

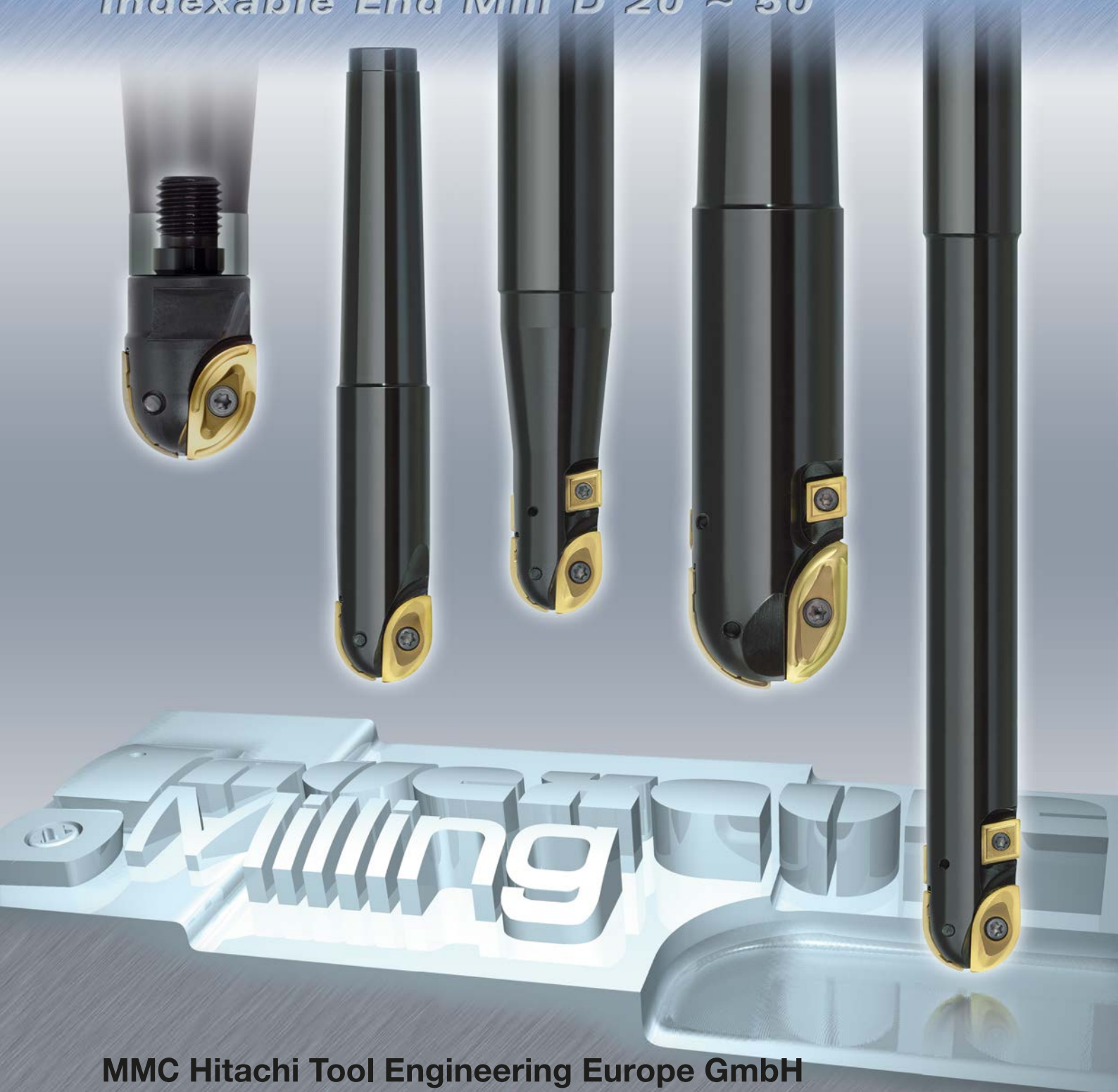
Advanced Engineering

Indexable
Milling
+Modular Series

MMC Hitachi Tool

No. 326.2

BCF Roughing Ball
Shank & Modular Types
Indexable End Mill D 20 ~ 50

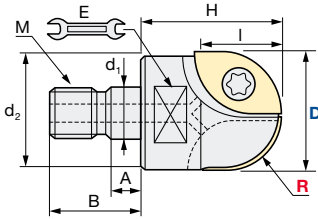
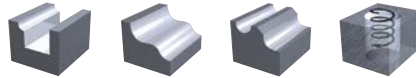


MMC Hitachi Tool Engineering Europe GmbH
www.high-speed-cutting.com

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BCFM Roughing Ball - Modular Type

