

MOTOR PERFORMANCE		Winding codes	TA	UA	TB	UB
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	1030	1030	1030	1030
Ti	Intermittent torque	Nm	789	764	789	764
Tc	Continuous torque	Nm	543	523	543	523
Ts	Standstill torque	Nm	419	402	419	402
Ip	Peak current	Arms	28.0	38.0	55.9	76.0
Ii	Intermittent current	Arms	20.0	26.1	40.0	52.1
Ic	Continuous current	Arms	12.7	16.5	25.3	33.0
Is	Standstill current	Arms	9.58	12.5	19.2	25.0
ns	Rated low speed	rpm	0.47	0.48	0.47	0.48
nm	Maximum speed without flux weakening	rpm	147	200	295	401
nm,FW	Maximum speed with flux weakening	rpm	299	377	503	626
ton,p	Maximum ON time for peak cycle	s	5.0	4.2	5.0	4.2
ton,i	Maximum ON time for intermittent cycle	s	2.7	2.7	2.7	2.7
Pp	Power dissipation @ Ip	W	18000	19500	18000	19500
Pi	Power dissipation @ Ii	W	11800	11700	11800	11700
Pc	Power dissipation @ Ic	W	4730	4680	4730	4680
Td	Max. detent torque (average to peak)	Nm	2.5	2.5	2.5	2.5

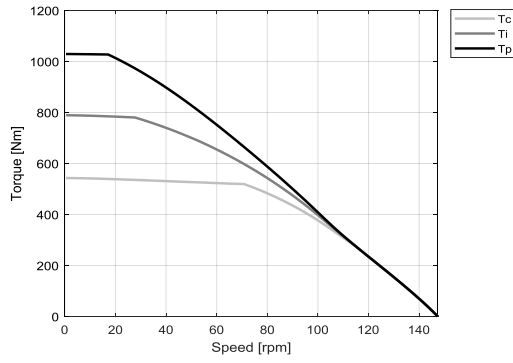
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	46.9	34.5	23.5	17.3
Ku	Back EMF constant (*)	Vrms/(rad/s)	26.9	19.8	13.5	9.90
Km	Motor constant	Nm/√W	10.2	9.81	10.2	9.81
R20	Electrical resistance at 20°C (*)	Ohm	14.2	8.26	3.54	2.07
Ld/Lq	Electrical inductance (*)	mH	56.2 / 51.7	30.4 / 28.3	14.0 / 12.9	7.61 / 7.06
Isc	Maximum short-circuit current	Arms	16.8	22.8	33.5	45.5
nb	Base speed	rpm	70.8	142	245	352
nb,i	Base speed at intermittent duty cycle	rpm	27.7	74.2	200	309
nb,p	Base speed at peak duty cycle	rpm	17.1	55.2	137	207
nn	Rated speed	rpm	56.5	116	219	321
Tn	Rated torque	Nm	525	432	342	287
In	Rated current	Arms	12.6	14.0	16.4	18.9
rth	Thermal time constant	s	38.9	37.9	38.9	37.9
Rth	Thermal resistance	K/W	0.0207	0.0207	0.0207	0.0207
2p	Number of poles	-	66	66	66	66
J	Rotor inertia	kg·m²	0.126	0.126	0.126	0.126
mr	Rotor mass	kg	9.01	9.01	9.01	9.01
ms	Stator mass	kg	20.0	19.8	20.0	19.8

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	0.140	0.140	0.140	0.140
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	15	15	15	15
Δpw	Max. pressure drop at qw	bar	1.1	1.1	1.1	1.1

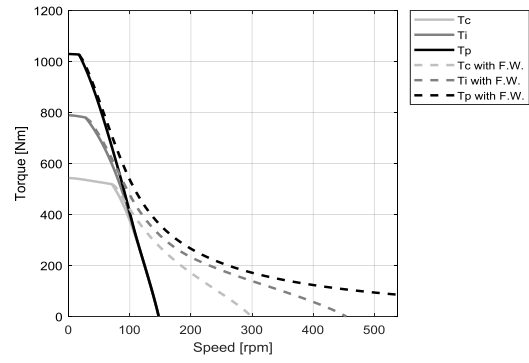
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

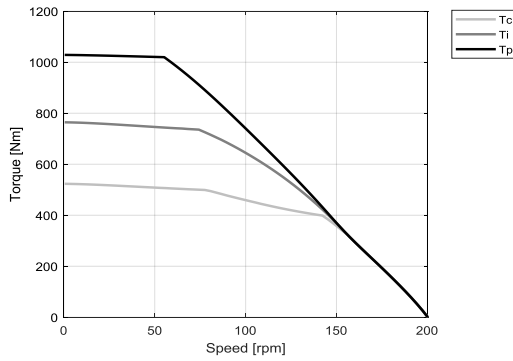
TA - WATER COOLING



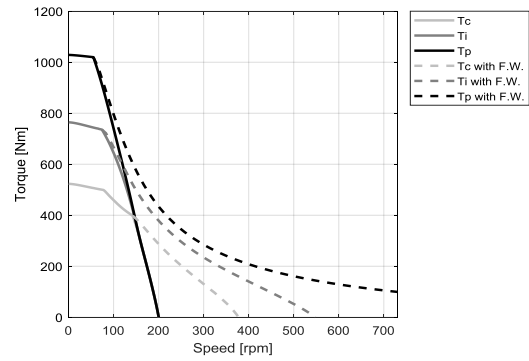
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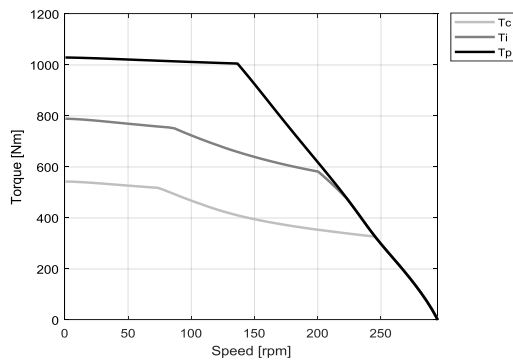
UA - WATER COOLING



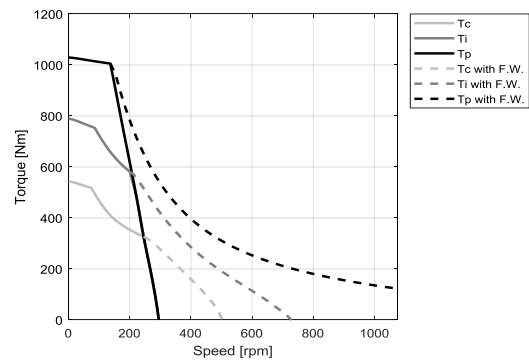
UA - WATER COOLING



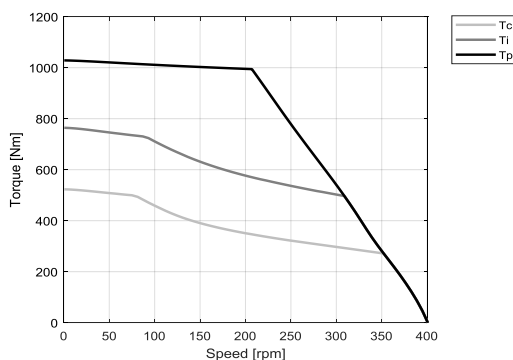
TB - WATER COOLING



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UB - WATER COOLING



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