

MOTOR PERFORMANCE		Winding codes	VB	VD		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	1330	1330		
Ti	Intermittent torque	Nm	981	981		
Tc	Continuous torque	Nm	699	699		
Ts	Standstill torque	Nm	553	553		
Ip	Peak current	Arms	58.8	118		
Ii	Intermittent current	Arms	37.2	74.4		
Ic	Continuous current	Arms	23.5	47.0		
Is	Standstill current	Arms	17.8	35.6		
ns	Rated low speed	rpm	0.18	0.18		
nm	Maximum speed without flux weakening	rpm	202	405		
nm,FW	Maximum speed with flux weakening	rpm	693	880		
ton,p	Maximum ON time for peak cycle	s	14	14		
ton,i	Maximum ON time for intermittent cycle	s	2.8	2.8		
Pp	Power dissipation @ Ip	W	17700	17700		
Pi	Power dissipation @ Ii	W	9070	9070		
Pc	Power dissipation @ Ic	W	3630	3630		
Td	Max. detent torque (average to peak)	Nm	4.2	4.2		

MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	33.6	16.8		
Ku	Back EMF constant (*)	Vrms/(rad/s)	19.6	9.81		
Km	Motor constant	Nm/√W	15.6	15.6		
R20	Electrical resistance at 20°C (*)	Ohm	3.08	0.770		
Ld/Lq	Electrical inductance (*)	mH	40.3 / 37.5	10.1 / 9.38		
Isc	Maximum short-circuit current	Arms	28.1	56.2		
nb	Base speed	rpm	141	328		
nb,i	Base speed at intermittent duty cycle	rpm	111	265		
nb,p	Base speed at peak duty cycle	rpm	90.8	222		
nn	Rated speed	rpm	123	289		
Tn	Rated torque	Nm	680	616		
In	Rated current	Arms	23.3	42.3		
rth	Thermal time constant	s	164	164		
Rth	Thermal resistance	K/W	0.0288	0.0288		
2p	Number of poles	-	40	40		
J	Rotor inertia	kg·m²	0.152	0.152		
mr	Rotor mass	kg	8.32	8.32		
ms	Stator mass	kg	31.1	31.1		

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	0.152	0.152		
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	0.5	0.5		

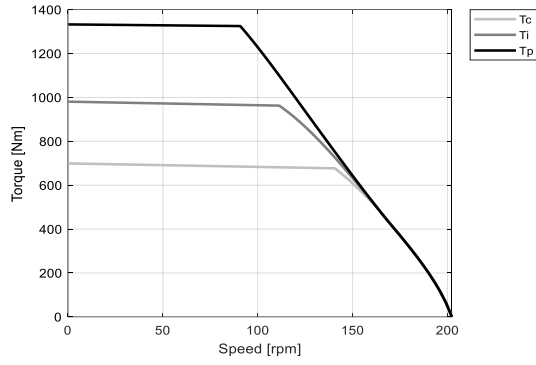
Notes: (*) terminal to terminal.

Hypotheses and tolerances are in ETEL Integration Manual.

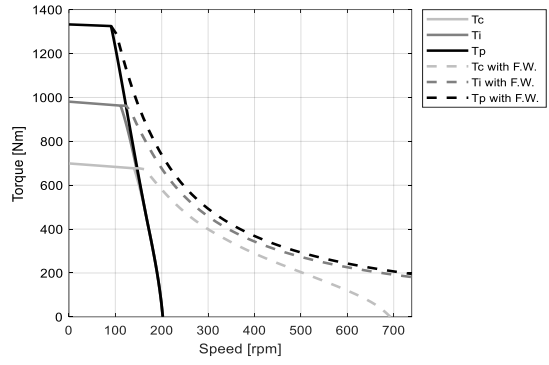
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

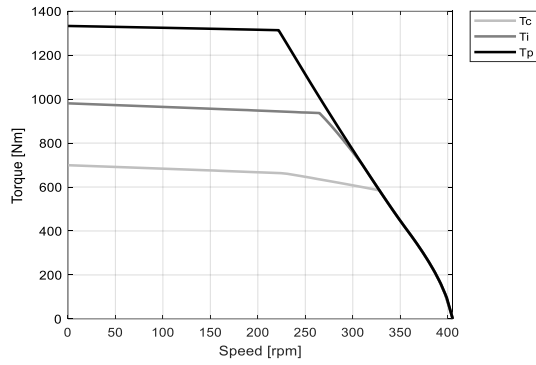
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