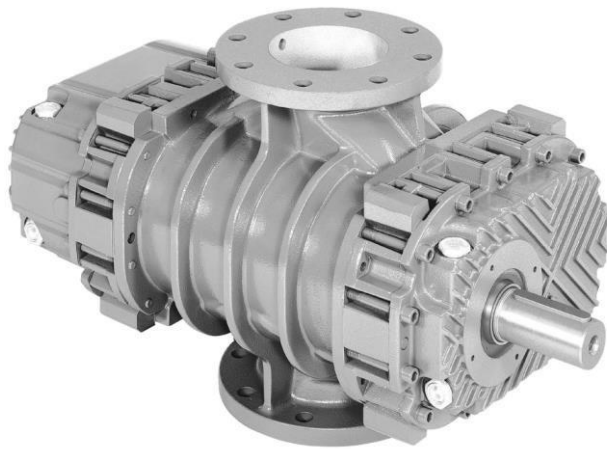


Gardner Denver



SERVICE MANUAL AND PARTS LIST

RBS BLOWERS

**Models
RBS 15-225**



**RB-7-100
Version 01
May 09, 2016**

**MAINTAIN BLOWER RELIABILITY AND PERFORMANCE
WITH GENUINE GARDNER DENVER
PARTS AND SUPPORT SERVICES**

Factory genuine parts, manufactured to design tolerances, are developed for optimum dependability - - - specifically for your blower. Design and material innovations are born from years of experience with hundreds of different blower applications. When you specify factory genuine parts you are assured of receiving parts that incorporate the most current design advancements manufactured in our state-of-the-art blower factory under exacting quality standards.

Your **AUTHORIZED DISTRIBUTOR** offers all the backup you require. A worldwide network of authorized distributors provides the finest product support in the blower industry.

1. Trained technical representatives to assist you in selecting the correct replacement parts.
2. Complete inventory of new machines and new, genuine factory parts.
3. A full line of factory tested AEON® PD blower lubricants, specifically formulated for optimum performance in all blowers.
4. Authorized distributor service technicians are factory-trained and skilled in blower maintenance and repair. They are ready to respond and assist you by providing fast, expert maintenance and repair service.

INSTRUCTIONS FOR DETERMINING BLOWER CONFIGURATION

1. Face the blower drive shaft.
2. In a **VERTICAL** configuration, air flow is Horizontal.
3. In a **HORIZONTAL** configuration, air flow is Vertical.
4. In a vertical configuration, a **BOTTOM HAND** exists when the drive shaft is below the horizontal center line of the blower. A **TOP HAND** exists when the drive shaft is above the horizontal center line of the blower.
5. In a horizontal configuration, a **RIGHT HAND** exists when the drive shaft is to the right of the vertical center line of the blower. A **LEFT HAND** exists when the drive shaft is to the left of the vertical center line of the blower.

INSTRUCTIONS FOR ORDERING REPAIR PARTS

For pricing, and ordering information contact your nearest **AUTHORIZED FACTORY DISTRIBUTOR**. When ordering parts, specify Blower **MODEL** and **SERIAL NUMBER** (see nameplate on unit).

Rely upon the knowledge and experience of your **AUTHORIZED DISTRIBUTOR** and let them assist you in making the proper parts selection for your blower.

**To Contact Gardner Denver or locate your local distributor:
Visit: www.contactgd.com/mobile**

Or

Call: (217)222-5400

GARDNER DENVER LUBRICANT ORDER INFORMATION

Re-order Part Numbers for Factory
Recommended Lubricants.

Gear and Drive End

AEON PD Synthetic Lubricant, AEON PD-XP—Extreme Duty
Synthetic Lubricant or AEON PD-FG—Food Grade Synthetic
Lubricant

AEON PD Synthetic Lubricant

<u>Description</u>	<u>Part Number</u>
1 Quart	28G23
Case/12Quarts	28G24
1 Gallon Container	28G40
Case/6 Gallons	28G41
5 Gallon Pail	28G25
55 Gallon Drum	28G28

AEON PD-XD – Extreme Duty Synthetic Lubricant

<u>Description</u>	<u>Part Number</u>
1 Quart	28G46
Case/12Quarts	28G47
1 Gallon Container	28G42
Case/6 Gallons	28G43
5 Gallon Pail	28G44
55 Gallon Drum	28G45

AEON PD-FG – Food Grade Synthetic Lubricant

<u>Description</u>	<u>Part Number</u>
1 Quart	28H97
Case/12Quarts	28H98
1 Gallon Container	28H333
Case/6 Gallons	28H334
5 Gallon Pail	28H99
55 Gallon Drum	28H100

Drive End

AEON PD Grease

<u>Description</u>	<u>Part Number</u>
Case/10 Tubes (14oz/Tube)	28H283

FOREWORD

RBS® blowers are the result of advanced engineering and skilled manufacturing. To be assured of receiving maximum service from this machine, the owner must exercise care in its operation and maintenance. This manual is written to give the operator and maintenance department essential information for day-to-day operation, maintenance and adjustment. Careful adherence to these instructions will result in economical operation and minimum downtime.



Danger is used to indicate the presence of a hazard which will cause severe personal injury, death, or substantial property damage if the warning is ignored.



Warning is used to indicate the presence of a hazard which can cause severe personal injury, death, or substantial property damage if the warning is ignored.



Caution is used to indicate the presence of a hazard which will or can cause minor personal injury or property damage if the warning is ignored.

NOTICE

Notice is used to notify people of installation, operation or maintenance information which is important but not hazard-related.

SAFETY PRECAUTIONS

Safety is everybody's business and is based on your use of good common sense. All situations or circumstances cannot always be predicted and covered by established rules. Therefore, use your past experience, watch out for safety hazards and be cautious. Some general safety precautions are given below:



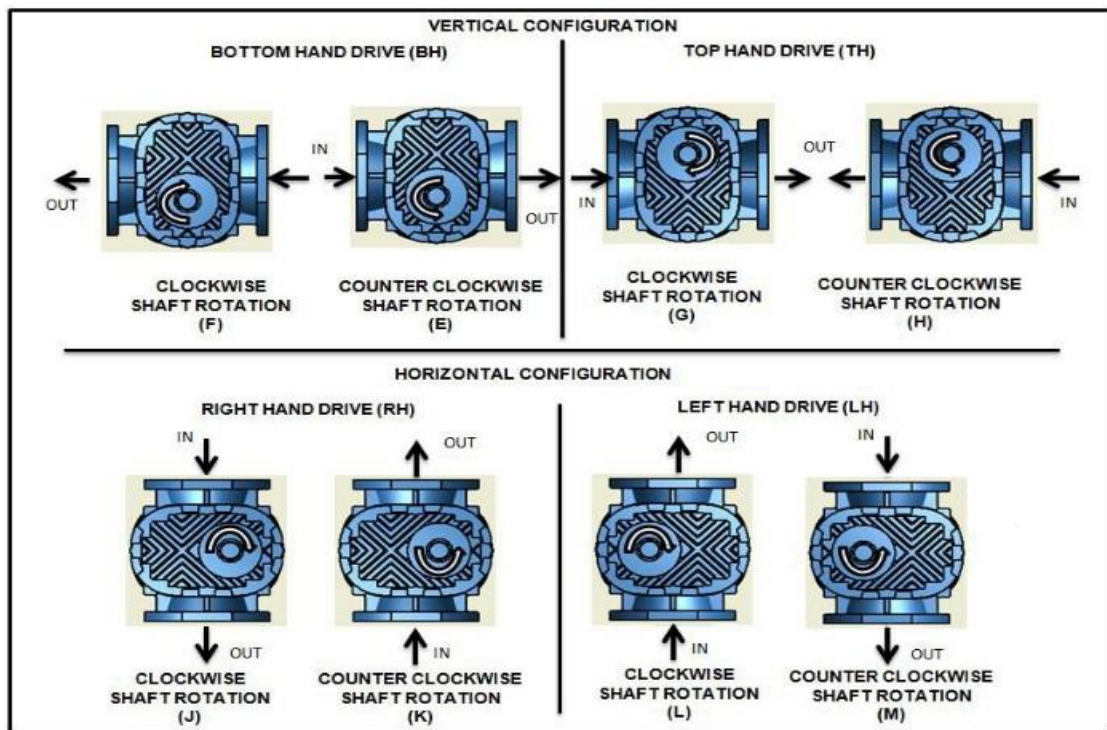
Failure to observe these notices could result in injury to or death of personnel.

- **Keep fingers and clothing away** from revolving fan, drive coupling, etc.
- **Do not use the air discharge** from this unit for breathing – not suitable for human consumption.
- **Do not loosen or remove** the oil filler plug, drain plugs, covers or break any connections, etc., in the blower air or oil system until the unit is shut down and the air pressure has been relieved.
- **Electrical shock** can and may be fatal.
- **Blower unit must be grounded** in accordance with the National Electrical Code. A ground jumper equal to the size of the equipment ground conductor must be used to connect the blower motor base to the unit base.
- **Open main disconnect switch**, tag and lockout before working on the control.
- **Disconnect the blower** from its power source, tag and lockout before working on the unit – this machine may be automatically controlled and may start at any time.



Failure to observe these notices could result in damage to equipment.

- **Stop the unit** if any repairs or adjustments on or around the blower are required.
- **Disconnect the blower** from its power source, tag and lockout before working on the unit – this machine may be automatically controlled and may start at any time.
- **Do not exceed** the rated maximum speed shown on the nameplate.
- **Do not operate unit** if safety devices are not operating properly. Check periodically. Never bypass safety devices.



NOTICE

When changing mounting configuration, it may be necessary to reposition breather/oil fill (B), oil level gauge (H) and drain plug (A). Refer to Figure 3-1, for correct location.

DRIVE INSTALLATION

When selecting a V-belt drive, check to be sure the shaft overhung load limitation is not exceeded. Refer to FIGURE 2-2, for overhung load calculations and limitations.

Belt drives must be carefully aligned. Motor and blower pulleys must be parallel to each other and in the same plane within 1/32 inch. Belt tension should be carefully adjusted to the belt manufacturer's recommendation using a belt tension gauge. Check tension frequently during the first day of operation.



WARNING

Over tightening belts leads to heavy bearing loads and premature failure.

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1 OPERATING PROBLEMS

PROBLEM	CAUSE
High absorbed power  WARNING : STOP THE BLOWER IMMEDIATELY	1-3-6-7-8-9-10-11-12-13-14
Differential pressure higher than the contract value  WARNING : STOP THE BLOWER IMMEDIATELY	1-3-6-7-8
Discharge temperature T2 higher than the contract value  WARNING : STOP THE BLOWER IMMEDIATELY	2-4-5-6-7-8
High vibrations and/or noises  WARNING : STOP THE BLOWER IMMEDIATELY	9-10-11-12-13-14-15
Oil dark	2-4-5-6-7-8-13-14-15-17-19-20-21-22
Oil leakages	15-16-17-20-21
Cooling liquid leakages	22
Shaft rotation locked or limited	9-10-11-12-13-14-15
Cracks on external surface	9-10-11-12-13-14-15
Alteration of the color of the external paint	2-4-5-6-7-8-9-10-11

Rif.	CAUSE	SOLUTION
1	Pressure P2-P1 higher than the contract value	Reset the rated value
2	Ratio P2/P1 higher than the contract value	
3	Speed n higher than the contract value	
4	Speed n lower than the contract value	
5	Temperature T1 higher than the contract value	
6	Filter clogged	Replace the filter element
7	Suction pipe clogged	Remove the obstruction and check the piping
8	Discharge pipe clogged	
9	Scale deposits in the compression chamber	Clean the compression chamber and the rotors, balance the rotors if necessary
10	Rotors making contact	Check the surface of the rotors, of the casing and of the covers Replace the parts with damaged surface
11	Intake of foreign particles	Remove the foreign particles Clean the compression chamber Check the clearances
12	Transmission not aligned	Check and correct the alignment
13	Bearing damaged	Replace the bearings
14	Gear damaged	Replace the gears
15	Labyrinth seals damaged	Replace the labyrinth seals
16	Drive seal shaft damaged	Replace the shaft seal
17	Oil level too high	Reset the rated value
18	Oil viscosity too low	Change the oil type
19	Oil viscosity too high	
20	Gaskets damaged	Replace the gaskets
21	Oil level plugs are broken	Replace the oil level plugs
22	Cooling circuit damaged (only /RV)	Restore the circuit

NOTE

P1 = Suction absolute pressure
P2 = Discharge absolute pressure
n = Rotational speed

T1 = Suction temperature
T2 = Discharge temperature

2 REMOVAL OF THE BLOWER FROM THE PLANT

2.1 Stopping the blower

If the blower is still in operation remove, if possible, the differential pressure.
Stop the electric supply



WARNING: Check that the deceleration of the blower is even and without vibrations.

Close the cooling water circuit (only for /RV)
Insulate the blower from the plant and restore the atmospheric pressure into it.



WARNING: The gas contained in the plant may be hot, toxic or irritant.



WARNING: Disconnect the electric supply, lock the general switching in open position with the key and conserve it during service operation



WARNING: Wait until the blower returns at the ambient temperature (<40°C)

2.2 Disassembling the connections

2.2.1 Disassembling the pipes

Unscrew the screws fixing the elastic connections between the silencers and the main pipes.
Remove the elastic connections using suitable hoisting devices.



WARNING: The elastic connections with DN higher than 200 weight more than 30 kg.

If necessary disassemble also the pipe near the silencers.



NOTE: For the blower with vertical nozzles (/V) operate only on the piping connected to the upper silencer.

In case of blowers with oil cooling circuit (/R-V) disconnect also the cooling liquid supply pipes

2.2.2 Disassembling the silencers

Unscrew the screws fixing the silencers to the blower nozzles and to their supports if any
remove the silencers using suitable hoisting devices.



WARNING: The silencers with DN higher than 150 weight more than 50 kg.



NOTE: For the blower with vertical nozzles (/V) operate only on the piping connected to the upper silencer.

2.3 Removal of the blower from the unit

Disassemble the drive protection device

Unscrew the screws fixing the blower to the base frame

2.3.1 Direct drive coupling

Lift the blower using hoisting devices suitable to his weight (table 7.1)

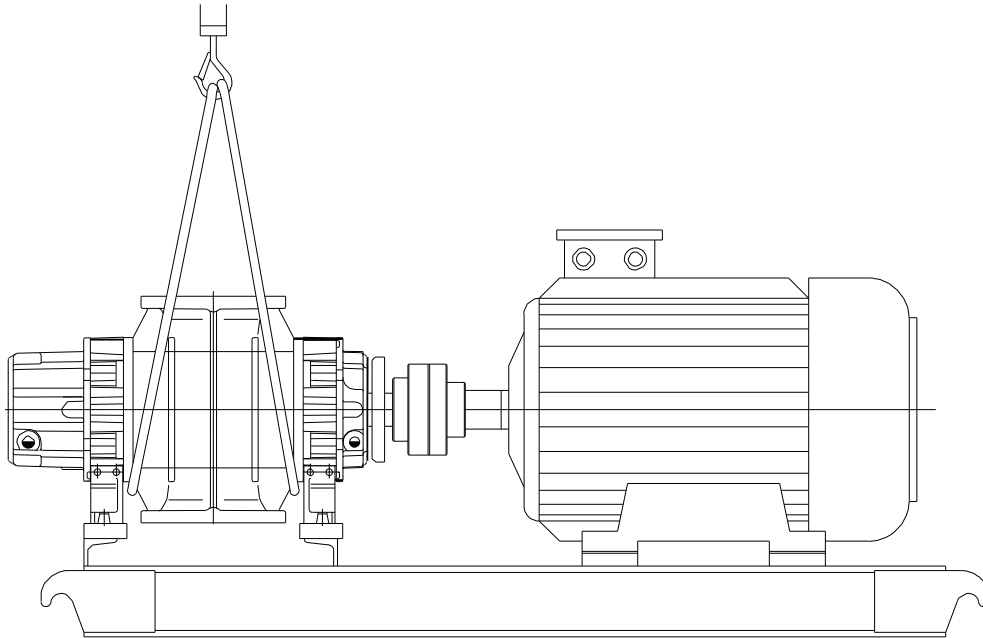


Fig. 1

2.3.2 V-belt drive coupling

Loosen the V-belts approaching the motor to the blower using the screws of the motor rails

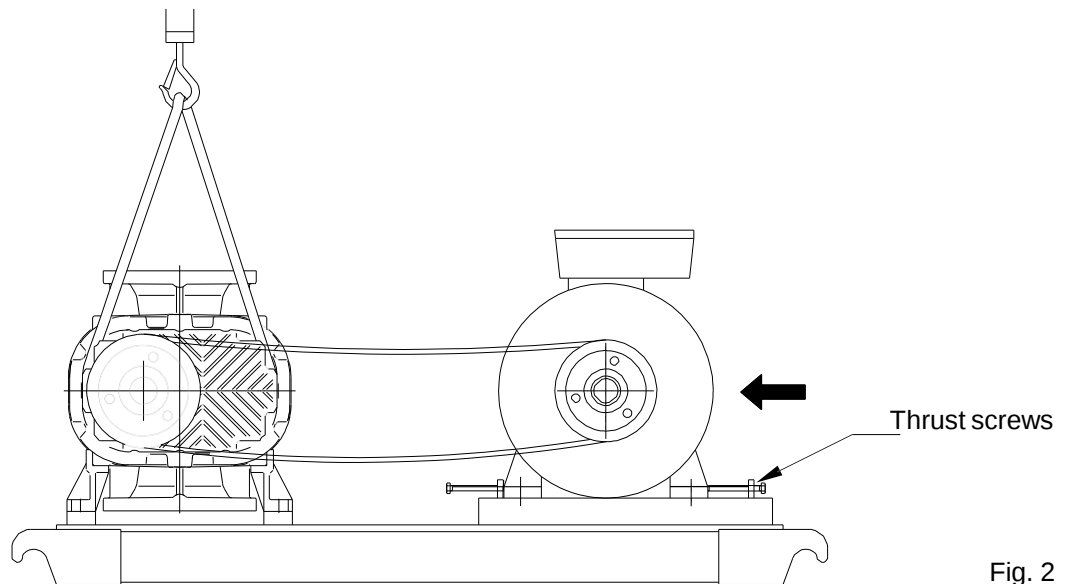


Fig. 2

Remove the V-belts

Lift the blower using hoisting devices suitable to his weight (table 7.1)

2.4 Disassembling of the drive devices

2.4.1 Direct drive coupling

Loose the safety screw G fixing the key 30
Extract the coupling by means of a suitable device.



WARNING: Do not use the hammer to extract the coupling.

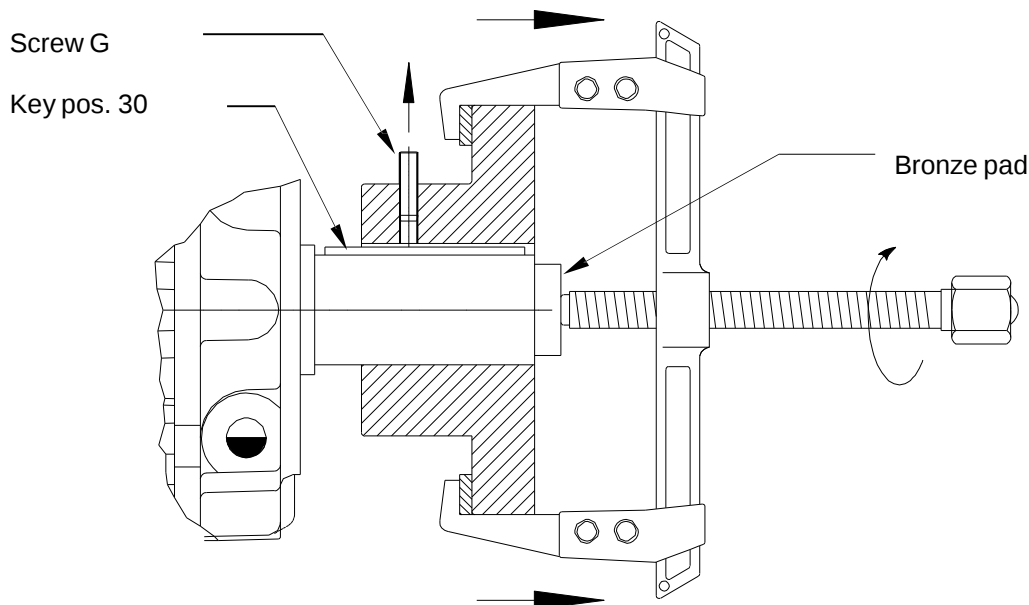


Fig. 3

Remove the key 30 from blower shaft

2.4.2 V-belt drive coupling

Unscrew the fixing screws V and screws 1 or 2 of these one (following the sleeve type) alternatively into the extraction holes E until to unlocking the sleeve, remove the pulley and the sleeve



WARNING: Do not use the hammer to extract the pulley.

