

MOTOR PERFORMANCE		Winding codes	WJ	UT	WT	
		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	
Tp	Peak torque	Nm	42900	42900	42900	
Ti	Intermittent torque	Nm	30200	29600	30200	
Tc	Continuous torque	Nm	22300	21800	22300	
Ts	Standstill torque	Nm	17900	17400	17900	
Ip	Peak current	Arms	421	580	841	
Ii	Intermittent current	Arms	214	285	427	
Ic	Continuous current	Arms	135	180	270	
Is	Standstill current	Arms	102	137	205	
ns	Rated low speed	rpm	0.029	0.029	0.029	
nm	Maximum speed without flux weakening	rpm	35.1	48.5	70.3	
nm,FW	Maximum speed with flux weakening	rpm	92.1	113	142	
ton,p	Maximum ON time for peak cycle	s	4.5	3.8	4.5	
ton,i	Maximum ON time for intermittent cycle	s	2.8	2.8	2.8	
Pp	Power dissipation @ Ip	W	228000	245000	228000	
Pi	Power dissipation @ Ii	W	70100	69700	70100	
Pc	Power dissipation @ Ic	W	28000	27900	28000	
Td	Max. detent torque (average to peak)	Nm	110	110	110	

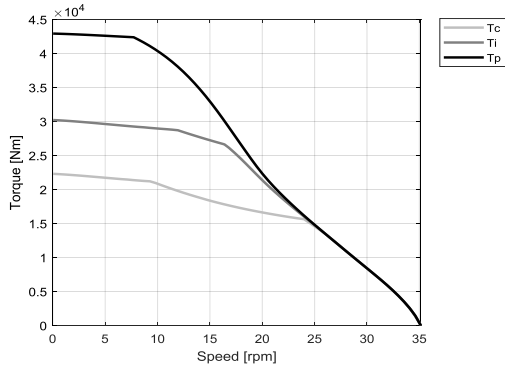
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	197	143	98.6	
Ku	Back EMF constant (*)	Vrms/(rad/s)	113	82.0	56.6	
Km	Motor constant	Nm/√W	188	182	188	
R20	Electrical resistance at 20°C (*)	Ohm	0.735	0.411	0.184	
Ld/Lq	Electrical inductance (*)	mH	12.1 / 10.5	6.34 / 5.59	3.01 / 2.62	
Isc	Maximum short-circuit current	Arms	98.5	136	197	
nb	Base speed	rpm	24.0	37.2	59.3	
nb,i	Base speed at intermittent duty cycle	rpm	16.4	27.3	45.8	
nb,p	Base speed at peak duty cycle	rpm	7.72	15.2	28.1	
nn	Rated speed	rpm	20.5	32.2	53.7	
Tn	Rated torque	Nm	16500	13900	10700	
In	Rated current	Arms	97.0	110	122	
rth	Thermal time constant	s	191	188	191	
Rth	Thermal resistance	K/W	0.00340	0.00342	0.00340	
2p	Number of poles	-	220	220	220	
J	Rotor inertia	kg·m²	64.7	64.7	64.7	
mr	Rotor mass	kg	211	211	211	
ms	Stator mass	kg	495	492	495	

MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600	600	
Di	Intermittent duty cycle	%	40	40	40	
Dp	Peak duty cycle	%	5.0	5.0	5.0	
Sr	Rotor exchange surface	m²	1.600	1.600	1.600	
θamb	Ambient temperature	°C	20	20	20	
θmax	Maximum coil temperature	°C	130	130	130	
θw	Inlet water temperature	°C	20	20	20	
Δθw	Water temperature difference for Pc	K	10	10	10	
qw	Minimum water flow for Δθw	l/min	44	44	44	
Δpw	Max. pressure drop at qw	bar	2.9	2.9	2.9	

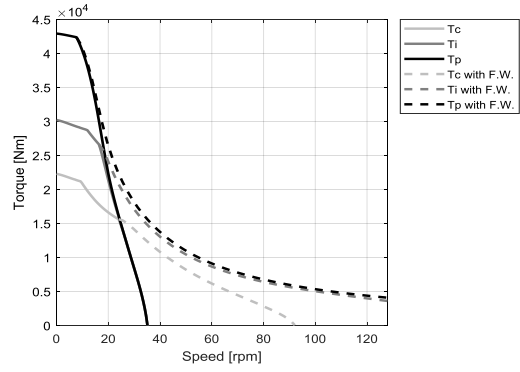
Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.
Please refer to ETEL Integration Manual for the mass of the optional cooling jacket and the possible additional pressure drop.

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.

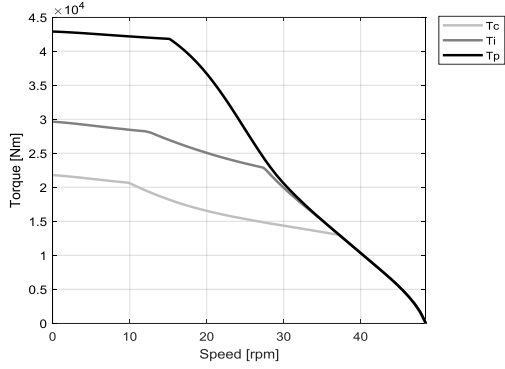
WJ - WATER COOLING



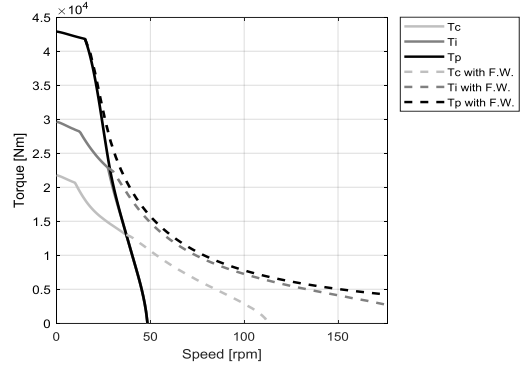
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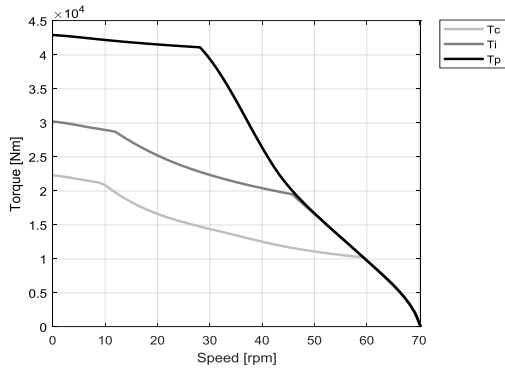
UT - WATER COOLING



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