

MOTOR PERFORMANCE		Winding codes	VC	VF		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	7790	7790		
Ti	Intermittent torque	Nm	5810	5810		
Tc	Continuous torque	Nm	4210	4210		
Ts	Standstill torque	Nm	3360	3360		
Ip	Peak current	Arms	81.0	162		
Ii	Intermittent current	Arms	51.3	103		
Ic	Continuous current	Arms	32.4	64.9		
Is	Standstill current	Arms	24.6	49.2		
ns	Rated low speed	rpm	0.099	0.099		
nm	Maximum speed without flux weakening	rpm	45.2	90.5		
nm,FW	Maximum speed with flux weakening	rpm	165	312		
ton,p	Maximum ON time for peak cycle	s	12	12		
ton,i	Maximum ON time for intermittent cycle	s	2.8	2.8		
Pp	Power dissipation @ Ip	W	57000	57000		
Pi	Power dissipation @ Ii	W	28900	28900		
Pc	Power dissipation @ Ic	W	11600	11600		
Td	Max. detent torque (average to peak)	Nm	26	26		

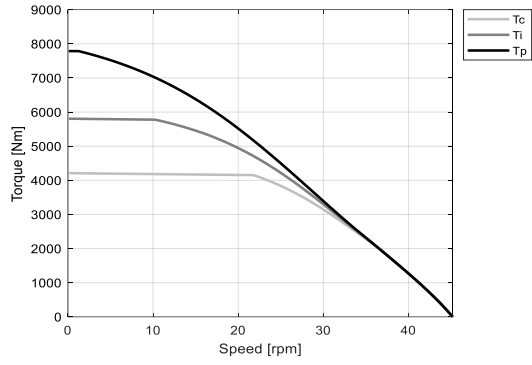
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	151	75.3		
Ku	Back EMF constant (*)	Vrms/(rad/s)	87.8	43.9		
Km	Motor constant	Nm/√W	53.7	53.7		
R20	Electrical resistance at 20°C (*)	Ohm	5.24	1.31		
Ld/Lq	Electrical inductance (*)	mH	93.7 / 81.6	23.4 / 20.4		
Isc	Maximum short-circuit current	Arms	36.0	72.1		
nb	Base speed	rpm	21.8	61.6		
nb,i	Base speed at intermittent duty cycle	rpm	10.2	48.2		
nb,p	Base speed at peak duty cycle	rpm	1.27	38.7		
nn	Rated speed	rpm	17.7	53.7		
Tn	Rated torque	Nm	4160	4080		
In	Rated current	Arms	32.4	64.3		
rth	Thermal time constant	s	201	201		
Rth	Thermal resistance	K/W	0.00854	0.00854		
2p	Number of poles	-	60	60		
J	Rotor inertia	kg·m²	1.78	1.78		
mr	Rotor mass	kg	39.8	39.8		
ms	Stator mass	kg	123	123		

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	0.561	0.561		
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	36	36		
Δpw	Max. pressure drop at qw	bar	2.8	2.8		

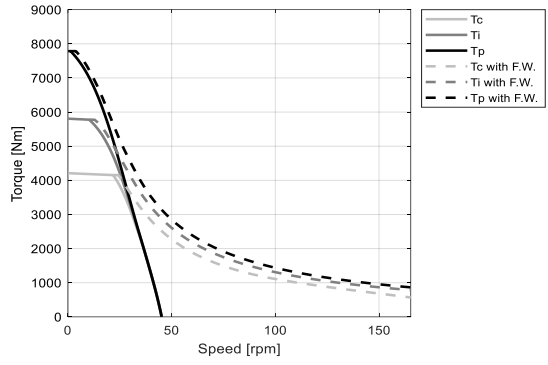
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

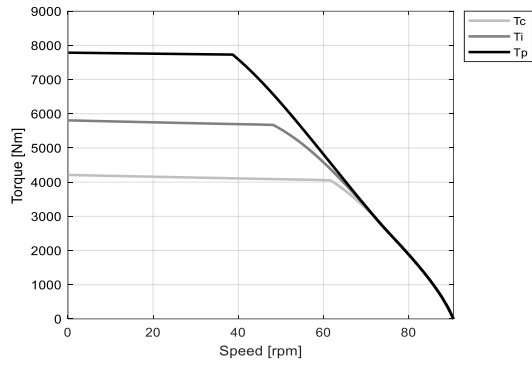
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