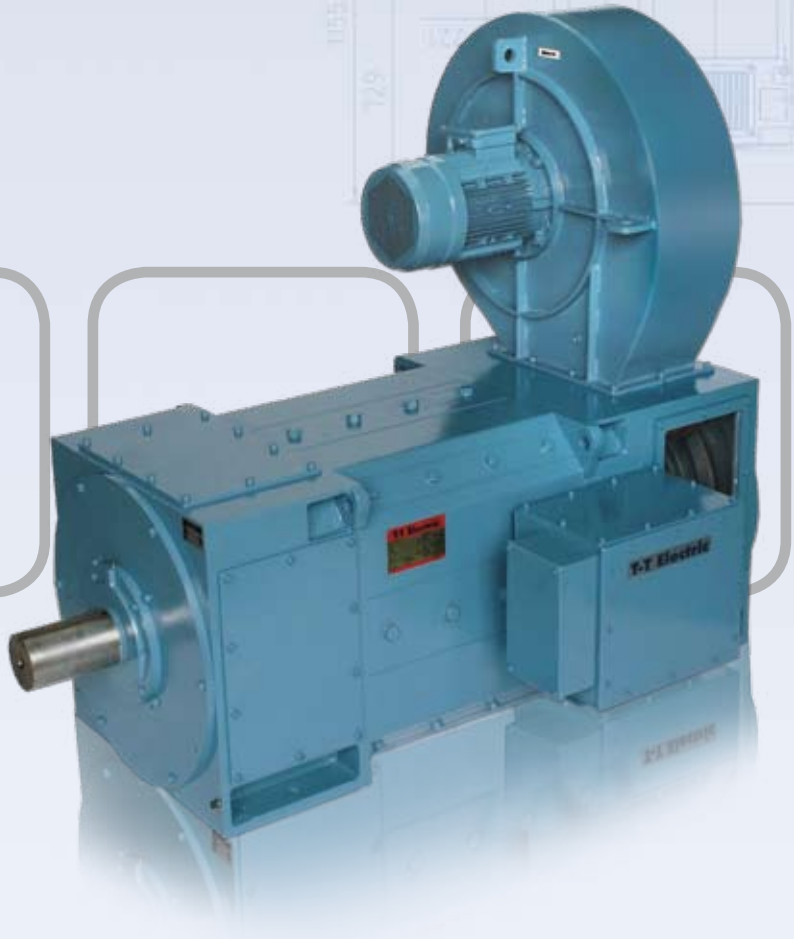
LAKC DC Motors

Catalogue-2009/01 E

LAKC
Serie 355-560
300-1300 kW
670-1700 HP
4000-23000 Nm



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List of contents

Introduction

The LAKC motor range of d.c. motors are fully laminated with compensated shunt windings and comprises 4, and 6 pole machines.

Output : 300 - 1300 kW
Torque : 4000 - 23000 Nw

LAKC Range

Frame size	Poles	Core lengths
355	4	A, B, C
400	6	A, B, C
450	4	A, B, C
500	6	A, B, C, D
560	6	A, B, C, D

Type designation example:

LAKC 4355 A:

LAK = type of motor
C = compensated
4 = number of poles
355 = frame size
A = core lenghts

Design and characteristics

The LAKC motors are designed for use in heavy industry meeting the tough requirements for high realiability, low maintenance costs, good commutation, long brush life and low energy consumption.

- Fully laminated stator yoke, main poles and interpoles.
- Pole face compensation winding to enhance performance in overload conditions.
- Excellent commutation due to well proportioned ratio between armature length and diameter with low bar to bar voltage.
- High thermal time constant.
- Class H insulation.
- Armatures wound with high quality materials.
- Vacuum impregnated armature windings with 100% fill resin for optimal reliability.
- Generously dimensioned shaft and bearings.
- End shields of square design with large openings to facilitate brush accessability for maintenance.
- Spigot at the non-drive end for mounting of tachometer, encoder etc.
- Twin brushes.

Advantages

The fully laminated compensated LAKC d.c. motor ensures:

- High overload capacity with linear torque/current characteristic.
- High efficiency due to low field losses and well proportioned air gaps between armature and stator.
- Excellent commutation over the entire speed range.
- Long brush life.
- Low noise level.
- Class H insulation.
- Class F temperature rise.
- Excellent dynamic response, enhanced by superior transient commutation.
- Easy access to brushes and commutator.
- Custom built to meet individual specifications.

Options

Frame size		LAKC	355	400	450	500	560
Cooling forms							
IC06	(IP 23)	Force ventilated	o	o	o	o	o
IC17	(IP 23)	Single pipe ventilated	o	o	o	o	o
IC37	(IP 54)	Double pipe ventilated	o	o	o	o	o
IC666	(IP 54)	Air-air cooled	o	o	o	o	o
IC86W	(IP 54)	Air-water cooled	o	o	o	o	o
Special protection							
IP 55			o	o	o	o	o
Mounting forms							
IM 1001 Horizontal foot			o	o	o	o	o
IM 1002 Horizontal foot, two shaft ends			o	o	o	o	o
IM 1002 For tandem use			o	o	o	o	o
IM 2001 Horizontal foot and flange			o	o	o	o	o
IM 2011 Vertical foot and flange			o	o	o	o	o
Modifications and accessories							
Thermistors in stator windings (PTC)			o	o	o	o	o
Temperature sensors in stator windings (PT100)			o	o	o	o	o
Temperature sensors in endshield (PT100)			o	o	o	o	o
Bearing sensor			o	o	o	o	o
Grounding brush			o	o	o	o	o
Heating element			o	o	o	o	o
Brush wear sensor			o	o	o	o	o
Special shaft			o	o	o	o	o
Roller bearing, D-end			o	o	o	o	o
Special balance Class 'B'			o	o	o	o	o
Filter			o	o	o	o	o
Pressure switch			o	o	o	o	o
Special volt/Hz on blower			o	o	o	o	o
Special paint (RAL colour)			o	o	o	o	o
Special corrosion protection			o	o	o	o	o
Transparent inspection cover			o	o	o	o	o
Brake			o	o	o	o	o
Baseplate etc. for tandem use			o	o	o	o	o
Tachos with coupling							
REO 444R (60v/1000min^{-1})			o	o	o	o	o
TDP 0.2 T-4 (60v/1000min^{-1})			o	o	o	o	o
Others available							
Pulse generators							
POG 9D (1-1250 ppr)			o	o	o	o	o
DGS65 (1024 ppr)			o	o	o	o	o
Others available							

Application data

Standards
IEC 60034, IEC 60072, etc.

Insulation
Class H (180° C)

Temperature rise
Class F (155° C)

Balance
IEC 60034-14 grade 'A' standard.
Reduced vibration levels on request.
The motors are balanced with half key as standard.

Overload capacity
160% FLTx 15 sec every 5 min.
200% FLCx30 sec every 15 min.
200% FLC 200% FLT at rated flux.
Overloads must be followed by periods of reduced loading in order to maintain an r.m.s. load cycle of 100% FLC.
Other duty cycles on request.

Dynamic loading
Suitable for di/dt of 200 x FLC/sec.
Higher levels considered on request.

Standstill
The permissible currents during standstill operation with the cooling air applied are:

- 200% FLC for 10 sec.
- 100% FLC for 30 sec.
- 50% FLC for 90 sec.
- 20% FLC for 300 sec.
- 15% FLC for 600 sec.

Terminal box position
RHS viewed from D-end.
LHS or top mounting on request.

Blower position
Top mounted at D-end.
Other positions available on request.

Filter
Available on request.

Bearings
Grease lubricated ball bearings suitable for direct drive.
For belt drive or side loading, contact our sales offices.

Heat exchangers

Air-water (IC86W)
Air-water exchangers are especially recommended for polluted environment.
Standard is for clean water supply.
For corrosive water, please contact T-T Electric.

Position
On top of motor.
Other positions and for remote installation available on request.

Water inlet/outlet
Water connections DN Flange according to DIN 2633 on opposite side to terminal box. This can be changed to suit customer's requirements.
Other connection forms available on request.

Water parameters
Inlet temperature max. 25° C
Inlet pressure max. 3.45 bar
Max. water flow 6m3/s
A water teperature rise of 10°C must be expected.
Other datas on request.

For motors on light load or with low inlet water temperature, a temperature regulated water volume control valve is recommended to avoid condensation in the cooling air circuit, minimise water consumption and reduce the risk of too cold commutator running conditions.

Air-air (IC666)
Air-air exchangers are recommended where water is not available for cooling purposes. The output of a motor with an air-air exchanger will be reduced by approx. 20% compared to cooling form IC06.
Motor output data available on request.

Mounting
On top of the motor.
Other positions available on request.
Two constant speed ac fan motors on the exchanger provide air circulation for the external and internal air circuits.

Protection
Standard:

- Internal air circuit filter.
- Air leakage compensation filter.

Options:

- Water flow switch (IC86W)
- Air pressure switch (IC666)
- Air pressure switch (internal)
- Differential pressure switch across filter monitoring contamination.
- Water flow control valve for motors used continuously in a light load condition (IC86W).

The internal air pressure switch indicates air flow failure only, it does not react to a reduction in air flow due to contaminated filter

Detailed heat exchanger information supplied on request.

Application data

Mechanical data

Frame	Inertia (kg-m2)	Max. mechanical speed (min^{-1})
LAKC 4355A	14.3	1800
LAKC 4355B	15.8	
LAKC 4355C	17.3	
LAKC 6400A	23.0	1750
LAKC 6400B	28.8	
LAKC 6400C	36.3	
LAKC 4450A	47.1	1600
LAKC 4450B	53.0	
LAKC 4450C	59.7	
LAKC 6500A	69.5	1500
LAKC 6500B	87.1	
LAKC 6500C	109.8	
LAKC 6500D	127.0	
LAKC 6560A	145.0	1250
LAKC 6560B	165.0	
LAKC 6560C	187.5	
LAKC 6560D	207.5	

Cooling data

Frame	Air volume m^3/h	Pressure drop in motor N/m^2
LAKC 4355	7200	1670
LAKC 6400	12600	1470
LAKC 4450	18000	1520
LAKC 6500	18000	1570
LAKC 6560	21600	1860

Blower motor data

Frame	3 x 380 – 420V (± 5%), 50 Hz	
	KW	FKC (A)
LAKC 4355	5.5	11.9
LAKC 6400	10.0	23.0
LAKC 4450	10.0	23.0
LAKC 6500	10.0	23.0
LAKC 6560	18.5	39.0

Bearing types

Frame	Drive end	Comm. end
LAKC 4355	6228 C3	6228 C3
LAKC 6400	6230 C3	6230 C3
LAKC 4450	NU232 C3	6232 C3
LAKC 6500	NU234 C3	6232 C3
LAKC 6560	NU244 C3	6244 C3

Tandem mounted motors will have larger bearings fitted.

Output data

Select motor frame size against voltage, output and speed.
For intermediate output, take the nearest higher output listed under the same frame size.
For intermediate speed, take the next lower speed listed giving the output required.

The output lists are based on:

- **Cooling forms IC06/IC17/IC37/ IC86W.**
- **The armature circuit resistance listed is for duty warm condition.**
- **The inductance listed is for the armature circuit.**
- **Motors supplied from 3-phase fully controlled thyristor.**

Constant power/constant torque
The full field or base speed and maximum speed through field control with constant output is listed for each winding.
Armature voltage: For -10% the output and speed is proportional to the voltage.
For higher shunt field, ranges please refer to sales offices.
With a combination of armature voltage and field control greater constant power ranges can be obtained.

Calculation example:
Derating for higher field range
Armature: 500VA

Request: 345kW 865/1850rpm

Catalogue: LAKC 4355A
368kW 865/1750 rpm

Derate: 368x1750/1850=348kW

Motor data: LAKC 4355A
348kW 865/1850rpm
Max. mechanical speed limit is shown under application data.

Duty cycles
All outputs are duty type S1 and motors fed from a 3-phase fully controlled thyristor where the form factor is 1.05.
For other ratings or special duty cycles, refer to sales offices giving full details.

