

MOTOR PERFORMANCE		Winding codes	UB	WC	WF	WL
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
Tp	Peak torque	Nm	4990	5430	5430	5430
Ti	Intermittent torque	Nm	4000	4070	4070	4070
Tc	Continuous torque	Nm	2970	3030	3030	3030
Ts	Standstill torque	Nm	2390	2450	2450	2450
Ip	Peak current	Arms	44.5	118	236	472
Ii	Intermittent current	Arms	30.5	68.4	137	273
Ic	Continuous current	Arms	19.3	43.2	86.5	173
Is	Standstill current	Arms	14.6	32.8	65.5	131
ns	Rated low speed	rpm	0.068	0.066	0.066	0.066
nm	Maximum speed without flux weakening	rpm	36.5	79.4	159	319
nm,FW	Maximum speed with flux weakening	rpm	133	207	305	400
ton,p	Maximum ON time for peak cycle	s	15	9.3	9.3	9.3
ton,i	Maximum ON time for intermittent cycle	s	2.9	2.9	2.9	2.9
Pp	Power dissipation @ Ip	W	32000	46600	46600	46600
Pi	Power dissipation @ Ii	W	19600	19600	19600	19600
Pc	Power dissipation @ Ic	W	7830	7860	7860	7860
Td	Max. detent torque (average to peak)	Nm	14	14	14	14

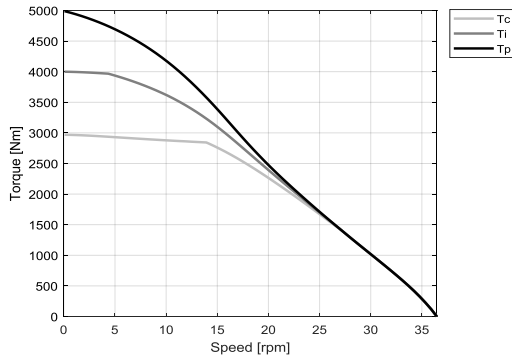
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	189	86.9	43.5	21.7
Ku	Back EMF constant (*)	Vrms/(rad/s)	109	50.0	25.0	12.5
Km	Motor constant	Nm/√W	49.2	50.5	50.5	50.5
R20	Electrical resistance at 20°C (*)	Ohm	9.85	1.97	0.493	0.123
Ld/Lq	Electrical inductance (*)	mH	142 / 120	30.0 / 24.9	7.49 / 6.24	1.87 / 1.56
Isc	Maximum short-circuit current	Arms	13.4	29.2	58.4	117
nb	Base speed	rpm	13.9	56.2	136	312
nb,i	Base speed at intermittent duty cycle	rpm	4.34	41.1	107	257
nb,p	Base speed at peak duty cycle	rpm	0.00	26.7	70.2	153
nn	Rated speed	rpm	11.0	48.7	124	186
Tn	Rated torque	Nm	2870	2100	1340	1040
In	Rated current	Arms	19.2	28.5	35.5	56.2
rth	Thermal time constant	s	134	138	138	138
Rth	Thermal resistance	K/W	0.0134	0.0134	0.0134	0.0134
2p	Number of poles	-	132	132	132	132
J	Rotor inertia	kg·m²	2.32	2.32	2.32	2.32
mr	Rotor mass	kg	20.8	20.8	20.8	20.8
ms	Stator mass	kg	98.7	99.5	99.5	99.5

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	0.360	0.360	0.360	0.360
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	24	25	25	25
Δpw	Max. pressure drop at qw	bar	1.1	1.1	1.1	1.1

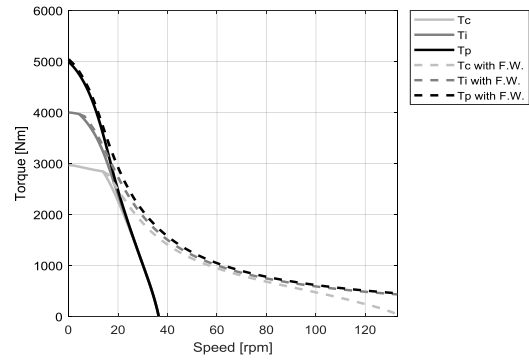
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

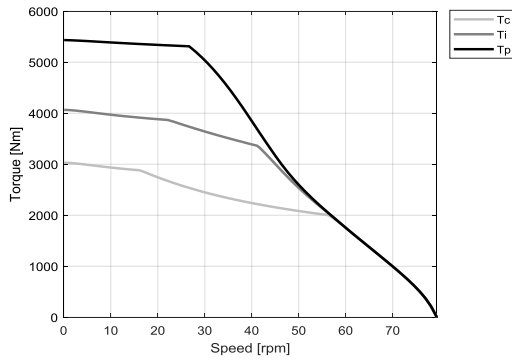
UB - WATER COOLING



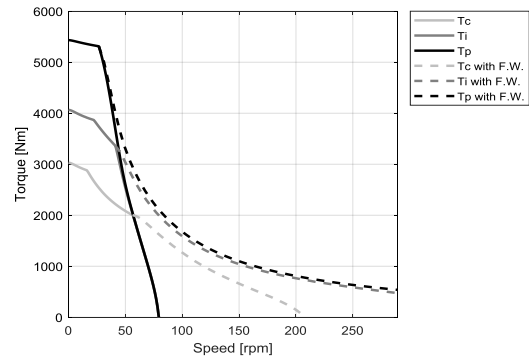
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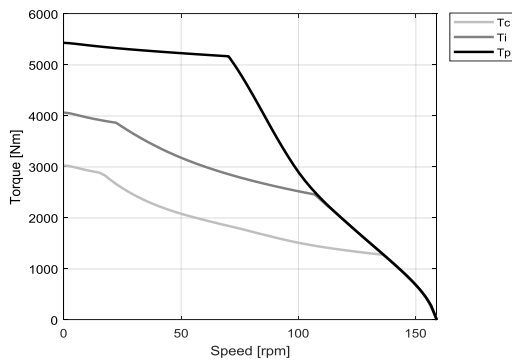
WC - WATER COOLING



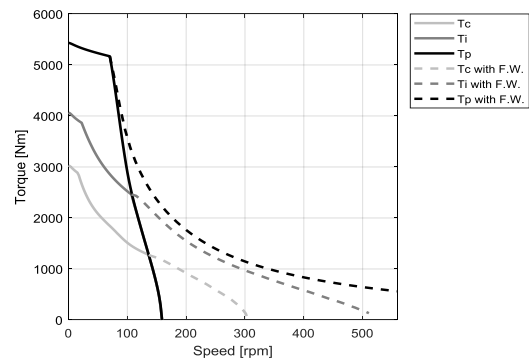
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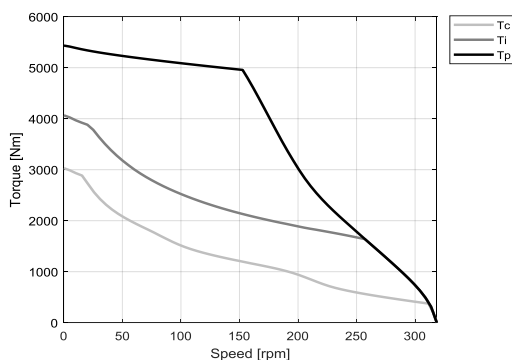
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