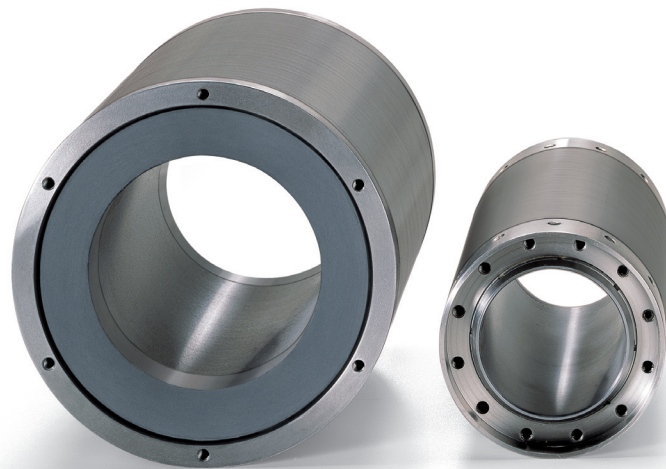


Motors and Gearboxes

High-Speed Synchronmotors

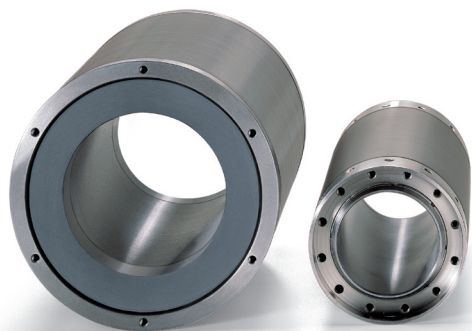
IndraDyn H - for high speed with integrated cooling



Motors and Gearboxes

High-Speed Synchronmotors ■ IndraDyn H - for high speed with integrated cooling

Documentation



High dynamics and precision

- Maximum torques of up to 4,500 Nm
- Maximum speeds up to 30,000 rpm
- Wide constant output power range
- Integrated cooling system
- Straightforward integration in the machine

The liquid-cooled high-speed IndraDyn H kit motors achieve maximum torques of up to 4,500 Nm with speeds of up to 30,000 rpm. With their broad constant output power range, short ramp-up time and low rotor temperature they are predestined for motor spindles and other similar areas of application.

The new onboard cooling system simplifies their integration in the machine and increases their cooling efficiency. For extra easy assembly and disassembly we can supply the rotor on request with a step interference fit and the corresponding hydraulic connections.

Technical data

Electric data

Type	Rated speed	Maximum speed	Rated torque	Maximum torque	Rated power	Rated current	Maximum current	Moment of inertia
	n_N	n_{Max}	M_N	M_{Max}	P_N	I_N	I_{Max}	J
	[1/min]	[1/min]	[Nm]	[Nm]	[kW]	[A]	[A]	[kgm ²]
MSS102B-0800	8000	30000	10.5	30	8.8	18	40	0.003
MSS102D-0800		10000	20	45	16.8	24	69	0.004
MSS102F-0300	3000	18000	32	75	10.1	15.3	100	0.006
MSS102F-0800	8000	30000	26	68	21.8	43		0.011
MSS142B-0700	7000	28000	27.5	67	20.2	45	140	0.014
MSS142D-0700			40.5	90	29.7	65		
MSS142F-0700			65	150	47.6	68		
MSS162B-0400	4000	16000	50	115	20.9	42	110	0.014
MSS162D-0400			70	160	29.3	64		170
MSS162F-0310	3100	12400	90	200	29.2		0.022	
MSS162J-0200	2000	8000	120	275	25.1	0.028		
MSS182A-0100	1000	4000	12	30	1.25	3.7	11	0.0089
MSS182A-0250	2500	10000			3.1	5		
MSS182B-0280	2800	11200	100	230	29.3	64	170	0.031

