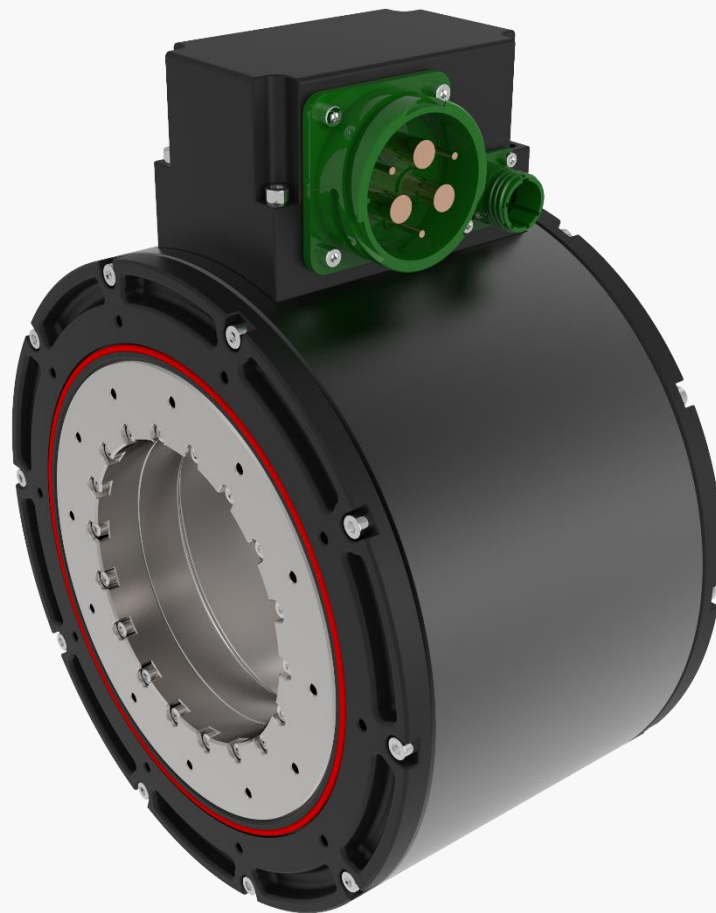




**MDS Motor**  
*Feel the perfect motion...*

## **HoSM Series Hollow Shaft DD Motors**



Hollow Shaft Direct Drive Motors

135 – 280mm Frame Sizes

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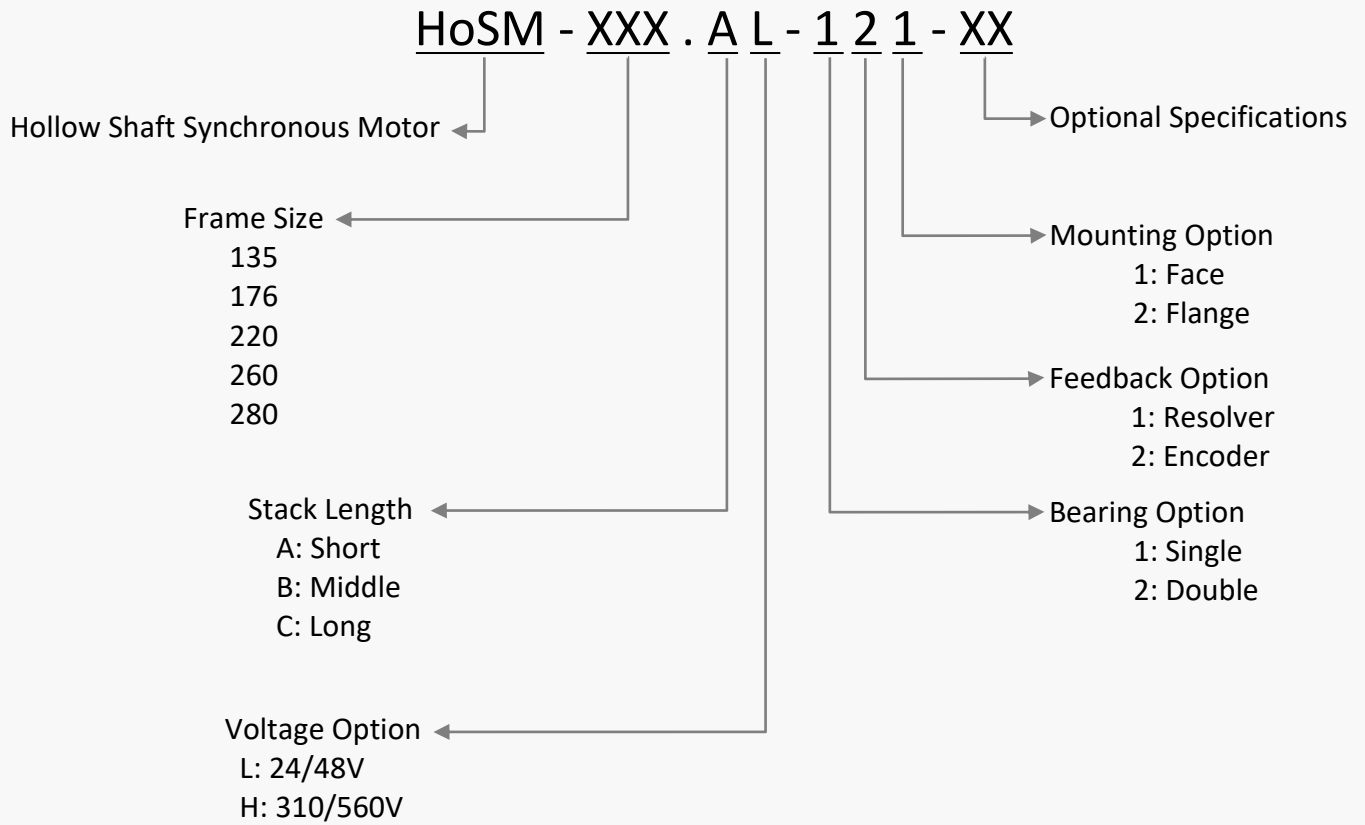
## Definitions of Motor Parameters

Rated Torque	$T_r$	Torque value at rated speed when continuous power is the output
Peak Torque	$T_p$	Maximum torque that the motor delivers when maximum current ( $I_p$ ) is provided. Peak torque is available for a maximum of 2 seconds
Rated Speed	$N_r$	Speed at continuous power is the output
No-Load Speed	$N_{no-load}$	Maximum possible speed of motor that it can be electrically excited
Torque Constant	$K_t$	Ratio of the developed torque to input current
Voltage Constant	$K_v$	Ratio of voltage generated in the winding to rotor speed
Max. Cogging Torque	$T_{cog}$	Undesirable torque component arising from attractions between magnets and teeth. Cogging torque is minimized for each MDS's torque motor is less than 0.5 % of the rated torque
Torque Ripple	$T_{ripple}$	Undesirable torque component arising from attractions between stator MMF and magnets
Num. of Pole	$2p$	Number of poles
Rated Current	$I_r$	Current required to obtain the rated continuous torque
Peak Current	$I_p$	Current required to obtain peak torque from the motor
Line Resistance	$R_{LL}$	Cold (25°C) resistance measured between two leads of the AC winding
Line Inductance	$L_{LL}$	Inductance measured between two leads of the AC winding (@60Hz)
Total Weight	$W_t$	Total weight of stator and rotor weight
Mech. Time Constant	$K_{mech}$	Motor mechanical dynamic capability level at 25°C
Thermal Resistance	$R_{th}$	Ratio of winding temperature rise to average stator power loss at rated motor operation
Inertia	$J$	Inertia of the rotor
Friction Torque	$T_f$	Torque component due to bearings and sealing units
Motor Constant	$K_m$	Ratio of peak torque to square root of input power: $K_m = T_{peak}/(P_{peak})^{.5}$ . It shows the ability of a motor to convert electrical power to torque
Rotor ID		Rotor inner diameter of the motor

**NOTE: All performance data is obtained at 25°C ambient**



# Nomenclature





## ▶ HoSM-135 ◀ Performance Parameters

	Motor Parameters	Symbols	Units	HoSM-135					
				AL		BL		CL	
				A	B	A	B	A	B
<b>PERFORMANCE</b>	Rated Torque	$T_r$	Nm	4		7.1		10	
	Peak Torque	$T_p$	Nm	7.5		15		22.4	
	Rated Speed	$N_r$	rpm	210	540	160	400	125	315
	No-Load Speed	$N_{no-load}$	rpm	375	755	260	530	205	415
	Torque Constant	$K_t$	Nm/A	0.74		1.05		1.33	
	Voltage Constant	$K_v$	V/rpm	0.063		0.09		0.115	
	Max. Cogging Torque	$T_{cog}$	%	<1					
	Torque Ripple	$T_{ripple}$	%	<1					
<b>ELECTRICAL</b>	Num. of Pole	$2p$	-	16					
	Rated Current	$I_r$	Arms	5.5		6.9		7.5	
	Peak Current	$I_p$	Arms	10.6		14.9		17.5	
	Line Resistance	$R_{LL(@25^{\circ}C)}$	Ohm	1.28		0.92		0.8	
	Line Inductance	$L_{LL}$ (@60Hz)	mH	5.02		4.91		5.28	
<b>MECH &amp; THERM</b>	Total Weight (+Face)	$W_t$	kg	6.3		7.6		9.5	
	Total Weight (+Flange)	$W_t$	kg	6.5		7.8		9.7	
	Mech. Time Constant	$K_{mech}$	ms	2.35		1.1		0.77	
	Thermal Resistance	$R_{th}$	$^{\circ}C/W$	--		--		--	
	Inertia	$J$	kg.m <sup>2</sup>	0.000819		0.00107		0.00132	
	Friction Torque	$T_f$	Nm	1.5					
	Motor Constant	$K_m$	Nm/ $\sqrt{W}$	0.43	0.27	0.65	0.41	0.87	0.55
	Rotor ID	$R_{ID}$	mm	19					

