2.1 TMRW1 Series

2.1.1 TMRW1 Dimensions

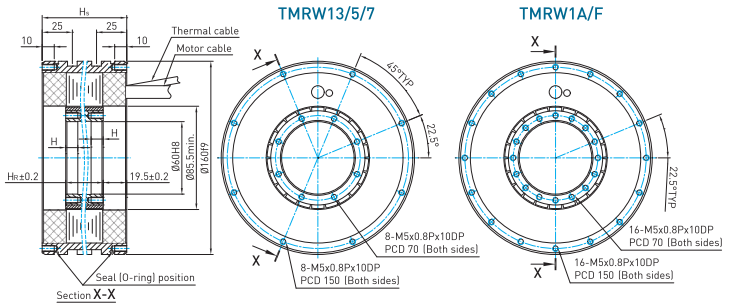
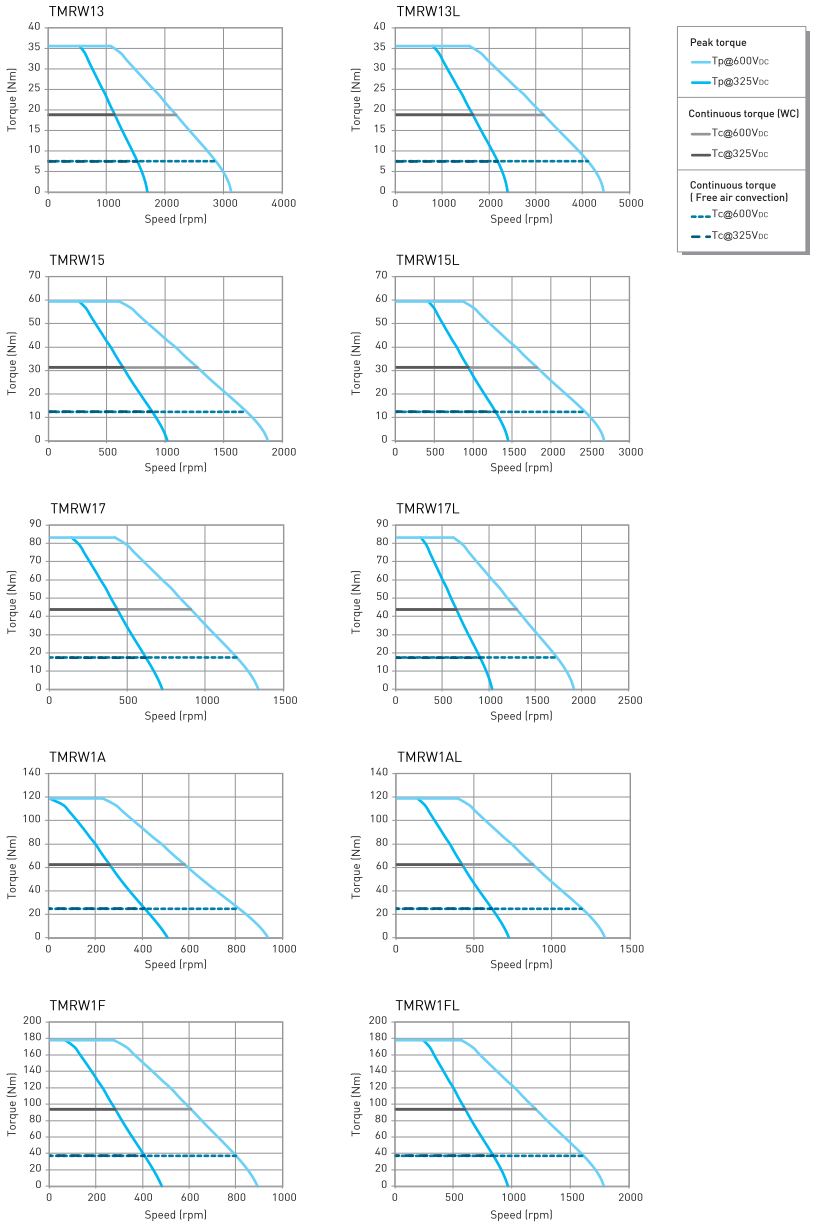


Table 2.1 TMRW1 Specifications

	Symbol	Unit	TMRW13	TMRW13L	TMRW15	TMRW15L	TMRW17	TMRW17L	TMRW1A	TMRW1AL	TMRW1F	TMRW1FL
Continuous torque	T_c	Nm	7.5	7.5	12.4	12.4	17.4	17.4	24.9	24.9	37.3	37.3
Continuous current	I_c	A_{rms}	4	5.7	4	5.7	4	5.7	4	5.7	5.7	11.4
Continuous torque (WC)	T_{cw}	Nm	18.8	18.8	31.3	31.3	43.8	43.8	62.5	62.5	93.8	93.8
Continuous current (WC)	I_{cw}	A_{rms}	10	14.4	10	14.4	10	14.4	10	14.4	14.4	28.8
Stall torque	T_s	Nm	5	5	9	9	12	12	17	17	26	26
Stall current	I_s	A_{rms}	2.8	4	2.8	4	2.8	4	2.8	4	4	8
Stall torque (WC)	T_{sw}	Nm	13	13	22	22	31	31	44	44	66	66
Stall current (WC)	I_{sw}	A_{rms}	7	10.1	7	10.1	7	10.1	7	10.1	10.1	20.2
Peak torque(Within 1s.)	T_p	Nm	35.6	35.6	59.4	59.4	83.1	83.1	118.8	118.8	178.1	178.1
Peak current(Within 1s.)	I_p	A_{rms}	27	38.9	27	38.9	27	38.9	27	38.9	38.9	77.8
Torque constant	K_t	Nm/ A_{rms}	1.87	1.32	3.1	2.18	4.36	3.06	6.23	4.36	6.55	3.27
Electrical time constant	T_e	ms	3.2	3.2	3.6	3.4	3.6	4.1	4	4.1	3.9	4.3
Resistance (line to line at 25°C)	R_{25}	Ω	3.3	1.6	4.5	2.36	6.2	2.9	7.7	3.8	5.5	1.37
Inductance (line to line)	L	mH	10.5	5.1	16	8	22.5	11.9	31	15.5	21.7	5.9
Number of poles	2_p		22									
Back emf constant (line to line)	K_v	V_{rms}/(rad/s)	1.08	0.76	1.8	1.26	2.52	1.76	3.6	2.52	3.78	1.89
Motor constant (at 25°C)	K_m	Nm/$\sqrt{W}$	0.84	0.85	1.19	1.16	1.43	1.46	1.83	1.83	2.28	2.28
Thermal resistance	R_{th}	K/W	1.2	1.22	0.88	0.83	0.64	0.67	0.51	0.51	0.35	0.36
Thermal resistance (WC)	R_{thw}	K/W	0.192	0.191	0.141	0.129	0.102	0.105	0.082	0.08	0.056	0.056
Thermal sensor			PTC SNM100+SNM120+Pt1000									
Max. DC BUS		V_{DC}	750									
Inertia of rotor	J	kgm^2	0.001	0.001	0.0016	0.0016	0.0023	0.0023	0.0033	0.0033	0.0049	0.0049
Max. speed at conti. Torque		rpm	2800	4000	1600	2400	1150	1700	800	1170	760	1600
Max. speed at conti. Torque (WC)		rpm	2200	3200	1200	1750	830	1300	580	870	540	1200
Max. speed at max. Torque		rpm	1000	1600	600	830	400	610	230	390	210	560
Rated speed	ω_n	rpm	820	820	820	820	820	820	820	820	800	820
Mass of rotor	M_r	kg	0.6	0.6	1	1	1.4	1.4	2	2	3	3
Mass of stator	M_S	kg	3.7	3.7	5.1	5.1	6.2	6.2	8.6	8.6	12.2	12.2
Height of stator	H_S	mm	70	70	90	90	110	110	140	140	190	190
Height of rotor	H_R	mm	31	31	51	51	71	71	101	101	151	151
Height	H	mm	10	10	15	15	15	15	15	15	15	15

