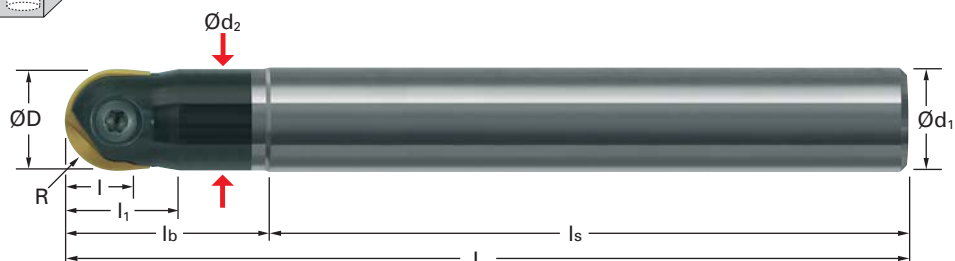
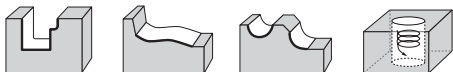


PARTS		Clamp Screw		Wrench	
Body	ID-Code	Item-Code	ID-Code	Item-Code	
ABPF-08S12L	ET 153	581-141	ET 13	104-T8	
ABPF-10S16L	ET 154	581-142	ET 11	104-T10	
ABPF-12S16L	ET 155	581-143	ET 14	105-T20	
ABPF-16S20L	ET 156	581-144	ET 14	105-T20	
ABPF-20S25L	ET 157	581-145	ET 9	101-T25S	
ABPF-20S20L120	ET 157	581-145	ET 9	101-T25S	
ABPF-20S20L150	ET 157	581-145	ET 9	101-T25S	
ABPF-25S32L	ET 168	581-146	ET 167	105-T30A	
ABPF-25S32L150	ET 168	581-146	ET 167	105-T30A	
ABPF-32S32L200	ET 169	581-147	ET 167	105-T30A	
ABPF-32S32L	ET 169	581-147	ET 167	105-T30A	

Indexable Milling Tools

ABPF-W | Ball High Precision Finish - Carbide Shank Regular

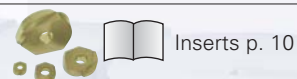
V max High Speed	▽▽ Semi-Finishing	▽▽▽ Finishing	HRC 60	No. of Teeth 2
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R	±0.005
Set-up	±0.010

ID Code	Item No.	Stock	Flutes	ØD	R	L	l	l ₁	l _b	l _s	Ød ₁	Ød ₂	Inserts x1
FH 393	ABPF-08S08W	■	2	8	4	100	4.4	18	30	70	8	7.8	ZPFG080
FH 394	ABPF-10S10W	■	2	10	5	100	5.5	23	35	65	10	9.8	ZPFG100
FH 395	ABPF-12S12W	■	2	12	6	110	6.6	26	45	65	12	11.8	ZPFG120
FH 478	ABPF-16S16W	■	2	16	8	140	8.8	19	35	105	16	15.5	ZPFG160
FH 479	ABPF-20S20W	■	2	20	10	160	11	22	40	120	20	19.5	ZPFG200
FH 480	ABPF-25S25W	■	2	25	12.5	180	13.7	25	45	135	25	24.5	ZPFG250
FH 481	ABPF-32S32W	■	2	32	16	180	17.6	30	55	125	32	31.5	ZPFG320

■ = Stock | Germany

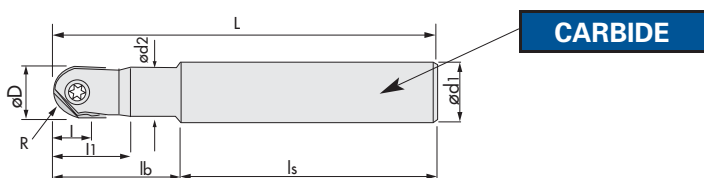
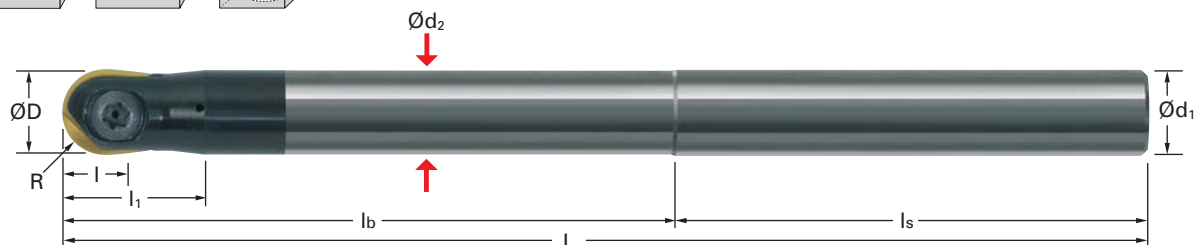
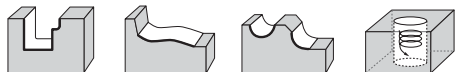


