

MOTOR PERFORMANCE		Winding codes	RA	SA	SB	UB
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	WATER COOLING
<b>Tp</b>	Peak torque	Nm	66.1	66.1	66.1	66.1
<b>Ti</b>	Intermittent torque	Nm	53.1	52.4	52.4	50.5
<b>Tc</b>	Continuous torque	Nm	38.7	38.1	38.1	36.4
<b>Ts</b>	Standstill torque	Nm	30.9	30.3	30.3	28.8
<b>Ip</b>	Peak current	Arms	14.0	18.3	36.7	65.0
<b>Ii</b>	Intermittent current	Arms	10.1	12.9	25.8	43.1
<b>Ic</b>	Continuous current	Arms	6.39	8.16	16.3	27.3
<b>Is</b>	Standstill current	Arms	4.84	6.19	12.4	20.7
<b>ns</b>	Rated low speed	rpm	0.84	0.84	0.84	0.87
<b>nm</b>	Maximum speed without flux weakening	rpm	947	1240	2480	4390
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	2160	2540	3850	4590
<b>ton,p</b>	Maximum ON time for peak cycle	s	9.1	8.5	8.5	6.8
<b>ton,i</b>	Maximum ON time for intermittent cycle	s	2.9	2.9	2.9	2.8
<b>Pp</b>	Power dissipation @ Ip	W	3780	3910	3910	4380
<b>Pi</b>	Power dissipation @ Ii	W	2560	2530	2530	2490
<b>Pc</b>	Power dissipation @ Ic	W	1020	1010	1010	996
<b>Td</b>	Max. detent torque (average to peak)	Nm	0.53	0.53	0.53	0.53

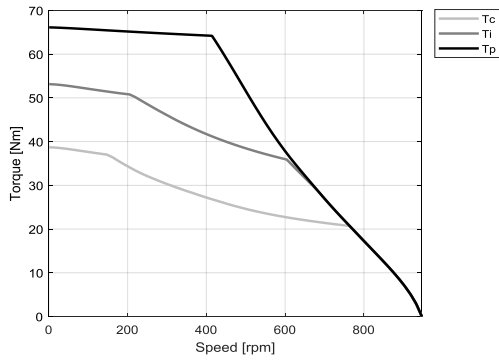
MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	7.27	5.57	2.78	1.57
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	4.19	3.21	1.60	0.906
<b>Km</b>	Motor constant	Nm/√W	1.73	1.70	1.70	1.62
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	11.8	7.12	1.78	0.629
<b>Ld/Lq</b>	Electrical inductance (*)	mH	87.7 / 75.4	51.4 / 44.5	12.9 / 11.1	4.10 / 3.62
<b>Isc</b>	Maximum short-circuit current	Arms	5.02	6.55	13.1	23.2
<b>nb</b>	Base speed	rpm	764	1040	2310	N/A
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	604	868	1990	3830
<b>nb,p</b>	Base speed at peak duty cycle	rpm	414	580	1290	2350
<b>nn</b>	Rated speed	rpm	682	946	2050	2010
<b>Tn</b>	Rated torque	Nm	21.6	19.0	12.3	12.4
<b>In</b>	Rated current	Arms	3.43	3.97	5.43	9.68
<b>rth</b>	Thermal time constant	s	65.1	64.6	64.6	62.6
<b>Rth</b>	Thermal resistance	K/W	0.102	0.104	0.104	0.105
<b>2p</b>	Number of poles	-	22	22	22	22
<b>J</b>	Rotor inertia	kg·m²	0.00168	0.00168	0.00168	0.00168
<b>mr</b>	Rotor mass	kg	1.20	1.20	1.20	1.20
<b>ms</b>	Stator mass	kg	6.34	6.32	6.32	6.26

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	0.025	0.025	0.025	0.025
<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	3.2	3.2	3.2	3.1
<b>Δpw</b>	Max. pressure drop at qw	bar	0.1	0.1	0.1	0.1

