

Motor Parameters		Symbols	Units	WTRM-200-L-030		WTRM-200-L-060		WTRM-200-L-120	
PERFORMANCE	DC Bus Voltage	$V_{DC}$	V	24	48	24	48	24	48
	Rated Torque	$T_r$	Nm	31.3		62.9		97.3	
	Peak Torque	$T_{peak}$	Nm	46.5		93.2		129.1	
	Rated Speed	$N_r$	rpm	65	210	35	125	25	80
	No-Load Speed	$N_{no-load}$	rpm	155	305	95	195	60	120
	Torque Constant	$K_t$	Nm/A	1.57		2.48		3.97	
	Voltage Constant	$K_v$	V/rpm	0.135		0.213		0.341	
	Max. Cogging Torque	$T_{cog}$	%			<1			
	Torque Ripple	$T_{ripple}$	%			<1			
	Number of Pole	$2p$	--			24			
ELECTRICAL	Rated Current	$I_r$	$A_{rms}$	20		25.4		24.5	
	Peak Current	$I_{peak}$	$A_{rms}$	30		38.1		32.7	
	Line Resistance	$R_{LL}@25^{\circ}C$	Ohm	0.46 ( $\pm 20\%$ )		0.42 ( $\pm 20\%$ )		0.41 ( $\pm 20\%$ )	
	Line Inductance	$L_{LL}@60Hz$	mH	2.1 ( $\pm 30\%$ )		2.3 ( $\pm 30\%$ )		3.44 ( $\pm 30\%$ )	
MECHANICAL & THERMAL	Total Weight	$W_{total}$	kg	6.12		10.64		19.75	
	Mech. Time Constant	$K_{mech}$	ms	1.71		1.26		0.96	
	Thermal Resistance <sup>(2)</sup>	$R_{th}$	$^{\circ}C/W$	0.120		0.064		0.035	
	Inertia	$J$	$kg.m^2$	0.0075		0.0151		0.0303	
	Water Inlet Temp.	$T_w$	$^{\circ}C$			20			
	Water Temp. Diff. Between Inlet-Outlet	$\Delta T_w$	$^{\circ}C$	2.3		2.3		2.3	
	Min. Water Volumetric Flow Rate	$q_w$	l/min	2.6		2.6		2.6	
	Pressure Drop for $q_w$	$\Delta P_w$	bar	0.0218		0.0218		0.0218	
	Environment Temp.	$T_{env}$	$^{\circ}C$			20			
	Rotor ID	$R_{ID}$	mm			120			

Motor Parameters		Symbols	Units	WTRM-200-H-030		WTRM-200-H-060		WTRM-200-H-120	
PERFORMANCE	DC Bus Voltage	$V_{DC}$	V	310	560	310	560	310	560
	Rated Torque	$T_r$	Nm	38.1		78.2		155.3	
	Peak Torque	$T_{peak}$	Nm	66.2		135.5		270	
	Rated Speed	$N_r$	rpm	210	435	165	350	145	305
	No-Load Speed	$N_{no-load}$	rpm	325	590	275	500	225	405
	Torque Constant	$K_t$	Nm/A	9.53		11.17		13.80	
	Voltage Constant	$K_v$	V/rpm	0.823		0.965		1.192	
	Max. Cogging Torque	$T_{cog}$	%			<1			
	Torque Ripple	$T_{ripple}$	%			<1			
	Number of Pole	$2p$	--			24			
ELECTRICAL	Rated Current	$I_r$	$A_{rms}$	4		7		11.25	
	Peak Current	$I_{peak}$	$A_{rms}$	7.2		12.6		20.25	
	Line Resistance	$R_{LL}@25^{\circ}C$	Ohm	15.8 ( $\pm 20\%$ )		10.1 ( $\pm 20\%$ )		5.15 ( $\pm 20\%$ )	
	Line Inductance	$L_{LL}@60Hz$	mH	79.2 ( $\pm 30\%$ )		60.4 ( $\pm 30\%$ )		40.6 ( $\pm 30\%$ )	
MECHANICAL & THERMAL	Total Weight	$W_{total}$	kg	6.12		10.64		19.75	
	Mech. Time Constant	$K_{mech}$	ms	1.59		1.48		0.99	
	Thermal Resistance <sup>(2)</sup>	$R_{th}$	$^{\circ}C/W$	0.120		0.064		0.035	
	Inertia	$J$	$kg.m^2$	0.0075		0.0151		0.0303	
	Water Inlet Temp.	$T_w$	$^{\circ}C$			20			
	Water Temp. Diff. Between Inlet-Outlet	$\Delta T_w$	$^{\circ}C$	3.4		4.7		2.3	
	Min. Water Volumetric Flow Rate	$q_w$	l/min	2.6		3.6		2.6	
	Pressure Drop for $q_w$	$\Delta P_w$	bar	0.0218		0.0211		0.0218	
	Environment Temp.	$T_{env}$	$^{\circ}C$			20			
	Rotor ID	$R_{ID}$	mm			120			

