

MOTOR PERFORMANCE		Winding codes	RA	RB	TB	VB
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
<b>Tp</b>	Peak torque	Nm	236	236	236	236
<b>Ti</b>	Intermittent torque	Nm	180	180	182	186
<b>Tc</b>	Continuous torque	Nm	127	127	129	132
<b>Ts</b>	Standstill torque	Nm	99.6	99.6	101	104
<b>Ip</b>	Peak current	Arms	13.5	27.0	41.3	63.1
<b>Ii</b>	Intermittent current	Arms	9.15	18.3	28.5	45.0
<b>Ic</b>	Continuous current	Arms	5.79	11.6	18.0	28.5
<b>Is</b>	Standstill current	Arms	4.39	8.77	13.6	21.6
<b>ns</b>	Rated low speed	rpm	0.76	0.76	0.74	0.75
<b>nm</b>	Maximum speed without flux weakening	rpm	277	554	846	1290
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	593	1030	1450	1960
<b>ton,p</b>	Maximum ON time for peak cycle	s	8.9	8.9	9.7	10
<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	8450	8450	8060	7860
<b>Pi</b>	Power dissipation @ Ii	W	4990	4990	4940	5190
<b>Pc</b>	Power dissipation @ Ic	W	2000	2000	1980	2080
<b>Td</b>	Max. detent torque (average to peak)	Nm	1.7	1.7	1.7	1.7

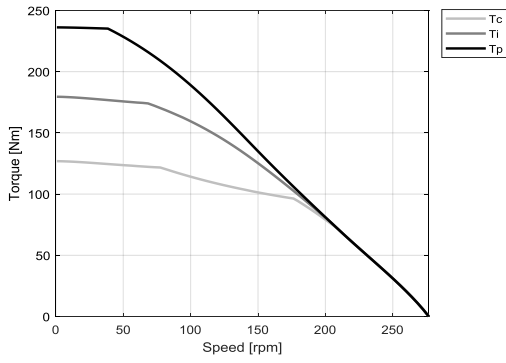
MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	25.0	12.5	8.19	5.36
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	14.3	7.17	4.70	3.07
<b>Km</b>	Motor constant	Nm/√W	3.84	3.84	3.93	3.97
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	28.2	7.05	2.89	1.21
<b>Ld/Lq</b>	Electrical inductance (*)	mH	248 / 228	61.9 / 57.0	26.5 / 24.3	11.4 / 10.3
<b>Isc</b>	Maximum short-circuit current	Arms	6.08	12.2	18.6	28.4
<b>nb</b>	Base speed	rpm	176	469	766	1210
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	68.4	393	677	1100
<b>nb,p</b>	Base speed at peak duty cycle	rpm	38.6	244	441	727
<b>nn</b>	Rated speed	rpm	142	422	710	1140
<b>Tn</b>	Rated torque	Nm	103	69.2	53.9	43.8
<b>In</b>	Rated current	Arms	4.74	6.23	7.52	9.55
<b>rth</b>	Thermal time constant	s	71.7	71.7	73.5	72.7
<b>Rth</b>	Thermal resistance	K/W	0.0508	0.0508	0.0513	0.0487
<b>2p</b>	Number of poles	-	22	22	22	22
<b>J</b>	Rotor inertia	kg·m²	0.00912	0.00912	0.00912	0.00912
<b>mr</b>	Rotor mass	kg	3.35	3.35	3.35	3.35
<b>ms</b>	Stator mass	kg	16.3	16.3	16.4	16.5

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	0.066	0.066	0.066	0.066
<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	6.2	6.2	6.2	6.5
<b>Δpw</b>	Max. pressure drop at qw	bar	0.3	0.3	0.3	0.3

