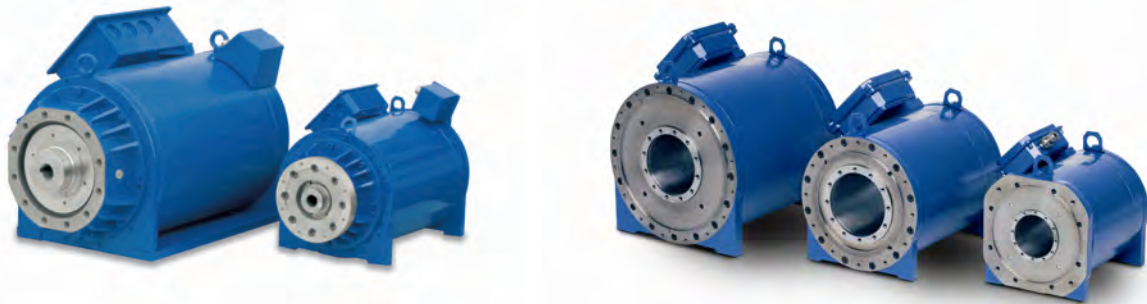


Motors Catalogue Sincrovert[®] Series

LIQUID COOLED TORQUE MOTOR



- Low speed synchronous AC, 16, 24 or 36 poles
- Power up to 496Kw
- Output torque from 120 to 14,000Nm
- Frame size 132 to 355
- Optional spherical thrust roller bearing



www.motiontech.com.au

General information

The permanent magnets synchronous motors of the LTS series have been developed and made to specifically meet the requirements of modern motorization where the "load" is driven directly by the motor without any additional mechanical equipment such as reducers, belts and pulley, or countershafts.

The concept is extremely simple - to apply the torque generated by the electric motor directly where it is required: on the shaft of the machine.

In particular, these new motors, despite the fact that they are very compact, offer very high torque, speed and positioning precision, producing very little noise when running, and they can be integrated perfectly into the machine. The liquid cooling of the external structure of the motor guarantees an optimal dissipation of the losses and constant performance, regardless of the temperature and quality of the air in the environment.

Advantages of the LTS Sincrovert® motors:

- High torque output at shaft
- Hollow shaft with through hole
- High precision rotation
- Maintenance free
- Particularly precise torque control
- Can be used in aggressive environmental conditions
- Very quiet
- High efficiency
- Minimum number of components in the kinematic system
- Reduced elasticity and play typically found in conventional transmission systems.
- No transmission friction losses

Sectors of use:

The main sectors of use for this series of motors are:

- Foodstuffs
- Mechanical and metalwork
- Working plastics
- Textiles
- Iron and steel
- Print works
- Energy

Typical fields of use:

- Plastic, rubber and foodstuffs extruders
- Metalworking machines
- Plastic injection machines
- Paper and cardboard production lines
- Machine tools and accessories
- Printing machines
- Mixers
- Positioners
- Transmission testing systems
- Power generation



Motore COPPIA sincrono raffreddato a liquido
Liquid cooled synchronous TORQUE motor
 TORQUE-Motor wassergekühlt

<i>Motor</i>	AC 3-phase synchronous liquid cooled torque motor
<i>Execution</i>	Liquid cooled permanent magnets torque motors
<i>Shaft height</i>	132, 160, 200, 280, 355mm
<i>Power</i>	2,5...496kW
<i>Torque</i>	118...14.046Nm
<i>Weight</i>	73...2020kg
<i>Nr. of poles</i>	16, 24, 36
<i>Base speed</i>	100, 150, 200, 250, 300, 350, 400, 500, 600rpm
<i>Supply voltage</i>	330...400Vac
<i>Connection</i>	Star
<i>Electrical connection</i>	Nr.3 or 6 terminals, (star or double star connection)
<i>Insulation class</i>	F, temperature rise cl.F
<i>Thermal protectors</i>	PTO (Klixon) as standard, PTC*, KTY84-130*, PT100* on request
<i>Mounting construction</i>	B3, B35 + hollow through shaft
<i>Protection degree</i>	IP 54, IP 55*
<i>Type of cooling</i>	IC 9W7
<i>Vibration degree</i>	R
<i>Balancing method</i>	Without keyway
<i>Ambient temperature</i>	-20...+60°C
<i>Liquid temperature</i>	+20°C (reference temp.), up to + 60°C with power derating
<i>Liquid type</i>	Water + antifreezing and anticorrosion additives
<i>Color</i>	RAL 5009 (medium blue)
<i>Frame material</i>	Steel
<i>Covers material</i>	Cast iron
<i>Flange material</i>	Cast iron
<i>Shaft</i>	Steel C45 – 39NiCrMo on request
<i>Terminal box position</i>	Standard position top-side mounted,
<i>Encoder connection</i>	With pulley+belt transmission for hollow through shaft version, axial in line connection for cylindrical or splined shaft version. Absolute encoder, PTC, KTY84-130, PT100, space heaters, cylindrical or splined solid shaft,
<i>Options available</i>	Made on request
<i>Availability</i>	From 6 up to 12 weeks size and options depending.
<i>Delivery time</i>	

On request with price increase

GENERAL DATA

Motor Protection
Insulation
Thermal Protection
Noise L_w
Cooling System
Max adm. shock
Ambient

IP 55
classe F – F class – F Klasse
PTO (Klixon) – PTC ²⁾ – PT100 ²⁾ – KTY84-130 ²⁾
$L_w < 73$ dB (A)
IC 9W7
$V_{eff} 6$ mm/s ($f = 6,3...63$ Hz) – acc. 4.0 m/s ² ($f > 63$ Hz)
- 20 / + 40°C – 1000 m ASL

COOLING

Motor size
Liquid delivery
Cooling capacity
Max perm. pressure
Max pressure drop
Coolant temperature *
Type of coolant
Cooling circuit

Size	132	160	200	280	355
l/min	8	10	14	20	30
KW	max 15 % of P _n				
Bar	3	3	3	3	3
Bar	< 0.5	< 0.6	< 0.8	< 0.8	< 1
18°C (min. 16°C) in funzionamento nominale - <i>at rated operation</i>					
Acqua + anticorrosivi/antigelo Water + anticorrosion/ho-frost additives (max 20%)					
Chiuso con scambiatore di calore esterno - <i>Closed with external heat-exchanger</i>					

TRANSDUCER²⁾

Encoder type
Signal
Encoder ratio ³⁾

<i>Absolute single-turn - SinCos Hiperface</i>	
<i>1024 sinus/turn 1V p/p – supply 7...12Vdc</i>	
ratio	4:1 for hollow shaft motors (3:1 only for LTS 355)

SPEED LIMITS

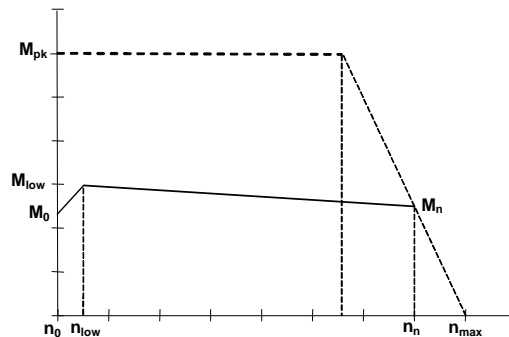
Motor size
Max mechanical speed

Size	132	160	200	280	355
rpm	1000	900	600	550	500

ELECTRICAL DATA AND PERFORMANCES

Motor Type	n _n 200 rpm U _n 330V		n _n 300 rpm U _n 330V		n _n 400 rpm U _n 330V		n _n 500 rpm U _n 330V		n _n 600 rpm U _n 330V		n _n 700 rpm U _n 330V		M _{pk} Nm	M _{low} Nm	M ₀ Nm	poles nr
	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A				
M _{low}	<i>Continuous torque available at low speed</i>															
M _{pk}	<i>Maximum output motor torque</i>															
M ₀	<i>Continuous torque available at blocked rotor</i>															
nr	<i>motor poles</i>															
n _n	<i>Nominal speed</i>															
M _n	<i>Nominal torque at the shaft</i>															
P _n	<i>Nominal mechanical power at the shaft</i>															
V _n	<i>Motor nominal voltage</i>															
I _n	<i>Nominal current</i>															
I _{pk}	<i>Max peak current</i>															

TORQUE DIAGRAM



Note 3) Mechanical ratio between the encoder and the motor shaft made with pulley and belt (ie. 4:1.....4 rev. Encoder = 1 rev. Motor shaft). For motors without the through hollow shaft the encoder is installed axially (direct without the transmission ratio).

