

Motor Parameters		Symbols	Units	WTRM-330-L-035		WTRM-330-L-070		WTRM-330-L-140	
PERFORMANCE	DC Bus Voltage	V_{DC}	V	24	48	24	48	24	48
	Rated Torque	T_r	Nm	124.5		249.7		375	
	Peak Torque	T_{peak}	Nm	183.6		367.2		498.2	
	Rated Speed	N_r	rpm	70	175	35	100	20	65
	No-Load Speed	$N_{no-load}$	rpm	125	250	75	150	45	90
	Torque Constant	K_t	Nm/A	1.95		3.24		5.21	
	Voltage Constant	K_v	V/rpm	0.167		0.278		0.445	
	Max. Cogging Torque	T_{cog}	%			<1			
	Torque Ripple	T_{ripple}	%			<1			
	Number of Pole	$2p$	--			48			
ELECTRICAL	Rated Current	I_r	A_{rms}	64		77		72	
	Peak Current	I_{peak}	A_{rms}	96		115.5		96	
	Line Resistance	$R_{LL}@25^{\circ}C$	Ohm	0.1 ($\pm 20\%$)		0.11 ($\pm 20\%$)		0.12 ($\pm 20\%$)	
	Line Inductance	$L_{LL}@60Hz$	mH	0.54 ($\pm 30\%$)		0.7 ($\pm 30\%$)		0.85 ($\pm 30\%$)	
MECHANICAL & THERMAL	Total Weight	W_{total}	kg	13.29		23.63		43.56	
	Mech. Time Constant	K_{mech}	ms	2.31		1.76		1.47	
	Thermal Resistance ⁽²⁾	R_{th}	$^{\circ}C/W$	0.059		0.032		0.017	
	Inertia	J	$kg.m^2$	0.0699		0.1404		0.2816	
	Water Inlet Temp.	T_w	$^{\circ}C$			20			
	Water Temp. Diff. Between Inlet-Outlet	ΔT_w	$^{\circ}C$	2.4		2.7		1.6	
	Min. Water Volumetric Flow Rate	q_w	l/min	6.1		8.4		13.0	
	Pressure Drop for q_w	ΔP_w	bar	0.1669		0.1995		0.1254	
	Environment Temp.	T_{env}	$^{\circ}C$			20			
	Rotor ID	R_{ID}	mm			240			

Motor Parameters		Symbols	Units	WTRM-330-H-035		WTRM-330-H-070		WTRM-330-H-140	
PERFORMANCE	DC Bus Voltage	V_{DC}	V	310	560	310	560	310	560
	Rated Torque	T_r	Nm	156.4		310		618.4	
	Peak Torque	T_{peak}	Nm	264.9		525.7		1048.9	
	Rated Speed	N_r	rpm	170	340	145	290	95	195
	No-Load Speed	$N_{no-load}$	rpm	270	485	220	395	150	270
	Torque Constant	K_t	Nm/A	11.59		14.16		20.61	
	Voltage Constant	K_v	V/rpm	1.002		1.225		1.782	
	Max. Cogging Torque	T_{cog}	%			<1			
	Torque Ripple	T_{ripple}	%			<1			
	Number of Pole	$2p$	--			48			
ELECTRICAL	Rated Current	I_r	A_{rms}	13.5		21.9		30	
	Peak Current	I_{peak}	A_{rms}	24.3		39.4		54	
	Line Resistance	$R_{LL}@25^{\circ}C$	Ohm	3.60 ($\pm 20\%$)		2.07 ($\pm 20\%$)		1.84 ($\pm 20\%$)	
	Line Inductance	$L_{LL}@60Hz$	mH	19.1 ($\pm 30\%$)		13.42 ($\pm 30\%$)		13.8 ($\pm 30\%$)	
MECHANICAL & THERMAL	Total Weight	W_{total}	kg	13.29		23.63		43.56	
	Mech. Time Constant	K_{mech}	ms	2.28		1.76		1.48	
	Thermal Resistance ⁽²⁾	R_{th}	$^{\circ}C/W$	0.059		0.032		0.017	
	Inertia	J	$kg.m^2$	0.0699		0.1404		0.2816	
	Water Inlet Temp.	T_w	$^{\circ}C$			20			
	Water Temp. Diff. Between Inlet-Outlet	ΔT_w	$^{\circ}C$	3.8		4.2		4.5	
	Min. Water Volumetric Flow Rate	q_w	l/min	6.1		8.4		13.0	
	Pressure Drop for q_w	ΔP_w	bar	0.1669		0.1995		0.1254	
	Environment Temp.	T_{env}	$^{\circ}C$			20			
	Rotor ID	R_{ID}	mm			240			

