

MOTOR PERFORMANCE		Winding codes	3UFN	3ULS		
		UNIT	WATER COOLING	WATER COOLING		
<b>Tp</b>	Peak torque	Nm	2270	2270		
<b>Ti</b>	Intermittent torque	Nm	2070	2070		
<b>Tc</b>	Continuous torque	Nm	1580	1590		
<b>Ts</b>	Standstill torque	Nm	1300	1300		
<b>Ip</b>	Peak current	Arms	142	285		
<b>Ii</b>	Intermittent current	Arms	133	267		
<b>Ic</b>	Continuous current	Arms	84.2	169		
<b>Is</b>	Standstill current	Arms	63.7	128		
<b>ns</b>	Rated low speed	rpm	0.18	0.18		
<b>nm</b>	Maximum speed without flux weakening	rpm	288	577		
<b>nm,FW</b>	Maximum speed with flux weakening	rpm	1050	1820		
<b>ton,p</b>	Maximum ON time for peak cycle	s	35	36		
<b>ton,i</b>	Maximum ON time for intermittent cycle	s	4.1	4.1		
<b>Pp</b>	Power dissipation @ Ip	W	21500	21300		
<b>Pi</b>	Power dissipation @ Ii	W	25400	25400		
<b>Pc</b>	Power dissipation @ Ic	W	10100	10100		
<b>Td</b>	Max. detent torque (average to peak)	Nm	9.0	9.0		

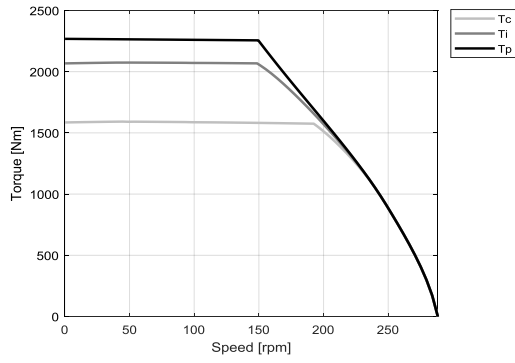
MOTOR SETTING		UNIT				
<b>Kt</b>	Torque constant	Nm/Arms	23.8	11.9		
<b>Ku</b>	Back EMF constant (*)	Vrms/(rad/s)	13.8	6.89		
<b>Km</b>	Motor constant	Nm/√W	23.6	23.8		
<b>R20</b>	Electrical resistance at 20°C (*)	Ohm	0.673	0.167		
<b>Ld/Lq</b>	Electrical inductance (*)	mH	7.01 / 5.40	1.75 / 1.35		
<b>Isc</b>	Maximum short-circuit current	Arms	68.8	138		
<b>nb</b>	Base speed	rpm	192	420		
<b>nb,i</b>	Base speed at intermittent duty cycle	rpm	149	332		
<b>nb,p</b>	Base speed at peak duty cycle	rpm	150	323		
<b>nn</b>	Rated speed	rpm	170	374		
<b>Tn</b>	Rated torque	Nm	1580	1540		
<b>In</b>	Rated current	Arms	84.0	163		
<b>rth</b>	Thermal time constant	s	101	101		
<b>Rth</b>	Thermal resistance	K/W	0.0103	0.0103		
<b>2p</b>	Number of poles	-	66	66		
<b>J</b>	Rotor inertia	kg·m²	0.674	0.674		
<b>mr</b>	Rotor mass	kg	40.7	40.7		
<b>ms</b>	Stator mass	kg	57.7	57.7		

MOTOR ENVIRONMENT		UNIT				
<b>Udc</b>	Nominal DC bus voltage	VDC	600	600		
<b>Di</b>	Intermittent duty cycle	%	40	40		
<b>Dp</b>	Peak duty cycle	%	5.0	5.0		
<b>Sr</b>	Rotor exchange surface	m²	0.162	0.162		
<b>θamb</b>	Ambient temperature	°C	20	20		
<b>θmax</b>	Maximum coil temperature	°C	130	130		
<b>θw</b>	Inlet water temperature	°C	20	20		
<b>Δθw</b>	Water temperature difference for Pc	K	5.0	5.0		
<b>qw</b>	Minimum water flow for Δθw	l/min	29	29		
<b>Δpw</b>	Max. pressure drop at qw	bar	2.1	2.1		

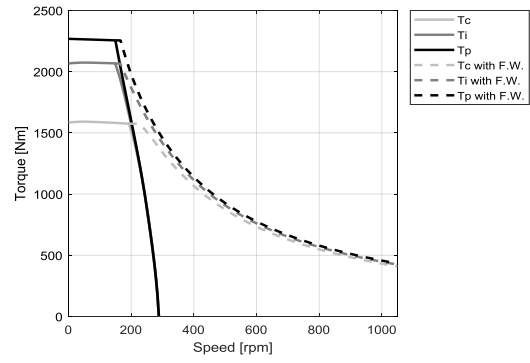
**Notes:** (\*) terminal to terminal.  
Hypotheses and tolerances are in ETEL Integration Manual.

**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.

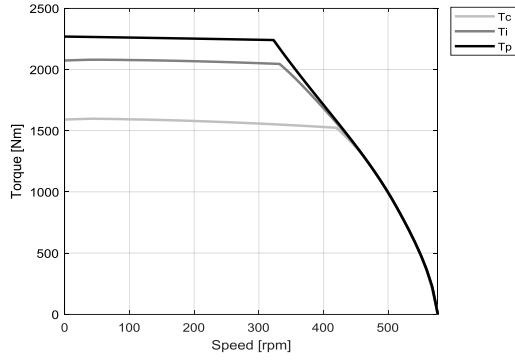
**3UFN - WATER COOLING**



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**3ULS - WATER COOLING**



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