

MOTOR PERFORMANCE		Winding codes	RA	UA	TB	UB
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	286	286	286	286
Ti	Intermittent torque	Nm	192	187	193	187
Tc	Continuous torque	Nm	133	128	133	128
Ts	Standstill torque	Nm	103	99.2	103	99.2
Ip	Peak current	Arms	20.6	42.3	62.2	84.5
Ii	Intermittent current	Arms	11.9	23.5	36.1	47.0
Ic	Continuous current	Arms	7.50	14.9	22.9	29.7
Is	Standstill current	Arms	5.68	11.3	17.3	22.5
ns	Rated low speed	rpm	0.40	0.40	0.39	0.40
nm	Maximum speed without flux weakening	rpm	350	719	1060	1440
nm,FW	Maximum speed with flux weakening	rpm	835	1290	1540	1540
ton,p	Maximum ON time for peak cycle	s	3.7	3.3	4.0	3.3
ton,i	Maximum ON time for intermittent cycle	s	2.9	2.8	2.9	2.8
Pp	Power dissipation @ Ip	W	9410	10000	9130	10000
Pi	Power dissipation @ Ii	W	3930	3840	3870	3840
Pc	Power dissipation @ Ic	W	1570	1540	1550	1540
Td	Max. detent torque (average to peak)	Nm	0.71	0.71	0.71	0.71

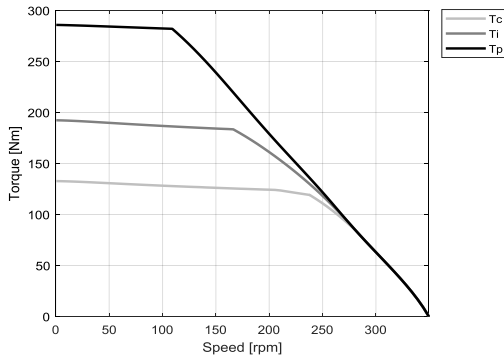
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	19.6	9.55	6.49	4.78
Ku	Back EMF constant (*)	Vrms/(rad/s)	11.3	5.51	3.74	2.76
Km	Motor constant	Nm/√W	4.43	4.32	4.49	4.32
R20	Electrical resistance at 20°C (*)	Ohm	13.1	3.26	1.39	0.816
Ld/Lq	Electrical inductance (*)	mH	42.3 / 39.2	10.0 / 9.32	4.62 / 4.27	2.50 / 2.33
Isc	Maximum short-circuit current	Arms	9.37	19.3	28.4	38.5
nb	Base speed	rpm	238	612	971	1380
nb,i	Base speed at intermittent duty cycle	rpm	166	502	835	1200
nb,p	Base speed at peak duty cycle	rpm	109	343	562	783
nn	Rated speed	rpm	199	550	854	836
Tn	Rated torque	Nm	124	88.2	68.0	68.4
In	Rated current	Arms	7.39	10.8	12.7	17.3
rth	Thermal time constant	s	45.3	45.3	46.8	45.3
Rth	Thermal resistance	K/W	0.0670	0.0685	0.0681	0.0685
2p	Number of poles	-	66	66	66	66
J	Rotor inertia	kg·m²	0.0380	0.0380	0.0380	0.0380
mr	Rotor mass	kg	2.73	2.73	2.73	2.73
ms	Stator mass	kg	8.78	8.81	8.86	8.81

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	4.9	4.8	4.8	4.8
Δpw	Max. pressure drop at qw	bar	0.2	0.2	0.2	0.2

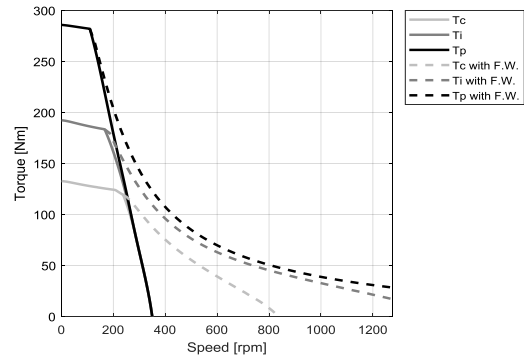
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

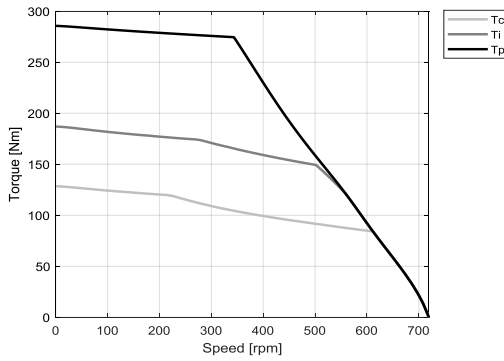
RA - WATER COOLING



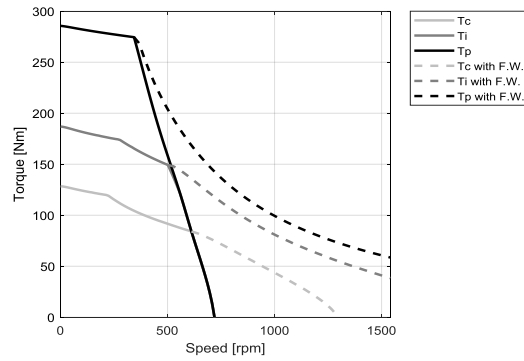
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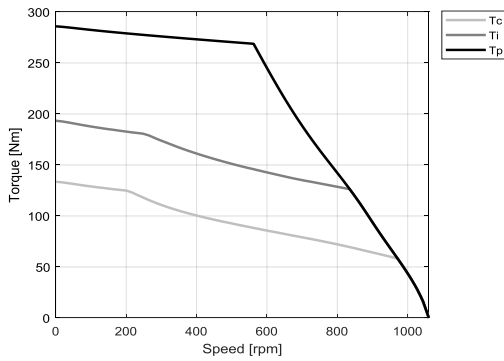
UA - WATER COOLING



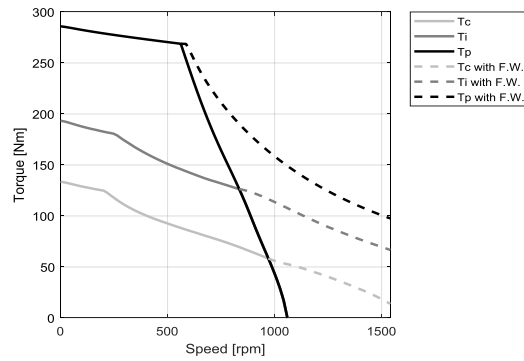
UA - WATER COOLING



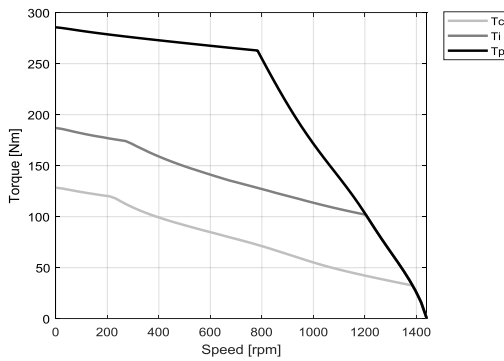
TB - WATER COOLING



TB - WATER COOLING



UB - WATER COOLING



UB - WATER COOLING