Field windings
All motors have separate excitation, the field being shunt wound and having pole face compensation windings.

Armature voltage
For other armature voltages, contact our sales offices.

Ambient temperature and altitude
Outputs listed are based on 40° C max. ambient and motor located max. 1000m above sea level.
If ambient and/or altitude are higher, derate output and select from the output tables.

Temp	45° C	50° C	55° C	60° C
Catalogue output	0.97	0.93	0.89	0.85

Attitude	2000m	3000m	4000m
Catalogue output	0.94	0.87	0.77

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
292	625						740	4462	1400	89,7	0,0509	0.71
306		660					740	4428	1475	89,9	0,0509	0.71
336			720				740	4456	1600	90,8	0,0509	0.70
398				880			720	4319	1700	92,1	0,0509	0,71
450					1040		690	4132	1770	93,2	0,0509	0,73
480						1125	685	4074	1780	93,4	0,0509	0,73
322	750						800	4100	1500	91.5	0,0365	0,55
336		790					800	4062	1600	91,3	0,0365	0,55
368			865				800	4063	1750	92,9	0,0365	0,54
446				1050			800	4056	1800	94,0	0,0365	0,54
520					1235		790	4021	1800	94,4	0,0365	0,54
545						1325	770	3928	1800	95.0	0,0365	0,55
388	860						960	4308	1730	91,9	0,0269	0,40
408		905					960	4305	1730	92,4	0,0269	0,40
446			985				960	4324	1730	92,9	0,0269	0,40
520				1200			920	4138	1800	94,2	0,0269	0,41
580					1410		875	3928	1800	94,7	0,0269	0,43
605						1520	850	3801	1800	94,9	0,0269	0,44
452	1015						1110	4253	1800	92,5	0,0213	0.29
466		1070					1090	4159	1800	92,9	0,0213	0,30
498			1165				1070	4082	1800	93,1	0,0213	0,30
565				1415			1000	3813	1800	94,2	0,0213	0,32
625					1665		935	3585	1800	95,5	0,0213	0,34
490	1130						1190	4141	1800	93.6	0,0150	0,25
510		1185					1180	4110	1800	94,0	0,0150	0,25
545			1295				1150	4019	1800	94,8	0,0150	0,25
610				1565			1070	3722	1800	95,0	0,0150	0,27
535	1250						1290	4087	1800	94,3	0.0131	0.20
550		1315					1270	3994	1800	94,1	0.0131	0,21
580			1435				1230	3860	1800	94,3	0.0131	0,21

** Through field control with constant output. Please specify.

Field loss (hot) = 3000 W

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
290	560						740	4945	1255	89,1	0,0537	0,80
304		590					740	4920	1305	89,3	0,0537	0,79
334			645				740	4945	1430	90,3	0,0537	0,79
406				790			740	4908	1530	91,4	0,0537	0,77
474					930		730	4867	1550	92,8	0,0537	0,77
505						1005	720	4799	1570	93,5	0,0537	0,78
320	675						800	4527	1350	90,9	0,0386	0,61
336		710					800	4519	1425	91,3	0,0386	0,61
368			775				800	4535	1575	92,0	0,0386	0,60
446				940			800	4531	1800	92,9	0,0386	0,60
525					1110		800	4517	1800	93,8	0,0386	0,59
565						1190	800	4534	1800	94,2	0,0386	0,59
388	775						960	4781	1610	91,9	0,0284	0,44
406		810					960	4787	1610	91,9	0,0284	0,44
444			890				960	4764	1610	92,5	0,0284	0,44
540				1075			960	4797	1610	93,8	0,0284	0,44
615					1270		930	4624	1660	94,5	0,0284	0,44
640						1365	900	4477	1720	94,8	0,0284	0,46
462	915						1140	4822	1800	92,1	0,0225	0.32
484		955					1140	4840	1800	92,3	0,0225	0.32
525			1045				1130	4798	1800	92,9	0,0225	0.32
605				1270			1070	4549	1800	94,2	0,0225	0,33
670					1495		1010	4280	1800	94,8	0,0225	0,35
494	1015						1200	4648	1800	93.6	0,0158	0.27
520		1065					1200	4663	1800	94.2	0,0158	0.27
565			1160				1200	4651	1800	94.2	0,0158	0.27
655				1405			1150	4452	1800	94,9	0,0158	0,28
565	1125						1370	4796	1800	93,7	0.0138	0.21
585		1180					1350	4734	1800	94,2	0.0138	0,22
625			1285				1320	4645	1800	94,7	0.0138	0,22

** Through field control with constant output. Please specify.

Field loss (hot) = 3300 W

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
288	510						740	5393	1130	88,5	0,0566	0.87
304		535					740	5426	1140	89,3	0,0566	0.87
332			585				740	5420	1305	89,7	0,0566	0,87
406				715			740	5423	1430	91,4	0,0566	0,85
478					845		740	5402	1430	92,3	0,0566	0.84
515						910	740	5404	1430	92,8	0,0566	0.84
318	610						800	4978	1225	90,3	0,0407	0,68
334		645					800	4945	1300	90,8	0,0407	0,67
366			705				800	4958	1425	91,5	0,0407	0,66
444				855			800	4959	1725	92,5	0,0407	0,66
525					1005		800	4989	1800	93,8	0,0407	0,65
565						1080	800	4996	1800	94,2	0,0407	0,65
386	700						960	5266	1475	91,4	0,0299	0,49
406		735					960	5275	1500	91,9	0,0299	0,49
444			805				960	5267	1500	92,5	0,0299	0,49
540				980			960	5262	1500	93,8	0,0299	0,48
635					1150		960	5273	1500	94,5	0,0299	0,48
680						1235	960	5258	1500	94,4	0,0299	0,47
460	830						1140	5293	1780	91,7	0,0238	0.35
482		870					1140	5291	1780	91,9	0,0238	0.35
530			950				1140	5328	1780	93,0	0,0238	0.35
635				1150			1130	5273	1790	93,7	0,0238	0.35
710					1355		1070	5004	1800	94,8	0,0238	0,36
492	925						1200	5079	1800	93.2	0,0167	0.30
520		965					1200	5146	1800	94,2	0,0167	0.30
565			1055				1200	5114	1800	94.2	0,0167	0.30
685				1275			1200	5131	1800	95.1	0,0167	0.29
590	1020						1430	5524	1800	93.8	0.0145	0.23
610		1070					1420	5444	1800	93,4	0.0145	0.23
655			1165				1390	5369	1800	94,2	0.0145	0.23

** Through field control with constant output. Please specify.

Field loss (hot) = 3400 W

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
424	805						1040	5031	1590	92.7	0.0226	0,26
440		845					1030	4973	1610	92,9	0.0226	0,26
472			925				1010	4874	1640	93,5	0.0226	0.27
550				1125			970	4669	1710	94,5	0.0226	0,27
615					1320		920	4450	1750	95,5	0.0226	0,29
640						1420	895	4305	1750	95,3	0.0226	0,30
436	870						1070	4787	1610	92,6	0.0212	0.24
454		910					1060	4765	1620	93,1	0.0212	0.24
486			995				1040	4665	1660	93,5	0.0212	0.24
570				1210			1000	4499	1720	95,0	0.0212	0,25
630					1420		945	4237	1750	95,2	0.0212	0,26
655						1525	915	4102	1750	95,4	0.0212	0,27
480	945						1170	4851	1750	93,2	0.0167	0.20
505		990					1170	4872	1750	93,8	0.0167	0.20
550			1080				1170	4864	1750	94.0	0.0167	0.20
645				1310			1140	4703	1750	95,0	0.0167	0.20
695					1540		1040	4310	1750	95,5	0.0167	0,22
715						1655	995	4126	1750	95,8	0.0167	0,23
540	1030						1310	5007	1750	93,7	0.0139	0,16
565		1085					1300	4974	1750	94,5	0.0139	0,16
600			1180				1270	4856	1750	94,5	0.0139	0,17
675				1430			1180	4508	1750	95,3	0.0139	0,18
725					1680		1080	4122	1750	95,9	0.0139	0,19
570	1240						1370	4390	1750	94,6	0,0120	0,13
585		1300					1340	4298	1750	94,9	0,0120	0,13
620			1420				1300	4170	1750	95,4	0,0120	0.13
665	1450						1590	4380	1750	95,1	0.0071	0,10
670		1515					1540	4224	1750	95,3	0.0071	0,10
690			1655				1450	3982	1750	95,2	0.0071	0.10
690	1575						1650	4335	1750	95,0	0.0068	0.08
700		1650					1600	4052	1750	95,1	0.0068	0,09

** Through field control with constant output. Please specify.

Field loss (hot) = 3600 W

Data subject to change without prior notice.

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
420	645						1040	6219	1350	91,8	0.0257	0.33
442		675					1040	6254	1350	92.4	0.0257	0.33
482			740				1040	6221	1350	92,7	0.0257	0,32
575				895			1020	6136	1380	94,0	0.0257	0.33
650					1055		980	5885	1440	94,8	0.0257	0,34
685						1135	960	5764	1470	95,1	0.0257	0,34
438	695						1080	6019	1350	92,2	0,0241	0,29
460		725					1080	6060	1350	92,6	0,0241	0,29
505			795				1080	6067	1350	93,5	0,0241	0,29
595				965			1050	5889	1390	94,4	0,0241	0.30
670					1135		1010	5638	1450	94,8	0,0241	0,31
705						1220	990	5519	1480	94,9	0,0241	0,31
476	755						1170	6022	1750	92,5	0,0191	0.25
500		790					1170	6045	1750	92,9	0,0191	0.25
545			865				1170	6018	1750	93,2	0,0191	0.25
660				1045			1170	6032	1750	94,0	0,0191	0,25
770					1230		1160	5979	1750	94,8	0,0191	0,25
795						1325	1110	5731	1750	95,5	0,0191	0,25
560	825						1370	6483	1590	92,9	0.0158	0,19
585		865					1360	6459	1600	93,5	0.0158	0,20
625			945				1330	6317	1640	94,0	0.0158	0,20
725				1145			1270	6048	1710	95,1	0.0158	0,21
795					1345		1190	5645	1750	95,4	0.0158	0,22
595	990						1440	5740	1710	93,9	0,0116	0.15
620		1040					1430	5694	1720	94,3	0,0116	0.15
665			1135				1400	5596	1750	95,0	0,0116	0,16
670	1160						1610	5517	1750	94,7	0,0081	0,11
700		1215					1610	5503	1750	95,1	0,0081	0,11
765			1325				1610	5514	1750	95,1	0,0081	0,12
750	1260						1800	4335	1750	94,7	0,0078	0.10
765		1320					1760	5535	1750	94,5	0,0078	0.10

** Through field control with constant output. Please specify.

Field loss (hot) = 4100 W

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
418	505						1040	7906	1130	91,3	0.0297	0.42
438		530					1040	7893	1130	91,6	0.0297	0.42
478			580				1040	7871	1130	91,9	0.0297	0.42
585				705			1040	7925	1130	93,8	0.0297	0.41
685					830		1040	7883	1130	94,1	0.0297	0.41
735						890	1040	7888	1130	94,2	0.0297	0.41
434	545						1080	7606	1130	91,3	0,0279	0.38
456		570					1080	7641	1130	91,8	0,0279	0.38
498			625				1080	7610	1130	92,6	0,0279	0.38
605				760			1080	7603	1130	93,4	0,0279	0.38
710					890		1080	7619	1130	93,9	0,0279	0.37
765						960	1080	7611	1130	94,4	0,0279	0.37
474	595						1170	7609	1490	92,1	0,0211	0.32
496		620					1170	7641	1490	92,2	0,0211	0.31
545			680				1170	7655	1490	93,2	0,0211	0.31
660				825			1170	7641	1490	94.0	0,0211	0.31
775					970		1170	7631	1490	94.6	0,0211	0.31
830						1040	1170	7623	1490	94,6	0,0211	0.31
560	645						1380	8292	1320	92,2	0.0183	0.27
590		680					1380	8287	1320	92,9	0.0183	0.27
645			740				1380	8325	1320	93,5	0.0183	0.27
780				900			1380	8278	1320	94,2	0.0183	0.26
910					1055		1370	8238	1320	94,9	0.0183	0.26
620	780						1510	7592	1370	93,3	0,0134	0.19
650		815					1510	7617	1370	93,6	0,0134	0.19
710			890				1510	7619	1370	94,0	0,0134	0.19
665	915						1610	6942	1650	94,0	0,0094	0.17
695		955					1610	6951	1650	94,5	0,0094	0.17
755			1045				1610	6901	1650	94,6	0,0094	0.17
745	990						1800	4335	1750	94,1	0,0090	0.12
780		1040					1800	7163	1750	94,2	0,0090	0.12

