

MOTOR PERFORMANCE		Winding codes	RA	TA	TB	UB
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
<b>Tp</b>	Peak torque	Nm	223	223	223	223
<b>Ti</b>	Intermittent torque	Nm	175	182	182	174
<b>Tc</b>	Continuous torque	Nm	122	128	128	122
<b>Ts</b>	Standstill torque	Nm	94.9	99.8	99.8	94.6
<b>Ip</b>	Peak current	Arms	16.5	23.9	47.8	66.0
<b>Ii</b>	Intermittent current	Arms	12.0	18.3	36.7	47.8
<b>Ic</b>	Continuous current	Arms	7.58	11.6	23.2	30.2
<b>Is</b>	Standstill current	Arms	5.74	8.78	17.6	22.9
<b>ns</b>	Rated low speed	rpm	0.59	0.57	0.57	0.59
<b>nm</b>	Maximum speed without flux weakening	rpm	387	560	1120	1550
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	927	1210	1830	2190
<b>ton,p</b>	Maximum ON time for peak cycle	s	6.8	8.3	8.3	6.7
<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	6460	5870	5870	6500
<b>Pi</b>	Power dissipation @ Ii	W	4450	4550	4550	4440
<b>Pc</b>	Power dissipation @ Ic	W	1780	1820	1820	1780
<b>Td</b>	Max. detent torque (average to peak)	Nm	1.0	1.0	1.0	1.0

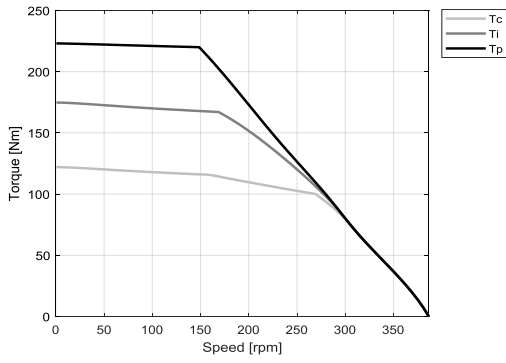
MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	17.8	12.3	6.14	4.44
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	10.3	7.08	3.54	2.56
<b>Km</b>	Motor constant	Nm/√W	3.80	3.97	3.97	3.79
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	14.6	6.37	1.59	0.917
<b>Ld/Lq</b>	Electrical inductance (*)	mH	64.7 / 57.9	30.8 / 27.3	7.71 / 6.82	4.04 / 3.62
<b>Isc</b>	Maximum short-circuit current	Arms	8.33	12.1	24.1	33.3
<b>nb</b>	Base speed	rpm	269	454	1010	1470
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	169	344	884	1290
<b>nb,p</b>	Base speed at peak duty cycle	rpm	149	278	645	912
<b>nn</b>	Rated speed	rpm	224	403	930	1040
<b>Tn</b>	Rated torque	Nm	106	87.2	59.2	52.9
<b>In</b>	Rated current	Arms	6.82	8.05	11.3	14.1
<b>rth</b>	Thermal time constant	s	45.9	47.6	47.6	46.1
<b>Rth</b>	Thermal resistance	K/W	0.0584	0.0571	0.0571	0.0584
<b>2p</b>	Number of poles	-	44	44	44	44
<b>J</b>	Rotor inertia	kg·m²	0.0152	0.0152	0.0152	0.0152
<b>mr</b>	Rotor mass	kg	2.56	2.56	2.56	2.56
<b>ms</b>	Stator mass	kg	8.68	8.81	8.81	8.73

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	0.056	0.056	0.056	0.056
<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	5.6	5.7	5.7	5.5
<b>Δpw</b>	Max. pressure drop at qw	bar	0.2	0.2	0.2	0.2