ELECTRICAL DATA AND PERFORMANCES

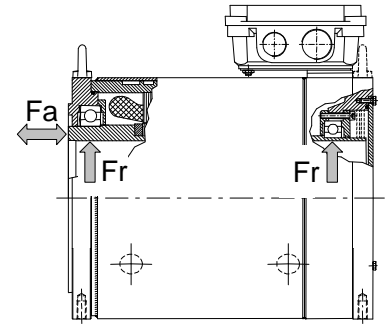
Motor Type	n _n 200 rpm U _n 330V		n _n 300 rpm U _n 330V		n _n 400 rpm U _n 330V		n _n 500 rpm U _n 330V		n _n 600 rpm U _n 330V		n _n 700 rpm U _n 330V		M _{pk} Nm	M _{low} Nm	M ₀ Nm	poles nr
	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A				
132 S	118 2,5	6,3 11,4	118 3,7	9,2 16,6	118 4,9	11,6 21,0	117 6,1	14,2 25,9	116 7,3	16,5 30,4	114 8,4	18,7 35,0	215	120	96	
132 M	177 3,7	9,4 17,0	177 5,6	13,7 24,8	176 7,4	17,3 31,5	176 9,2	21,3 38,9	174 10,9	24,7 45,6	171 12,5	28,1 52,6	320	180	144	
132 L	236 5,0	12,6 22,7	236 7,4	18,3 33,1	235 9,9	23,1 42,0	234 12,3	28,4 51,9	232 14,6	33,0 60,8	228 16,7	37,4 70,1	425	240	192	16
132 P	296 6,2	15,7 28,4	296 9,3	22,9 41,4	294 12,3	28,9 52,5	293 15,3	35,5 64,8	290 18,2	41,2 76,0	285 20,9	46,8 87,6	535	300	240	
132 X	355 7,4	18,9 34,1	355 11,1	27,5 49,7	353 14,8	34,7 63,0	351 18,4	42,6 77,8	347 21,8	49,4 91,2	342 25,1	56,1 105	640	360	288	
160 S	359 7,5	18,5 33,4	359 11,3	26,0 47,0	358 15,0	32,5 59,0	356 18,6	39,5 72,1	352 22,1	46,3 85,5	347 25,4	53,2 99,7	650	365	255	
160 M	449 9,4	23,1 41,8	449 14,1	32,5 58,8	447 18,7	40,6 73,7	445 23,3	49,3 90,1	440 27,6	57,9 106,8	433 31,8	66,5 125	810	456	319	16
160 L	539 11,3	27,8 50,1	539 16,9	39,0 70,5	536 22,5	48,7 88,5	534 27,9	59,2 108	528 33,2	69,5 128	520 38,1	79,8 150	975	547	383	
160 P	629 13,2	32,4 58,5	629 19,8	45,5 82,3	626 26,2	56,8 103,2	622 32,6	69,1 126	616 38,7	81,1 150	606 44,5	93,1 175	1135	638	447	
Motor Type	n _n 100 rpm U _n 330V		n _n 150 rpm U _n 330V		n _n 200 rpm U _n 330V		n _n 250 rpm U _n 330V		n _n 300 rpm U _n 330V		n _n 350 rpm U _n 330V		M _{pk} Nm	M _{low} Nm	M ₀ Nm	poles nr
	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A				
200 S	682 7,1	18,1 32,8	679 10,7	25,4 46,1	675 14,1	32,0 58,5	672 17,6	38,9 71,4	665 20,9	45,2 83,8	658 24,1	52,1 97,7	1235	693	554	
200 M	910 9,5	24,2 43,7	905 14,2	33,8 61,4	900 18,9	42,7 78,0	896 23,5	51,9 95,2	887 27,9	60,2 112	877 32,2	69,5 130	1645	924	739	
200 L	1328 13,9	35,3 63,8	1321 20,7	49,4 89,7	1314 27,5	62,3 114	1307 34,2	75,7 139	1294 40,6	87,9 163	1280 46,9	101 190	2400	1348	1078	24
200 P	1770 18,5	47,1 85,0	1761 27,7	65,8 120	1752 36,7	83,1 152	1743 45,6	101 185	1725 54,2	117 217	1707 62,6	135 254	3200	1797	1438	
200 X	2213 23,2	58,8 106	2201 34,6	82,3 149	2190 45,9	104 190	2179 57,0	126 232	2157 67,7	146 272	2134 78,2	169 317	4000	2246	1797	
280 S	2092 21,9	47,9 84,2	2082 32,7	71,5 126	2071 43,4	91,7 163	2060 53,9	114 203	2039 64,1	134 242	2018 74,0	155 282	3675	2226	1781	
280 M	2511 26,3	57,5 101	2498 39,2	85,8 151	2485 52,0	110 195	2472 64,7	137 244	2447 76,9	161 290	2421 88,7	186 338	4410	2671	2137	
280 L	3347 35,1	76,7 135	3330 52,3	114 202	3313 69,4	147 260	3296 86,3	183 326	3262 102	214 386	3228 118	248 451	5880	3562	2849	
280 P	5021 52,6	115 202	4996 78,5	172 303	4970 104	220 391	4945 129	274 488	4894 154	322 580	4843 177	371 676	8820	5342	4274	24
280 X	6276 65,7	144 252	6245 98,1	215 379	6213 130	275 488	6181 162	342 610	6117 192	402 725	6053 222	464 845	11025	6678	5342	
355 S	9088 95,2	208 366	9042 142	311 548	8996 188	399 707	8950 234	496 884	8858 278	582 1049	8765 321	672 1224	15900	9227	7381	
355 M	9915 104	227 399	9864 155	339 598	9814 206	435 771	9764 256	541 964	9663 304	635 1144	9562 350	733 1335	17400	10066	8052	
355 L	11567 121	265 465	11508 181	395 698	11450 240	507 900	11391 298	631 1125	11273 354	741 1335	11156 409	855 1558	20300	11743	9395	36
355 P	12393 130	284 499	12330 194	424 748	12267 257	543 964	12205 319	676 1205	12079 379	794 1431	11953 438	917 1669	21750	12582	10066	
355 X	14046 147	322 565	13974 219	480 848	13903 291	616 1093	13832 362	766 1366	13689 430	900 1621	13547 496	1039 1892	24600	14260	11408	

The max field weakening speed is n_n * 1.5 with mechanical limit as indicated on above pag.

