

MOTOR PERFORMANCE		Winding codes	VB	VD		
		UNIT	WATER COOLING	WATER COOLING		
TP	Peak torque	Nm	915	915		
TI	Intermittent torque	Nm	717	717		
TC	Continuous torque	Nm	538	538		
TS	Standstill torque	Nm	428	428		
IP	Peak current	Arms	73.5	147		
II	Intermittent current	Arms	46.5	93.0		
IC	Continuous current	Arms	29.4	58.8		
IS	Standstill current	Arms	22.3	44.5		
NS	Rated low speed	rpm	0.25	0.25		
NM	Maximum speed without flux weakening	rpm	313	627		
NM,FW	Maximum speed with flux weakening	rpm	1150	2310		
TON,p	Maximum ON time for peak cycle	s	11	11		
TON,i	Maximum ON time for intermittent cycle	s	3.1	3.1		
PP	Power dissipation @ Ip	W	21900	21900		
PI	Power dissipation @ Ii	W	11000	11000		
PC	Power dissipation @ Ic	W	4410	4410		
TD	Max. detent torque (average to peak)	Nm	4.0	4.0		

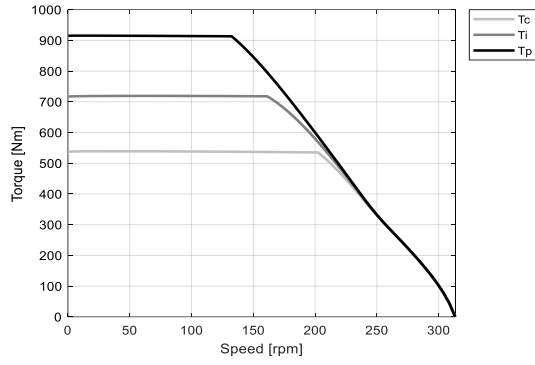
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	20.6	10.3		
Ku	Back EMF constant (*)	Vrms/(rad/s)	12.7	6.34		
Km	Motor constant	Nm/√W	10.7	10.7		
R20	Electrical resistance at 20°C (*)	Ohm	2.45	0.613		
Ld/Lq	Electrical inductance (*)	mH	25.8 / 21.6	6.45 / 5.40		
Isc	Maximum short-circuit current	Arms	25.8	51.5		
nb	Base speed	rpm	202	447		
nb,i	Base speed at intermittent duty cycle	rpm	161	373		
nb,p	Base speed at peak duty cycle	rpm	132	317		
nn	Rated speed	rpm	178	398		
Tn	Rated torque	Nm	536	525		
In	Rated current	Arms	29.2	57.5		
rth	Thermal time constant	s	109	109		
Rth	Thermal resistance	K/W	0.0218	0.0218		
2p	Number of poles	-	44	44		
J	Rotor inertia	kg·m²	0.184	0.184		
mr	Rotor mass	kg	20.9	20.9		
ms	Stator mass	kg	28.7	28.7		

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	0.090	0.090		
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	14	14		
Δpw	Max. pressure drop at qw	bar	1.0	1.0		

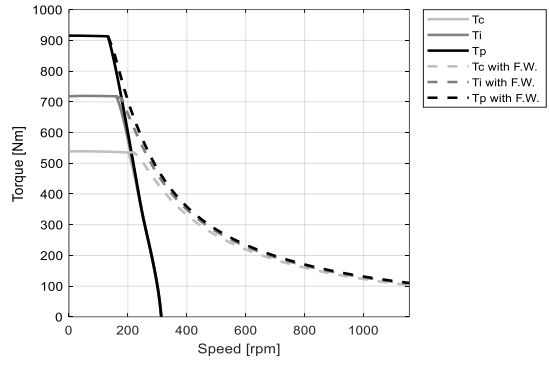
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.

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.

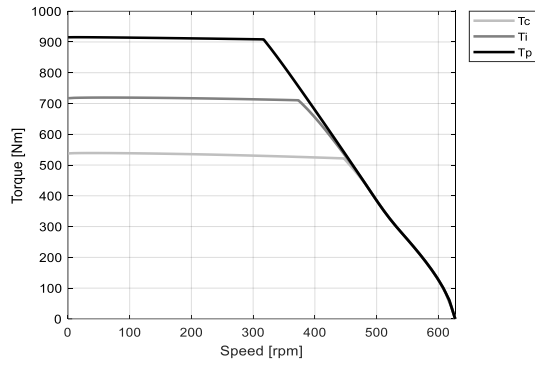
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