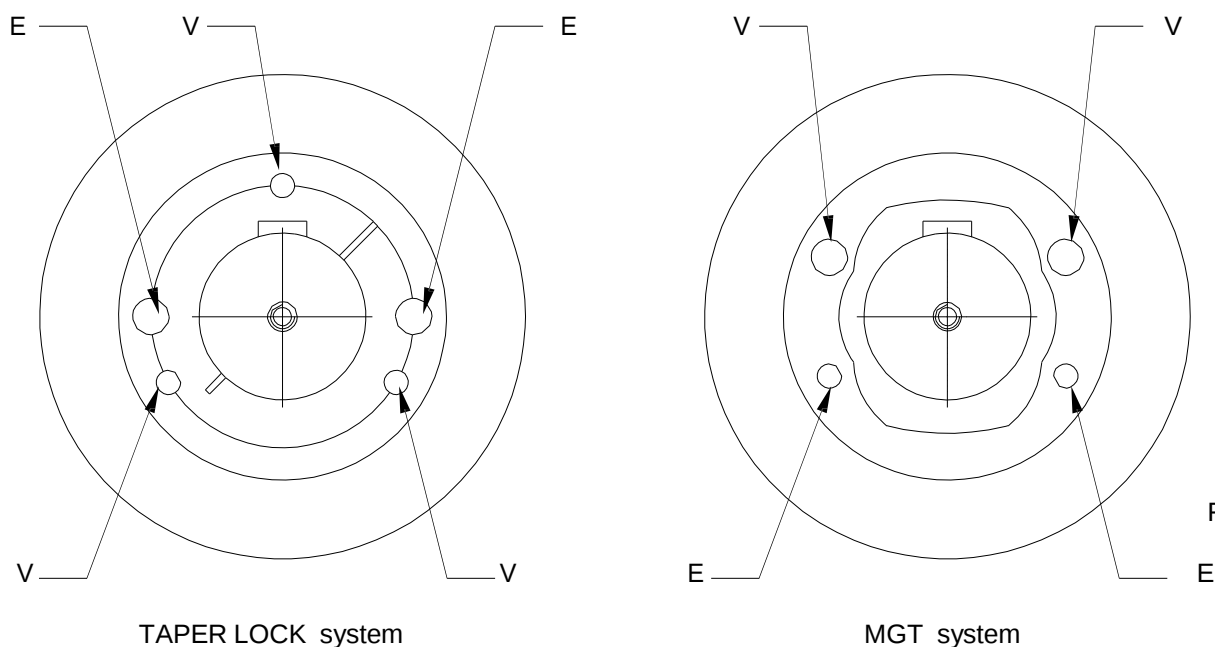


Fig. 4

Remove the key 30 from the blower shaft

3 DISASSEMBLING OF THE BLOWER

3.1 Preparation

Clean the external surface of the blower

Drain the lubricating oil



WARNING: Dispose the used oil in accordance with local regulations

Drain the cooling liquid (only for the /R-V version)



WARNING: Dispose the cooling liquid in accordance with local regulations.

Mark the position of the covers 5A and 5B and the position of the drive shaft in order to use these marks during the following assembly of the blower.

Put the blower onto a wooden support plane suitable to the weight of the blower as indicated in fig. 5 and make sure that there is enough space to operate on the drive side and on to gear side.

For this operation use hoisting bands that pass around the blower casing as indicated in fig. 5, for the weight of the blower see table 7.1.



WARNING: Use the hoisting devices suitable to the weight of the blower (table 7.1).



WARNING: Make sure that the blower is stable onto the support plane.

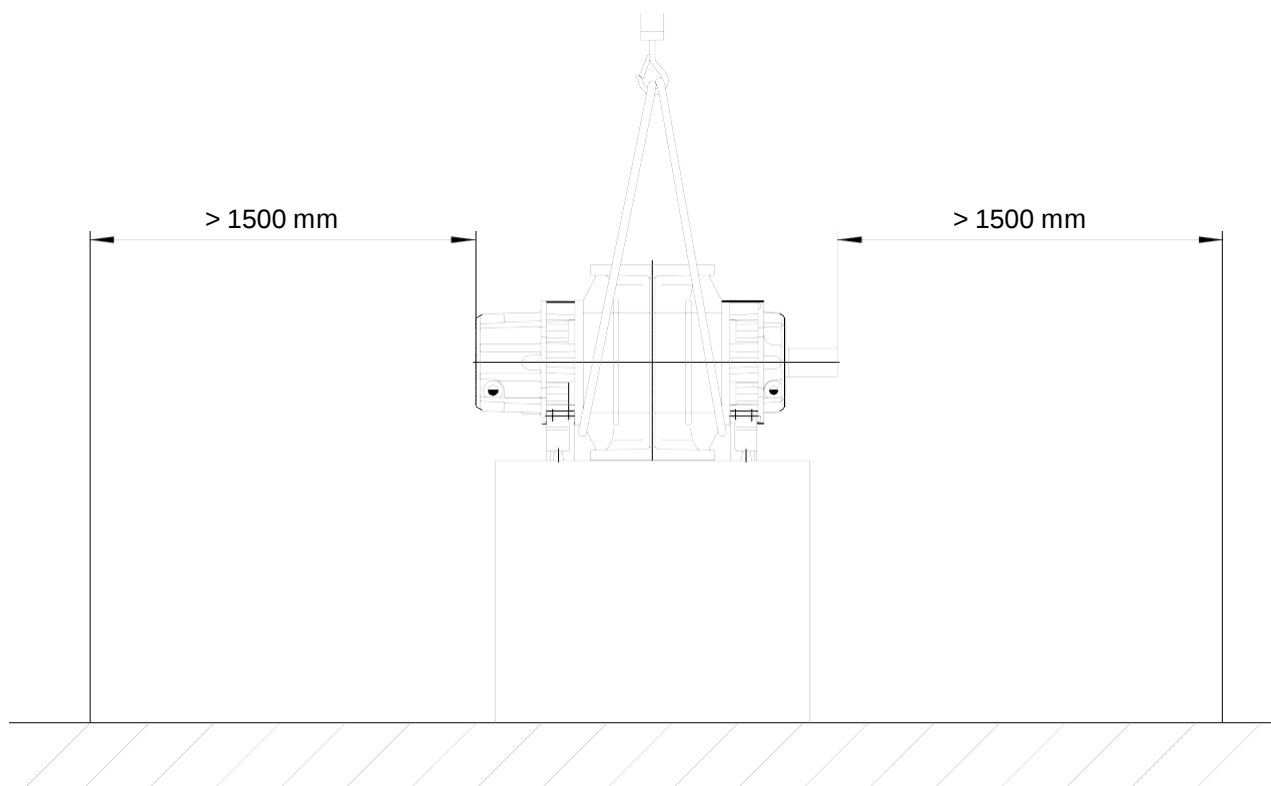


Fig. 5

3.2 Disassembling of the drive side

Remove the drive sump 12A



WARNING: Use the hoisting devices suitable to the weight of sump (table 7.1)

3.2.1 Sizes from 15 to 106

Extract the protection ring 37 by means of an extraction device as indicated in figure
Unscrew the screw 27B and extract the locking disk 17 of the bearing 32

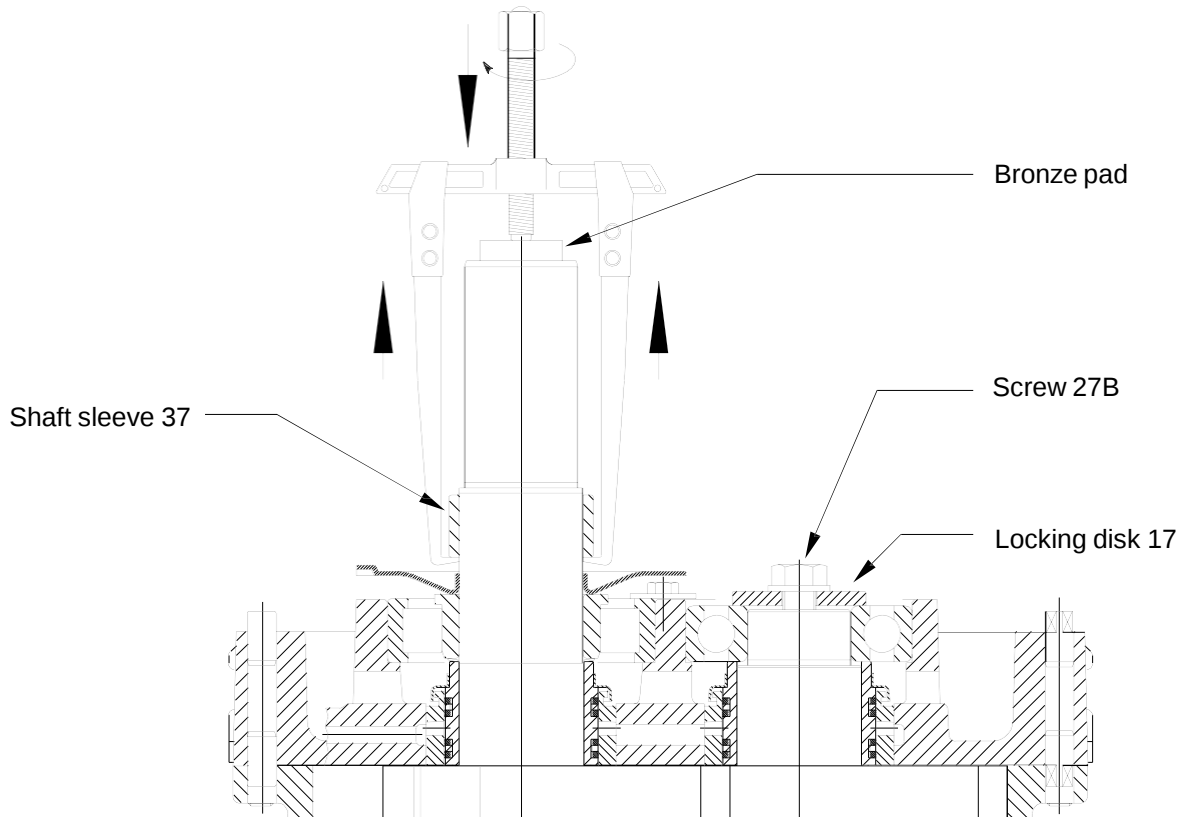


Fig. 6

Extract the cover 5A screwing alternatively two fixing screws into the suitable extraction holes

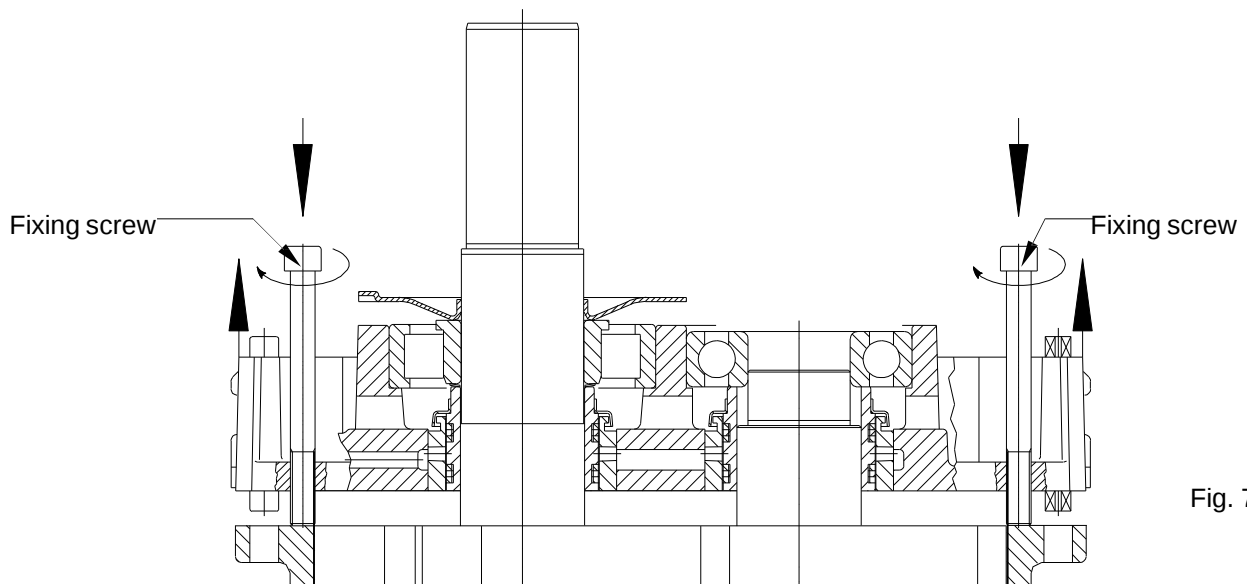


Fig. 7

3.2.2 Sizes from 115 to 225

Unscrew the nut 27A and with it extract the shaft sleeve 37, if the operation is difficult extract the sleeve 37 by means of an extractor device as indicated at paragraph 3.2.1

Unscrew the screw or nut 27B and extract the disk 17 locking the bearing 32
extract the oil splash disk 24

For the sizes from 115 to 126 extract the cover 5A screwing alternatively four fixing screws into the suitable extraction holes as indicated in Fig. 7

For the sizes from 135 to 225 fix two extractor devices to the threaded holes H indicated in Fig. 8

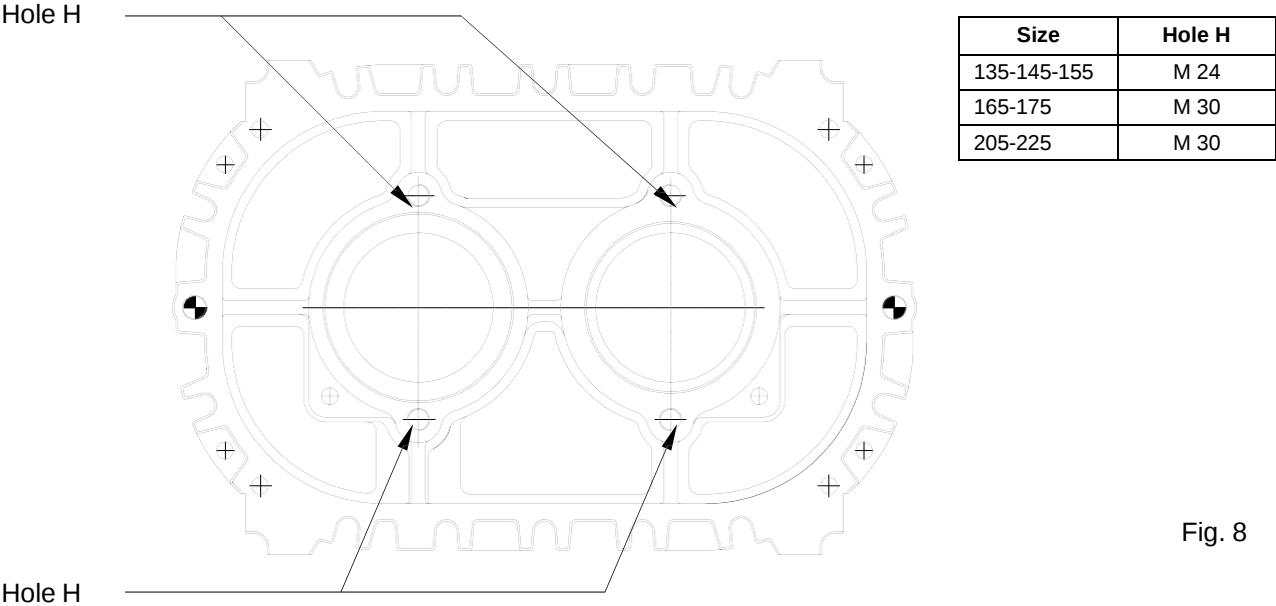


Fig. 8

Extract the cover 5A operating alternatively onto two extractor devices.

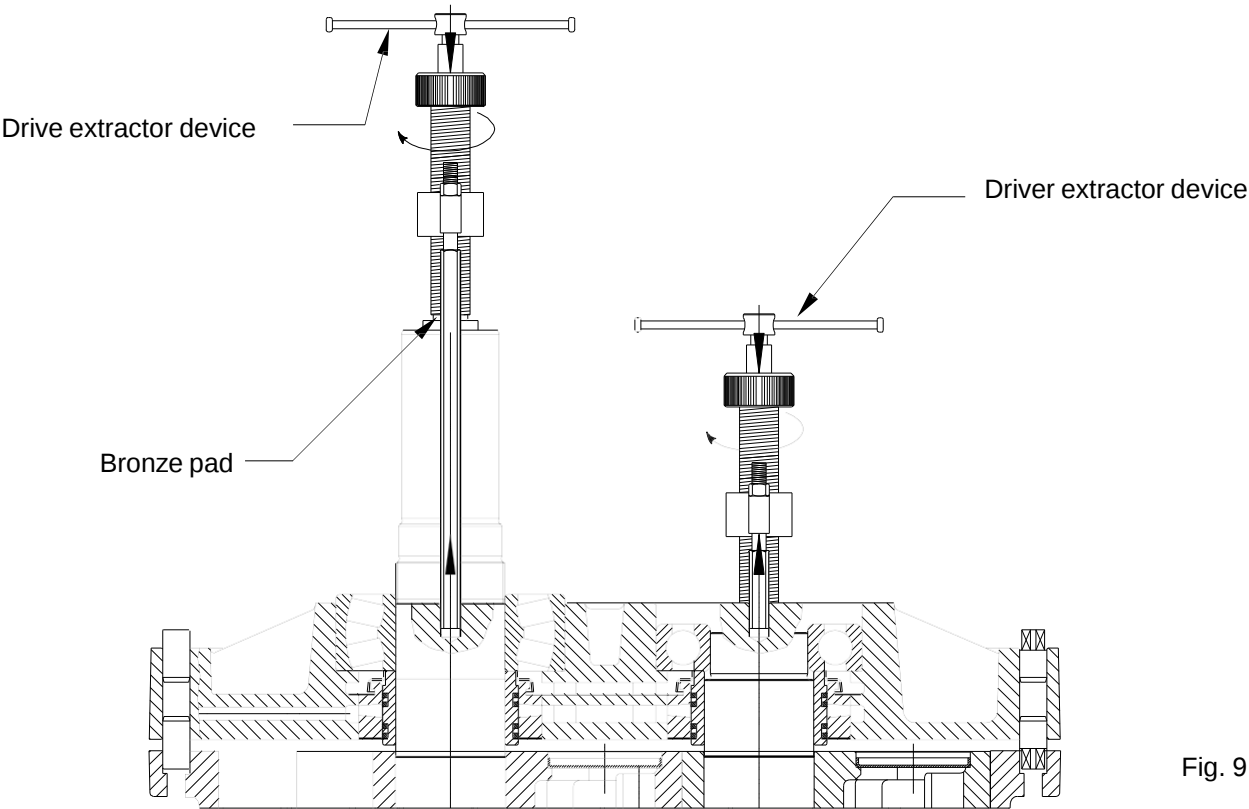


Fig. 9

3.3 Disassembling of the gear side

Remove the gear sump 5B



WARNING: Use the hoisting devices suitable to the weight of sump (table 7.1)



WARNING : Secure the cover 5B fixing it to the casing 1 using two fixing screws pos. 90 with big diameter washer for sizes from 15 to 126 and the prefixing screws for sizes from 135 to 225

3.3.1 Disassembling the gear side, sizes from 15 to 25

Unscrew the locking nuts 26 and remove the washers 311

Extract the wheels 11A and 11B and if necessary using an extractor device and mark their position

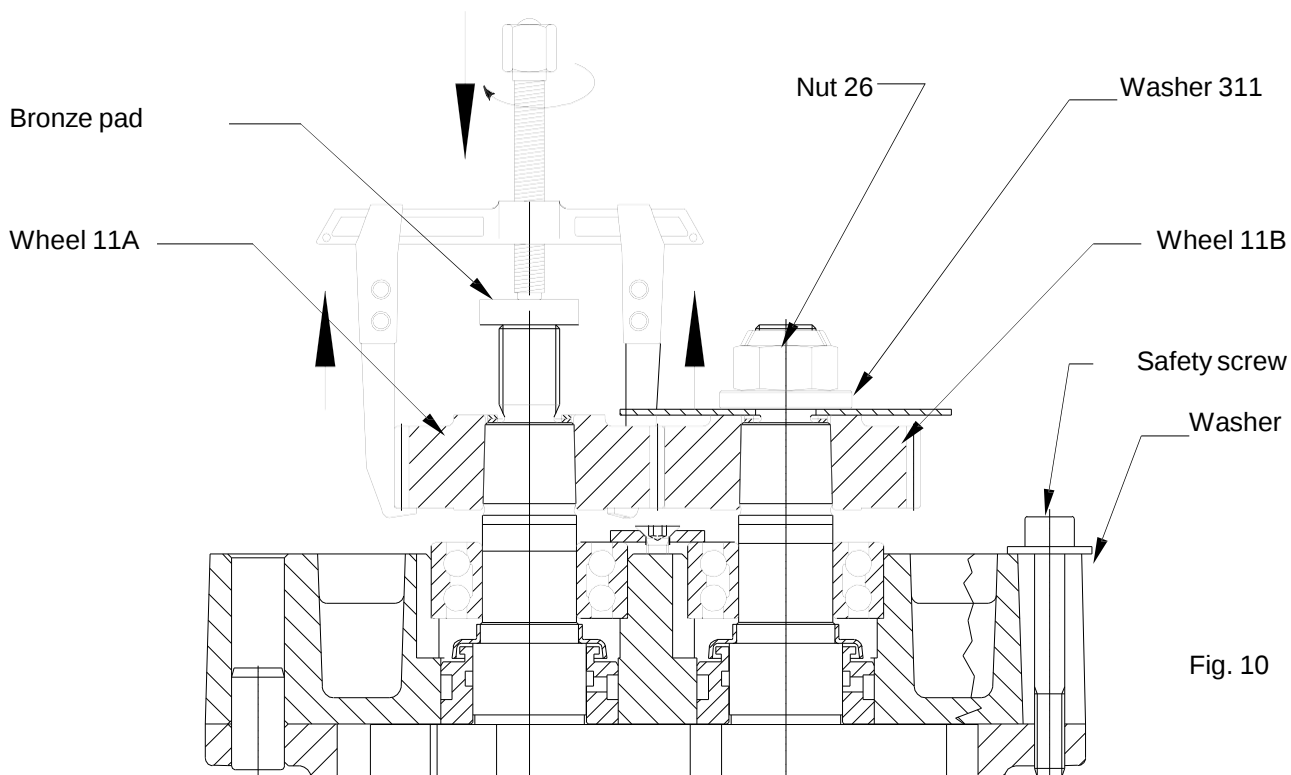


Fig. 10

During this operation also the adjusting shims 22A are removed, mark their position for the following assembly of the blower.