**Notes: A=24V** DC Bus Voltage

**B=48V** DC Bus Voltage

All performance and electrical specifications may change  $\pm 10\%$

## ▶ HoSM-135 ◀ Performance Parameters

	Motor Parameters	Symbols	Units	HoSM-135					
				AH		BH		CH	
				C	D	C	D	C	D
<b>PERFORMANCE</b>	Rated Torque	$T_r$	Nm	4		7.1		10.2	
	Peak Torque	$T_p$	Nm	12.4		24.9		37.5	
	Rated Speed	$N_r$	rpm	1010	1910	885	1650	780	1465
	No-Load Speed	$N_{no-load}$	rpm	1275	2315	1075	1950	935	1690
	Torque Constant	$K_t$	Nm/A	2.79		3.33		3.81	
	Voltage Constant	$K_v$	V/rpm	0.24		0.28		0.33	
	Max. Cogging Torque	$T_{cog}$	%	<1					
	Torque Ripple	$T_{ripple}$	%	<1					
<b>ELECTRICAL</b>	Num. of Pole	$2p$	-	16					
	Rated Current	$I_r$	Arms	1.45		2.15		2.7	
	Peak Current	$I_p$	Arms	5.55		9.35		12.25	
	Line Resistance	$R_{LL(@25^{\circ}C)}$	Ohm	16.4		9.6		6.6	
	Line Inductance	$L_{LL}$ (@60Hz)	mH	73.1		49.7		42.4	
<b>MECH &amp; THERM</b>	Total Weight (+Face)	$W_t$	kg	6.3		7.6		9.5	
	Total Weight (+Flange)	$W_t$	kg	6.5		7.8		9.7	
	Mech. Time Constant	$K_{mech}$	ms	2.08		1.12		0.75	
	Thermal Resistance	$R_{th}$	$^{\circ}C/W$	--		--		--	
	Inertia	$J$	kg.m <sup>2</sup>	0.000819		0.00107		0.00132	
	Friction Torque	$T_f$	Nm	1.5					
	Motor Constant	$K_m$	Nm/ $\sqrt{W}$	0.20	0.14	0.28	0.20	0.36	0.26
	Rotor ID	$R_{ID}$	mm	19					

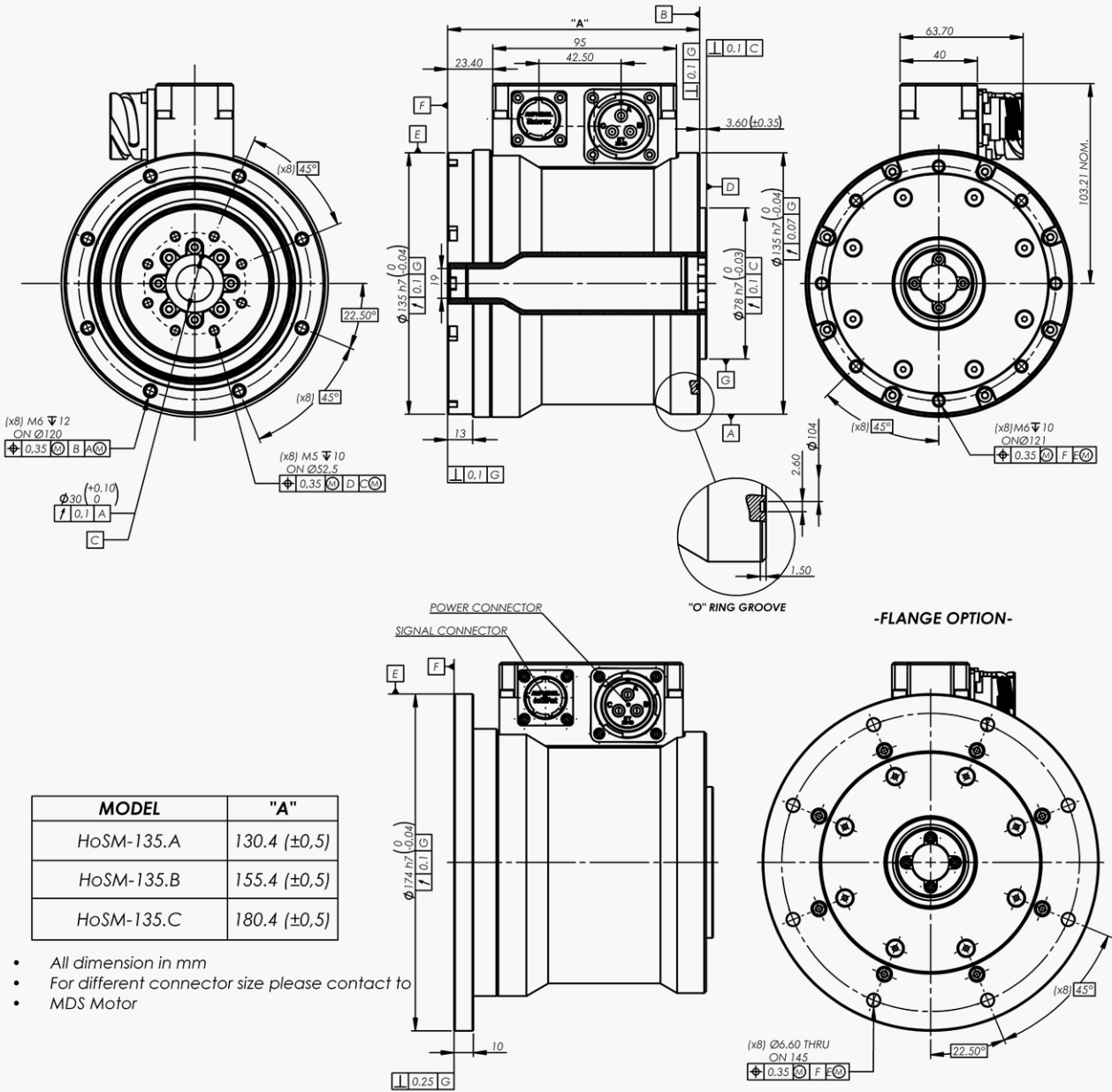
**Notes:** C=310V DC Bus Voltage

D=560V DC Bus Voltage

All performance and electrical specifications may change  $\pm 10\%$

## HoSM-135

## Outline Drawings



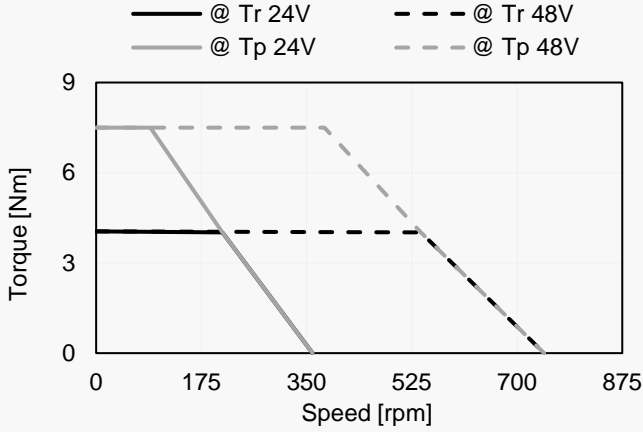
MODEL	"A"
HoSM-135.A	130.4 ( $\pm 0,5$ )
HoSM-135.B	155.4 ( $\pm 0,5$ )
HoSM-135.C	180.4 ( $\pm 0,5$ )