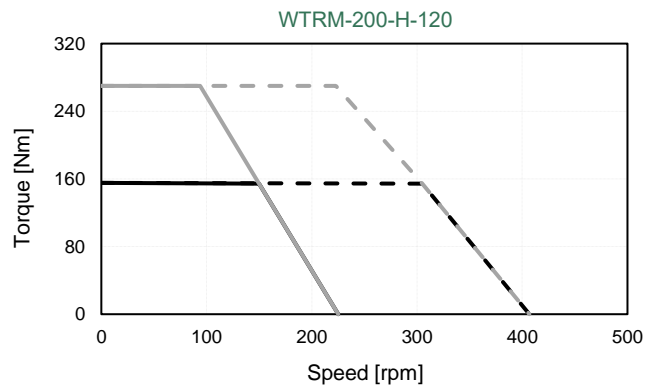
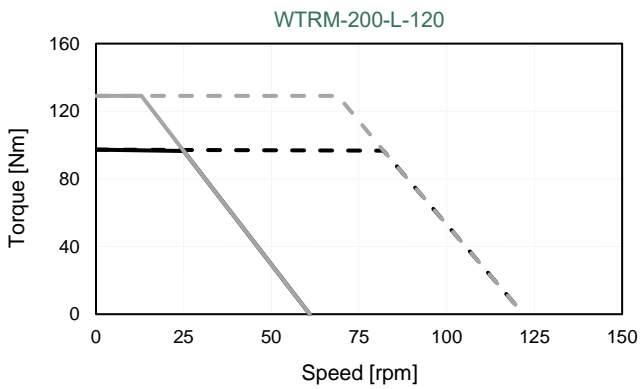
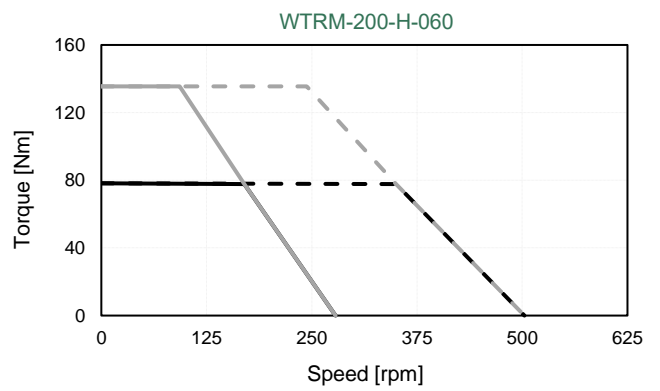
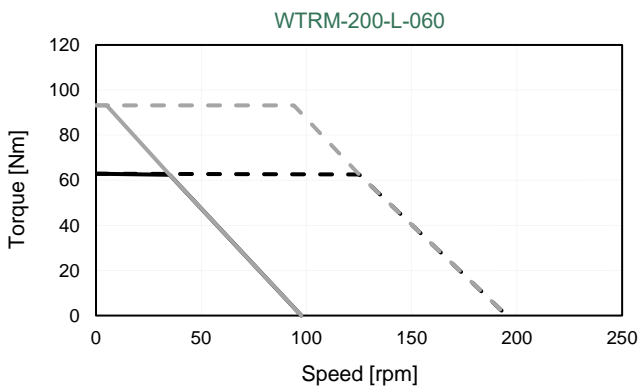
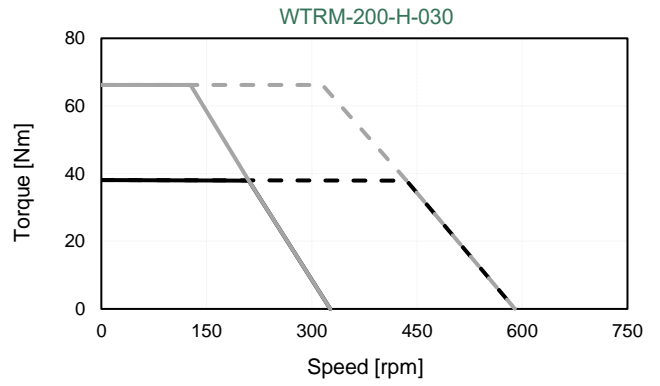
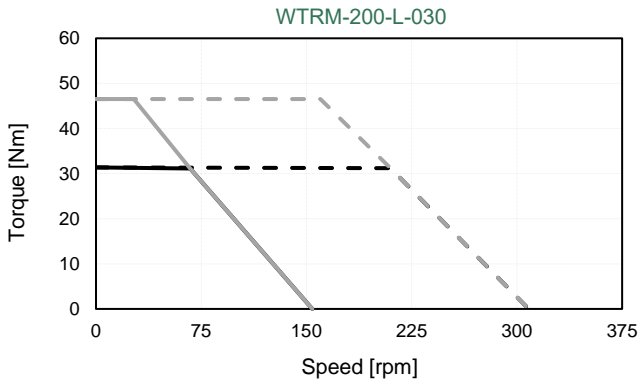
1. All performance and electrical specifications are obtained at 25°C ambient and may change  $\pm 10\%$ . 2. Maximum coil temperature is 130°C. 3. All data referenced to sinusoidal commutation. 4. Higher torque and speed values as well as dimensions on request.

