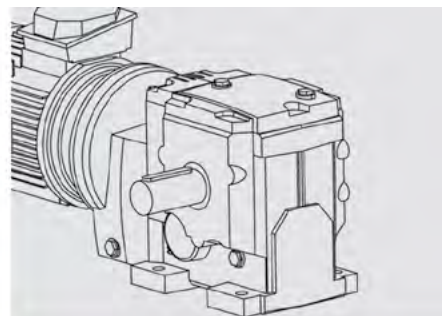


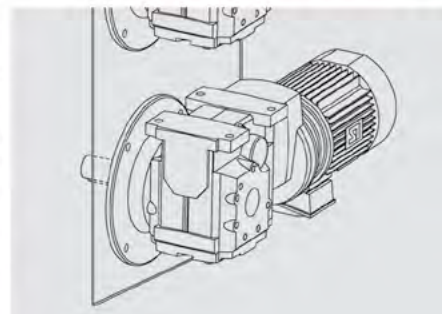
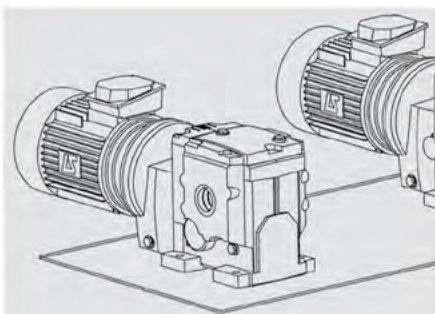
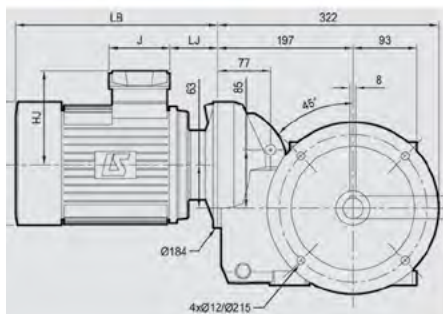


# EMERSON™

Industrial Automation



		OI 3333									
		0.25		0.37		0.65		0.75		0.9	
		LG (mm)									
		71		80		90		100		112	
		LS (mm)									
		1.1		1.6		2.2		3		4	
min-1	i										
9.06	180	3.41	2.24	1.46	1.26	0.9					
10.6	137	3.97	2.61	1.7	1.24	1.05	0.85				
11.6	125	4.35	2.86	1.89	1.35	1.19	0.94				
12.6	113	4.8	3.15	2.06	1.45	1.25	1.03				
15.0	95.4	5.61	3.68	2.4	1.75	1.48	1.23				
18.8	85.7	6.3	4.14	2.7	1.96	1.65	1.36	0.99	0.83		
21.4	77	7	4.8	3	2.16	1.84	1.51	1.1	0.92		
23.8	67.8	7.93	5.21	3.4	2.47	2.09	1.71	1.24	1.04	0.88	
27.0	61	8.79	5.78	3.77	2.74	2.31	1.89	1.39	1.19	1.04	
28.8	53.8	9.95	6.64	4.27	3.1	2.62	2.14	1.60	1.39	1.27	0.78
33.2	50.3		6.95	4.55	3.31	2.8	2.28	1.67	1.4	1.18	0.73
35.2	45.7		8.02	5.23	3.8	3.21	2.63	1.92	1.4	1.18	0.73
37.9	39.2			5.94	4.32	3.65	2.98	2.13	1.62	1.49	0.82
39.1	37.1	12.76	8.58	5.47	3.97	3.58	3.74	2	1.69	1.37	
41.9	34.6			6.57*	4.77*	4.03*	3.7*	2.4*	2.01*	1.64*	1.2
44.3	32.7	14.44	9.48	6.19	4.5	3.8	3.1	2.27	1.9	1.55	



## Right-angle output drive systems ORTHOBLOC 3000 / LS, LSES

Selection guide

4275 en - 2014.02 / f

# Electromechanical products

## Orthobloc 3000

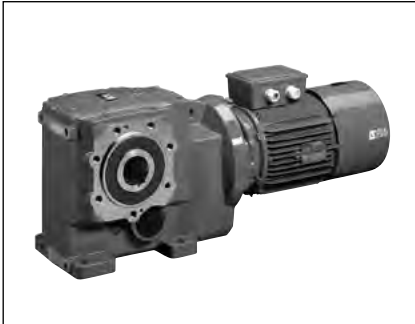
### Contents

<b>General, Construction</b> .....	<b>3</b>
<b>Mounting - Operating positions</b> .....	<b>4 to 9</b>
<b>General information - Ranges</b> .....	<b>10</b>
<b>Adaptation possibilities, Designation / Coding</b> .....	<b>11</b>
<b>Selection</b> .....	<b>12 to 21</b>
Method.....	12
List of applications .....	13
Conditions.....	14
Ot 3132 to Ot 3933 selections, AGMA class I, II, III.....	15 to 23
<b>Ot dimensions, solid output shaft</b> .....	<b>24</b>
Ot 3132 to Ot 3933, MI mounting .....	24 to 43
<b>Ot dimensions, hollow output shaft</b> .....	<b>44</b>
Ot 3132 to Ot 3933, MI mounting .....	44 to 63
<b>MU universal mounting dimensions</b> .....	<b>64</b>
<b>Option dimensions</b> .....	<b>65 to 68</b>
Ot dimensions, input shaft AP .....	65
Driven shaft dimensions.....	65
R torque arm .....	66
SD shrink disc .....	67
Side F details .....	68
NS form (feet kit added).....	68

# Electromechanical products

## Orthobloc 3000

### General



Orthobloc 3000 geared motors with helical bevel gears are used to adapt the speed of the electric motor to that of the driven machine.

Their size is therefore determined by the motor power ( $P$ ) expressed in kilowatts (kW) and the output rotation speed of the gearbox ( $n_S$ ) in revolutions per minute ( $\text{min}^{-1}$ ). The characteristic parameter of speed reducers is the rated output torque ( $M_{nS}$ ) expressed in Newton-metres (Nm):

$$M_{nS} = \frac{P \times 9550}{n_S} \times \text{efficiency}$$

A range of nine sizes: 31, 32, 33, 34, 35, 36, 37, 38, 39.

Rated output torque up to 23000 Nm.

Power ratings: 0.25 to 110 kW.

Reduction ratios: 3.71 to 160.

Two to three reduction stages.

Reversible.

Quiet operation.

### Construction

#### Description of Orthobloc (Ot) gearboxes

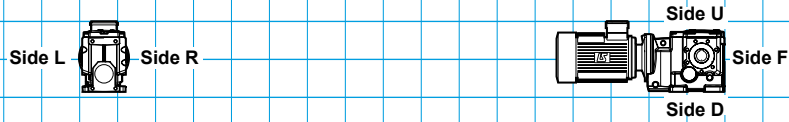
Component	Materials	Remarks
Housing	Cast iron	<ul style="list-style-type: none"> <li>- use of single-component pearlitic ENGJL-200 cast iron (flake graphite: 200 MPa tensile strength) to ensure unit is fully sealed</li> <li>- monobloc ribbed with internal reinforcements to absorb vibrations and noise, and increase its rigidity</li> <li>- foot mounted <b>S</b>, <b>SBT</b> or with flanges <b>BS</b>, <b>BD</b>..., <b>BR</b>. They are compact and meet industrial requirements</li> </ul>
Gears	Steel	<ul style="list-style-type: none"> <li>- cut by gear hob, they are heat treated and then undergo final machining. The quality and precision of the gear cutting allow maximum torque with minimum noise level</li> </ul>
Shaft	Steel	<ul style="list-style-type: none"> <li>- grinding of sealing surfaces</li> <li>- cylindrical hollow with protective cover or output with key in accordance with ISO R 773, or hollow with <b>SD shrink disc</b></li> <li>- tolerance of diameters in accordance with NFE 22-051 and ISO R 775</li> <li>- tapped holes at the solid shaft end for fixing connecting devices in accordance with DIN 332 version D</li> </ul>
Lipseals	Nitrile	<ul style="list-style-type: none"> <li>- sealing rings between housing and flange</li> <li>- antidust lipseals in accordance with DIN 3760 form AS</li> <li>- gasket under the access cover</li> </ul>
Lubrication	Oil	<ul style="list-style-type: none"> <li>- in accordance with ISO 6743/6</li> <li>- delivered with the quantity of oil corresponding to the operating position, it is fitted with drain, level and breather plugs</li> </ul>
Mounting		<p>AP: gearbox with input shaft            MI: geared motor with integral motor            MU-FF: geared motor with IEC motor, manufactured with universal mounting</p>
Standard motor		<p>LS, LSES: multi-voltage 230/400 VY - 400 VΔ</p> <ul style="list-style-type: none"> <li>- composite material (80 to 100) pressed steel (<math>\geq 112</math>) ventilation cover, on request fitted with a drip cover for operation in vertical position (shaft facing down)</li> <li>- LS: metal terminal box fitted with cable gland</li> <li>- LSES: terminal box made of composite material (80 to 112) aluminium alloy (<math>\geq 132</math>) equipped with threaded plugs (without cable glands)</li> <li>- IP 55 standard protection</li> </ul>
Brake motors		<p>FCR: failsafe brake induction motor, IP 55 protection, from 0.25 to 15 kW (LS), from 0.75 to 11 kW (LSES)            FCPL: failsafe brake induction motor, IP 44 protection, 11 to 90 kW (LS, LSES)</p>
Finish	Paint	Shade: RAL 6000 (green), system I (1 polyurethane vinyl layer of 25/30 $\mu\text{m}$ )

# Electromechanical products Orthobloc 3000

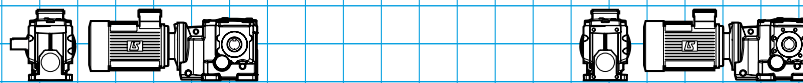
## Mounting and operating positions S, SBT, BS, BD, BR

Standard position: gearbox viewed from side F, motor behind.

### 1 - Marking on sides

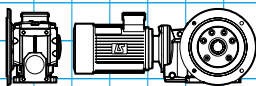


### 2 - Mounting

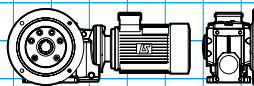


**S**  
Foot mounted

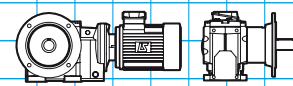
**SBT**  
Foot and face mounted



**BSL - BDL**  
Flange mounting on left

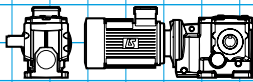


**BSR - BDR**  
Flange mounting on right

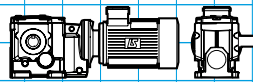


**BRR**  
Reinforced flange on right

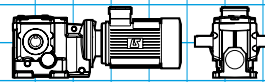
### 3 - Output shaft



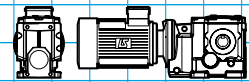
**L**  
Solid shaft coming out on left



**R**  
Solid shaft coming out on right



**LR**  
Solid shaft coming out on left and right



**H**  
Hollow shaft

### 4 - Options:

#### Shrink disc SD

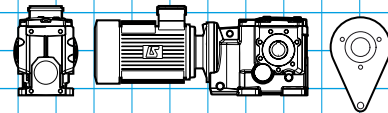


**SDR**  
Hollow shaft with shrink disc on right



**SDL**  
Hollow shaft with shrink disc on left

#### Torque arm R



**RK**  
Supplied separately

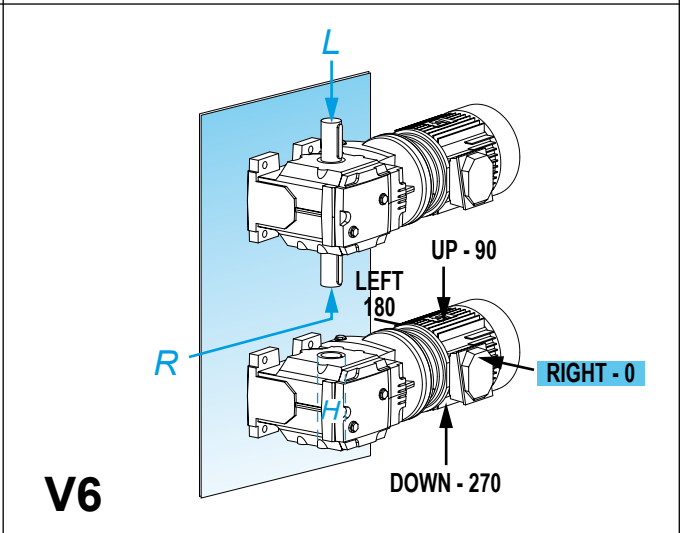
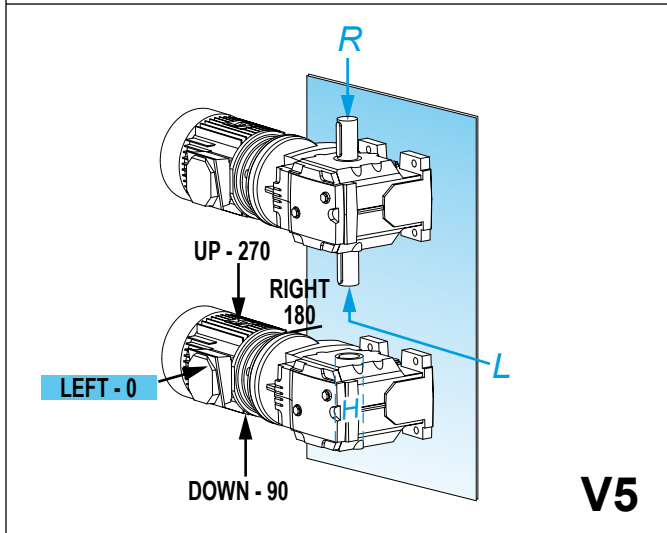
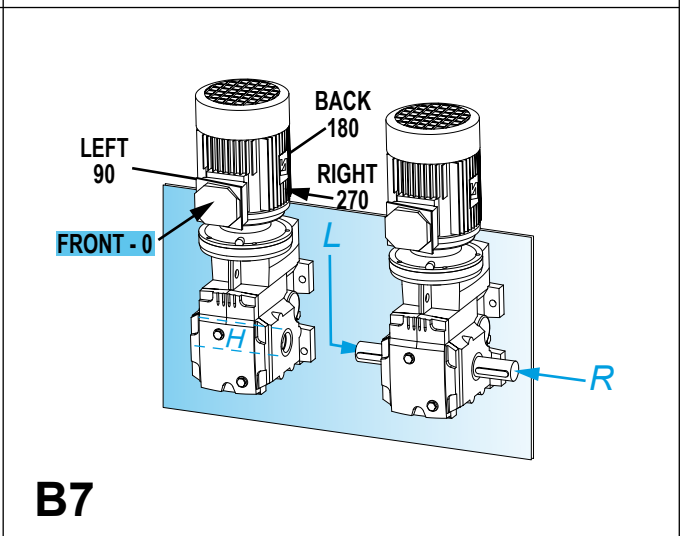
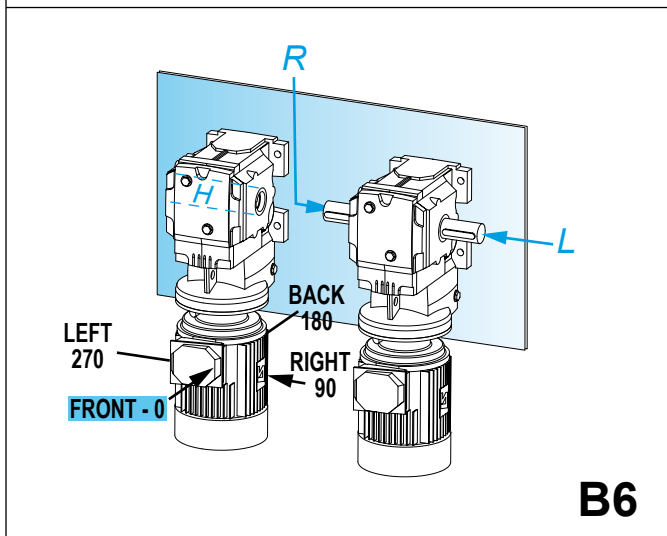
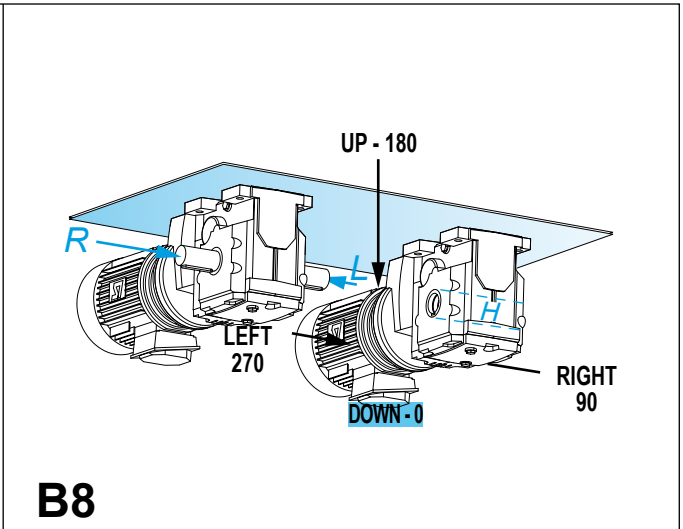
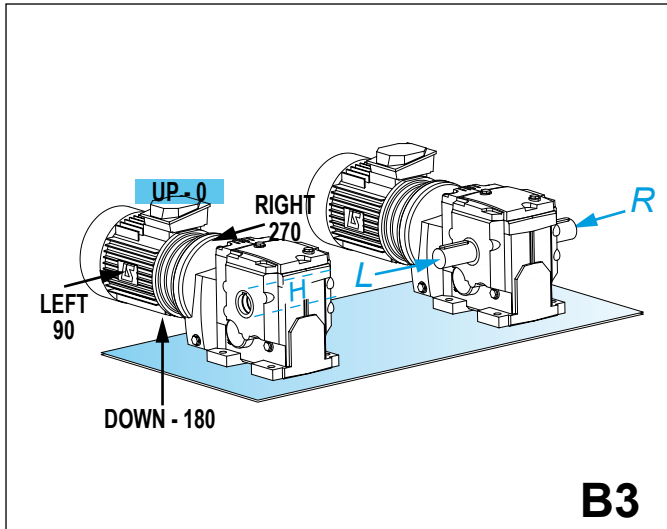
# Electromechanical products

## Orthobloc 3000

### Operating positions for Ot S, SBT

The absolute orientation of the connection (TB: Up, Down, Right, Left, Front, Back) is related to the chosen operating position.

The relative orientation (0-90-180-270, in the trigonometric direction), a consequence of the absolute position, is related to the feet (real or imaginary) for an observer, facing the gearbox.



Std terminal box

Left output shaft L, right R, hollow H.

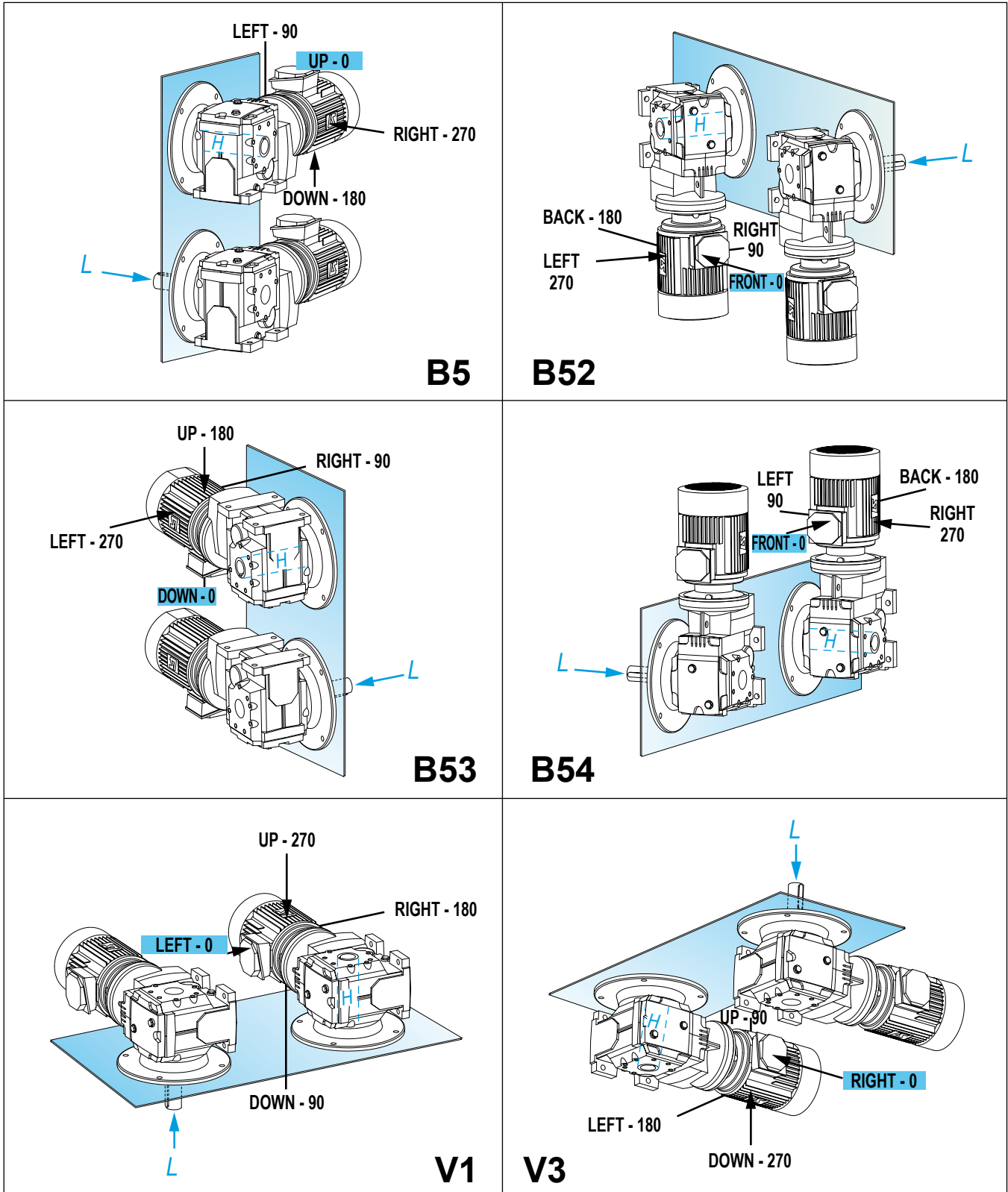
# Electromechanical products

## Orthobloc 3000

### Operating positions for Ot BSL, BDL

The absolute orientation of the connection (TB: Up, Down, Right, Left, Front, Back) is related to the chosen operating position.

The relative orientation (0-90-180-270, in the trigonometric direction), a consequence of the absolute position, is related to the feet (real or imaginary) for an observer, facing the gearbox.



Std terminal box

Left output shaft L, hollow H.

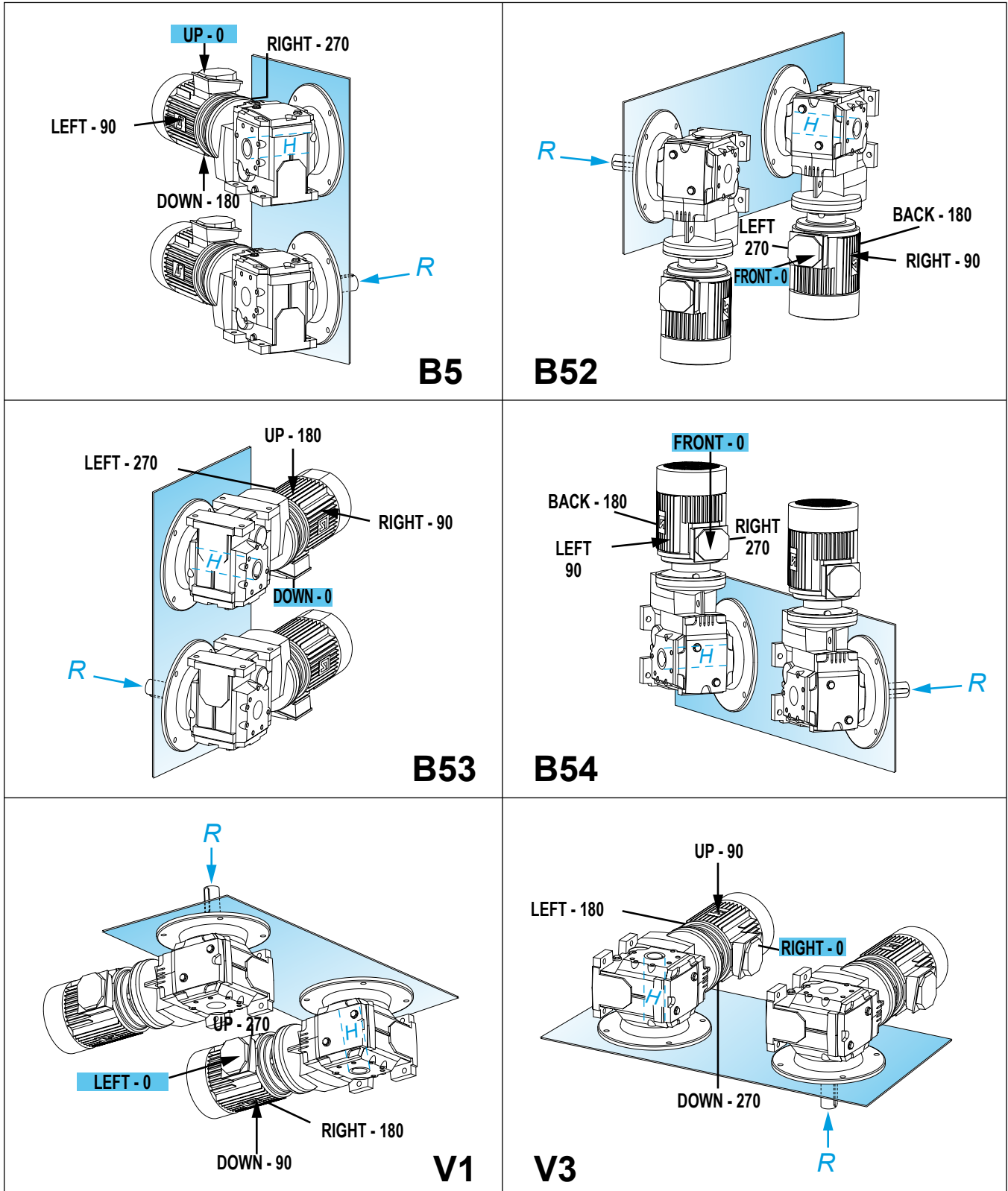
# Electromechanical products

## Orthobloc 3000

### Operating positions for Ot BSR, BDR, BRR

The absolute orientation of the connection (TB: Up, Down, Right, Left, Front, Back) is related to the chosen operating position.

The relative orientation (0-90-180-270, in the trigonometric direction), a consequence of the absolute position, is related to the feet (real or imaginary) for an observer, facing the gearbox.

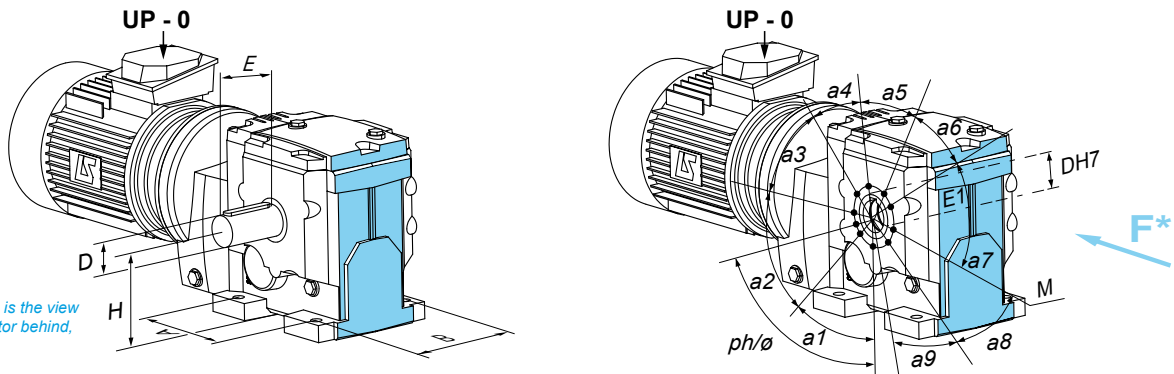


Std terminal box

Right output shaft *R*, hollow *H*.

# Electromechanical products Orthobloc 3000

## S, SBT mounting



### - Foot mounted form. solid shaft on left L. solid shaft on right R. hollow shaft H

Type	SL					SR					SH					kg
	A	B	H	ØD	E	A	B	H	ØD	E	A	B	H	ØDH7	E1	
Ot 3933 S	380	370	450	120m6	210	380	370	450	120m6	210	380	370	450	120	450	648
Ot 3833 S	350	270	375	110m6	210	350	270	375	110m6	210	350	270	375	100	350	378
Ot 3733 S	420	270	250	90m6	170	420	270	250	90m6	170	420	270	250	90	340	306
Ot 3633 S	355	240	225	70m6	140	355	240	225	70m6	140	355	240	225	70	304	198
Ot 3533 S	230	180	212	60m6	120	230	180	212	60m6	120	230	180	212	60	244	83
Ot 3433 S	190	165	180	50k6	100	190	165	180	50k6	100	190	165	180	50	226	60
Ot 3333 S	150	140	140	40k6	80	150	140	140	40k6	80	150	140	140	40	173	38
Ot 3233 S	150	120	112	30j6	60	150	120	112	30j6	60	150	120	112	35	151	21
Ot 3232 S	150	120	112	30j6	60	150	120	112	30j6	60	150	120	112	35	151	22
Ot 3132 S	100	100	80	25j6	50	100	100	80	25j6	50	100	100	80	30	130	14.5

### - Faceplate on left form. solid shaft on left L. solid shaft on right R. hollow shaft H

Type	Side L														H				kg	
	A	B	H	a1	a2	a3	a4	a5	a6	a7	a8	a9	a10	a11	n	ph/ø	øM	øDH7		E1
Ot 3933 SBT <sup>1</sup>	380	370	450	20°	34°	36°	36°	36°	36°	36°	36°	36°	34°	-	10	0°-180°/325	340	120	450	565
Ot 3833 SBT <sup>1</sup>	350	270	375	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	11	75°-255°/300	300	100	350	347
Ot 3733 SBT	420	270	250	36°	36°	36°	36°	36°	36°	36°	36°	36°	-	-	9	0°/230	230	90	340	289
Ot 3633 SBT	355	240	225	70°	35°	40°	70°	40°	35°	-	-	-	-	-	6	0°/220	230	70	310	186
Ot 3533 SBT	230	180	212	59°	52°	44°	50°	44°	81°	-	-	-	-	-	6	300°/190	190	60	244	80
Ot 3433 SBT	190	165	180	65°	46°	44°	50°	44°	81°	-	-	-	-	-	6	300°/152	152	50	226	58
Ot 3333 SBT	150	140	140	65°	48°	44°	46°	45°	67°	-	-	-	-	-	6	65°/123	123	40	173	36
Ot 3233 SBT	150	120	112	0°	65°	48°	44°	46°	50°	-	-	-	-	-	6	295°/102	100	35	151	20
Ot 3232 SBT	150	120	112	0°	65°	48°	44°	46°	50°	-	-	-	-	-	6	295°/102	100	35	151	21.8
Ot 3132 SBT	100	100	80	0°	90°	90°	90°	-	-	-	-	-	-	-	4	340°/95	95	30	130	14

1. Ot 38, Ot 39 SBT, solid shaft : not available

### - Faceplate on right form. solid shaft on left L. solid shaft on right R. hollow shaft H

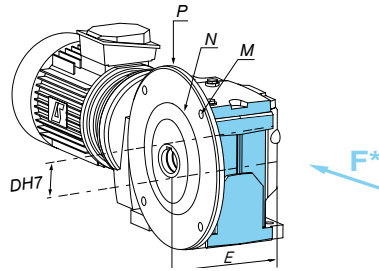
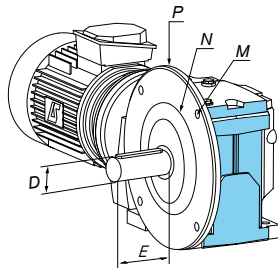
Type	Side R														H				kg	
	A	B	H	a1	a2	a3	a4	a5	a6	a7	a8	a9	a10	a11	n	ph/ø	øM	øDH7		E1
Ot 3933 SBT <sup>1</sup>	380	370	450	20°	34°	36°	36°	36°	36°	36°	36°	36°	34°	-	10	0°-180°/325	340	120	450	565
Ot 3833 SBT <sup>1</sup>	350	270	375	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	30°	11	75°-255°/300	300	100	350	347
Ot 3733 SBT	420	270	250	36°	36°	36°	36°	36°	36°	36°	36°	36°	-	-	9	0°/230	230	90	340	289
Ot 3633 SBT	355	240	225	70°	35°	40°	70°	40°	35°	-	-	-	-	-	6	0°/220	230	70	310	186
Ot 3533 SBT	230	180	212	0°	59°	52°	44°	50°	44°	-	-	-	-	-	6	300°/190	190	60	244	80
Ot 3433 SBT	190	165	180	10°	55°	46°	44°	50°	44°	-	-	-	-	-	6	300°/152	152	50	226	58
Ot 3333 SBT	150	140	140	0°	45°	68°	44°	46°	44°	-	-	-	-	-	6	65°/123	123	40	173	36
Ot 3233 SBT	150	120	112	0°	65°	48°	44°	46°	50°	-	-	-	-	-	6	295°/102	100	35	151	20
Ot 3232 SBT	150	120	112	0°	65°	48°	44°	46°	50°	-	-	-	-	-	6	295°/102	100	35	151	21.8
Ot 3132 SBT	100	100	80	0°	90°	90°	90°	-	-	-	-	-	-	-	4	340°/95	95	30	130	14

1. Ot 38, Ot 39 SBT, solid shaft : not available



# Electromechanical products Orthobloc 3000

## BSL, BDL mounting



\* Reference position is the view from side F, with motor behind, side D down.

