

MOTOR PERFORMANCE		Winding codes	VA	WB	WD	WH
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	1210	1210	1210	1210
Ti	Intermittent torque	Nm	890	871	871	871
Tc	Continuous torque	Nm	672	655	655	655
Ts	Standstill torque	Nm	549	533	533	533
Ip	Peak current	Arms	37.2	99.4	199	398
Ii	Intermittent current	Arms	20.2	51.9	104	208
Ic	Continuous current	Arms	12.8	32.8	65.7	131
Is	Standstill current	Arms	9.67	24.9	49.8	99.5
ns	Rated low speed	rpm	0.11	0.11	0.11	0.11
nm	Maximum speed without flux weakening	rpm	100	268	536	963
nm,FW	Maximum speed with flux weakening	rpm	360	632	847	963
ton,p	Maximum ON time for peak cycle	s	6.4	5.4	5.4	5.4
ton,i	Maximum ON time for intermittent cycle	s	2.9	2.9	2.9	2.9
Pp	Power dissipation @ Ip	W	26600	28700	28700	28700
Pi	Power dissipation @ Ii	W	9690	9560	9560	9560
Pc	Power dissipation @ Ic	W	3880	3830	3830	3830
Td	Max. detent torque (average to peak)	Nm	3.3	3.3	3.3	3.3

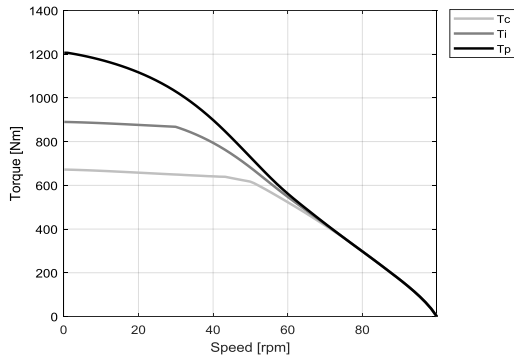
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	68.8	25.7	12.9	6.43
Ku	Back EMF constant (*)	Vrms/(rad/s)	39.7	14.8	7.42	3.71
Km	Motor constant	Nm/√W	16.8	16.3	16.3	16.3
R20	Electrical resistance at 20°C (*)	Ohm	11.1	1.66	0.416	0.104
Ld/Lq	Electrical inductance (*)	mH	122 / 98.8	17.1 / 14.1	4.26 / 3.51	1.07 / 0.878
Isc	Maximum short-circuit current	Arms	8.54	22.8	45.7	91.3
nb	Base speed	rpm	49.9	213	486	N/A
nb,i	Base speed at intermittent duty cycle	rpm	29.9	165	396	933
nb,p	Base speed at peak duty cycle	rpm	0.974	107	248	528
nn	Rated speed	rpm	40.3	189	438	437
Tn	Rated torque	Nm	641	390	251	252
In	Rated current	Arms	12.6	18.0	23.4	46.9
rth	Thermal time constant	s	122	120	120	120
Rth	Thermal resistance	K/W	0.0272	0.0275	0.0275	0.0275
2p	Number of poles	-	88	88	88	88
J	Rotor inertia	kg·m²	0.268	0.268	0.268	0.268
mr	Rotor mass	kg	8.11	8.11	8.11	8.11
ms	Stator mass	kg	40.3	40.0	40.0	40.0

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	0.150	0.150	0.150	0.150
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	12	12	12	12
Δpw	Max. pressure drop at qw	bar	0.4	0.4	0.4	0.4

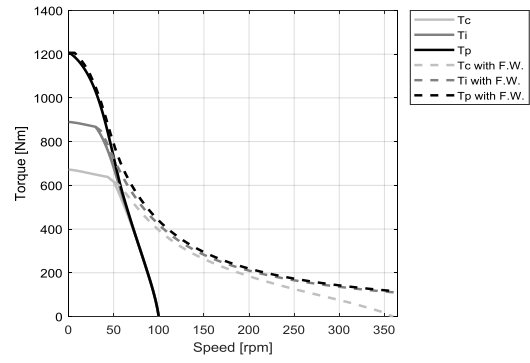
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

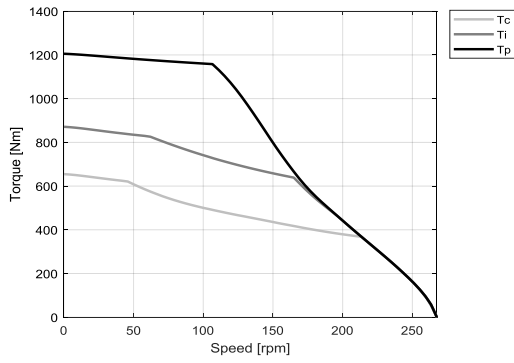
VA - WATER COOLING



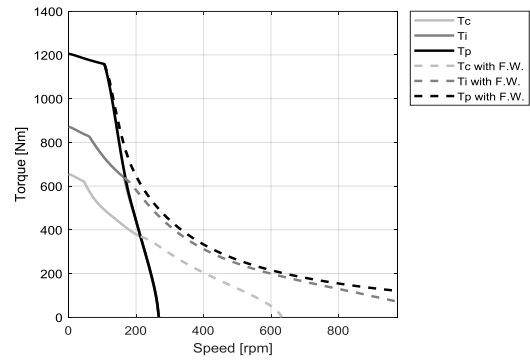
VA - WATER COOLING



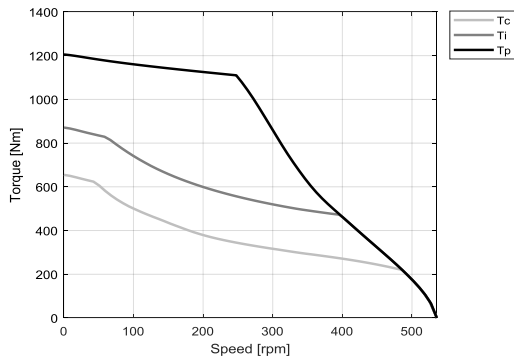
WB - WATER COOLING



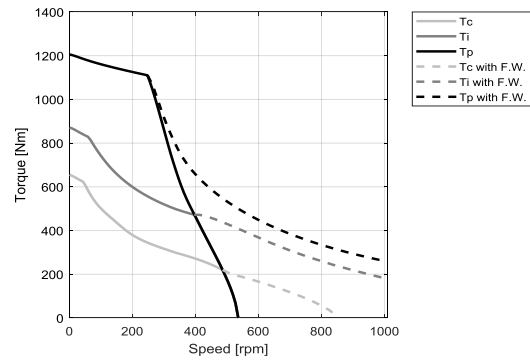
WB - WATER COOLING



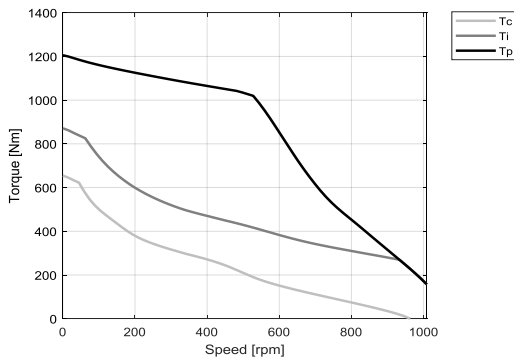
WD - WATER COOLING



WD - WATER COOLING



WH - WATER COOLING



WH - WATER COOLING

