

MOTOR PERFORMANCE		Winding codes	UB	WB	WC	WL
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
<b>Tp</b>	Peak torque	Nm	3830	3880	3880	3880
<b>Ti</b>	Intermittent torque	Nm	2790	2840	2840	2840
<b>Tc</b>	Continuous torque	Nm	2070	2110	2110	2110
<b>Ts</b>	Standstill torque	Nm	1670	1710	1710	1710
<b>Ip</b>	Peak current	Arms	54.4	81.7	122	490
<b>Ii</b>	Intermittent current	Arms	30.0	44.7	67.1	268
<b>Ic</b>	Continuous current	Arms	19.0	28.3	42.4	170
<b>Is</b>	Standstill current	Arms	14.4	21.4	32.1	129
<b>ns</b>	Rated low speed	rpm	0.067	0.065	0.065	0.065
<b>nm</b>	Maximum speed without flux weakening	rpm	51.1	74.1	111	446
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	186	244	308	534
<b>ton,p</b>	Maximum ON time for peak cycle	s	8.1	8.3	8.3	8.3
<b>ton,i</b>	Maximum ON time for intermittent cycle	s	3.0	2.9	2.9	2.9
<b>Pp</b>	Power dissipation @ Ip	W	39200	39900	39900	39900
<b>Pi</b>	Power dissipation @ Ii	W	14800	14800	14800	14800
<b>Pc</b>	Power dissipation @ Ic	W	5900	5930	5930	5930
<b>Td</b>	Max. detent torque (average to peak)	Nm	10	10	10	10

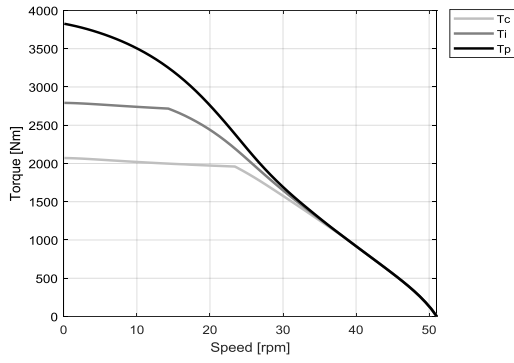
MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	135	93.0	62.0	15.5
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	77.7	53.6	35.7	8.93
<b>Km</b>	Motor constant	Nm/√W	39.7	40.7	40.7	40.7
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	7.68	3.47	1.54	0.0964
<b>Ld/Lq</b>	Electrical inductance (*)	mH	107 / 90.2	50.8 / 42.3	22.6 / 18.8	1.41 / 1.18
<b>Isc</b>	Maximum short-circuit current	Arms	12.7	18.4	27.7	111
<b>nb</b>	Base speed	rpm	23.4	45.1	78.7	438
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	14.3	30.3	59.1	353
<b>nb,p</b>	Base speed at peak duty cycle	rpm	0.00	19.3	40.5	207
<b>nn</b>	Rated speed	rpm	19.7	38.3	68.6	254
<b>Tn</b>	Rated torque	Nm	1970	1760	1480	730
<b>In</b>	Rated current	Arms	18.8	23.6	28.4	56.4
<b>rth</b>	Thermal time constant	s	136	140	140	140
<b>Rth</b>	Thermal resistance	K/W	0.0179	0.0179	0.0179	0.0179
<b>2p</b>	Number of poles	-	132	132	132	132
<b>J</b>	Rotor inertia	kg·m²	1.66	1.66	1.66	1.66
<b>mr</b>	Rotor mass	kg	14.8	14.8	14.8	14.8
<b>ms</b>	Stator mass	kg	80.9	81.6	81.6	81.6

MOTOR ENVIRONMENT		UNIT				
<b>Udc</b>	Nominal DC bus voltage	VDC	600	600	600	600
<b>Di</b>	Intermittent duty cycle	%	40	40	40	40
<b>Dp</b>	Peak duty cycle	%	5.0	5.0	5.0	5.0
<b>Sr</b>	Rotor exchange surface	m²	0.280	0.280	0.280	0.280
<b>θamb</b>	Ambient temperature	°C	20	20	20	20
<b>θmax</b>	Maximum coil temperature	°C	130	130	130	130
<b>θw</b>	Inlet water temperature	°C	20	20	20	20
<b>Δθw</b>	Water temperature difference for Pc	K	5.0	5.0	5.0	5.0
<b>qw</b>	Minimum water flow for Δθw	l/min	18	19	19	19
<b>Δpw</b>	Max. pressure drop at qw	bar	0.7	0.7	0.7	0.7