LTS
Version with big diameter through hollow shaft

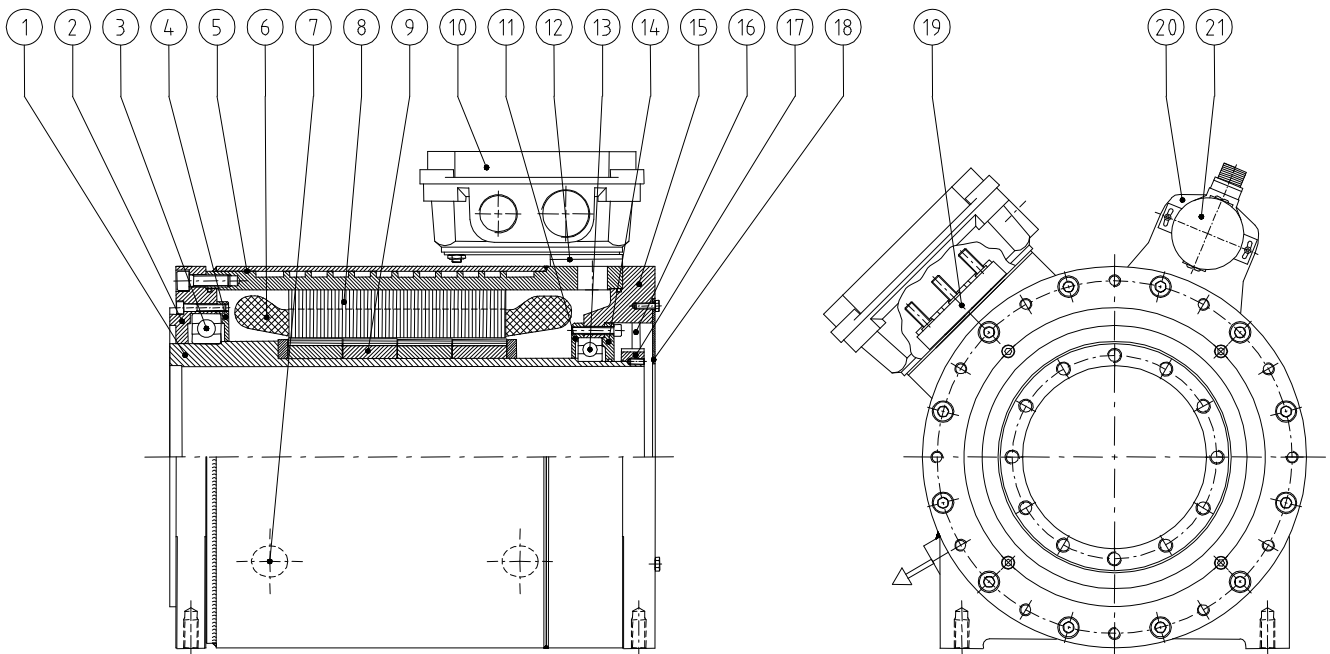
BEARINGS

Motor type	Drive-end Bearing code (dim. mm)	Non drive-end Bearing code (dim. mm)	Max. radial load Fr - [N]	Max. axial load Fa - [N]
132	61924 (120x165x22)	61922 (110x150x20)	2500	1500
160	61838 (190x240x24)	61832 (160x200x20)	4000	1800
200	61838 (190x240x24)	61832 (160x200x20)	4000	1800
280	61864 (320x400x38)	61856 (280x350x33)	8000	2000
355	61880 (400x500x46)	61876 (380x480x46)	10000	2500



LTS

EXPLODED DRAWING



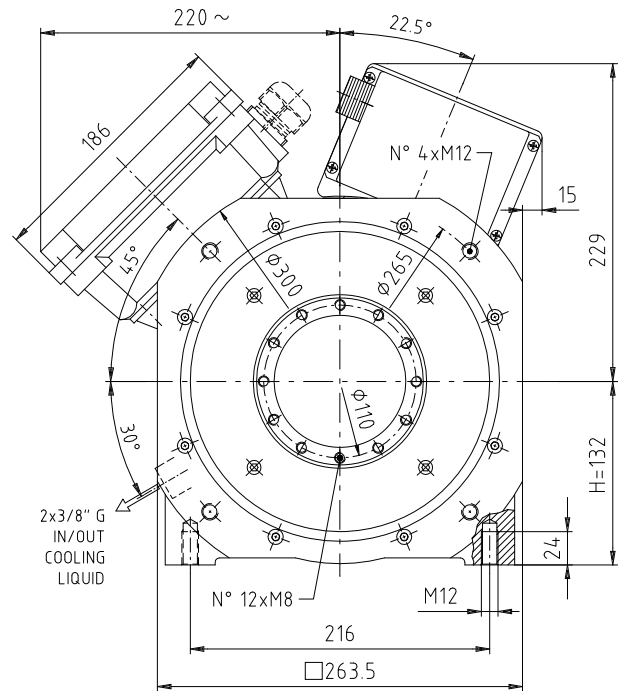
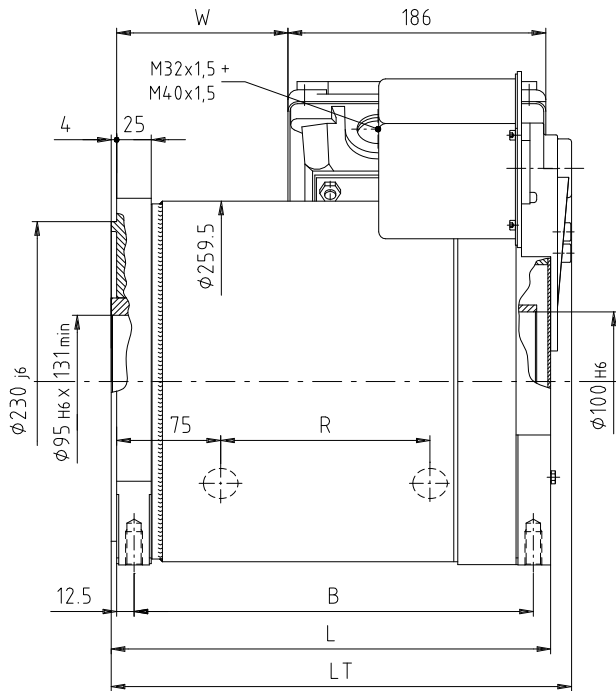
1	Shaft	12	Terminal box
2	Drive-end cover	13	Non drive-end bearing
3	Drive-end bearing	14	Grease Flange
4	Grease Flange	15	Non drive-end cover
5	Frame	16	Transducer belt
6	Winding	17	Transducer pulley
7	In /out cooling liquid	18	Transducer cover
8	Stator	19	Terminal board
9	Rotor	20	Transducer support
10	Terminal box cover	21	Transducer
11	Grease Flange		

Schematic drawing to identify the main components of the motor.
No special versions or options are shown here.

LTS 132

OVERALL DIMENSIONS

Dimensions [mm]