Note：WC：water cooled
*All the specifications in the table are in ±10% of tolerance except dimensions.
[1]The rated speed is the maximum speed which the motor can run continuously witout rest. More information please refer to Appendix B:Glossary.

2.1.2 TMRW1 Series T-N curves



2.2 TMRW2 Series

2.2.1 TMRW2 Dimensions

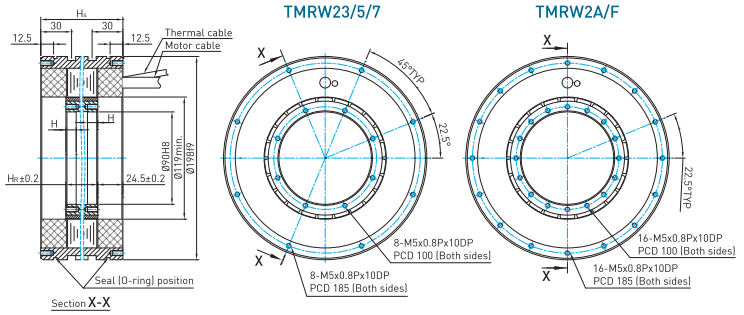
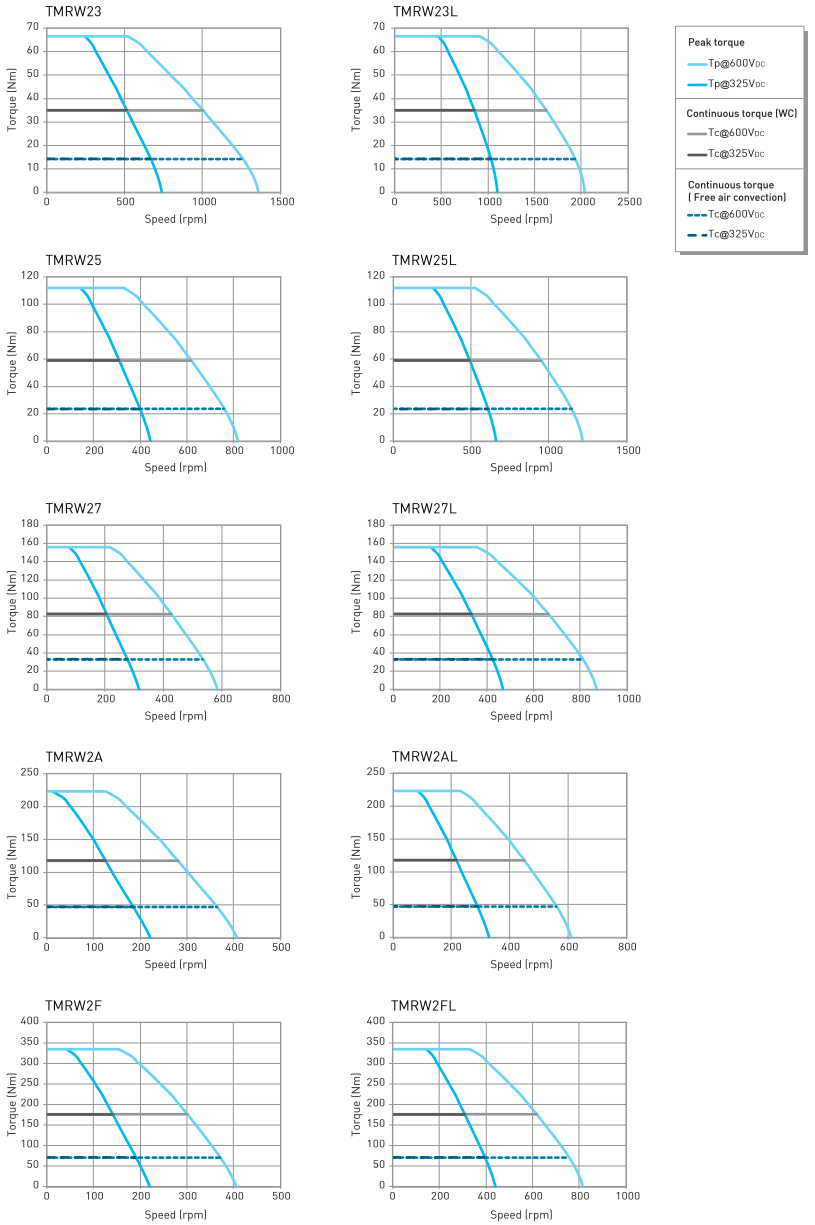


