

MOTOR PERFORMANCE		Winding codes	VB	VD		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	440	440		
Ti	Intermittent torque	Nm	344	344		
Tc	Continuous torque	Nm	256	256		
Ts	Standstill torque	Nm	203	203		
Ip	Peak current	Arms	69.8	140		
Ii	Intermittent current	Arms	44.1	88.2		
Ic	Continuous current	Arms	27.9	55.8		
Is	Standstill current	Arms	21.1	42.3		
ns	Rated low speed	rpm	0.22	0.22		
nm	Maximum speed without flux weakening	rpm	627	1260		
nm,FW	Maximum speed with flux weakening	rpm	2310	2690		
ton,p	Maximum ON time for peak cycle	s	13	13		
ton,i	Maximum ON time for intermittent cycle	s	3.1	3.1		
Pp	Power dissipation @ Ip	W	12200	12200		
Pi	Power dissipation @ Ii	W	6200	6200		
Pc	Power dissipation @ Ic	W	2480	2480		
Td	Max. detent torque (average to peak)	Nm	2.0	2.0		

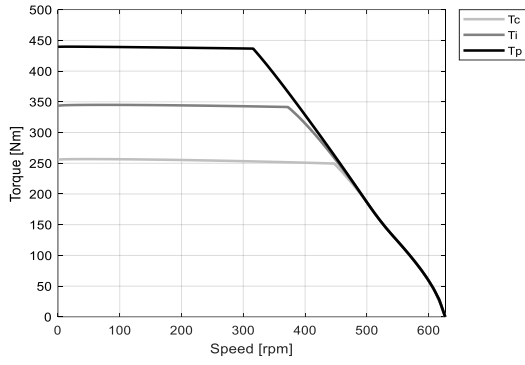
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	10.2	5.11		
Ku	Back EMF constant (*)	Vrms/(rad/s)	6.34	3.17		
Km	Motor constant	Nm/√W	6.79	6.79		
R20	Electrical resistance at 20°C (*)	Ohm	1.51	0.377		
Ld/Lq	Electrical inductance (*)	mH	12.8 / 10.8	3.21 / 2.71		
Isc	Maximum short-circuit current	Arms	25.9	51.8		
nb	Base speed	rpm	447	968		
nb,i	Base speed at intermittent duty cycle	rpm	372	810		
nb,p	Base speed at peak duty cycle	rpm	316	685		
nn	Rated speed	rpm	397	862		
Tn	Rated torque	Nm	251	233		
In	Rated current	Arms	27.3	51.6		
rth	Thermal time constant	s	126	126		
Rth	Thermal resistance	K/W	0.0411	0.0411		
2p	Number of poles	-	44	44		
J	Rotor inertia	kg·m²	0.103	0.103		
mr	Rotor mass	kg	11.9	11.9		
ms	Stator mass	kg	17.6	17.6		

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	0.064	0.064		
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	7.8	7.8		
Δpw	Max. pressure drop at qw	bar	0.3	0.3		

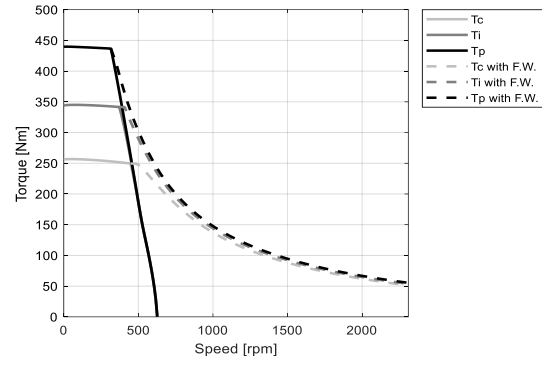
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.

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.

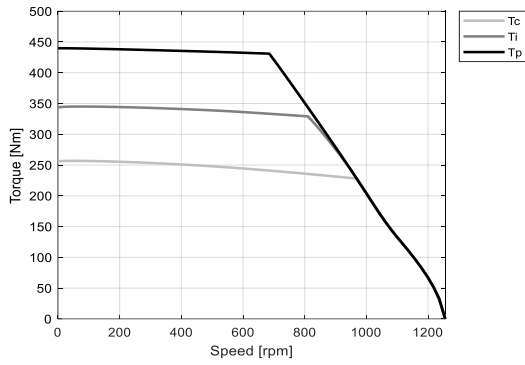
VB - WATER COOLING



VB - WATER COOLING



VD - WATER COOLING



VD - WATER COOLING

