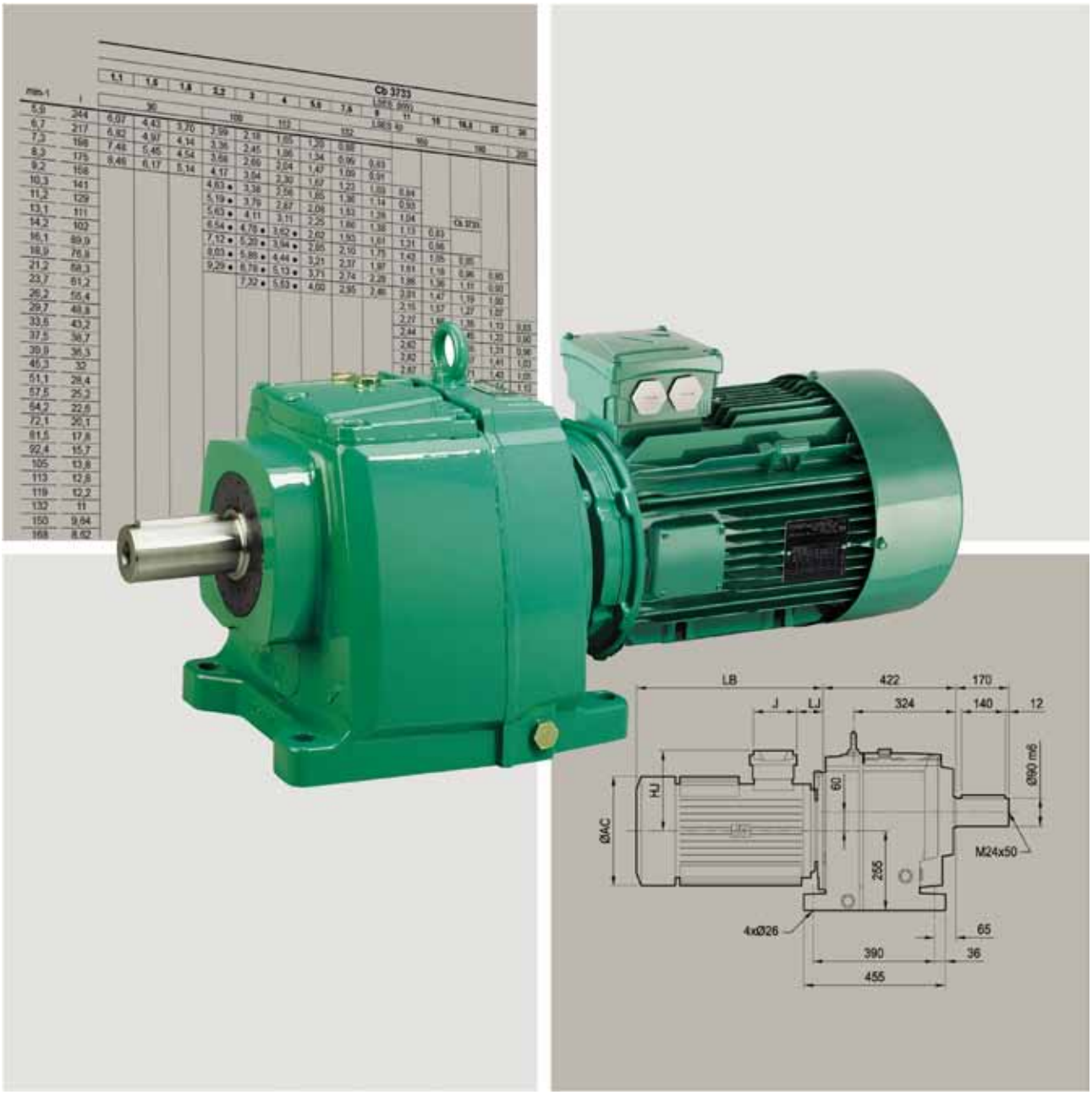
EMERSON™
Industrial Automation




LEROY SOMER®

LS2
Drive systems

# COMPABLOC 3000/LS, LSES

## Selection guide

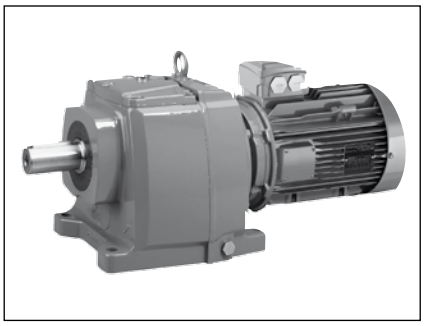
4787 en - 2011.04 / a

# Electromechanical products
# Compabloc

## Contents

# Electromechanical products
# Compabloc

## General



Compabloc geared motors with parallel 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 ($min^{-1}$).
The main characteristic of speed reducers is the rated output torque ($Mn_S$) expressed in Newton-metres (N.m):

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

A range of nine sizes: 15, 30, 31, 32, 33, 34, 35, 36, 37.
Rated output torque: from 10 N.m to 16,000 N.m.
Power ratings: from 0.06 to 75 kW.
Reduction ratios: from 1.16 to 252.
High efficiency: 95% to 98%.
Reversible.
Quiet operation.

## Construction

### Description of Compabloc gearboxes (Cb)

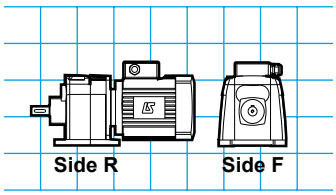
| Component | Materials | Remarks |
|---|---|---|
| Housing | Aluminium (15, 30)<br>ENGJL-200 cast iron (31 to 37) | - use of cast aluminium<br>- use of ENGJL-200 cast iron (flake graphite: 200 MPa tensile strength) single component perlite to ensure unit is fully sealed<br>- monobloc ribbed with internal reinforcements to absorb vibrations and noise, and increase its rigidity<br>- foot mounted **S**, **BT** or with flanges **BS**, **BD** or **BR**. They are compact and meet industrial requirements |
| Gears | Steel Ni Cr Mo | - cut by the 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 |
| Lipseals | Nitrile | - sealing ring on motor side<br>- sealed gasket with antidust lipseal in accordance with DIN 3760 form AS<br>- gasket under the access cover (30 to 37) |
| Shaft | Steel | - grinding of sealing surfaces<br>- key in accordance with ISO R773<br>- tolerance of diameters in accordance with NFE 22-051 and ISO R 775<br>- tapped holes at the shaft end for fixing connecting devices in accordance with DIN 332 |
| Lubrication | Oil | - in accordance with ISO 6743/6<br>- delivered with the quantity of oil corresponding to the operating position, it is fitted with drain, level and breather plugs (except Cb 15, 30) |
| Mounting | | AP: gearbox with input shaft<br>MI: geared motor with built-in motor<br>MU: geared motor with IEC motor, manufactured with universal mounting |
| Standard motor | | LS, LSES: multi-voltage 230/400 VY - 400 VΔ three-phase and 230 V single-phase<br>- fan cover made of composite material (80 to 100) or pressed steel (≥ 112), on request fitted with a drip cover for operation in vertical position (shaft facing down)<br>- LS: metal terminal box fitted with cable gland<br>- LSES: terminal box made of composite material (80 to 112) or aluminium alloy (≥ 132) equipped with threaded plugs (without cable glands)<br>- IP 55 standard protection |
| Brake motors | | FMC: failsafe brake induction motor, from 0.06 to 0.25 kW, IP 55 protection (LS 56 to 71)<br>FCR: failsafe brake induction motor, from 0.25 to 15 kW (LS), from 0.75 to 11 kW (LSES), IP 55 protection<br>FCPL: failsafe brake induction motor, from 11 to 75 kW, IP 44 protection (LS, LSES 160 and 225) |
| Finish | Paint | Shade: RAL 6000 (green), system I (1 polyurethane vinyl layer of 25/30 µm) |

# Electromechanical products
# Compabloc

## Mounting - Operating positions

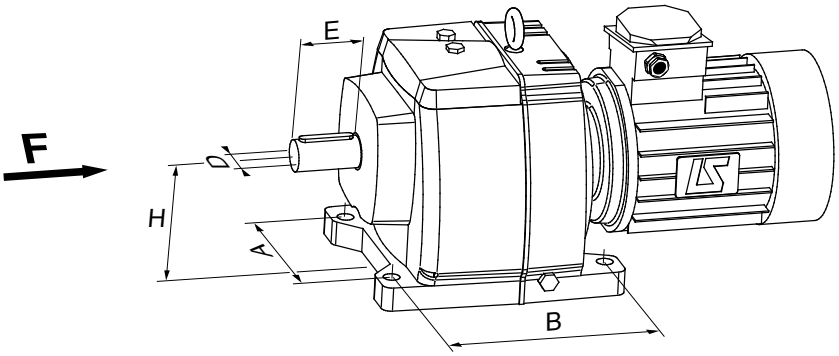
Standard position: gearbox view from side F, motor behind, side D on the floor.

**Definition of mounting form: S**




**S**

**Foot mounted housing**



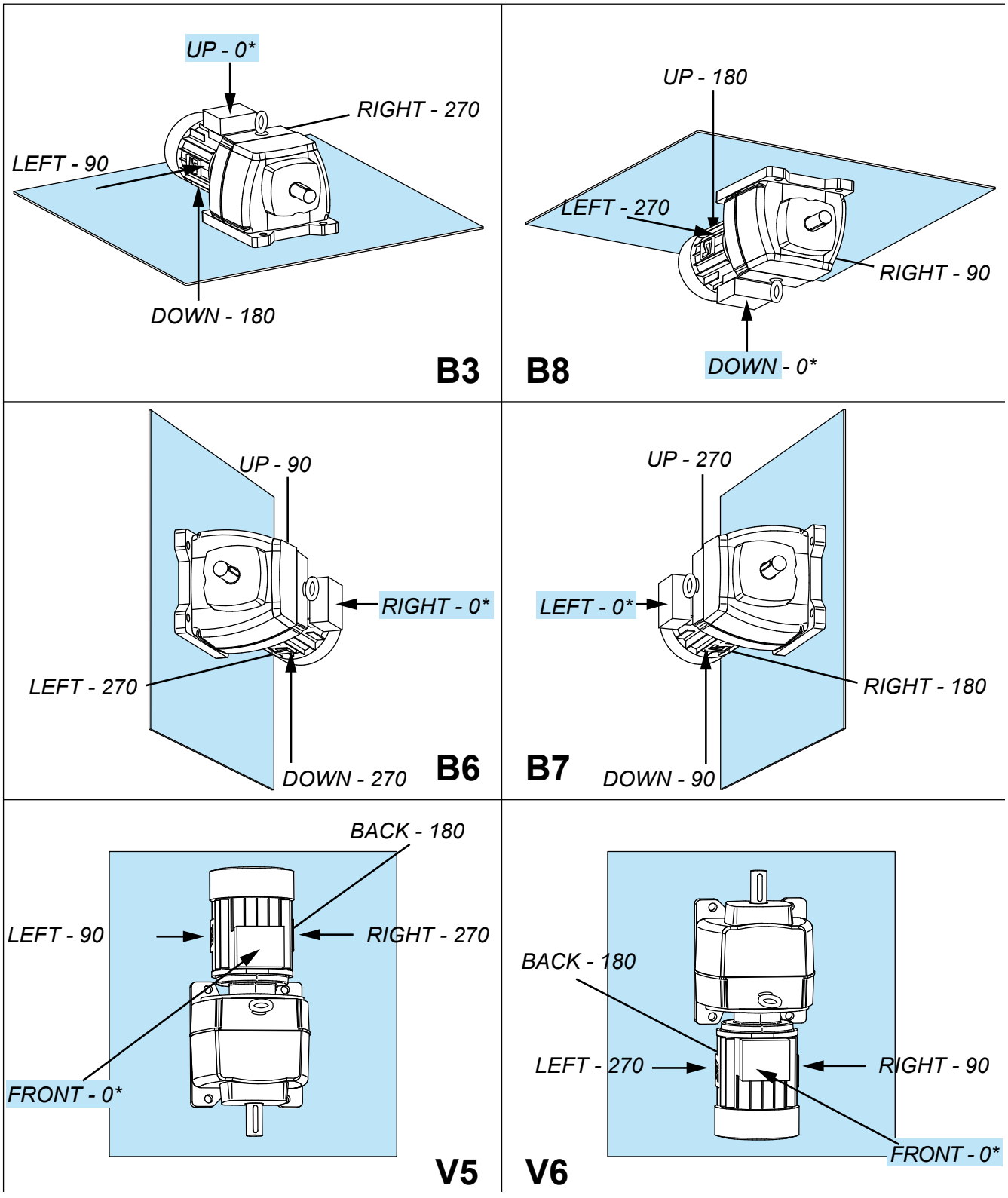

| Compabloc | 1-stage gearbox | | | | | |
|---|---|---|---|---|---|---|
| | ØD | E | A | B | H | kg |
| **Cb 3531** | 45k6 | 90 | 260 | 160 | 160 | 41 |
| **Cb 3431** | 40k6 | 80 | 216 | 125 | 132 | 25 |
| **Cb 3331** | 35k6 | 70 | 190 | 100 | 112 | 15.5 |
| **Cb 3231** | 25j6 | 50 | 140 | 80 | 90 | 8.3 |
| **Cb 3131** | 20j6 | 40 | 120 | 75 | 80 | 6.9 |
| **Cb 3031** | 16j6 | 40 | 125 | 70 | 75 | 2.3 |

| Compabloc | Multi-stage gearbox | | | | | |
|---|---|---|---|---|---|---|
| | ØD | E | A | B | H | kg |
| **Cb 3733** | 90m6 | 170 | 420 | 390 | 315 | 192 |
| **Cb 3633** | 70m6 | 140 | 355 | 355 | 250 | 162 |
| **Cb 3533** | 60m6 | 120 | 280 | 280 | 225 | 90 |
| **Cb 3433** | 50k6 | 100 | 230 | 235 | 180 | 50 |
| **Cb 3333** | 40k6 | 80 | 170 | 240 | 140 | 30 |
| **Cb 3233** | 30j6 | 60 | 135 | 192 | 115 | 18.5 |
| **Cb 3133** | 25j6 | 50 | 110 | 165 | 90 | 13 |
| **Cb 3033** | 20j6 | 40 | 125 | 125 | 75 | 4.9 |
| **Cb 3032** | 20j6 | 40 | 125 | 105 | 75 | 4.8 |
| **Cb 15--** | 16j6 | 40 | 100 | 105 | 90 | 3.2 |

# S operating position

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 base of the gearbox for an observer, facing the gearbox.

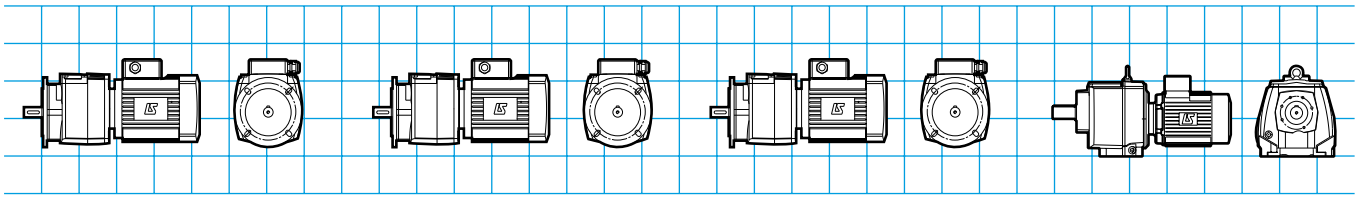



* : Std terminal box

# Mounting - Operating positions

Standard position: gearbox view from side F, motor behind, side D on the floor.

**Definition of mounting form: BS, BDn..., BR, BT**

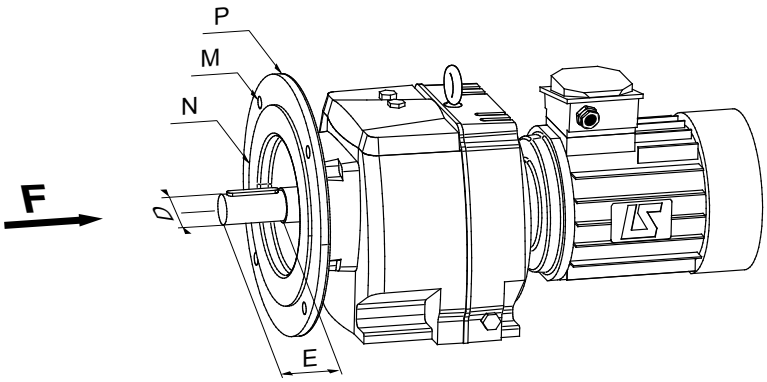


**BS**
**Flange housing with plain holes**

**BDn...**
**Flange housing (different diameter) with plain holes**

**BR**
**Reinforced flange housing**

**BT**
**Housing with side F with tapped holes**



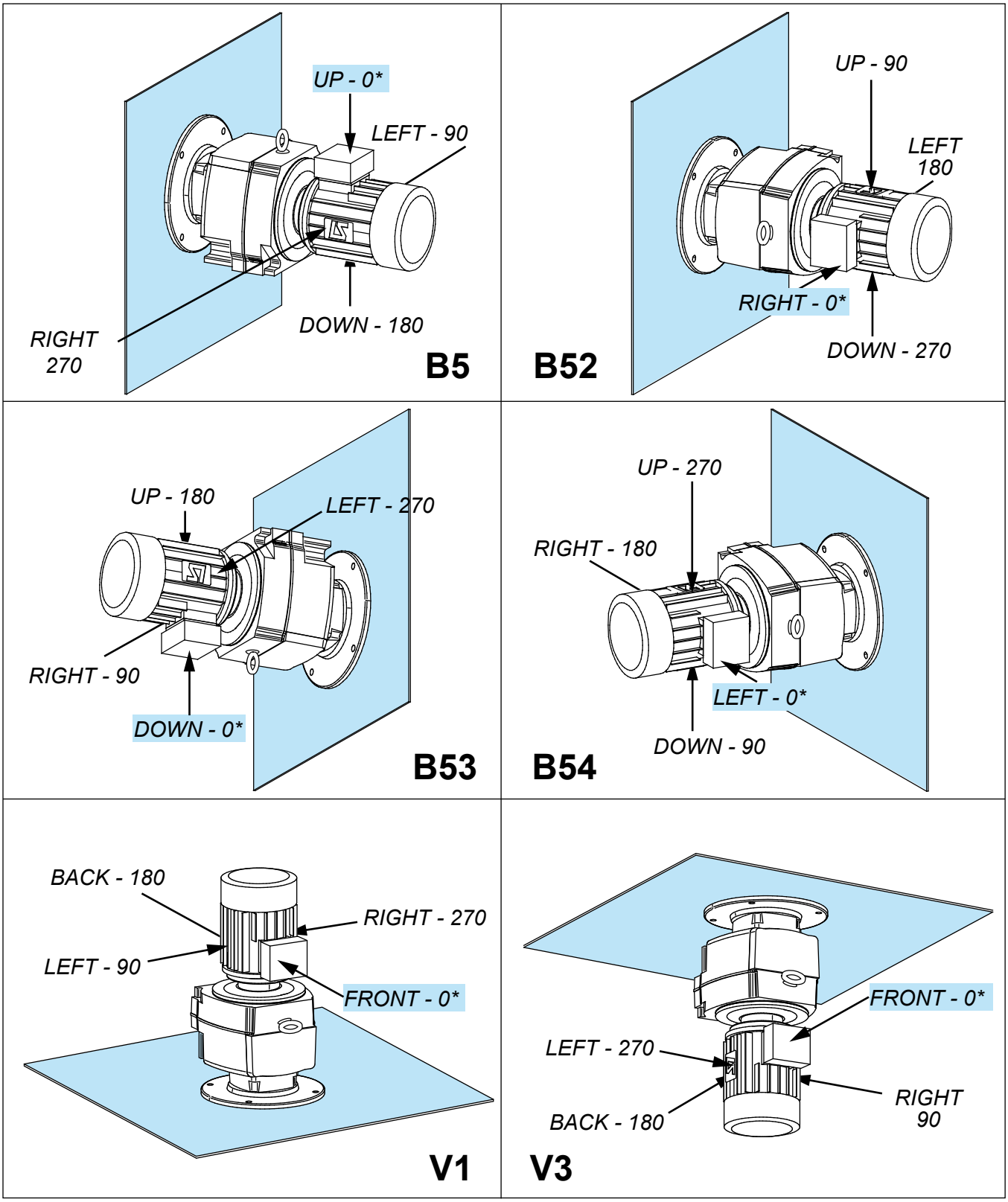

| | 1-stage gearbox | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | BS | | | | BD1 | | | | BD2 | | | | BD3 | | | |
| Compabloc | ØD | E | ØM | ØN | ØP | kg | ØM | ØN | ØP | kg | ØM | ØN | ØP | kg | ØM | ØN | ØP | kg |
| **Cb 3531** | 45k6 | 90 | 300 | 250 | 350 | 48 | 265 | 230 | 300 | 46 | - | - | - | - | - | - | - | - |
| **Cb 3431** | 40k6 | 80 | 265 | 230 | 300 | 31 | 215 | 180 | 250 | 30 | - | - | - | - | - | - | - | - |
| **Cb 3331** | 35k6 | 70 | 215 | 180 | 250 | 19 | 165 | 130 | 200 | 18 | - | - | - | - | - | - | - | - |
| **Cb 3231** | 25j6 | 50 | 165 | 130 | 200 | 10 | 130 | 110 | 160 | 9.5 | - | - | - | - | - | - | - | - |
| **Cb 3131** | 20j6 | 40 | 130 | 110 | 160 | 8.1 | 115 | 95 | 140 | 7.9 | - | - | - | - | - | - | - | - |
| **Cb 3031** | 16j6 | 40 | 115 | 95 | 140 | 2.5 | 100 | 80 | 120 | 2.5 | 130 | 110 | 160 | 2.5 | 165 | 130 | 200 | 2.4 |

| | Multi-stage gearbox | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | BS | | | | BD1 | | | | BD2 | | | | BD3 | | | |
| Compabloc | ØD | E | ØM | ØN | ØP | kg | ØM | ØN | ØP | kg | ØM | ØN | ØP | kg | ØM | ØN | ØP | kg |
| **Cb 3733** | 90m6 | 170 | 500 | 450 | 550 | 228 | 400 | 350 | 450 | 222 | - | - | - | - | - | - | - | - |
| **Cb 3633** | 70m6 | 140 | 500 | 450 | 550 | 196 | 400 | 350 | 450 | 190 | - | - | - | - | - | - | - | - |
| **Cb 3533** | 60m6 | 120 | 350 | 300 | 400 | 97 | 300 | 250 | 350 | 96 | 265 | 230 | 300 | 90 | - | - | - | - |
| **Cb 3433** | 50k6 | 100 | 300 | 250 | 350 | 56 | 265 | 230 | 300 | 55 | 215 | 180 | 250 | 54 | - | - | - | - |
| **Cb 3333** | 40k6 | 80 | 265 | 230 | 300 | 34 | 215 | 180 | 250 | 33 | 165 | 130 | 200 | 32.5 | - | - | - | - |
| **Cb 3233** | 30j6 | 60 | 215 | 180 | 250 | 18.8 | 165 | 130 | 200 | 18.7 | 130 | 110 | 160 | 18.6 | - | - | - | - |
| **Cb 3133** | 25j6 | 50 | 165 | 130 | 200 | 13.4 | 130 | 110 | 160 | 13.3 | 115 | 95 | 140 | 13.2 | 100 | 80 | 120 | 13.1 |
| **Cb 3033** | 20j6 | 40 | 115 | 95 | 140 | 4.9 | 100 | 80 | 120 | 4.5 | 130 | 110 | 160 | 4.9 | 165 | 130 | 200 | 5 |
| **Cb 3032** | 20j6 | 40 | 115 | 95 | 140 | 4.9 | 100 | 80 | 120 | 4.5 | 130 | 110 | 160 | 4.9 | 165 | 130 | 200 | 5 |
| **Cb 15--** | 16j6 | 40 | 100 | 80 | 120 | 2.9 | 85 | 70 | 105 | 2.8 | 115 | 95 | 140 | 3 | - | - | - | - |

# Operating positions BS, BD, BR, BT

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 base of the gearbox for an observer, facing the gearbox.




* : Std terminal box

# Selection

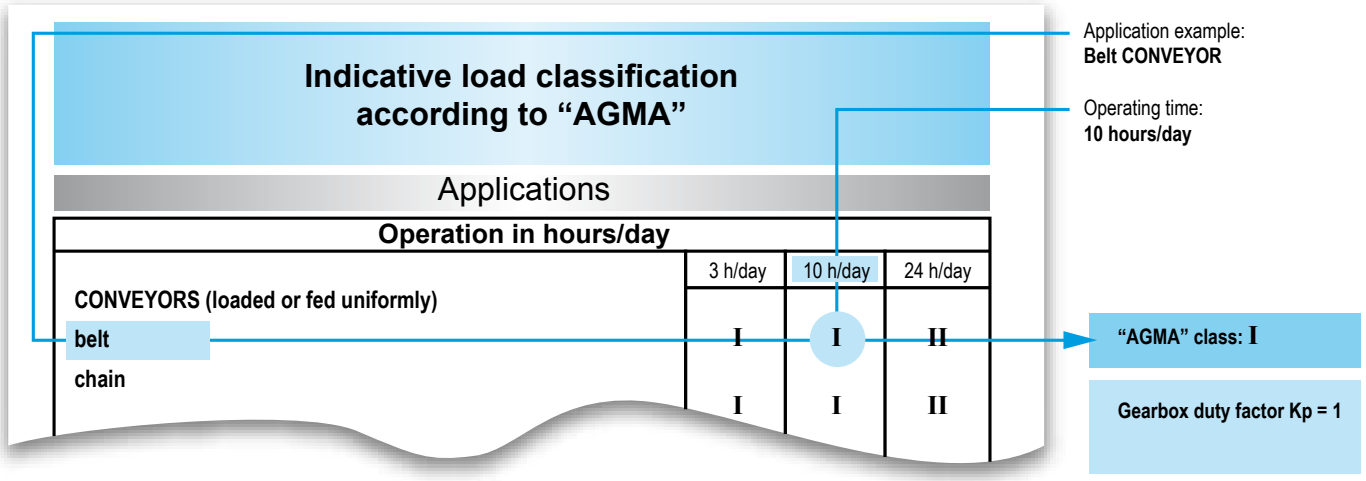
The selection of a gearbox or a geared motor should take account of the application.
Some of these applications are listed in the indicative “AGMA” load classification, on the next page.

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

| “AGMA” class | Gearbox duty factor $K_p$ |
|---|---|
| I | 1 |
| II | 1.4 |
| III | 2 |

## *1st case* – Your application is listed

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




## *2nd case* – Your application is not listed

The “AGMA” selection class is defined by the daily operating time and the type of application operation, 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 | |
| Violent shocks, many starts | 10 hours/day | III |
| Damped shocks | 24 hours/day | |

# Electromechanical products
# Compabloc

## List of applications

| OPERATION in hours/day | 3 h/day | 10 h/day | 24 h/day |
|---|---|---|---|
| **AGITATORS** | | | |
| liquids and solids | II | II | II |
| liquids with variable density | II | II | II |
| pure liquids | I | I | II |
| semi-liquids, variable density | II | II | II* |
| **BREWERIES, DISTILLERIES** | | | |
| boilers, continuous duty | | | II |
| bottling machines | I | I | II |
| brewing vats, continuous duty | | | II |
| cookers, continuous duty | | | II |
| scaling hoppers: | | | |
| frequent starts | II | II | III |
| **CANE KNIVES** | II | II | III |
| **SIEVES** | | | |
| rotary | I | II | III |
| stone washer with water circulation | I | I | II |
| DREDGERS | | | |
| cable winding drums | I | II | - |
| conveyors | I | II | II |
| cutting head control | III | III | III* |
| handling winches | II | II | - |
| pumps | I | II | II |
| service winches | II | II | - |
| shaker control | III | III | III* |
| sieve control | III | III | III* |
| **CLARIFIERS** | I | I | II |
| **SORTERS, GRADERS** | I | II | II |
| **COMPRESSORS** | | | |
| centrifugal | I | II | II |
| | I | II | II |
| **CONVEYORS (loaded or fed non-uniformly)** | | | |
| **heavy duty:** | | | |
| **apron** | **II** | **II** | **II** |
| **assembly** | **II** | **II** | **II** |
| **belt** | **II** | **II** | **II** |
| **bucket** | **II** | **II** | **II** |
| **chain** | **II** | **II** | **II** |
| **furnace** | **II** | **II** | **II** |
| **reciprocating** | **III** | **III** | **III*** |
| **removal** | **I** | **I** | **-** |
| **roller** | **I** | **I** | **II** |
| **scraper** | **II** | **II** | **II** |
| **screw** | **II** | **II** | **II** |
| **vibrator** | **III** | **III** | **III*** |
| **CONVEYORS (loaded or fed uniformly)** | | | |
| **apron** | **I** | **I** | **II** |
| **assembly** | **I** | **I** | **II** |
| **belt** | **I** | **I** | **II** |
| **bucket** | **I** | **I** | **II** |
| **chain** | **I** | **I** | **II** |
| **furnace** | **I** | **I** | **II** |
| **scraper** | **I** | **I** | **II** |
| **screw** | **I** | **I** | **II** |
| **CONTROL (vehicle)** | II | II | II |
| **ELEVATORS** | | | |
| buckets: | | | |
| continuous load | I | I | II |
| heavy load | II | II | II |
| uniform load | I | I | II |
| centrifugal unloading | I | I | II |
| escalators | I | II | III |
| gravity unloading | I | I | II |
| hoist for building materials | III | III | - |
| **COOLING TOWERS** | - | - | - |
| **CRANES AND LIFTING** | | | |
| bucket winches | - | - | - |
| hoisting gear | - | - | - |
| moving bridge | - | - | - |
| moving truck | - | - | - |
| **FEEDING (attachment)** | | | |
| belt | I | II | II |
| disks | I | I | II |
| lattice | I | II | II |
| reciprocating | III | III | III* |
| screw | I | II | II |
| **FOOD AND BEVERAGE INDUSTRY** | | | |
| beet choppers | II | II | II |
| cereal cookers | I | I | II |

| OPERATION in hours/day | 3 h/day | 10 h/day | 24 h/day |
|---|---|---|---|
| dough mixers | I | II | II |
| extruding machines | II | II | II |
| meat choppers | II | II | II |
| **GRINDERS** | | | |
| minerals | III | III | III* |
| stones | III | III | III* |
| **HAMMER MILLS** | III | III | III* |
| **ROTARY GRINDERS** | | | |
| ball mills | III | III | III* |
| pebble mills | III | III | III* |
| rod mills | III | III | III* |
| **MACHINE TOOLS** | | | |
| auxiliary drive system | I | II | II |
| main drive system | I | I | II |
| bending rollers | II | II | II |
| flat planers | III | III | III* |
| punching machines (geared) | III | III | III* |
| nut tappers | II | III | III* |
| shears | III | III | III |
| drawing frames, carriage | III | III | III* |
| drawing frames, carriage | III | III | III* |
| drawing frames, main control | III | III | III* |
| drying rollers | - | - | - |
| roller drive | III | III | III |
| spreading systems | III | III | III* |
| separating rollers | - | - | - |
| shape-cutting machines | III | III | III* |
| sheet metal winders | I | II | II |
| splitting lines | II | II | III |
| table conveyor: | | | |
| reverse operation | III | III | III |
| single direction of operation | I | II | III |
| wire drawing mills, flatteners | II | II | III |
| agitators, mixers | I | II | II |
| ball conveyors | III* | III* | III* |
| barking drums | III | III | III* |
| barking machines (mechanical) | III | III | III |
| bleaching vats | I | II | II |
| calenders | I | II | II* |
| centrifugal | I | I | II |
| conveyors | I | II | II |
| cutters, plating machines | I | II | II |
| cylinders | I | II | II |
| dosing | I | II | II* |
| dryers | I | II | II* |
| felt stitching machines | III* | III* | III* |
| felt tension devices | I | II | II |
| presses | I | II* | II* |
| pulp hammers | II | II | II* |
| pulp machines, uncoilers | I | II | II |
| PUMPS | | | |
| reciprocating: | | | |
| multi-cylinder single-acting | I | II | II |
| rotary: | | | |
| geared | I | I | II |
| lobed, vaned | I | I | II |
| suction rollers | I | II | II* |
| washers, thickeners | I | II | II* |
| wind up turrets | I | I | II |
| wire winders | I | II | II |
| wood pulp storing machines | I | II | II |
| agitators, mixers | I | II | II |
| ball conveyors | III* | III* | III* |
| barking drums | III | III | III* |
| barking machines (mechanical) | III | III | III |
| alignment controls | - | - | - |
| calenders | I | II | II |
| carding machines, spinners | I | II | II* |
| cloth finishing machines: | | | |
| washers, spreading machines | I | II | II |
| dryers, calenders | I | II | II |
| dryers | I | II | II |
| drying machines, mangles | II | II | II |
| dyeing machines | I | II | II |
| glueing machines | I | II | II |
| knitting machines | - | - | - |
| loading hoppers | II | II | II |
| napping mills | I | II | II |

| | 3 h/day | 10 h/day | 24 h/day |
|---|---|---|---|
| padding calenders | I | II | II |
| reelers (except drum) | I | II | II |
| soap milling machines | I | II | II |
| spinning machines | I | I | II |
| thread preparation machines: | | | |
| washing machines | I | II | II |
| weaving looms | II | III | III |
| **RUBBER (industry)** | | | |
| air chamber extruder | II | II | II |
| calenders | II | II | II* |
| extruding machines | II | II | III |
| grinders (2 or more) | II | II | II* |
| mixers | III | III | III* |
| sheet forming machines | I | II | II* |
| **TIPPERS** | III | III | |
| **TIMBER (industry)** | | | |
| ball conveyors | III | III | III* |
| ball support plates | III | III | III* |
| barking drums | III | III | III* |
| barking machine, feeder | II | II | III |
| barking machine, main drive system | III | III | III* |
| burner conveyors | I | II | III |
| chains | II | II | III |
| circular feed conveyors | I | II | III |
| cutting saws: | | | |
| chain | II | II | III |
| for ball turning | III | III | III* |
| for planer inclination | I | II | III |
| reciprocating | II | II | III |
| devices: | | | |
| haulage of balls: | | | |
| inclined | III | III | III* |
| well | III | III | III* |
| main conveyors | I | II | III |
| peeling tower | - | - | - |
| plank conveyors | III | III | III* |
| roller drive system | III | III | III* |
| sorting tables | I | II | III |
| supplying: | | | |
| cutting | II | II | III |
| planers | II | II | III |
| saws in series | III | III | III* |
| shape-cutting machines | II | II | III |
| transfer conveyors | I | II | III |
| transfer: | | | |
| chain | I | II | III |
| on bogies | I | II | III |
| turntable control | I | II | III |
| waste conveyors | I | II | II |
| **TRANSMISSION SHAFT** | | | |
| brick machines | III | III | III* |
| brick presses | III | III | III* |
| CLAY (industry) | | | |
| constant loads | I | I | II |
| loads with moderate shocks | I | II | II |
| loads with severe shocks | III | III | III* |
| mixers | II | II | II |
| processing machines | II | II | II |
| **WASHING MACHINES** | | | |
| drum | II | II | II |
| reversible | II | II | II |
| **WINDING MACHINES** | _ | _ | _ |
| **FILTERS** | I | II | III |
| **FURNACES** | | | |
| dryers, coolers | I | II | II |
| tumbling barrels | III | III | III* |
| **WINDLASSES, CAPSTANS** | II | II | II* |
| **PRINTING (presses)** | I | I | II |
| **PACKAGING MACHINES** | | | |
| stackers | II | III | III |
| wrapping machines | I | I | II |

** : 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.*

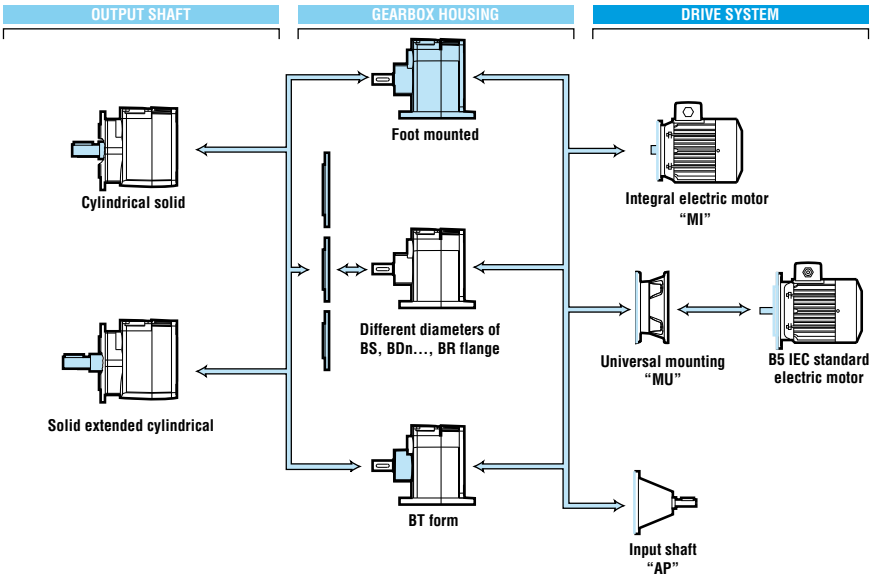
*- : Consult Leroy-Somer*

# Adaptation possibilities

Leroy-Somer offers several drives for its gearboxes which satisfy a very broad range of requirements. They are described below and offered in this catalogue.
For other drives, consult the Leroy-Somer technical specialists who will be glad to assist.

