

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

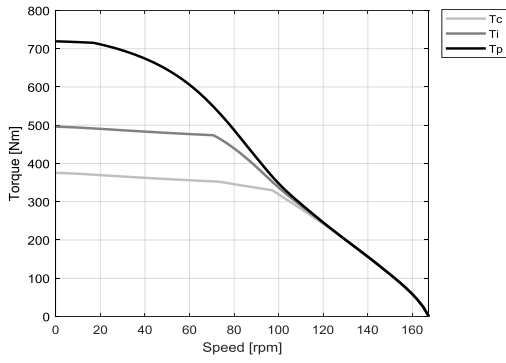
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	41.1	15.4	7.68	3.84
Ku	Back EMF constant (*)	Vrms/(rad/s)	23.7	8.86	4.43	2.22
Km	Motor constant	Nm/√W	11.9	11.5	11.5	11.5
R20	Electrical resistance at 20°C (*)	Ohm	7.96	1.19	0.297	0.0743
Ld/Lq	Electrical inductance (*)	mH	77.6 / 63.8	10.8 / 9.08	2.71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

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

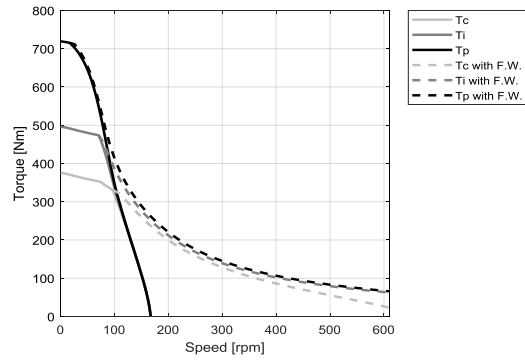
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

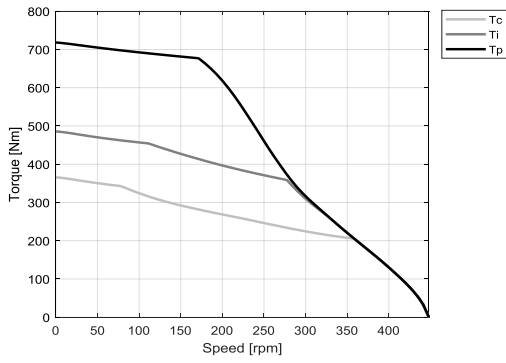
VA - WATER COOLING



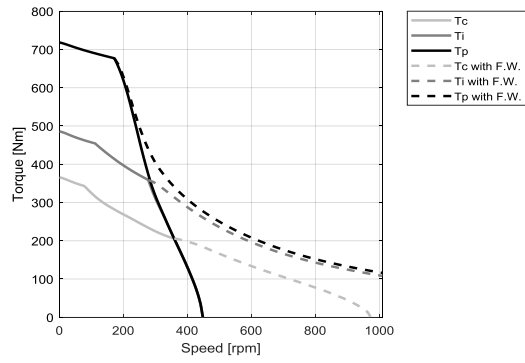
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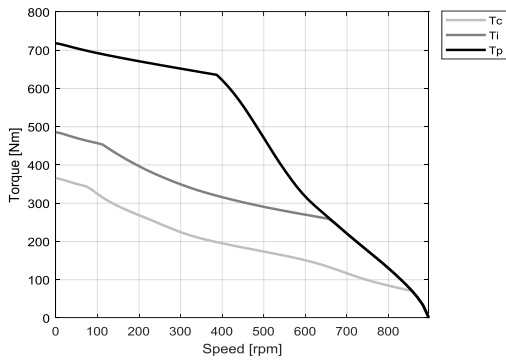
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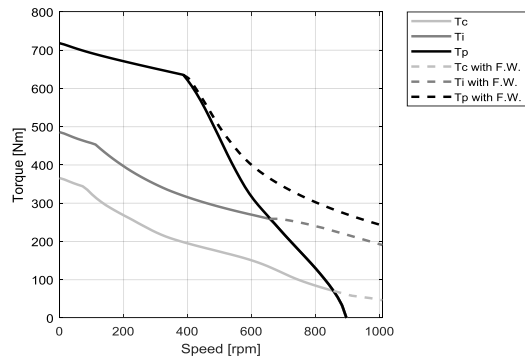
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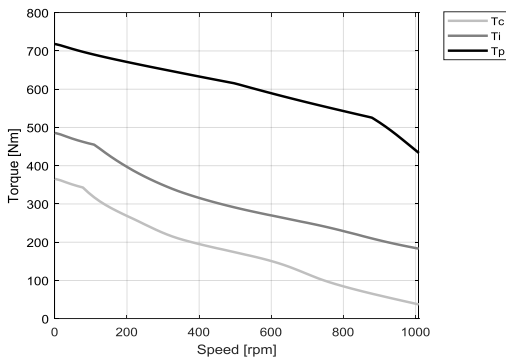
WD - WATER COOLING



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WH - WATER COOLING



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