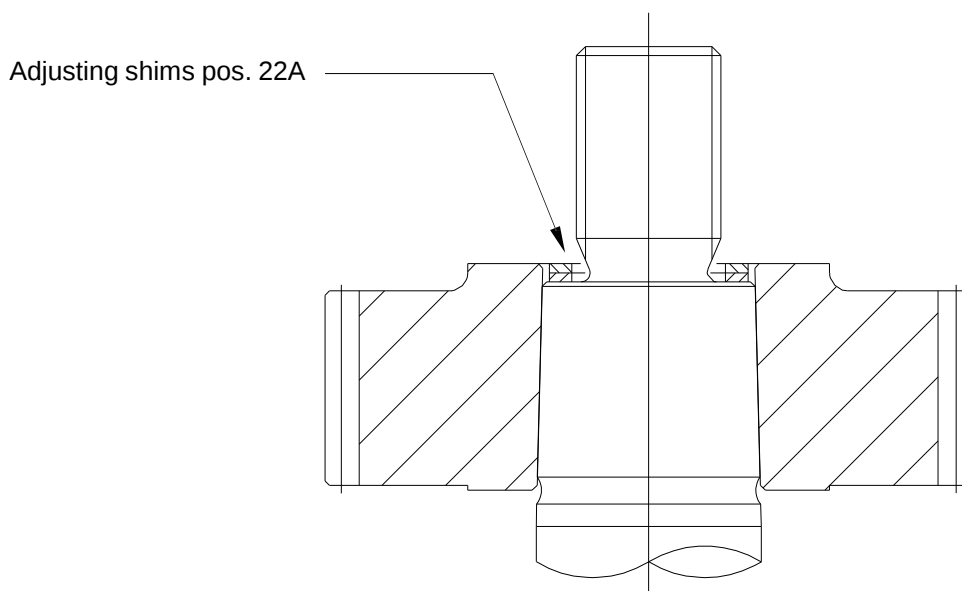


Fig. 11

3.3.2 Disassembling the gear side, sizes from 35 to 225

Unscrew slightly the locking nuts 26 and move them 1 or 2 mm away from the gear wheels



WARNING: DO NOT REMOVE THE LOCKING NUTS 26, because by releasing the gear wheels they may be cast out.

Screw the injector or oil pump to the end of the shaft using the suitable nipples, for the devices see table 7.5, for the connections size see table 7.6.

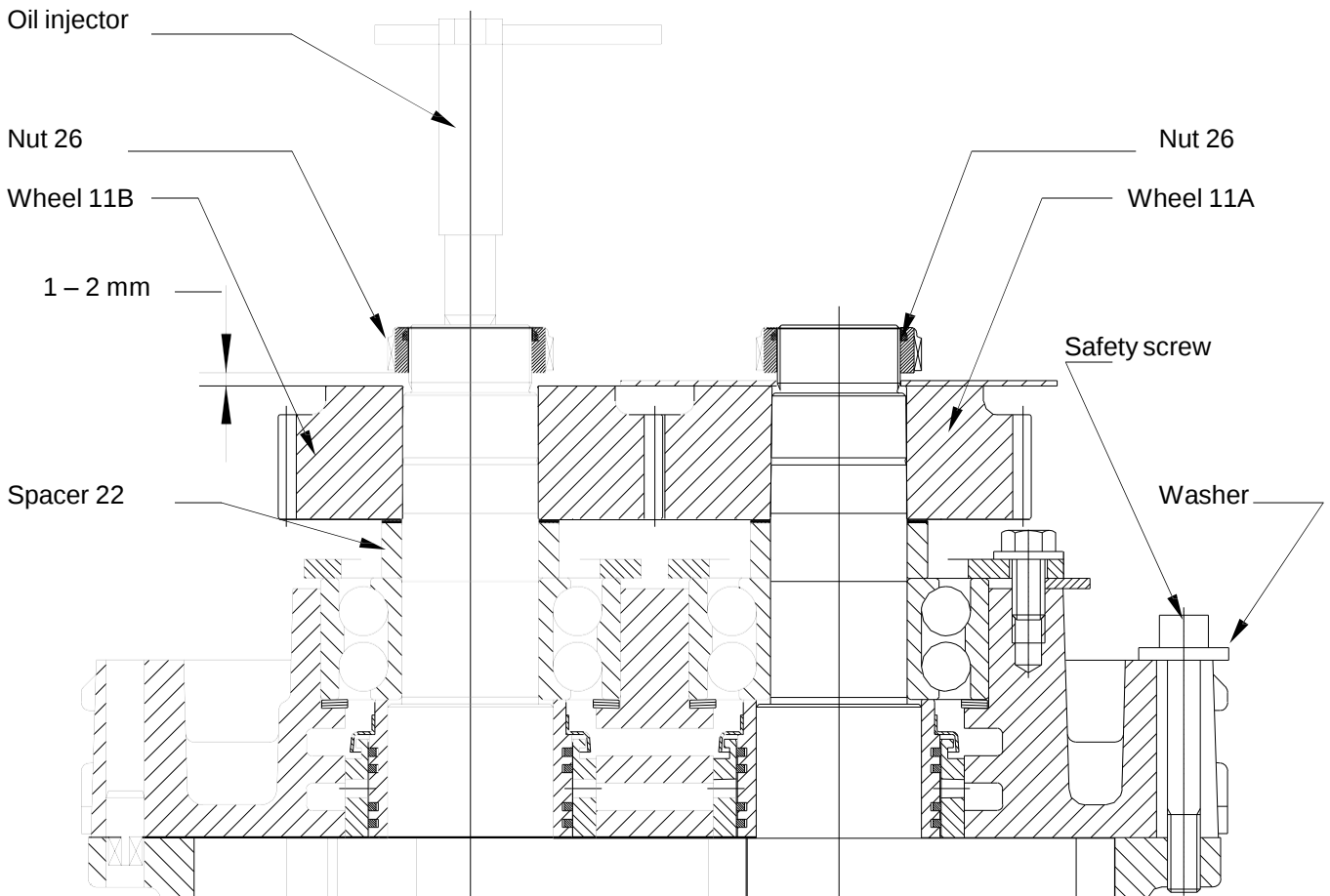


Fig. 12

Inject oil until the gear wheel is released.



WARNING: The pressure of the oil during disassembly may reach 2000 bar and the incorrect assembly of the injector or pump may cause serious physical damage owing to the jets of oil under pressure.

Remove the injector or the oil pump and the locking nuts 26
Extract the gear wheels 11A and 11B and mark their position



WARNING: Use the hoisting devices suitable to the weight of gear wheel (table 7.1), starting from size 165 the wheels have threaded holes to facilitate their hoisting

Extract the spacers 22 and the adjusting shims and mark their position for following assembly of the blower

3.3.3 Extraction of cover 5B, sizes from 15 to 25

Disassemble the bearing cover 35

Extract the rotors using an extractor fixed to the threaded holes of the casing as indicated in figure 13

Remove the safety screws fixing the cover 5B to the casing1 and extract it

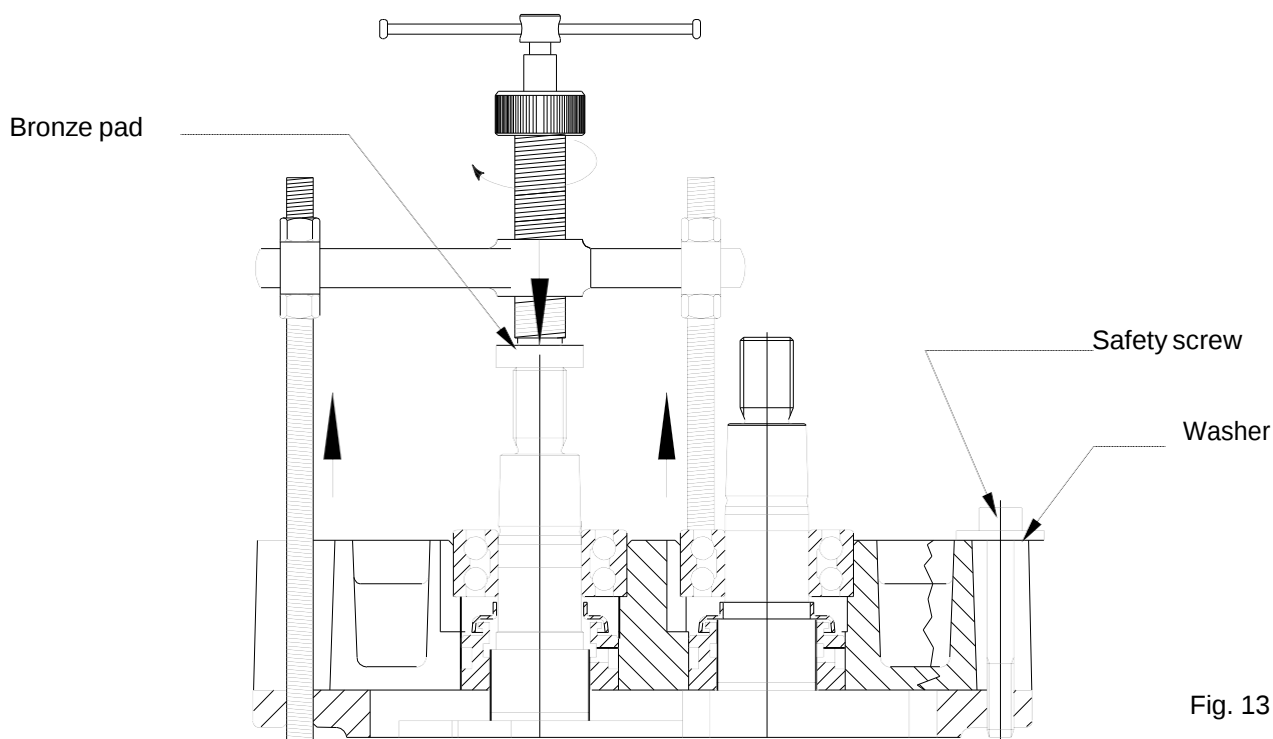


Fig. 13

3.3.4 Extraction of cover 5B, sizes from 35 to 225

Disassemble the bearing covers position 35 and, for the sizes from 35 to 126, mark the position of adjusting washer 304 for the following assembly of the blower

Extract the rotors using an extractor fixed to the threaded holes of the bearing covers, for the sizes from 35 to 126 or to the extraction holes indicated in fig. 8 for sizes from 135 to 225

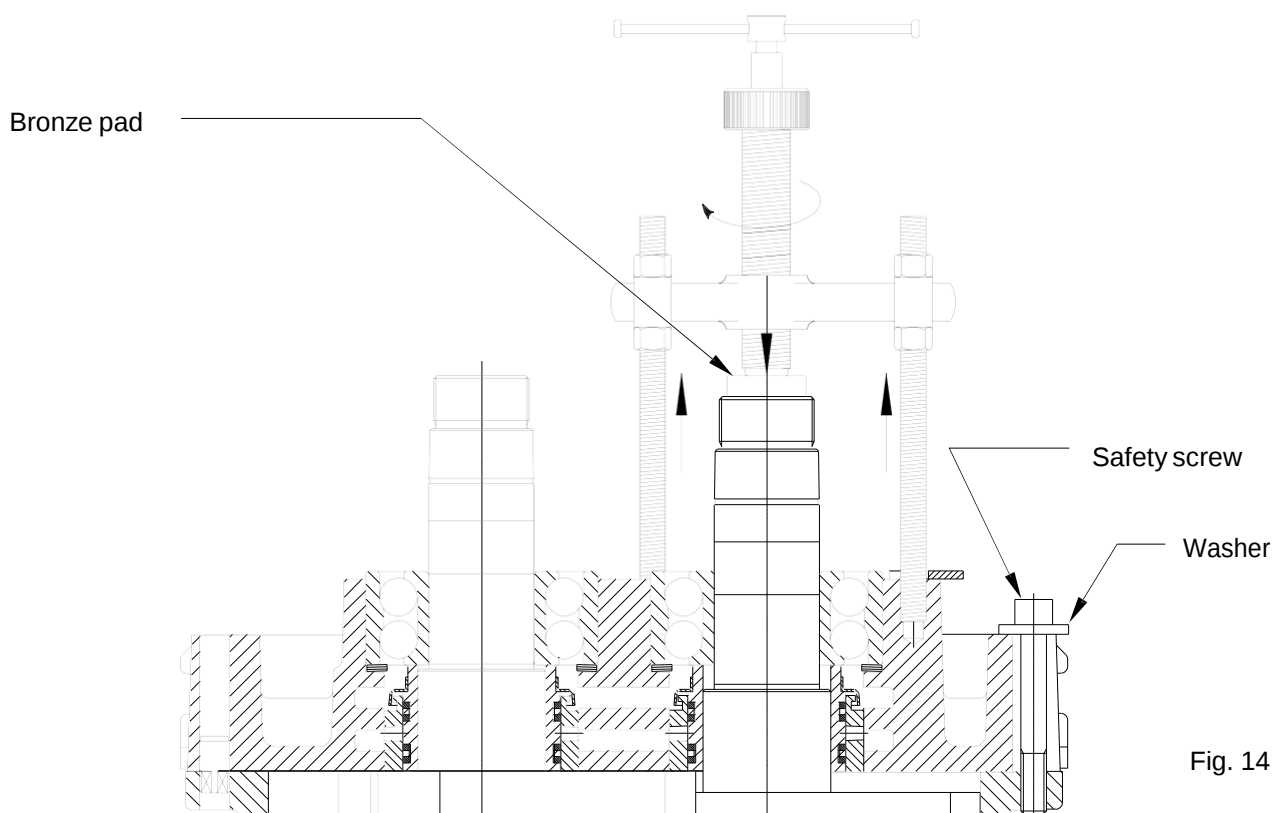


Fig. 14

Fix the cover to a suitable hoisting device for the mass of the cover (table 7.1)

Remove the safety screws fixing the cover 5B to the casing 1 and extract it

3.4 Final disassembly

Mark the position of the rotors

Extract the rotors from the casing 1 fixing them to the threaded holes on their drive side



WARNING: For the lifting of the rotors do not use the threaded end on the gear side nor the threaded holes on the gear side



WARNING: Use the hoisting devices suitable to the weight of the rotors (table 7.1)

3.4.1 Cover 5A

For the sizes from 35 to 106 remove the screw Pos. 407 fixing the bearing pos. 31

Extract the bearings pos. 31 and Pos. 32 from the cover 5A, if necessary use an extractor device



WARNING: Use the hoisting devices suitable to the weight of the bearings (table 7.1)

For the sizes from 35 to 225 extract the spacer's Pos. 25 with the oil splash disks 23A and 23C



WARNING: During this operation do not damage the spacers 25 and the oil splash disks 23A and 23C.



WARNING: Do not remove the reference pins

3.4.2 Cover 5B

Extract the bearings pos. 33 from the cover 5B, if necessary use an extractor device, mark their position and the side towards the gear wheel



WARNING: Use the hoisting devices suitable to the weight of the bearings (table 7.1)

For the sizes from 35 to 126 extract the compensation springs Pos. 68 and mark their position

for the sizes from 135 to 225 extract the adjusting rings Pos. 67 and mark their position.

For the sizes from 35 to 225 extract the spacer's Pos. 25 with the oil splash disks Pos. 23B and mark their position.



WARNING: During this operation do not damage the spacers 25 and the oil splash disks 23B



WARNING: Do not remove the reference pins

4 REPAIR OF THE PARTS

4.1 Rotors

Clean the external surface of the rotors, remove the incrustations and rust using solvents and scraper.



WARNING: Keep to the prescribed safety rules when using solvents and wear protection glasses and safety gloves



NOTE: Do not damage the external surface of the rotors when using the scraper

Check the external surface of the rotors, if there are any signs of seizure, cracks or grooves replace the rotors. Measure the external diameter DR of the rotors, the maximum thickness SL of the lobes in various points along their length and the maximum length LR of the rotors

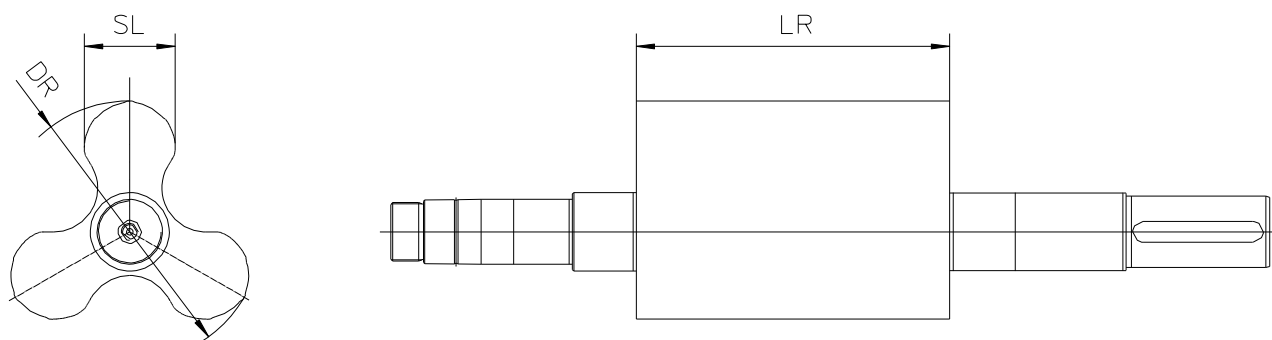


Fig. 15

Place the rotors between the centers of a lathe as indicated in figure

Check the surface of the bearing seats on the shaft and the surface of the tapered seats of the gear wheels, if there are any signs of seizure, cracks or grooves also of small dimensions replace the rotors.