**Compabloc Cb gearboxes can be used in conjunction with the following drives:**

- **single-phase induction motors:**
  - LS motor from 0.06 to 0.25 kW
  - LS FMC brake motor from 0.06 to 0.25 kW
- **fixed speed three-phase induction motors:**
  - LS motor from 0.06 to 0.55 kW
  - LSES motor from 0.75 to 75 kW
  - LS FMC brake motor from 0.06 to 0.25 kW
  - FCR LS brake motor from 0.25 to 15 kW
    LSES motor from 0.75 to 11 kW
  - LS, LSES FCPL brake motor from 11 to 75 kW




# Designation / Coding

| Cb | 3333 | 30.2 | BS | S | B52 | MI | 4P | LSES 112 MU | 4 kW LS2/IE2 | 230/400 V 50 Hz | UG |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Compabloc gearbox type | Size and manufacturer code | Exact reduction | Mounting form | Definition of the output shaft | Operating position | Type of input | Number of poles | Series, frame size, manufacturer code | Motor power Generation code Class η | Mains voltage and frequency | Application |

**Example of coding:**

Compabloc 3333 with flange 4 kW, 47 $min^{-1}$, class I

**Designation:** Cb 3333 i:30.2 BS S B52 MI 4P LSES 112 MU 4 kW LS2/IE2 230/400V 50 Hz UG

**Code:** 473 8378

All the products in this catalogue have a code.
The coding table is incorporated in the price list with the list of designations.
Each electromechanical product is classified in order of power and then in order of speed.

# Electromechanical products
# Compabloc

## Conditions

**Cb:** S, BS, BT, BDn, BR
**LS:** IP55 - 50 Hz - Cl. F - 400 VY from 0.06 to 0.55 kW - **LSES:** IP55 - 50 Hz - Cl. F - 400 VY, 400 VΔ from 0.75 to 75 kW LS2/IE2 - U.G.
**LS, LS FMC brake:** IP55 - 50 Hz - Cl. F - 230/400 V from 0.06 to 0.25 kW - U.G.
**LS FCR brake:** IP55 - 50 Hz - Cl. F - 400 V LS from 0.25 to 15 kW - **LSES FCR brake:** from 0.75 to 11 kW - U.G.
**LS, LSES FCPL brake:** IP44 - 50 Hz - Cl. F - 400 V from 11 to 75 kW - U.G.

**MI**
**MU**
**AP**

**Maximum quantity per order**

| | Input | Cb 3031 | Cb 3131 to 3531 | Cb 15-- | Cb 3032-3033 | Cb 3133 to 3533 | Cb 3633 | Cb 3733 |
|---|---|---|---|---|---|---|---|---|
| **AP** | - | 5 | 5 | 5 | 5 | 5 | 3 | 3 |
| **MI LS** | 1-ph 0.06-->0.25 kW | 5 | - | 5 | 5 | - | - | - |
| | 3-ph 0.06 --> 0.55 kW | 5 | 5 | 5 | 5 | 5 | - | - |
| **MI LSES** | 3-ph 0.75 --> 9 kW | 5 | 5 | - | 5 | 5 | 3 | 3 |
| | 11 --> 45 kW | - | 2 | - | - | 2 | 2 | 2 |
| **MI LS FMC** | 1-ph 0.06-->0.25 kW | 5 | - | 5 | 5 | - | - | - |
| | 3-ph 0.06 --> 0.25 kW | 5 | - | 5 | 5 | - | - | - |
| **MI LS FCR** | 0.25 --> 9 kW | 5 | 5 | - | 5 | 5 | 3 | 3 |
| | 11 - 15 kW | - | 2 | - | - | 2 | 2 | 2 |
| **MI LSES FCR** | 0.75 --> 11 kW | | | - | | | | |
| **MI LS, LSES FCPL** | 11 --> 75 kW | - | | - | - | | | |
| **MU LS** | 1-ph 0.06-->0.25 kW | 5 | - | 5 | 5 | - | - | - |
| | 3-ph 0.06 --> 0.55 kW | 5 | 5 | 5 | 5 | 5 | - | - |
| **MU LSES** | 3-ph 0.75 --> 9 kW | 5 | 5 | - | 5 | 5 | 3 | 3 |
| | 11 --> 30 kW | - | 2 | - | - | 2 | 2 | 2 |
| | 37 - 45 kW | - | - | - | - | - | 1 | 1 |
| | 55 - 75 kW[1] | - | - | - | - | - | 1 | 1 |
| **MU LS FCR** | 0.25 --> 9 kW | 5 | 5 | - | 5 | 5 | 3 | 3 |
| | 11 - 15 kW | - | 1 | - | - | 1 | 1 | 1 |
| **MU LSES FCR** | 0.75 --> 11 kW | | | - | | | | |
| **MU LS, LSES FCPL** | 11 --> 45 kW | | | - | | | | |
| | 55 - 75 kW[1] | - | - | - | - | - | | |

*1. B35 motor obligatory*

**Pages of dimensions corresponding to mounting**

| | 1-stage Cb MI forms | | | | | | Mounting 1-stage Cb | Mounting 1-stage Cb |
|---|---|---|---|---|---|---|---|---|
| | Feet | Flange | | Other flanges | | Faceplate | | |
| Type | S | BS | BD1 | BD2 | BD3 | BT | MU | AP |
| **Cb 3031** | 29 | 29 | 28 | 28 | 28 | 28 | 60 | 27 |
| **Cb 3131** | 31 | 31 | 30 | 30 | | 30 | 60 | 27 |
| **Cb 3231** | 33 | 33 | 32 | | | 32 | 60 | 27 |
| **Cb 3331** | 35 | 35 | 34 | | | 34 | 60 | 27 |
| **Cb 3431** | 37 | 37 | 36 | | | 36 | 60 | 27 |
| **Cb 3531** | 39 | 39 | 38 | | | 38 | 60 | 27 |

| | Multi-stage Cb MI forms | | | | | | | Mounting Multi-stage Cb | Mounting Multi-stage Cb |
|---|---|---|---|---|---|---|---|---|---|
| | Feet | Flange | | Other flanges | | | Faceplate | | |
| Type | S | BS | BD1 | BD2 | BD3 | BR | BT | MU | AP |
| **Cb 1502 to 1504** | 41 | 41 | 40 | 40 | | | 40 | 60 | 27 |
| **Cb 3032** | 43 | 43 | 42 | 42 | 42 | | 42 | 60 | 27 |
| **Cb 3033** | 45 | 45 | 44 | 44 | 44 | | 44 | 60 | 27 |
| **Cb 3133** | 47 | 47 | 46 | 46 | 46 | | 46 | 60 | 27 |
| **Cb 3233** | 49 | 49 | 48 | 48 | | | 48 | 60 | 27 |
| **Cb 3333** | 51 | 51 | 50 | 50 | | **50** | 50 | 60 | 27 |
| **Cb 3433** | 53 | 53 | 52 | 52 | | **52** | 52 | 60 | 27 |
| **Cb 3533** | 55 | 55 | 54 | 54 | | **54** | 54 | 60 | 27 |
| **Cb 3633** | 57 | 57 | 56 | | | | 56 | 60 | 27 |
| **Cb 3733** | 59 | 59 | 58 | | | | 58 | 60 | 27 |

**Options**

| | Input 4p/MI-MU | Electrical options 230/400 V | 400 VΔ | PTO/PTC | Brake options Hand Brake Release | Drip cover | TRR | Different Mf | J01 |
|---|---|---|---|---|---|---|---|---|---|
| **LS** | 0.06 --> 0.55 kW | | - | | - | - | - | - | - |
| | 0.75 - 0.9 kW | | - | | - | - | - | - | - |
| **LSES** | 1.1 --> 3 kW | | | | - | - | - | - | - |
| | 4 - 9 kW MI | | | | - | - | - | - | - |
| | 11 - 15 kW MI | | | | - | - | - | - | - |
| | 18.5 - 45 kW MI | | | | - | - | - | - | - |
| | 4 --> 9 kW MU | | | | - | - | - | - | - |
| | 11 --> 45 kW MU | | | | - | - | - | - | - |
| | 55 --> 75 kW[1] MU | | | | - | - | - | - | - |
| **LS FMC** | 0.06 - 0.25 kW | | - | | | | - | - | - |
| **LS FCR** | 0.25 - 3 kW | | | | | | | | |
| | 4 - 5.5 kW | | | | | | | | |
| | 7.5 - 9 kW | | | | | | | | - |
| | 11 - 15 kW | | | | | | - | | - |
| **LSES FCR** | 0.75 --> 11 kW | | | | | | | | |
| | 11 --> 45 kW | | | | | - | | | - |
| **LS, LSES FCPL** | 55 --> 75 kW[1] | | | | | - | | | - |

*1. B35 motor obligatory*

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

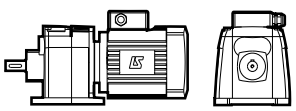
DG: Availability; n WDs: Nbr of Working Days (ex. works)

# Electromechanical products
# Compabloc

## Selection

| Classes | Cb 3031 | |
|---|---|---|
| I, II, III<br>(kp = 1, 1.4, 2) | LS, LSES, LS brake, LSES brake - IP 55 - Cl. F<br>230 V/400 V Y - 50 Hz - U.G. | Integral mounting **MI**<br>Universal mounting **MU**<br>Input shaft mounting **AP** |

| | | Cb 3031 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LS, LSES (kW) | | | | | | | | | | |
| | | **0.06** | **0.09** | **0.12** | **0.18** | **0.25** | **0.37** | **0.55** | **0.75** | **0.9** | **1.1** | **1.5** |
| | | Three-phase 4-pole LS, LSES | | | | | | | | | | |
| | | 56 | | 63 | | 71 | | | 80 | | 90 | |
| | | Single-phase 4-pole LS | | | | | | | | | | |
| min-1 | i exact | 56 P | | 63 P | | 71 P | | | | | | |
| 178 | 8.13 | 6.16 | 3.87 | 2.73 | 1.76 | 1.27 | 0.84 | | | | | |
| 201 | 7.22 | 6.93 | 4.36 | 3.07 | 1.98 | 1.43 | 0.94 | | | | | |
| 227 | 6.4 | 7.82 | 4.92 | 3.47 | 2.23 | 1.61 | 1.07 | | | | | |
| 249 | 5.82 | 8.60 | 5.41 | 3.82 | 2.46 | 1.78 | 1.17 | | | | | |
| 281 | 5.17 | 9.68 | 6.09 | 4.30 | 2.77 | 2.00 | 1.32 | | | | | |
| 316 | 4.58 | | 6.87 | 4.84 | 3.12 | 2.25 | 1.49 | 0.97 | | | | |
| 356 | 4.08 | | 7.72 | 5.45 | 3.51 | 2.53 | 1.67 | 1.10 | 0.82 | | | |
| 400 | 3.63 | | 8.68 | 6.12 | 3.95 | 2.85 | 1.88 | 1.23 | 0.93 | | | |
| 448 | 3.24 | | 9.73 | 6.86 | 4.42 | 3.19 | 2.11 | 1.38 | 1.04 | 0.85 | | |
| 527 | 2.75 | | | 8.07 | 5.20 | 3.76 | 2.48 | 1.62 | 1.22 | 1.00 | | |
| 569 | 2.55 | | | 8.71 | 5.61 | 4.05 | 2.68 | 1.75 | 1.32 | 1.08 | | |
| 662 | 2.19 | | | | 6.53 | 4.72 | 3.11 | 2.04 | 1.53 | 1.26 | | |
| 741 | 1.96 | | | | 7.31 | 5.28 | 3.49 | 2.28 | 1.72 | 1.41 | | |
| 794 | 1.83 | | | | 7.83 | 5.66 | 3.74 | 2.45 | 1.84 | 1.51 | | |
| 943 | 1.54 | | | | 9.30 | 6.72 | 4.43 | 2.90 | 2.18 | 1.79 | | |
| 992 | 1.46 | | | | 9.79 | 7.07 | 4.67 | 3.06 | 2.30 | 1.88 | | |
| 1096 | 1.32 | | | | | 7.81 | 5.16 | 3.38 | 2.54 | 2.08 | | |
| **4-pole LS, LSES and brakes** | | Three-phase 4-pole LS, LSES | | | | | | | | | | |
| **LS FMC** | | 56 M | | 63 M | | 71 M | | | | | | |
| **LS FCR** | | | | | | 71 L | | | 80 L | | | |
| **LSES FCR** | | | | | | | | | **80** | | | |
| | | Single-phase 4-pole LS | | | | | | | | | | |
| **LS FMC** | | 56 MP | | 63 MP | | 71 MP | | | | | | |



**Selection example**

| | |
|---|---|
| Required power: | 0.25 kW |
| Required speed: | 178 min-1 |
| Duty factor required by the application: | Kp = 1 |
| Operating position; Mounting form: | horizontal, foot mounted |

**Designation: Cb 3031 i: 8.13 S S M - MI 4p LS 71M 0.25 kW - 400 VY - U.G.**

# Selection

| Classes | Cb 3131 | |
|---|---|---|
| I, II, III<br>(kp = 1, 1.4, 2) | LS, LSES, LS brake, LSES brake - IP 55 - Cl. F<br>230 V/400 V Y 400 V Δ - 50 Hz - U.G. | Integral mounting **MI**<br>Universal mounting **MU**<br>Input shaft mounting **AP** |

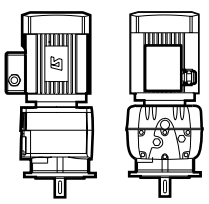
| | | Cb 3131 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LS, LSES (kW) | | | | | | | | | | |
| | | **0.25** | **0.37** | **0.55** | **0.75** | **0.9** | **1.1** | **1.5** | **1.8** | **2.2** | **3** | **4** |
| | | Three-phase 4-pole LS, LSES | | | | | | | | | | |
| min-1 | i exact | 71 | | | 80 | | 90 | | | 100 | | 112 |
| 183 | 7.91 | 4.08 | 2.70 | | | | | | | | | |
| 202 | 7.17 | 4.50 | 2.97 | | | | | | | | | |
| 232 | 6.25 | 5.17 | 3.41 | 2.23 | 1.68 | 1.38 | 1.14 ● | | | | | |
| 255 | 5.69 | 5.67 | 3.75 | 2.45 | 1.84 | 1.51 | 1.25 ● | | | | | |
| 295 | 4.92 | 6.57 | 4.34 | 2.84 | 2.13 | 1.75 | 1.45 | 1.06 | 0.88 | | | |
| 331 | 4.38 | 7.36 | 4.86 | 3.18 | 2.39 | 1.96 | 1.62 | 1.19 | 0.98 | 0.80 | | |
| 369 | 3.93 | 8.22 | 5.43 | 3.55 | 2.67 | 2.19 | 1.81 | 1.32 | 1.10 | 0.90 | | |
| 422 | 3.44 | 9.39 | 6.20 | 4.06 | 3.05 | 2.50 | 2.07 | 1.51 | 1.25 | 1.02 | | |
| 446 | 3.25 | 9.93 | 6.56 | 4.29 | 3.23 | 2.64 | 2.19 | 1.60 | 1.32 | 1.08 | | |
| 530 | 2.74 | | 7.79 | 5.10 | 3.83 | 3.14 | 2.60 | 1.90 | 1.57 | 1.29 | 0.94 | |
| 562 | 2.58 | | 8.27 | 5.41 | 4.07 | 3.33 | 2.76 | 2.02 | 1.67 | 1.36 | 1.00 | |
| 634 | 2.29 | | 9.33 | 6.10 | 4.59 | 3.76 | 3.11 | 2.27 | 1.88 | 1.54 | 1.13 | |
| 725 | 2 | | | 6.76 | 5.06 | 4.15 | 3.43 | 2.50 | 2.08 | 1.70 | 1.24 | |
| 824 | 1.76 | | | 7.18 | 5.34 | 4.39 | 3.62 | 2.64 | 2.19 | 1.79 | 1.31 | |
| 932 | 1.56 | | | 7.47 ● | 5.55 ● | 4.57 ● | 3.76 | 2.75 | 2.28 | 1.86 | 1.36 | |
| 1051 | 1.38 | | | 7.74 ● | 5.75 ● | 4.74 ● | 3.90 | 2.85 | 2.36 | 1.93 | 1.41 | |
| 1190 | 1.22 | | | 8.29 | 6.16 | 5.07 | 4.18 | 3.05 | 2.53 | 2.07 | 1.51 | |
| 1254 | 1.16 | | | 8.56 | 6.36 | 5.23 | 4.31 | 3.15 | 2.61 | 2.14 | 1.56 | |
| **4-pole LS, LSES and brake** | | Three-phase 4-pole LS, LSES | | | | | | | | | | |
| **LS FCR** | | 71 L | | | 80 L | | 90 L | | | 100 L | | |
| **LSES FCR** | | | | | **80** | | **90** | | | **100** | | |

● *MU obligatory*

**Selection example**

| | |
|---|---|
| Required power: | 1.5 kW |
| Required speed: | 331 min-1 |
| Duty factor required by the application: | Kp = 1 |
| Operating position; Mounting form: | V1 vertical; BS flange |

**Designation: Cb 3131 i: 4.38 BS S V1 - MI 4p LSES 90L 1.5 kW LS2/IE2 - 400 VY - U.G.**

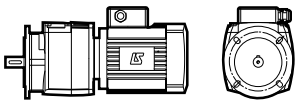


# Selection

| Classes | Cb 3231 | |
|---|---|---|
| I, II, III<br>(kp = 1, 1.4, 2) | LS, LSES, LS brake, LSES brake - IP 55 - Cl. F<br>230 V/400 V Y 400 V Δ - 50 Hz - U.G. | Integral mounting **MI**<br>Universal mounting **MU**<br>Input shaft mounting **AP** |

| | | Cb 3231 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 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** |
| | | Three-phase 4-pole LS, LSES | | | | | | | | | | | |
| min-1 | i exact | 71 | | | 80 | | 90 | | | 100 | | 112 | 132 |
| 180 | 8.08 | 6.40 | 4.22 | 2.76 | 2.08 | 1.70 | 1.41 ● | | | | | | |
| 210 | 6.92 | 7.47 | 4.93 | 3.23 | 2.43 | 1.99 | 1.65 | 1.20 | 1.00 | 0.81 | | | |
| 230 | 6.31 | 8.19 | 5.41 | 3.54 | 2.66 | 2.18 | 1.80 | 1.32 | 1.09 | 0.89 | | | |
| 254 | 5.71 | 9.04 | 5.97 | 3.91 | 2.94 | 2.41 | 1.99 | 1.46 | 1.20 | 0.99 | | | |
| 297 | 4.88 | | 7.00 | 4.58 | 3.44 | 2.82 | 2.33 | 1.71 | 1.41 | 1.16 | 0.84 | | |
| 335 | 4.33 | | 7.87 | 5.15 | 3.88 | 3.17 | 2.63 | 1.92 | 1.59 | 1.30 | 0.95 | | |
| 372 | 3.89 | | 8.76 | 5.73 | 4.31 | 3.53 | 2.92 | 2.13 | 1.77 | 1.45 | 1.06 | 0.80 | |
| 423 | 3.43 | | 9.95 | 6.51 | 4.90 | 4.01 | 3.32 | 2.43 | 2.01 | 1.64 | 1.20 | 0.91 | |
| 470 | 3.09 | | | 7.23 | 5.44 | 4.45 | 3.69 | 2.69 | 2.23 | 1.82 | 1.33 | 1.01 | |
| 533 | 2.72 | | | 8.21 | 6.17 | 5.06 | 4.18 | 3.06 | 2.53 | 2.07 | 1.51 | 1.15 | 0.83 |
| 570 | 2.55 | | | 8.77 | 6.60 | 5.40 | 4.47 | 3.27 | 2.70 | 2.21 | 1.62 | 1.23 | 0.89 |
| 657 | 2.21 | | | | 7.60 | 6.23 | 5.15 | 3.77 | 3.12 | 2.55 | 1.86 | 1.41 | 1.02 |
| 748 | 1.94 | | | | 8.67 | 7.10 | 5.87 | 4.29 | 3.55 | 2.91 | 2.13 | 1.61 | 1.17 |
| 829 | 1.75 | | | | 9.44 ● | 7.74 ● | 6.40 ● | 4.67 ● | 3.87 ● | 3.17 ● | 2.31 | 1.75 | 1.27 |
| 936 | 1.55 | | | | | 8.41 ● | 6.93 ● | 5.07 ● | 4.20 ● | 3.43 ● | 2.51 | 1.90 | 1.38 |
| 999 | 1.45 | | | | | 8.23 ● | 6.77 ● | 4.95 ● | 4.10 ● | 3.36 ● | 2.45 | 1.85 | 1.34 |
| 1180 | 1.23 | | | | | 8.91 ● | 7.33 ● | 5.36 ● | 4.44 ● | 3.63 ● | 2.66 | 2.00 | 1.45 |
| **4-pole LS, LSES and brake** | | Three-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: | 230 min-1 |
| Duty factor required by the application: | Kp = 1 |
| Operating position; Mounting form: | Horizontal B5; BS flange |

**Designation: Cb 3231 i: 6.31 BS S B5 - MI 4p LSES 90L 1.5 kW LS2/IE2 - 400 VY - U.G.**

# Selection

| Classes | Cb 3331 | |
|---|---|---|
| I, II, III<br>(kp = 1, 1.4, 2) | LS, LSES, LS brake, LSES brake - IP 55 - Cl. F<br>230 V/400 V Y 400 V Δ - 50 Hz - U.G. | Integral mounting **MI**<br>Universal mounting **MU**<br>Input shaft mounting **AP** |

**Cb 3331**

LS, LSES (kW)

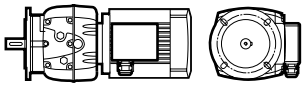
| | | 0.25 | 0.37 | 0.55 | 0.75 | 0.9 | 1.1 | 1.5 | 1.8 | 2.2 | 3 | 4 | 5.5 | 7.5 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Three-phase 4-pole LS, LSES | | | | | | | | | | | | | |
| min-1 | i exact | 71 | | | 80 | | 90 | | | 100 | | 112 | 132 | | |
| 185 | 7.83 | | 8.16 | 5.34 | 4.02 | 3.29 | 2.72 | 1.99 | 1.65 | 1.35 | | | | | |
| 205 | 7.08 | | 9.04 | 5.92 | 4.45 | 3.64 | 3.01 | 2.20 | 1.82 | 1.49 | | | | | |
| 229 | 6.33 | | | 6.61 | 4.97 | 4.07 | 3.37 | 2.46 | 2.04 | 1.67 | 1.22 | 0.92 | | | |
| 264 | 5.5 | | | 7.61 | 5.72 | 4.69 | 3.88 | 2.83 | 2.35 | 1.92 | 1.40 | 1.06 | | | |
| 298 | 4.87 | | | 8.60 | 6.47 | 5.30 | 4.38 | 3.20 | 2.65 | 2.17 | 1.59 | 1.20 | 0.87 | | |
| 324 | 4.47 | | | 9.36 | 7.04 | 5.76 | 4.77 | 3.48 | 2.89 | 2.36 | 1.73 | 1.31 | 0.95 | | |
| 367 | 3.95 | | | | 7.97 | 6.52 | 5.40 | 3.94 | 3.27 | 2.67 | 1.95 | 1.48 | 1.07 | | |
| 412 | 3.52 | | | | 8.74 | 7.17 | 5.92 | 4.33 | 3.59 | 2.93 | 2.14 | 1.62 | 1.18 | 0.87 | |
| 459 | 3.16 | | | | 9.12 | 7.51 | 6.18 | 4.52 | 3.75 | 3.06 | 2.24 | 1.69 | 1.23 | 0.90 | |
| 498 | 2.91 | | | | | 8.76 | 7.25 | 5.30 | 4.39 | 3.59 | 2.62 | 1.99 | 1.44 | 1.06 | |
| 561 | 2.58 | | | | | 9.98 | 8.26 | 6.03 | 5.00 | 4.09 | 2.99 | 2.27 | 1.64 | 1.21 | |
| 644 | 2.25 | | | | | | 8.34 | 6.10 | 5.06 | 4.13 | 3.02 | 2.28 | 1.65 | 1.22 | |
| 712 | 2.04 | | | | | | 8.77 • | 6.41 • | 5.32 • | 4.35 • | 3.18 | 2.40 | 1.74 | 1.28 | |
| 817 | 1.77 | | | | | | 8.27 • | 6.05 • | 5.01 • | 4.10 • | 3.00 | 2.26 | 1.64 | 1.21 | |
| 903 | 1.61 | | | | | | 8.29 • | 6.06 • | 5.02 • | 4.11 • | 3.01 • | 2.27 • | 1.64 | 1.21 | |
| 995 | 1.46 | | | | | | 8.40 • | 6.14 • | 5.09 • | 4.16 • | 3.05 | 2.30 | 1.67 | 1.23 | |
| 1148 | 1.26 | | | | | | 8.83 • | 6.45 • | 5.35 • | 4.38 • | 3.20 • | 2.41 • | 1.75 | 1.29 | |
| **4-pole LS, LSES and brake** | | Three-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: | 4 kW |
| Required speed: | 300 min-1 |
| Duty factor required by the application: | Kp = 1 |
| Operating position; Mounting form: | Horizontal B52; BS flange |

**Designation: Cb 3331 i: 4.87 BS S B52 - MI 4p LSES 112MU 4 kW LS2/IE2 - 400 VY - U.G.**



# Electromechanical products
# Compabloc

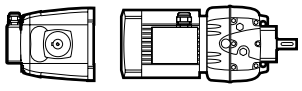
## Selection

| Classes | Cb 3431 | |
|---|---|---|
| I, II, III | LSES, LS brake, LSES brake - IP 55 - Cl. F | Integral mounting **MI** |
| (kp = 1, 1.4, 2) | 230 V/400 V Y 400 V Δ - 50 Hz - U.G. | Universal mounting **MU** |
| | | Input shaft mounting **AP** |

**Cb 3431**

| | | LS, 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** |
| | | Three-phase 4-pole LS, LSES | | | | | | | | | | | | | | | |
| min-1 | i exact | 80 | | 90 | | | 100 | | 112 | 132 | | | 160 | | 180 | | 200 |
| 179 | 8.1 | 8.05 | 6.59 | 5.45 | 3.98 | 3.29 | 2.69 | 1.97 | 1.49 | | | | | | | | |
| 212 | 6.83 | | 8.25 | 6.82 | 4.98 | 4.12 | 3.37 | 2.46 | 1.87 | | | | | | | | |
| 236 | 6.15 | | 9.20 | 7.61 | 5.55 | 4.60 | 3.76 | 2.75 | 2.08 | 1.51 | 1.11 | | | | | | |
| 260 | 5.57 | | | 8.40 | 6.13 | 5.08 | 4.15 | 3.03 | 2.30 | 1.66 | 1.23 | | | | | | |
| 282 | 5.13 | | | 9.12 | 6.66 | 5.51 | 4.51 | 3.29 | 2.50 | 1.81 | 1.33 | | | | | | |
| 329 | 4.41 | | | | 7.75 | 6.41 | 5.24 | 3.83 | 2.90 | 2.10 | 1.55 | 1.29 | 1.06 | | | | |
| 353 | 4.11 | | | | 8.31 | 6.88 | 5.63 | 4.11 | 3.12 | 2.26 | 1.66 | 1.39 | 1.13 | 0.83 | | | |
| 403 | 3.6 | | | | 9.49 | 7.86 | 6.43 | 4.70 | 3.56 | 2.58 | 1.90 | 1.58 | 1.29 | 0.95 | | | |
| 456 | 3.18 | | | | | 8.89 | 7.27 | 5.31 | 4.03 | 2.91 | 2.15 | 1.79 | 1.46 | 1.07 | 0.87 | | |
| 512 | 2.83 | | | | | 9.89 | 8.09 | 5.91 | 4.48 | 3.24 | 2.39 | 1.99 | 1.63 | 1.19 | 0.97 | 0.81 | |
| 571 | 2.54 | | | | | | 8.75 | 6.39 | 4.84 | 3.51 | 2.58 | 2.15 | 1.76 | 1.29 | 1.04 | 0.88 | |
| 667 | 2.17 | | | | | | 9.73 | 7.11 | 5.38 | 3.90 | 2.87 | 2.39 | 1.96 | 1.43 | 1.16 | 0.98 | |
| 737 | 1.97 | | | | | | | 7.58 • | 5.74 • | 4.16 | 3.06 | 2.55 | 2.09 | 1.53 | 1.24 | 1.04 | |
| 836 | 1.74 | | | | | | | 7.41 • | 5.61 • | 4.06 | 2.99 | 2.50 | 2.04 | 1.49 | 1.21 | 1.02 | |
| 932 | 1.56 | | | | | | | 8.73 • | 6.61 • | 4.79 | 3.53 | 2.94 | 2.40 | 1.76 | 1.43 | 1.20 | 0.88 • |
| 1047 | 1.38 | | | | | | | 8.62 • | 6.53 • | 4.73 | 3.48 | 2.91 | 2.37 | 1.74 | 1.41 | 1.18 | 0.87 • |
| 1171 | 1.24 | | | | | | | 8.04 • | 6.08 • | 4.41 | 3.25 | 2.71 | 2.21 | 1.62 | 1.31 | 1.10 | 0.81 • |
| **4-pole LS, LSES and brakes** | | Three-phase 4-pole LS, LSES | | | | | | | | | | | | | | | |
| **LS FCR** | | 80 L | | 90 L | | | 100 L | | 112 | 132 | | | 160 | | | | |
| **LSES FCR** | | **80** | | **90** | | | **100** | | **112** | **132** | | | **160** | | | | |
| **LS, LSES FCPL** | | | | | | | | | | | | | **160** | | **180** | | **200** |

• *MU obligatory*



**Selection example**

| | |
|---|---|
| Required power: | 4 kW |
| Required speed: | 179 min-1 |
| Duty factor required by the application: | Kp = 1.4 |
| Operating position; Mounting form: | Horizontal B7; foot mounted |

**Designation: Cb 3431 i: 8.1 S S B7 - MI 4p LS 112MU 4 kW LS2/IE2 - 400 VY - U.G.**

# Selection

| Classes | Cb 3531 | |
|---|---|---|
| I, II, III<br>(kp = 1, 1.4, 2) | LSES, LS brake, LSES brake - IP 55 - Cl. F<br>230 V/400 V Y 400 V Δ - 50 Hz - U.G. | Integral mounting **MI**<br>Universal mounting **MU**<br>Input shaft mounting **AP** |

**Cb 3531**

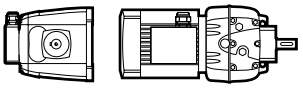
| | | LSES (kW) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **1.1** | **1.5** | **1.8** | **2.2** | **3** | **4** | **5.5** | **7.5** | **9** | **11** | **15** | **18.5** | **22** | **30** |
| | | Three-phase 4-pole LSES | | | | | | | | | | | | | |
| min-1 | i exact | 90 | | | 100 | | 112 | 132 | | | 160 | | 180 | | 200 |
| 181 | 8 | 9.93 | 7.24 | 5.99 | 4.90 | 3.58 | 2.71 | 1.96 | 1.45 | | | | | | |
| 211 | 6.87 | | 8.20 | 6.78 | 5.55 | 4.05 | 3.07 | 2.22 | 1.64 | | | | | | |
| 230 | 6.31 | | 9.26 | 7.66 | 6.26 | 4.58 | 3.47 | 2.51 | 1.85 | | | | | | |
| 264 | 5.5 | | | 8.79 | 7.19 | 5.25 | 3.98 | 2.88 | 2.12 | 1.77 | 1.45 | 1.06 | 0.86 | | |
| 299 | 4.85 | | | 9.92 | 8.11 | 5.92 | 4.48 | 3.25 | 2.39 | 2.00 | 1.63 | 1.19 | 0.97 | 0.81 | |
| 333 | 4.35 | | | | 9.09 | 6.64 | 5.03 | 3.64 | 2.68 | 2.24 | 1.83 | 1.34 | 1.08 | 0.91 | |
| 374 | 3.88 | | | | 9.83 | 7.18 | 5.44 | 3.93 | 2.90 | 2.42 | 1.98 | 1.45 | 1.17 | 0.98 | |
| 408 | 3.55 | | | | | 7.88 | 5.96 | 4.31 | 3.18 | 2.65 | 2.17 | 1.58 | 1.29 | 1.08 | |
| 472 | 3.07 | | | | | 7.94 | 6.01 | 4.35 | 3.21 | 2.67 | 2.19 | 1.60 | 1.30 | 1.09 | |
| 523 | 2.77 | | | | | 8.88 | 6.70 | 4.86 | 3.57 | 2.98 | 2.44 | 1.78 | 1.45 | 1.21 | 0.89 |
| 594 | 2.44 | | | | | 9.43 • | 7.11 • | 5.16 | 3.79 | 3.16 | 2.58 | 1.89 | 1.53 | 1.29 | 0.95 |
| 644 | 2.25 | | | | | 9.76 • | 7.36 • | 5.33 | 3.92 | 3.27 | 2.67 | 1.96 | 1.59 | 1.33 | 0.98 |
| 725 | 2 | | | | | | 7.71 • | 5.58 | 4.11 | 3.42 | 2.8 | 2.05 | 1.66 | 1.40 | 1.03 |
| 812 | 1.79 | | | | | | 8.03 • | 5.82 | 4.28 | 3.57 | 2.92 | 2.14 | 1.73 | 1.45 | 1.07 |
| 906 | 1.6 | | | | | | | | | 3.71 | 3.03 | 2.22 | 1.80 | 1.51 | 1.11 |
| 994 | 1.46 | | | | | | | | | 3.82 | 3.12 | 2.28 | 1.85 | 1.56 | 1.14 |
| 1137 | 1.28 | | | | | | | | | 3.97 | 3.25 | 2.38 | 1.93 | 1.62 | 1.19 |
| **4-pole LS, LSES and brakes** | | Three-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** |

