

MOTOR PERFORMANCE		Winding codes	VB	VD		
		UNIT	WATER COOLING	WATER COOLING		
<b>Tp</b>	Peak torque	Nm	954	954		
<b>Ti</b>	Intermittent torque	Nm	704	704		
<b>Tc</b>	Continuous torque	Nm	502	502		
<b>Ts</b>	Standstill torque	Nm	396	396		
<b>Ip</b>	Peak current	Arms	57.8	116		
<b>Ii</b>	Intermittent current	Arms	36.5	72.9		
<b>Ic</b>	Continuous current	Arms	23.1	46.1		
<b>Is</b>	Standstill current	Arms	17.5	34.9		
<b>ns</b>	Rated low speed	rpm	0.18	0.18		
<b>nm</b>	Maximum speed without flux weakening	rpm	283	568		
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	870	900		
<b>ton,p</b>	Maximum ON time for peak cycle	s	15	15		
<b>ton,i</b>	Maximum ON time for intermittent cycle	s	2.8	2.8		
<b>Pp</b>	Power dissipation @ Ip	W	13400	13400		
<b>Pi</b>	Power dissipation @ Ii	W	6870	6870		
<b>Pc</b>	Power dissipation @ Ic	W	2750	2750		
<b>Td</b>	Max. detent torque (average to peak)	Nm	3.0	3.0		

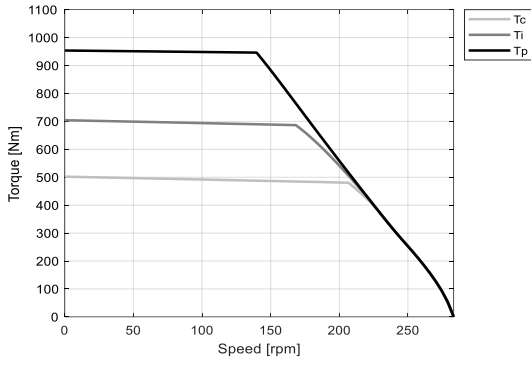
MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	24.2	12.1		
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	14.0	7.01		
<b>Km</b>	Motor constant	Nm/√W	12.7	12.7		
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	2.42	0.605		
<b>Ld/Lq</b>	Electrical inductance (*)	mH	29.5 / 27.8	7.38 / 6.94		
<b>Isc</b>	Maximum short-circuit current	Arms	27.4	54.8		
<b>nb</b>	Base speed	rpm	207	484		
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	168	392		
<b>nb,p</b>	Base speed at peak duty cycle	rpm	140	319		
<b>nn</b>	Rated speed	rpm	182	434		
<b>Tn</b>	Rated torque	Nm	483	380		
<b>In</b>	Rated current	Arms	22.8	35.0		
<b>rth</b>	Thermal time constant	s	168	168		
<b>Rth</b>	Thermal resistance	K/W	0.0384	0.0384		
<b>2p</b>	Number of poles	-	40	40		
<b>J</b>	Rotor inertia	kg·m²	0.110	0.110		
<b>mr</b>	Rotor mass	kg	6.01	6.01		
<b>ms</b>	Stator mass	kg	24.0	24.0		

MOTOR ENVIRONMENT		UNIT				
<b>Udc</b>	Nominal DC bus voltage	VDC	600	600		
<b>Di</b>	Intermittent duty cycle	%	40	40		
<b>Dp</b>	Peak duty cycle	%	5.0	5.0		
<b>Sr</b>	Rotor exchange surface	m²	0.112	0.112		
<b>θamb</b>	Ambient temperature	°C	20	20		
<b>θmax</b>	Maximum coil temperature	°C	130	130		
<b>θw</b>	Inlet water temperature	°C	20	20		
<b>Δθw</b>	Water temperature difference for Pc	K	5.0	5.0		
<b>qw</b>	Minimum water flow for Δθw	l/min	8.6	8.6		
<b>Δpw</b>	Max. pressure drop at qw	bar	0.3	0.3		

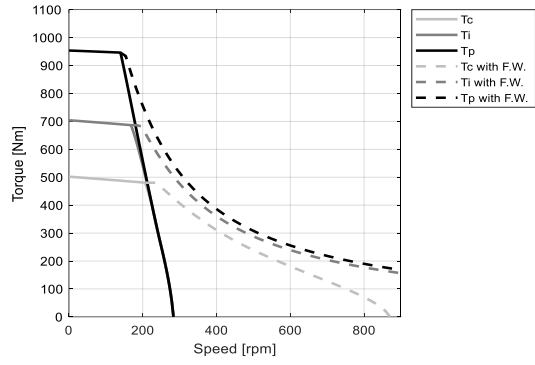
**Notes:** (\*) terminal to terminal.  
Hypotheses and tolerances are in ETEL Integration Manual.  
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

**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.

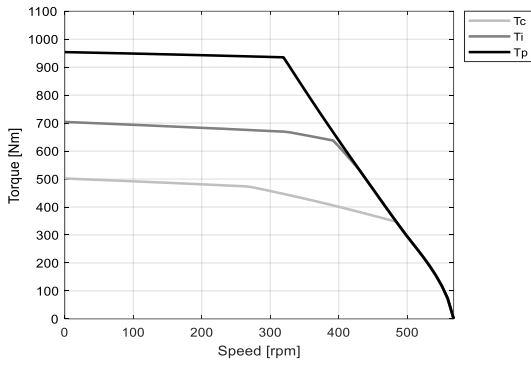
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