

MOTOR PERFORMANCE		Winding codes	UP	XP		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	13500	13500		
Ti	Intermittent torque	Nm	10200	10200		
Tc	Continuous torque	Nm	7580	7540		
Ts	Standstill torque	Nm	6130	6090		
Ip	Peak current	Arms	413	801		
Ii	Intermittent current	Arms	260	501		
Ic	Continuous current	Arms	165	317		
Is	Standstill current	Arms	125	240		
ns	Rated low speed	rpm	0.034	0.034		
nm	Maximum speed without flux weakening	rpm	120	234		
nm,FW	Maximum speed with flux weakening	rpm	443	661		
ton,p	Maximum ON time for peak cycle	s	15	14		
ton,i	Maximum ON time for intermittent cycle	s	3.2	3.2		
Pp	Power dissipation @ Ip	W	69900	71000		
Pi	Power dissipation @ Ii	W	34900	34900		
Pc	Power dissipation @ Ic	W	14000	14000		
Td	Max. detent torque (average to peak)	Nm	28	28		

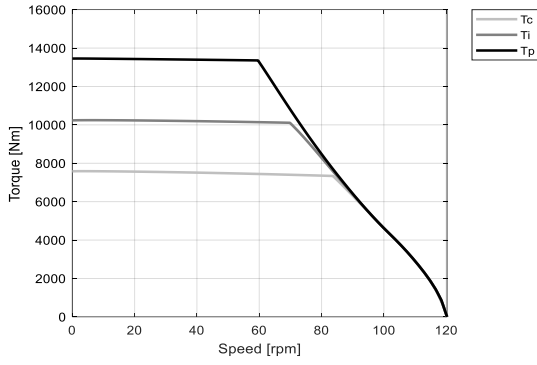
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	55.8	28.7		
Ku	Back EMF constant (*)	Vrms/(rad/s)	33.1	17.0		
Km	Motor constant	Nm/√W	91.8	91.1		
R20	Electrical resistance at 20°C (*)	Ohm	0.246	0.0662		
Ld/Lq	Electrical inductance (*)	mH	2.90 / 2.58	0.769 / 0.686		
Isc	Maximum short-circuit current	Arms	150	290		
nb	Base speed	rpm	83.7	175		
nb,i	Base speed at intermittent duty cycle	rpm	69.8	146		
nb,p	Base speed at peak duty cycle	rpm	59.6	124		
nn	Rated speed	rpm	74.3	156		
Tn	Rated torque	Nm	7380	6850		
In	Rated current	Arms	160	288		
rth	Thermal time constant	s	202	202		
Rth	Thermal resistance	K/W	0.00693	0.00691		
2p	Number of poles	-	176	176		
J	Rotor inertia	kg·m²	27.0	27.0		
mr	Rotor mass	kg	147	147		
ms	Stator mass	kg	215	215		

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	0.449	0.449		
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	10	10		
qw	Minimum water flow for Δθw	l/min	22	22		
Δpw	Max. pressure drop at qw	bar	1.0	0.9		

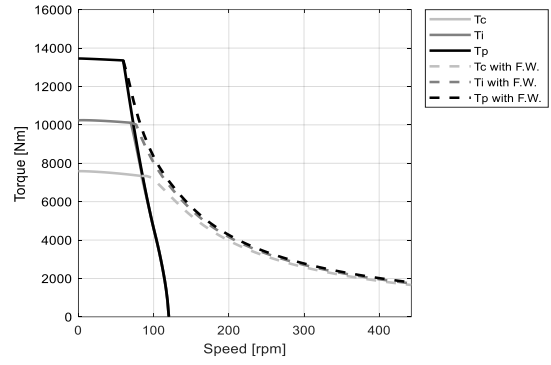
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.

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.

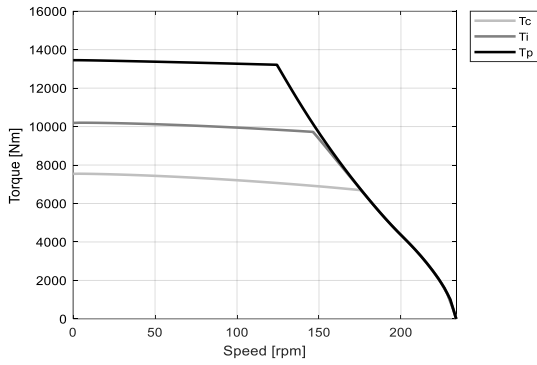
UP - WATER COOLING



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