• *MU obligatory*

**Selection example**

| | |
|---|---|
| Required power: | 15 kW |
| Required speed: | 300 min-1 |
| Duty factor required by the application: | Kp = 1 |
| Operating position; Mounting form: | Horizontal B7; foot mounted |

**Designation: Cb 3531 i: 4.85 S S B7 - MI 4p LSES 160L 15 kW LS2/IE2 - 400 VΔ - U.G.**



# Electromechanical products
# Compabloc

## Selection

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

**Cb 15**
**LS, brake LS - IP 55 - Cl. F - 230 V/400 V Y - 50 Hz - U.G.**

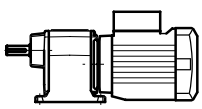
| | |
|---|---|
| Integral mounting | **MI** |
| Universal mounting | **MU** |
| Input shaft mounting | **AP** |

**Cb 1502, 1503, 1504**

LS (kW)

| min-1 | i exact | **0.06** | **0.09** | **0.12** | **0.18** | **0.25** | **0.37** | **0.55** | **0.75** | **0.9** | **1.1** | **1.5** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Three-phase 4-pole LS | | | | | | | | | | | | |
| | | 56 | | 63 | | 71 | | | 80 | | 90 | |
| Single-phase 4-pole LS | | | | | | | | | | | | |
| | | 56 P | 63 P | | 71 P | | | | 80 | | 90 | |
| 6.29 | 231 | 1.01 | | | | | | | | | | |
| 7.13 | 203 | 1.14 | | | **Cb 1504** | | | | | | | |
| 8.01 | 181 | 1.27 | | | | | | | | | | |
| 9.01 | 161 | 1.33 | 0.83 | | | | | | | | | |
| 10.1 | 144 | 1.48 | 0.92 | | | | | | | | | |
| 11.6 | 125 | 1.69 | 1.05 | | | | | | | | | |
| 13.1 | 110 | 1.89 | 1.18 | 0.83 | | | | | | | | |
| 14.8 | 98.3 | 2.10 | 1.31 | 0.92 | | | | | | | | |
| 16.4 | 88.2 | 2.32 | 1.45 | 1.02 | | **Cb 1503** | | | | | | |
| 18.2 | 79.7 | 2.54 | 1.58 | 1.11 | | | | | | | | |
| 20.5 | 70.8 | 2.80 | 1.74 | 1.23 | | | | | | | | |
| 22.5 | 64.6 | 3.01 | 1.87 | 1.32 | 0.85 | | | | | | | |
| 24.5 | 59.1 | 3.22 | 2.00 | 1.41 | 0.91 | | | | | | | |
| 29.0 | 50.1 | 3.71 | 2.30 | 1.63 | 1.04 | | | | | | | |
| 31.4 | 46.2 | 3.91 | 2.43 | 1.72 | 1.10 | | | | | | | |
| 35.6 | 40.8 | 4.31 | 2.68 | 1.89 | 1.21 | 0.87 | | | | | | |
| 39.3 | 36.9 | 4.64 | 2.88 | 2.03 | 1.31 | 0.94 | | | | | | |
| 46.0 | 31.5 | 4.16 | 2.60 | 1.83 | 1.18 | | | | | | | |
| 51.5 | 28.2 | 5.70 | 3.56 | 2.51 | 1.61 | 1.16 | | | | | | |
| 59.1 | 24.5 | 6.38 | 3.99 | 2.80 | 1.80 | 1.30 | | | | | | |
| 67 | 21.6 | 7.13 | 4.46 | 3.14 | 2.01 | 1.45 | | **Cb 1502** | | | | |
| 75.2 | 19.3 | 7.89 | 4.93 | 3.47 | 2.23 | 1.61 | | | | | | |
| 83.8 | 17.3 | 8.62 | 5.39 | 3.79 | 2.44 | 1.76 | 1.16 | | | | | |
| 92.8 | 15.6 | 9.37 | 5.86 | 4.12 | 2.65 | 1.91 | 1.26 | | | | | |
| 104 | 13.9 | | 6.40 | 4.50 | 2.89 | 2.09 | 1.38 | | | | | |
| 115 | 12.7 | | 6.84 | 4.81 | 3.09 | 2.23 | 1.47 | 0.96 | | | | |
| 125 | 11.6 | | 7.24 | 5.10 | 3.27 | 2.36 | 1.56 | 1.02 | | | | |
| 148 | 9.81 | | 8.16 | 5.74 | 3.69 | 2.66 | 1.76 | 1.15 | | | | |
| 160 | 9.07 | | 8.63 | 6.07 | 3.90 | 2.81 | 1.86 | 1.21 | | | | |
| 181 | 7.99 | | 9.53 | 6.70 | 4.31 | 3.11 | 2.05 | 1.34 | | | | |
| 201 | 7.23 | | | 7.07 | 4.55 | 3.28 | 2.16 | 1.42 | | | | |

| **4-pole LS and brakes** | Three-phase 4-pole LS | | | | |
|---|---|---|---|---|---|
| **FMC** | 56 M | 63 M | 71 M | | |
| **FCR** | | | 71 L | | |
| | Single-phase 4-pole LS | | | | |
| **FMC** | 56 MP | 63 MP | 71 MP | | |



**Selection example**

| | |
|---|---|
| Required power: | 0.18 kW |
| Required speed: | 45 min-1 |
| Duty factor required by the application: | Kp = 1 |
| Operating position; Mounting form: | horizontal, foot mounted |

**Designation: Cb 1502 i: 31.5 S S M - MI 4p LS 63M 0.18 kW - 400 VY - U.G.**

## Selection

| Classes | Cb 30 | |
|---|---|---|
| I, II, III<br>(kp = 1, 1.4, 2) | LS, LSES, LS brake, LSES brake - IP 55 - Cl. F<br>230 V/400 V Y - 50 Hz - U.G. | Integral mounting **MI**<br>Universal mounting **MU**<br>Input shaft mounting **AP** |

**Cb 3032, 3033**

LS, LSES (kW)

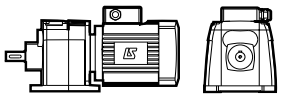
| | | 0.06 | 0.09 | 0.12 | 0.18 | 0.25 | 0.37 | 0.55 | 0.75 | 0.9 | 1.1 | 1.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Three-phase 4-pole LS, LSES | | | | | | | | | | |
| | | 56 | | 63 | | 71 | | | 80 | | 90 | |
| | | Single-phase 4-pole LS | | | | | | | | | | |
| min-1 | i exact | 56 P | 63 P | | 71 P | | | | | | | |
| 7.1 | 204 | 1.41 | 0.89 | | | | | | | | | |
| 7.99 | 181 | 1.59 | 1.00 | | | | | | | | | |
| 9.02 | 161 | 1.79 | 1.13 | 0.80 | | | | | | | | |
| 9.92 | 146 | 1.97 | 1.24 | 0.88 | | | | **Cb 3033** | | | | |
| 11.2 | 130 | 2.22 | 1.40 | 0.99 | | | | | | | | |
| 12.6 | 115 | 2.50 | 1.58 | 1.11 | | | | | | | | |
| 14.2 | 102 | 2.82 | 1.77 | 1.25 | 0.80 | | | | | | | |
| 15.9 | 91.1 | 3.17 | 1.99 | 1.41 | 0.91 | | | | | | | |
| 17.8 | 81.3 | 3.55 | 2.23 | 1.57 | 1.01 | | | | | | | |
| 21.0 | 69.1 | 4.17 | 2.63 | 1.85 | 1.19 | 0.86 | | | | | | |
| 22.6 | 64.1 | 4.50 | 2.83 | 2.00 | 1.29 | 0.93 | | | | | | |
| 26.4 | 55 | 5.24 | 3.30 | 2.33 | 1.50 | 1.08 | | | | | | |
| 29.5 | 49.2 | 5.87 | 3.69 | 2.60 | 1.68 | 1.21 | 0.80 | | | | | |
| 31.6 | 45.9 | 6.28 | 3.95 | 2.79 | 1.80 | 1.30 | 0.86 | | | | | |
| 37.5 | 38.7 | 7.44 | 4.68 | 3.30 | 2.13 | 1.54 | 1.01 | | | | | |
| 39.5 | 36.7 | 7.83 | 4.92 | 3.47 | 2.24 | 1.62 | 1.07 | | | | | |
| 43.6 | 33.2 | 8.62 | 5.44 | 3.82 | 2.46 | 1.78 | 1.17 | | | | | |
| | | | | | | | | | | | | |
| 32.0 | 45.4 | 6.29 | 3.95 | 2.79 | 1.80 | 1.30 | 0.86 | | | | | |
| 36.0 | 40.3 | 7.06 | 4.44 | 3.13 | 2.02 | 1.46 | 0.96 | | | | | |
| 40.6 | 35.7 | 7.96 | 5.00 | 3.53 | 2.27 | 1.64 | 1.08 | | **Cb 3032** | | | |
| 43.6 | 33.2 | 8.62 | 5.42 | 3.82 | 2.46 | 1.78 | 1.17 | | | | | |
| 44.6 | 32.5 | 8.74 | 5.49 | 3.88 | 2.50 | 1.8 | 1.19 | | | | | |
| 50.3 | 28.8 | 9.82 | 6.17 | 4.36 | 2.81 | 2.03 | 1.34 | | | | | |
| 56.7 | 25.6 | | 6.94 | 4.90 | 3.16 | 2.28 | 1.50 | 0.99 | | | | |
| 63.7 | 22.8 | | 7.79 | 5.50 | 3.54 | 2.56 | 1.69 | 1.11 | 0.83 | | | |
| 71.6 | 20.2 | | 8.74 | 6.17 | 3.97 | 2.87 | 1.89 | 1.24 | 0.93 | | | |
| 80.3 | 18.1 | | 9.76 | 6.89 | 4.44 | 3.20 | 2.12 | 1.39 | 1.04 | 0.85 | | |
| 94.4 | 15.4 | | | 8.08 | 5.20 | 3.75 | 2.48 | 1.62 | 1.22 | 1.00 | | |
| 102 | 14.2 | | | 8.69 | 5.60 | 4.04 | 2.67 | 1.75 | 1.31 | 1.08 | | |
| 119 | 12.2 | | | | 6.49 | 4.69 | 3.09 | 2.03 | 1.52 | 1.25 | | |
| 133 | 10.9 | | | | 7.24 | 5.23 | 3.45 | 2.26 | 1.70 | 1.39 | | |
| 142 | 10.2 | | | | 7.75 | 5.59 | 3.69 | 2.42 | 1.82 | 1.49 | | |
| 169 | 8.59 | | | | 9.15 | 6.60 | 4.36 | 2.85 | 2.14 | 1.76 | | |
| 178 | 8.16 | | | | 9.61 | 6.94 | 4.58 | 3.00 | 2.25 | 1.85 | | |
| 196 | 7.38 | | | | | 7.62 | 5.03 | 3.30 | 2.48 | 2.03 | | |

| 4-pole LS, LSES and brakes | Three-phase 4-pole LS, LSES | | | | | |
|---|---|---|---|---|---|---|
| **LS FMC** | 56 M | 63 M | 71 M | | | |
| **LS FCR** | | | 71 L | 80 L | | |
| **LSES FCR** | | | | **80** | | |
| | Single-phase 4-pole LS | | | | | |
| **FMC** | 56 MP | 63 MP | 71 MP | | | |

**Selection example**

| | |
|---|---|
| Required power: | 0.25 kW |
| Required speed: | 32 min-1 |
| Duty factor required by the application: | Kp = 1 |
| Operating position; Mounting form: | horizontal, foot mounted |

**Designation: Cb 3032 i: 45.4 S S M - MI 4p LS 71M 0.25 kW - 400 VY - U.G.**

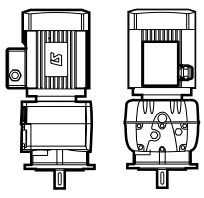


# Selection

| Classes | Cb 3133 | |
|---|---|---|
| I, II, III | LS, LSES, LS brake, LSES brake - IP 55 - Cl. F | Integral mounting **MI** |
| (kp = 1, 1.4, 2) | 230 V/400 V Y 400 V Δ - 50 Hz - U.G. | Universal mounting **MU** |
| | | Input shaft mounting **AP** |

| | | **Cb 3133** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LS, LSES (kW) | | | | | | | | | | |
| | | **0.25** | **0.37** | **0.55** | **0.75** | **0.9** | **1.1** | **1.5** | **1.8** | **2.2** | **3** | **4** |
| | | Three-phase 4-pole LS, LSES | | | | | | | | | | |
| min-1 | i exact | 71 | | | 80 | | 90 | | | 100 | | 112 |
| 9.17 | 158 | 0.85 | | | | | | | | | | |
| 10.1 | 144 | 0.93 | | | | | | | | | | |
| 11.7 | 124 | 1.08 | | | | | | | | | | |
| 13.1 | 111 | 1.20 | | | | | | | | | | |
| 14.6 | 99.4 | 1.30 | 0.86 | | | | | | | | | |
| 16.7 | 87 | 1.43 | 0.95 | | | | | | | | | |
| 17.6 | 82.2 | 1.49 | 0.99 | | | | | | | | | |
| 20.9 | 69.2 | 1.67 | 1.11 | | | | | | | | | |
| 22.2 | 65.3 | 1.74 | 1.15 | | | | | | | | | |
| 25.1 | 57.8 | 1.89 | 1.25 | 0.82 | | | | **Cb 3133** | | | | |
| 28.7 | 50.6 | | | 0.90 | | | | | | | | |
| 29.5 | 49.1 | 2.71 | 1.79 | | | | | | | | | |
| 32.6 | 44.5 | 2.98 | 1.97 | 0.98 | | | | | | | | |
| 37.3 | 38.8 | 3.41 | 2.25 | 1.48 | 1.11 | 0.91 | | | | | | |
| 41.0 | 35.4 | 3.74 | 2.47 | 1.62 | 1.22 | 1.00 | 0.82 | | | | | |
| 47.5 | 30.6 | 4.32 | 2.85 | 1.87 | 1.40 | 1.15 | 0.95 | | | | | |
| 53.2 | 27.2 | 4.83 | 3.19 | 2.09 | 1.57 | 1.29 | 1.06 | | | | | |
| 59.4 | 24.4 | 5.38 | 3.55 | 2.33 | 1.75 | 1.43 | 1.18 | 0.87 | | | | |
| 67.9 | 21.4 | 6.13 | 4.05 | 2.65 | 1.99 | 1.63 | 1.35 | 0.99 | 0.82 | | | |
| 71.8 | 20.2 | 6.47 | 4.27 | 2.8 | 2.10 | 1.72 | 1.42 | 1.04 | 0.86 | | | |
| 85.3 | 17 | 7.65 | 5.05 | 3.31 | 2.49 | 2.04 | 1.68 | 1.23 | 1.02 | 0.83 | | |
| 90.5 | 16 | 8.11 | 5.35 | 3.50 | 2.63 | 2.16 | 1.78 | 1.30 | 1.08 | 0.88 | | |
| 102 | 14.2 | 9.11 | 6.02 | 3.94 | 2.96 | 2.43 | 2.01 | 1.47 | 1.21 | 0.99 | | |
| 117 | 12.4 | | 6.71 | 4.40 | 3.29 | 2.70 | 2.23 | 1.63 | 1.35 | 1.11 | 0.81 | |
| 133 | 10.9 | | 7.36 | 4.84 | 3.61 | 2.97 | 2.45 | 1.79 | 1.48 | 1.21 | 0.89 | |
| 139 | 10.4 | | 5.84 | 3.82 | 2.87 | 2.35 | 1.95 • | | | | | |
| 150 | 9.67 | | | 5.28 • | 3.93 • | 3.23 • | 2.66 | 1.95 | 1.61 | 1.32 | 0.96 | |
| 165 | 8.79 | | 6.93 | 4.54 | 3.41 | 2.8 | 2.31 • | | | | | |
| 169 | 8.57 | | | 5.72 • | 4.25 • | 3.50 • | 2.88 | 2.11 | 1.75 | 1.43 | | |
| 191 | 7.57 | | | 6.18 | 4.60 | 3.79 | 3.12 | 2.28 | 1.89 | 1.55 | 1.13 | |
| 198 | 7.34 | | 8.30 | 5.43 | 4.09 | 3.35 | 2.77 | 2.02 | 1.68 | 1.37 | 1.00 | |
| 226 | 6.42 | | 9.49 | 6.21 | 4.67 | 3.83 | 3.17 | 2.31 | 1.92 | 1.57 | 1.15 | |
| 257 | 5.65 | | | 6.96 | 5.22 | 4.28 | 3.54 | 2.58 | 2.14 | 1.75 | 1.28 | |
| 290 | 4.99 | | | 7.39 • | 5.49 • | 4.52 • | 3.72 | 2.72 | 2.26 | 1.84 | 1.35 | |
| 327 | 4.43 | | | 7.61 • | 5.65 • | 4.66 • | 3.83 | 2.80 | 2.32 | 1.90 | 1.39 | |
| 371 | 3.91 | | | 8.48 | 6.30 | 5.19 | 4.27 | 3.12 | 2.59 | 2.12 | 1.55 | |
| 391 | 3.71 | | | 8.72 | 6.48 | 5.33 | 4.39 | 3.21 | 2.66 | 2.18 | 1.59 | |
| **4-pole LS, LSES and brake** | | Three-phase 4-pole LS, LSES | | | | | | | | | | |
| **LS FCR** | | 71 L | | | 80 L | | 90 L | | | 100 L | | |
| **LSES FCR** | | | | | **80** | | **90** | | | **100** | | |

• *MU obligatory*



**Selection example**

| | |
|---|---|
| Required power: | 1.5 kW |
| Required speed: | 84 min-1 |
| Duty factor required by the application: | Kp = 1 |
| Operating position; Mounting form: | V1 vertical; BS flange |

**Designation: Cb 3133 i: 17 BS S V1 - MI 4p LSES 90L 1.5 kW LS2/IE2 - 400 VY - U.G.**

# Electromechanical products
# Compabloc

## Selection

| Classes | Cb 3233 | |
|---|---|---|
| I, II, III | LS, LSES, LS brake, LSES brake - IP 55 - Cl. F | Integral mounting **MI** |
| (kp = 1, 1.4, 2) | 230 V/400 V Y 400 V Δ - 50 Hz - U.G. | Universal mounting **MU** |
| | | Input shaft mounting **AP** |

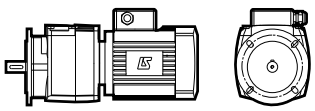
| | | **Cb 3233** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | LS, LSES (kW) | | | | | | | | | | | |
| | | **0.25** | **0.37** | **0.55** | **0.75** | **0.9** | **1.1** | **1.5** | **1.8** | **2.2** | **3** | **4** | **5.5** |
| | | Three-phase 4-pole LS, LSES | | | | | | | | | | | |
| min-1 | i exact | 71 | | | 80 | | 90 | | | 100 | | 112 | 132 |
| 7.12 | 204 | 1.48 | 0.97 | | | | | | | | | | |
| 8.31 | 174 | 1.72 | 1.14 | | | | | | | | | | |
| 9.11 | 159 | 1.89 | 1.25 | 0.82 | | | | | | | | | |
| 10.1 | 144 | 2.09 | 1.38 | 0.90 | | | | | | | | | |
| 11.8 | 123 | 2.45 | 1.62 | 1.06 | 0.80 | | | | | | | | |
| 13.3 | 109 | 2.75 | 1.82 | 1.19 | 0.89 | | | | | | | | |
| 14.8 | 98.2 | 3.06 | 2.02 | 1.32 | 1.00 | 0.82 | | | | | | | |
| 16.8 | 86.5 | 3.48 | 2.30 | 1.50 | 1.13 | 0.93 | | | Cb 3233 | | | | |
| 18.6 | 77.9 | 3.86 | 2.55 | 1.67 | 1.26 | 1.03 | 0.85 | | | | | | |
| 21.1 | 68.6 | 4.38 | 2.90 | 1.89 | 1.43 | 1.17 | 0.97 | | | | | | |
| 22.6 | 64.2 | 4.68 | 3.09 | 2.02 | 1.52 | 1.25 | 1.03 | | | | | | |
| 26.0 | 55.7 | 5.40 | 3.57 | 2.33 | 1.76 | 1.44 | 1.19 | 0.87 | | | | | |
| 28.9 | 50.2 | 5.93 | 3.92 | 2.56 | 1.93 | 1.58 | 1.31 | | | | | | |
| 29.7 | 48.9 | | | 2.66 | 2.00 | 1.64 | 1.36 | 0.99 | 0.82 | | | | |
| 33.7 | 43 | 6.91 | 4.56 | 2.99 | 2.25 | 1.84 | 1.52 | 1.11 | 0.92 | | | | |
| 37.0 | 39.2 | 7.56 | 5.00 | 3.27 | 2.46 | 2.01 | 1.67 | 1.22 | 1.01 | 0.82 | | | |
| 40.8 | 35.5 | 8.33 | 5.50 | 3.60 | 2.71 | 2.22 | 1.84 | 1.34 | 1.11 | 0.91 | | | |
| 47.9 | 30.3 | 9.73 | 6.43 | 4.21 | 3.16 | 2.59 | 2.14 | 1.57 | 1.30 | 1.06 | | | |
| 53.9 | 26.9 | | 7.21 | 4.72 | 3.55 | 2.91 | 2.40 | 1.76 | 1.45 | 1.19 | 0.87 | | |
| 59.9 | 24.2 | | 8.00 | 5.24 | 3.94 | 3.23 | 2.67 | 1.95 | 1.61 | 1.32 | 0.97 | | |
| 68.1 | 21.3 | | 9.06 | 5.93 | 4.46 | 3.65 | 3.02 | 2.21 | 1.83 | 1.50 | 1.09 | 0.83 | |
| 75.6 | 19.2 | | 9.99 | 6.54 | 4.92 | 4.03 | 3.33 | 2.43 | 2.02 | 1.65 | 1.21 | 0.9 | |
| 85.8 | 16.9 | | | 7.20 | 5.39 | 4.42 | 3.65 | 2.67 | 2.21 | 1.81 | 1.32 | 1.00 | |
| 91.7 | 15.8 | | | 7.57 | 5.64 | 4.64 | 3.82 | 2.79 | 2.32 | 1.89 | 1.39 | 1.05 | |
| 106 | 13.7 | | | 8.38 | 6.23 | 5.13 | 4.22 | 3.09 | 2.56 | 2.09 | 1.53 | 1.16 | 0.84 |
| 120 | 12 | | | 9.12 | 6.79 | 5.59 | 4.60 | 3.36 | 2.79 | 2.28 | 1.67 | 1.26 | |
| 133 | 10.9 | | | 9.77 • | 7.27 • | 5.98 • | 4.93 • | 3.60 • | 2.99 • | 2.44 • | 1.79 | 1.35 | |
| 134 | 10.8 | | | 6.51 | 4.90 | 4.01 | 3.32 | 2.43 | 2.01 | 1.64 | | | |
| 149 | 9.72 | | | 7.23 | 5.44 | 4.46 | 3.69 | 2.69 | 2.23 | 1.82 | | | |
| 151 | 9.62 | | | | 7.86 • | 6.47 • | 5.32 • | 3.89 • | 3.23 • | 2.64 • | 1.93 | 1.46 | 1.06 |
| 161 | 9.02 | | | | 8.22 • | 6.77 • | 5.57 • | 4.07 • | 3.38 • | 2.76 • | 2.02 | 1.52 | 1.11 |
| 169 | 8.57 | | | 8.21 | 6.17 | 5.06 | 4.18 | 3.06 | 2.53 | 2.07 | | | |
| 181 | 8.02 | | | 8.77 | 6.60 | 5.40 | 4.47 | 3.27 | 2.71 | 2.21 | | | |
| 190 | 7.63 | | | | 9.13 • | 7.51 • | 6.19 • | 4.52 • | 3.75 • | 3.07 • | 2.24 | 1.69 | 1.23 |
| 208 | 6.96 | | | | 7.61 | 6.23 | 5.15 | 3.77 | 3.12 | 2.55 | 1.86 | 1.41 | 1.02 |
| 238 | 6.1 | | | | 8.67 | 7.10 | 5.87 | 4.29 | 3.55 | 2.91 | 2.13 | 1.61 | 1.17 |
| 263 | 5.51 | | | | 9.6 • | 7.86 • | 6.50 • | 4.75 • | 3.93 • | 3.22 • | 2.35 | 1.78 | 1.29 |
| 297 | 4.88 | | | | | 8.88 • | 7.35 • | 5.37 • | 4.45 • | 3.64 • | 2.66 | 2.02 | 1.46 |
| 317 | 4.57 | | | | | 9.48 • | 7.84 • | 5.73 • | 4.74 • | 3.88 • | 2.84 | 2.15 | 1.56 |
| 375 | 3.87 | | | | | | 9.26 • | 6.77 • | 5.6 • | 4.59 • | 3.35 | 2.54 | 1.84 |
| **4-pole LS, LSES and brakes** | | Three-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: | 0.75 kW |
| Required speed: | 20 min-1 |
| Duty factor required by the application: | Kp = 1 |
| Operating position; Mounting form: | Horizontal B5; BS flange |

**Designation: Cb 3233 i: 77.9 BS S B5 - MI 4p LSES 80LG 0.75 kW LS2/IE2 - 400 VY - U.G.**



# Selection

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

**Cb 3333**
**LS, LSES, LS brake, LSES brake - IP 55 - Cl. F**
**230 V/400 V Y 400 V Δ - 50 Hz - U.G.**

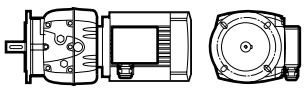
| | |
|---|---|
| Integral mounting | **MI** |
| Universal mounting | **MU** |
| Input shaft mounting | **AP** |

## Cb 3333

LS, LSES (kW)

| min-1 | i exact | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Three-phase 4-pole LS, LSES | | | | | | | | | | | | | |
| | | 71 | | | 80 | | 90 | | | 100 | | 112 | 132 | | |
| 7.23 | 200 | 2.75 | 1.81 | 1.19 | 0.89 | | | | | | | | | | |
| 8.01 | 181 | 3.04 | 2.01 | 1.31 | 0.99 | 0.81 | | | | | | | | | |
| 8.95 | 162 | 3.40 | 2.24 | 1.47 | 1.10 | 0.90 | | | | | | | | | |
| 10.3 | 141 | 3.91 | 2.58 | 1.69 | 1.27 | 1.04 | 0.86 | | | Cb 3333 | | | | | |
| 11.6 | 125 | 4.42 | 2.92 | 1.91 | 1.44 | 1.18 | 0.97 | | | | | | | | |
| 12.7 | 114 | 4.81 | 3.17 | 2.08 | 1.56 | 1.28 | 1.06 | | | | | | | | |
| 14.3 | 101 | 5.44 | 3.59 | 2.35 | 1.77 | 1.45 | 1.20 | 0.88 | | | | | | | |
| 16.1 | 90.1 | 6.11 | 4.03 | 2.64 | 1.99 | 1.63 | 1.35 | 0.98 | 0.81 | | | | | | |
| 17.9 | 80.9 | 6.81 | 4.49 | 2.94 | 2.21 | 1.81 | 1.50 | 1.10 | 0.91 | | | | | | |
| 19.5 | 74.4 | 7.39 | 4.88 | 3.20 | 2.40 | 1.97 | 1.63 | 1.19 | 0.99 | 0.81 | | | | | |
| 21.9 | 66.1 | 8.33 | 5.50 | 3.60 | 2.71 | 2.22 | 1.83 | 1.34 | 1.11 | 0.91 | | | | | |
| 25.2 | 57.6 | | | 4.13 | 3.11 | 2.54 | 2.11 | 1.54 | 1.27 | 1.04 | | | | | |
| 27.8 | 52.1 | | | 4.57 • | 3.43 • | 2.81 • | 2.33 • | 1.70 • | 1.41 • | 1.15 • | 0.84 | | | | |
| 29.8 | 48.7 | | 7.13 | 4.67 | 3.51 | 2.88 | 2.38 | 1.74 | 1.44 | 1.18 | | | | | |
| 33.0 | 44 | | 7.89 | 5.17 | 3.89 | 3.18 | 2.63 | 1.92 | 1.59 | 1.30 | | | | | |
| 36.8 | 39.4 | | 8.82 | 5.77 | 4.34 | 3.56 | 2.94 | 2.15 | 1.78 | 1.46 | 1.06 | 0.81 | | | |
| 42.4 | 34.2 | | | 6.65 | 5.00 | 4.10 | 3.39 | 2.48 | 2.05 | 1.68 | 1.23 | 0.93 | | | |
| 48.0 | 30.2 | | | 7.51 | 5.65 | 4.63 | 3.83 | 2.80 | 2.32 | 1.90 | 1.39 | 1.05 | | | |
| 52.2 | 27.8 | | | 8.17 | 6.15 | 5.03 | 4.17 | 3.04 | 2.52 | 2.06 | 1.51 | 1.14 | 0.83 | | |
| 59.0 | 24.6 | | | 9.25 | 6.96 | 5.70 | 4.72 | 3.5 | 2.85 | 2.33 | 1.71 | 1.29 | 0.94 | | |
| 66.3 | 21.9 | | | | 7.81 | 6.40 | 5.29 | 3.87 | 3.20 | 2.62 | 1.91 | 1.45 | 1.05 | | |
| 73.8 | 19.6 | | | | 8.70 | 7.13 | 5.90 | 4.31 | 3.57 | 2.92 | 2.13 | 1.62 | 1.17 | 0.86 | |
| 80.2 | 18.1 | | | | 9.45 | 7.74 | 6.41 | 4.68 | 3.88 | 3.17 | 2.32 | 1.76 | 1.27 | 0.94 | |
| 90.3 | 16.1 | | | | | 8.72 | 7.21 | 5.27 | 4.36 | 3.57 | 2.61 | 1.98 | 1.43 | 1.06 | |
| 104 | 14 | | | | | | 8.28 | 6.05 | 5.01 | 4.10 | 3.00 | 2.27 | 1.64 | 1.21 | |
| 115 | 12.7 | | | | | | 9.12 • | 6.66 • | 5.52 • | 4.51 • | 3.30 | 2.50 | 1.81 | 1.34 | |
| 116 | 12.5 | | | 9.25 | 6.96 | 5.70 | 4.72 | 3.45 | 2.85 | 2.33 | | | | | |
| 131 | 11.1 | | | | 7.81 | 6.40 | 5.29 | 3.87 | 3.20 | 2.62 | | | | | |
| 132 | 11 | | | | | | 9.94 • | 7.26 • | 6.02 • | 4.92 • | 3.60 | 2.72 | 1.97 | 1.45 | |
| 145 | 9.98 | | | | | | | 7.95 • | 6.59 • | 5.39 • | 3.94 • | 2.98 • | 2.16 | 1.59 | |
| 146 | 9.95 | | | | 8.70 | 7.13 | 5.90 | 4.31 | 3.57 | 2.92 | 2.13 | 1.62 | | | |
| 158 | 9.16 | | | | 9.45 | 7.74 | 6.41 | 4.68 | 3.88 | 3.17 | | | | | |
| 160 | 9.06 | | | | | | | 8.51 • | 7.06 • | 5.77 • | 4.22 | 3.19 | 2.31 | 1.70 | |
| 178 | 8.14 | | | | | 8.72 | 7.21 | 5.27 | 4.36 | 3.57 | 2.61 | 1.98 | | | |
| 185 | 7.85 | | | | | | | 9.33 • | 7.74 • | 6.33 • | 4.63 • | 3.49 • | 2.53 | 1.86 | |
| 205 | 7.09 | | | | | | 8.28 | 6.05 | 5.01 | 4.10 | 3.00 | 2.27 | 1.64 | 1.21 | |
| 226 | 6.41 | | | | | | 9.15 • | 6.69 • | 5.54 • | 4.53 • | 3.31 | 2.51 | 1.82 | 1.34 | |
| 259 | 5.59 | | | | | | | 7.68 • | 6.35 • | 5.20 • | 3.80 | 2.88 | 2.09 | 1.54 | |
| 287 | 5.06 | | | | | | | 8.48 • | 7.02 • | 5.74 • | 4.20 • | 3.18 • | 2.30 | 1.70 | |
| 316 | 4.59 | | | | | | | 9.35 • | 7.74 • | 6.33 • | 4.63 | 3.51 | 2.54 | 1.87 | |
| 364 | 3.98 | | | | | | | | 8.93 • | 7.30 • | 5.34 • | 4.05 • | 2.93 | 2.16 | |
| **4-pole LS, LSES and brake** | | Three-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: | 4 kW |
| Required speed: | 47 min-1 |
| Duty factor required by the application: | Kp = 1 |
| Operating position; Mounting form: | Horizontal B52; BS flange |

**Designation: Cb 3333 i: 30.2 BS S B52 - MI 4p LSES 112MU 4 kW LS2/IE2 - 400 VY - U.G.**

# Electromechanical products
# Compabloc

## Selection

| Classes | Cb 3433 | |
|---|---|---|
| I, II, III | LSES, LS brake, LSES brake - IP 55 - Cl. F | Integral mounting **MI** |
| (kp = 1, 1.4, 2) | 230 V/400 V Y 400 V Δ - 50 Hz - U.G. | Universal mounting **MU** |
| | | Input shaft mounting **AP** |

