

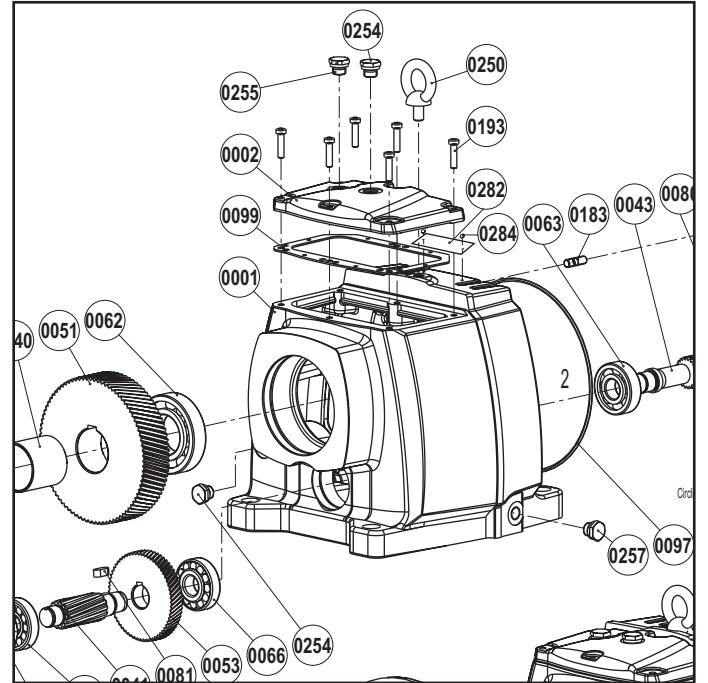


5060 en - 2013.04 / a

en



CE



COMPABLOC 3000

Drive systems
Maintenance

COMPABLOC 3000

Drive systems

This document complements the general instructions ref.2557 (recommendations), ref.3711, 3804 (Atex specific recommendations) and the Compabloc 3000 Installation instructions ref.3520.

NOTE

LEROY-SOMER reserves the right to modify the characteristics of its products at any time in order to incorporate the lastest technological developments. The information contained in this document may therefore be changed without notice.

LEROY-SOMER gives no contractual guarantee whatsoever concerning the information published in this document and cannot be held responsible for any errors it may contain, nor for any damage resulting from ist use.

CAUTION

 The specifications, instructions and descriptions are for standard operation. They do not take account of structural variants or special adaptations. Failure to comply with these recommendations may lead to premature deterioration of the gearbox and voiding of the manufacturer's guarantee.

Despite all the care taken in the manufacture and checking of this equipment, LEROY-SOMER cannot guarantee that lubricant will not escape during the product's lifetime. If slight leaks could have serious consequences for the safety of people and property, the installer and user should take all necessary precautions to avoid such consequences.

CONTENTS

1 - HOW TO ORDER	13
2 - INSTRUCTIONS FOR DISMANTLING AND REBUILDING	13
2.1 - Dismantling	13
2.2 - Rebuilding	13
3 - EXPLODED VIEWS - PARTS LIST	14
5.1 - Compabloc multistage	14
5.1.1 - Compabloc multistage exploded views: Cb 3032 to Cb 3833	14
5.1.2 - Cb 30xx to Cb 38xx parts list	15
5.2 - Compabloc 1 stage	16
5.2.1 - Compabloc 1 stage exploded views: Cb 3031 to Cb 3531	16
5.2.2 - Compabloc 1 stage parts list: Cb 3031 to Cb 3531	16
5.3 - Input shaft AP and input shaft with AD backstop	17
5.3.1 - AP and AP-AD exploded views	17
5.3.2 - AP and AP-AD parts list	17
5.4 - MU universal mounting and MU-AD universal mounting with AD backstop	18
5.4.1 - MU and MU-AD exploded views	18
5.4.2 - MU and MU-AD parts list	19
5.5 - Motor	20
5.5.1 - Motor exploded views	20
5.5.2 - Motor parts list	20

COMPABLOC 3000

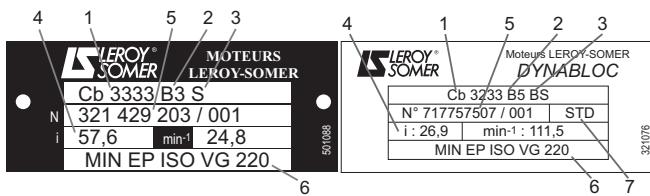
Drive systems

1 - HOW TO ORDER

Necessary information

a) from the gearbox nameplate :

- 1- gearbox model and size ;
- 2- operating position ;
- 3- fixing type (S with foot, BS, BDn or BT...);
- 4- exact reduction ;
- possible options ;
- 5- serial number ;
- 6- lubricant ;
- 7- backlash : Standard (DYNABLOC).



b) from the appropriate part list :

- part description and item number.

c) Where a motor is fitted to the gearbox, from the motor nameplate :

(for the motor : see the corresponding manual)

- motor type ;
- No. of poles (or speed in min⁻¹) ;
- power in kW (or N.m).

Caution : the motor requires a special shaft and flange for integral mounting (MI) with the gearbox.

2 - INSTRUCTIONS FOR DISMANTLING AND REBUILDING

4.1 - Dismantling

- Remove the geared motor from the machine.
- Drain the gearbox.
- Remove the motor (undo the nuts 184 on motor side).
- Dismantle the gearbox.



Utilisation of appropriate tools (hub-puller, bearing puller, mallets, adjustable spanners, circlips pliers, assorted screwdrivers, taps and dies, press...) as well as applying our rigorous procedures (M32 S244 §9 for gearbox and T32 S69 §4 for Universal mounting) the intervention of an authorised Leroy-Somer Service Centre will be required to maintain the original high performance of the drive system.