Q max High Efficient
▽ Roughing
▽▽ Semi-Finishing
HRC 50
No. of Teeth 2

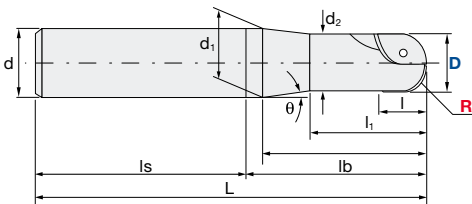


Tolerance R:	Tolerance Dia.:
± 0.05 mm	0/- 0.15 mm

ID Code	Item Code	Flutes	D	R	H	l	d ₁	d ₂	A	B	C	E	M	Inserts x1	Inserts x1
FH522	BCFM-20	2	20	10	38	18	10.5	17.8	5.5	19	10	15	M10	ZCEW100CE*	ZCEW100SE*
FH523	BCFM-25		25	12.5		23	12.5	20.8		22		17	M12	ZCEW125CE*	ZCEW125SE*
FH524	BCFM-32		32	16		28	17	28.8		6		23	12	M16	ZCET160CE

* or ZCET

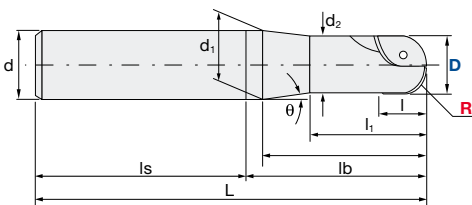
BCF-S Roughing Ball - Short



ID Code	Item Code	Flutes	D	R	L	d	l	l ₁	l ₂	lb	ls	θ°	d ₁	d ₂	Inserts x1	Inserts x1
FH034	BCF-2018S25S	2	20	10	140	25	18	30	52	60	80	5.7°	23.4	19	ZCEW100CE*	ZCEW100SE*
FH040	BCF-2523S32S		25	12.5	150	32	23	35	62	70		6.5°	30.1	24	ZCEW125CE*	ZCEW125SE*
FH044	BCF-3028S32S		30	15	160		28	50	72	80		3.1°	31.2	28.8	ZCEW150CE*	ZCEW150SE*
FH383	BCF-3228S32S		32	16			-	-	30.6	ZCET160CE		ZCET160SE				

* or ZCET

BCF-TE Roughing Ball - Taper Necked Long Shank



ID Code	Item Code	Flutes	D	R	L	d	l	l ₁	l ₂	lb	ls	θ°	d ₁	d ₂	Inserts x1	Inserts x1			
FH035	BCF-2018S25TE	2	20	10	250	25	18	30	72	80	170	3°	23.4	19	ZCEW100CE*	ZCEW100SE*			
FH036	BCF-2018S32TE				300				107	115	185	4°9'	31.2	18	ZCEW100CE*	ZCEW100SE*			
FH041	BCF-2523S32TE		25	12.5	350				32	23	35	97	105	195	2°8'	30.1	24	ZCEW125CE*	ZCEW125SE*
FH045	BCF-3028S32TE		30	15						28	40	92	100	250	1°3'	31.2	28.8	ZCEW150CE*	ZCEW150SE*
FH386	BCF-3228S32TE		32	16						-	-	30.6	ZCET160CE	ZCET160SE					

* or ZCET

Parts	Clamp Screw		Wrench	
Body	ID-Code	Item-Code	ID-Code	Item-Code
D 20	ET034	261-141	ET011	104-T10
D 25	ET035	262-141	ET012	104-T15
D 30 + D 32	ET036	263-141	ET014	105-T20

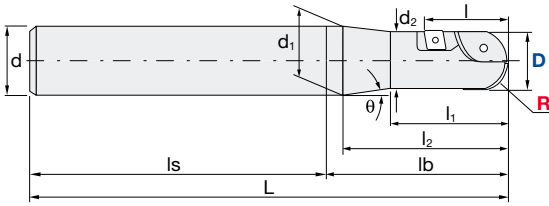
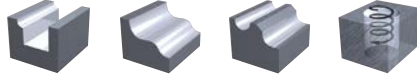
For further information about Modular Chucks please see our brochure Indexable Modular Series No. 328.2

Weitere Informationen über Modulare Werkzeugaufnahmen finden Sie in unserem Prospekt Indexable Modular Series No. 328.2