Motors and Gearboxes

High-Speed Synchronmotors ■ IndraDyn H - for high speed with integrated cooling

Electric data

Type	Rated speed	Maximum speed	Rated torque	Maximum torque	Rated power	Rated current	Maximum current	Moment of inertia
	n_N	n_{Max}	M_N	M_{Max}	P_N	I_N	I_{Max}	J
	[1/min]	[1/min]	[Nm]	[Nm]	[kW]	[A]	[A]	[kgm ²]
MSS182D-0260	2600	10400	140	320	38.1	71	200	0.039
MSS182F-0200	2000	8000	200	450	41.9			0.053
MSS202A-0200			105	270	22	45	130	0.05
MSS202B-0150	1500	6000	140	390		52	141	0.064
MSS202B-0210	2100	8400			30.8	68	180	
MSS202D-0170	1700	6800	175	480	31.2			98
MSS202D-0360	3600	8000	136	333	51.3	68	180	0.104
MSS202F-0120	1200	4800	245	650	30.8			0.119
MSS242B-0100	1000	4000	250	575	26.2	49.5	180	0.167
MSS242D-0070	700	2800	375	860	27.5			0.193
MSS242F-0060	600	2400	425	970	26.7	68	200	0.268
MSS272B-0065	650	2600	400	900	27.2	71	250	0.335
MSS272B-0080	800	3200			33.5	82	200	
MSS272D-0050	500	2000	525	1200	27.5	71	200	0.617
MSS272F-0040	400	1600	650	1550	27.2			62.5
MSS312B-0035	350	1400			820	1950	24	59.5
MSS312D-0028	280	1120	975	2275	51.5	93.2	250	1.064
MSS312D-0060	600	2400			28.6	62	180	
MSS312F-0028	280	1120	1125	2750	29.5	197	570	1.911
MSS312H-0025	250	1000			97.9	197	570	
MSS312H-0085	850	3400	1100	4500	40.9	83.6	210	0.604
MSS382B-0025	250	1000	1375	2875	36	85	250	1.525
MSS382D-0020	200	800	1775	3700	37.2	101	250	1.911
MSS382F-0018	180	720	2170	4500	40.9	83.6	210	2.296
MSS482A-0200	2000	5000	120	275	25.1	40	210	0.604

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

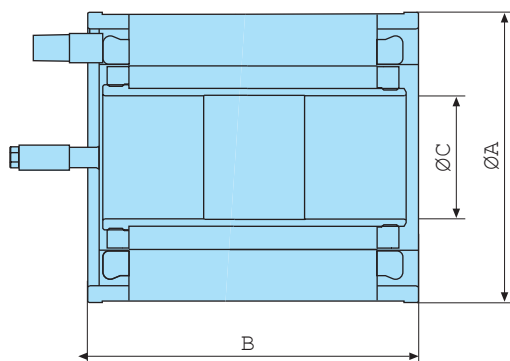
The indicated maximum speed is reached at a DC bus voltage of 750 V.

Moment of inertia depends on rotor version

Dimensions

Motors and Gearboxes

High-Speed Synchronmotors ■ IndraDyn H - for high speed with integrated cooling



Type	$\varnothing A$	B	$\varnothing C$	Weight		
	[mm]	[mm]	[mm]	Stator[kg]		
MSS102B-0800	120	156	46	5.8		
MSS102D-0800		206		7.2		
MSS102F-0300		306		11.2		
MSS102F-0800						
MSS142B-0700	160	181	58	9.6		
MSS142D-0700		231		16		
MSS142F-0700		281		21		
MSS162B-0400	180	206	68	22		
MSS162D-0400		256		28.1		
MSS162F-0310		306		28.2		
MSS162J-0200		381		46.1		
MSS182A-0100	200	82	85	6.9		
MSS182A-0250		232		32.1		
MSS182B-0280					282	38.9
MSS182D-0260						
MSS182F-0200						
MSS202A-0200	220	215	96	25		
MSS202B-0150		265		40.7		
MSS202B-0210					315	48.3
MSS202D-0170		37.6				
MSS202D-0360				63.7		
MSS202F-0120						
MSS242B-0100	270	275	110	66.7		
MSS242D-0070		375		92.3		
MSS242F-0060		425		105.1		
MSS272B-0065	300	330	135	90.4		
MSS272B-0080				405	112.3	
MSS272D-0050		465				134.2
MSS272F-0040						

Motors and Gearboxes

High-Speed Synchronmotors ■ IndraDyn H - for high speed with integrated cooling

Type	Ø A	B	Ø C	Weight	
	[mm]	[mm]	[mm]	Stator[kg]	
MSS312B-0035	340	380	170	128.7	
MSS312D-0028		455		170	154.1
MSS312D-0060					
MSS312F-0028		530		179.5	
MSS312H-0025		630		170	215
MSS312H-0085					
MSS382B-0025	405	430	240	178.5	
MSS382D-0020		530		242.7	
MSS382F-0018		630		262	
MSS482A-0200	510	115	345	59	

Mass values stator/rotor with largest available internal diameter of rotor

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