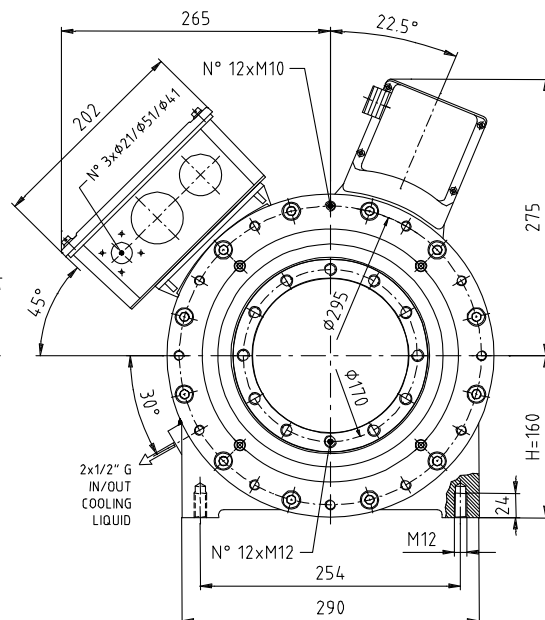
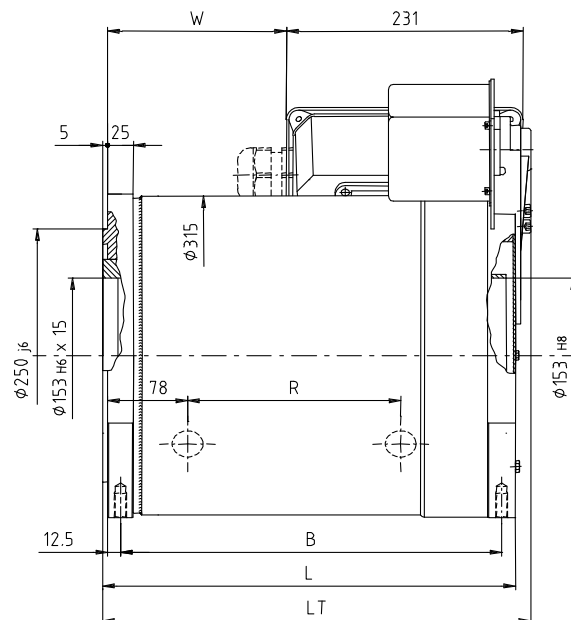
LTS	B	L	LT	R	W	inertia J (kgm ²)	weight (kg)
132S	243	272	290	106	78	0.054	75
132M	288	317	335	151	123	0.074	90
132L	333	362	380	196	168	0.095	110
132P	378	407	425	241	213	0.116	130
132X	423	452	470	286	258	0.136	145

LTS

LTS 160

OVERALL DIMENSIONS

Dimensions [mm]

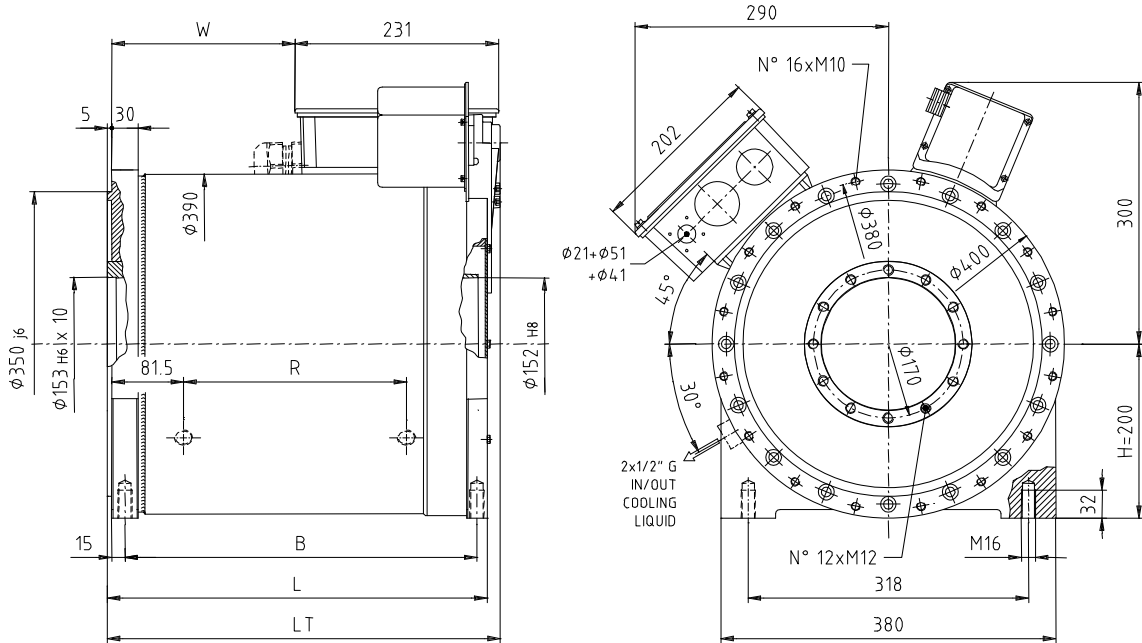


LTS	B	L	LT	R	W	inertia J (kgm ²)	weight (kg)
160S	372	405	420	208	174	0.21	150
160M	417	450	465	253	219	0.24	175
160L	462	495	510	298	264	0.28	200
160P	507	540	555	343	309	0.31	220

LTS 200

OVERALL DIMENSIONS

Dimensions [mm]

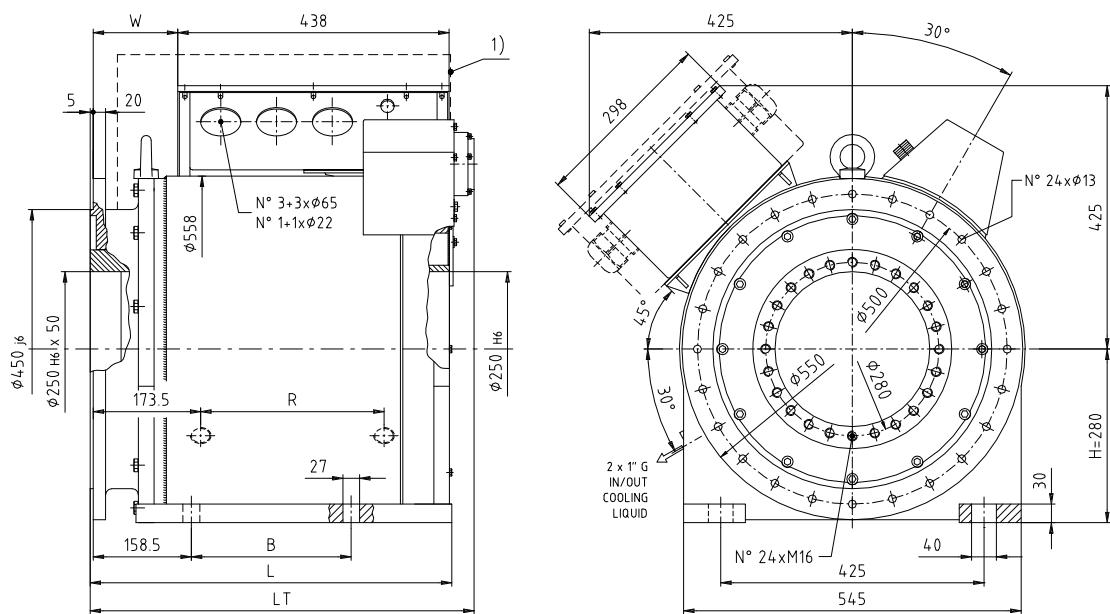


LTS	B	L	LT	R	W	inertia J (kgm ²)	weight (kg)
200S	264.5	296	311	118	73	0.62	185
200M	309.5	341	356	163	118	0.81	220
200L	399.5	431	446	253	208	1.2	300
200P	489.5	521	536	343	298	1.6	370
200X	579.5	611	626	433	388	1.9	450

LTS 280

OVERALL DIMENSIONS

Dimensions [mm]