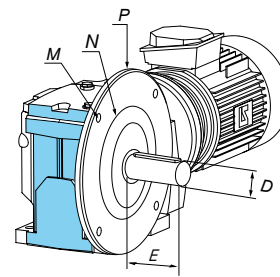
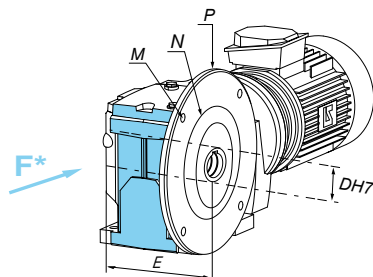
### - Solid shaft on left L

Type	BSL L						BDL L					
	ØM	ØNj6	ØP	ØD	E	kg	ØM	ØNj6	ØP	ØD	E	kg
Ot 3933	600	550	660	120m6	210	726	-	-	-	-	-	-
Ot 3833	600	550	660	110m6	210	440	500	450	550	110m6	210	402
Ot 3733	500	450	550	90m6	170	342	400	350	450	90m6	170	336
Ot 3633	500	450	550	70m6	140	232	400	350	450	70m6	140	226
Ot 3533	350	300	400	60m6	120	94	300	250	350	60m6	120	93
Ot 3433	300	250	350	50k6	100	68	265	230	300	50k6	100	67
Ot 3333	265	230	300	40k6	80	42	215	180	250	40k6	80	42
Ot 3233	215	180	250	30j6	60	22	165	130	200	30j6	60	21.7
Ot 3232	215	180	250	30j6	60	23.3	165	130	200	30j6	60	23
Ot 3132	130	110	165	25j6	50	14.8	-	-	-	-	-	-

### - Hollow shaft H

Type	BSL H						BDL H					
	ØM	ØNj6	ØP	ØDH7	E	kg	ØM	ØNj6	ØP	ØDH7	E	kg
Ot 3933	600	550	660	120	450	648	-	-	-	-	-	-
Ot 3833	600	550	660	100	350	408	500	450	550	100	350	374
Ot 3733	500	450	550	90	340	328	400	350	450	90	340	322
Ot 3633	500	450	550	70	310	222	400	350	450	70	310	216
Ot 3533	350	300	400	60	244	91	300	250	350	60	244	89
Ot 3433	300	250	350	50	226	66	265	230	300	50	226	65
Ot 3333	265	230	300	40	173	40	215	180	250	40	173	40
Ot 3233	215	180	250	35	151	21	165	130	200	35	151	21.7
Ot 3232	215	180	250	35	151	23.3	165	130	200	30	151	23
Ot 3132	130	110	165	30	130	14.8	-	-	-	-	-	-

## BSR, BDR, BRR mounting



\* Reference position is the view from side F, with motor behind, side D down.

### - Solid shaft on right R

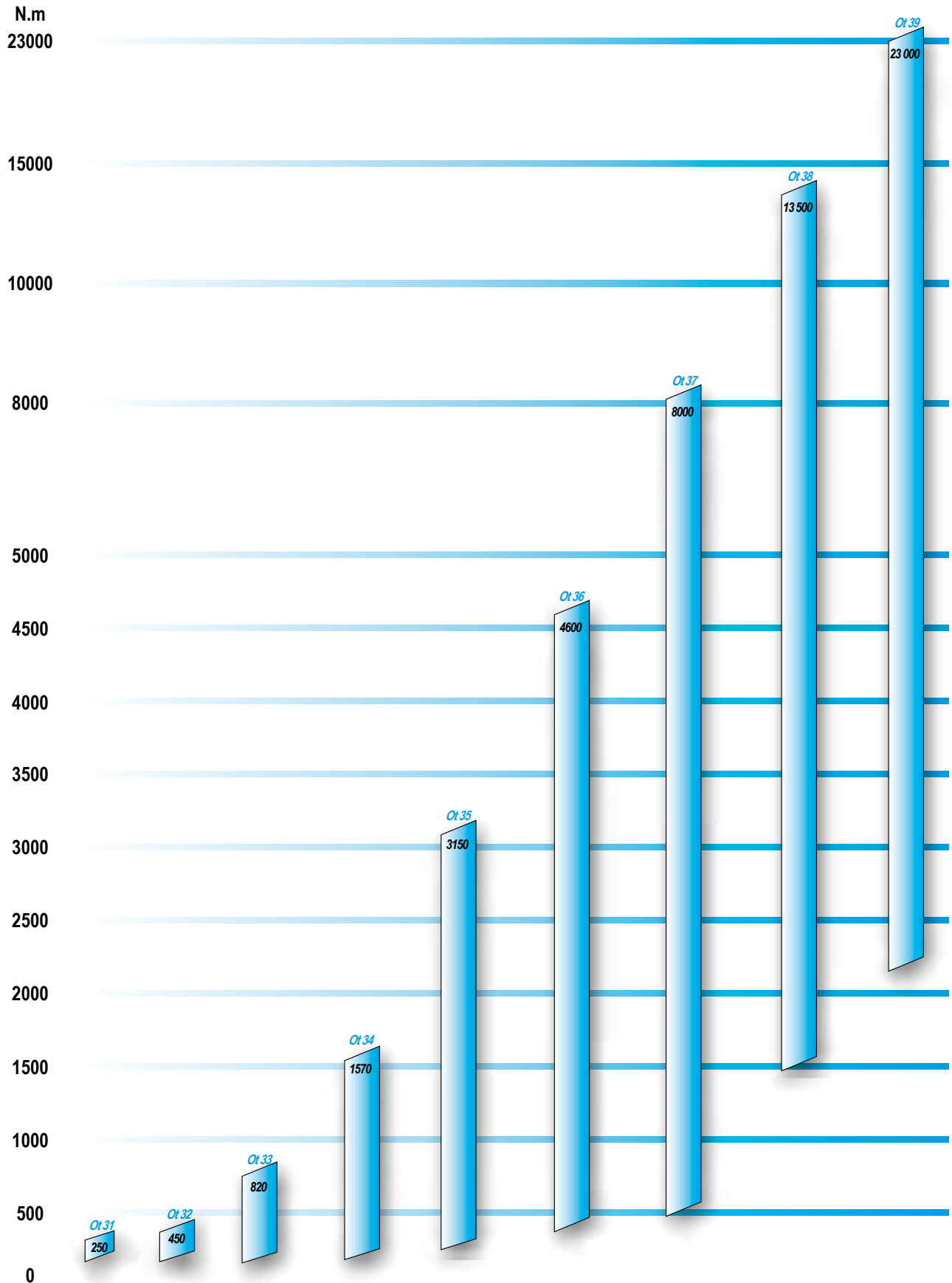
Type	BSR R						BDR R					BRR R exclusively						
	ØM	ØNj6	ØP	ØD	E	kg	ØM	ØNj6	ØP	ØD	E	kg	ØM	ØNj6	ØP	ØD	E	kg
Ot 3933	600	550	660	120m6	210	726	-	-	-	-	-	-	-	-	-	-	-	-
Ot 3833	600	550	660	110m6	210	440	500	450	550	110m6	210	402	-	-	-	-	-	-
Ot 3733	500	450	550	90m6	170	342	400	350	450	90m6	170	336	-	-	-	-	-	-
Ot 3633	500	450	550	70m6	140	232	400	350	450	70m6	140	226	-	-	-	-	-	-
Ot 3533	350	300	400	60m6	120	94	300	250	350	60m6	120	93	300	250	350	65m6	130	120
Ot 3433	300	250	350	50k6	100	68	265	230	300	50k6	100	67	265	230	300	55k6	110	72
Ot 3333	265	230	300	40k6	80	42	215	180	250	40k6	80	42	215	180	250	45k6	90	51
Ot 3233	215	180	250	30j6	60	22	165	130	200	30j6	60	21.7	-	-	-	-	-	-
Ot 3232	215	180	250	30j6	60	23.3	165	130	200	30j6	60	23	-	-	-	-	-	-
Ot 3132	130	110	165	25j6	50	14.8	-	-	-	-	-	-	-	-	-	-	-	-

### - Hollow shaft H

Type	BSR H						BDR H					
	ØM	ØNj6	ØP	ØDH7	E	kg	ØM	ØNj6	ØP	ØDH7	E	kg
Ot 3933	600	550	660	120	450	648	-	-	-	-	-	-
Ot 3833	600	550	660	100	350	408	500	450	550	100	350	374
Ot 3733	500	450	550	90	340	328	400	350	450	90	340	322
Ot 3633	500	450	550	70	310	222	400	350	450	70	310	216
Ot 3533	350	300	400	60	244	91	300	250	350	60	244	89
Ot 3433	300	250	350	50	226	66	265	230	300	50	226	65
Ot 3333	265	230	300	40	173	40	215	180	250	40	173	40
Ot 3233	215	180	250	35	151	21	165	130	200	35	151	21.7
Ot 3232	215	180	250	35	151	23.3	165	130	200	30	151	23
Ot 3132	130	110	165	30	130	14.8	-	-	-	-	-	-

# Electromechanical products Orthobloc 3000

## General information - Ranges



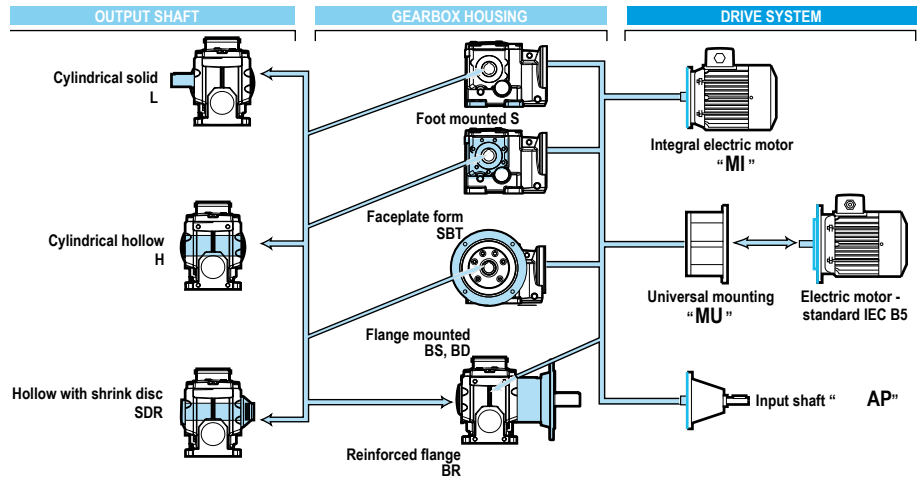
# Electromechanical products Orthobloc 3000

## Adaptation possibilities

Emerson Industrial Automation offers different types of drive for its gearboxes which meet very wide-ranging needs. They are described below and offered in this catalogue. For other drives, consult the Emerson Industrial Automation technical specialists who will be glad to assist.

Orthobloc Ot 3000 gearboxes can be used in conjunction with the following drives:

- 3-phase induction motors:
  - LS motor from 0.25 to 0.55 kW
  - LSES motor from 0.75 to 110 kW
  - FCR brake motor from 0.25 to 15 kW (LS), from 0.55 to 11 kW (LSES)
  - LS, LSES FCPL brake motor from 11 to 90 kW



## Designation / Coding

Ot	3433	57	BS	L	L	B5	MI	4P	LSES 100 LR	3 kW LS2/IE2	230/400 V 50 Hz	UG
Gearbox type	Size	Exact reduction	Mounting form	Mounting position	Definition of output shaft	Operating position	Type of input	Number of poles	Series and frame size	Motor output power Generation code Class <input type="checkbox"/>	Mains voltage and frequency	Use

### Example of coding:

Orthobloc 3433 3 kW, 25 min<sup>-1</sup>, class II

**Designation:** Ot 3433 - i : 57 - BSL - L - B5 - MI  
4P LSES 100 LR 3 kW LS2/IE2 230/400V 50 Hz UG  
**Code:** 473 2455

# Electromechanical products Orthobloc 3000

## Selection

The selection of a gearbox or a geared motor should take account of the application. Some of these applications are listed in the "AGMA" indicative load classification on the next page.

The table opposite summarises the relationship between the "AGMA" class and the duty factor  $K_p$  of the gearbox.

"AGMA" class	Gearbox duty factor $K_p$
I	1
II	1.4
III	2

### 1<sup>st</sup> case. - Your application is listed

Follow the indicative load classification table according to "AGMA" on the next page.

### Indicative classification of loads according to "AGMA"

Applications			
	Operation in hours/day		
	3 h/day	10 h/day	24 h/day
CONVEYORS (loaded or fed uniformly)			
belt	I	I	II
chain	I	I	II

Application example: belt CONVEYOR

Operating time: 10 hours/day

**"AGMA" class: I**

Gearbox duty factor  $K_p = 1$

### 2<sup>nd</sup> case. - Your application is not listed

The "AGMA" selection class is defined by the daily operating time and the type of operation of the application, according to the table below. ▼

Type of application	Daily operating time	"AGMA" class
Shock-free, not many starts	10 hours/day	I
Damped shocks	10 hours/day	II
Shock-free, not many starts	24 hours/day	II
Violent shocks, many starts	10 hours/day	III
Damped shocks	24 hours/day	III

# Electromechanical products

## Orthobloc 3000

### List of applications

OPERATION in hours/day				OPERATION in hours/day				OPERATION in hours/day			
	3 h/day	10 h/day	24 h/day		3 h/day	10 h/day	24 h/day		3 h/day	10 h/day	24 h/day
<b>COOLING TOWERS</b>	-	-	-	grinders (2 or more)	II	II	II*	bending rollers	II	II	II*
<b>AGITATORS</b>				calenders	II	II	II*	nut tappers	II	II	II*
liquids with variable density	II	II	II	extruding machines	II	II	III	shears	III	III	III
liquids and solids	II	II	II	sheet forming machines	I	II	II*	<b>MIXERS</b>			
pure liquids	I	I	II	mixers	III	III	III*	constant density	I	I	II
semi-liquids, variable density	II	II	II*	<b>CLARIFIERS</b>				variable density	I	II	II
<b>FOOD AND BEVERAGE INDUSTRY</b>				<b>SORTERS, GRADERS</b>				cement, continuous duty	I	II	II
cereal cookers	I	I	II	<b>COMPRESSORS</b>				cement, intermittent duty	I	I	-
beet choppers	II	II	II	lobe	I	II	II	<b>METALLURGY (industry)</b>			
meat choppers	II	II	II	centrifugal	I	II	II	drawing frames, carriage	III	III	III*
dough mixers	I	II	II	<b>CONVEYORS (loaded or fed uniformly)</b>				drawing frames, main control	III	III	III*
extruding machines	I	II	III	belt				table conveyor:			
<b>FEEDING (attachment)</b>				chain	I	I	II	single direction of operation	I	II	III
reciprocating	III	III	III*	apron	I	I	II	reverse operation	III	III	III
disks	I	I	II	bucket	I	I	II	wire winders	I	II	II
lattice	I	II	II	scraper	I	I	II	sheet metal winders	I	II	II
belt	I	II	II	screw	I	I	II	spreading	III	III	III*
screw	I	II	II	assembly	I	I	II	roller drive			
<b>TRANSMISSION SHAFT</b>				furnace	I	I	II	splitting lines	II	II	III
loads with moderate shocks	I	II	II	<b>CONVEYORS (loaded or fed non-uniformly)</b>				wire drawing mills, flatteners	III	III	III
loads with severe shocks	III	III	III*	heavy duty:				shape-cutting machines	III	III	III*
constant loads	I	I	II	belt	II	II	II	separating rollers	-	-	-
<b>CLAY (industry)</b>				chain	II	II	II	drying rollers	-	-	-
brick machines	III	III	III*	apron	II	II	II	<b>PAPER (industry)</b>			
processing machines	II	II	II	bucket	II	II	II	aerators	-	-	-
mixers	II	II	II	scraper	II	II	II	agitators, mixers	I	I	II
brick presses	III	III	III*	roller	I	I	II	wind up turrets	I	I	II
<b>TIPPERS</b>	III	III		screw	II	II	II	calenders	I	II	II*
<b>TIMBER (industry)</b>				reciprocating	III	III	III*	conveyors	I	II	II
supplying:				assembly	II	II	II	ball conveyors	III*	III*	III*
saws in series	III	III	III*	furnace	II	II	II	cutters, plating machines	I	II	II
shape-cutting machines	II	II	III	vibratory	III	III	III*	bleaching vats	I	II	II
planers	II	II	III	removal	I	I	-	cylinders			
cutting	II	II	III	<b>CANE KNIVES</b>	II	II	III	felt stitching machines	III*	III*	III*
chains	I	II	III	<b>SIEVES</b>				washers, thickeners	I	II	II*
turntable control	I	II	III	rotary	I	II	III	barking machines (mechanical)	III	III	III
main conveyors	I	II	III	stone washer with water circulation	I	I	II	pulp machines, uncoilers	I	II	II
ball conveyors	III	III	III*	<b>DREDGERS</b>				pulp hammers	II	II	II*
circular feed conveyors	I	II	III	shaker control	III	III	III*	presses	I	II*	II*
burner conveyors	I	II	III	cutting head control	III	III	III*	suction rollers	I	II	II*
waste conveyors	I	II	III	sieve control	III	III	III*	dryers	I	II	II*
plank conveyors	III	III	III*	conveyors	I	II	II	wood pulp storing machines	I	II	II
transfer conveyors	I	II	III	pumps	I	II	II	barking drums	III	III	III*
devices:				cable winding drums	I	II	-	felt tension devices	I	II	II
for planer inclination	I	II	III	handling winches	II	II	-	<b>PUMPS</b>			
for ball turning	III	III	III*	service winches	II	II	-	reciprocating:			
barking machine, feeder	II	II	III	<b>CONTROL (vehicle)</b>	II	II	II	multi-cylinder single-acting	I	II	II
main drive system barking machine	III	III	III*	<b>ELEVATORS</b>				centrifugal	I	I	II
roller drive system	III	III	III*	centrifugal unloading	I	I	II	dosing	I	II	II*
haulage of balls:				gravity unloading	I	I	II	rotary:			
inclined	III	III	III*	escalators	I	II	III	geared	I	I	II
well	III	III	III*	buckets:				lobed, vaned	I	I	II
cross-cut saws:				continuous load	I	I	II	<b>SEWAGE PLANTS</b>			
chain	II	II	III	heavy load	II	II	II	surface aerators	III	III	III
reciprocating	II	II	III	uniform load	I	I	II	duck type aerators	III	III	III
sorting tables	I	II	III	hoist for building materials	III	III	-	bar screens	I	I	II
ball support plates	III	III	III*	<b>WINDING MACHINES</b>	-	-	-	screw pumps	I	II	III
barking drums	III	III	III*	<b>FILTERS</b>	I	II	III	<b>TEXTILES</b>			
peeling tower	-	-	-	<b>FURNACES</b>				reelers (except drum)	I	II	II
transfer:				dryers, coolers	I	II	II	calenders	I	II	II
on bogies	I	II	III	tumbling barrels	III	III	III*	padding calenders	I	II	II
chain	I	II	III	<b>CRANES AND LIFTING</b>				carding machines, spinners	I	II	II*
<b>BREWERIES, DISTILLERIES</b>				moving truck	-	-	-	alignment controls	-	-	-
boilers, continuous duty			II	moving bridge	-	-	-	glueing machines	I	II	II
cookers, continuous duty			II	bucket winches	-	-	-	drying machines, mangles	II	II	II
brewing vats, continuous duty			II	hoisting gear	-	-	-	napping mills	I	II	II
bottling machines	I	I	II	<b>WINDLASSES, CAPSTANS</b>	II	II	II*	washing machines	I	II	II
scaling hoppers:				<b>PRINTING (presses)</b>	I	I	II	soap milling machines	I	II	II
frequent starts	II	II	III	<b>PACKAGING MACHINES</b>				dyeing machines	I	II	II
<b>GRINDERS</b>				stackers	II	III	III	knitting machines	-	-	-
minerals	III	III	III*	wrapping machines	I	I	II	cloth finishing machines:			
stones	III	III	III*	<b>WASHING MACHINES</b>				washers, spreading machines	I	II	II
<b>HAMMER MILLS</b>	III	III	III*	drum	II	II	II	dryers, calenders	I	II	II
<b>ROTARY GRINDERS</b>				reversible	II	II	II	thread preparation machines:			
rod mills	III	III	III*	<b>MACHINE TOOLS</b>				weaving looms	II	III	III
ball mills	III	III	III*	main drive system	I	II	II	spinning machines	I	I	II
pebble mills	III	III	III*	auxiliary drive system	I	I	II	dryers	I	II	II
<b>RUBBER (industry)</b>				punching machines (geared)	III	III	III*	loading hoppers	II	II	II
air chamber extruder	II	II	II	flat planers	III	III	III*	<b>VENTILATION</b>	-	-	-

\*: These classes assume minimum and normal conditions. To take account of variations which may affect the load conditions, it is recommended that applications are carefully researched before making a selection.

-: Consult Emerson Industrial Automation

# Electromechanical products

## Orthobloc 3000

### Conditions

Ot : S, SBT, BS, BD..., BR

LS : IP55 - 50 Hz - Cl. F - 400 VY - from 0.25 to 0.55 kW - LSES : IP55 - 50 Hz - Cl. F - 400 VY, 400VΔ from 0.75 to 110 kW LS2/IE2 - U.G.

LS, LSES FCR brake : IP55 - 50 Hz - Cl. F - 400 V - LS : from 0.25 to 15 kW - LSES : from 0.75 to 11 kW - U.G.

LS, LSES FCPL brake : IP44 - 50 Hz - Cl. F - 400 V - from 11 to 90 kW - U.G.

MI

MU

AP

#### Maximum quantity per order

Input	Ot 3132	Ot 3232 - 3233	Ot 3333	Ot 3433	Ot 3533	Ot 3633	Ot 3733	Ot 3833	Ot 3933
AP	3	3	3	3	3	2	2	2	
MI LS	0.25 --> 0.55 kW	3	3	3	3	-	-	-	-
MI LSES	0.75 --> 9 kW	3	3	3	3	2	2	2	
MI LS FCR	11 --> 45 kW	-	-	-	-	2	2	2	
MI LSES FCR	0.25 --> 9 kW	3	3	3	3	3	2	2	
MI LS, LSES FCPL	11 - 15 kW	-	-	-	-	2	2	2	
MU LS	0.25 --> 0.55 kW	3	3	3	3	-	-	-	-
MU LSES	0.75 --> 9 kW	3	3	3	3	2	2	2	
MU LSES	11 --> 30 kW	-	-	-	-	2	2	2	
MU LSES	37 - 45 kW	-	-	-	-	-	1	1	
MU LSES	55 <sup>1</sup> - 110 kW <sup>1</sup>	-	-	-	-	-	1	1	
MU LS FCR	0.25 --> 9 kW	3	3	3	3	3	2	2	
MU LSES FCR	11 - 15 kW	-	-	-	-	1	1	1	
MU LSES FCPL	0.75 --> 11 kW	-	-	-	-	-	-	-	-
MU LS, LSES	11 --> 45 kW	-	-	-	-	-	-	-	-
FCPL	55 <sup>1</sup> --> 90 kW <sup>1</sup>	-	-	-	-	-	-	-	-

1. LSES B35 obligatory

#### Mechanical options and pages of dimensions corresponding to the mounting form and L (left) R (right) output shaft

Type	Ot MI forms						Mounting		
	Foot mounted		NS	Flange mounted		BRR	Backstop <sup>1</sup>	Ot	Ot
S/L/R	SBTLR L/R	BSL / BSR		BDL / BDR	AD/MI-MU-AP		MU	AP	
Ot 3132	25	24		25			64	65	
Ot 3232	27	26		27	26		64	65	
Ot 3233	29	28		29	28		64	65	
Ot 3333	31	30	64	31	30	30	64	65	
Ot 3433	33	32	64	33	32	32	64	65	
Ot 3533	35	34	64	35	34	34	64	65	
Ot 3633	37	36		37	36		36-65-64	64	65
Ot 3733	39	38		39	38		38-65-64	64	65
Ot 3833	41			41	40		40-65-64	64	65
Ot 3933	43			42			42-65-64	64	65

1. Ot 36 to 39 : AD (backstop) prohibited operating positions B7, B54.

#### Mechanical options and pages of dimensions corresponding to the mounting form and H hollow shaft

Type	Ot MI forms						Mounting		
	Foot mounted		Flange mounted		Shrink disc SDR / SDL	Torque arm RK	Backstop <sup>1</sup>	Ot	Ot
S	SBT	BSL / BSR	BDL / BDR	AD/MI-MU-AP			MU	AP	
Ot 3132	45	44	45		44-67	66	64	65	
Ot 3232	47	46	47	46	46-67	66	64	65	
Ot 3233	49	48	49	48	48-67	66	64	65	
Ot 3333	51	50	51	50	50-67	66	64	65	
Ot 3433	53	52	53	52	52-67	66	64	65	
Ot 3533	55	54	55	54	54-67	66	64	65	
Ot 3633	57	56	57	56	56-67	66	56-57-65-64	64	65
Ot 3733	59	58	59	58	58-67	66	58-59-65-64	64	65
Ot 3833	61	60	61	60	60-67	66	60-61-65-64	64	65
Ot 3933	63	62	63		62-67	66	62-63-65-64	64	65

1. Ot 36 to 39 : AD (backstop) prohibited operating positions B7, B54.

#### Options

Input	Electrical options			Mechanical options			Brake options		
	230/400V	400V Δ	PTO/CTP	Drip cover	Cover sheet	DLRA	Different Mf	TRR	J01
LS	0.25--> 0.55 kW								
	0.75 - 0.9 kW								
	1.1--> 3 kW								
	4--> 9 kW MI				Standard				
LSES	11 - 15 kW MI				Standard				
	18.5 - 45 kW MI				Standard				
	4--> 9 kW MU				Standard				
	11--> 45 kW MU				Standard				
	55 <sup>1</sup> --> 110 kW <sup>1</sup> MU				Standard				
LS FCR	0.25 - 3 kW				Standard				
	4 - 5.5 kW				Standard				
	7.5 - 9 kW				Standard				
	11 - 15 kW				Standard				
LSES FCR	0.75--> 11 kW								
LS, LSES FCPL	11 - 45 kW								
	55 <sup>1</sup> - 90 kW <sup>1</sup>								

1. LSES B35 obligatory

DG < 2 WD < 5 WD < 10 WD < 15 WD < To be agreed

DG : Availability ; n WD : Working Days

# Electromechanical products Orthobloc 3000

## Selection

Classes  
I, II, III  
(kp = 1, 1.4, 2)

Ot 3132  
LS, LSES, brake LS, brake LSES - IP 55 - Cl. F  
230V/400VY 400V $\Delta$  - 50 Hz - U.G

Integral mounting	<b>MI</b>
Universal mounting	<b>MU</b>
Input shaft mounting	<b>AP</b>

		<b>Ot 3132</b>										
		LS, LSES (kW)										
		0.25	0.37	0.55	0.75	0.9	1.1	1.5	1.8	2.2	3	4
		3-phase 4-pole LS, LSES										
min-1	i exact	71		80		90		100		112		
29.2	49.4	3.08	2.03									
32.2	44.8	3.39	2.24									
36.9	39.1	3.88	2.56	1.68	1.26	1.03	0.85 ●					
40.5	35.6	4.25	2.81	1.84	1.38	1.13	0.94 ●					
47.0	30.7	4.74	3.13	2.05	1.54	1.26	1.04					
52.7	27.4	5.17	3.42	2.25	1.67	1.38	1.13	0.83				
58.7	24.6	5.56	3.68	2.42	1.80	1.48	1.22	0.89				
67.1	21.5	6.13	4.05	2.66	1.98	1.63	1.34	0.98	0.81			
71.1	20.3	6.30	4.16	2.74	2.04	1.68	1.38	1.01	0.84			
84.4	17.1	7.12	4.71	3.10	2.30	1.90	1.56	1.14	0.95			
89.6	16.1	7.33	4.85	3.19	2.37	1.95	1.61	1.17	0.97	0.80		
101	14.3		5.26	3.46	2.58	2.12	1.75	1.28	1.06	0.86		
115	12.5		5.74	3.77	2.81	2.31	1.90	1.39	1.15	0.94		
131	11		6.22	4.09	3.05	2.51	2.06	1.51	1.25	1.02		
148	9.72			4.43 ●	3.29 ●	2.92 ●	2.23	1.63	1.35	1.11	0.81	
167	8.62			4.77 ●	3.55 ●	3.18 ●	2.41	1.76	1.46	1.19	0.87	
189	7.62			5.19	3.86	3.18	2.62	1.91	1.59	1.30	0.95	
200	7.23			5.35	3.98	3.27	2.70	1.97	1.63	1.34	0.98	
224	6.43			5.73 ●	4.27 ●	3.51 ●	2.89	2.11	1.75	1.43	1.05	
283	5.1				4.89 ●	4.02 ●	3.31	2.42	2.01	1.64	1.20	
<b>4-pole and brake LS, LSES</b>		3-phase 4-pole LS, LSES										
<b>LS FCR</b>		71 L		80 L		90 L		100 L				
<b>LSES FCR</b>				<b>80</b>		<b>90</b>		<b>100</b>				

● MU obligatory

### Selection example

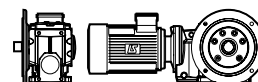
Required power: 1.5 kW

Required speed: 90 min-1

Duty factor required by the application: Kp = 1

Operating position; Mounting form: Horizontal B5, shaft on left, BS flange

Designation : Ot 3132 i : 16.1 BSL L B5 - MI 4p LSES90L 1.5 kW LS2/IE2- 400VY - U.G.



# Electromechanical products Orthobloc 3000

## Selection

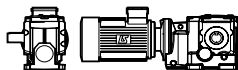
**Classes**  
I, II, III  
(kp = 1, 1.4, 2)

**Ot 3232, Ot 3233**  
**LS, LSES, brake LS, brake LSES - IP 55 - CI. F**  
**230V/400VY 400VΔ - 50 Hz - U.G**

Integral mounting	<b>MI</b>
Universal mounting	<b>MU</b>
Input shaft mounting	<b>AP</b>

		<b>Ot 3232, Ot 3233</b>												
		LS, LSES (kW)												
		0.25	0.37	0.55	0.75	0.9	1.1	1.5	1.8	2.2	3	4	5.5	
		3-phase 4-pole LS, LSES												
min-1	i exact	71			80		90			100		112	132	
9.27	156	1.93	1.27											
10.2	142	2.13	1.40											
11.7	124	2.44	1.60	1.05										
12.9	113	2.67	1.76	1.15	0.86									
14.9	97.2	3.09	2.03	1.33	1.00	0.82								
16.7	86.7	3.46	2.28	1.49	1.12	0.91								
18.7	77.7	3.85	2.54	1.66	1.24	1.02	0.84							
21.3	68	4.40	2.89	1.89	1.42	1.16	0.96							
22.6	64.3	4.64	3.06	2.00	1.50	1.23	1.02							
26.8	54.1	5.50	3.62	2.36	1.78	1.45	1.20	0.88						
28.4	51	5.83	3.84	2.51	1.88	1.54	1.27	0.93						
32.1	45.2	6.56	4.32	2.82	2.12	1.73	1.43	1.05	0.87					
36.7	39.5	7.48	4.92	3.22	2.41	1.98	1.63	1.19	0.99	0.81				
41.7	34.8			3.64●	2.74●	2.24●	1.85	1.35	1.12	0.92				
47.1	30.8			4.11●	3.09●	2.53●	2.09	1.53	1.26	1.03				
53.2	27.3			4.62●	3.47●	2.84●	2.35	1.72	1.42	1.16	0.85			
60.2	24.1			5.22	3.92	3.21	2.65	1.94	1.60	1.31	0.96			
63.4	22.9			5.47	4.10	3.36	2.78	2.03	1.68	1.37	1.00			
71.2	20.4			5.98●	4.47●	3.67●	3.03	2.21	1.83	1.50	1.09			
89.9	16.1			7.13●	5.30●	4.6●	3.59	2.62	2.17	1.77	1.30			
39.4	36.8	6.46	4.25	2.78	2.09	1.71	1.41●							
46.0	31.5	7.54	4.96	3.24	2.44	1.99	1.65	1.20	1.00	0.82				
50.5	28.7	8.27	5.44	3.55	2.67	2.19	1.81	1.32	1.09	0.89				
55.7	26	9.13	6.01	3.92	2.95	2.41	2.00	1.46	1.21	0.99				
73.5	19.7			7.92	5.17	3.89	3.18	2.63	1.92	1.59	1.30	0.95		
81.7	17.7			8.82	5.76	4.33	3.54	2.93	2.14	1.77	1.45	1.06	0.80	
92.8	15.6			10.01	6.54	4.91	4.02	3.33	2.43	2.01	1.64	1.20	0.91	
103	14.1				7.26	5.46	4.47	3.69	2.70	2.23	1.83	1.34	1.01	
117	12.4				8.24	6.19	5.07	4.19	3.06	2.53	2.07	1.52	1.15	0.83
125	11.6				8.81	6.62	5.42	4.48	3.27	2.71	2.22	1.62	1.23	0.89
144	10.1				10.15	7.63	6.24	5.16	3.77	3.12	2.55	1.87	1.41	1.02
164	8.83					8.70	7.12	5.89	4.30	3.56	2.91	2.13	1.61	1.17
182	7.97					9.63●	7.88●	6.52●	4.76●	3.94●	3.22●	2.35	1.78	1.29
206	7.05						8.91●	7.37●	5.38●	4.45●	3.64●	2.66	2.02	1.46
219	6.61						9.5●	7.86●	5.74●	4.75●	3.88●	2.84	2.15	1.56
259	5.6							9.28	6.78	5.61	4.59	3.35	2.54	1.84
310	4.68								8.05	6.67	5.45	3.99	3.02	2.19
391	3.71								9.31	7.72	6.31	4.61	3.48	2.52
		3-phase 4-pole LS, LSES												
		71 L			80 L		90 L			100 L		112	132	
<b>LS FCR</b>														
<b>LSES FCR</b>					<b>80</b>		<b>90</b>		<b>100</b>		<b>112</b>	<b>132</b>		

● MU obligatory



**Selection example**

Required power: 0.55 kW  
 Required speed: 16 min-1  
 Duty factor required by the application: Kp = 1.4  
 Operating position; Mounting form: Horizontal B3; shaft on left; foot mounted  
**Designation : Ot 3233 i : 86.7 S L B3 - MI 4p LS71L 0.55 kW - 400VY - U.G.**



# Electromechanical products

## Orthobloc 3000

### Selection

**Classes**  
I, II, III  
(kp = 1, 1.4, 2)

**Ot 3333**  
LS, LSES, brake LS, brake LSES - IP 55 - CI. F  
230V/400VY 400VΔ - 50 Hz - U.G

Integral mounting	<b>MI</b>
Universal mounting	<b>MU</b>
Input shaft mounting	<b>AP</b>

		<b>Ot 3333</b>											
		LS, LSES (kW)											
		0.25	0.37	0.55	0.75	0.9	1.1	1.5	1.8	2.2	3	4	5.5
		3-phase 4-pole LS, LSES											
min-1	i exact	71			80			90		100		112	132
9.08	160	3.41	2.24	1.46	1.10	0.90							
10.6	137	3.97	2.61	1.70	1.28	1.05	0.86						
11.6	125	4.35	2.86	1.86	1.40	1.15	0.95						
12.8	113	4.80	3.15	2.06	1.54	1.26	1.04						
15.0	96.4	5.61	3.68	2.40	1.80	1.48	1.22	0.89					
16.9	85.7	6.30	4.14	2.70	2.03	1.66	1.37	1.00	0.83				
18.8	77	7.00	4.60	3.00	2.25	1.84	1.52	1.11	0.92				
21.4	67.8	7.93	5.21	3.40	2.55	2.09	1.73	1.26	1.04	0.85			
23.8	61	8.79	5.78	3.77	2.83	2.31	1.91	1.40	1.16	0.94			
27.0	53.8	9.95	6.54	4.27	3.20	2.62	2.16	1.58	1.31	1.07			
28.8	50.3		6.98	4.55	3.42	2.80	2.31	1.69	1.40	1.14	0.83		
33.2	43.7		8.02	5.23	3.92	3.21	2.66	1.94	1.60	1.31	0.96		
37.9	38.3			5.94	4.46	3.65	3.02	2.20	1.82	1.49	1.09	0.83	
39.1	37.1		8.38	5.47	4.10	3.36	2.77	2.03	1.68	1.37			
41.9	34.6			6.57●	4.93●	4.03●	3.33●	2.43●	2.01●	1.65●	1.20	0.91	
44.3	32.7		9.48	6.19	4.64	3.80	3.14	2.29	1.90	1.55			
47.4	30.6			7.4●	5.55●	4.54●	3.75●	2.74●	2.27●	1.86●	1.36	1.03	
47.4	30.58			6.60	4.95	4.05	3.35	2.45	2.02	1.65			
50.5	28.7			7.88●	5.91●	4.84●	4.00●	2.92●	2.42●	1.98●	1.44	1.09	
54.7	26.5			7.58	5.69	4.65							
59.7	24.3			9.27●	6.95●	5.69●	4.70	3.43	2.84	2.32	1.70	1.29	0.93
62.3	23.3			8.61	6.46	5.28	4.37	3.19	2.64	2.16	1.58	1.19	0.86
69.0	21			9.50●	7.13●	5.83●	4.82●	3.52●	2.91●	2.38●	1.74	1.32	0.95
71.5	20.3				7.99●	6.55●	5.41	3.95	3.27	2.67	1.95	1.48	1.07
78.0	18.6				8.02●	6.57●	5.43●	3.96●	3.28●	2.68●	1.96	1.48	1.07
83.1	17.4				8.54●	6.99●	5.78●	4.22●	3.49●	2.85●	2.09	1.58	1.14
90.1	16.1					7.77●	6.40	4.67	3.87	3.16	2.31	1.75	1.27
98.2	14.8					8.21●	6.79	4.96	4.10	3.35	2.45	1.86	1.34
118	12.3					9.52●	7.85	5.73	4.75	3.88	2.84	2.15	1.55
148	9.78						9.30	6.79	5.63	4.60	3.36	2.54	1.84

4-pole and brake LS, LSES		3-phase 4-pole LS, LSES					
LS FCR		71 L	80 L	90 L	100 L	112	132
LSES FCR			80	90	100	112	132

● MU obligatory

#### Selection example

Required power: 1.5 kW  
 Required speed: 21 min-1  
 Duty factor required by the application: Kp = 1  
 Operating position; Mounting form: Horizontal B3; hollow shaft; BT faceplate mounted



Designation : Ot 3333 i : 67.8 SBTLR H B3 - MI 4p LSES90L 1.5 kW LS2/IE2- 400VY - U.G.