- All dimension in mm
- For different connector size please contact to MDS Motor

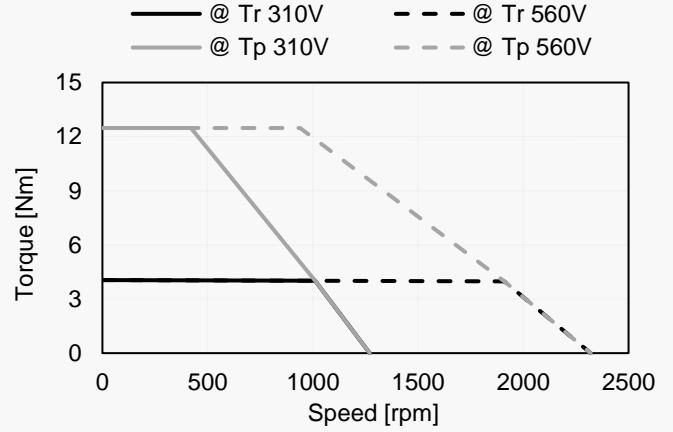


## HoSM-135 Torque-Speed Curves

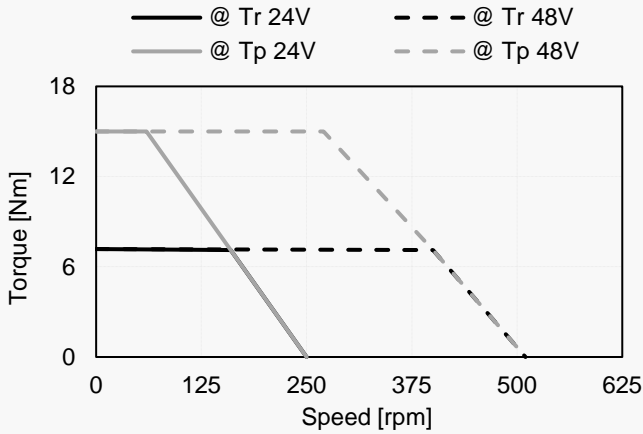
### HoSM-135-AL



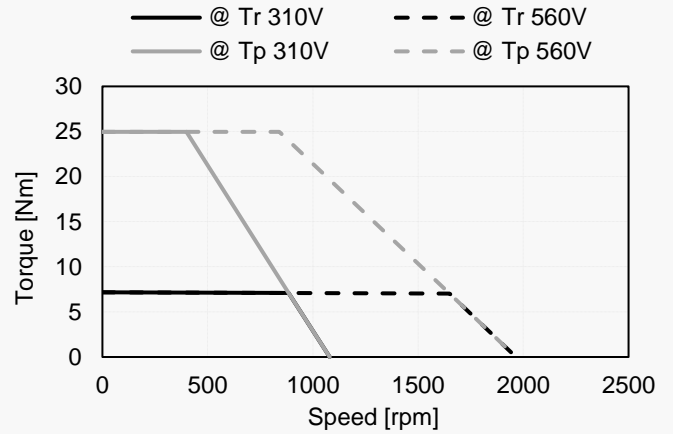
### HoSM-135-AH



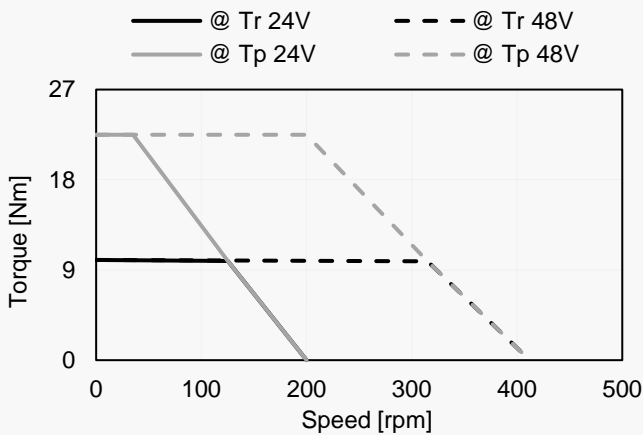
### HoSM-135-BL



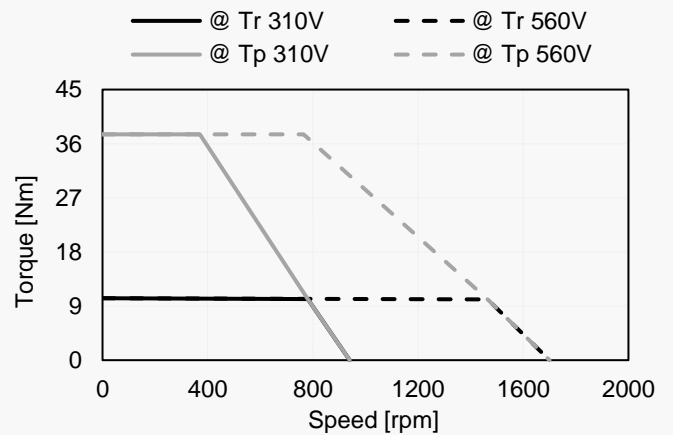
### HoSM-135-BH



### HoSM-135-CL



### HoSM-135-CH



#### Notes:

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

## ▶ HoSM-176 ◀ Performance Parameters

	Motor Parameters	Symbols	Units	HoSM-176					
				AL		BL		CL	
				A	B	A	B	A	B
<b>PERFORMANCE</b>	Rated Torque	$T_r$	Nm	10.8		21.7		30.2	
	Peak Torque	$T_p$	Nm	18		35.8		54.3	
	Rated Speed	$N_r$	rpm	125	315	75	195	65	165
	No-Load Speed	$N_{no-load}$	rpm	220	440	135	275	115	230
	Torque Constant	$K_t$	Nm/A	1.26		2.01		2.42	
	Voltage Constant	$K_v$	V/rpm	0.107		0.172		0.207	
	Max. Cogging Torque	$T_{cog}$	%	<1					
	Torque Ripple	$T_{ripple}$	%	<1					
<b>ELECTRICAL</b>	Num. of Pole	$2p$	-	24					
	Rated Current	$I_r$	Arms	8.6		10.8		12.5	
	Peak Current	$I_p$	Arms	14.4		18		22.8	
	Line Resistance	$R_{LL(@25^{\circ}C)}$	Ohm	0.82		0.74		0.6	
	Line Inductance	$L_{LL}$ (@60Hz)	mH	3.78		4.5		4.01	
<b>MECH &amp; THERM</b>	Total Weight (+Face)	$W_t$	kg	11		14.3		17.8	
	Total Weight (+Flange)	$W_t$	kg	11.4		14.7		18.2	
	Mech. Time Constant	$K_{mech}$	ms	3.42		1.8		1.34	
	Thermal Resistance	$R_{th}$	$^{\circ}C/W$	--		--		--	
	Inertia	$J$	kg.m <sup>2</sup>	0.00538		0.00802		0.01065	
	Friction Torque	$T_f$	Nm	2.8					
	Motor Constant	$K_m$	Nm/ $\sqrt{W}$	0.91	0.57	1.66	1.03	2.11	1.32
	Rotor ID	$R_{ID}$	mm	43					

**Notes:** A=24V DC Bus Voltage

B=48V DC Bus Voltage

All performance and electrical specifications may change  $\pm 10\%$

## ▶ HoSM-176 ◀ Performance Parameters

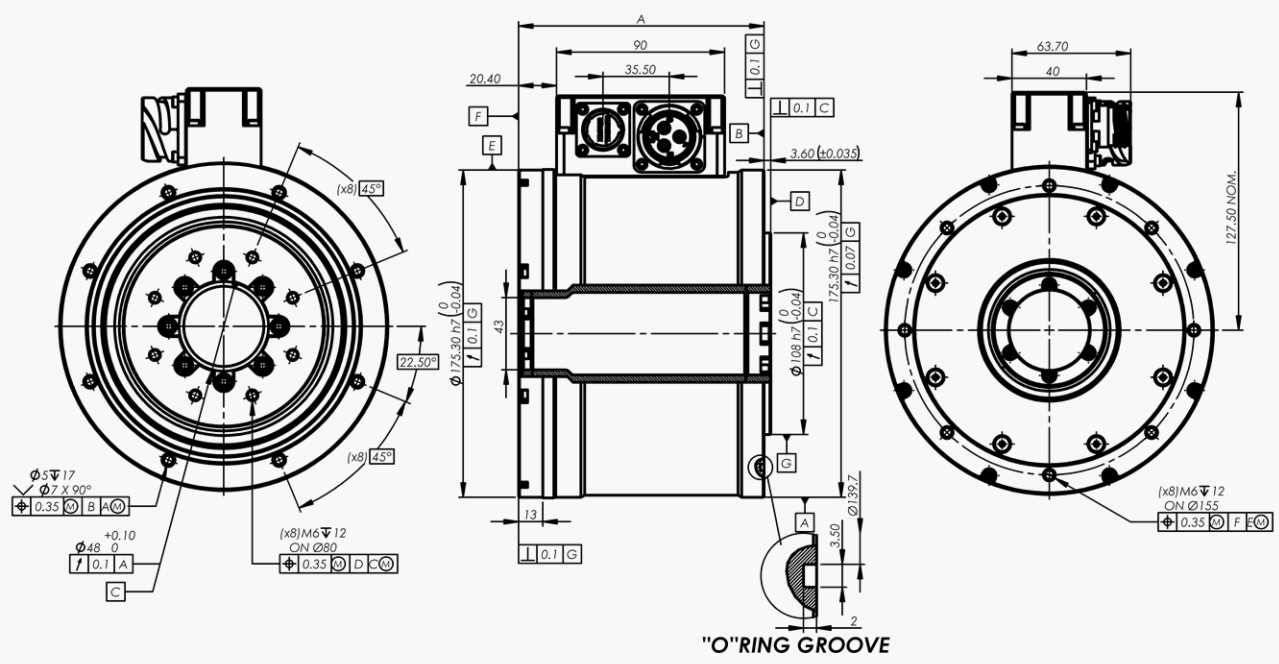
	Motor Parameters	Symbols	Units	HoSM-176					
				AH		BH		CH	
				C	D	C	D	C	D
PERFORMANCE	Rated Torque	$T_r$	Nm	11.3		21.7		29.8	
	Peak Torque	$T_p$	Nm	33.7		65.5		98.8	
	Rated Speed	$N_r$	Rpm	330	650	285	555	315	605
	No-Load Speed	$N_{no-load}$	rpm	460	835	375	690	395	720
	Torque Constant	$K_t$	Nm/A	7.79		9.45		9.03	
	Voltage Constant	$K_v$	V/rpm	0.666		0.809		0.775	
	Max. Cogging Torque	$T_{cog}$	%	<1					
	Torque Ripple	$T_{ripple}$	%	<1					
ELECTRICAL	Num. of Pole	$2p$	-	24					
	Rated Current	$I_r$	Arms	1.45		2.3		3.3	
	Peak Current	$I_p$	Arms	4.8		7.6		12	
	Line Resistance	$R_{LL(@25^\circ C)}$	Ohm	31.6		16.5		8.4	
	Line Inductance	$L_{LL}$ (@60Hz)	mH	155.2		103.3		60.9	
MECH & THERM	Total Weight (+Face)	$W_t$	kg	11		14.3		17.8	
	Total Weight (+Flange)	$W_t$	kg	11.4		14.7		18.2	
	Mech. Time Constant	$K_{mech}$	ms	3.43		1.81		1.34	
	Thermal Resistance	$R_{th}$	°C/W	--		--		--	
	Inertia	$J$	kg.m <sup>2</sup>	0.00538		0.00802		0.01065	
	Friction Torque	$T_f$	Nm	2.8					
	Motor Constant	$K_m$	Nm/√W	0.57	0.41	0.85	0.61	0.95	0.69
	Rotor ID	$R_{ID}$	mm	43					

**Notes:** C=310V DC Bus Voltage

D=560V DC Bus Voltage

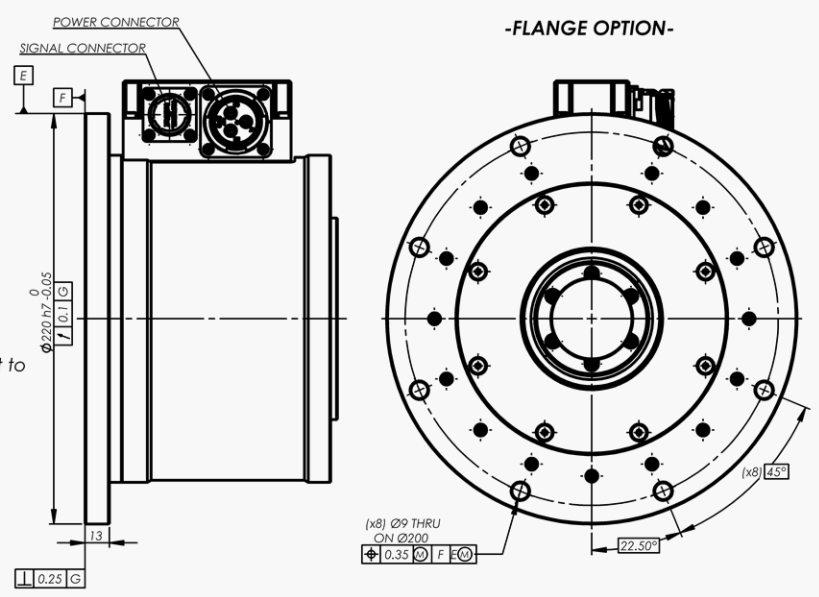
All performance and electrical specifications may change ±10%

