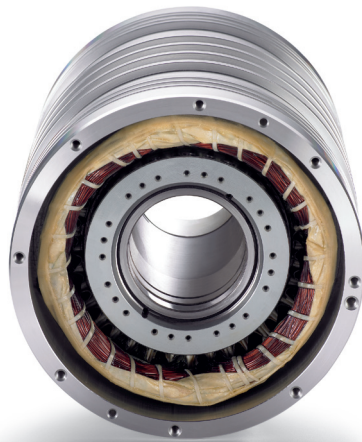


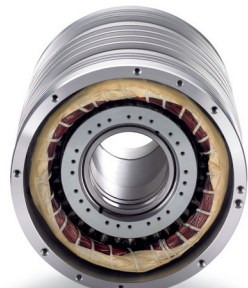
Motors and Gearboxes

High-Speed Asynchronmotors 1MB - for high speed



High-Speed Asynchronmotors ■ 1MB - for high speed**Documentation**

- Project Planning Manual

**Robust and reliable**

- Rated torques up to 875 Nm
- Maximum speeds up to 20,000 rpm
- Large spindle cutoff
- Excellent running smoothness
- Straightforward integration in the machine

The 1MB frameless (kit) motors are maintenance-free asynchronous motors with high power density. For different performance requirements and installation situations, our product range offers 9 motor sizes with different overall lengths and diameters.

Typical areas of application of these motors are the main spindles of modern CNC machines and machining centers. These frameless (kit) motors excel by their superb running smoothness and perfect servo quality for C-axis machining, thread cutting and spindle positioning.

Technical data**Electric data**

Type	Rated speed	Maximum speed	Rated torque	Rated power	Rated current	Maximum current	Moment of inertia	
	n_N	n_{Max}	M_N	P_N	I_N	I_{Max}	J	
	[1/min]	[1/min]	[Nm]	[kW]	[A]	[A]	[kgm ²]	
1MS140B-4A	7500	20000	7	5.5	18	41.79	0.0044	
1MS140B-4B	5000			3.7		25		52.69
1MS140D-4B	4000	16000	14	6	43	89.37	0.0061	
1MS140F-4A	3000	15000	24	7.5		111.27		0.0082
1MS140H-4B			34	10.5	58	127.28	0.0103	
1MS160B-4A			12000	16	5	36	78.37	
1MS160D-4A	32	10			48	112.83	0.0121	
1MS160D-4B		2000	8000	32	6.7	23.8		53.28
1MS160E-4B	1000	4000	33	3.5	19	34.77	0.0149	