WARNING: Any discontinuity also of small dimensions on the external surface of the shaft compromise the blower safety

Measure with a comparator the concentricity of the external diameter of the rotors with the seats of the bearings as indicated in figure

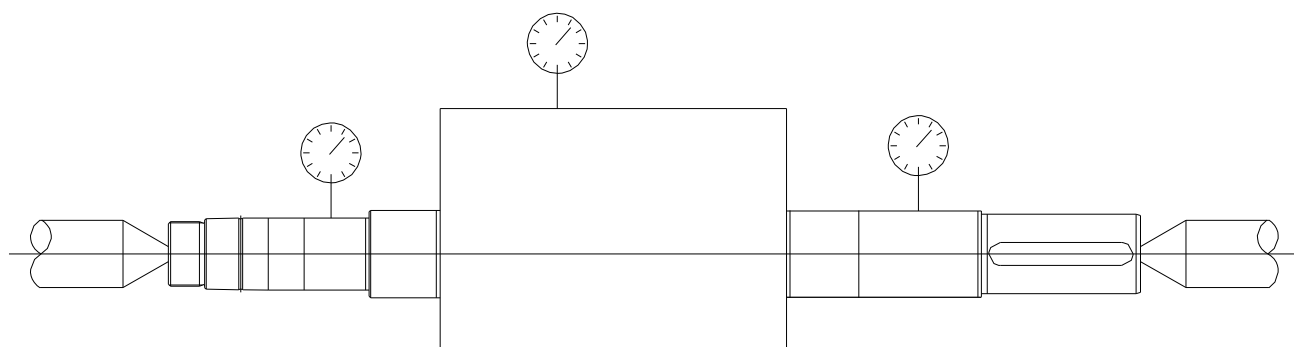


Fig. 16

Communicate the values of the recorded data to ROBUSCHI to check the possibility of using the rotors again.



NOTE: In case of replacement of a rotor it is necessary always to replace both rotors

4.2 Casing

Clean the external surface of the internal, remove the incrustations and rust using solvents and scraper.



WARNING: Keep to the prescribed safety rules when using solvents and wear protection glasses and safety gloves



NOTE: Do not damage the internal surface of the rotors when using the scraper

Check the internal surface of the casing, if there are any signs of seizure, cracks or grooves replace the casing.

Measure the internal diameter DC of the two holes of the casing in various points along their length

Communicate the values of the recorded data to ROBUSCHI to check the possibility of using the casing again.

4.3 Covers

Clean the surface of the covers turned toward the rotors, remove the incrustations and rust using solvents and scraper.



WARNING: Keep to the prescribed safety rules when using solvents and wear protection glasses and safety gloves



NOTE: Do not damage the internal surface of the rotors when using the scraper

Check the surface of the covers turned toward the rotors, if there are any signs of seizure, cracks or grooves replace the covers.

Check the surface of the bearings housings, if there are any signs of seizure, cracks or grooves replace the covers.

Measure the internal diameter DSC of the bearing housings in various points and communicate the values of the recorded data to ROBUSCHI to check the possibility of using the cover again.



WARNING: Any discontinuity also of small dimensions on the surface of the bearing housings compromise the blower safety



NOTE: It is possible to replace also only one cover

4.4 Gear

Clean the surface of the teeth of the gear wheels, remove the incrustations and rust using solvents and scraper.



WARNING: Keep to the prescribed safety rules when using solvents and wear protection glasses and safety gloves



NOTE: Do not damage the surface of the gear wheels when using the scraper

Check the surface of the teeth, if there are any signs of seizure, pitting, grooves or the color of the teeth range from brown to blue replace the wheels.

Check the tapered surface of the hole of the wheels, if there are any signs of seizure, cracks or grooves, also of small dimensions replace the wheels.



WARNING: Any discontinuity also of small dimensions on the tapered surface of the hole of the wheels compromise the blower safety

Measure the dimension Width W in various points of the teeth of the two wheels using a comparator as indicated in figure 17, the number of teeth for the measure W is indicated in the table

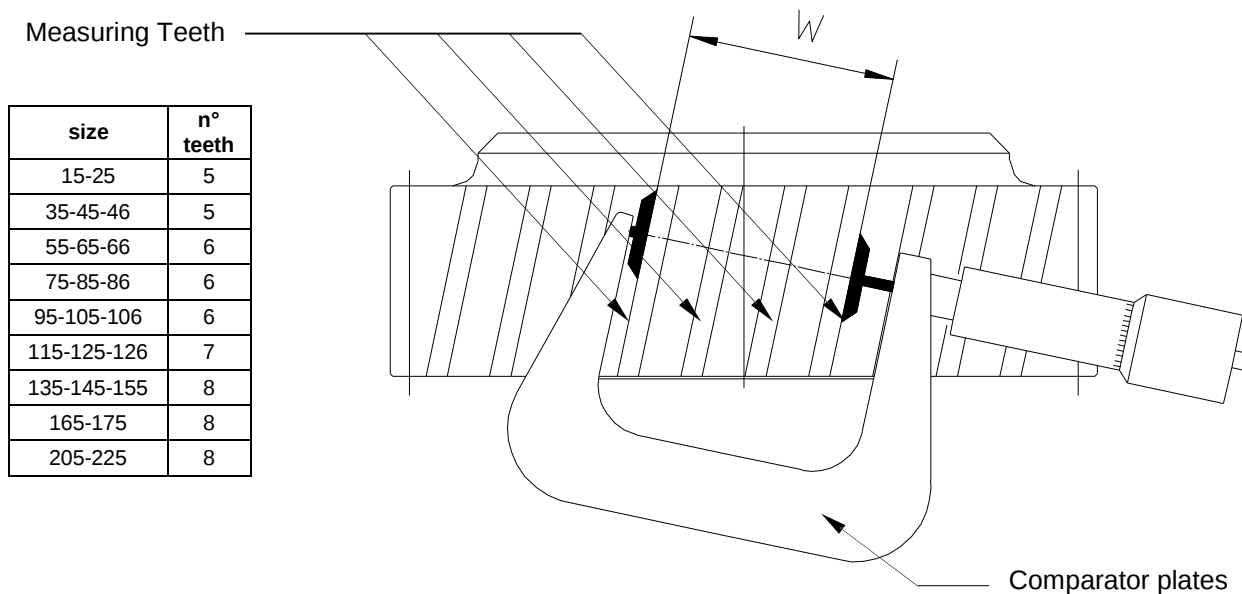


Fig. 17

Communicate the values of the recorded dimensions to Gardner-Denver to check the possibility of using the gears again.



NOTE: In case of replacement of the wheels it is necessary always to replace both wheels

4.5 Bearings

Clean the bearings, remove the incrustations and rust using solvents and scraper.



WARNING: Keep to the prescribed safety rules when using solvents and wear protection glasses and safety gloves



NOTE: Do not damage the surface of the gear wheels when using the scraper

Check the external surface of the bearing, if there is any damage to the cage, or the external surface has spots of rust replace the bearings.

Check the raceways of the bearing rings, if there is pitting, overheating signs, and vocalization or if the trace of the roller elements is too **evident** replace the bearings.

Measure with a thickness meter the radial clearance of the bearings, if the measured values are 20% higher than the maximum values indicated in the catalogs of the bearings manufacturers replace the bearings



NOTE: In case of replacement of also only one of the bearing it is recommended to replace all the bearings of the blower

4.6 Labyrinth seals

Clean the sealing spacers and the sealing chambers, remove the incrustations and rust using solvents and scraper.



WARNING: Keep to the prescribed safety rules when using solvents and wear protection glasses and safety gloves



NOTE: Do not damage the surface of the sealing spacers and the sealing chambers when using the scraper

Extract the sealing piston rings from the sealing spacers

Check the external surface of the spacers 25, if the surface has spots of rust replace the spacers

Measure the width of the grooves and communicate the recorded values to ROBUSCHI to check the possibility of using the spacers again



NOTE: In case of replacement of also only one of the spacers it is recommended to replace all the spacers of the blower



NOTE: Replace all the sealing piston rings always

Check the internal surface of the sealing chambers pos. 20, if the surface has spots of rust and/or circumferential grooves induced by the piston rings replace the sealing chambers



WARNING: If the sealing chambers Pos. 20 lean out from the cover surface replace them



NOTE: In case of replacement of also only one of the sealing chambers it is recommended to replace both the sealing chamber of the cover

4.7 Drive shaft seal

Clean the shaft sleeve Pos. 37 remove the incrustations and rust using solvents and scraper.



WARNING: Keep to the prescribed safety rules when using solvents and wear protection glasses and safety gloves



NOTE: Do not damage the surface of the shaft sleeve when using the scraper

Check the external surface of the shaft sleeve pos. 37, if the surface has abrasions and /or a groove induced by the leap of the sealing ring Pos. 43 replace the shaft sleeve 37.



NOTE: Replace the sealing ring Pos. 43 always

5 ASSEMBLING OF THE BLOWER

5.1 Preparation

Before the reassembly of the blower clean all the elements and oil the elements that are in contact with each other.

Place the cover 5B on suitable wooden supports in order to have a free space below of almost 300 mm as indicated in figure 18

Place the casing 1 onto the cover 5B using suitable ropes passing around the nozzles as indicated in figure 18, with the threaded holes F of the flanges downwards, to position the casing use the reference pins of the cover and the reference marks carried out during the disassembly of the blower



WARNING: Use the hoisting devices suitable to the weight of the elements (table 7.1)

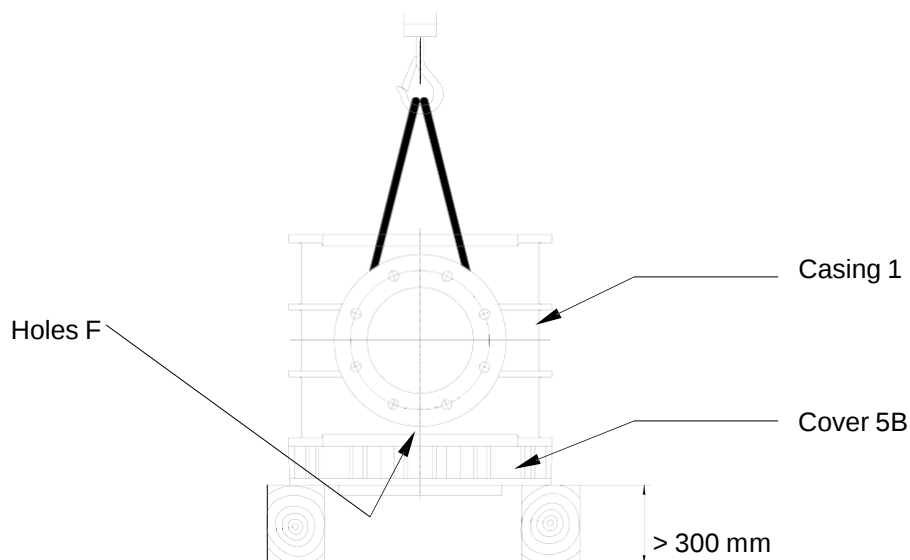


Fig. 18

Slide the rotors in the casing with the tapered ends downwards, place the drive rotor following the marks carried out during the disassembly of the blower



WARNING: Use the hoisting devices suitable to the weight of the rotors (table 7.1), fixed to the threaded end as indicated in figure 19



WARNING: Do not damage the tapered end of the shafts.

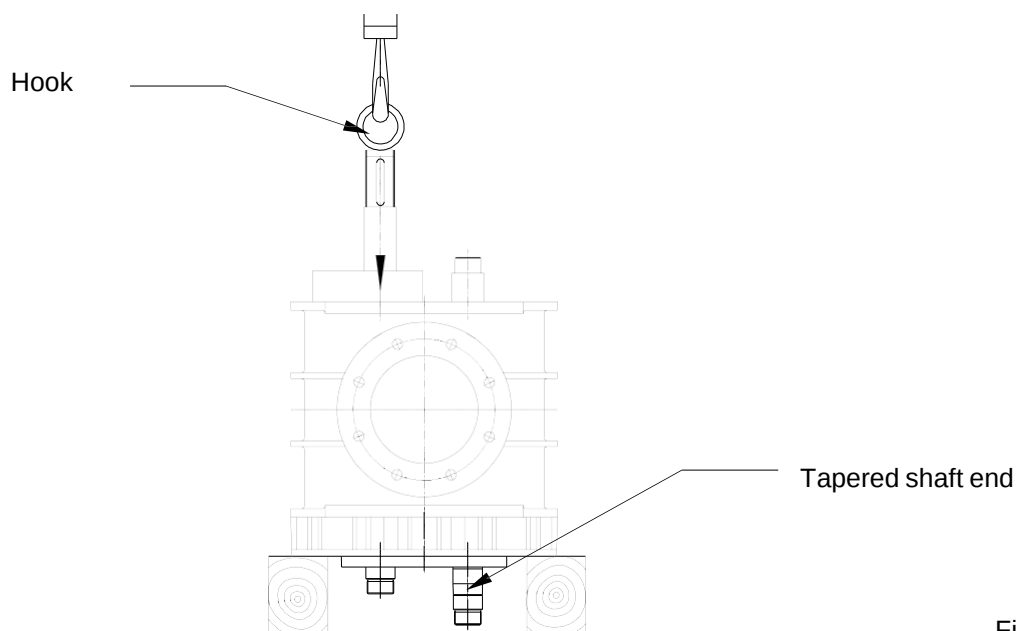


Fig. 19

5.2 Assembling of the drive side

Place the cover 5A onto casing 1 using the reference pins and the marks carried out during the disassembly of the blower



WARNING: Use the hoisting devices suitable to the weight of the cover (table 7.1).

5.2.1 Sizes from 15 to 25

Insert the oil splash disks 23 A onto the shaft by means of a pipe as indicated in figure 20.

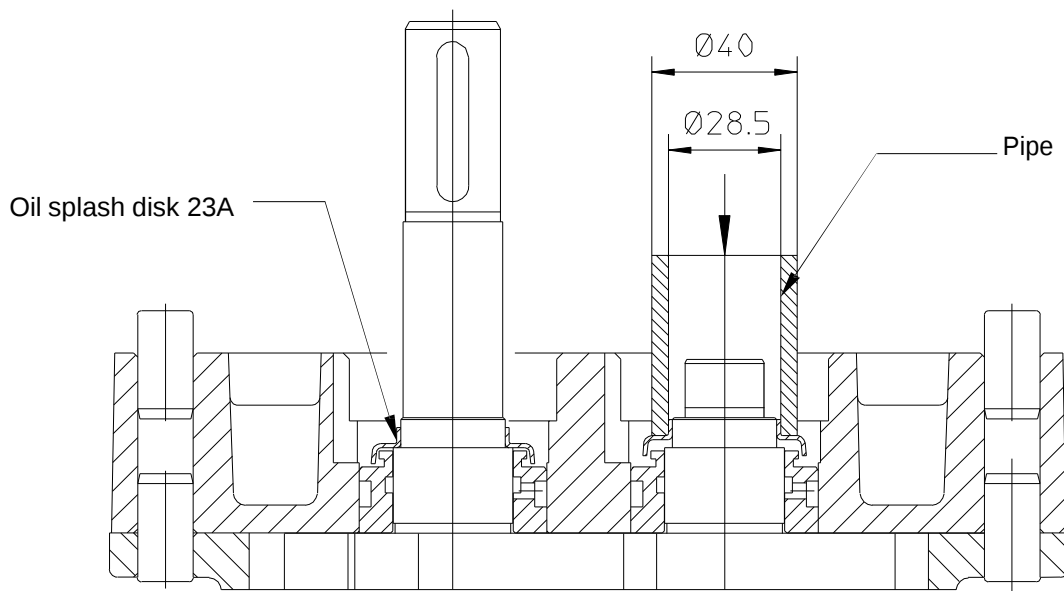


Fig. 20

Mount the bearing 31 and 32 as indicated in the paragraph 5.5.1 and 5.5.2

Lock the bearing 32 by means the disk 17 and the screw 27B

Insert the lubricating disk 16A onto drive shaft in contact with the bearing pos. 31

Insert the shaft sleeve Pos. 37 onto the drive shaft following the dimension indicated in figure 21

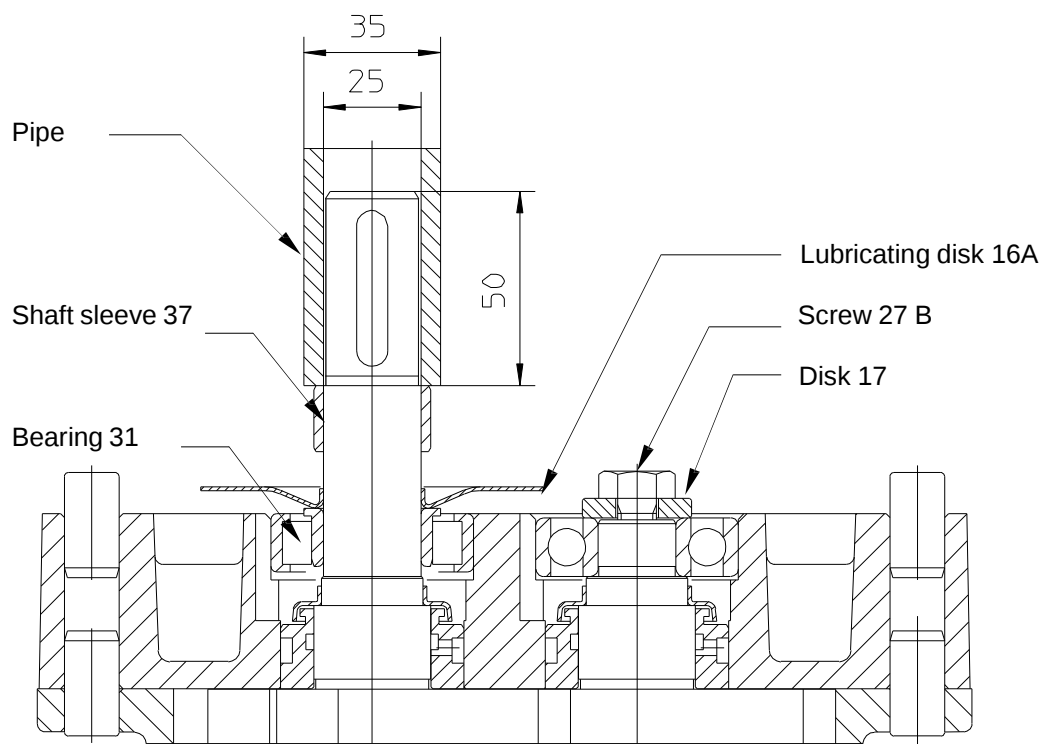


Fig. 21

Mount the drive side oil sump 12A with a new gasket 50

Fix the oil sump with the screws Pos 90

5.2.2 Sizes from 35 to 106

Insert the sealing spacers Pos. 25 completed with the sealing piston rings as indicated in the paragraph 5.4.
Insert the oil splash disks 23A and 23C onto the sealing spacers by means of a pipe as indicated in figure 22.

