

MOTOR PERFORMANCE		Winding codes	VB	VE		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	1450	1450		
Ti	Intermittent torque	Nm	1080	1080		
Tc	Continuous torque	Nm	782	782		
Ts	Standstill torque	Nm	626	626		
Ip	Peak current	Arms	56.0	140		
Ii	Intermittent current	Arms	35.4	88.4		
Ic	Continuous current	Arms	22.4	55.9		
Is	Standstill current	Arms	16.9	42.4		
ns	Rated low speed	rpm	0.13	0.13		
nm	Maximum speed without flux weakening	rpm	164	412		
nm,FW	Maximum speed with flux weakening	rpm	600	600		
ton,p	Maximum ON time for peak cycle	s	14	14		
ton,i	Maximum ON time for intermittent cycle	s	2.7	2.7		
Pp	Power dissipation @ Ip	W	17400	17400		
Pi	Power dissipation @ Ii	W	8890	8890		
Pc	Power dissipation @ Ic	W	3550	3550		
Td	Max. detent torque (average to peak)	Nm	7.0	7.0		

MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	41.0	16.4		
Ku	Back EMF constant (*)	Vrms/(rad/s)	24.2	9.67		
Km	Motor constant	Nm/√W	18.3	18.3		
R20	Electrical resistance at 20°C (*)	Ohm	3.32	0.532		
Ld/Lq	Electrical inductance (*)	mH	47.4 / 44.2	7.59 / 7.08		
Isc	Maximum short-circuit current	Arms	23.6	58.9		
nb	Base speed	rpm	109	347		
nb,i	Base speed at intermittent duty cycle	rpm	86.1	277		
nb,p	Base speed at peak duty cycle	rpm	70.4	222		
nn	Rated speed	rpm	95.6	309		
Tn	Rated torque	Nm	761	563		
In	Rated current	Arms	22.2	39.3		
rth	Thermal time constant	s	184	184		
Rth	Thermal resistance	K/W	0.0298	0.0298		
2p	Number of poles	-	50	50		
J	Rotor inertia	kg·m²	0.262	0.262		
mr	Rotor mass	kg	8.54	8.54		
ms	Stator mass	kg	38.0	38.0		

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	0.148	0.148		
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	11	11		
Δpw	Max. pressure drop at qw	bar	0.4	0.4		

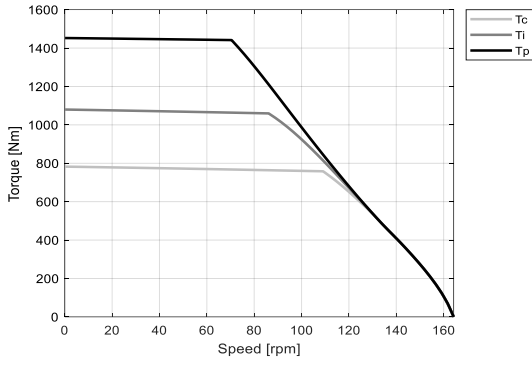
Notes: (*) terminal to terminal.

Hypotheses and tolerances are in ETEL Integration Manual.

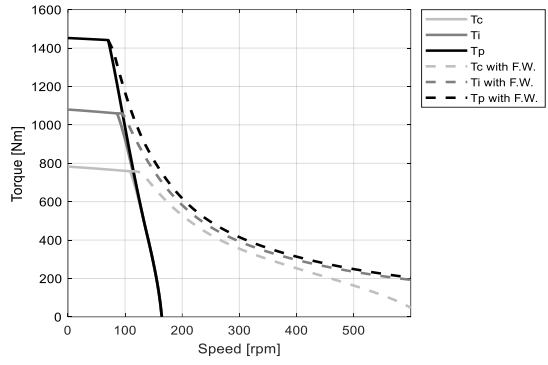
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

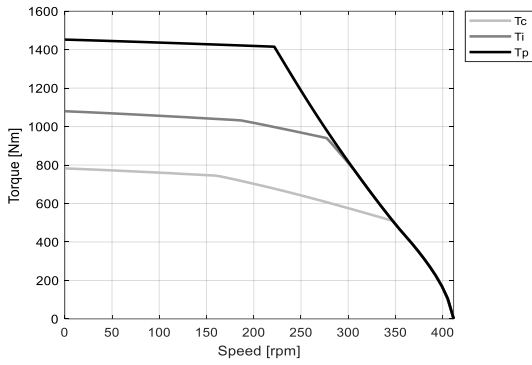
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