Table 2.2 TMRW2 Specifications

	Symbol	Unit	TMRW23	TMRW23L	TMRW25	TMRW25L	TMRW27	TMRW27L	TMRW2A	TMRW2AL	TMRW2F	TMRW2FL
Continuous torque	T_c	Nm	14.2	14.2	23.6	23.6	33	33	47.3	47.3	71	71
Continuous current	I_c	A_{rms}	3.3	4.9	3.3	4.9	3.3	4.9	3.3	4.9	4.9	9.9
Continuous torque (WC)	T_{cw}	Nm	35	35	59	59	82.5	82.5	117.5	117.5	176	176
Continuous current (WC)	I_{cw}	A_{rms}	8.3	12.3	8.3	12.3	8.3	12.3	8.3	12.3	12.3	24.6
Stall torque	T_s	Nm	10	10	17	17	23	23	33	33	50	50
Stall current	I_s	A_{rms}	2.3	3.4	2.3	3.4	2.3	3.4	2.3	3.4	3.4	6.9
Stall torque (WC)	T_{sw}	Nm	25	25	41	41	58	58	82	82	123	123
Stall current (WC)	I_{sw}	A_{rms}	5.8	8.6	5.8	8.6	5.8	8.6	5.8	8.6	8.6	17.2
Peak torque(Within 1s.)	T_p	Nm	66.5	66.5	112	112	156	156	223	223	334.5	334.5
Peak current(Within 1s.)	I_p	A_{rms}	22.3	33.2	22.3	33.2	22.3	33.2	22.3	33.2	33.2	66.4
Torque constant	K_t	Nm/ A_{rms}	4.29	2.8	7.16	4.8	10.03	6.72	14.32	9.6	14.39	7.2
Electrical time constant	T_e	ms	6.4	6.1	6.8	6.5	6.5	6.5	7.4	7.4	7.8	6.9
Resistance (line to line at 25°C)	R_{25}	Ω	4.3	1.9	5.7	2.5	7.8	3.5	9.6	4.4	6	1.5
Inductance (line to line)	L	mH	27.5	11.5	39	16.23	50.7	22.72	70.8	32.46	47	10.4
Number of poles	2_p		22									
Back emf constant (line to line)	K_v	V_{rms}/(rad/s)	2.48	1.6	4.13	2.77	5.79	3.88	8.27	5.54	8.31	4.15
Motor constant (at 25°C)	K_m	Nm/$\sqrt{W}$	1.68	1.72	2.45	2.49	2.92	2.94	3.78	3.76	4.83	4.78
Thermal resistance	R_{th}	K/W	1.35	1.39	1.02	1.06	0.75	0.75	0.61	0.53	0.44	0.43
Thermal resistance (WC)	R_{thw}	K/W	0.214	0.22	0.161	0.167	0.118	0.12	0.096	0.095	0.07	0.07
Thermal sensor			PTC SNM100+SNM120+Pt1000									
Max. DC BUS		V_{DC}	750									
Inertia of rotor	J	kgm^2	0.0027	0.0027	0.0045	0.0045	0.0063	0.0063	0.009	0.009	0.013	0.013
Max. speed at conti. Torque		rpm	1260	1900	750	1130	525	800	360	550	360	740
Max. speed at conti. Torque (WC)		rpm	1060	1600	610	950	420	660	280	440	275	610
Max. speed at max. Torque		rpm	590	900	330	525	210	360	125	225	120	330
Rated speed	ω_n	rpm	820	820	750	820	530	810	360	560	370	760
Mass of rotor	M_r	kg	0.95	0.95	1.6	1.6	2.2	2.2	3.2	3.2	4.8	4.8
Mass of stator	M_S	kg	6.1	6.1	8.4	8.4	10.2	10.2	14.2	14.2	20.1	20.1
Height of stator	H_S	mm	80	80	100	100	120	120	150	150	200	200
Height of rotor	H_R	mm	31	31	51	51	71	71	101	101	151	151
Height	H	mm	10	10	15	15	15	15	15	15	15	15

Note：WC：water cooled
*All the specifications in the table are in ±10% of tolerance except dimensions.
[1]The rated speed is the maximum speed which the motor can run continuously witout rest. More information please refer to Appendix B:Glossary.

2.2.2 TMRW2 Series T-N curves



2.3 TMRW4Series

2.3.1 TMRW4 Dimensions

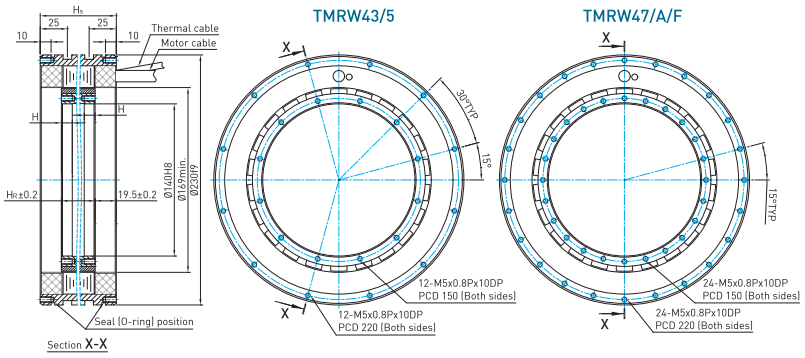
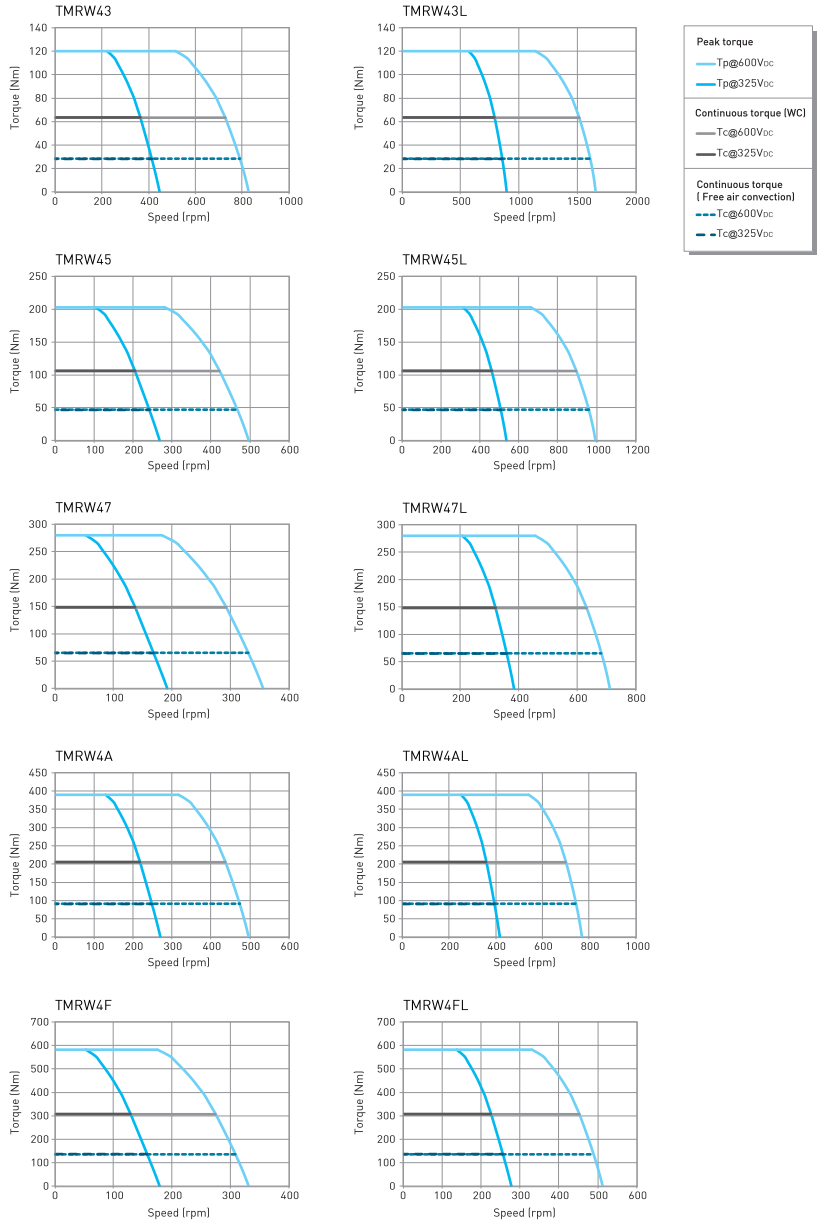


