

MOTOR PERFORMANCE		Winding codes	WH	UP	WP	
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	
<b>Tp</b>	Peak torque	Nm	27500	27500	27500	
<b>Ti</b>	Intermittent torque	Nm	20400	20000	20400	
<b>Tc</b>	Continuous torque	Nm	15100	14800	15100	
<b>Ts</b>	Standstill torque	Nm	12200	11900	12200	
<b>Ip</b>	Peak current	Arms	317	437	634	
<b>Ii</b>	Intermittent current	Arms	180	240	360	
<b>Ic</b>	Continuous current	Arms	114	152	227	
<b>Is</b>	Standstill current	Arms	86.2	115	172	
<b>ns</b>	Rated low speed	rpm	0.045	0.046	0.045	
<b>nm</b>	Maximum speed without flux weakening	rpm	42.8	59.1	85.7	
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	106	130	163	
<b>ton,p</b>	Maximum ON time for peak cycle	s	6.0	5.2	6.0	
<b>ton,i</b>	Maximum ON time for intermittent cycle	s	2.8	2.8	2.8	
<b>Pp</b>	Power dissipation @ Ip	W	157000	169000	157000	
<b>Pi</b>	Power dissipation @ Ii	W	61900	61500	61900	
<b>Pc</b>	Power dissipation @ Ic	W	24800	24600	24800	
<b>Td</b>	Max. detent torque (average to peak)	Nm	73	73	73	

MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	162	117	80.9	
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	92.8	67.3	46.4	
<b>Km</b>	Motor constant	Nm/√W	138	134	138	
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	0.919	0.514	0.230	
<b>Ld/Lq</b>	Electrical inductance (*)	mH	15.1 / 12.8	7.93 / 6.83	3.77 / 3.20	
<b>Isc</b>	Maximum short-circuit current	Arms	80.8	111	162	
<b>nb</b>	Base speed	rpm	30.6	46.6	73.5	
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	22.0	35.0	57.9	
<b>nb,p</b>	Base speed at peak duty cycle	rpm	11.3	20.4	36.3	
<b>nn</b>	Rated speed	rpm	26.3	40.8	66.9	
<b>Tn</b>	Rated torque	Nm	10200	8690	6770	
<b>In</b>	Rated current	Arms	72.5	83.4	94.3	
<b>rth</b>	Thermal time constant	s	151	148	151	
<b>Rth</b>	Thermal resistance	K/W	0.00382	0.00383	0.00382	
<b>2p</b>	Number of poles	-	176	176	176	
<b>J</b>	Rotor inertia	kg·m²	20.0	20.0	20.0	
<b>mr</b>	Rotor mass	kg	100	100	100	
<b>ms</b>	Stator mass	kg	294	291	294	

MOTOR ENVIRONMENT		UNIT				
<b>Udc</b>	Nominal DC bus voltage	VDC	600	600	600	
<b>Di</b>	Intermittent duty cycle	%	40	40	40	
<b>Dp</b>	Peak duty cycle	%	5.0	5.0	5.0	
<b>Sr</b>	Rotor exchange surface	m²	1.200	1.200	1.200	
<b>θamb</b>	Ambient temperature	°C	20	20	20	
<b>θmax</b>	Maximum coil temperature	°C	130	130	130	
<b>θw</b>	Inlet water temperature	°C	20	20	20	
<b>Δθw</b>	Water temperature difference for Pc	K	10	10	10	
<b>qw</b>	Minimum water flow for Δθw	l/min	39	38	39	
<b>Δpw</b>	Max. pressure drop at qw	bar	2.6	2.5	2.6	

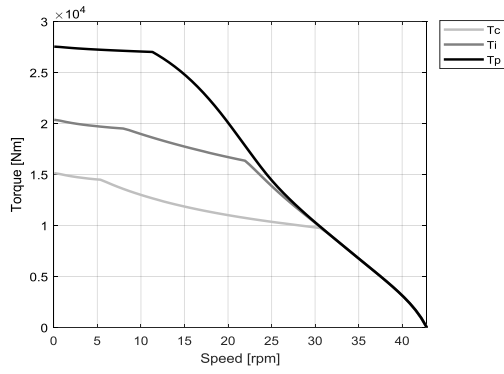
**Notes:** (\*) terminal to terminal.

Hypotheses and tolerances are in ETEL Integration Manual.

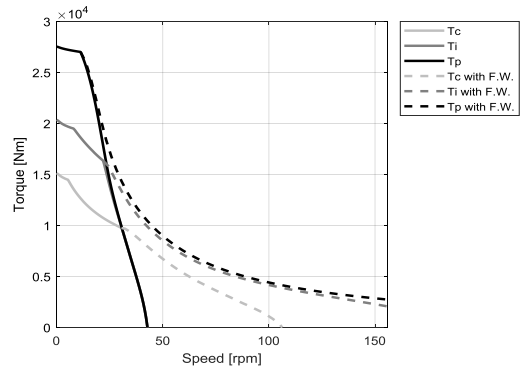
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

**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.

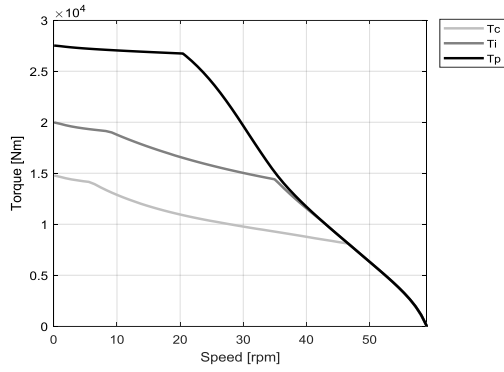
**WH - WATER COOLING**



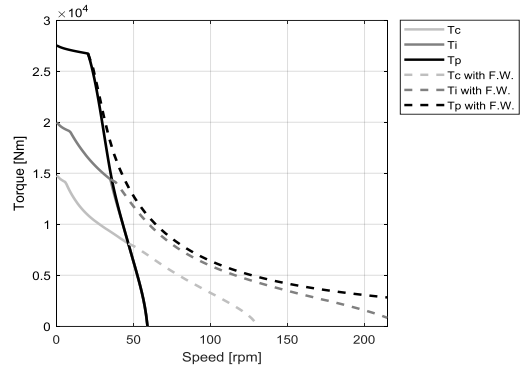
**WH - WATER COOLING**



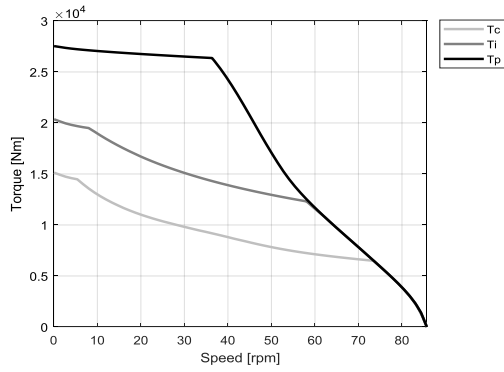
**UP - WATER COOLING**



**UP - WATER COOLING**



**WP - WATER COOLING**



**WP - WATER COOLING**

