

MOTOR PERFORMANCE		Winding codes	VA	WB	WD	WH
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
<b>Tp</b>	Peak torque	Nm	1590	1690	1690	1690
<b>Ti</b>	Intermittent torque	Nm	1270	1250	1250	1250
<b>Tc</b>	Continuous torque	Nm	964	939	939	939
<b>Ts</b>	Standstill torque	Nm	788	765	765	765
<b>Ip</b>	Peak current	Arms	30.4	95.8	192	383
<b>Ii</b>	Intermittent current	Arms	20.6	52.9	106	212
<b>Ic</b>	Continuous current	Arms	13.0	33.5	67.0	134
<b>Is</b>	Standstill current	Arms	9.86	25.4	50.7	101
<b>ns</b>	Rated low speed	rpm	0.11	0.12	0.12	0.12
<b>nm</b>	Maximum speed without flux weakening	rpm	71.4	191	383	767
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	239	438	619	767
<b>ton,p</b>	Maximum ON time for peak cycle	s	12	6.0	6.0	6.0
<b>ton,i</b>	Maximum ON time for intermittent cycle	s	2.8	2.8	2.8	2.8
<b>Pp</b>	Power dissipation @ Ip	W	21900	33800	33800	33800
<b>Pi</b>	Power dissipation @ Ii	W	13000	12800	12800	12800
<b>Pc</b>	Power dissipation @ Ic	W	5180	5110	5110	5110
<b>Td</b>	Max. detent torque (average to peak)	Nm	4.6	4.6	4.6	4.6

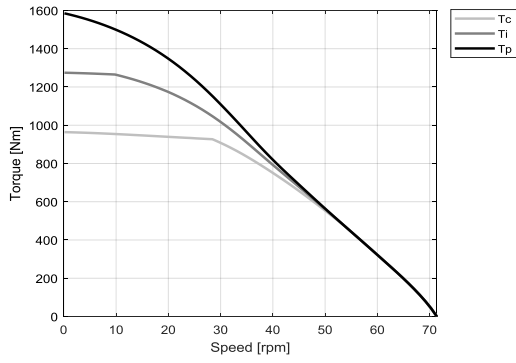
MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	96.5	36.1	18.0	9.02
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	55.6	20.8	10.4	5.19
<b>Km</b>	Motor constant	Nm/√W	20.8	20.1	20.1	20.1
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	14.4	2.14	0.536	0.134
<b>Ld/Lq</b>	Electrical inductance (*)	mH	163 / 131	22.7 / 18.7	5.69 / 4.67	1.42 / 1.17
<b>Isc</b>	Maximum short-circuit current	Arms	8.96	24.0	47.9	95.9
<b>nb</b>	Base speed	rpm	28.4	152	346	N/A
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	9.79	116	287	663
<b>nb,p</b>	Base speed at peak duty cycle	rpm	0.00	71.6	179	387
<b>nn</b>	Rated speed	rpm	22.7	134	317	319
<b>Tn</b>	Rated torque	Nm	935	566	365	362
<b>In</b>	Rated current	Arms	12.9	18.4	23.7	47.0
<b>rth</b>	Thermal time constant	s	120	118	118	118
<b>Rth</b>	Thermal resistance	K/W	0.0202	0.0204	0.0204	0.0204
<b>2p</b>	Number of poles	-	88	88	88	88
<b>J</b>	Rotor inertia	kg·m²	0.377	0.377	0.377	0.377
<b>mr</b>	Rotor mass	kg	11.4	11.4	11.4	11.4
<b>ms</b>	Stator mass	kg	50.1	49.8	49.8	49.8

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	0.200	0.200	0.200	0.200
<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	16	16	16	16
<b>Δpw</b>	Max. pressure drop at qw	bar	0.7	0.7	0.7	0.7