PARTS		Clamp Screw		Wrench	
Body	ID-Code	Item-Code	ID-Code	Item-Code	
ABPF-08S08W	ET 153	581-141	ET 13	104-T8	
ABPF-10S10W	ET 154	581-142	ET 11	104-T10	
ABPF-12S12W	ET 155	581-143	ET 14	105-T20	
ABPF-16S16W	ET 156	581-144	ET 14	105-T20	
ABPF-20S20W	ET 157	581-145	ET 9	101-T25S	
ABPF-25S25W	ET 168	581-146	ET 167	105-T30A	
ABPF-32S32W	ET 169	581-147	ET 167	105-T30A	

Indexable Milling Tools

ABPF-WL | Ball High Precision Finish - Carbide Shank Long Neck

V max High Speed	Semi-Finishing	Finishing	HRC 60	No. of Teeth 2
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R	±0.005
Set-up	±0.010

ID Code	Item No.	Stock	Flutes	ØD	R	L	I	I ₁	lb	ls	Ød ₁	Ød ₂	Inserts x1
FH 396	ABPF-08S08WL	■	2	8	4	130	4.4	18	65	65	8	7.8	ZPFG080
FH 397	ABPF-10S10WL	■	2	10	5	140	5.5	23	75	65	10	9.8	ZPFG100
FH 398	ABPF-12S12WL	■	2	12	6	150	6.6	26	85	65	12	11.8	ZPFG120

■ = Stock | Germany

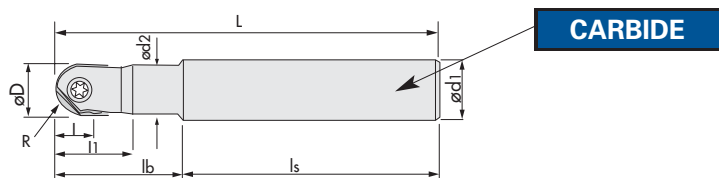
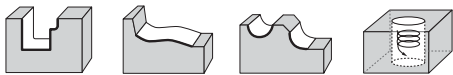


PARTS		Screw		Wrench	
Body	ID-Code	Item-Code	ID-Code	Item-Code	
ABPF-08S08WL	ET 153	581-141	ET 13	104-T8	
ABPF-10S10WL	ET 154	581-142	ET 11	104-T10	
ABPF-12S12WL	ET 155	581-143	ET 14	105-T20	

Indexable Milling Tools

ABPF-WE | Ball High Precision Finish - Carbide Shank Extra Long

V max			HRC	No. of Teeth
High Speed	Semi-Finishing	Finishing	60	2



R	±0.005
Set-up	±0.010

ID Code	Item No.	Stock	Flutes	ØD	R	L	I	I ₁	lb	ls	Ød ₁	Ød ₂	Inserts x1
FH 458	ABPF-16S16WE	■	2	16	8	200	8.8	19	120	80	16	15.8	ZPFG160
FH 459	ABPF-20S20WE	■	2	20	10	250	11	22	150	100	20	19.8	ZPFG200
FH 460	ABPF-25S25WE	■	2	25	12.5	300	13.7	25	190	110	25	24.8	ZPFG250
FH 482	ABPF-32S32WE	■	2	32	16	350	17.6	30	230	120	32	31.8	ZPFG320

■ = Stock | Germany

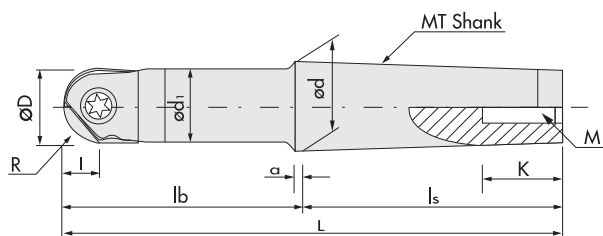
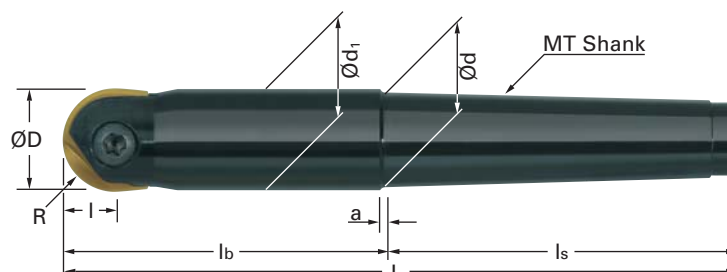
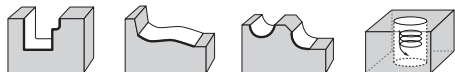