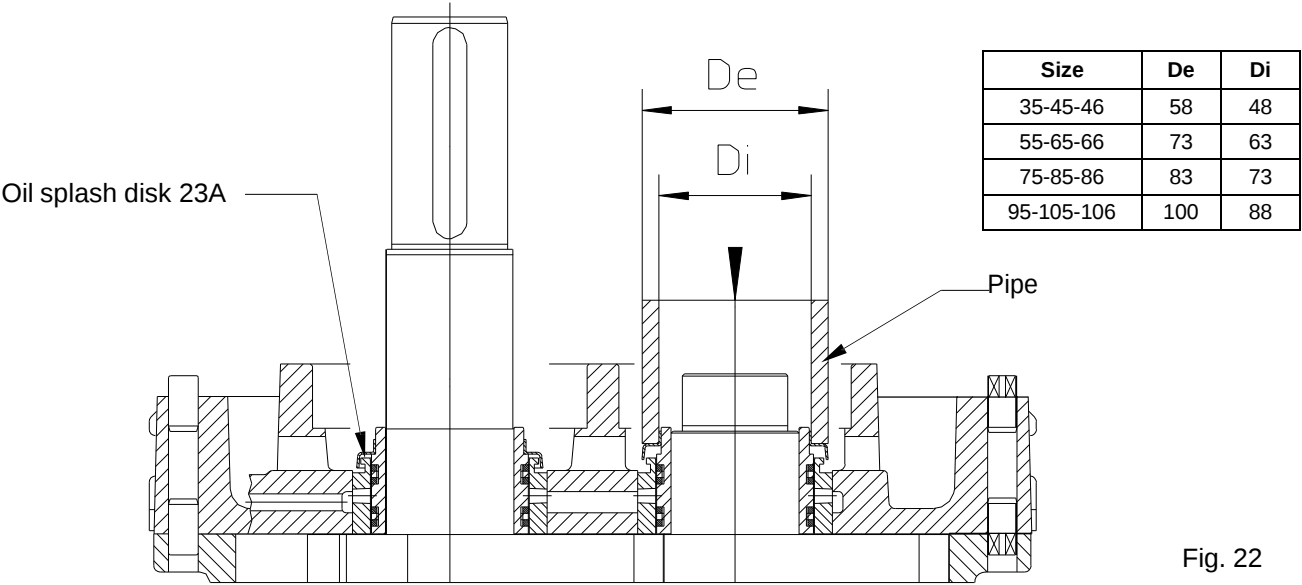


Fig. 22

Insert the spring Pos. 64 onto the drive shaft
Mount the bearings 31 and 32 as indicated in the paragraph 5.5.1 e 5.5.2
Lock the bearing 32 by means the disk 17 and the screw 27B
Lock the external ring of the bearing 31 by means of the screw Pos. 407
Insert the lubricating disk 16A onto the drive shaft in contact with the bearing pos. 31
Insert the shaft sleeve Pos. 37 as indicated in figure 23

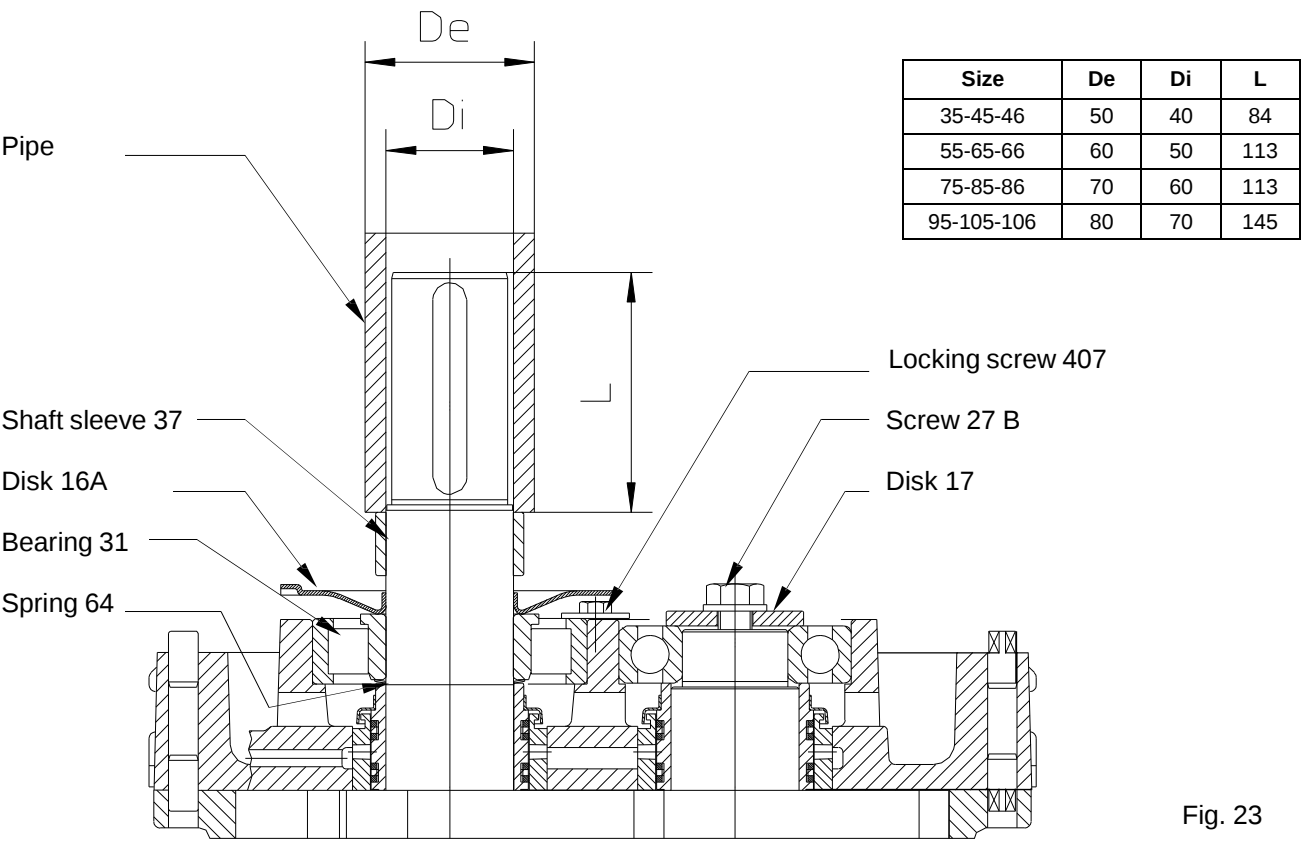


Fig. 23

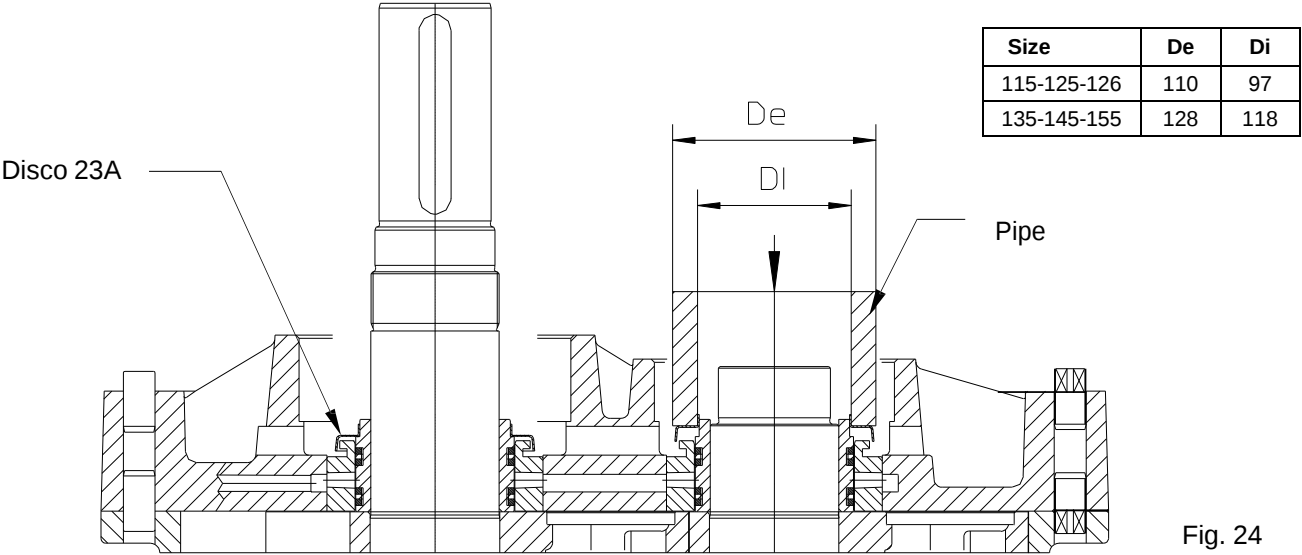
Mount the drive side oil sump 12A with a new gasket 50

 **WARNING:** Use the hoisting devices suitable to the weight of the oil sump (table 7.1).

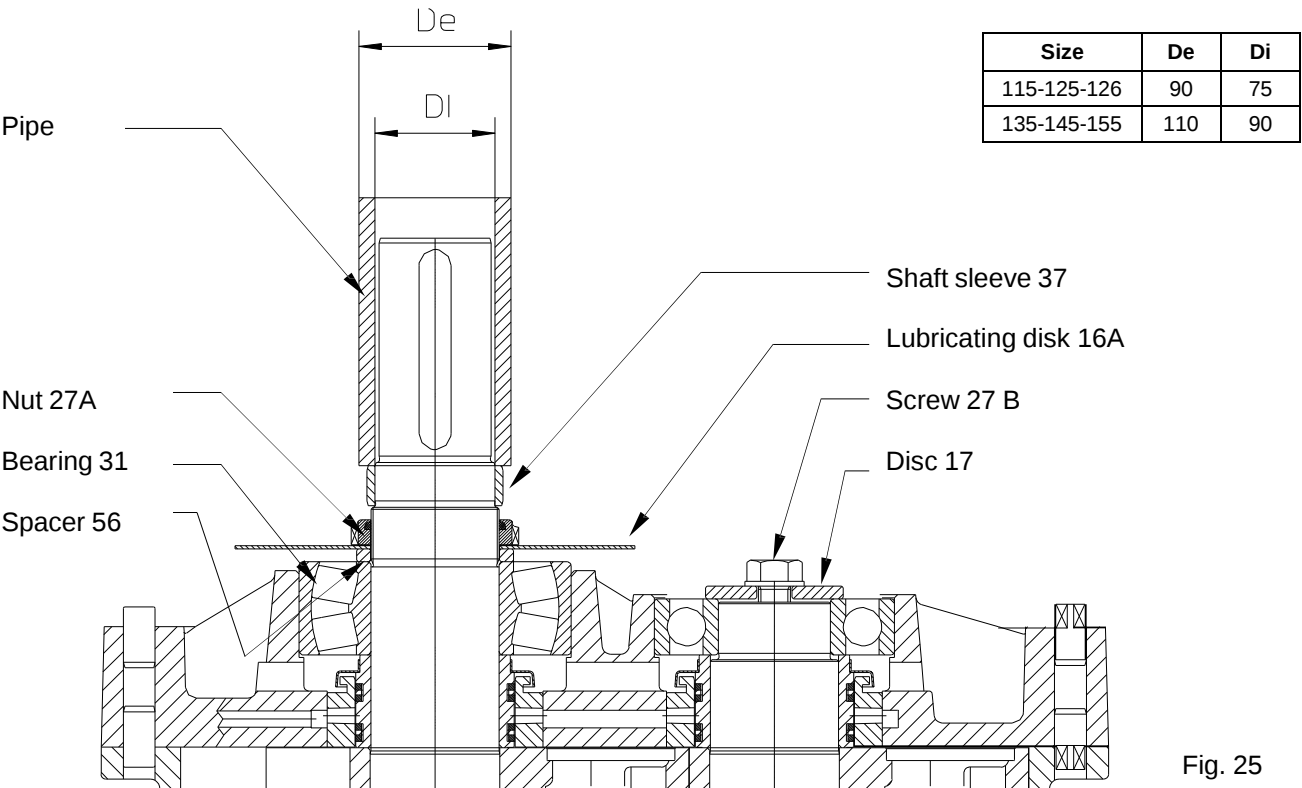
Fix the oil sump with the screws Pos. 90

5.2.3 Sizes from 115 to 155

Insert the sealing spacers 25 completed with the sealing piston rings as indicated at paragraph 5.4.
Insert the oil splash disks 23A and 23C onto the sealing spacers by means of a pipe as indicated in figure 24



Mount the bearings 31 and 32 as indicated at paragraph 5.5.1 e 5.5.2.
Lock the bearing 32 with the disk 17 and the screw 27B
Insert the spacer 56 and the lubricating disk 16A onto the drive shaft
Lock the assembly by means the nut 27A
Insert the shaft sleeve Pos. 37 as indicated in figure 25



Mount the drive side oil sump 12A with a new gasket 50

 **WARNING: Use the hoisting devices suitable to the weight of the oil sump (table 7.1).**

Fix the oil sump with the screws Pos. 90

5.2.4 Sizes from 165 to 225

- Insert the compensating spring Pos. 63
- Insert the sealing spacers 25 completed with the sealing piston rings as indicated at paragraph 5.4.
- Insert the oil splash disks 23A and 23C onto the shaft
- Mount the bearings 31 and 32 as indicated at paragraph 5.5.1 and 5.5.2.
- Lock the bearing 31 with the nut 27A and relevant washer
- Insert the spacer 56 and the lubricating disk 16A onto the driven shaft
- Lock the assembly by means the nut 27 and relevant washer
- Insert the shaft sleeve Pos. 37 as indicated in figure 26

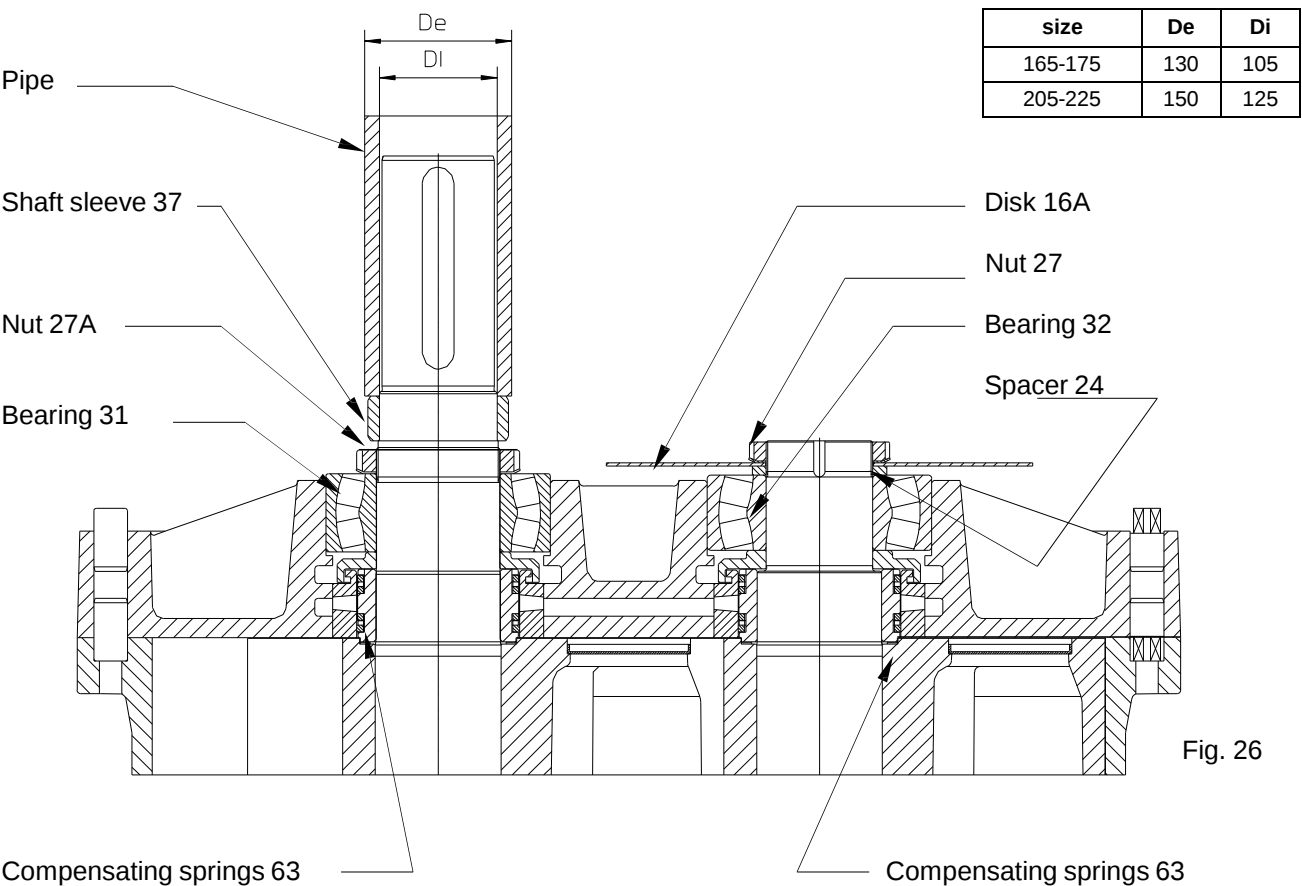


Fig. 26

Mount the drive side oil sump 12A with a new gasket 50

 **WARNING:** Use the hoisting devices suitable to the weight of the oil sump (table 7.1).

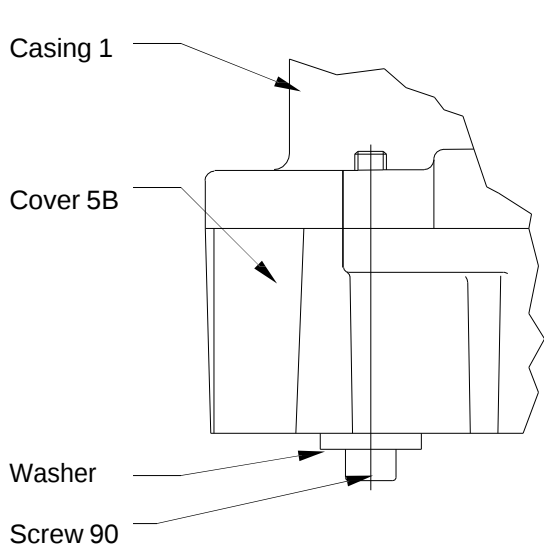
Fix the oil sump with the screws Pos. 90

5.3 Assembling of the gear side

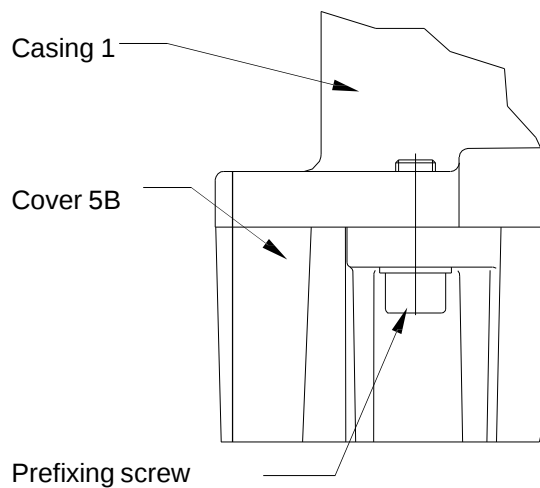


WARNING: Fix the cover 5B to the casing 1 by means the safety screws

For the sizes from 15 to 106 use two screws Pos. 90 with two washers of big diameter, for the sizes from 115 to 225 use the suitable holes in the cover as indicated in figure 27



From 15 to 106



from 115 to 225

Fig. 27

Overturn the blower as indicated in figure 28 using hoisting bands passing around the nozzles of the casing.



WARNING: Use the hoisting devices suitable to the weight of the blower (table 7.1).

