

MOTOR PERFORMANCE		Winding codes	WB	WE		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	3710	3710		
Ti	Intermittent torque	Nm	2750	2750		
Tc	Continuous torque	Nm	1990	1990		
Ts	Standstill torque	Nm	1580	1580		
Ip	Peak current	Arms	73.8	184		
Ii	Intermittent current	Arms	46.6	117		
Ic	Continuous current	Arms	29.5	73.7		
Is	Standstill current	Arms	22.3	55.9		
ns	Rated low speed	rpm	0.14	0.14		
nm	Maximum speed without flux weakening	rpm	87.9	220		
nm,FW	Maximum speed with flux weakening	rpm	321	530		
ton,p	Maximum ON time for peak cycle	s	11	11		
ton,i	Maximum ON time for intermittent cycle	s	2.7	2.7		
Pp	Power dissipation @ Ip	W	36600	36600		
Pi	Power dissipation @ Ii	W	18600	18600		
Pc	Power dissipation @ Ic	W	7430	7430		
Td	Max. detent torque (average to peak)	Nm	18	18		

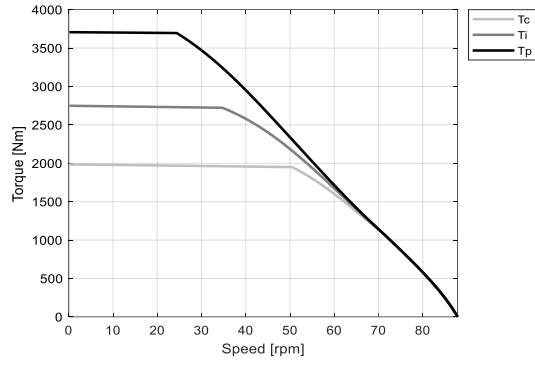
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	77.5	31.0		
Ku	Back EMF constant (*)	Vrms/(rad/s)	45.2	18.1		
Km	Motor constant	Nm/√W	31.5	31.5		
R20	Electrical resistance at 20°C (*)	Ohm	4.04	0.647		
Ld/Lq	Electrical inductance (*)	mH	67.3 / 61.5	10.8 / 9.84		
Isc	Maximum short-circuit current	Arms	31.0	77.6		
nb	Base speed	rpm	50.5	168		
nb,i	Base speed at intermittent duty cycle	rpm	34.7	133		
nb,p	Base speed at peak duty cycle	rpm	24.4	109		
nn	Rated speed	rpm	43.2	146		
Tn	Rated torque	Nm	1960	1780		
In	Rated current	Arms	29.4	66.7		
rth	Thermal time constant	s	171	171		
Rth	Thermal resistance	K/W	0.0137	0.0137		
2p	Number of poles	-	50	50		
J	Rotor inertia	kg·m²	0.623	0.623		
mr	Rotor mass	kg	20.3	20.3		
ms	Stator mass	kg	74.4	74.4		

MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Di	Intermittent duty cycle	%	40	40		
Dp	Peak duty cycle	%	5.0	5.0		
Sr	Rotor exchange surface	m²	0.330	0.330		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		
θw	Inlet water temperature	°C	20	20		
Δθw	Water temperature difference for Pc	K	5.0	5.0		
qw	Minimum water flow for Δθw	l/min	23	23		
Δpw	Max. pressure drop at qw	bar	1.7	1.7		

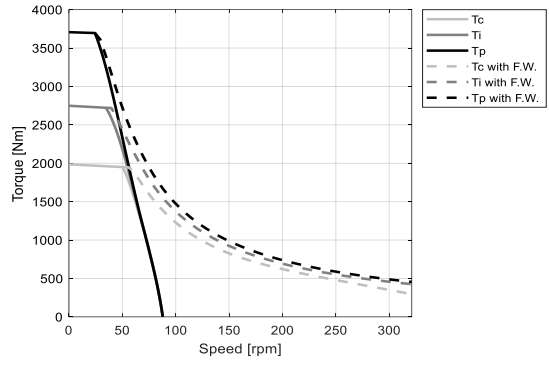
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

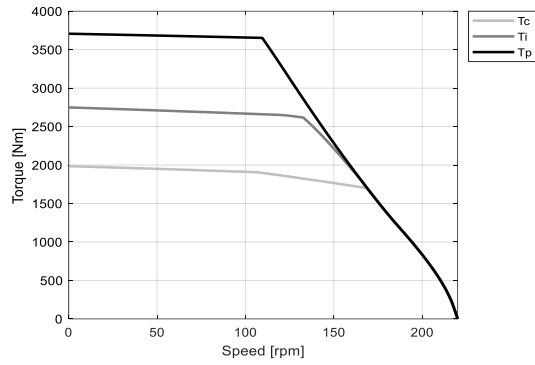
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