PARTS		Screw		Wrench	
Body	ID-Code	Item-Code	ID-Code	Item-Code	
ABPF-16S16WE	ET 156	581-144	ET 14	105-T20	
ABPF-20S20WE	ET 157	581-145	ET 9	101-T25S	
ABPF-25S25WE	ET 168	581-146	ET 167	105-T30A	
ABPF-32S32WE	ET 169	581-147	ET 167	105-T30A	

Indexable Milling Tools

ABPF-MT | Ball High Precision Finish - MT Shank

V max High Speed	 Semi-Finishing	 Finishing	HRC 60	No. of Teeth 2
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R	±0.005
Set-up	±0.010

ID Code	Item No.	Stock	Flutes	ØD	R	I	MT	L	lb	ls	Ød	Ød ₁	a	K	M	Inserts x1
FH 461	ABPF-20MT2	■	2	20	10	11	MT2	129	65	64	17.78	19.5	5	24	M10	ZPFG200
FH 462	ABPF-25MT3	■	2	25	12.5	13.7	MT3	166	85	81	23.825	24.5	5	28	M12	ZPFG250
FH 463	ABPF-32MT4	■	2	32	16	17.6	MT4	217.5	115	102.5	31.267	30.8	6.5	32	M16	ZPFG320

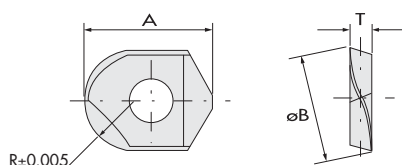
■ = Stock | Germany



PARTS		Clamp Screw		Wrench	
					
Body	ID-Code	Item-Code	ID-Code	Item-Code	
ABPF-20MT2	ET 157	581-145	ET 9	101-T25s	
ABPF-25MT3	ET 168	581-146	ET 167	105-T30A	
ABPF-32MT4	ET 169	581-147	ET 167	105-T30A	

