

MOTOR PERFORMANCE		Winding codes	VB	VD		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	3370	3370		
Ti	Intermittent torque	Nm	2460	2460		
Tc	Continuous torque	Nm	1750	1750		
Ts	Standstill torque	Nm	1380	1380		
Ip	Peak current	Arms	60.3	121		
Ii	Intermittent current	Arms	38.1	76.2		
Ic	Continuous current	Arms	24.1	48.2		
Is	Standstill current	Arms	18.3	36.5		
ns	Rated low speed	rpm	0.20	0.20		
nm	Maximum speed without flux weakening	rpm	83.2	167		
nm,FW	Maximum speed with flux weakening	rpm	304	511		
ton,p	Maximum ON time for peak cycle	s	9.9	9.9		
ton,i	Maximum ON time for intermittent cycle	s	2.8	2.8		
Pp	Power dissipation @ Ip	W	38500	38500		
Pi	Power dissipation @ Ii	W	19400	19400		
Pc	Power dissipation @ Ic	W	7750	7750		
Td	Max. detent torque (average to peak)	Nm	11	11		

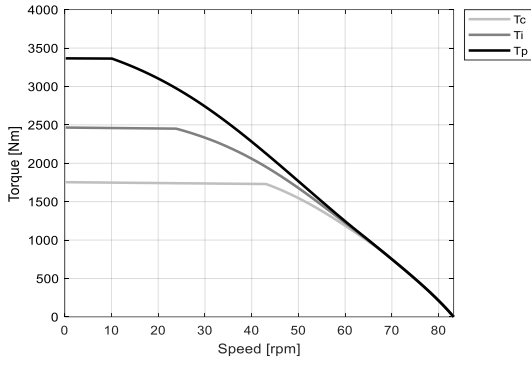
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	82.0	41.0		
Ku	Back EMF constant (*)	Vrms/(rad/s)	47.7	23.8		
Km	Motor constant	Nm/√W	26.5	26.5		
R20	Electrical resistance at 20°C (*)	Ohm	6.39	1.60		
Ld/Lq	Electrical inductance (*)	mH	94.8 / 86.3	23.7 / 21.6		
Isc	Maximum short-circuit current	Arms	29.0	58.1		
nb	Base speed	rpm	43.1	116		
nb,i	Base speed at intermittent duty cycle	rpm	23.8	91.2		
nb,p	Base speed at peak duty cycle	rpm	10.1	73.1		
nn	Rated speed	rpm	35.7	102		
Tn	Rated torque	Nm	1730	1700		
In	Rated current	Arms	24.0	47.8		
rth	Thermal time constant	s	153	153		
Rth	Thermal resistance	K/W	0.0126	0.0126		
2p	Number of poles	-	40	40		
J	Rotor inertia	kg·m²	0.371	0.371		
mr	Rotor mass	kg	20.3	20.3		
ms	Stator mass	kg	63.8	63.8		

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	0.350	0.350		
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	24	24		
Δpw	Max. pressure drop at qw	bar	2.0	2.0		

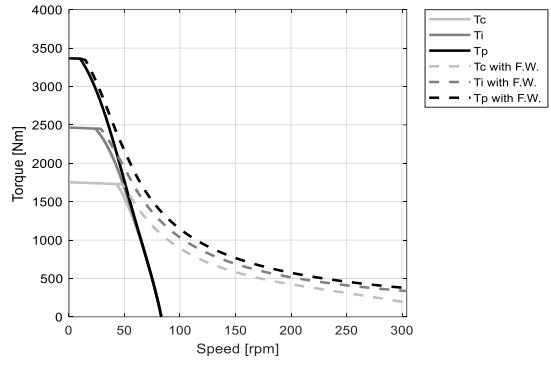
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

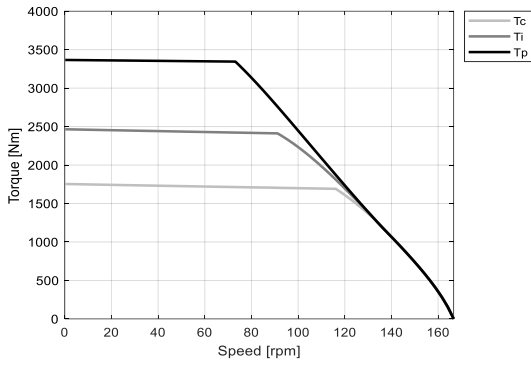
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