



QTL 485 series,
with a height of 105 mm

Torque QTL 485 series with cooling ring

Parameter	Remarks	Symbol	Unit	QTL-A 485-85	QTL-A 485-105
Performance				I	I
Winding type					
Motor type max. voltage ph-ph	3-phase synchronous		$V_{ac,rms}$ (V _{dc})	480 (680)	
Ultimate torque @ 20°C/s increase	magnet @ 25°C	T_u	Nm	1651	2202
Peak torque @ 6°C/s increase	magnet @ 25°C	T_p	Nm	1342	1789
Continuous torque	coil @ 100°C	T_c	Nm	659	907
Stall torque	coil @ 100°C	T_s	Nm	466	642
Maximum speed ⁽¹⁾	@ T_c @ 680 Vdc	n_{max}	rpm	138	96
Motor torque constant	up to I_c	K_t	Nm/A _{rms}	41.7	55.6
Motor constant	coils @ 25°C	K_m	(Nm) ² /W	218.5	310.7
Electrical					
Ultimate current	magnet @ 25°C	I_u	A _{rms}	44.0	44.0
Peak current	magnet @ 25°C	I_p	A _{rms}	33.8	33.8
Maximum continuous current ⁽²⁾	coils @ 100°C	I_c	A _{rms}	15.8	16.3
Stall current ⁽²⁾	coils @ 100°C	I_s	A _{rms}	11.2	11.5
Back EMF phase-phase _{peak}		K_e	V/krpm	3569	4758
Back EMF phase-phase _{RMS}		K_e	V/krpm	2523	3364
Coil resistance per phase	coils @ 25°C ex. cable	R	Ω	2.66	3.32
Coil induction per phase	$I < 0.6 I_p$	L	mH	14.5	19.0
Electrical time constant		τ_e	ms	5.4	5.7
Poles		N_{mgn}	nr	62	62
Thermal					
Continuous power loss	coils @ 100°C	P_c	W	2584	3444
Thermal resistance ⁽³⁾	coils to mount. sfc.	R_{th}	°C/W	0.031	0.023
Thermal time constant		τ_{th}	s	47	44
Water cooling flow	for $\Delta T=3K$	Φ_w	l/min	12.4	16.5
Temperature cut-off / sensor				PTC 1kΩ (3x)/ PT1000 (3x)	
Mechanical					
Stator OD		OD_s	mm	485	
Rotor ID		ID_R	mm	366	
Motor height		H_{motor}	mm	85	105
Lamination stack height		H_{arm}	mm	60	80
Rotor inertia		J_R	kg*m ²	0.357	0.476
Stator mass	excluding cables	M_s	kg	18.75	25
Rotor mass		M_R	kg	9.68	12.9
Total mass	excluding cables	M_T	kg	28.43	37.9
Cable mass	all cables	m	kg	0.5	
Cable type (power)	length 2 m	d	mm (AWG)	10.6 (13)	
Cable type (sensor)	length 2 m	d	mm (AWG)	8.9 (22)	

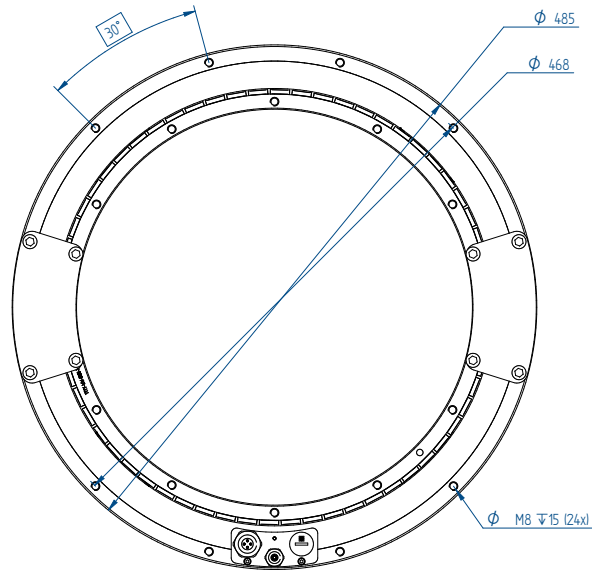
- Actual values depend on bus voltage.
Please check the T/n diagram in our manual or online simulation tool.
- These values are only applicable when the mounting surface is at 20°C and the motor is driven at maximum continuous current.
If these values differ in your application, please check our simulation tool or manual.
- R_{th} based on given water flow and pressure.

All specifications ±10%

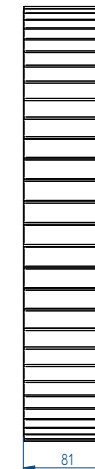
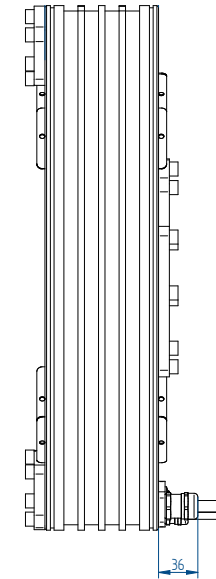
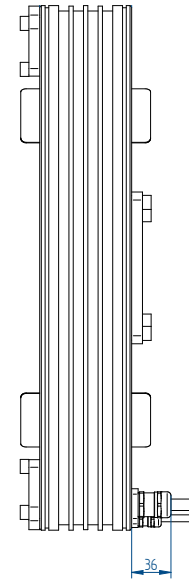
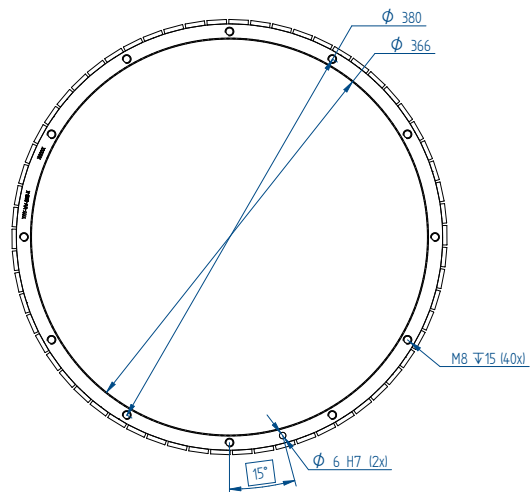
QTL-A -485-85

QTL-A 485-105

Stator



Rotor



Mounting instructions and tolerances can be found in the torque installation manual. Manuals and 3D CAD files can be downloaded from our website.

* All sizes are in mm