Indexable Milling Tools

INSERTS | Ball High Precision Finish



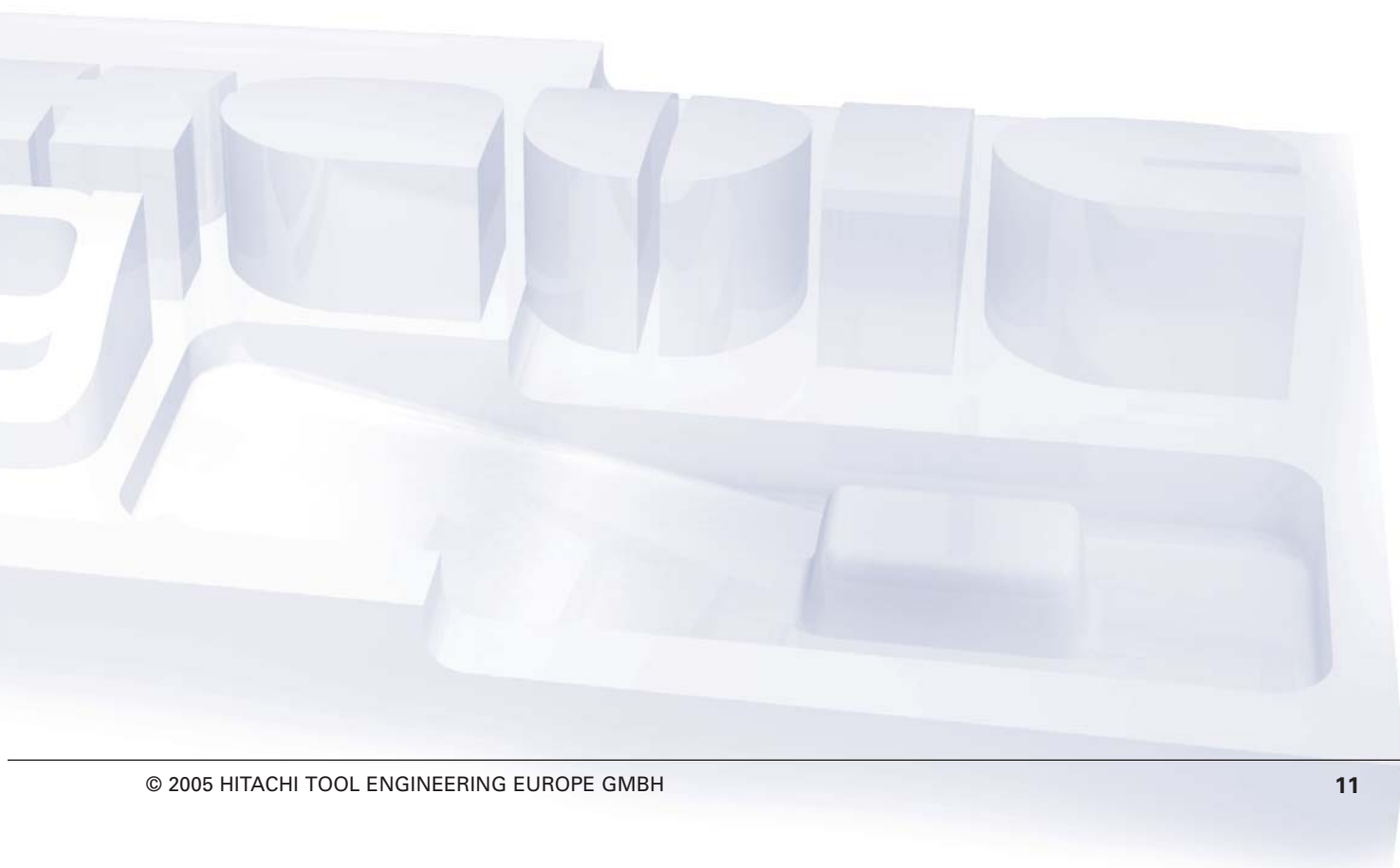
C-Coated										G-Coated						
ID Code	Item No.	Grade	CY100H	CY150	CY250	CY250V	CY9020	PCA08M	PCA12M	PCA15 M	GF30	HC844	R	I(A)	T	W(B)
WF 594	ZPFG-080	PCA08M						■					4	9.7	2.1	8
WF 547	ZPFG-080	PCA12M							■				4	9.7	2.1	8
WF 595	ZPFG-100	PCA08M						■					5	12.1	2.7	10
WF 548	ZPFG-100	PCA12M							■				5	12.1	2.7	10
WF 596	ZPFG-120	PCA08M						■					6	14.6	3.2	12
WF 549	ZPFG-120	PCA12M							■				6	14.6	3.2	12
WF 597	ZPFG-160	PCA08M						■					8	16.6	4.2	16
WF 598	ZPFG-160	PCA12M							■				8	16.6	4.2	16
WF 599	ZPFG-200	PCA08M						■					10	20.3	5.2	20
WF 600	ZPFG-200	PCA12M							■				10	20.3	5.2	20
WF 601	ZPFG-250	PCA08M						■					12.5	24.1	6.2	25
WF 602	ZPFG-250	PCA12M							■				12.5	24.1	6.2	25
WF 603	ZPFG-320	PCA08M						■					16	30	7.2	32
WF 604	ZPFG-320	PCA12M							■				16	30	7.2	32

■ = Stock | Germany

Indexable Milling Tools | Grades Overview & Cutting Conditions

ISO														
P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30	K40
PCA08M					PCA12M					PCA08M				
PCA12M					PCA12M					PCA12M				

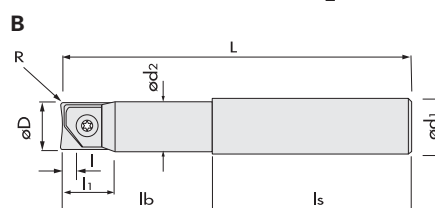
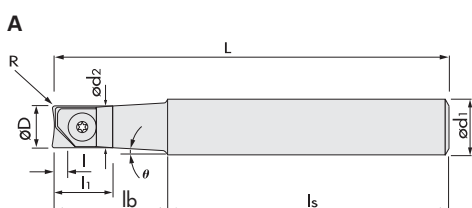
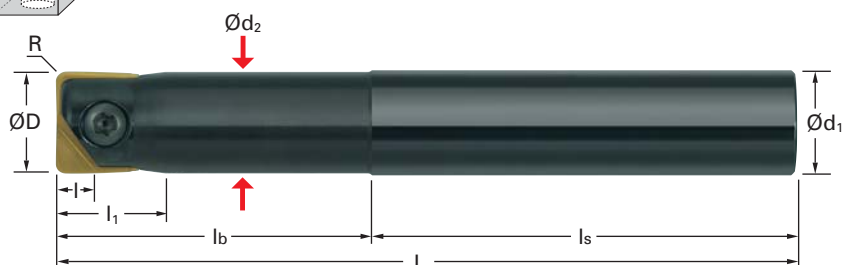
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										PCA08M				
										PCA12M				