### Cb 3433

| | | 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** |
| | | Three-phase 4-pole LSES | | | | | | | | | | | | | | | |
| min-1 | i exact | 80 | | 90 | | | 100 | | 112 | 132 | | | 160 | | 180 | | 200 |
| 7.11 | 204 | 1.72 | 1.40 | 1.16 | 0.85 | | | | | | | | | | | | |
| 8.43 | 172 | 2.03 | 1.66 | 1.37 | 1.00 | 0.83 | | | | | | | | | | | |
| 9.36 | 155 | 2.26 | 1.85 | 1.53 | 1.11 | 0.92 | | | | | | | | | | | |
| 10.3 | 140 | 2.49 | 2.04 | 1.68 | 1.23 | 1.02 | 0.83 | | | | | | | | | | |
| 11.2 | 129 | 2.70 | 2.21 | 1.82 | 1.33 | 1.10 | 0.90 | | | | | | | | | | |
| 13.1 | 111 | 3.13 | 2.56 | 2.12 | 1.55 | 1.28 | 1.05 | | | | | | | | | | |
| 14 | 104 | 3.36 • | 2.75 • | 2.27 | 1.66 | 1.37 | 1.12 | 0.82 | | | | | | | | | |
| 16.0 | 90.7 | 3.82 • | 3.13 • | 2.59 | 1.89 | 1.56 | 1.28 | 0.93 | | | | | | | | | |
| 18.1 | 80.1 | 4.32 • | 3.53 • | 2.92 | 2.13 | 1.76 | 1.44 | 1.05 | 0.80 | | | | | | | | |
| 20.3 | 71.4 | 4.84 • | 3.96 • | 3.27 | 2.39 | 1.98 | 1.62 | 1.18 | 0.90 | | | | | | | | |
| 22.7 | 63.9 | 5.39 • | 4.41 • | 3.64 | 2.66 | 2.20 | 1.80 | 1.32 | 1.00 | | | | | | | | |
| 26.5 | 54.7 | 6.27 • | 5.13 • | 4.24 | 3.10 | 2.56 | 2.10 | 1.53 | 1.16 | 0.84 | | **Cb 3433** | | | | | |
| 28.8 | 50.3 | 6.74 | 5.51 | 4.56 | 3.33 | 2.75 | 2.25 | 1.65 | 1.25 | | | | | | | | |
| 34.2 | 42.5 | 7.95 | 6.51 | 5.38 | 3.93 | 3.25 | 2.66 | 1.94 | 1.47 | | | | | | | | |
| 37.9 | 38.2 | 8.81 | 7.21 | 5.96 | 4.35 | 3.60 | 2.94 | 2.15 | 1.63 | 1.18 | 0.87 | | | | | | |
| 41.9 | 34.6 | 9.70 | 7.94 | 6.56 | 4.79 | 3.97 | 3.24 | 2.37 | 1.80 | 1.30 | 0.96 | | | | | | |
| 45.5 | 31.9 | | 8.60 | 7.11 | 5.19 | 4.29 | 3.51 | 2.57 | 1.94 | 1.41 | 1.04 | | | | | | |
| 52.9 | 27.4 | | 9.96 | 8.23 | 6.01 | 4.98 | 4.07 | 2.97 | 2.25 | 1.63 | 1.20 | 1.00 | 0.82 | | | | |
| 56.8 | 25.5 | | | 8.82 | 6.44 | 5.33 | 4.36 | 3.18 | 2.41 | 1.75 | 1.29 | 1.07 | 0.88 | | | | |
| 64.8 | 22.4 | | | | 7.32 | 6.06 | 4.95 | 3.62 | 2.74 | 1.99 | 1.46 | 1.22 | 1.00 | | | | |
| 73.3 | 19.8 | | | | 8.25 | 6.83 | 5.58 | 4.08 | 3.09 | 2.24 | 1.65 | 1.38 | 1.12 | 0.82 | | | |
| 82.4 | 17.6 | | | | 9.22 | 7.63 | 6.24 | 4.56 | 3.46 | 2.50 | 1.84 | 1.54 | 1.26 | 0.92 | | | |
| 91.9 | 15.8 | | | | | 8.49 | 6.94 | 5.07 | 3.84 | 2.78 | 2.05 | 1.71 | 1.40 | 1.02 | 0.83 | | |
| 107 | 13.5 | | | | | 9.86 | 8.06 | 5.89 | 4.46 | 3.23 | 2.38 | 1.99 | 1.62 | 1.19 | 0.96 | 0.81 | |
| 119 | 12.2 | | | | | | 8.86 • | 6.48 • | 4.90 • | 3.55 | 2.62 | 2.18 | 1.78 | 1.31 | 1.06 | 0.89 | |
| 134 | 10.8 | | | | | | 9.77 • | 7.14 • | 5.40 • | 3.91 | 2.88 | 2.40 | 1.96 | 1.44 | 1.17 | 0.98 | |
| 150 | 9.67 | | | | | | | 7.72 • | 5.83 • | 4.22 | 3.11 | 2.59 | 2.12 | 1.55 | 1.26 | 1.06 | |
| 169 | 8.6 | | | | | | | 8.31 • | 6.28 • | 4.55 | 3.35 | 2.79 | 2.28 | 1.67 | 1.35 | 1.14 | 0.84 • |
| 188 | 7.69 | | | | | | | 8.04 • | 6.09 • | 4.41 | 3.25 | 2.71 | 2.21 | 1.62 | 1.31 | 1.10 | 0.81 • |
| 211 | 6.86 | | | | | | 9.73 | 7.11 | 5.38 | 3.90 | 2.87 | 2.40 | 1.96 | 1.43 | 1.16 | 0.98 | |
| 233 | 6.21 | | | | | | | 7.59 • | 5.74 • | 4.16 | 3.06 | 2.56 | 2.09 | 1.53 | 1.24 | 1.04 | |
| 265 | 5.48 | | | | | | | 7.41 • | 5.61 • | 4.06 | 2.99 | 2.50 | 2.04 | 1.49 | 1.21 | 1.02 | |
| 295 | 4.91 | | | | | | | 8.73 • | 6.61 • | 4.79 | 3.53 | 2.94 | 2.40 | 1.76 | 1.43 | 1.20 | 0.88 • |
| 332 | 4.37 | | | | | | | 8.63 • | 6.53 • | 4.73 | 3.48 | 2.91 | 2.38 | 1.74 | 1.41 | 1.18 | 0.87 • |
| 371 | 3.91 | | | | | | | 8.04 • | 6.09 • | 4.41 | 3.25 | 2.71 | 2.21 | 1.62 | 1.31 | 1.10 | 0.81 • |

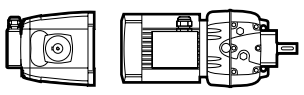
| **4-pole LS, LSES and brakes** | Three-phase 4-pole LS, LSES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **LS FCR** | 80 L | 90 L | 100 L | 112 | 132 | | 160 | | |
| **LSES FCR** | **80** | **90** | **100** | **112** | **132** | | **160** | | |
| **LS, LSES FCPL** | | | | | | | **160** | **180** | **200** |

• *MU obligatory*

**Selection example**

| | |
|---|---|
| Required power: | 4 kW |
| Required speed: | 28 min-1 |
| Duty factor required by the application: | Kp = 1 |
| Operating position; Mounting form: | Horizontal B7; foot mounted |

**Designation: Cb 3433 i: 50.3 S S B7 - MI 4p LSES 112MU LS2/IE2 4 kW - 400 VY - U.G.**



# Electromechanical products
# Compabloc

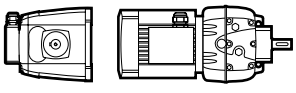
## Selection

| Classes | Cb 3533 | |
|---|---|---|
| I, II, III | LSES, LS brake, LSES brake - IP 55 - Cl. F | Integral mounting **MI** |
| (kp = 1, 1.4, 2) | 230 V/400 V Y 400 V Δ - 50 Hz - U.G. | Universal mounting **MU** |
| | | Input shaft mounting **AP** |

### Cb 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 |
| | | Three-phase 4-pole LSES | | | | | | | | | | | | | | | |
| min-1 | i exact | 80 | | 90 | | | 100 | | 112 | 132 | | | 160 | | 180 | | 200 |
| 7.2 | 201 | 3.32 • | 2.72 • | 2.24 | 1.64 | 1.35 | 1.11 | 0.81 | | | | | | | | | |
| 8.39 | 173 | 3.86 • | 3.16 • | 2.61 | 1.90 | 1.57 | 1.29 | 0.94 | | | | | | | | | |
| 9.13 | 159 | 4.19 • | 3.43 • | 2.83 | 2.07 | 1.71 | 1.40 | 1.02 | | | | | | | | | |
| 10.5 | 138 | 4.80 • | 3.93 • | 3.25 | 2.37 | 1.96 | 1.60 | 1.17 | 0.89 | | | | | | | | |
| 11.9 | 122 | 5.44 • | 4.45 • | 3.67 | 2.68 | 2.22 | 1.81 | 1.32 | 1.00 | | | | | | | | |
| 13.2 | 110 | 6.05 • | 4.94 • | 4.08 | 2.98 | 2.46 | 2.02 | 1.47 | 1.11 | 0.81 | | | | | | | |
| 14.9 | 97.5 | 6.78 • | 5.54 • | 4.58 | 3.34 | 2.76 | 2.26 | 1.65 | 1.25 | 0.90 | | | | | | | |
| 16.2 | 89.3 | 7.39 • | 6.04 • | 4.99 • | 3.64 • | 3.01 • | 2.46 • | 1.80 | 1.36 | 0.99 | | | | | | | |
| 18.8 | 77.2 | 8.52 • | 6.97 • | 5.75 • | 4.2 • | 3.47 • | 2.84 • | 2.07 | 1.57 | 1.14 | 0.84 | | Cb 3533 | | | | |
| 20.8 | 69.8 | 9.10 • | 7.46 • | 6.15 • | 4.49 • | 3.71 • | 3.04 • | 2.22 | 1.68 | 1.21 | 0.89 | | | | | | |
| 23.6 | 61.4 | 9.90 • | 8.13 • | 6.69 • | 4.88 • | 4.04 • | 3.30 • | 2.41 • | 1.82 • | 1.32 | 0.97 | 0.81 | | | | | |
| 25.6 | 56.6 | | 8.52 • | 7.00 • | 5.11 • | 4.23 • | 3.46 • | 2.53 • | 1.91 • | 1.38 | 1.02 | 0.85 | | | | | |
| 29.2 | 49.7 | | | 8.76 | 6.39 | 5.29 | 4.32 | 3.16 | 2.39 | 1.73 | 1.28 | | | | | | |
| 34.0 | 42.7 | | | | 7.41 | 6.13 | 5.02 | 3.66 | 2.77 | 2.01 | 1.48 | | | | | | |
| 37.0 | 39.2 | | | | 8.05 | 6.66 | 5.44 | 3.98 | 3.01 | 2.18 | 1.61 | | | | | | |
| 42.4 | 34.2 | | | | 9.20 | 7.61 | 6.22 | 4.55 | 3.44 | 2.49 | 1.84 | 1.53 | 1.25 | 0.92 | | | |
| 48.1 | 30.1 | | | | | 8.60 | 7.03 | 5.13 | 3.89 | 2.81 | 2.07 | 1.73 | 1.41 | 1.03 | 0.84 | | |
| 53.6 | 27.1 | | | | | 9.55 | 7.80 | 5.70 | 4.32 | 3.12 | 2.30 | 1.92 | 1.57 | 1.15 | 0.93 | | |
| 60.2 | 24.1 | | | | | | 8.73 | 6.38 | 4.83 | 3.50 | 2.58 | 2.15 | 1.76 | 1.28 | 1.04 | 0.88 | |
| 65.7 | 22.1 | | | | | | 9.50 • | 6.94 | 5.26 | 3.80 | 2.80 | 2.34 | 1.91 | 1.40 | 1.13 | 0.95 | |
| 76.0 | 19.1 | | | | | | | 7.56 | 5.73 | 4.14 | 3.05 | 2.55 | 2.08 | 1.52 | 1.24 | 1.04 | |
| 84.1 | 17.2 | | | | | | | 8.78 | 6.65 | 4.81 | 3.55 | 2.96 | 2.42 | 1.77 | 1.43 | 1.20 | 0.89 |
| 95.6 | 15.2 | | | | | | | 9.61 • | 7.27 • | 5.27 | 3.88 | 3.24 | 2.64 | 1.93 | 1.57 | 1.32 | 0.97 |
| 104 | 14 | | | | | | | | 7.66 • | 5.55 | 4.09 | 3.41 | 2.79 | 2.04 | 1.65 | 1.39 | 1.02 |
| 117 | 12.4 | | | | | | | | 8.46 • | 6.12 | 4.51 | 3.76 | 3.08 | 2.25 | 1.82 | 1.53 | 1.13 |
| 131 | 11.1 | | | | | | | | 9.04 • | 6.55 | 4.82 | 4.02 | 3.29 | 2.41 | 1.95 | 1.64 | 1.21 |
| 146 | 9.94 | | | | | | | | | | | 4.44 | 3.63 | 2.65 | 2.15 | 1.81 | 1.33 |
| 160 | 9.07 | | | | | | | | | | | 4.71 | 3.85 | 2.82 | 2.29 | 1.92 | 1.41 |
| 183 | 7.92 | | | | | | | | | | | 5.15 | 4.21 | 3.08 | 2.50 | 2.10 | 1.54 |
| 202 | 7.18 | | | | | | | | 7.66 • | 5.55 | 4.09 | 3.41 | 2.79 | 2.04 | 1.65 | 1.39 | 1.02 |
| 227 | 6.38 | | | | | | | | 8.46 • | 6.13 | 4.51 | 3.76 | 3.08 | 2.25 | 1.83 | 1.53 | 1.13 |
| 255 | 5.7 | | | | | | | | 9.04 • | 6.54 | 4.82 | 4.02 | 3.29 | 2.40 | 1.95 | 1.64 | 1.21 |
| 284 | 5.1 | | | | | | | | | | | 5.28 | 4.31 | 3.16 | 2.56 | 2.15 | 1.58 |
| 311 | 4.66 | | | | | | | | | | | 5.55 | 4.53 | 3.32 | 2.69 | 2.26 | 1.66 |
| 356 | 4.07 | | | | | | | | | | | 5.94 | 4.86 | 3.55 | 2.88 | 2.42 | 1.78 |
| 4-pole LS, LSES and brakes | | Three-phase 4-pole LS, LSES | | | | | | | | | | | | | | | |
| **LS FCR** | | 80 L | | 90 L | | | 100 L | | 112 | 132 | | | 160 | | | | |
| **LSES FCR** | | **80** | | **90** | | | **100** | | **112** | **132** | | | **160** | | | | |
| **LS, LSES FCPL** | | | | | | | | | | | | | **160** | | **180** | | **200** |

• *MU obligatory*



**Selection example**

| | |
|---|---|
| Required power: | 15 kW |
| Required speed: | 60 min-1 |
| Duty factor required by the application: | Kp = 1 |
| Operating position; Mounting form: | Horizontal B7; foot mounted |

**Designation: Cb 3533 i: 24.1 S S B7 - MI 4p LSES 160L 15 kW LS2/IE2 - 400 VΔ - U.G.**

# Electromechanical products
# Compabloc

## Selection

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

**Cb 3633**
**LSES, LS brake, LSES brake - IP 55 - Cl. F**
**230 V/400 V Y 400 V Δ - 50 Hz - U.G.**

| | |
|---|---|
| Integral mounting | **MI** |
| Universal mounting | **MU** |
| Input shaft mounting | **AP** |

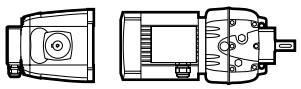
**Cb 3633**

| | | 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 | 55 [1] |
| | | Three-phase 4-pole LSES | | | | | | | | | | | | | | | | |
| min-1 | i exact | 90 | | | 100 | | 112 | 132 | | | 160 | | 180 | | 200 | 225 | | 250 |
| 5.8 | 252 | 2.56 | 1.86 | 1.54 | 1.26 | 0.92 | | | | | | | | | | | | |
| 6.7 | 216 | 2.98 | 2.17 | 1.79 | 1.47 | 1.07 | 0.81 | | | | | | | | | | | |
| 7.3 | 199 | 3.24 | 2.36 | 1.95 | 1.60 | 1.17 | 0.88 | | | | | | | | | | | |
| 8.4 | 173 | 3.72 | 2.71 | 2.24 | 1.83 | 1.34 | 1.02 | | | | | | | | | | | |
| 9.5 | 153 | 4.22 | 3.08 | 2.56 | 2.08 | 1.52 | 1.15 | 0.83 | | | | | | | | | | |
| 10.6 | 137 | 4.69 | 3.42 | 2.85 | 2.32 | 1.69 | 1.28 | 0.93 | | | | | | | | | | |
| 11.9 | 122 | 5.26 | 3.84 | 3.20 | 2.60 | 1.90 | 1.44 | 1.04 | | Cb 3633 | | | | | | | | |
| 12.9 | 112 | | | | 2.83 • | 2.07 | 1.56 | 1.13 | 0.83 | | | | | | | | | |
| 15.0 | 96.6 | | | | 3.26 • | 2.38 | 1.80 | 1.31 | 0.96 | 0.80 | | | | | | | | |
| 16.6 | 87.3 | | | | 3.60 • | 2.63 | 1.99 | 1.44 | 1.06 | 0.89 | | | | | | | | |
| 18.9 | 76.9 | | | | 4.08 • | 2.98 • | 2.26 • | 1.63 | 1.20 | 1.00 | 0.82 | | | | | | | |
| 20.5 | 70.8 | | | | 4.42 • | 3.23 • | 2.44 • | 1.77 | 1.30 | 1.09 | 0.89 | | | | | | | |
| 23.0 | 63 | | | | 4.96 • | 3.62 • | 2.74 • | 1.98 | 1.46 | 1.22 | 1.00 | | | | | | | |
| 25.8 | 56.2 | | | | 5.54 • | 4.04 • | 3.06 • | 2.22 | 1.63 | 1.36 | 1.11 | 0.81 | | | | | | |
| 28.8 | 50.4 | | | | 6.16 • | 4.50 • | 3.41 • | 2.47• | 1.82 • | 1.52 | 1.24 | 0.91 | | | | | | |
| 33.9 | 42.8 | | | | 6.80 | 4.97 | 3.75 | 2.72 | 2.00 | 1.67 | 1.36 | 1.00 | 0.81 | | | | | |
| 37.2 | 39 | | | | 7.83 | 5.72 | 4.33 | 3.13 | 2.31 | 1.93 | 1.57 | 1.15 | 0.93 | | | | | |
| 42.0 | 34.5 | | | | 8.75 | 6.39 | 4.84 | 3.50 | 2.58 | 2.15 | 1.76 | 1.29 | 1.04 | 0.88 | | | | |
| 46.6 | 31.1 | | | | 9.60 • | 7.01 | 5.30 | 3.84 | 2.83 | 2.36 | 1.93 | 1.41 | 1.14 | 0.96 | | | | |
| 52.3 | 27.7 | | | | | 7.76 | 5.87 | 4.25 | 3.13 | 2.61 | 2.13 | 1.56 | 1.27 | 1.06 | | | | |
| 56.9 | 25.5 | | | | | 8.35 | 6.31 | 4.57 | 3.37 | 2.81 | 2.29 | 1.68 | 1.36 | 1.14 | | | | |
| 66.2 | 21.9 | | | | | 9.54 • | 7.21 • | 5.22 | 3.85 | 3.21 | 2.62 | 1.92 | 1.56 | 1.31 | 0.96 | | | |
| 72.5 | 20 | | | | | | 7.78 • | 5.63 | 4.15 | 3.46 | 2.83 | 2.07 | 1.68 | 1.41 | 1.04 | 0.84 | | |
| 81.9 | 17.7 | | | | | | 8.66 • | 6.27 | 4.62 | 3.85 | 3.15 | 2.30 | 1.87 | 1.57 | 1.15 | 0.94 | | |
| 96.0 | 15.1 | | | | | | 9.95 • | 7.20 | 5.30 | 4.42 | 3.62 | 2.65 | 2.15 | 1.80 | 1.33 | 1.08 | 0.89 | |
| 107 | 13.5 | | | | | | | 7.98 | 5.88 | 4.90 | 4.01 | 2.93 | 2.38 | 2.00 | 1.47 | 1.20 | 0.98 | 0.81 • |
| 120 | 12.1 | | | | | | | | | 5.40 | 4.41 | 3.23 | 2.62 | 2.20 | 1.62 | 1.32 | 1.08 | 0.89 • |
| 133 | 10.9 | | | | | | | | | 5.90 | 4.82 | 3.53 | 2.86 | 2.40 | 1.77 | 1.44 | 1.18 | 0.97 • |
| 151 | 9.63 | | | | | | | | | 6.58 | 5.38 | 3.94 | 3.19 | 2.68 | 1.97 | 1.61 | 1.32 | 1.09 • |
| 170 | 8.53 | | | | | | | | | 7.33 | 5.99 | 4.38 | 3.56 | 2.99 | 2.20 | 1.79 | 1.47 | 1.21 • |
| 190 | 7.62 | | | | | | | | | 8.10 | 6.62 | 4.84 | 3.93 | 3.30 | 2.43 | 1.98 | 1.63 | 1.34 • |
| 203 | 7.15 | | | | | | | | | | 7.00 • | 5.12 • | 4.15 • | 3.49 • | 2.57 | 2.09 | 1.72 | 1.42 • |
| 236 | 6.15 | | | | | | | | | | 7.73 | 5.66 | 4.59 | 3.85 | 2.83 | 2.30 | 1.90 | 1.56 • |
| 261 | 5.56 | | | | | | | | | | 8.36 | 6.12 | 4.96 | 4.17 | 3.06 | 2.49 | 2.05 | 1.69 • |
| 295 | 4.91 | | | | | | | | | | 9.18 | 6.72 | 5.45 | 4.57 | 3.36 | 2.74 | 2.25 | 1.85 • |
| 334 | 4.34 | | | | | | | | | | 10.04 | 7.35 | 5.96 | 5.00 | 3.68 | 3.00 | 2.47 | 2.03 • |
| 374 | 3.88 | | | | | | | | | | 10.12 | 7.40 | 6.00 | 5.04 | 3.71 | 3.02 | 2.49 | 2.05 • |
| 398 | 3.64 | | | | | | | | | | 9.49 • | 6.94 • | 5.63 • | 4.73 • | 3.48 | 2.83 | 2.33 | 1.92 • |
| 452 | 3.21 | | | | | | | | | | 9.37 • | 6.86 • | 5.56 • | 4.67 • | 3.44 | 2.80 | 2.30 | 1.90 • |

| 4-pole LS, LSES and brakes | Three-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: | 37 kW |
| Required speed: | 105 min-1 |
| Duty factor required by the application: | Kp = 1 |
| Operating position; Mounting form: | Horizontal B7; foot mounted |

**Designation: Cb 3633 i: 13.5 S S B7 - MI 4p LSES 225ST 37 kW LS2/IE2 - 400 VΔ - U.G.**

# Selection

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

**Cb 3733**
**LSES IE2, LS IE1 brake, LSES brake - IP 55 - Cl. F**
**230 V/400 V Y 400 V Δ - 50 Hz - U.G.**

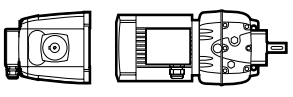
| | |
|---|---|
| Integral mounting | **MI** |
| Universal mounting | **MU** |
| Input shaft mounting | **AP** |

## Cb 3733

| | | 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** [1] | **75** [1] |
| | | Three-phase 4-pole LSES | | | | | | | | | | | | | | | | |
| min-1 | i exact | 90 | | | 100 | | 112 | 132 | | | 160 | | 180 | | 200 | 225 | | 250 | 280 |
| 5.9 | 244 | 6.07 | 4.43 | 3.70 | 2.99 | 2.18 | 1.65 | 1.20 | 0.88 | | | | | | | | | | |
| 6.7 | 217 | 6.82 | 4.97 | 4.14 | 3.36 | 2.45 | 1.86 | 1.34 | 0.99 | 0.83 | | | | | | | | | |
| 7.3 | 198 | 7.48 | 5.45 | 4.54 | 3.68 | 2.69 | 2.04 | 1.47 | 1.09 | 0.91 | | | | | | | | | |
| 8.3 | 175 | 8.46 | 6.17 | 5.14 | 4.17 | 3.04 | 2.30 | 1.67 | 1.23 | 1.03 | 0.84 | | | | | | | | |
| 9.2 | 158 | | | | 4.63 • | 3.38 | 2.56 | 1.85 | 1.36 | 1.14 | 0.93 | | | | | | | | |
| 10.3 | 141 | | | | 5.19 • | 3.79 | 2.87 | 2.08 | 1.53 | 1.28 | 1.04 | | Cb 3733 | | | | | | |
| 11.2 | 129 | | | | 5.63 • | 4.11 | 3.11 | 2.25 | 1.66 | 1.38 | 1.13 | 0.83 | | | | | | | |
| 13.1 | 111 | | | | 6.54 • | 4.78 • | 3.62 • | 2.62 | 1.93 | 1.61 | 1.31 | 0.96 | | | | | | | |
| 14.2 | 102 | | | | 7.12 • | 5.20 • | 3.94 • | 2.85 | 2.10 | 1.75 | 1.43 | 1.05 | 0.85 | | | | | | |
| 16.1 | 89.9 | | | | 8.03 • | 5.86 • | 4.44 • | 3.21 | 2.37 | 1.97 | 1.61 | 1.18 | 0.96 | 0.80 | | | | | |
| 18.9 | 76.8 | | | | 9.29 • | 6.78 • | 5.13 • | 3.71 | 2.74 | 2.28 | 1.86 | 1.36 | 1.11 | 0.93 | | | | | |
| 21.2 | 68.3 | | | | | 7.32 • | 5.53 • | 4.00 | 2.95 | 2.46 | 2.01 | 1.47 | 1.19 | 1.00 | | | | | |
| 23.7 | 61.2 | | | | | | | | | 2.63 | 2.15 | 1.57 | 1.27 | 1.07 | | | | | |
| 26.2 | 55.4 | | | | | | | | | 2.78 | 2.27 | 1.66 | 1.35 | 1.13 | 0.83 | | | | |
| 29.7 | 48.8 | | | | | | | | | 2.99 | 2.44 | 1.79 | 1.45 | 1.22 | 0.90 | | | | |
| 33.6 | 43.2 | | | | | | | | | 3.20 | 2.62 | 1.92 | 1.55 | 1.31 | 0.96 | | | | |
| 37.5 | 38.7 | | | | | | | | | | 2.82 • | 2.06 • | 1.67 • | 1.41 • | 1.03 | 0.84 | | | |
| 39.9 | 36.3 | | | | | | | | | | 2.87 • | 2.10 • | 1.71 • | 1.43 • | 1.05 | 0.86 | | | |
| 45.3 | 32 | | | | | | | | | | 3.10 • | 2.27 • | 1.84 • | 1.54 • | 1.13 | 0.92 | | | |
| 51.1 | 28.4 | | | | | | | 8.90 | 6.55 | 5.47 | 4.47 | 3.27 | 2.65 | 2.23 | 1.64 | 1.33 | | | |
| 57.5 | 25.2 | | | | | | | 9.87 | 7.27 | 6.06 | 4.95 | 3.62 | 2.94 | 2.47 | 1.82 | 1.48 | | | |
| 64.2 | 22.6 | | | | | | | | 7.98 | 6.66 | 5.44 | 3.98 | 3.23 | 2.71 | 1.99 | 1.62 | 1.34 | 1.10 • | |
| 72.1 | 20.1 | | | | | | | | 8.81 | 7.35 | 6.00 | 4.39 | 3.56 | 2.99 | 2.20 | 1.79 | 1.47 | 1.21 • | |
| 81.5 | 17.8 | | | | | | | | 9.78 | 8.15 | 6.66 | 4.88 | 3.95 | 3.32 | 2.44 | 1.99 | 1.64 | 1.35 • | |
| 92.4 | 15.7 | | | | | | | | | 9.11 | 7.44 | 5.45 | 4.42 | 3.71 | 2.73 | 2.22 | 1.83 | 1.51 • | |
| 105 | 13.8 | | | | | | | | | | 8.31 | 6.08 | 4.93 | 4.14 | 3.05 | 2.48 | 2.04 | 1.68 • | |
| 119 | 12.2 | | | | | | | | | | 9.27 | 6.78 | 5.50 | 4.62 | 3.40 | 2.77 | 2.28 | 1.87 • | |
| 132 | 11 | | | | | | | | | | | 7.38 | 5.98 | 5.03 | 3.70 | 3.01 | 2.48 | 2.04 • | 1.50 • |
| 150 | 9.64 | | | | | | | | | | | 8.31 | 6.74 | 5.66 | 4.16 | 3.39 | 2.79 | 2.30 • | 1.68 • |
| 168 | 8.62 | | | | | | | | | | | 9.16 | 7.43 | 6.24 | 4.59 | 3.74 | 3.08 | 2.53 • | 1.86 • |
| 189 | 7.68 | | | | | | | | | | | | 8.22 | 6.90 | 5.08 | 4.14 | 3.40 | 2.80 • | 2.06 • |
| 210 | 6.9 | | | | | | | | | | | | 9.02 | 7.58 | | 4.54 | 3.73 | 3.08 • | 2.26 • |
| 240 | 6.05 | | | | | | | | | | | | 10.13 | 8.51 | | 5.10 | 4.19 | 3.45 • | 2.53 • |
| 258 | 5.63 | | | | | | | | | | | | 7.17 | 6.02 | 4.43 | 3.61 | 2.97 | 2.45 • | 1.80 • |
| 295 | 4.91 | | | | | | | | | | | | 8.16 | 6.85 | 5.04 | 4.11 | 3.38 | 2.79 • | 2.04 • |
| 330 | 4.39 | | | | | | | | | | | | 9.07 | 7.62 | 5.61 | 4.57 | 3.76 | 3.10 • | 2.27 • |
| 371 | 3.91 | | | | | | | | | | | | | 8.50 | 6.25 | 5.09 | 4.19 | 3.45 • | 2.53 • |
| 412 | 3.52 | | | | | | | | | | | | | | | 5.62 | 4.63 | 3.81 • | 2.80 • |
| 471 | 3.08 | | | | | | | | | | | | | | | 6.36 | 5.24 | 4.31 • | 3.16 • |
| **4-pole LS, LSES and brakes** | | Three-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** | **280** |

*1. LS B35 obligatory*

• *MU obligatory*



**Selection example**

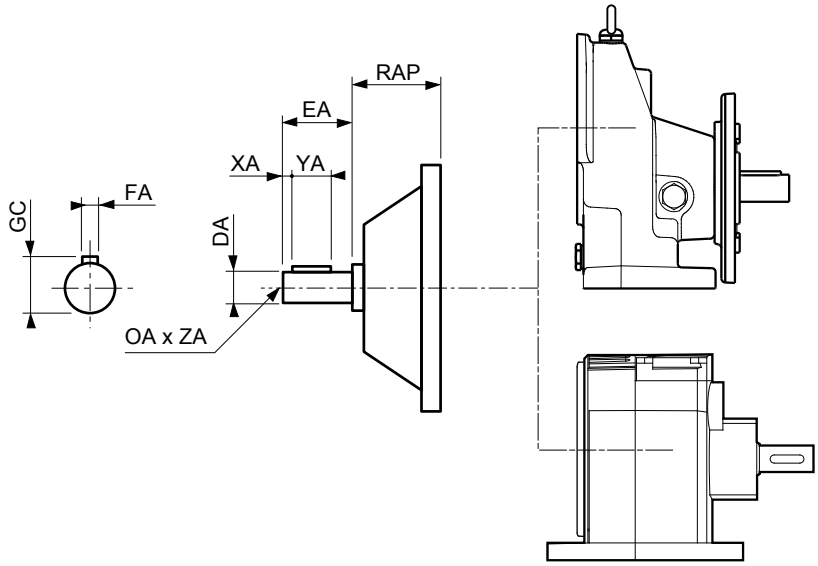
| | |
|---|---|
| Required power: | 45 kW |
| Required speed: | 70 min-1 |
| Duty factor required by the application: | Kp = 1.4 |
| Operating position; Mounting form: | Horizontal B7; foot mounted |

**Designation: Cb 3733 i: 20.1 S S B7 - MI 4p LS 225MR 45 kW LS2/IE2 - 400 VΔ - U.G.**

# Dimensions

## Dimensions of the AP input shaft

*Dimensions in millimetres*




| | AP | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Type** | Ø DA | EA | YA | XA | FA | GC | RAP | OAxZA | kg |
| **Cb 37** | 48k6 | 110 | 90 | 10 | 14 | 51.5 | 51 | M16x36 | 27 |
| **Cb 36** | 48k6 | 110 | 90 | 10 | 14 | 51.5 | 51 | M16x36 | 27 |
| **Cb 35** | 38j6 | 80 | 63 | 8 | 10 | 41 | 129.5 | M12x28 | 14 |
| **Cb 34** | 28j6 | 60 | 50 | 5 | 8 | 31 | 138.5 | M10x22 | 5 |
| **Cb 33** | 28j6 | 60 | 50 | 5 | 8 | 31 | 69 | M10x22 | 5 |
| **Cb 32** | 24j6 | 50 | 40 | 4.5 | 8 | 27 | 73 | M8x19 | 1.2 |
| **Cb 31** | 24j6 | 50 | 40 | 4.5 | 8 | 27 | 73 | M8x19 | 1.5 |
| **Cb 30** | 14j6 | 30 | 20 | 3 | 5 | 16 | 69 | M5x14 | 1.3 |
| **Cb 15** | 11j7 | 23 | 20 | - | 4 | 12.5 | 50.5 | M4x10 | 0.3 |

# Dimensions

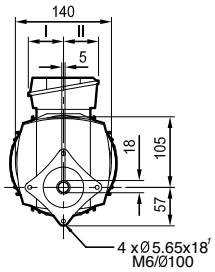
**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3031**

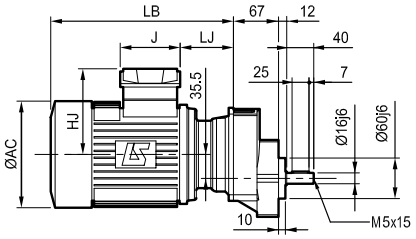
*Dimensions in millimetres*

**- BT faceplate form**

Cb: 2.3 kg + Motor

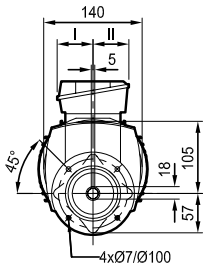
*1. for self-tapping screw*

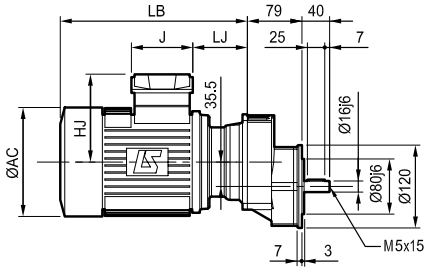



**- BD1 flange**

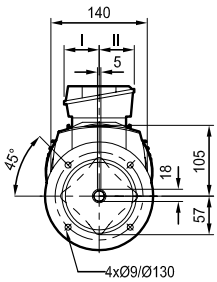
Cb: 2.5 kg + Motor

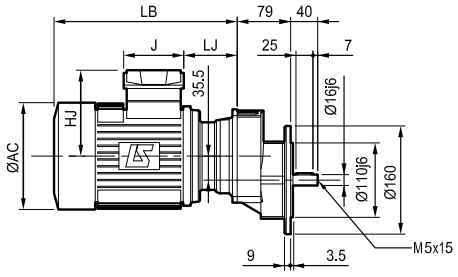



**- BD2 flange**

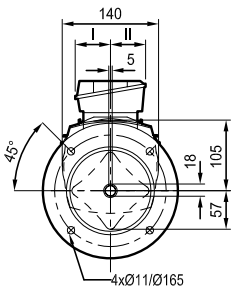
Cb: 2.5 kg + Motor

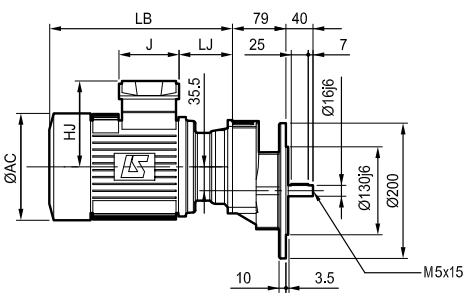



**- BD3 flange**

Cb: 2.4 kg + Motor



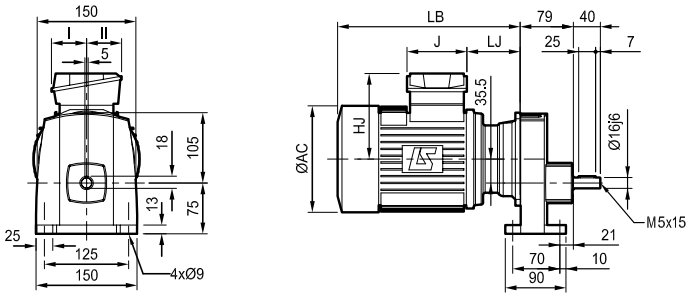
# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3031