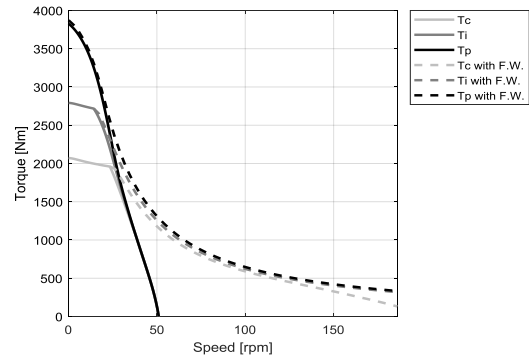
**Notes:** (\*) terminal to terminal.  
Hypotheses and tolerances are in ETEL Integration Manual.  
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

**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.

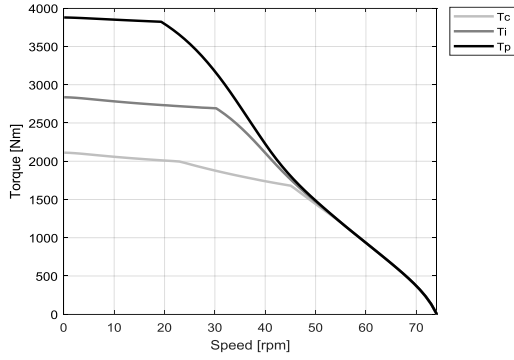
**UB - WATER COOLING**



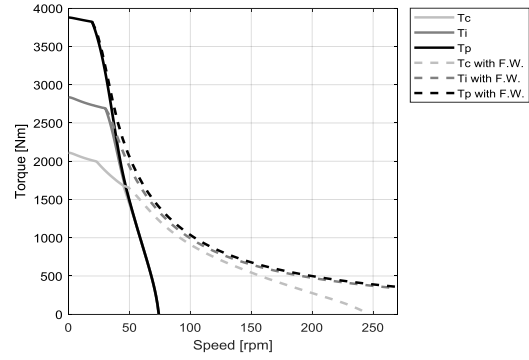
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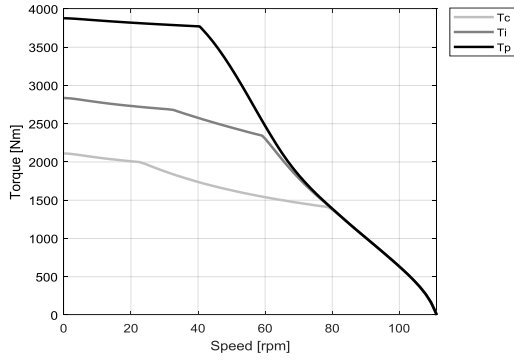
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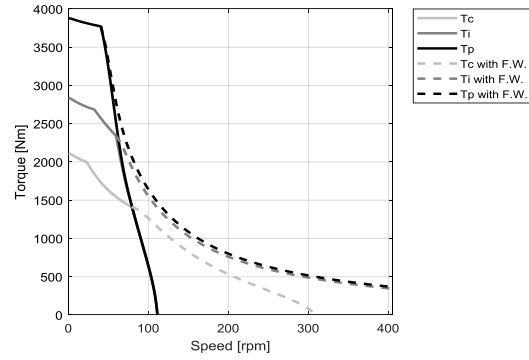
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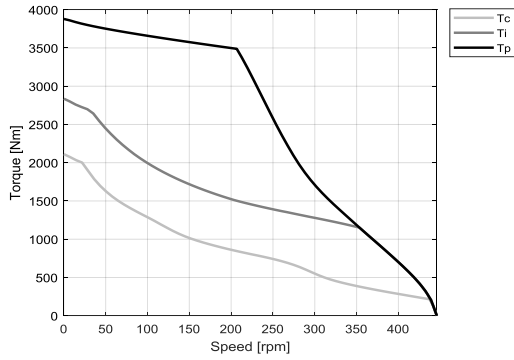
**WC - WATER COOLING**



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