



MOTOR SPINDLE OVERVIEW
MOTORSPINDEL-ÜBERSICHT



SMALL MOTOR SPINDLES *KLEINE MOTORSPINDELN*

Ø 16mm - 60mm / **HT 16 S 100 - HF 6015 D**

				HT 16 S 100	HT 19 S 100	HT 22 S 100	HT 25 S 60	HT 25 S 100	HF 33 A 50	HF 33 A 60	HF 33 D/S 60 HT 33 D/S 60	HF 45 A 50	HF 45 A 60	HF 45.11 A 60	HF 45.11 S 35	HF 45 S 60	HF 45 S 80 HT 45 S 80	HT 45 S 140	HF 6015 D	
Speed <i>Drehzahl</i>	Oil-air <i>Öl-Luft</i>	C	RPM <i>min⁻¹</i>	80'000	80'000	80'000	80'000	80'000		60'000	60'000		60'000	35'000	35'000	60'000	80'000	160'000		
	Grease <i>Fett</i>	CP	RPM <i>min⁻¹</i>	60'000	60'000	60'000	60'000	60'000	60'000	60'000	60'000	80'000	60'000	35'000	35'000	60'000	60'000	100'000	15'000	
	Max. speed* <i>Max. Drehzahl*</i>	C	RPM <i>min⁻¹</i>	100'000	100'000	100'000	120'000	90'000			80'000							90'000		
HF Asynchronous motor <i>Asynchronmotor</i>	Power <i>Leistung</i>	S6-40%	W						260	260	260	975	975	550	550	975	1300		530	
		S1-100%	W						200	200	200	750	750	475	475	750	1000		410	
	Torque <i>Drehmoment</i>	S6-40%	Ncm						4.6	4.6	4.6	11.6	15.5	15	15	15.5	15.5		34	
		S1-100%	Ncm						3.5	3.5	3.5	8.9	11.9	13	13	11.9	11.9		28	
HT Synchronous motor <i>Synchronmotor</i>	Power <i>Leistung</i>	S6-40%	W	208	273	312	182	351/364									2.500	819		
		S1-100%	W	160	210	240	140	270/280									1.900	630		
	Torque <i>Drehmoment</i>	S6-40%	Ncm	2.5	3.1	4.7	2.0	4.9/6.5									38	5.6		
		S1-100%	Ncm	1.9	2.4	3.5	1.6	3.8/5.0									29	4.3		
Qty. of bearings / Anzahl der Kugellager				3	3	3	2	3	3	4	3	3	4	4	2/4	4	4	2	3	
Cone <i>Konus</i>	HSK	K																		
	SKI																			
	(B)BT / SK	B																		
	Capto	Y																		
	Collet <i>Spannzange</i>	S		D6		ER8			P6		ER8		P9			ER11				
	Collet <i>Spannzange</i>	U				Mega-3S										Mega-6S			Mega-4S	
	Grinding arbor <i>Schleifdom</i>	D									M4/Ø7								M6/Ø6.4	
Spindle Ø <i>Spindel Ø</i>		mm	16/17/18	19/20	22/22.8	25/25.4	25/25.4	33	33	33	45	45	45	45	45	45	45	45	60	
Spindle length <i>Spindelänge</i>		mm	110.3	108.0	126.5	87.3	118.0	171.4	205.5	162.0	235.5	235.5	235.5	185.1	185.1	185.1	116.5	216.5		
Spindle weight <i>Spindelgewicht</i>		kg	0.150	0.150	0.200	0.200	0.300	0.900	0.900	0.700	2.3	2.3	2.3	1.3	1.3	1.3	1.1	3.7		
Spindle cooling <i>Spindelkühlung</i>			without* / ohne*													liquid / Flüssigkeit				
Options <i>Optionen</i>			P	P	E-P-U	E-P-U	E-P-U	P	H-P	P	P	P	P	P	P	P-U	P-U	P-U	P	
Encoder / Drehgeber		V	OpenLoop																	
<p>*Small spindles with maximum speed are oil-air lubricated and have to be cooled. The heat must be dissipated via spindle holder. Maximum external housing temperature 60°C. <i>*Kleine Spindeln mit maximaler Drehzahl sind Öl-Luft geschmiert und müssen gekühlt werden. Die Wärmeableitung muss über den Spindelhalter erfolgen. Maximale Gehäusetemperatur 60°C.</i></p>																				