Indexable Milling Tools

ARPF-S | Radius High Precision Finish - Regular

V max			HRC	No. of Teeth
High Speed	Semi-Finishing	Finishing	60	2



R	±0.015
Set-up	±0.010

ID Code	Item No.	Stock	Flutes	ØD	L	l	l1	lb	ls	θ	Ød1	Ød2	Type	Inserts x1
FH 399	ARPF-08S12	■	2	8	100	2.5	10	22	78	9.5°	12	7.5	A	ZCFW080-R □.□
FH 400	ARPF-10S12	■	2	10	100	3	13	25	75	3°	12	9.5	A	ZCFW100-R □.□
FH 401	ARPF-12S12	■	2	12	110	4	15	30	80		12	11.5	B	ZCFW120-R □.□
FH 402	ARPF-16S16	■	2	16	130	5	17	50	80		16	15.5	B	ZCFW160-R □.□
FH 403	ARPF-20S20	■	2	20	140	6	21	60	80		20	19.5	B	ZCFW200-R □.□
FH 464	ARPF-25S25	■	2	25	150	8	24	70	80		25	24.5	B	ZCFW250-R □.□
FH 465	ARPF-32S32	■	2	32	160	10	30	80	80		32	31.5	B	ZCFW320-R □.□

■ = Stock | Germany

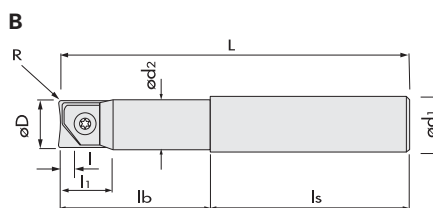
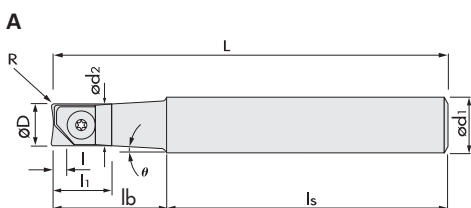
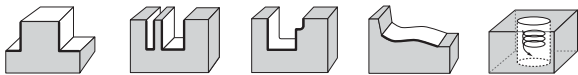


PARTS	Clamp Screw	Wrench
Body	ID-Code	Item-Code
ARPF-08S12	ET 153	581-141
ARPF-10S12	ET 154	581-142
ARPF-12S12	ET 155	581-143
ARPF-16S16	ET 156	581-144
ARPF-20S20	ET 157	581-145
ARPF-25S25	ET 168	581-146
ARPF-32S32	ET 169	581-147

Indexable Milling Tools

ARPF-L | Radius High Precision Finish - Long Neck

V max			HRC	No. of Teeth
High Speed	Semi-Finishing	Finishing	60	2



R	±0.015
Set-up	±0.010

ID Code	Item No.	Stock	Flutes	ØD	L	l	l ₁	lb	ls	θ	Ød ₁	Ød ₂	Type	Inserts x1
FH 404	ARPF-08S12L	■	2	8	130	2.5	10	50	80	3°	12	7.5	A	ZCFW080-R □.□
FH 405	ARPF-10S16L	■	2	10	150	3	13	50	100	4.5°	16	9.5	A	ZCFW100-R □.□
FH 406	ARPF-12S16L	■	2	12	160	4	15	60	100	2°	16	11.5	A	ZCFW120-R □.□
FH 407	ARPF-16S16L	■	2	16	165	5	17	65	100		16	15.5	B	ZCFW160-R □.□
FH 408	ARPF-20S20L	■	2	20	180	6	21	80	100		20	19.5	B	ZCFW200-R □.□
FH 466	ARPF-20S20L120	■	2	20	220	6	21	120	100		20	19.5	B	ZCFW200-R □.□
FH 467	ARPF-20S20L150	■	2	20	250	6	21	150	100		20	19.5	B	ZCFW200-R □.□
FH 468	ARPF-25S25L	■	2	25	200	8	24	90	110		25	24.5	B	ZCFW250-R □.□
FH 469	ARPF-25S32L150	■	2	25	250	8	24	150	100		32	24.5	B	ZCFW250-R □.□
FH 470	ARPF-32S32L	■	2	32	220	10	30	100	120		32	31.5	B	ZCFW320-R □.□

■ = Stock | Germany



PARTS

Clamp Screw

Wrench

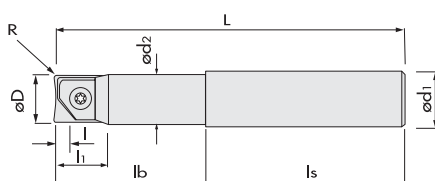
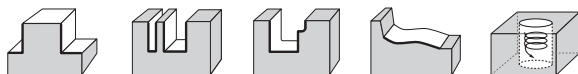