Table 2.3 TMRW4 Specifications

	Symbol	Unit	TMRW43	TMRW43L	TMRW45	TMRW45L	TMRW47	TMRW47L	TMRW4A	TMRW4AL	TMRW4F	TMRW4FL
Continuous torque	T_c	Nm	28.2	28.2	47	47	65	65	91	91	136	136
Continuous current	I_c	A_{rms}	4	8	4	8	4	8	8	12	8	12
Continuous torque (WC)	T_{cw}	Nm	63.5	63.5	106	106	148	148	205	205	307	307
Continuous current (WC)	I_{cw}	A_{rms}	9	18	9	18	9	18	18	27	18	27
Stall torque	T_s	Nm	20	20	33	33	46	46	64	64	95	95
Stall current	I_s	A_{rms}	2.8	5.6	2.8	5.6	2.8	5.6	5.6	8.4	5.6	8.4
Stall torque (WC)	T_{sw}	Nm	44	44	74	74	104	104	144	144	215	215
Stall current (WC)	I_{sw}	A_{rms}	6.3	12.6	6.3	12.6	6.3	12.6	12.6	18.9	12.6	18.9
Peak torque(Within 1s.)	T_p	Nm	120	120	203	203	280	280	390	390	583	583
Peak current(Within 1s.)	I_p	A_{rms}	24.3	48.6	24.3	48.6	24.3	48.6	48.6	72.9	48.6	72.9
Torque constant	K_t	Nm/ A_{rms}	7.06	3.53	11.76	5.88	16.47	8.23	11.76	7.61	17.65	11.42
Electrical time constant	T_e	ms	4.1	4.1	4.7	4.3	4.9	4.7	5.2	4.3	5.2	4.4
Resistance (line to line at 25˚C)	R_{25}	Ω	4.38	1.1	6.01	1.5	7.63	1.9	2.5	1.06	3.66	1.58
Inductance (line to line)	L	mH	17.9	4.5	28	6.38	37.6	8.93	13	4.57	19.13	6.9
Number of poles	2_p		22									
Back emf constant (line to line)	K_v	V_{rms}/[rad/s]	4.08	2.04	6.8	3.4	9.5	4.75	6.79	4.39	10.19	6.59
Motor constant (at 25˚C)	K_m	Nm/$\sqrt{W}$	2.75	2.74	3.91	3.92	4.8	4.81	5.87	6.01	7.26	7.36
Thermal resistance	R_{th}	K/W	0.9	0.9	0.66	0.66	0.52	0.52	0.4	0.41	0.27	0.28
Thermal resistance (WC)	R_{thw}	K/W	0.179	0.178	0.13	0.13	0.102	0.103	0.078	0.082	0.053	0.055
Thermal sensor			PTC SNM100+SNM120+Pt1000									
Max. DC BUS		V_{DC}	750									
Inertia of rotor	J	kgm^2	0.0085	0.0085	0.014	0.014	0.022	0.022	0.029	0.029	0.045	0.045
Max. speed at conti. Torque		rpm	770	1600	450	950	320	670	460	730	300	470
Max. speed at conti. Torque (WC)		rpm	710	1500	410	890	290	620	420	680	260	440
Max. speed at max. Torque		rpm	500	1100	270	660	180	450	300	500	160	300
Rated speed	ω_n	rpm	780	820	460	820	330	680	470	740	300	480
Mass of rotor	M_r	kg	1.4	1.4	2.4	2.4	3.3	3.3	4.7	4.7	7.1	7.1
Mass of stator	M_S	kg	5.8	5.8	7.8	7.8	9.6	9.6	12.7	12.7	18.7	18.7
Height of stator	H_S	mm	70	70	90	90	110	110	140	140	190	190
Height of rotor	H_R	mm	31	31	51	51	71	71	101	101	151	151
Height	H	mm	10	10	15	15	15	15	15	15	15	15

Note：WC：water cooled
*All the specifications in the table are in ±10% of tolerance except dimensions.
[1]The rated speed is the maximum speed which the motor can run continuously witout rest. More information please refer to Appendix B:Glossary.