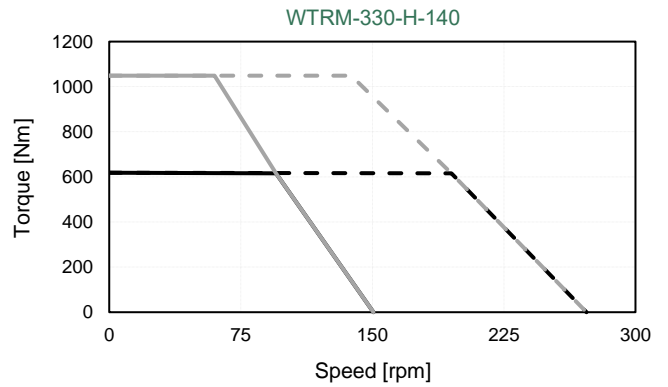
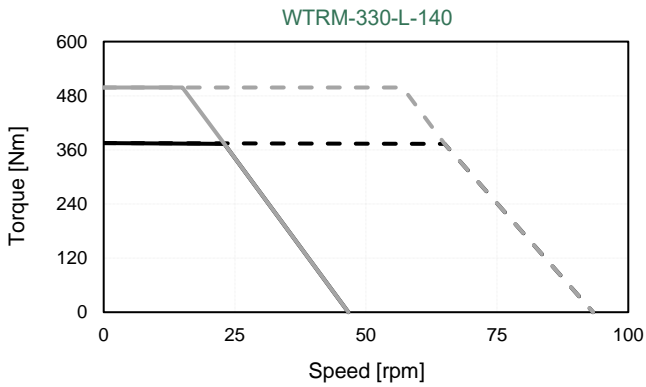
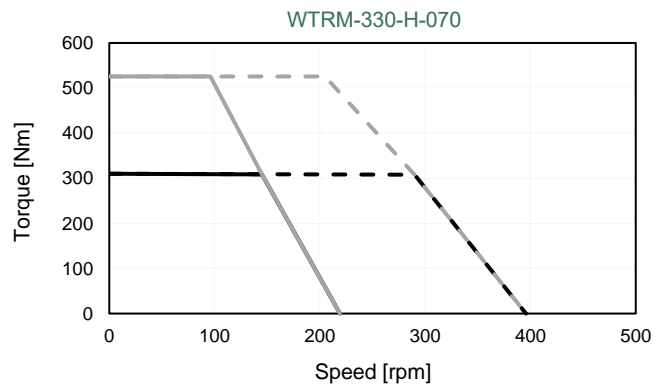
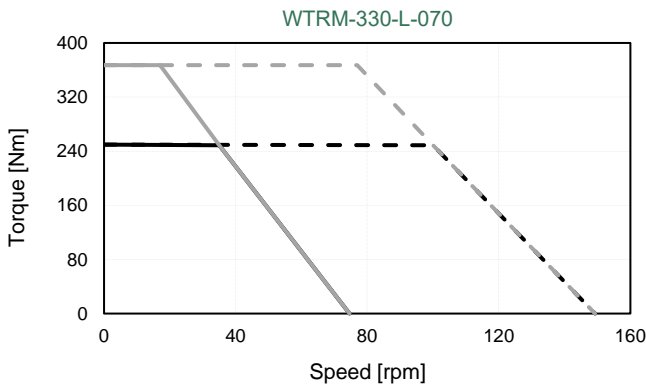
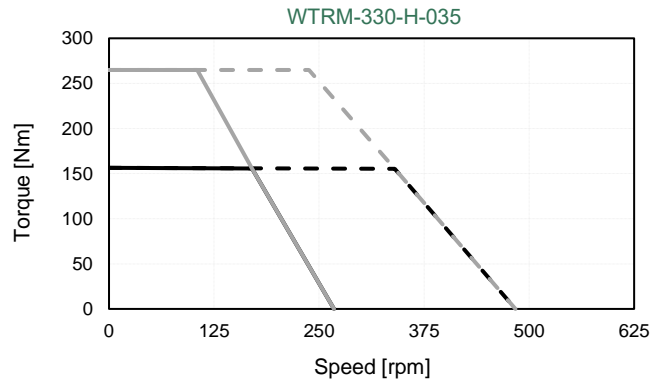
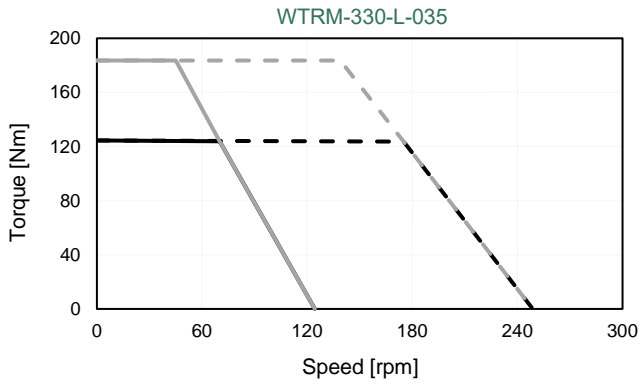
1. All performance and electrical specifications are obtained at 25°C ambient and may change $\pm 10\%$. 2. Maximum coil temperature is 130°C. 3. All data referenced to sinusoidal commutation. 4. Higher torque and speed values as well as dimensions on request.