Body	ID-Code	Item-Code	ID-Code	Item-Code
ARPF-08S12L	ET 153	581-141	ET 13	104-T8
ARPF-10S16L	ET 154	581-142	ET 11	104-T10
ARPF-12S16L	ET 155	581-143	ET 14	105-T20
ARPF-16S16L	ET 156	581-144	ET 14	105-T20
ARPF-20S20L	ET 157	581-145	ET 9	101-T25S
ARPF-20S20L120	ET 157	581-145	ET 9	101-T25S
ARPF-20S20L150	ET 157	581-145	ET 9	101-T25S
ARPF-25S25L	ET 168	581-146	ET 167	105-T30A
ARPF-25S32L150	ET 168	581-146	ET 167	105-T30A
ARPF-32S32L	ET 169	581-147	ET 167	105-T30A

Indexable Milling Tools

ARPF-E | Radius High Precision Finish - Extra Long

V max			HRC	No. of Teeth
High Speed	Semi-Finishing	Finishing	60	2



R	±0.015
Set-up	±0.010

ID Code	Item No.	Stock	Flutes	ØD	L	l	l1	lb	ls	θ	Ød1	Ød2	Inserts x1
FH 409	ARPF-16S16E	■	2	16	200	5	17	65	135		16	15.5	ZCFW160-R □.□
FH 410	ARPF-20S20E	■	2	20	250	6	21	80	170		20	19.5	ZCFW200-R □.□
FH 471	ARPF-25S25E	■	2	25	300	8	24	90	210		25	24.5	ZCFW250-R □.□
FH 472	ARPF-32S32E	■	2	32	350	10	30	100	250		32	31.5	ZCFW320-R □.□

■ = Stock | Germany

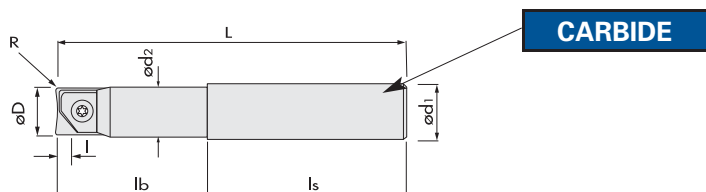
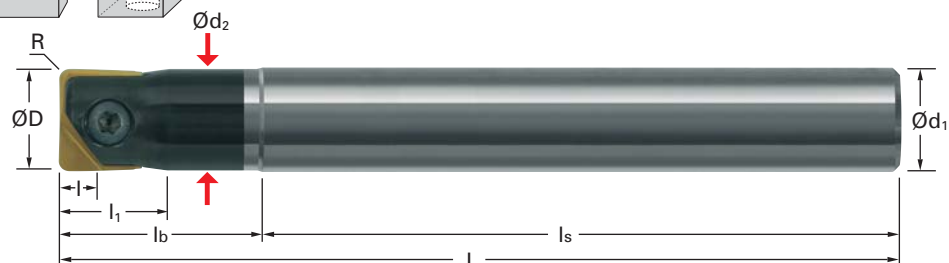
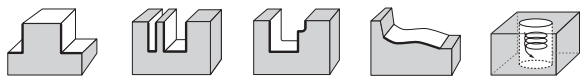


PARTS		Clamp Screw		Wrench	
Body	ID-Code	Item-Code	ID-Code	Item-Code	
ARPF-16S16E	ET 156	581-144	ET 14	105-T20	
ARPF-20S20E	ET 157	581-145	ET 9	101-T25S	
ARPF-25S25E	ET 168	581-146	ET 167	105-T30A	
ARPF-32S32E	ET 169	581-147	ET 167	105-T30A	

Indexable Milling Tools

ARPF-W | Radius High Precision Finish - Carbide Shank Regular

V max			HRC	No. of Teeth
High Speed			60	2



R	±0.015
Set-up	±0.010

ID Code	Item No.	Stock	Flutes	ØD	L	l	lb	ls	Ød ₁	Ød ₂	Inserts x1
FH 473	ARPF-08S08W	■	2	8	100	2.5	30	70	8	7.8	ZCFW080-R □.□
FH 474	ARPF-10S10W	■	2	10	100	3	35	65	10	9.8	ZCFW100-R □.□
FH 475	ARPF-12S12W	■	2	12	110	4	35	75	12	11.8	ZCFW120-R □.□
FH 483	ARPF-16S16W	■	2	16	140	5	35	105	16	15.5	ZCFW160-R □.□
FH 484	ARPF-20S20W	■	2	20	160	6	40	120	20	19.5	ZCFW200-R □.□
FH 485	ARPF-25S25W	■	2	25	180	8	45	135	25	24.5	ZCFW250-R □.□
FH 486	ARPF-32S32W	■	2	32	180	10	55	125	32	31.5	ZCFW320-R □.□