BCF-L Roughing Ball - Long

Q max High Efficient	▽ Roughing	▽▽ Semi-Finishing	HRC 50	No. of Teeth 2
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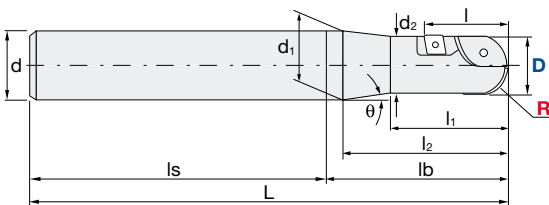


Tolerance R:	Tolerance Dia.:
± 0.05 mm	0/- 0.15 mm

ID Code	Item Code	Flutes	D	R	L	d	l	l ₁	l ₂	lb	ls	θ°	d ₁	d ₂	Inserts x1	Inserts x1	Inserts x2
FH038	BCF-2030S25L	2	20	10	150	25	30	35	62	70	80	5.3°	24	18.5	ZCEW100CE*	ZCEW100SE*	CPMT080204
FH043	BCF-2539S32L		25	12.5	180	32	39	50	72	80	100	9.7°	31	23.5	ZCEW125CE*	ZCEW125SE*	CPMT090308
FH047	BCF-3043S32L		30	15	200	43	60	92	100	100	100	2.7°	30.3	-	ZCEW150CE*	ZCEW150SE*	CPMT090308
FH384	BCF-3243S32L		32	16	-	-	-	-	-	-	-	-	30.3	-	ZCET160CE	ZCET160SE	CPMT090308
FH363	BCF-4050S42L		40	20	250	42	50	-	-	-	150	-	38.6	-	ZCEW200CE	ZCEW200SE	CPMT090308

* or ZCET

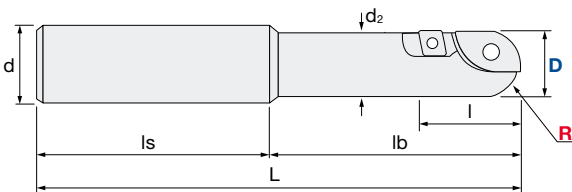
BCF-E Roughing Ball - Extra Long



ID Code	Item Code	Flutes	D	R	L	d	l	l ₁	l ₂	lb	ls	θ°	d ₁	d ₂	Inserts x1	Inserts x1	Inserts x2
FH037	BCF-2030S25E	2	20	10	250	25	30	35	62	70	180	5.2°	24	18.5	ZCEW100CE*	ZCEW100SE*	CPMT080204
FH039	BCF-2030S32E		25	12.5	300	32	39	50	72	80	220	12.4°	30.4	18.5	ZCEW100CE*	ZCEW100SE*	CPMT080204
FH042	BCF-2539S32E		25	12.5	300	32	39	50	72	80	220	9.7°	31	23.5	ZCEW125CE*	ZCEW125SE*	CPMT090308
FH046	BCF-3043S32E		30	15	350	43	60	92	100	250	250	2.7°	30.3	-	ZCEW150CE*	ZCEW150SE*	CPMT090308
FH385	BCF-3243S32E		32	16	-	-	-	-	-	-	-	-	30.3	-	ZCET160CE	ZCET160SE	CPMT090308

* or ZCET

BCF-ST Roughing Ball - Straight Neck Long Shank



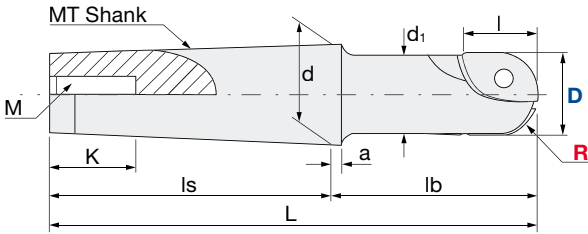
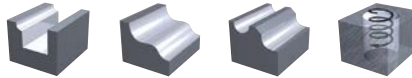
ID Code	Item Code	Flutes	D	R	L	d	l	lb	ls	d ₂	Inserts x1	Inserts x1	Inserts x2
FH439	BCF-2030S20ST080	2	20	10	180	20	30	80	100	18.5	ZCEW100CE*	ZCEW100SE*	CPMT080204
FH440	BCF-2030S20ST150				250			150			CPMT080204		
FH441	BCF-2539S32ST100		200	39	100	ZCEW125CE*	ZCEW125SE*	CPMT090308					
FH442	BCF-2539S32ST150		250		150	ZCEW125CE*	ZCEW125SE*	CPMT090308					
FH487	BCF-3243S32ST100		200	43	100	ZCET160CE	ZCET160SE	CPMT090308					
FH488	BCF-3243S32ST200		300		200	ZCET160CE	ZCET160SE	CPMT090308					

