

MOTOR PERFORMANCE		Winding codes	WA	WB	WD	WH
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	3120	3460	3460	3460
Ti	Intermittent torque	Nm	2700	2820	2740	2740
Tc	Continuous torque	Nm	2120	2120	2050	2050
Ts	Standstill torque	Nm	1730	1730	1740	1740
Ip	Peak current	Arms	28.7	71.7	143	287
Ii	Intermittent current	Arms	22.9	50.0	94.6	189
Ic	Continuous current	Arms	15.8	31.6	59.8	120
Is	Standstill current	Arms	12.0	24.0	47.9	95.8
ns	Rated low speed	rpm	0.11	0.11	0.11	0.11
nm	Maximum speed without flux weakening	rpm	40.5	81.1	162	325
nm,FW	Maximum speed with flux weakening	rpm	145	213	339	515
ton,p	Maximum ON time for peak cycle	s	27	13	13	13
ton,i	Maximum ON time for intermittent cycle	s	18	2.9	11	11
Pp	Power dissipation @ Ip	W	20600	33100	33100	33100
Pi	Power dissipation @ Ii	W	16500	20900	17900	17900
Pc	Power dissipation @ Ic	W	8350	8350	7160	7160
Td	Max. detent torque (average to peak)	Nm	10	10	10	10

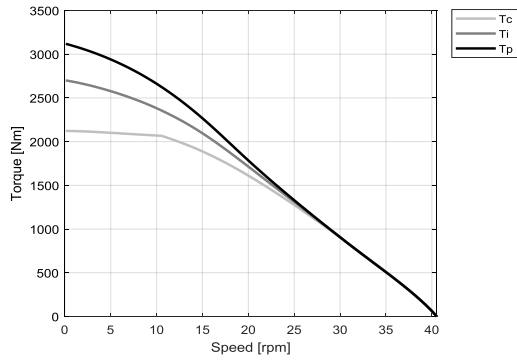
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	170	85.2	42.6	21.3
Ku	Back EMF constant (*)	Vrms/(rad/s)	97.9	48.9	24.5	12.2
Km	Motor constant	Nm/√W	35.0	35.0	35.0	35.0
R20	Electrical resistance at 20°C (*)	Ohm	15.8	3.94	0.985	0.246
Ld/Lq	Electrical inductance (*)	mH	244 / 195	61.0 / 48.7	15.2 / 12.5	3.81 / 3.13
Isc	Maximum short-circuit current	Arms	10.5	21.1	42.1	84.3
nb	Base speed	rpm	10.5	54.3	135	301
nb,i	Base speed at intermittent duty cycle	rpm	0.00	35.2	108	256
nb,p	Base speed at peak duty cycle	rpm	0.00	24.6	74.1	166
nn	Rated speed	rpm	6.88	46.0	121	279
Tn	Rated torque	Nm	2090	1540	1050	654
In	Rated current	Arms	15.8	21.7	28.0	36.0
rth	Thermal time constant	s	126	126	126	126
Rth	Thermal resistance	K/W	0.0123	0.0123	0.0123	0.0123
2p	Number of poles	-	88	88	88	88
J	Rotor inertia	kg·m²	0.933	0.933	0.933	0.933
mr	Rotor mass	kg	19.4	19.4	19.4	19.4
ms	Stator mass	kg	78.8	78.8	78.8	78.8

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	0.320	0.320	0.320	0.320
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	26	26	22	22
Δpw	Max. pressure drop at qw	bar	1.5	1.5	1.2	1.2

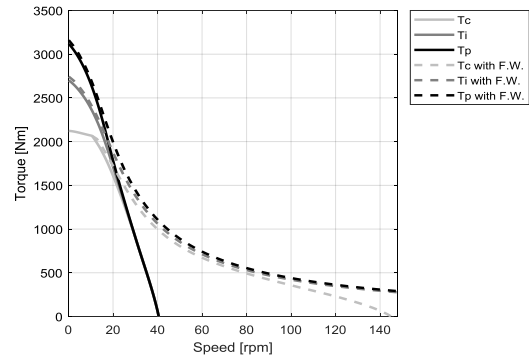
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

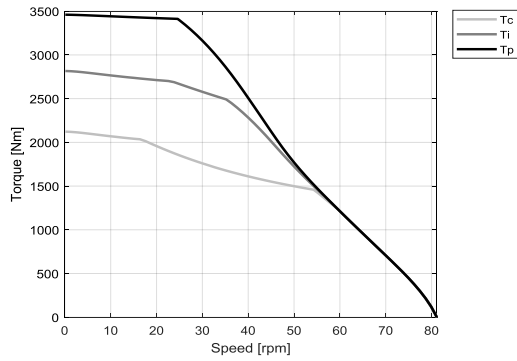
WA - WATER COOLING



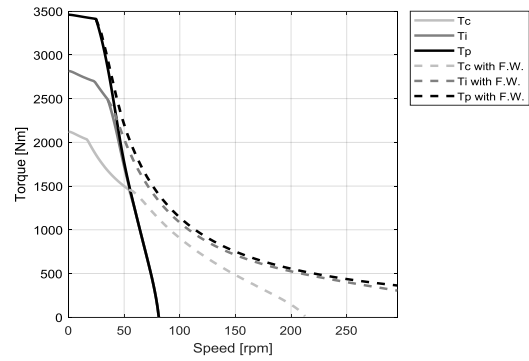
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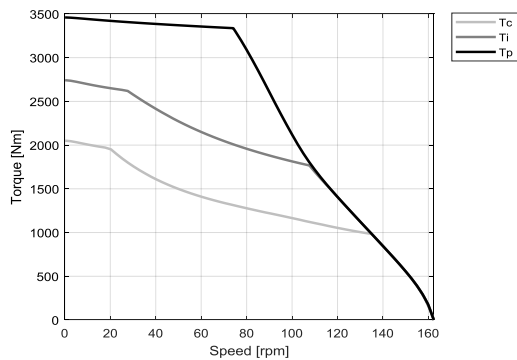
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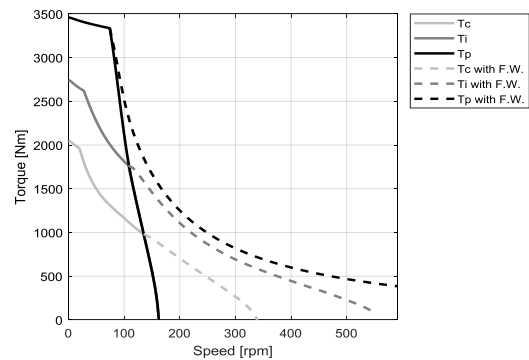
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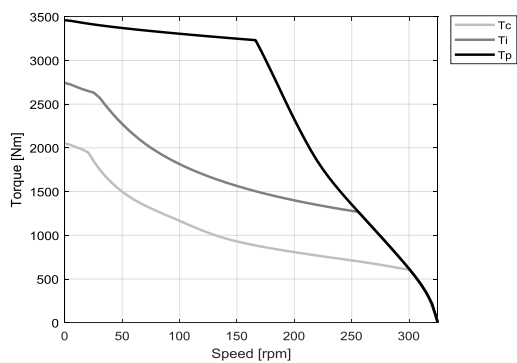
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