** Through field control with constant output. Please specify.

Field loss (hot) = 4300 W

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
344	330						875	9955	735	89,4	0,0452	1,14
360		345					875	9965	760	89,4	0,0452	1,14
396			380				875	9952	835	90,5	0,0452	1,13
482				460			875	10006	1035	91,8	0,0452	1,12
570					545		880	9988	1160	92,5	0,0452	1,09
600						585	860	9794	1180	93,0	0,0452	1,12
412	385						1040	10219	830	90,0	0,0035	0,82
432		405					1040	10186	880	90,3	0,0035	0,82
474			440				1040	10288	955	91,2	0,0035	0,82
565				540			1020	9992	1185	92,3	0,0035	0,82
655					635		1000	9850	1340	93,6	0,0035	0,83
695						685	990	9689	1350	93,6	0,0035	0,83
480	445						1200	10301	925	90,9	0,0270	0,62
500		470					1190	10159	985	91,3	0,0270	0,62
545			515				1180	10106	1095	92,4	0,0270	0,62
645				625			1150	9855	1200	93,5	0,0270	0,63
745					735		1130	9680	1220	94,2	0,0270	0,63
785						790	1110	9489	1250	94,3	0,0270	0,64
520	525						1280	9459	1385	92,3	0,0208	0,49
545		550					1280	9463	1410	92,6	0,0208	0,49
595			600				1280	9470	1410	93,0	0,0208	0,49
720				730			1280	9419	1410	93,8	0,0208	0,48
820					860		1240	9105	1460	94,5	0,0208	0,49
860						925	1210	8879	1490	94,8	0,0208	0,50
620	635						1500	9324	1325	93,9	0,0125	0,35
650		670					1500	9265	1375	94,2	0,0125	0,34
705			730				1500	9223	1500	94,0	0,0125	0,34
855				880			1500	9278	1550	95,0	0,0125	0,34

** Through field control with constant output. Please specify.

Field loss (hot) = 5100 W

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
348	290						895	11459	635	88,4	0,0484	1,27
366		305					895	11459	660	88,9	0,0484	1,26
400			335				895	11402	735	89,4	0,0484	1,25
490				410			895	11413	885	91,2	0,0484	1,23
580					485		895	11420	1060	92,6	0,0484	1,21
625						520	895	11478	1060	93,1	0,0484	1,21
412	340						1050	11572	740	89,2	0,0373	0,92
434		360					1050	11513	765	89,9	0,0373	0,91
474			395				1050	11459	840	90,3	0,0373	0,90
580				480			1050	11539	1040	92,1	0,0373	0,89
675					565		1040	11409	1200	92,7	0,0373	0,89
720						610	1030	11272	1210	93,2	0,0373	0,90
476	395						1200	11508	805	90,2	0,0290	0,70
500		415					1200	11506	855	90,6	0,0290	0,69
550			455				1200	11543	930	91,7	0,0290	0,69
665				555			1200	11442	1080	92,4	0,0290	0,68
765					655		1170	11153	1100	93,4	0,0290	0,69
820						705	1160	11107	1110	94,3	0,0290	0,69
525	470						1300	10667	1225	91,8	0,0223	0,54
550		490					1300	10719	1275	92,0	0,0223	0,54
600			535				1300	10710	1300	92,3	0,0223	0,54
730				650			1300	10725	1300	93,6	0,0223	0,53
855					765		1300	10673	1300	94,0	0,0223	0,53
915						825	1290	10591	1310	94,6	0,0223	0,53
615	570						1500	10303	1185	93,2	0,0134	0,39
645		595					1500	10352	1235	93,5	0,0134	0,39
705			650				1500	10358	1335	94,0	0,0134	0,38
855				790			1500	10335	1460	95,0	0,0134	0,38

** Through field control with constant output. Please specify.

Field loss (hot) = 5500 W

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
344	250						895	13140	535	87,4	0,0530	1,47
362		260					895	13296	560	87,9	0,0530	1,48
398			285				895	13336	610	88,9	0,0530	1,47
486				350			895	13260	760	90,5	0,0530	1,44
575					415		895	13231	910	91,8	0,0530	1,41
620						450	895	13157	960	92,4	0,0530	1,40
408	290						1050	13435	615	88,3	0,0409	1,08
430		305					1050	13463	640	89,0	0,0409	1,08
470			335				1050	13398	715	89,5	0,0409	1,07
575				410			1050	13393	890	91,3	0,0409	1,05
680					485		1050	13389	1040	92,5	0,0409	1,03
730						525	1050	13278	1090	92,7	0,0409	1,02
472	340						1200	13257	705	89,4	0,0319	0,81
496		360					1200	13157	755	89,9	0,0319	0,80
545			390				1200	13345	805	90,8	0,0319	0,80
665				480			1200	13230	980	92,4	0,0319	0,78
780					565		1200	13183	980	92,9	0,0319	0,77
840						605	1200	13259	980	93,3	0,0319	0,77
530	400						1330	12653	1010	90,6	0,0245	0,62
560		420					1330	12733	1060	91,5	0,0245	0,62
610			460				1330	12664	1160	91,7	0,0245	0,61
740				560			1330	12619	1160	92,7	0,0245	0,60
875					660		1330	12660	1160	94,0	0,0245	0,60
940						710	1330	12643	1160	94,2	0,0245	0,60
615	490						1500	11986	1015	93,2	0,0148	0,45
645		515					1500	11960	1065	93,5	0,0148	0,45
705			560				1500	12022	1165	94,0	0,0148	0,45
850				680			1500	11937	1340	94,4	0,0148	0,44

** Through field control with constant output. Please specify.

Field loss (hot) = 6000 W

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
575	535						1420	10265	1120	92,0	0,0182	0,29
600		560					1410	10233	1180	92,5	0,0182	0,29
645			610				1380	10099	1310	93,5	0,0182	0,30
745				745			1320	9551	1500	94,1	0,0182	0,31
835					875		1260	9114	1500	94,7	0,0182	0,32
875						940	1230	8891	1500	94,9	0,0182	0,32
645	610						1570	10099	1275	93,4	0,0139	0,23
665		640					1550	9924	1345	93,3	0,0139	0,23
710			700				1520	9688	1500	93,4	0,0139	0,23
820				850			1440	9214	1500	94,9	0,0139	0,25
900					1000		1350	8596	1500	95,2	0,0139	0,26
940						1075	1310	8352	1500	95,7	0,0139	0,27
665	665						1620	9551	1470	93,3	0,0127	0,20
690		695					1610	9482	1480	93,2	0,0127	0,21
735			760				1570	9237	1500	93,6	0,0127	0,21
840				920			1480	8721	1500	94,6	0,0127	0,22
930					1080		1390	8225	1500	95,6	0,0127	0,23
960						1165	1340	7870	1500	95,5	0,0127	0,24
715	720						1740	9485	1500	93,4	0,0116	0,18
740		755					1720	9361	1500	93,5	0,0116	0,18
790			825				1680	9146	1500	94,0	0,0116	0,18
895				1000			1570	8548	1500	95,0	0,0116	0,19
965					1180		1440	7811	1500	95,7	0,0116	0,21
750	790						1830	9067	1500	93,1	0,0107	0,15
790		830					1830	9091	1500	93,8	0,0107	0,15
845			905				1800	8918	1500	93,9	0,0107	0,15
940				1100			1650	8162	1500	94,9	0,0107	0,17
845	940						2020	8586	1500	95,1	0,0058	0,12
865		985					1980	8388	1500	95,0	0,0058	0,12
905			1075				1900	8041	1500	95,3	0,0058	0,12
925	1110						2220	7959	1500	94,7	0,0050	0,09
945		1160					2160	7781	1500	95,1	0,0050	0,09

** Through field control with constant output. Please specify.

Field loss (hot) = 4300 W

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
605	425						1510	13596	835	91,1	0,0205	0,34
635		445					1510	13629	885	91,4	0,0205	0,34
695			485				1510	13687	960	92,1	0,0205	0,34
825				590			1470	13355	1190	93,5	0,0205	0,35
935					695		1420	12849	1230	94,1	0,0205	0,35
985						750	1390	12544	1260	94,5	0,0205	0,36
680	485						1670	13391	955	92,5	0,0158	0,27
710		510					1670	13297	1005	92,4	0,0158	0,27
775			560				1670	13218	1105	92,8	0,0158	0,27
915				675			1620	12947	1220	94,1	0,0158	0,28
1030					795		1550	12374	1280	94,9	0,0158	0,28
1080						860	1510	11994	1310	95,4	0,0158	0,29
725	525						1780	13190	1110	92,6	0,0144	0,24
755		550					1770	13111	1170	92,7	0,0144	0,24
810			605				1740	12787	1190	93,1	0,0144	0,24
945				735			1670	12280	1240	94,3	0,0144	0,24
1070					865		1600	11815	1290	95,5	0,0144	0,25
1120						930	1560	11502	1320	95,7	0,0144	0,26
745	575						1830	12375	1300	92,5	0,0131	0,21
780		605					1830	12314	1300	92,7	0,0131	0,21
855			660				1830	12373	1300	93,4	0,0131	0,21
1010				800			1790	12058	1330	94,0	0,0131	0,21
1130					940		1690	11482	1410	95,5	0,0131	0,22
750	630						1830	11370	1500	93,1	0,0121	0,19
785		665					1830	11275	1500	93,3	0,0121	0,19
855			725				1830	11264	1500	93,4	0,0121	0,19
1040				875			1830	11352	1500	94,7	0,0121	0,19
875	755						2100	11069	1480	94,7	0,0066	0,14
915		790					2100	11062	1480	94,7	0,0066	0,14
1000			860				2100	11106	1480	95,2	0,0066	0,14
1070	885						2580	11548	1500	94,3	0,0056	0,10
1110		925					2540	11461	1500	95,0	0,0056	0,10

** Through field control with constant output. Please specify.

Field loss (hot) = 4800 W

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
600	330						1510	17366	640	90,3	0,0236	0,44
630		350					1510	17192	690	90,7	0,0236	0,44
690			380				1510	17343	740	91,4	0,0236	0,44
840				465			1510	17254	915	92,7	0,0236	0,43
985					545		1510	17262	990	93,2	0,0236	0,43
1060						590	1510	17160	990	94,2	0,0236	0,42
670	380						1670	16840	735	91,2	0,0182	0,35
705		400					1670	16834	785	91,8	0,0182	0,34
770			440				1670	16714	860	92,2	0,0182	0,34
935				530			1670	16850	1010	93,3	0,0182	0,34
1100					625		1670	16810	1010	94,1	0,0182	0,34
1170						675	1650	16555	1020	94,5	0,0182	0,34
720	415						1790	16571	855	91,4	0,0166	0,30
755		435					1790	16577	905	91,7	0,0166	0,30
825			475				1790	16589	980	92,2	0,0166	0,29
1010				575			1790	16777	980	94,0	0,0166	0,29
1140					680		1730	16012	1010	94,1	0,0166	0,30
1210						730	1700	15831	1030	94,9	0,0166	0,30
740	450						1830	15706	1110	91,9	0,0151	0,27
775		475					1830	15583	1110	92,1	0,0151	0,26
850			520				1830	15612	1110	92,9	0,0151	0,26
1030				630			1830	15615	1110	93,8	0,0151	0,26
1210					740		1830	15617	1110	94,5	0,0151	0,26
740	495						1830	14278	1400	91,9	0,0140	0,24
780		520					1830	14327	1400	92,7	0,0140	0,24
850			570				1830	14243	1400	92,9	0,0140	0,24
1030				690			1830	14257	1400	93,8	0,0140	0,24
870	595						2100	13965	1260	94,2	0,0075	0,18
915		620					2100	14096	1260	94,7	0,0075	0,18
995			680				2100	13976	1260	94,8	0,0075	0,18
1110	695						2690	15254	1330	93,8	0,0065	0,12
1170		730					2690	15308	1330	94,6	0,0065	0,12