* or ZCET

Parts	Clamp Screw R Insert	Clamp Screw Peripheral Insert	Wrench R Insert	Wrench Peripheral Insert
Body	ID-Code	Item-Code	ID-Code	Item-Code
D 20	ET034	261-141	ET033	251-141
D 25	ET035	262-141	ET035	262-141
D 30	ET036	263-141	ET035	262-141
D 32	ET036	263-141	ET035	262-141
D 40	ET150	571-141A	ET035	262-141

BCF-MT Roughing Ball - MT Shank

Q max High Efficient	▽ Roughing	▽▽ Semi-Finishing	HRC 50	No. of Teeth 2
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Inserts: p. 6



Tolerance R:	Tolerance Dia.:
± 0.05 mm	0/- 0.15 mm

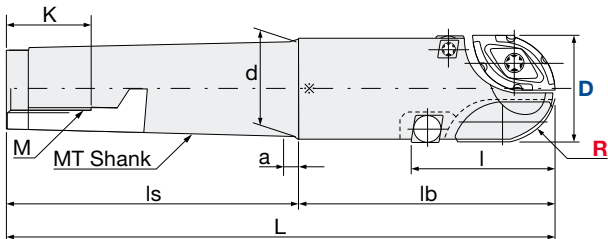
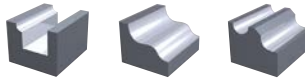
ID Code	Item Code	Flutes	D	R	I	MT	L	lb	ls	d	d ₁	a	K	M	Inserts x1	Inserts x1	Inserts x2
FH443	BCF-20MT2	2	20	10	18	MT2	129	65	64	17.78	19	5	24	M10	ZCEW100CE*	ZCEW100SE*	
FH444	BCF-25MT3		25	12.5	23	MT3	166	85	81	23.825	24		28	M12	ZCEW125CE*	ZCEW125SE*	
FH445	BCF-32MT4		32	16	28	MT4	217.5	115	102.5	31.267	30.6	6.5	32	M16	ZCET160CE	ZCET160SE	
FH446	BCF-40MT5		40	20	50	MT5	226	96.5	129.5	44.399	38.6		40	M20	ZCEW200CE	ZCEW200SE	CPMT090308

* or ZCET

Parts BCF	Clamp Screw		Clamp Screw		Wrench		Wrench	
			Peripheral Insert				Peripheral Insert	
Body	ID-Code	Item-Code	ID-Code	Item-Code	ID-Code	Item-Code	ID-Code	Item-Code
BCF-20MT2	ET034	261-141			ET011	104-T10		
BCF-25MT3	ET035	262-141			ET012	104-T15		
BCF-32MT4	ET036	263-141			ET014	105-T20		
BCF-40MT5	ET150	571-141A	ET035	262-141	ET167	105-T30A	ET012	104-T15

BCU Roughing Ball - Heavy Roughing MT Shank

Q max High Efficient	▽ Roughing	HRC 50	No. of Teeth 2
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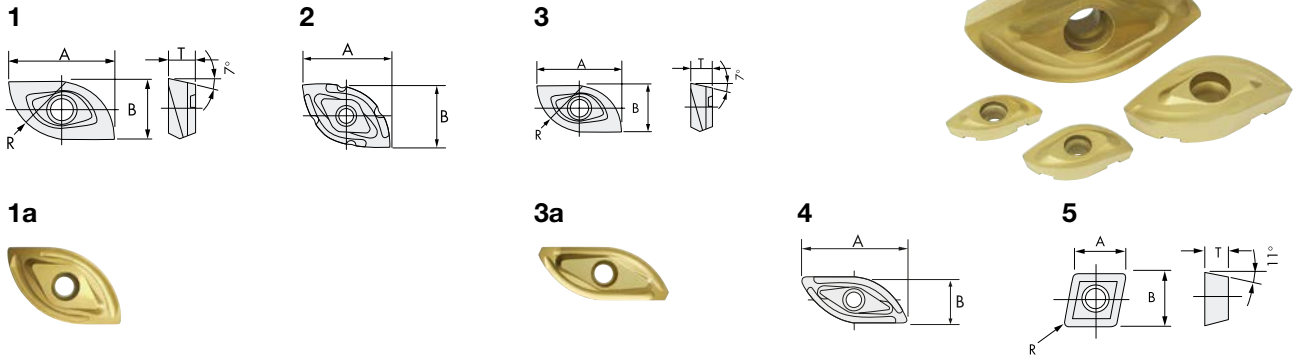
Tolerance R:	Tolerance Dia.:
± 0.05 mm	0/- 0.1 mm

