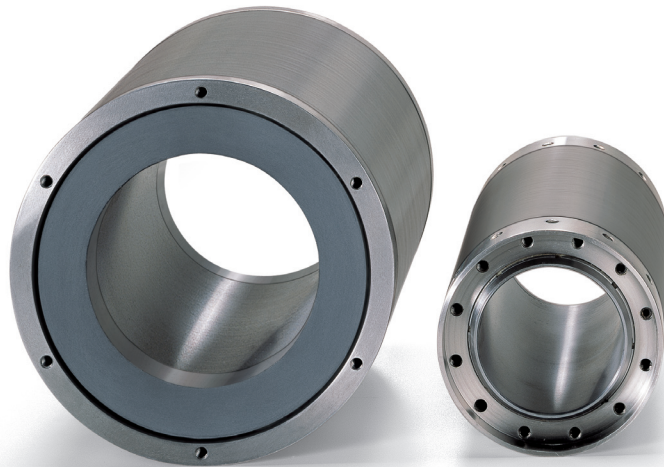


Motors and Gearboxes

## High-Speed Synchronmotors

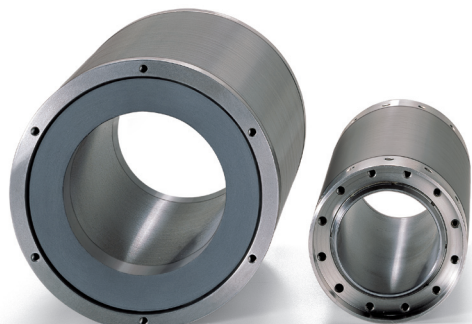
# IndraDyn H - for high speed with integrated cooling



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 <sup>2</sup> ]
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	35	0.006
MSS102F-0800	8000	30000	26	68	21.8	43	100	
MSS142B-0700	7000	28000	27.5	67	20.2	45	140	0.011
MSS142D-0700			40.5	90	29.7	65	180	0.014
MSS142F-0700			65	150	47.6	68	170	0.017
MSS162B-0400	4000	16000	50	115	20.9	42	110	0.014
MSS162D-0400			70	160	29.3	64	170	0.018
MSS162F-0310	3100	12400	90	200	29.2	64	170	0.022
MSS162J-0200	2000	8000	120	275	25.1	64	170	0.028
MSS182A-0100	1000	4000	12	30	1.25	3.7	11	0.0089
MSS182A-0250	2500	10000			3.1	5	15	
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

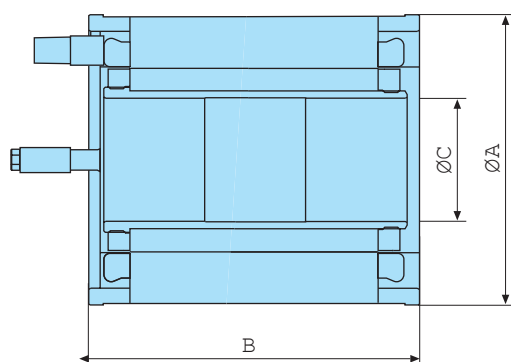
Type	Rated speed	Maximum speed	Rated torque	Maximum torque	Rated power	Rated current	Maximum current	Moment of inertia
	$n_N$	$n_{Max}$	$M_N$	$M_{Max}$	$P_N$	$I_N$	$I_{Max}$	$J$
	[1/min]	[1/min]	[Nm]	[Nm]	[kW]	[A]	[A]	[kgm <sup>2</sup> ]
MSS182D-0260	2600	10400	140	320	38.1	71	200	0.039
MSS182F-0200	2000	8000	200	450	41.9			0.053
MSS202A-0200			105	270	22	45	130	0.05
MSS202B-0150	1500	6000	140	390				
MSS202B-0210	2100	8400	140	390	30.8	68	180	0.064
MSS202D-0170	1700	6800			175			480
MSS202F-0120	1200	4800	245	650	30.8	68	180	0.104
MSS242B-0100	1000	4000	250	575	26.2			0.119
MSS242D-0070	700	2800	375	860	27.5	49.5	68	0.167
MSS242F-0060	600	2400	425	970	26.7	68		0.193
MSS272B-0065	650	2600	400	900	27.2	71	200	0.268
MSS272B-0080	800	3200			33.5	82	250	
MSS272D-0050	500	2000	525	1200	27.5	71	200	0.335
MSS272F-0040	400	1600	650	1500	27.2			0.403
MSS312B-0035	350	1400	650	1550	23.8	62.5	170	0.617
MSS312D-0028	280	1120			820	1950	24	59.5
MSS312D-0060	600	2400	820	1950	51.5	93.2	250	
MSS312F-0028	280	1120			975	2275	28.6	62
MSS312H-0025	250	1000	1125	2750	29.5	197	570	
MSS312H-0085	850	3400	1100	2875	97.9	197	570	1.525
MSS382B-0025	250	1000	1375		36	85	250	
MSS382D-0020	200	800	1775	3700	37.2	101		2.296
MSS382F-0018	180	720	2170	4500	40.9	83.6	210	0.604
MSS482A-0200	2000	5000	120	275	25.1	40		

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	Ø A	B	Ø 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				
MSS182B-0280		232		32.1
MSS182D-0260		282		38.9
MSS182F-0200		382		52.6
MSS202A-0200	220	215	96	25
MSS202B-0150		265		40.7
MSS202B-0210		315		48.3
MSS202D-0170		415		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				
MSS312B-0035	340	380	170	128.7
MSS312D-0028		455		154.1
MSS312D-0060		530		179.5
MSS312F-0028		630		215
MSS312H-0025				
MSS312H-0085				
MSS382B-0025	405	430	240	178.5
MSS382D-0020		630		242.7
MSS382F-0018				262
MSS482A-0200	510	115	345	59

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

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