*Dimensions in millimetres*

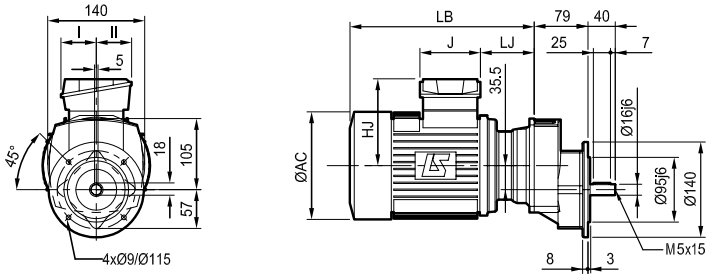
### - S foot mounted

Cb: 2.3 kg + Motor




### - Standard BS flange

Cb: 2.5 kg + Motor




| | Three-phase 4-pole motors | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LSES | | | | | | | | LSES FCR | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **LSES 80** | 170 | 135 | 86 | 309 | 77 | 43 | 43 | 11.7 | 172 | 146 | 160 | 349.5 | 46 | 55 | 55 | 18 |

| | Three-phase 4-pole motors | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS | | | | | | | | LS FMC | | | | | | | | LS FCR | | | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg | | |
| **LS 56** | 110 | 84 | 86 | 167 | 19 | 43 | 43 | 4 | 110 | 90 | 85 | 217 | 19 | 42.5 | 42.5 | 4.9 | - | - | - | - | - | - | - | - | | |
| **LS 63** | 124 | 89 | 86 | 183 | 29 | 43 | 43 | 5 | 124 | 96 | 85 | 233 | 29 | 42.5 | 42.5 | 5.7 | - | - | - | - | - | - | - | - | | |
| **LS 71 L** | 140 | 109 | 86 | 240 | 73 | 43 | 43 | 8.3 | - | - | - | - | - | - | - | - | 140 | 135 | 160 | 268 | 34 | 55 | 55 | 11.3 | | |
| **LS 80 L** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 172 | 146 | 160 | 300 | 46 | 55 | 55 | 18 | | |

| | Single-phase 4-pole motors | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS | | | | | | | | LS FMC | | | | | | |
| Fr. size | AC | HJ | J | LB[1]/LB[2] | LJ | I | II | kg | AC | HJ | J | LB[1]/LB[2] | LJ | I | II | kg |
| **LS 56** | 110 | 92 | 86 | 167/146 | 19 | 90 | 44 | 3.5 | 110 | 92 | 86 | 217/196 | 18 | 90 | 44 | 4.4 |
| **LS 63** | 124 | 97 | 138 | 183/161 | 29 | 100 | 102.5 | 5 | 124 | 97 | 138 | 233/211 | 29 | 100 | 102.5 | 5.9 |
| **LS 71 L** | 140 | 107 | 138 | 204/166 | 29 | 100 | 102.5 | 8 | 140 | 107 | 138 | 244/216 | 29 | 100 | 102.5 | 8.9 |

*1. ventilated motor.*
*2. non-ventilated motor.*

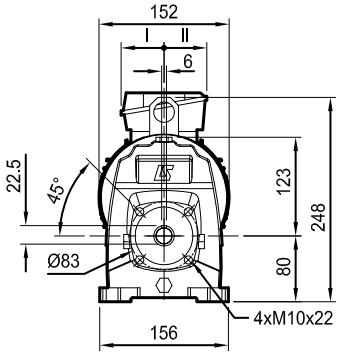
# Dimensions

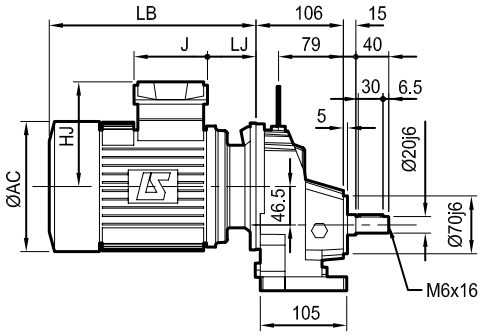
**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3131**

*Dimensions in millimetres*

**- BT faceplate form**

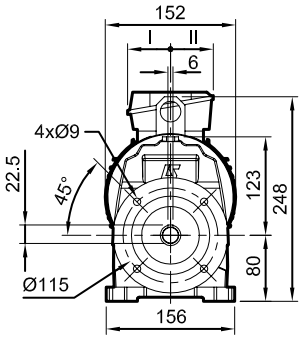
Cb: 6.9 kg + Motor

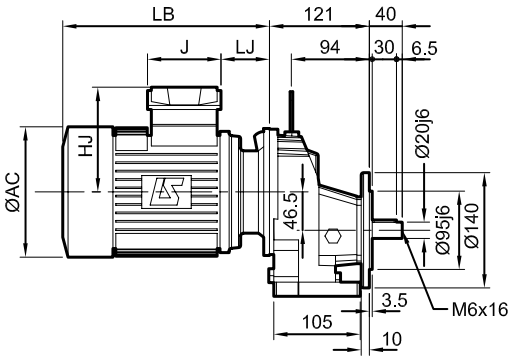



**- BD1 flange**

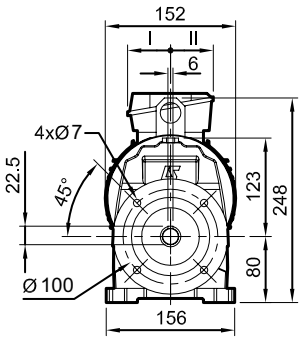
Cb: 7.9 kg + Motor

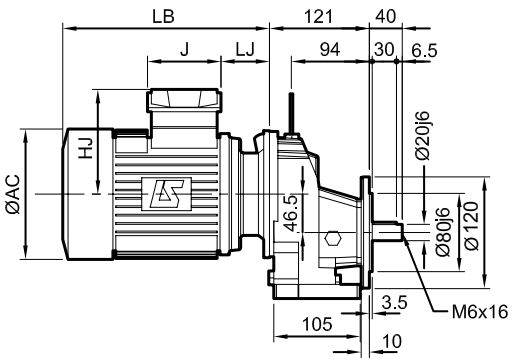



**- BD2 flange**

Cb: 7.8 kg + Motor



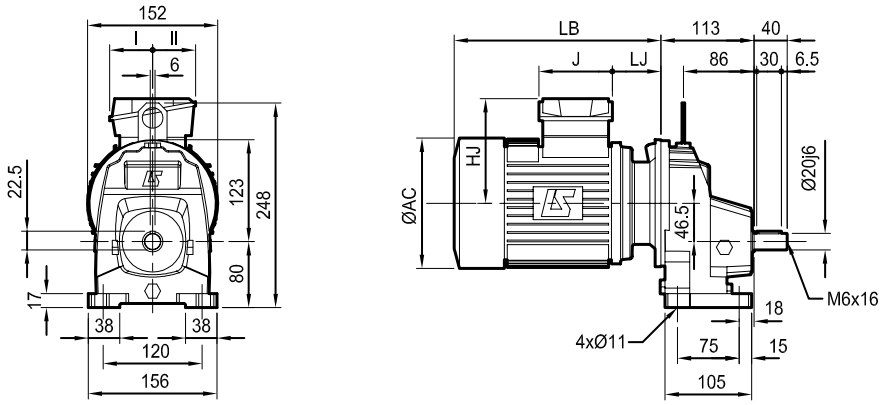
# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3131

*Dimensions in millimetres*

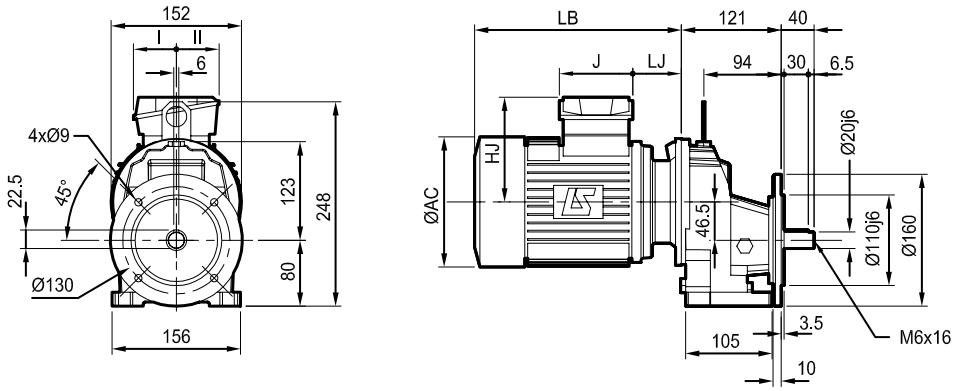
**- S foot mounted**

Cb: 6.9 kg + Motor




**- Standard BS flange**

Cb: 8.1 kg + Motor




| | 4-pole motors | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LSES | | | | | | | | LSES FCR | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **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 100 LR** | 200 | 140 | 86 | 354.5 | 72 | 43 | 43 | 25.7 | 200 | 161 | 160 | 410 | 59.5 | 55 | 55 | 30 |

| | 4-pole motors | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS | | | | | | | | LS FCR | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **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 |

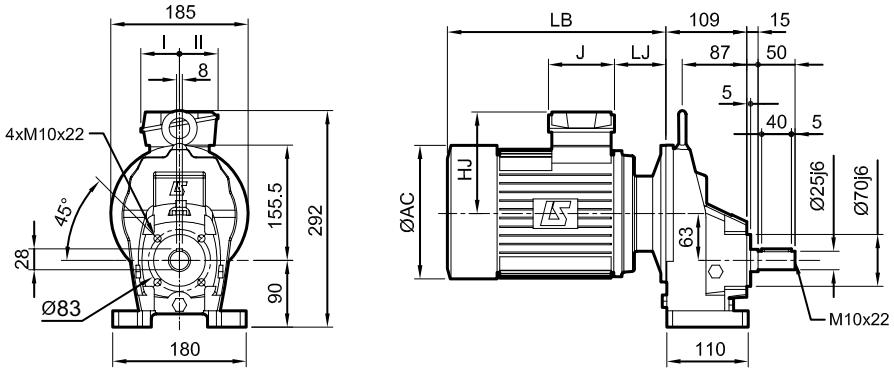
# Dimensions

**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3231**

*Dimensions in millimetres*

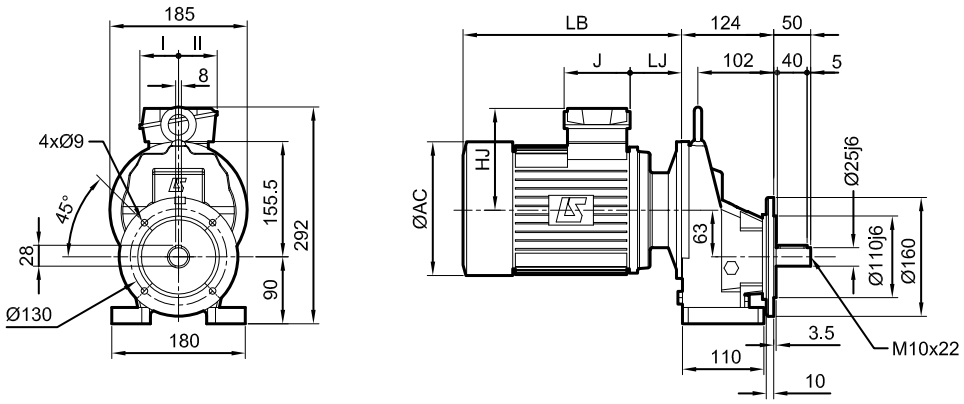
**- BT faceplate form**

Cb: 8.3 kg + Motor




**- BD1 flange**

Cb: 9.5 kg + Motor



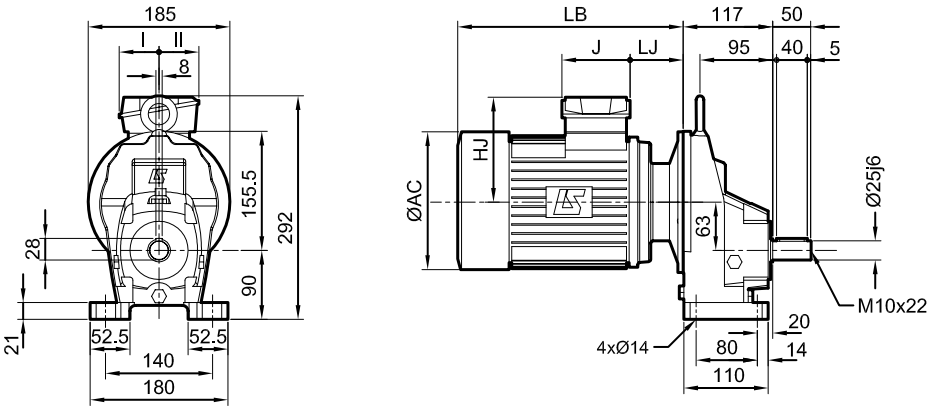
# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3231

*Dimensions in millimetres*

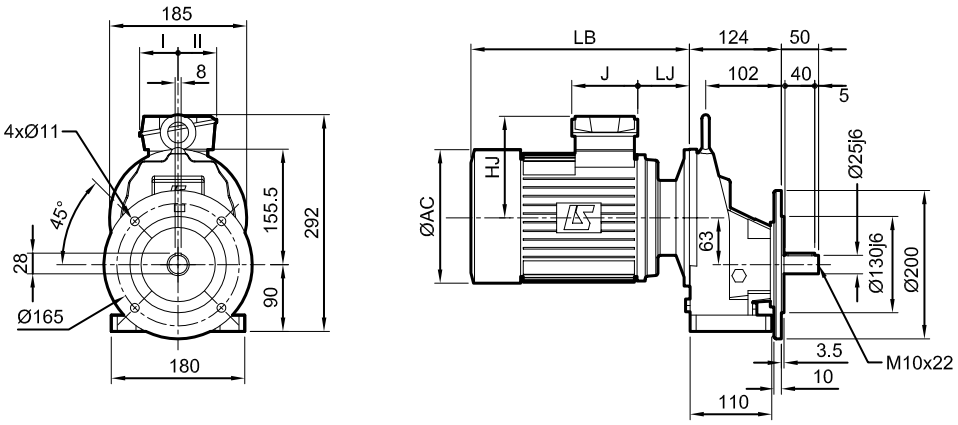
**- S foot mounted**

Cb: 8.3 kg + Motor




**- Standard BS flange**

Cb: 10.3 kg + Motor




| | 4-pole motors | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LSES | | | | | | | | LSES FCR | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **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 100 LR** | 200 | 140 | 86 | 354.5 | 72 | 43 | 43 | 25.7 | 200 | 161 | 160 | 410 | 59.5 | 55 | 55 | 30 |
| **LSES 112 MU** | 235 | 149 | 86 | 371 | 73.5 | 43 | 43 | 35 | 235 | 169 | 160 | 434 | 61 | 55 | 55 | 44.5 |
| **LSES 132 SU** | 260 | 172 | 126 | 397 | 52.5 | 63 | 63 | 42 | 235 | 169 | 160 | 477 | 61 | 55 | 55 | 48 |

| | 4-pole motors | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS | | | | | | | | LS FCR | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **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 |
| **LS 112 MG** | - | - | - | - | - | - | - | - | 235 | 169 | 160 | 434 | 61 | 55 | 55 | 44.5 |
| **LS 132 S** | - | - | - | - | - | - | - | - | 235 | 169 | 160 | 457 | 61 | 55 | 55 | 48 |

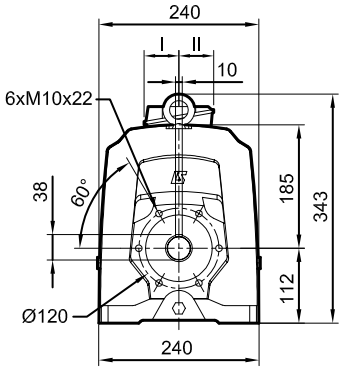
# Dimensions

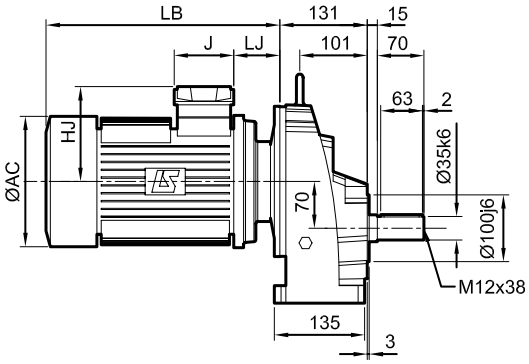
**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3331**

*Dimensions in millimetres*

**- BT faceplate form**

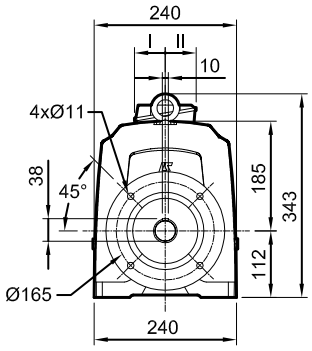
Cb: 15.5 kg + Motor

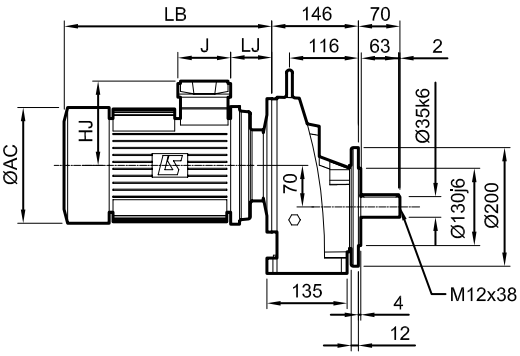



**- BD1 flange**

Cb: 18.3 kg + Motor



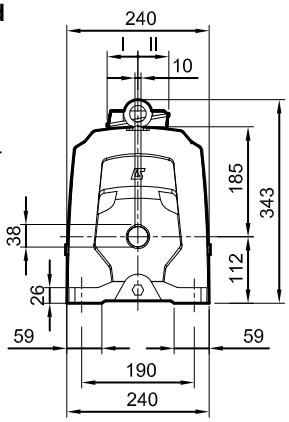
# Dimensions

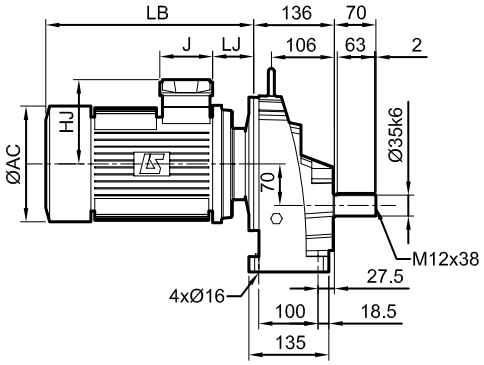
## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3331

*Dimensions in millimetres*

**- S foot mounted**

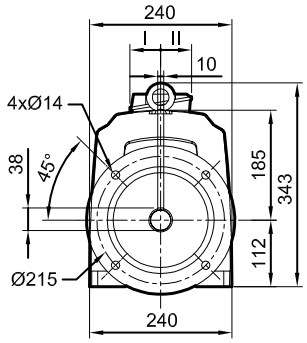
Cb: 15.5 kg + Motor

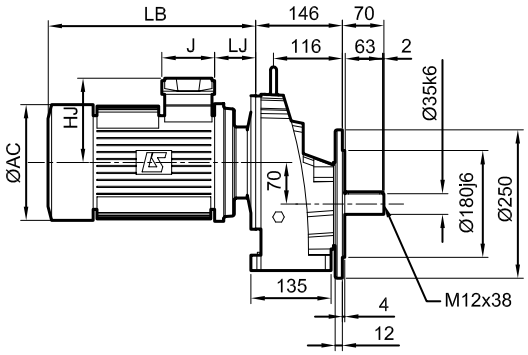



**- Standard BS flange**

Cb: 19.4 kg + Motor




| | 4-pole motors | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LSES | | | | | | | | LSES FCR | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **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 100 LR** | 200 | 140 | 86 | 350.5 | 68 | 43 | 43 | 25.7 | 200 | 161 | 160 | 406 | 55.5 | 55 | 55 | 30 |
| **LSES 112 MU** | 235 | 149 | 86 | 367 | 69.5 | 43 | 43 | 35 | 235 | 169 | 160 | 430 | 58 | 55 | 55 | 44.5 |
| **LSES 132 MU** | 265 | 190 | 126 | 460 | 65 | 63 | 63 | 68 | 280 | 188 | 160 | 541 | 73 | 55 | 55 | 80 |

| | 4-pole motors | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS | | | | | | | | LS FCR | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **LS 71 L** | 140 | 109 | 86 | 213 | 45 | 43 | 43 | 8.3 | 140 | 135 | 160 | 264 | 21.5 | 55 | 55 | 11.3 |
| **LS 80 L** | - | - | - | - | - | - | - | - | 172 | 146 | 160 | 296 | 42 | 55 | 55 | 18 |
| **LS 90 L** | - | - | - | - | - | - | - | - | 184 | 156 | 160 | 345.5 | 54.5 | 55 | 55 | 24.2 |
| **LS 100 L** | - | - | - | - | - | - | - | - | 200 | 161 | 160 | 393.5 | 55.5 | 55 | 55 | 30 |
| **LS 112 MG** | - | - | - | - | - | - | - | - | 235 | 169 | 160 | 430 | 58 | 55 | 55 | 44.5 |
| **LS 132 M** | - | - | - | - | - | - | - | - | 280 | 188 | 160 | 541 | 73 | 55 | 55 | 80 |

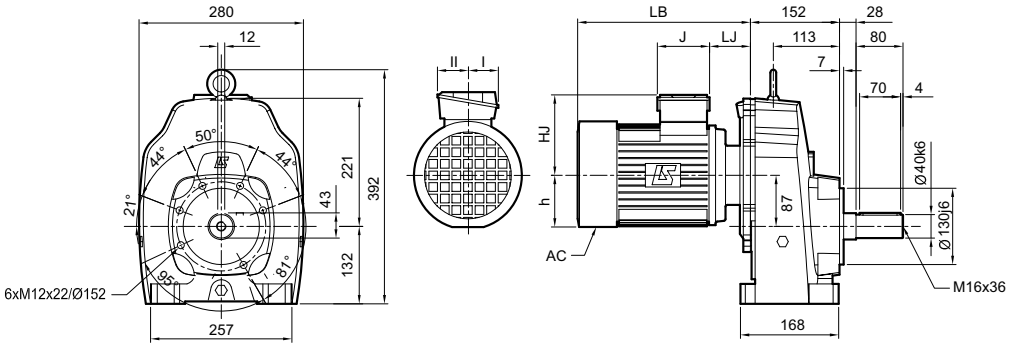
# Dimensions

**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3431**

*Dimensions in millimetres*

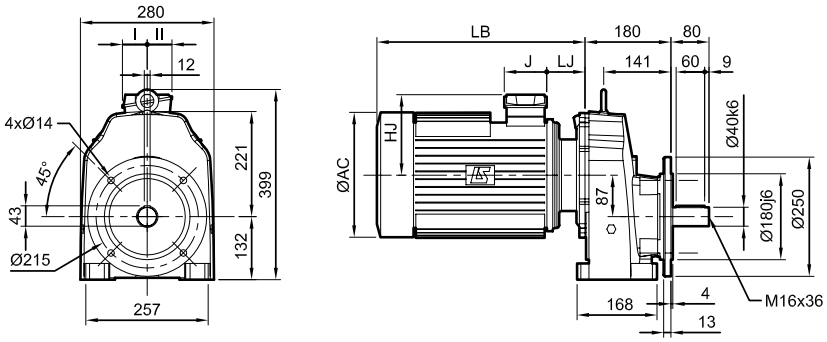
**- BT faceplate form**

Cb: 25 kg + Motor




**- BD1 flange**

Cb: 29.5 kg + Motor



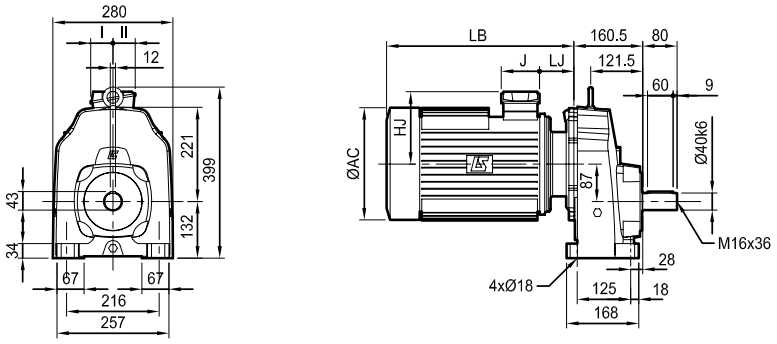
# Dimensions

**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3431**

*Dimensions in millimetres*

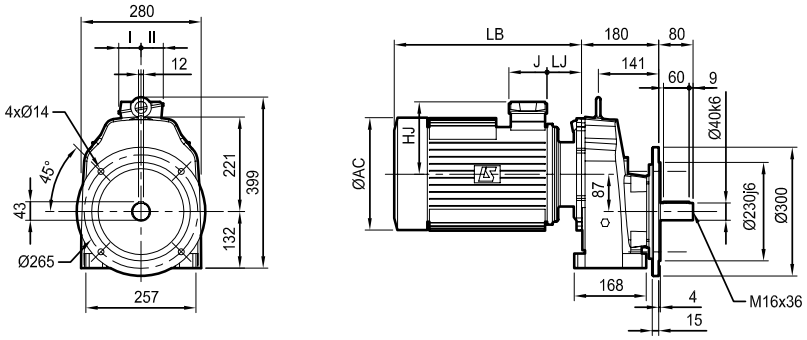
**- S foot mounted**

Cb: 25 kg + Motor




**- Standard BS flange**

Cb: 31 kg + Motor




| Fr. size | 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 80 LG** | 170 | 135 | 86 | 288.5 | 68 | 43 | 43 | 11.7 | 172 | 146 | 160 | 345.5 | 46.5 | 55 | 55 | 18 | - | - | - | - | - | - | - | - |
| **LSES 90 L** | 190 | 135 | 86 | 286 | 67 | 43 | 43 | 15.2 | 184 | 156 | 160 | 345.5 | 54.5 | 55 | 55 | 24.2 | - | - | - | - | - | - | - | - |
| **LSES 100 LR** | 200 | 140 | 86 | 350.5 | 68 | 43 | 43 | 25.7 | 200 | 161 | 160 | 406 | 55.5 | 55 | 55 | 30 | - | - | - | - | - | - | - | - |
| **LSES 112 MU** | 235 | 149 | 86 | 367 | 69.5 | 43 | 43 | 35 | 235 | 169 | 160 | 434 | 62 | 55 | 55 | 44.5 | - | - | - | - | - | - | - | - |
| **LSES 132 MU** | 265 | 190 | 126 | 464 | 69 | 63 | 63 | 68 | 280 | 188 | 160 | 545 | 77 | 55 | 55 | 80 | - | - | - | - | - | - | - | - |
| **LSES 160 L** | 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 180 LR** | 312 | 248 | 186 | 533 | 67.8 | 112 | 98 | 115 | - | - | - | - | - | - | - | - | 345 | 235 | 134 | 696 | 57 | 92 | 63 | 155 |

| Fr. size | 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 90 L** | 184 | 156 | 160 | 345.5 | 54.5 | 55 | 55 | 24.2 | - | - | - | - | - | - | - | - |
| **LS 100 L** | 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 160 L** | 316 | 231 | 160 | 620 | 96 | 55 | 55 | 110 | 345 | 235 | 134 | 681 | 56.8 | 92 | 63 | 140 |
| **LS 180 LR** | - | - | - | - | - | - | - | - | 345 | 235 | 134 | 696 | 57 | 92 | 63 | 155 |

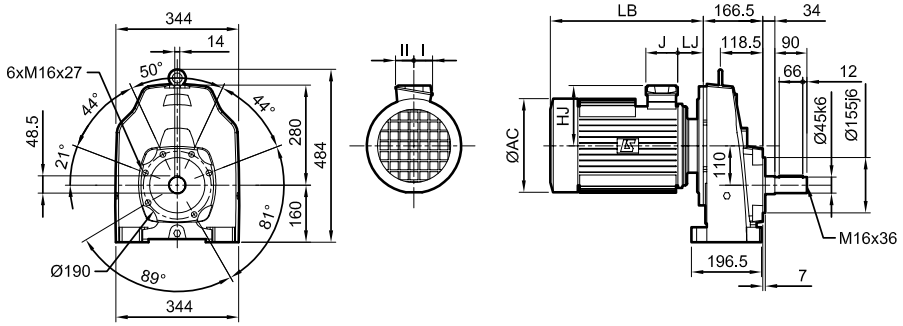
# Dimensions

**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3531**

*Dimensions in millimetres*

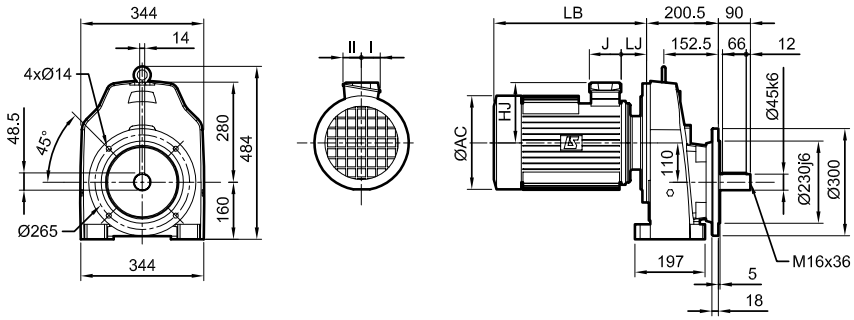
**- BT faceplate form**

Cb: 41 kg + Motor




**- BD1 flange**

Cb: 46 kg + Motor



# Electromechanical products
# Compabloc

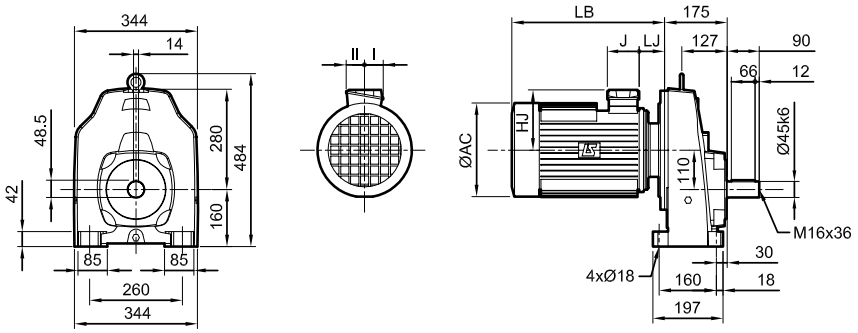
## Dimensions

**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3531**

*Dimensions in millimetres*

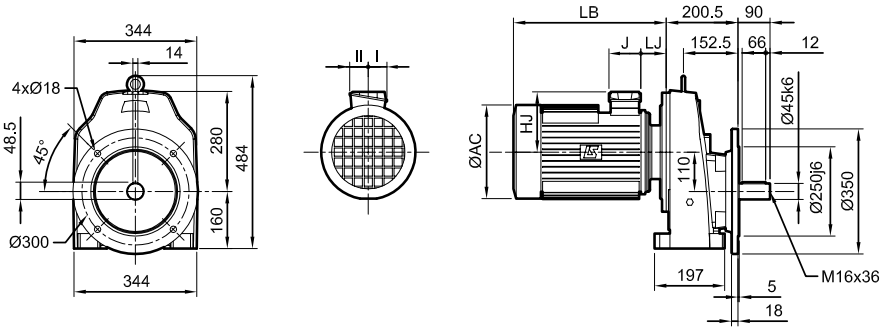
**- S foot mounted**

Cb: 41 kg + Motor




**- Standard BS flange**

Cb: 48 kg + Motor




| Fr. size | 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 90 L** | 190 | 135 | 86 | 281 | 62 | 43 | 43 | 15.2 | 184 | 156 | 160 | 340.5 | 49.5 | 55 | 55 | 24.2 | - | - | - | - | - | - | - | - |
| **LSES 100 LR** | 200 | 140 | 86 | 345.5 | 63 | 43 | 43 | 25.7 | 200 | 161 | 160 | 401 | 50.5 | 55 | 55 | 30 | - | - | - | - | - | - | - | - |
| **LSES 112 MU** | 235 | 149 | 86 | 362 | 64.5 | 43 | 43 | 35 | 235 | 169 | 160 | 425 | 53 | 55 | 55 | 44.5 | - | - | - | - | - | - | - | - |
| **LSES 132 MU** | 265 | 190 | 126 | 455 | 60 | 63 | 63 | 68 | 280 | 188 | 160 | 536 | 56 | 55 | 55 | 80 | - | - | - | - | - | - | - | - |
| **LSES 160 L** | 312 | 222 | 126 | 499 | 51.8 | 63 | 63 | 91 | 316 | 231 | 160 | 611 | 87 | 55 | 55 | 110 | 312 | 235 | 134 | 672 | 47.8 | 92 | 63 | 140 |
| **LSES 180 LR** | 312 | 248 | 186 | 524 | 58.8 | 112 | 98 | 115 | - | - | - | - | - | - | - | - | 345 | 235 | 134 | 687 | 48 | 92 | 63 | 150 |
| **LSES 200 LR** | 350 | 256 | 186 | 618 | 67.5 | 112 | 98 | 164 | - | - | - | - | - | - | - | - | 384 | 256 | 186 | 826 | 67.5 | 111 | 98 | 240 |

| Fr. size | 4-pole motors | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS FCR | | | | | | | | LS FCPL | | | | | | | |
| | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **LS 90 L** | 184 | 156 | 160 | 340.5 | 49.5 | 55 | 55 | 24.2 | - | - | - | - | - | - | - | - |
| **LS 100 L** | 200 | 161 | 160 | 388.5 | 50.5 | 55 | 55 | 30 | - | - | - | - | - | - | - | - |
| **LS 112 MG** | 235 | 169 | 160 | 425 | 53 | 55 | 55 | 44.5 | - | - | - | - | - | - | - | - |
| **LS 132 M** | 280 | 188 | 160 | 536 | 56 | 55 | 55 | 80 | - | - | - | - | - | - | - | - |
| **LS 160 LR** | 316 | 231 | 160 | 611 | 87 | 55 | 55 | 110 | 312 | 235 | 134 | 672 | 47.8 | 92 | 63 | 140 |
| **LS 180 LR** | - | - | - | - | - | - | - | - | 345 | 235 | 134 | 687 | 48 | 92 | 63 | 150 |
| **LS 200 LT** | - | - | - | - | - | - | - | - | 384 | 256 | 186 | 826 | 67.5 | 111 | 98 | 240 |