ID Code	Item Code	Flutes	D	R	I	MT	L	lb	ls	d	a	K	M	Inserts x1	Inserts x1	Inserts x2
FH362	BCU-5063SMT5	2	50	25	63	MT5	236	100	136	44.741	6.5	52.5	M20	ZCET250CE	ZCET250SK	CPMT120408
FH364	BCU-5063LMT5						286	150						ZCET250CE	ZCET250SK	CPMT120408

* or ZCET

Parts BCU	Clamp Screw		Clamp Screw		Wrench		Wrench	
	R Insert		Peripheral Insert		R Insert		Peripheral Insert	
Body	ID-Code	Item-Code	ID-Code	Item-Code	ID-Code	Item-Code	Item-Code	
BCU-5063S(L)MT5	ET150	571-141A	ET037	263-143	ET167	105-T30A	ET014	105-T20

INSERTS | Roughing Ball



ID Code	Item Code	Grade	C-Coated		G-Coated	R	I(A)	T	W(B)	Figure	
			CY250	CY9020	HC844						
WF583	ZCET100CE	CY9020		●		10	18.3	4.74	10	1a	
WF132	ZCEW100CE	HC844			●					1	
WF588	ZCET100SE	CY9020		●			16.7	4.24	8.1	3a	
WF135	ZCEW100SE	HC844			●					3	
WF584	ZCET125CE	CY9020		●		12.5	23.1	6.1	12.3	1a	
WF138	ZCEW125CE	HC844			●					1	
WF589	ZCET125SE	CY9020		●			20.8	5.4	9.3	3a	
WF141	ZCEW125SE	HC844			●					3	
WF585	ZCET150CE	CY9020		●		15	28.3	7.59	14.9	1a	
WF144	ZCEW150CE	HC844			●					1	
WF590	ZCET150SE	CY9020		●			25.7	7.09	11.8	3a	
WF147	ZCEW150SE	HC844			●					3	
WF586	ZCET160CE	CY9020		●		16	28.8	7.45	15.4	1a	
WF539	ZCET160CE	HC844			●					1a	
WF591	ZCET160SE	CY9020		●			26.3	6.96	12.4	3a	
WF540	ZCET160SE	HC844			●					3a	
WF514	ZCEW200CE	HC844			●	20	35.4	8	20.1	1	
WF515	ZCEW200SE	HC844			●		31.9	7	15.7	3	
WF587	ZCET250CE	CY250	●			25	38.8	-	26	2	
WF512	ZCET250CE	HC844			●					45.03	-
WF592	ZCET250SK	CY250	●				0.4	7.94	2.38		
WF513	ZCET250SK	HC844			●						
WF025	CPMT080204	HC844			●	0.8	9.525	3.18	9.525	5	
WF034	CPMT090308	HC844			●	0.8	12.7	4.76	12.7	5	
WF041	CPMT120408	HC844			●	0.8	12.7	4.76	12.7	5	

● = Available insert and grade combination

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Product Range

Solid Carbide End Mills



Indexable Milling Tools



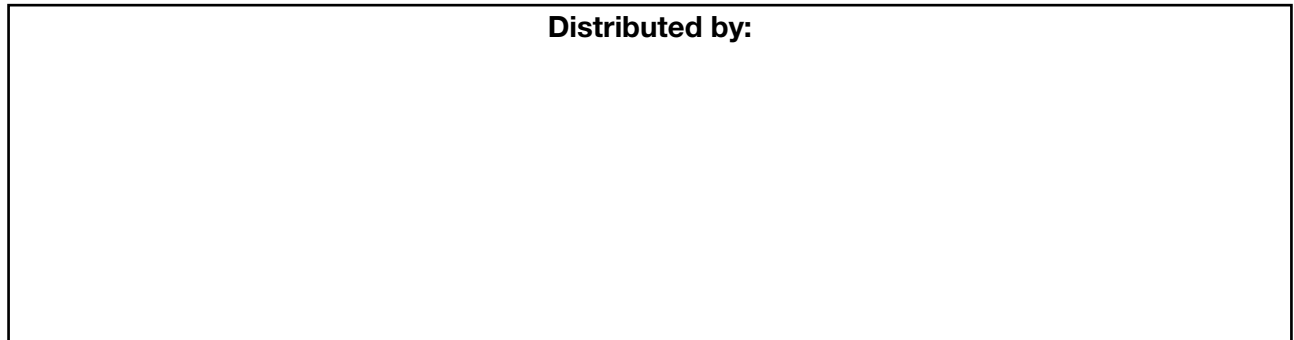
WHNSB Drills



Milling Chucks



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