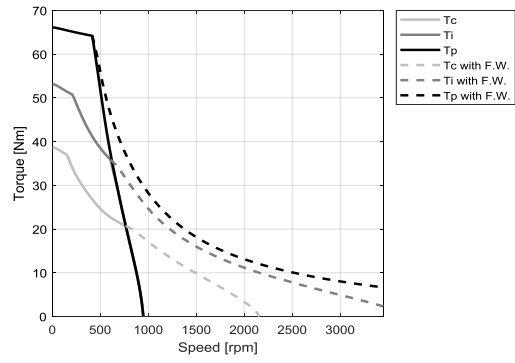
**Notes:** (\*) terminal to terminal.  
Hypotheses and tolerances are in ETEL Integration Manual.  
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

**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.

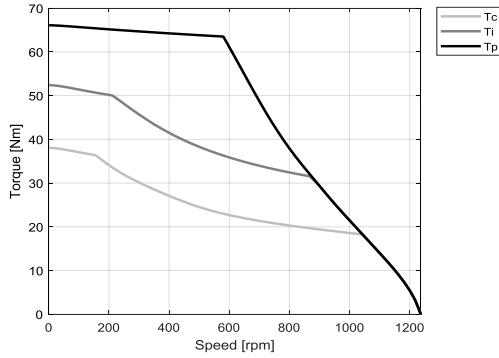
**RA - WATER COOLING**



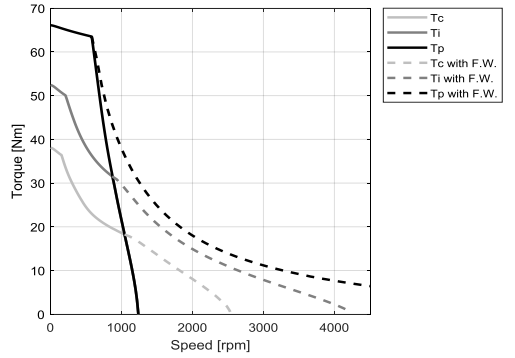
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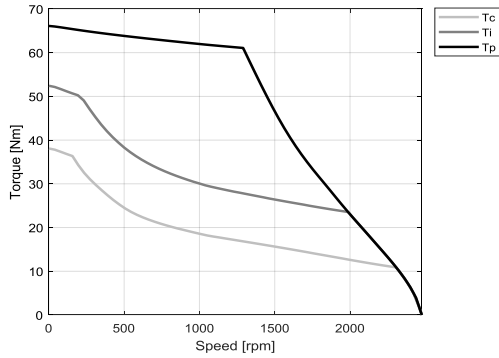
**SA - WATER COOLING**



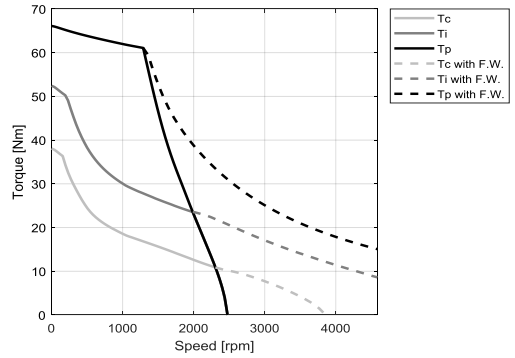
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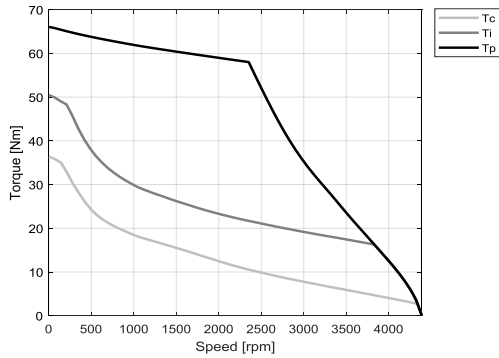
**SB - WATER COOLING**



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**UB - WATER COOLING**



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