# Electromechanical products Orthobloc 3000

## Selection

Classes  
I, II, III  
(kp = 1, 1.4, 2)

Ot 3433  
LS, LSES, brake LS, brake LSES - IP 55 - CI. F  
230V/400VY 400VΔ - 50 Hz - U.G

Integral mounting	<b>MI</b>
Universal mounting	<b>MU</b>
Input shaft mounting	<b>AP</b>

### Ot 3433

LS, LSES (kW)

		0.25	0.37	0.55	0.75	0.9	1.1	1.5	1.8	2.2	3	4	5.5	7.5	9	
		3-phase 4-pole LS, LSES														
min-1	i exact	71			80			90			100		112	132		
9.44	154	7.08	4.65	3.03	2.28	1.86	1.54	1.12	0.93							
10.5	139	7.82	5.14	3.35	2.52	2.06	1.70	1.24	1.03	0.84						
11.7	124	8.73	5.74	3.74	2.81	2.30	1.90	1.39	1.15	0.94						
13.5	108		6.59	4.30	3.23	2.64	2.18	1.59	1.32	1.08						
15.2	95.4		7.43	4.85	3.64	2.98	2.46	1.80	1.49	1.22	0.89					
16.5	87.7		8.07	5.26	3.95	3.23	2.67	1.95	1.61	1.32	0.96					
18.7	77.5		9.12	5.95	4.46	3.65	3.02	2.20	1.82	1.49	1.09	0.83				
21.0	69			6.66	5.00	4.09	3.38	2.47	2.04	1.67	1.22	0.92				
23.4	61.9			7.40	5.56	4.55	3.76	2.74	2.27	1.86	1.36	1.03				
25.4	57			8.03	6.03	4.93	4.08	2.98	2.46	2.01	1.47	1.12	0.81			
28.6	50.6			9.02	6.77	5.54	4.58	3.34	2.77	2.26	1.65	1.25	0.91			
32.9	44.1				7.52	6.17	5.09	3.71	3.08	2.52	1.84	1.39	1.01			
36.3	39.9				8.10●	6.65●	5.48●	4.00●	3.31●	2.71●	1.98	1.50	1.08	0.80		
38.2	38				7.93	6.49	5.36	3.92	3.24	2.65						
41.5	35				8.54	6.99	5.77	4.22	3.49	2.85						
41.7	34.8				8.94●	7.35●	6.05●	4.42●	3.66●	2.99●	2.19	1.65	1.20	0.88		
46.1	31.5				9.59●	7.88●	6.49●	4.74●	3.93●	3.21●	2.35●	1.77●	1.28	0.94		
46.7	31				9.32	7.64	6.30	4.60	3.81	3.12	2.28	1.72				
50.8	28.6					8.44●	6.95	5.07	4.21	3.44	2.51	1.90	1.37	1.01		
53.6	27					8.48										
58.6	24.8					9.33●	7.68	5.60	4.65	3.80	2.78	2.10	1.52	1.12		
68.0	21.3						8.25●	6.02●	4.99●	4.08●	2.98	2.25	1.63	1.20		
72.3	20.1						8.90	6.50	5.39	4.40	3.22	2.43				
75.2	19.3						8.85●	6.46●	5.35●	4.38●	3.20	2.41	1.75	1.29		
82.8	17.5						9.47	6.92	5.73	4.69	3.43	2.59	1.87	1.38		
93.5	15.5							7.77	6.44	5.27	3.85	2.91	2.11	1.55		
95.6	15.2							7.64	6.34	5.18	3.79	2.86	2.07	1.52		
118	12.3							8.86	7.34	6.00	4.39	3.31	2.40	1.77		
152	9.51								8.79	7.18	5.25	3.96	2.87	2.11		

4-pole and brake LS, LSES

3-phase 4-pole LS, LSES

LS FCR	71 L	80 L	90 L	100 L	112	132
LSES FCR		<b>80</b>	<b>90</b>	<b>100</b>	<b>112</b>	<b>132</b>

● MU obligatory

#### Selection example

Required power: 3 kW

Required speed: 25 min-1

Duty factor required by the application: Kp 1.4

Operating position; Mounting form: Horizontal B5; shaft on left; BS flange

Designation : Ot 3433 i : 57 BSL L B5 - MI 4p LSES100LR 3 kW LS2/IE2- 400VY - U.G.



# Electromechanical products

## Orthobloc 3000

### Selection

Classes  
I, II, III  
(kp = 1, 1.4, 2)

Ot 3533  
LS, LSES, brake LS, brake LSES - IP 55 - CI. F  
230V/400VY 400VΔ - 50 Hz - U.G

Integral mounting	<b>MI</b>
Universal mounting	<b>MU</b>
Input shaft mounting	<b>AP</b>

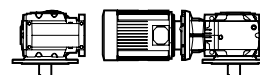
### Ot 3533

		LSES (kW)															
		0.75	0.9	1.1	1.5	1.8	2.2	3	4	5.5	7.5	9	11	15	18.5	22	30
		3-phase 4-pole LSES															
min-1	i exact	80	90			100			112	132			160	180		200	
9.13	159	3.64	2.97	2.46	1.79	1.48	1.21	0.89									
10.8	134	4.29	3.51	2.90	2.12	1.75	1.43	1.05									
12.0	121	4.75	3.89	3.21	2.34	1.94	1.58	1.16	0.88								
13.3	109	5.24	4.28	3.54	2.58	2.13	1.75	1.27	0.97								
14.4	101	5.67	4.64	3.83	2.79	2.31	1.89	1.38	1.05								
16.8	86.5	6.56	5.37	4.43	3.24	2.68	2.19	1.60	1.21	0.88							
18.0	80.6	7.03●	5.75●	4.75	3.46	2.87	2.34	1.71	1.30	0.94							
20.6	70.6	7.99●	6.54●	5.40	3.94	3.26	2.66	1.95	1.47	1.07							
23.3	62.4	9.00●	7.36●	6.08	4.44	3.67	3.00	2.19	1.66	1.20	0.89						
26.1	55.5		8.23●	6.80	4.96	4.10	3.35	2.45	1.86	1.34	0.99	0.83					
29.2	49.8		9.15●	7.55	5.51	4.56	3.73	2.72	2.06	1.49	1.10	0.92					
34.1	42.6			8.77	6.40	5.29	4.33	3.16	2.39	1.73	1.28	1.06	0.87				
37.6	38.6			9.64●	7.03●	5.82●	4.76●	3.47●	2.63●	1.90	1.40	1.17	0.96				
37.9	38.2			9.49	6.92	5.73	4.68	3.42	2.59								
42.6	34.04				7.73	6.40	5.23	3.82	2.89								
42.6	34				7.93●	6.56●	5.36●	3.92●	2.97●	2.15	1.58	1.32	1.08				
47.5	30.5				8.59	7.11	5.81	4.24	3.21								
47.6	30.49				8.80●	7.28●	5.95●	4.35●	3.29●	2.38	1.76	1.46	1.20	0.88			
53.4	27.1				9.82●	8.13●	6.65●	4.86●	3.68●	2.66	1.96	1.64	1.34	0.98			
55.6	26.1				9.96	8.24	6.74	4.92	3.73								
59.8	24.3					9.04●	7.39●	5.40●	4.08●	2.96	2.18	1.82	1.49	1.09	0.88		
61	23.6					9.05●	7.40●	5.40●	4.09●	2.96	2.18	1.82	1.49	1.09	0.88		
69.6	20.8						8.33●	6.09●	4.61●	3.33	2.46	2.05	1.67	1.23	0.99	0.83	
77.6	18.7						9.24●	6.75●	5.11●	3.70	2.72	2.27	1.86	1.36	1.10	0.93	
87.2	16.6							7.53●	5.70●	4.12	3.04	2.53	2.07	1.52	1.23	1.03	
97.5	14.9							8.36●	6.33●	4.58	3.37	2.81	2.30	1.68	1.36	1.15	0.84
118	12.3							9.75●	7.37●	5.34	3.93	3.28	2.68	1.96	1.59	1.34	0.98
153	9.47								8.88●	6.44	4.74	3.95	3.23	2.36	1.92	1.61	1.18
		4-pole and brake LS, LSES															
		3-phase 4-pole LSES															
LS FCR		80 L	90 L			100 L			112	132			160				
LSES FCR		<b>80</b>	<b>90</b>			<b>100</b>			<b>112</b>	<b>132</b>			<b>160</b>				
LS, LSES FCPL												<b>160</b>	<b>180</b>	<b>200</b>			

● MU obligatory

#### Selection example

Required power: 4 kW  
 Required speed: 17 min-1  
 Duty factor required by the application: Kp = 1  
 Operating position; Mounting form: V1; shaft on left facing down; BS flange  
**Designation : Ot 3533 i : 86.5 BSL L V1 - MI 4p LSES112MU 4 kW LS2/IE2 - 400VY - U.G.**



# Electromechanical products

## Orthobloc 3000

### Selection

Classes  
I, II, III  
(kp = 1, 1.4, 2)

Ot 3633  
LS, LSES, brake LS, brake LSES - IP 55 - CI. F  
230V/400VY 400VΔ - 50 Hz - U.G

Integral mounting	<b>MI</b>
Universal mounting	<b>MU</b>
Input shaft mounting	<b>AP</b>

### Ot 3633

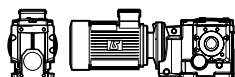
		LSES (kW)																	
		1.1	1.5	1.8	2.2	3	4	5.5	7.5	9	11	15	18.5	22	30	37	45		
		3-phase 4-pole LSES																	
min-1	i exact	90			100			112	132			160		180	200		225		
9.25	157	4.01	2.92	2.42	1.98	1.44	1.09												
10.8	135	4.67	3.41	2.82	2.30	1.68	1.27	0.92											
11.7	124	5.08	3.70	3.06	2.51	1.83	1.39	1.00											
13.5	108	5.83	4.25	3.52	2.88	2.10	1.59	1.15	0.85										
15.3	95.1	6.61	4.82	3.99	3.26	2.38	1.80	1.31	0.96	0.80									
17	85.3	7.36	5.37	4.44	3.63	2.65	2.01	1.46	1.07	0.89									
19.1	75.9	8.27	6.04	4.99	4.08	2.98	2.26	1.63	1.20	1.00	0.82								
20.8	69.6				4.46●	3.25	2.47	1.78	1.32	1.10	0.90								
24.1	60.1				5.15●	3.76	2.85	2.06	1.52	1.27	1.04								
26.7	54.4				5.70●	4.16	3.15	2.28	1.68	1.40	1.15	0.84							
30.3	47.8				6.48●	4.73●	3.59●	2.59	1.91	1.60	1.30	0.95							
32.9	44.1				7.03●	5.13●	3.89●	2.82	2.08	1.73	1.41	1.03	0.84						
37.0	39.2				7.91●	5.78●	4.38●	3.17	2.33	1.95	1.59	1.16	0.94						
41.4	35				8.86●	6.47●	4.90●	3.55	2.61	2.18	1.78	1.30	1.06	0.89					
46.2	31.4				9.89●	7.22●	5.47●	3.96	2.92	2.43	1.99	1.45	1.18	0.99					
50.7	28.6					7.92●	6.00●	4.34	3.20	2.67	2.18	1.60	1.29	1.09	0.80				
58.0	25					9.06●	6.86●	4.97	3.66	3.05	2.50	1.83	1.48	1.24	0.92				
67.7	21.4									3.44	2.82	2.06	1.67	1.40	1.03	0.84			
75.4	19.2									3.46	2.83	2.07	1.68	1.41	1.04	0.84			
81.2	17.9									7.61●	5.52	4.06	3.38	2.77	2.02	1.64	1.38	1.01	0.82
90.7	16									7.90●	5.72	4.21	3.51	2.87	2.10	1.70	1.43	1.05	0.85
99.4	14.6									8.36●	6.05	4.45	3.71	3.03	2.22	1.80	1.51	1.11	0.90
114	12.7									9.06●	6.57	4.83	4.03	3.29	2.41	1.95	1.64	1.21	0.98
133	10.9												4.41	3.61	2.64	2.14	1.80	1.32	1.07
148	9.81																		1.14
159	9.1									7.63●	5.53	4.07	3.39	2.77	2.03	1.65	1.38	1.02	0.83
178	8.15									7.91●	5.73	4.22	3.52	2.87	2.10	1.71	1.43	1.05	0.86
195	7.43									9.32●	6.75	4.97	4.14	3.38	2.48	2.01	1.69	1.24	1.01
223	6.5									9.08●	6.58	4.84	4.04	3.30	2.42	1.96	1.65	1.21	0.98
260	5.57												4.42	3.61	2.65	2.15	1.80	1.32	1.08
290	5												4.70	3.85	2.81	2.28	1.92	1.41	1.15

4-pole and brake LS, LSES		3-phase 4-pole LSES																	
LS FCR		90 L			100 L			112	132			160							
LSES FCR		90			100			112	132			160							
LS, LSES FCPL												160	180	200	225				

● MU obligatory

#### Selection example

Required power: 22 kW  
 Required speed: 50 min-1  
 Duty factor required by the application: Kp = 1  
 Operating position; Mounting form: Horizontal B3; hollow shaft; BT faceplate mounted  
**Designation : Ot 3633 i : 28.6 SBTLR H B3 - MI 4p LSES180LR 22 kW LS2/IE2 - 400VA - U.G.**



# Electromechanical products

## Orthobloc 3000

### Selection

**Classes**  
I, II, III  
(kp = 1, 1.4, 2)

**Ot 3733**  
LS, LSES, brake LS, brake LSES - IP 55 - CI. F  
230V/400VY 400VΔ - 50 Hz - U.G

Integral mounting	<b>MI</b>
Universal mounting	<b>MU</b>
Input shaft mounting	<b>AP</b>

		<b>Ot 3733</b>																	
		LSES (kW)																	
		1.1	1.5	1.8	2.2	3	4	5.5	7.5	9	11	15	18.5	22	30	37	45	55 <sup>1</sup>	
		3-phase 4-pole LSES																	
min-1	i exact	90	100	112	132	160	180	200	225	250									
9.57	152	8.05	5.93	4.91	4.01	2.93	2.22	1.60	1.18										
10.8	135	9.03	6.65	5.50	4.50	3.28	2.49	1.80	1.33	1.11	0.90								
11.8	123	9.88	7.28	6.02	4.92	3.59	2.72	1.97	1.45	1.21	0.99								
13.3	109		8.21	6.79	5.55	4.05	3.07	2.22	1.64	1.37	1.12	0.82							
14.8	98				6.15	4.49	3.40	2.46	1.81	1.51	1.24	0.90							
16.6	87.4				6.88	5.02	3.80	2.75	2.03	1.69	1.38	1.01	0.82						
18.0	80.4				7.47	5.45	4.13	2.99	2.20	1.84	1.50	1.10	0.89						
21.0	68.9				8.67	6.33	4.79	3.47	2.56	2.13	1.74	1.27	1.03	0.87					
22.9	63.2				9.43	6.89	5.21	3.77	2.78	2.32	1.90	1.39	1.12	0.94					
25.9	55.9					7.76	5.88	4.25	3.13	2.61	2.14	1.56	1.27	1.06					
30.4	47.7					8.69	6.57	4.75	3.50	2.92	2.38	1.75	1.42	1.19	0.87				
34.2	42.5					9.44	7.12	5.16	3.79	3.16	2.58	1.89	1.53	1.29	0.95				
38.1	38.1									3.39	2.77	2.03	1.65	1.38	1.02	0.83			
42.1	34.4									3.62	2.96	2.16	1.75	1.47	1.08	0.88			
47.7	30.4									3.92	3.20	2.34	1.90	1.60	1.17	0.95			
53.9	26.9									4.22	3.45	2.53	2.05	1.72	1.27	1.03	0.85		
60.3	24									5.04	4.12	3.01	2.44	2.05	1.51	1.23	1.01	0.83	
64.3	22.6										4.11	3.01	2.44	2.05	1.51	1.23	1.01	0.83	
72.9	19.9										4.15	3.04	2.46	2.07	1.52	1.24	1.02	0.84	
82.6	17.6									4.99	4.08	2.99	2.42	2.03	1.49	1.22	1.00	0.82	
93.6	15.5									5.18	4.24	3.10	2.51	2.11	1.55	1.26	1.04	0.85	
106	13.7									5.22	4.27	3.12	2.53	2.13	1.56	1.27	1.05	0.86	
118	12.3									5.97	4.88	3.57	2.90	2.43	1.79	1.45	1.20	0.98	
126	11.5										5.07	3.71	3.01	2.53	1.86	1.51	1.24	1.02	
143	10.1										5.45	3.99	3.23	2.72	2.00	1.62	1.34	1.10	
162	8.95									4.99	4.08	2.99	2.42	2.03	1.49	1.22	1.00	0.82	
184	7.9									5.18	4.23	3.10	2.51	2.11	1.55	1.26	1.04	0.85	
207	6.99									5.22	4.27	3.12	2.53	2.13	1.56	1.27	1.05	0.86	
232	6.25									5.58	4.56	3.34	2.71	2.28	1.67	1.36	1.12	0.92	
247	5.86										4.74	3.47	2.81	2.36	1.74	1.41	1.16	0.96	
280	5.17										5.10	3.73	3.03	2.54	1.87	1.52	1.25	1.03	
		4-pole and brake LS, LSES					3-phase 4-pole LS, LSES												
LS FCR		90 L	100 L	112	132	160													
LSES FCR		90	100	112	132	160													
LS, LSES FCPL							160	180	200	225	250								

1. LS B35 obligatory  
 MU obligatory

#### Selection example

Required power: 45 kW  
 Required speed: 93 min-1  
 Duty factor required by the application: Kp = 1  
 Operating position; Mounting form: Horizontal B3; shaft on left; foot mounted  
 Designation : Ot 3733 i : 15.5 S L B3 - MI 4p LSES225MR 45 kW LS2/IE2 - 400VΔ - U.G.



# Electromechanical products Orthobloc 3000

## Selection

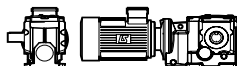
Classes  
I, II, III  
(kp = 1, 1.4, 2)

Ot 3833  
LS, LSES, brake LS, brake LSES - IP 55 - CI. F  
230V/400VY 400VΔ - 50 Hz - U.G

Integral mounting	<b>MI</b>
Universal mounting	<b>MU</b>
Input shaft mounting	<b>AP</b>

		Ot 3833											
		LSES (kW)											
		5.5	7.5	9	11	15	18.5	22	30	37	45	55 <sup>1</sup>	75 <sup>1</sup>
		3-phase 4-pole LSES											
min-1	i exact	132	160	180	200	225	250	280					
9.42	154	2.79	2.05	1.71	1.40	1.02	0.83						
10.6	137	3.11	2.29	1.91	1.56	1.14	0.92						
11.3	128	3.33	2.44	2.04	1.60	1.22	0.99	0.83					
12.6	115	3.71	2.72	2.27	1.86	1.36	1.10	0.93					
14.2	102	4.18	3.07	2.56	2.09	1.53	1.24	1.04					
16.0	90.8	4.67	3.43	2.86	2.34	1.71	1.39	1.17	0.86				
18.0	80.5	5.26	3.86	3.22	2.63	1.92	1.56	1.31	0.96	0.79			
20.1	72.2	5.81	4.26	3.56	2.90	2.13	1.72	1.45	1.07	0.87			
22.6	64.3	6.32	4.63	3.87	3.16	2.31	1.87	1.58	1.16	0.94			
25.4	57	6.90	5.06	4.22	3.45	2.53	2.05	1.72	1.26	1.03	0.85		
28.9	50.1	7.56	5.55	4.63	3.78	2.77	2.24	1.89	1.39	1.13	0.93		
32.8	44.2	8.27	6.06	5.06	4.13	3.02	2.45	2.06	1.61	1.23	1.01	0.83●	
35.7	40.6		7.50	6.26	5.11	3.74	3.04	2.55	1.88	1.53●			
39.8	36.4		7.93	6.61	5.40	3.95	3.21	2.70	1.98	1.61	1.32	1.09●	0.80●
44.8	32.4		8.91	7.43	6.07	4.44	3.60	3.03	2.23	1.81	1.49	1.22●	0.90●
50.5	28.7		9.26	7.73	6.31	4.62	3.75	3.15	2.31	1.88	1.55	1.27●	0.93●
57.3	25.3			8.98	7.34	5.37	4.36	3.66	2.69	2.19	1.80	1.48●	1.08●
65.3	22.2			9.49	7.75	5.67	4.60	3.87	2.84	2.31	1.90	1.56●	1.15●
74.0	19.6				8.77	6.42	5.20	4.38	3.21	2.61	2.15	1.77●	1.30●
81.5	17.8				9.10	6.87	5.40	4.54	3.34	2.71	2.23	1.84●	1.35●
93.5	15.5					7.56	6.13	5.15	3.79	3.08	2.53	2.08●	1.53●
104	13.9					8.18	6.63	5.58	4.10	3.33	2.74	2.25●	1.65●
117	12.4					8.87	7.19	6.05	4.44	3.61	2.97	2.44●	1.79●
131	11.1					9.22	7.48	6.29		3.76	3.09	2.54●	1.86●
147	9.86					6.42	5.21	4.38	3.22	2.61	2.15	1.77●	
149	9.75						8.48	7.13		4.26	3.50	2.88●	2.11●
162	8.94					6.67	5.41	4.55	3.34	2.71	2.23	1.84●	1.35●
186	7.8					7.57	6.13	5.16	3.79	3.08	2.53	2.08●	1.53●
208	6.98					8.18	6.64	5.58	4.10	3.33	2.74	2.25●	1.65●
233	6.21					8.87	7.20	6.05	4.45	3.61	2.97	2.44●	1.79●
259	5.59					9.23	7.48	6.29		3.76	3.09	2.54●	1.86●
296	4.9						8.49	7.14		4.26	3.51	2.88●	2.11●

1. LS B35 obligatory  
● MU obligatory



### Selection example

Required power: 45 kW  
 Required speed: 33 min-1  
 Duty factor required by the application: Kp = 1  
 Operating position; Mounting form: Horizontal B3; shaft on left; foot mounted  
**Designation: Ot 3833 i : 44.2 S L B3 - MI 4p LSES225MR 45 kW LS2/IE2 - 400V Δ - U.G.**

# Electromechanical products Orthobloc 3000

## Selection

**Classes**  
I, II, III  
(kp = 1, 1.4, 2)

**Ot 3933**  
LS, LSES, brake LS, brake LSES - IP 55 - Cl. F  
230V/400VY 400VΔ - 50 Hz - U.G

Integral mounting	<b>MI</b>
Universal mounting	<b>MU</b>
Input shaft mounting	<b>AP</b>

### Ot 3933

LSES (kW)

9	11	15	18.5	22	30	37	45	55 <sup>1</sup>	75 <sup>1</sup>	90 <sup>1</sup>	110 <sup>1</sup>
---	----	----	------	----	----	----	----	-----------------	-----------------	-----------------	------------------

3-phase 4-pole LSES

min-1	i exact	132	160	180	200	225	250	280	315				
9.29	156	2.44	1.99	1.46	1.18	1.00							
10.4	139	2.74	2.23	1.64	1.33	1.12							
11.8	123	3.09	2.52	1.85	1.50	1.26							
13.2	110	3.46	2.82	2.07	1.68	1.41	1.03						
14.8	98.1	3.88	3.16	2.32	1.88	1.58	1.16						
16.6	87.6	4.34	3.54	2.60	2.11	1.77	1.30	1.05	0.86				
18.5	78.3	4.86	3.96	2.91	2.36	1.98	1.45	1.17	0.96				
20.8	69.7	5.45	4.45	3.27	2.65	2.23	1.63	1.32	1.08	0.88 •			
23.3	62.1	6.12	5.00	3.67	2.97	2.50	1.83	1.48	1.21	0.98 •			
26.4	55.0	6.91	5.64	4.14	3.36	2.82	2.06	1.67	1.37	1.11 •			
29.7	48.9	7.78	6.35	4.66	3.78	3.18	2.32	1.87	1.54	1.24 •			
32.5	44.6	8.52	6.96	5.11	4.14	3.48	2.55	2.06	1.69	1.36 •	1.00 •		
36.8	39.4	9.47	7.73	5.68	4.60	3.87	2.83	2.28	1.87	1.52 •	1.11 •		
40.7	35.6		8.30	6.10	4.94	4.15	3.04	2.45	2.01	1.63 •	1.19 •	0.99 •	
46.3	31.3		9.08	6.67	5.40	4.54	3.32	2.68	2.20	1.78 •	1.31 •	1.09 •	
50.0	29.0			7.03	5.70	4.79		2.83	2.32	1.88 •	1.38 •	1.15 •	
58.5	24.8			7.85	6.36	5.35		3.16	2.59	2.10 •	1.54 •	1.28 •	1.04 •
64.2	22.6			8.38	6.79	5.71		3.37	2.77	2.24 •	1.64 •	1.37 •	1.11 •
73.6	19.7			9.39	7.61	6.40	4.67	3.77	3.10	2.51 •	1.84 •	1.54 •	1.25 •
79.2	18.3			9.00	7.29	6.13		3.62	2.97	2.41 •	1.76 •	1.47 •	1.20 •
92	15.7				8.11	6.82		4.02	3.30	2.68 •	1.96 •	1.64 •	1.33 •
101	14.3				8.66	7.28		4.30	3.53	2.86 •	2.10 •	1.75 •	1.42 •
112	12.9					7.80		4.62	3.79	3.08 •	2.26 •	1.88 •	1.53 •

4-pole LS, LSES and brake

3-phase 4-pole LS, LSES

LS FCR	132	160							
LSES FCR	132	160							
LS, LSES FCPL		160	180	200	225	250	280	NC	

1. LS B35 obligatory

• MU obligatory

NC: Consult us

#### Selection example

Required power: 45 kW

Required speed: 20 min-1

Duty factor required by the application: Kp = 1

Operating position; Mounting form: Horizontal B3; shaft on left; foot mounted

Designation: Ot 3933 i : 69.7 S L B3 - MI 4p LSES225MR 45 kW LS2/IE2 - 400V Δ - U.G.



# Electromechanical products

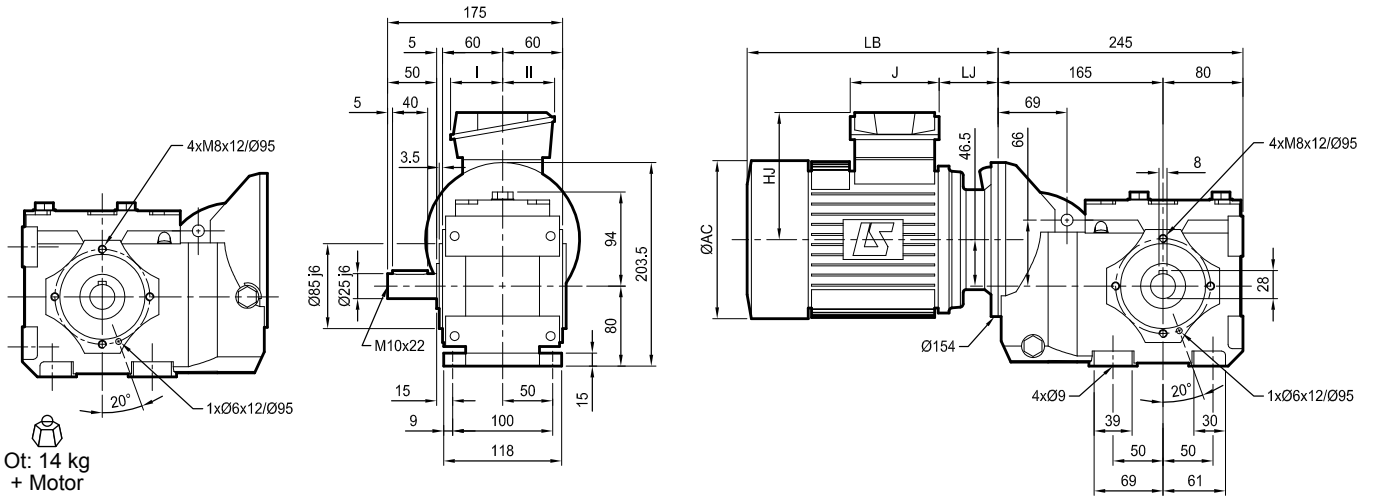
## Orthobloc 3000

### Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3132

Dimensions in millimetres

- SBT LR faceplate form, L\* output shaft on left



Ot: 14 kg  
+ Motor

\* R shaft on right option



# Electromechanical products

## Orthobloc 3000

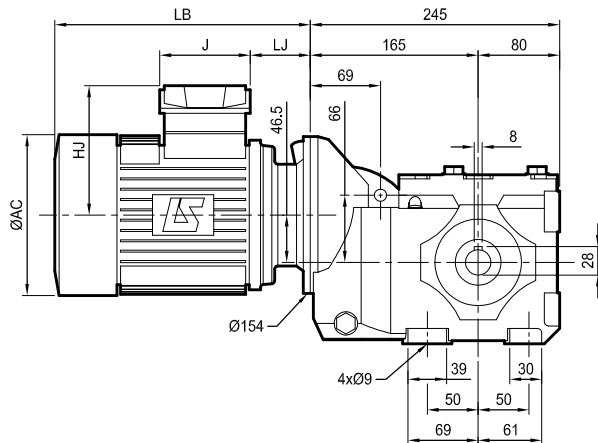
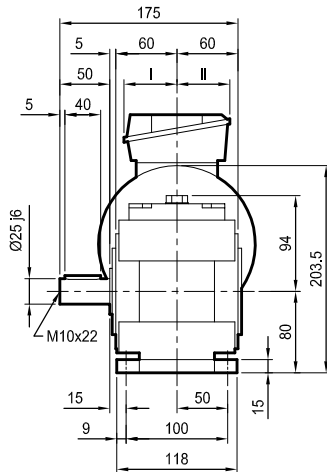
### Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3132

Dimensions in millimetres

#### - S foot mounted form, L\* output shaft on left

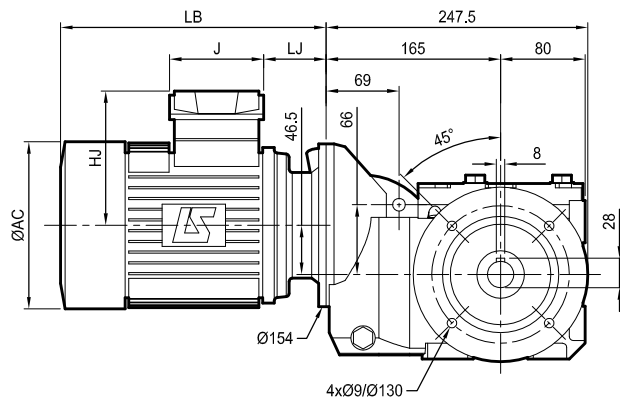
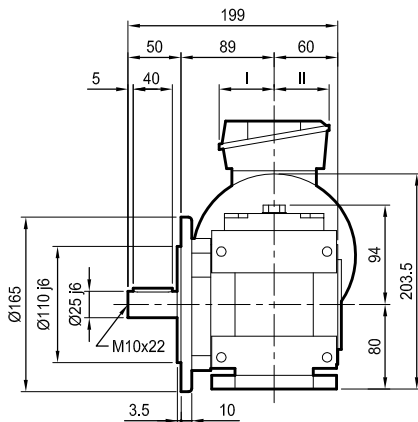
 Ot: 14.5 kg  
+ Motor



\* R shaft on right option



#### - BS L\* flange form, L\* output shaft on left

 Ot: 14.8 kg  
+ Motor





\* BSR R right option: identical flange and shaft

#### 4-pole motors

Type	LSES							 kg	LSES FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LSSES 80	170	135	86	288.5	67.5	43	43	11.7	172	146	160	349.5	46	55	55	18
LSSES 90	190	135	86	290	71	43	43	15.2	184	156	160	349.5	58.5	55	55	24.2
LSSES 100LR	200	140	86	354.5	72	43	43	25.7	200	161	160	410	59.5	55	55	30

#### 4-pole motors

Type	LS							 kg	LS FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LS 71 L	140	109	86	217	49	43	43	8.3	140	135	160	268	34	55	55	11.3
LS 80 L	-	-	-	-	-	-	-	-	172	146	160	300	46	55	55	18
LS 90 L	-	-	-	-	-	-	-	-	184	156	160	349.5	58.5	55	55	24.2
LS 100 L	-	-	-	-	-	-	-	-	200	161	160	397.5	59.5	55	55	30