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MEDIUM SIZED MOTOR SPINDLES *MITTLERE MOTORSPINDELN*

Ø 60mm - 150mm / **HF 60 A/D/S 60 - HF 150 A 24 P**

				HF 60 A/D/S 60 HT 60 A/D/S 60	HF 62 A 60 P	HF 62 A 70 P	HF 62 A 80 P	HF 80 A 20	HF 80 A/D/S 40 HT 80 A 40 **	HF 80 D 15 P** HF 80 D 30 P	HF 100 A/S 40	HF 100 A/D/S 45 HT 100 A/D/S 45	HF 100 A/DI/SI 50	HF 110 A 30 HT 110 A 30	HF 120 A/D/S 24 P	HF 120 A/DI/SI 36 HT 120 A/DI/SI 36	HT 120 A 72	HF 140 A/DI/SI 30 HT 140 A/DI/SI 30**	HF 150.2 A 24 P
Speed <i>Drehzahl</i>	Oil-air <i>Öl-Luft</i>	C	RPM <i>min⁻¹</i>	80'000				24'000	50'000		40'000	50'000	60'000	35'000		42'000	70'000	36'000	
	CC-grease <i>CC-Fett</i>	CCP	RPM <i>min⁻¹</i>	70'000		70'000			50'000		38'000	45'000	45'000		30'000	32'000		25'000	
	Grease <i>Fett</i>	CP	RPM <i>min⁻¹</i>	60'000	60'000	60'000	80'000	20'000	40'000	30'000	30'000	40'000	40'000	28'000	24'000			50'000	20'000
HF Asynchronous motor <i>Asynchronmotor</i>	Power <i>Leistung</i>	S6-40%	kW	1.7	2.6	1.2*/2.0	1.3	1.7	2.5/3.2/4.3	1.5/1.7	7.8	4.8/7.8	5.8	10.5	7.8/16.9	7.8/16.9		18.2/32.5	18.2
		S1-100%	kW	1.3	2.0	0.9*/1.5	1.0	1.3	1.9/2.5/3.3	1.15/1.3	6.0	3.7/6.0	4.5	8.0	6.0/13.0	6.0/13.0		14.0/25.0	14.0
	Torque <i>Drehmoment</i>	S6-40%	Nm	0.27	0.43	0.20/0.33	0.15	0.8	0.8	0.95/1.4	2.1	2.1/3.1	1.1	8.0	3.6/6.3	3.6/6.3		9.9/13.2	9.9
		S1-100%	Nm	0.21	0.33	0.15/0.25	0.12	0.6	0.6	0.73/1.1	1.6	1.6/2.4	0.8	6.1	2.8/4.8	2.8/4.8		7.6/10.1	7.6
HT Synchronous motor <i>Synchronmotor</i>	Power <i>Leistung</i>	S6-40%	kW	4.2					4.3			9.1		18.2		19.2	9.1/15.0	28.6	
		S1-100%	kW	3.2					3.3			7.0		14.0		14.0	7.0/11.5	22.0	
	Torque <i>Drehmoment</i>	S6-40%	Nm	0.57					2.1			5.4		15.6		15.6	2.6/4.8	23.4	
		S1-100%	Nm	0.43					1.6			4.1		12.0		12.0	2.0/3.7	18.0	
Qty. of bearings / Anzahl der Kugellager				4		2 / 3 / 4		3 / 4		4									
Cone <i>Konus</i>	HSK	K						E32	C/E25 F32		C/E32 F40	C/E32 F40		E40 F50	C/E40 F50		E25	E40 A/C/E50 F63	A/T40
	SKI		16					20					25	30					
	(B)BT / SK	B																	
	Capto	Y																	
	Collet <i>Spannzange</i>	S	ER16	P10	P9			ER16	ER25	ER20	D20	ER25		ER32					
Grinding arbor <i>Schleifdorn</i>	D	M10/Ø11					M10/Ø11	M10/Ø23/38	M16/Ø18		M10/Ø11	M22/Ø23		M22/Ø23					
Spindle Ø <i>Spindel Ø</i>		mm	60	61.9	61.9	61.9	80	80	80	100	100	100	110	120	120	120	140/160	150	
Spindle length <i>Spindellänge</i>		mm	216.5	249.5	239.5	239.5	323	298	263	332.5	332.5	298.5	460.9	380	380.5	309	419	475.5	
Spindle weight <i>Spindelgewicht</i>		kg	3.7	4.4	3.7	3.7	7.3	7.3	7.1	13.8	11.1	12	24.1	21	22.5	28.5	31.8	44.3	
Spindle cooling <i>Spindelkühlung</i>			liquid / Flüssigkeit			optional			liquid / Flüssigkeit										
Options <i>Optionen</i>			H-I-P-V-W	P	P	P	F-G-H-K- P-W	F-G-H-H-K- Mn-P-V-W	P	F-G-H-H-K- Mn-P-V-W	F-G-H-H-K- Mn-P-V-W	F-G-H-H-K- Mn-P-V-W	B-F-G-H-I- K-P-V-W	B-F-H-H-K-P-V	F-G-H-H-I3-K- Mn-P-V-W	F-H-I-K-P-V	F-G-H-H-K- Mn-R-P- V-W	F-G-H-H-I3- R-P-V-W	
Encoder / Drehgeber		V	optional		OpenLoop		optional			optional				CloseLoop					