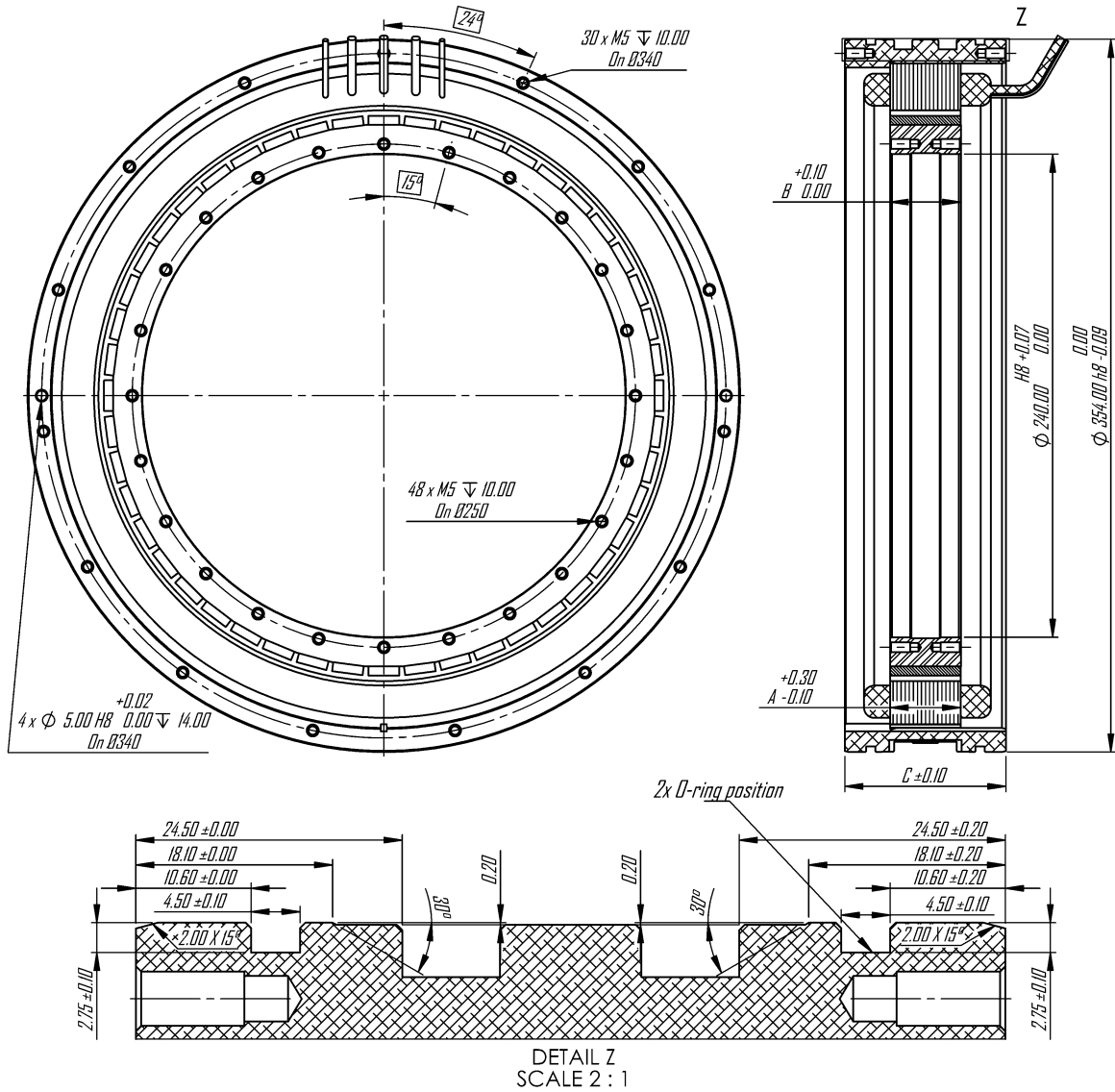
WTRM-330-(L/H)-Torque-Speed Curves

Tr: Rated Torque
Tp: Peak Torque

— @Tr 24V - - - @Tr 48V
— @Tp 24V - - - @Tp 48V

— @Tr 310V - - - @Tr 560V
— @Tp 310V - - - @Tp 560V





Model	A (mm)	B (mm)	C (mm)
WTRM-(L/H)-330-035	35	35.1	80
WTRM-(L/H)-330-070	70	70.2	115
WTRM-(L/H)-330-140	140	140.4	185

All dimensions in mm

Notes:

MOTOR LEADS:

WTRM-330-L: #6 AWG Teflon® insulated, 500 mm (optional) length, 1-Red, 1-White, 1-Black.
 WTRM-330-H: #10 AWG Teflon® insulated, 500 mm (optional) length, 1-Red, 1-White, 1-Black.

THERMISTOR LEADS:

#26 AWG Teflon® insulated, 500 mm (optional) length, 2-Brown or Blue.

(For detailed mounting information, including tolerances, please contact MDS Motor or refer to the MDS Motor mounting document)