# Electromechanical products

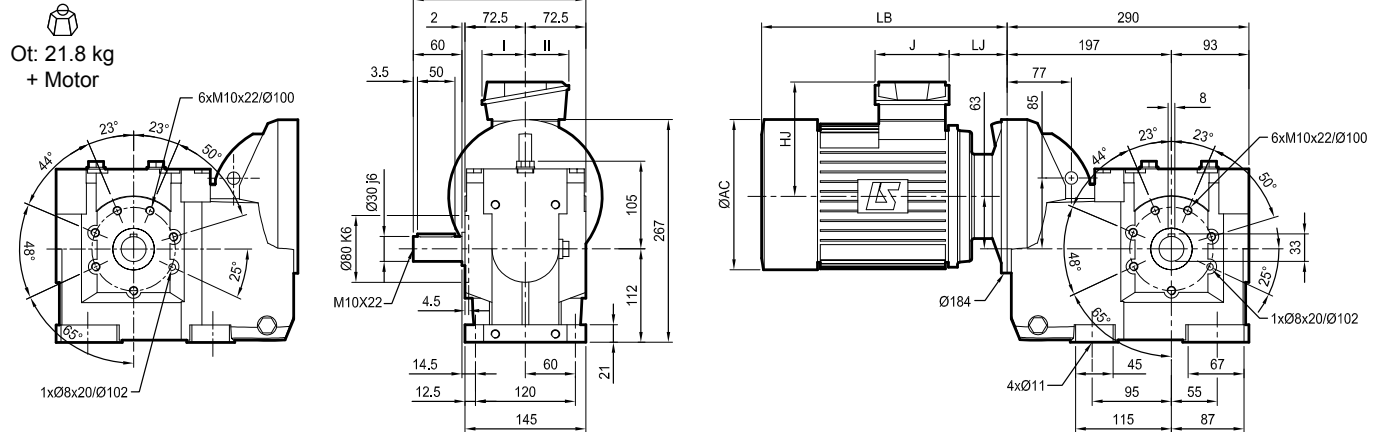
## Orthobloc 3000

### Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3232

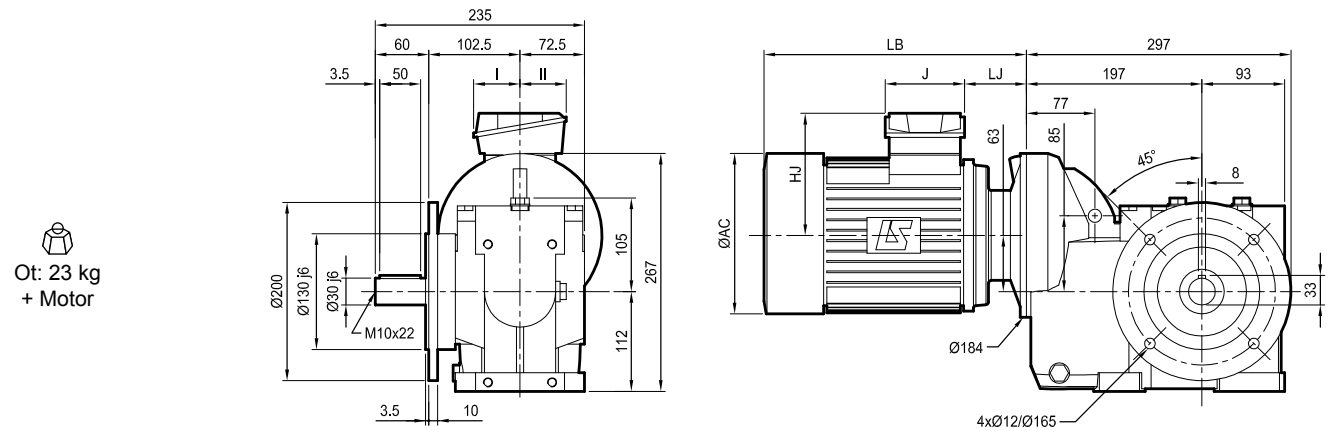
Dimensions in millimetres

#### - SBT LR faceplate form, L\* output shaft on left



\* R shaft on right option

#### - BD L\* flange form, L\* output shaft on left



\* BDR R right option: identical flange and shaft

# Electromechanical products Orthobloc 3000

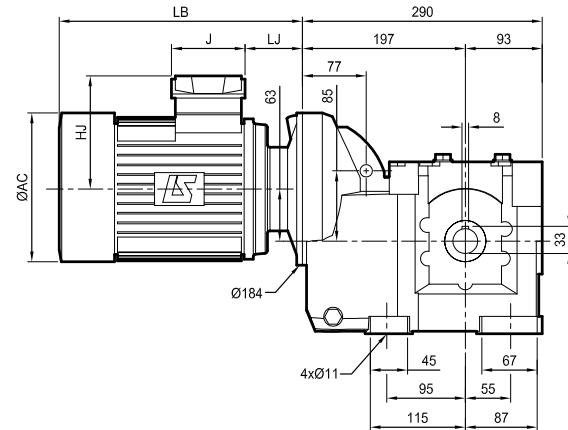
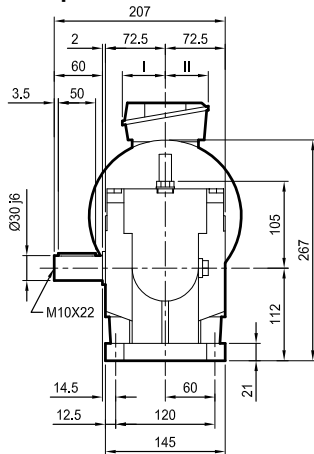
## Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3232

Dimensions in millimetres

### - S foot mounted form, L\* output shaft on left

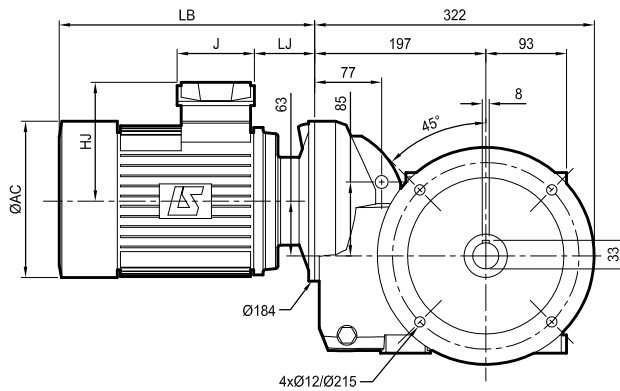
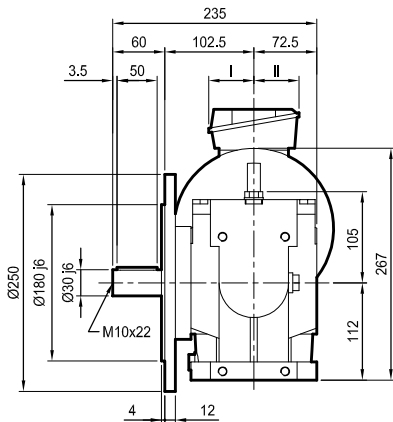
  
Ot: 22 kg  
+ Motor



\* R shaft on right option



### - BS L\* flange form, L\* output shaft on left

  
Ot: 23.3 kg  
+ Motor





\* BSR R right option: identical flange and shaft

#### 4-pole motors

Type	LSES							 kg	LSES FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LSES 80	170	135	86	288	67.5	43	43	11.7	172	146	160	349.5	46	55	55	18
LSES 90	190	135	86	290	71	43	43	15.2	184	156	160	349.5	58.5	55	55	24.2
LSES 100LR	200	140	86	354.5	72	43	43	25.7	200	161	160	410	59.5	55	55	30
LSES 112MU	235	149	86	371	73.5	43	43	35	235	169	160	434	61	55	55	44.5
LSES 132SU	260	172	126	397	52.5	63	63	42	235	169	160	477	61	55	55	48

#### 4-pole motors

Type	LS							 kg	LS FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LS 71 L	140	109	86	217	49	43	43	8.3	140	135	160	268	34	55	55	11.3
LS 80 L	-	-	-	-	-	-	-	-	172	146	160	300	46	55	55	18
LS 90L	-	-	-	-	-	-	-	-	184	156	160	349.5	58.5	55	55	24.2
LS 100L	-	-	-	-	-	-	-	-	200	161	160	397.5	59.5	55	55	30
LS 112MG	-	-	-	-	-	-	-	-	235	169	160	434	61	55	55	44.5
LS 132S	-	-	-	-	-	-	-	-	235	169	160	457	61	55	55	48



# Electromechanical products Orthobloc 3000

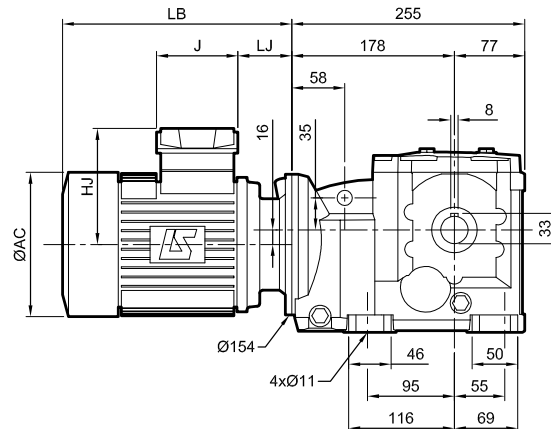
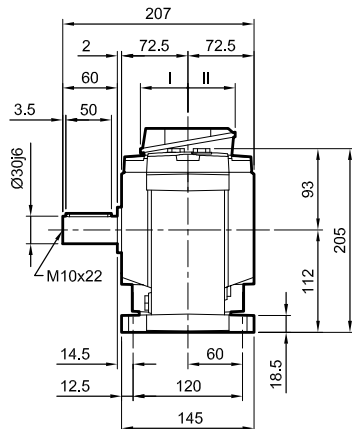
## Dimensions

### Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting, Ot 3233

Dimensions in millimetres

#### - S foot mounted form, L\* output shaft on left

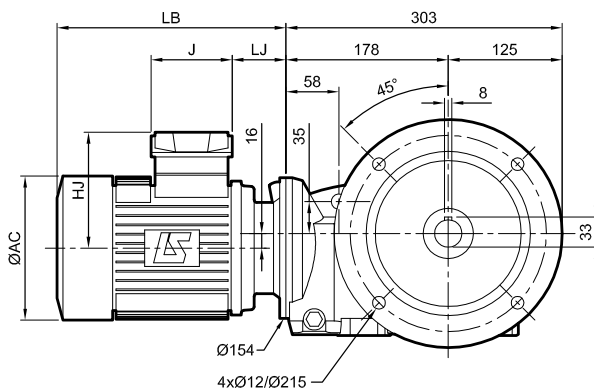
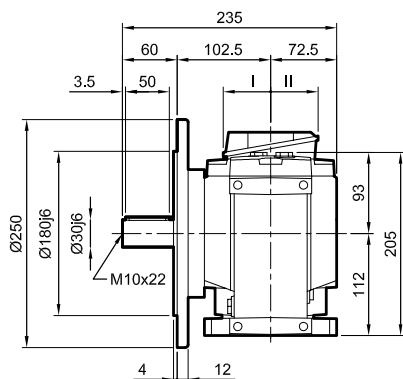
  
Ot: 20.5 kg  
+ Motor



\* R shaft on right option



#### - BS L\* flange form, L\* output shaft on left

  
Ot: 22 kg  
+ Motor





\* BSR R right option: identical flange and shaft

#### 4-pole motors

Type	LSES							 kg	LSES FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LSSES 80	170	135	86	288.5	67.5	43	43	11.7	172	146	160	349.5	46	55	55	18
LSSES 90	190	135	86	290	71	43	43	15.2	184	156	160	349.5	58.5	55	55	24.2
LSSES 100LR	200	140	86	354.5	72	43	43	25.7	200	161	160	410	59.5	55	55	30

#### 4-pole motors

Type	LS							 kg	LS FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LS71 L	140	109	86	217	49	43	43	8.3	140	135	160	268	34	55	55	11.3
LS80 L	-	-	-	-	-	-	-	-	172	146	160	300	46	55	55	18
LS90 L	-	-	-	-	-	-	-	-	184	156	160	349.5	58.5	55	55	24.2
LS100 L	-	-	-	-	-	-	-	-	200	161	160	397.5	59.5	55	55	30

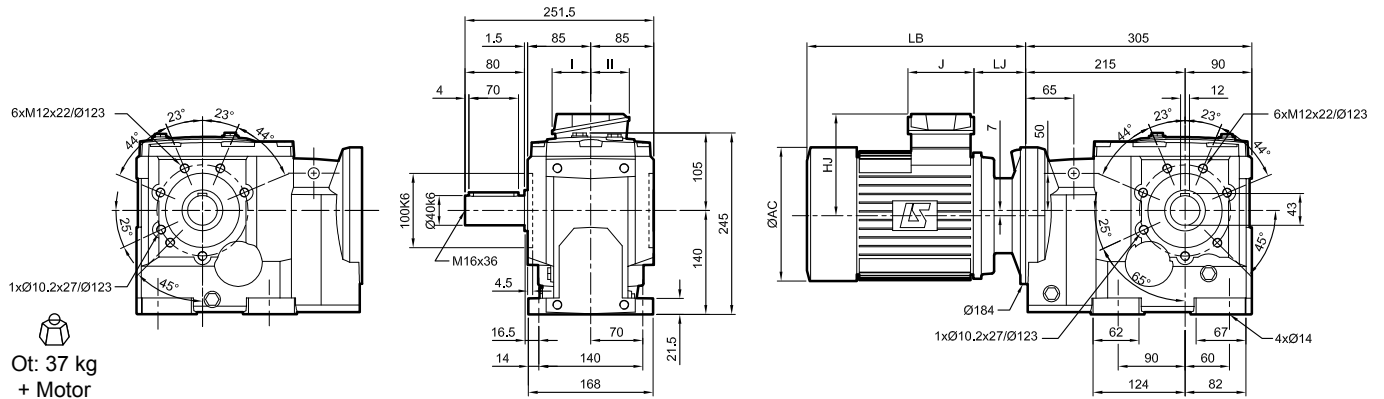
# Electromechanical products Orthobloc 3000

## Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3333

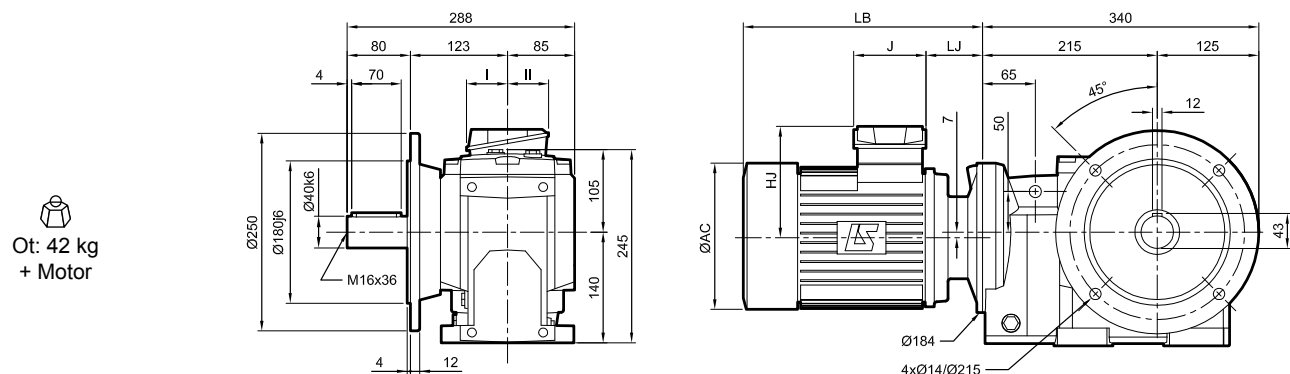
Dimensions in millimetres

### - SBT LR faceplate form, L\* output shaft on left



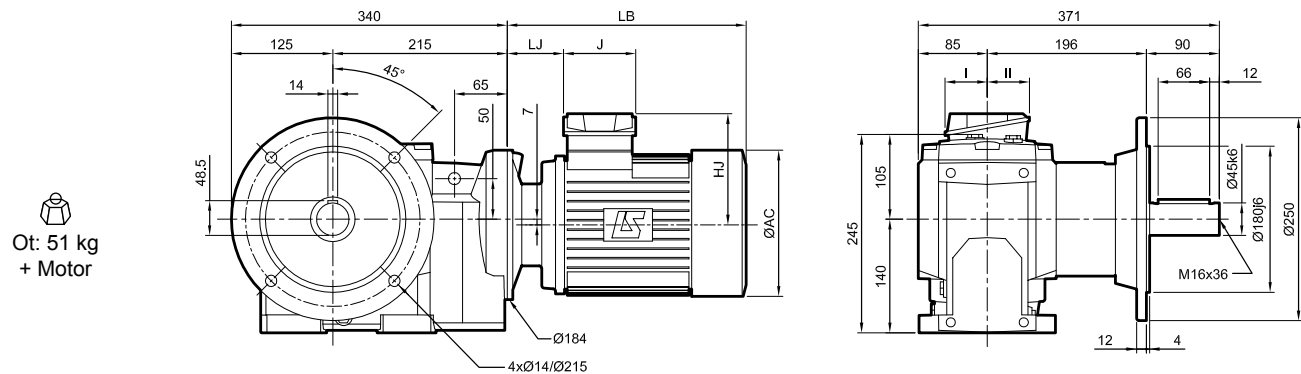
\* R shaft on right option

### - BD L\* flange form, L\* output shaft on left



\* BDR R right option: identical flange and shaft

### - BR R reinforced flange form, R\* output shaft on right exclusively



\* Left option: not available

# Electromechanical products Orthobloc 3000

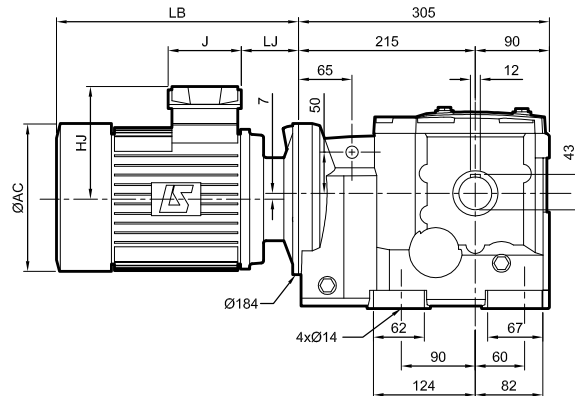
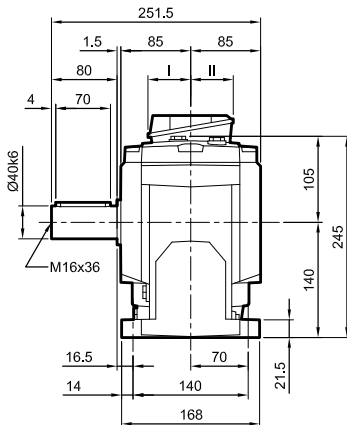
## Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3333

Dimensions in millimetres

### - S foot mounted form, L\* output shaft on left

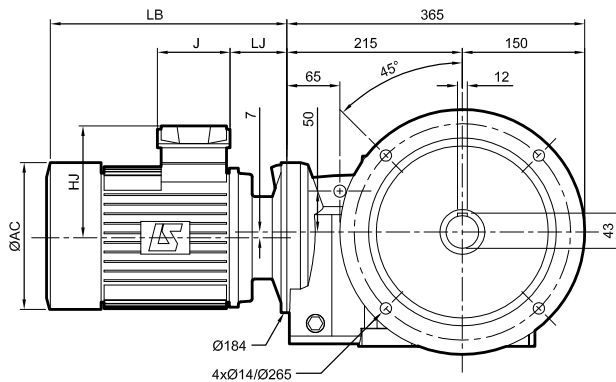
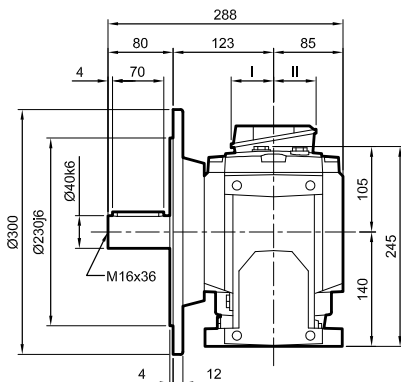
  
Ot: 38 kg  
+ Motor



\* R shaft on right option



### - BS L\* flange form, L\* output shaft on left

  
Ot: 42 kg  
+ Motor





\* BSR R right option: identical flange and shaft

#### 4-pole motors

Type	LSES							 kg	LSES FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LSES 80	170	135	86	288	67.5	43	43	11.7	172	146	160	349.5	46	55	55	18
LSES 90	190	135	86	290	71	43	43	15.2	184	156	160	349.5	58.5	55	55	24.2
LSES 100LR	200	140	86	354.5	72	43	43	25.7	200	161	160	410	59.5	55	55	30
LSES 112MU	235	149	86	371	73.5	43	43	35	235	169	160	434	61	55	55	44.5
LSES 132SU	260	172	126	397	52.5	63	63	42	235	169	160	477	61	55	55	48

#### 4-pole motors

Type	LS							 kg	LS FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LS 71 L	140	109	86	217	49	43	43	8.3	140	135	160	268	34	55	55	11.3
LS 80 L	-	-	-	-	-	-	-	-	172	146	160	300	46	55	55	18
LS 90L	-	-	-	-	-	-	-	-	184	156	160	349.5	58.5	55	55	24.2
LS 100L	-	-	-	-	-	-	-	-	200	161	160	397.5	59.5	55	55	30
LS 112MG	-	-	-	-	-	-	-	-	235	169	160	434	61	55	55	44.5
LS 132S	-	-	-	-	-	-	-	-	235	169	160	457	61	55	55	48

# Electromechanical products

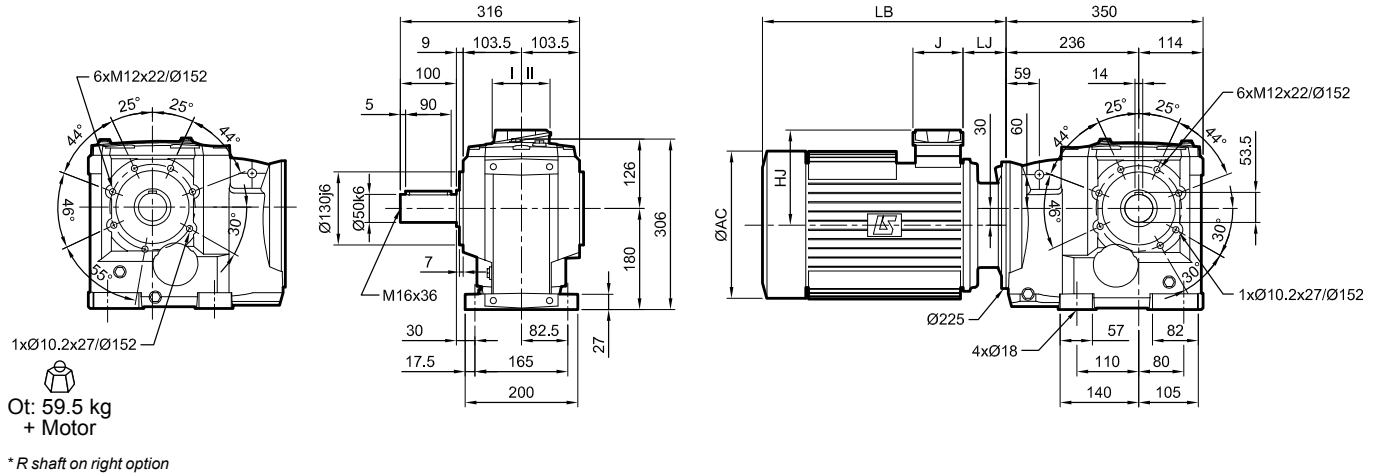
## Orthobloc 3000

### Dimensions

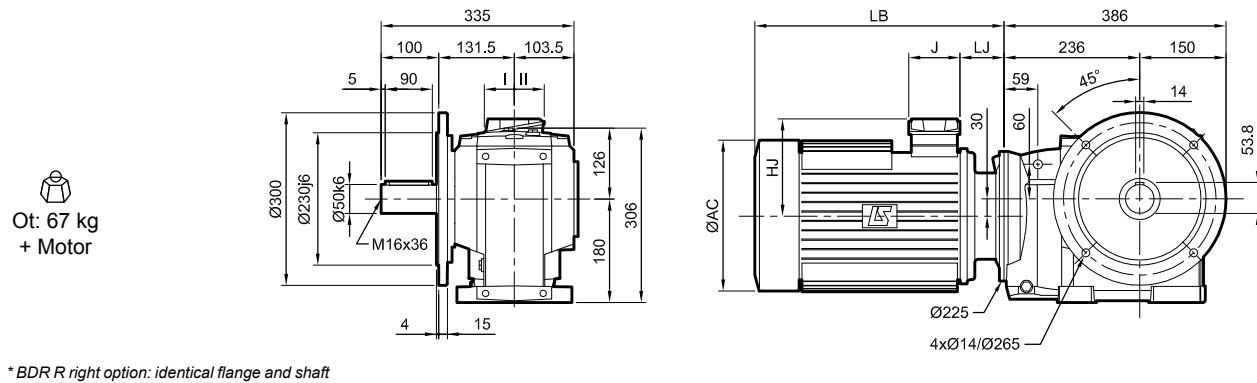
Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3433

Dimensions in millimetres

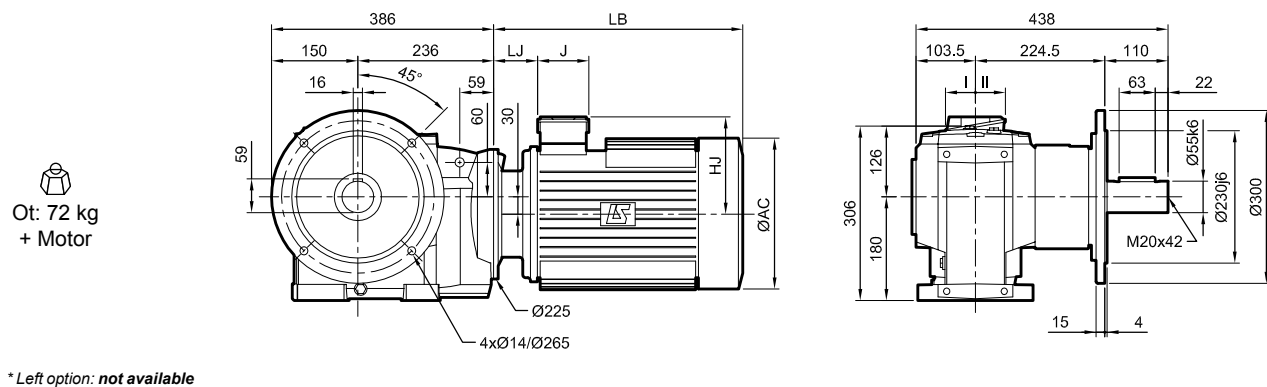
#### - SBT LR faceplate form, L\* output shaft on left



#### - BD L\* flange form, L\* output shaft on left



#### - BR R reinforced flange form, R\* output shaft on right exclusively





# Electromechanical products Orthobloc 3000

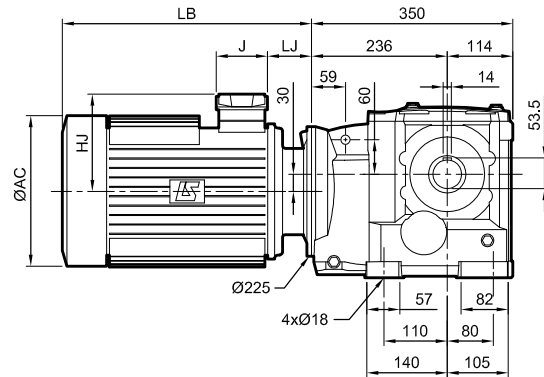
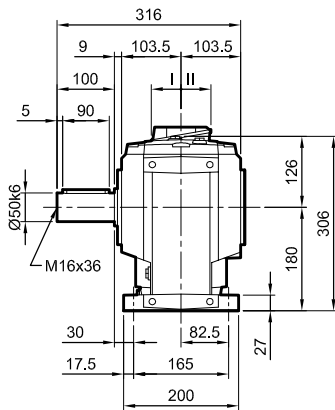
## Dimensions

### Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting, Ot 3433

Dimensions in millimetres

#### - S foot mounted form, L\* output shaft on left

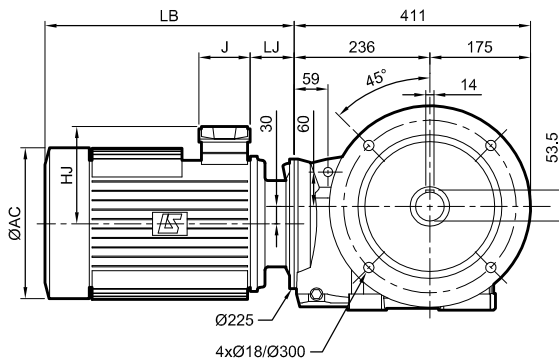
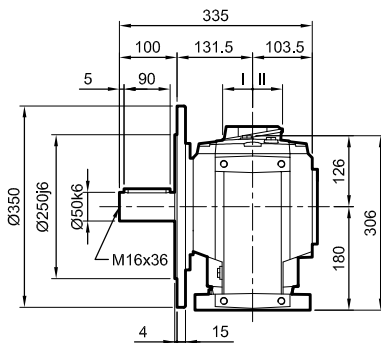
  
Ot: 60 kg  
+ Motor



\* R shaft on right option



#### - BS L\* flange form, L\* output shaft on left

  
Ot: 68 kg  
+ Motor





\* BSR R right option: identical flange and shaft

#### 4-pole motors

Type	LSES							 kg	LSES FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LS 80	170	135	86	284	63.5	43	43	11.7	172	146	160	345.5	42	55	55	18
LS 90	190	135	86	286	67	43	43	15.2	184	156	160	345.5	54.5	55	55	24.2
LS 100LR	200	140	86	350.5	68	43	43	25.7	200	161	160	406	55.5	55	55	30
LS 112MU	235	149	86	367	69.5	43	43	35	235	169	160	430	58	55	55	44.5
LS 132MU	265	190	126	460	65	63	63	68	280	188	160	541	73	55	55	80

#### 4-pole motors

Type	LS							 kg	LS FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LS 71 L	140	109	86	213	45	43	43	8.3	140	130	160	254.5	21.5	55	55	11.3
LS 80 L	-	-	-	-	-	-	-	-	172	146	160	296	42	55	55	18
LS 90L	-	-	-	-	-	-	-	-	184	156	160	345.5	54.5	55	55	24.2
LS 100L	-	-	-	-	-	-	-	-	200	161	160	393.5	55.5	55	55	30
LS 112MG	-	-	-	-	-	-	-	-	235	169	160	430	58	55	55	44.5
LS 132M	-	-	-	-	-	-	-	-	280	188	160	541	73	55	55	80

# Electromechanical products

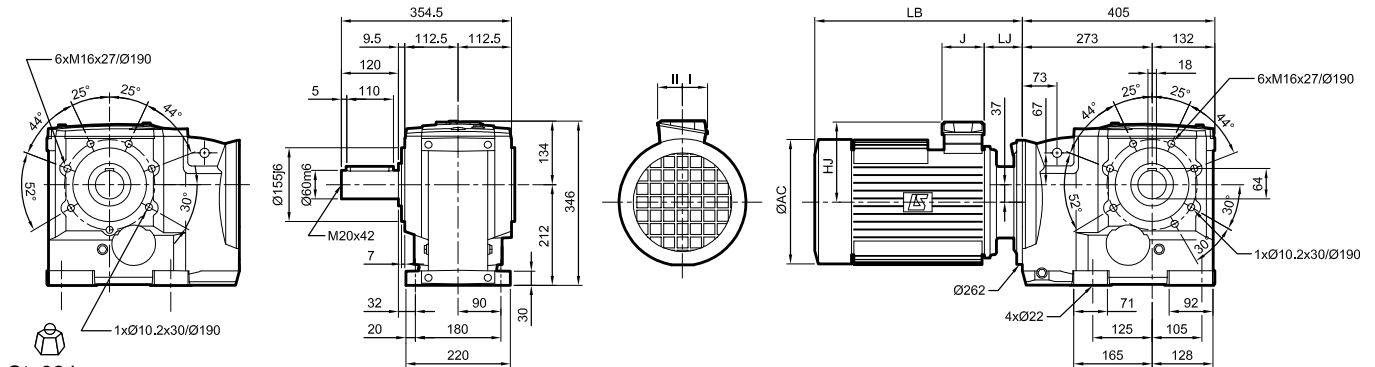
## Orthobloc 3000

### Dimensions

#### Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting, Ot 3533

Dimensions in millimetres

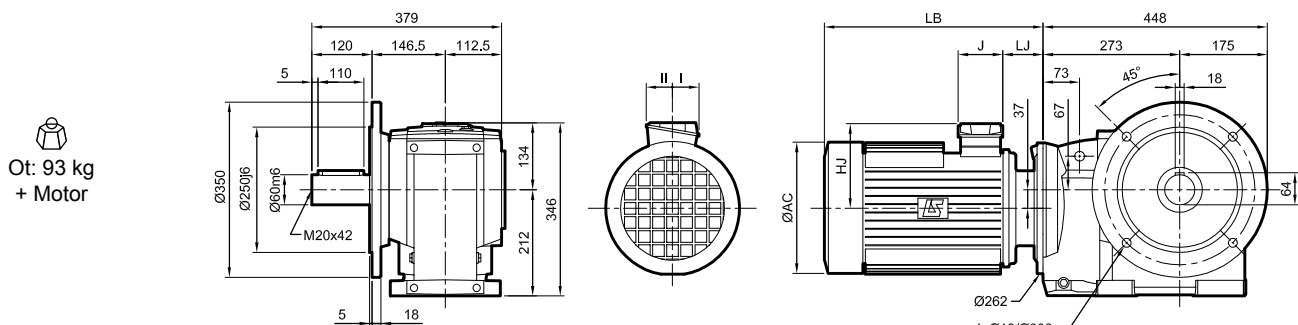
#### - SBT LR faceplate form, L\* output shaft on left



Ot: 82 kg  
+ Motor

\* R shaft on right option

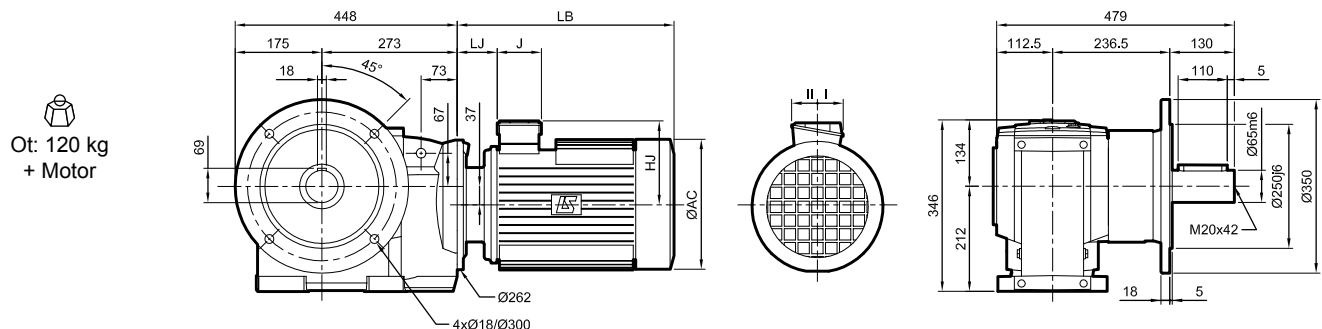
#### - BD L\* flange form, L\* output shaft on left