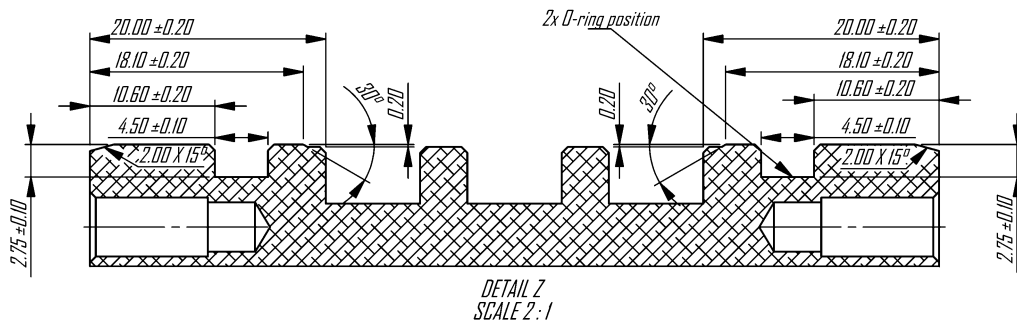
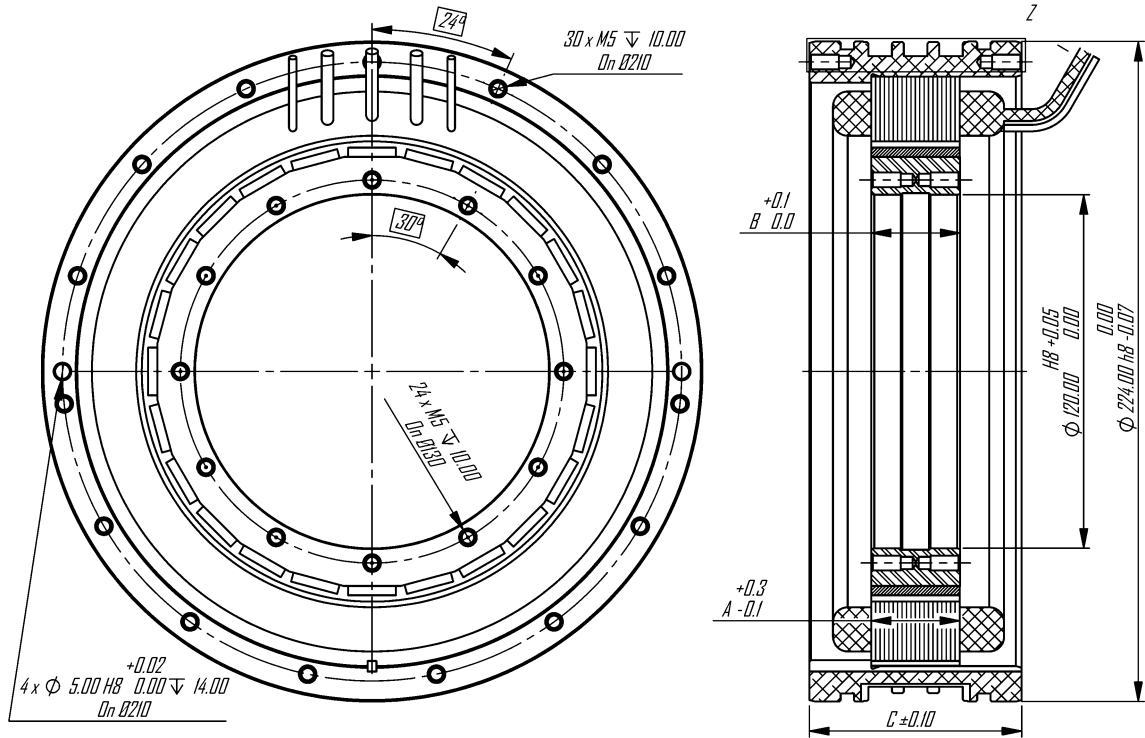
# WTRM-200-(L/H)-Torque-Speed Curves

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)-200-030	30	30.1	72
WTRM-(L/H)-200-060	60	60.2	102
WTRM-(L/H)-200-120	120	120.4	162

All dimensions in mm

**Notes:**

**MOTOR LEADS:**

WTRM-200-L: #10 AWG Teflon® insulated, 500 mm (optional) length, 1-Red, 1-White, 1-Black.  
 WTRM-200-H: #14 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)