



QMT-LA 485 series,
with a height of 130 mm

Torque QMT-LA 485 series

Parameter	Remarks	Symbol	Unit	QMT-LA 485-90	QMT-LA 485-110	QMT-LA 485-130	QMT-LA 485-160
Performance	Winding type			I	I	I	I
Motor type, max voltage ph-ph	3-phase synchronous	U_{max}	V_{dc}	680			
Ultimate torque @ 10 K/s increase	magnets @ 25°C	T_u	Nm	1094	1792	2514	3585
Peak torque @ 6 K/s increase	magnets @ 25°C	T_p	Nm	969	1587	2226	3174
Continuous torque ¹	coils @ 130°C	T_c	Nm	439	774	1131	1666
Stall torque ¹	coils @ 130°C	T_s	Nm	338	596	871	1283
Maximum speed ²	@ U_{max} @ T_c	n_{max}	rpm	168	90	56	30
Motor torque constant	$I \leq I_c$	K_t	Nm/ A_{rms}	34.1	55.9	78.4	111.7
Motor constant	coils @ 25°C	K_m	(Nm) ² /W	135.8	257.9	392.1	597.1
Electrical	Ultimate current	I_u	A_{rms}	45.8	45.8	45.8	45.8
Peak current	magnets @ 25°C	I_p	A_{rms}	35.5	35.5	35.5	35.5
Continuous current ¹	coils @ 130°C	I_c	A_{rms}	12.9	13.9	14.4	14.9
Stall current ¹	coils @ 130°C	I_s	A_{rms}	9.9	10.7	11.1	11.5
Back EMF ph-ph _{peak}		K_e	$V_{dc}/krpm$	2916	4777	6700	9554
Back EMF ph-ph _{rms}		K_e	$V_{ac}/krpm$	2062	3378	4738	6756
Resistance per phase	coils @ 25°C ex. cable	R_{ph}	Ω	2.86	4.04	5.22	6.97
Induction per phase	$I < 0.6 I_p$	L_{ph}	mH	14.9	24.4	34.3	48.9
Electrical time constant	coils @ 25°C	τ_e	ms	5.2	6.1	6.6	7.0
Thermal	Continuous power loss ¹	P_c	W	2014	3300	4628	6599
Thermal resistance	coils to mount. sfc.	R_{th}	K/W	0.055	0.033	0.024	0.017
Thermal time constant			s	90	77	71	67
Water cooling flow	for $\Delta T=8K$	Φ_w	l/min	3.6	6.1	8.3	12.0
Temperature cut-off / sensor				PTC130 (3x) / Pt1000 (3x)			
Mechanical	Stator OD	OD_s	mm	485			
Rotor ID		ID_r	mm	345			
Stator height		H_s	mm	90	110	130	160
Rotor height		H_r	mm	31	51	71	101
Poles		N_{mgn}		70			
Rotor inertia		J_r	kgm ²	0.163	0.269	0.375	0.534
Stator mass	ex. cables	m_s	kg	20.5	27.6	34.7	45.7
Rotor mass		m_r	kg	4.9	8.1	11.2	16.0
Total mass	ex. cables	m	kg	25.4	35.7	45.9	61.7
Cable mass	all cables		kg/m	0.25			
Cable type (power)	length 2 m	d	mm (AWG)	10.6 (13)			
Cable type (sensor)	length 2 m	d	mm (AWG)	6.4 (25)			

¹ These values are only applicable when the mounting surface is at 20°C and the motor is driven at continuous current. If these values differ in your application, please check our simulation tool.

² Actual values depend on bus voltage. Please check the T/n diagram in our manual or online simulation tool.