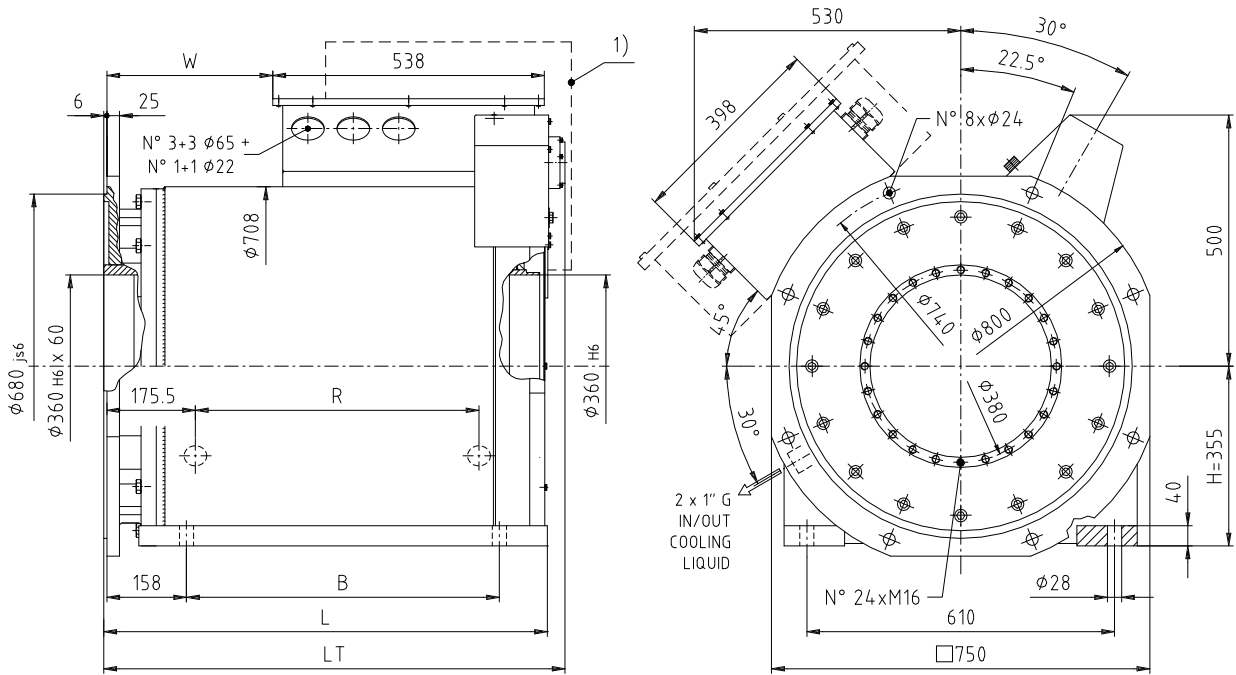
LTS	B	L	LT	R	W	inertia J (kgm ²)	weight (kg)
280S	213	539	575	251	91	4.1	560
280M	258	584	620	296	136	4.9	620
280L	348	674	710	386	226	5.6	750
280P	528	854	890	566	406	7.0	1020
280X	663	989	1025	701	541	9.9	1220

Increased size terminal box for current higher than 300A

LTS 355

OVERALL DIMENSIONS

Dimensions [mm]



LTS	B	L	LT	R	W	inertia J (kgm ²)	weight (kg)
355S	575	835	870	517	284	27	1430
355M	620	880	915	562	329	30	1530
355L	710	970	1005	652	419	24	1730
355P	755	1015	1050	697	464	36	1830
355X	845	1105	1140	787	554	41	2030

Increased size terminal box for current higher than 500A

LTS

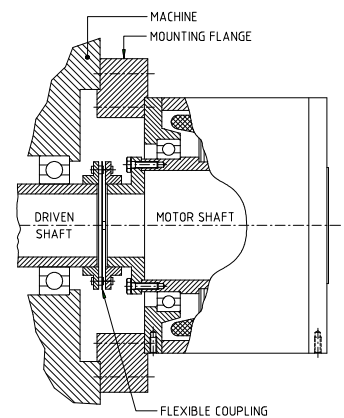
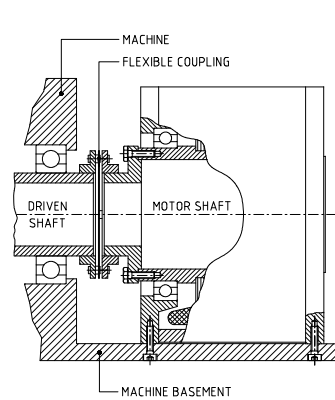
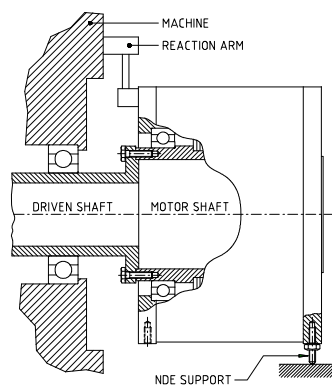
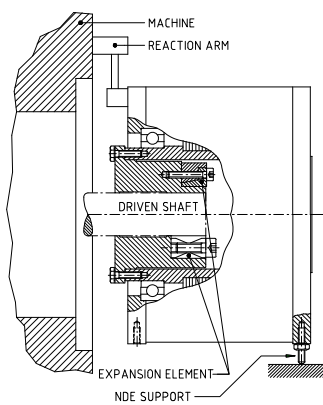
MOUNTING EXAMPLES

EXPANSION ELEMENT + REACTION ARM

RIGID COUPLING + REACTION ARM

FEET MOUNTING + FLEXIBLE COUPLING

FLANGE MOUNTING + FLEXIBLE COUPLING



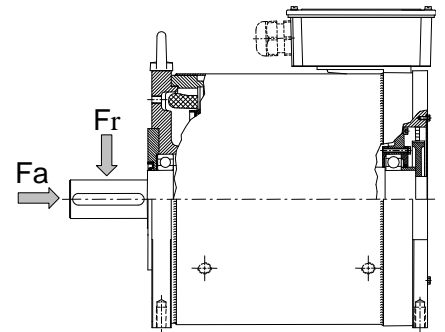
LTS-S

LTS-S

Versione con albero sporgente cilindrico con chiave, cilindrico liscio, scanalato.

BEARINGS

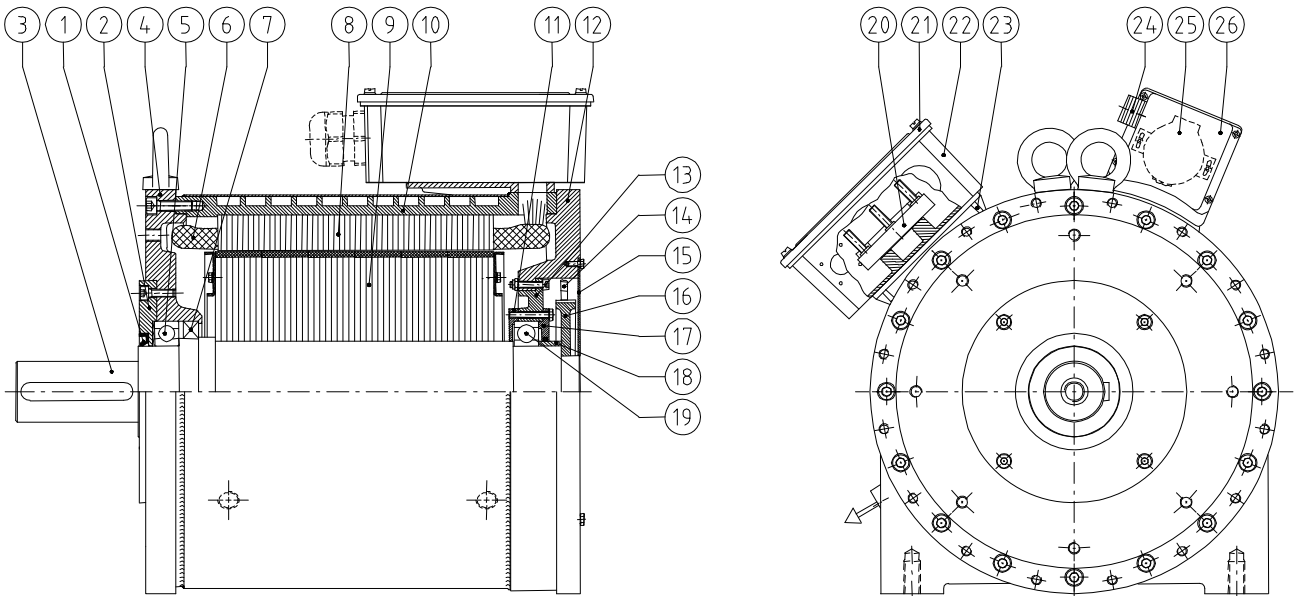
Motor type	Drive-end Bearing code ⁵⁾	Non drive-end Bearing code ⁵⁾	Max. radial load Fr - [N]	Max. axial load Fa - [N]
132	* 1)	* 1)	* 1)	* 1)
160	* 1)	* 1)	* 1)	* 1)
200	6018	6018	3800	1800
280	61936 MA	61936 MA	7000	4000
355	6036 M	6036 M	14000	5000