** Through field control with constant output. Please specify.

Field loss (hot) = 5100 W

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
595	285						1510	19940	565	89,6	0,0260	0,51
625		300					1510	19898	590	90,0	0,0260	0,51
685			325				1510	20131	640	90,7	0,0260	0,51
835				400			1510	19938	790	92,2	0,0260	0,50
980					470		1510	19915	890	92,7	0,0260	0,49
1060						505	1510	20048	890	93,6	0,0260	0,49
670	325						1670	19690	635	91,2	0,0200	0,41
700		345					1670	19379	660	91,1	0,0200	0,40
765			375				1670	19484	735	91,6	0,0200	0,40
930				460			1670	19310	910	92,8	0,0200	0,39
1100					540		1670	19456	910	94,1	0,0200	0,39
1180						580	1670	19432	910	94,2	0,0200	0,39
715	355						1790	19237	730	90,8	0,0183	0,35
750		370					1790	19360	780	91,1	0,0183	0,35
820			405				1790	19338	855	91,6	0,0183	0,34
1000				495			1790	19295	880	93,1	0,0183	0,34
1180					585		1790	19265	880	94,2	0,0183	0,33
1270						625	1790	19408	880	94,6	0,0183	0,34
735	390						1830	18000	950	91,3	0,0167	0,31
770		405					1830	18159	1000	91,5	0,0167	0,31
845			445				1830	18136	1000	92,3	0,0167	0,31
1030				540			1830	18218	1000	93,8	0,0167	0,30
1210					635		1830	18200	1000	94,5	0,0167	0,30
740	425						1830	16630	1270	91,9	0,0154	0,28
775		450					1830	16449	1270	92,1	0,0154	0,28
845			490				1830	16471	1270	92,3	0,0154	0,28
1030				595			1830	16534	1270	93,8	0,0154	0,28
870	510						2100	16293	1140	94,2	0,0083	0,21
910		535					2100	16246	1140	94,2	0,0083	0,20
995			585				2100	16245	1140	94,8	0,0083	0,20
1110	600						2690	17670	1210	93,8	0,0071	0,14
1160		630					2690	17586	1210	93,7	0,0071	0,14

** Through field control with constant output. Please specify.

Field loss (hot) = 5800 W

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
450	265						1170	16217	605	87.4	0.0404	0.71
474		280					1170	16167	630	88.1	0.0404	0.70
515			310				1160	15865	715	88.8	0.0404	0.70
620				380			1140	15582	850	90.6	0.0404	0.69
730					450		1130	15492	860	92.3	0.0404	0.69
780						485	1120	15359	870	92.9	0.0404	0.69
490	290						1260	16136	705	88.4	0.0346	0.60
515		305					1260	16125	755	88.9	0.0346	0.60
560			335				1250	15964	840	89.6	0.0346	0.60
670				410			1220	15606	860	91.5	0.0346	0.60
785					485		1210	15457	870	92.7	0.0346	0.60
835						520	1200	15335	880	92.8	0.0346	0.60
535	320						1360	15966	600	89.4	0.0291	0.51
560		335					1350	15964	650	90.2	0.0291	0.51
610			370				1340	15745	710	91.0	0.0291	0.50
730				450			1320	15492	770	92.2	0.0291	0.51
850					530		1300	15316	780	93.4	0.0291	0.51
900						575	1280	14948	790	93.8	0.0291	0.51
575	345						1440	15917	685	90.8	0.0245	0.44
595		360					1430	15784	745	90.5	0.0245	0.45
650			395				1420	15715	770	91.5	0.0245	0.45
780				485			1400	15359	780	92.9	0.0245	0.44
900					570		1370	15079	800	93.8	0.0245	0.45
950						615	1350	14752	810	93.8	0.0245	0.45
615	370						1550	15874	800	90.2	0.0223	0.38
645		390					1540	15794	850	91.1	0.0223	0.38
700			425				1530	15729	860	91.5	0.0223	0.38
840				515			1510	15577	870	92.7	0.0223	0.39
965					610		1470	15108	890	93.8	0.0223	0.39
1030						655	1450	15018	910	94.7	0.0223	0.39
630	400						1570	15041	900	91.2	0.0204	0.35
660		420					1570	15007	900	91.4	0.0204	0.35
715			460				1560	14844	900	91.7	0.0204	0.35
850				560			1520	14496	920	93.2	0.0204	0.35
975					660		1480	14108	950	94.1	0.0204	0.36
1030						710	1450	13854	970	94.7	0.0204	0.36
695	435						1720	15258	910	91.8	0.0171	0.29
725		455					1720	15217	910	91.6	0.0171	0.29
790			500				1710	15089	910	92.4	0.0171	0.29
930				605			1660	14680	940	93.4	0.0171	0.30
1060					715		1600	14158	970	94.6	0.0171	0.31
1120						770	1570	13891	990	95.1	0.0171	0.31
765	475						1880	15381	1010	92.5	0.0139	0.25
800		500					1880	15280	1010	92.5	0.0139	0.24
860			545				1850	15070	1030	93.0	0.0139	0.25
1010				665			1790	14505	1060	94.0	0.0139	0.25
1140					780		1720	13958	1110	94.7	0.0139	0.26
1200						840	1680	13643	1130	95.2	0.0139	0.27
835	525						2050	15189	1030	92.6	0.0117	0.20
870		550					2030	15106	1040	93.2	0.0117	0.21
935			600				2000	14882	1050	93.5	0.0117	0.21
1090				730			1920	14260	1100	94.6	0.0117	0.21
860	570						2100	14409	970	93.1	0.0104	0.18
900		600					2100	14325	970	93.2	0.0104	0.18
985			655				2100	14361	970	93.8	0.0104	0.18
1160				795			2040	13935	990	94.8	0.0104	0.18

** Through field control with constant output. Please specify.

Field loss (hot) = 5800 W

Data subject to change without prior notice.

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
450	235						1180	18287	530	86.7	0.0428	0.79
474		250					1180	18107	555	87.3	0.0428	0.78
520			275				1180	18058	630	88.1	0.0428	0.77
640				335			1180	18245	755	90.4	0.0428	0.76
750					400		1170	17906	780	91.6	0.0428	0.75
805						430	1170	17878	780	91.7	0.0428	0.75
490	260						1270	17998	630	87.7	0.0366	0.67
515		270					1270	18216	655	88.2	0.0366	0.67
565			300				1270	17986	730	89.0	0.0366	0.66
690				365			1270	18053	780	90.6	0.0366	0.65
810					430		1260	17990	790	91.8	0.0366	0.65
865						465	1250	17765	790	92.3	0.0366	0.65
540	285						1380	18095	540	88.9	0.0309	0.56
565		300					1380	17986	565	89.0	0.0309	0.56
620			330				1380	17942	615	89.9	0.0309	0.55
750				400			1370	17906	700	91.2	0.0309	0.55
875					475		1350	17592	710	92.6	0.0309	0.55
940						510	1350	17602	710	92.8	0.0309	0.54
580	305						1470	18161	600	89.7	0.0260	0.49
610		320					1470	18205	625	90.2	0.0260	0.49
670			355				1470	18024	700	91.2	0.0260	0.48
810				430			1460	17990	710	92.5	0.0260	0.48
940					510		1440	17602	720	93.3	0.0260	0.48
995						545	1420	17435	730	93.4	0.0260	0.48
635	330						1600	18377	680	90.2	0.0237	0.42
665		345					1600	18408	705	90.4	0.0237	0.42
725			375				1600	18463	780	90.6	0.0237	0.42
870				460			1570	18062	790	92.4	0.0237	0.42
1010					545		1540	17698	810	93.7	0.0237	0.42
1070						585	1520	17468	820	93.9	0.0237	0.42
650	355						1630	17486	820	90.6	0.0217	0.38
680		370					1630	17551	820	90.7	0.0217	0.38
740			410				1620	17237	820	91.4	0.0217	0.38
890				495			1600	17171	830	92.7	0.0217	0.38
1020					585		1560	16651	850	93.4	0.0217	0.38
1090						630	1540	16523	860	94.4	0.0217	0.39
715	385						1790	17736	820	90.8	0.0181	0.32
745		405					1780	17567	830	91.0	0.0181	0.32
815			445				1770	17490	830	92.1	0.0181	0.32
970				540			1740	17155	850	92.9	0.0181	0.32
1120					635		1690	16844	870	94.7	0.0181	0.33
1180						685	1660	16451	890	94.8	0.0181	0.33
790	425						1960	17752	920	91.6	0.0147	0.26
825		445					1950	17705	930	92.0	0.0147	0.27
900			485				1940	17722	930	92.8	0.0147	0.27
1060				590			1890	17158	960	93.5	0.0147	0.27
1210					695		1820	16627	990	95.0	0.0147	0.28
1280						750	1790	16299	1010	95.3	0.0147	0.28
870	465						2140	17868	940	92.4	0.0124	0.22
905		490					2130	17638	940	92.4	0.0124	0.22
980			535				2110	17493	950	92.9	0.0124	0.22
1150				650			2030	16896	990	94.4	0.0124	0.23
860	510						2100	16104	910	93.1	0.0110	0.21
900		535					2100	16065	910	93.2	0.0110	0.20
985			585				2100	16080	910	93.8	0.0110	0.20
1190				710			2100	16006	910	94.4	0.0110	0.20

** Through field control with constant output. Please specify.

Field loss (hot) = 6200 W

Data subject to change without prior notice.

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
446	240						1180	17747	480	85.9	0.0456	0.89
470		220					1180	20402	505	86.6	0.0456	0.89
520			245				1180	20269	555	88.1	0.0456	0.86
635				300			1180	20214	680	89.7	0.0456	0.85
750					355		1180	20176	730	90.8	0.0456	0.84
810						380	1180	20357	730	91.5	0.0456	0.84
486	210						1270	22101	555	87.0	0.0389	0.75
515		240					1270	20493	580	88.2	0.0389	0.75
565			265				1270	20361	655	89.0	0.0389	0.74
690				325			1270	20275	730	90.6	0.0389	0.73
815					380		1270	20482	730	91.7	0.0389	0.73
875						410	1270	20381	730	91.9	0.0389	0.72
535	250						1380	20437	475	88.1	0.0330	0.64
565		265					1380	20361	500	89.0	0.0330	0.63
620			290				1380	20417	550	89.9	0.0330	0.62
755				355			1380	20311	650	91.2	0.0330	0.61
890					420		1380	20237	650	92.1	0.0330	0.60
960						450	1380	20373	650	92.8	0.0330	0.60
580	270						1470	20515	535	89.7	0.0277	0.55
605		285					1470	20273	560	89.5	0.0277	0.55
665			315				1470	20161	610	90.5	0.0277	0.54
810				380			1470	20357	660	91.8	0.0277	0.54
955					450		1470	20267	660	92.8	0.0277	0.53
1030						485	1470	20281	660	93.4	0.0277	0.53
630	290						1600	20747	605	89.5	0.0252	0.47
660		305					1600	20666	630	89.7	0.0252	0.47
725			335				1600	20668	705	90.6	0.0252	0.47
880				410			1600	20498	730	91.7	0.0252	0.46
1040					480		1600	20692	730	92.9	0.0252	0.46
1120						520	1600	20569	730	93.3	0.0252	0.45
645	315						1630	19555	745	89.9	0.0230	0.43
675		330					1630	19534	770	90.0	0.0230	0.43
740			360				1630	19631	770	90.8	0.0230	0.43
900				440			1630	19534	770	92.0	0.0230	0.42
1070					520		1630	19651	770	93.8	0.0230	0.41
1140						560	1620	19441	770	93.8	0.0230	0.41
715	340						1800	20083	770	90.3	0.0192	0.36
750		360					1800	19896	770	90.6	0.0192	0.35
825			395				1800	19946	770	91.7	0.0192	0.35
1000				480			1800	19896	770	92.6	0.0192	0.35
1170					565		1780	19776	780	93.9	0.0192	0.35
1240						610	1760	19413	790	93.9	0.0192	0.35
795	375						1980	20246	860	91.3	0.0157	0.30
835		395					1980	20188	860	91.7	0.0157	0.29
910			430				1980	20210	860	91.9	0.0157	0.29
1110				525			1980	20191	860	93.4	0.0157	0.29
1270					620		1930	19562	880	94.0	0.0157	0.29
1350						665	1900	19387	900	94.7	0.0157	0.30
875	415						2170	20136	870	91.6	0.0132	0.24
920		435					2170	20198	870	92.2	0.0132	0.24
1010			475				2170	20306	870	93.1	0.0132	0.24
1210				575			2150	20097	880	93.8	0.0132	0.24
855	455						2100	17946	860	92.5	0.0117	0.23
895		475					2100	17994	860	92.7	0.0117	0.23
980			520				2100	17998	860	93.3	0.0117	0.23
1190				630			2100	18039	860	94.4	0.0117	0.23

** Through field control with constant output. Please specify.

Field loss (hot) = 6600 W

Data subject to change without prior notice.

