

Motors and gearboxes

High-speed synchron motors

IndraDyn H - for high speed with integrated cooling



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Documentation



High dynamics and precision

- Maximum torques of up to 4,500 Nm
- Maximum speeds up to 22,500 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 22,500 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 a hydraulically separable version.

Technical data**Electrical data**

Type	Rated speed	Maximum speed	Rated torque	Maximum torque	Rated output	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]	[kgm²]
MSS102B-0800	8000	22500	10.7	36.7	8.96	16.9	52	0.003
MSS102D-0800			20	45	16.8	24	69	0.004
MSS102F-0300	3000	18000	32	75	10.1	15.3	35	0.006
MSS102F-0800	8000	22500	26	68	21.8	43	100	
MSS142B-0700	7000	19000	27.5	67	20.2	45	140	0.011
MSS142D-0700			40.5	90	29.7	65	180	0.014
MSS142F-0700			53	113	38.9	84	180	0.017
MSS162B-0400	4000	16500	50	115	20.9	42	110	0.014
MSS162D-0400			70	160	29.3	64	170	0.018
MSS162F-0310	3100	15500	90	200	29.2	50	130	0.022
MSS162J-0200	2000	10000	120	275	25.1	50	130	0.028
MSS182A-0100	1000	6000	12	30	1.25	3.7	11	0.0089
MSS182A-0250	2500	12000			3.1	5	15	
MSS182B-0280	2800		100	230	29.3	64	170	0.031
MSS182D-0260	2600		140	320	38.1	71	200	0.039
MSS182F-0200	2000	11000	200	450	41.9	45	130	0.053
MSS202A-0200			105	270	22	45	130	0.05

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Type	Rated speed	Maximum speed	Rated torque	Maximum torque	Rated output	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]
MSS202B-0150	1500	8200	141	353	22.2	46	128	0.064
MSS202B-0210	2100	11500	128	320	28.1	52	144	
MSS202D-0170	1700	9300	163	407	29	53	147	0.077
MSS202D-0360	3600	12500	136	333	51.3	102	197	
MSS202F-0120	1200	6600	194	484	24.3	45	125	0.104
MSS242B-0100	1000	6000	250	575	26.2	68	180	0.119
MSS242D-0070	700	4200	375	860	27.5	49.5		0.167
MSS242F-0060	600	3600	425	970	26.7	68		0.193
MSS272B-0065	650	3000	400	900	27.2	71	200	0.268
MSS272B-0080	800	3200			33.5	82	250	
MSS272D-0050	500	2200	525	1200	27.5	71	200	0.335
MSS272F-0040	400	1800	650	1500	27.2			0.403
MSS312B-0035	350	1500		1550	23.8	62.5	170	0.617
MSS312D-0028	280	1200	820	1950	24	59.5	160	0.751
MSS312D-0060	600	2400			51.5	93.2	250	
MSS312F-0028	280	1200	975	2275	28.6	62	180	0.885
MSS312H-0025	250	1100	1125	2750	29.5			1.064
MSS312H-0085	850	3400	1100		97.9	197	570	
MSS382B-0025	250	1000	1375	2875	36	85	250	1.525
MSS382D-0020	200	800	1775	3700	37.2	101		1.911
MSS382F-0018	180	720	2170	4500	40.9	83.6		2.296
MSS482A-0200	2000	4000	120	275	25.1	40	210	0.604

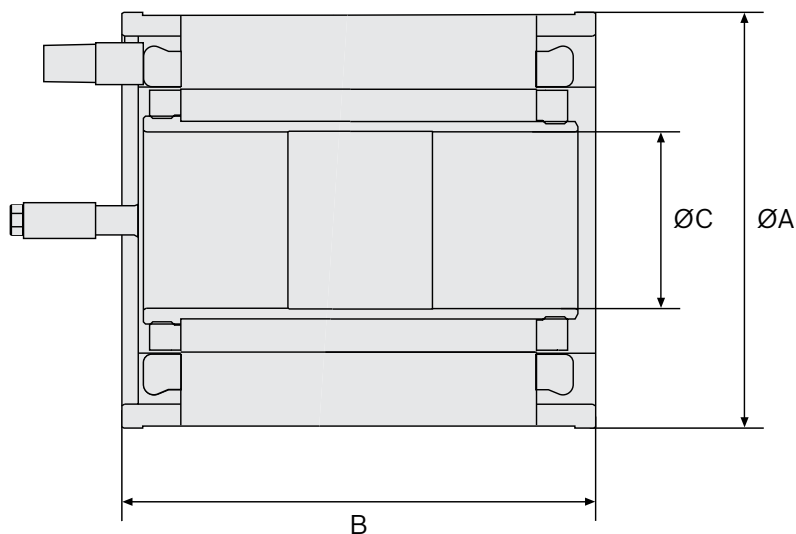
All the specifications relate to operation with liquid cooling and 540 V DC bus voltage.

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

Moment of inertia depends on rotor version

Dimensions

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Type	Ø A	B	Ø C	Mass
	[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				
MSS182D-0260				
MSS182F-0200		382		43.5
MSS202A-0200	220	215	96	25
MSS202B-0150		265		40.7
MSS202B-0210				
MSS202D-0170		315		37.6
MSS202D-0360				
MSS202F-0120	220	415	96	63.7
MSS242B-0100	270	275	110	66.7
MSS242D-0070		375		92.3
MSS242F-0060		425		105.1

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Type	Ø A [mm]	B [mm]	Ø C [mm]	Mass Stator [kg]
MSS272B-0065	300	330	135	90.4
MSS272B-0080				
MSS272D-0050		405		112.3
MSS272F-0040		465		134.2
MSS312B-0035	340	380	170	128.7
MSS312D-0028		455		154.1
MSS312D-0060				
MSS312F-0028		530		179.5
MSS312H-0025				
MSS312H-0085		630		215
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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As our products are constantly being further developed, no
statements concerning a certain condition or suitability for a certain
application can be derived from our information. The information
given does not release the user from the obligation of own judgment
and verification.
It must be remembered that our products are subject to a natural
process of wear and aging.