

MOTOR PERFORMANCE		Winding codes	VC	VF		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	2190	2190		
Ti	Intermittent torque	Nm	1620	1620		
Tc	Continuous torque	Nm	1170	1170		
Ts	Standstill torque	Nm	931	931		
Ip	Peak current	Arms	78.0	156		
Ii	Intermittent current	Arms	49.3	98.5		
Ic	Continuous current	Arms	31.2	62.3		
Is	Standstill current	Arms	23.6	47.2		
ns	Rated low speed	rpm	0.092	0.092		
nm	Maximum speed without flux weakening	rpm	154	308		
nm,FW	Maximum speed with flux weakening	rpm	544	544		
ton,p	Maximum ON time for peak cycle	s	18	18		
ton,i	Maximum ON time for intermittent cycle	s	2.8	2.8		
Pp	Power dissipation @ Ip	W	20100	20100		
Pi	Power dissipation @ Ii	W	10300	10300		
Pc	Power dissipation @ Ic	W	4100	4100		
Td	Max. detent torque (average to peak)	Nm	7.4	7.4		

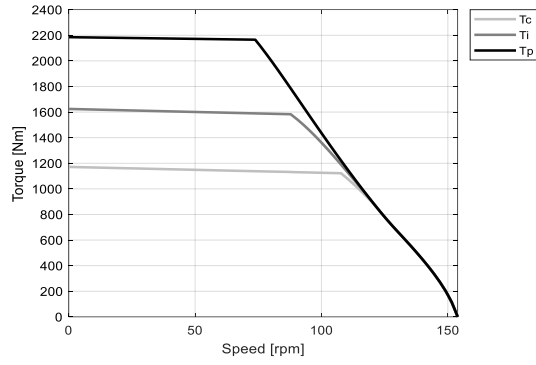
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	43.0	21.5		
Ku	Back EMF constant (*)	Vrms/(rad/s)	25.8	12.9		
Km	Motor constant	Nm/√W	25.0	25.0		
R20	Electrical resistance at 20°C (*)	Ohm	1.98	0.495		
Ld/Lq	Electrical inductance (*)	mH	32.0 / 27.5	7.99 / 6.86		
Isc	Maximum short-circuit current	Arms	31.1	62.2		
nb	Base speed	rpm	108	252		
nb,i	Base speed at intermittent duty cycle	rpm	87.8	207		
nb,p	Base speed at peak duty cycle	rpm	73.8	172		
nn	Rated speed	rpm	94.8	225		
Tn	Rated torque	Nm	1130	928		
In	Rated current	Arms	30.7	49.3		
rth	Thermal time constant	s	218	218		
Rth	Thermal resistance	K/W	0.0258	0.0258		
2p	Number of poles	-	60	60		
J	Rotor inertia	kg·m²	0.528	0.528		
mr	Rotor mass	kg	11.8	11.8		
ms	Stator mass	kg	46.3	46.3		

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	0.184	0.184		
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	13	13		
Δpw	Max. pressure drop at qw	bar	0.4	0.4		

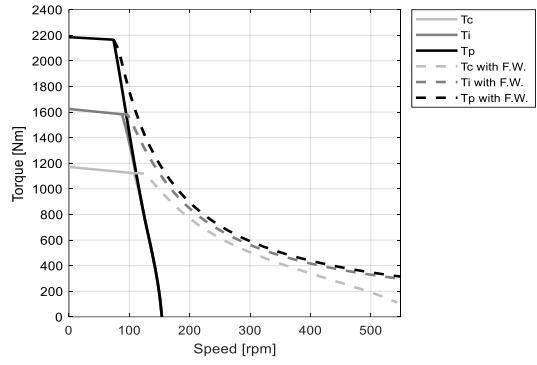
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

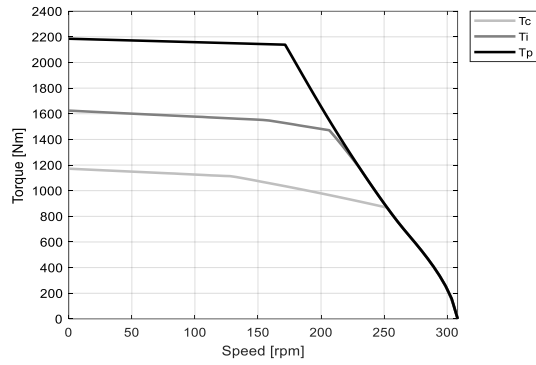
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