		Winding codes	3SDN	3UHN	3UPN	
MOTOR PERFORMANCE		UNIT	WATER COOLING	WATER COOLING	WATER COOLING	
Tp	Peak torque	Nm	3520	3520	3520	
Ti	Intermittent torque	Nm	2810	2800	2770	
Tc	Continuous torque	Nm	2160	2150	2120	
Ts	Standstill torque	Nm	1760	1750	1720	
Ip	Peak current	Arms	70.0	226	458	
Ii	Intermittent current	Arms	45.7	146	291	
Ic	Continuous current	Arms	28.9	92.4	184	
Is	Standstill current	Arms	21.9	70.0	139	
ns	Rated low speed	rpm	0.091	0.091	0.092	
nm	Maximum speed without flux weakening	rpm	75.6	244	495	
nm,FW	Maximum speed with flux weakening	rpm	275	887	1360	
τon,p	Maximum ON time for peak cycle	s	17	17	16	
τon,i	Maximum ON time for intermittent cycle	s	3.0	3.0	3.0	
Pp	Power dissipation @ Ip	W	39500	40200	42000	
Pi	Power dissipation @ Ii	W	21800	21800	21800	
Pc	Power dissipation @ Ic	W	8730	8720	8720	
Td	Max. detent torque (average to peak)	Nm	14	14	14	
MOTOR SETTING		UNIT				
Kt	Torque constant	Nm/Arms	90.8	28.2	13.9	
Ku	Back EMF constant (*)	Vrms/(rad/s)	52.5	16.3	8.03	
Km	Motor constant	Nm/√W	33.6	33.4	32.7	
R20	Electrical resistance at 20°C (*)	Ohm	4.86	0.475	0.120	
Ld/Lq	Electrical inductance (*)	mH	66.8 / 53.5	6.43 / 5.16	1.56 / 1.25	
Isc	Maximum short-circuit current	Arms	20.6	66.5	135	
nb	Base speed	rpm	35.5	155	342	
nb,i	Base speed at intermittent duty cycle	rpm	20.8	120	266	
nb,p	Base speed at peak duty cycle	rpm	13.7	99.6	217	
nn	Rated speed	rpm	29.9	138	304	
Tn	Rated torque	Nm	2160	2120	2010	
In	Rated current	Arms	28.9	90.8	173	
τth	Thermal time constant	s	149	150	149	
Rth	Thermal resistance	K/W	0.0123	0.0123	0.0123	
2p	Number of poles	-	88	88	88	
J	Rotor inertia	kg·m²	2.37	2.37	2.37	
mr	Rotor mass	kg	56.8	56.8	56.8	
ms	Stator mass	kg	78.4	78.4	78.3	
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	0.209	0.209	0.209	
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	5.0	5.0	5.0	
qw	Minimum water flow for Δθw	l/min	25	25	25	
Δpw	Max. pressure drop at qw	bar	1.2	1.2	1.2	

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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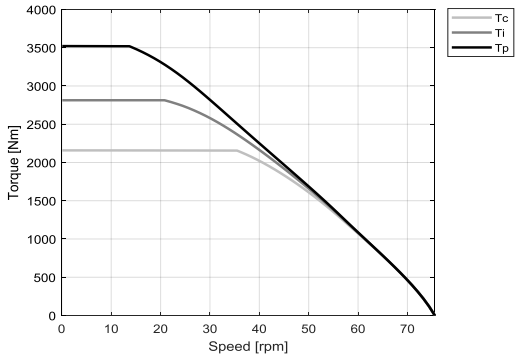
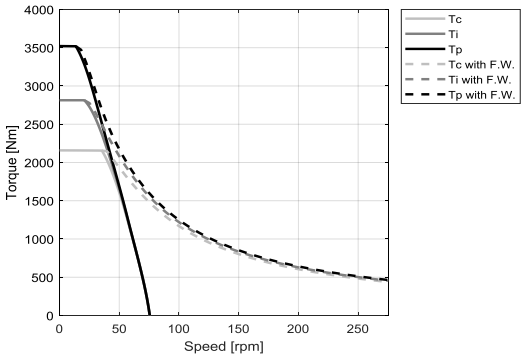
3SDN - WATER COOLING



3SDN - WATER COOLING



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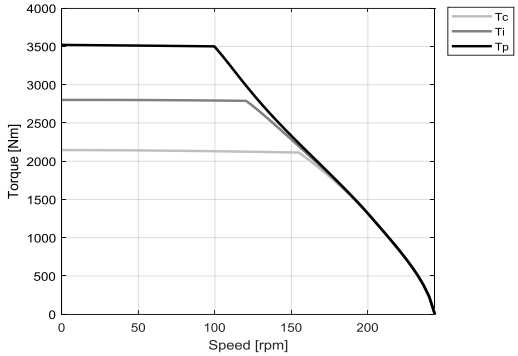

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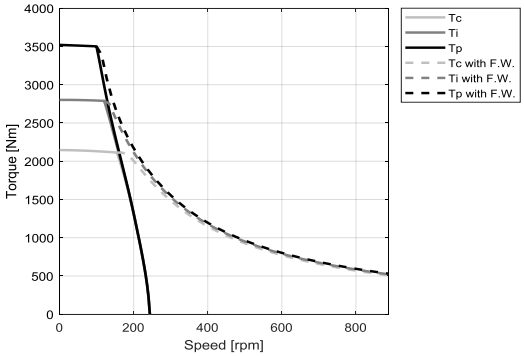

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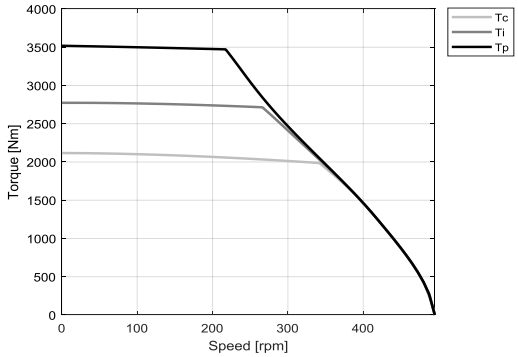
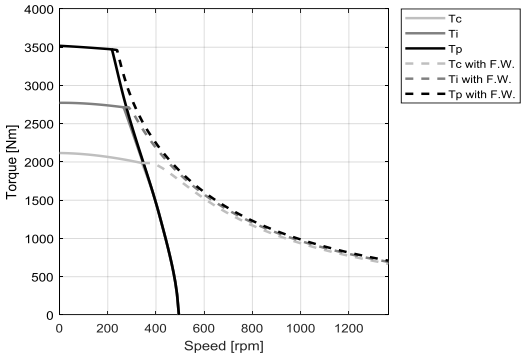


3UPN - WATER COOLING



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