

MOTOR PERFORMANCE		Winding codes	WA	WB	WD	WH
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	1730	1730	1730	1730
Ti	Intermittent torque	Nm	1340	1340	1340	1340
Tc	Continuous torque	Nm	1010	1010	1000	1000
Ts	Standstill torque	Nm	817	817	818	818
Ip	Peak current	Arms	38.1	76.3	153	305
Ii	Intermittent current	Arms	23.8	47.6	94.6	189
Ic	Continuous current	Arms	15.1	30.1	59.8	120
Is	Standstill current	Arms	11.4	22.8	45.7	91.3
ns	Rated low speed	rpm	0.10	0.10	0.10	0.10
nm	Maximum speed without flux weakening	rpm	81.1	162	325	651
nm,FW	Maximum speed with flux weakening	rpm	290	435	621	774
ton,p	Maximum ON time for peak cycle	s	11	11	11	11
ton,i	Maximum ON time for intermittent cycle	s	2.9	2.9	4.2	4.2
Pp	Power dissipation @ Ip	W	22500	22500	22500	22500
Pi	Power dissipation @ Ii	W	11200	11200	11000	11000
Pc	Power dissipation @ Ic	W	4480	4480	4390	4390
Td	Max. detent torque (average to peak)	Nm	5.0	5.0	5.0	5.0

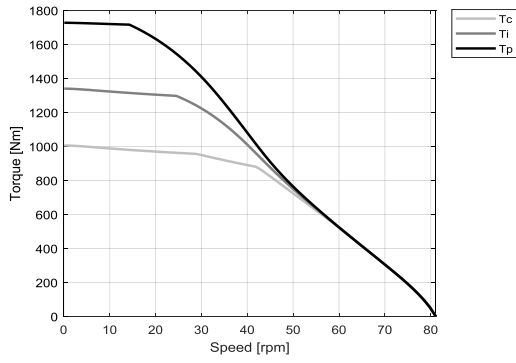
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	84.9	42.5	21.2	10.6
Ku	Back EMF constant (*)	Vrms/(rad/s)	48.9	24.5	12.2	6.12
Km	Motor constant	Nm/√W	22.8	22.8	22.8	22.8
R20	Electrical resistance at 20°C (*)	Ohm	9.26	2.31	0.579	0.145
Ld/Lq	Electrical inductance (*)	mH	135 / 109	33.8 / 27.3	8.45 / 6.84	2.11 / 1.71
Isc	Maximum short-circuit current	Arms	9.49	19.0	38.0	75.9
nb	Base speed	rpm	41.9	117	279	638
nb,i	Base speed at intermittent duty cycle	rpm	24.5	88.4	221	524
nb,p	Base speed at peak duty cycle	rpm	14.3	63.7	149	316
nn	Rated speed	rpm	34.0	102	254	380
Tn	Rated torque	Nm	925	675	428	329
In	Rated current	Arms	14.2	19.0	23.5	37.2
rth	Thermal time constant	s	136	136	136	136
Rth	Thermal resistance	K/W	0.0235	0.0235	0.0235	0.0235
2p	Number of poles	-	88	88	88	88
J	Rotor inertia	kg·m²	0.470	0.470	0.470	0.470
mr	Rotor mass	kg	9.77	9.77	9.77	9.77
ms	Stator mass	kg	49.8	49.8	49.8	49.8

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	0.180	0.180	0.180	0.180
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	14	14	14	14
Δpw	Max. pressure drop at qw	bar	0.5	0.5	0.5	0.5

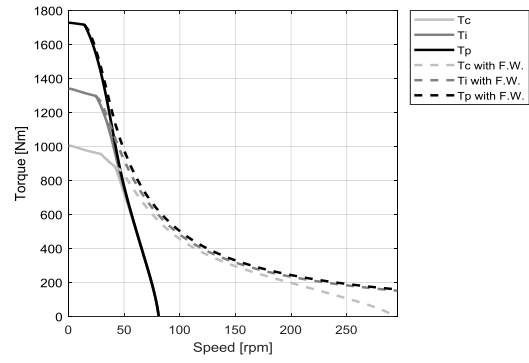
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

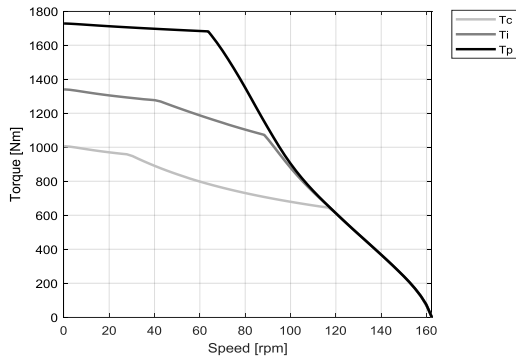
WA - WATER COOLING



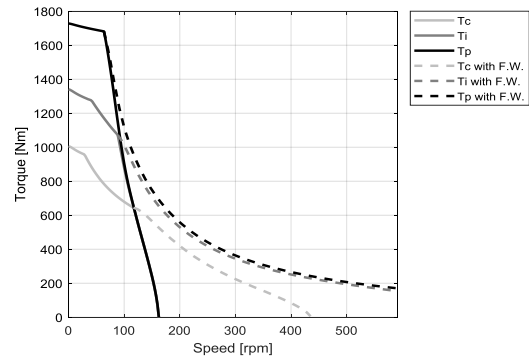
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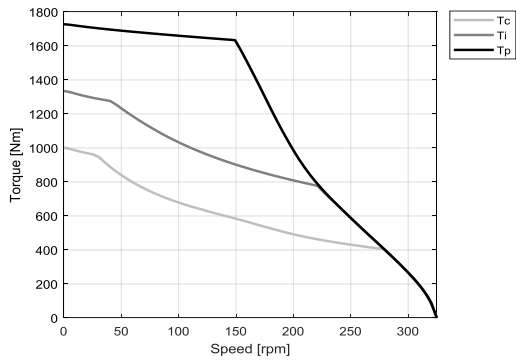
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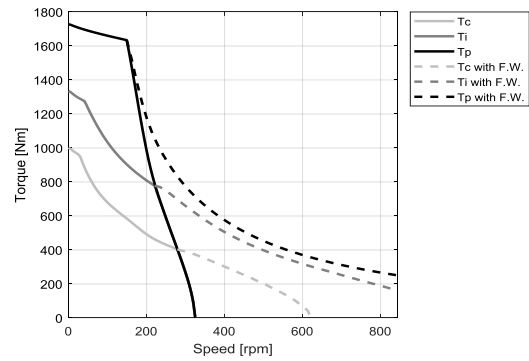
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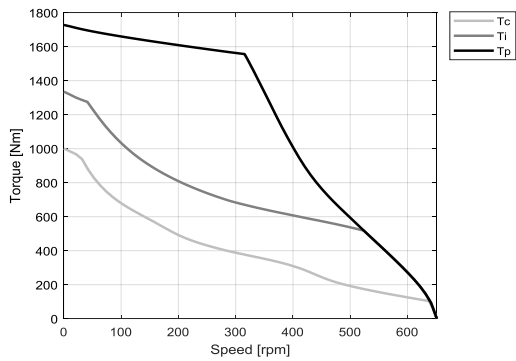
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