***The heat must be dissipated via spindle holder. Maximum external housing temperature 60°C. / **Spindle motor with reduced speed.**

**Die Wärmeableitung muss über den Spindelhalter erfolgen. Maximale Gehäusetemperatur 60°C. / **Spindelmotor mit reduzierter Drehzahl.*



LARGE MOTOR SPINDLES *GROSSE MOTORSPINDELN*

Ø 170mm - 360mm / HT 170 A 17 - HF 360 AI 7

				HT 170 A 17 P	HF 170 AI 18 HT 170 AI 18	HF 170 AI 20 HT 170 AI 20	HF 170 AI 22 HT 170 AI 22**	HT 210 A 20	HF 210 AI 24 HT 210 AI 24**	HF 220 A 24 P	HF 230 AI 17	HF 230 AI 18	HF 230 AI 20 HT 230 AI 20	HF 240 AI 12	HF 250 AI 12	HF 260 AI 12	HF 285 AI 10	HF 300 AI 10	HF 360 AI 7
Speed <i>Drehzahl</i>	Oil-air <i>Öl-Luft</i>	C	RPM <i>min⁻¹</i>		20'000	24'000	30'000	20'000	15'000		17'000	13'000	24'000	12'000	15'000	12'000	12'000	12'000	7'000
	CC-grease <i>CC-Fett</i>	CCP	RPM <i>min⁻¹</i>		17'000	22'000	22'000				15'000		20'000		13'000	13'000	10'000	11'000	
	Grease <i>Fett</i>	CP	RPM <i>min⁻¹</i>	10'000	15'000	17'000	17'000			20'000	13'000		15'000		10'000	10'000	8'000	6'000	
HF Asynchronous motor <i>Asynchronmotor</i>	Power <i>Leistung</i>	S6-40%	kW		52.0/57.2	20.8/71.5	32.5/54.6	32.5	22.1	38.0	39.0/97.5	33.0	19.5/104.0	42.9	39.0/78.0	23.4/104.0	36.0	39.0	130.0
		S1-100%	kW		40.0/44.0	16.0/55.0	25.0/42.0	25.0	17.0	30.0	30.0/75.0	23.9	15.0/80.0	33.0	30.0/60.0	18.0/80.0	32.0	30.0	100.0
	Torque <i>Drehmoment</i>	S6-40%	Nm		62.9/69.4	20.7/38.1	20.9/41.4	82.3	124.2	100.0	96.0/118.6	95.8	77.0/124.2	104.2	75.0/222.1	333.5/414.0	343.8	310.4	1'280.0
		S1-100%	Nm		48.4/53.4	16.1/29.3	16.1/31.8	63.3	95.5	79.0	73.8/91.2	72.6	59.0/95.0	80.2	57.7/170.8	256.6/318.0	305.6	238.8	985.0
HT Synchronous motor <i>Synchronmotor</i>	Power <i>Leistung</i>	S6-40%	kW	52.0	39.0	39.0	39.0		71.5				27.3/72.8		52.0				