Place the blower onto a suitable support plane and make sure that the blower is stable

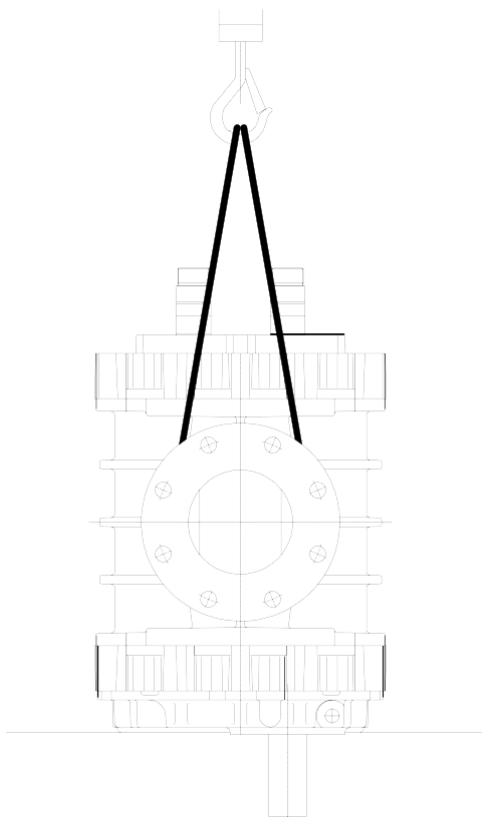


Fig. 28

5.3.1 Sizes from 15 to 25

Remove the cover 5B

Place four sheets LM with thickness alike the value of the maximum clearance indicated in the table 7.4 in the third column as indicated in figure 29

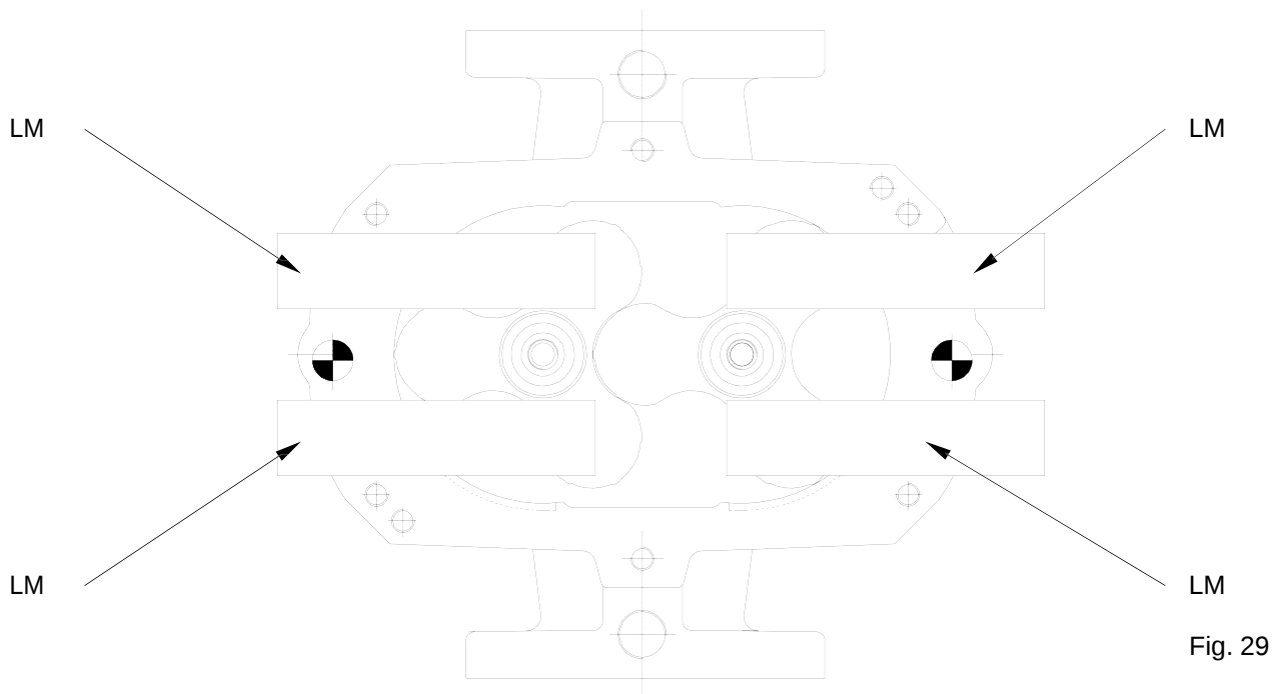


Fig. 29

Place the cover 5B

Insert the oil splash disks 23B by means of a pipe as indicated in figure 30

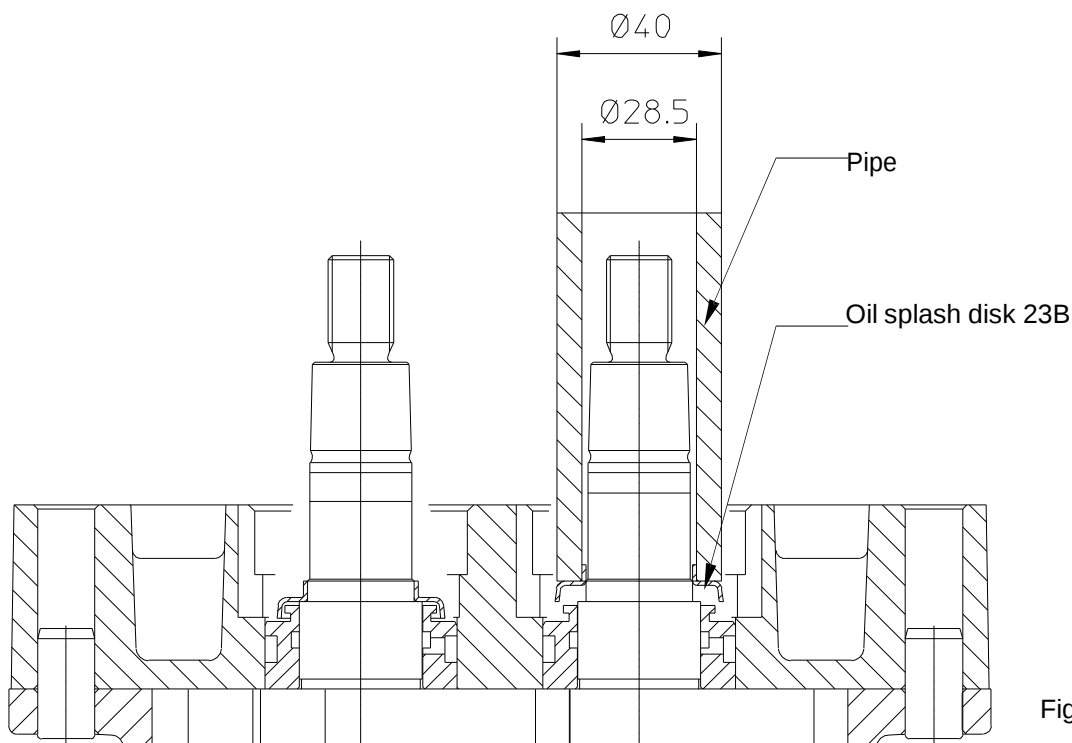


Fig. 30

Mount the bearings Pos. 33 as indicated at paragraph 5.7

Extract the four sheets LM pulling them towards the external of the casing 1

Fix the bearings cover pos. 35

Mount the timing gear following the procedure of the paragraph 5.8

Mount the gear side oil sump 12B with a new gasket 50

Fix the oil sump with the screws Pos. 70

5.3.2 Sizes from 35 to 126

Insert the sealing spacers 25B with the sealing piston rings as indicated at paragraph 5.4.

Insert the oil splash disks 23B onto the sealing spacers by means of a pipe as indicated in figure 31.

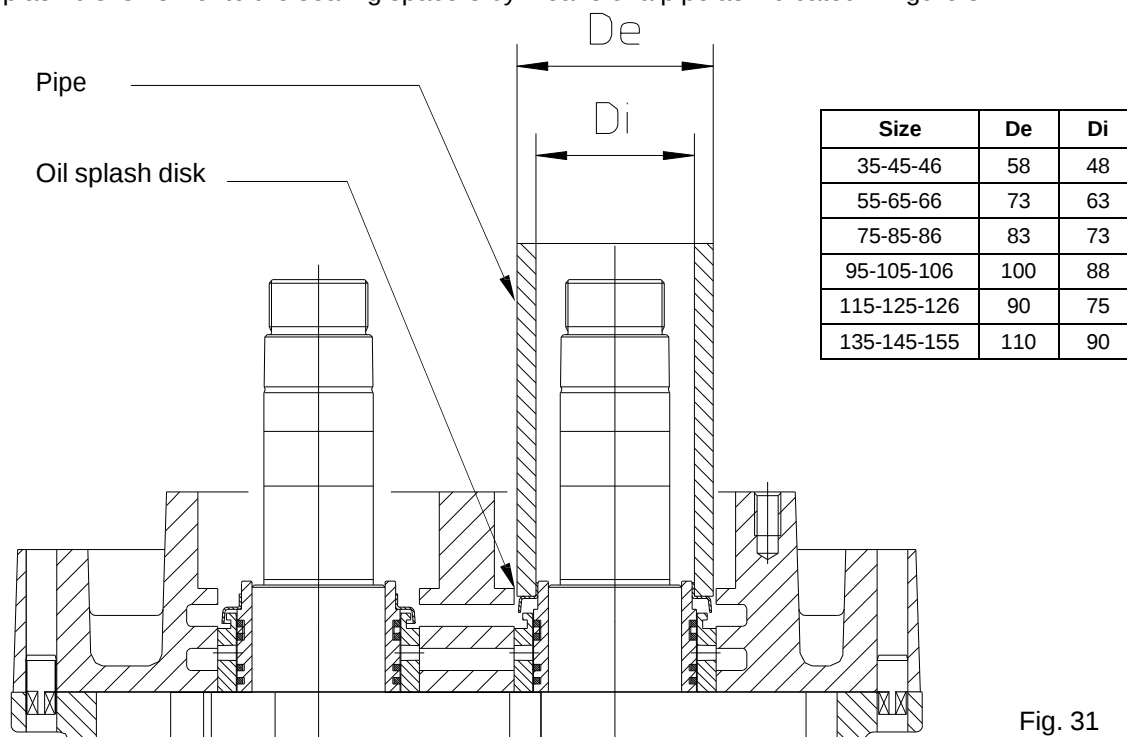


Fig. 31

Insert the compensation springs 68

Mount the bearings 33 as indicated in the paragraph 5.5.3

Insert the bearing covers 35 with the original adjusting washer 304 in the original positions

Approach the bearing cover 35 fixing screws, but do not lock the covers against the washer 304

Mount the timing gear following the procedure of the paragraph 5.6

Insert two comparators onto the end of the shaft as indicated in figure 32 and adjust the dial to the 0 position

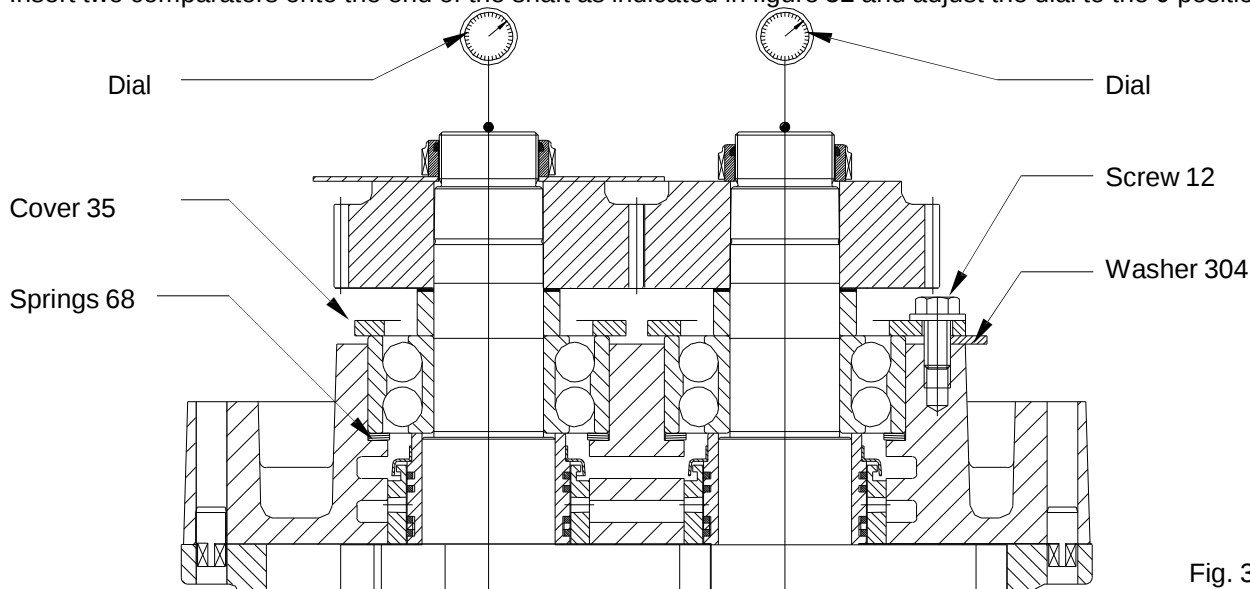


Fig. 32

Lock the bearing covers 35, read onto the comparators the clearance rotor/cover 5B, if the value is not in the range indicated in table 7.4 (possible when it has been changed at least one of the parts : spacers Pos. 25, rotors cover 5B) restore the correct value adjusting the washers thickness 304 as follow :

- Clearance lower than the minimum value reduce the thickness of the washers 304
- Clearance higher than the maximum value increase the thickness of the washer

304 Mount the gear side oil sump 12B with a new gasket 50

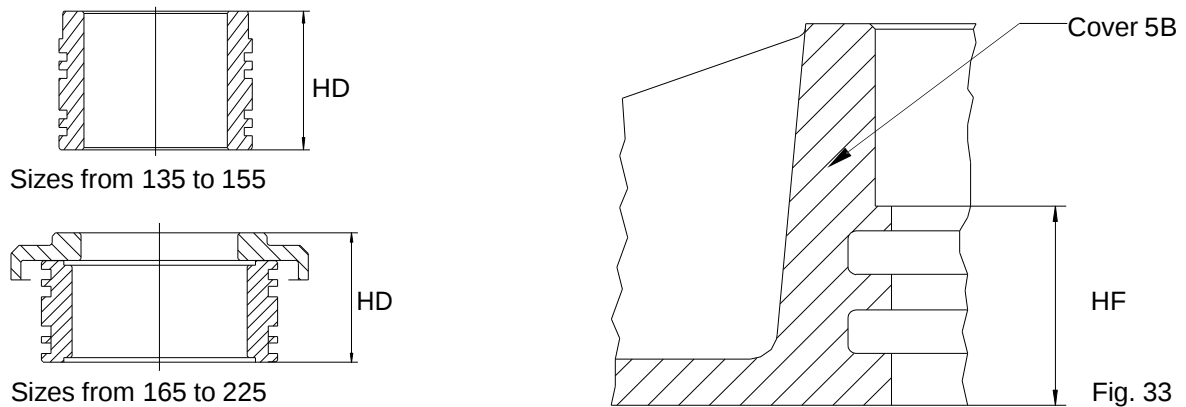


WARNING: Use the hoisting devices suitable to the weight of the oil sump (table 7.1).

Fix the oil sump with the screws 90

5.3.3 Sizes from 135 to 225

If at least one of the parts that generate the axial clearance between the rotors and the cover 5B: spacers Pos. 25, oil splash disks Pos. 23B (only sizes from 165 to 225), rotors and cover Pos. 5B has been replaced then prepare two adjusting rings Pos. 67 as follow :

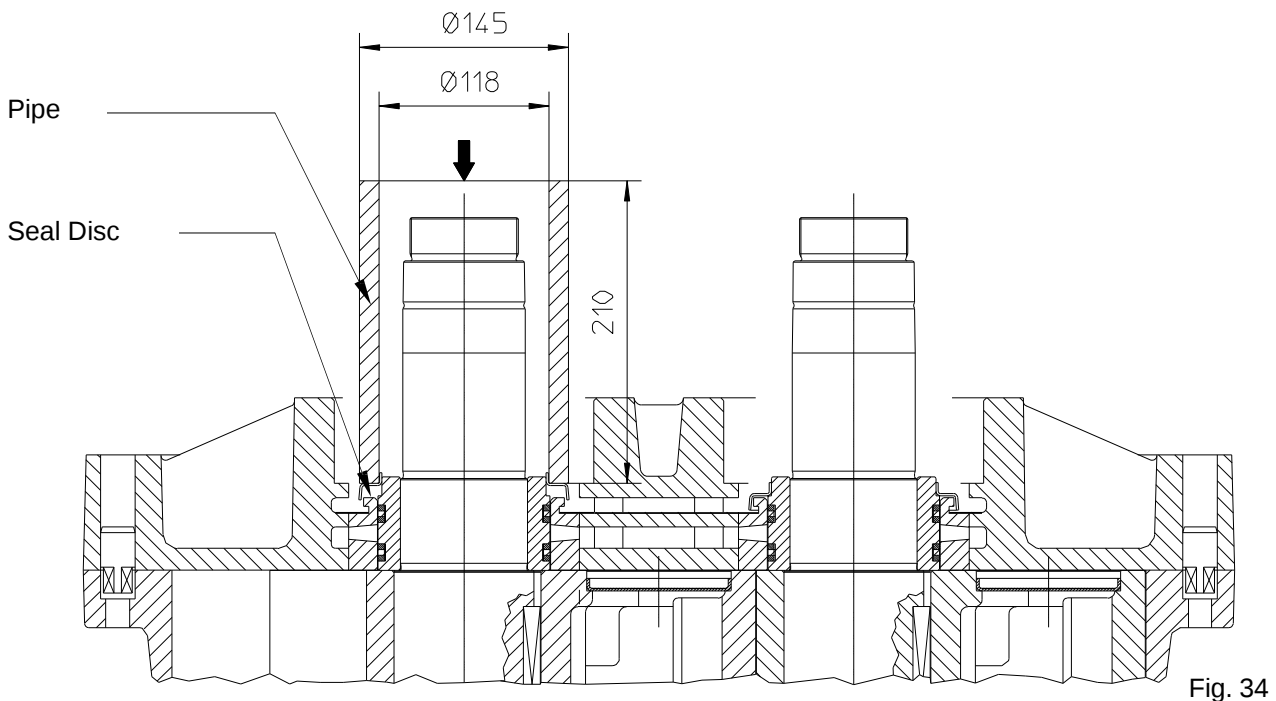


- Measure the height HD of the spacers 25B as indicated in figure 33
- Measure the height HF of the cover 5B on each bearing housing as indicated in figure 33
- Make two adjusting rings Pos. 67, one for each bearing housing, with thickness SR

$$SR = HD - HF - G5B \times 1.25$$

Where G5B is the axial clearance between the rotors and the cover 5B indicated in the table 7.4

Insert the sealing spacers 25B with the sealing piston rings as indicated in the paragraph 5.4.
 Sizes from 135 to 155 insert the oil splash disks 23B onto the spacers by means of a pipe (figure 34)



Sizes from 165 to 225 insert the oil splash disks 23B onto the shaft
 insert the original adjusting rings Pos. 67 or that one's prepared above
 Mount the bearings 33 as indicated in the paragraph 5.6
 Insert the bearing covers 35 and the fixing them by the screws
 Mount the timing gear following the procedure of the paragraph 5.5
 Mount the gear side oil sump 12B with a new gasket 50



WARNING: Use the hoisting devices suitable to the weight of the oil sump (table 7.1).

Fix the oil sump with the screws Pos. 70

5.4 Assembling of the labyrinth seals

Install the sealing spacers by means the mounting device and by a pipe as indicate in figure 35