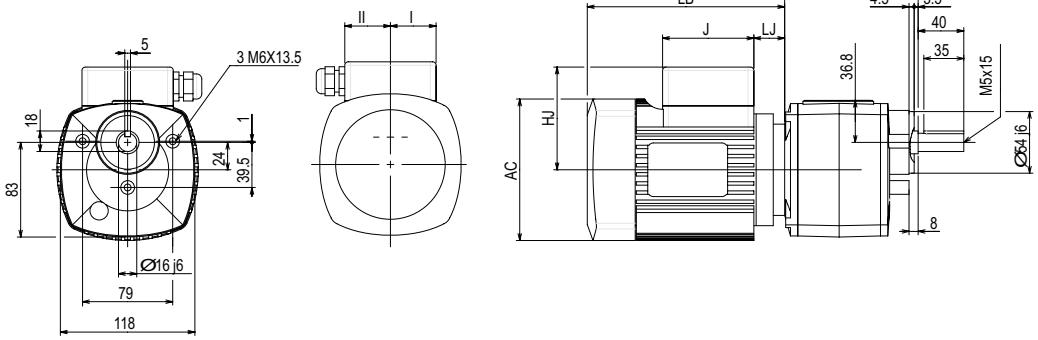
# Dimensions

**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 15--**

*Dimensions in millimetres*

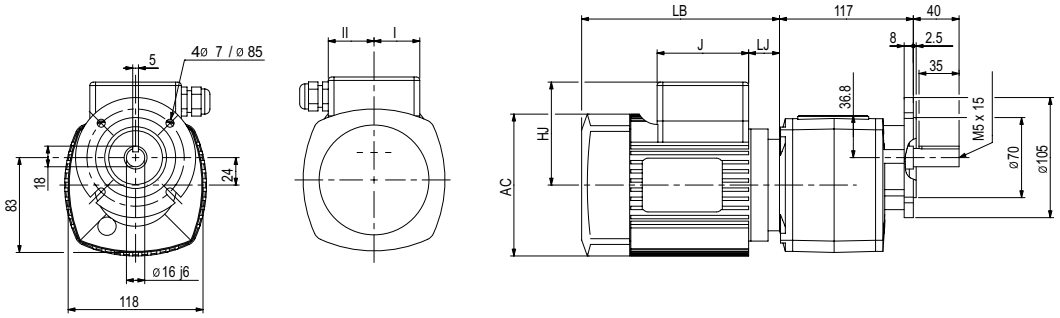
**- BT faceplate form**

Cb: 2.9 kg + Motor



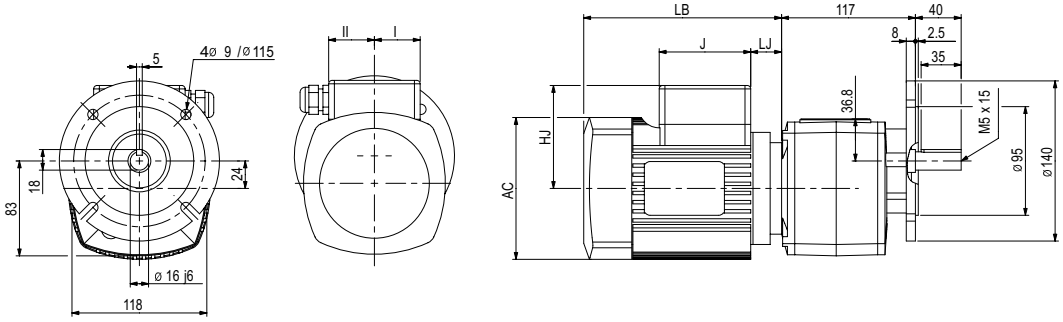

**- BD1 flange**

Cb: 2.8 kg + Motor




**- BD2 flange**

Cb: 3 kg + Motor



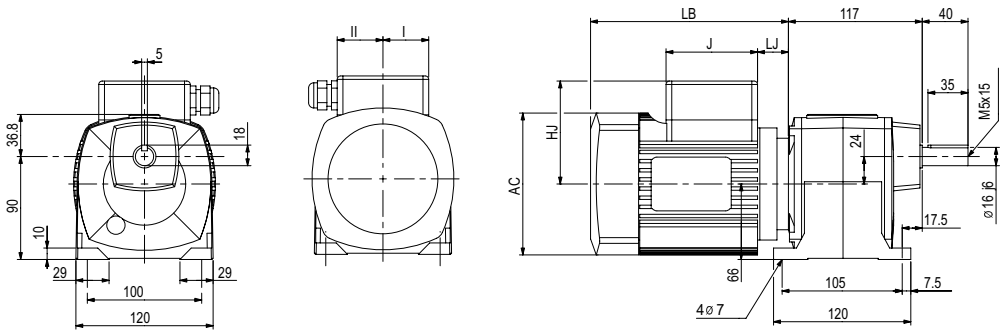
# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 15--

*Dimensions in millimetres*

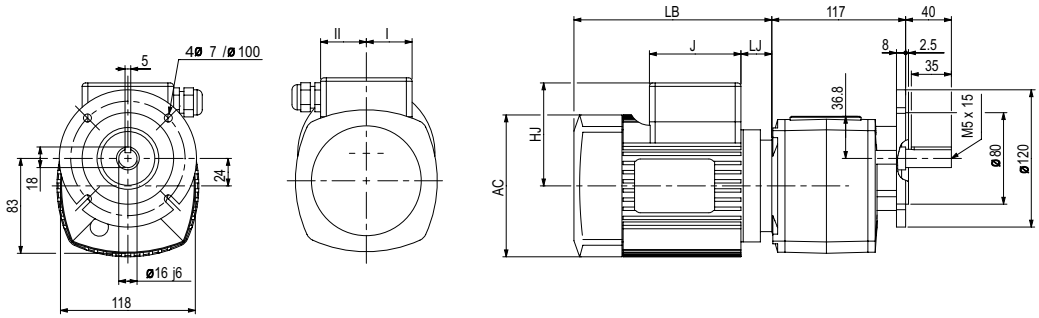
### - S foot mounted

Cb: 2.9 kg + Motor




### - Standard BS flange

Cb: 2.9 kg + Motor




| Fr. size | 4-pole motors | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS | | | | | | | | LS FCR | | | | | | | | LS FMC | | | | | | | | | |
| | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg | | |
| **56** | 110 | 85 | 78 | 156 | 16 | 39 | 39 | 4 | - | - | - | - | - | - | - | - | 110 | 90 | 86 | 206 | 16 | 43 | 43 | 4.3 | | |
| **63** | 124 | 95 | 78 | 172 | 26 | 39 | 39 | 5 | - | - | - | - | - | - | - | - | 124 | 110 | 86 | 222 | 26 | 43 | 43 | 5.2 | | |
| **71** | 140 | 102 | 78 | 183 | 21 | 39 | 39 | 8.3 | 140 | 135 | 160 | 273 | 38 | 55 | 55 | 8.5 | 140 | 129 | 86 | 233 | 21 | 43 | 43 | 7.4 | | |

| Fr. size | Single-phase 4-pole LS | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS | | | | | | | | LS FMC | | | | | | | | | |
| | AC | HJ | J | LB[1] | LB[2] | LJ | I[3] | II | kg | AC | HJ | J | LB[1] | LB[2] | LJ | I | II | kg |
| **56** | 110 | 90 | 86 | 156 | 135 | 19 | 90 | 44 | 3.5 | 110 | 90 | 86 | 206 | 196 | 16 | 43 | 43 | 4.4 |
| **63** | 124 | 110 | 138 | 172 | 150 | 29 | 100 | 44 | 4.5 | 124 | 110 | 86 | 222 | 211 | 26 | 43 | 43 | 5.4 |
| **71** | 140 | 129 | 138 | 183 | 155 | 29 | 100 | 44 | 7.5 | 140 | 129 | 86 | 233 | 216 | 21 | 43 | 43 | 8.4 |

*1. ventilated motor*
*2. non-ventilated motor*
*3. with permanent capacitor*

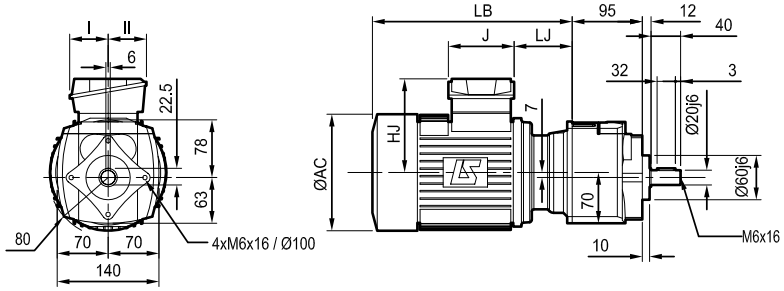
# Dimensions

**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3032**

*Dimensions in millimetres*

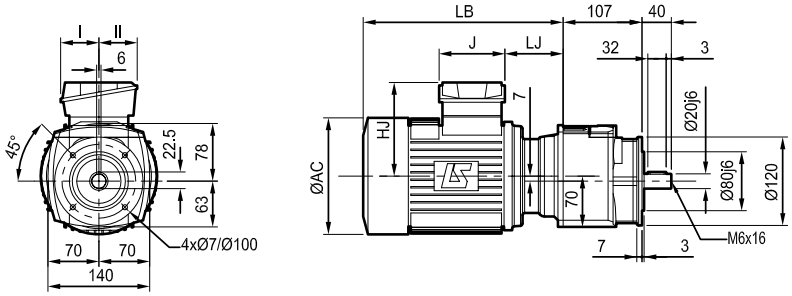
**- BT faceplate form**

Cb: 4.6 kg + Motor



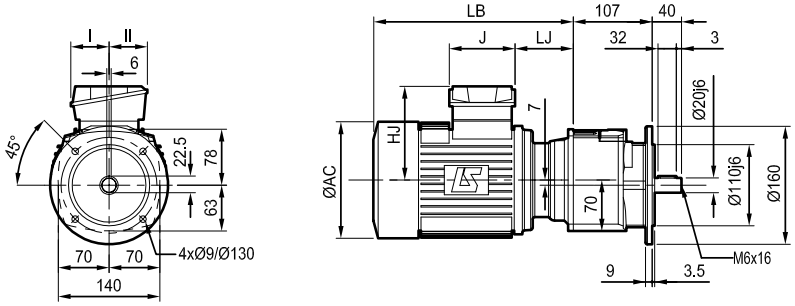

**- BD1 flange**

Cb: 4.7 kg + Motor



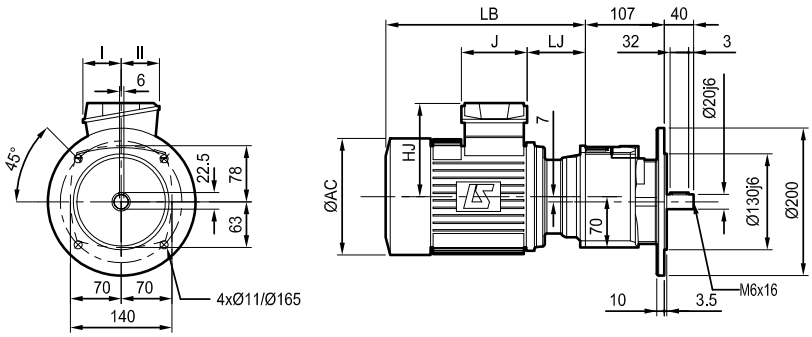

**- BD2 flange**

Cb: 4.9 kg + Motor




**- BD3 flange**

Cb: 5 kg + Motor



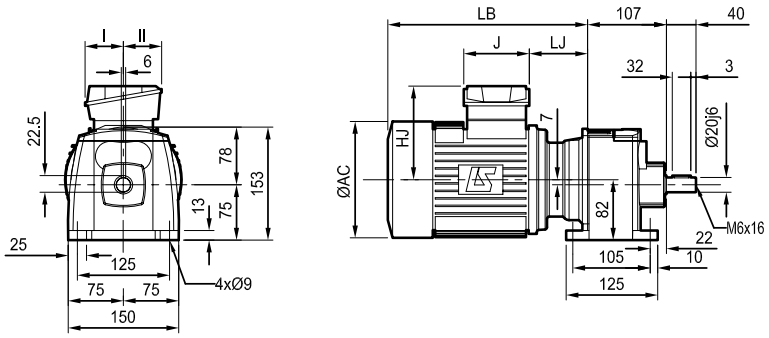
# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3032

*Dimensions in millimetres*

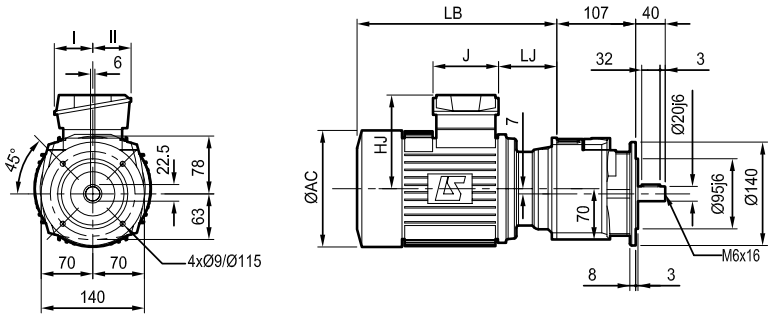
### - S foot mounted

Cb: 4.8 kg + Motor




### - Standard BS flange

Cb: 4.8 kg + Motor




| | Three-phase 4-pole motors | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LSES | | | | | | | | LSES FCR | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **LSES 80** | 170 | 135 | 86 | 309 | 77 | 43 | 43 | 11.7 | 172 | 146 | 160 | 349.5 | 46 | 55 | 55 | 18 |

| | Three-phase 4-pole motors | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS | | | | | | | | LS FMC | | | | | | | | LS FCR | | | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg | | |
| **LS 56** | 110 | 84 | 86 | 167 | 19 | 43 | 43 | 4 | 110 | 90 | 85 | 217 | 19 | 42.5 | 42.5 | 4.9 | - | - | - | - | - | - | - | - | | |
| **LS 63** | 124 | 89 | 86 | 183 | 29 | 43 | 43 | 5 | 124 | 96 | 85 | 233 | 29 | 42.5 | 42.5 | 5.7 | - | - | - | - | - | - | - | - | | |
| **LS 71 L** | 140 | 109 | 86 | 240 | 73 | 43 | 43 | 8.3 | - | - | - | - | - | - | - | - | 140 | 135 | 160 | 268 | 34 | 55 | 55 | 11.3 | | |
| **LS 80 L** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 172 | 146 | 160 | 300 | 46 | 55 | 55 | 18 | | |

| | Single-phase 4-pole motors | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS | | | | | | | | LS FMC | | | | | | |
| Fr. size | AC | HJ | J | LB[1]/LB[2] | LJ | I | II | kg | AC | HJ | J | LB[1]/LB[2] | LJ | I | II | kg |
| **LS 56** | 110 | 92 | 86 | 167/146 | 19 | 90 | 44 | 3.5 | 110 | 92 | 86 | 217/196 | 18 | 90 | 44 | 4.4 |
| **LS 63** | 124 | 97 | 138 | 183/161 | 29 | 100 | 102.5 | 5 | 124 | 97 | 138 | 233/211 | 29 | 100 | 102.5 | 5.9 |
| **LS 71 L** | 140 | 107 | 138 | 204/166 | 29 | 100 | 102.5 | 8 | 140 | 107 | 138 | 244/216 | 29 | 100 | 102.5 | 8.9 |

*1. ventilated motor.*
*2. non-ventilated motor.*

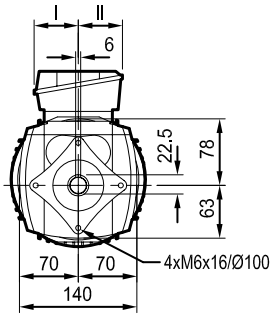
# Dimensions

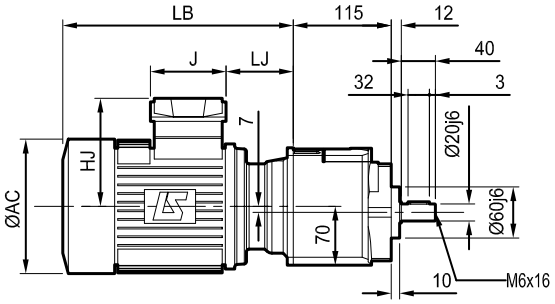
**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3033**

*Dimensions in millimetres*

**- BT faceplate form**

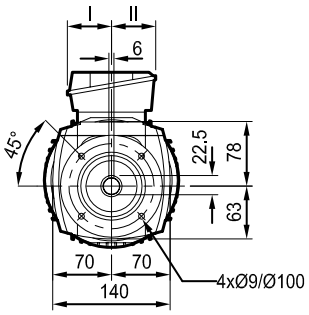
Cb: 4.7 kg + Motor

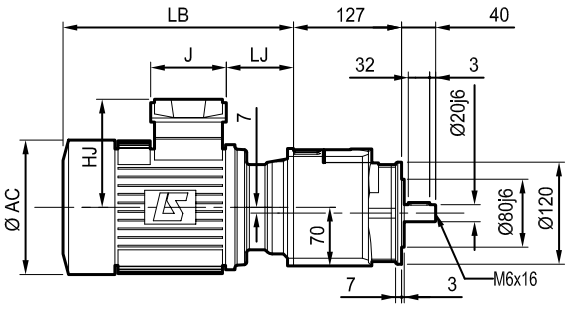



**- BD1 flange**

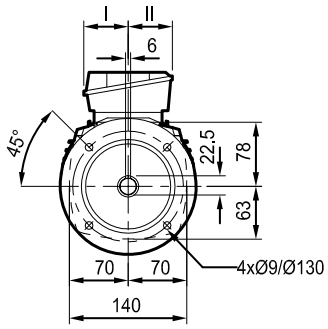
Cb: 4.8 kg + Motor

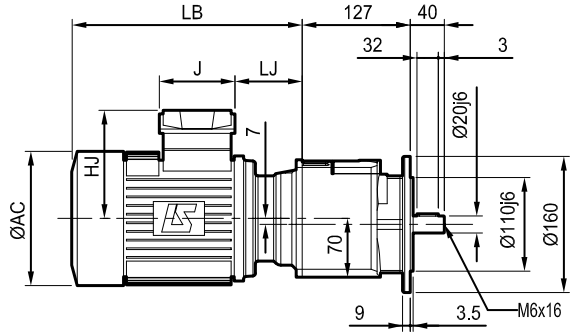



**- BD2 flange**

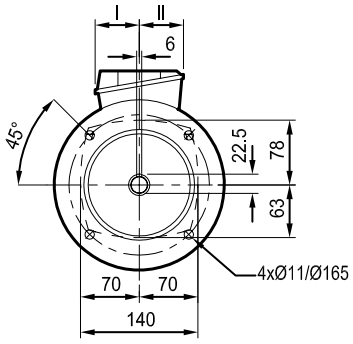
Cb: 5 kg + Motor

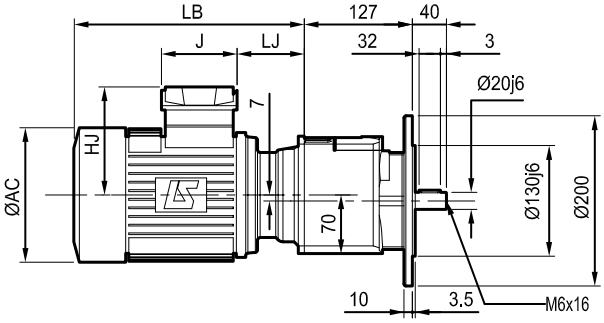



**- BD3 flange**

Cb: 5.1 kg + Motor



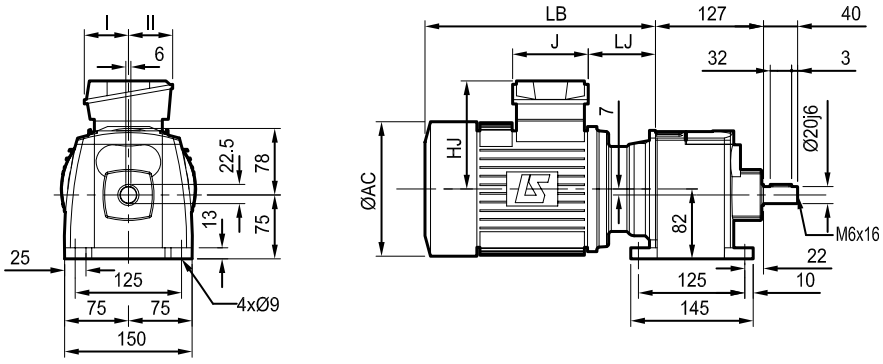
# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3033

*Dimensions in millimetres*

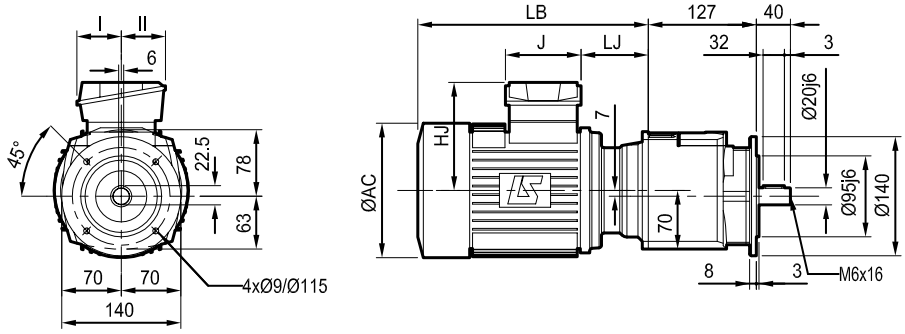
### - S foot mounted

Cb: 4.9 kg + Motor




### - Standard BS flange

Cb: 4.9 kg + Motor




| | Three-phase 4-pole motors | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LSES | | | | | | | | LSES FCR | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **LSES 80** | 170 | 135 | 86 | 309 | 77 | 43 | 43 | 11.7 | 172 | 146 | 160 | 349.5 | 46 | 55 | 55 | 18 |

| | Three-phase 4-pole motors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS | | | | | | | | LS FMC | | | | | | | | LS FCR | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **LS 56** | 110 | 84 | 86 | 167 | 19 | 43 | 43 | 4 | 110 | 90 | 85 | 217 | 19 | 42.5 | 42.5 | 4.9 | - | - | - | - | - | - | - | - |
| **LS 63** | 124 | 89 | 86 | 183 | 29 | 43 | 43 | 5 | 124 | 96 | 85 | 233 | 29 | 42.5 | 42.5 | 5.7 | - | - | - | - | - | - | - | - |
| **LS 71 L** | 140 | 109 | 86 | 240 | 73 | 43 | 43 | 8.3 | - | - | - | - | - | - | - | - | 140 | 135 | 160 | 268 | 34 | 55 | 55 | 11.3 |
| **LS 80 L** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 172 | 146 | 160 | 300 | 46 | 55 | 55 | 18 |

| | Single-phase 4-pole motors | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS | | | | | | | | LS FMC | | | | | | | |
| Fr. size | AC | HJ | J | $LB^1/LB^2$ | LJ | I | II | kg | AC | HJ | J | $LB^1/LB^2$ | LJ | I | II | kg |
| **LS 56** | 110 | 92 | 86 | 167/146 | 19 | 90 | 44 | 3.5 | 110 | 92 | 86 | 217/196 | 18 | 90 | 44 | 4.4 |
| **LS 63** | 124 | 97 | 138 | 183/161 | 29 | 100 | 102.5 | 5 | 124 | 97 | 138 | 233/211 | 29 | 100 | 102.5 | 5.9 |
| **LS 71 L** | 140 | 107 | 138 | 204/166 | 29 | 100 | 102.5 | 8 | 140 | 107 | 138 | 244/216 | 29 | 100 | 102.5 | 8.9 |

*1. ventilated motor.*
*2. non-ventilated motor.*

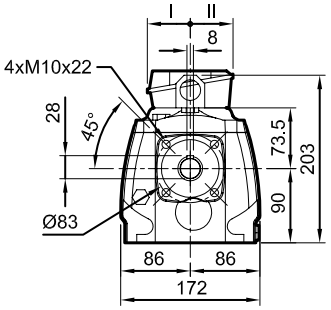
# Dimensions

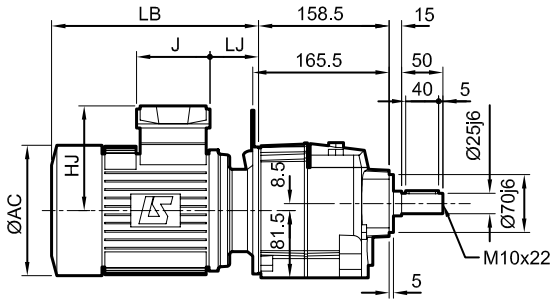
## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3133

*Dimensions in millimetres*

### - BT faceplate form

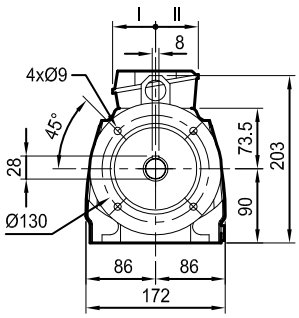
Cb: 12.7 kg + Motor

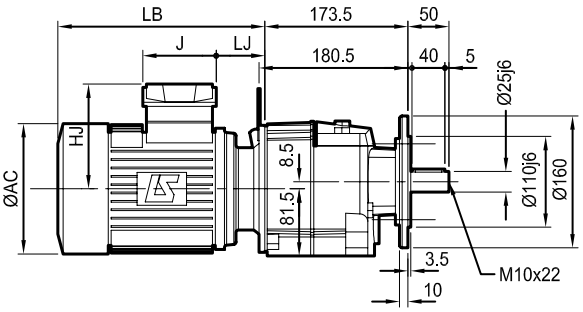



### - BD1 flange

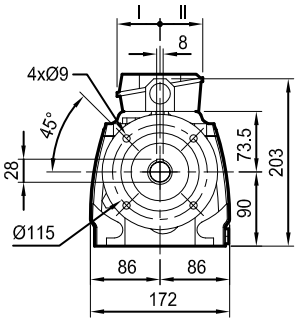
Cb: 13.3 kg + Motor

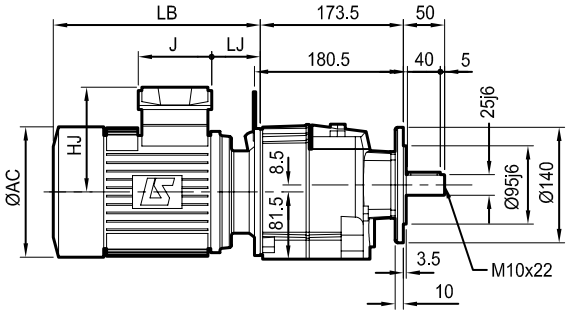



### - BD2 flange

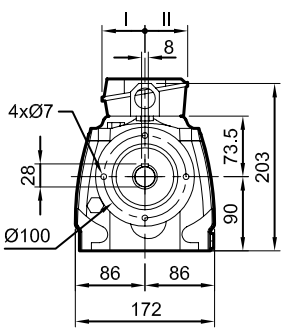
Cb: 13.2 kg + Motor

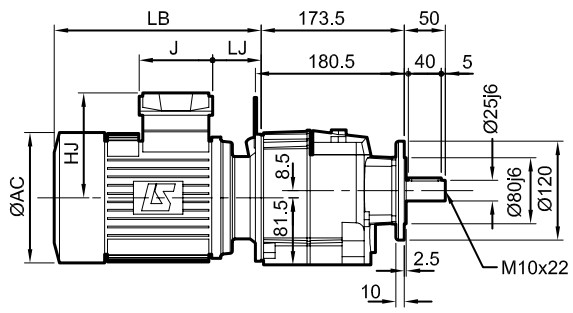



### - BD3 flange

Cb: 13.1 kg + Motor



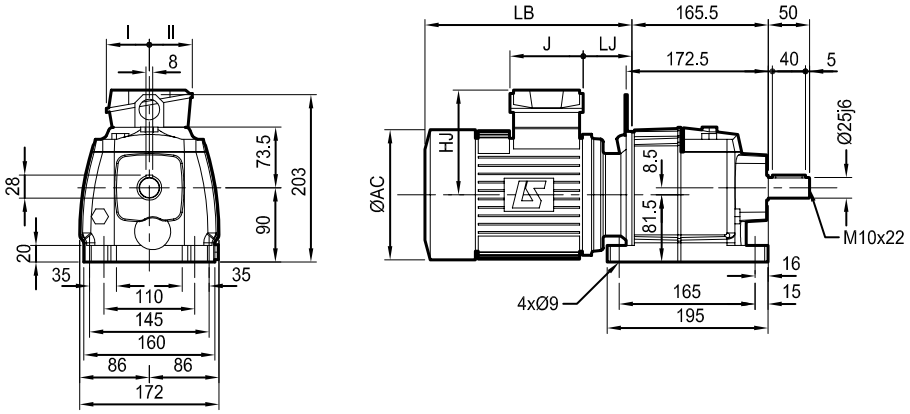
# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3133

*Dimensions in millimetres*

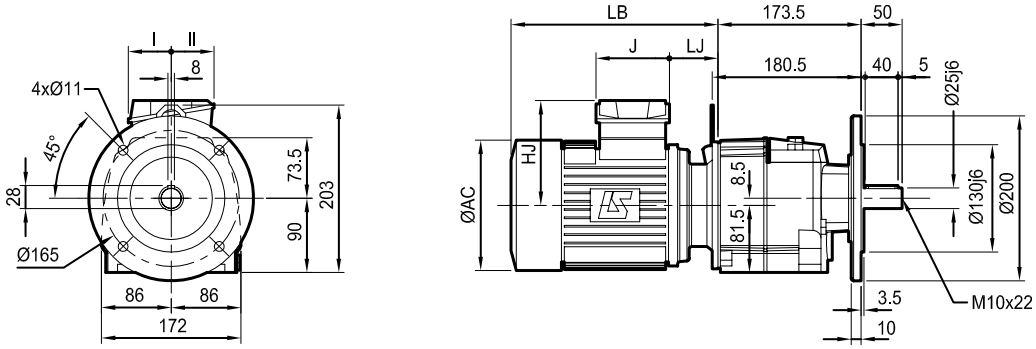
**- S foot mounted**

Cb: 13 kg + Motor




**- Standard BS flange**

Cb: 13.4 kg + Motor




| | 4-pole motors | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LSES | | | | | | | | LSES FCR | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **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 100 LR** | 200 | 140 | 86 | 354.5 | 72 | 43 | 43 | 25.7 | 200 | 161 | 160 | 410 | 59.5 | 55 | 55 | 30 |

| | 4-pole motors | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS | | | | | | | | LS FCR | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **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 |

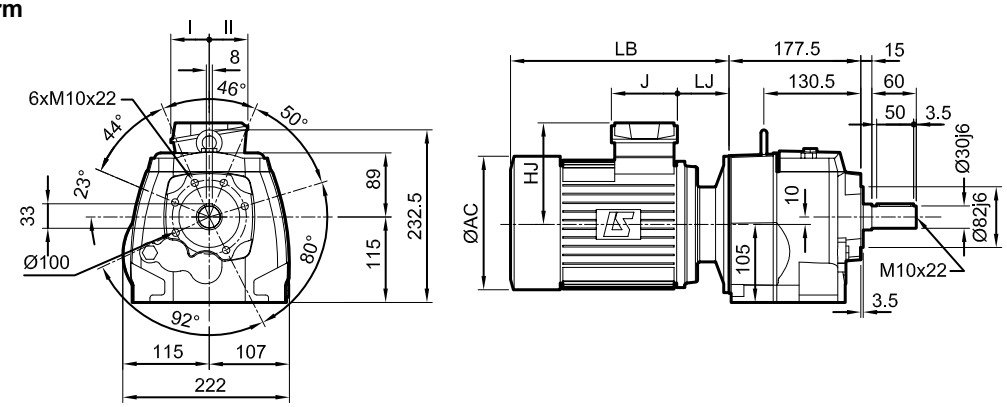
# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3233

*Dimensions in millimetres*

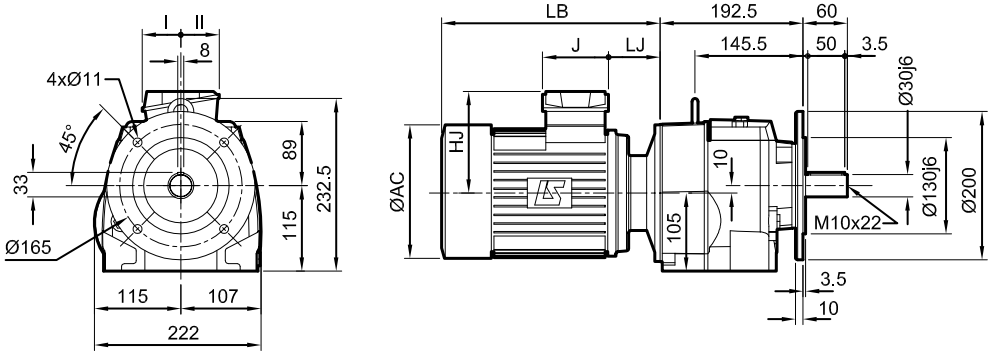
**- BT faceplate form**

Cb: 18.2 kg + Motor



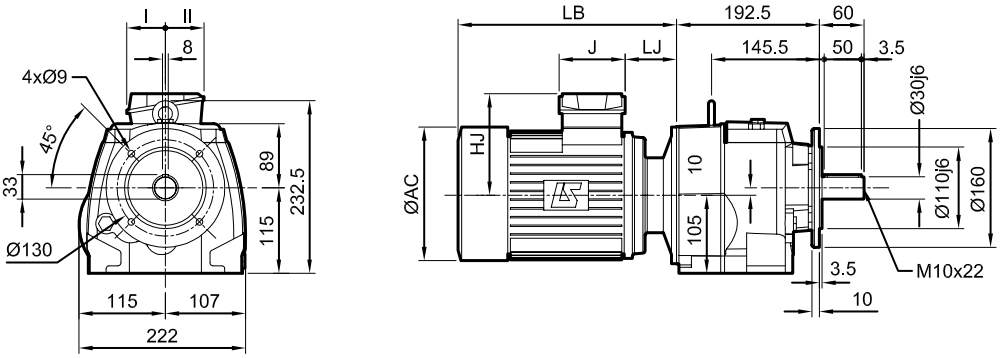

**- BD1 flange**

Cb: 18.7 kg + Motor




**- BD2 flange**

Cb: 18.6 kg + Motor



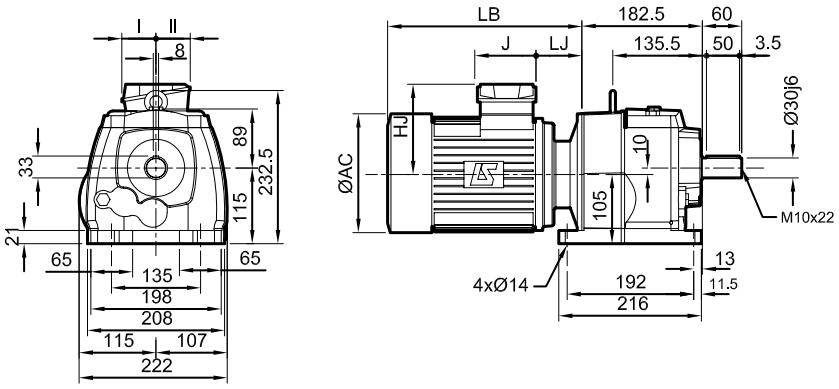
# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3233

