

MOTOR PERFORMANCE		Winding codes	UA	TB	VB	TF
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	1390	1470	1470	1470
Ti	Intermittent torque	Nm	1160	1180	1120	1180
Tc	Continuous torque	Nm	853	870	818	870
Ts	Standstill torque	Nm	684	699	653	699
Ip	Peak current	Arms	25.7	43.2	77.7	129
Ii	Intermittent current	Arms	19.7	30.4	50.4	91.2
Ic	Continuous current	Arms	12.5	19.2	31.9	57.7
Is	Standstill current	Arms	9.46	14.6	24.1	43.7
ns	Rated low speed	rpm	0.23	0.22	0.23	0.22
nm	Maximum speed without flux weakening	rpm	83.8	126	226	378
nm,FW	Maximum speed with flux weakening	rpm	234	311	468	666
ton,p	Maximum ON time for peak cycle	s	12	9.2	6.6	9.2
ton,i	Maximum ON time for intermittent cycle	s	3.1	2.8	2.8	2.8
Pp	Power dissipation @ Ip	W	18400	22300	26000	22300
Pi	Power dissipation @ Ii	W	14100	14300	13900	14300
Pc	Power dissipation @ Ic	W	5710	5720	5570	5720
Td	Max. detent torque (average to peak)	Nm	3.9	3.9	3.9	3.9

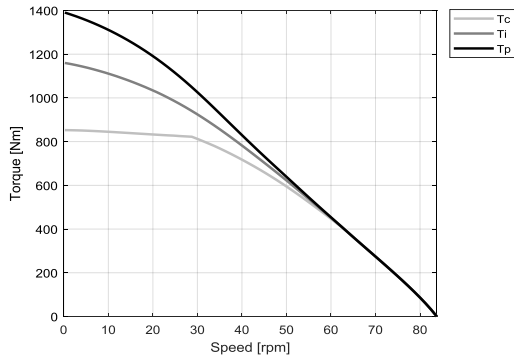
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	82.3	54.9	30.5	18.3
Ku	Back EMF constant (*)	Vrms/(rad/s)	47.3	31.6	17.5	10.5
Km	Motor constant	Nm/√W	16.1	16.6	15.4	16.6
R20	Electrical resistance at 20°C (*)	Ohm	17.4	7.33	2.61	0.814
Ld/Lq	Electrical inductance (*)	mH	158 / 139	70.3 / 61.2	21.7 / 19.4	7.81 / 6.80
Isc	Maximum short-circuit current	Arms	10.5	15.7	28.3	47.2
nb	Base speed	rpm	28.7	81.0	183	334
nb,i	Base speed at intermittent duty cycle	rpm	0.00	40.1	141	284
nb,p	Base speed at peak duty cycle	rpm	0.00	32.5	92.0	191
nn	Rated speed	rpm	21.4	67.4	162	307
Tn	Rated torque	Nm	831	690	492	382
In	Rated current	Arms	12.4	14.9	18.3	23.8
rth	Thermal time constant	s	79.6	81.0	77.9	81.0
Rth	Thermal resistance	K/W	0.0177	0.0177	0.0181	0.0177
2p	Number of poles	-	66	66	66	66
J	Rotor inertia	kg·m²	0.215	0.215	0.215	0.215
mr	Rotor mass	kg	10.9	10.9	10.9	10.9
ms	Stator mass	kg	40.6	40.9	40.3	40.9

MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600	600	600
Di	Intermittent duty cycle	%	40	40	40	40
Dp	Peak duty cycle	%	5.0	5.0	5.0	5.0
Sr	Rotor exchange surface	m²	0.200	0.200	0.200	0.200
θamb	Ambient temperature	°C	20	20	20	20
θmax	Maximum coil temperature	°C	130	130	130	130
θw	Inlet water temperature	°C	20	20	20	20
Δθw	Water temperature difference for Pc	K	5.0	5.0	5.0	5.0
qw	Minimum water flow for Δθw	l/min	18	18	17	18
Δpw	Max. pressure drop at qw	bar	1.1	1.1	1.0	1.1

