

MOTOR PERFORMANCE		Winding codes	RA	TA	SB	UB
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	199	198	198	198
Ti	Intermittent torque	Nm	166	163	164	158
Tc	Continuous torque	Nm	121	118	119	114
Ts	Standstill torque	Nm	96.2	94.0	94.6	89.9
Ip	Peak current	Arms	13.2	22.2	34.4	60.9
Ii	Intermittent current	Arms	10.3	16.9	26.4	44.0
Ic	Continuous current	Arms	6.52	10.7	16.7	27.8
Is	Standstill current	Arms	4.94	8.09	12.6	21.1
ns	Rated low speed	rpm	0.90	0.91	0.91	0.94
nm	Maximum speed without flux weakening	rpm	316	532	825	1460
nm,FW	Maximum speed with flux weakening	rpm	720	1040	1460	2290
ton,p	Maximum ON time for peak cycle	s	9.0	8.0	8.3	6.5
ton,i	Maximum ON time for intermittent cycle	s	2.7	2.7	2.7	2.7
Pp	Power dissipation @ Ip	W	8290	8710	8560	9520
Pi	Power dissipation @ Ii	W	6590	6520	6510	6360
Pc	Power dissipation @ Ic	W	2640	2610	2600	2540
Td	Max. detent torque (average to peak)	Nm	1.6	1.6	1.6	1.6

MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	21.9	13.0	8.39	4.73
Ku	Back EMF constant (*)	Vrms/(rad/s)	12.6	7.47	4.81	2.72
Km	Motor constant	Nm/√W	3.28	3.20	3.23	3.07
R20	Electrical resistance at 20°C (*)	Ohm	29.8	11.0	4.50	1.58
Ld/Lq	Electrical inductance (*)	mH	234 / 201	82.4 / 71.4	34.2 / 29.6	10.9 / 9.62
Isc	Maximum short-circuit current	Arms	5.65	9.51	14.8	26.1
nb	Base speed	rpm	175	419	713	1360
nb,i	Base speed at intermittent duty cycle	rpm	38.9	316	613	1220
nb,p	Base speed at peak duty cycle	rpm	42.4	200	399	790
nn	Rated speed	rpm	119	369	651	1280
Tn	Rated torque	Nm	110	68.9	54.8	36.3
In	Rated current	Arms	6.02	5.96	7.45	9.05
rth	Thermal time constant	s	60.3	59.7	59.7	58.3
Rth	Thermal resistance	K/W	0.0365	0.0367	0.0369	0.0374
2p	Number of poles	-	22	22	22	22
J	Rotor inertia	kg·m²	0.00506	0.00506	0.00506	0.00506
mr	Rotor mass	kg	3.61	3.61	3.61	3.61
ms	Stator mass	kg	15.1	15.1	15.1	14.9

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	0.063	0.063	0.063	0.063
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	8.2	8.1	8.1	7.9
Δpw	Max. pressure drop at qw	bar	0.4	0.4	0.4	0.4

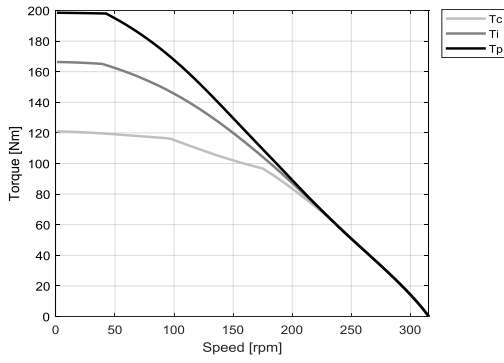
Notes: (*) terminal to terminal.

Hypotheses and tolerances are in ETEL Integration Manual.

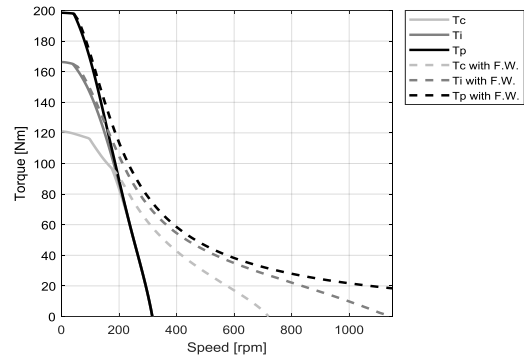
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

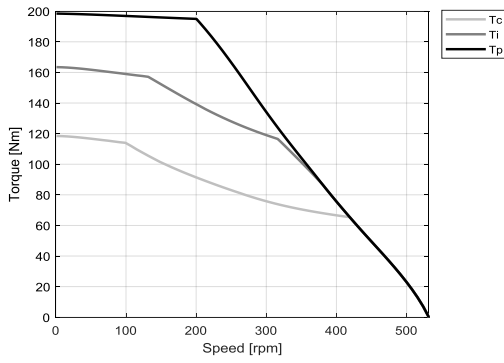
RA - WATER COOLING



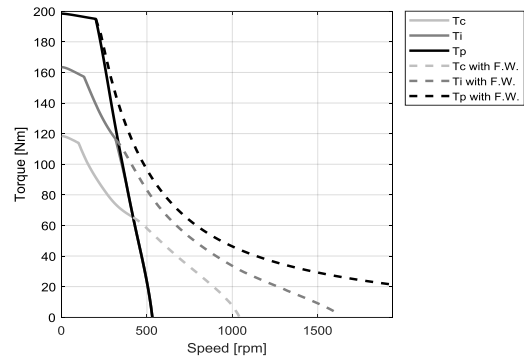
RA - WATER COOLING



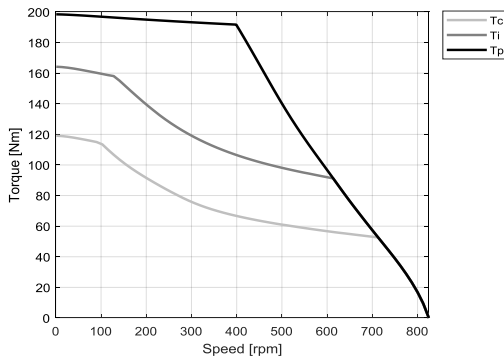
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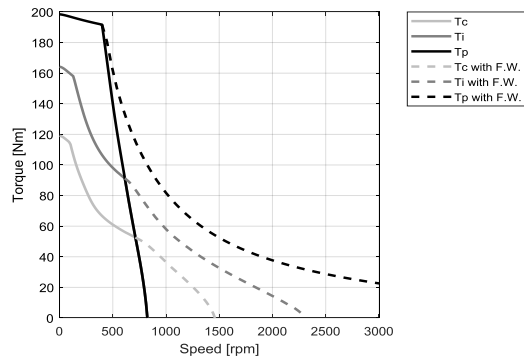
TA - WATER COOLING



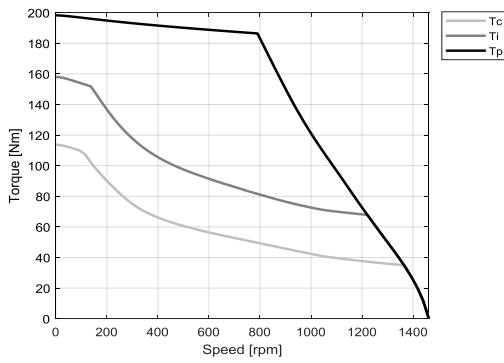
SB - WATER COOLING



SB - WATER COOLING



UB - WATER COOLING



UB - WATER COOLING