		S1-100%	kW	40.0	30.0	30.0	30.0		55.0				21.0/56.0		40.0				
	Torque <i>Drehmoment</i>	S6-40%	Nm	99.3	124.2	74.5/86.6	41.4		189.0				174.0/231.7		275.9				
		S1-100%	Nm	76.4	95.5	57.3/66.6	31.8		145.0				134.0/178.3		212.2				
Qty. of bearings / Anzahl der Kugellager				4			4			4			5		4		5		
Cone <i>Konus</i>	HSK	K		A80	A/E63	A/C/E63	A/E63			A80	A/T63	A63	A100	A100					
	SKI																		
	(B)BT / SK	B			40*		40*				40*		40/45/50	50				50	
	Capto	Y												C6					
	Collet <i>Spannzange</i>	S																	
Grinding arbor <i>Schleifdorn</i>	D			on request / auf Anfrage															
Spindle Ø <i>Spindel Ø</i>			mm	170	170	170/180	170	210	210	220	230	230	230	240	250	260	285	300	360
Spindle length <i>Spindellänge</i>			mm	629	624	520	405	580	506	543	620	690	600	750	764	786	1'450	812	988
Spindle weight <i>Spindelgewicht</i>			kg	70	85	63/70	44	118	118	125	152	165	145	230	240	250	275	305	345
Spindle cooling <i>Spindelkühlung</i>				liquid / Flüssigkeit															
Options <i>Optionen</i>				F-G-H-I	B-F-G-H-I	B-F-G-H-I	F-G-H-I	B-F-G-H-I	F-G-H-I	F-G-H-I	F-G-H-I	F-G-H-I	F-G-H-I	F-G-H-I	B-F-G-H-I	B-F-G-H-I	B-F-G-H-I	B-F-G-H-I	B-F-G-H-I
				I3-Mn-P-V	I3-K-Mn-P	I3-K-Mn-P	I3-K-Mn-P	I3-K-P-V	I3-K-Mn-P	I3-K-Mn-P	I3-K-Mn-P	I3-K-Mn-P	I3-K-Mn-P	I3-K-Mn-P	I3-K-Mn-P	I3-K-Mn-P	I3-K-Mn-P	I3-K-Mn-P	I3-K-Mn-P
				WV-W	R-V-W	R-V-W	V-W		V-W	V-W	V-W	R-V-W	R-V-W	R-V-W	R-V-W	V-W-Y	R-V-W	R-V-W	V-W
Encoder / Drehgeber		V		CloseLoop															

***The maximum allowed speed for tooling system (B)BT / SK40 is 20'000 RPM. / **Spindle motor with reduced speed.**
 *Die maximale zulässige Drehzahl für Werkzeugschnittstelle (B)BT / SK40 ist 20'000 U/min. / **Spindelmotor mit reduzierter Drehzahl.



