

MOTOR PERFORMANCE		Winding codes	RA	RB	TB	VB
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	165	165	165	165
Ti	Intermittent torque	Nm	122	122	124	127
Tc	Continuous torque	Nm	86.6	86.6	87.7	90.1
Ts	Standstill torque	Nm	68.0	68.0	68.9	71.0
Ip	Peak current	Arms	13.8	27.7	42.3	64.6
Ii	Intermittent current	Arms	8.97	17.9	27.8	44.0
Ic	Continuous current	Arms	5.67	11.3	17.6	27.8
Is	Standstill current	Arms	4.30	8.59	13.3	21.1
ns	Rated low speed	rpm	0.71	0.71	0.69	0.70
nm	Maximum speed without flux weakening	rpm	395	792	1210	1850
nm,FW	Maximum speed with flux weakening	rpm	839	1430	1810	2080
ton,p	Maximum ON time for peak cycle	s	8.6	8.6	9.4	10
ton,i	Maximum ON time for intermittent cycle	s	3.0	3.0	2.9	2.9
Pp	Power dissipation @ Ip	W	6720	6720	6420	6270
Pi	Power dissipation @ Ii	W	3610	3610	3580	3760
Pc	Power dissipation @ Ic	W	1450	1450	1430	1500
Td	Max. detent torque (average to peak)	Nm	1.2	1.2	1.2	1.2

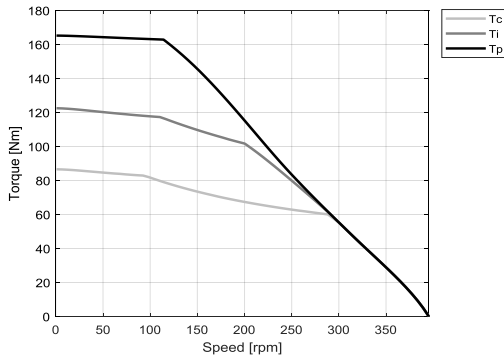
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	17.5	8.75	5.73	3.75
Ku	Back EMF constant (*)	Vrms/(rad/s)	10.0	5.02	3.29	2.15
Km	Motor constant	Nm/√W	3.10	3.10	3.17	3.20
R20	Electrical resistance at 20°C (*)	Ohm	21.2	5.29	2.17	0.915
Ld/Lq	Electrical inductance (*)	mH	183 / 169	45.8 / 42.3	19.7 / 18.1	8.42 / 7.66
Isc	Maximum short-circuit current	Arms	5.75	11.5	17.6	26.8
nb	Base speed	rpm	288	696	1120	1830
nb,i	Base speed at intermittent duty cycle	rpm	200	594	990	1620
nb,p	Base speed at peak duty cycle	rpm	114	375	636	1020
nn	Rated speed	rpm	246	638	1050	1120
Tn	Rated torque	Nm	63.2	41.0	31.7	30.1
In	Rated current	Arms	4.13	5.36	6.49	9.45
rth	Thermal time constant	s	76.5	76.5	78.6	77.7
Rth	Thermal resistance	K/W	0.0716	0.0716	0.0725	0.0687
2p	Number of poles	-	22	22	22	22
J	Rotor inertia	kg·m²	0.00644	0.00644	0.00644	0.00644
mr	Rotor mass	kg	2.37	2.37	2.37	2.37
ms	Stator mass	kg	12.8	12.8	12.9	12.9

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	0.049	0.049	0.049	0.049
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	4.5	4.5	4.5	4.7
Δpw	Max. pressure drop at qw	bar	0.1	0.1	0.1	0.1

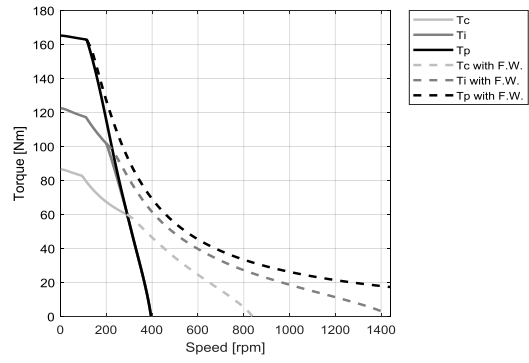
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

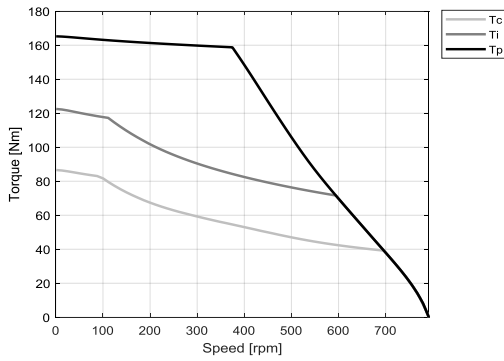
RA - WATER COOLING



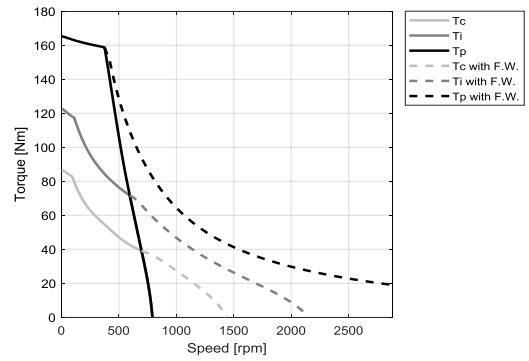
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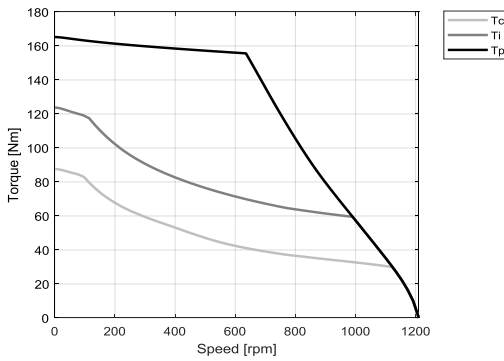
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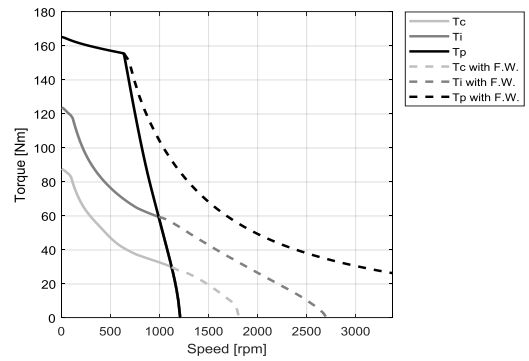
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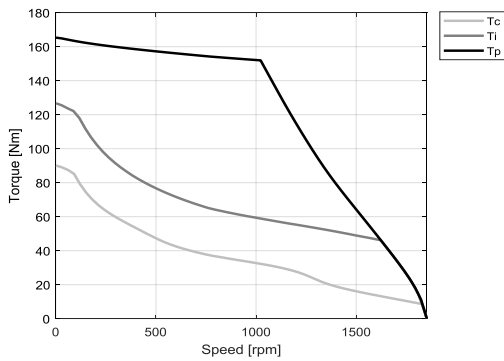
TB - WATER COOLING



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