

MOTOR PERFORMANCE		Winding codes	SA	SB	UB	UD
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	260	260	260	260
Ti	Intermittent torque	Nm	188	188	190	190
Tc	Continuous torque	Nm	137	137	139	139
Ts	Standstill torque	Nm	110	110	111	111
Ip	Peak current	Arms	17.3	34.5	53.9	108
Ii	Intermittent current	Arms	10.0	20.0	31.8	63.6
Ic	Continuous current	Arms	6.32	12.6	20.1	40.2
Is	Standstill current	Arms	4.79	9.58	15.2	30.5
ns	Rated low speed	rpm	0.24	0.24	0.24	0.24
nm	Maximum speed without flux weakening	rpm	259	518	809	1620
nm,FW	Maximum speed with flux weakening	rpm	792	1190	1480	1650
ton,p	Maximum ON time for peak cycle	s	8.5	8.5	9.0	9.0
ton,i	Maximum ON time for intermittent cycle	s	3.0	3.0	3.0	3.0
Pp	Power dissipation @ Ip	W	8410	8410	8240	8240
Pi	Power dissipation @ Ii	W	3550	3550	3620	3620
Pc	Power dissipation @ Ic	W	1420	1420	1450	1450
Td	Max. detent torque (average to peak)	Nm	1.1	1.1	1.1	1.1

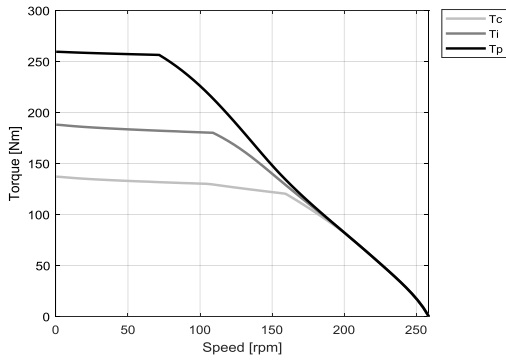
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	26.6	13.3	8.52	4.26
Ku	Back EMF constant (*)	Vrms/(rad/s)	15.3	7.67	4.91	2.46
Km	Motor constant	Nm/√W	5.34	5.34	5.38	5.38
R20	Electrical resistance at 20°C (*)	Ohm	16.6	4.15	1.67	0.418
Ld/Lq	Electrical inductance (*)	mH	150 / 133	37.5 / 33.2	15.4 / 13.5	3.84 / 3.38
Isc	Maximum short-circuit current	Arms	5.37	10.7	16.8	33.5
nb	Base speed	rpm	159	407	704	N/A
nb,i	Base speed at intermittent duty cycle	rpm	109	320	574	1340
nb,p	Base speed at peak duty cycle	rpm	71.6	228	392	836
nn	Rated speed	rpm	134	358	641	962
Tn	Rated torque	Nm	125	96.1	70.2	53.4
In	Rated current	Arms	5.92	8.69	9.75	15.2
rth	Thermal time constant	s	111	111	112	112
Rth	Thermal resistance	K/W	0.0748	0.0748	0.0733	0.0733
2p	Number of poles	-	44	44	44	44
J	Rotor inertia	kg·m²	0.0242	0.0242	0.0242	0.0242
mr	Rotor mass	kg	2.12	2.12	2.12	2.12
ms	Stator mass	kg	13.0	13.0	13.1	13.1

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	4.4	4.4	4.5	4.5
Δpw	Max. pressure drop at qw	bar	0.1	0.1	0.1	0.1

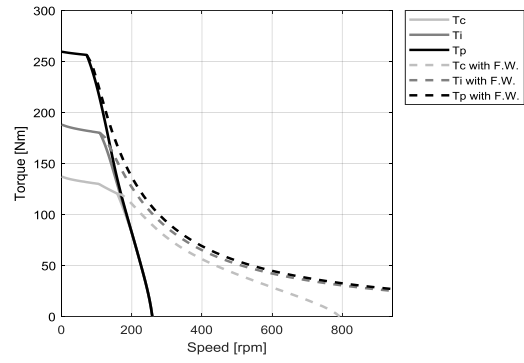
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

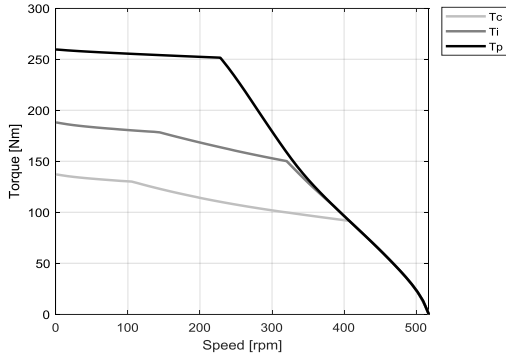
SA - WATER COOLING



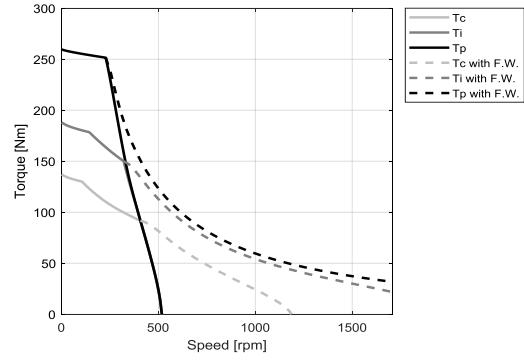
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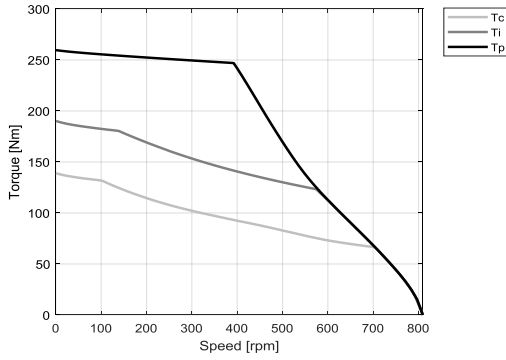
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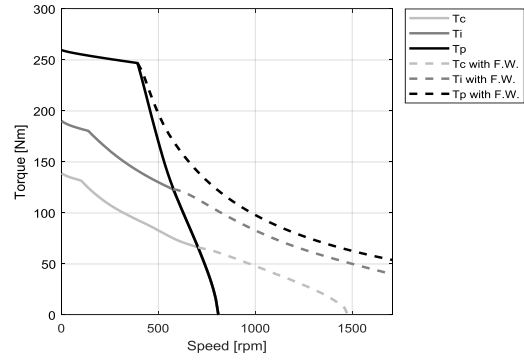
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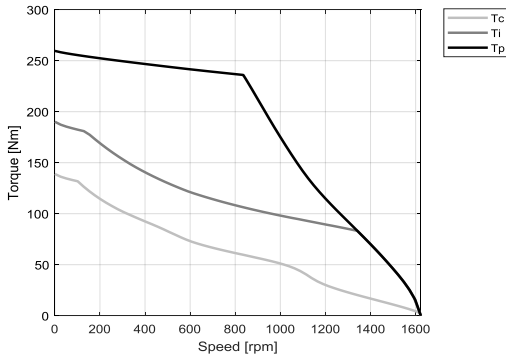
UB - WATER COOLING



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UD - WATER COOLING



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