Cont. output (kW)	Base speed (min-1) at armature voltage (V)						Armature current (A)	Rated torque (Nm)	Max. Electrical speed** (min^{-1})	Armature circuit		
	440	460	500	600	700	750				Efficiency (%)	Resistance (Ohm)	Inductance (mH)
442	180						1180	23451	405	85.1	0.0487	1.04
466		190					1180	23423	430	85.9	0.0487	1.03
515			210				1180	23420	480	87.3	0.0487	1.01
630				260			1180	23140	580	89.0	0.0487	0.98
750					310		1180	23105	680	90.8	0.0487	0.96
805						335	1180	22949	680	91.0	0.0487	0.95
482	200						1270	23016	480	86.3	0.0416	0.87
510		210					1270	23193	505	87.3	0.0416	0.86
560			230				1270	23252	555	88.2	0.0416	0.86
685				280			1270	23363	680	89.9	0.0416	0.84
810					335		1270	23091	680	91.1	0.0416	0.82
875						360	1270	23212	680	91.9	0.0416	0.82
530	220						1380	23007	400	87.3	0.0353	0.72
560		230					1380	23252	425	88.2	0.0353	0.72
615			255				1380	23032	475	89.1	0.0353	0.71
750				310			1380	23105	575	90.6	0.0353	0.70
885					365		1380	23155	600	91.6	0.0353	0.69
955						395	1380	23089	600	92.3	0.0353	0.69
575	235						1470	23367	460	88.9	0.0296	0.64
605		250					1470	23111	485	89.5	0.0296	0.63
660			275				1470	22920	535	89.8	0.0296	0.62
805				335			1470	22949	610	91.3	0.0296	0.61
950					395		1470	22968	610	92.3	0.0296	0.60
1030						425	1470	23145	610	93.4	0.0296	0.60
625	255						1600	23407	530	88.8	0.0270	0.54
655		265					1600	23605	555	89.0	0.0270	0.54
720			290				1600	23710	605	90.0	0.0270	0.54
875				355			1600	23539	680	91.1	0.0270	0.53
1040					420		1600	23648	680	92.9	0.0270	0.52
1120						455	1600	23508	680	93.3	0.0270	0.52
640	275						1630	22225	635	89.2	0.0246	0.49
675		290					1630	22228	685	90.0	0.0246	0.49
740			315				1630	22435	710	90.8	0.0246	0.49
900				385			1630	22325	710	92.0	0.0246	0.48
1060					455		1630	22248	710	92.9	0.0246	0.47
1140						490	1630	22218	710	93.3	0.0246	0.47
715	300						1800	22761	720	90.3	0.0205	0.41
750		315					1800	22738	720	90.6	0.0205	0.41
820			345				1800	22699	720	91.1	0.0205	0.40
995				420			1800	22624	720	92.1	0.0205	0.40
1180					495		1800	22766	720	93.7	0.0205	0.39
1270						530	1800	22884	720	94.1	0.0205	0.39
790	330						1980	22862	775	90.7	0.0167	0.34
830		345					1980	22975	800	91.1	0.0167	0.34
910			375				1980	23175	800	91.9	0.0167	0.34
1110				460			1980	23045	800	93.4	0.0167	0.33
1300					540		1980	22991	800	93.8	0.0167	0.33
1400						580	1980	23052	800	94.3	0.0167	0.33
875	360						2170	23212	785	91.6	0.0141	0.28
915		380					2170	22995	810	91.7	0.0141	0.28
1000			415				2170	23012	810	92.2	0.0141	0.28
1220				505			2170	23071	810	93.7	0.0141	0.27
855	395						2100	20672	800	92.5	0.0125	0.27
895		415					2100	20596	800	92.7	0.0125	0.26
975			455				2100	20464	800	92.9	0.0125	0.26
1190				550			2100	20662	800	94.4	0.0125	0.26

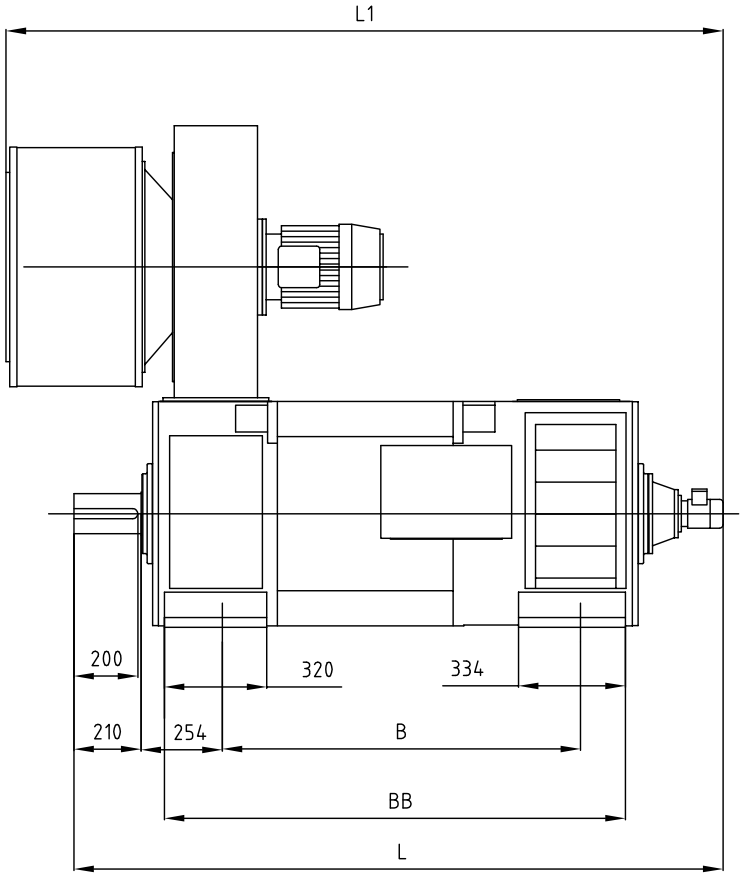
** Through field control with constant output. Please specify.

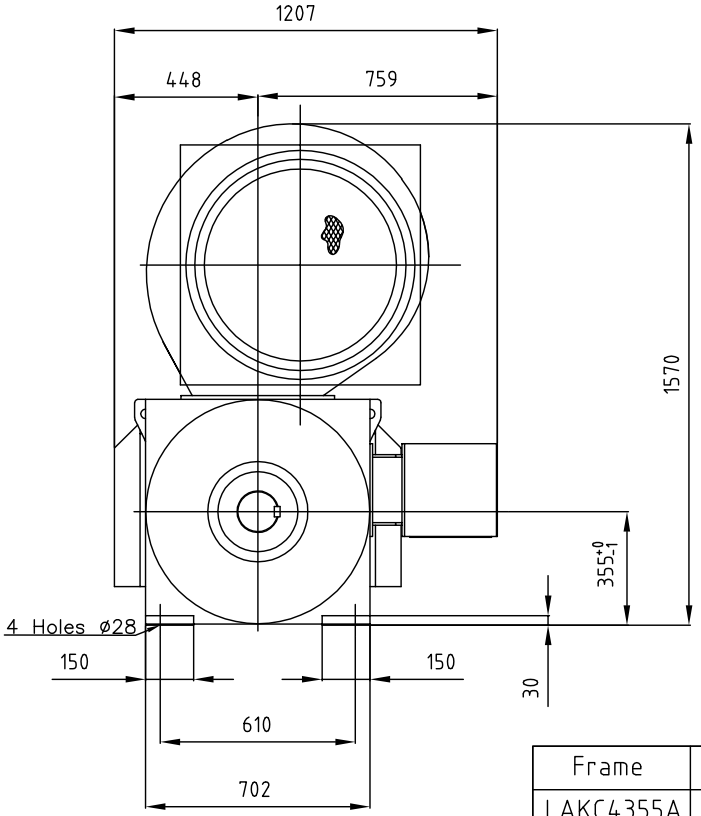
Field loss (hot) = 8100 W

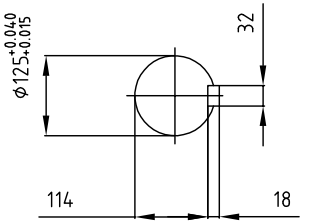
Data subject to change without prior notice.

Dimension drawing, LAKC4355

Dimensions in mm





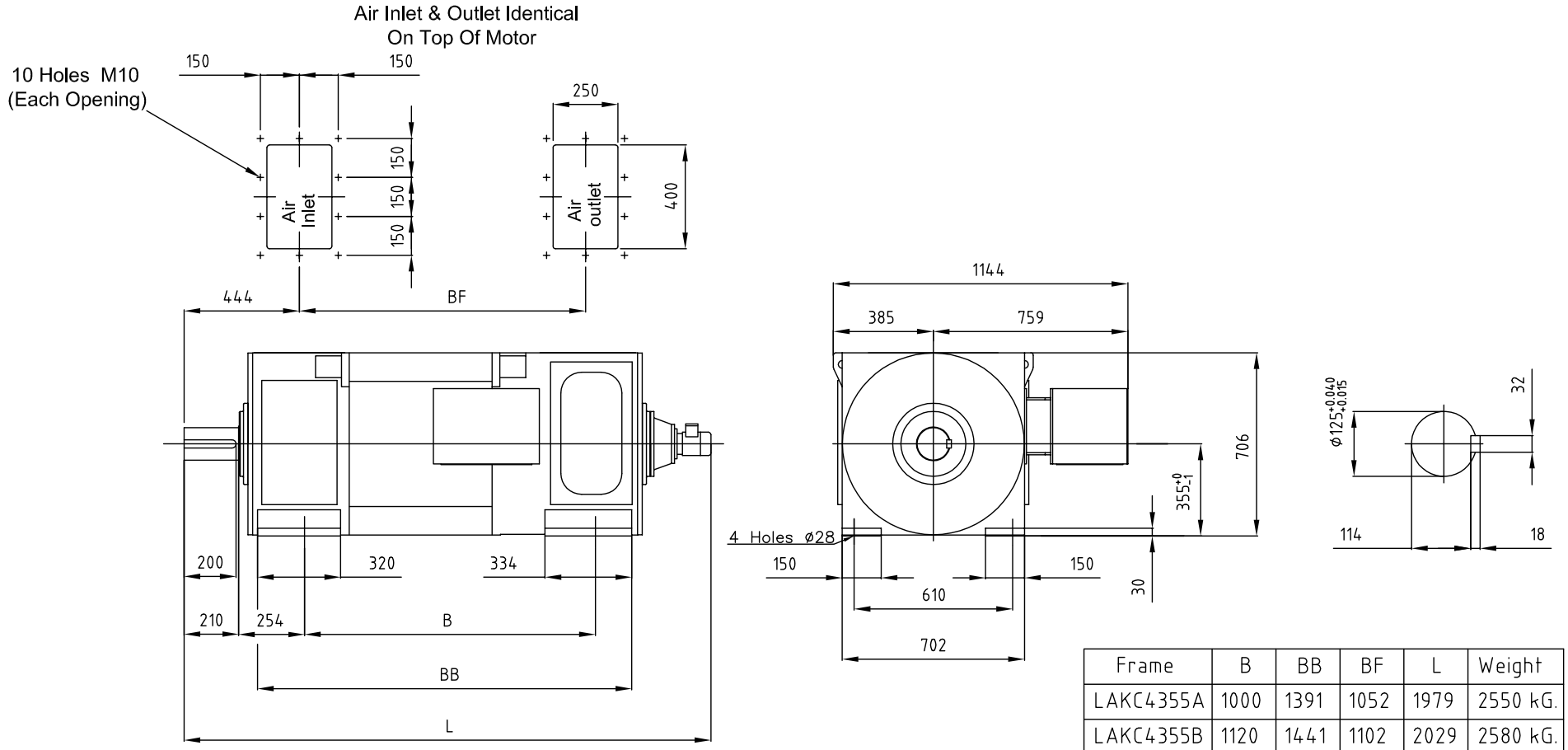


Frame	B	BB	L	L1	Weight
LAKC4355A	1000	1391	1979	2191	2750 kG.
LAKC4355B	1120	1441	2029	2241	2780 kG.
LAKC4355C	1250	1491	2079	2291	3100 kG.