### HoSM-176 Outline Drawings



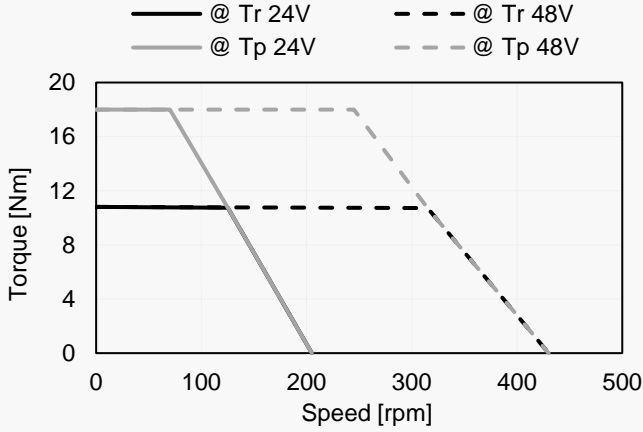
MODEL	"A"
HoSM-176.A	131.6 ( $\pm 0.5$ )
HoSM-176.B	156.5 ( $\pm 0.5$ )
HoSM-176.C	182.4 ( $\pm 0.5$ )

- All dimensions in mm
- For different connector size please contact to MDS Motor

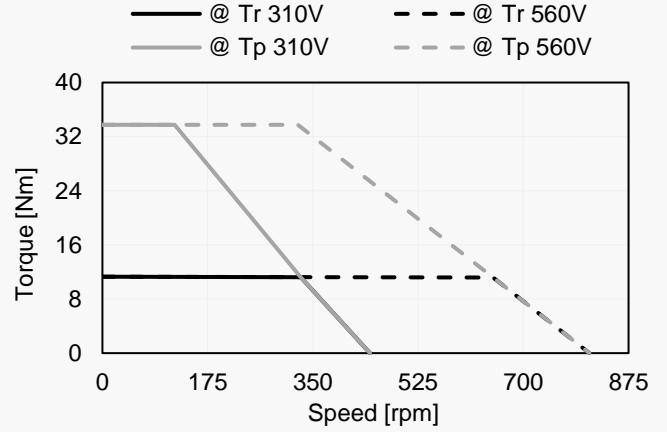


## HoSM-176 Torque-Speed Curves

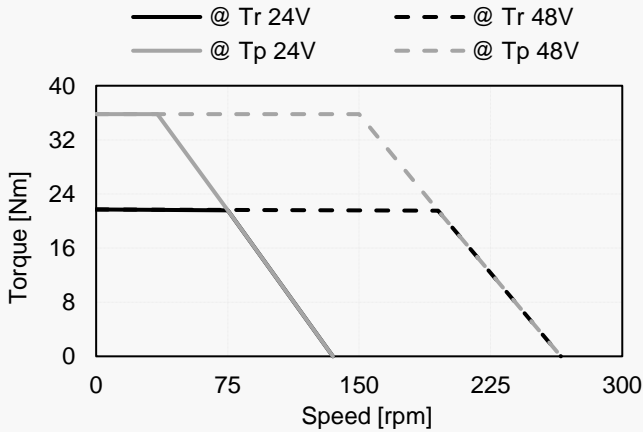
### HoSM-176-AL



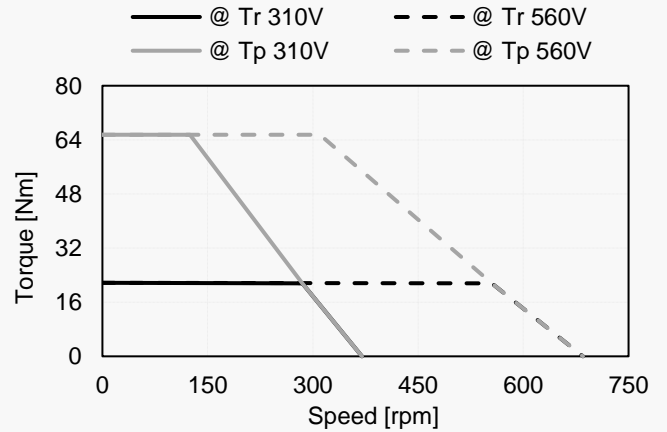
### HoSM-176-AH



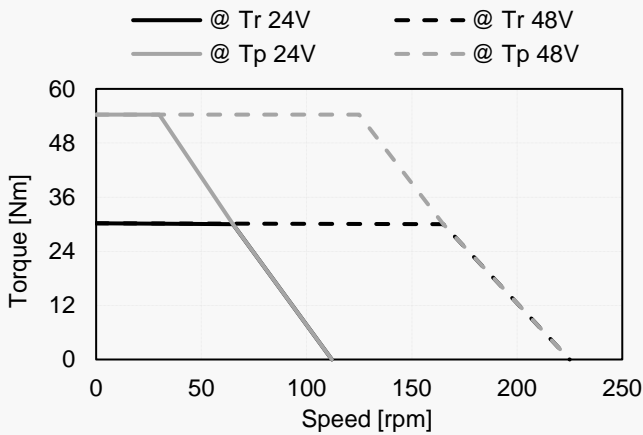
### HoSM-176-BL



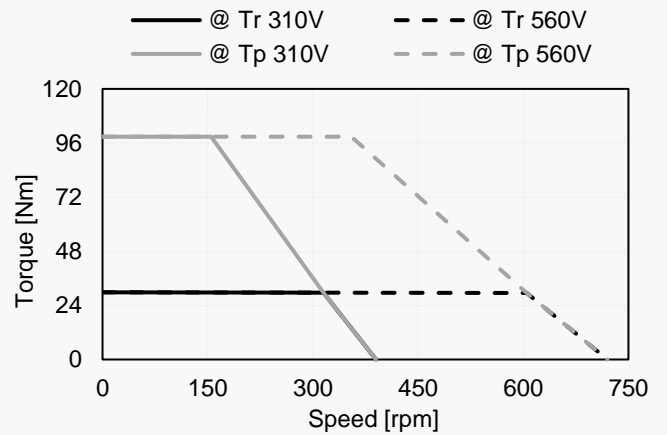
### HoSM-176-BH



### HoSM-176-CL



### HoSM-176-CH



#### Notes:

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

## ▶ HoSM-220 ◀ Performance Parameters

	Motor Parameters	Symbols	Units	HoSM-220					
				AL		BL		CL	
				A	B	A	B	A	B
PERFORMANCE	Rated Torque	$T_r$	Nm	19.7		34.8		51.7	
	Peak Torque	$T_p$	Nm	31.3		62.9		94.5	
	Rated Speed	$N_r$	rpm	115	275	70	175	55	140
	No-Load Speed	$N_{no-load}$	rpm	175	350	110	220	90	185
	Torque Constant	$K_t$	Nm/A	1.58		2.49		2.97	
	Voltage Constant	$K_v$	V/rpm	0.135		0.213		0.256	
	Max. Cogging Torque	$T_{cog}$	%	<1					
	Torque Ripple	$T_{ripple}$	%	<1					
ELECTRICAL	Num. of Pole	$2p$	-	24					
	Rated Current	$I_r$	Arms	12.5		14		17.4	
	Peak Current	$I_p$	Arms	20		25.4		31.8	
	Line Resistance	$R_{LL(@25^{\circ}C)}$	Ohm	0.46		0.4		0.39	
	Line Inductance	$L_{LL}$ (@60Hz)	mH	2.15		2.82		2.61	
MECH & THERM	Total Weight (+Face)	$W_t$	kg	17.1		22.3		26.6	
	Total Weight (+Flange)	$W_t$	kg	17.6		22.7		27.1	
	Mech. Time Constant	$K_{mech}$	ms	3.4		1.97		1.78	
	Thermal Resistance	$R_{th}$	$^{\circ}C/W$	--		--		--	
	Inertia	$J$	kg.m <sup>2</sup>	0.01578		0.02489		0.03399	
	Friction Torque	$T_f$	Nm	3.1					
	Motor Constant	$K_m$	Nm/ $\sqrt{W}$	1.28	0.83	2.18	1.38	3	1.88
	Rotor ID	$R_{ID}$	mm	63.5					

**Notes:** A=24V DC Bus Voltage

B=48V DC Bus Voltage

All performance and electrical specifications may change  $\pm 10\%$

## ▶ HoSM-220 ◀ Performance Parameters

	Motor Parameters	Symbols	Units	HoSM-220					
				AH		BH		CH	
				C	D	C	D	C	D
<b>PERFORMANCE</b>	Rated Torque	$T_r$	Nm	19.2		35.2		51	
	Peak Torque	$T_p$	Nm	59.5		121.9		182.6	
	Rated Speed	$N_r$	rpm	295	570	255	490	240	455
	No-Load Speed	$N_{no-load}$	rpm	370	675	315	575	285	520
	Torque Constant	$K_t$	Nm/A	9.63		11.36		12.44	
	Voltage Constant	$K_v$	V/rpm	0.823		0.965		1.065	
	Max. Cogging Torque	$T_{cog}$	%	<1					
	Torque Ripple	$T_{ripple}$	%	<1					
<b>ELECTRICAL</b>	Num. of Pole	$2p$	-	24					
	Rated Current	$I_r$	Arms	2		3.1		4.1	
	Peak Current	$I_p$	Arms	6.4		11.2		15.2	
	Line Resistance	$R_{LL(@25^{\circ}C)}$	Ohm	16.2		10.1		6.2	
	Line Inductance	$L_{LL}$ (@60Hz)	mH	88.6		60.4		45.2	
<b>MECH &amp; THERM</b>	Total Weight (+Face)	$W_t$	kg	17.1		22.3		26.6	
	Total Weight (+Flange)	$W_t$	kg	17.6		22.7		27.1	
	Mech. Time Constant	$K_{mech}$	ms	3.4		2.4		1.66	
	Thermal Resistance	$R_{th}$	°C/W	--		--		--	
	Inertia	$J$	kg.m <sup>2</sup>	0.01578		0.02489		0.03399	
	Friction Torque	$T_f$	Nm	3.1					
	Motor Constant	$K_m$	Nm/√W	0.69	0.5	1.08	0.78	1.36	0.99
	Rotor ID	$R_{ID}$	mm	63.5					

