

MOTOR PERFORMANCE		Winding codes	RA	TA	TB	UB
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	223	223	223	223
Ti	Intermittent torque	Nm	175	182	182	174
Tc	Continuous torque	Nm	122	128	128	122
Ts	Standstill torque	Nm	94.9	99.8	99.8	94.6
Ip	Peak current	Arms	16.5	23.9	47.8	66.0
Ii	Intermittent current	Arms	12.0	18.3	36.7	47.8
Ic	Continuous current	Arms	7.58	11.6	23.2	30.2
Is	Standstill current	Arms	5.74	8.78	17.6	22.9
ns	Rated low speed	rpm	0.59	0.57	0.57	0.59
nm	Maximum speed without flux weakening	rpm	387	560	1120	1550
nm,FW	Maximum speed with flux weakening	rpm	927	1210	1830	2190
ton,p	Maximum ON time for peak cycle	s	6.8	8.3	8.3	6.7
ton,i	Maximum ON time for intermittent cycle	s	2.8	2.8	2.8	2.8
Pp	Power dissipation @ Ip	W	6460	5870	5870	6500
Pi	Power dissipation @ Ii	W	4450	4550	4550	4440
Pc	Power dissipation @ Ic	W	1780	1820	1820	1780
Td	Max. detent torque (average to peak)	Nm	1.0	1.0	1.0	1.0

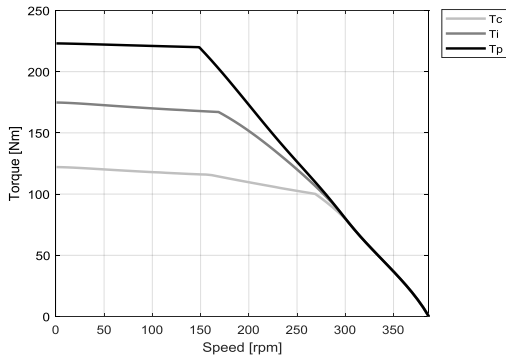
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	17.8	12.3	6.14	4.44
Ku	Back EMF constant (*)	Vrms/(rad/s)	10.3	7.08	3.54	2.56
Km	Motor constant	Nm/√W	3.80	3.97	3.97	3.79
R20	Electrical resistance at 20°C (*)	Ohm	14.6	6.37	1.59	0.917
Ld/Lq	Electrical inductance (*)	mH	64.7 / 57.9	30.8 / 27.3	7.71 / 6.82	4.04 / 3.62
Isc	Maximum short-circuit current	Arms	8.33	12.1	24.1	33.3
nb	Base speed	rpm	269	454	1010	1470
nb,i	Base speed at intermittent duty cycle	rpm	169	344	884	1290
nb,p	Base speed at peak duty cycle	rpm	149	278	645	912
nn	Rated speed	rpm	224	403	930	1040
Tn	Rated torque	Nm	106	87.2	59.2	52.9
In	Rated current	Arms	6.82	8.05	11.3	14.1
rth	Thermal time constant	s	45.9	47.6	47.6	46.1
Rth	Thermal resistance	K/W	0.0584	0.0571	0.0571	0.0584
2p	Number of poles	-	44	44	44	44
J	Rotor inertia	kg·m²	0.0152	0.0152	0.0152	0.0152
mr	Rotor mass	kg	2.56	2.56	2.56	2.56
ms	Stator mass	kg	8.68	8.81	8.81	8.73

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	0.056	0.056	0.056	0.056
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	5.6	5.7	5.7	5.5
Δpw	Max. pressure drop at qw	bar	0.2	0.2	0.2	0.2

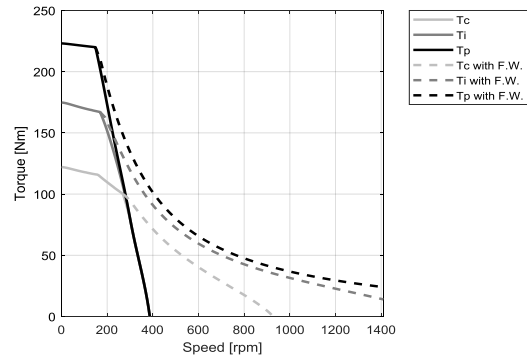
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

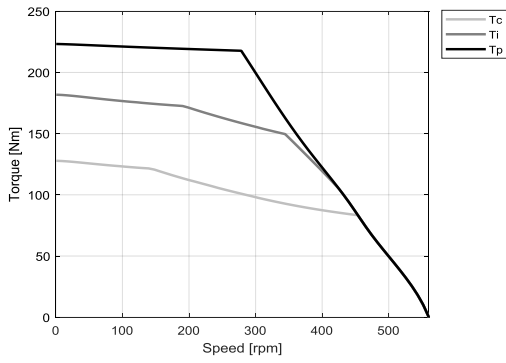
RA - WATER COOLING



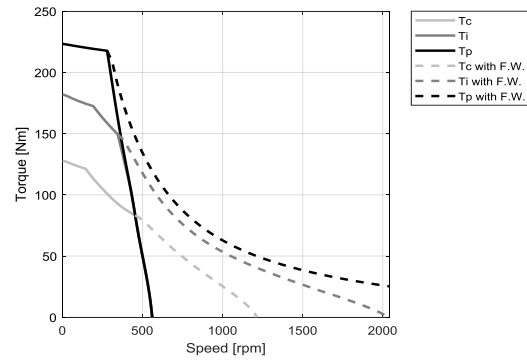
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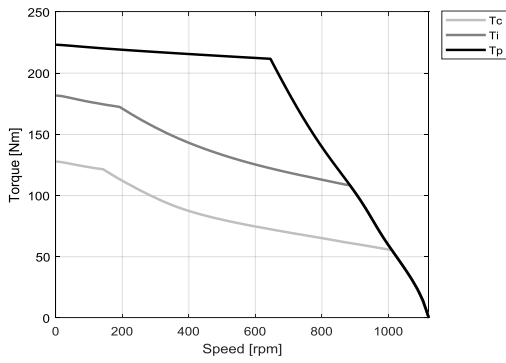
TA - WATER COOLING



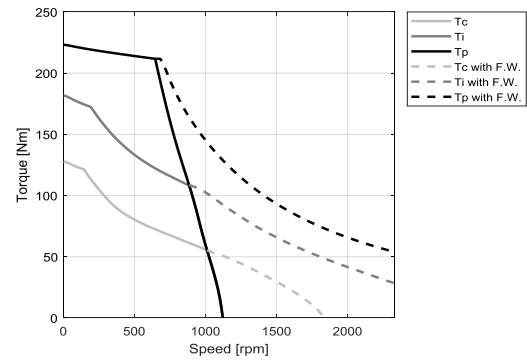
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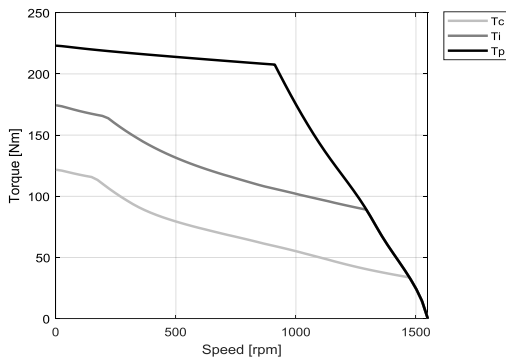
TB - WATER COOLING



TB - WATER COOLING



UB - WATER COOLING



UB - WATER COOLING