Dimensions are not binding

Dimension drawing, LAKC4355

Dimensions in mm

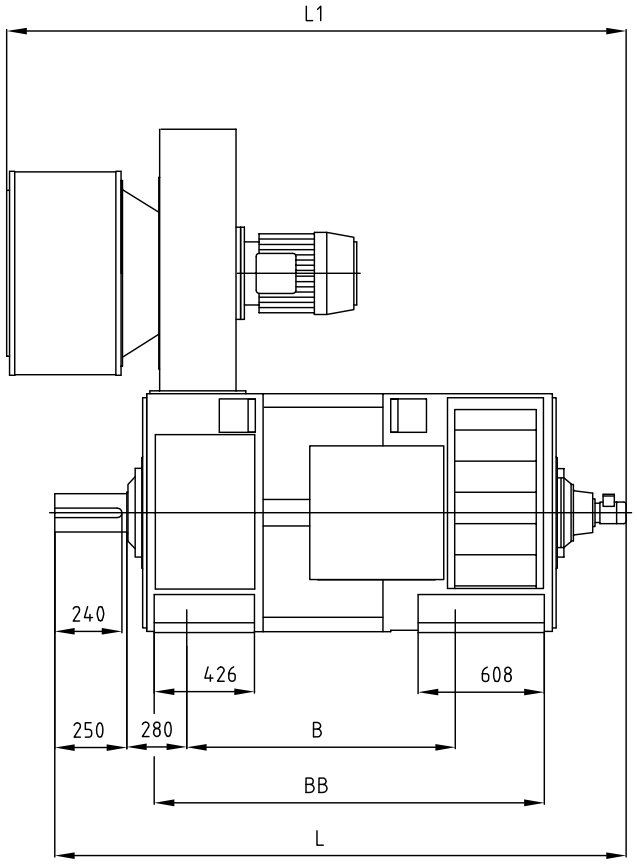


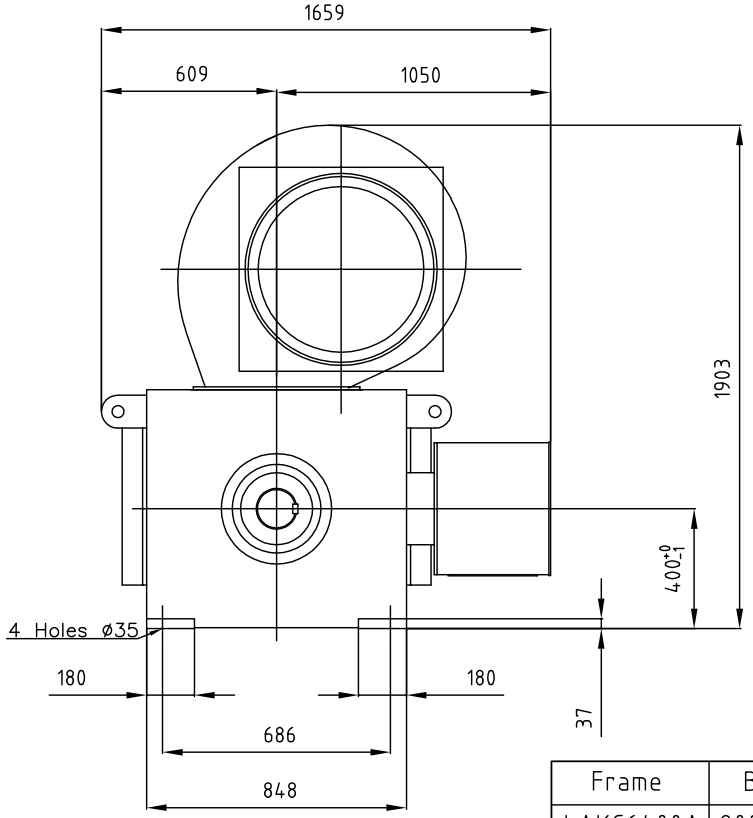
Frame	B	BB	BF	L	Weight
LAKC4355A	1000	1391	1052	1979	2550 kG.
LAKC4355B	1120	1441	1102	2029	2580 kG.
LAKC4355C	1250	1491	1152	2079	2900 kG.

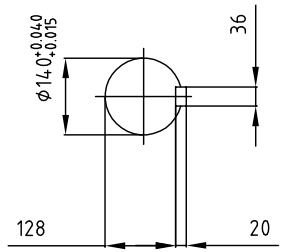
Dimensions are not binding

Dimension drawing, LAKC6400

Dimensions in mm





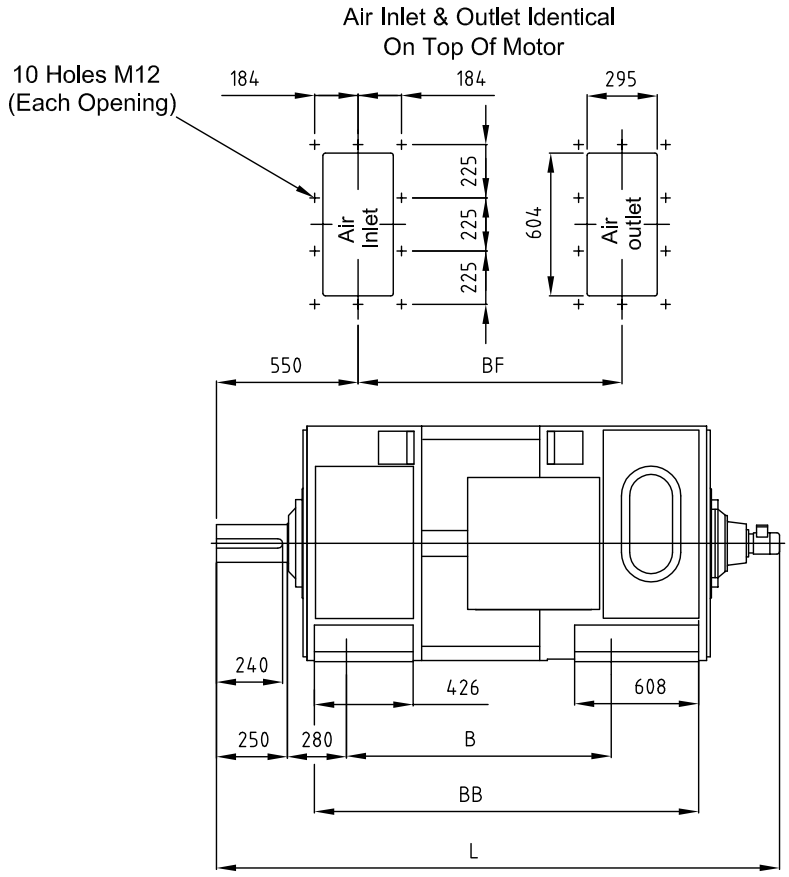


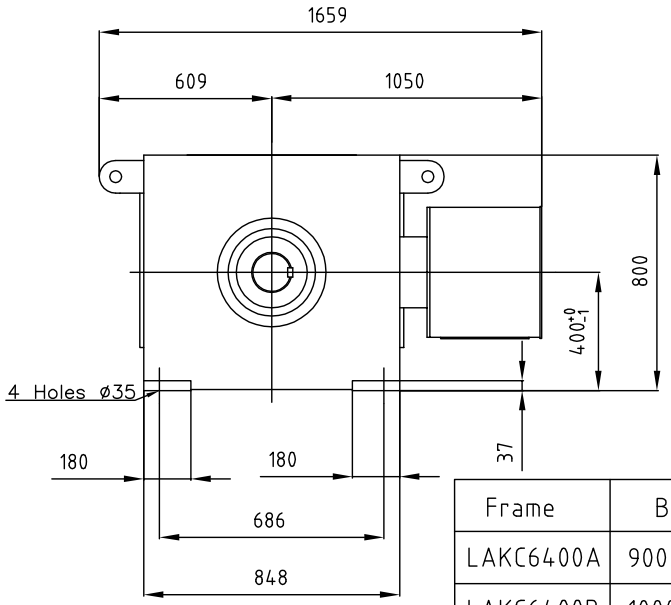
Frame	B	BB	L	L1	Weight
LAKC6400A	900	1500	2147	2397	3340 kG.
LAKC6400B	1000	1600	2247	2497	3740 kG.
LAKC6400C	1120	1730	2377	2627	4140 kG.