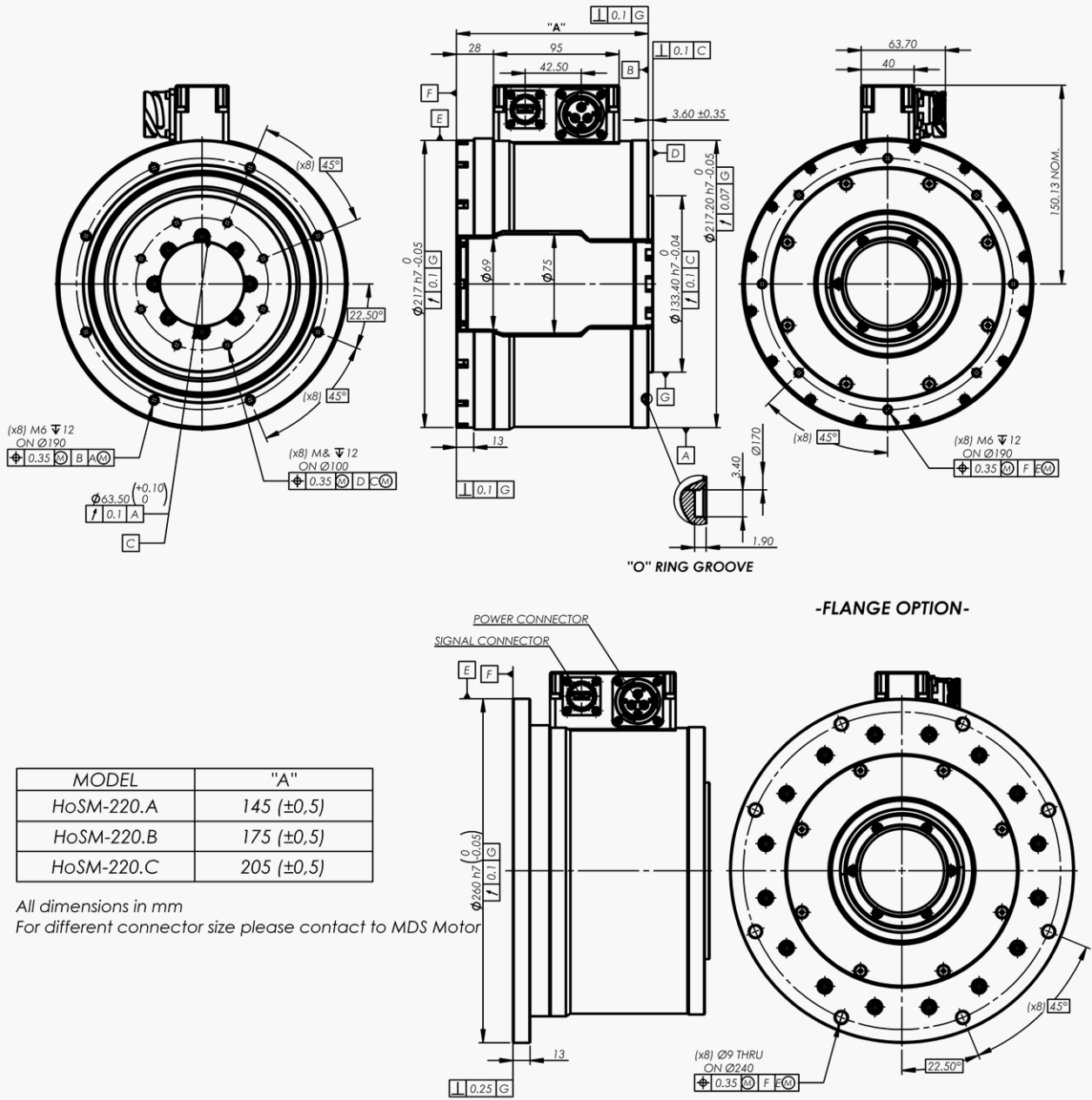
**Notes:** C=310V DC Bus Voltage

D=560V DC Bus Voltage

All performance and electrical specifications may change ±10%

## HoSM-220

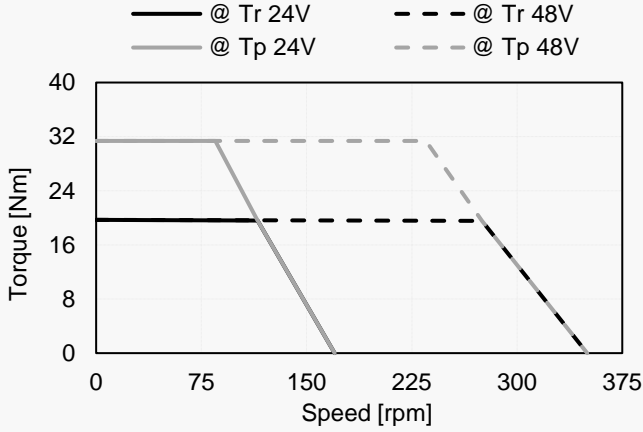
## Outline Drawings



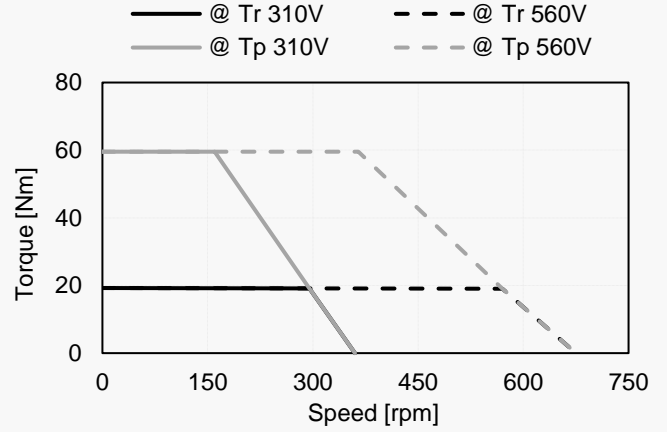


## HoSM-220 Torque-Speed Curves

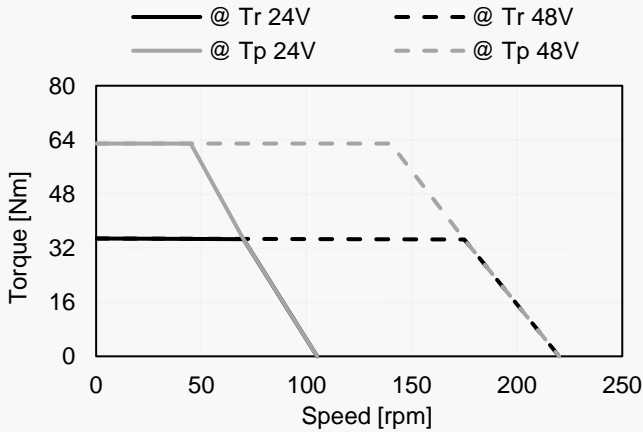
### HoSM-220-AL



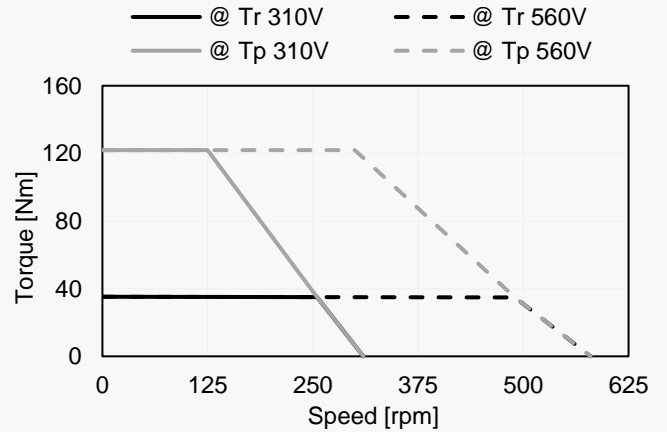
### HoSM-220-AH



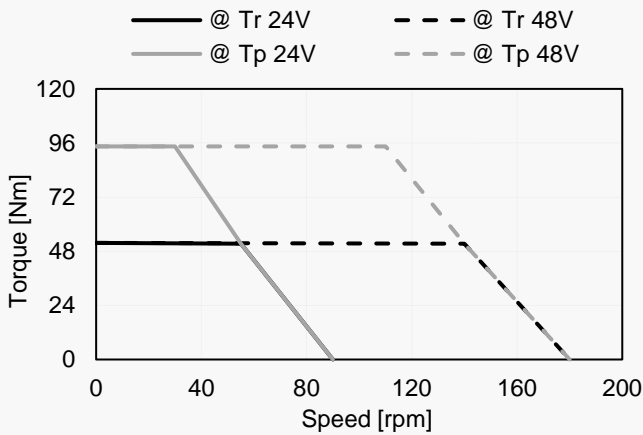
### HoSM-220-BL



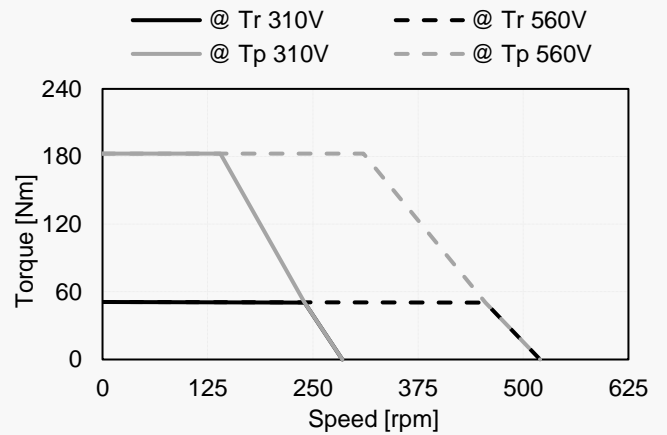
### HoSM-220-BH



### HoSM-220-CL



### HoSM-220-CH



#### Notes:

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

## ▶ HoSM-260 ◀ Performance Parameters

	Motor Parameters	Symbols	Units	HoSM-260					
				AL		BL		CL	
				A	B	A	B	A	B
PERFORMANCE	Rated Torque	$T_r$	Nm	34.2		64.9		89.3	
	Peak Torque	$T_p$	Nm	54.3		112.1		168.3	
	Rated Speed	$N_r$	rpm	110	260	65	155	55	125
	No-Load Speed	$N_{no-load}$	rpm	160	325	95	195	70	145
	Torque Constant	$K_t$	Nm/A	1.71		2.8		3.74	
	Voltage Constant	$K_v$	V/rpm	0.147		0.241		0.321	
	Max. Cogging Torque	$T_{cog}$	%	<1					
	Torque Ripple	$T_{ripple}$	%	<1					
ELECTRICAL	Num. of Pole	$2p$	-	32					
	Rated Current	$I_r$	Arms	20		23.2		23.9	
	Peak Current	$I_p$	Arms	32		40.4		45.5	
	Line Resistance	$R_{LL(@25^{\circ}C)}$	Ohm	0.22		0.22		0.18	
	Line Inductance	$L_{LL}$ (@60Hz)	mH	1.31		1.63		1.91	
MECH & THERM	Total Weight (+Face)	$W_t$	kg	25.3		33.5		41.5	
	Total Weight (+Flange)	$W_t$	kg	25.9		34.1		42.1	
	Mech. Time Constant	$K_{mech}$	ms	3.53		2.12		1.33	
	Thermal Resistance	$R_{th}$	$^{\circ}C/W$	--		--		--	
