

MOTOR PERFORMANCE		Winding codes	RA	TA	SB	UB
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
<b>Tp</b>	Peak torque	Nm	132	132	132	132
<b>Ti</b>	Intermittent torque	Nm	111	109	109	105
<b>Tc</b>	Continuous torque	Nm	80.9	79.2	79.6	76.2
<b>Ts</b>	Standstill torque	Nm	64.5	63.0	63.4	60.3
<b>Ip</b>	Peak current	Arms	13.4	22.6	35.0	62.0
<b>Ii</b>	Intermittent current	Arms	10.4	17.1	26.7	44.6
<b>Ic</b>	Continuous current	Arms	6.60	10.8	16.9	28.2
<b>Is</b>	Standstill current	Arms	5.00	8.19	12.8	21.4
<b>ns</b>	Rated low speed	rpm	0.91	0.92	0.92	0.94
<b>nm</b>	Maximum speed without flux weakening	rpm	473	798	1240	2190
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	1010	1490	2080	3220
<b>ton,p</b>	Maximum ON time for peak cycle	s	9.9	8.9	9.1	7.3
<b>ton,i</b>	Maximum ON time for intermittent cycle	s	2.8	2.8	2.8	2.8
<b>Pp</b>	Power dissipation @ Ip	W	5960	6270	6160	6860
<b>Pi</b>	Power dissipation @ Ii	W	4750	4700	4690	4600
<b>Pc</b>	Power dissipation @ Ic	W	1900	1880	1880	1840
<b>Td</b>	Max. detent torque (average to peak)	Nm	1.1	1.1	1.1	1.1

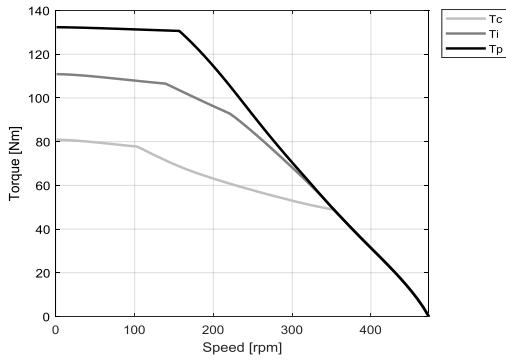
MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	14.6	8.66	5.59	3.15
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	8.38	4.98	3.21	1.81
<b>Km</b>	Motor constant	Nm/√W	2.62	2.56	2.58	2.46
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	20.7	7.63	3.12	1.10
<b>Ld/Lq</b>	Electrical inductance (*)	mH	157 / 134	55.5 / 47.9	23.1 / 19.8	7.35 / 6.45
<b>Isc</b>	Maximum short-circuit current	Arms	5.59	9.42	14.6	25.9
<b>nb</b>	Base speed	rpm	353	674	1120	2090
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	221	570	994	1880
<b>nb,p</b>	Base speed at peak duty cycle	rpm	157	368	651	1230
<b>nn</b>	Rated speed	rpm	299	611	1040	1970
<b>Tn</b>	Rated torque	Nm	53.1	38.9	29.6	19.7
<b>In</b>	Rated current	Arms	4.15	5.12	6.18	7.71
<b>rth</b>	Thermal time constant	s	59.9	59.2	59.4	57.8
<b>Rth</b>	Thermal resistance	K/W	0.0533	0.0536	0.0539	0.0546
<b>2p</b>	Number of poles	-	22	22	22	22
<b>J</b>	Rotor inertia	kg·m²	0.00334	0.00334	0.00334	0.00334
<b>mr</b>	Rotor mass	kg	2.38	2.38	2.38	2.38
<b>ms</b>	Stator mass	kg	10.5	10.4	10.5	10.4

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	0.044	0.044	0.044	0.044
<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	5.9	5.9	5.9	5.7
<b>Δpw</b>	Max. pressure drop at qw	bar	0.3	0.3	0.3	0.3