Ot: 93 kg  
+ Motor

\* BDR R right option: identical flange and shaft

#### - BR R reinforced flange form, R\* output shaft on right exclusively



Ot: 120 kg  
+ Motor

\* Left option: not available

# Electromechanical products

## Orthobloc 3000

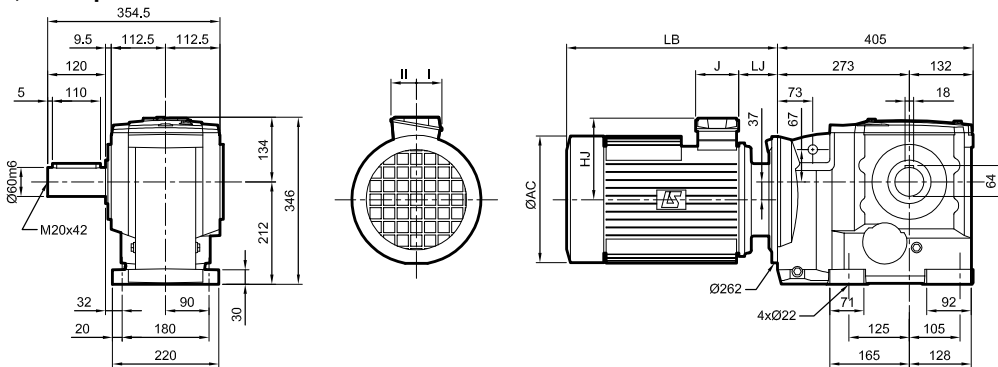
### Dimensions

#### Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting, Ot 3533

Dimensions in millimetres

#### - S foot mounted form, L\* output shaft on left

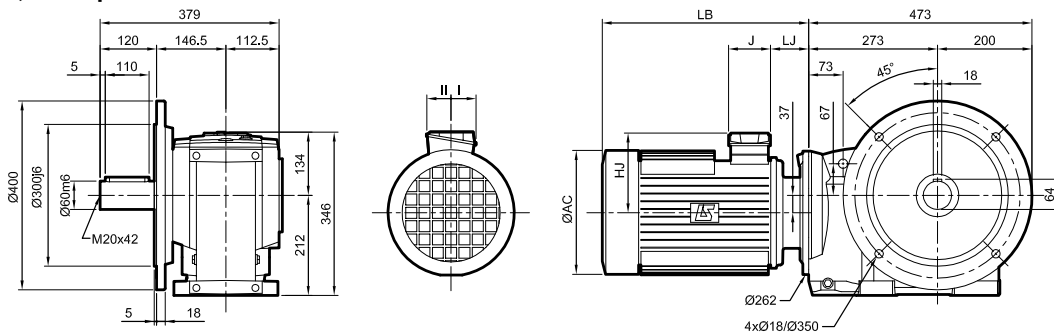
  
Ot: 83 kg  
+ Motor






\* R shaft on right option



#### - BS L\* flange form, L\* output shaft on left

  
Ot: 94 kg  
+ Motor



\* BSR R right option: identical flange and shaft

Type	LSES							 kg	4-pole motors							 kg	LSES FCPL							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LSES 80LG	170	135	86	288.5	68	43	43	11.7	172	146	160	345.5	46.5	55	55	18	-	-	-	-	-	-	-	
LSES 90L	190	135	86	286	67	43	43	15.2	184	156	160	345.5	54.5	55	55	24.2	-	-	-	-	-	-	-	
LSES 100LR	200	140	86	350.5	68	43	43	25.7	200	161	160	406	55.5	55	55	30	-	-	-	-	-	-	-	
LSES 112MU	235	149	86	367	69.5	43	43	35	235	169	160	434	61	55	55	44.5	-	-	-	-	-	-	-	
LSES 132MU	265	190	126	464	69	63	63	68	280	188	160	545	77	55	55	80	-	-	-	-	-	-	-	
LSES 160L	312	222	126	508	60.8	63	63	91	316	231	160	620	96	55	55	110	345	235	134	681	56.8	92	63	140
LSES 180LR	312	248	186	533	67.8	112	98	115	-	-	-	-	-	-	-	-	345	235	134	696	57	92	63	155

Type	4-pole motors							 kg	4-pole motors							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LS 80 L	172	146	160	300.5	46.5	55	55	18	-	-	-	-	-	-	-	
LS 90L	184	156	160	345.5	54.5	55	55	24.2	-	-	-	-	-	-	-	
LS 100L	200	161	160	393.5	55.5	55	55	30	-	-	-	-	-	-	-	
LS 112 MG	235	169	160	434	61	55	55	44.5	-	-	-	-	-	-	-	
LS 132 M	280	188	160	545	77	55	55	80	-	-	-	-	-	-	-	
LS 160L	316	231	160	620	96	55	55	110	345	235	134	681	56.8	92	63	140
LS 180LR	-	-	-	-	-	-	-	-	345	235	134	696	57	92	63	155

# Electromechanical products

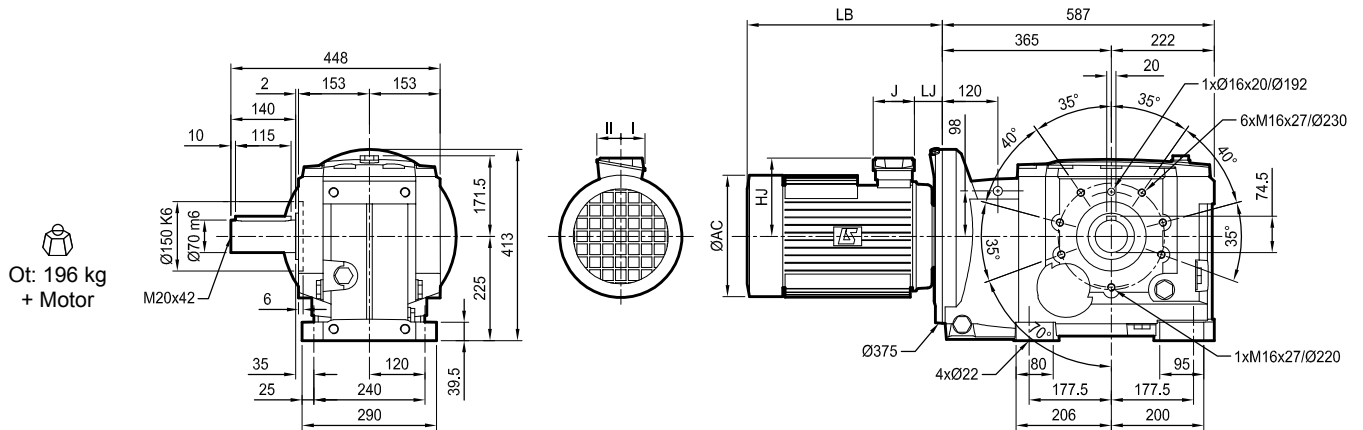
## Orthobloc 3000

### Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3633

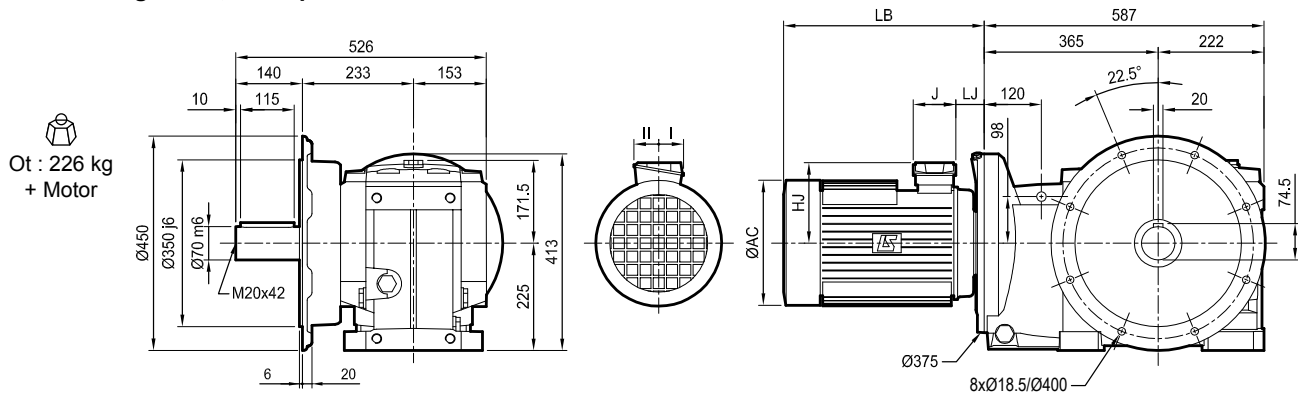
Dimensions in millimetres

#### - SBT LR faceplate form, L\* output shaft on left



\* SBT LR R right option: identical faceplate form and shaft

#### - BD L\* flange form, L\* output shaft on left



\* BDR R right option: identical flange and shaft


# Electromechanical products Orthobloc 3000

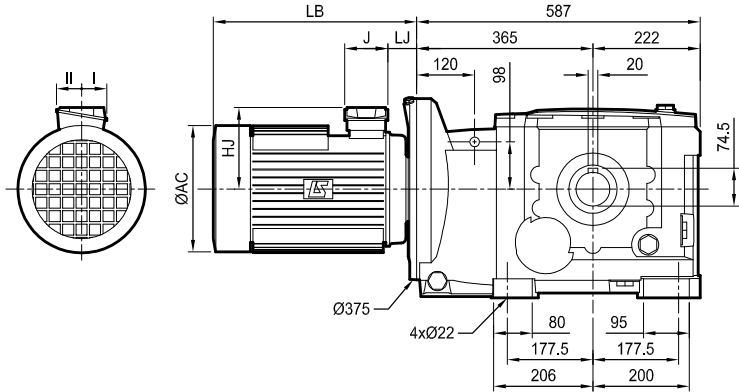
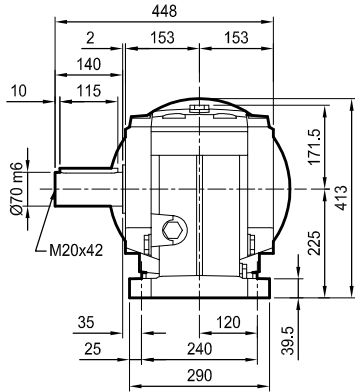
## Dimensions

### Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting, Ot 3633

Dimensions in millimetres

#### - S foot mounted form, L\* output shaft on left

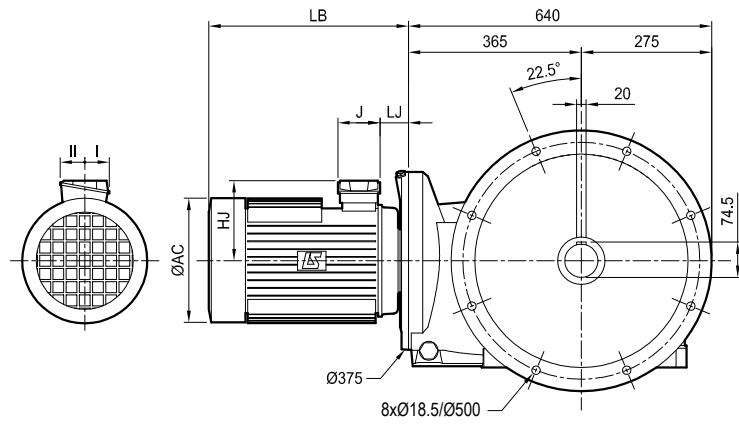
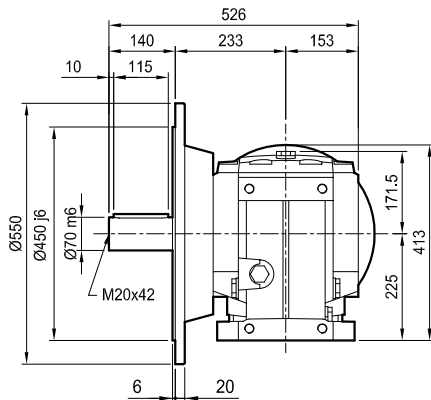
 Ot : 198 kg  
+ Motor






\* R shaft on right option



#### - BS L\* flange form, L\* output shaft on left

 Ot : 232 kg  
+ Motor



\* BSR R right option: identical flange and shaft

Type	LSES							 kg	4-pole motors LSES FCR							 kg	LSES FCPL							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LSES 90L	190	135	86	272	53	43	43	15.2	184	156	160	331.5	48.5	55	55	24.2	-	-	-	-	-	-	-	
LSES 100LR	200	140	86	336.5	54	43	43	25.7	200	161	160	394.5	52	55	55	30	-	-	-	-	-	-	-	
LSES 112MU	235	149	86	353	55.5	43	43	35	235	169	160	421	51	55	55	44.5	-	-	-	-	-	-	-	
LSES 132MU	265	190	126	446	51	63	63	68	280	188	160	527	66.5	55	55	80	-	-	-	-	-	-	-	
LSES 160L	312	222	126	490	42.8	63	63	91	316	231	160	564	58	55	55	110	345	235	134	672	47.8	92	63	140
LSES 180LR	312	248	186	515	49.8	112	98	115	-	-	-	-	-	-	-	-	345	235	134	678	39	92	63	150
LSES 200LR	350	256	186	609	58.5	112	98	164	-	-	-	-	-	-	-	-	384	256	186	774	84.5	111	98	240
LSES 225MR	390	310	231	674	59.5	119	142	235	-	-	-	-	-	-	-	-	410	276	186	837	82	111	98	320

Type	4-pole motors LS FCR							 kg	4-pole motors LS FCPL							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LS 90L	184	156	160	331.5	48.5	55	55	24.2	-	-	-	-	-	-	-	
LS 100L	200	161	160	382	52	55	55	30	-	-	-	-	-	-	-	
LS 112 MG	235	169	160	421	51	55	55	44.5	-	-	-	-	-	-	-	
LS 132 M	280	188	160	527	66.5	55	55	80	-	-	-	-	-	-	-	
LS 160L	316	231	160	564	58	55	55	110	345	235	134	672	47.8	92	63	140
LS 180LR	-	-	-	-	-	-	-	-	345	235	134	678	39	92	63	150
LS 200LT	-	-	-	-	-	-	-	-	384	256	186	774	84.5	111	98	240
LS 225MR	-	-	-	-	-	-	-	-	410	276	186	837	82	111	98	320

# Electromechanical products

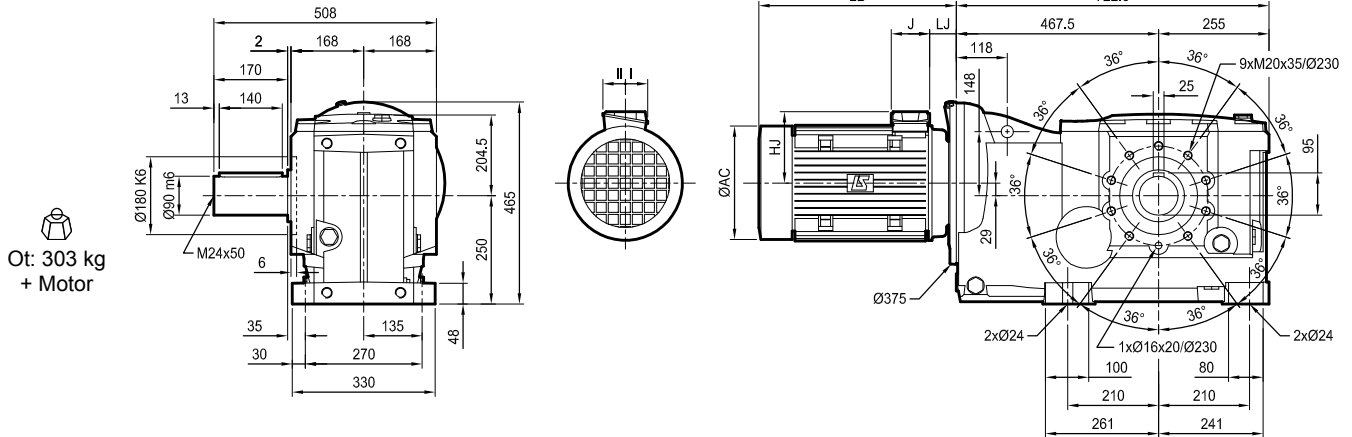
## Orthobloc 3000

### Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3733

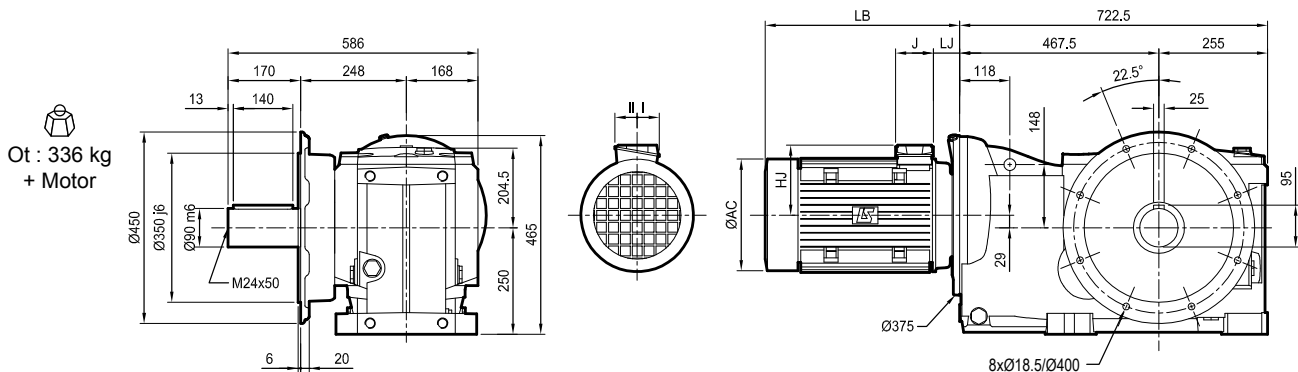
Dimensions in millimetres

#### - SBT LR faceplate form, L\* output shaft on left



\* SBT LR R right option: identical faceplate form and shaft

#### - BD L\* flange form, L\* output shaft on left



\* BDR R right option: identical flange and shaft

# Electromechanical products

## Orthobloc 3000

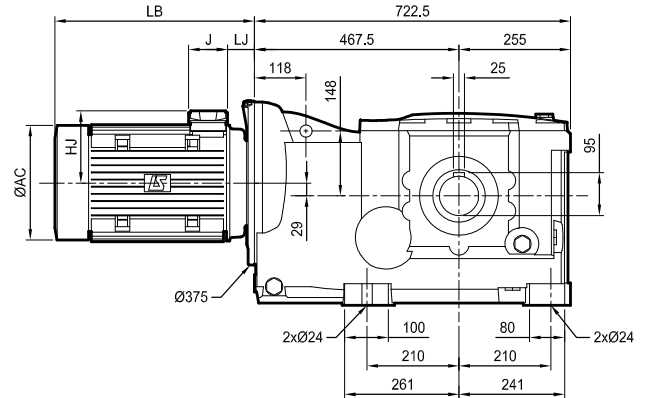
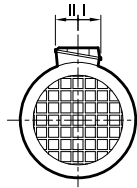
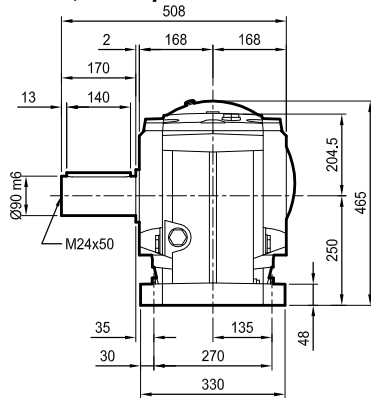
### Dimensions

#### Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting, Ot 3733

Dimensions in millimetres

#### - S foot mounted form, L\* output shaft on left

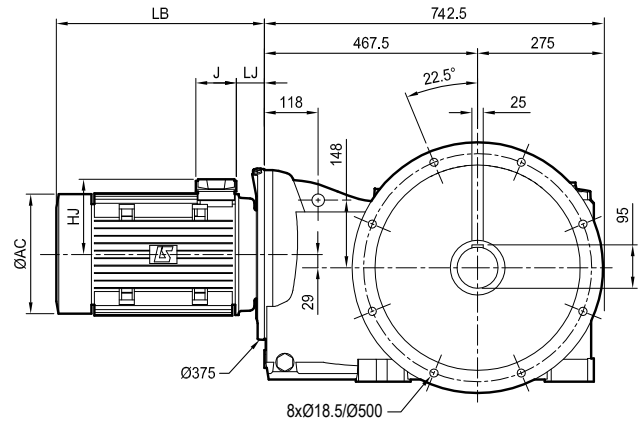
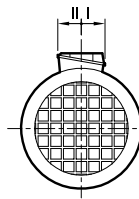
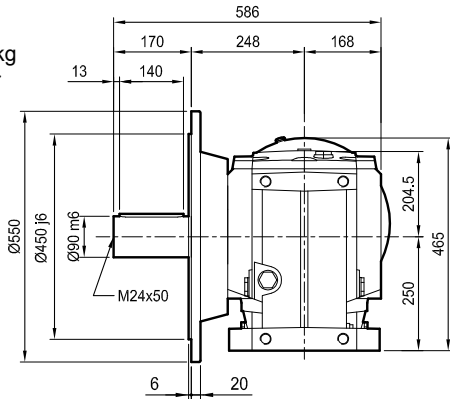
Ot : 306 kg  
+ Motor



1. Through holes  
\* R shaft on right option

#### - BS L\* flange form, L\* output shaft on left

Ot : 342 kg  
+ Motor



\* BSR R right option: identical flange and shaft

Type	LSES							kg	4-pole motors LSES FCR							kg	LSES FCPL							kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LSES 90L	190	135	86	272	53	43	43	15.2	184	156	160	331.5	48.5	55	55	24.2	-	-	-	-	-	-	-	-
LSES 100LR	200	140	86	336.5	54	43	43	25.7	200	161	160	394.5	52	55	55	30	-	-	-	-	-	-	-	-
LSES 112MU	235	149	86	353	55.5	43	43	35	235	169	160	421	51	55	55	44.5	-	-	-	-	-	-	-	-
LSES 132MU	265	190	126	446	51	63	63	68	280	188	160	527	66.5	55	55	80	-	-	-	-	-	-	-	-
LSES 160L	312	222	126	490	42.8	63	63	91	316	231	160	564	58	55	55	110	345	235	134	672	47.8	92	63	140
LSES 180LR	312	248	186	515	49.8	112	98	115	-	-	-	-	-	-	-	-	345	235	134	678	39	92	63	150
LSES 200LR	350	256	186	609	58.5	112	98	164	-	-	-	-	-	-	-	-	384	256	186	774	84.5	111	98	240
LSES 225MR	390	310	231	674	59.5	119	142	235	-	-	-	-	-	-	-	-	410	276	186	837	82	111	98	320

Type	LS FCR							kg	LS FCPL							kg	
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II		
LS 90L	184	156	160	331.5	48.5	55	55	24.2	-	-	-	-	-	-	-	-	-
LS 100L	200	161	160	382	52	55	55	30	-	-	-	-	-	-	-	-	-
LS 112 MG	235	169	160	421	51	55	55	44.5	-	-	-	-	-	-	-	-	-
LS 132 M	280	188	160	527	66.5	55	55	80	-	-	-	-	-	-	-	-	-
LS 160L	316	231	160	564	58	55	55	110	345	235	134	672	47.8	92	63	140	
LS 180LR	-	-	-	-	-	-	-	-	345	235	134	678	39	92	63	150	
LS 200LT	-	-	-	-	-	-	-	-	384	256	186	774	84.5	111	98	240	
LS 225MR	-	-	-	-	-	-	-	-	410	276	186	837	82	111	98	320	






# Electromechanical products Orthobloc 3000

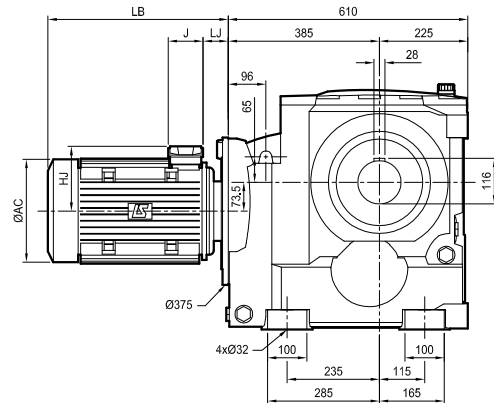
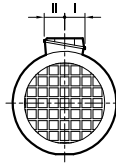
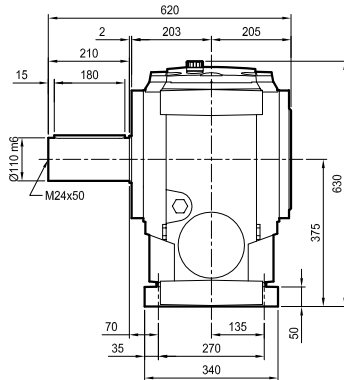
## Dimensions

### Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting, Ot 3833

Dimensions in millimetres

#### - S foot mounted form, L\* output shaft on left

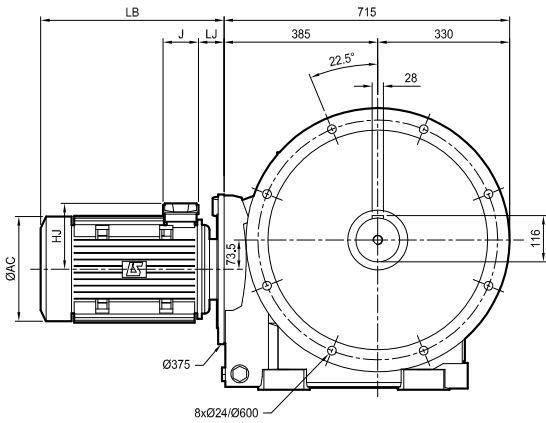
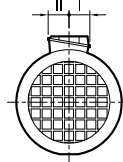
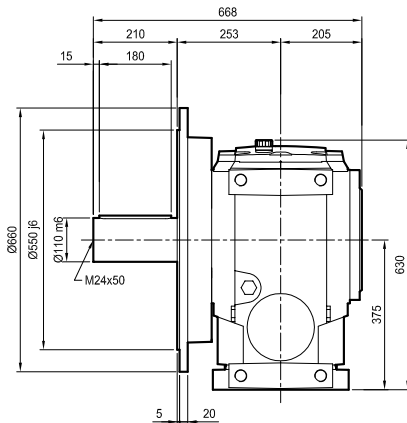
  
Ot : 378 kg  
+ Motor






\* R shaft on right option



#### - BS L\* flange form, L\* output shaft on left

  
Ot : 440 kg  
+ Motor



\* BSR R right option: identical flange and shaft

Type	LSES								4-pole motors LSES FCR								LSES FCPL								
	AC	HJ	J	LB	LJ	I	II	 kg	AC	HJ	J	LB	LJ	I	II	 kg	AC	HJ	J	LB	LJ	I	II	 kg	
LSES 132MU	265	190	126	446	51	63	63	68	280	188	160	527	66.5	55	55	80	-	-	-	-	-	-	-	-	-
LSES 160L	312	222	126	490	42.8	63	63	91	316	231	160	564	58	55	55	110	345	235	134	672	47.8	92	63	140	
LSES 180LR	312	248	186	515	49.8	112	98	115	-	-	-	-	-	-	-	-	345	235	134	678	39	92	63	150	
LSES 200LR	350	256	186	609	58.5	112	98	164	-	-	-	-	-	-	-	-	384	256	186	774	84.5	111	98	240	
LSES 225MR	390	310	231	674	59.5	119	142	235	-	-	-	-	-	-	-	-	410	276	186	837	82	111	98	320	

Type	4-pole motors LS FCR								LS FCPL							
	AC	HJ	J	LB	LJ	I	II	 kg	AC	HJ	J	LB	LJ	I	II	 kg
LS 132 M	280	188	160	527	66.5	55	55	80	-	-	-	-	-	-	-	-
LS 160L	316	231	160	564	58	55	55	110	345	235	134	672	47.8	92	63	140
LS 180LR	-	-	-	-	-	-	-	-	345	235	134	678	39	92	63	150
LS 200LT	-	-	-	-	-	-	-	-	384	256	186	774	84.5	111	98	240
LS 225MR	-	-	-	-	-	-	-	-	410	276	186	837	82	111	98	320

# Electromechanical products

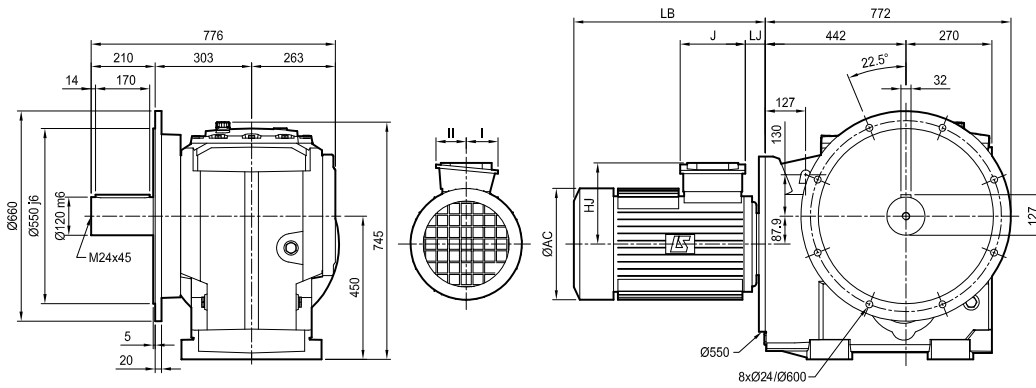
## Orthobloc 3000

### Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3933

Dimensions in millimetres

- BS L\* flange form, L\* output shaft on left



Ot : 726 kg  
+ Motor

\*BSR R right option: identical flange and shaft

# Electromechanical products

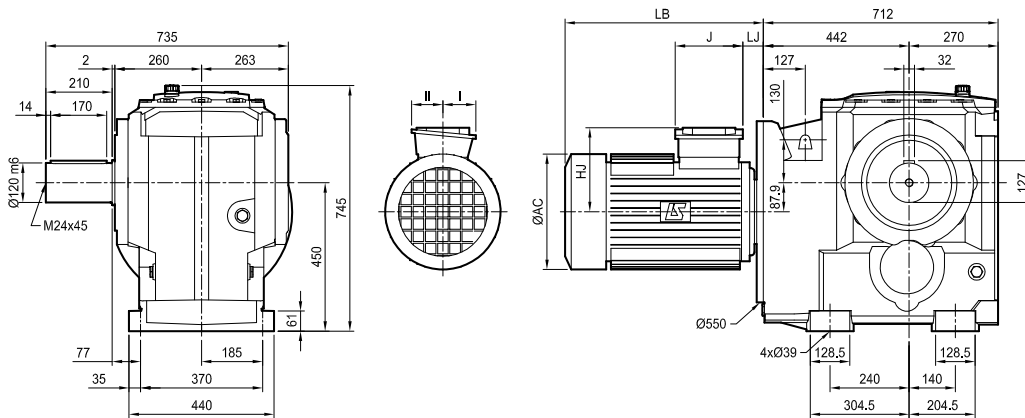
## Orthobloc 3000


### Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3933




Dimensions in millimetres



- S foot mounted form, L\* output shaft on left



  
 Ot : 648 kg  
 + Motor

\* R shaft on right option

Type	LSES								4-pole motors LSES FCR								LSES FCPL								
	AC	HJ	J	LB	LJ	I	II	 kg	AC	HJ	J	LB	LJ	I	II	 kg	AC	HJ	J	LB	LJ	I	II	 kg	
LSES 132MU	265	190	126	433	38	63	63	68	280	188	160	514	53.5	55	55	80	-	-	-	-	-	-	-	-	-
LSES 160L	312	222	126	477	29.8	63	63	91	316	231	160	551	45	55	55	110	345	235	134	659	34.8	92	63	140	
LSES 180LR	312	248	186	502	36.8	112	98	115	-	-	-	-	-	-	-	-	345	235	134	665	26	92	63	150	
LSES 200LR	350	256	186	596	45.5	112	98	164	-	-	-	-	-	-	-	-	384	256	186	761	71.5	111	98	240	
LSES 225MR	390	310	231	661	46.5	119	142	235	-	-	-	-	-	-	-	-	410	276	186	865	69	111	98	320	

Type	4-pole motors LS FCR								LS FCPL							
	AC	HJ	J	LB	LJ	I	II	 kg	AC	HJ	J	LB	LJ	I	II	 kg
LS 132 M	280	188	160	514	53.5	55	55	80	-	-	-	-	-	-	-	-
LS 160L	316	231	160	551	45	55	55	110	345	235	134	659	34.8	92	63	140
LS 180LR	-	-	-	-	-	-	-	-	345	235	134	665	26	92	63	150
LS 200LT	-	-	-	-	-	-	-	-	384	256	186	761	71.5	111	98	240
LS 225MR	-	-	-	-	-	-	-	-	410	276	186	865	69	111	98	320



# Electromechanical products Orthobloc 3000

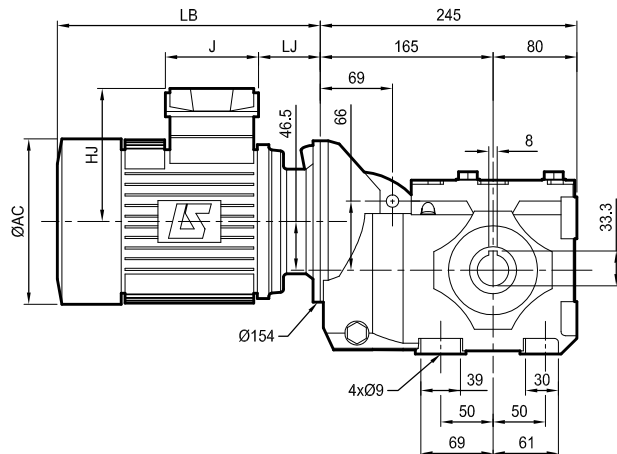
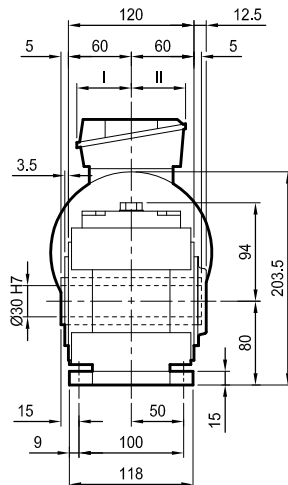
## Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3132

Dimensions in millimetres

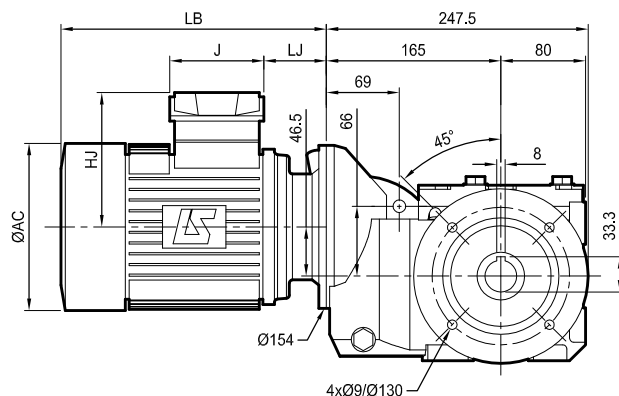
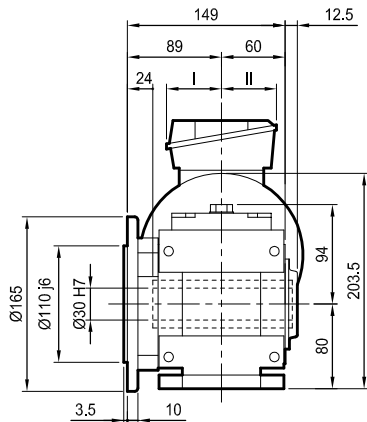
### - S foot mounted form, H cylindrical hollow shaft

