

MOTOR PERFORMANCE		Winding codes	WB	WD	WH	WP
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
<b>Tp</b>	Peak torque	Nm	9120	9650	9650	9650
<b>Ti</b>	Intermittent torque	Nm	7030	7030	7030	7030
<b>Tc</b>	Continuous torque	Nm	5230	5230	5230	5230
<b>Ts</b>	Standstill torque	Nm	4230	4230	4230	4230
<b>Ip</b>	Peak current	Arms	72.8	167	335	670
<b>Ii</b>	Intermittent current	Arms	45.2	90.5	181	362
<b>Ic</b>	Continuous current	Arms	28.6	57.2	114	229
<b>Is</b>	Standstill current	Arms	21.7	43.3	86.7	173
<b>ns</b>	Rated low speed	rpm	0.047	0.047	0.047	0.047
<b>nm</b>	Maximum speed without flux weakening	rpm	30.5	61.1	122	245
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	111	165	238	315
<b>ton,p</b>	Maximum ON time for peak cycle	s	12	7.5	7.5	7.5
<b>ton,i</b>	Maximum ON time for intermittent cycle	s	2.9	2.9	2.9	2.9
<b>Pp</b>	Power dissipation @ Ip	W	52300	71700	71700	71700
<b>Pi</b>	Power dissipation @ Ii	W	25800	25800	25800	25800
<b>Pc</b>	Power dissipation @ Ic	W	10300	10300	10300	10300
<b>Td</b>	Max. detent torque (average to peak)	Nm	26	26	26	26

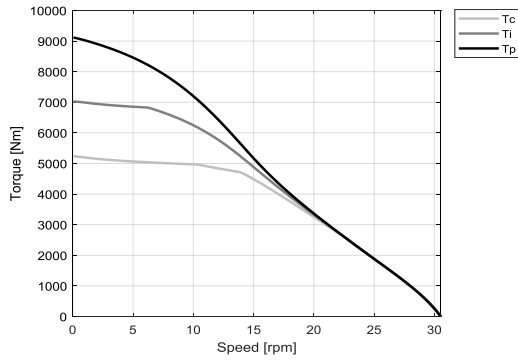
MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	226	113	56.5	28.2
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	130	65.0	32.5	16.2
<b>Km</b>	Motor constant	Nm/√W	75.8	75.8	75.8	75.8
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	5.92	1.48	0.370	0.0924
<b>Ld/Lq</b>	Electrical inductance (*)	mH	90.0 / 75.4	22.5 / 18.8	5.63 / 4.71	1.41 / 1.18
<b>Isc</b>	Maximum short-circuit current	Arms	18.9	37.9	75.8	152
<b>nb</b>	Base speed	rpm	13.9	42.2	104	240
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	6.24	30.8	79.6	194
<b>nb,p</b>	Base speed at peak duty cycle	rpm	0.00	18.7	51.4	113
<b>nn</b>	Rated speed	rpm	10.5	36.6	93.7	143
<b>Tn</b>	Rated torque	Nm	4950	3700	2390	1830
<b>In</b>	Rated current	Arms	28.2	38.8	48.5	76.1
<b>rth</b>	Thermal time constant	s	144	144	144	144
<b>Rth</b>	Thermal resistance	K/W	0.0102	0.0102	0.0102	0.0102
<b>2p</b>	Number of poles	-	176	176	176	176
<b>J</b>	Rotor inertia	kg·m²	6.96	6.96	6.96	6.96
<b>mr</b>	Rotor mass	kg	34.9	34.9	34.9	34.9
<b>ms</b>	Stator mass	kg	139	139	139	139

MOTOR ENVIRONMENT		UNIT				
<b>Udc</b>	Nominal DC bus voltage	VDC	600	600	600	600
<b>Di</b>	Intermittent duty cycle	%	40	40	40	40
<b>Dp</b>	Peak duty cycle	%	5.0	5.0	5.0	5.0
<b>Sr</b>	Rotor exchange surface	m²	0.520	0.520	0.520	0.520
<b>θamb</b>	Ambient temperature	°C	20	20	20	20
<b>θmax</b>	Maximum coil temperature	°C	130	130	130	130
<b>θw</b>	Inlet water temperature	°C	20	20	20	20
<b>Δθw</b>	Water temperature difference for Pc	K	5.0	5.0	5.0	5.0
<b>qw</b>	Minimum water flow for Δθw	l/min	32	32	32	32
<b>Δpw</b>	Max. pressure drop at qw	bar	1.6	1.6	1.6	1.6