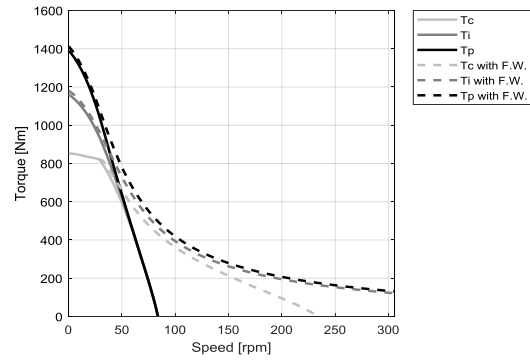
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

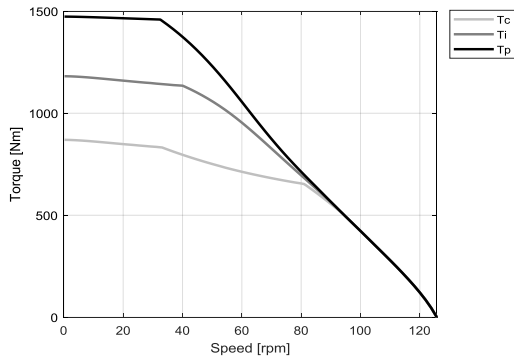
UA - WATER COOLING



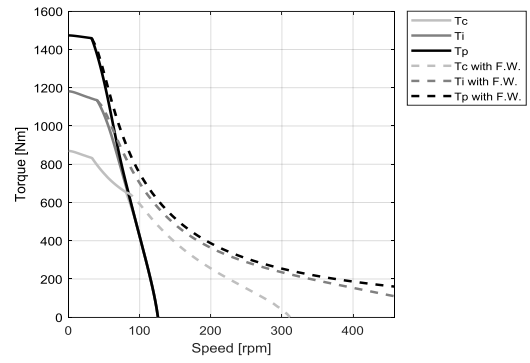
UA - WATER COOLING



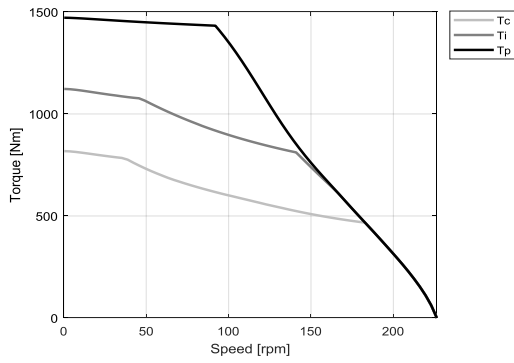
TB - WATER COOLING



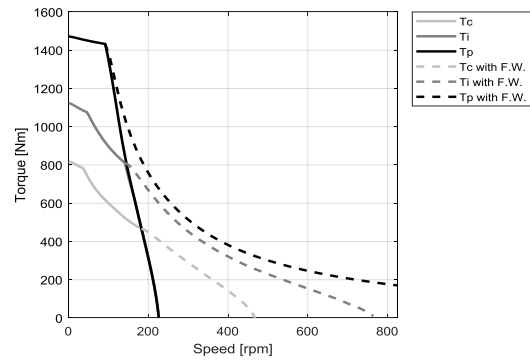
TB - WATER COOLING



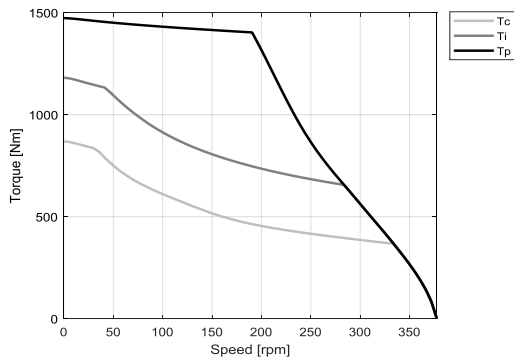
VB - WATER COOLING



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TF - WATER COOLING



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