

MOTOR PERFORMANCE		Winding codes	WA	WB	WD	WH
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
TP	Peak torque	Nm	2190	2410	2410	2410
Ti	Intermittent torque	Nm	1790	1790	1790	1790
Tc	Continuous torque	Nm	1350	1350	1350	1350
Ts	Standstill torque	Nm	1100	1100	1100	1100
Ip	Peak current	Arms	36.8	93.3	187	373
li	Intermittent current	Arms	26.4	52.7	105	211
Ic	Continuous current	Arms	16.7	33.3	66.7	133
Is	Standstill current	Arms	12.6	25.3	50.5	101
ns	Rated low speed	rpm	0.12	0.12	0.12	0.12
nm	Maximum speed without flux weakening	rpm	66.8	134	268	536
nm,FW	Maximum speed with flux weakening	rpm	199	315	492	774
ton,p	Maximum ON time for peak cycle	s	12	5.4	5.4	5.4
ton,i	Maximum ON time for intermittent cycle	s	2.7	2.7	2.7	2.7
Pp	Power dissipation @ Ip	W	26400	44600	44600	44600
Pi	Power dissipation @ li	W	17600	17600	17600	17600
Pc	Power dissipation @ Ic	W	7050	7050	7050	7050
Td	Max. detent torque (average to peak)	Nm	6.6	6.6	6.6	6.6

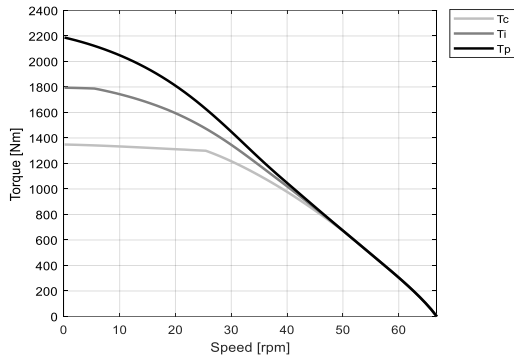
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	103	51.6	25.8	12.9
Ku	Back EMF constant (*)	Vrms/(rad/s)	59.4	29.7	14.8	7.42
Km	Motor constant	Nm/√W	24.3	24.3	24.3	24.3
R20	Electrical resistance at 20°C (*)	Ohm	12.0	3.01	0.752	0.188
Ld/Lq	Electrical inductance (*)	mH	124 / 102	31.0 / 25.6	7.75 / 6.40	1.94 / 1.60
Isc	Maximum short-circuit current	Arms	12.6	25.1	50.2	100
nb	Base speed	rpm	25.4	101	233	514
nb,i	Base speed at intermittent duty cycle	rpm	5.49	72.4	195	449
nb,p	Base speed at peak duty cycle	rpm	0.0	39.2	122	274
nn	Rated speed	rpm	19.8	86.1	213	314
Tn	Rated torque	Nm	1310	925	625	494
In	Rated current	Arms	16.6	21.3	27.8	44.6
rth	Thermal time constant	s	112	112	112	112
Rth	Thermal resistance	K/W	0.0144	0.0144	0.0144	0.0144
2p	Number of poles	-	88	88	88	88
J	Rotor inertia	kg·m²	0.533	0.533	0.533	0.533
mr	Rotor mass	kg	16.1	16.1	16.1	16.1
ms	Stator mass	kg	62.9	62.9	62.9	62.9

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	0.260	0.260	0.260	0.260
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	22	22	22	22
Δpw	Max. pressure drop at qw	bar	1.4	1.4	1.4	1.4

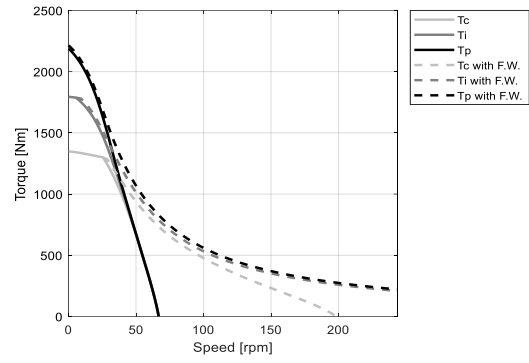
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

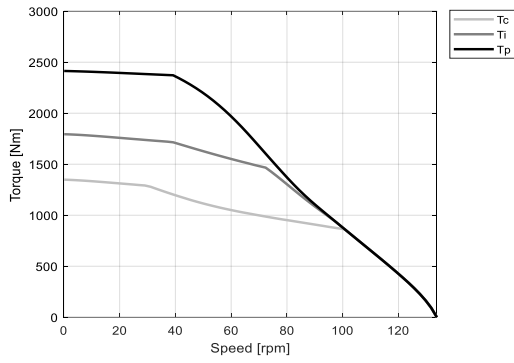
WA - WATER COOLING



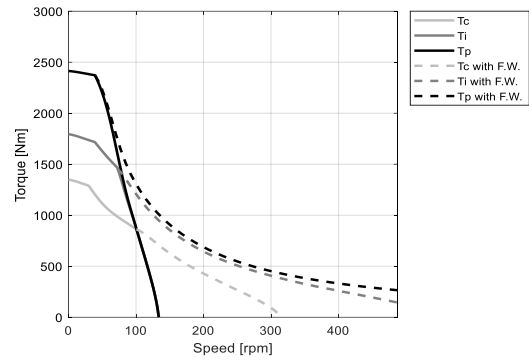
WA - WATER COOLING



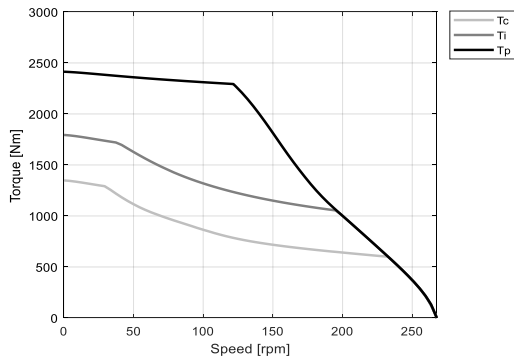
WB - WATER COOLING



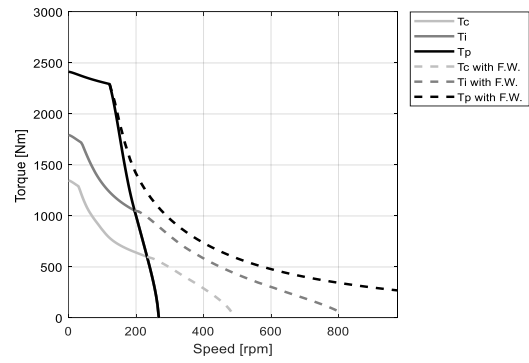
WB - WATER COOLING



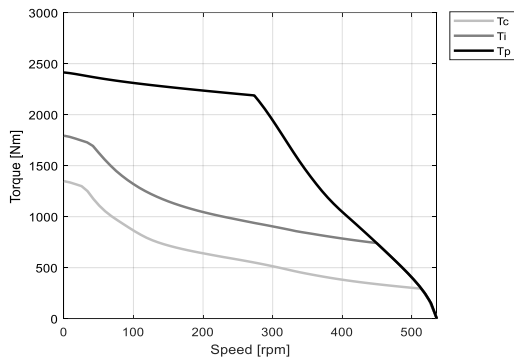
WD - WATER COOLING



WD - WATER COOLING



WH - WATER COOLING



WH - WATER COOLING