1) data not available yet
 5) - Life lubricated with grease -

LTS-S

EXPLODED DRAWING



1	Oil seal	14	Transducer belt
2	Grease Flange	15	Pulley cover
3	Shaft	16	Transducer pulley
4	Drive-end cover	17	Grease Flange
5	Drive-end bearing	18	Spacer
6	Winding	19	Non drive-end bearing
7	Oil seal	20	Terminal board
8	Stator	21	Terminal box cover
9	Rotor	22	Terminal box
10	Frame	23	Terminal box support
11	Grease Flange	24	Transducer connector
12	Non drive-end cover	25	Transducer
13	Bearing support	26	Transducer cover

Schematic drawing to identify the main components of the motor.
 No special versions or options are shown here.

Mechanical drawings available on request, for detailed informations please contact our technical office.

General information

This LTS-TB series torque motor has been specifically designed and built to be used as main motor (screw rotation) for plastic extruders. The motor has on the front side an oversized high quality thrust bearing, lubricated by oil and housed into a cast iron made hub provided with radial cooling fins. The extrusion screw fits directly into the shaft of the motor with the coupling produced to the customer's drawing and specifications. The extrusion cylinder fits directly on the thrust bearing hub which is available with various flanges or adaptors to guarantee the full compatibility with existing cylinders. The motor shaft has a hole going through it so the screw can be easily removed. The liquid cooling of the external structure of the motor guarantees optimal dissipation of the heat generated by the losses and constant performance, regardless of the temperature and quality of the air in the environment. The current production range easily satisfies the majority of requirements for high-performance single screw extruder drives, modern, reliable and innovative.

Advantages of the LTS Sincrovert® motors:

- *Thrust bearing integrated in motor*
- *Direct activation of the screw with high precision rotation and torque control.*
- *High torque output at shaft*
- *Can be used in aggressive environmental conditions*
- *Very quiet*
- *High efficiency*
- *Minimum number of components in the kinematic system*
- *No transmission friction losses*

Sectors of use:

The main sectors of use for this series of motors are:

- *Foodstuffs*
- *Plastics and rubber processing*

Typical fields of use:

- *Plastic extruders*
- *Rubber extruders*
- *Extruders for foodstuffs and feedstuffs*
- *Mixers*

LTS-TB - SINCROVERT®

680...14.000 Nm

Motore COPPIA sincro raffreddato a liquido con reggisplinta
Liquid cooled synchronous TORQUE motor with thrust bearing
 Torque-Motor wassergekühlt mit Drucklager



<i>Motor</i>	AC 3-phase synchronous liquid cooled torque motor
<i>Execution</i>	Liquid cooled permanent magnets torque motors
<i>Shaft height</i>	200, 280, 355mm
<i>Power</i>	7,1...496kW
<i>Torque</i>	680...14.046Nm
<i>Weight</i>	185...2020kg
<i>Nr. of poles</i>	24, 36
<i>Base speed</i>	100, 150, 200, 250, 300, 350rpm
<i>Supply voltage</i>	330...400Vac
<i>Connection</i>	Star
<i>Electrical connection</i>	Nr.3 or 6 terminals, (star or double star connection)
<i>Insulation class</i>	F, temperature rise cl.F
<i>Thermal protectors</i>	PTO (Klixon) as standard, PTC*, KTY84-130*, PT100* on request
<i>Mounting construction</i>	B3 + flange for barrel connection
<i>Thrust bearing</i>	29400 Series, oil lubricated
<i>Protection degree</i>	IP 54, IP 55*
<i>Type of cooling</i>	IC 9W7
<i>Vibration degree</i>	R
<i>Balancing method</i>	Without keyway
<i>Ambient temperature</i>	-20...+60°C
<i>Liquid temperature</i>	+20°C (reference temp.), up to + 60°C with power derating
<i>Liquid type</i>	Water + antifreezing and anticorrosion additives
<i>Color</i>	RAL 5009 (medium blue)
<i>Frame material</i>	Steel
<i>Covers material</i>	Cast iron
<i>Shaft</i>	Cylindrical or splined with hollow through shaft for screw extraction. Material 39NiCrMo or others on request.
<i>Terminal box position</i>	Standard position top-side mounted,
<i>Encoder connection</i>	With pulley+belt transmission for hollow through shaft version, axial in line connection for cylindrical or splined shaft version.
<i>Options available</i>	Absolute encoder, PTC, KTY84-130, PT100, space heaters
<i>Availability</i>	Made on request
<i>Delivery time</i>	From 9 up to 12 weeks size and options depending.

* A richiesta con sovrapprezzo – On request with price increase –

GENERAL DATA

Motor Protection
Insulation
Thermal Protection
Noise L_w
Cooling System
Max adm. shock
Ambient

IP 55
classe F – F class – F Klasse
PTO (Klixon) – PTC ²⁾ – PT100 ²⁾ – KTY84-130 ²⁾
$L_w < 73$ dB (A)
IC 9W7
V eff 4.5 mm/s 6,3...63Hz – acc. 2.55 m/s ²
- 20 / + 40°C – 1000 m ASL

COOLING

Motor size
Liquid delivery
Cooling capacity
Max perm. pressure
Max pressure drop
Coolant temperature *
Type of coolant
Cooling circuit

Size	200	280	355
l/min	14	20	30
kW	max 15 % of Pn		
Bar	3	3	3
Bar	< 0.8	< 0.8	< 1
18°C (min. 16°C) in funzionamento nominale - <i>at rated operation</i>			
Acqua + anticorrosivi/antigelo <i>Water + anticorrosion/no-frost additives (max 20%)</i>			
Chiuso con scambiatore di calore esterno - <i>Closed with external heat-exchanger</i>			

TRANSDI

Encoder type
Signal
Encoder ratio ³⁾

<i>Absolute single-turn - SinCos Hiperface</i>	
<i>1024 sinus/turn 1V p/p – supply 7...12Vdc</i>	
ratio	4:1 for hollow shaft motors (3:1 only for LTS 355)

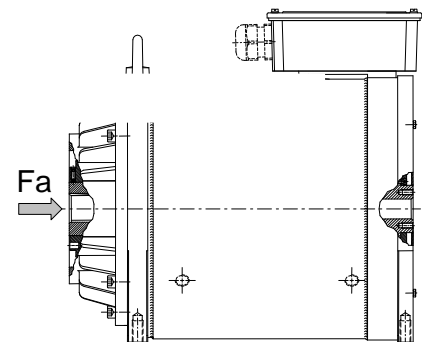
SPEED LIMITS

Motor size
Max mechanical speed

Size	200	280	355
rpm	600	550	500

BEARINGS**WÄLZLAGER**

Motor type	Thrust bearing Code ⁴⁾	Drive-end Bearing code ⁴⁾	Non drive-end Bearing code ⁵⁾	Max axial thrust Fa [N]
132	* 1)	* 1)	* 1)	* 1)
160	* 1)	* 1)	* 1)	* 1)
200	29416 E / EM	6018	6018	* 1)
280	29430 E / EM	61936 MA	61936 MA	* 1)
355	29434 E / EM	6036 M	6036 M	* 1)