4.2 - Rebuilding

- Proceed in the reverse order to dismantling.
- Oil the lip-seals ; they must be fitted very carefully so as to avoid damage to the running seal area ; the use of protection sleeves is recommended to cover the sharp edges of shaft keyways.
- Nuts must be fixed with medium strength anaerobic adhesive.
- Re-fit the O-rings, checking that they are positioned correctly.
- Fill with oil up to the appropriate level (see § 6).
- Turn the shaft to check that the box is functioning satisfactorily before finally mounting it in position.

COMPABLOC 3000

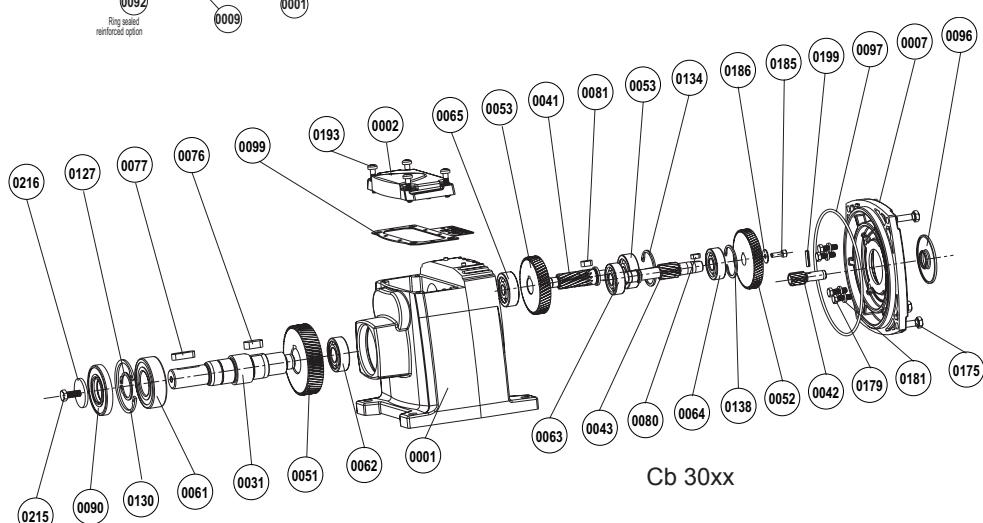
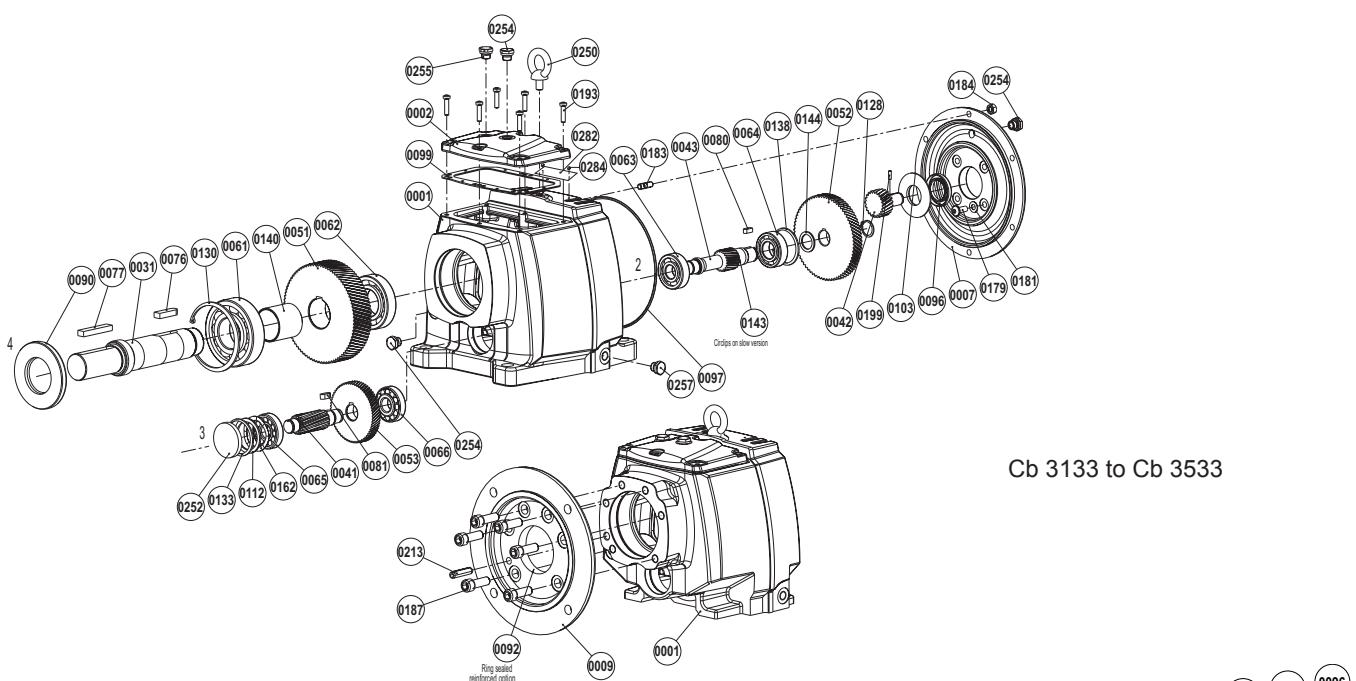
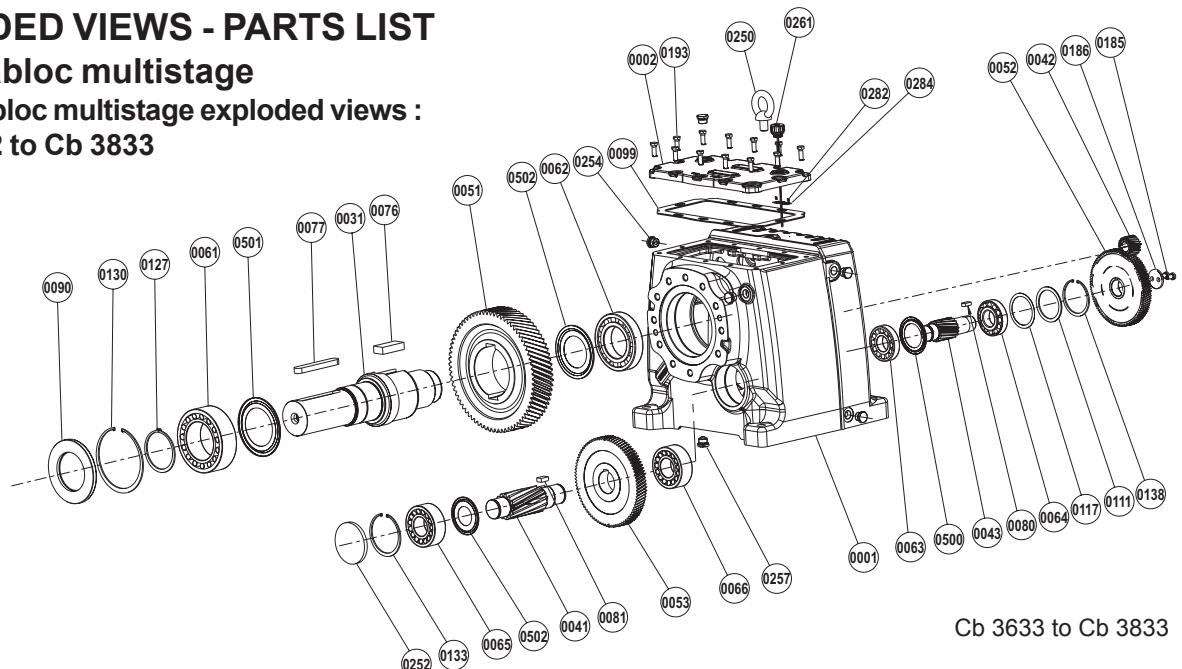
Drive systems