PLUG ,N' GO - MOTOR SPINDLES VORSATZ-MOTORSPINDELN

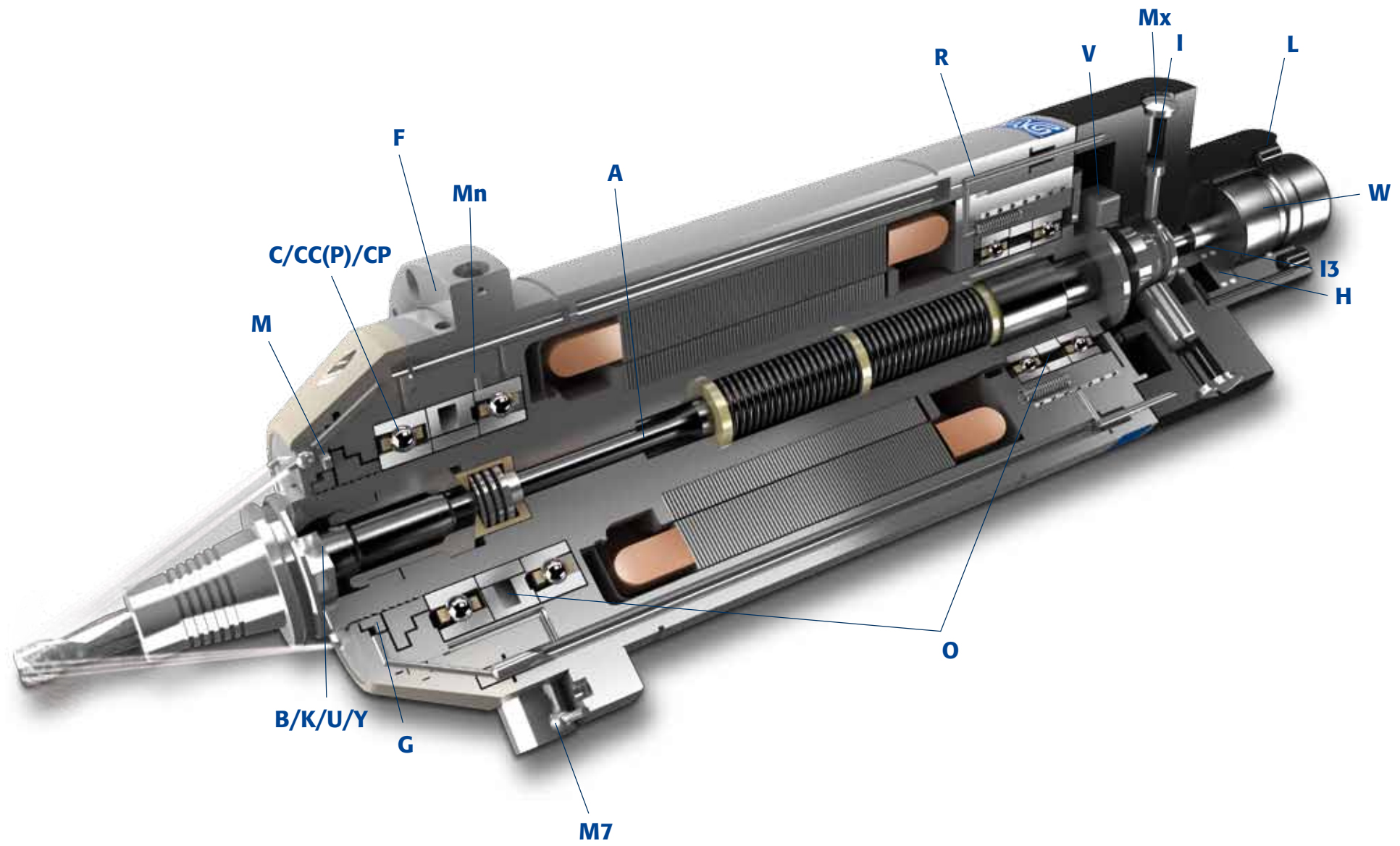
HT 25 S 60 S - HFK 135 M/S 30

				HT 25 S 60 S	HFK 90.1 S 40	HFK 90 S 40	HFK 95.1 S 40 P*	HFK 135 M/S 30
Speed <i>Drehzahl</i>	Oil-air <i>Öl-Luft</i>	C	RPM <i>min⁻¹</i>	80'000	60'000	60'000		40'000
	CC-grease <i>CC-Fett</i>	CCP	RPM <i>min⁻¹</i>		58'000	58'000		
	Grease <i>Fett</i>	CP	RPM <i>min⁻¹</i>	60'000	42'000	42'000	42'000	36'000
HF Asynchronous motor <i>Asynchronmotor</i>	Power <i>Leistung</i>	S6-40%	kW		2.2	3.0	1.3	10.4
		S1-100%	kW		1.7	2.3	1.0	8.0
	Torque <i>Drehmoment</i>	S6-40%	Nm		0.43	0.48	0.3	5.6
		S1-100%	Nm		0.33	0.36	0.23	4.3
HT Synchronous motor <i>Synchronmotor</i>	Power <i>Leistung</i>	S6-40%	kW	0.18				
		S1-100%	kW	0.14				
	Torque <i>Drehmoment</i>	S6-40%	Nm	0.020				
		S1-100%	Nm	0.016				
Qty. of bearings / Anzahl der Kugellager				2	4			
Cone <i>Konus</i>	HSK	K						C32
	SKI							
	(B)BT / SK	B						
	Capto	Y						
	Collet <i>Spannzange</i>	S		ER8	ER16	ER16	ER16	ER25
	Grinding arbor <i>Schleifdorn</i>	D		on request / auf Anfrage				
Spindle Ø <i>Spindel Ø</i>			mm	25/25.4	90	90	99	135
Spindle length <i>Spindellänge</i>			mm	87.5	259	259	217	348
Spindle weight <i>Spindelgewicht</i>			kg	0.200	7.1-8.6	7.1-8.6	4.4-5.7	21
Spindle cooling <i>Spindelkühlung</i>				without / ohne	liquid / Flüssigkeit		air / Luft	liquid / Flüssigkeit
Options <i>Optionen</i>				E-U				
Encoder / Drehgeber		V		Open Loop				
*Maximum external housing temperature 60°C. *Maximale Gehäusetemperatur 60°C.								

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The charts show only an extract of available motor configurations for IBAG motor spindles. Do you wish an alternative motor spindle or a customized solution? Feel free to contact us.