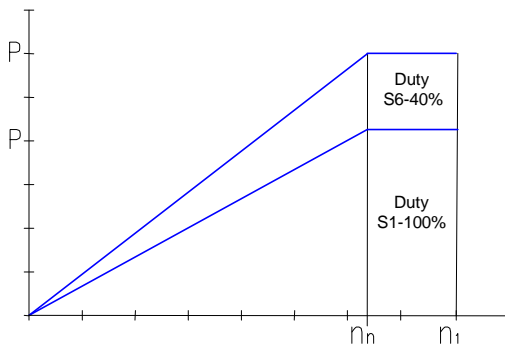
- 1) *data not available yet*
 4) *- Oil lubricated -*
 5) *- Life lubricated with grease -*

ELECTRICAL DATA AND PERFORMANCES

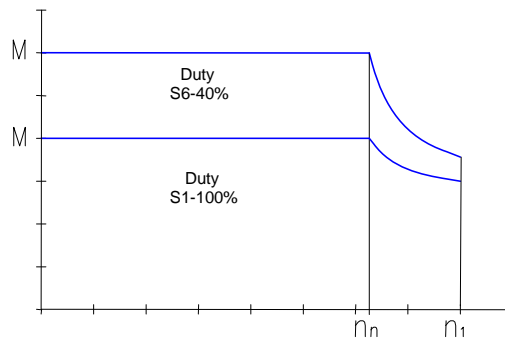
Motor Type	n _n 100 rpm U _n 330V		n _n 150 rpm U _n 330V		n _n 200 rpm U _n 330V		n _n 250 rpm U _n 330V		n _n 300 rpm U _n 330V		n _n 350 rpm U _n 330V		M _{pk} Nm	M _{low} Nm	M ₀ Nm	poles nr
	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A				
200 S	682 7,1	18,1 32,8	679 10,7	25,4 46,1	675 14,1	32,0 58,5	672 17,6	38,9 71,4	665 20,9	45,2 83,8	658 24,1	52,1 97,7	1235	693	554	
200 M	910 9,5	24,2 43,7	905 14,2	33,8 61,4	900 18,9	42,7 78,0	896 23,5	51,9 95,2	887 27,9	60,2 112	877 32,2	69,5 130	1645	924	739	
200 L	1328 13,9	35,3 63,8	1321 20,7	49,4 89,7	1314 27,5	62,3 114	1307 34,2	75,7 139	1294 40,6	87,9 163	1280 46,9	101 190	2400	1348	1078	24
200 P	1770 18,5	47,1 85,0	1761 27,7	65,8 120	1752 36,7	83,1 152	1743 45,6	101 185	1725 54,2	117 217	1707 62,6	135 254	3200	1797	1438	
200 X	2213 23,2	58,8 106	2201 34,6	82,3 149	2190 45,9	104 190	2179 57,0	126 232	2157 67,7	146 272	2134 78,2	169 317	4000	2246	1797	
280 S	2092 21,9	47,9 84,2	2082 32,7	71,5 126	2071 43,4	91,7 163	2060 53,9	114 203	2039 64,1	134 242	2018 74,0	155 282	3675	2226	1781	
280 M	2511 26,3	57,5 101	2498 39,2	85,8 151	2485 52,0	110 195	2472 64,7	137 244	2447 76,9	161 290	2421 88,7	186 338	4410	2671	2137	
280 L	3347 35,1	76,7 135	3330 52,3	114 202	3313 69,4	147 260	3296 86,3	183 326	3262 102	214 386	3228 118	248 451	5880	3562	2849	24
280 P	5021 52,6	115 202	4996 78,5	172 303	4970 104	220 391	4945 129	274 488	4894 154	322 580	4843 177	371 676	8820	5342	4274	
280 X	6276 65,7	144 252	6245 98,1	215 379	6213 130	275 488	6181 162	342 610	6117 192	402 725	6053 222	464 845	11025	6678	5342	
355 S	9088 95,2	208 366	9042 142	311 548	8996 188	399 707	8950 234	496 884	8858 278	582 1049	8765 321	672 1224	15900	9227	7381	
355 M	9915 104	227 399	9864 155	339 598	9814 206	435 771	9764 256	541 964	9663 304	635 1144	9562 350	733 1335	17400	10066	8052	
355 L	11567 121	265 465	11508 181	395 698	11450 240	507 900	11391 298	631 1125	11273 354	741 1335	11156 409	855 1558	20300	11743	9395	36
355 P	12393 130	284 499	12330 194	424 748	12267 257	543 964	12205 319	676 1205	12079 379	794 1431	11953 438	917 1669	21750	12582	10066	
355 X	14046 147	322 565	13974 219	480 848	13903 291	616 1093	13832 362	766 1366	13689 430	900 1621	13547 496	1039 1892	24600	14260	11408	

The max field weakening speed is $n_n \cdot 1.5$ with mechanical limit as indicated on above pag.

POWER DIAGRAM



TORQUE DIAGRAM



speed range

n _n rpm	n ₁ rpm
100	150
150	225
200	300
250	375
300	450
350	500

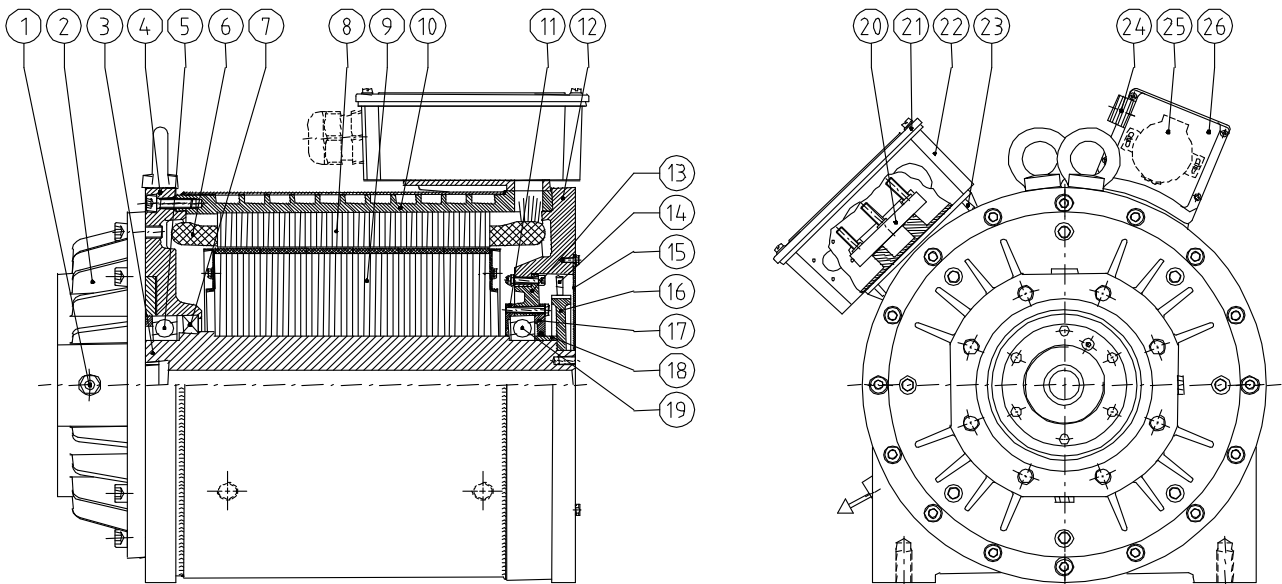
ELECTRICAL DATA AND PERFORMANCES

Motor Type	n _n 100 rpm U _n 330V		n _n 150 rpm U _n 330V		n _n 200 rpm U _n 330V		n _n 250 rpm U _n 330V		n _n 300 rpm U _n 330V		n _n 350 rpm U _n 330V		M _{pk} Nm	M _{low} Nm	M ₀ Nm	poles nr
	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A	M _n Nm P _n Kw	I _n A I _{pk} A				
M _{low}	Continuous torque available at low speed															
M _{pk}	Maximum output motor torque															
M ₀	Continuous torque available at blocked rotor															
nr	motor poles															
n _n	Nominal speed															
M _n	Nominal torque at the shaft															
P _n	Nominal mechanical power at the shaft															
V _n	Motor nominal voltage															
I _n	Nominal current															
I _{pk}	Max peak current															

Note 3) Mechanical ratio between the encoder and the motor shaft made with pulley and belt (ie. 4:1.....4 rev. Encoder = 1 rev. Motor shaft).
For motors without the through hollow shaft the encoder is installed axially (direct without the transmission ratio).

