

MOTOR PERFORMANCE		Winding codes	WA	WB	WD	WH
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	2420	2420	2420	2420
Ti	Intermittent torque	Nm	1930	1930	1900	1900
Tc	Continuous torque	Nm	1450	1450	1420	1420
Ts	Standstill torque	Nm	1180	1180	1180	1180
Ip	Peak current	Arms	36.8	73.6	147	294
Ii	Intermittent current	Arms	24.4	48.8	94.6	189
Ic	Continuous current	Arms	15.4	30.8	59.8	120
Is	Standstill current	Arms	11.7	23.4	46.7	93.4
ns	Rated low speed	rpm	0.10	0.10	0.10	0.10
nm	Maximum speed without flux weakening	rpm	57.9	116	232	465
nm,FW	Maximum speed with flux weakening	rpm	199	295	447	596
ton,p	Maximum ON time for peak cycle	s	12	12	12	12
ton,i	Maximum ON time for intermittent cycle	s	2.9	2.9	7.8	7.8
Pp	Power dissipation @ Ip	W	26500	26500	26500	26500
Pi	Power dissipation @ Ii	W	15000	15000	13700	13700
Pc	Power dissipation @ Ic	W	5990	5990	5500	5500
Td	Max. detent torque (average to peak)	Nm	7.0	7.0	7.0	7.0

MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	119	59.6	29.8	14.9
Ku	Back EMF constant (*)	Vrms/(rad/s)	68.5	34.2	17.1	8.56
Km	Motor constant	Nm/√W	28.3	28.3	28.3	28.3
R20	Electrical resistance at 20°C (*)	Ohm	11.8	2.96	0.740	0.185
Ld/Lq	Electrical inductance (*)	mH	180 / 144	44.9 / 36.1	11.2 / 9.15	2.80 / 2.29
Isc	Maximum short-circuit current	Arms	10.0	20.0	40.1	80.1
nb	Base speed	rpm	24.7	82.9	199	454
nb,i	Base speed at intermittent duty cycle	rpm	9.05	61.0	159	379
nb,p	Base speed at peak duty cycle	rpm	0.164	42.7	108	233
nn	Rated speed	rpm	18.7	71.7	181	278
Tn	Rated torque	Nm	1390	975	623	474
In	Rated current	Arms	15.3	19.4	24.0	37.5
rth	Thermal time constant	s	134	134	134	134
Rth	Thermal resistance	K/W	0.0175	0.0175	0.0175	0.0175
2p	Number of poles	-	88	88	88	88
J	Rotor inertia	kg·m²	0.659	0.659	0.659	0.659
mr	Rotor mass	kg	13.7	13.7	13.7	13.7
ms	Stator mass	kg	62.1	62.1	62.1	62.1

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	0.240	0.240	0.240	0.240
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	19	19	17	17
Δpw	Max. pressure drop at qw	bar	0.7	0.7	0.7	0.7

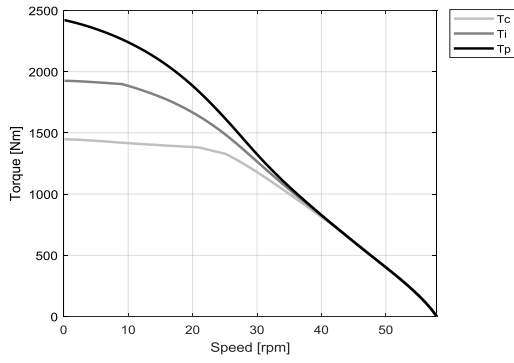
Notes: (*) terminal to terminal.

Hypotheses and tolerances are in ETEL Integration Manual.

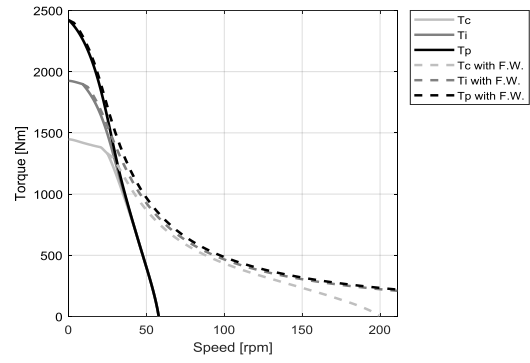
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

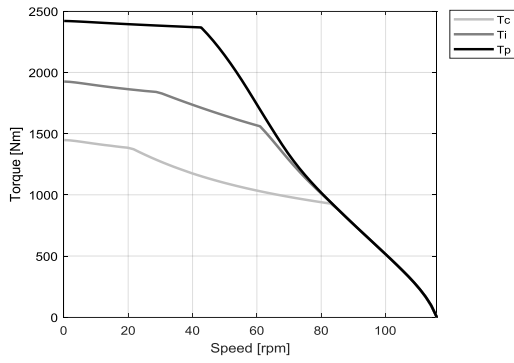
WA - WATER COOLING



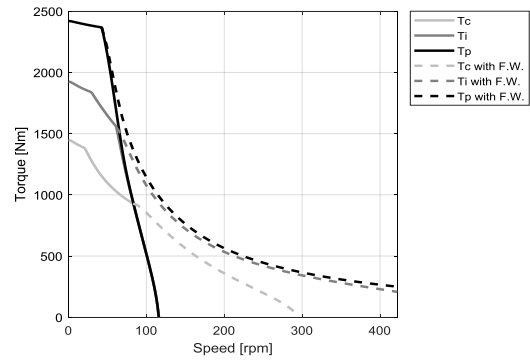
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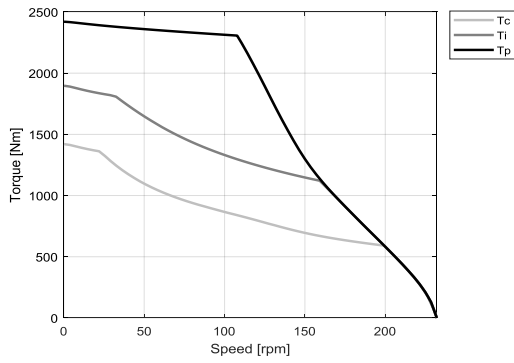
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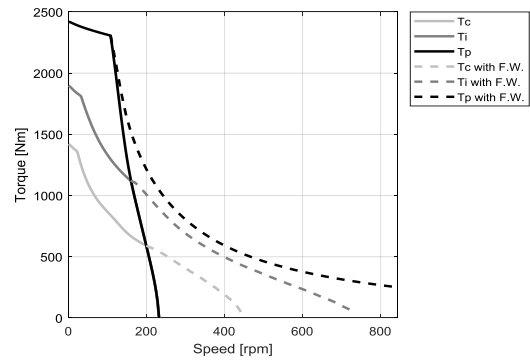
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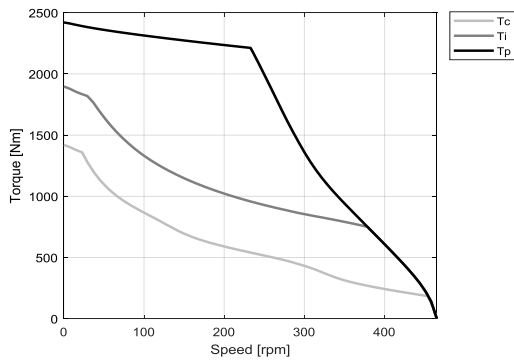
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