■ = Stock | Germany

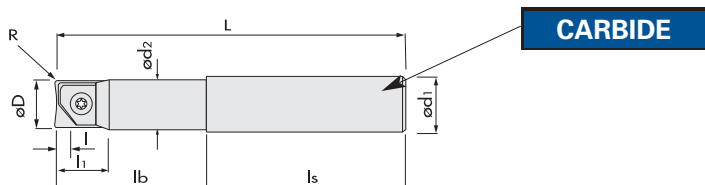
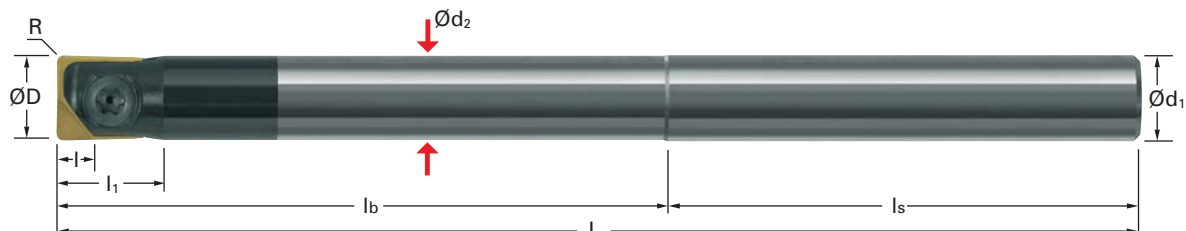


PARTS		Clamp Screw		Wrench	
Body	ID-Code	Item-Code	ID-Code	Item-Code	
ARPF-08S08W	ET 153	581-141	ET 13	104-T8	
ARPF-10S10W	ET 154	581-142	ET 11	104-T10	
ARPF-12S12W	ET 155	581-143	ET 14	105-T20	
ARPF-16S16W	ET 156	581-144	ET 14	105-T20	
ARPF-20S20W	ET 156	581-145	ET 9	101-T25S	
ARPF-25S25W	ET 168	581-146	ET 167	105-T30A	
ARPF-32S32W	ET 169	581-147	ET 167	105-T30A	

Indexable Milling Tools

ARPF-WL | Radius High Precision Finish - Carbide Shank Long Neck

V max High Speed	▽▽ Semi-Finishing	▽▽▽ Finishing	HRC 60	No. of Teeth 2
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R	±0.015
Set-up	±0.010

ID Code	Item No.	Stock	Flutes	ØD	L	l	l1	lb	ls	Ød1	Ød2	Inserts x1
FH 411	ARPF-08S08WL	■	2	8	130	2.5	18	65	65	8	7.8	ZCFW080-R □.□
FH 412	ARPF-10S10WL	■	2	10	140	3	23	75	65	10	9.8	ZCFW100-R □.□
FH 413	ARPF-12S12WL	■	2	12	150	4	26	85	65	12	11.8	ZCFW120-R □.□

■ = Stock | Germany

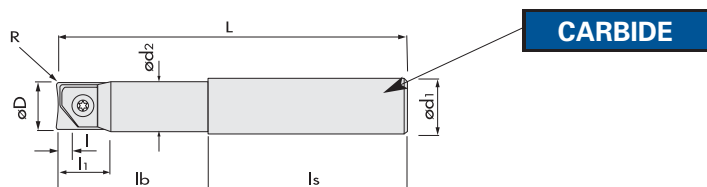
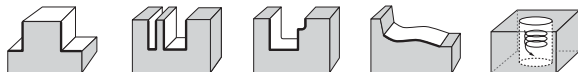


PARTS		Clamp Screw		Wrench	
Body	ID-Code	Item-Code	ID-Code	Item-Code	
ARPF-08S08WL	ET 153	581-141	ET 13	104-T8	
ARPF-10S10WL	ET 154	581-142	ET 11	104-T10	
ARPF-12S12WL	ET 155	581-143	ET 14	105-T20	

Indexable Milling Tools

ARPF-WE | Radius High Precision Finish - Carbide Shank Extra Long

V max			HRC	No. of Teeth
High Speed	Semi-Finishing	Finishing	60	2



R	±0.015
Set-up	±0.010

ID Code	Item No.	Stock	Flutes	ØD	L	l	l ₁	l _b	l _s	Ød ₁	Ød ₂	Inserts x1
FH 429	ARPF-16S16WE	■	2	16	200	5	29	120	80	16	15.8	ZCFW160-R □.□
FH 430	ARPF-20S20WE	■	2	20	250	6	36	150	100	20	19.8	ZCFW200-R □.□
FH 476	ARPF-25S25WE	■	2	25	300	8	41	190	110	25	24.8	ZCFW250-R □.□
FH 477	ARPF-32S32WE	■	2	32	350	10	51	230	120	32	31.8	ZCFW320-R □.□