*Dimensions in millimetres*

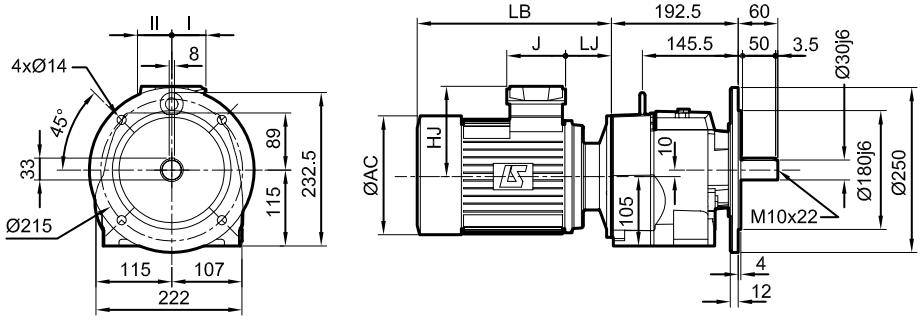
### - S foot mounted

Cb: 18.5 kg + Motor




### - Standard BS flange

Cb: 18.8 kg + Motor




| | 4-pole motors | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LSES | | | | | | | | LSES FCR | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **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 100 LR** | 200 | 140 | 86 | 354.5 | 72 | 43 | 43 | 25.7 | 200 | 161 | 160 | 410 | 59.5 | 55 | 55 | 30 |
| **LSES 112 MU** | 235 | 149 | 86 | 371 | 73.5 | 43 | 43 | 35 | 235 | 169 | 160 | 434 | 61 | 55 | 55 | 44.5 |
| **LSES 132 SU** | 260 | 172 | 126 | 397 | 52.5 | 63 | 63 | 42 | 235 | 169 | 160 | 477 | 61 | 55 | 55 | 48 |

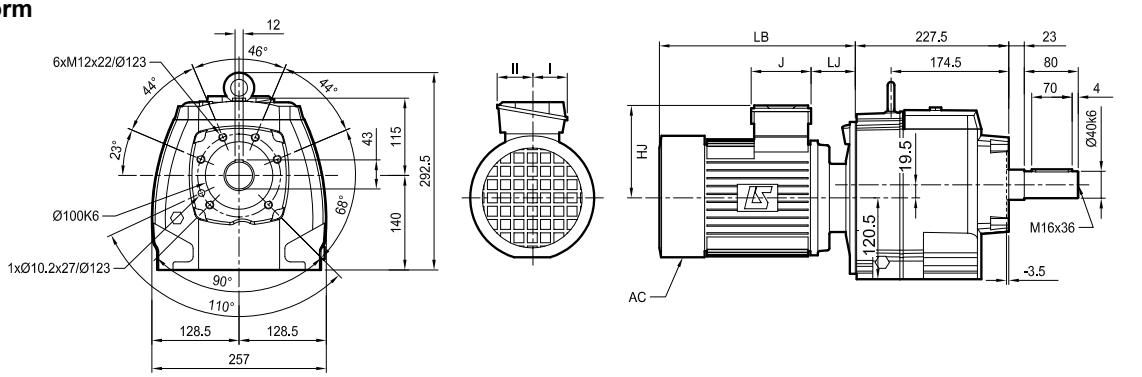
| | 4-pole motors | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS | | | | | | | | LS FCR | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **LS 71 L** | 140 | 109 | 86 | 217 | 49 | 43 | 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 |
| **LS 112 MG** | - | - | - | - | - | - | - | - | 235 | 169 | 160 | 434 | 61 | 55 | 55 | 44.5 |
| **LS 132 S** | - | - | - | - | - | - | - | - | 235 | 169 | 160 | 457 | 61 | 55 | 55 | 48 |

# Dimensions

**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3333**

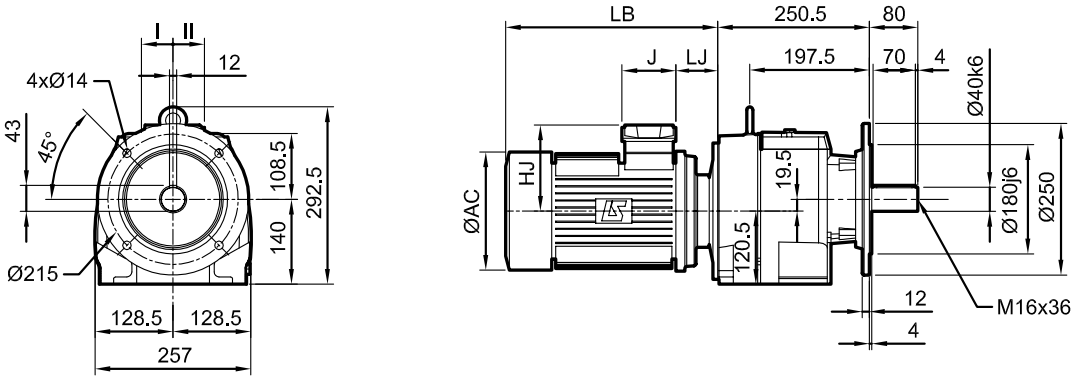
**- BT faceplate form**

Cb: 29 kg + Motor



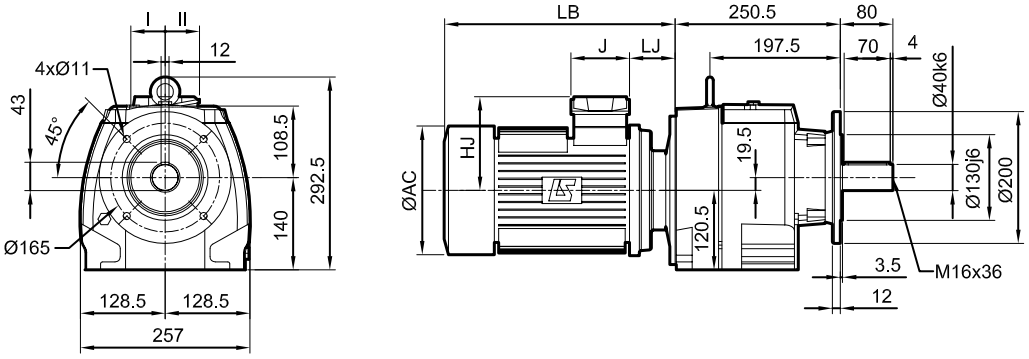

**- BD1 flange**

Cb: 33 kg + Motor



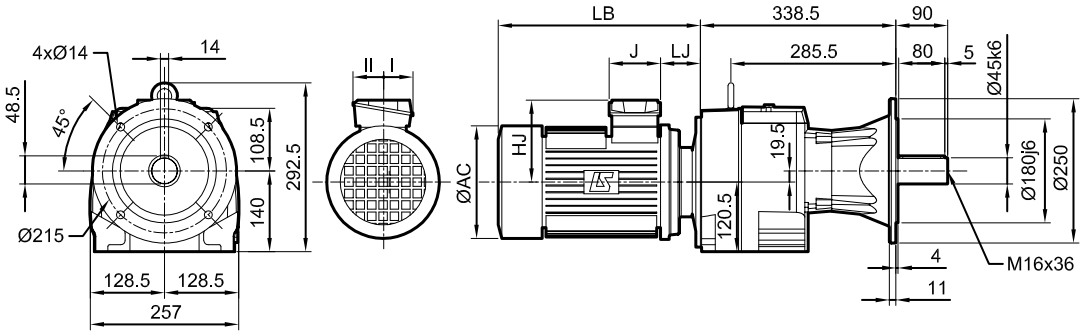

**- BD2 flange**

Cb: 32.5 kg + Motor




**- BR flange**

Cb: 44 kg + Motor



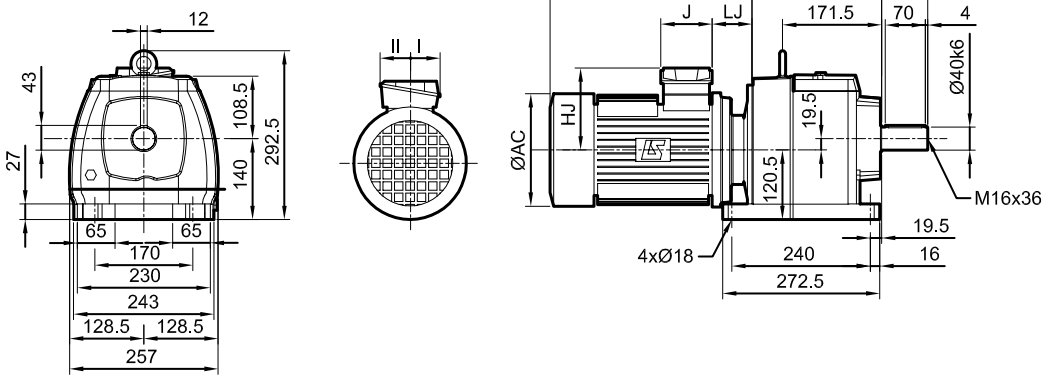
# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3333

*Dimensions in millimetres*

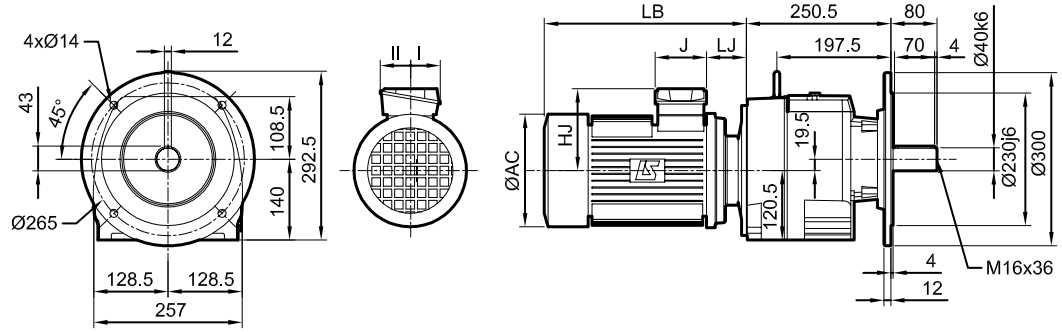
**- S foot mounted**

Cb: 30 kg + Motor




**- Standard BS flange**

Cb: 34 kg + Motor




| | 4-pole motors | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LSES | | | | | | | | LSES FCR | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **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 100 LR** | 200 | 140 | 86 | 350.5 | 68 | 43 | 43 | 25.7 | 200 | 161 | 160 | 406 | 55.5 | 55 | 55 | 30 |
| **LSES 112 MU** | 235 | 149 | 86 | 367 | 69.5 | 43 | 43 | 35 | 235 | 169 | 160 | 430 | 58 | 55 | 55 | 44.5 |
| **LSES 132 MU** | 265 | 190 | 126 | 460 | 65 | 63 | 63 | 68 | 280 | 188 | 160 | 541 | 73 | 55 | 55 | 80 |

| | 4-pole motors | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS | | | | | | | | LS FCR | | | | | | | |
| Fr. size | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **LS 71 L** | 140 | 109 | 86 | 213 | 45 | 43 | 43 | 8.3 | 140 | 135 | 160 | 264 | 21.5 | 55 | 55 | 11.3 |
| **LS 80 L** | - | - | - | - | - | - | - | - | 172 | 146 | 160 | 296 | 42 | 55 | 55 | 18 |
| **LS 90 L** | - | - | - | - | - | - | - | - | 184 | 156 | 160 | 345.5 | 54.5 | 55 | 55 | 24.2 |
| **LS 100 L** | - | - | - | - | - | - | - | - | 200 | 161 | 160 | 393.5 | 55.5 | 55 | 55 | 30 |
| **LS 112 MG** | - | - | - | - | - | - | - | - | 235 | 169 | 160 | 430 | 58 | 55 | 55 | 44.5 |
| **LS 132 M** | - | - | - | - | - | - | - | - | 280 | 188 | 160 | 541 | 73 | 55 | 55 | 80 |

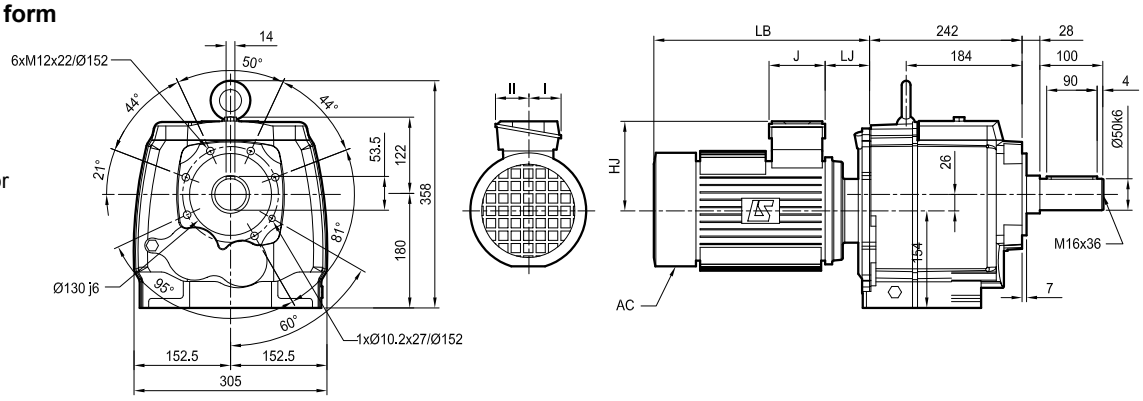
# Dimensions

**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3433**

*Dimensions in millimetres*

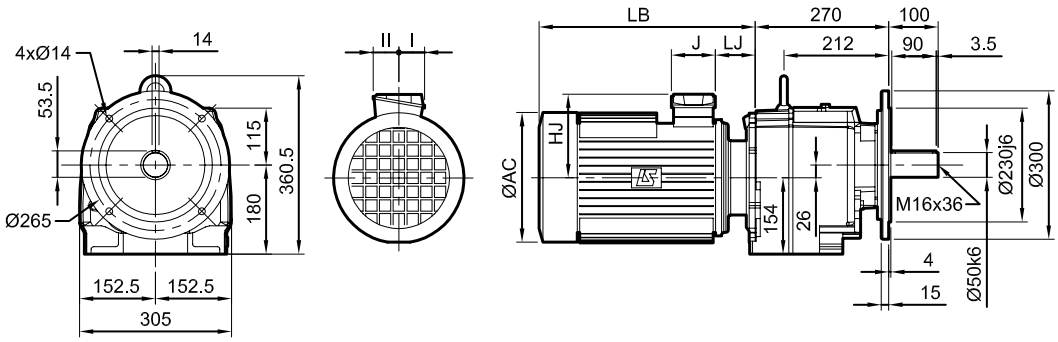
**- BT faceplate form**

Cb: 48 kg + Motor



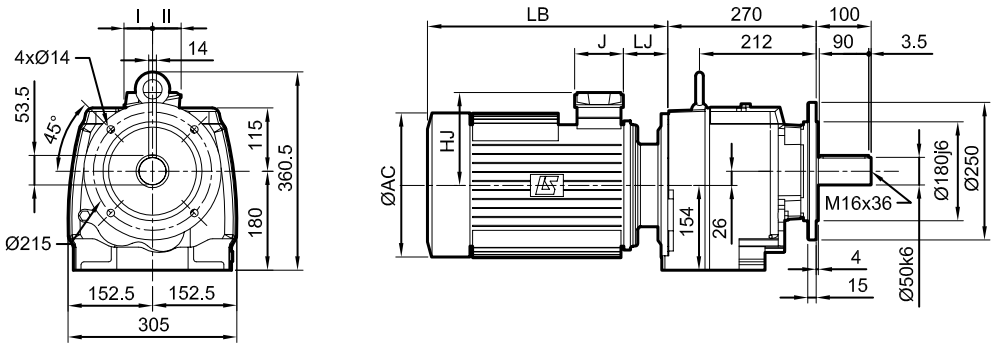

**- BD1 flange**

Cb: 55 kg + Motor



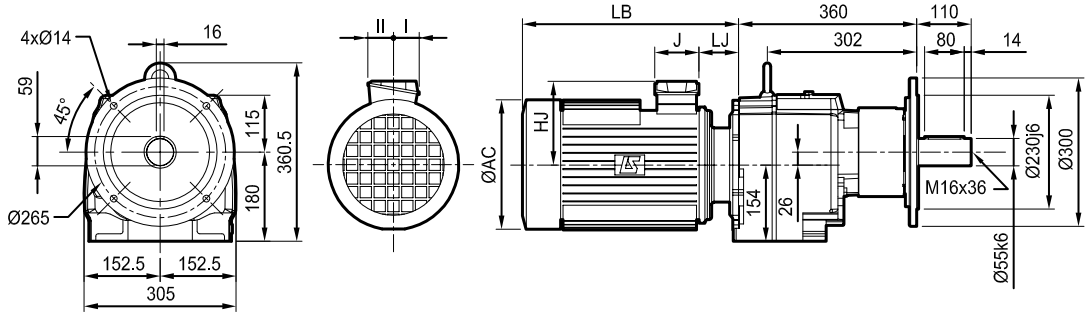

**- BD2 flange**

Cb: 54 kg + Motor




**- BR flange**

Cb: 72 kg + Motor



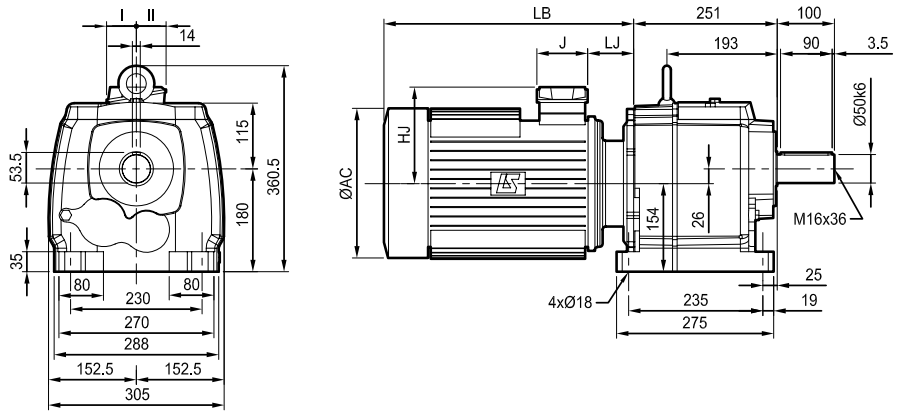
# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3433

*Dimensions in millimetres*

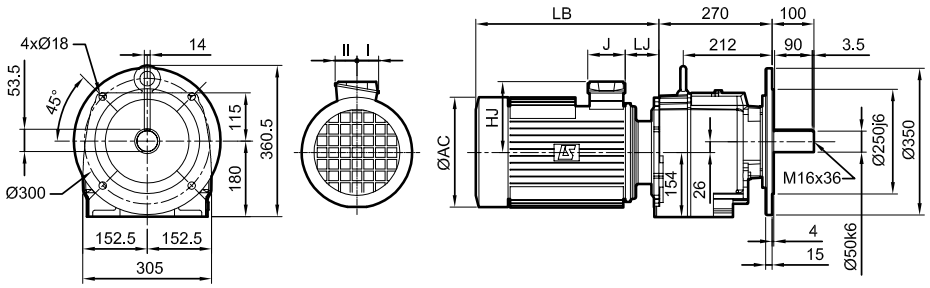
**- S foot mounted**

Cb: 50 kg + Motor




**- Standard BS flange**

Cb: 56 kg + Motor




| Fr. size | 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 80 LG** | 170 | 135 | 86 | 288.5 | 68 | 43 | 43 | 11.7 | 172 | 146 | 160 | 345.5 | 46.5 | 55 | 55 | 18 | - | - | - | - | - | - | - | - |
| **LSES 90 L** | 190 | 135 | 86 | 286 | 67 | 43 | 43 | 15.2 | 184 | 156 | 160 | 345.5 | 54.5 | 55 | 55 | 24.2 | - | - | - | - | - | - | - | - |
| **LSES 100 LR** | 200 | 140 | 86 | 350.5 | 68 | 43 | 43 | 25.7 | 200 | 161 | 160 | 406 | 55.5 | 55 | 55 | 30 | - | - | - | - | - | - | - | - |
| **LSES 112 MU** | 235 | 149 | 86 | 367 | 69.5 | 43 | 43 | 35 | 235 | 169 | 160 | 434 | 62 | 55 | 55 | 44.5 | - | - | - | - | - | - | - | - |
| **LSES 132 MU** | 265 | 190 | 126 | 464 | 69 | 63 | 63 | 68 | 280 | 188 | 160 | 545 | 77 | 55 | 55 | 80 | - | - | - | - | - | - | - | - |
| **LSES 160 L** | 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 180 LR** | 312 | 248 | 186 | 533 | 67.8 | 112 | 98 | 115 | - | - | - | - | - | - | - | - | 345 | 235 | 134 | 696 | 57 | 92 | 63 | 155 |

| Fr. size | 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 90 L** | 184 | 156 | 160 | 345.5 | 54.5 | 55 | 55 | 24.2 | - | - | - | - | - | - | - | - |
| **LS 100 L** | 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 160 L** | 316 | 231 | 160 | 620 | 96 | 55 | 55 | 110 | 345 | 235 | 134 | 681 | 56.8 | 92 | 63 | 140 |
| **LS 180 LR** | - | - | - | - | - | - | - | - | 345 | 235 | 134 | 696 | 57 | 92 | 63 | 155 |

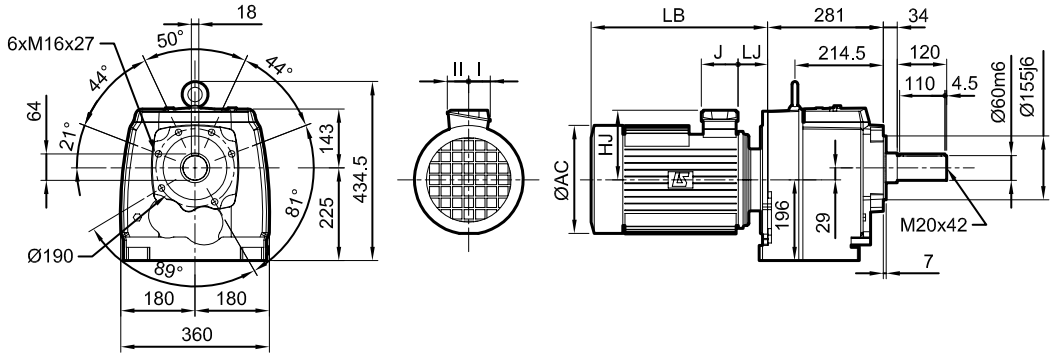
# Dimensions

**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3533**

*Dimensions in millimetres*

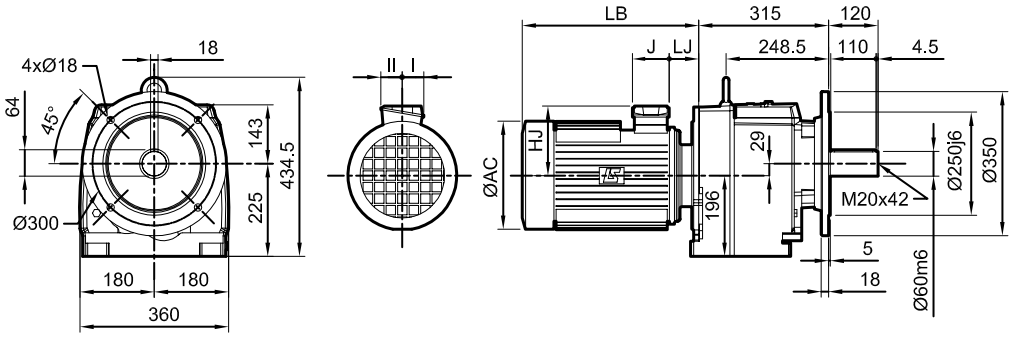
**- BT faceplate form**

Cb: 86 kg + Motor



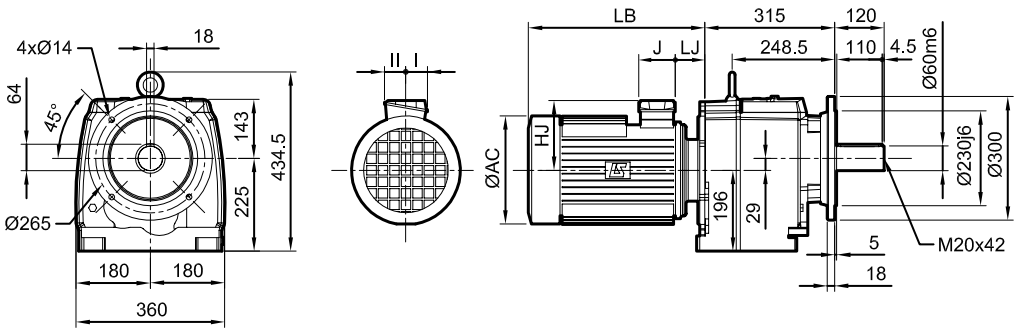

**- BD1 flange**

Cb: 96 kg + Motor



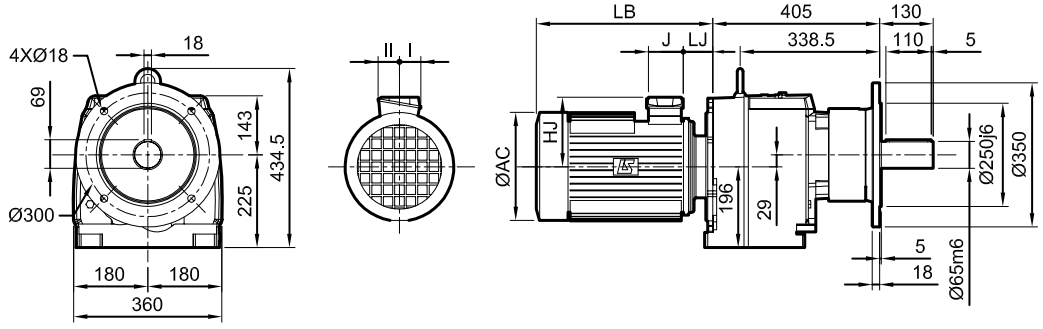

**- BD2 flange**

Cb: 90 kg + Motor




**- BR flange**

Cb: 130 kg + Motor



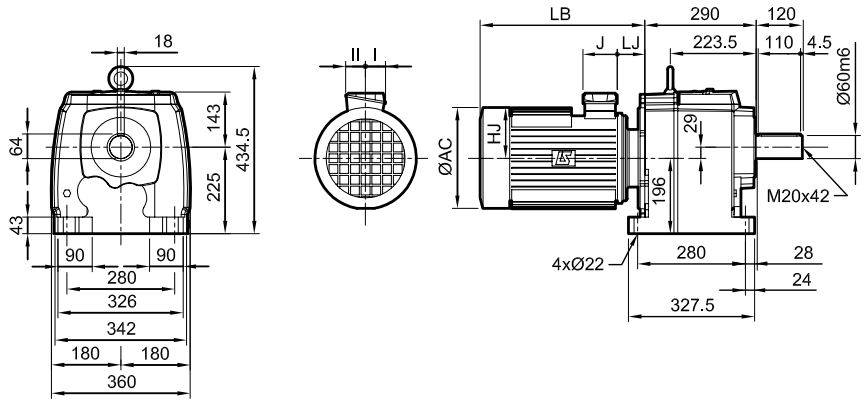
# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3533

*Dimensions in millimetres*

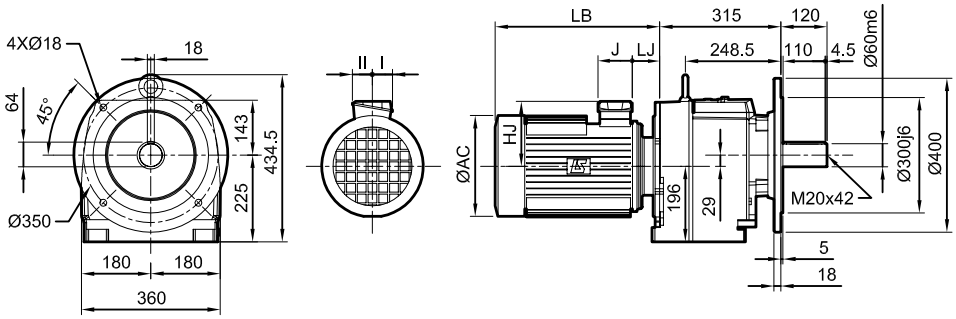
**- S foot mounted**

Cb: 90 kg + Motor




**- Standard BS flange**

Cb: 97 kg + Motor




| Fr. size | 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 90 L** | 190 | 135 | 86 | 281 | 62 | 43 | 43 | 15.2 | 184 | 156 | 160 | 340.5 | 49.5 | 55 | 55 | 24.2 | - | - | - | - | - | - | - | - |
| **LSES 100 LR** | 200 | 140 | 86 | 345.5 | 63 | 43 | 43 | 25.7 | 200 | 161 | 160 | 401 | 50.5 | 55 | 55 | 30 | - | - | - | - | - | - | - | - |
| **LSES 112 MU** | 235 | 149 | 86 | 362 | 64.5 | 43 | 43 | 35 | 235 | 169 | 160 | 425 | 53 | 55 | 55 | 44.5 | - | - | - | - | - | - | - | - |
| **LSES 132 MU** | 265 | 190 | 126 | 455 | 60 | 63 | 63 | 68 | 280 | 188 | 160 | 536 | 56 | 55 | 55 | 80 | - | - | - | - | - | - | - | - |
| **LSES 160 L** | 312 | 222 | 126 | 499 | 51.8 | 63 | 63 | 91 | 316 | 231 | 160 | 611 | 87 | 55 | 55 | 110 | 312 | 235 | 134 | 672 | 47.8 | 92 | 63 | 140 |
| **LSES 180 LR** | 312 | 248 | 186 | 524 | 58.8 | 112 | 98 | 115 | - | - | - | - | - | - | - | - | 345 | 235 | 134 | 687 | 48 | 92 | 63 | 150 |
| **LSES 200 LR** | 350 | 256 | 186 | 618 | 67.5 | 112 | 98 | 164 | - | - | - | - | - | - | - | - | 384 | 256 | 186 | 826 | 67.5 | 111 | 98 | 240 |

| Fr. size | 4-pole motors | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS FCR | | | | | | | | LS FCPL | | | | | | | |
| | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **LS 90 L** | 184 | 156 | 160 | 340.5 | 49.5 | 55 | 55 | 24.2 | - | - | - | - | - | - | - | - |
| **LS 100 L** | 200 | 161 | 160 | 388.5 | 50.5 | 55 | 55 | 30 | - | - | - | - | - | - | - | - |
| **LS 112 MG** | 235 | 169 | 160 | 425 | 53 | 55 | 55 | 44.5 | - | - | - | - | - | - | - | - |
| **LS 132 M** | 280 | 188 | 160 | 536 | 56 | 55 | 55 | 80 | - | - | - | - | - | - | - | - |
| **LS 160 LR** | 316 | 231 | 160 | 611 | 87 | 55 | 55 | 110 | 312 | 235 | 134 | 672 | 47.8 | 92 | 63 | 140 |
| **LS 180 LR** | - | - | - | - | - | - | - | - | 345 | 235 | 134 | 687 | 48 | 92 | 63 | 150 |
| **LS 200 LT** | - | - | - | - | - | - | - | - | 384 | 256 | 186 | 826 | 67.5 | 111 | 98 | 240 |

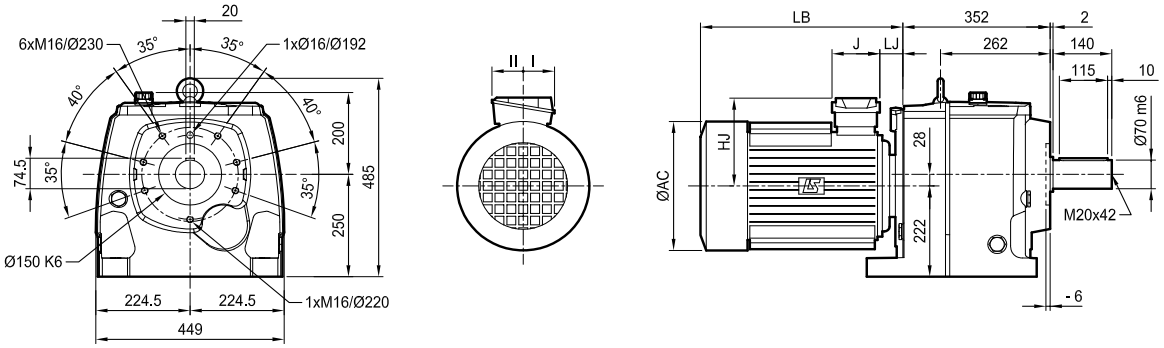
# Dimensions

**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3633**

*Dimensions in millimetres*

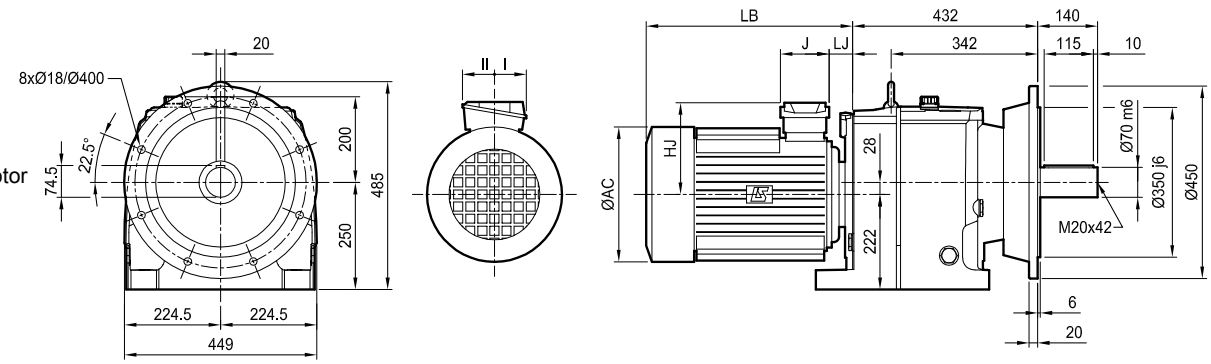
**- BT faceplate form**

Cb: 162 kg + Motor




**- BD1 flange**

Cb: 190 kg + Motor



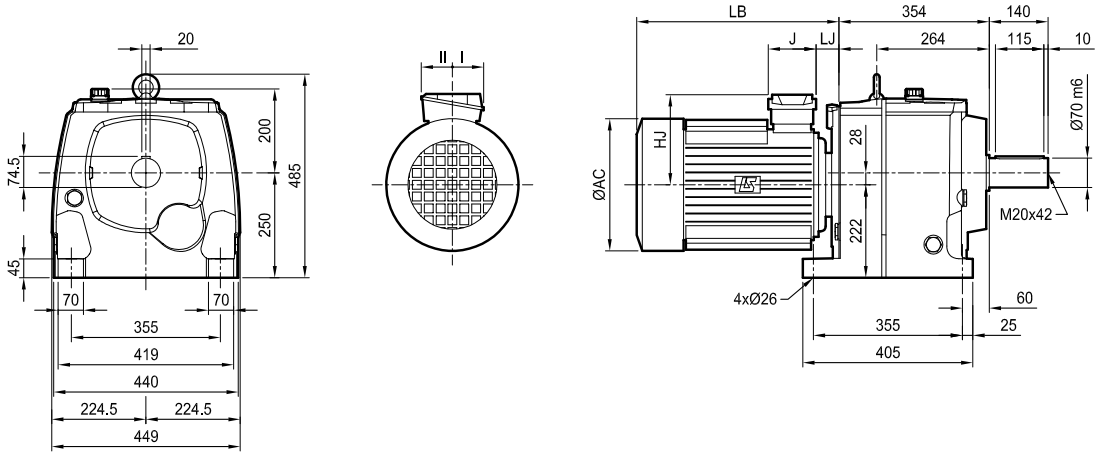
# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3633

