

MOTOR PERFORMANCE		Winding codes	UB	VB	TF	UF
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
<b>Tp</b>	Peak torque	Nm	2890	2940	2950	2940
<b>Ti</b>	Intermittent torque	Nm	2310	2220	2350	2310
<b>Tc</b>	Continuous torque	Nm	1680	1610	1720	1680
<b>Ts</b>	Standstill torque	Nm	1350	1280	1380	1350
<b>Ip</b>	Peak current	Arms	54.1	75.8	126	168
<b>Ii</b>	Intermittent current	Arms	38.4	48.8	88.8	115
<b>Ic</b>	Continuous current	Arms	24.3	30.9	56.1	72.8
<b>Is</b>	Standstill current	Arms	18.4	23.4	42.5	55.1
<b>ns</b>	Rated low speed	rpm	0.23	0.23	0.22	0.23
<b>nm</b>	Maximum speed without flux weakening	rpm	83.8	113	189	252
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	212	262	380	459
<b>ton,p</b>	Maximum ON time for peak cycle	s	6.8	4.8	6.9	6.0
<b>ton,i</b>	Maximum ON time for intermittent cycle	s	2.7	2.7	2.8	2.7
<b>Pp</b>	Power dissipation @ Ip	W	38900	46400	39800	42100
<b>Pi</b>	Power dissipation @ Ii	W	24700	23900	24800	24700
<b>Pc</b>	Power dissipation @ Ic	W	9870	9570	9930	9870
<b>Td</b>	Max. detent torque (average to peak)	Nm	7.8	7.8	7.8	7.8

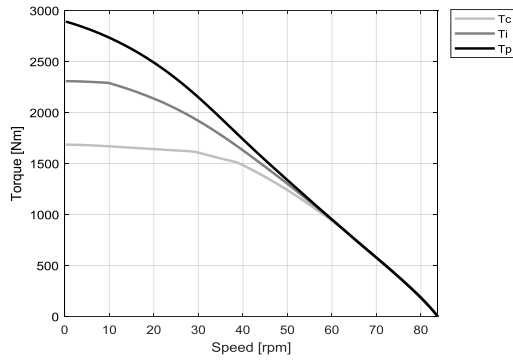
MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	82.5	61.1	36.7	27.5
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	47.3	35.1	21.0	15.8
<b>Km</b>	Motor constant	Nm/√W	23.5	22.5	24.2	23.5
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	8.20	4.92	1.54	0.911
<b>Ld/Lq</b>	Electrical inductance (*)	mH	78.2 / 69.5	42.9 / 38.8	15.5 / 13.6	8.69 / 7.72
<b>Isc</b>	Maximum short-circuit current	Arms	21.2	28.6	47.6	63.5
<b>nb</b>	Base speed	rpm	38.2	71.7	154	215
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	9.71	33.9	120	178
<b>nb,p</b>	Base speed at peak duty cycle	rpm	0.00	17.5	79.6	117
<b>nn</b>	Rated speed	rpm	26.5	58.4	138	196
<b>Tn</b>	Rated torque	Nm	1620	1330	971	841
<b>In</b>	Rated current	Arms	24.1	25.3	29.7	34.3
<b>rth</b>	Thermal time constant	s	80.4	78.9	81.7	80.4
<b>Rth</b>	Thermal resistance	K/W	0.00916	0.00935	0.00919	0.00916
<b>2p</b>	Number of poles	-	66	66	66	66
<b>J</b>	Rotor inertia	kg·m²	0.434	0.434	0.434	0.434
<b>mr</b>	Rotor mass	kg	21.9	21.9	21.9	21.9
<b>ms</b>	Stator mass	kg	72.6	71.9	73.0	72.6

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	0.360	0.360	0.360	0.360
<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	31	30	31	31
<b>Δpw</b>	Max. pressure drop at qw	bar	3.8	3.6	3.8	3.8

