MOTOR PERFORMANCE		Winding codes	UL	XL		
		UNIT	WATER COOLING	WATER COOLING		
Tp	Peak torque	Nm	8080	8080		
Ti	Intermittent torque	Nm	6200	6180		
Tc	Continuous torque	Nm	4620	4600		
Ts	Standstill torque	Nm	3750	3720		
Ip	Peak current	Arms	318	616		
Ii	Intermittent current	Arms	200	386		
Ic	Continuous current	Arms	127	244		
Is	Standstill current	Arms	96.0	185		
ns	Rated low speed	rpm	0.052	0.052		
nm	Maximum speed without flux weakening	rpm	153	297		
nm,FW	Maximum speed with flux weakening	rpm	563	881		
τon,p	Maximum ON time for peak cycle	s	14	14		
τon,i	Maximum ON time for intermittent cycle	s	3.1	3.1		
Pp	Power dissipation @ Ip	W	54800	55700		
Pi	Power dissipation @ Ii	W	27600	27600		
Pc	Power dissipation @ Ic	W	11000	11000		
Td	Max. detent torque (average to peak)	Nm	21	21		

MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	44.2	22.8		
Ku	Back EMF constant (*)	Vrms/(rad/s)	26.0	13.4		
Km	Motor constant	Nm/√W	63.1	62.6		
R20	Electrical resistance at 20°C (*)	Ohm	0.328	0.0883		
Ld/Lq	Electrical inductance (*)	mH	3.92 / 3.39	1.04 / 0.902		
Isc	Maximum short-circuit current	Arms	116	225		
nb	Base speed	rpm	108	226		
nb,i	Base speed at intermittent duty cycle	rpm	90.5	190		
nb,p	Base speed at peak duty cycle	rpm	77.3	162		
nn	Rated speed	rpm	96.0	201		
Tn	Rated torque	Nm	4500	4190		
In	Rated current	Arms	123	223		
τth	Thermal time constant	s	176	176		
Rth	Thermal resistance	K/W	0.00894	0.00892		
2p	Number of poles	-	132	132		
J	Rotor inertia	kg·m²	9.89	9.89		
mr	Rotor mass	kg	98.9	98.9		
ms	Stator mass	kg	147	147		

MOTOR ENVIRONMENT		UNIT				
Udc	Nominal DC bus voltage	VDC	600	600		
Di	Intermittent duty cycle	%	40	40		
Dp	Peak duty cycle	%	5.0	5.0		
Sr	Rotor exchange surface	m²	0.524	0.524		
θamb	Ambient temperature	°C	20	20		
θmax	Maximum coil temperature	°C	130	130		
θw	Inlet water temperature	°C	20	20		
Δθw	Water temperature difference for Pc	K	5.0	5.0		
qw	Minimum water flow for Δθw	l/min	34	34		
Δpw	Max. pressure drop at qw	bar	2.2	2.2		

Notes: (*) terminal to terminal.
Hypotheses and tolerances are in ETEL Integration Manual.

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.

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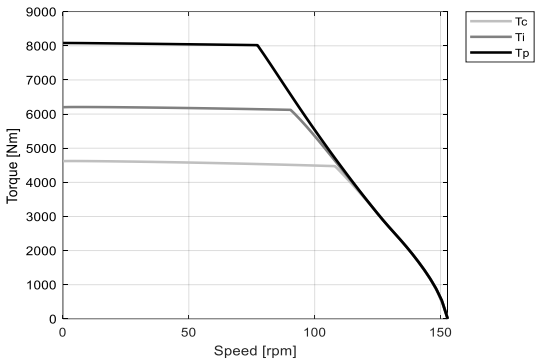
ETEL

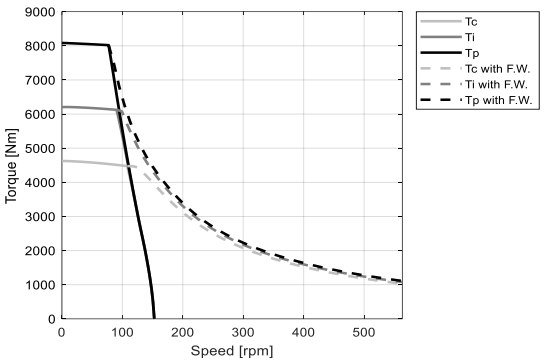
HIGH SPEED TORQUE MOTOR

TMKi0761-100

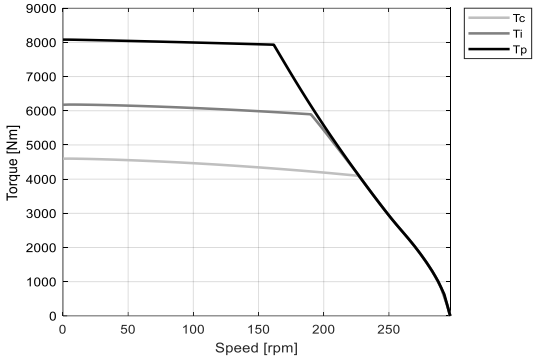
UL - WATER COOLING



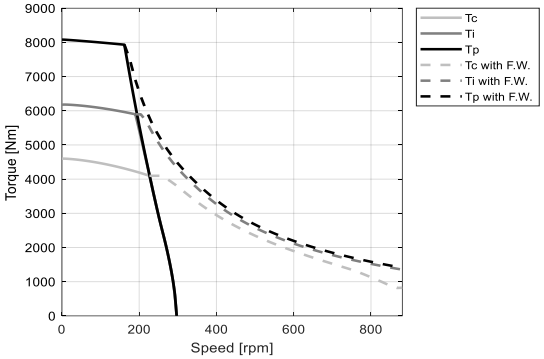
UL - WATER COOLING



XL - WATER COOLING



XL - WATER COOLING



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