

MOTOR PERFORMANCE		Winding codes	RA	RB	TB	VB
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	236	236	236	236
Ti	Intermittent torque	Nm	180	180	182	186
Tc	Continuous torque	Nm	127	127	129	132
Ts	Standstill torque	Nm	99.6	99.6	101	104
Ip	Peak current	Arms	13.5	27.0	41.3	63.1
Ii	Intermittent current	Arms	9.15	18.3	28.5	45.0
Ic	Continuous current	Arms	5.79	11.6	18.0	28.5
Is	Standstill current	Arms	4.39	8.77	13.6	21.6
ns	Rated low speed	rpm	0.76	0.76	0.74	0.75
nm	Maximum speed without flux weakening	rpm	277	554	846	1290
nm,FW	Maximum speed with flux weakening	rpm	593	1030	1450	1960
ton,p	Maximum ON time for peak cycle	s	8.9	8.9	9.7	10
ton,i	Maximum ON time for intermittent cycle	s	2.9	2.9	2.9	2.9
Pp	Power dissipation @ Ip	W	8450	8450	8060	7860
Pi	Power dissipation @ Ii	W	4990	4990	4940	5190
Pc	Power dissipation @ Ic	W	2000	2000	1980	2080
Td	Max. detent torque (average to peak)	Nm	1.7	1.7	1.7	1.7

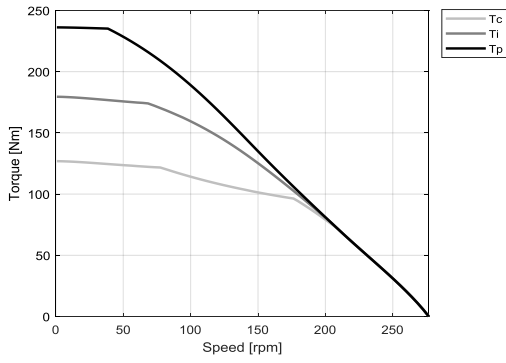
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	25.0	12.5	8.19	5.36
Ku	Back EMF constant (*)	Vrms/(rad/s)	14.3	7.17	4.70	3.07
Km	Motor constant	Nm/√W	3.84	3.84	3.93	3.97
R20	Electrical resistance at 20°C (*)	Ohm	28.2	7.05	2.89	1.21
Ld/Lq	Electrical inductance (*)	mH	248 / 228	61.9 / 57.0	26.5 / 24.3	11.4 / 10.3
Isc	Maximum short-circuit current	Arms	6.08	12.2	18.6	28.4
nb	Base speed	rpm	176	469	766	1210
nb,i	Base speed at intermittent duty cycle	rpm	68.4	393	677	1100
nb,p	Base speed at peak duty cycle	rpm	38.6	244	441	727
nn	Rated speed	rpm	142	422	710	1140
Tn	Rated torque	Nm	103	69.2	53.9	43.8
In	Rated current	Arms	4.74	6.23	7.52	9.55
rth	Thermal time constant	s	71.7	71.7	73.5	72.7
Rth	Thermal resistance	K/W	0.0508	0.0508	0.0513	0.0487
2p	Number of poles	-	22	22	22	22
J	Rotor inertia	kg·m²	0.00912	0.00912	0.00912	0.00912
mr	Rotor mass	kg	3.35	3.35	3.35	3.35
ms	Stator mass	kg	16.3	16.3	16.4	16.5

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	0.066	0.066	0.066	0.066
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	6.2	6.2	6.2	6.5
Δpw	Max. pressure drop at qw	bar	0.3	0.3	0.3	0.3

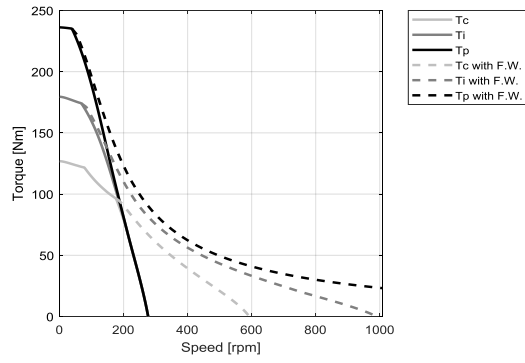
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

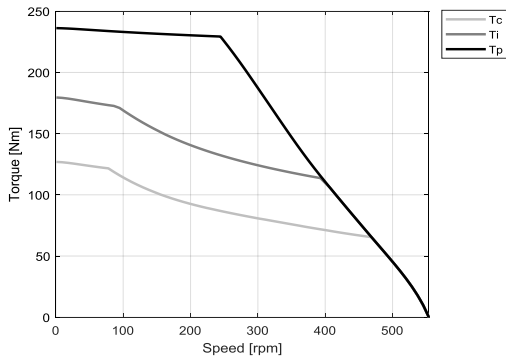
RA - WATER COOLING



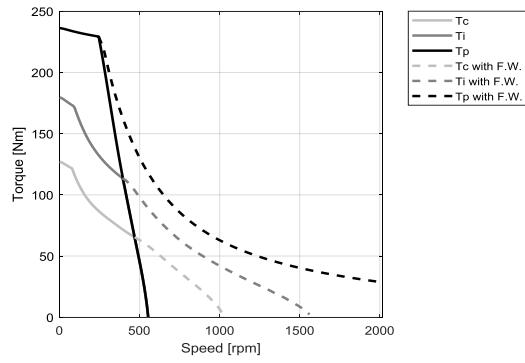
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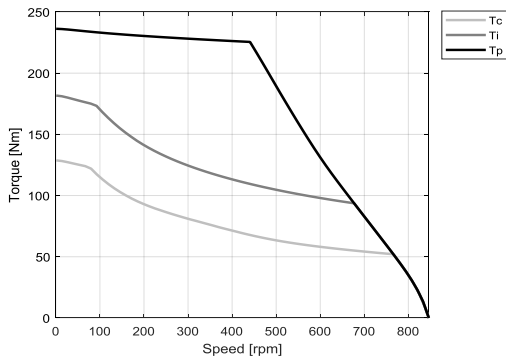
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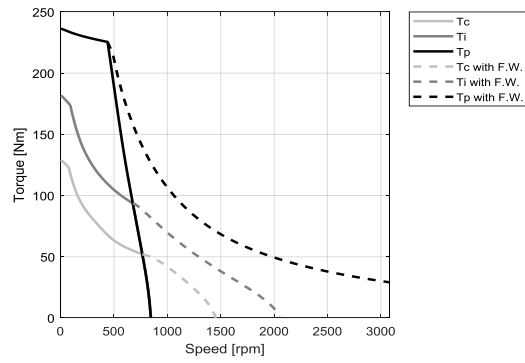
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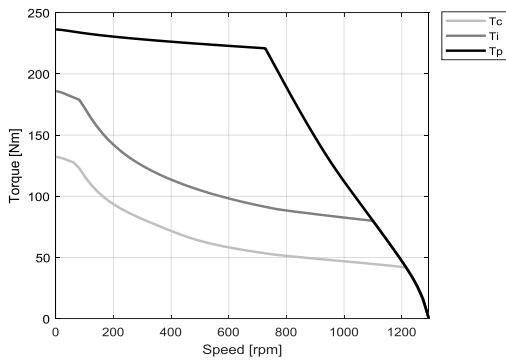
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