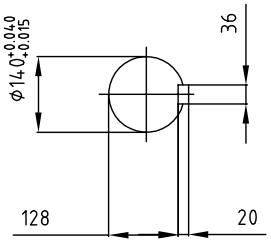
Dimensions are not binding

Dimension drawing, LAKC6400

Dimensions in mm





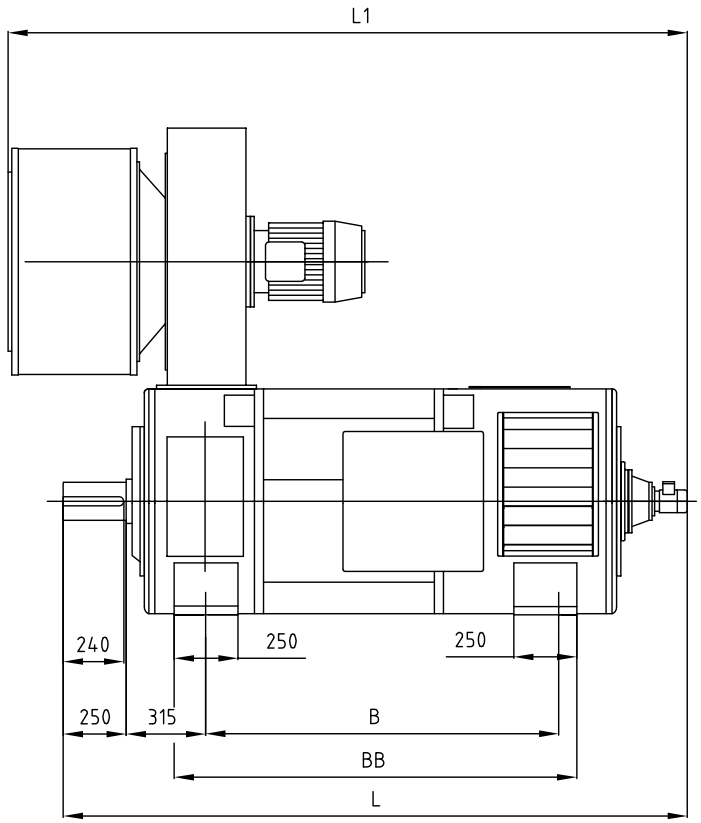


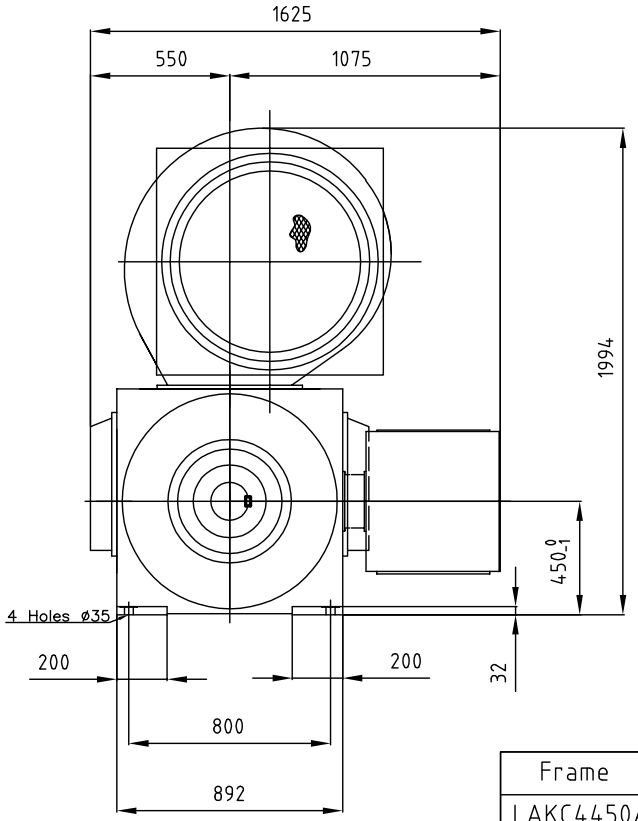
Frame	B	BB	BF	L	Weight
LAKC6400A	900	1500	994	2147	2940 kG.
LAKC6400B	1000	1600	1094	2247	3340 kG.
LAKC6400C	1120	1730	1224	2377	3740 kG.

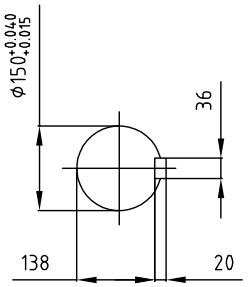
Dimensions are not binding

Dimension drawing, LAKC4450

Dimensions in mm





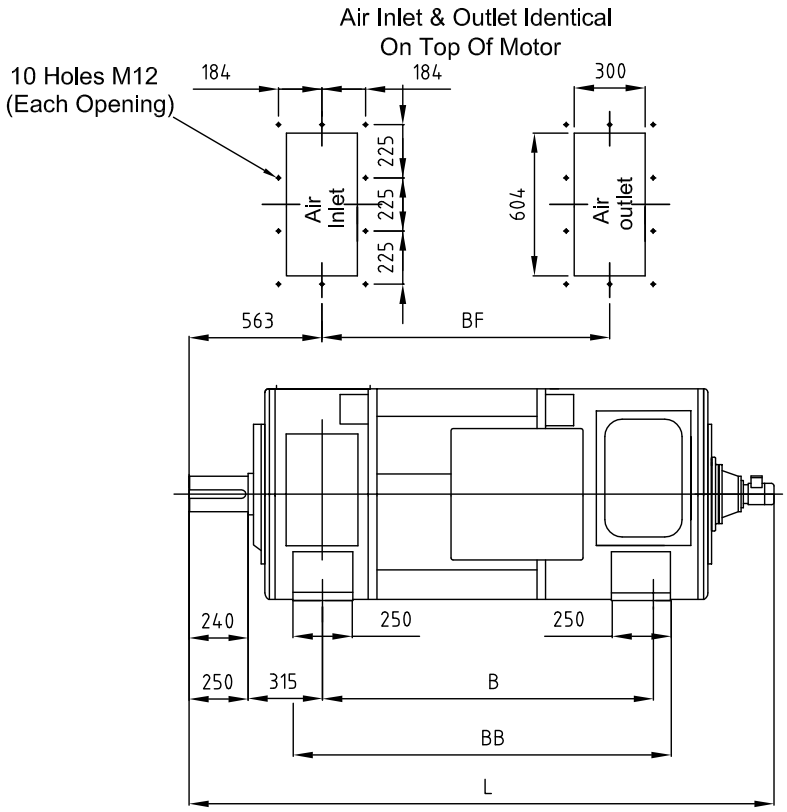


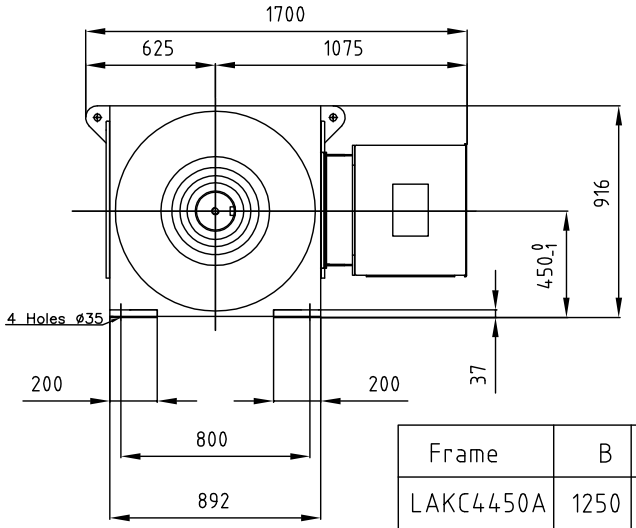
Frame	B	BB	L	L1	Weight
LAKC4450A	1250	1527	2426	2595	5300 kG.
LAKC4450B	1400	1597	2496	2665	5600 kG.
LAKC4450C	1400	1697	2596	2765	6000 kG.

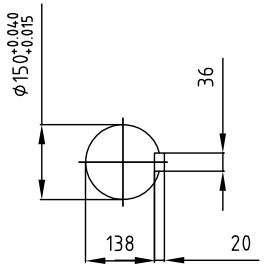
Dimensions are not binding

Dimension drawing, LAKC4450

Dimensions in mm





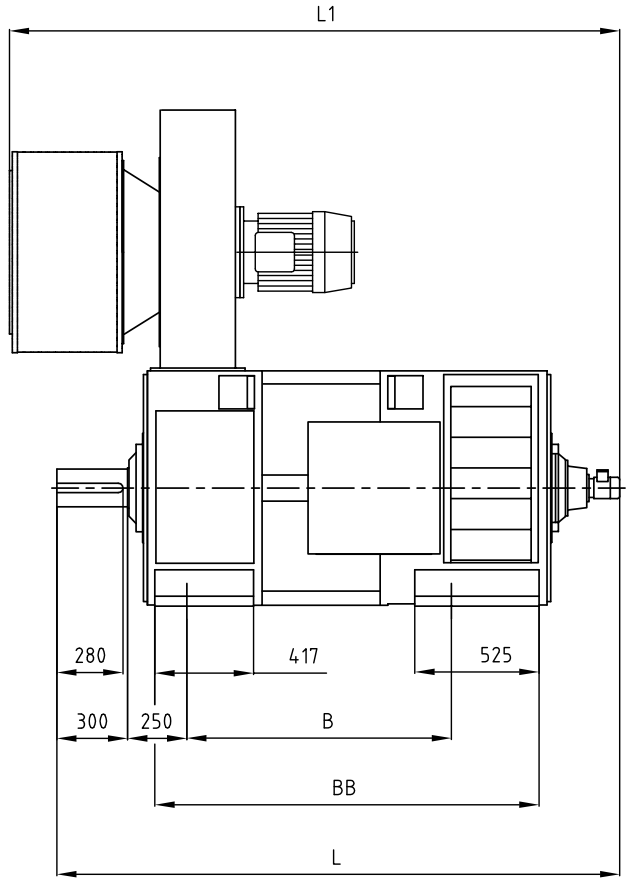


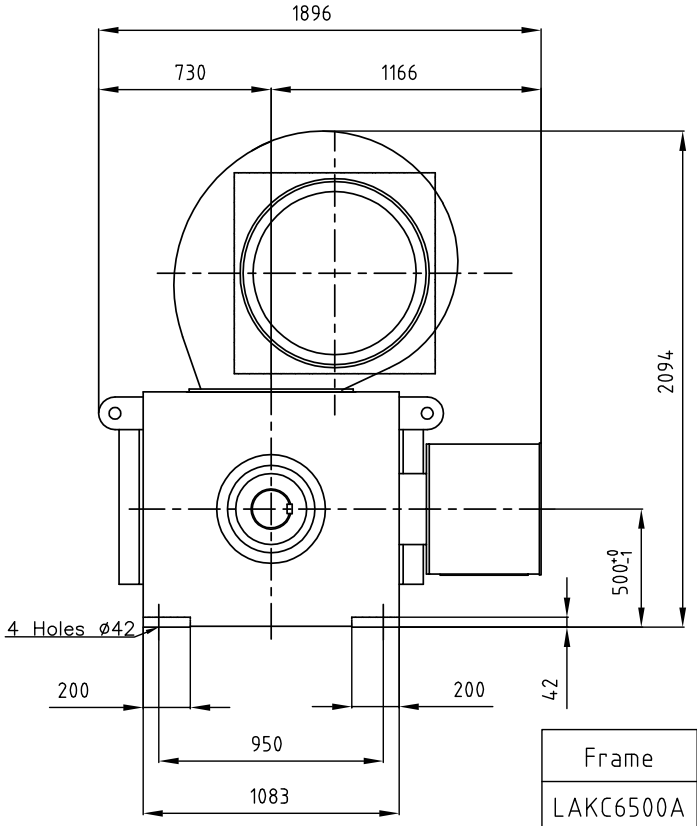
Frame	B	BB	BF	L	Weight
LAKC4450A	1250	1527	1177	2426	4900 kG.
LAKC4450B	1400	1597	1247	2496	5200 kG.
LAKC4450C	1400	1697	1347	2596	5600 kG.

