

PERFORMANCES		Winding codes	3VDN	3VHS	3VDN	3VHS
		UNIT	FREE AIR CONVECTION		WATER COOLING	
Tp	Peak torque	Nm	6650		6650	
Tc	Continuous torque	Nm	1760	1760	3530	3530
Ts	Stall torque	Nm	1360	1360	2830	2830
Kt	Torque constant	Nm/Arms	82.5	41.2	82.5	41.2
Ku	Back EMF constant (*)	Vrms/(rad/s)	47.7	23.9	47.7	23.9
Km	Motor constant	Nm/√W	51.9	51.9	51.9	51.9
R20	Electrical resistance at 20°C (*)	Ohm	1.69	0.422	1.69	0.422
L1	Electrical inductance (*)	mH	19.7	4.93	18.5	4.63
Ip	Peak current	Arms	155	311	155	311
Ic	Continuous current	Arms	21.8	43.7	48.4	96.8
Is	Stall current	Arms	16.5	33.1	36.7	73.4
Pc	Max continuous power dissipation	W	1730	1730	8490	8490

SPECIFICATIONS		UNIT	FREE AIR CONVECTION	WATER COOLING
Udc	Nominal input voltage	VDC	600	600
τ th	Thermal time constant	s	4100	200
Rth	Thermal resistance	K/W	0.0638	0.0127
2p	Number of poles	-	176	176
J	Rotor inertia	kgm ²	5.0E+000	5.0E+000
Mr	Rotor mass	kg	25.1	25.1
Ms	Stator mass	kg	111	111
Td	Max Detent torque (average to peak)	Nm	56	56
ns	Stall speed	rpm	0.0017	0.034
Δθ w	Water temperature difference for Pc	K	--	5
qw	Minimum water flow for Δθw	l/min	--	24
Δpw	Max pressure drop at qw	bar	--	1

Notes: (*) terminal to terminal

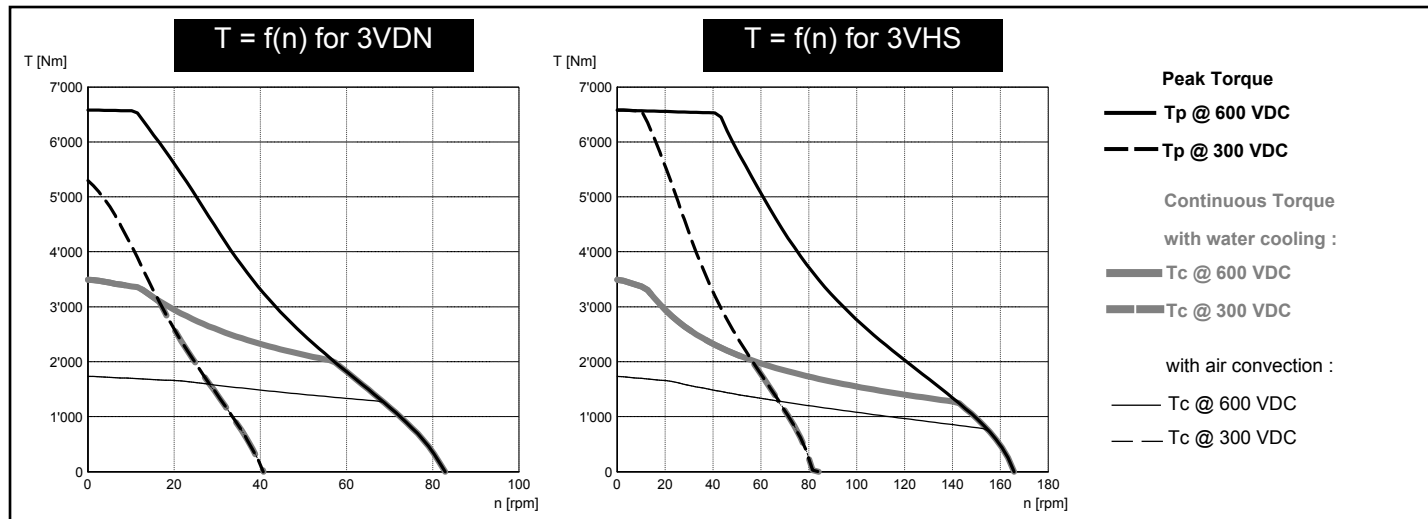
Hypothesis and tolerances are in ETEL's Handbook

