

MOTOR PERFORMANCE		Winding codes	TA	VA	VB	TF
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
<b>Tp</b>	Peak torque	Nm	736	735	735	736
<b>Ti</b>	Intermittent torque	Nm	567	538	538	567
<b>Tc</b>	Continuous torque	Nm	415	390	390	415
<b>Ts</b>	Standstill torque	Nm	333	311	311	333
<b>Ip</b>	Peak current	Arms	22.5	40.4	80.9	135
<b>Ii</b>	Intermittent current	Arms	14.7	24.3	48.5	87.9
<b>Ic</b>	Continuous current	Arms	9.27	15.3	30.7	55.6
<b>Is</b>	Standstill current	Arms	7.02	11.6	23.3	42.1
<b>ns</b>	Rated low speed	rpm	0.21	0.22	0.22	0.21
<b>nm</b>	Maximum speed without flux weakening	rpm	126	226	453	756
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	413	598	901	1150
<b>ton,p</b>	Maximum ON time for peak cycle	s	8.6	6.3	6.3	8.6
<b>ton,i</b>	Maximum ON time for intermittent cycle	s	2.9	2.8	2.8	2.9
<b>Pp</b>	Power dissipation @ Ip	W	14100	16600	16600	14100
<b>Pi</b>	Power dissipation @ Ii	W	7740	7560	7560	7740
<b>Pc</b>	Power dissipation @ Ic	W	3100	3020	3020	3100
<b>Td</b>	Max. detent torque (average to peak)	Nm	2.0	2.0	2.0	2.0

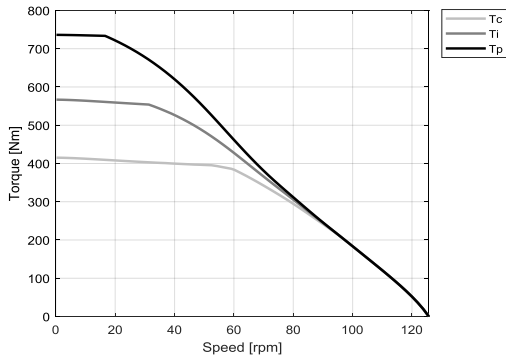
MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	54.7	30.4	15.2	9.11
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	31.6	17.5	8.77	5.26
<b>Km</b>	Motor constant	Nm/√W	10.9	10.1	10.1	10.9
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	16.9	6.03	1.51	0.470
<b>Ld/Lq</b>	Electrical inductance (*)	mH	155 / 136	47.9 / 43.1	12.0 / 10.8	4.31 / 3.77
<b>Isc</b>	Maximum short-circuit current	Arms	7.12	12.8	25.6	42.7
<b>nb</b>	Base speed	rpm	59.2	156	381	701
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	31.3	110	303	577
<b>nb,p</b>	Base speed at peak duty cycle	rpm	16.6	75.4	206	377
<b>nn</b>	Rated speed	rpm	47.6	134	345	599
<b>Tn</b>	Rated torque	Nm	397	308	210	155
<b>In</b>	Rated current	Arms	9.19	12.1	16.1	20.3
<b>rth</b>	Thermal time constant	s	86.1	82.4	82.4	86.1
<b>Rth</b>	Thermal resistance	K/W	0.0339	0.0346	0.0346	0.0339
<b>2p</b>	Number of poles	-	66	66	66	66
<b>J</b>	Rotor inertia	kg·m²	0.108	0.108	0.108	0.108
<b>mr</b>	Rotor mass	kg	5.47	5.47	5.47	5.47
<b>ms</b>	Stator mass	kg	25.7	25.3	25.3	25.7

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	0.110	0.110	0.110	0.110
<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	9.7	9.4	9.4	9.7
<b>Δpw</b>	Max. pressure drop at qw	bar	0.3	0.3	0.3	0.3