3 - EXPLODED VIEWS - PARTS LIST

3.1 - Compabloc multistage

3.1.1 - Compabloc multistage exploded views :

Cb 3032 to Cb 3833



COMPABLOC 3000**Drive systems****3.1.2 - Cb 30xx to Cb 38xx parts list**

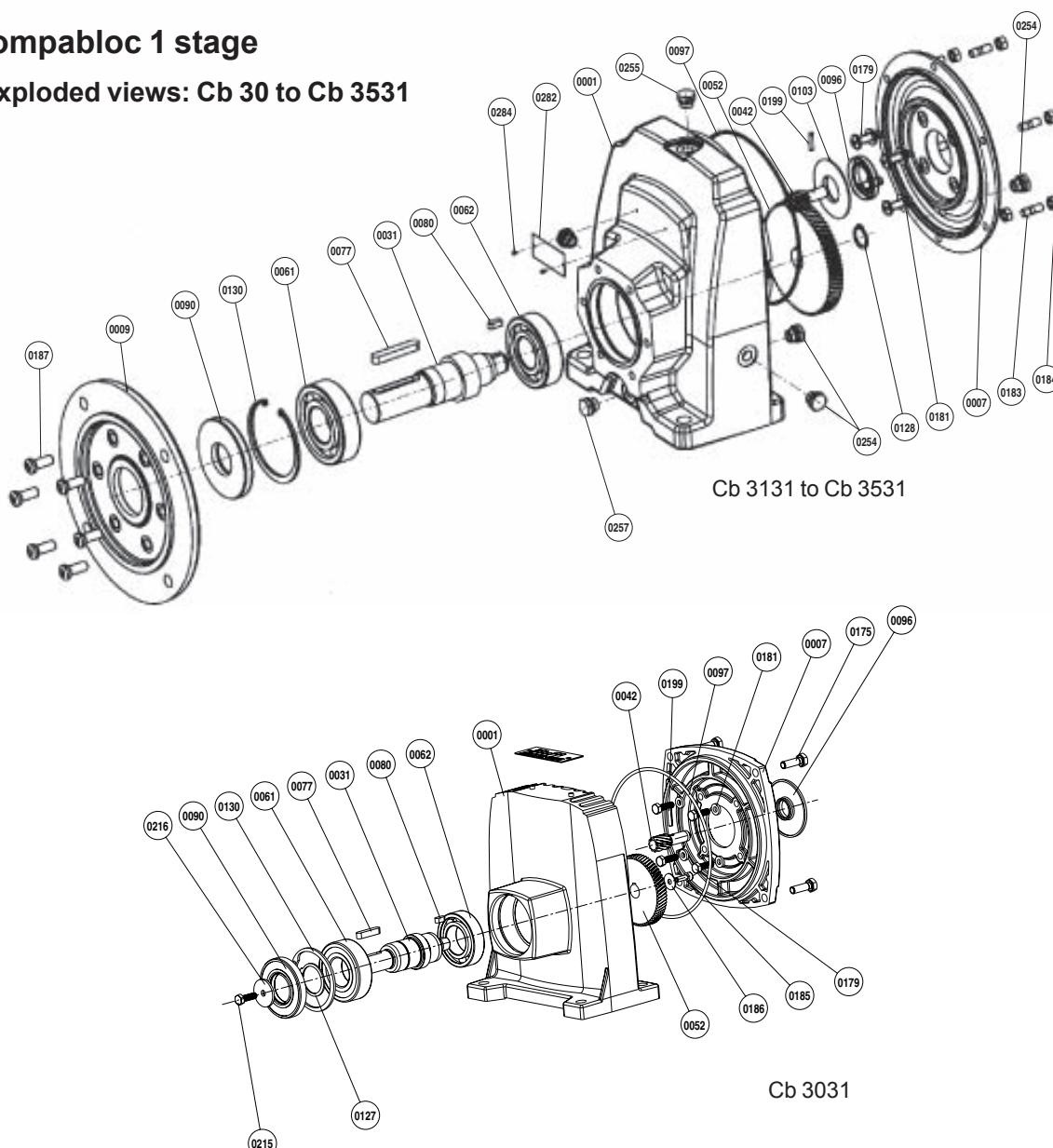
Rep	Description	Compabloc																			
		3032	3033	31 2T	31 3T	32 2T	32 3T	33 2T	33 3T	34 2T	34 3T	35 2T	35 3T	36 2T	36 3T	37 2T	37 3T	38 2T	38 3T	Qty	Qty
Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty
0001	Housing	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0002	Cover	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0007	Face-plate	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0009	Built-up flange	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0031	Output shaft	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0034	Adapter for bored pinion axis 1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0041	Pinion axis 3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0042	Pinion axis 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0043	Pinion axis 2	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
0051	Wheel axis 4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0052	Wheel axis 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0053	Wheel axis 3	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
0061	Bearing Front axis 4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0062	Bearing Back axis 4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0063	Bearing Front axis 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0064	Bearing Back axis 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0065	Bearing Front axis 3	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
0066	Bearing Back axis 3	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
0076	Wheel key (rep.51)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0077	Output shaft key	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0080	Wheel key (rep.52)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0081	Wheel key (rep.53)	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
0090	Ring seal	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1
0092	Ring sealed reinforced (option for flange)	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0096	Ring seal axis 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0097	O-ring gearbox input flange axis 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0099	Cover gasket (rep.2)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0103	Oil deflector	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0111	Bearing spacer (rep.64)	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
0112	Bearing spacer axis 3	0	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	0	0	0	0
0114	Bearing spacer axis 3	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0115	Bearing spacer axis 2 (rep.63)	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
0117	Shims (rep 64)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0119	Shims (bearing axis 3)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
0127	Bearing circlips	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
0128	Stop circlips wheel (rep.52) axis 2	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	0	0
0130	Bearing circlips (rep.61) axis 4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0132	Bearing circlips (rep.63) axis 2	0	0	0	0	1	1	0	0	1	1	1	1	1	1	0	1	0	1	0	1
0133	Bearing circlips (rep.65) axis 3	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
0134	Bearing circlips (rep.66)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0138	Bearing circlips (rep.64)	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	1
0140	Wheel distance piece axis 4	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
0141	Distance piece (rep.53) axis 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
0143	Bearing distance piece	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0144	GV wheel distance piece (rep.52) axis 2	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
0161	Elastic spacer	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	0
0162	Elastic spacer	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0
0163	Elastic spacer	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
0164	Elastic spacer	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0175	Screw for face-plate	4	4	4	4	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0179	Screw face-plate	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
0181	Screw washer (rep.179)	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
0183	Input fixing stud	4	4	4	4	4	4	6	6	6	4	4	4	8	8	8	8	8	8	8	8
0184	Stud nut (rep.183)	4	4	4	4	4	4	6	6	4	4	4	8	8	8	8	8	8	8	8	8
0185	GV wheel washer	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	2	2	2
0186	Screw washer	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
0187	Fixing screw (rep.9)	4	4	4	4	6	6	6	6	6	6	6	6	6	7	7	9	9	11	11	11
0193	Cover fixing screw (rep.2)	4	4	4	4	6	6	6	6	6	6	8	8	9	9	12	12	11	11	11	11
0199	GV pinion pin (rep.42)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0
0213	Flange pin (rep.9)	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2
0220	Pinion screw h32 (rep.34)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
0250	Lifting ring	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0251	Obturating cap axis 2	0	0	0	0	1	1	0	0	1	1	1	1	1	1	0	1	0	1	0	1
0252	Obturating cap axis 3	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0
0254	Plug E-R/N/V*	1	1	3	3	3	3	3	3	3	3	4	4	5	5	5	5	7	7	7	7
0255	Breather plug	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
0257	Drain plug	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0261	Breather plug with dipstick	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
0282	Nameplate	1	1</																		