	Inertia	$J$	kg.m <sup>2</sup>	0.03859		0.06218		0.08443	
	Friction Torque	$T_f$	Nm	3.7					
	Motor Constant	$K_m$	Nm/ $\sqrt{W}$	1.72	1.12	3.09	2	3.94	2.61
	Rotor ID	$R_{ID}$	mm	65					

**Notes: A=24V** DC Bus Voltage

**B=48V** DC Bus Voltage

All performance and electrical specifications may change  $\pm 10\%$

## ▶ HoSM-260 ◀ Performance Parameters

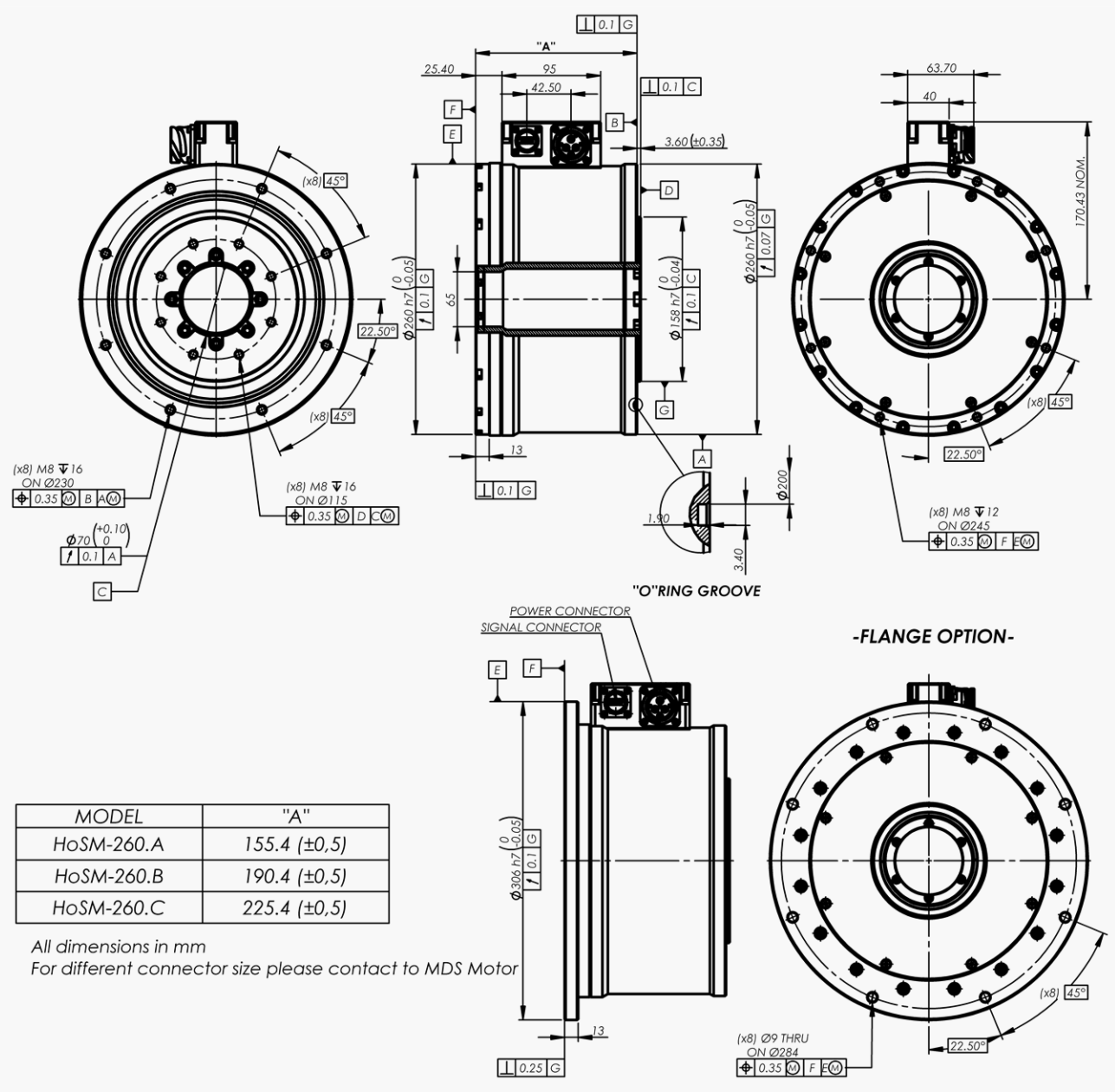
	Motor Parameters	Symbols	Units	HoSM-260					
				AH		BH		CH	
				C	D	C	D	C	D
PERFORMANCE	Rated Torque	$T_r$	Nm	34.8		64.5		89.8	
	Peak Torque	$T_p$	Nm	115.5		233.7		351.3	
	Rated Speed	$N_r$	rpm	280	535	260	490	210	395
	No-Load Speed	$N_{no-load}$	rpm	345	635	310	560	245	445
	Torque Constant	$K_t$	Nm/A	10.26		11.53		14.49	
	Voltage Constant	$K_v$	V/rpm	0.879		0.987		1.241	
	Max. Cogging Torque	$T_{cog}$	%	<1					
	Torque Ripple	$T_{ripple}$	%	<1					
ELECTRICAL	Num. of Pole	$2p$	-	32					
	Rated Current	$I_r$	Arms	3.4		5.6		6.2	
	Peak Current	$I_p$	Arms	12.1		22		26.3	
	Line Resistance	$R_{LL(@25^\circ C)}$	Ohm	7.88		3.76		3.6	
	Line Inductance	$L_{LL}$ (@60Hz)	mH	47.2		27.7		28.6	
MECH & THERM	Total Weight (+Face)	$W_t$	kg	25.3		33.5		41.5	
	Total Weight (+Flange)	$W_t$	kg	25.9		34.1		42.1	
	Mech. Time Constant	$K_{mech}$	ms	3.53		2.15		1.6	
	Thermal Resistance	$R_{th}$	°C/W	--		--		--	
	Inertia	$J$	kg.m <sup>2</sup>	0.03859		0.06218		0.08443	
	Friction Torque	$T_f$	Nm	3.7					
	Motor Constant	$K_m$	Nm/√W	1.09	0.79	1.54	1.12	2.02	1.47
	Rotor ID	$R_{ID}$	mm	65					

**Notes:** C=310V DC Bus Voltage

D=560V DC Bus Voltage

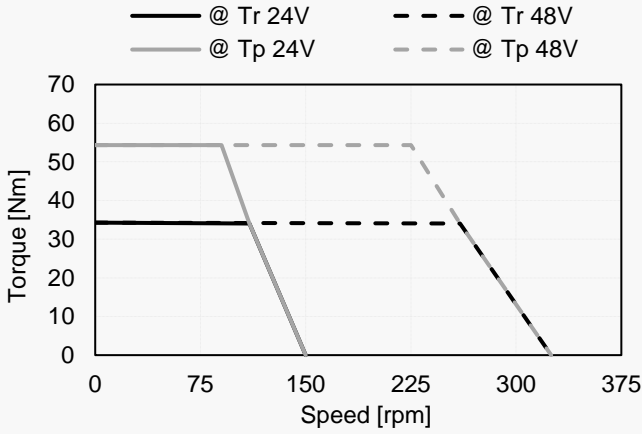
All performance and electrical specifications may change ±10%