2.3.2 TMRW4 Series T-N curves



2.4 TMRW7 Series

2.4.1 TMRW7 Dimensions

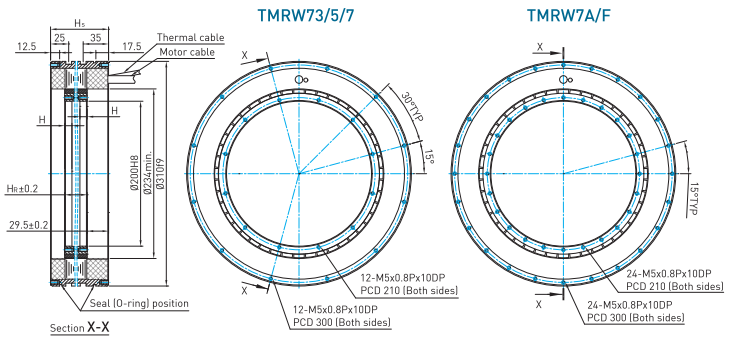
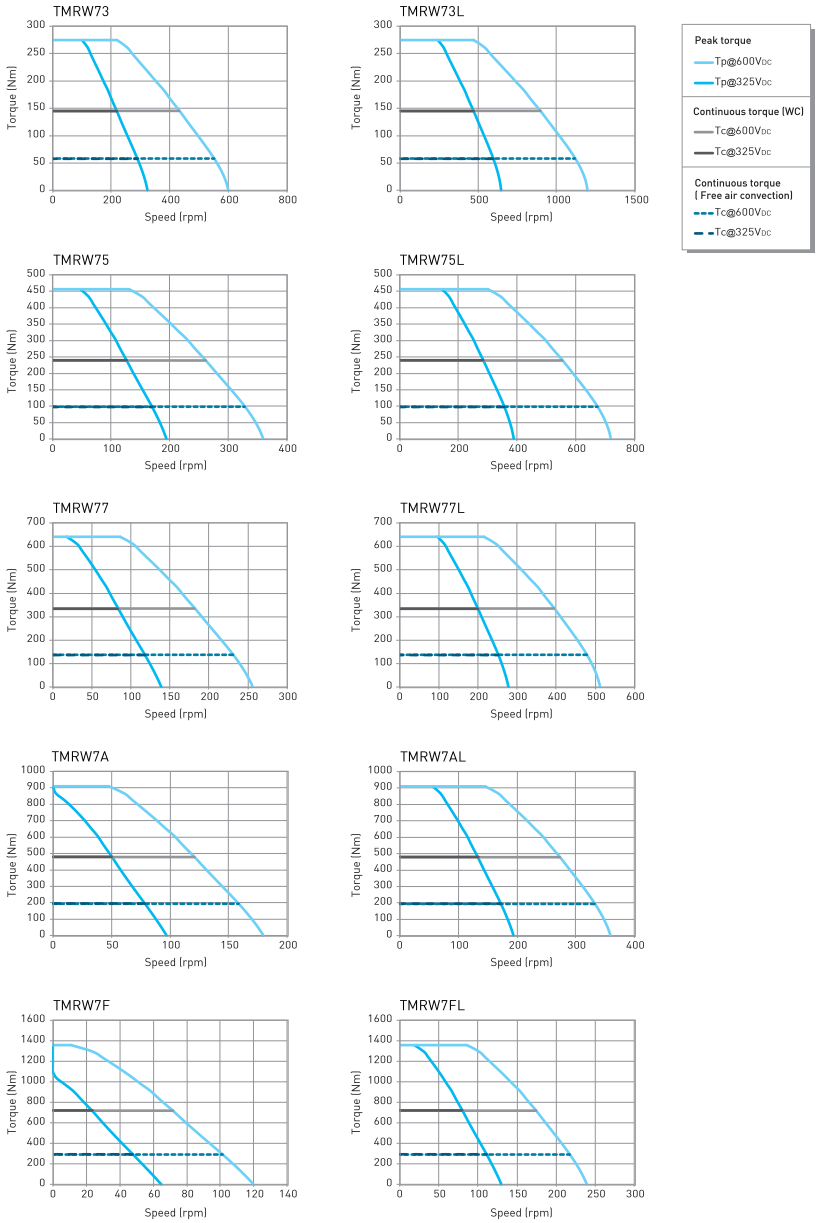


Table 2.4 TMRW7 Specifications

	Symbol	Unit	TMRW73	TMRW73L	TMRW75	TMRW75L	TMRW77	TMRW77L	TMRW7A	TMRW7AL	TMRW7F	TMRW7FL
Continuous torque	T_c	Nm	58	58	98	98	137	137	195	195	293	293
Continuous current	I_c	A_{rms}	6	12	6	12	6	12	6	12	6	12
Continuous torque (WC)	T_{cw}	Nm	145	145	240	240	335	335	480	480	720	720
Continuous current (WC)	I_{cw}	A_{rms}	15	30	15	30	15	30	15	30	15	30
Stall torque	T_s	Nm	41	41	69	69	96	96	137	137	205	205
Stall current	I_s	A_{rms}	4.2	8.4	4.2	8.4	4.2	8.4	4.2	8.4	4.2	8.4
Stall torque (WC)	T_{sw}	Nm	102	102	168	168	235	235	336	336	504	504
Stall current (WC)	I_{sw}	A_{rms}	10.5	21	10.5	21	10.5	21	10.5	21	10.5	21
Peak torque(Within 1s.)	T_p	Nm	275	275	456	456	640	640	910	910	1360	1360
Peak current(Within 1s.)	I_p	A_{rms}	40.5	81	40.5	81	40.5	81	40.5	81	40.5	81
Torque constant	K_t	Nm/ A_{rms}	9.77	4.89	16.3	8.15	22.8	11.4	32.56	16.28	48.85	24.45
Electrical time constant	T_e	ms	5	4.9	5.6	5.6	5.6	5.6	5.6	5.6	6	5.8
Resistance (line to line at 25°C)	R_{25}	Ω	3	0.81	4.19	1.05	5.52	1.38	7.52	1.88	10	2.5
Inductance (line to line)	L	mH	15	4	23.45	5.86	30.9	7.73	42.07	10.52	60	14.6
Number of poles	2_p		44									
Back emf constant (line to line)	K_v	V_{rms}/(rad/s)	5.64	2.82	9.4	4.7	13.2	6.6	18.8	9.4	28.2	14.1
Motor constant (at 25°C)	K_m	Nm/$\sqrt{W}$	4.56	4.38	6.52	6.51	7.92	7.94	9.68	9.68	12.61	12.61
Thermal resistance	R_{th}	K/W	0.59	0.54	0.42	0.42	0.32	0.32	0.23	0.23	0.18	0.18
Thermal resistance (WC)	R_{thw}	K/W	0.094	0.087	0.067	0.067	0.051	0.051	0.037	0.037	0.028	0.028
Thermal sensor			PTC SNM100+SNM120+Pt1000									
Max. DC BUS		V_{DC}	750									
Inertia of rotor	J	kgm^2	0.023	0.023	0.039	0.039	0.059	0.059	0.079	0.079	0.11	0.11
Max. speed at conti. Torque		rpm	560	1110	325	675	225	475	160	325	100	210
Max. speed at conti. Torque (WC)		rpm	470	890	270	580	180	400	115	275	72	170
Max. speed at max. Torque		rpm	270	460	150	340	90	230	50	150	13	85
Rated speed	ω_n	rpm	410	410	320	410	230	410	150	330	100	210
Mass of rotor	M_r	kg	2.5	2.5	4.1	4.1	5.7	5.7	8.1	8.1	12.1	12.1
Mass of stator	M_s	kg	14.2	14.2	18.9	18.9	23.7	23.7	30.9	30.9	43.6	43.6
Height of stator	H_S	mm	80	80	100	100	120	120	150	150	200	200
Height of rotor	H_R	mm	31	31	51	51	71	71	101	101	151	151
Height	H	mm	10	10	15	15	15	15	15	15	15	15

Note：WC：water cooled
*All the specifications in the table are in ±10% of tolerance except dimensions.
[1]The rated speed is the maximum speed which the motor can run continuously witout rest. More information please refer to Appendix B:Glossary.