COMPABLOC 3000

Drive systems

3.2 - Compabloc 1 stage

3.2.1 - Exploded views: Cb 30 to Cb 3531



3.2.2 - Compabloc 1 stage parts list: Cb 3031 to Cb 3531

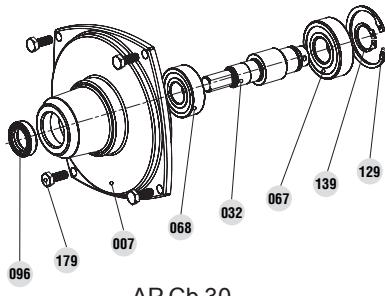
Rep	Description	Compabloc						Compabloc					
		3031	3131	3231	3331	3431	3531	3031	3131	3231	3331	3431	3531
Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty
0001	Housing	1	1	1	1	1	1	1	1	1	1	1	1
0007	Face-plate	1	1	1	1	1	1	4	4	5	0	0	0
0009	Built-up flange	1	1	1	1	1	1	0199	4	4	4	4	4
0031	Output shaft	1	1	1	1	1	1	0042	4	4	4	4	4
0042	Pinion GV	1	1	1	1	1	1	0181	4	4	4	4	4
0052	Wheel GV	1	1	1	1	1	1	0183	4	4	4	6	4
0061	Bearing front	1	1	1	1	1	1	0184	4	4	4	6	4
0062	Bearing back	1	1	1	1	1	1	0185	1	0	0	0	0
0077	Output shaft key (rep.31)	1	1	1	1	1	1	0186	1	0	0	0	0
0080	Wheel key (rep.52)	1	1	1	1	1	1	0187	4	4	4	6	6
0090	Ring seal	1	1	1	1	1	1	0193	4	4	4	4	6
0092	Ring sealed reinforced (option)	0	1	1	1	1	1	0199	1	1	1	1	1
0096	Ring seal	1	1	1	1	1	1	0213	0	1	1	1	1
0097	Input O-ring seal	1	1	1	1	1	1	0250	0	1	1	1	1
0103	Oil deflector	0	1	1	1	1	1	0254	1	4	4	4	3
0105	Lifting ring seal	0	1	1	1	1	1	0255	0	1	1	1	1
0127	Bearing circlips	1	0	0	0	0	0	0257	0	1	1	1	1
0128	Stop circlips wheel GV	0	1	1	1	1	1	0282	1	1	1	1	1
*E-R/NV : Breather-Filling/Level/Draining plugs													
Rep n Maintenance parts													