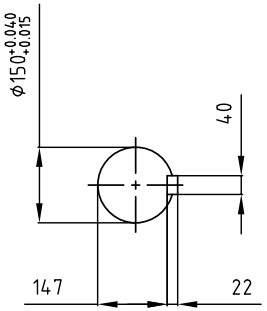
Dimensions are not binding

Dimension drawing, LAKC6500

Dimensions in mm





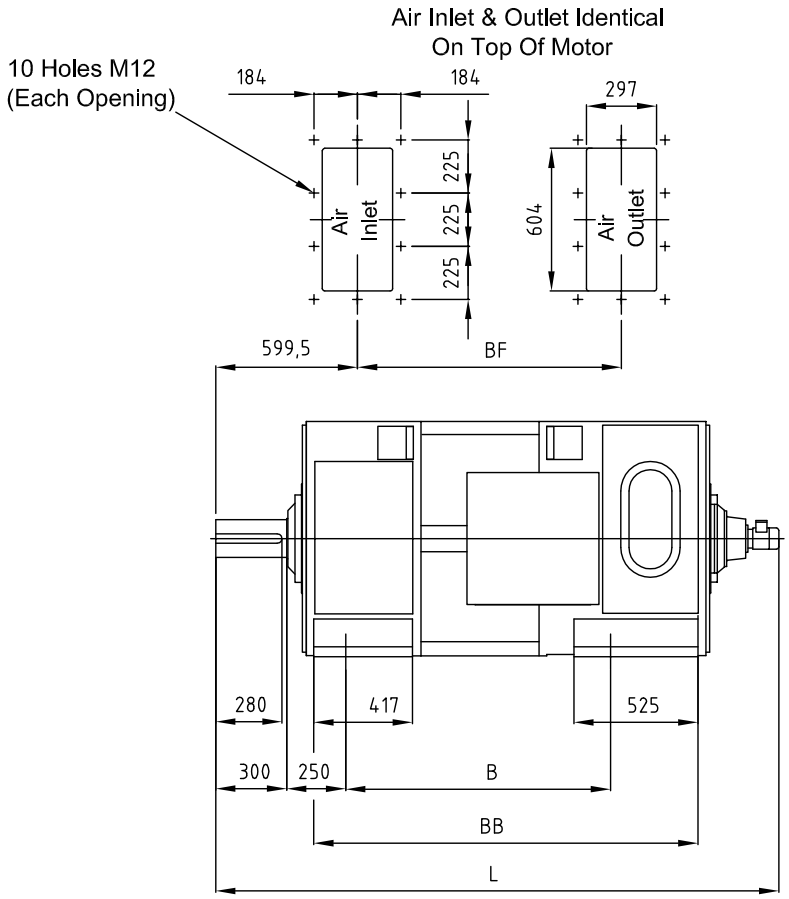


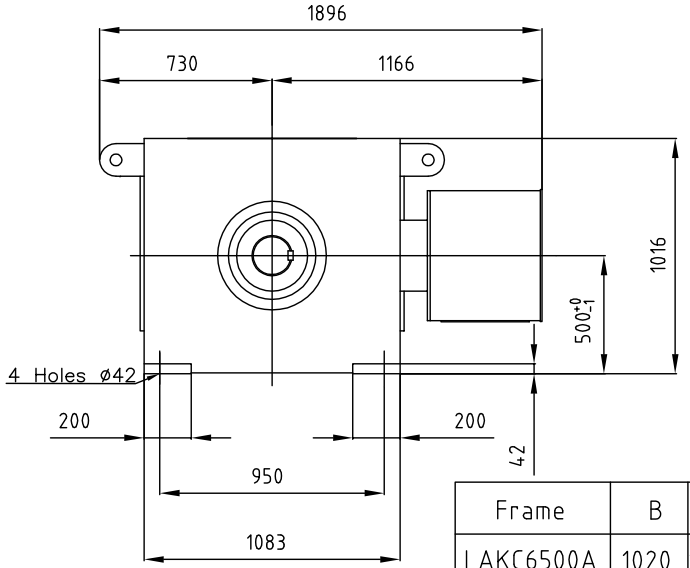
Frame	B	BB	L	L1	Weight
LAKC6500A	1020	1525	2282	2482	5880 kG
LAKC6500B	1120	1625	2382	2582	6380 kG
LAKC6500C	1250	1755	2512	2712	7030 kG
LAKC6500D	1400	1855	2612	2812	7530 kG

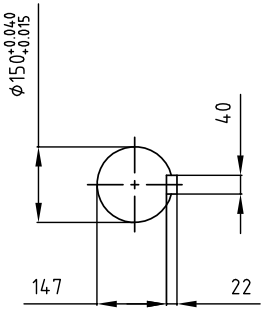
Dimensions are not binding

Dimension drawing, LAKC6500

Dimensions in mm





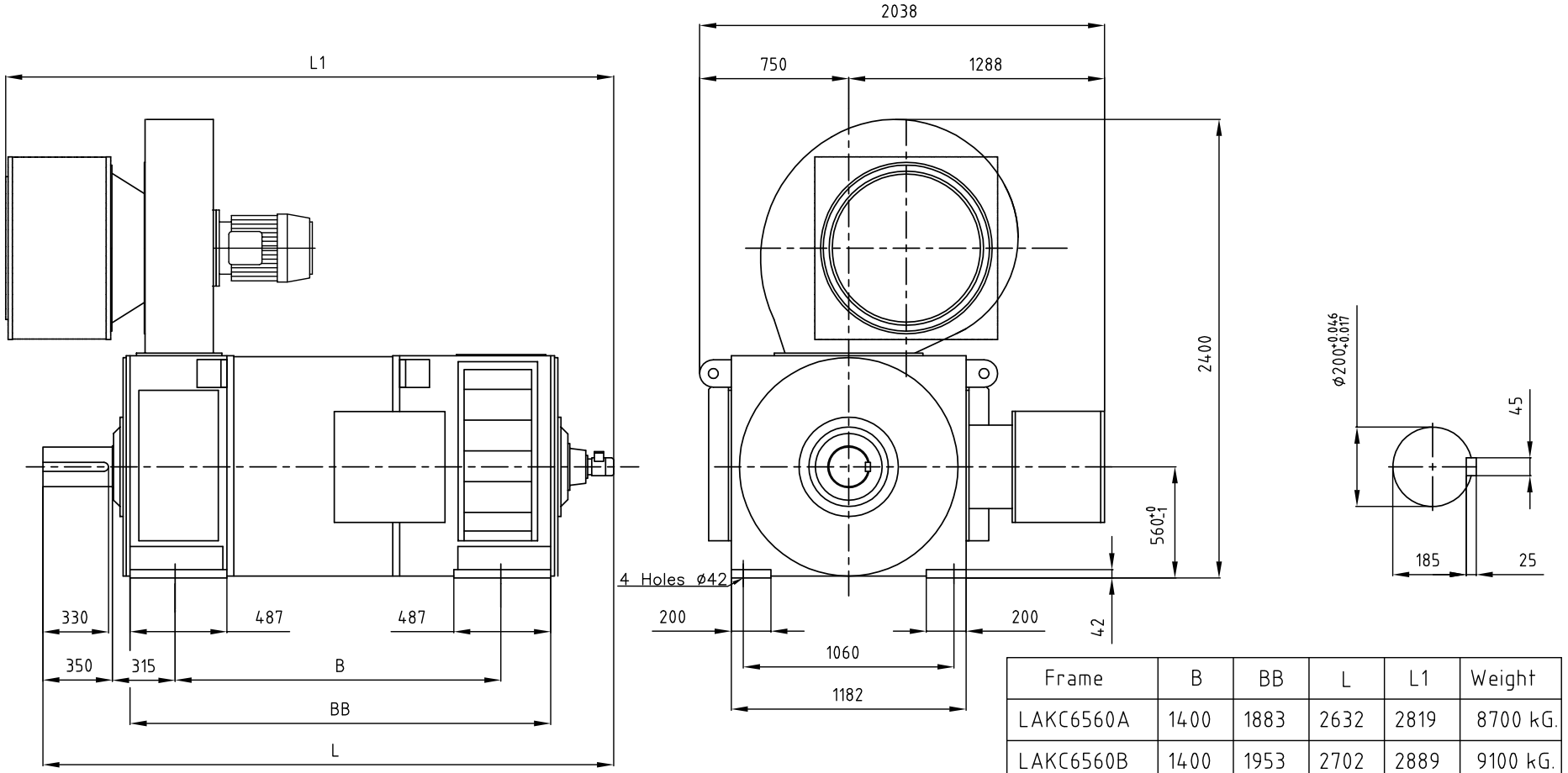


Frame	B	BB	BF	L	Weight
LAKC6500A	1020	1525	1017	2282	5480 kG.
LAKC6500B	1120	1625	1117	2382	5980 kG.
LAKC6500C	1250	1755	1247	2512	6630 kG.
LAKC6500D	1400	1855	1347	2612	7130 kG.

Dimensions are not binding

Dimension drawing, LAKC6560

Dimensions in mm

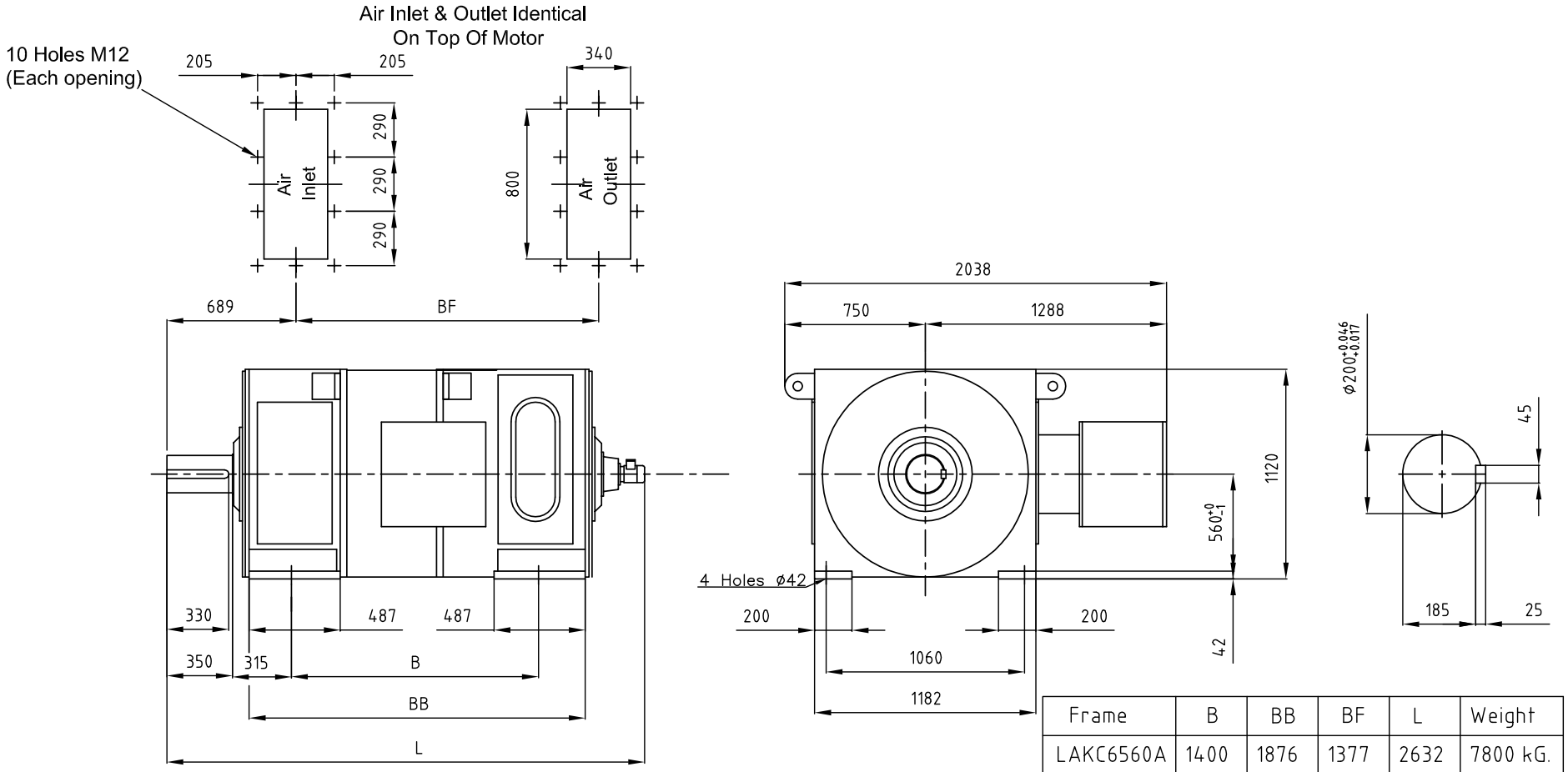


Frame	B	BB	L	L1	Weight
LAKC6560A	1400	1883	2632	2819	8700 kG.
LAKC6560B	1400	1953	2702	2889	9100 kG.
LAKC6560C	1600	2033	2782	2969	9500 kG.
LAKC6560D	1600	2123	2872	3059	10150 kG.

Dimensions are not binding

Dimension drawing, LAKC6560

Dimensions in mm



Frame	B	BB	BF	L	Weight
LAKC6560A	1400	1876	1377	2632	7800 kG.
LAKC6560B	1400	1946	1477	2702	8300 kG.
LAKC6560C	1600	2026	1527	2782	8800 kG.
LAKC6560D	1600	2116	1617	2872	9400 kG.

Dimensions are not binding

Founded over 100 years ago, T-T Electric is a world-class supplier of top-quality industrial electric motors and drives. Pioneers in the industry, we are an experienced and established manufacturer of a comprehensive and cost-effective range of highly reliable drive products. They are used around the world in the toughest of application environments and in all industrial segments.

Driven by customer demand, T-T Electric is continually researching product excellence and manufacturing process perfection. The flexible product design ensures easy adaptations to customer requirements. This, combined with unequalled short delivery times, make T-T Electric a reference within industry. Our extensive support services include diagnostics and maintenance on site as well as full overhaul in our own repair facilities.

T-T Electric is committed to a working partnership with our customers. For mutual benefit, we focus on complete and innovative solutions together.

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