2.4.2 TMRW7 Series T-N curves



2.5 TMRWA Series

2.5.1 TMRWA Dimensions

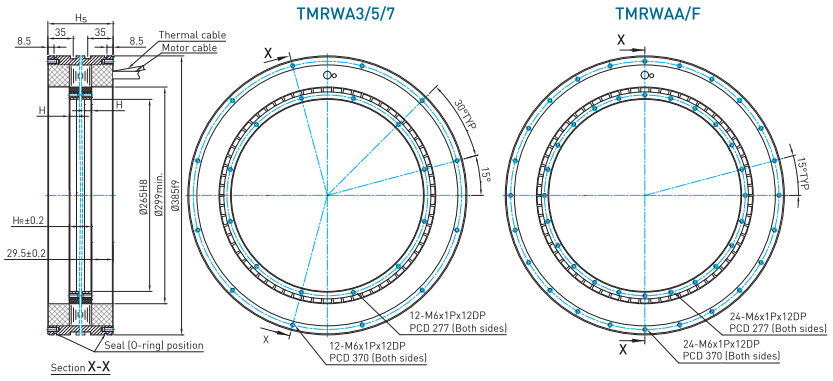
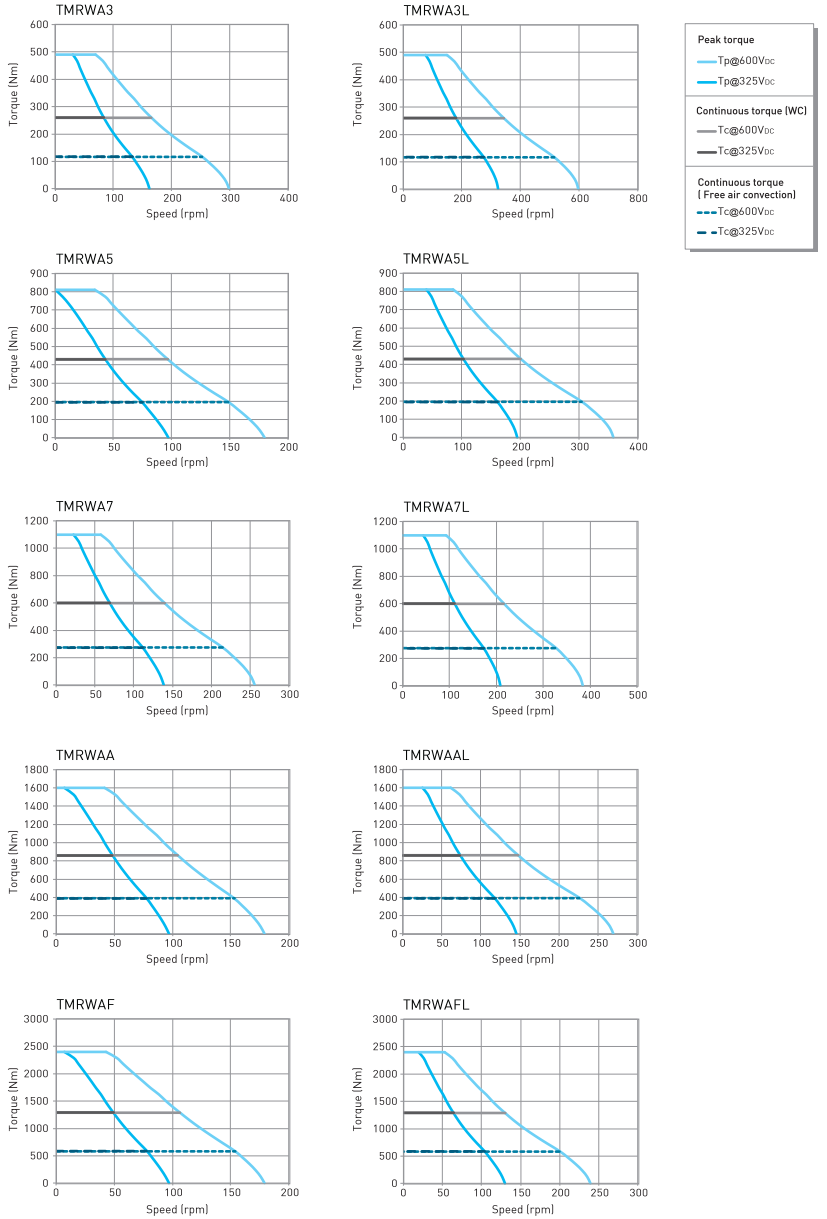


Table 2.5 TMRWA Specifications

	Symbol	Unit	TMRWA3	TMRWA3L	TMRWA5	TMRWA5L	TMRWA7	TMRWA7L	TMRWAA	TMRWAAL	TMRWAF	TMRWAFL
Continuous torque	T_c	Nm	117	117	195	195	274	274	390	390	585	585
Continuous current	I_c	A_{rms}	6	12	6	12	12	18	12	18	18	24
Continuous torque (WC)	T_{cw}	Nm	260	260	430	430	600	600	860	860	1290	1290
Continuous current (WC)	I_{cw}	A_{rms}	15	30	15	30	30	45	30	45	45	60
Stall torque	T_s	Nm	82	82	137	137	192	192	273	273	410	410
Stall current	I_s	A_{rms}	4.2	8.4	4.2	8.4	8.4	12.6	8.4	12.6	12.6	16.8
Stall torque (WC)	T_{sw}	Nm	182	182	301	301	420	420	602	602	903	903
Stall current (WC)	I_{sw}	A_{rms}	10.5	21	10.5	21	21	31.5	21	31.5	31.5	42
Peak torque(Within 1s.)	T_p	Nm	490	490	810	810	1100	1100	1600	1600	2400	2400
Peak current(Within 1s.)	I_p	A_{rms}	40.5	81	40.5	81	81	121.5	81	121.5	121.5	162
Torque constant	K_t	Nm/ A_{rms}	19.57	9.79	32.6	16.32	22.84	15.23	32.63	21.75	32.63	24.45
Electrical time constant	T_e	ms	7.9	10	7.5	7.5	8.4	8.2	8.1	8	8.6	10
Resistance (line to line at 25°C)	R_{25}	Ω	4.8	0.89	7.1	1.78	2.2	0.98	2.97	1.32	1.98	1
Inductance (line to line)	L	mH	38.15	8.93	53.4	13.35	18.5	8	24.2	10.5	17	10
Number of poles	2_p		66									
Back emf constant (line to line)	K_v	V_{rms}/(rad/s)	11.3	5.65	18.8	9.42	13.18	8.79	18.83	12.55	18.83	14.12
Motor constant (at 25°C)	K_m	Nm/$\sqrt{W}$	8.43	8.44	9.96	9.94	12.57	12.56	15.4	15.4	18.86	19.9
Thermal resistance	R_{th}	K/W	0.37	0.49	0.25	0.25	0.2	0.2	0.15	0.15	0.1	0.11
Thermal resistance (WC)	R_{thw}	K/W	0.059	0.079	0.04	0.04	0.032	0.032	0.024	0.024	0.016	0.018
Thermal sensor			PTC SNM100+SNM120+Pt1000									
Max. DC BUS		V_{DC}	750									
Inertia of rotor	J	kgm^2	0.065	0.065	0.1	0.1	0.15	0.15	0.21	0.21	0.32	0.32
Max. speed at conti. Torque		rpm	250	510	140	300	210	320	140	220	140	200
Max. speed at conti. Torque (WC)		rpm	160	340	90	200	135	210	90	140	92	125
Max. speed at max. Torque		rpm	65	150	35	80	55	90	35	60	35	50
Rated speed	ω_n	rpm	240	270	140	270	210	270	150	230	150	200
Mass of rotor	M_r	kg	3.1	3.1	5.1	5.1	7.1	7.1	10.2	10.2	15.3	15.3
Mass of stator	M_S	kg	20.1	20.1	26.8	26.8	34.5	34.5	44.9	44.9	63.1	63.1
Height of stator	H_S	mm	90	90	110	110	130	130	160	160	210	210
Height of rotor	H_R	mm	31	31	51	51	71	71	101	101	151	151
Height	H	mm	10	10	15	15	15	15	15	15	15	15

Note：WC：water cooled
*All the specifications in the table are in ±10% of tolerance except dimensions.
[1]The rated speed is the maximum speed which the motor can run continuously witout rest. More information please refer to Appendix B:Glossary.