Series approvals



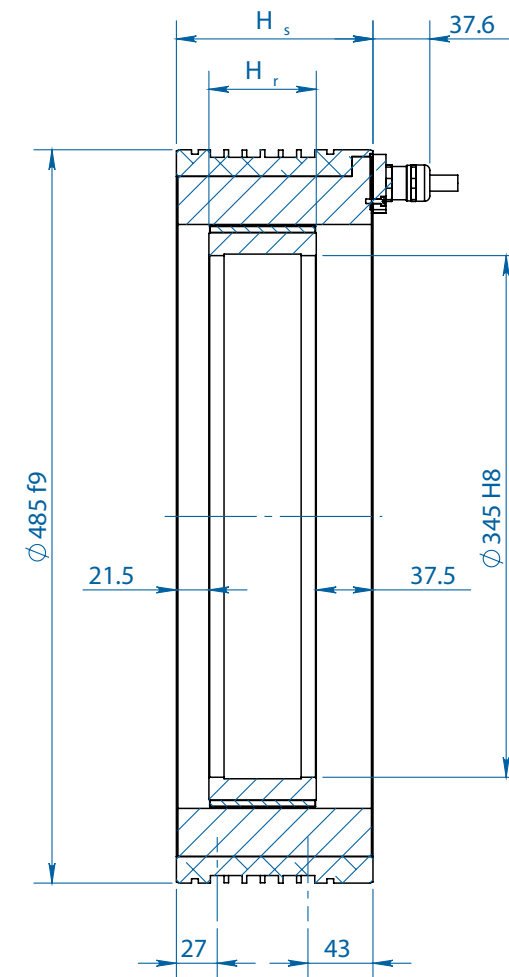
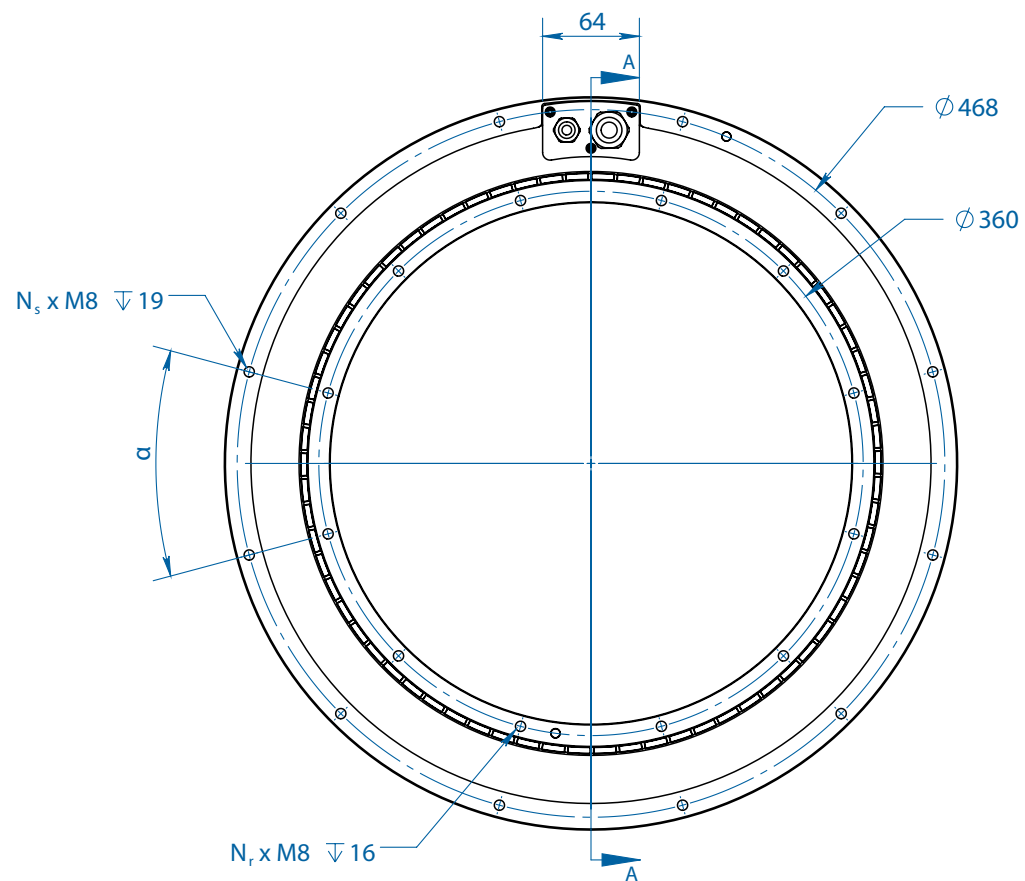
Series partly approved, full approval pending:



Please contact us for the latest status

All specifications $\pm 10\%$

QMT-LA 485



SECTION A-A

Motor type	H_s	H_r	N_s	N_r	α
QMT-LA-485-90	90	31	12	12	30
QMT-LA-485-110	110	51	12	12	30
QMT-LA-485-130	130	71	12	12	30
QMT-LA-485-160	160	101	23	24	15

* All sizes are in mm