  
Ot: 14.5 kg  
+ Motor





### - BS L\* flange form, H cylindrical hollow shaft

  
Ot: 14.8 kg  
+ Motor





\*BSR H right option: identical flange and shaft

#### 4-pole motors

Type	LSES							 kg	LSES FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
<b>LSES 80</b>	170	135	86	288.5	67.5	43	43	11.7	172	146	160	349.5	46	55	55	18
<b>LSES 90</b>	190	135	86	290	71	43	43	15.2	184	156	160	349.5	58.5	55	55	24.2
<b>LSES 100LR</b>	200	140	86	354.5	72	43	43	25.7	200	161	160	410	59.5	55	55	30

#### 4-pole motors

Type	LS							 kg	LS FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
<b>LS 71 L</b>	140	109	86	217	49	43	43	8.3	140	135	160	268	34	55	55	11.3
<b>LS 80 L</b>	-	-	-	-	-	-	-	-	172	146	160	300	46	55	55	18
<b>LS 90L</b>	-	-	-	-	-	-	-	-	184	156	160	349.5	58.5	55	55	24.2
<b>LS 100L</b>	-	-	-	-	-	-	-	-	200	161	160	397.5	59.5	55	55	30

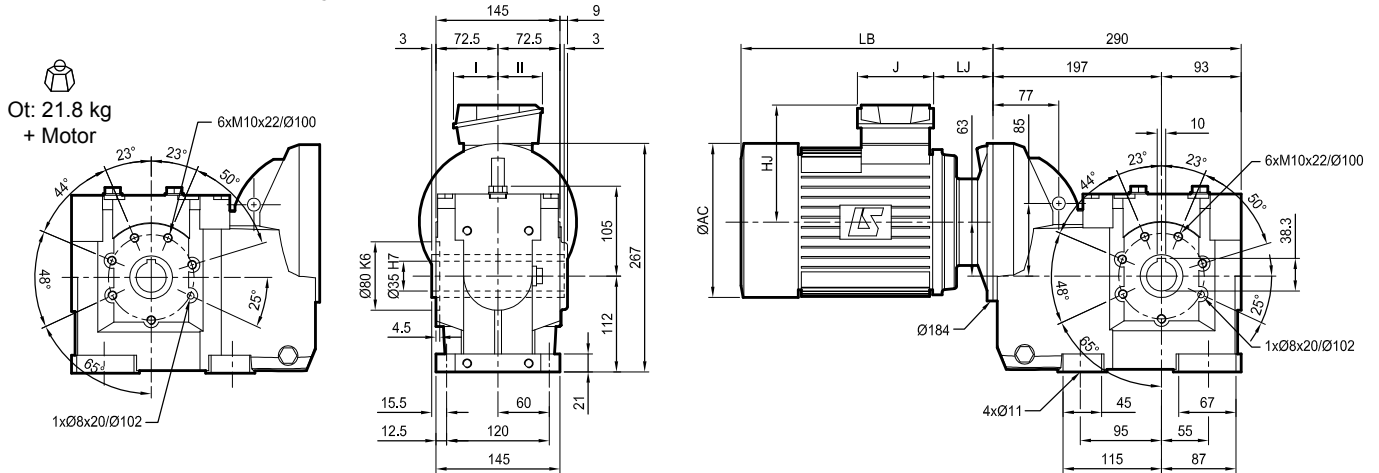
# Electromechanical products Orthobloc 3000

## Dimensions

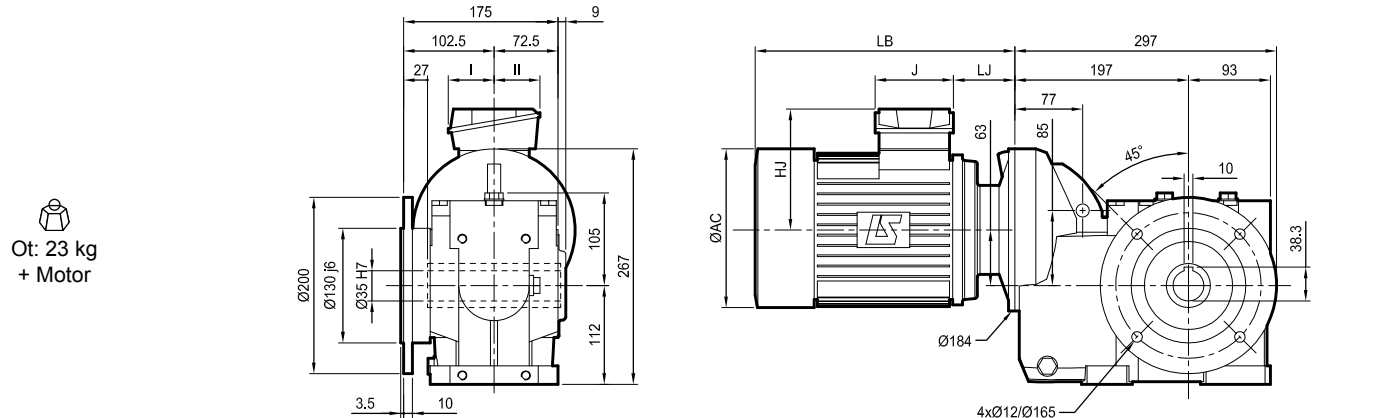
Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3232

Dimensions in millimetres

### - SBT LR faceplate form, H cylindrical hollow shaft

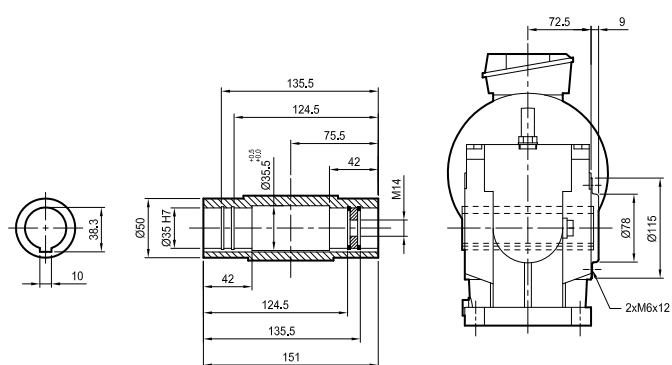


### - BD L\* flange form, H cylindrical hollow shaft

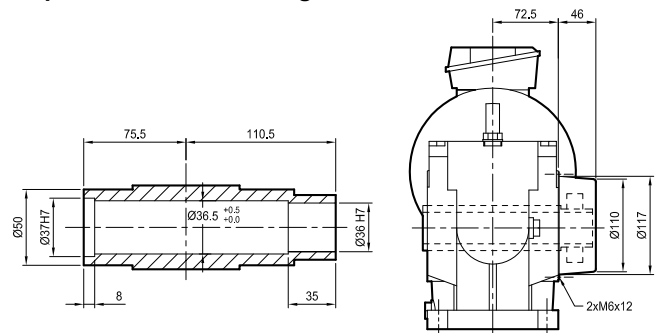


\*BDR H right option: identical flange and shaft

### - H hollow shaft details



### - Option: shrink disc on right SDR\*



\* left SDL

# Electromechanical products Orthobloc 3000

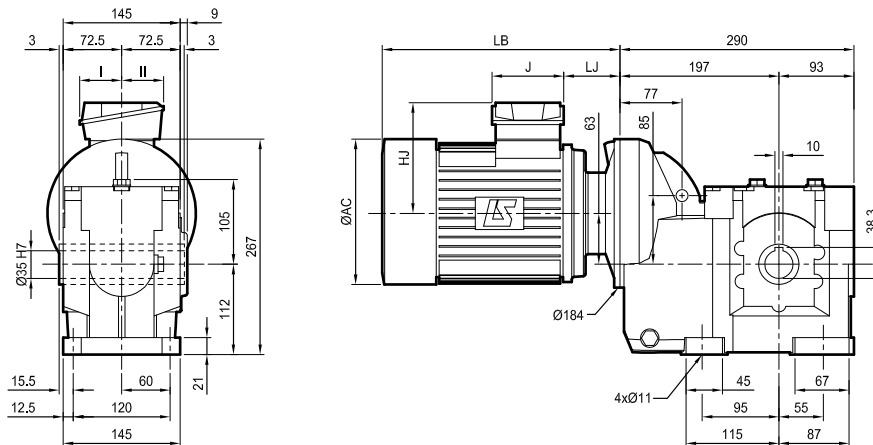
## Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3232

Dimensions in millimetres

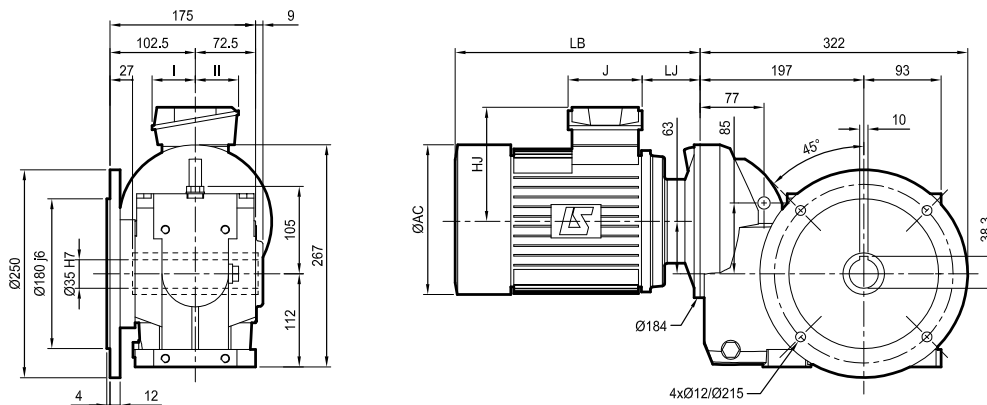
### - S foot mounted form, H cylindrical hollow shaft

  
Ot: 22 kg  
+ Motor





### - BS L\* flange form, H cylindrical hollow shaft

  
Ot: 23.3 kg  
+ Motor





\* BSR H right option: identical flange and shaft

#### 4-pole motors

Type	LSES							 kg	LSES FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LSSES 80	170	135	86	288	67.5	43	43	11.7	172	146	160	349.5	46	55	55	18
LSSES 90	190	135	86	290	71	43	43	15.2	184	156	160	349.5	58.5	55	55	24.2
LSSES 100LR	200	140	86	354.5	72	43	43	25.7	200	161	160	410	59.5	55	55	30
LSSES 112MU	235	149	86	371	73.5	43	43	35	235	169	160	434	61	55	55	44.5
LSSES 132SU	260	172	126	397	52.5	63	63	42	235	169	160	477	61	55	55	48

#### 4-pole motors

Type	LS							 kg	LS FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LS71 L	140	109	86	217	49	43	43	8.3	140	135	160	268	34	55	55	11.3
LS80 L	-	-	-	-	-	-	-	-	172	146	160	300	46	55	55	18
LS90L	-	-	-	-	-	-	-	-	184	156	160	349.5	58.5	55	55	24.2
LS100L	-	-	-	-	-	-	-	-	200	161	160	397.5	59.5	55	55	30
LS112MG	-	-	-	-	-	-	-	-	235	169	160	434	61	55	55	44.5
LS132S	-	-	-	-	-	-	-	-	235	169	160	457	61	55	55	48

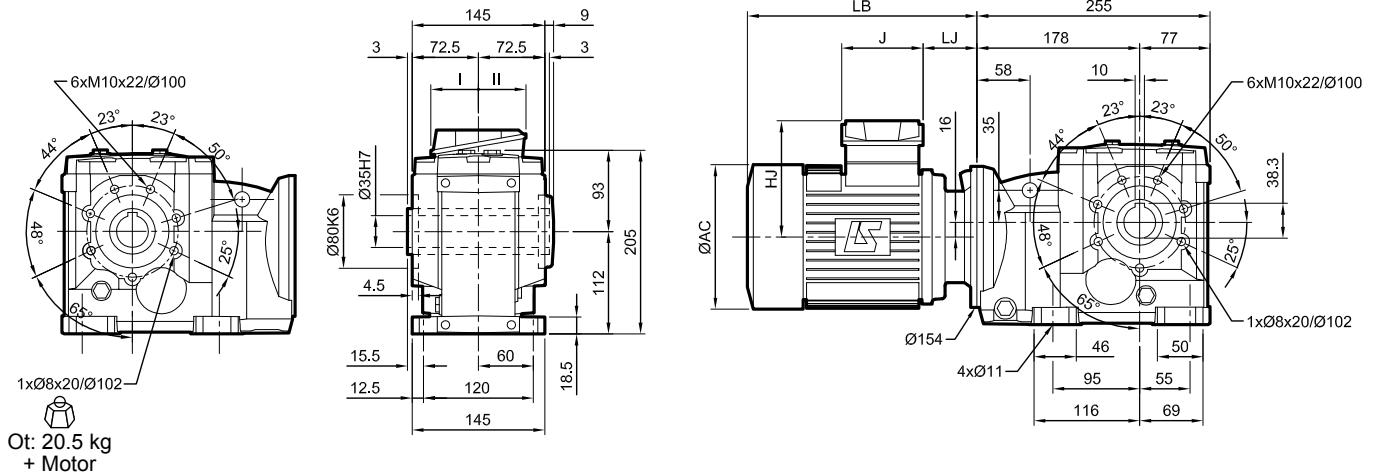
# Electromechanical products Orthobloc 3000

## Dimensions

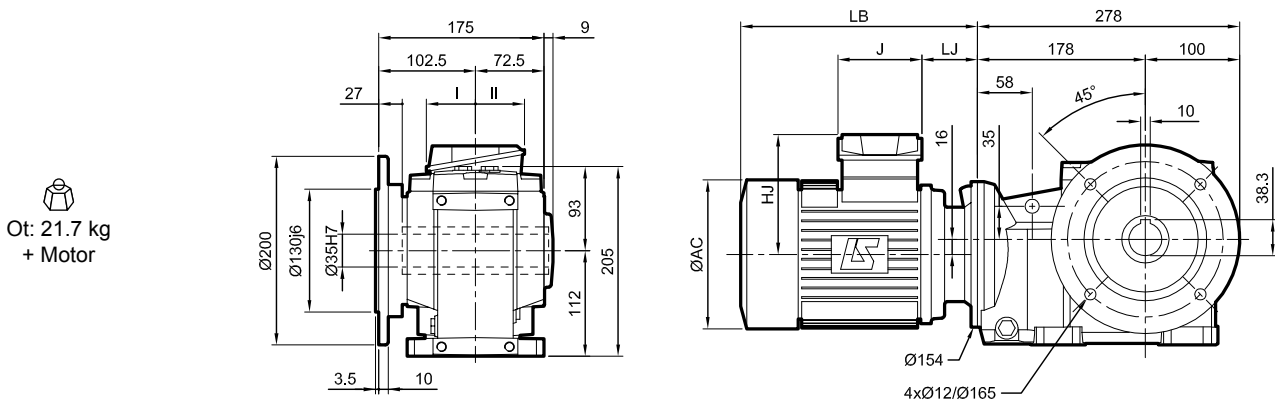
Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3233

Dimensions in millimetres

### - SBT LR faceplate form, H cylindrical hollow shaft

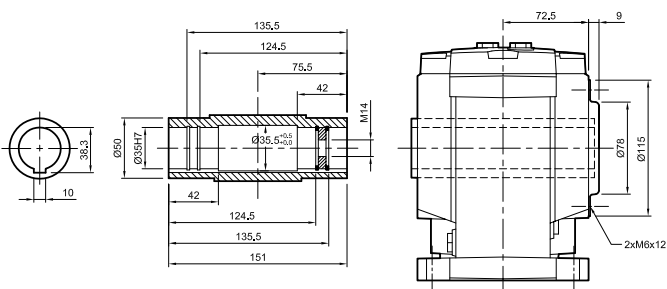


### - BD L\* flange form, H cylindrical hollow shaft

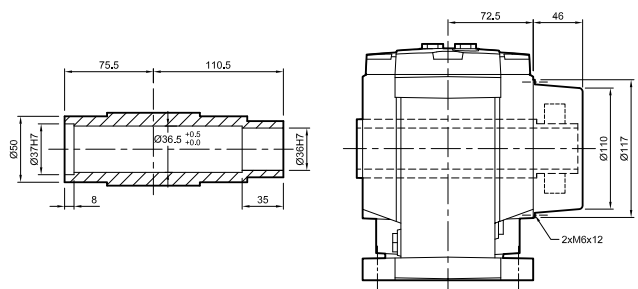


\*BDR H right option: identical flange and shaft

### - H hollow shaft details



### - Option: shrink disc on right SDR\*



\* left SDL

Keying on driven shaft: according to NF E22-175



# Electromechanical products Orthobloc 3000

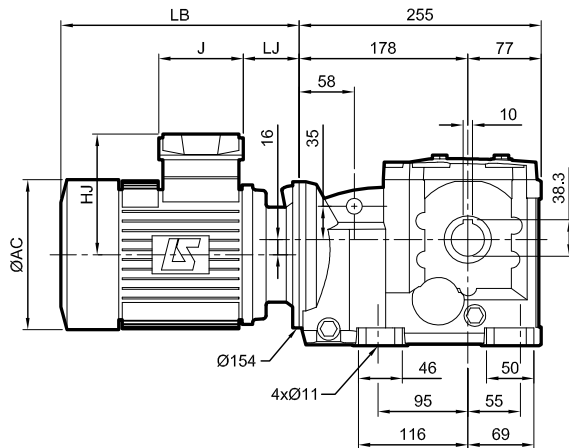
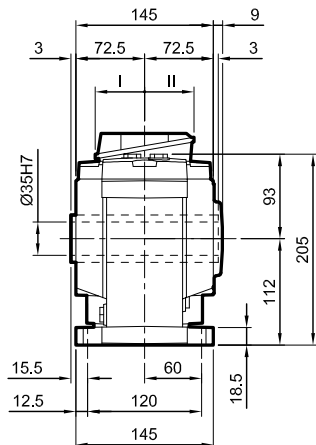
## Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3233

Dimensions in millimetres

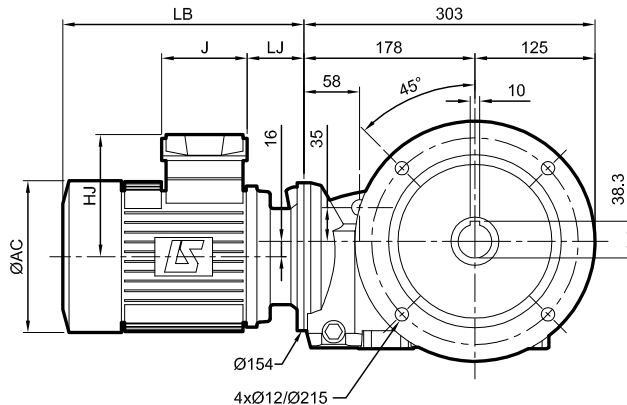
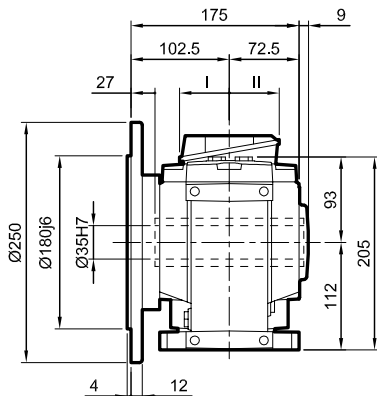
### - S foot mounted form, H cylindrical hollow shaft

  
Ot: 21 kg  
+ Motor



### - BS L\* flange form, H cylindrical hollow shaft

  
Ot: 22 kg  
+ Motor



\* BSR H right option: identical flange and shaft

Type	4-pole motors								kg	4-pole motors								kg
	LSES				LSES FCR					LSES				LSES FCR				
	AC	HJ	J	LB	LJ	I	II	AC		HJ	J	LB	LJ	I	II			
LSES 80	170	135	86	288.5	67.5	43	43	11.7	172	146	160	349.5	46	55	55	18		
LSES 90	190	135	86	290	71	43	43	15.2	184	156	160	349.5	58.5	55	55	24.2		
LSES 100LR	200	140	86	354.5	72	43	43	25.7	200	161	160	410	59.5	55	55	30		

Type	4-pole motors								kg	4-pole motors								kg
	LS				LS FCR					LS				LS FCR				
	AC	HJ	J	LB	LJ	I	II	AC		HJ	J	LB	LJ	I	II			
LS 71 L	140	109	86	217	49	43	43	8.3	140	135	160	268	34	55	55	11.3		
LS 80 L	-	-	-	-	-	-	-	-	172	146	160	300	46	55	55	18		
LS 90 L	-	-	-	-	-	-	-	-	184	156	160	349.5	58.5	55	55	24.2		
LS 100 L	-	-	-	-	-	-	-	-	200	161	160	397.5	59.5	55	55	30		

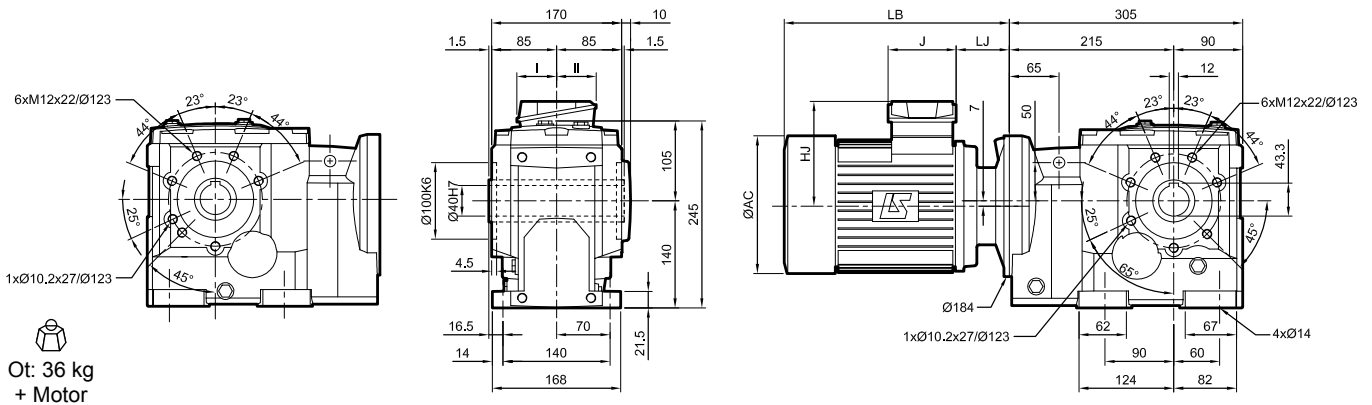
# Electromechanical products Orthobloc 3000

## Dimensions

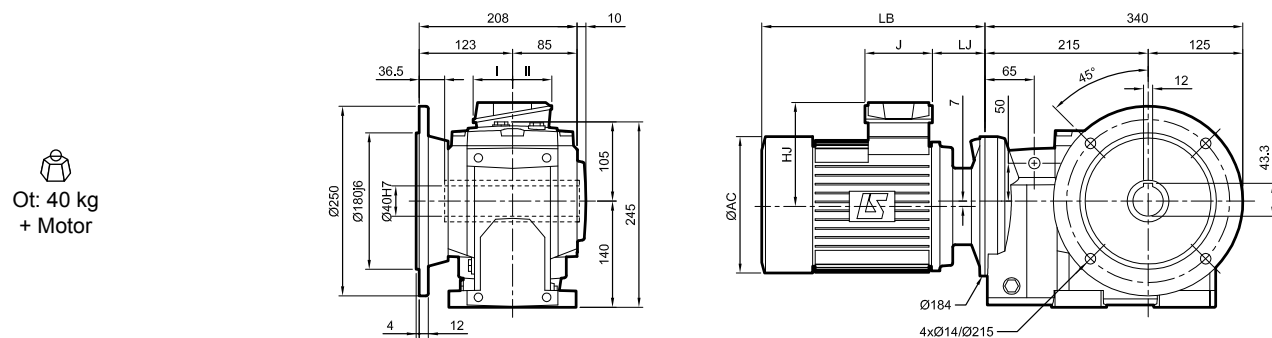
Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3333

Dimensions in millimetres

### - SBT LR faceplate form, H cylindrical hollow shaft

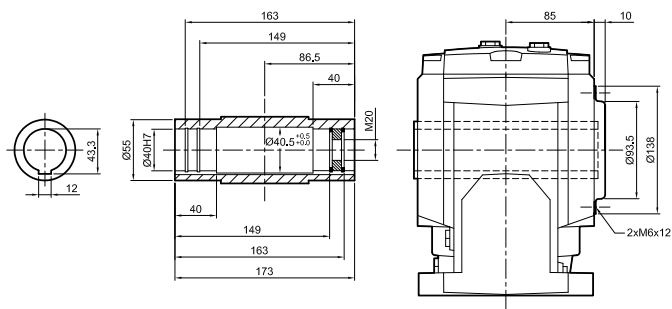


### - BD L\* flange form, H cylindrical hollow shaft

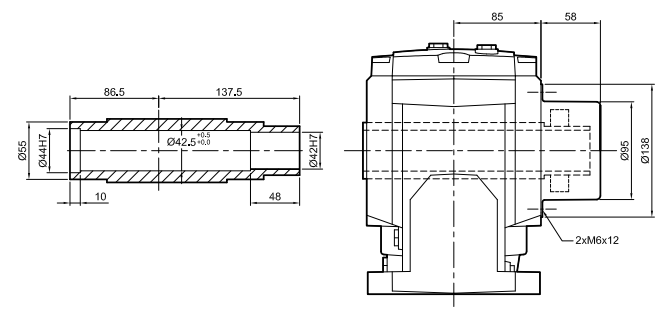


\* BDR H right option: identical flange and shaft

### - H hollow shaft details



### - Option: shrink disc on right SDR\*



\* left SDL

Keying on driven shaft: according to NF E22-175

# Electromechanical products

## Orthobloc 3000

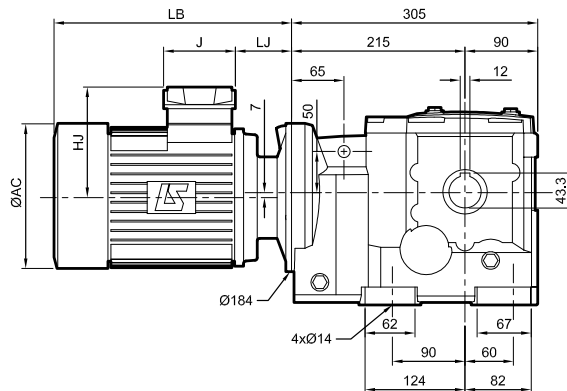
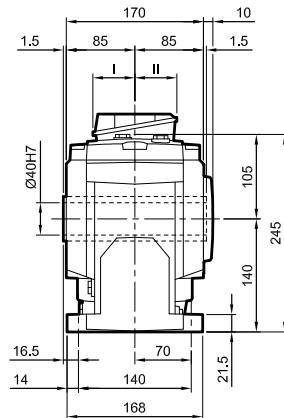
### Dimensions

#### Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting, Ot 3333

Dimensions in millimetres

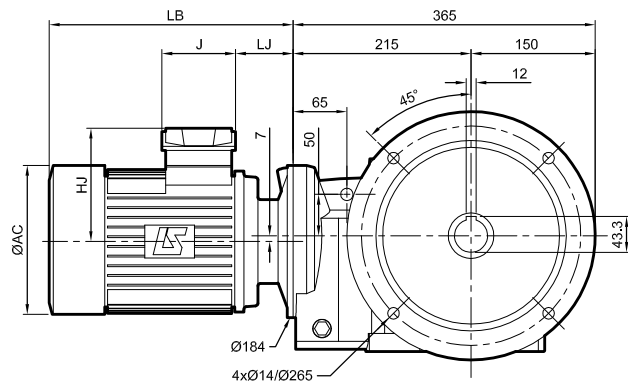
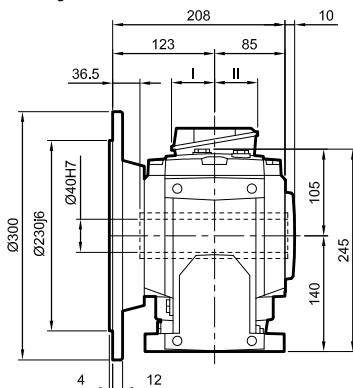
#### - S foot mounted form, H cylindrical hollow shaft

  
Ot: 37 kg  
+ Motor





#### - BS L\* flange form, H cylindrical hollow shaft

  
Ot: 40 kg  
+ Motor





\* BSR H right option: identical flange and shaft

#### 4-pole motors

Type	LSES							 kg	LSES FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LS 80	170	135	86	288	67.5	43	43	11.7	172	146	160	349.5	46	55	55	18
LS 90	190	135	86	290	71	43	43	15.2	184	156	160	349.5	58.5	55	55	24.2
LS 100LR	200	140	86	354.5	72	43	43	25.7	200	161	160	410	59.5	55	55	30
LS 112MU	235	149	86	371	73.5	43	43	35	235	169	160	434	61	55	55	44.5
LS 132SU	260	172	126	397	52.5	63	63	42	235	169	160	477	61	55	55	48

#### 4-pole motors

Type	LS							 kg	LS FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LS 71 L	140	109	86	217	49	43	43	8.3	140	135	160	268	34	55	55	11.3
LS 80 L	-	-	-	-	-	-	-	-	172	146	160	300	46	55	55	18
LS 90L	-	-	-	-	-	-	-	-	184	156	160	349.5	58.5	55	55	24.2
LS 100L	-	-	-	-	-	-	-	-	200	161	160	397.5	59.5	55	55	30
LS 112MG	-	-	-	-	-	-	-	-	235	169	160	434	61	55	55	44.5
LS 132S	-	-	-	-	-	-	-	-	235	169	160	457	61	55	55	48

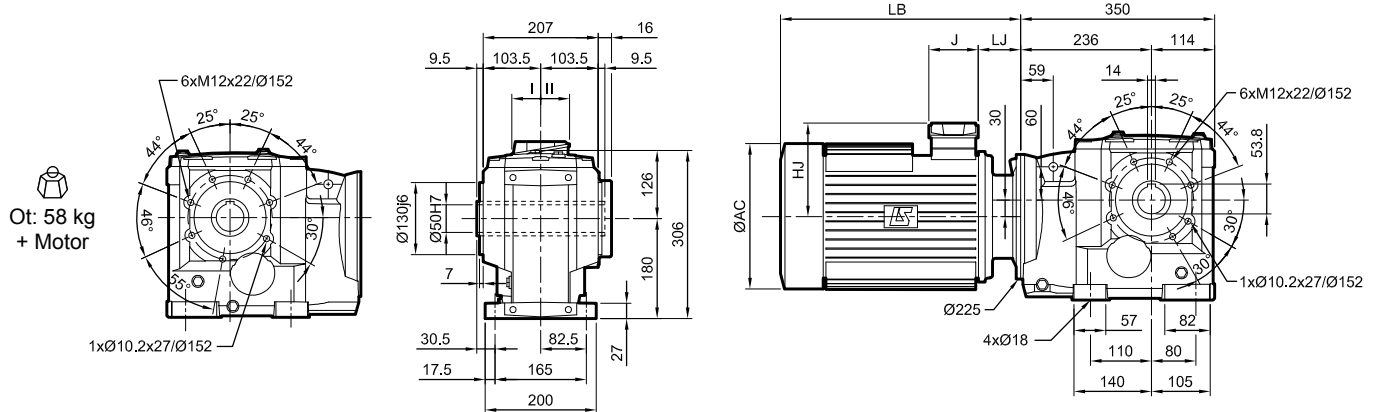
# Electromechanical products Orthobloc 3000

## Dimensions

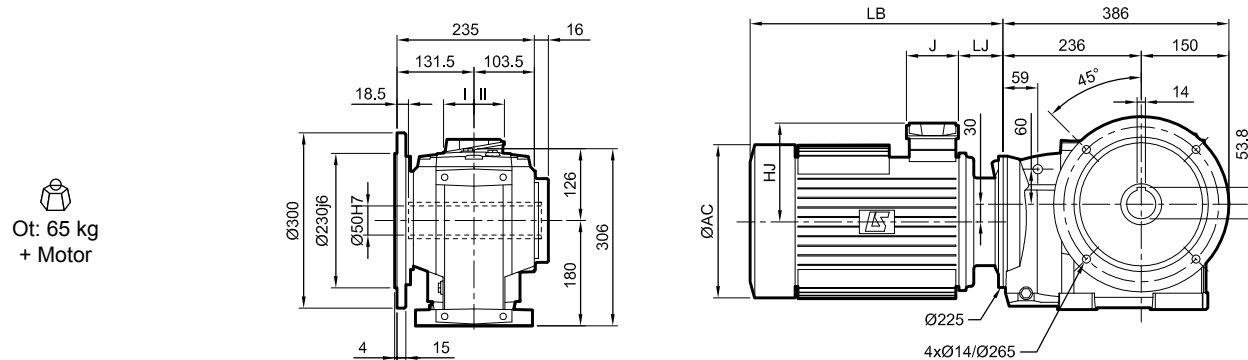
Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3433

Dimensions in millimetres

### - SBT LR faceplate form, H cylindrical hollow shaft

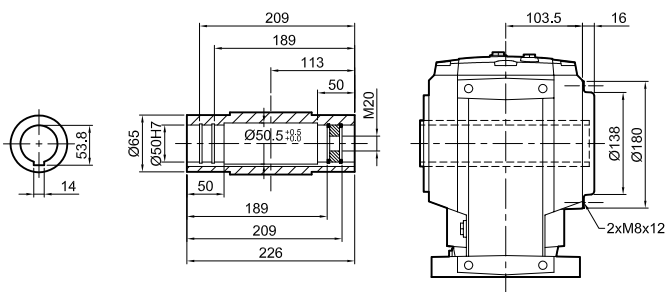


### - BD L\* flange form, H cylindrical hollow shaft

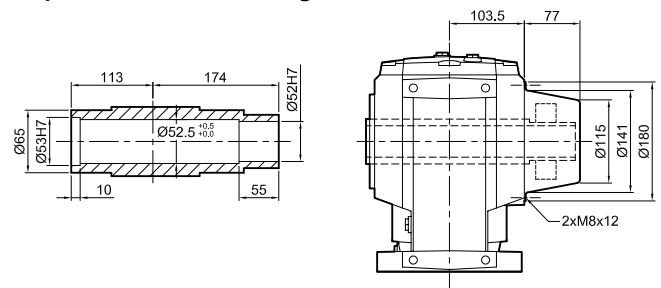


\*BDR H right option: identical flange and shaft

### - H hollow shaft details



### - Option: shrink disc on right SDR\*



\*left SDL

Keying on driven shaft: according to NF E22-175


# Electromechanical products Orthobloc 3000

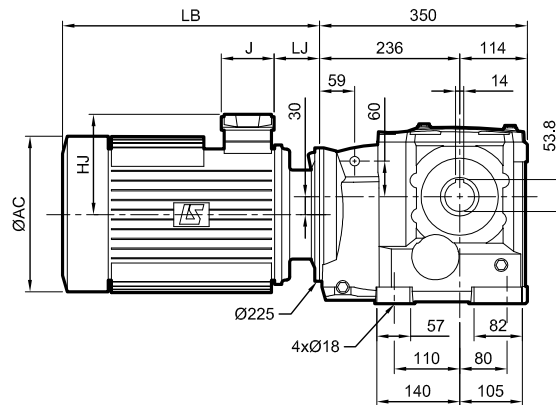
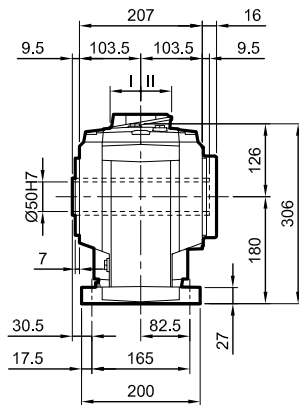
## Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3433