2.5.2 TMRWA Series T-N curves



2.6 TMRWD Series

2.6.1 TMRWD Dimensions

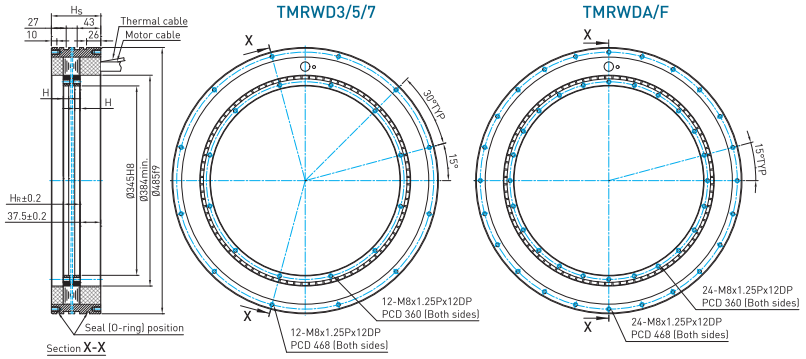
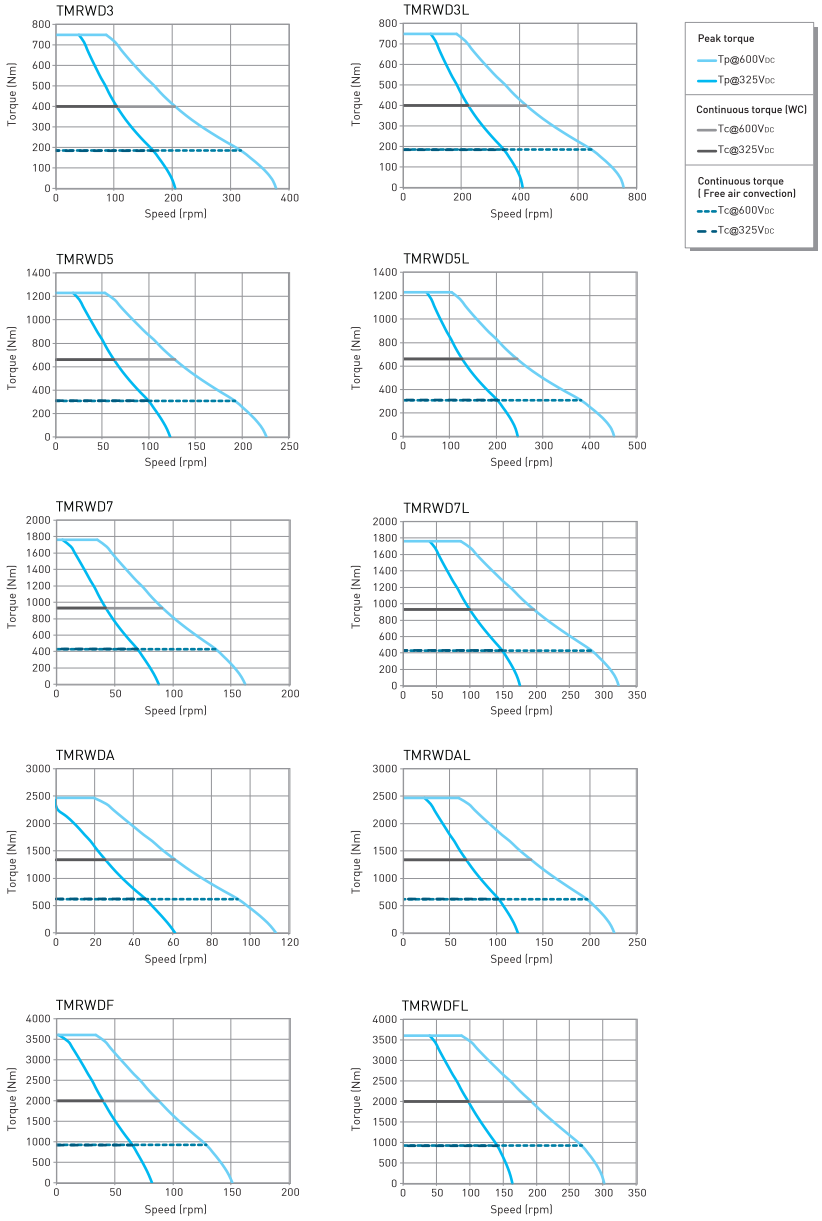