Motors and Gearboxes

High-Speed Asynchronmotors ■ 1MB - for high speed**Electric data**

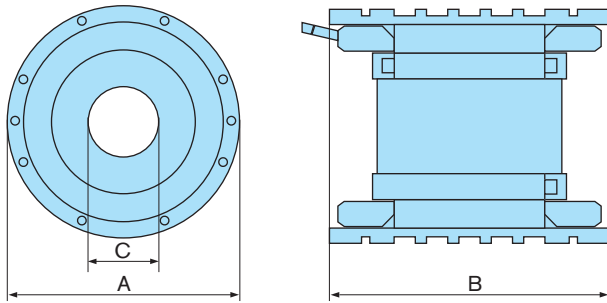
Type	Rated speed	Maximum speed	Rated torque	Rated power	Rated current	Maximum current	Moment of inertia
	n_N	n_{Max}	M_N	P_N	I_N	I_{Max}	J
	[1/min]	[1/min]	[Nm]	[kW]	[A]	[A]	[kgm ²]
1MS160F-4A	3000	12000	48	15	74	169.43	0.0161
1MS160F-4B					45	99.87	
1MS160F-4D	2500	10000		12.5	23.2	54.15	
1MS160F-4E				15	53	114.57	
1MS160H-4A	3000	12000	64	20	58	132.2	0.0201
1MS160N-4A					28	75	170.83
1MS160N-4B	2000	8000	89	18.6	60	135.51	0.0267
1MS160N-4C					14	26	
1MS200C-4A	1500	6000	57	9	50	114.48	0.041
1MS200D-4B			85	13.5	48	115.76	
1MS200D-4C	5000	20000	59	31	75	157.18	0.037
1MS200D-4D	2500	10000	85	22	59	144.29	
1MS200D-4E	1500	6000		13.5	84	201.91	
1MS200D-4F	6000	18000	49	31	82	182.24	
1MS200E-4B	1800	7200	85	16	41.4	111.08	0.059
1MS200E-4C	3900	15600	74	30.2	65	139.44	
1MS200H-4B	1500	6000	124	19.5	68	171	0.069
1MS200H-4D					52.6	128.21	
1MS240B-4A	1000	4000	62	6.5	46	101.06	0.078
1MS240F-4A			123	13	74	164.18	0.12
1MS240H-4B			169	18	56	124.16	0.153
1MS241D-6A			112	12	62	139.52	0.135
1MS241D-6C					27	59.68	
1MS241H-6C	1800	7200	202	32	75.5	184.55	0.227
1MS241H-6D	850	3400		18	66.4	127.88	
1MS241H-6G	800	3200		16.9	39.7	91.92	
1MS242N-4B	1700	6800	185	33	98	224.31	0.135
1MS270C-4B	1500	6000	190	30	96	228.5	0.258
1MS310B-6B	1000	4000	260	27	75	164.03	0.477
1MS310B-6D	700	2800		19	81	178.92	
1MS310B-6E	440	1760		12	58	125.75	
1MS310D-6B	800	3200	340	28.5	81	174.17	0.492
1MS310F-6A	400	1600	480	20	61	138.75	0.723
1MS310F-6B	900	3600		35	111	246.64	
1MS375B-6B	600	2400	636	40	120	257.22	1.39
1MS375D-6B			875	55	150	329.29	1.73
1MS375D-6D	300	1200		27.5	94	210.01	

All the specifications relate to operation with liquid cooling and 540 V DC bus voltage.

Motors and Gearboxes

High-Speed Asynchronmotors ■ 1MB - for high speed

Dimensions



Type	Ø A	B	Ø C	Weight	
	[mm]			[mm]	[mm]
1MS140B-4A	160	150	45	5.3	3.3
1MS140B-4B					
1MS140D-4B		190			
1MS140F-4A		240			
1MS140H-4B		290			
1MS160B-4A	180	205	60	6.8	5.3
1MS160D-4A					
1MS160D-4B					
1MS160E-4B		240		14.4	9.4
1MS160F-4A		255		15.8	10.2
1MS160F-4B					
1MS160F-4D					
1MS160F-4E					
1MS160H-4A		310		21	9.8
1MS160N-4A		385		28.1	12.7
1MS160N-4B					
1MS160N-4C					
1MS200C-4A	220	240	66	21	15
1MS200D-4B					
1MS200D-4C					
1MS200D-4D		295		29	19
1MS200D-4E					
1MS200D-4F					
1MS200E-4B		330		34	22
1MS200E-4C					
1MS200H-4B		380		41	26
1MS200H-4D					

Motors and Gearboxes

High-Speed Asynchronmotors ■ 1MB - for high speed

Type	Ø A	B	Ø C	Weight	
	[mm]	[mm]	[mm]	Stator[kg]	Rotor[kg]
1MS240B-4A	270	270	72	29	19
1MS240F-4A		360		48	29
1MS240H-4B		430		62	37
1MS241D-6A		290	111	38	24
1MS241D-6C		410		63	39
1MS241H-6C					
1MS241H-6D					
1MS241H-6G		440	71	81	37
1MS242N-4B					
1MS270C-4B		300	400	120	82
1MS310B-6B	340	385	125	67	65
1MS310B-6D					
1MS310B-6E					
1MS310D-6B		450		86	80
1MS310F-6A		520		103	97
1MS310F-6B					
1MS375B-6B	405	620	170	162	106
1MS375D-6B				205	132
1MS375D-6D					