

MOTOR PERFORMANCE		Winding codes	VB	VD		
		UNIT	WATER COOLING	WATER COOLING		
<b> Tp </b>	Peak torque	Nm	2360	2360		
<b> Ti </b>	Intermittent torque	Nm	1730	1730		
<b> Tc </b>	Continuous torque	Nm	1230	1230		
<b> Ts </b>	Standstill torque	Nm	975	975		
<b> Ip </b>	Peak current	Arms	60.3	121		
<b> Ii </b>	Intermittent current	Arms	38.1	76.2		
<b> Ic </b>	Continuous current	Arms	24.1	48.2		
<b> Is </b>	Standstill current	Arms	18.3	36.5		
<b> ns </b>	Rated low speed	rpm	0.19	0.19		
<b> nm </b>	Maximum speed without flux weakening	rpm	118	236		
<b> nm,FW </b>	Maximum speed with flux weakening	rpm	431	664		
<b> ton,p </b>	Maximum ON time for peak cycle	s	11	11		
<b> ton,i </b>	Maximum ON time for intermittent cycle	s	2.8	2.8		
<b> Pp </b>	Power dissipation @ Ip	W	28600	28600		
<b> Pi </b>	Power dissipation @ Ii	W	14500	14500		
<b> Pc </b>	Power dissipation @ Ic	W	5810	5810		
<b> Td </b>	Max. detent torque (average to peak)	Nm	7.4	7.4		

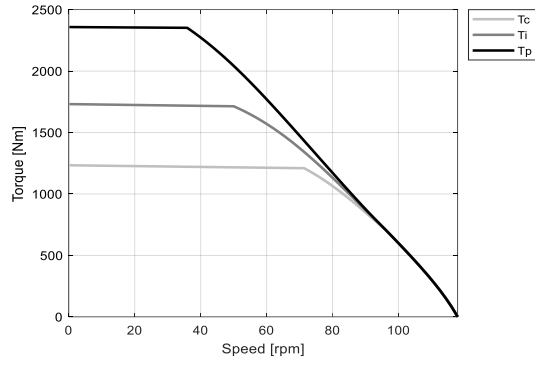
MOTOR SETTING		UNIT				
<b> Kt </b>	Torque constant	Nm/Arms	57.8	28.9		
<b> Ku </b>	Back EMF constant (*)	Vrms/(rad/s)	33.6	16.8		
<b> Km </b>	Motor constant	Nm/√W	21.7	21.7		
<b> R20 </b>	Electrical resistance at 20°C (*)	Ohm	4.74	1.19		
<b> Ld/Lq </b>	Electrical inductance (*)	mH	67.5 / 61.8	16.9 / 15.4		
<b> Isc </b>	Maximum short-circuit current	Arms	28.8	57.5		
<b> nb </b>	Base speed	rpm	71.4	174		
<b> nb,i </b>	Base speed at intermittent duty cycle	rpm	50.0	142		
<b> nb,p </b>	Base speed at peak duty cycle	rpm	35.9	117		
<b> nn </b>	Rated speed	rpm	61.1	153		
<b> Tn </b>	Rated torque	Nm	1210	1180		
<b> In </b>	Rated current	Arms	24.0	47.5		
<b> rth </b>	Thermal time constant	s	155	155		
<b> Rth </b>	Thermal resistance	K/W	0.0174	0.0174		
<b> 2p </b>	Number of poles	-	40	40		
<b> J </b>	Rotor inertia	kg·m²	0.263	0.263		
<b> mr </b>	Rotor mass	kg	14.3	14.3		
<b> ms </b>	Stator mass	kg	47.3	47.3		

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	0.251	0.251		
<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	18	18		
<b> Δpw </b>	Max. pressure drop at qw	bar	1.2	1.2		

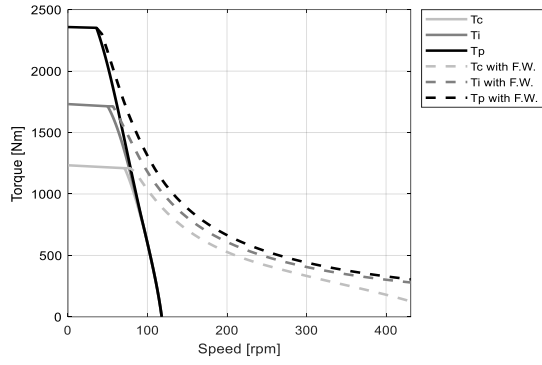
**Notes:** (\*) terminal to terminal.  
Hypotheses and tolerances are in ETEL Integration Manual.  
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

**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.

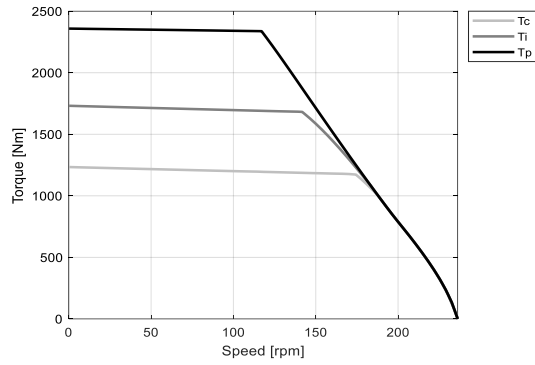
**VB - WATER COOLING**



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