

MOTOR PERFORMANCE		Winding codes	VA	WB	WD	WH
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
<b>Tp</b>	Peak torque	Nm	719	718	718	718
<b>Ti</b>	Intermittent torque	Nm	496	486	486	486
<b>Tc</b>	Continuous torque	Nm	375	366	366	366
<b>Ts</b>	Standstill torque	Nm	307	298	298	298
<b>Ip</b>	Peak current	Arms	43.8	117	235	469
<b>Ii</b>	Intermittent current	Arms	19.0	48.9	97.8	196
<b>Ic</b>	Continuous current	Arms	12.0	30.9	61.9	124
<b>Is</b>	Standstill current	Arms	9.11	23.4	46.9	93.7
<b>ns</b>	Rated low speed	rpm	0.10	0.10	0.10	0.10
<b>nm</b>	Maximum speed without flux weakening	rpm	167	448	897	1010
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	610	973	1010	1010
<b>ton,p</b>	Maximum ON time for peak cycle	s	3.0	2.4	2.4	2.4
<b>ton,i</b>	Maximum ON time for intermittent cycle	s	2.9	2.9	2.9	2.9
<b>Pp</b>	Power dissipation @ Ip	W	28800	31300	31300	31300
<b>Pi</b>	Power dissipation @ Ii	W	6150	6080	6080	6080
<b>Pc</b>	Power dissipation @ Ic	W	2460	2430	2430	2430
<b>Td</b>	Max. detent torque (average to peak)	Nm	2.0	2.0	2.0	2.0

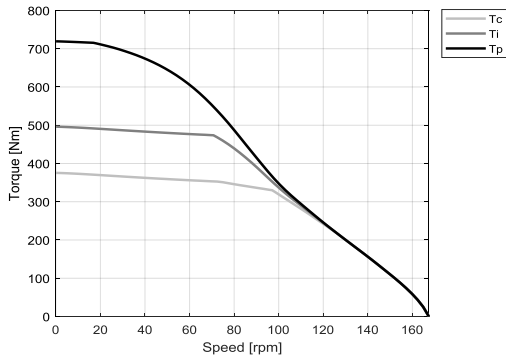
MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	41.1	15.4	7.68	3.84
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	23.7	8.86	4.43	2.22
<b>Km</b>	Motor constant	Nm/√W	11.9	11.5	11.5	11.5
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	7.96	1.19	0.297	0.0743
<b>Ld/Lq</b>	Electrical inductance (*)	mH	77.6 / 63.8	10.8 / 9.08	2.71 / 2.27	0.678 / 0.567
<b>Isc</b>	Maximum short-circuit current	Arms	8.02	21.4	42.9	85.8
<b>nb</b>	Base speed	rpm	97.1	358	856	N/A
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	70.7	277	656	N/A
<b>nb,p</b>	Base speed at peak duty cycle	rpm	16.9	171	387	879
<b>nn</b>	Rated speed	rpm	82.1	318	592	590
<b>Tn</b>	Rated torque	Nm	344	218	153	153
<b>In</b>	Rated current	Arms	11.4	17.4	24.9	49.9
<b>rth</b>	Thermal time constant	s	135	132	132	132
<b>Rth</b>	Thermal resistance	K/W	0.0433	0.0438	0.0438	0.0438
<b>2p</b>	Number of poles	-	88	88	88	88
<b>J</b>	Rotor inertia	kg·m²	0.160	0.160	0.160	0.160
<b>mr</b>	Rotor mass	kg	4.83	4.83	4.83	4.83
<b>ms</b>	Stator mass	kg	31.1	31.0	31.0	31.0

MOTOR ENVIRONMENT		UNIT				
<b>Udc</b>	Nominal DC bus voltage	VDC	600	600	600	600
<b>Di</b>	Intermittent duty cycle	%	40	40	40	40
<b>Dp</b>	Peak duty cycle	%	5.0	5.0	5.0	5.0
<b>Sr</b>	Rotor exchange surface	m²	0.110	0.110	0.110	0.110
<b>θamb</b>	Ambient temperature	°C	20	20	20	20
<b>θmax</b>	Maximum coil temperature	°C	130	130	130	130
<b>θw</b>	Inlet water temperature	°C	20	20	20	20
<b>Δθw</b>	Water temperature difference for Pc	K	5.0	5.0	5.0	5.0
<b>qw</b>	Minimum water flow for Δθw	l/min	7.7	7.6	7.6	7.6
<b>Δpw</b>	Max. pressure drop at qw	bar	0.2	0.2	0.2	0.2