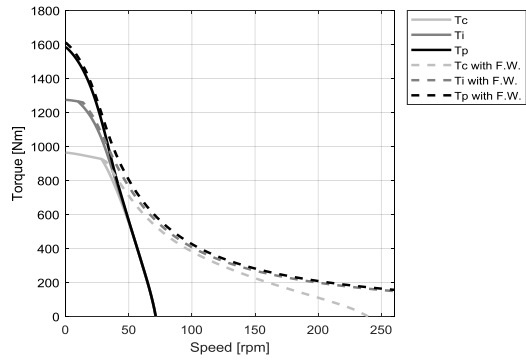
**Notes:** (\*) terminal to terminal.  
Hypotheses and tolerances are in ETEL Integration Manual.  
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

**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.

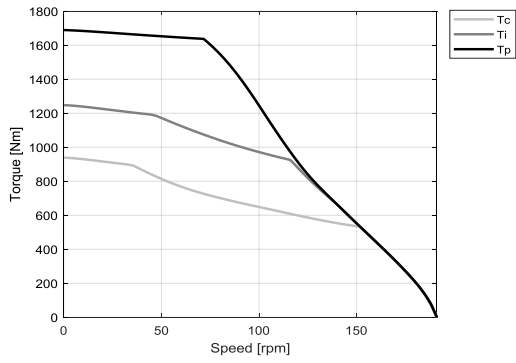
**VA - WATER COOLING**



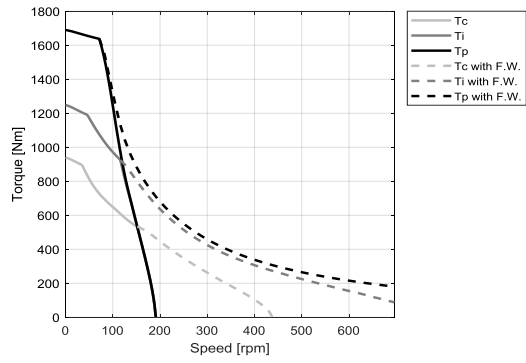
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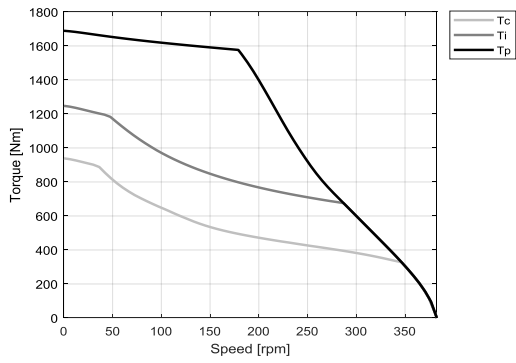
**WB - WATER COOLING**



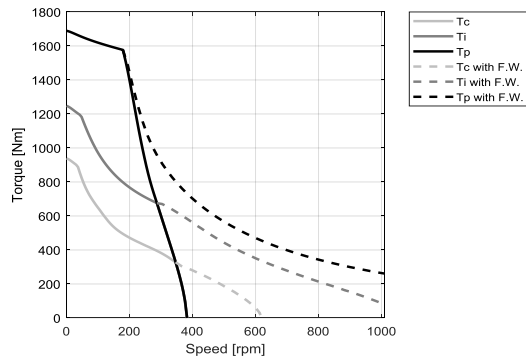
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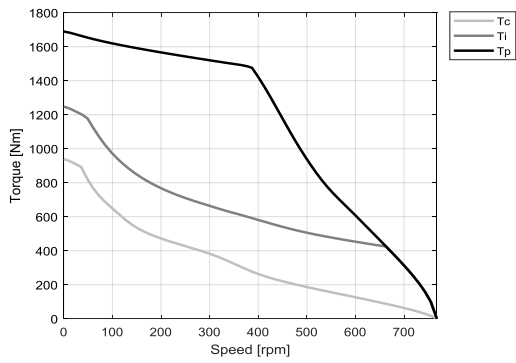
**WD - WATER COOLING**



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