

MOTOR PERFORMANCE		Winding codes	VC	VF		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	5480	5480		
Ti	Intermittent torque	Nm	4080	4080		
Tc	Continuous torque	Nm	2960	2960		
Ts	Standstill torque	Nm	2360	2360		
Ip	Peak current	Arms	81.3	163		
Ii	Intermittent current	Arms	51.3	103		
Ic	Continuous current	Arms	32.5	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	64.1	128		
nm,FW	Maximum speed with flux weakening	rpm	234	412		
ton,p	Maximum ON time for peak cycle	s	14	14		
ton,i	Maximum ON time for intermittent cycle	s	2.7	2.7		
Pp	Power dissipation @ Ip	W	42600	42600		
Pi	Power dissipation @ Ii	W	21600	21600		
Pc	Power dissipation @ Ic	W	8640	8640		
Td	Max. detent torque (average to peak)	Nm	19	19		

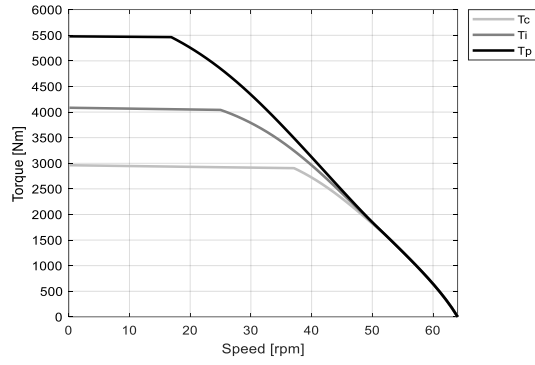
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	106	52.9		
Ku	Back EMF constant (*)	Vrms/(rad/s)	61.9	31.0		
Km	Motor constant	Nm/√W	43.9	43.9		
R20	Electrical resistance at 20°C (*)	Ohm	3.88	0.970		
Ld/Lq	Electrical inductance (*)	mH	68.0 / 58.9	17.0 / 14.7		
Isc	Maximum short-circuit current	Arms	35.1	70.2		
nb	Base speed	rpm	37.1	94.1		
nb,i	Base speed at intermittent duty cycle	rpm	25.0	75.7		
nb,p	Base speed at peak duty cycle	rpm	16.9	63.2		
nn	Rated speed	rpm	31.5	81.9		
Tn	Rated torque	Nm	2910	2820		
In	Rated current	Arms	32.3	63.4		
rth	Thermal time constant	s	203	203		
Rth	Thermal resistance	K/W	0.0118	0.0118		
2p	Number of poles	-	60	60		
J	Rotor inertia	kg·m²	1.26	1.26		
mr	Rotor mass	kg	28.1	28.1		
ms	Stator mass	kg	91.1	91.1		

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	0.403	0.403		
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	27	27		
Δpw	Max. pressure drop at qw	bar	1.7	1.7		

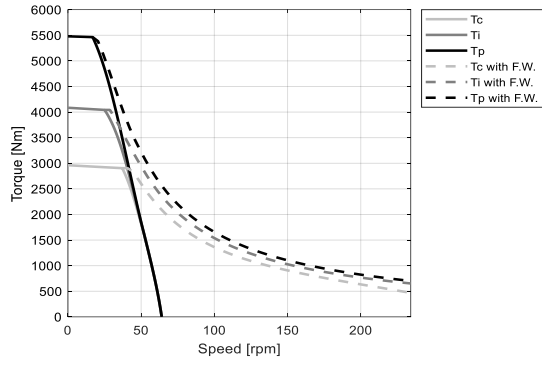
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

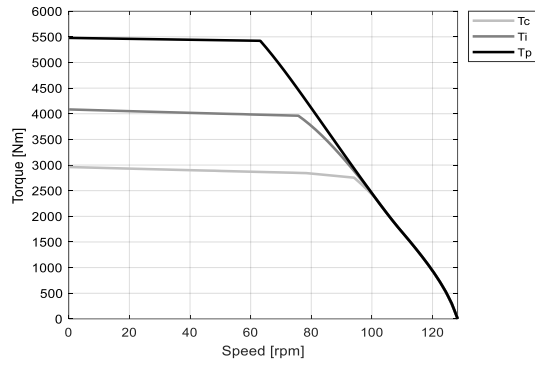
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