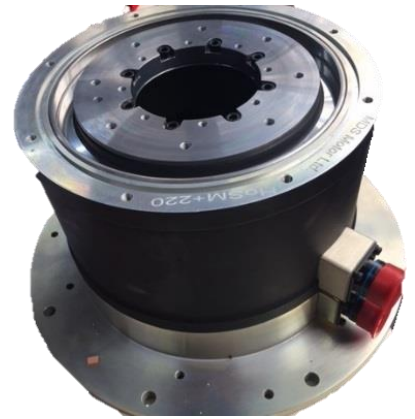




Hollow Shaft Torque Motors

MDS Motor offers a new framed/housed motor series for direct drive applications. HoSM series torque motors are designed to deliver high torque at low rated speeds with encoder or resolver options in a framed structure. HoSM series hollow shaft torque motors are the perfect servo solutions for direct drive systems requiring a large diameter with wide hollow shaft.

HoSM series offer 15 motor sizes for high performance and zero maintenance applications.



HoSM-135

- Motor OD: 135 mm
- Flange OD: 174 mm
- Hollow shaft ID: 19 mm
- Three different lengths
- 24V/ 48V/ 310V/ 560V options
- Peak torque up to 37.5 Nm

HoSM-176

- Motor OD: 175.3 mm
- Flange OD: 220 mm
- Hollow shaft ID: 43 mm
- Three different lengths
- 24V/ 48V/ 310V/ 560V options
- Peak torque up to 98.8 Nm

HoSM-220

- Motor OD: 217 mm
- Flange OD: 260 mm
- Hollow shaft ID: 69 mm
- Three different lengths
- 24V/ 48V/ 310V/ 560V options
- Peak torque up to 182.6 Nm

HoSM-260

- Motor OD: 260 mm
- Flange OD: 306 mm
- Hollow shaft ID: 65 mm
- Three different lengths
- 24V/ 48V/ 310V/ 560V options
- Peak torque up to 351.3 Nm

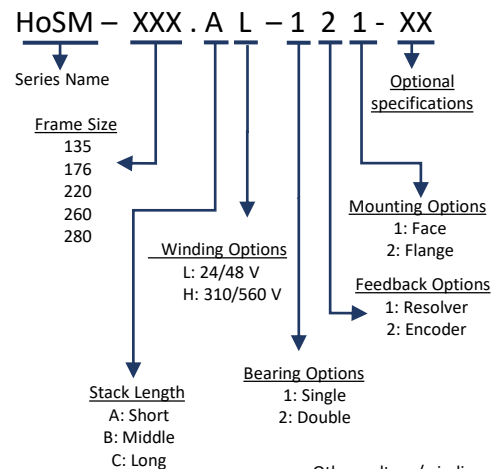
HoSM-280

- Motor OD: 280 mm
- Flange OD: 330 mm
- Hollow shaft ID: 94 mm
- Three different lengths
- 24V/ 48V/ 310V/ 560V options
- Peak torque up to 424 Nm

HoSM Series Torque Motor Range

Motor Model	Parameter	L	2L	3L
HoSM-135	Tr [Nm]	3.1	6.2	9.4
	Tp [Nm]	12.4	24.9	37.5
HoSM-176	Tr [Nm]	9.3	17.6	27.1
	Tp [Nm]	33.7	65.5	98.8
HoSM-220	Tr [Nm]	15.4	31.8	47.2
	Tp [Nm]	115.5	233.7	351.3
HoSM-260	Tr [Nm]	27.7	56.5	84.7
	Tp [Nm]	115.5	233.7	351.3
HoSM-280	Tr [Nm]	34.0	67.6	101.3
	Tp [Nm]	142.5	282.8	424.0

Nomenclature



Other voltage/winding options are available upon request.

