

MOTOR PERFORMANCE		Winding codes	TA	RB	TB	VB
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	472	472	472	473
Ti	Intermittent torque	Nm	364	358	364	372
Tc	Continuous torque	Nm	256	252	256	263
Ts	Standstill torque	Nm	201	197	201	207
Ip	Peak current	Arms	20.1	26.3	40.1	61.3
Ii	Intermittent current	Arms	14.0	17.9	28.0	44.2
Ic	Continuous current	Arms	8.84	11.3	17.7	28.0
Is	Standstill current	Arms	6.70	8.59	13.4	21.2
ns	Rated low speed	rpm	0.76	0.78	0.76	0.77
nm	Maximum speed without flux weakening	rpm	211	277	423	647
nm,FW	Maximum speed with flux weakening	rpm	451	551	774	1110
ton,p	Maximum ON time for peak cycle	s	7.8	7.1	7.8	8.3
ton,i	Maximum ON time for intermittent cycle	s	2.8	2.8	2.8	2.8
Pp	Power dissipation @ Ip	W	14100	14800	14100	13700
Pi	Power dissipation @ Ii	W	8630	8680	8630	9030
Pc	Power dissipation @ Ic	W	3450	3470	3450	3610
Td	Max. detent torque (average to peak)	Nm	3.4	3.4	3.4	3.4

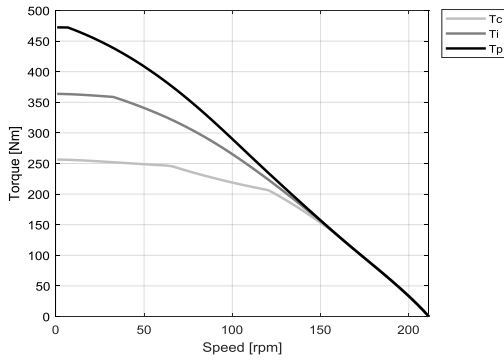
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	32.8	25.0	16.4	10.7
Ku	Back EMF constant (*)	Vrms/(rad/s)	18.8	14.3	9.39	6.15
Km	Motor constant	Nm/√W	5.77	5.63	5.77	5.83
R20	Electrical resistance at 20°C (*)	Ohm	21.5	13.2	5.38	2.26
Ld/Lq	Electrical inductance (*)	mH	209 / 192	122 / 113	52.2 / 48.1	22.4 / 20.4
Isc	Maximum short-circuit current	Arms	9.44	12.4	18.9	28.8
nb	Base speed	rpm	120	195	351	579
nb,i	Base speed at intermittent duty cycle	rpm	32.5	116	289	508
nb,p	Base speed at peak duty cycle	rpm	6.78	59.3	176	329
nn	Rated speed	rpm	87.6	163	314	535
Tn	Rated torque	Nm	228	186	145	113
In	Rated current	Arms	8.01	8.35	9.91	11.9
rth	Thermal time constant	s	71.3	69.8	71.3	70.8
Rth	Thermal resistance	K/W	0.0265	0.0262	0.0265	0.0251
2p	Number of poles	-	22	22	22	22
J	Rotor inertia	kg·m²	0.0185	0.0185	0.0185	0.0185
mr	Rotor mass	kg	6.79	6.79	6.79	6.79
ms	Stator mass	kg	29.7	29.6	29.7	29.8

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	0.120	0.120	0.120	0.120
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	11	11	11	11
Δpw	Max. pressure drop at qw	bar	1.0	1.0	1.0	1.0

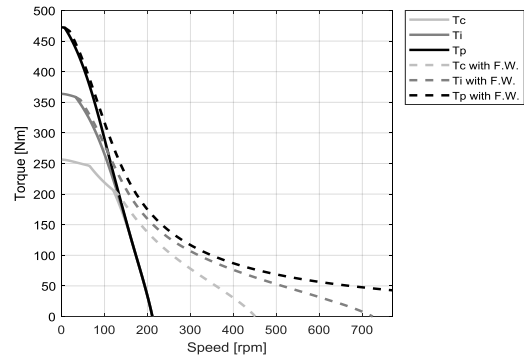
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

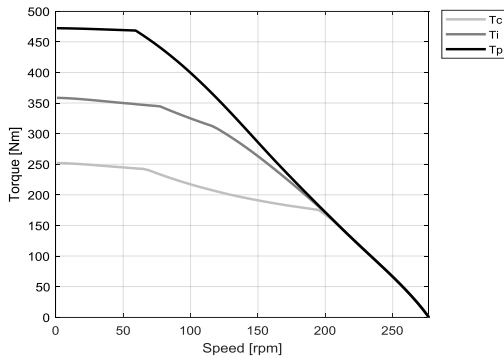
TA - WATER COOLING



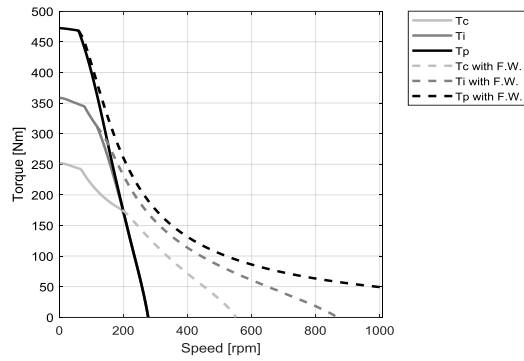
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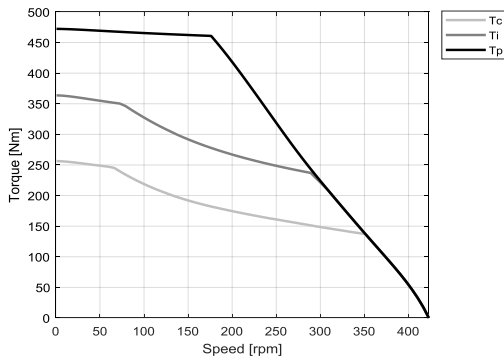
RB - WATER COOLING



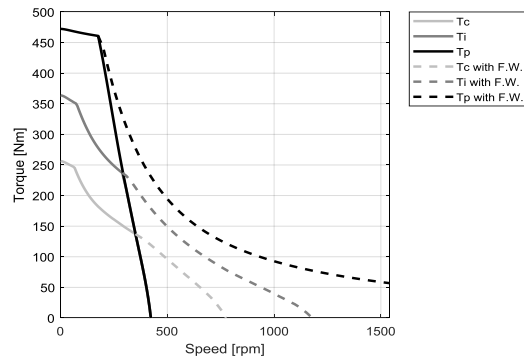
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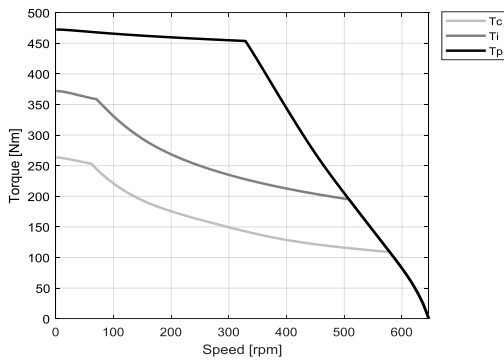
TB - WATER COOLING



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VB - WATER COOLING



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