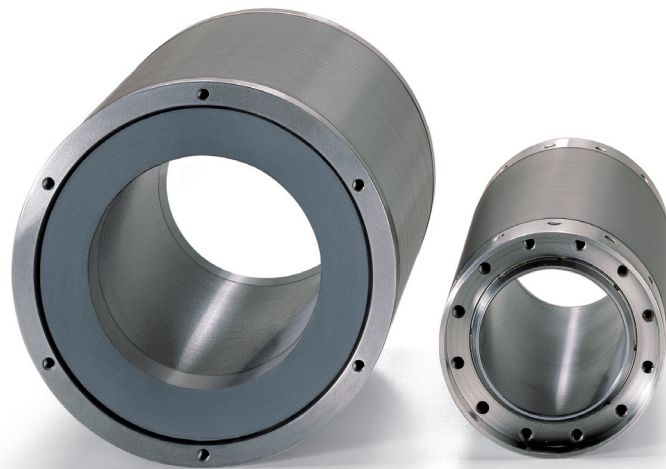


Motors and Gearboxes

High-Speed Synchronmotors

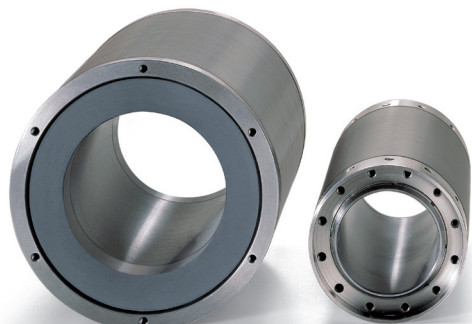
IndraDyn H - for high speed with integrated cooling



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 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 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 | 22500 | 10.7 | 36.7 | 8.96 | 16.9 | 52 | 0.003 |
| MSS102D-0800 | | | 20 | 45 | 16.8 | 24 | | 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 | | 0.014 |
| MSS142F-0700 | | | 53 | 113 | 38.9 | 84 | | 180 |
| 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 | | 200 | 450 | 41.9 | 71 | 200 | 0.053 |
| MSS202A-0200 | | | 11000 | 105 | 270 | 22 | 45 | 130 |
| MSS202B-0150 | 1500 | 8200 | 141 | 353 | 22.2 | 46 | 128 | 0.064 |
| MSS202B-0210 | 2100 | 11500 | 128 | 320 | 28.1 | 52 | 144 | |

Motors and Gearboxes

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

Electric data

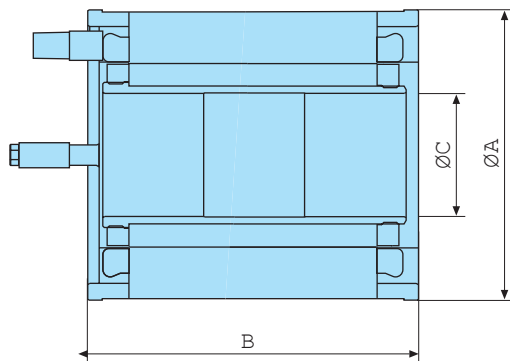
| Type | Rated speed | Maximum speed | Rated torque | Maximum torque | Rated power | Rated current | Maximum current | Moment of inertia | |
|--------------|-------------|---------------|--------------|----------------|-------------|---------------|-----------------|---------------------|-------|
| | 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] | |
| 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 | | 200 | 0.403 | |
| MSS312B-0035 | 350 | 1500 | | 820 | 1550 | 23.8 | 62.5 | 170 | 0.617 |
| MSS312D-0028 | 280 | 1200 | 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 | | 570 | 1.064 | |
| MSS312H-0085 | 850 | 3400 | 1100 | 2875 | 97.9 | 197 | 570 | 1.525 | |
| MSS382B-0025 | 250 | 1000 | 1375 | | 36 | 85 | 250 | | 1.911 |
| MSS382D-0020 | 200 | 800 | 1775 | | 37.2 | 101 | | | 2.296 |
| MSS382F-0018 | 180 | 720 | 2170 | 40.9 | 83.6 | 210 | | 0.604 | |
| 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



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 | | 232 | | 32.1 | | | | |
| MSS182B-0280 | | | | | 282 | 38.9 | | |
| MSS182D-0260 | | | | | | | 382 | 43.5 |
| MSS182F-0200 | | | | | | | | |
| MSS202A-0200 | 220 | 215 | 96 | 25 | | | | |
| MSS202B-0150 | | 265 | | 40.7 | | | | |
| MSS202B-0210 | | | | | 315 | 37.6 | | |
| MSS202D-0170 | | | | | | | | |
| MSS202D-0360 | | | | | | | | |
| MSS202F-0120 | 415 | 63.7 | | | | | | |
| 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 | | 530 | | 242.7 | | | | |
| MSS382F-0018 | | 630 | | 262 | | | | |
| MSS482A-0200 | 510 | 115 | 345 | 59 | | | | |

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

Representante oficial de:

Rexroth
Bosch Group

[Argentina]



Calle 49 N° 5764 - Villa Ballester (B1653AOX) - Prov. de Buenos Aires - ARGENTINA
Tel: (+54 11) 4768-4242 / Fax: (+54 11) 4849-1212
Mail: ventas@nakase.com.ar / Web: www.nakase.com.ar

