

MOTOR PERFORMANCE		Winding codes	UA	UC		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	345	345		
Ti	Intermittent torque	Nm	234	234		
Tc	Continuous torque	Nm	167	167		
Ts	Standstill torque	Nm	132	132		
Ip	Peak current	Arms	27.3	81.8		
Ii	Intermittent current	Arms	14.4	43.1		
Ic	Continuous current	Arms	9.09	27.3		
Is	Standstill current	Arms	6.89	20.7		
ns	Rated low speed	rpm	0.25	0.25		
nm	Maximum speed without flux weakening	rpm	319	962		
nm,FW	Maximum speed with flux weakening	rpm	1170	1170		
ton,p	Maximum ON time for peak cycle	s	8.0	8.0		
ton,i	Maximum ON time for intermittent cycle	s	2.9	2.9		
Pp	Power dissipation @ Ip	W	11200	11200		
Pi	Power dissipation @ Ii	W	3820	3820		
Pc	Power dissipation @ Ic	W	1530	1530		
Td	Max. detent torque (average to peak)	Nm	0.83	0.83		

MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	20.6	6.88		
Ku	Back EMF constant (*)	Vrms/(rad/s)	12.4	4.14		
Km	Motor constant	Nm/√W	5.74	5.74		
R20	Electrical resistance at 20°C (*)	Ohm	8.64	0.960		
Ld/Lq	Electrical inductance (*)	mH	98.4 / 94.4	10.9 / 10.5		
Isc	Maximum short-circuit current	Arms	9.73	29.2		
nb	Base speed	rpm	208	873		
nb,i	Base speed at intermittent duty cycle	rpm	162	681		
nb,p	Base speed at peak duty cycle	rpm	110	487		
nn	Rated speed	rpm	181	667		
Tn	Rated torque	Nm	163	106		
In	Rated current	Arms	9.01	17.1		
rth	Thermal time constant	s	158	158		
Rth	Thermal resistance	K/W	0.0697	0.0697		
2p	Number of poles	-	30	30		
J	Rotor inertia	kg·m²	0.0346	0.0346		
mr	Rotor mass	kg	3.61	3.61		
ms	Stator mass	kg	14.1	14.1		

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	0.053	0.053		
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	4.8	4.8		
Δpw	Max. pressure drop at qw	bar	0.2	0.2		

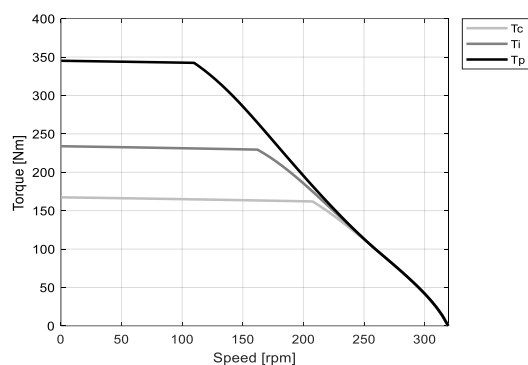
Notes: (*) terminal to terminal.

Hypotheses and tolerances are in ETEL Integration Manual.

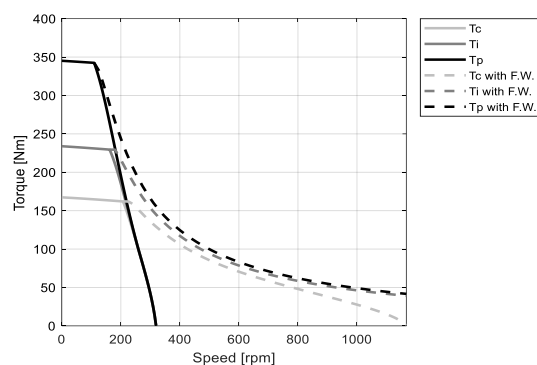
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

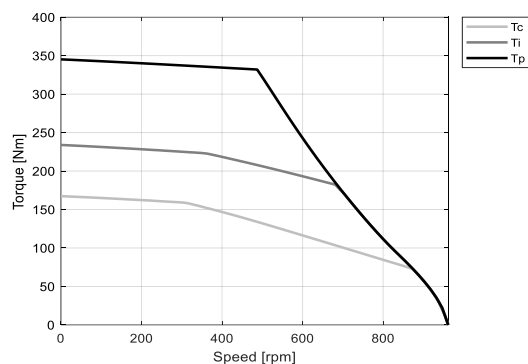
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