Applications



Communication



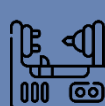
Milling Heads



Defense



Food industry



Rotary table



Injection molding



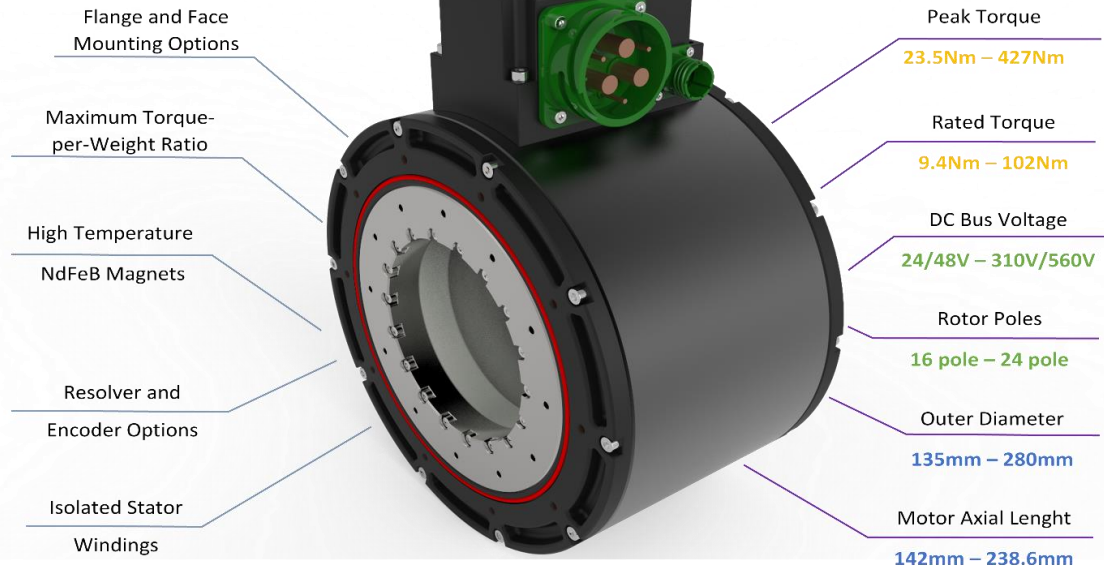
Robotics



Packaging



Structure



Main Features & Benefits

- 15 Standard motor sizes
- 5 Different frame sizes with 3 different stacks
- Rated torque up to 101.3 Nm
- Peak torque up to 424 Nm
- Speed up to 2000 rpm
- Motor axial length up to 223 mm
- 4 Different winding options (24 V/48 V/310 V/560V)
- Flange and face mounting options
- Resolver and encoder options
- Very high torque per-weight
- Low back-EMF THD levels
- NdFeB or SmCo magnets
- Easy direct system integration
- Eliminates coupling devices
- Single and double bearing designs
- Compact solution
- High resolution feedback for accuracy
- Wide temperature range

HoSM Series Hollow Shaft DD Motors

HoSM-220 Performance Parameters

Motor Parameters	Symbol	Units	HoSM-220			
			C	AH	BH	CH
Rated Torque	T_r	Nm	15.4	31.8	31.8	31.8
Peak Torque	T_p	Nm	59.5	121.9	121.9	121.9
Rated Speed	N_r	rpm	310	590	260	590
No-load Speed	$N_{no-load}$	rpm	370	575	310	575
Torque Constant	K_t	Nm/A	9.63	9.63	9.63	9.63
Voltage Constant	K_v	V/rpm	0.823	0.823	0.823	0.823
Max. Cogging Torque	T_{cog}	%				
Torque Ripple	T_{ripple}	%				
Num. of Pole	$2p$	-				
Rated Current	I_r	A rms				
Peak Current	I_p	A rms				
Line Resistance	$R_{line(2\phi)}$	Ohm				
Line Inductance	L_L	mH				
Total Weight (Flange)	W_f	kg				
Total Weight (Flange)	W_f	kg				
Mech. Time Constant	τ_{mech}	ms				
Thermal Resistance	R_{th}	°C/W				
Friction Torque	T_f	Nm				
Motor Constant	K_m	Nm/√W	0.61	0.61	0.61	0.61
Rotor ID	R_{id}	mm				

Notes: C=310V DC Bus Voltage
D=560V DC Bus Voltage
All performance and electrical specifications may change ±20%

HoSM Series Hollow Shaft DD Motors

HoSM-220 Outline Drawings

HoSM Series Hollow Shaft DD Motors

HoSM-220 Torque-Speed Curves

Torque-speed curves are obtained at ambient temperature 25°C

Detailed technical datasheets are available on our website.