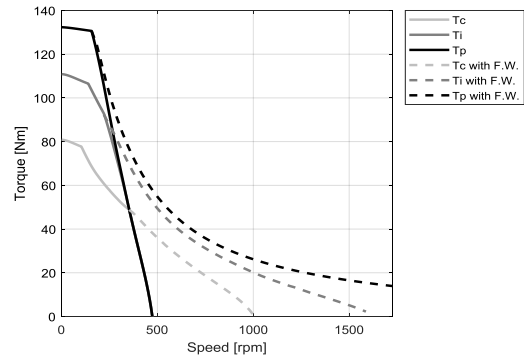
**Notes:** (\*) terminal to terminal.  
Hypotheses and tolerances are in ETEL Integration Manual.  
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

**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.

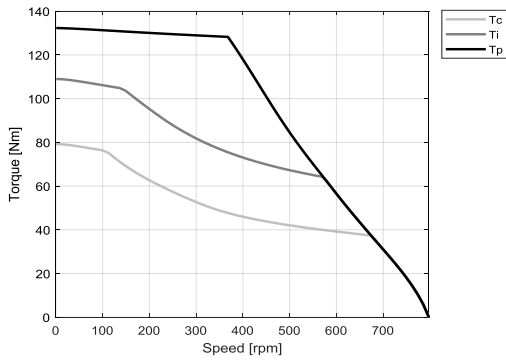
**RA - WATER COOLING**



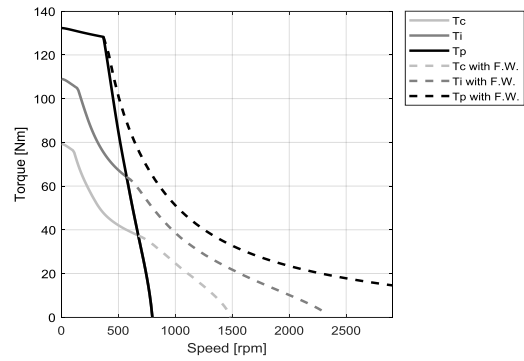
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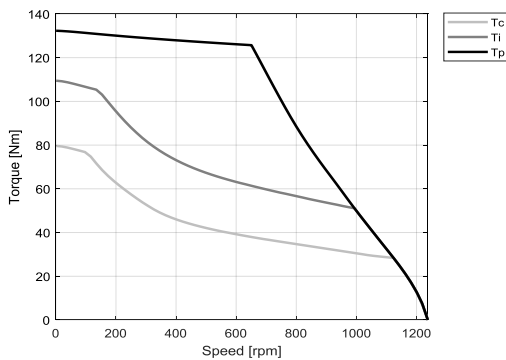
**TA - WATER COOLING**



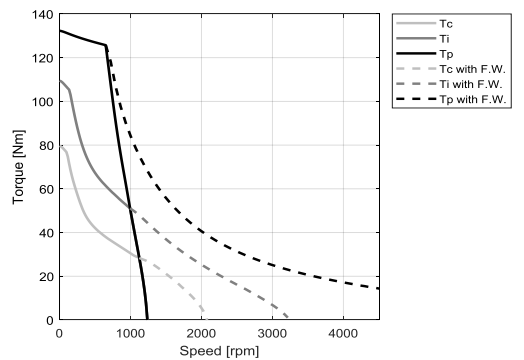
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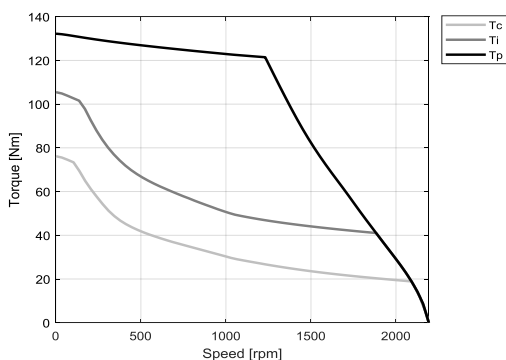
**SB - WATER COOLING**



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**UB - WATER COOLING**



**UB - WATER COOLING**

