

MOTOR PERFORMANCE		Winding codes	RA	TA	SB	UB
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	92.6	92.6	92.6	92.5
Ti	Intermittent torque	Nm	76.2	74.9	75.2	72.4
Tc	Continuous torque	Nm	55.4	54.3	54.6	52.2
Ts	Standstill torque	Nm	44.2	43.2	43.4	41.3
Ip	Peak current	Arms	13.6	23.0	35.6	63.1
Ii	Intermittent current	Arms	10.3	16.8	26.3	43.9
Ic	Continuous current	Arms	6.49	10.6	16.6	27.7
Is	Standstill current	Arms	4.92	8.06	12.6	21.0
ns	Rated low speed	rpm	0.86	0.87	0.87	0.89
nm	Maximum speed without flux weakening	rpm	676	1140	1770	3140
nm,FW	Maximum speed with flux weakening	rpm	1440	2050	2780	3930
ton,p	Maximum ON time for peak cycle	s	9.8	8.8	9.1	7.3
ton,i	Maximum ON time for intermittent cycle	s	2.8	2.8	2.8	2.8
Pp	Power dissipation @ Ip	W	4590	4840	4750	5300
Pi	Power dissipation @ Ii	W	3420	3400	3380	3330
Pc	Power dissipation @ Ic	W	1370	1360	1350	1330
Td	Max. detent torque (average to peak)	Nm	0.75	0.75	0.75	0.75

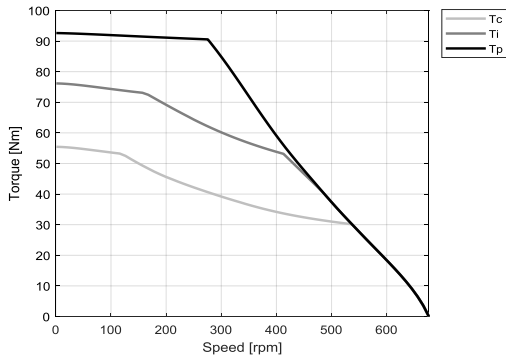
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	10.2	6.06	3.90	2.20
Ku	Back EMF constant (*)	Vrms/(rad/s)	5.87	3.48	2.25	1.27
Km	Motor constant	Nm/√W	2.13	2.08	2.10	1.99
R20	Electrical resistance at 20°C (*)	Ohm	15.3	5.66	2.31	0.815
Ld/Lq	Electrical inductance (*)	mH	116 / 99.5	41.0 / 35.4	17.0 / 14.7	5.43 / 4.77
Isc	Maximum short-circuit current	Arms	5.30	8.93	13.9	24.5
nb	Base speed	rpm	537	995	1650	3070
nb,i	Base speed at intermittent duty cycle	rpm	413	852	1450	2740
nb,p	Base speed at peak duty cycle	rpm	276	556	938	1730
nn	Rated speed	rpm	475	909	1540	2100
Tn	Rated torque	Nm	31.7	24.1	16.8	12.6
In	Rated current	Arms	3.54	4.61	5.17	7.21
rth	Thermal time constant	s	63.6	62.8	63.0	61.2
Rth	Thermal resistance	K/W	0.0756	0.0760	0.0765	0.0775
2p	Number of poles	-	22	22	22	22
J	Rotor inertia	kg·m²	0.00236	0.00236	0.00236	0.00236
mr	Rotor mass	kg	1.69	1.69	1.69	1.69
ms	Stator mass	kg	8.18	8.15	8.16	8.08

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	0.033	0.033	0.033	0.033
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	4.3	4.2	4.2	4.2
Δpw	Max. pressure drop at qw	bar	0.1	0.1	0.1	0.1

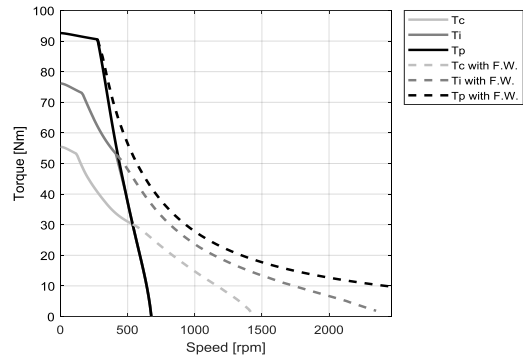
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

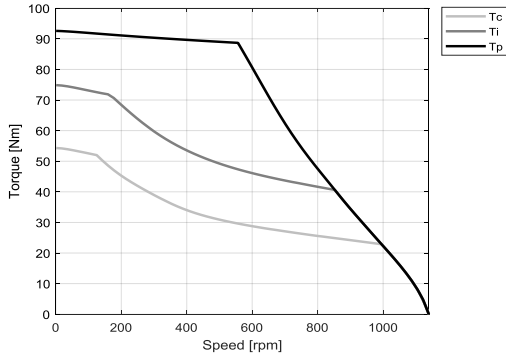
RA - WATER COOLING



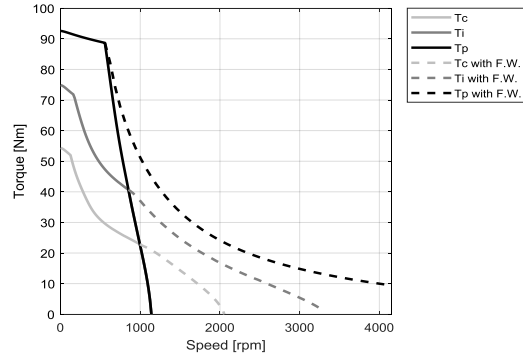
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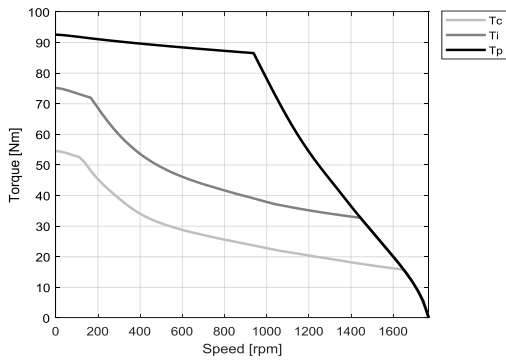
TA - WATER COOLING



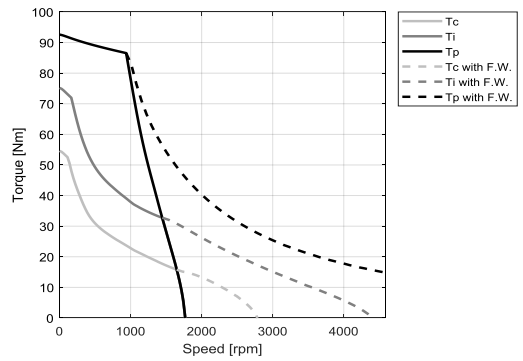
TA - WATER COOLING



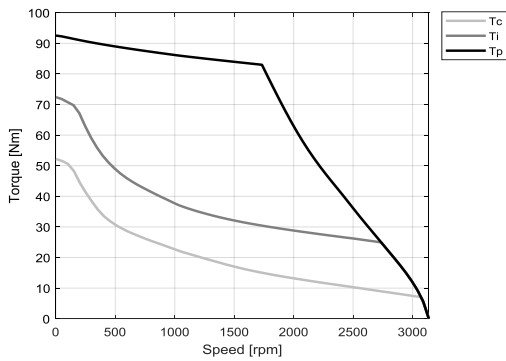
SB - WATER COOLING



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UB - WATER COOLING



UB - WATER COOLING