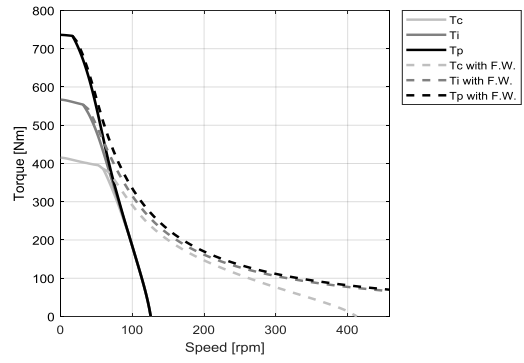
**Notes:** (\*) terminal to terminal.  
Hypotheses and tolerances are in ETEL Integration Manual.  
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

**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.

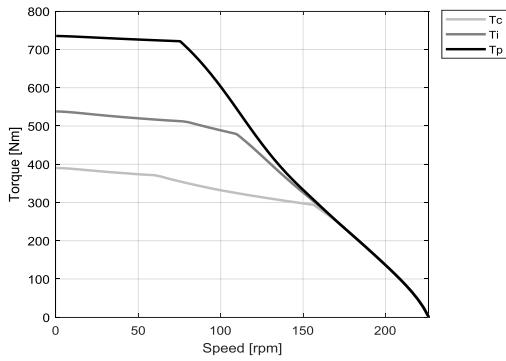
**TA - WATER COOLING**



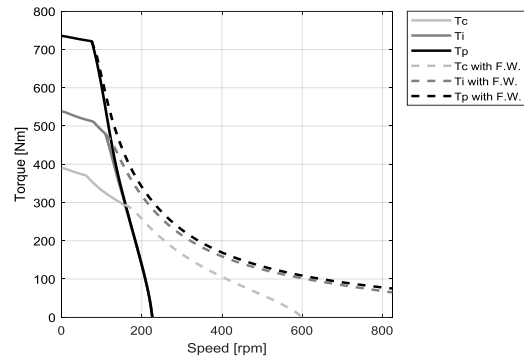
**TA - WATER COOLING**



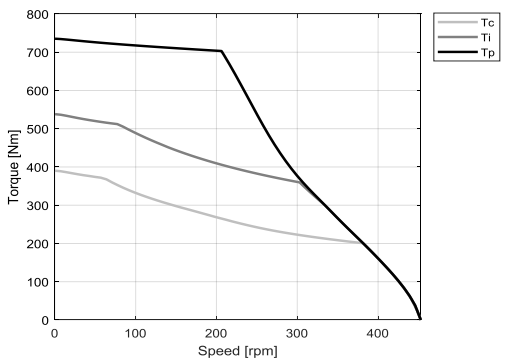
**VA - WATER COOLING**



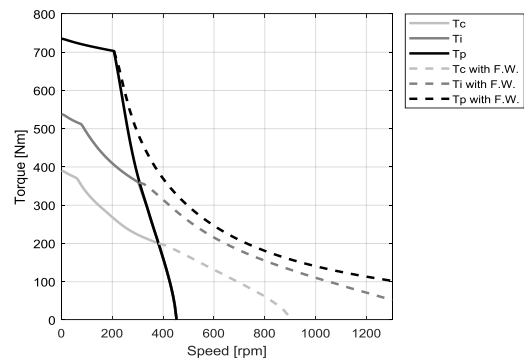
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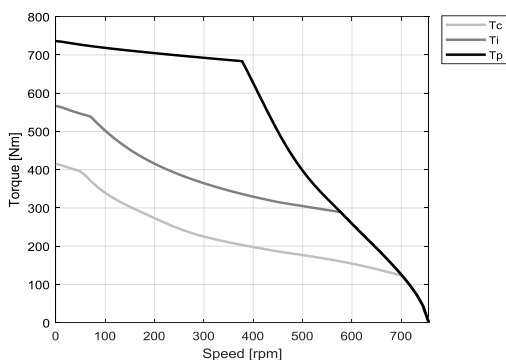
**VB - WATER COOLING**



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**TF - WATER COOLING**



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