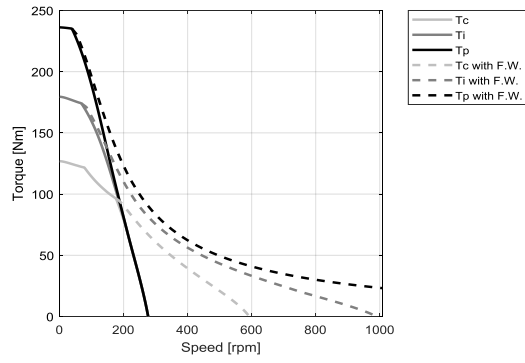
**Notes:** (\*) terminal to terminal.  
Hypotheses and tolerances are in ETEL Integration Manual.  
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

**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.

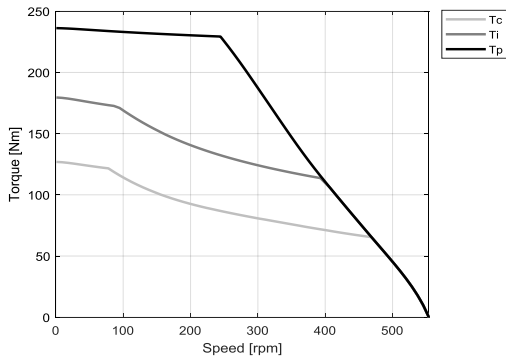
**RA - WATER COOLING**



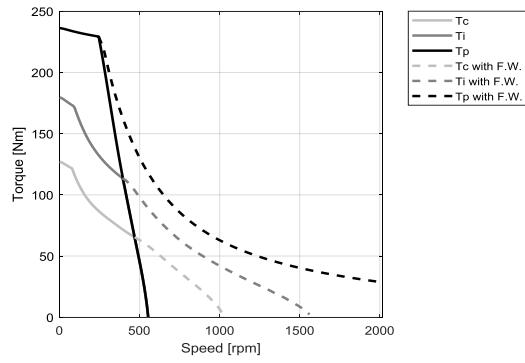
**RA - WATER COOLING**



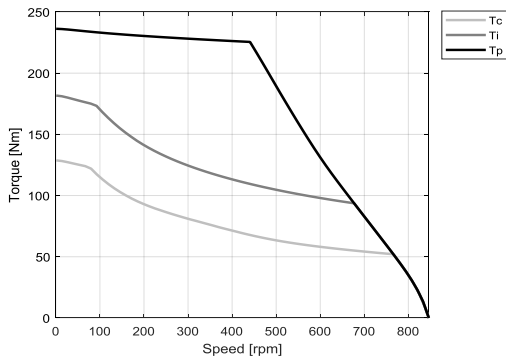
**RB - WATER COOLING**



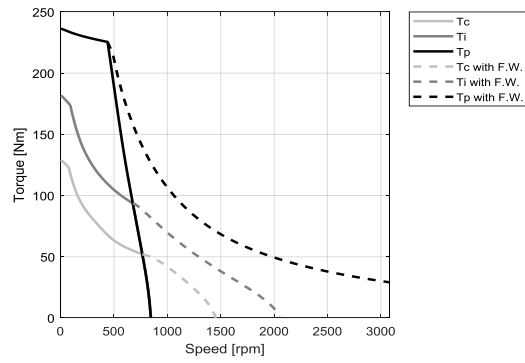
**RB - WATER COOLING**



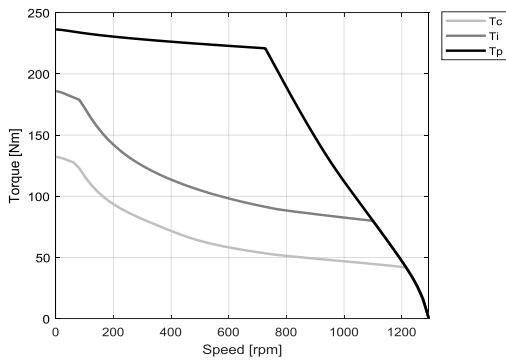
**TB - WATER COOLING**



**TB - WATER COOLING**



**VB - WATER COOLING**



**VB - WATER COOLING**

