

MOTOR PERFORMANCE		Winding codes	VB	VD	XD	
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	
 Tp 	Peak torque	Nm	1380	1380	1310	
 Ti 	Intermittent torque	Nm	1080	1080	1070	
 Tc 	Continuous torque	Nm	811	811	800	
 Ts 	Standstill torque	Nm	645	645	633	
 Ip 	Peak current	Arms	73.5	147	204	
 Ii 	Intermittent current	Arms	46.5	93.1	146	
 Ic 	Continuous current	Arms	29.4	58.9	92.5	
 Is 	Standstill current	Arms	22.3	44.6	70.1	
 ns 	Rated low speed	rpm	0.26	0.26	0.26	
 nm 	Maximum speed without flux weakening	rpm	209	418	671	
 nm,FW 	Maximum speed with flux weakening	rpm	770	1540	2360	
 ton,p 	Maximum ON time for peak cycle	s	9.9	9.9	14	
 ton,i 	Maximum ON time for intermittent cycle	s	3.0	3.0	3.1	
 Pp 	Power dissipation @ Ip	W	30100	30100	22700	
 Pi 	Power dissipation @ Ii	W	15000	15000	14900	
 Pc 	Power dissipation @ Ic	W	6000	6000	5940	
 Td 	Max. detent torque (average to peak)	Nm	6.0	6.0	6.0	

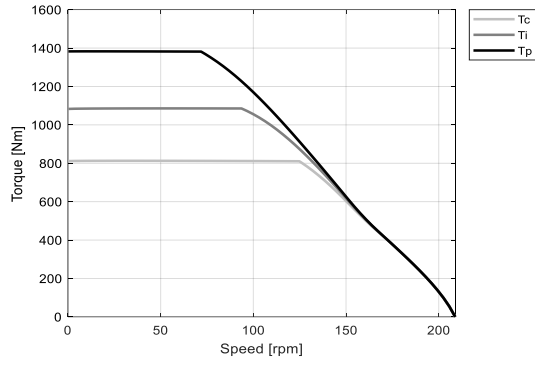
MOTOR SETTING		UNIT				
 Kt 	Torque constant	Nm/Arms	31.0	15.5	9.67	
 Ku 	Back EMF constant (*)	Vrms/(rad/s)	19.0	9.50	5.93	
 Km 	Motor constant	Nm/√W	13.8	13.8	13.5	
 R20 	Electrical resistance at 20°C (*)	Ohm	3.39	0.847	0.340	
 Ld/Lq 	Electrical inductance (*)	mH	38.8 / 32.5	9.70 / 8.12	3.77 / 3.18	
 Isc 	Maximum short-circuit current	Arms	25.7	51.4	82.5	
 nb 	Base speed	rpm	125	287	487	
 nb,i 	Base speed at intermittent duty cycle	rpm	93.6	236	407	
 nb,p 	Base speed at peak duty cycle	rpm	71.8	199	362	
 nn 	Rated speed	rpm	108	254	433	
 Tn 	Rated torque	Nm	811	803	774	
 In 	Rated current	Arms	29.3	58.2	89.8	
 rth 	Thermal time constant	s	106	106	106	
 Rth 	Thermal resistance	K/W	0.0151	0.0151	0.0151	
 2p 	Number of poles	-	44	44	44	
 J 	Rotor inertia	kg·m²	0.264	0.264	0.264	
 mr 	Rotor mass	kg	30.0	30.0	30.0	
 ms 	Stator mass	kg	40.5	40.5	40.5	

MOTOR ENVIRONMENT		UNIT				
 Udc 	Nominal DC bus voltage	VDC	600	600	600	
 Di 	Intermittent duty cycle	%	40	40	40	
 Dp 	Peak duty cycle	%	5.0	5.0	5.0	
 Sr 	Rotor exchange surface	m²	0.117	0.117	0.117	
 θamb 	Ambient temperature	°C	20	20	20	
 θmax 	Maximum coil temperature	°C	130	130	130	
 θw 	Inlet water temperature	°C	20	20	20	
 Δθw 	Water temperature difference for Pc	K	5.0	5.0	5.0	
 qw 	Minimum water flow for Δθw	l/min	19	19	19	
 Δpw 	Max. pressure drop at qw	bar	1.8	1.8	1.8	

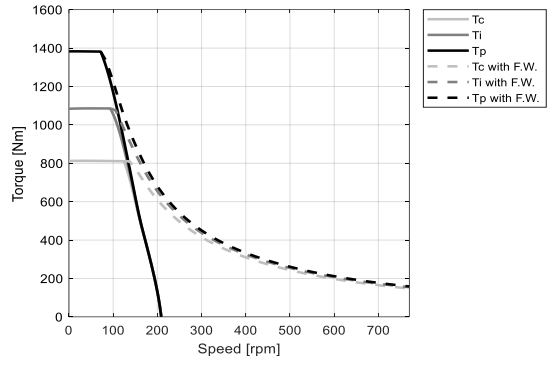
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.

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.

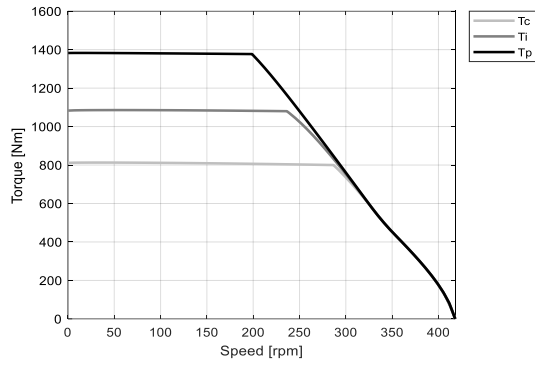
VB - WATER COOLING



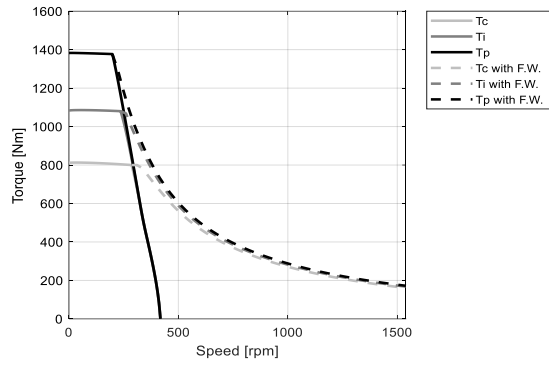
VB - WATER COOLING



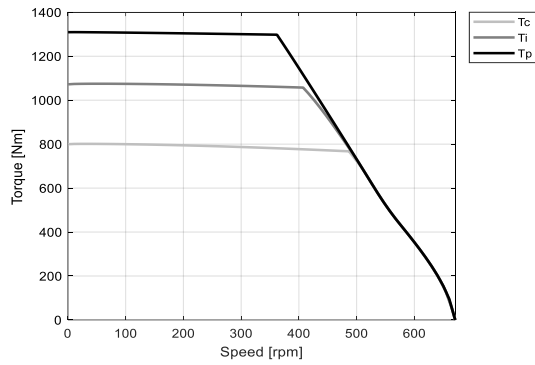
VD - WATER COOLING



VD - WATER COOLING



XD - WATER COOLING



XD - WATER COOLING