*Dimensions in millimetres*

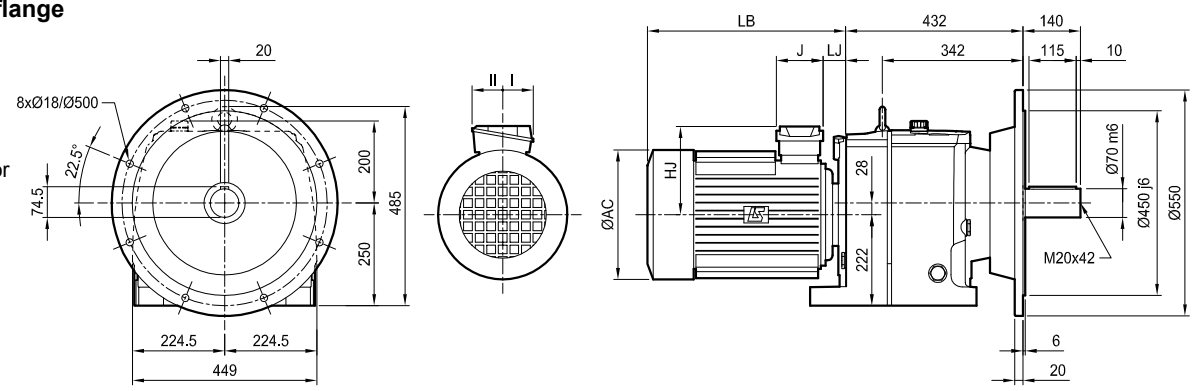
**- S foot mounted**

Cb: 162 kg + Motor




**- Standard BS flange**

Cb: 196 kg + Motor




| Fr. size | 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 90 L** | 190 | 135 | 86 | 272 | 53 | 43 | 43 | 15.2 | 190 | 156 | 160 | 331.5 | 48.5 | 55 | 55 | 24.2 | - | - | - | - | - | - | - | - |
| **LSES 100 LR** | 200 | 140 | 86 | 336.5 | 54 | 43 | 43 | 25.7 | 200 | 161 | 160 | 394.5 | 52 | 55 | 55 | 30 | - | - | - | - | - | - | - | - |
| **LSES 112 MU** | 235 | 149 | 86 | 353 | 55.5 | 43 | 43 | 35 | 235 | 169 | 160 | 421 | 51 | 55 | 55 | 44.5 | - | - | - | - | - | - | - | - |
| **LSES 132 MU** | 265 | 190 | 126 | 446 | 51 | 63 | 63 | 68 | 280 | 188 | 160 | 527 | 66.5 | 55 | 55 | 80 | - | - | - | - | - | - | - | - |
| **LSES 160 L** | 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 180 LR** | 312 | 248 | 186 | 515 | 49.8 | 112 | 98 | 115 | - | - | - | - | - | - | - | - | 345 | 235 | 134 | 678 | 39 | 92 | 63 | 150 |
| **LSES 200 LR** | 350 | 256 | 186 | 609 | 58.5 | 112 | 98 | 164 | - | - | - | - | - | - | - | - | 384 | 256 | 186 | 774 | 84.5 | 111 | 98 | 240 |
| **LSES 225 MR** | 390 | 310 | 231 | 674 | 59.5 | 119 | 142 | 235 | - | - | - | - | - | - | - | - | 410 | 276 | 186 | 837 | 82 | 111 | 98 | 320 |

| Fr. size | 4-pole motors | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS FCR | | | | | | | | LS FCPL | | | | | | | |
| | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **LS 90 L** | 190 | 156 | 160 | 331.5 | 48.5 | 55 | 55 | 24.2 | - | - | - | - | - | - | - | - |
| **LS 100 L** | 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 160 L** | 316 | 231 | 160 | 564 | 58 | 55 | 55 | 110 | 345 | 235 | 134 | 672 | 47.8 | 92 | 63 | 140 |
| **LS 180 LR** | - | - | - | - | - | - | - | - | 345 | 235 | 134 | 678 | 39 | 92 | 63 | 150 |
| **LS 200 LT** | - | - | - | - | - | - | - | - | 384 | 256 | 186 | 774 | 84.5 | 111 | 98 | 240 |
| **LS 225 MR** | - | - | - | - | - | - | - | - | 410 | 276 | 186 | 837 | 82 | 111 | 98 | 320 |

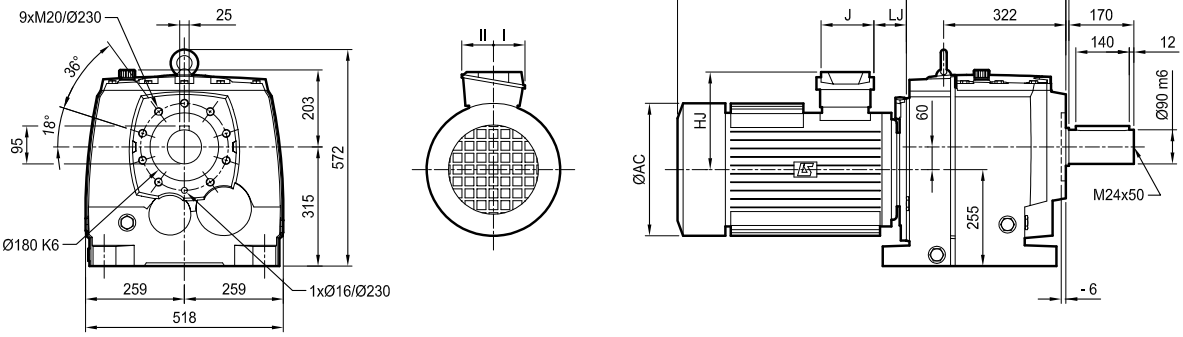
# Dimensions

**Dimensions of Compabloc (Cb) gearboxes, MI integral mounting,
Cb 3733**

*Dimensions in millimetres*

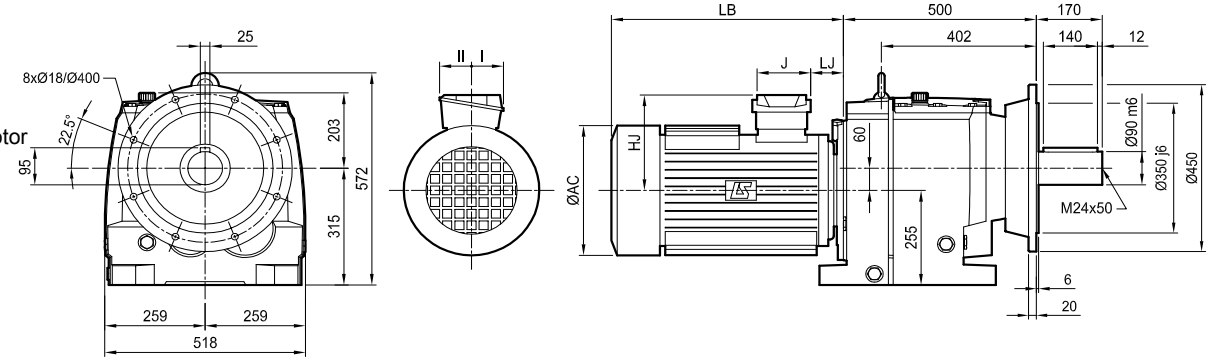
**- BT faceplate form**

Cb: 192 kg + Motor




**- BD1 flange**

Cb: 222 kg + Motor



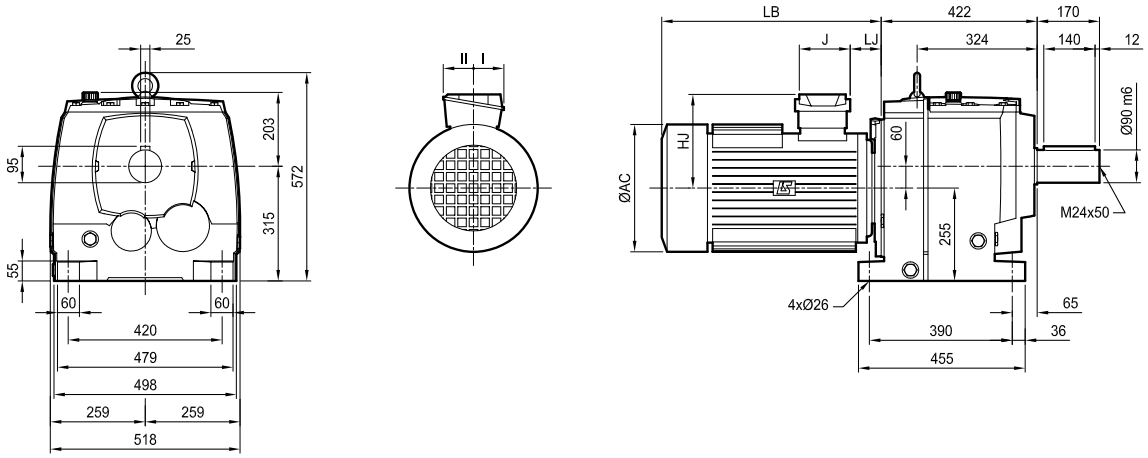
# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MI integral mounting, Cb 3733

*Dimensions in millimetres*

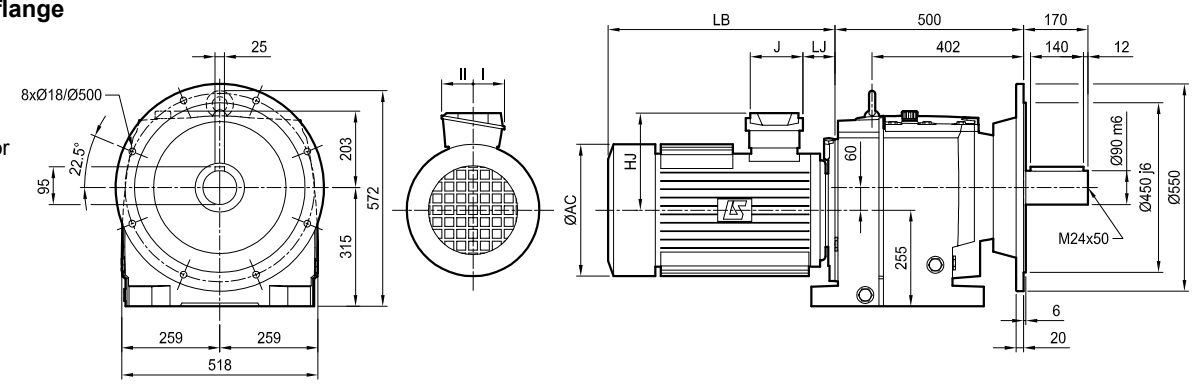
**- S foot mounted**

Cb: 192 kg + Motor




**- Standard BS flange**

Cb: 228 kg + Motor



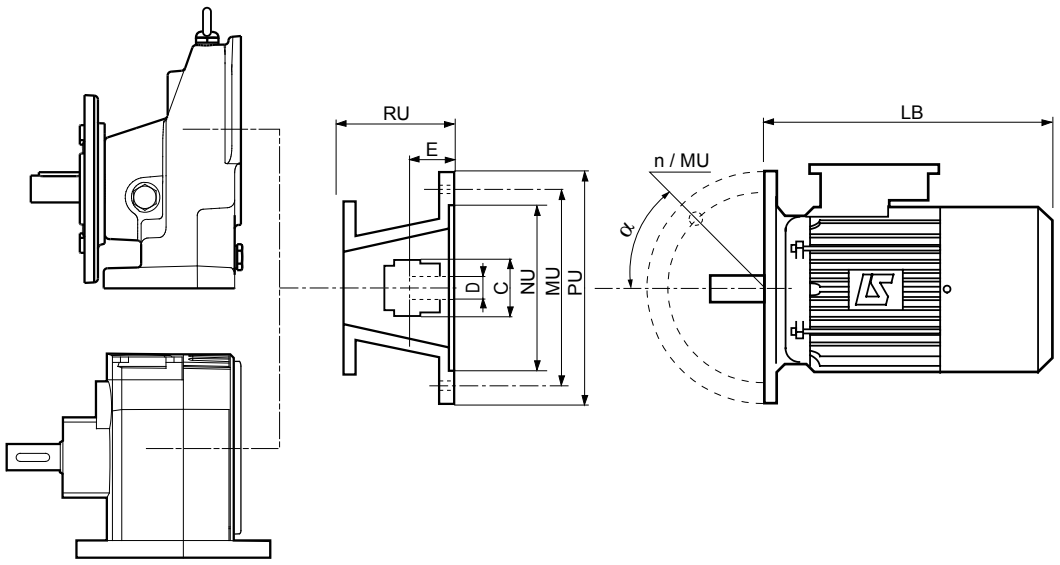

| Fr. size | 4-pole motors | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LSES | | | | | | | | LSES FCR | | | | | | | | LSES FCPL | | | | | | | |
| | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ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

| Fr. size | 4-pole motors | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LS FCR | | | | | | | | LS FCPL | | | | | | | |
| | AC | HJ | J | LB | LJ | I | II | kg | AC | HJ | J | LB | LJ | I | II | kg |
| **LS 90 L** | 190 | 156 | 160 | 331.5 | 48.5 | 55 | 55 | 24.2 | - | - | - | - | - | - | - | - |
| **LS 100 L** | 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 160 L** | 316 | 231 | 160 | 564 | 58 | 55 | 55 | 110 | 345 | 235 | 134 | 672 | 47.8 | 92 | 63 | 140 |
| **LS 180 LR** | - | - | - | - | - | - | - | - | 345 | 235 | 134 | 678 | 39 | 92 | 63 | 150 |
| **LS 200 LT** | - | - | - | - | - | - | - | - | 384 | 256 | 186 | 774 | 84.5 | 111 | 98 | 240 |
| **LS 225 MR** | - | - | - | - | - | - | - | - | 410 | 276 | 186 | 837 | 82 | 111 | 98 | 320 |

# Dimensions

## Dimensions of Compabloc (Cb) gearboxes, MU universal mounting

*Dimensions in millimetres*




| Type | LS, LSES IM 3001 (IM B5) IEC | | | | | | | | | U-mounts | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Cb 15-- | | Cb 30-- | | Cb 31-- | | Cb 32-- | | Cb 33-- | | Cb 34-- | | Cb 35-- | | Cb 36/37-- | |
| | Ø D | E | LB[1]/LB[2] | LB FMC/FCR/FCPL | Ø MU | Ø NU | Ø PU | n | α° | Ø C | RU | Ø C | RU | Ø C | RU | Ø C | RU | Ø C | RU | Ø C | RU | Ø C | RU | Ø C | RU |
| **LS 56 M** | 9j6 | 20 | 156/134 | 206/-/- | FF100 | 80 | 120 | 4 | 45 | - | 50 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| **LS 63 M** | 11j6 | 23 | 172/165 | 222/-/- | FF115 | 95 | 140 | 4 | 45 | - | 50 | - | 60 | - | - | - | - | - | - | - | - | - | - | - | - |
| **LS 71 L** | 14j6 | 30 | 183 | 233/271/- | FF130 | 110 | 160 | 4 | 45 | - | 50 | - | 60 | 65 | 122 | 65 | 122 | 65 | 122 | 65 | 122 | - | - | - | - |
| **LSES 80 LG** | 19j6 | 40 | 247 | -/292/- | FF165 | 130 | 200 | 4 | 45 | - | - | - | 90 | 65 | 130 | 65 | 130 | 65 | 130 | 65 | 130 | 65 | 121 | - | - |
| **LSES 90 L** | 24j6 | 50 | 265 | -/324/- | FF165 | 130 | 200 | 4 | 45 | - | - | - | - | 65 | 130 | 65 | 130 | 65 | 130 | 65 | 130 | 65 | 121 | - | - |
| **LSES 100 LR** | 28j6 | 60 | 309 | -/388/- | FF200 | 180 | 250 | 4 | 45 | - | - | - | - | 65 | 144 | 65 | 144 | 65 | 144 | 65 | 144 | 65 | 135 | 65 | 148 |
| **LSES 112 MU** | 28j6 | 60 | 333 | -/425/- | FF200 | 180 | 250 | 4 | 45 | - | - | - | - | 65 | 144 | 65 | 144 | 65 | 144 | 65 | 144 | 65 | 135 | 65 | 148 |
| **LSES 132 MU** | 38k6 | 80 | 412 | -/532/- | FF265 | 230 | 300 | 4 | 45 | - | - | - | - | - | - | - | - | 65 | 162 | 65 | 169 | 65 | 157.5 | 65 | 167 |
| **LSES 160 L** | 42k6 | 110 | 495 | -/567/668 | FF300 | 250 | 350 | 4 | 45 | - | - | - | - | - | - | - | - | - | - | 95 | 194 | 95 | 183 | 95 | 199 |
| **LSES 180 LR** | 48k6 | 110 | 520 | -/-/683 | FF300 | 250 | 350 | 4 | 45 | - | - | - | - | - | - | - | - | - | - | 95 | 194 | 95 | 183 | 95 | 199 |
| **LSES 200 LR** | 55m6 | 110 | 620 | -/-/828 | FF350 | 300 | 400 | 4 | 45 | - | - | - | - | - | - | - | - | - | - | 95 | 194 | 95 | 183 | 95 | 199 |
| **LSES 225[1] MR** | 60m6 | 140 | 676 | -/-/953 | FF400 | 350 | 450 | 8 | 22.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 120 | 311 |
| **LSES 250[1] ME** | 65m6 | 140 | 810 | -/-/1180 | FF500 | 450 | 550 | 8 | 22.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 120 | 328 |
| **LSES 280[1] MD** | 75m6 | 140 | 870 | -/-/1246 | FF500 | 450 | 550 | 8 | 22.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 120 | 328 |

LB[1]: ventilated motor - LB[2]: non-ventilated motor

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

| | 15-- | 30-- | 31-- | 32-- | 33-- | 34-- | 35-- | 36-- | 37-- |
|---|---|---|---|---|---|---|---|---|---|
| **MU max (kg)** | 0.6 | 3 | 4 | 8 | 14 | 20 | 35 | 75 | 75 |
| **LS max (kg)** | 10 | 30 | 65 | 70 | 120 | 150 | 205 | 350 | 350 |

# Notes

**I - SCOPE OF APPLICATION**
These General Conditions of Sale («GCS») shall apply to the sale of all products, components, software and services (referred to as «Products») proposed or sold by the Seller to the Client. Said GCS shall also apply to all quotation or offers made by the Seller, and are an integral part of all orders. «Seller» is understood to mean all companies directly or indirectly controlled by LEROY-SOMER. As a complementary measure, orders are also subject to the latest version in force of the Inter-Union General Conditions of Sale for France of the F.I.E.E.C. (*Fédération des Industries Electriques, Electroniques et de Communication* [Federation of Electrical, Electronic and Communication Industries]), inasmuch as they are not contrary to the GCS.
The acceptance of the Seller's offers or quotations, or any order, entails the acceptance without reservation of these GCS and rules out all contrary provisions shown on all other documents and, in particular, on the Client's order forms and the Client's General Conditions of Purchase.
If the sale concerns castings, by way of derogation to Paragraph 1 above, said castings shall be subject to the latest version in force of the *Conditions Générales Contractuelles des Fonderies Européennes* [General Contractual Conditions of European Foundries].
**The Products and services sold pursuant to these GCS may under no circumstances be used for applications in the nuclear field, as such sales expressly fall under technical specifications and specific contracts that the Seller reserves the right to refuse.**

**II - ORDERS**
All orders, even those taken by the Seller's agents and representatives, and regardless of the transmission method, shall only bind the Seller after written acceptance thereby of the order.
The Seller reserves the option of modifying the characteristics of its Products without notice. However, the Client shall retain the possibility of specifying the characteristics on which its commitment is contingent. In the absence of any such express stipulation, the Client may not refuse delivery of new, modified Products.
The Seller may not be held liable for an unsatisfactory selection of Products if said selection results from conditions of use that are incomplete and/or mistaken, or not disclosed to the Seller by the Client.
Except in the event of a stipulation to the contrary, the offers and quotations remitted by the Seller shall only be valid for thirty days as from the date on which they are drawn up.
Where the Products must comply with standards, specific regulations and/or be received by control and inspection agencies, the price request must be accompanied by the technical specification, all terms and conditions the Seller must comply with. Reference shall be made thereto on the quotation or offer. Approval and attendance costs shall always be borne by the Client.

**III - PRICES**
Tariffs are expressed exclusive of tax and may be revised without notice.
Prices are either deemed to be firm for the period of validity specified on the quotation, or subject to a revision formula attached to the offer and which specifies, according to the regulations, parameters pertaining to the materials, products, various services and salaries for which the indices are published in the B.O.C.C.R.F. (*Bulletin Officiel de la Concurrence, de la Consommation et de la Répression des Fraudes* [French Official Journal of Competition and Consumer Matters, and Anti-Fraud Measures]).
All additional costs, in particular approval costs, specific checks, etc., shall be invoiced in addition.

**IV - DELIVERY**
Sales are governed by the latest edition in force of the INCOTERMS published by the Internal Chamber of Commerce («I.C.C. INCOTERMS»).
The Products shall be dispatched according to the conditions stated on the order acknowledgement issued by the Seller for all orders of Products.
Except in the event of specific provisions, the prices correspond to Products that are made available in the Seller's factories, including basic packaging.
Except in the event of a provision to the contrary, the Products shall always be transported at the risk of the addressee. In all cases, it shall be the responsibility of the addressee to make any claims to the carrier, within the delivery time and in the forms specified by law, concerning the state or number of parcels received, and to concomitantly provide the Seller with a copy of such declaration. Failure to comply with said procedure shall exempt the Seller from any liability. In any event, the Seller's liability may not exceed the amount of the indemnities received from its insurers.
If the provisions concerning transportation are amended by the Client subsequent to the acceptance of the order, the Seller reserves the right to invoice any supplemental costs that may result therefrom.
Except in the event of a contractual or statutory obligation to the contrary, packaging shall not be returnable.
In the event that a delivery of Products is delayed for a reason not attributable to the Seller, the Products stored on the Seller's premises shall be insured at the exclusive risk of the Client. Consideration for storage, costs will be invoiced at a rate of 1% (*one per cent*) of the total amount of the order, per week or partial week of storage, with no deductible or *de minimis* amount, as from the date of Products availability provided for in the contract. Upon expiration of a period of thirty days as from said date, the Seller may, at its discretion, either freely dispose of the Products and/or agree with the Client on a new delivery date for said Products, or invoice the Client in full for payment, according to the timeframes and amount provided for contractually. In any event, down payments shall inure to the Seller as indemnities, without prejudice to any other action the Seller may take.

**V - DELIVERY TIME**
The Seller shall only be bound by the delivery time mentioned on its order acknowledgement. Said delivery time shall only start to run as from the date of issuance of the order acknowledgement by the Seller, and subject to the fulfilment of the conditions provided for on the confirmation receipt, in particular receipt of the down payment for the order, notification of the opening of an operative irrevocable and confirmed documentary credit that complies in all respects to the Seller's request (*in particular regarding the amount , currency, validity and licence*), acceptance of the payment conditions accompanied by the implementation of any guarantees requested, etc.
Exceeding delivery time shall not grant the Client entitlement to damages and/or penalties.
Except in the event of a specific condition to the contrary, the Seller reserves the right to make partial deliveries.
Delivery times shall be interrupted by right and without the need for any judicial formalities, by any failure to pay or late payment by the Client.

**VI - TESTS - QUALIFICATION**
The Products manufactured by the Seller are checked and tested before leaving its factories. Clients may be present at said tests if specified on the order.
Specific tests and/or trials, as well as approval of Products, requested by the Client, whether carried out on the Client's premises or in the Seller's factories, on site, or by control and inspection agencies, must be specified on the order and are always at Client's expense.
Prototypes for Products specially developed or adapted for a Client must be qualified by the Client before serial production in order to ensure that it is compatible with the other components that make up its equipment, and that it is adapted to the intended use. Said qualification will also enable the Client to ensure that the Products comply with the technical specification. In this respect, the Client and Seller shall sign a Product Approval Form in two original, one of which shall be retained by the Client and one by the Seller.
In the event that the Client requires delivery without having firstly qualified the Products, said Products shall be delivered as they stand and shall always be deemed to be prototypes ; the Client shall then be solely liable for using the Products or delivering them to its own clients. However, the Seller may also decide not to deliver the Products that have not received the Client's prior approval.

**VII - PAYMENT CONDITIONS**
All sales shall be deemed to be completed and payable at the Seller's registered office, without any possible derogation, regardless of the payment method, where the contract was concluded and where delivery was made.
Where the Client is located out of French territory, invoices shall be payable in cash upon receipt, or by a bank draft or a bill of exchange, within 30 (thirty) days net.
All early payment compared to the deadline fixed shall give right to a discount of 0.2% (*nought point two* per cent) per month, of the amount concerned of the invoice.
Except in the event of provisions to the contrary, where the Client is located outside of French Territory, invoices shall be payable in cash against remittance of shipping documents, or by irrevocable documentary credit confirmed by a first rate French bank, at Client's expense.
Payment shall be understood to mean the funds being made available on the Seller's bank account and must imperatively be made in the invoicing currency.
Pursuant to French Law no. 2008-776 of 4 August 2008, failure to pay an invoice when due shall trigger, after service of formal notice that has remained without effect, payment to the Seller of a flat-rate penalty on the due date of the receivable, which shall be applied to amount inclusive of tax of monies owed if the invoice is liable to VAT (*Value Added Tax*), and the suspension of pending orders. Said penalty is equal to the European Central Bank interest rate on the main refinancing operations + 10 basis points.
The collection of said monies via litigation shall trigger an increase of 15% (*fifteen per cent*) of the amount claimed, with a minimum of Euros 500 exclusive of tax (*five hundred euros exclusive of tax*), with tax in addition if due.
Moreover, subject to compliance with the statutory provisions in force, in the event of total or partial failure to pay any invoice or instalment whatsoever, regardless of the payment method used, all amounts that remain owed to the Seller (*including its subsidiaries, affiliated or allied companies, whether French or foreign*) for all deliveries and services, regardless of the due date originally provided for, shall immediately become due.
Notwithstanding any specific payment conditions provided for between the parties, the Seller reserves the right to require, in the event of a decline in the Client's credit rating, a payment incident or bankruptcy of the Client :
- the payment in cash, before the Products leave the factory, for all orders currently being fulfilled,
- down payments to be made on all orders,
- alternative or different payment guarantees.

**VIII - PAYABLE AND RECEIVABLE BALANCE**
Except where prohibited by law, the Seller and the Client expressly agree to balance their payables and receivables arising from their trade relations, even if all conditions defined by law for legal balancing are not met.
For the application of said clause, the Seller shall mean any company of the LEROY-SOMER Group.

**IX - TRANSFER OF RISK / RESERVE OF TITLE**
**Risk shall be transferred as soon as the Products are made available, according to the delivery conditions stipulated on the order acknowledgement.**
**The transfer to the Client of title shall take place after payment in full. In the event that the restitution of the Products delivered is claimed by the Seller, the Seller is entitled to retain any down payment as compensation.**
**Remittance of a bill that creates an obligation to pay (*bill of exchange or other*) shall not constitute payment and discharge.**
**For as long as the price has not been paid in full, the Client is required to inform the Seller, within twenty-four hours, of the sequestration, requisition or confiscation of the Products for the benefit of a third party, and to take all protective measures to make known the Seller's property right in the event of action by creditors, and to cause such right to be respected.**

**X - CONFIDENTIALITY**
Each of the parties undertakes to maintain the confidentiality of all technical, trade, financial or other information received from the other party, whether orally, in writing or by any other means of communication, when any order is negotiated and/or fulfilled.
This confidentiality obligation shall apply throughout the period during which the order is fulfilled and for 5 (five) years subsequent to completion or cancellation thereof, regardless of the reasons therefor.

**XI - INDUSTRIAL AND INTELLECTUAL PROPERTY**
Data, studies, results, information or software, whether patentable or not obtained by the Seller when any order is fulfilled shall remain the exclusive property of the Seller.
With the exception of instruction and maintenance manuals, documents of any nature remitted to the Client shall remain the exclusive property of the Seller and must be returned to it upon request, even if the Client was invoiced for part of the cost of the study, and said documents may not be disclosed to third parties or used without the Seller's prior written agreement.

**XII - CANCELLATION / TERMINATION**
The Seller reserves the right to cancel or terminate immediately, at the Seller's discretion, by right and without the need for any judicial formalities, the contract in the event of failure to pay any portion whatsoever of the price, when due, or in the event of any breach of any of the Client's contractual obligations. Down payments and any amount already paid shall remain in Seller's hands in the form of indemnities, without prejudice to the Seller's right to claim damages. In the event that the contract is cancelled, the Products must be returned to the Seller immediately, regardless of where the Products are located, at Client's expense and risk, under penalty of 10% (*ten per cent*) of the value thereof, per week's delay.

**XIII - WARRANTY**
The Seller warrants the Products against all operating defects caused by a material or manufacturing fault, for a period of twelve months as from the date on which the Products are made available, unless a different statutory provision subsequently applies, under the conditions defined below.
The warranty may only be triggered insofar as the Products have been stored, used and maintained in accordance with the Seller's instructions and manuals. The warranty does not apply where the defect results, in particular, from :
- inadequate monitoring, maintenance or storage,
- normal wear and tear on the Products,
- servicing or modification of the Products without the Seller's prior written authorisation,
- abnormal use of the Products or use of the Products for a purpose other than that intended,
- faulty installation of the Products on the premises of the Client and/or the end user,
- failure by the Client to disclose the purpose or conditions of use of the Products,
- failure to use genuine spare parts,
- force majeure or any event that is beyond the control of the Seller.

In any case, the warranty is limited to the replacement or repair of the parts or Products deemed faulty by the Seller's technical departments. If the repair is entrusted to a third party, the repair shall only be carried out once the Seller has agreed to the quotation for the repair.
All Products returns must have been given the Seller's prior, written authorisation.
The Products to be repaired must be dispatched carriage paid, to the address given by the Seller. If the Products are not accepted under warranty, their return to the Client shall be invoiced to the Client or the end user.
This warranty shall apply to the Seller's Products that are made readily available and therefore does not cover the de-installation and re-installation of said Products in the equipment into which it is mounted.
Repair, modification or replacement of any part or Product during the warranty period may not result in the warranty period being extended.
The provisions of this article constitute the Seller's sole obligation concerning the warranty of the Products delivered.

**XIV - LIABILITY**
The Seller's liability is strictly limited to the obligations stipulated in these GCS and those expressly accepted by the Seller. All penalties and indemnities provided for therein constitute lump sum damages that include discharge for the Seller and are exclusive of any other penalty or indemnification.
With the exception of the Seller's gross negligence and the compensation of bodily injury, the Seller's liability shall be limited, in total, to the contractual amount, exclusive of tax, of the Product(s) that give(s) right to compensation.
The Seller may under no circumstances be required to indemnify consequential, indirect and / or punitive damages that the Client may use as the basis for a claim; as a result, the Seller may not be required to indemnify, in particular, production losses, operating losses or lost profit or, in general, any damage eligible for indemnification other than bodily injury or damage to property.
The Client undertakes to hold harmless the Seller and / or its insurers from any and all claims made by its insurers and/or any third party in a contractual relation with the Client, in excess of the limit and for the exclusions listed above.

**XV - SPARE PARTS AND ACCESSORIES**
Spare parts and accessories shall be supplied upon request, to the extent of their availability. Associated costs shall be invoiced in addition.
The Seller reserves the right to require a minimum quantity or invoicing amount per order.

**XVI - WASTE MANAGEMENT**
The Products that form the purpose of the sale does not fall within the scope of the European Directive 2002/96/EC (WEEE) dated January 27th, 2003, and all related legislation of Member States of the European Union that result therefrom, on the composition of electrical and electronic equipment and the disposal of waste from such equipment.
In accordance with Article L 541-2 of the French Environment Code, it is the responsibility of the waste holder to ensure the disposal thereof or to cause the disposal thereof at its own expense.

**XVII - FORCE MAJEURE**
With the exception of the Client's obligation to pay the monies owed to the Seller in respect of an order, the Client and Seller may not be held liable for the total or partial failure to perform their contractual obligations if such failure results from the occurrence of a force majeure. Delays or disturbances in production that totally or partially result from war (whether declared or not), terrorist act, strikes, riots, accidents, fires, floods, natural disasters, transportation delays, shortage of components or materials, governmental decision or action (including prohibition on import/export or the withdrawal of an import/export licence) shall, in particular, be deemed a force majeure.
If one of the parties is delayed or prevented from performing its obligations by reason of this Article for a period in excess of 180 consecutive days, each party may then terminate, by right and without any need for judicial formalities, the unperformed part of the order, by written notice to the other party, without liability. However, the Client shall be required to pay the price agreed pertaining to the Products already delivered on the date of termination.

**XVIII - PROHIBITION ON UNLAWFUL PAYMENTS**
The Client shall refrain from being engaged in any activity that would expose the Seller or any of its affiliates to a risk of penalties under laws and regulations of any relevant jurisdiction prohibiting improper payments, including but not limited to bribes or gifts of an obviously unreasonable amount, to any government or agency officials, to political parties or their officials or candidates for public office, or to any employee of any customer or supplier.

**XIX - TRADE COMPLIANCE LAWS**
The Client agrees that all applicable import, export control and sanctions laws, regulations, orders and requirements, as they may be amended from time to time, including without limitation those of the European Union, the United States of America, and the jurisdictions in which the Seller and the Client are established or from which Products may be supplied, and the requirements of any licences, authorisations, general licences or licence exceptions relating thereto ("Trade Compliance Laws") will apply to its receipt and use of Products, as well as related services and technology. In no event shall the Client use, transfer, release, export or re-export the Products, related services or technology in violation of Trade Compliance Laws.
Seller shall have no obligation to supply any Products, or services unless and until it has received any necessary licences or authorisations or has qualified for general licences or licence exceptions under Trade Compliance Laws.
If for any reason any such licences, authorisations or approvals are denied or revoked, or if there is a change in any Trade Compliance Laws that would prohibit Seller from fulfilling the contract, or would in the reasonable judgement of Seller otherwise expose Seller and/or Seller's Affiliate(s) to a risk of liability under Trade Compliance Laws, Seller shall be relieved without liability of all obligations under the contract.

**XX - SEVERABILITY**
All clauses and/or provisions of these General Conditions that are deemed or become null or void shall not cause the nullity or voidance of the contract, but solely the clause and/or provision concerned.

**XXI - DISPUTES**
**THIS CONTRACT SHALL BE GOVERNED BY AND INTERPRETED IN ACCORDANCE WITH THE LAWS OF FRANCE.**
**ANY DISPUTE IN RELATION TO THE INTERPRETATION OR THE EXECUTION OF THIS CONTRACT NOT AMICABLY SETTLED BETWEEN THE PARTIES WITHIN A 30 DAY PERIOD, SHALL BE SETTLED BY THE COMPETENT COURT OF ANGOULÊME (FRANCE), EVEN IN THE CASE OF INTRODUCTION OF THIRD PARTIES OR THE ENVOLVEMENT OF SEVERAL DEFENDANTS. HOWEVER, THE SUPPLIER RESERVES THE EXCLUSIVE RIGHT TO BRING THE DISPUTE TO THE COMPETENT COURTS OF THE SELLER OR THE CLIENT.**

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