LTS-TB

EXPLODED DRAWING



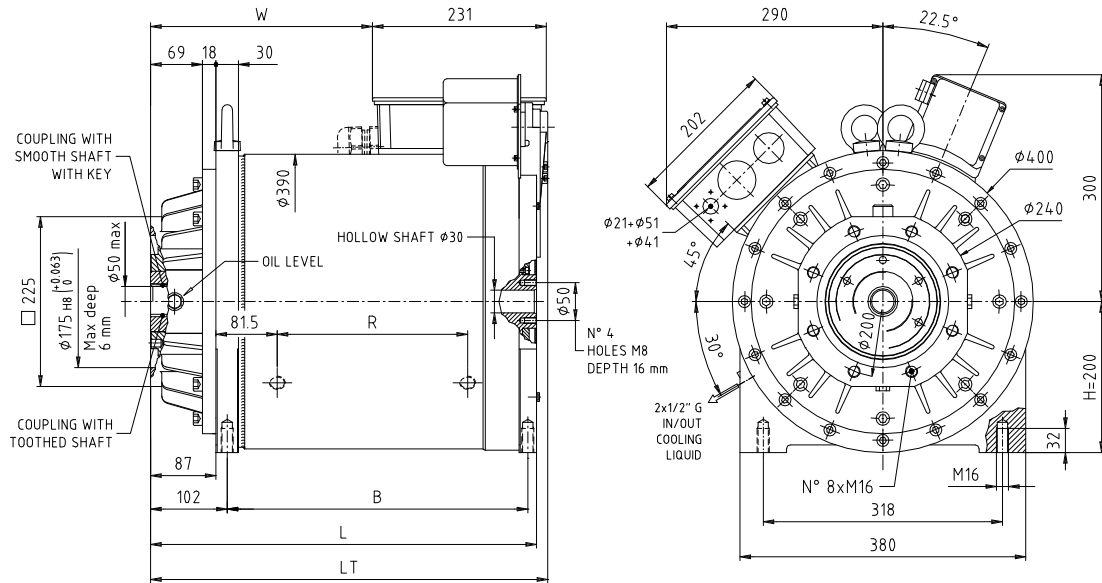
1	Oil inspection	14	Transducer belt
2	Thrust bearing support	15	Pulley cover
3	Shaft	16	Transducer pulley
4	Drive-end cover	17	Grease Flange
5	Drive-end bearing	18	Spacer
6	Winding	19	Non drive-end bearing
7	Oil seal	20	Terminal board
8	Stator	21	Terminal box cover
9	Rotor	22	Terminal box
10	Frame	23	Terminal box support
11	Grease Flange	24	Transducer connector
12	Non drive-end cover	25	Transducer
13	Grease Flange	26	Transducer cover

Schematic drawing to identify the main components of the motor.
No special versions or options are shown here.

LTS-TB 200

OVERALL DIMENSIONS

Dimensions [mm]

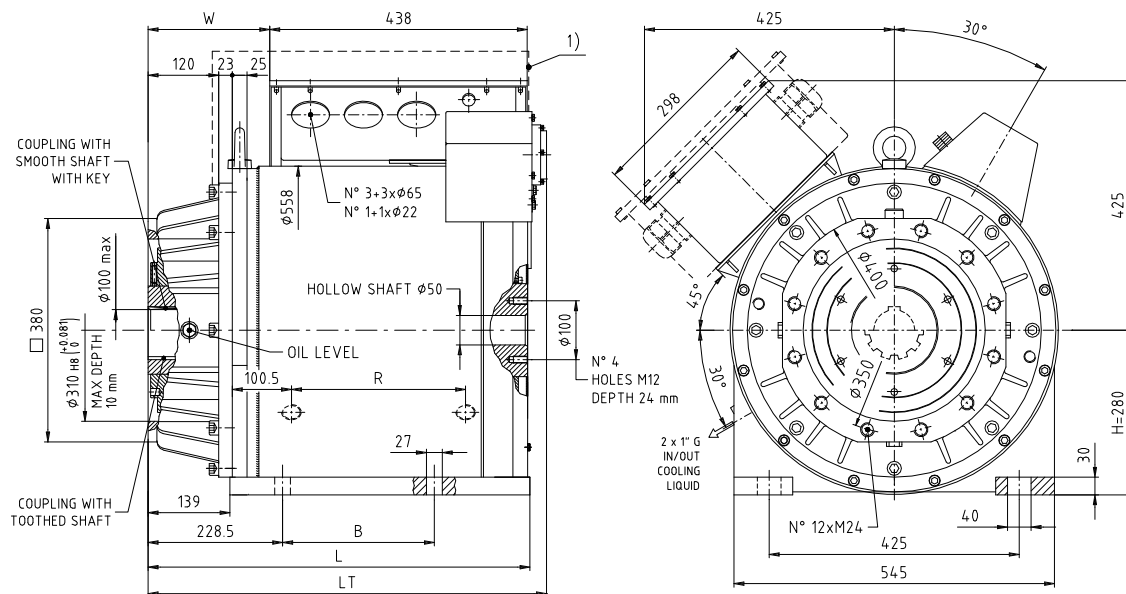


LTS-TB	B	L	LT	R	W	inertia J (kgm ²)	weight (kg)
200S	264.5	378	393	118	160	0.65	230
200M	309.5	423	438	163	205	0.86	270
200L	399.5	513	528	253	295	1.3	360
200P	489.5	603	618	343	385	1.7	440
200X	579.5	693	708	433	475	2.2	530

LTS-TB 280

OVERALL DIMENSIONS

Dimensions [mm]



LTS-TB	B	L	LT	R	W	inertia J (kgm ²)	weight (kg)
280S	213	604	635	251	161	4.5	670
280M	258	699	680	296	206	5.4	750
280L	348	739	770	386	296	7.2	920
280P	528	919	950	566	476	10.8	1300
280X	663	1054	1085	701	611	13.5	1530

1) Scatola morsettiere maggiorata per corrente superiore a 300A – Increased size terminal box for current higher than 300A

Note Foro albero ed attacco vite / cilindro realizzabili a richiesta secondo disegni e specifiche del Cliente.
 Shaft hole and screw / barrel connection can be made on request in accordance to the Customer drawing and specifications.

Other OEMER Products

0,55...1.115 kW

AC 3-phase high performances inverter duty motor



550...2.870 Nm

AC 3-phase inverter duty very low inertia motor



46...503 Nm

AC 3-phase permanent magnets Synchronous servomotor



3,2...291 kW

AC 3-phase inverter duty liquid cooled asynchronous motor



0,2...480 kW

Direct current motor



Other Motion Tech Products



Precision in the Extreme



Kinavo



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