

MOTOR PERFORMANCE		Winding codes	UH	XH		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	5710	5450		
Ti	Intermittent torque	Nm	4450	4470		
Tc	Continuous torque	Nm	3350	3380		
Ts	Standstill torque	Nm	2710	2730		
Ip	Peak current	Arms	221	381		
Ii	Intermittent current	Arms	140	274		
Ic	Continuous current	Arms	88.4	173		
Is	Standstill current	Arms	67.0	131		
ns	Rated low speed	rpm	0.094	0.094		
nm	Maximum speed without flux weakening	rpm	149	290		
nm,FW	Maximum speed with flux weakening	rpm	550	1070		
ton,p	Maximum ON time for peak cycle	s	11	17		
ton,i	Maximum ON time for intermittent cycle	s	3.0	3.1		
Pp	Power dissipation @ Ip	W	56600	43100		
Pi	Power dissipation @ Ii	W	28100	28400		
Pc	Power dissipation @ Ic	W	11200	11400		
Td	Max. detent torque (average to peak)	Nm	21	21		

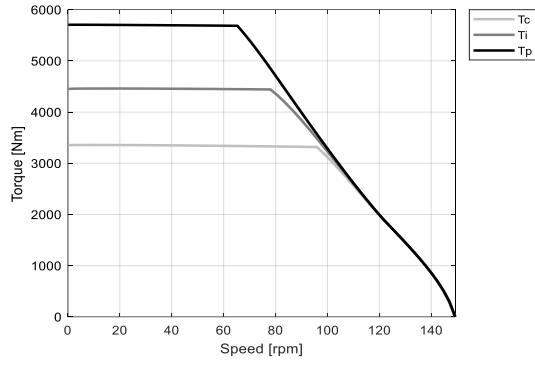
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	44.3	22.8		
Ku	Back EMF constant (*)	Vrms/(rad/s)	26.6	13.7		
Km	Motor constant	Nm/√W	43.2	43.4		
R20	Electrical resistance at 20°C (*)	Ohm	0.702	0.184		
Ld/Lq	Electrical inductance (*)	mH	9.92 / 8.16	2.63 / 2.16		
Isc	Maximum short-circuit current	Arms	70.4	137		
nb	Base speed	rpm	95.9	201		
nb,i	Base speed at intermittent duty cycle	rpm	78.0	168		
nb,p	Base speed at peak duty cycle	rpm	65.3	151		
nn	Rated speed	rpm	84.8	179		
Tn	Rated torque	Nm	3320	3260		
In	Rated current	Arms	87.5	168		
rth	Thermal time constant	s	145	145		
Rth	Thermal resistance	K/W	0.00807	0.00806		
2p	Number of poles	-	88	88		
J	Rotor inertia	kg·m²	3.37	3.37		
mr	Rotor mass	kg	80.7	80.7		
ms	Stator mass	kg	107	107		

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	0.271	0.271		
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	35	36		
Δpw	Max. pressure drop at qw	bar	2.7	2.7		

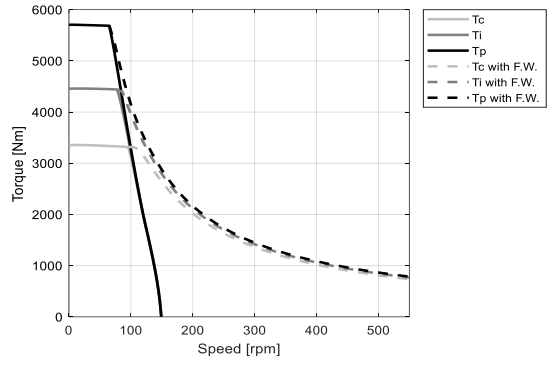
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.

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.

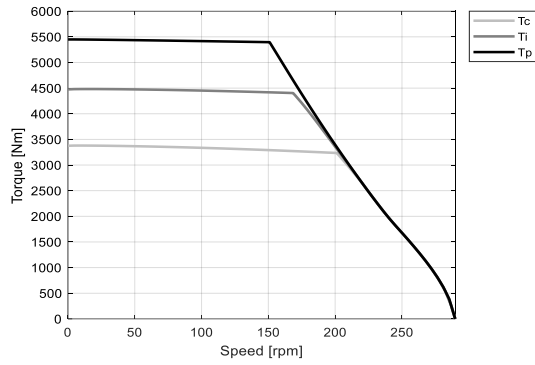
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