

MOTOR PERFORMANCE		Winding codes	VC	VF		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	3120	3120		
Ti	Intermittent torque	Nm	2320	2320		
Tc	Continuous torque	Nm	1680	1680		
Ts	Standstill torque	Nm	1340	1340		
Ip	Peak current	Arms	79.3	159		
Ii	Intermittent current	Arms	50.1	100		
Ic	Continuous current	Arms	31.7	63.4		
Is	Standstill current	Arms	24.0	48.0		
ns	Rated low speed	rpm	0.094	0.094		
nm	Maximum speed without flux weakening	rpm	110	220		
nm,FW	Maximum speed with flux weakening	rpm	401	500		
ton,p	Maximum ON time for peak cycle	s	17	17		
ton,i	Maximum ON time for intermittent cycle	s	2.7	2.7		
Pp	Power dissipation @ Ip	W	26400	26400		
Pi	Power dissipation @ Ii	W	13500	13500		
Pc	Power dissipation @ Ic	W	5400	5400		
Td	Max. detent torque (average to peak)	Nm	11	11		

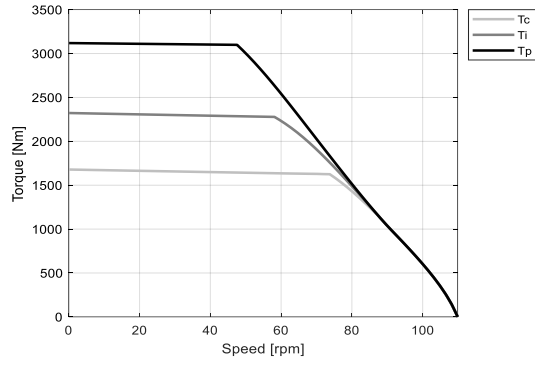
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	61.0	30.5		
Ku	Back EMF constant (*)	Vrms/(rad/s)	36.1	18.1		
Km	Motor constant	Nm/√W	31.3	31.3		
R20	Electrical resistance at 20°C (*)	Ohm	2.52	0.631		
Ld/Lq	Electrical inductance (*)	mH	42.3 / 36.5	10.6 / 9.11		
Isc	Maximum short-circuit current	Arms	32.9	65.8		
nb	Base speed	rpm	73.8	174		
nb,i	Base speed at intermittent duty cycle	rpm	58.1	142		
nb,p	Base speed at peak duty cycle	rpm	47.6	120		
nn	Rated speed	rpm	64.4	154		
Tn	Rated torque	Nm	1630	1470		
In	Rated current	Arms	31.4	56.1		
rth	Thermal time constant	s	213	213		
Rth	Thermal resistance	K/W	0.0195	0.0195		
2p	Number of poles	-	60	60		
J	Rotor inertia	kg·m²	0.737	0.737		
mr	Rotor mass	kg	16.5	16.5		
ms	Stator mass	kg	59.8	59.8		

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	0.246	0.246		
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	17	17		
Δpw	Max. pressure drop at qw	bar	0.7	0.7		

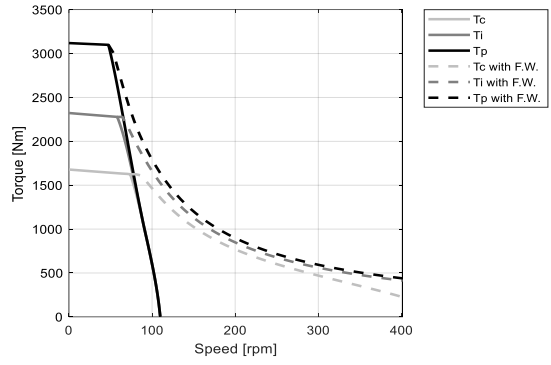
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

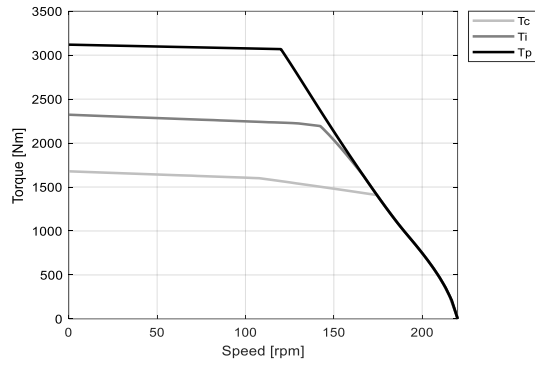
VC - WATER COOLING



VC - WATER COOLING



VF - WATER COOLING



VF - WATER COOLING