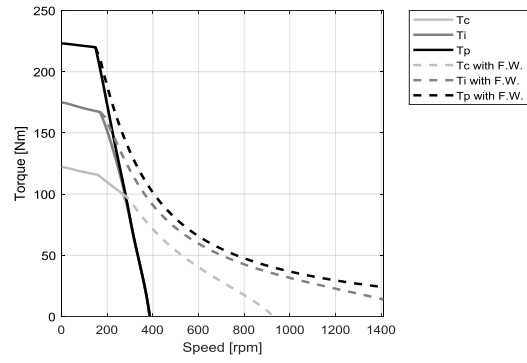
**Notes:** (\*) terminal to terminal.  
Hypotheses and tolerances are in ETEL Integration Manual.  
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

**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.

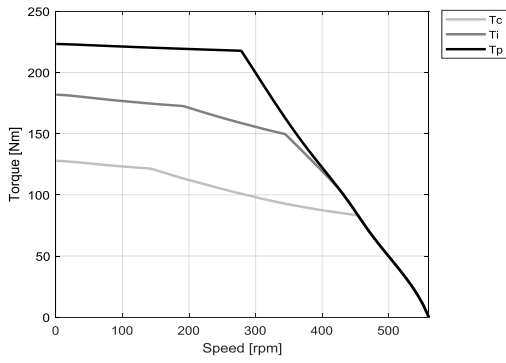
**RA - WATER COOLING**



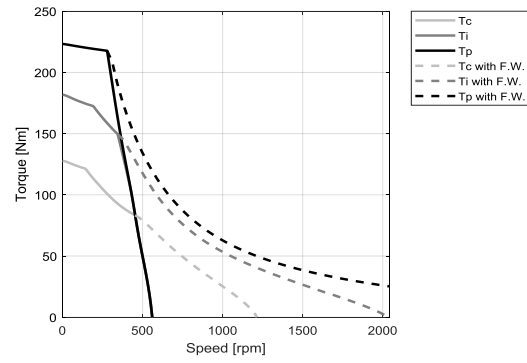
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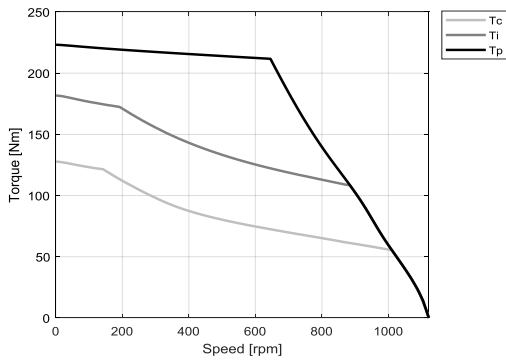
**TA - WATER COOLING**



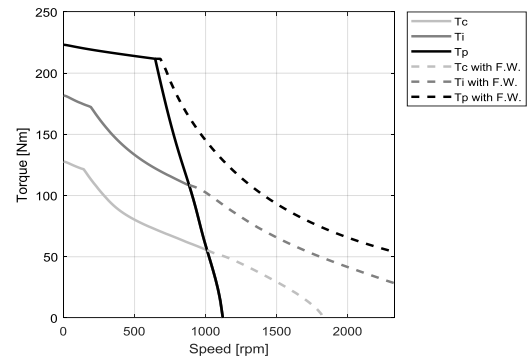
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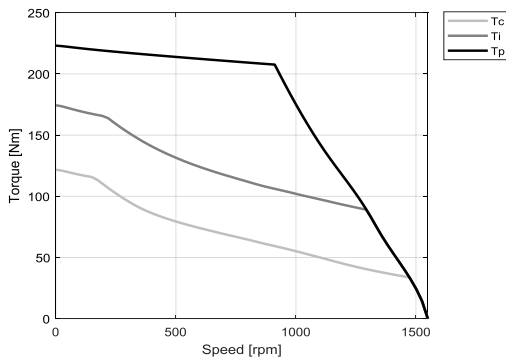
**TB - WATER COOLING**



**TB - WATER COOLING**



**UB - WATER COOLING**



**UB - WATER COOLING**