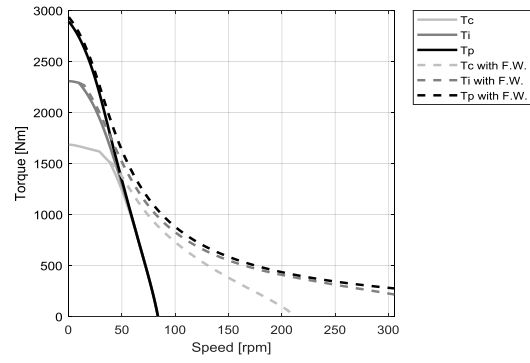
**Notes:** (\*) terminal to terminal.  
Hypotheses and tolerances are in ETEL Integration Manual.  
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

**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.

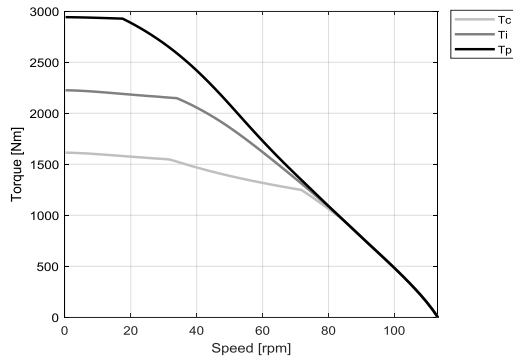
**UB - WATER COOLING**



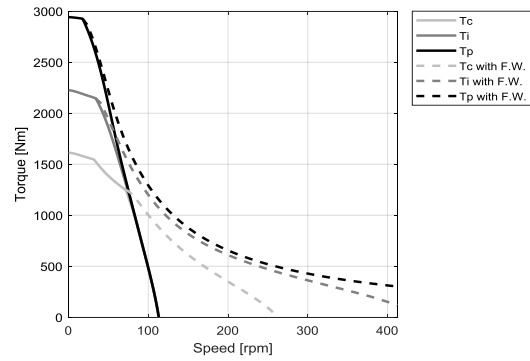
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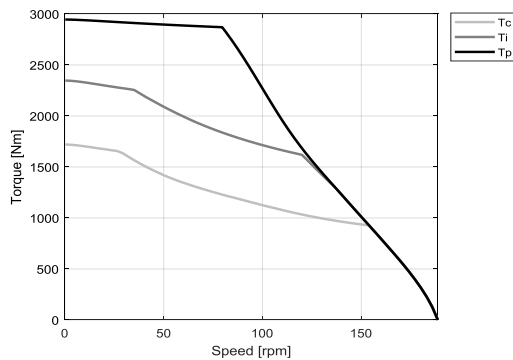
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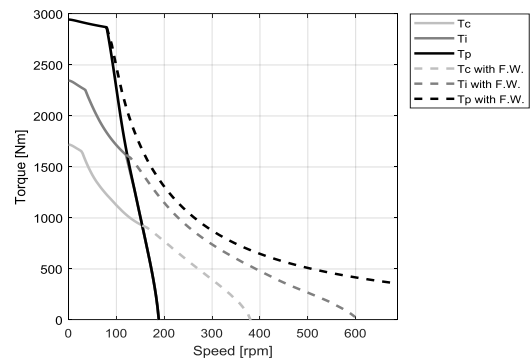
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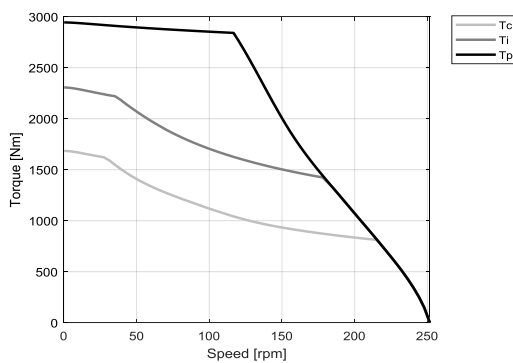
**TF - WATER COOLING**



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**UF - WATER COOLING**



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