## HoSM-260 Outline Drawings

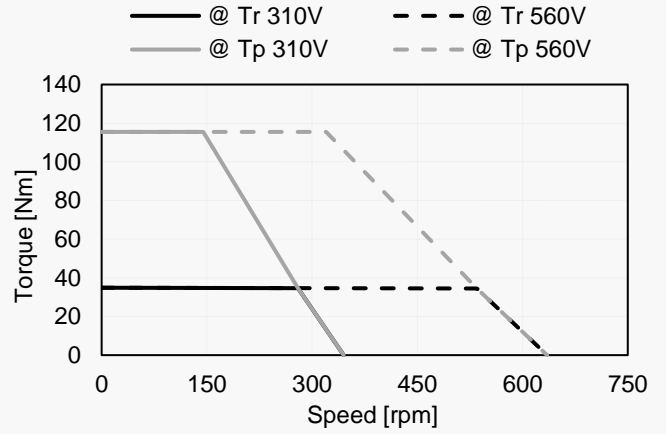


## HoSM-260 Torque-Speed Curves

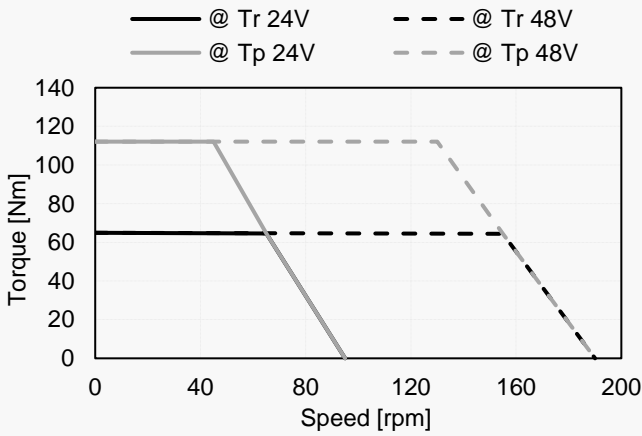
### HoSM-260-AL



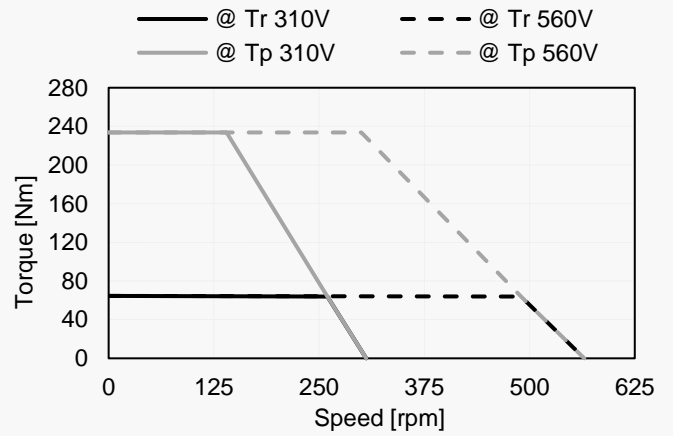
### HoSM-260-AH



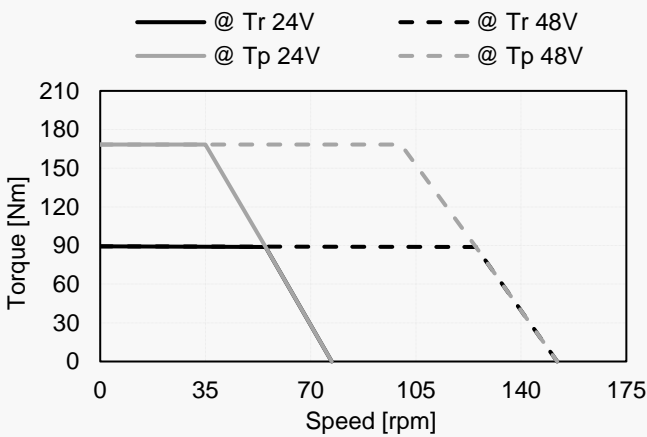
### HoSM-260-BL



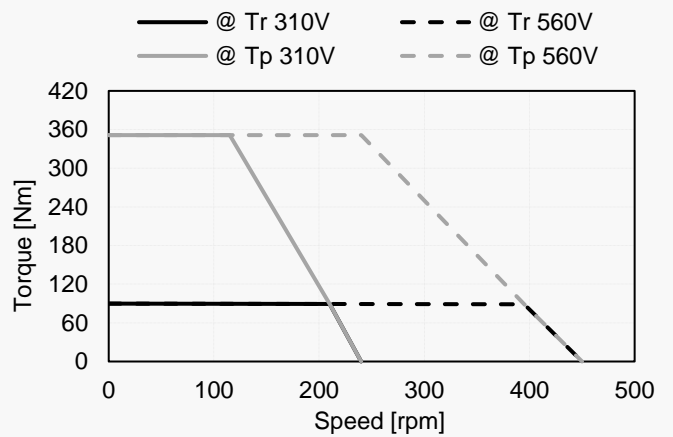
### HoSM-260-BH



### HoSM-260-CL



### HoSM-260-CH



#### Notes:

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

## ▶ HoSM-280 ◀ Performance Parameters

	Motor Parameters	Symbols	Units	HoSM-280					
				AL		BL		CL	
				A	B	A	B	A	B
<b>PERFORMANCE</b>	Rated Torque	$T_r$	Nm	41.6		75		106	
	Peak Torque	$T_p$	Nm	69		135.7		200.7	
	Rated Speed	$N_r$	rpm	105	240	65	155	50	120
	No-Load Speed	$N_{no-load}$	rpm	150	300	95	195	75	150
	Torque Constant	$K_t$	Nm/A	1.83		2.84		3.66	
	Voltage Constant	$K_v$	V/rpm	0.157		0.244		0.313	
	Max. Cogging Torque	$T_{cog}$	%	<1					
	Torque Ripple	$T_{ripple}$	%	<1					
<b>ELECTRICAL</b>	Num. of Pole	$2p$	-	40					
	Rated Current	$I_r$	Arms	22.8		26.4		29	
	Peak Current	$I_p$	Arms	38		48		55.2	
	Line Resistance	$R_{LL(@25^{\circ}C)}$	Ohm	0.21		0.2		0.19	
	Line Inductance	$L_{LL}$ (@60Hz)	mH	1.04		1.18		1.14	
<b>MECH &amp; THERM</b>	Total Weight (+Face)	$W_t$	kg	29.3		37.7		44.6	
	Total Weight (+Flange)	$W_t$	kg	30.2		38.5		45.5	
	Mech. Time Constant	$K_{mech}$	ms	4.26		2.57		1.98	
	Thermal Resistance	$R_{th}$	°C/W	--		--		--	
	Inertia	$J$	kg.m <sup>2</sup>	0.05645		0.08736		0.11493	
	Friction Torque	$T_f$	Nm	4.2					
	Motor Constant	$K_m$	Nm/√W	1.95	1.29	3.32	2.15	4.5	2.9
	Rotor ID	$R_{ID}$	mm	73					

**Notes:** A=24V DC Bus Voltage

B=48V DC Bus Voltage

All performance and electrical specifications may change ±10%

## ▶ HoSM-280 ◀ Performance Parameters

	Motor Parameters	Symbols	Units	HoSM-280					
				AH		BH		CH	
				C	D	C	D	C	D
PERFORMANCE	Rated Torque	$T_r$	Nm	40.5		74.1		105.7	
	Peak Torque	$T_p$	Nm	142.5		282.8		424	
	Rated Speed	$N_r$	rpm	260	500	230	435	210	395
	No-Load Speed	$N_{no-load}$	rpm	325	590	275	500	245	445
	Torque Constant	$K_t$	Nm/A	10.97		13		14.68	
	Voltage Constant	$K_v$	V/rpm	0.938		1.112		1.251	
	Max. Cogging Torque	$T_{cog}$	%	<1					
	Torque Ripple	$T_{ripple}$	%	<1					
ELECTRICAL	Num. of Pole	$2p$	-	40					
	Rated Current	$I_r$	Arms	3.7		5.7		7.2	
	Peak Current	$I_p$	Arms	13.9		23.4		31.1	
	Line Resistance	$R_{LL(@25^\circ C)}$	Ohm	7.72		4.1		2.8	
	Line Inductance	$L_{LL}$ (@60Hz)	mH	37.5		24.5		18.3	
MECH & THERM	Total Weight (+Face)	$W_t$	kg	29.3		37.7		44.6	
	Total Weight (+Flange)	$W_t$	kg	30.2		38.5		45.5	
	Mech. Time Constant	$K_{mech}$	ms	4.43		2.6		1.78	
	Thermal Resistance	$R_{th}$	°C/W	--		--		--	
	Inertia	$J$	kg.m <sup>2</sup>	0.05645		0.08736		0.11493	
	Friction Torque	$T_f$	Nm	4.2					
	Motor Constant	$K_m$	Nm/√W	1.22	0.88	1.75	1.28	2.19	1.6
	Rotor ID	$R_{I_D}$	mm	73					