COMPABLOC 3000

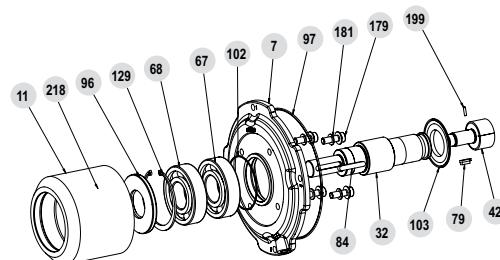
Drive systems

3.3 - Input shaft AP and input shaft with AD backstop

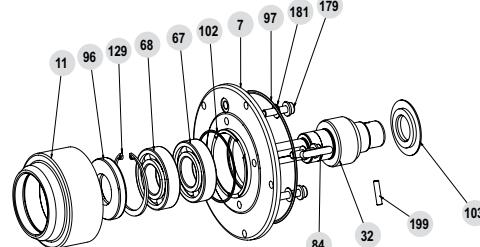
3.3.1 - Exploded views AP and AP-AD



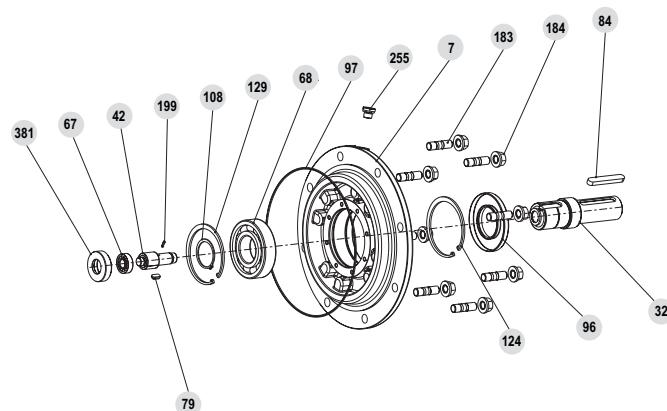
AP Cb 30



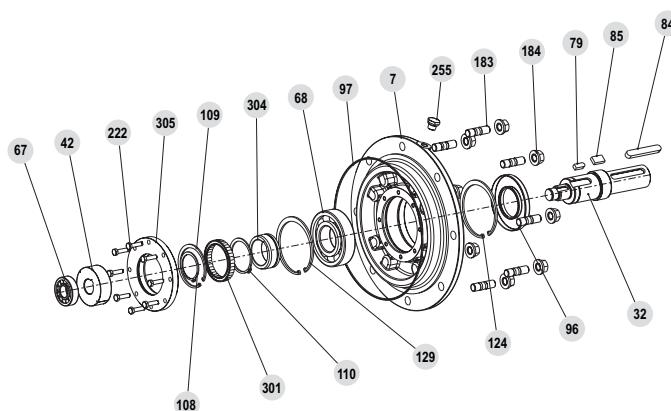
AP Cb 34xx, Cb 35xx



AP Cb 31xx, Cb 32xx, Cb 33xx



AP Cb 36xx to Cb 38xx



AP-AD Cb 36xx to Cb 38xx

3.3.2 - Parts list AP and AP-AD

Compabloc							Compabloc						
Rep	30 31-32-33 34 35 36/37/38						Rep	30 31-32 33 34 35 36/37/38					
	Qty	Qty	Qty	Qty	Qty	Qty		Qty	Qty	Qty	Qty	Qty	Qty
7	Face-plate	1	1	1	1	1	139	Bearing circlips back	1	1	1	1	1
11	AP shield	0	1	1	1	1	149	Stop circlips (rep.304 s32)	0	0	0	0	1
32	Input shaft AP and MU axis 1	1	1	1	1	1	179	Screw face plate	4	4	4	4	4
42	Pinion GV	0	1	1	1	1	181	Screw washer (rep.179)	0	4	4	4	4
67	Bearing axis 1 gearbox side	1	1	1	1	1	183	Input gearbox fixing stud	4	4	6	4	8
68	Bearing axis 1 motor side	1	1	1	1	1	184	Stud nut (rep.183)	4	4	6	4	8
79	Stop piece (rep.42)	0	1	1	1	1	199	GV pinion pin (rep.42)	1	1	1	1	1
84	AP shaft key	0	1	1	1	1	218	Grease nipple ¹ (rep.11)	0	0	0	1	0
