

MOTOR PERFORMANCE		Winding codes	UH	XH		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	1740	1640		
Ti	Intermittent torque	Nm	1360	1350		
Tc	Continuous torque	Nm	1030	1020		
Ts	Standstill torque	Nm	844	829		
Ip	Peak current	Arms	215	359		
Ii	Intermittent current	Arms	136	257		
Ic	Continuous current	Arms	85.8	163		
Is	Standstill current	Arms	65.0	123		
ns	Rated low speed	rpm	0.082	0.082		
nm	Maximum speed without flux weakening	rpm	448	871		
nm,FW	Maximum speed with flux weakening	rpm	1240	1240		
ton,p	Maximum ON time for peak cycle	s	16	23		
ton,i	Maximum ON time for intermittent cycle	s	3.2	3.1		
Pp	Power dissipation @ Ip	W	22900	17400		
Pi	Power dissipation @ Ii	W	11700	11700		
Pc	Power dissipation @ Ic	W	4670	4670		
Td	Max. detent torque (average to peak)	Nm	7.0	7.0		

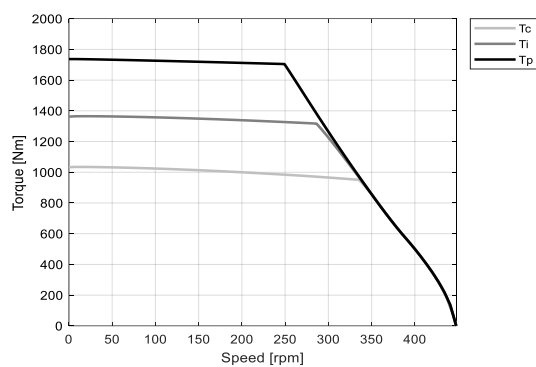
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	14.7	7.59		
Ku	Back EMF constant (*)	Vrms/(rad/s)	8.87	4.57		
Km	Motor constant	Nm/√W	22.0	21.5		
R20	Electrical resistance at 20°C (*)	Ohm	0.299	0.0833		
Ld/Lq	Electrical inductance (*)	mH	2.95 / 2.53	0.784 / 0.678		
Isc	Maximum short-circuit current	Arms	78.8	153		
nb	Base speed	rpm	336	720		
nb,i	Base speed at intermittent duty cycle	rpm	286	600		
nb,p	Base speed at peak duty cycle	rpm	249	523		
nn	Rated speed	rpm	298	644		
Tn	Rated torque	Nm	966	768		
In	Rated current	Arms	80.4	123		
rth	Thermal time constant	s	166	167		
Rth	Thermal resistance	K/W	0.0220	0.0219		
2p	Number of poles	-	88	88		
J	Rotor inertia	kg·m²	1.37	1.37		
mr	Rotor mass	kg	33.2	33.2		
ms	Stator mass	kg	49.2	49.4		

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	0.147	0.147		
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	15	15		
Δpw	Max. pressure drop at qw	bar	0.5	0.5		

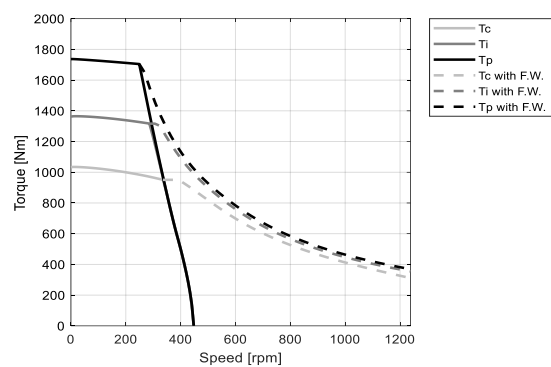
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.

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.

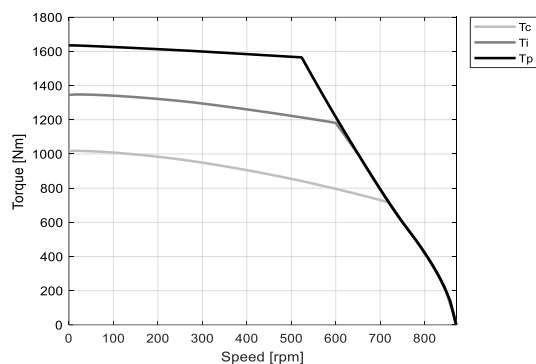
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