Dimensions in millimetres

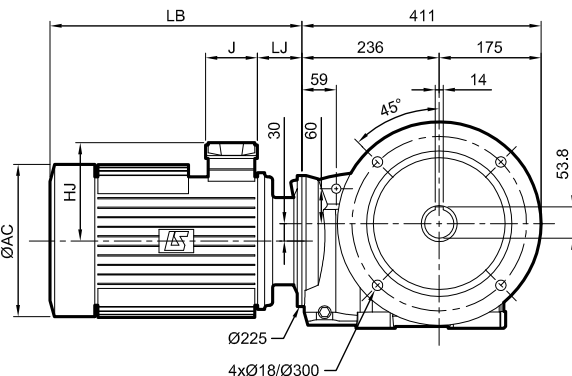
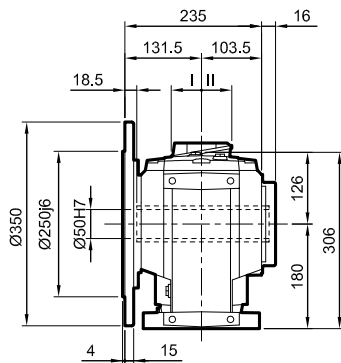
### - S foot mounted form, H cylindrical hollow shaft

  
Ot: 58.5 kg  
+ Motor





### - BS L\* flange form, H cylindrical hollow shaft

  
Ot: 66 kg  
+ Motor





\* BSR H right option: identical flange and shaft

#### 4-pole motors

Type	LSES							 kg	LSES FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LSES 80	170	135	86	284	63.5	43	43	11.7	172	146	160	345.5	42	55	55	18
LSES 90	190	135	86	286	67	43	43	15.2	184	156	160	345.5	54.5	55	55	24.2
LSES 100LR	200	140	86	350.5	68	43	43	25.7	200	161	160	406	55.5	55	55	30
LSES 112MU	235	149	86	367	69.5	43	43	35	235	169	160	430	58	55	55	44.5
LSES 132MU	265	190	126	460	65	63	63	68	280	188	160	541	73	55	55	80

#### 4-pole motors

Type	LS							 kg	LS FCR							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LS 71 L	140	109	86	213	45	43	43	8.3	140	130	160	254.5	21.5	55	55	11.3
LS 80 L	-	-	-	-	-	-	-	-	172	146	160	296	42	55	55	18
LS 90L	-	-	-	-	-	-	-	-	184	156	160	345.5	54.5	55	55	24.2
LS 100L	-	-	-	-	-	-	-	-	200	161	160	393.5	55.5	55	55	30
LS 112MG	-	-	-	-	-	-	-	-	235	169	160	430	58	55	55	44.5
LS 132M	-	-	-	-	-	-	-	-	280	188	160	541	73	55	55	80

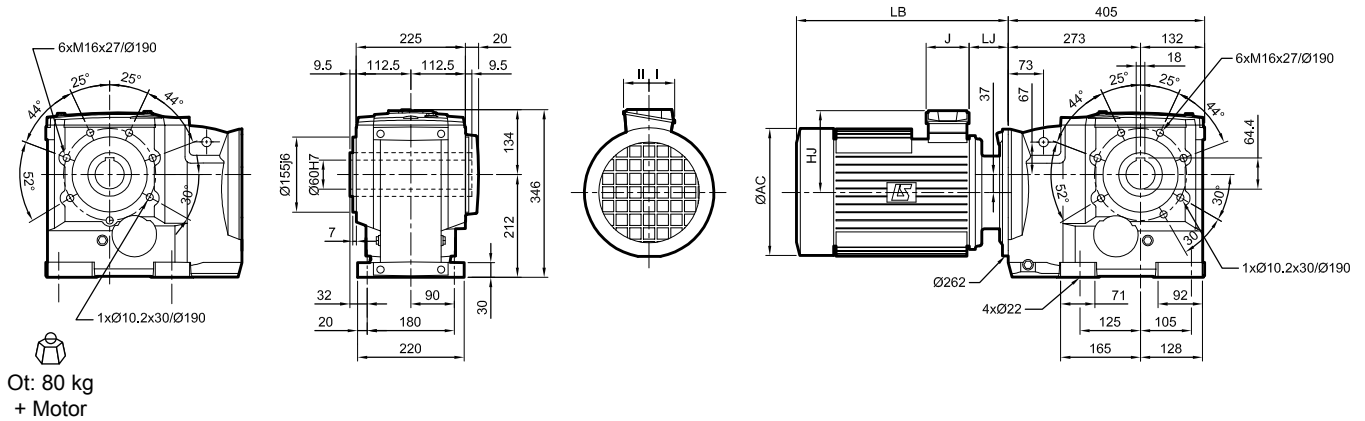
# Electromechanical products Orthobloc 3000

## Dimensions

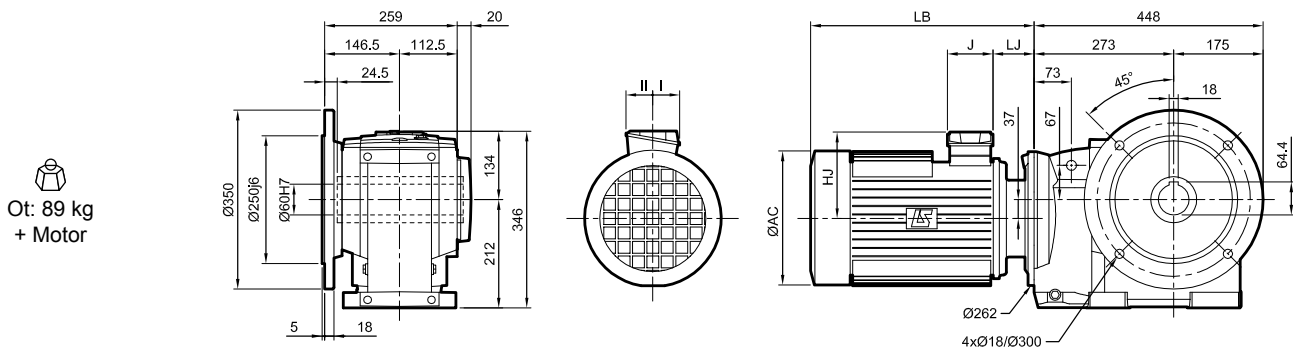
Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3533

Dimensions in millimetres

### - SBT LR faceplate form, H cylindrical hollow shaft

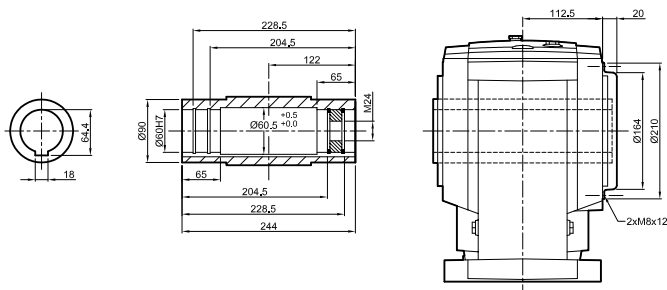


### - BD L\* flange form, H cylindrical hollow shaft

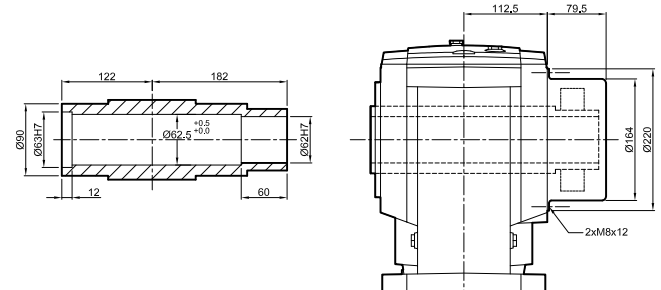


\* BDR H right option: identical flange and shaft

### - H hollow shaft details



### - Option: shrink disc on right SDR\*



\* left SDL

Keying on driven shaft: according to NF E22-175

# Electromechanical products Orthobloc 3000

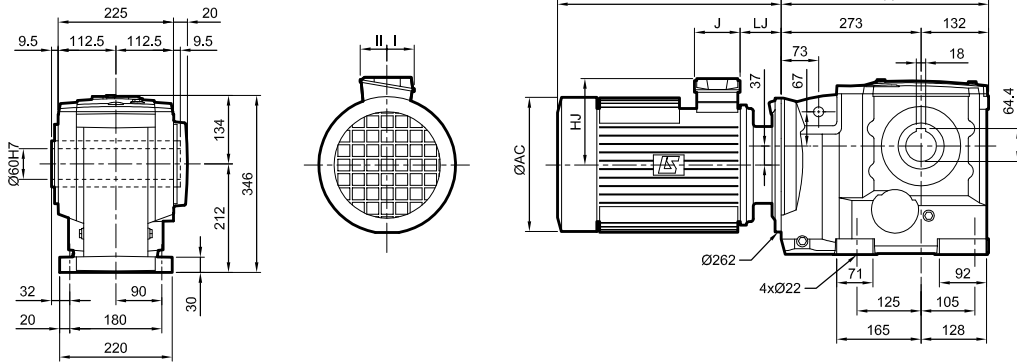
## Dimensions

### Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting, Ot 3533

Dimensions in millimetres

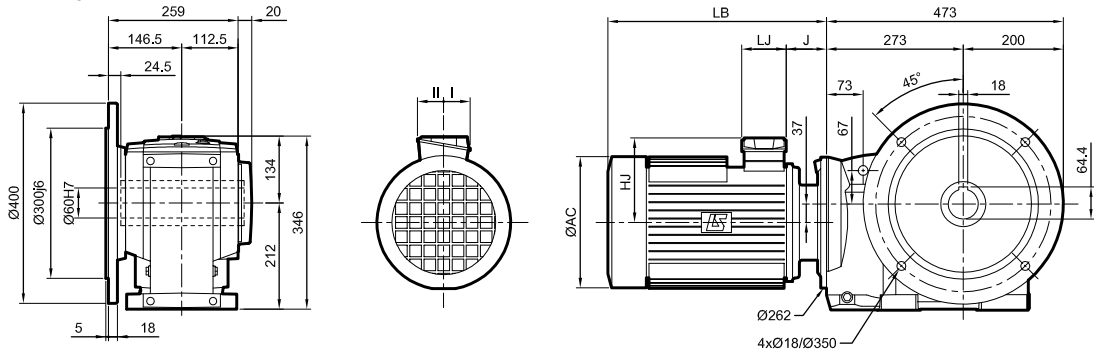
#### - S foot mounted form, H cylindrical hollow shaft

  
Ot: 82 kg  
+ Motor



#### - BS L\* flange form, H cylindrical hollow shaft

  
Ot: 91 kg  
+ Motor



\* BSR H right option: identical flange and shaft

Type	4-pole motors																								
	LSES							LSES FCR							LSES FCPL										
	AC	HJ	J	LB	LJ	I	II	kg	AC	HJ	J	LB	LJ	I	II	kg	AC	HJ	J	LB	LJ	I	II	kg	
LSES 80LG	170	135	86	288.5	68	43	43	11.7	172	146	160	345.5	46.5	55	55	18	-	-	-	-	-	-	-	-	-
LSES 90L	190	135	86	286	67	43	43	15.2	184	156	160	345.5	54.5	55	55	24.2	-	-	-	-	-	-	-	-	-
LSES 100LR	200	140	86	350.5	68	43	43	25.7	200	161	160	406	55.5	55	55	30	-	-	-	-	-	-	-	-	-
LSES 112MU	235	149	86	367	69.5	43	43	35	235	169	160	434	61	55	55	44.5	-	-	-	-	-	-	-	-	-
LSES 132MU	265	190	126	464	69	63	63	68	280	188	160	545	77	55	55	80	-	-	-	-	-	-	-	-	-
LSES 160L	312	222	126	508	60.8	63	63	91	316	231	160	620	96	55	55	110	345	235	134	681	56.8	92	63	140	
LSES 180LR	312	248	186	533	67.8	112	98	115	-	-	-	-	-	-	-	-	345	235	134	696	57	92	63	155	

Type	4-pole motors																
	LS FCR							LS FCPL									
	AC	HJ	J	LB	LJ	I	II	kg	AC	HJ	J	LB	LJ	I	II	kg	
LS 80 L	172	146	160	300.5	46.5	55	55	18	-	-	-	-	-	-	-	-	
LS 90L	184	156	160	345.5	54.5	55	55	24.2	-	-	-	-	-	-	-	-	
LS 100L	200	161	160	393.5	55.5	55	55	30	-	-	-	-	-	-	-	-	
LS 112 MG	235	169	160	434	61	55	55	44.5	-	-	-	-	-	-	-	-	
LS 132 M	280	188	160	545	77	55	55	80	-	-	-	-	-	-	-	-	
LS 160L	316	231	160	620	96	55	55	110	345	235	134	681	56.8	92	63	140	
LS 180LR	-	-	-	-	-	-	-	-	345	235	134	696	57	92	63	155	

# Electromechanical products

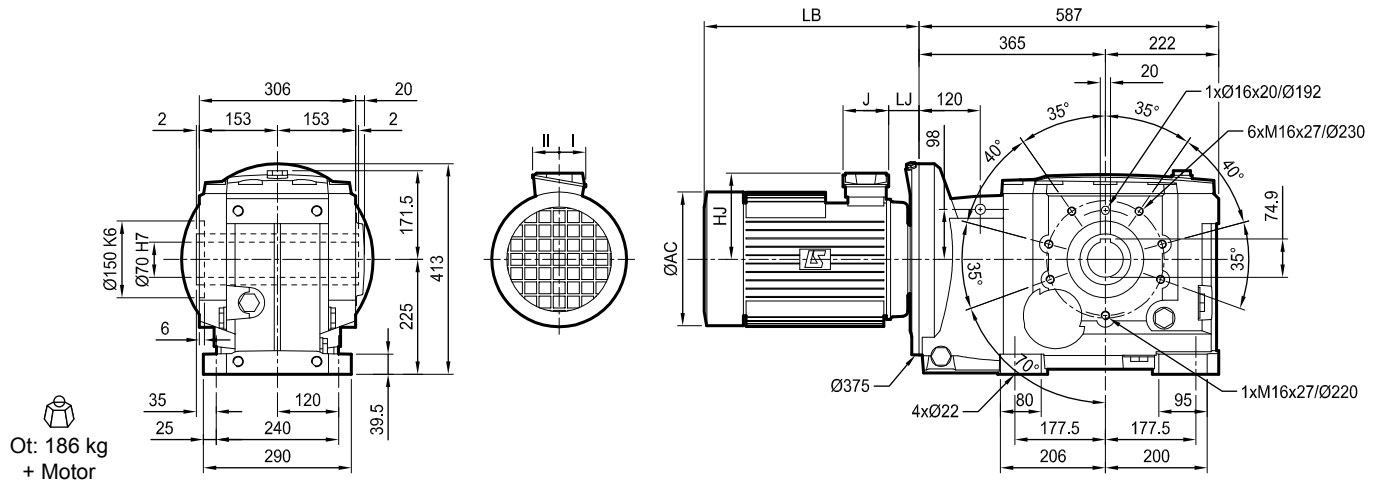
## Orthobloc 3000

### Dimensions

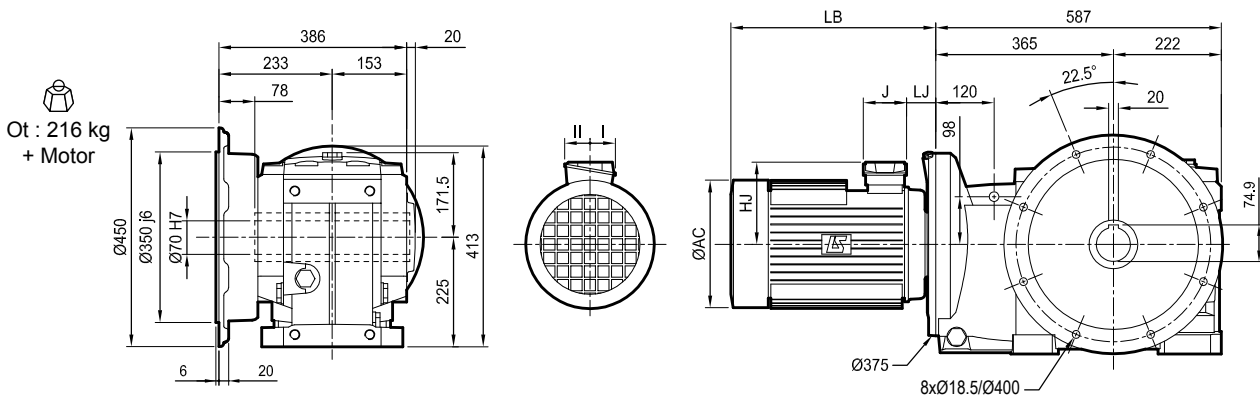
Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3633

Dimensions in millimetres

#### - SBT LR faceplate form, H cylindrical hollow shaft

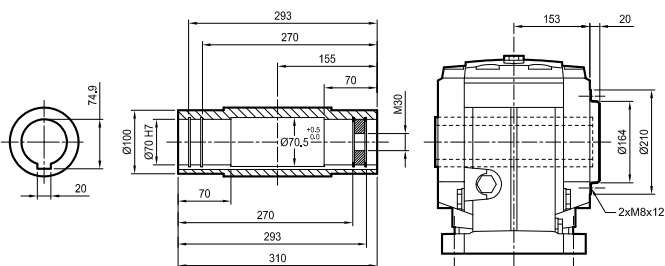


#### - BD L\* flange form, H cylindrical hollow shaft

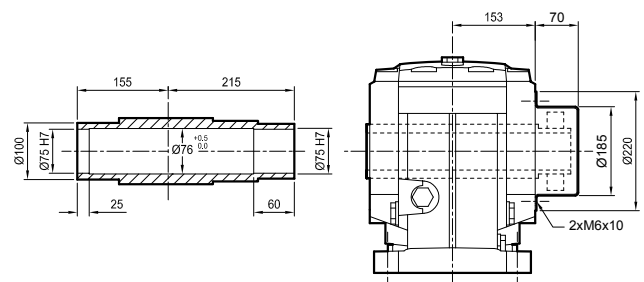


\* BDR H right option: identical flange and shaft

#### - H hollow shaft details



#### - Option: shrink disc on right SDR\*



\* left SDL



# Electromechanical products

## Orthobloc 3000

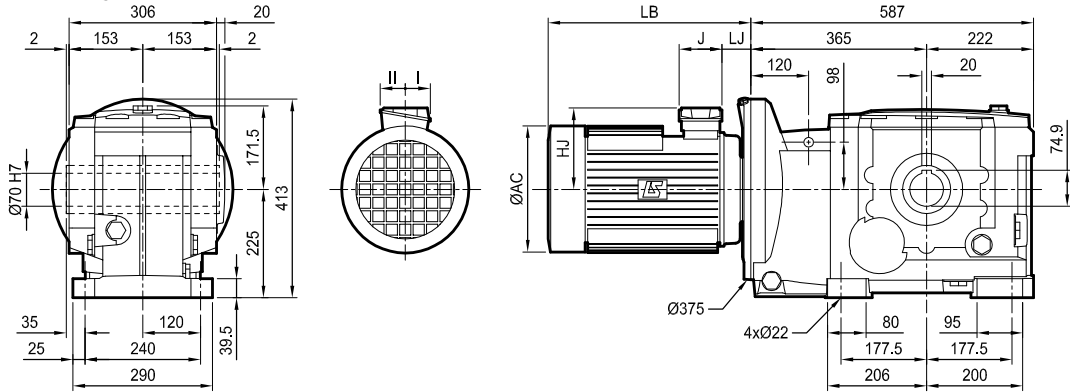
### Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3633

Dimensions in millimetres

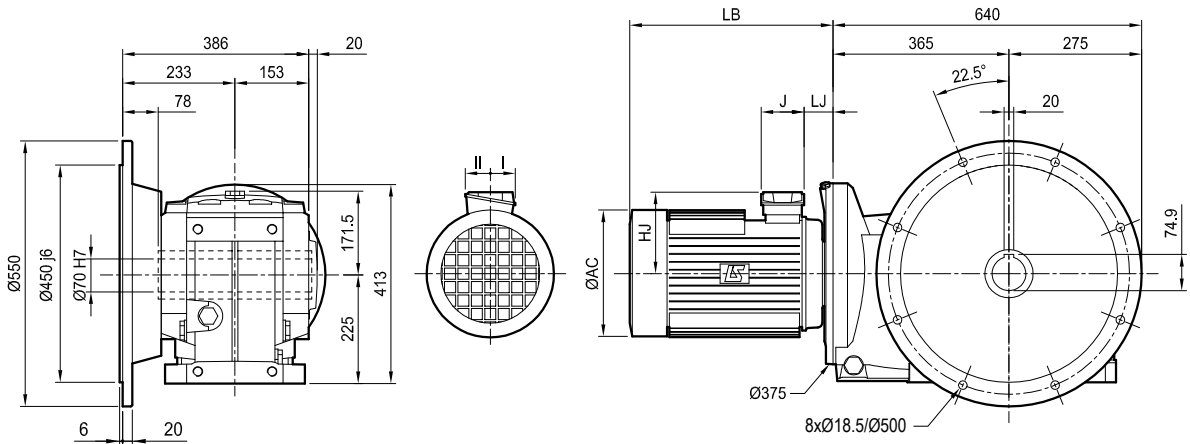
#### - S foot mounted form, H cylindrical hollow shaft

Ot: 188 kg  
+ Motor



#### - BS L\* flange form, H cylindrical hollow shaft

Ot: 222 kg  
+ Motor



\* BSR H right option: identical flange and shaft

Type	4-pole motors																								
	LSES							LSES FCR							LSES FCPL										
	AC	HJ	J	LB	LJ	I	II	kg	AC	HJ	J	LB	LJ	I	II	kg	AC	HJ	J	LB	LJ	I	II	kg	
LSES 90L	190	135	86	272	53	43	43	15.2	184	156	160	331.5	48.5	55	55	24.2	-	-	-	-	-	-	-	-	-
LSES 100LR	200	140	86	336.5	54	43	43	25.7	200	161	160	394.5	52	55	55	30	-	-	-	-	-	-	-	-	-
LSES 112MU	235	149	86	353	55.5	43	43	35	235	169	160	421	51	55	55	44.5	-	-	-	-	-	-	-	-	-
LSES 132MU	265	190	126	446	51	63	63	68	280	188	160	527	66.5	55	55	80	-	-	-	-	-	-	-	-	-
LSES 160L	312	222	126	490	42.8	63	63	91	316	231	160	564	58	55	55	110	345	235	134	672	47.8	92	63	140	
LSES 180LR	312	248	186	515	49.8	112	98	115	-	-	-	-	-	-	-	-	345	235	134	678	39	92	63	150	
LSES 200LR	350	256	186	609	58.5	112	98	164	-	-	-	-	-	-	-	-	384	256	186	774	84.5	111	98	240	
LSES 225MR	390	310	231	674	59.5	119	142	235	-	-	-	-	-	-	-	-	410	276	186	837	82	111	98	320	

Type	4-pole motors																
	LS FCR							LS FCPL									
	AC	HJ	J	LB	LJ	I	II	kg	AC	HJ	J	LB	LJ	I	II	kg	
LS 90L	184	156	160	331.5	48.5	55	55	24.2	-	-	-	-	-	-	-	-	
LS 100L	200	161	160	382	52	55	55	30	-	-	-	-	-	-	-	-	
LS 112 MG	235	169	160	421	51	55	55	44.5	-	-	-	-	-	-	-	-	
LS 132 M	280	188	160	527	66.5	55	55	80	-	-	-	-	-	-	-	-	
LS 160L	316	231	160	564	58	55	55	110	345	235	134	672	47.8	92	63	140	
LS 180LR	-	-	-	-	-	-	-	-	345	235	134	678	39	92	63	150	
LS 200LT	-	-	-	-	-	-	-	-	384	256	186	774	84.5	111	98	240	
LS 225MR	-	-	-	-	-	-	-	-	410	276	186	837	82	111	98	320	

# Electromechanical products

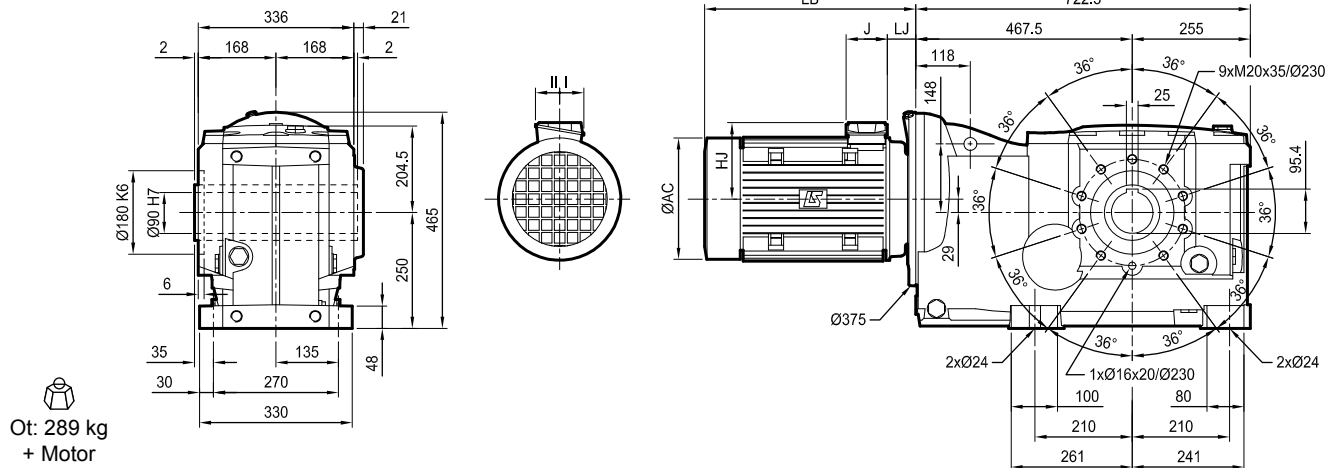
## Orthobloc 3000

### Dimensions

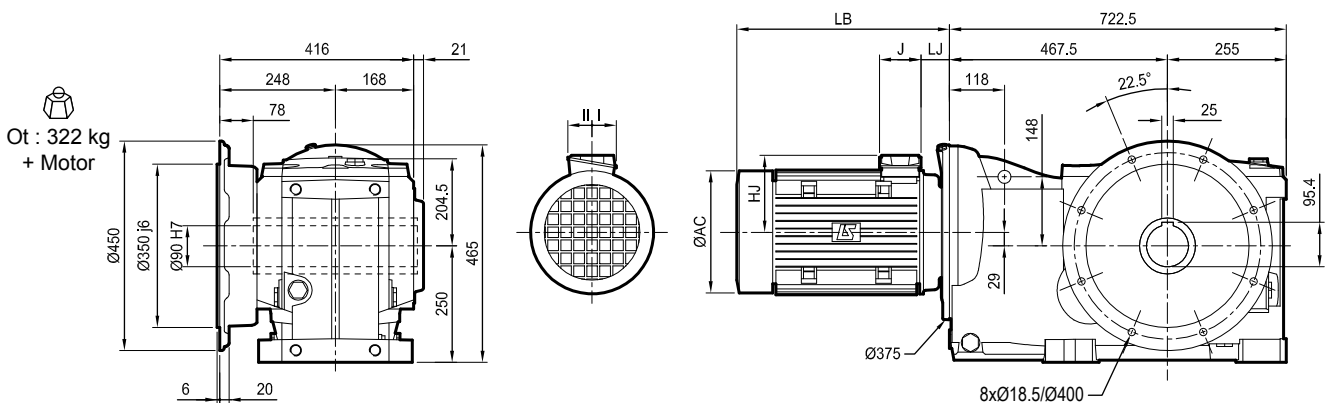
Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3733

Dimensions in millimetres

#### - SBT LR faceplate form, H cylindrical hollow shaft

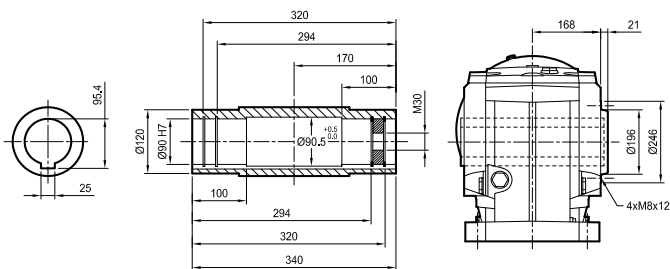


#### - BD L\* flange form, H cylindrical hollow shaft

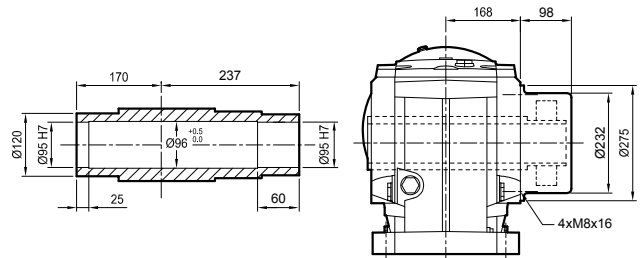


\* BDR H right option: identical flange and shaft

#### - H hollow shaft details



#### - Option: shrink disc on right SDR\*



\* left SDL

# Electromechanical products Orthobloc 3000

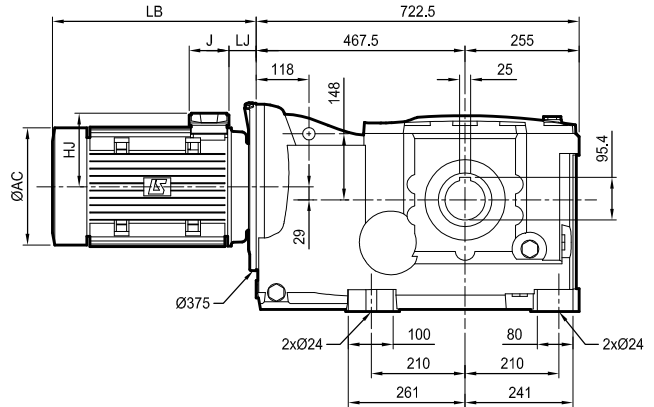
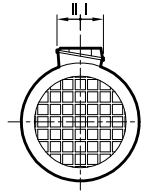
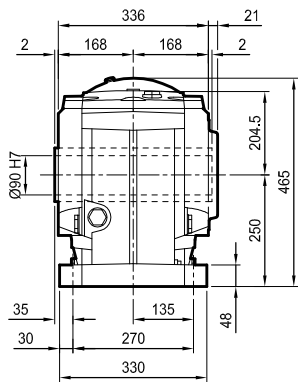
## Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3733

Dimensions in millimetres

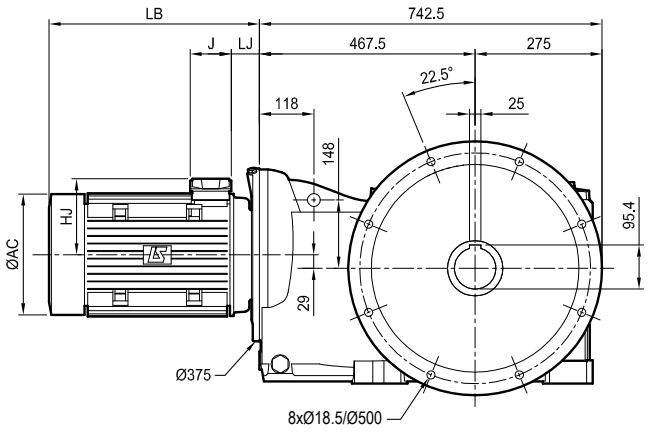
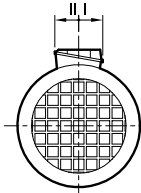
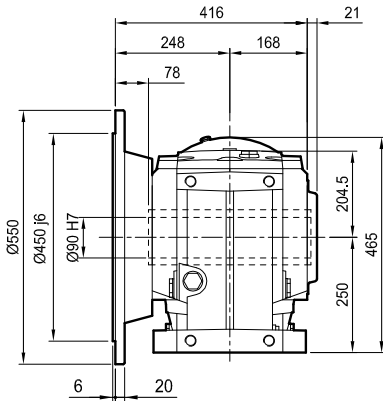
### - S foot mounted form, H cylindrical hollow shaft

Ot: 292 kg  
+ Motor



### - BS L\* flange form, H cylindrical hollow shaft

Ot: 328 kg  
+ Motor



\*BSR H right option: identical flange and shaft

Type	LSES							kg	4-pole motors LSES FCR							kg	LSES FCPL							kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LSES 90L	190	135	86	272	53	43	43	15.2	184	156	160	331.5	48.5	55	55	24.2	-	-	-	-	-	-	-	-
LSES 100LR	200	140	86	336.5	54	43	43	25.7	200	161	160	394.5	52	55	55	30	-	-	-	-	-	-	-	-
LSES 112MU	235	149	86	353	55.5	43	43	35	235	169	160	421	51	55	55	44.5	-	-	-	-	-	-	-	-
LSES 132MU	265	190	126	446	51	63	63	68	280	188	160	527	66.5	55	55	80	-	-	-	-	-	-	-	-
LSES 160L	312	222	126	490	42.8	63	63	91	316	231	160	564	58	55	55	110	345	235	134	672	47.8	92	63	140
LSES 180LR	312	248	186	515	49.8	112	98	115	-	-	-	-	-	-	-	-	345	235	134	678	39	92	63	150
LSES 200LR	350	256	186	609	58.5	112	98	164	-	-	-	-	-	-	-	-	384	256	186	774	84.5	111	98	240
LSES 225MR	390	310	231	674	59.5	119	142	235	-	-	-	-	-	-	-	-	410	276	186	837	82	111	98	320

Type	4-pole motors LS FCR							kg	LS FCPL							kg								
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II									
LS 90L	184	156	160	331.5	48.5	55	55	24.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LS 100L	200	161	160	382	52	55	55	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LS 112 MG	235	169	160	421	51	55	55	44.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LS 132 M	280	188	160	527	66.5	55	55	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LS 160L	316	231	160	564	58	55	55	110	345	235	134	672	47.8	92	63	140	-	-	-	-	-	-	-	
LS 180LR	-	-	-	-	-	-	-	-	345	235	134	678	39	92	63	150	-	-	-	-	-	-	-	-
LS 200LT	-	-	-	-	-	-	-	-	384	256	186	774	84.5	111	98	240	-	-	-	-	-	-	-	-
LS 225MR	-	-	-	-	-	-	-	-	410	276	186	837	82	111	98	320	-	-	-	-	-	-	-	-