Ambiant Temperature = 20° Celsius, Inlet Water Temperature = 20° Celsius

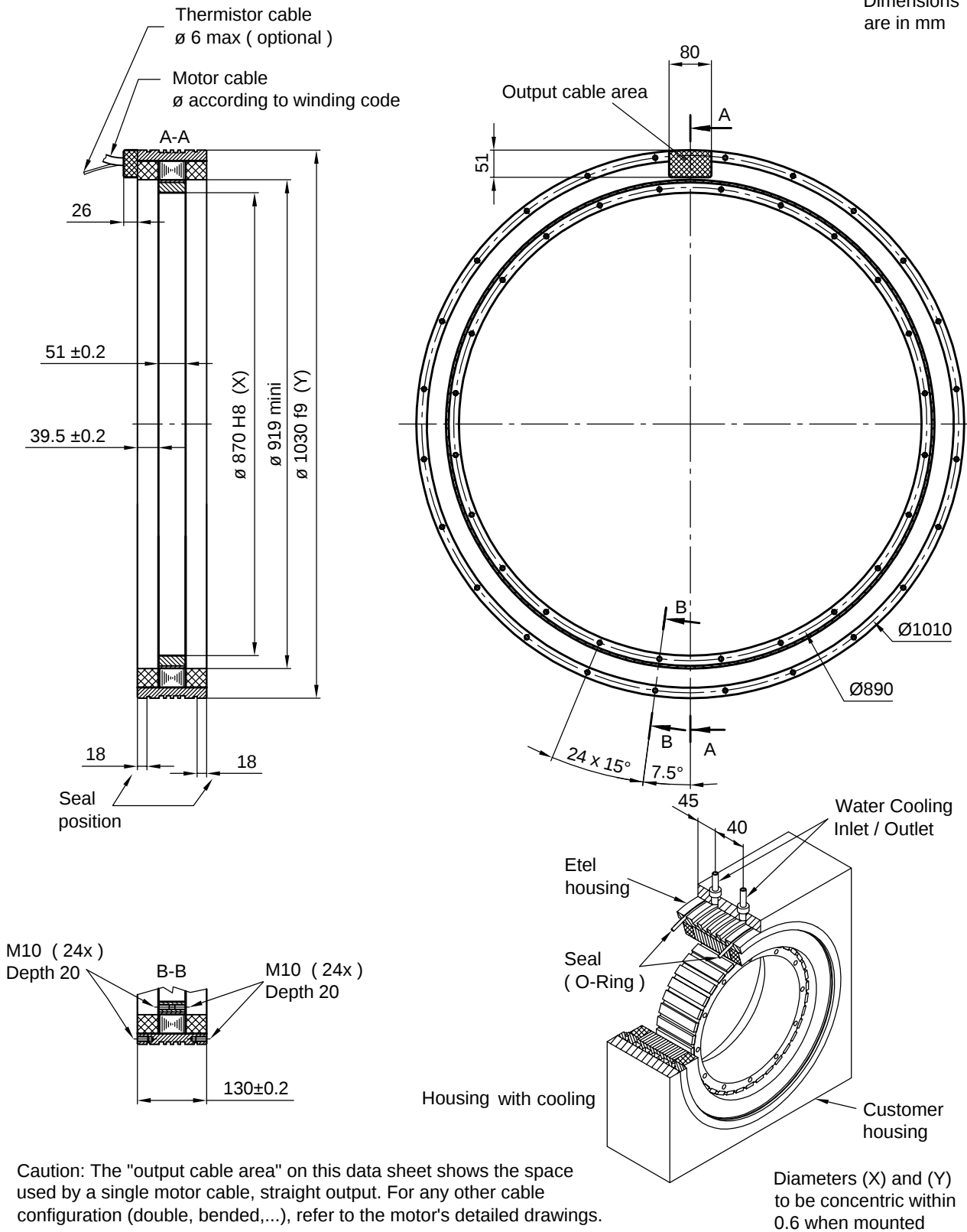
Max Coil Temperature = 130 ° Celsius

Power with stator connected to a total surface of 0.74 m² and rotor to a total surface of 0.41 m²

Caution: Any use of the motor beyond rated speed could lead to hazardous voltage and serious injuries. ETEL cannot be held responsible if the previous recommendation is not strictly applied



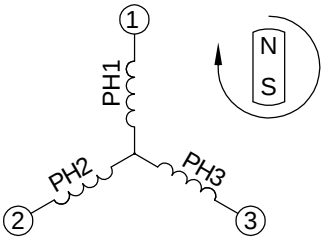
MOTOR



OUTPUT CABLE

THREE PHASE MOTOR WIRE TABLE	
Color or wire n°	Function
1	PH1
2	PH2
3	PH3
green/yellow	GND

Cable exit view



Back EMF

