

MOTOR PERFORMANCE		Winding codes	TA	VA	VB	TF
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	440	441	441	440
Ti	Intermittent torque	Nm	315	317	317	315
Tc	Continuous torque	Nm	231	230	230	231
Ts	Standstill torque	Nm	186	184	184	186
Ip	Peak current	Arms	25.3	40.1	80.3	152
Ii	Intermittent current	Arms	13.8	22.9	45.8	83.0
Ic	Continuous current	Arms	8.75	14.5	28.9	52.5
Is	Standstill current	Arms	6.63	11.0	21.9	39.8
ns	Rated low speed	rpm	0.19	0.20	0.20	0.19
nm	Maximum speed without flux weakening	rpm	211	358	716	1270
nm,FW	Maximum speed with flux weakening	rpm	760	952	1300	1300
ton,p	Maximum ON time for peak cycle	s	5.8	6.2	6.2	5.8
ton,i	Maximum ON time for intermittent cycle	s	2.9	2.9	2.9	2.9
Pp	Power dissipation @ Ip	W	13300	11800	11800	13300
Pi	Power dissipation @ Ii	W	4950	4820	4820	4950
Pc	Power dissipation @ Ic	W	1980	1930	1930	1980
Td	Max. detent torque (average to peak)	Nm	1.2	1.2	1.2	1.2

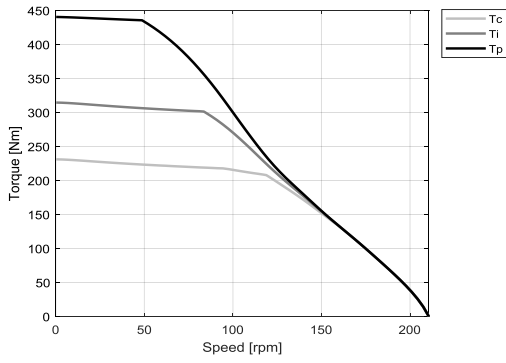
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	32.6	19.2	9.61	5.44
Ku	Back EMF constant (*)	Vrms/(rad/s)	18.8	11.1	5.55	3.14
Km	Motor constant	Nm/√W	7.67	7.56	7.56	7.67
R20	Electrical resistance at 20°C (*)	Ohm	12.1	4.31	1.08	0.336
Ld/Lq	Electrical inductance (*)	mH	99.0 / 87.9	30.5 / 27.9	7.62 / 6.97	2.75 / 2.44
Isc	Maximum short-circuit current	Arms	6.65	12.7	25.5	39.9
nb	Base speed	rpm	119	260	612	N/A
nb,i	Base speed at intermittent duty cycle	rpm	83.5	197	492	964
nb,p	Base speed at peak duty cycle	rpm	48.7	148	349	599
nn	Rated speed	rpm	99.4	226	555	802
Tn	Rated torque	Nm	216	185	126	95.1
In	Rated current	Arms	8.54	11.7	15.7	21.5
rth	Thermal time constant	s	93.8	89.4	89.4	93.8
Rth	Thermal resistance	K/W	0.0537	0.0549	0.0549	0.0537
2p	Number of poles	-	66	66	66	66
J	Rotor inertia	kg·m²	0.0647	0.0647	0.0647	0.0647
mr	Rotor mass	kg	3.27	3.27	3.27	3.27
ms	Stator mass	kg	19.7	19.4	19.4	19.7

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	0.079	0.079	0.079	0.079
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	6.2	6.0	6.0	6.2
Δpw	Max. pressure drop at qw	bar	0.2	0.2	0.2	0.2

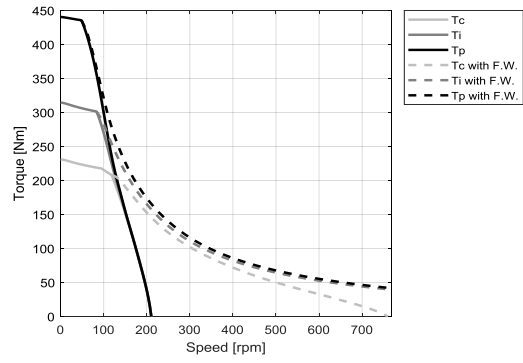
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

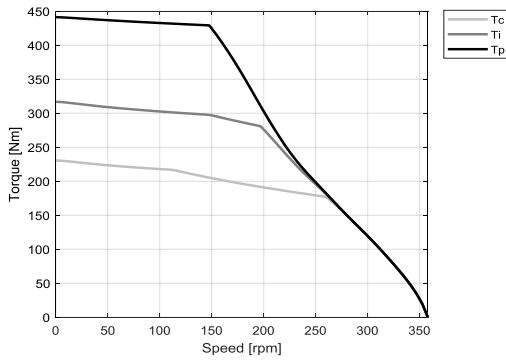
TA - WATER COOLING



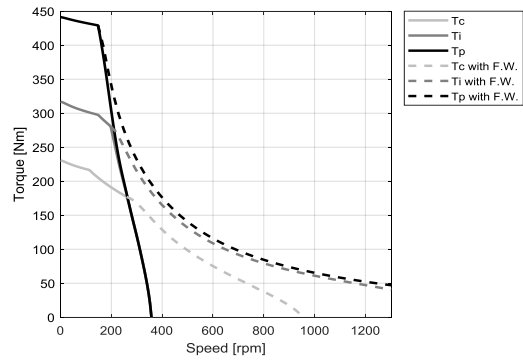
TA - WATER COOLING



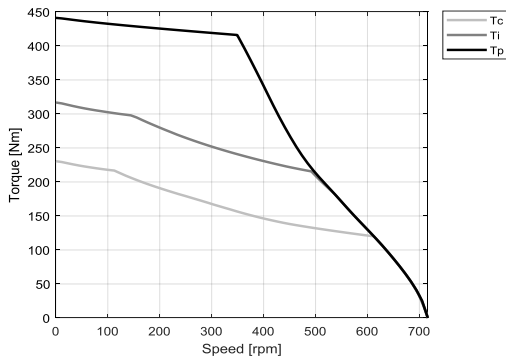
VA - WATER COOLING



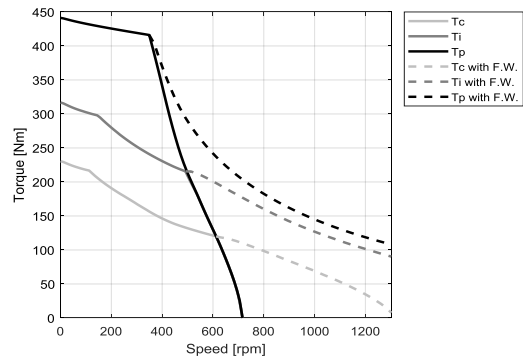
VA - WATER COOLING



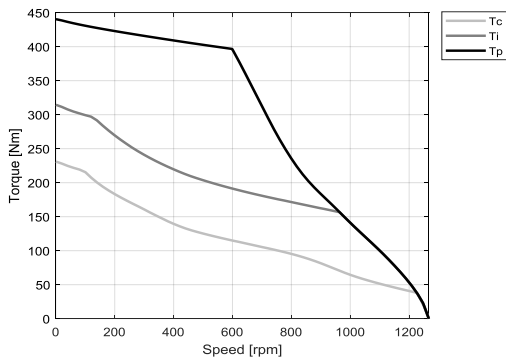
VB - WATER COOLING



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