Die Tabellen zeigen nur einen Teil der möglichen Motorkonfigurationen für IBAG Motorspindeln. Wünschen Sie eine alternative Motorspindel oder eine Sonderlösung? Kein Problem, fragen Sie uns bitte an.



OPTIONS *OPTIONEN*

BT/BBT/CAT/SK tooling system	B	<i>Werkzeugschnittstelle BT/BBT/CAT/SK</i>
Ceramic ball bearings	C	<i>Keramik-Hybrid-Kugellager</i>
High speed ceramic ball bearings	CC	<i>Hochleistungs-Keramik-Hybrid-Kugellager</i>
Spindle extension	E	<i>Spindelverlängerung</i>
Flange according to spindle drawing	F	<i>Ring-Flansch zur axialen Befestigung</i>
Antistatic brushes	G	<i>Anti-Statikbürsten</i>
Tool change by hydraulic pressure	H	<i>hydraulischer Werkzeugausstoß</i>
Sensors to check the tool holder position	I	<i>Werkzeugwechsel-Sensoren</i>
Piston position monitoring	I3	<i>PI-Sensor zur Kolbenüberwachung</i>
HSK tooling system	K	<i>Werkzeugschnittstelle HSK</i>
Oil extraction system	L	<i>Öl-Absaugung</i>
Spindle axial extension measurement	M	<i>automatische Längenwachstumskompensation</i>
Bearing temperature sensor	Mn	<i>Lagertemperatur-Sensoren</i>
Datalogger	Mx	<i>Datalogger</i>
Vibration sensor	M7	<i>Schwingungssensor</i>
Bearing arrangement for higher stiffness	O	<i>Lageranordnung für höhere axiale Steifigkeit</i>
Grease-packed ball bearings	P	<i>Kugellager fett-dauergeschmiert</i>
Hydraulic preload for higher axial load	R	<i>hydraulische Vorspannung für höhere axiale Belastung</i>
Special / customized solution	S	<i>Spezial / Kundenlösung</i>
MEGA-xS tooling system	U	<i>Werkzeugschnittstelle MEGA-xS</i>
Encoder for vector control and shaft positioning	V	<i>Gebersystem für Lageorientierung/Vektorkontrolle</i>
Tool cooling through spindle-centre	W	<i>Innere-Kühlmittelzufuhr</i>
Capto tooling system	Y	<i>Werkzeugschnittstelle CAPTO</i>

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