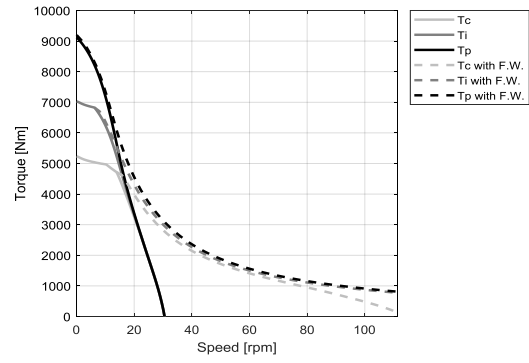
**Notes:** (\*) terminal to terminal.  
Hypotheses and tolerances are in ETEL Integration Manual.  
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

**Caution:** Any use of the motor beyond speed/torque limit could lead to hazardous voltage and serious injuries. Customer is responsible for setting safeties/limitations that will keep the motor in its safe operating area. ETEL cannot be held responsible if the motor is used in an improper way.

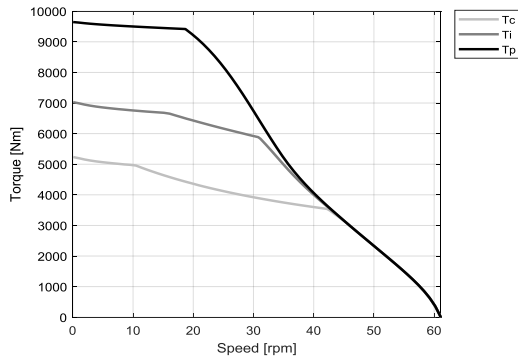
**WB - WATER COOLING**



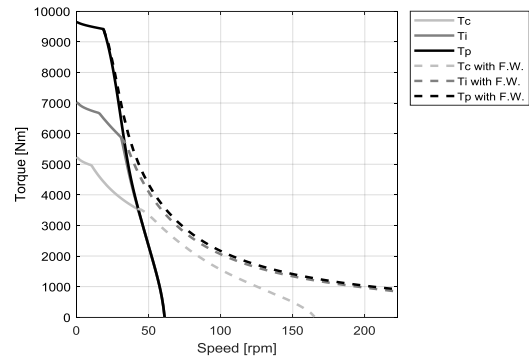
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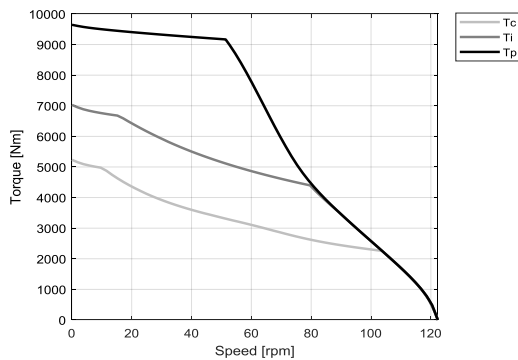
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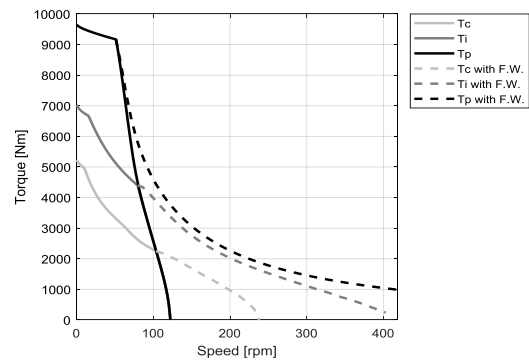
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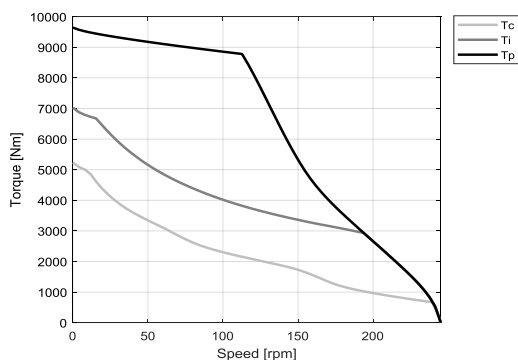
**WH - WATER COOLING**



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