

MOTOR PERFORMANCE		Winding codes	SB	UC		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	624	624		
Ti	Intermittent torque	Nm	428	425		
Tc	Continuous torque	Nm	307	304		
Ts	Standstill torque	Nm	242	239		
Ip	Peak current	Arms	35.7	87.3		
Ii	Intermittent current	Arms	19.0	46.0		
Ic	Continuous current	Arms	12.0	29.1		
Is	Standstill current	Arms	9.11	22.0		
ns	Rated low speed	rpm	0.29	0.29		
nm	Maximum speed without flux weakening	rpm	235	576		
nm,FW	Maximum speed with flux weakening	rpm	859	1130		
ton,p	Maximum ON time for peak cycle	s	7.0	6.7		
ton,i	Maximum ON time for intermittent cycle	s	2.8	2.8		
Pp	Power dissipation @ Ip	W	17100	17500		
Pi	Power dissipation @ Ii	W	5950	5950		
Pc	Power dissipation @ Ic	W	2380	2380		
Td	Max. detent torque (average to peak)	Nm	1.5	1.5		

MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	28.4	11.6		
Ku	Back EMF constant (*)	Vrms/(rad/s)	16.9	6.90		
Km	Motor constant	Nm/√W	8.34	8.24		
R20	Electrical resistance at 20°C (*)	Ohm	7.72	1.32		
Ld/Lq	Electrical inductance (*)	mH	105 / 98.5	17.5 / 16.5		
Isc	Maximum short-circuit current	Arms	12.4	30.4		
nb	Base speed	rpm	145	454		
nb,i	Base speed at intermittent duty cycle	rpm	109	358		
nb,p	Base speed at peak duty cycle	rpm	67.4	271		
nn	Rated speed	rpm	126	398		
Tn	Rated torque	Nm	300	252		
In	Rated current	Arms	12.0	24.3		
rth	Thermal time constant	s	137	137		
Rth	Thermal resistance	K/W	0.0442	0.0442		
2p	Number of poles	-	30	30		
J	Rotor inertia	kg·m²	0.0575	0.0575		
mr	Rotor mass	kg	5.98	5.98		
ms	Stator mass	kg	18.9	18.9		

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	0.080	0.080		
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	7.4	7.4		
Δpw	Max. pressure drop at qw	bar	0.3	0.3		

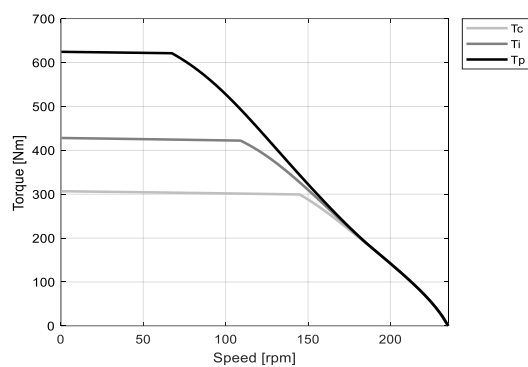
Notes: (*) terminal to terminal.

Hypotheses and tolerances are in ETEL Integration Manual.

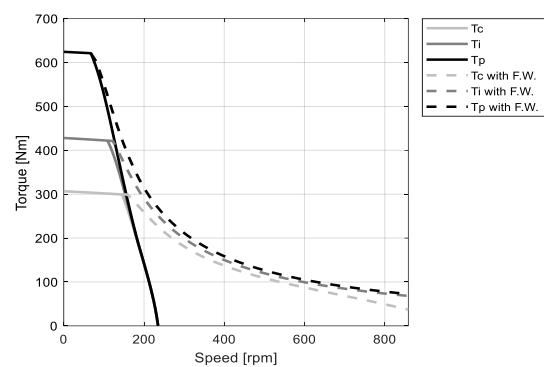
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

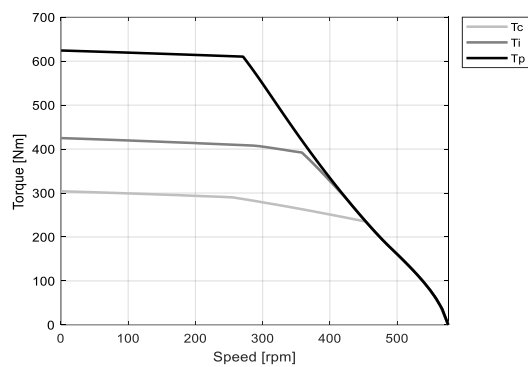
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