

MOTOR PERFORMANCE		Winding codes	WB	WD	WH	WP
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	6890	6890	6890	6890
Ti	Intermittent torque	Nm	4900	4900	4900	4900
Tc	Continuous torque	Nm	3650	3650	3650	3650
Ts	Standstill torque	Nm	2950	2950	2950	2950
Ip	Peak current	Arms	87.1	174	348	697
Ii	Intermittent current	Arms	44.4	88.8	178	355
Ic	Continuous current	Arms	28.1	56.1	112	225
Is	Standstill current	Arms	21.3	42.5	85.1	170
ns	Rated low speed	rpm	0.047	0.047	0.047	0.047
nm	Maximum speed without flux weakening	rpm	42.8	85.6	171	343
nm,FW	Maximum speed with flux weakening	rpm	156	245	332	415
ton,p	Maximum ON time for peak cycle	s	6.6	6.6	6.6	6.6
ton,i	Maximum ON time for intermittent cycle	s	2.9	2.9	2.9	2.9
Pp	Power dissipation @ Ip	W	61800	61800	61800	61800
Pi	Power dissipation @ Ii	W	19500	19500	19500	19500
Pc	Power dissipation @ Ic	W	7790	7790	7790	7790
Td	Max. detent torque (average to peak)	Nm	18	18	18	18

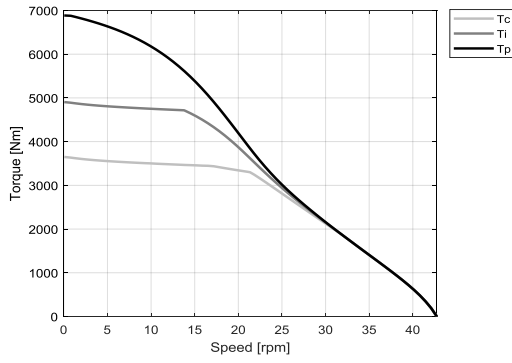
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	161	80.6	40.3	20.1
Ku	Back EMF constant (*)	Vrms/(rad/s)	92.8	46.4	23.2	11.6
Km	Motor constant	Nm/√W	61.1	61.1	61.1	61.1
R20	Electrical resistance at 20°C (*)	Ohm	4.63	1.16	0.289	0.0723
Ld/Lq	Electrical inductance (*)	mH	67.9 / 56.8	17.0 / 14.2	4.24 / 3.55	1.06 / 0.888
Isc	Maximum short-circuit current	Arms	17.9	35.9	71.7	143
nb	Base speed	rpm	21.3	58.7	144	336
nb,i	Base speed at intermittent duty cycle	rpm	13.8	43.9	109	266
nb,p	Base speed at peak duty cycle	rpm	0.809	28.9	71.3	152
nn	Rated speed	rpm	17.5	51.0	130	200
Tn	Rated torque	Nm	3430	2630	1680	1260
In	Rated current	Arms	27.5	39.3	48.5	75.0
rth	Thermal time constant	s	146	146	146	146
Rth	Thermal resistance	K/W	0.0136	0.0136	0.0136	0.0136
2p	Number of poles	-	176	176	176	176
J	Rotor inertia	kg·m²	4.94	4.94	4.94	4.94
mr	Rotor mass	kg	24.8	24.8	24.8	24.8
ms	Stator mass	kg	115	115	115	115

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	0.410	0.410	0.410	0.410
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	24	24	24	24
Δpw	Max. pressure drop at qw	bar	1.1	1.1	1.1	1.1

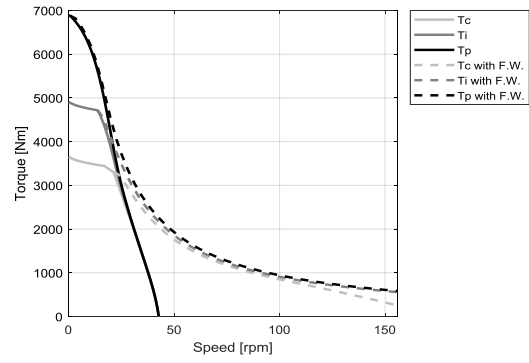
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

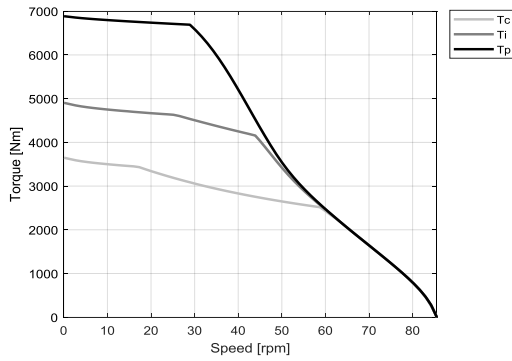
WB - WATER COOLING



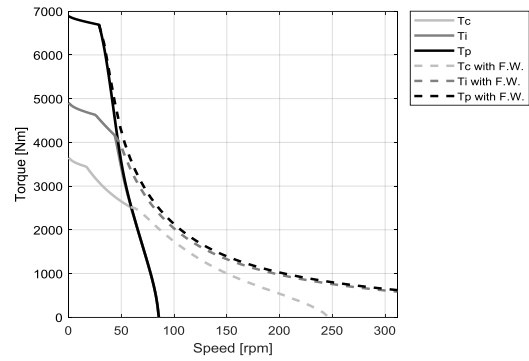
WB - WATER COOLING



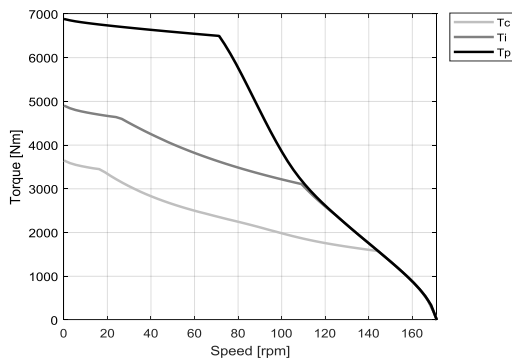
WD - WATER COOLING



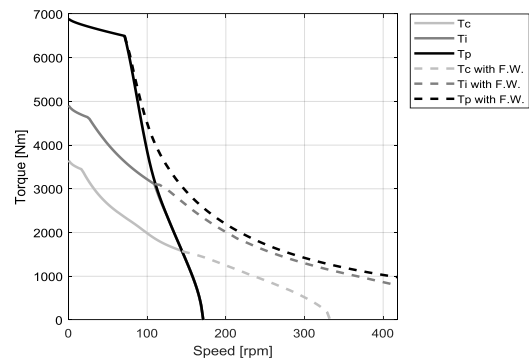
WD - WATER COOLING



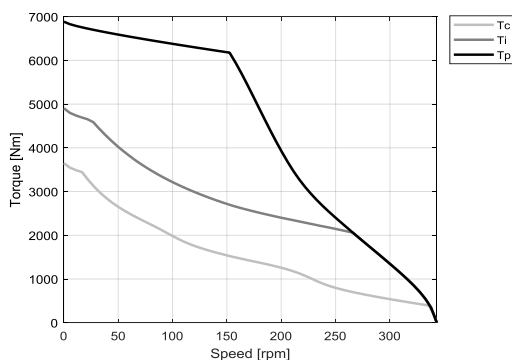
WH - WATER COOLING



WH - WATER COOLING



WP - WATER COOLING



WP - WATER COOLING