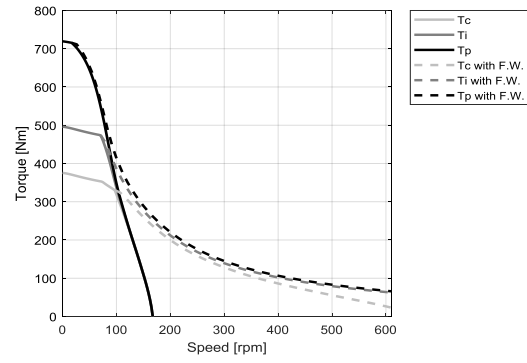
**Notes:** (\*) terminal to terminal.  
Hypotheses and tolerances are in ETEL Integration Manual.  
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

**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.

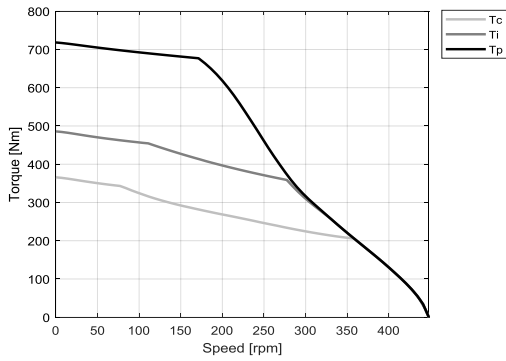
**VA - WATER COOLING**



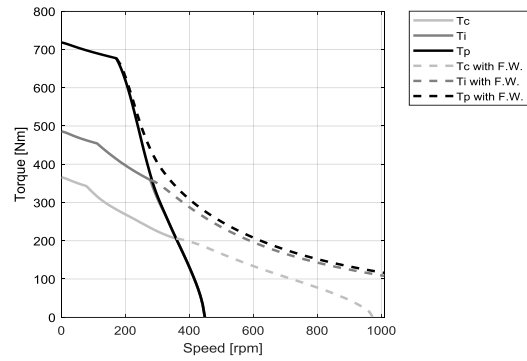
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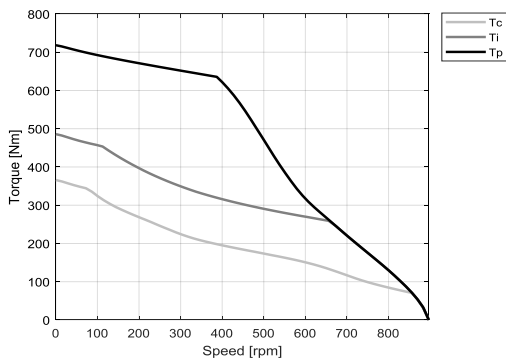
**WB - WATER COOLING**



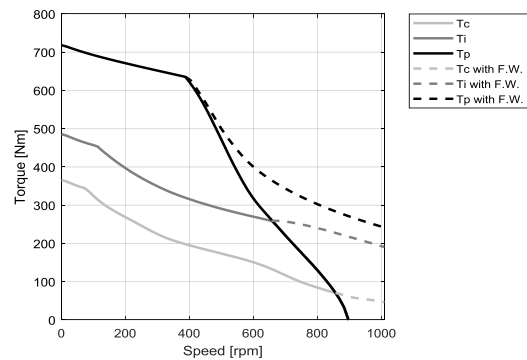
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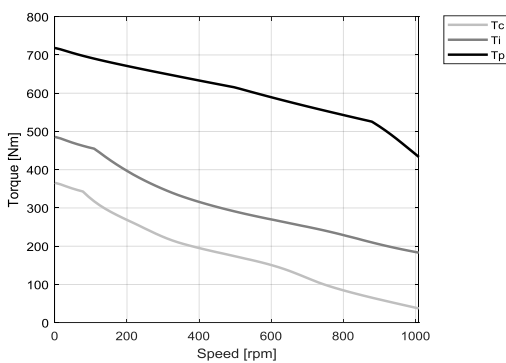
**WD - WATER COOLING**



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