96	Ring seal	1	1	1	1	1	220	Screw for pinion (MI h32)	0	0	0	1	1
97	O-ring axis 1 input face plate	0	1	1	1	1	222	Screw for ring AD back	0	0	0	1	1
102	"U" mounting O-ring	0	1	1	1	1	254	E-R/N/V ² plug	0	0	0	0	1
103	Oil deflector	0	1	1	1	0	255	Breather plug	0	1	1	1	1
108	Stop circlips (rep.301 s32)	0	0	0	0	1	287	INA ring for ring seal	0	0	0	0	1
109	Stop circlips front (rep.301 s32)	0	0	0	0	1	301	AD	0	0	0	0	1
110	Stop circlips back (rep.301 s32)	0	0	0	0	1	304	Ring front (rep.301)	0	0	0	0	1
124	Stop circlips	0	0	0	0	1	305	Ring back (rep.301)	0	0	0	0	1
129	Bearing circlips front	1	1	1	1	1	381	Endshield axis 1	0	0	0	0	1

1. See § 2 ref.3520.

Rep n AP maintenance parts

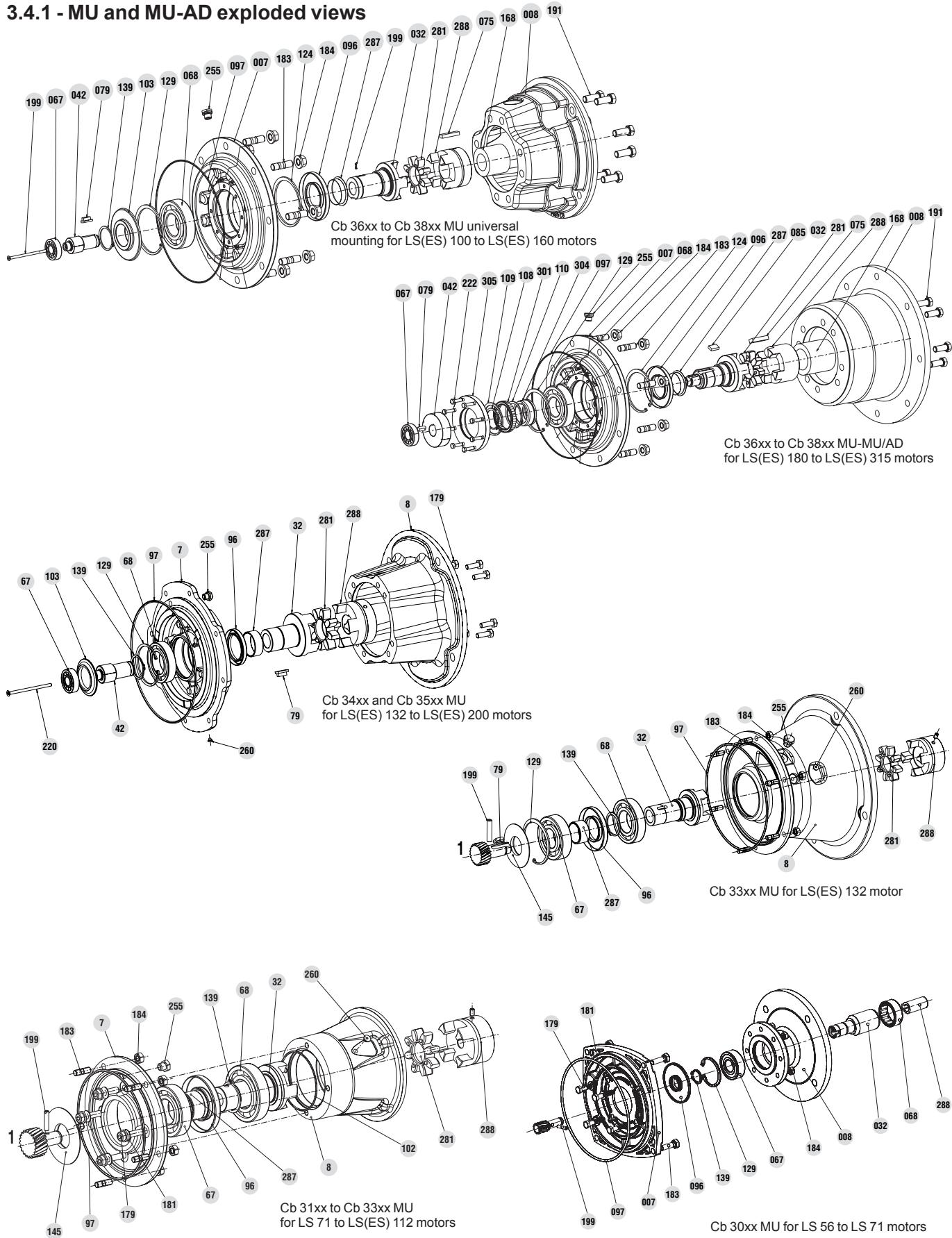
2. E-R/N/V : Breather-Filling/Level/Draining plugs

COMPABLOC 3000

Drive systems

3.4 - MU universal mounting and universal mounting with AD backstop

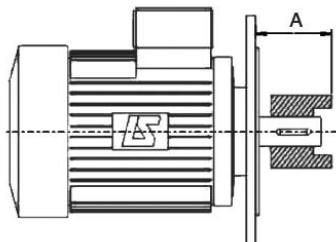
3.4.1 - MU and MU-AD exploded views



COMPABLOC 3000

Drive systems

Dimension A must be kept according to the table below for Cb 31 to Cb 35 ; you can measure it between the flange face of the motor and the end of the coupling. Cb 36 to Cb 38: mounting with distance piece (rep.168).



