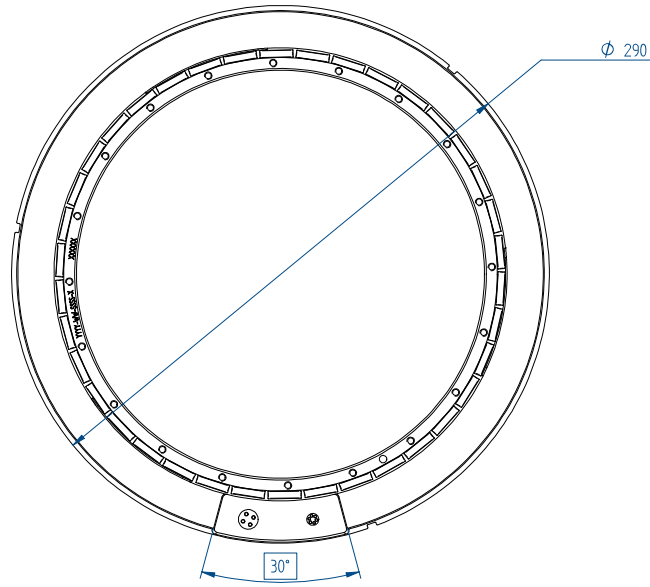
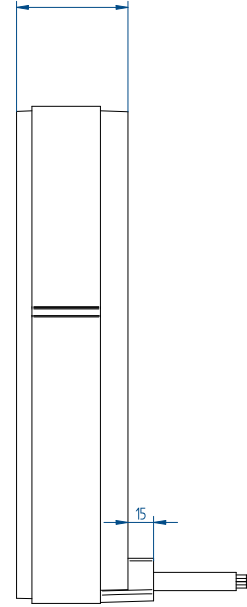


Mounting instructions and tolerances can be found in the torque installation manual. Manuals and 3D CAD files can be downloaded from our website.

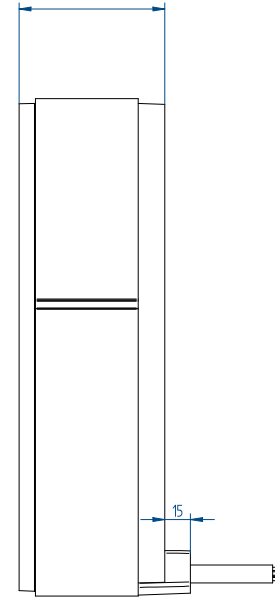
STATOR



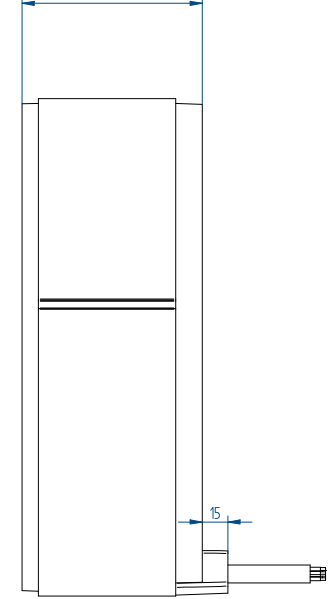
QTL-A 290-65



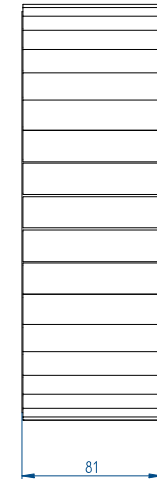
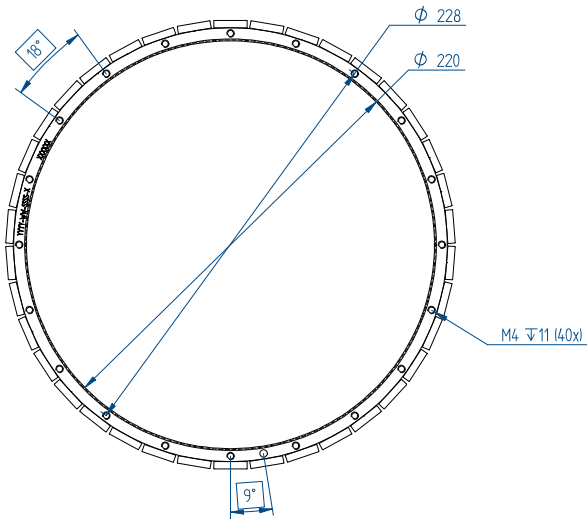
QTL-A 290-85



QTL-A 290-105



ROTOR



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QTL 290 series, with a height of 65 mm

	Parameter	Remarks	Symbol	Unit	QTL-A 290-65	QTL-A 290-85	QTL-A 290-105
Performance	Winding type				N	N	N
	Motortype 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	389	583	778
	Peak torque @ 6°C/s increase	magnet @ 25°C	T_p	Nm	316	474	632
	Continuous torque	coil @ 100°C	T_c	Nm	140	222	305
	Stall torque	coil @ 100°C	T_s	Nm	99	157	215
	Maximum speed ⁽¹⁾	@ Tc @ 680 Vdc	n_{max}	rpm	306	189	130
	Motor torque constant	up to Ic	K_t	Nm/A _{rms}	19.7	29.5	39.3
	Motor constant	coils @ 25°C	K_m	(Nm) ² /W	27.0	45.5	64.7
	Electrical	Ultimate current	magnet @ 25°C	I_u	A _{rms}	22.0	22.0
Peak current		magnet @ 25°C	I_p	A _{rms}	16.9	16.9	16.9
Maximum continuous current ⁽²⁾		coils @ 100°C	I_c	A _{rms}	7.14	7.54	7.75
Stall current ⁽²⁾		coils @ 100°C	I_s	A _{rms}	5.05	5.33	5.48
Back EMF phase-phase _{peak}			K_e	V/krpm	1681	2521	3362
Back EMF phase-phase _{RMS}			K_e	V/krpm	1189	1783	2377
Coil resistance per phase		coils @ 25°C ex. cable	R	Ω	4.77	6.37	7.96
Coil induction per phase		l < 0.6 lp	L	mH	23.9	34.7	45.5
Electrical time constant			τ_e	ms	5.0	5.5	5.7
Poles			N_{mgn}	nr	38	38	38
Thermal	Continuous power loss	coils @ 100°C	P_c	W	948	1410	1864
	Thermal resistance ⁽³⁾	coils to mount. sfc.	R_{th}	°C/W	0.084	0.057	0.043
	Thermal time constant		τ_{th}	s	57	52	49
	Temperature cut-off / sensor				PTC 1kΩ (3x) / PT1000 (3x)		
Mechanical	Stator OD		OD _S	mm	290		
	Rotor ID		ID _R	mm	220		
	Motor height		H _{motor}	mm	65	85	105
	Lamination stack height		H _{arm}	mm	40	60	80
	Rotor inertia		J _R	kg*m ²	0.031	0.046	0.061
	Stator mass	excluding cables	M _S	kg	6.0	8.3	10.8
	Rotor mass		M _R	kg	2.3	3.5	4.7
	Total mass	excluding cables	M _T	kg	8.3	11.8	15.5
	Cable mass	all cables	m	g	500		
	Cable type (power)	length 2 m	d	mm (AWG)	10.6 (13)		
Cable type (sensor)	length 2 m	d	mm (AWG)	6.4 (25)			

All specifications ±0.0%

1. Actual values depend on bus voltage. Please check the T/n diagram in our manual or online simulation tool.
2. 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.
3. R_{th} based on radial mounting of stator lamination stack.