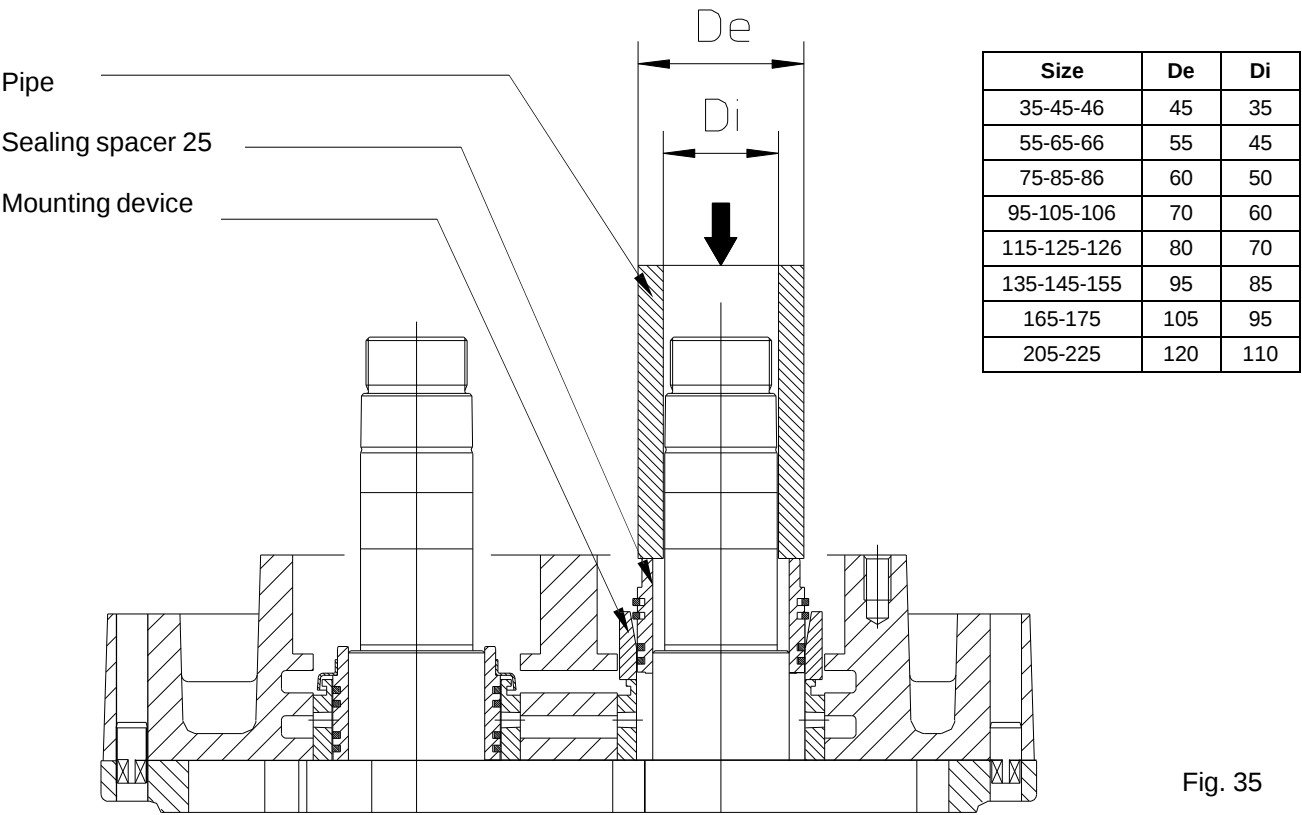


Fig. 35

The mounting device must have the dimensions indicated in the figure 36 below

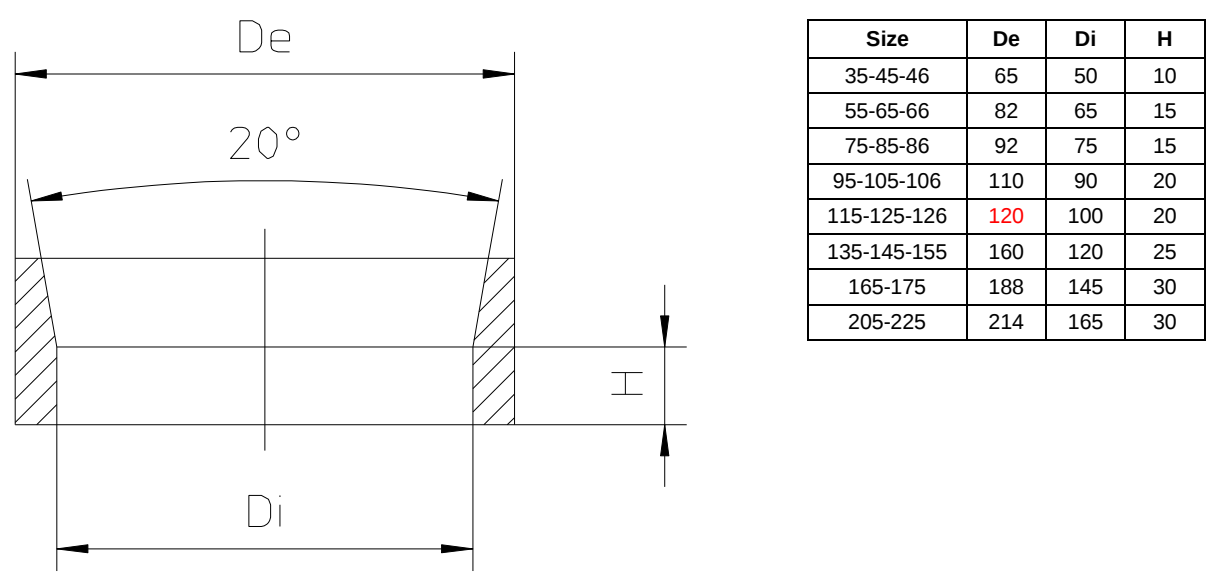


Fig. 36

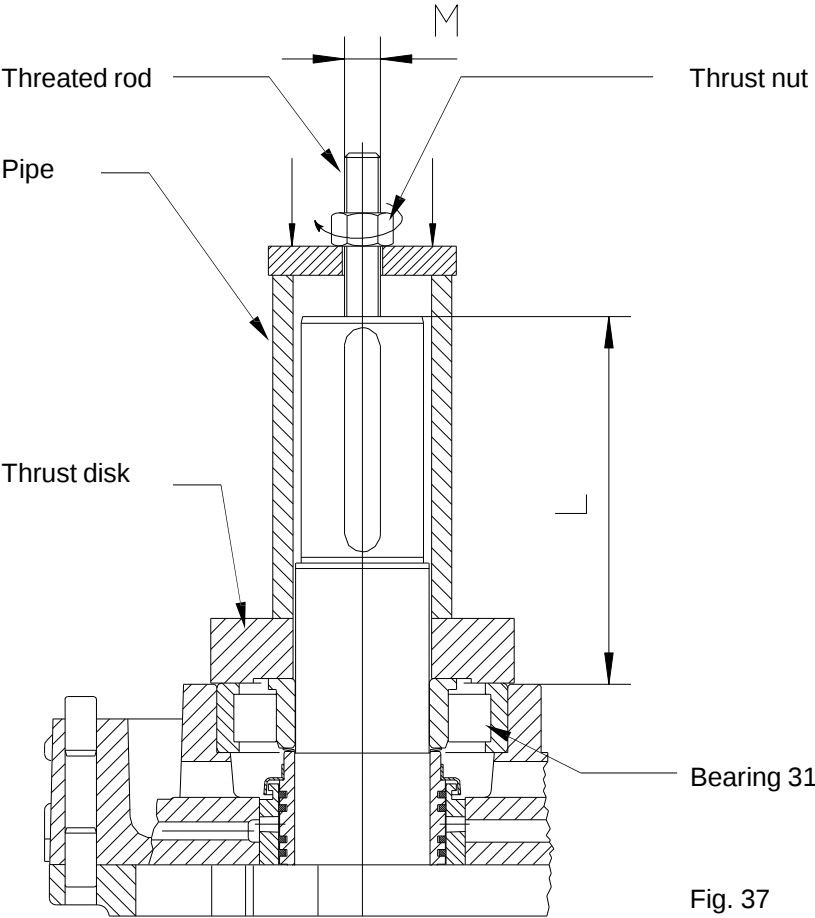
5.5 Assembling of the bearings

Clean and oil the matching surfaces of the bearings, of the shafts and of the bearing housings

 **WARNING:** Use the hoisting devices suitable to the weight of the bearings (table 7.1).

 **WARNING:** Do not use the hammer to introduce the bearings

5.5.1 .1 Bearing Pos. 31

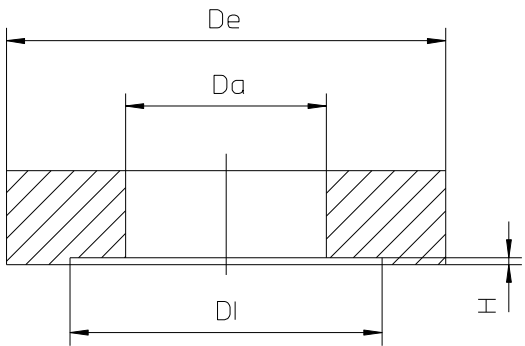


Size	M	L
15-25	10	83
35-45-46	10	126
55-65-66	12	155
75-85-86	16	164
95-105-106	16	204
115-125-126	20	202
135-145-155	20	237
165-175	24	283
205-225	24	288

Fig. 37

 **WARNING:** The device must be fixed to the end of the drive shaft as indicated in figure 37

The thrust disk must have the dimensions indicated in the figure 38 below

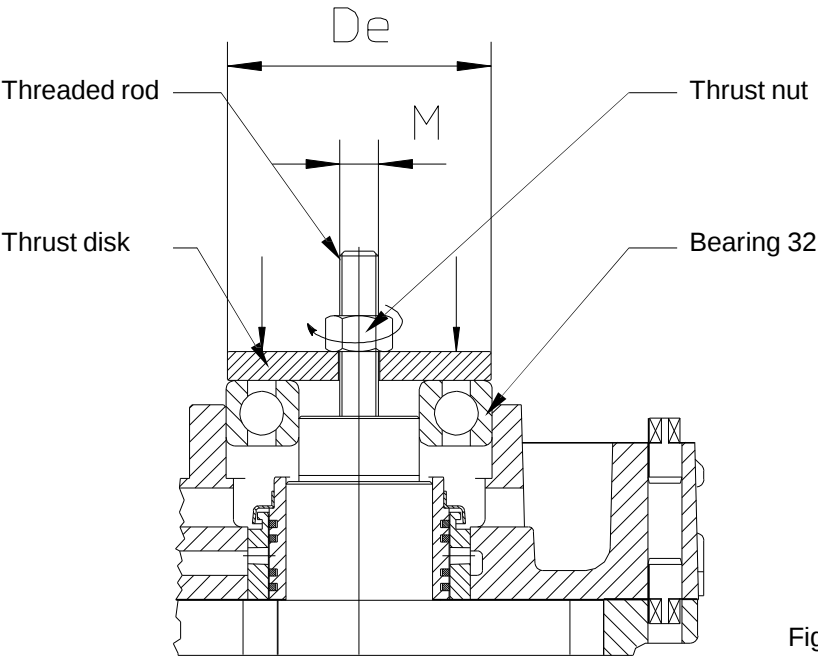


Size	De	Di	Da	H
15-25	50	40	25	1,4
35-45-46	80	65	40	1,8
55-65-66	110	90	50	1,9
75-85-86	130	105	60	2,1
95-105-106	150	125	70	2,1
115-125-126	170	80	80	0
135-145-155	200	95	95	0
165-175	200	110	110	0
205-225	230	130	130	0

Fig. 38

 **WARNING:** Respect the dimensions Di and H scrupulously

5.5.2 Bearing Pos. 32



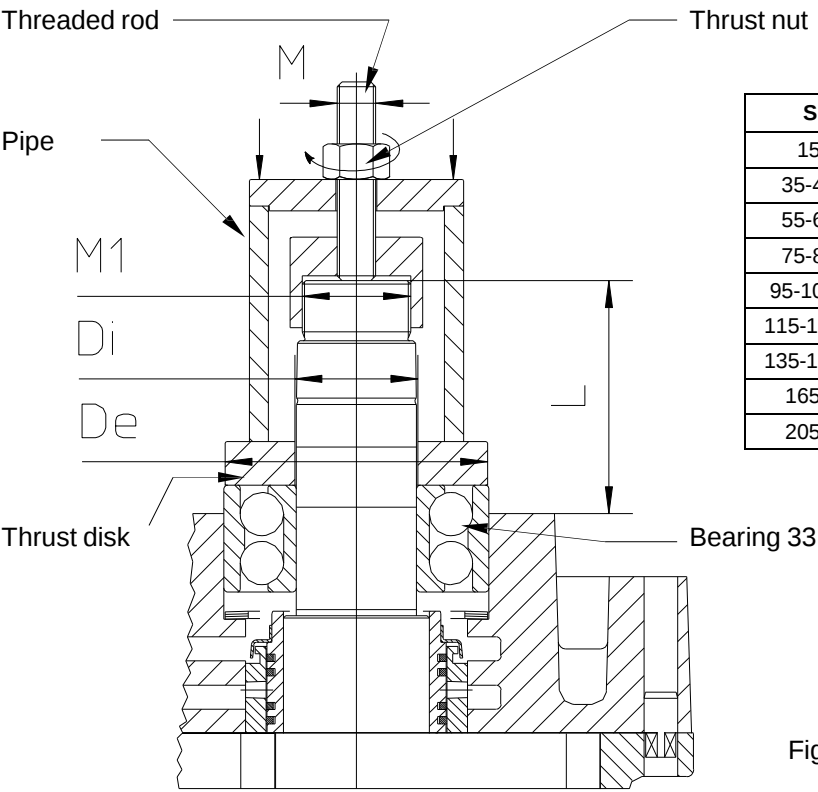
Size	M	De
15-25	10	52
35-45-46	10	72
55-65-66	12	90
75-85-86	16	110
95-105-106	16	130
115-125-126	20	150
135-145-155	20	180
165-175	24	200
205-225	24	230

Fig. 39



WARNING: The device must be fixed to the end of driver shaft as indicated in 39

5.5.3 Bearings pos. 33



Size	M	M1	De	Di	L
15-25	10	16	52	25	61
35-45-46	10	30	72	35	77
55-65-66	12	40	100	45	88
75-85-86	16	45	110	50	97
95-105-106	16	55	130	60	110
115-125-126	20	65	150	70	130
135-145-155	20	75	180	85	125
165-175	24	85	200	95	150
205-225	24	100	240	110	184

Fig. 40



WARNING: The device must be fixed to the threaded end of the shaft as indicated in figure 40 (for the threading see table 7.6)

5.6 Assembly of the timing gear

5.6.1 .1 Preparation

Arrange the rotors in the position indicated in the figure below
Interpose between the rotors a metal sheet LL with thickness equal to maximum value of the clearance rotor/rotor indicated in the table 7.4 at the sixth column and long about the 70% of the length of the rotors Lock the rotors in this position by means of the wooden spacers SL with dimension higher than dimension L and fixed by means the plates P fixed to the casing nozzles as indicated in figure 41

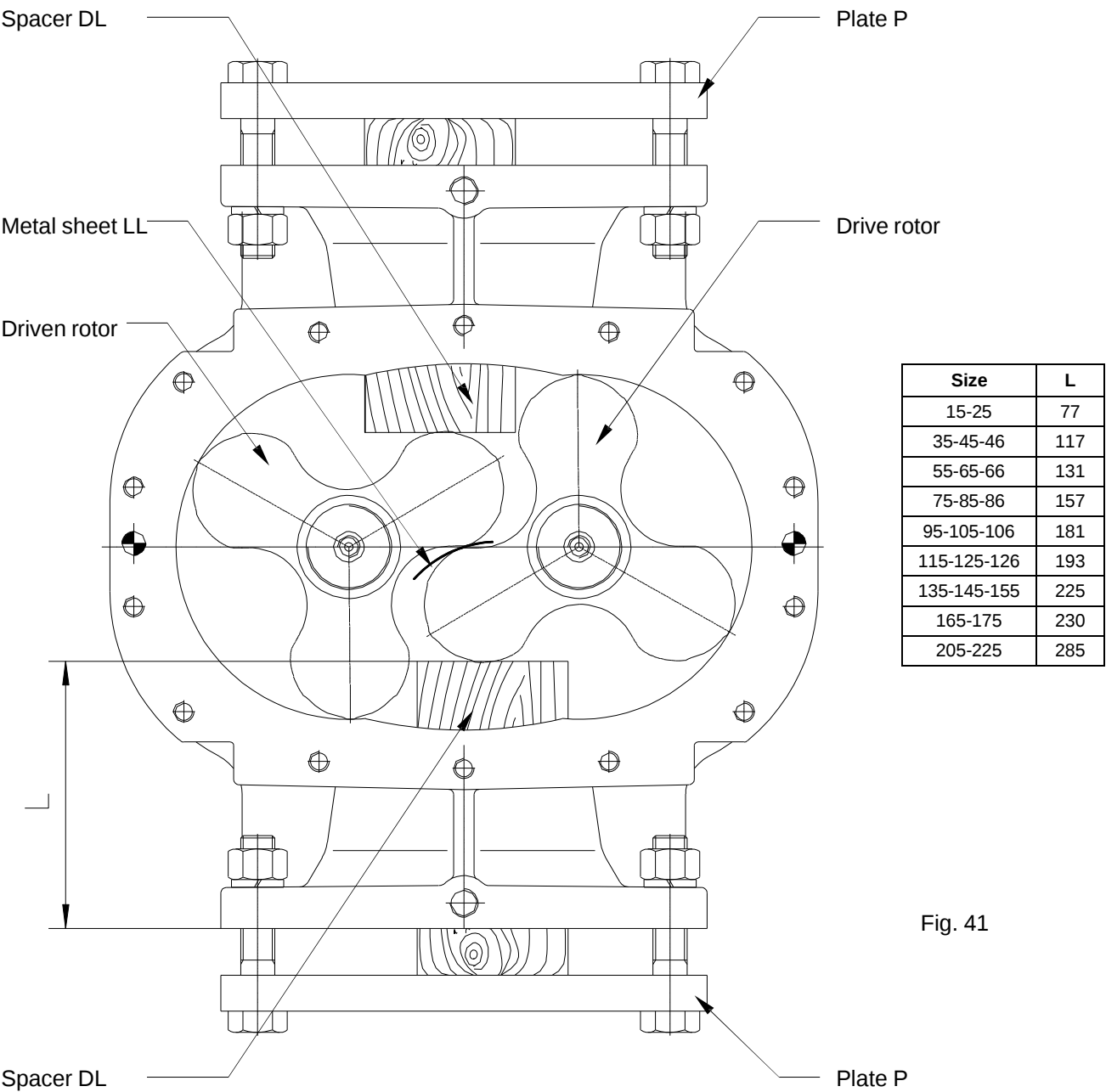


Fig. 41



WARNING: Do not damage the surface of the rotors during this operation

5.6.2 Sizes from 15 to 25

Clean carefully the tapered ends of the shafts

Clean carefully the surface of the tapered holes of the wheels

Insert the toothed wheels onto the shaft and press them slightly by hand

Insert the shims 22A in the original position using the marks made during the blower disassembly

Measure the dimension QI indicated in figure for each toothed wheel, if the rotors or the wheels have not been replaced the dimension must be in the range indicated in the column L of the table 7.6.

If instead the measure is outside the range adjust the shims 22A to restore the correct value

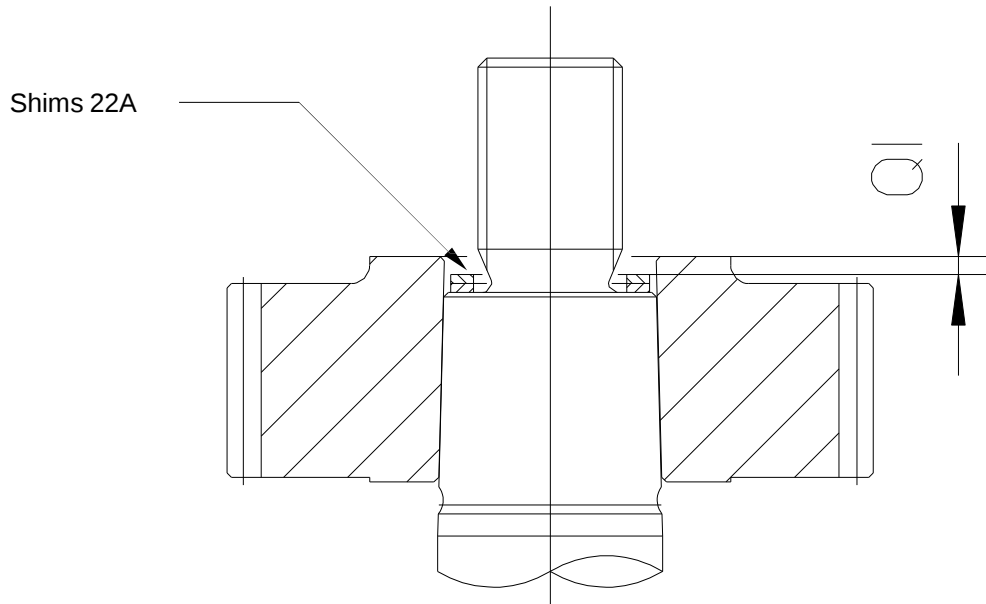


Fig. 42



WARNING: If the gear wheels or the rotors have been replaced calculate the dimension QI from the maximum wedging dimension in the table 7.6

$$QI = L_{max} + 0,5$$

Insert the lubricating disk 16B onto the drive shaft

Insert the thrust washers 311

Approach the two new nuts 26 to the washers 311

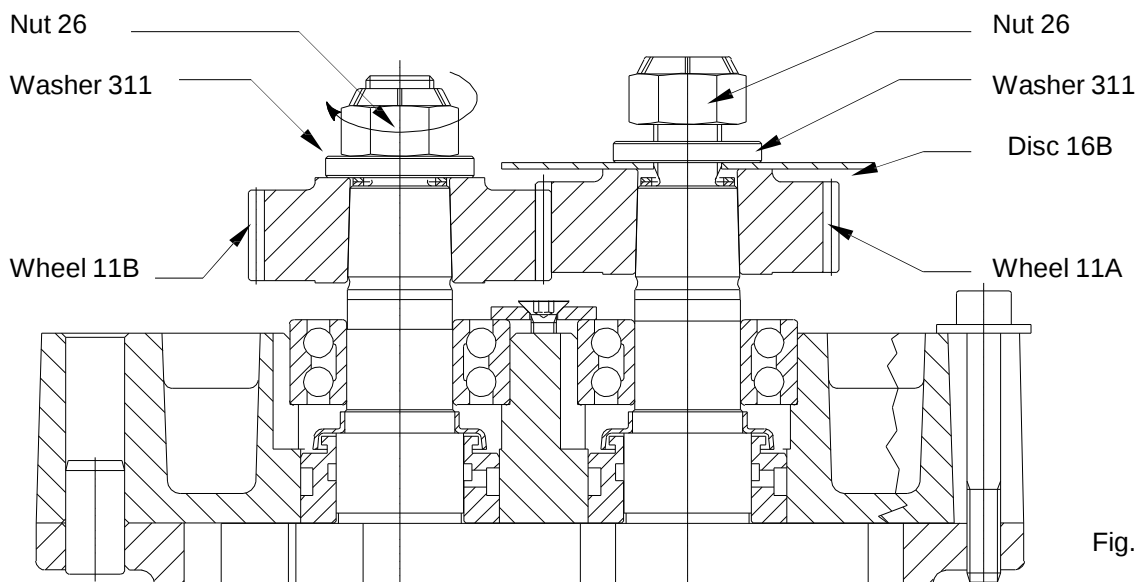


Fig. 43



NOTE: At first fix the nut 26 onto the driven wheel 11B and then the nut 26 onto the driver wheel 11A, using the tightening torque Ms indicated in the table 7.6

Unlock the rotors and extract the metal sheet LL

5.6.3 Sizes from 35 to 225

Clean carefully the tapered ends of the shafts

Clean carefully the surface of the tapered holes of the wheels

Insert the spacers 22 and the shims in the same original position as indicated in figure 44 using the marks made during the blower disassembly

Insert the toothed wheel 11 A onto the drive shaft and the toothed wheel 11B onto the driven shaft using the marks made during the blower disassembly

Set the wheels pressing them slightly by hand

Measure the dimension QI indicated in figure 44 for each toothed wheel, if the rotors, the bearings 33, the spacers 25B, the disks 25B, the oil splash disks Pos. 23B (only from size 135 to 225) and the cover 5B have not been changed the dimension must be in the range indicated in the column L of the table 7.6.