# Electromechanical products


## Orthobloc 3000

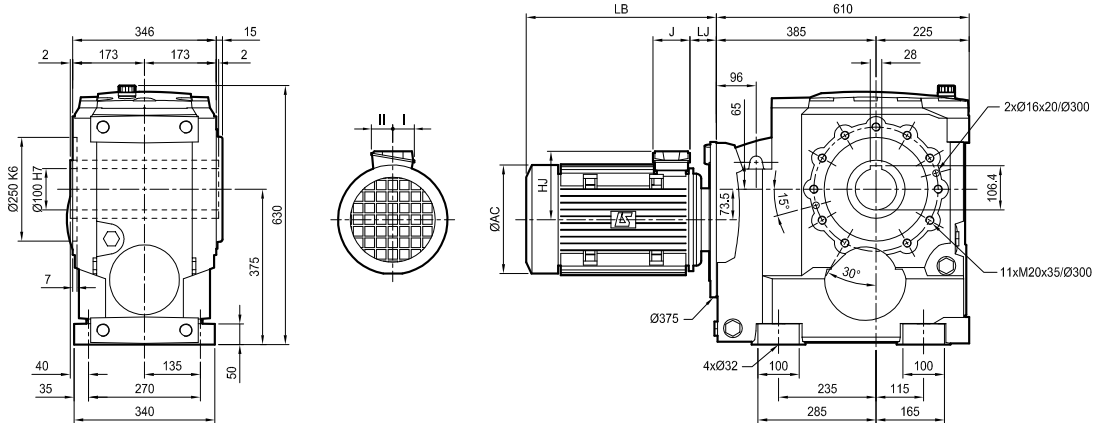
### Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3833


Dimensions in millimetres

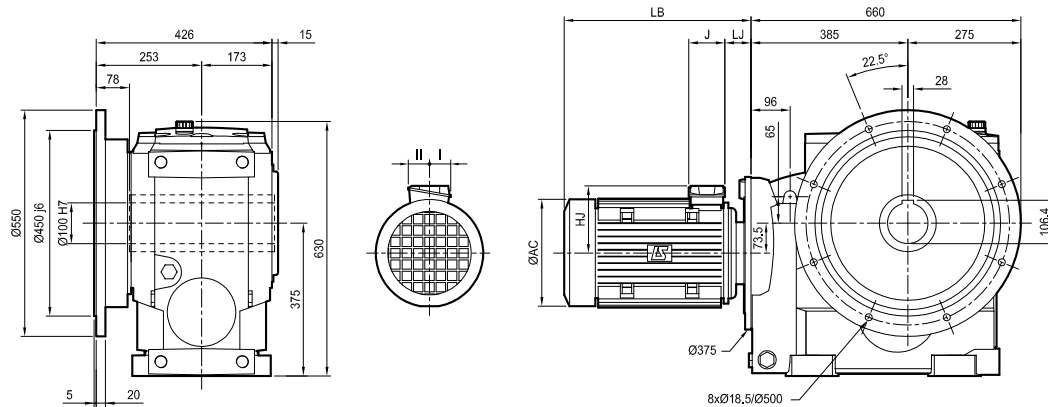
#### - SBT LR faceplate form, H cylindrical hollow shaft

  
Ot : 347 kg  
+ mot



#### - BD L\* flange form, H cylindrical hollow shaft

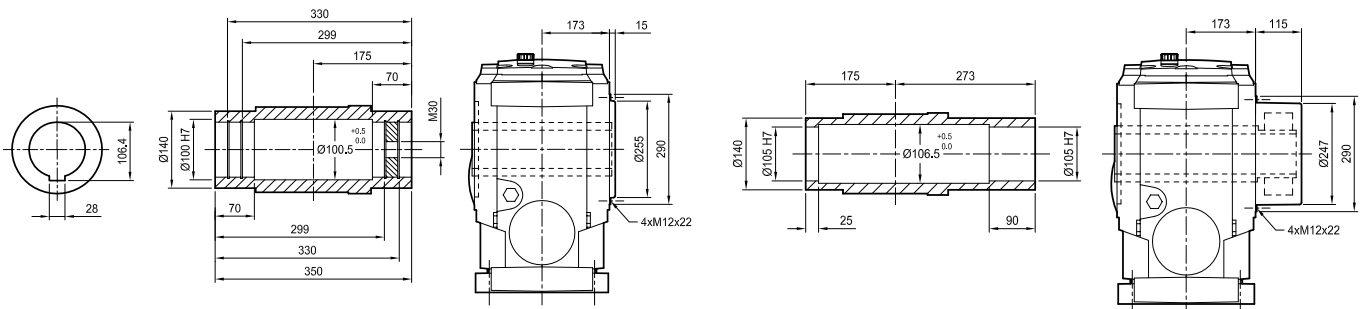
  
Ot : 374 kg  
+ mot



\* BDR H right option: identical flange and shaft

#### - H hollow shaft details

#### - Option: shrink disc on right SDR\*



\* left SDL

# Electromechanical products


## Orthobloc 3000

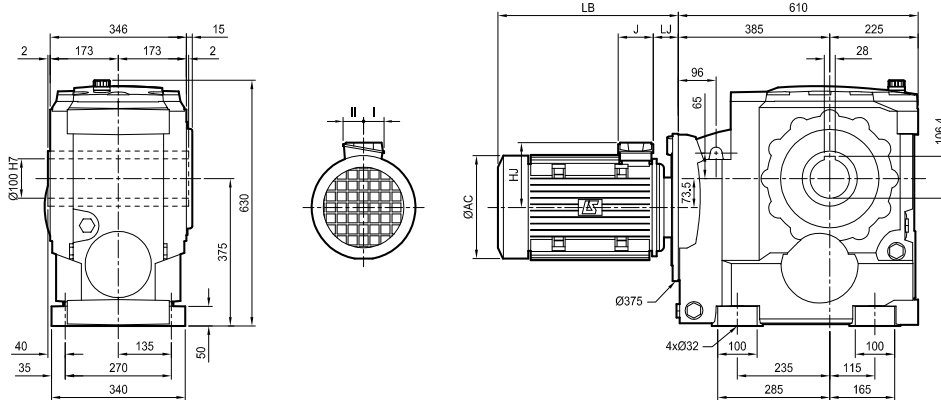
### Dimensions

Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting,  
Ot 3833


Dimensions in millimetres

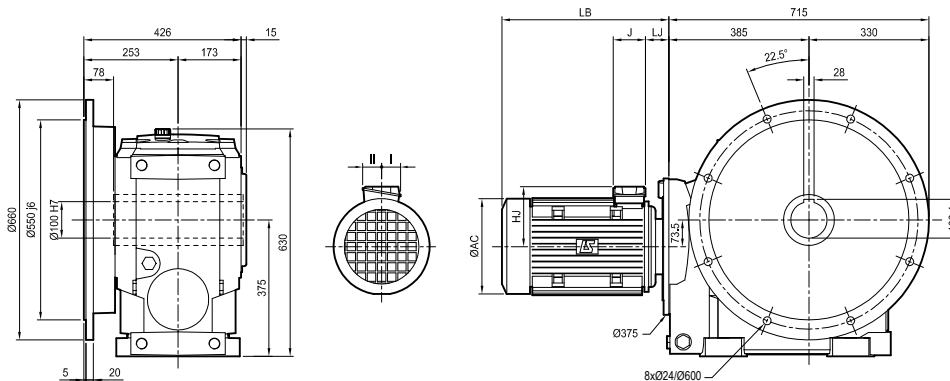
#### - S foot mounted form, H cylindrical hollow shaft

 Ot : 350 kg + mot








#### - BS L\* flange form, H cylindrical hollow shaft

 Ot : 408 kg + mot



\*BSR H right option: identical flange and shaft

Type	LSES								4-pole motors LSES FCR								LSES FCPL								
	AC	HJ	J	LB	LJ	I	II		kg	AC	HJ	J	LB	LJ	I		II	kg	AC	HJ	J	LB	LJ		I
LSES 132MU	265	190	126	446	51	63	63	68	280	188	160	527	66.5	55	55	80	-	-	-	-	-	-	-	-	-
LSES 160L	312	222	126	490	42.8	63	63	91	316	231	160	564	58	55	55	110	345	235	134	672	47.8	92	63	140	
LSES 180LR	312	248	186	515	49.8	112	98	115	-	-	-	-	-	-	-	-	345	235	134	678	39	92	63	150	
LSES 200LR	350	256	186	609	58.5	112	98	164	-	-	-	-	-	-	-	-	384	256	186	774	84.5	111	98	240	
LSES 225MR	390	310	231	674	59.5	119	142	235	-	-	-	-	-	-	-	-	410	276	186	837	82	111	98	320	

Type	4-pole motors LS FCR								LS FCPL								
	AC	HJ	J	LB	LJ	I	II		kg	AC	HJ	J	LB	LJ	I		II
LS 132 M	280	188	160	527	66.5	55	55	80	-	-	-	-	-	-	-	-	-
LS 160L	316	231	160	564	58	55	55	110	345	235	134	672	47.8	92	63	140	
LS 180LR	-	-	-	-	-	-	-	-	345	235	134	678	39	92	63	150	
LS 200LT	-	-	-	-	-	-	-	-	384	256	186	774	84.5	111	98	240	
LS 225MR	-	-	-	-	-	-	-	-	410	276	186	837	82	111	98	320	




# Electromechanical products Orthobloc 3000

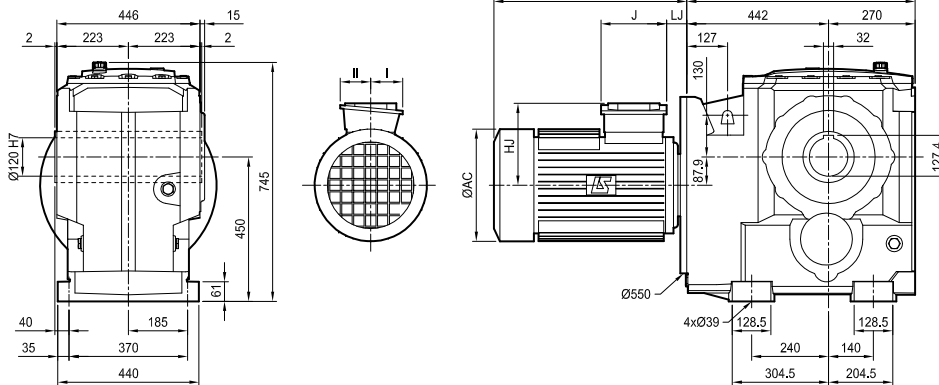
## Dimensions

### Dimensions of Orthobloc (Ot) gearboxes, MI integral mounting, Ot 3933


Dimensions in millimetres

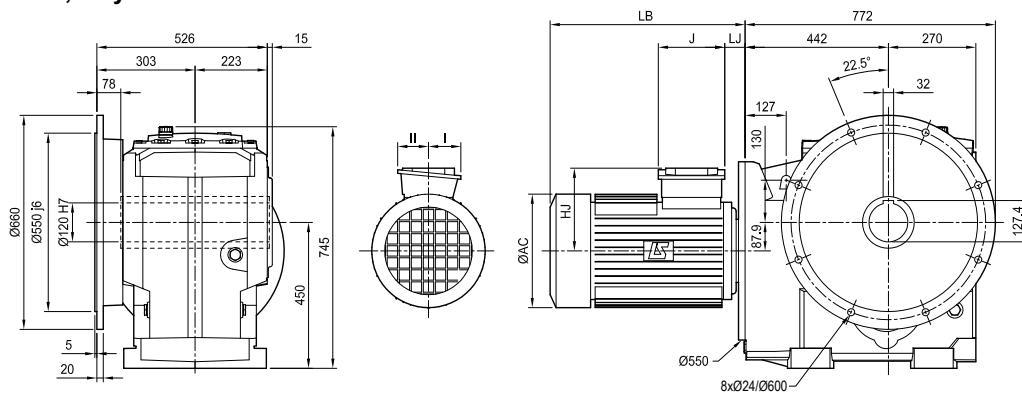
#### - S foot mounted form, H cylindrical hollow shaft

  
Ot : 570 kg  
+ mot








#### - BS L\* flange form, H cylindrical hollow shaft

  
Ot : 648 kg  
+ mot



\* BSR H right option: identical flange and shaft

Type	LSES							 kg	4-pole motors LSES FCR							 kg	LSES FCPL							 kg
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II	
LSES 132MU	265	190	126	433	38	63	63	68	280	188	160	514	53.5	55	55	-	-	-	-	-	-	-	-	
LSES 160L	312	222	126	477	29.8	63	63	91	316	231	160	551	45	55	55	345	235	134	659	34.8	92	63	140	
LSES 180LR	312	248	186	502	36.8	112	98	115	-	-	-	-	-	-	-	345	235	134	665	26	92	63	150	
LSES 200LR	350	256	186	596	45.5	112	98	164	-	-	-	-	-	-	-	384	256	186	761	71.5	111	98	240	
LSES 225MR	390	310	231	661	46.5	119	142	235	-	-	-	-	-	-	-	410	276	186	865	69	111	98	320	

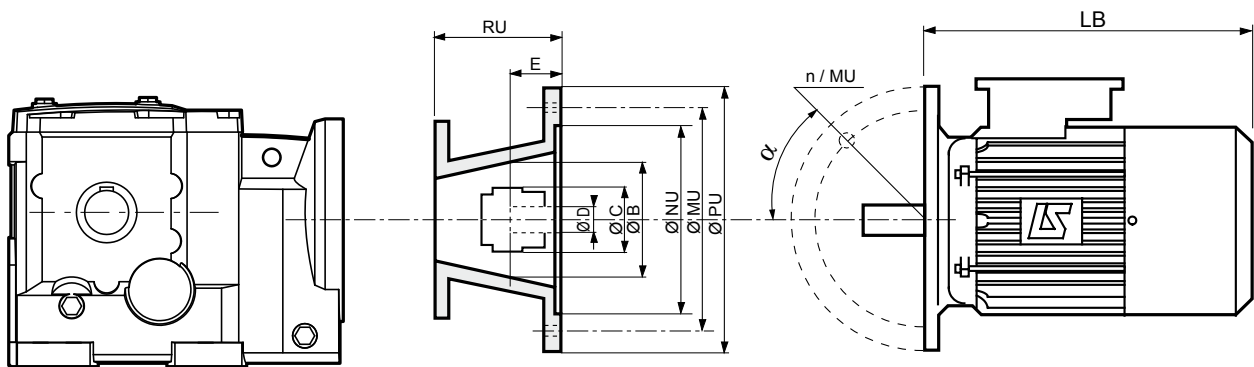
Type	4-pole motors LS FCR							 kg	4-pole motors LS FCPL							 kg								
	AC	HJ	J	LB	LJ	I	II		AC	HJ	J	LB	LJ	I	II									
LS 132 M	280	188	160	514	53.5	55	55	80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LS 160L	316	231	160	551	45	55	55	110	345	235	134	659	34.8	92	63	140	345	235	134	665	26	92	63	150
LS 180LR	-	-	-	-	-	-	-	-	345	235	134	665	26	92	63	150	-	-	-	-	-	-	-	-
LS 200LT	-	-	-	-	-	-	-	-	384	256	186	761	71.5	111	98	240	-	-	-	-	-	-	-	-
LS 225MR	-	-	-	-	-	-	-	-	410	276	186	865	69	111	98	320	-	-	-	-	-	-	-	-

# Electromechanical products Orthobloc 3000

## Dimensions

### Dimensions of Orthobloc (Ot) gearboxes, MU universal mounting

Dimensions in millimetres



Type	LS, LSES IM 3001 (IM B5) IEC										U-mounts																
	ØD	E	LB	LB FCR/FCPL	ØMU	ØNU	ØPU	n	°	ØC	RU <sup>3</sup>	ØC	RU <sup>3</sup>	ØC	RU <sup>3</sup>	ØC	RU	ØC	RU	ØC	RU	ØC	RU	ØC	RU		
LS 71L	14j6	30	183	271/-	FF130	110	160	4	45	65/-	122/73	65/-	122/72	65/-	122/72	65	122	65	122	-	-	-	-	-	-	-	
LSES 80LG	19j6	40	247	292/-	FF165	130	200	4	45	65/-	130/73	65/-	130/83	65/-	130/83	65	126	65	130	-	-	-	-	-	-	-	
LSES 90L	24j6	50	265	324/-	FF165	130	200	4	45	65/-	130/73	65/-	130/83	65/-	130/83	65	126	65	130	-	-	-	-	-	-	-	
LSES 100LR	28j6	60	309	388/-	FF215	180	250	4	45	65	144	65/-	144/92	65/-	140/92	65	140	65	144	65	148	65	148	65	148	65	136
LSES 112MU	28j6	60	333	425/-	FF215	180	250	4	45	65	144	65/-	144/92	65/-	144/92	65	140	65	144	65	148	65	148	65	148	65	136
LSES 132MU	38k6	80	412	532/-	FF265	230	300	4	45	-	-	-	-	-	-	65	162	65	169	65	167	65	167	65	167	65	156
LSES 160L	42k6	110	495	567/668	FF300	250	350	4	45	-	-	-	-	-	-	95	194	95	199	95	199	95	199	95	199	95	187
LSES 180LR	48k6	110	520	-/683	FF300	250	350	4	45	-	-	-	-	-	-	95	194	95	199	95	199	95	199	95	199	95	187
LSES 200LR	55m6	110	620	-/828	FF350	300	400	4	45	-	-	-	-	-	-	95	194	95	199	95	199	95	199	95	199	95	187
LSES 225' MR	60m6	140	676	-/953	FF400	350	450	8	22.5	-	-	-	-	-	-	-	-	120	311	120	311	120	311	120	311	200	
LSES 250' ME	65m6	140	810	-/1180	FF500	450	550	8	22.5	-	-	-	-	-	-	-	-	-	-	160	303	160	303	160	303	160	316
LSES 280' MD	75m6	140	870	-/1246	FF500	450	550	8	22.5	-	-	-	-	-	-	-	-	-	-	-	-	160	303	160	303	160	316
LSES 315' SP	80m6	170	947	-/NC <sup>2</sup>	FF600	550	660	8	22.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	366

1. Horizontally mounted foot and flange mounted motors (B35). Provision of a motor support is recommended.

2. NC : consult Emerson Industrial Automation

3. RU : MU new (2012)

	Ot								
	31	32	33	34	35	36	37	38	39
MU max (kg)	4	4	8	14	20	75	75	75	117
LS max (kg)	65	65	70	120	150	350	350	350	350

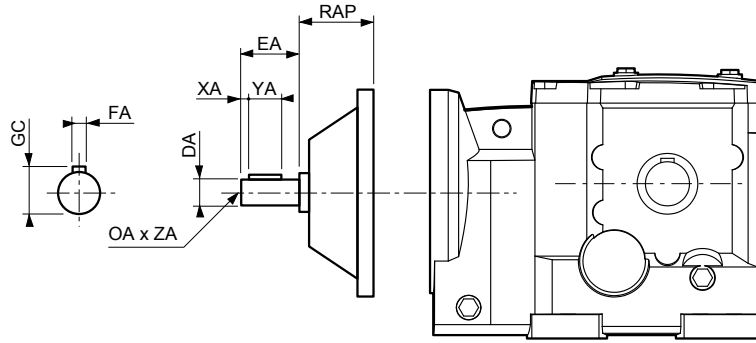


# Electromechanical products Orthobloc 3000

## Dimensions

### Dimensions of the AP input shaft

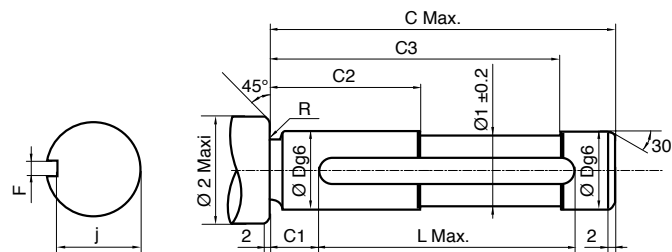
Dimensions in millimetres



Type	AP									kg
	Ø DA	EA	YA	XA	FA	GC	RAP	OAxZA		
Ot 3933	55k6	110	90	10	16	59	48.5	M20x42	32	
Ot 3833	48k6	110	90	10	14	51.5	51	M16x24	27	
Ot 3733	48k6	110	90	10	14	51.5	51	M16x24	27	
Ot 3633	48k6	110	90	10	14	51.5	51	M16x24	27	
Ot 3533	28j6	60	50	5	8	31	138.5	M10x22	5	
Ot 3433	28j6	60	50	5	8	31	69	M10x22	5	
Ot 3333	24j6	50	40	4.5	8	27	73	M8x19	1.2	
Ot 3233	24j6	50	40	4.5	8	27	73	M8x19	1.5	
Ot 3232	24j6	50	40	4.5	8	27	73	M10x22	1.2	
Ot 3132	24j6	50	40	4.5	8	27	73	M8x19	1.5	

### Driven shaft

Dimensions in millimetres



Type	Drive shaft										
	C	C1	C2	C3	D	F	j	L	Ø1	Ø2	R
Ot 3933	390	20	120	330	120	32	109	350	119	150	1
Ot 3833	295	20	110	280	100	28	90	265	99.5	130	1
Ot 3733	290	20	100	275	90	25	81	280	89.5	120	0.8
Ot 3633	265	20	75	250	70	20	62.5	255	69.5	100	0.8
Ot 3533	200	15	65	179	60	18	53	175	59.5	65	0.8
Ot 3433	185	15	50	176	50	14	44.5	160	49.5	65	0.8
Ot 3333	145	15	45	133	40	12	35	120	39.5	55	0.8
Ot 3233	120	15	42	109	35	10	30	95	34.5	50	0.8
Ot 3232	120	15	42	109	35	10	30	95	34.5	50	0.8
Ot 3132	105	15	32	100	30	8	26	85	29.5	45	0.8

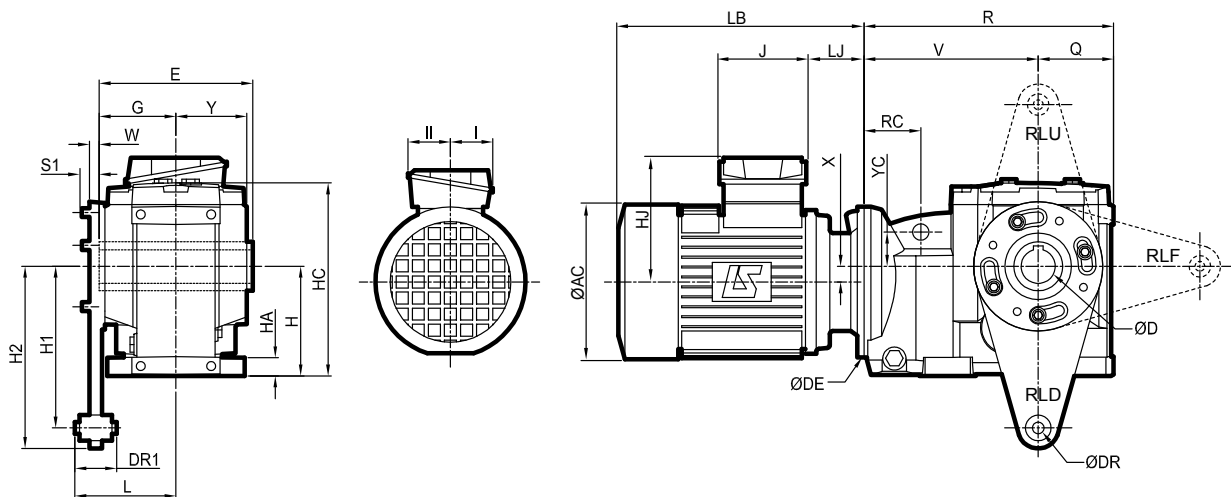
# Electromechanical products

## Orthobloc 3000

### Dimensions

#### Torque arm

Dimensions in millimetres

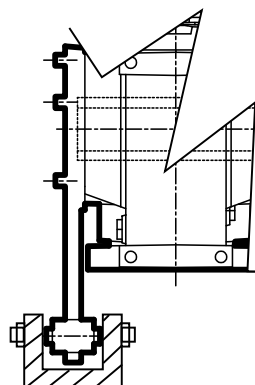


Torque arm R

Type	Ø D	Ø DE	Ø DR	DR1	E	G	H	H1	H2	HA	HC	L	Q	R	RC	V	W	X	Y	YC	S1
Ot 3933	120H7	550	32	116	446	223	450	700	772	61	745	305	270	712	127	442	32	87.9	223	130	16
Ot 3833	100H7	375	32	116	346	173	375	550	610	50	630	253	225	610	96	385	28	73.5	173	65	13
Ot 3733	90H7	375	24	96	340	170	250	450	496	48	465	236	255	722.5	118	467.5	24	-29	168	148	12.5
Ot 3633	70H7	375	24	96	310	155	225	350	391.5	39.5	413	215	222	587	120	365	18	0	153	98	10
Ot 3533	60H7	262	16	54	244	122	212	310	340	30	346	139.5	132	405	73	273	15.5	37	112.5	67	-
Ot 3433	50H7	225	16	54	226	113	180	250	280	27	306	128.5	114	350	59	236	13.5	30	103.5	60	-
Ot 3333	40H7	184	16	54	173	86.5	140	200	230	21.5	245	110	90	305	65	215	21.5	7	85	50	-
Ot 3233	35H7	154	10	33	151	75.5	112	130	151	18.5	205	90	77	255	58	178	13	16	72.5	35	-
Ot 3232	35H7	184	10	33	151	75.5	112	130	151	21	267	91.5	93	290	77	197	13	63	72.5	85	-
Ot 3132	30H7	154	10	33	130	65	80	130	151	15	203.5	77.5	80	245	69	165	11	46.5	60	66	-

Shaft-mounted using a torque point.

We recommend mounting with the supplied flexible joint, as shown in the diagram.



# Electromechanical products Orthobloc 3000

## Dimensions

### SD shrink disc option

Dimensions in millimetres

#### ADVANTAGE OF THE SHRINK DISC

Specially designed for assembling hollow shafts, it attaches the transmission device securely to the shaft.

The torque ( $M$ ), radial ( $F_R$ ) and axial ( $F_a$ ) forces are transmitted integrally without play. There is no need to use a key, and the absence of the keyway avoids incipient cracks.

Alternating movements are possible within the limits of the torque ( $M$ ) indicated in the table.

The absence of initial play is retained throughout the life of the gearbox.

The tightening torque is maintained for operating temperatures from  $-50^{\circ}\text{C}$  to  $+250^{\circ}\text{C}$ .

#### Surface roughness tolerance

The maximum permissible surface roughness is:

$$R_z \text{ max} = 15 \mu\text{m}.$$

The maximum permissible tolerance on the shrink disc working reach diameter =  $h8$ .

#### Secure positioning

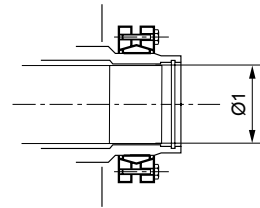
While the screws are tightened, the hub does not move axially in relation to the shaft.

#### Characteristics of the shrink disc

Very high transmissible torque (shrink disc  $M$  according to table below).

No axial movement between shaft/hub (shrink disc  $F_a$ ).  
Takes little time to assemble.  
Quick to dismantle.

The assembly and dismantling precautions are described in the corresponding manual.

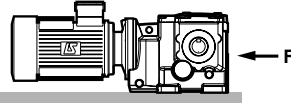


Type	Shrink disc torque $M$ Nm	Shaft $\text{Ø}1$	Tightening torque for shrink disc bolts Nm	Dimensions see pages
Ot 3933	31000	125	100	62
Ot 3833	20000	105	100	60
Ot 3733	15000	95	59	58
Ot 3633	7250	75	30	56
Ot 3533	6000	62	30	54
Ot 3433	2400	52	12	52
Ot 3333	1380	42	12	50
Ot 3232 - 33	860	36	12	46 - 48
Ot 3132	570	30	12	44

#### DEFINITION

After the operating position, the following elements must be specified:

- the mounting form and position: these are defined on page 4. The gearbox is viewed from side F with the motor behind, operation B3 or B5.



- the side for fixing the SD shrink disc on the hollow shaft: SD R: shrink disc mounted on the right, SD L:

shrink disc mounted on the left.

The two tables below give the mounting options and the positioning of the shrink disc and cover according to the possible mounting forms.

With a flanged gearbox, the shrink disc and its cover are always opposite the flange.

#### SD R shrink disc and cover on right, client shaft on left: ● = feasibility

Type	Foot mounting form		Flange mounting form		
	NS SD R	S SD R	SB TLR SD R	BS L SD R	BD L SD R
Ot 39	NA	●	●	●	NA
Ot 36 - 37 - 38	NA	●	●	●	●
Ot 33 - 34 - 35	-	●	●	●	●
Ot 32	NA	●	●	●	●
Ot 31	NA	●	●	●	-

NA: not available

#### SD L shrink disc and cover on left, client shaft on right: ● = feasibility

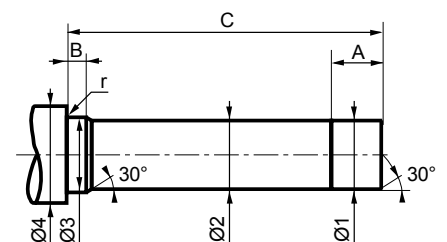
Type	Foot mounting form		Flange mounting form		
	NS SD L	S SD L	SB TLR SD L	BS R SD L	BD R SD L
Ot 39	NA	●	●	●	NA
Ot 36 - 37 - 38	NA	●	●	●	●
Ot 33 - 34 - 35	-	●	●	●	●
Ot 32	NA	●	●	●	●
Ot 31	NA	●	●	●	-

NA: not available

#### CLIENT SHAFT FOR SHRINK DISC

Type	A min.	B max.	C max.	r max.	Ø 1	Ø 2	Ø 3h6	Ø 4
Ot 3933	90	24.5	538	1	125g6	124	125	160
Ot 3833	90	24.5	448	1	105g6	104	105	140
Ot 3733	60	24.5	407	0.8	95g6	94	95	120
Ot 3633	60	24.5	370	0.8	75g6	74	75	100
Ot 3533	50	11.5	304	0.8	62g6	61	63	90
Ot 3433	45	9.5	287	0.5	52g6	51	53	65
Ot 3333	37	9.5	224	0.5	42h6	41	44	55
Ot 3232 - 33	25	7.5	186	0.8	36h6	35	37	50
Ot 3132	25	34.5	167	-	30h6	29	30	45

These values are given as a guide only.



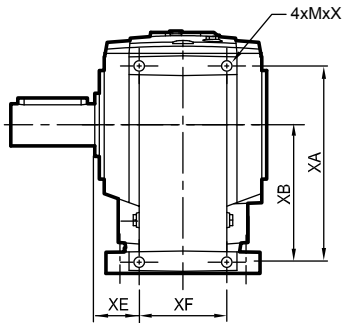
# Electromechanical products Orthobloc 3000

## Dimensions

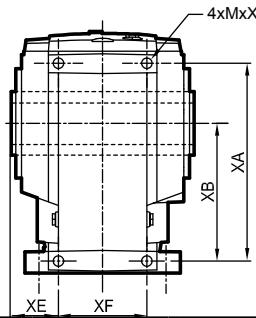
### Side F details (operation in position B7<sup>1</sup>, foot mounted form)

Dimensions in millimetres

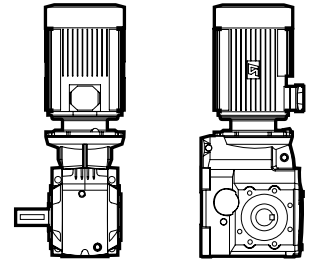
#### - Side F details, L\* output shaft on left



#### - Side F details, H hollow shaft



#### - Position B7<sup>1</sup>

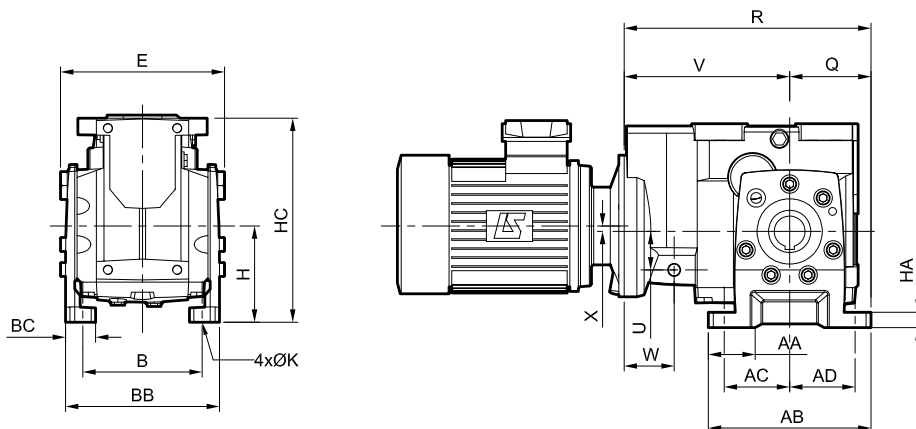


Side F details, Ot output shaft L* hollow H					
Type	MxX	XA	XB	XE	XF
Ot 3933	M30 x 45	565	390	127	270
Ot 3833	M30 x 45	490	340	75	200
Ot 3733	M24 x 40	345	224	85	170
Ot 3633	M20 x 35	295	200	78	154
Ot 3533	M16 x 27	280	196	59.5	125
Ot 3433	M12 x 22	238	164	62.5	100
Ot 3333	M12 x 22	184	127	41.5	90
Ot 3233	M10 x 22	155	102	38.5	72
Ot 3232	M10 x 22	155	102	38.5	72
Ot 3132	9	100	50	15	100

1. Operation in position B7, foot mounted form (fixation side F, on Ot 31, exclusively)  
\* R shaft on right option

### NS form option (feet kit added)

Dimensions in millimetres



Type	Feet added on																		
	AA	AB	AC	AD	B	BB	BC	E	H	HA	HC	K	Q	R	U	V	W	X	
Ot 3533	103	330	140	140	230	280	60	293	200	40	412	24	165	438	67	273	73	37	
Ot 3433	81	271	115	115	195	241	46	257	160	30	340	18	135.5	371.5	60	236	59	30	
Ot 3333	61	211	85	85	155	200	39	213	125	20	265	14	106	321	50	215	65	7	

# Electromechanical products

## Orthobloc 3000

### Notes

# Electromechanical products

## Orthobloc 3000

### Notes





# EMERSON™

Industrial Automation



en-2013\_10 / 1

[www.emersonindustrial.com](http://www.emersonindustrial.com)

© - This document is the property of Emerson Industrial Automation, it can not be reproduced in any form without prior written authorization. Emerson Industrial Automation reserves the right to modify the design, technical specifications and dimensions of the products shown in this document. The descriptions cannot in any way be considered contractual.

Moteurs Leroy-Somer SAS - RCS 338 567 258 ANGOULÊME - Capital de 65 800 512 €

The Emerson logo is a trademark and service mark of Emerson Electric Co. © 2013

**EMERSON. CONSIDER IT SOLVED.™**