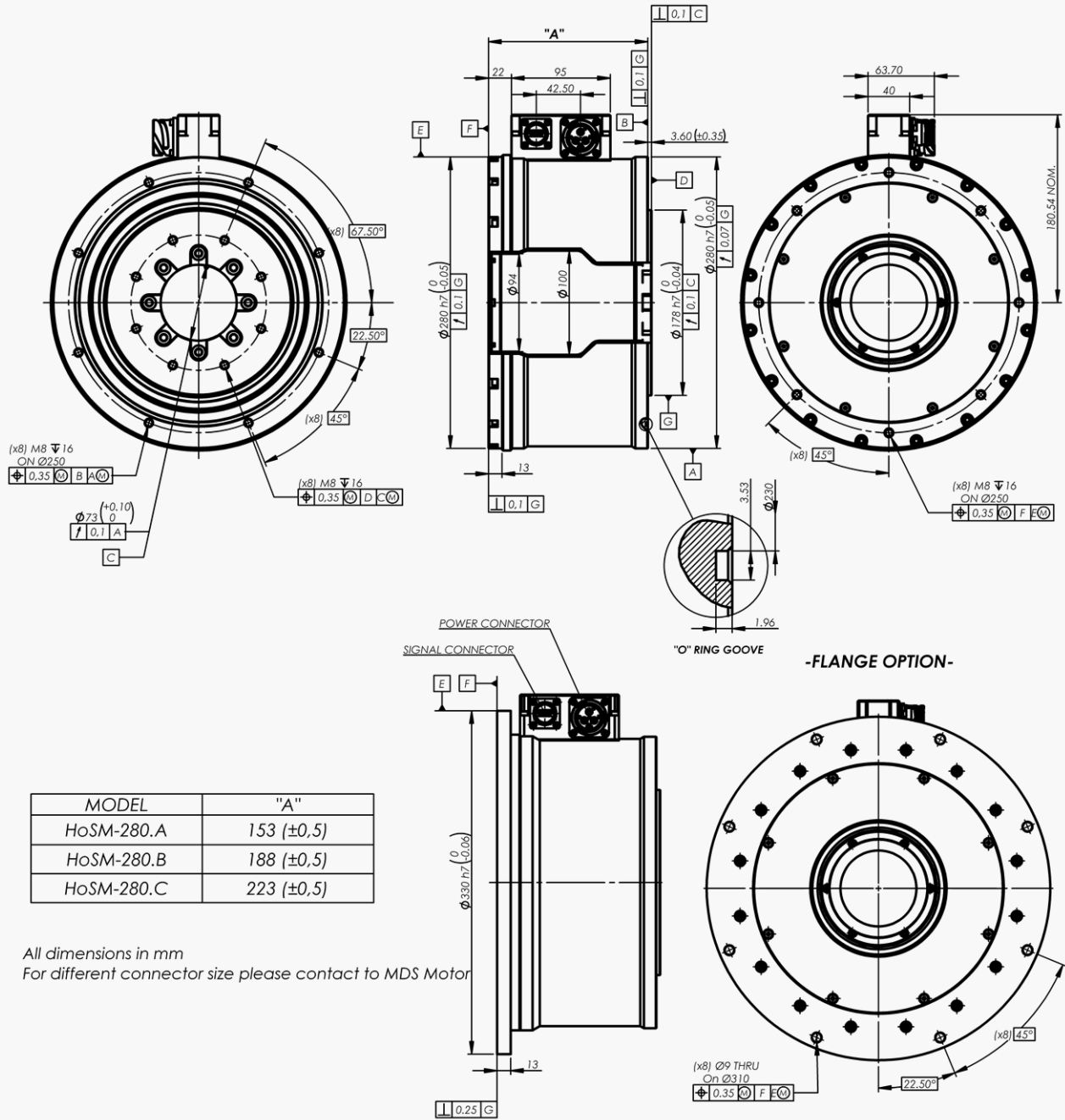
**Notes:** C=310V DC Bus Voltage

D=560V DC Bus Voltage

All performance and electrical specifications may change ±10%

## HoSM-280

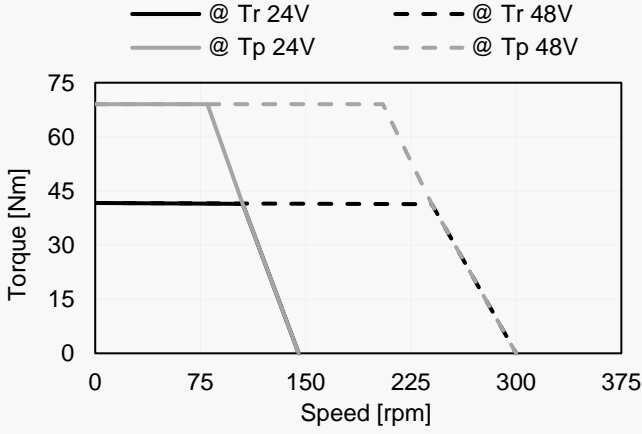
## Outline Drawings



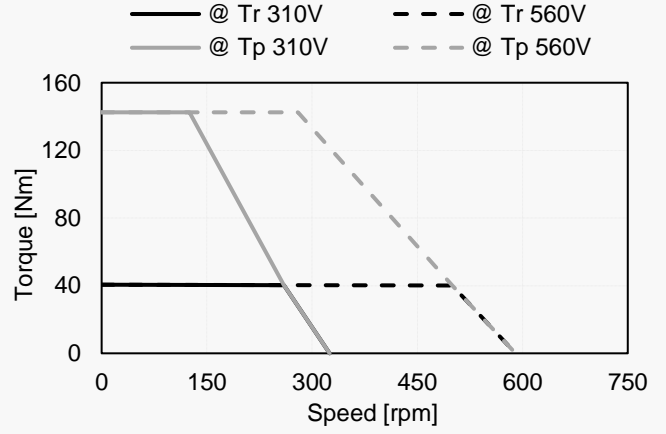


## ▶ HoSM-280 ◀ Torque-Speed Curves

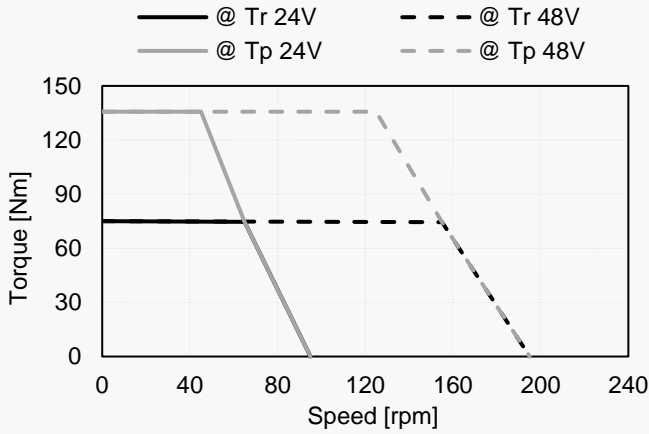
### HoSM-280-AL



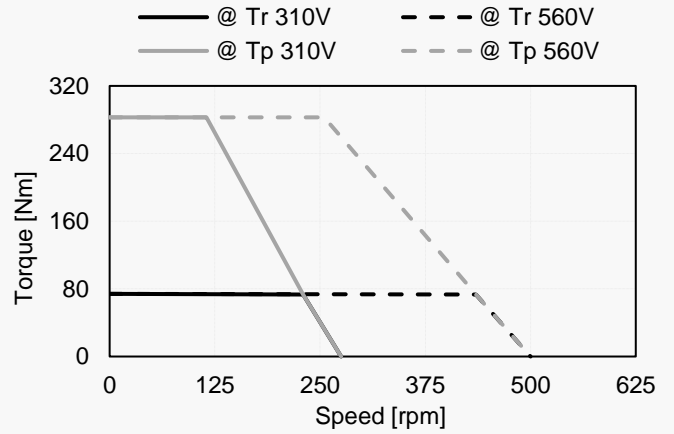
### HoSM-280-AH



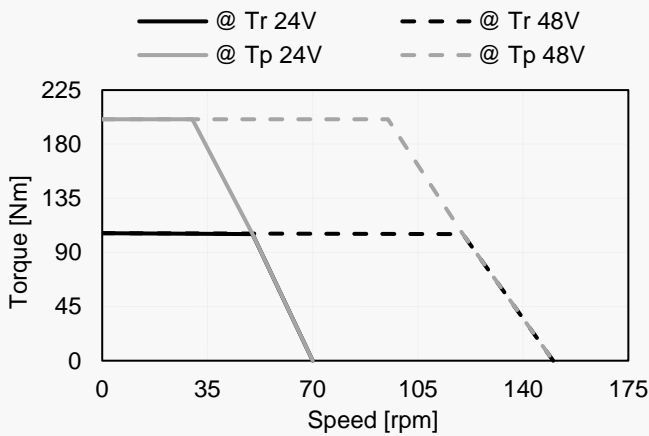
### HoSM-280-BL



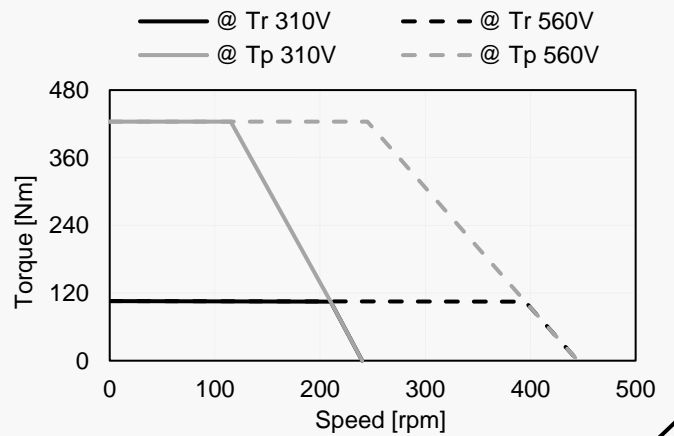
### HoSM-280-BH



### HoSM-280-CL



### HoSM-280-CH



#### Notes:

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

# Motor Design Sheet

Please send your inquiry to  
[mds@mdsmotor.com](mailto:mds@mdsmotor.com)  
 or fax: +90 (262) 341 4472

Contact details	
Company:	
Name:	
Tel:	
Email:	
Application/Project:	

## Specifications for motor design

Required torques			
Rated torque [Nm]			
Rated speed [rpm]			
Max. torque [Nm]			
Max speed [rpm]			
Electrical specifications			
DC bus voltage [V]			
Rated current [Arms]			
Max current [Arms]			
Current supply	BLDC / BLAC		
Motor size limits			
Max. diameter allowed [mm]			
Max. length allowed [mm]			
Weigth limit if any [kg]			
Inertia req. if any			
Cooling / Construction			
Ambient temp. [°C]			
Housing / cooling type	<input type="radio"/> Natural cooled	<input type="radio"/> Air cooled	<input type="radio"/> Water cooled
Duty cycle			
Other / Comments			
Rotor type	Surface / IPM / other...		
Torque-speed curve – please draw			
Comments			





## MDS Motor Tasarım Ltd.

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Kocaeli Üniversitesi Teknopark  
Vatan Caddesi, No:83 / C:19  
41275, Başiskele, Kocaeli, TURKEY

P: +90 (262)-341-4470

F: +90 (262)-341-4472

E-mail: [mds@mdsmotor.com](mailto:mds@mdsmotor.com)

Website: [www.mdsmotor.com](http://www.mdsmotor.com)

REVISION NO	VERSION NO	MADE BY	DATE	REASON
3	V17	MO	22.10.2020	Performance values of motors changed.

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