Table 2.6 TMRWD Specifications

	Symbol	Unit	TMRWD3	TMRWD3L	TMRWD5	TMRWD5L	TMRWD7	TMRWD7L	TMRWDA	TMRWDAL	TMRWDF	TMRWDFL
Continuous torque	T_c	Nm	185	185	310	310	430	430	619	619	925	925
Continuous current	I_c	A_{rms}	12	24	12	24	12	24	12	24	24	48
Continuous torque (WC)	T_{cw}	Nm	400	400	660	660	930	930	1340	1340	2000	2000
Continuous current (WC)	I_{cw}	A_{rms}	30	60	30	60	30	60	30	60	60	120
Stall torque	T_s	Nm	130	130	217	217	301	301	433	433	648	648
Stall current	I_s	A_{rms}	8.4	16.8	8.4	16.8	8.4	16.8	8.4	16.8	16.8	33.6
Stall torque (WC)	T_{sw}	Nm	280	280	462	462	651	651	938	938	1400	1400
Stall current (WC)	I_{sw}	A_{rms}	21	42	21	42	21	42	21	42	42	84
Peak torque(Within 1s.)	T_p	Nm	750	750	1230	1230	1760	1760	2470	2470	3600	3600
Peak current(Within 1s.)	I_p	A_{rms}	81	162	81	162	81	162	81	162	162	324
Torque constant	K_t	Nm/ A_{rms}	15.48	7.74	25.8	12.9	36.11	18.1	51.6	25.8	38.7	19.35
Electrical time constant	T_e	ms	7.1	7.1	7.1	8.1	7.1	7.1	7.1	7	8.3	8.5
Resistance (line to line at 25°C)	R_{25}	Ω	1.57	0.39	2.31	0.59	3.04	0.76	4.14	1.04	1.35	0.33
Inductance (line to line)	L	mH	11.13	2.78	16.3	4.78	21.5	5.38	29.3	7.33	11.2	2.8
Number of poles	2_p		88									
Back emf constant (line to line)	K_v	V_{rms}/(rad/s)	8.94	4.47	14.9	7.45	20.85	10.43	29.8	14.9	22.35	11.18
Motor constant (at 25°C)	K_m	Nm/$\sqrt{W}$	10.05	10.08	13.88	13.73	16.78	16.78	20.7	20.65	27.08	27.39
Thermal resistance	R_{th}	K/W	0.28	0.28	0.19	0.19	0.14	0.14	0.11	0.11	0.08	0.08
Thermal resistance (WC)	R_{thw}	K/W	0.045	0.045	0.030	0.030	0.023	0.023	0.017	0.017	0.013	0.013
Thermal sensor			PTC SNM100+SNM120+Pt1000									
Max. DC BUS		V_{DC}	750									
Inertia of rotor	J	kgm^2	0.16	0.16	0.26	0.26	0.37	0.37	0.53	0.53	0.8	0.8
Max. speed at conti. Torque		rpm	300	630	180	390	130	275	90	190	125	260
Max. speed at conti. Torque (WC)		rpm	200	420	120	250	85	190	60	133	80	190
Max. speed at max. Torque		rpm	85	175	50	115	30	85	18	60	30	80
Rated speed	ω_n	rpm	200	200	190	200	130	200	90	190	120	200
Mass of rotor	M_r	kg	5.5	5.5	9.2	9.2	12.8	12.8	18.3	18.3	22	22
Mass of stator	M_s	kg	22.8	22.8	38	38	53.2	53.2	76	76	90	90
Height of stator	H_S	mm	90	90	110	110	130	130	160	160	210	210
Height of rotor	H_R	mm	31	31	51	51	71	71	101	101	151	151
Height	H	mm	10	10	15	15	15	15	15	15	15	15

Note：WC：water cooled
*All the specifications in the table are in ±10% of tolerance except dimensions.
[1]The rated speed is the maximum speed which the motor can run continuously witout rest. More information please refer to Appendix B:Glossary.

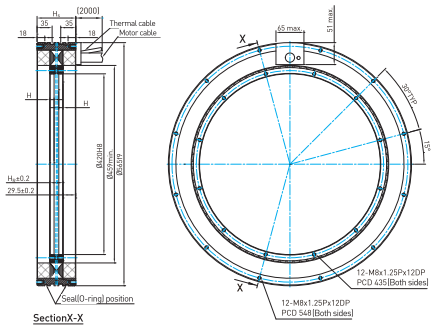
2.6.2 TMRWD Series T-N curves



2.7 TMRWG Series

2.7.1 TMRWG Dimensions

TMRWG7



TMRWGA/F

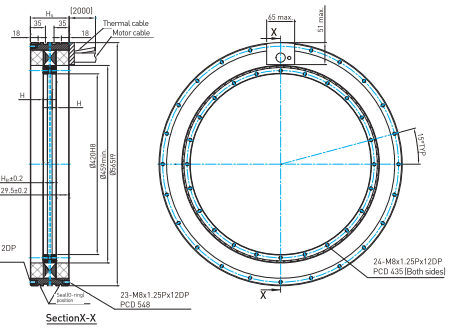


Table 2.7 TMRWG Specifications

	Symbol	Unit	TMRWG7	TMRWG7L	TMRWGA	TMRWGAL	TMRWGF	TMRWGFL
Continuous torque	T_c	Nm	582	582	810	810	1200	1200
Continuous current	I_c	A_{rms}	10.5	21	21	42	21	42
Continuous torque (WC)	T_{cw}	Nm	1255	1255	1810	1810	2720	2720
Continuous current (WC)	I_{cw}	A_{rms}	26.3	52.5	52.5	105	52.5	105
Stall torque	T_s	Nm	407	407	567	567	840	840
Stall current	I_s	A_{rms}	7.4	14.7	14.7	29.4	14.7	29.4
Stall torque (WC)	T_{sw}	Nm	879	879	1267	1267	1904	1904
Stall current (WC)	I_{sw}	A_{rms}	18.4	36.8	36.8	73.5	36.8	73.5
Peak torque(for 1s)	T_p	Nm	2360	2360	3340	3340	5020	5020
Peak current(for 1s)	I_p	A_{rms}	71	142	142	284	142	284
Torque constant	K_t	Nm/A_{rms}	55.4	27.7	38.8	19.4	57	28.5
Electrical time constant	T_e	ms	7.8	7.2	8	8.3	8.9	8.8
Resistance (line to line at 25°C)	R_{25}	Ω	3.3	0.83	1.06	0.27	1.46	0.37
Inductance (line to line)	L	mH	25.7	6	8.5	2.23	13	3.25
Number of poles	2_p		88					
Back emf constant (line to line)	K_v	$V_{rms}/(rad/s)$	32	16	22.4	11.2	33.6	16.8
Motor constant (at 25°C)	K_m	$Nm/\sqrt{W}$	24.91	24.84	30.59	30.3	38.61	38.35
Thermal resistance	R_{th}	K/W	0.17	0.17	0.14	0.13	0.1	0.1
Thermal resistance (WC)	R_{thw}	K/W	0.028	0.028	0.022	0.021	0.016	0.016
Thermal sensor			PTC SNM100+SNM120+Pt1000					
Max. DC BUS		V_{DC}	750					
Inertia of rotor	J	kgm^2	0.619	0.619	0.904	0.904	1.38	1.38
Max. speed at conti. Torque		rpm	90	190	130	280	90	180
Max. speed at conti. Torque (WC)		rpm	70	150	100	220	60	140
Max. speed at max. Torque		rpm	30	80	50	110	30	70
Rated speed	ω_n	rpm	90	190	130	200	90	180
Mass of rotor	M_r	kg	13.3	13.3	19	19	28.3	28.3
Mass of stator	M_S	kg	61.1	61.1	75	75	107.5	107.5
Height of stator	H_S	mm	130	130	160	160	210	210
Height of rotor	H_R	mm	71	71	101	101	151	151
Height	H	mm	15	15	15	15	15	15

Note：WC：water cooled
*All the specifications in the table are in ±10% of tolerance except dimensions.
[1]The rated speed is the maximum speed which the motor can run continuously witout rest. More information please refer to Appendix B:Glossary.

2.7.2 TMRWG Series T-N curves