Size	Flange	Shaft Ø	A value (mm)			
			Cb 31 / 32xx ¹	Cb 33xx	Cb 34xx	Cb 35xx
LS 71	F 130	14x30	52.5	52.5	52.5	-
LS 71	F 130	19x40	52.5	52.5	52.5	-
LSES 80	F 165	19x40	60.5	60.5	60.5	60.5
LSES 90	F 165	24x50	60.5	60.5	60.5	60.5
LSES 100	F 215	28x60	74.5	74.5	74.5	74.5
LSES 112	F 215	28x60	74.5	74.5	74.5	74.5
LSES 132	F 265	38x80	-	96.5	97.5	96.5
LSES 160	F 300	42x110	-	-	130.5	130.5
LSES 180	F 300	48x110	-	-	130.5	130.5
LSES 200	F 350	55x110	-	-	130.5	130.5

1. MU before 09/2012

3.4.2 - MU and MU-AD universal mounting parts list

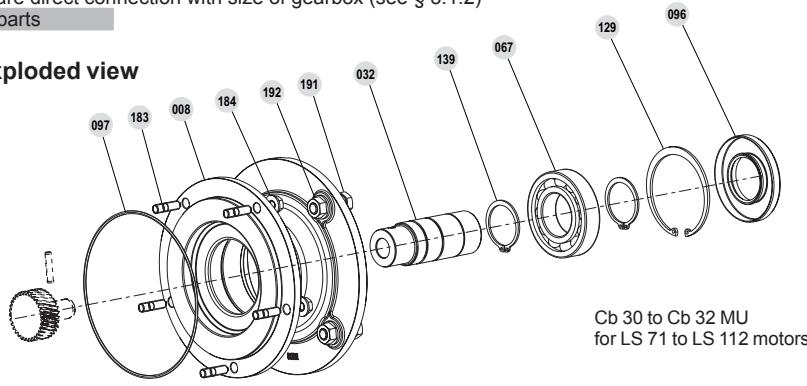
Rep	Description	LS 56-63	LS 71 ¹	LS 71	LS(ES) 80	LS(ES) 90	LS(ES) 100-112	LS(ES) 132	LS(ES) 160	LS(ES) 180	LS(ES) 200	LS(ES) 225	LS(ES) 250 to 315
		Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty
7	Face plate	1	1	1	1	1	1	1	1	1	1	1	1
8	"U" mount housing	1	1	1	1	1	1	1	1	1	1	1	1
32	Input shaft MU axis 1	1	1	1	1	1	1	1	1	1	1	1	1
67	Bearing axis 1 gearbox side	1	1	1	1	1	1	1	1	1	1	1	1
68	Bearing axis 1 motor side	1	1	1	1	1	1	1	1	1	1	1	1
75	MU coupling key (rep.288)	0	0	0	0	0	0	0	0	0	0	1	1
79	Stop-piece (rep.42)	0	0	0	0	0	0	0	0	0	0	1	1
85	Key (rep.301)	0	0	0	0	0	0	0	0	0	0	1	1
96	Ring seal	1	1	1	1	1	1	1	1	1	1	1	1
97	O-ring axis 1 input face plate	1	1	1	1	1	1	1	1	1	1	1	1
102	"U" mounting O-ring	0	0	1	1	1	1	0	0	0	0	1	1
103	Oil deflector	0	0	1	1	1	1	1	1	1	1	1	1
108	Stop circlips (rep.301 s32)	0	0	0	0	0	0	0	0	0	0	1	1
109	Stop circlips front (rep.301 s32)	0	0	0	0	0	0	0	0	0	0	1	1
110	Stop circlips back (rep.301 s32)	0	0	0	0	0	0	0	0	0	0	1	1
124	Stop circlips	0	0	0	0	0	0	0	0	0	0	0	1
129	Bearing circlips front	1	1	0	0	0	0	1	1	1	1	1	1
139	Bearing circlips back	1	1	1	1	1	1	1	1	1	1	1	1
145	GV shaft deflector	0	0	1	1	1	1	1	1	1	1	1	1
168	Distance piece (rep.288)	0	0	0	0	0	1	1	1	1	1	1	1
179	Screw face plate	4	4	4	4	4	4	4	4	4	4	4	4
181	Screw washer (rep.179)	4	4	4	4	4	4	4	4	4	4	4	4
183*	Input fixing stud	*	*	*	*	*	*	*	*	*	*	*	*
184*	Stud nut	*	*	*	*	*	*	*	*	*	*	*	*
191	Fixing screw MU	0	0	4	4	4	4	4	4	4	4	4	4
192	Nut (rep.191)	0	0	4	4	4	4	4	4	4	4	4	4
199	GV pinion pin	1	1	1	1	1	1	1	1	1	1	1	1
220	Screw for pinion h32 (rep.34)	0	0	0	0	0	0	0	1	1	1	1	1
222	Screw for ring AD back	0	0	0	0	0	0	0	0	0	0	8	8
255	Breather plug	0	0	1	1	1	1	1	1	1	1	1	1
260	Blow-off plug	0	0	1	1	1	1	1	1	0	0	0	0
281	Flexible joint	0	0	1	1	1	1	1	1	1	1	1	1
287	INA ring for ring seal	0	0	1	1	1	1	1	1	1	1	1	1
288	MU coupling	1	1	1	1	1	1	1	1	1	1	1	2
290	Key	1	1	0	0	0	0	0	0	0	0	0	0
301	AD (Cb 36/37/38)	0	0	0	0	0	1	1	1	1	1	1	1
304	Ring front (rep.301)	0	0	0	0	0	1	1	1	1	1	1	1
305	Ring back (rep.301)	0	0	0	0	0	1	1	1	1	1	1	1