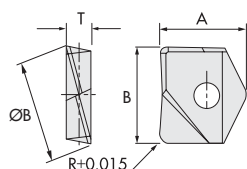
■ = Stock | Germany



PARTS		Clamp Screw		Wrench	
Body	ID-Code	Item-Code	ID-Code	Item-Code	
ARPF-16S16WE	ET 156	581-144	ET 14	105-T20	
ARPF-20S20WE	ET 157	581-145	ET 9	101-T25S	
ARPF-25S25WE	ET 168	581-146	ET 167	105-T30A	
ARPF-32S32WE	ET 169	581-147	ET 167	105-T30A	

Indexable Milling Tools

INSERTS | Radius High Precision Finish



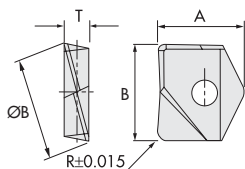
ID Code	Item No.	Grade	C-Coated						G-Coated		R	l(A)	T	W(B)
			CY100H	CY150	CY250	CY250V	CY9020	PCA08M	PCA12M	PCA15M	GF30	HC344		
WF 551	ZCFW-080-03	PCA12M							■		0.3	9.7	2.1	8
WF 605	ZCFW-080-05	PCA12M							■		0.5	9.7	2.1	8
WF 552	ZCFW-080-10	PCA12M							■		1	9.7	2.1	8
WF 553	ZCFW-100-03	PCA12M							■		0.3	12	2.7	10
WF 606	ZCFW-100-05	PCA12M							■		0.5	12	2.7	10
WF 554	ZCFW-100-10	PCA12M							■		1	12	2.7	10
WF 555	ZCFW-100-15	PCA12M							■		1.5	12	2.7	10
WF 556	ZCFW-100-20	PCA12M							■		2	12	2.7	10
WF 557	ZCFW-120-03	PCA12M							■		0.3	14.6	3.2	12
WF 607	ZCFW-120-05	PCA12M							■		0.5	14.6	3.2	12
WF 558	ZCFW-120-10	PCA12M							■		1	14.6	3.2	12
WF 559	ZCFW-120-15	PCA12M							■		1.5	14.6	3.2	12
WF 560	ZCFW-120-20	PCA12M							■		2	14.6	3.2	12
WF 561	ZCFW-160-03	PCA12M							■		0.3	16.6	4.2	16
WF 608	ZCFW-160-05	PCA12M							■		0.5	16.6	4.2	16
WF 562	ZCFW-160-10	PCA12M							■		1	16.6	4.2	16
WF 563	ZCFW-160-15	PCA12M							■		1.5	16.6	4.2	16
WF 564	ZCFW-160-20	PCA12M							■		2	16.6	4.2	16

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Indexable Milling Tools | Grades Overview & Cutting Conditions

INSERTS | Radius High Precision Finish

ISO														
P01	P10	P20	P30	P40	M01	M10	M20	M30	M40	K01	K10	K20	K30	K40
PCA12M					PCA12M					PCA12M				
N01	N10	N20	N30	N40	S01	S10	S20	S30	S40	H01	H10	H20	H30	H40
												PCA12M		



ID Code	Item No.	Grade	C-Coated						G-Coated		R	l(A)	T	W(B)
			CY100H	CY150	CY250	CY250V	CY9020	PCA08M	PCA12M	PCA15M	GF30	HC344		
WF 565	ZCFW-200-03	PCA12M							■		0.3	19.9	5.2	20
WF 609	ZCFW-200-05	PCA12M							■		0.5	19.9	5.2	20
WF 566	ZCFW-200-10	PCA12M							■		1	19.9	5.2	20
WF 567	ZCFW-200-15	PCA12M							■		1.5	19.9	5.2	20
WF 568	ZCFW-200-20	PCA12M							■		2	19.9	5.2	20
WF 610	ZCFW-250-03	PCA12M							■		0.3	22.6	6.2	25
WF 611	ZCFW-250-05	PCA12M							■		0.5	22.6	6.2	25
WF 612	ZCFW-250-10	PCA12M							■		1	22.6	6.2	25
WF 613	ZCFW-250-20	PCA12M							■		2	22.6	6.2	25
WF 614	ZCFW-320-03	PCA12M							■		0.3	27.2	7.2	32
WF 615	ZCFW-320-05	PCA12M							■		0.5	27.2	7.2	32
WF 616	ZCFW-320-10	PCA12M							■		1	27.2	7.2	32
WF 617	ZCFW-320-20	PCA12M							■		2	27.2	7.2	32

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Product Range

Solid Carbide End Mills

Epoch21
MINIATURE

3D-Cut

CARBIDE

Indexable Milling Tools

Indexable
Milling

ESM Speed End Mills
EMC Power Drills

ESM
SPEED

Milling Chucks

Milling
Chucks

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