

MOTOR PERFORMANCE		Winding codes	RA	RB	TB	VB
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	319	354	354	354
Ti	Intermittent torque	Nm	265	271	274	281
Tc	Continuous torque	Nm	191	191	194	199
Ts	Standstill torque	Nm	149	149	152	157
Ip	Peak current	Arms	11.2	26.5	40.5	61.9
Ii	Intermittent current	Arms	8.78	18.2	28.4	44.9
Ic	Continuous current	Arms	5.76	11.5	17.9	28.4
Is	Standstill current	Arms	4.36	8.73	13.6	21.5
ns	Rated low speed	rpm	0.77	0.77	0.75	0.76
nm	Maximum speed without flux weakening	rpm	184	369	564	862
nm,FW	Maximum speed with flux weakening	rpm	421	711	1010	1430
ton,p	Maximum ON time for peak cycle	s	14	8.3	9.1	9.7
ton,i	Maximum ON time for intermittent cycle	s	6.4	2.9	2.9	2.9
Pp	Power dissipation @ Ip	W	8010	11600	11000	10700
Pi	Power dissipation @ Ii	W	6300	6960	6900	7240
Pc	Power dissipation @ Ic	W	2780	2780	2760	2890
Td	Max. detent torque (average to peak)	Nm	2.5	2.5	2.5	2.5

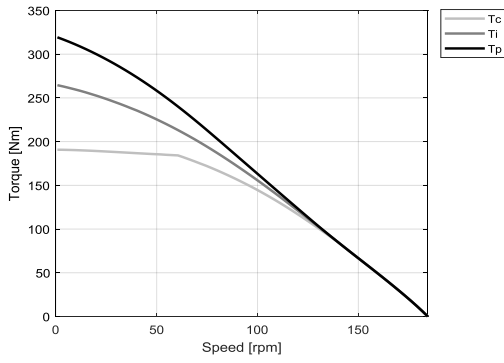
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	37.5	18.8	12.3	8.05
Ku	Back EMF constant (*)	Vrms/(rad/s)	21.5	10.8	7.04	4.61
Km	Motor constant	Nm/√W	4.83	4.83	4.95	5.00
R20	Electrical resistance at 20°C (*)	Ohm	40.3	10.1	4.11	1.73
Ld/Lq	Electrical inductance (*)	mH	367 / 339	91.8 / 84.7	39.4 / 36.1	16.9 / 15.3
Isc	Maximum short-circuit current	Arms	6.15	12.3	18.8	28.7
nb	Base speed	rpm	60.5	288	490	790
nb,i	Base speed at intermittent duty cycle	rpm	0.00	220	420	707
nb,p	Base speed at peak duty cycle	rpm	0.00	127	267	464
nn	Rated speed	rpm	42.9	250	447	736
Tn	Rated torque	Nm	186	124	95.2	76.2
In	Rated current	Arms	5.74	7.44	8.72	10.8
rth	Thermal time constant	s	71.0	71.0	72.7	72.1
Rth	Thermal resistance	K/W	0.0348	0.0348	0.0352	0.0334
2p	Number of poles	-	22	22	22	22
J	Rotor inertia	kg·m²	0.0138	0.0138	0.0138	0.0138
mr	Rotor mass	kg	5.06	5.06	5.06	5.06
ms	Stator mass	kg	23.1	23.1	23.3	23.3

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	0.094	0.094	0.094	0.094
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	8.7	8.7	8.6	9.0
Δpw	Max. pressure drop at qw	bar	0.5	0.5	0.5	0.5

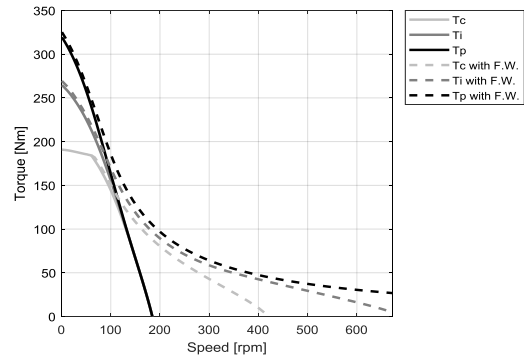
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

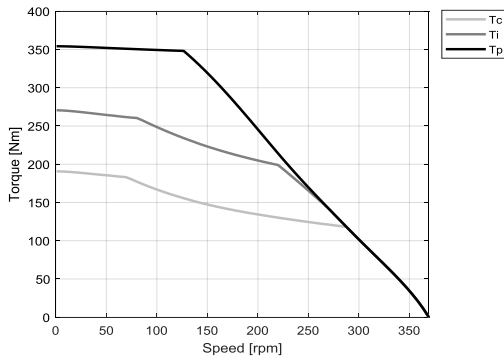
RA - WATER COOLING



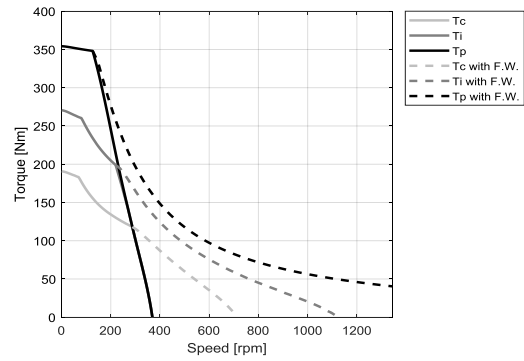
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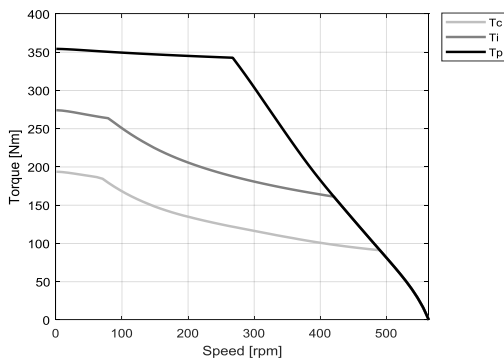
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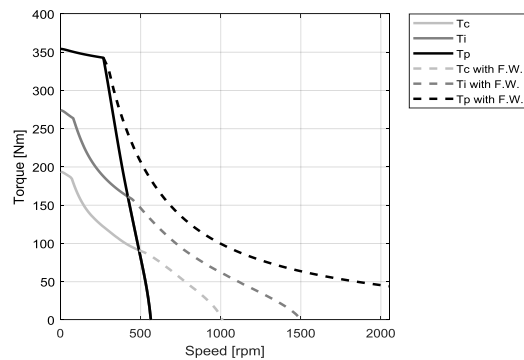
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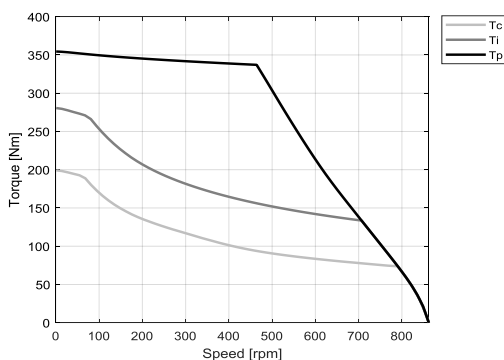
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