1. For Cb 30

183* and 184*: quantities are direct connection with size of gearbox (see § 3.1.2)

Rep n MU maintenance parts

2012/09 : New MU, exploded view



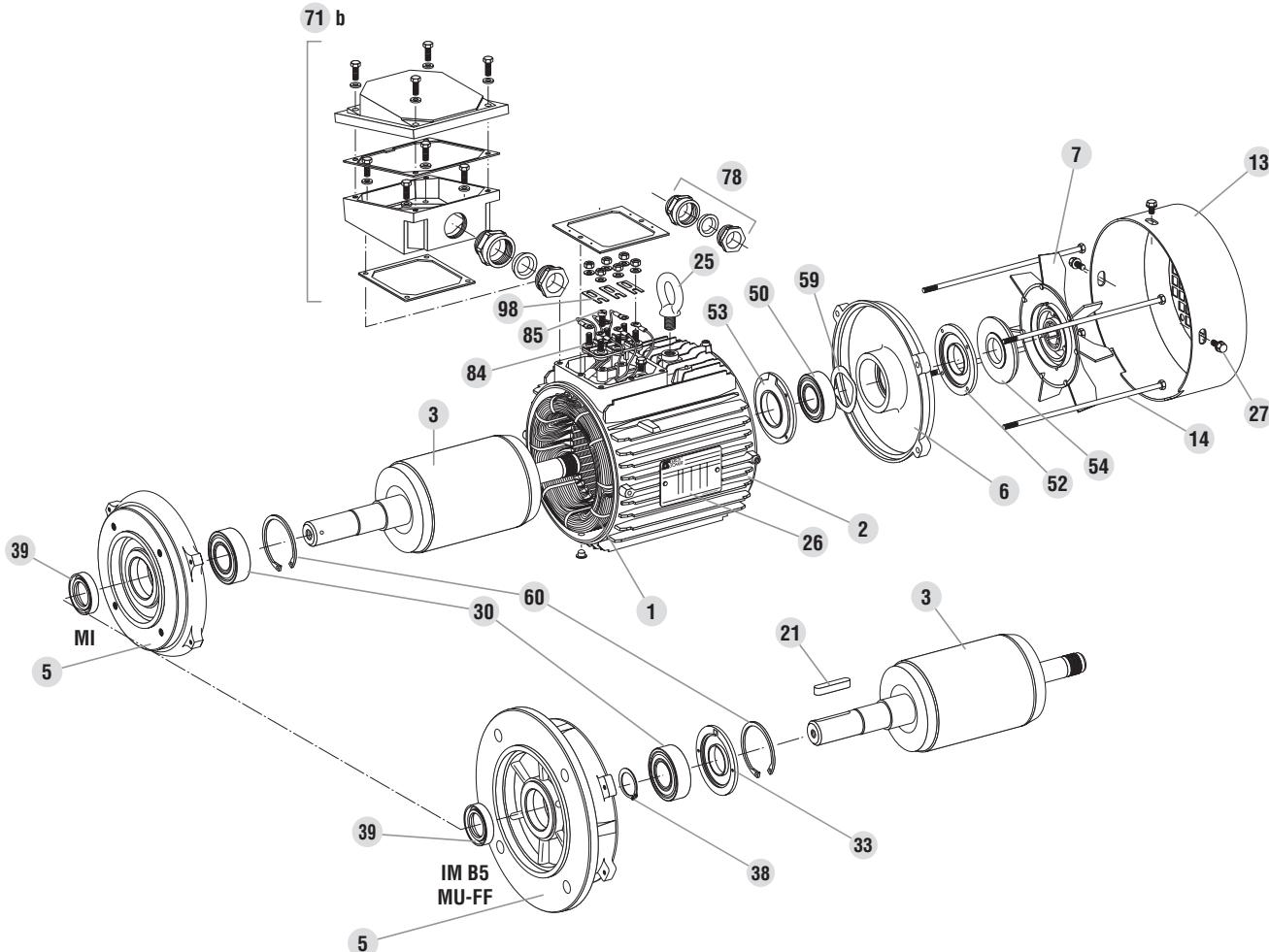
COMPABLOC 3000

Drive systems

3.5 - Motor

3.5.1 - Motor exploded views

Frame size: LS 56 to LS(ES) 315



3.5.2 - Motor parts list

Frame size: LS 56 to LS(ES) 315

Rep.	Description	Rep.	Description	Rep.	Description
1	Wound stator	27	Coverfixing screw	53	NDE internal bearing retainer (LS[ES] 200 --> 315)
2	Housing	30	DE bearing	54	NDE seal
3	Rotor	32	DE bearing retainer (LS[ES] 315)	55	NDE fixed grease valve (LS[ES] 315)
5	Drive end shield	33	Bearing retaining plate (LS[ES] 160 --> 280)	56	NDE mobile grease valve (LS[ES] 315)
6	Non drive end shield	34	DE fixed grease valve (LS[ES] 315)	59	Preloading (wavy) washer
7	Fan	35	DE mobile grease valve (LS[ES] 315)	60	Circlips
13	Fan cover	38	Drive end bearing circlip (LS[ES] 160 --> 280)	71 b	Terminal box
14	Tie rods	39	DE seal	78	Cable gland
21	Keyway	42	Grease nipples (LS[ES] 315)	84	Terminal block
25	Lifting ring	50	NDE bearing	85	Set screw
26	Nameplate	52	NDE external bearing retainer (LS[ES] 200 --> 225 + LS[ES] 315)	98	Connector links