If instead the measure is out of the range or the bearings Pos. 33 or the spacers Pos. 25B or the oil splash disks Pos. 23B (only from size 135 to 225) or the cover 5B have been replaced adjust the shims to restore the correct value

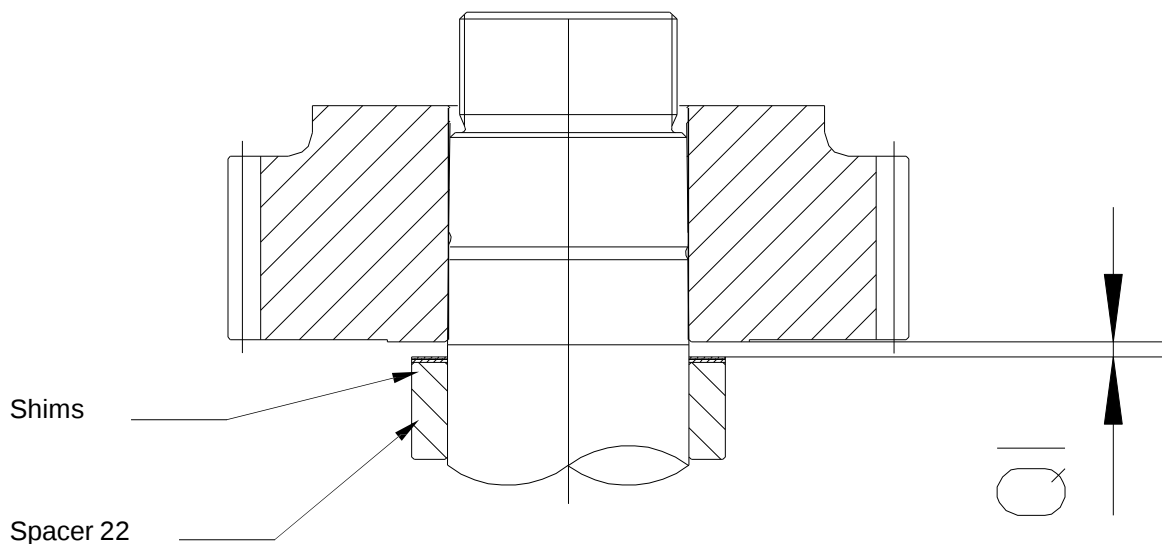


Fig. 44



WARNING: If the gear wheels or the rotors have been replaced calculate the dimension QI from the maximum wedging dimension in the table 7.6

$$QI = L_{max} + 0,5$$

Insert the lubricating disk 16B onto the driver shaft

Insert two new nuts 26 onto the shafts lubricating the matching surfaces of the nuts and of the gear wheels

Approach the nuts 26 to the toothed wheels.

Interpose between the teeth not the wheels a cloth to avoid their rotation



NOTE: At first fix the nut 26 onto the driven wheel 11B and then the nut 26 onto the driver wheel 11A, following the tightening procedure at page 74.

Unlock the rotors and extract the metal sheet LL

Tightening procedure of the nuts 26

Screw the injector or the oil pump to the shaft end using eventually the suitable connecting screws, for the devices see table 7.5, for the connection screws see table 7.6.

Inject oil and screw alternatively the nut 26 until the gear wheel has been tightened to the spacer 22.

The tightening torque M_s of the nuts 26 is indicated in the table 7.6



WARNING: The oil pressure during assembly of the wheels may reach 2200 bar and the incorrect assembly of the injector or of the oil pump may cause serious physical injury owing to jets of oil under pressure

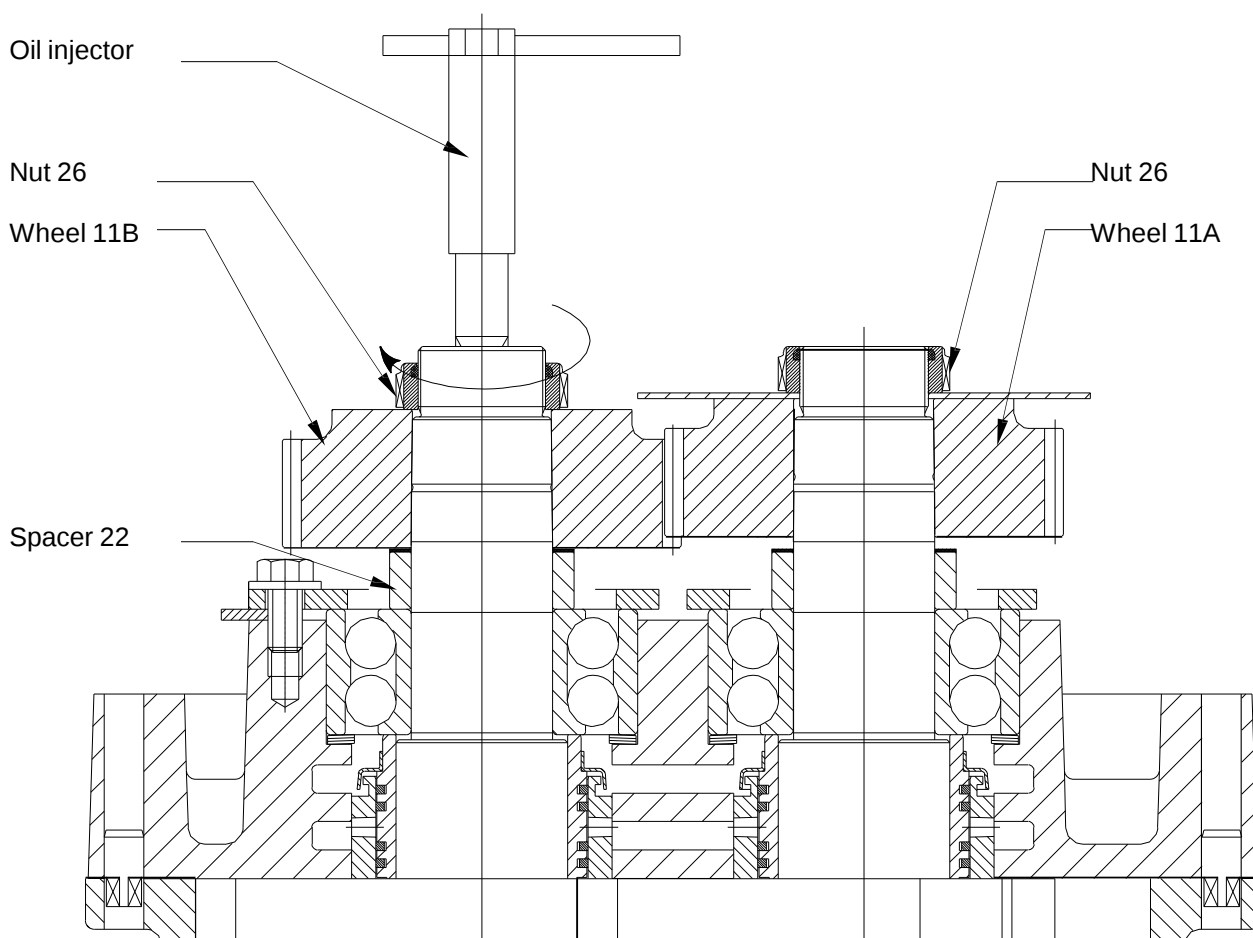


Fig. 45

Release the pressure and drain the oil for at least 1 minute
disassemble the injector or the oil pump

5.7 Final checks

Place the blower onto a horizontal plate and carry out the following check:

- Tightening torque of the screws Pos. 90 fixing the covers and the oil sumps
- Tightening torque of the oil plugs
- Tightening torque of the oil levels
- Shaft rotation free by hand without locks
- Clearances of the blower (use table 264468) compare the recorded values with the 7.4.

If the above checks are negative disassemble the blower to find out the cause, if instead the above checks are positive mount the drive shaft seal

Clean the housing of the seal ring

Oil the external surface and the seal lip of the oil seal ring Pos. 43

Oil the sleeve of the device

Insert the oil seal ring onto the mounting device and approach it to his housing

Insert the oil seal ring into his housing by means a suitable device as indicated in figure, for the dimension of the device see table 7.

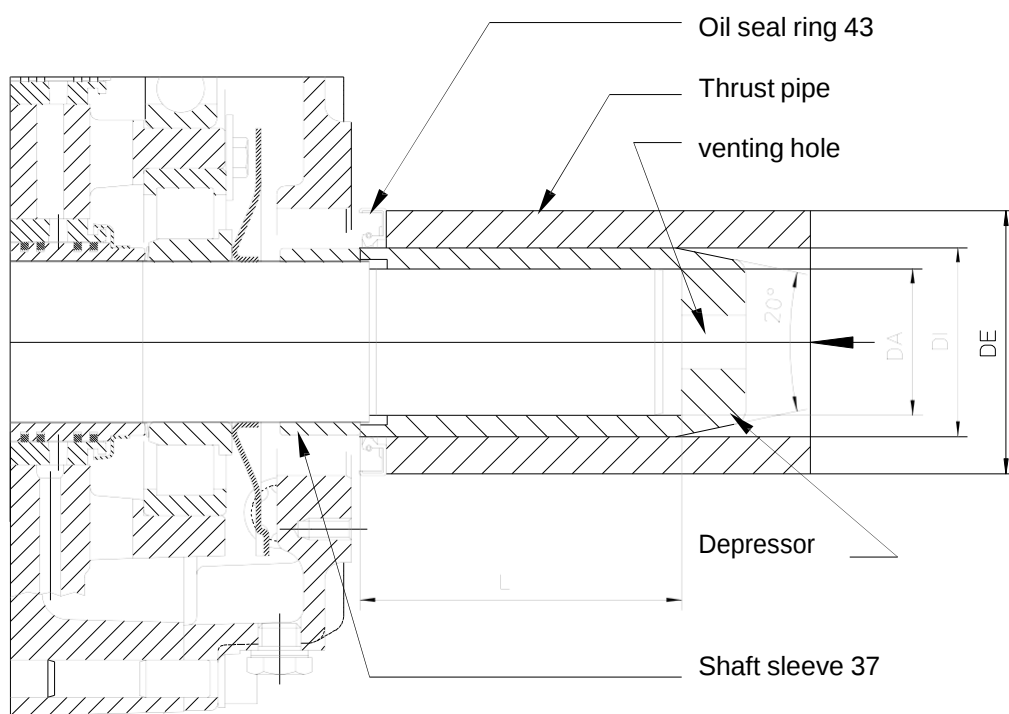


Fig. 46

Size	DE	DI	DA	L
15-25	48	30	24	60
35-45-46	62	45	38	90
55-65-66	80	55	48	120
75-85-86	100	70	55	120
95-105-106	100	80	60	150
115-125-126	110	80	70	150
135-145-155	140	105	85	180
165-175	160	125	100	220
205-225	175	145	120	220



WARNING: During this operation do not damage the lip seal of the oil seal ring Pos. 43

6 INSTALLATION OF THE BLOWER SHEAVE AT THE PLANT

6.1 Assembling of the driving devices

6.1.1 Direct drive coupling

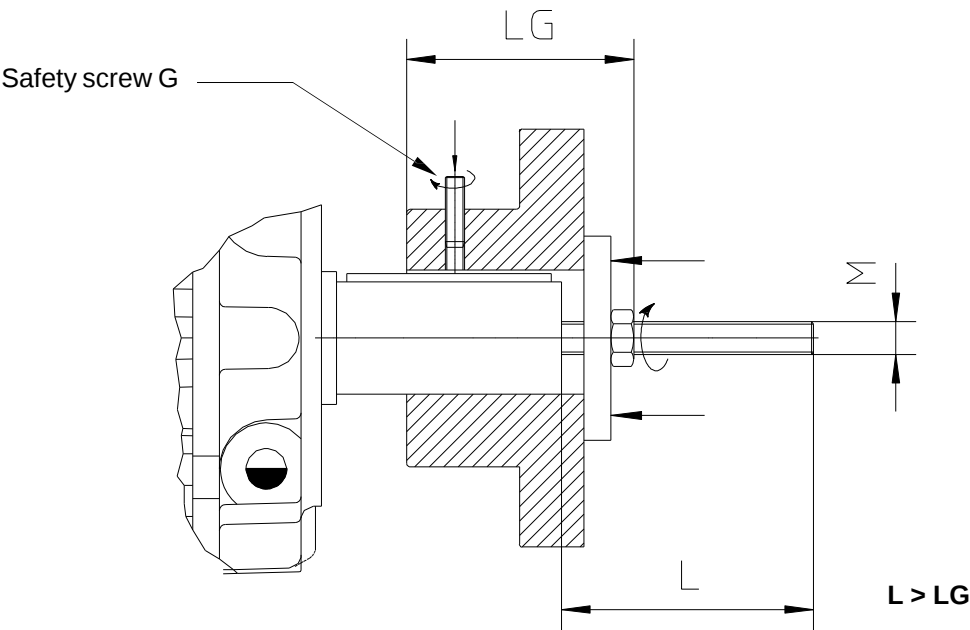
Oil the blower shaft

Insert the key 30

Slide the coupling onto the shaft using a suitable device as indicated in figure



WARNING: Do not use the hammer to introduce the coupling



Size	M
15-25	10
35-45-46	10
55-65-66	12
75-85-86	16
95-105-106	16
115-125-126	20
135-145-155	20
165-175	24
205-225	24

Fig. 47

Fix the safety screw G

6.1.2 V-belt drive coupling

Oil the blower shaft

Insert the key 30

Insert the shaft sleeve of the pulley

Insert the pulley and tight the pulley fixing the screws V as indicated in figure 48



WARNING: Do not use the hammer to introduce the pulley

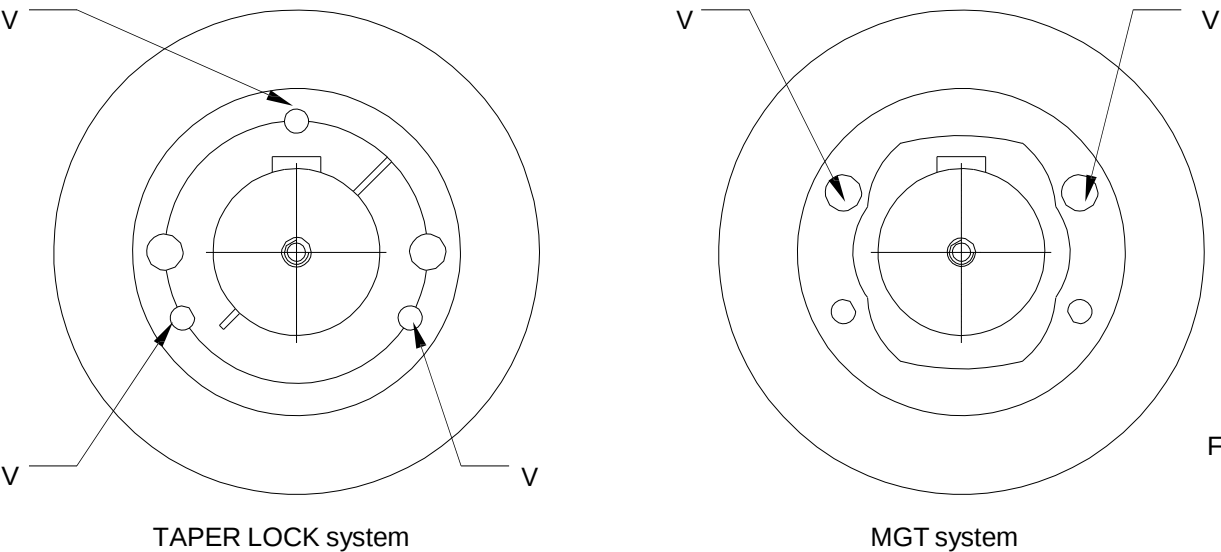


Fig. 48

6.2 Coupling of the blower

6.2.1 Direct drive coupling

Place the blower at the distance S from the motor as indicated in the table below.

Align the shafts of the blower and of the motor by shims under the feet of the motor and/or blower.

Check the alignment by using comparators or gauges with scales as shown in Fig. 49

Coupling diameter	Distance S (mm)	Axial deviation Ka (mm)	Standard deviation	
			Radial Kr (mm)	Angular Kw (mm)
80	3	1	0.13	0.13
100	3	1	0.15	0.15
130	3	1	0.18	0.18
150	3	1	0.21	0.21
160	4	2	0.27	0.27
180	4	2	0.30	0.30
200	4	2	0.34	0.34
225	4	2	0.38	0.38
250	5.5	2.5	0.42	0.42
280	5.5	2.5	0.47	0.47
315	5.5	2.5	0.52	0.52
350	5.5	2.5	0.58	0.58

Alignment check

$$S_{max} < S + K_a$$

$$S_{min} < S - K_a$$

$$K_v = 1.5 \cdot \frac{\text{rpm}}{3000}$$

$$D_r < K_r \times K_v$$

$$D_w < S_{max} - S_{min}$$

$$D_w < K_w \times K_r$$

$$D_r + D_w < K_w \times K_v$$

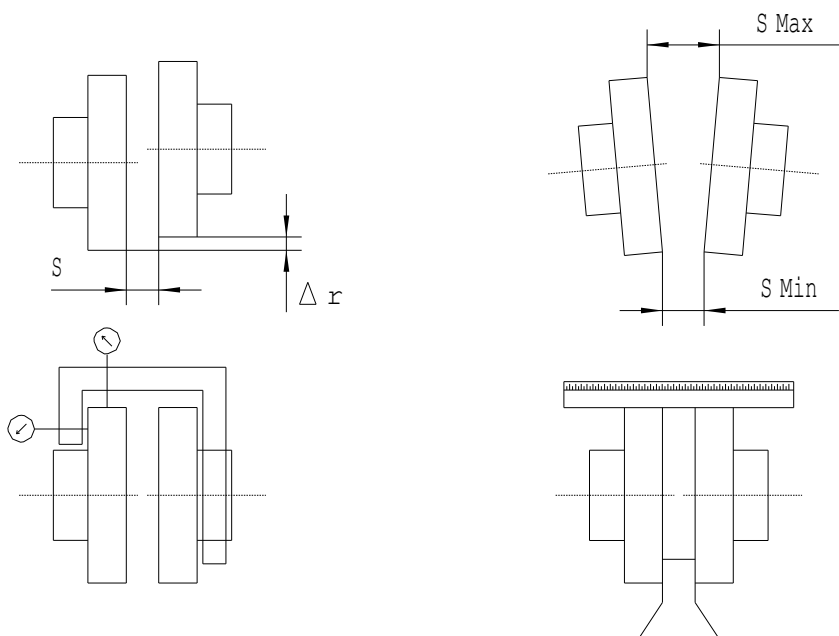


Fig. 49



WARNING: Alignment errors cause premature wearing of the bearings and flexible couplings.

Fix the feet of the blower by means the screws

6.2.2 V-belt drive coupling

Fix the blower to the base frame by means the fixing screws

Approach the electric motor by means of the suitable thrust screws

Install the V-belts

Produce belt tension by using the motor thrust screws in accordance with the values shown in the table

V-belt profile	Force F (daN)	Diameter D of smaller pulley (mm)	Deflection E (mm)
SPZ XPZ	2.5	95 – 125 > 132	1.45 1.30
SPA XPA	5.0	100 – 140 150 – 200 > 224	2.30 2.10 2.00
SPB XPB	7.5	160 – 224 236 – 355 > 375	1.55 1.20 1.10
SPC XPC	12.5	250 – 355 375 - 560	1.80 1.60

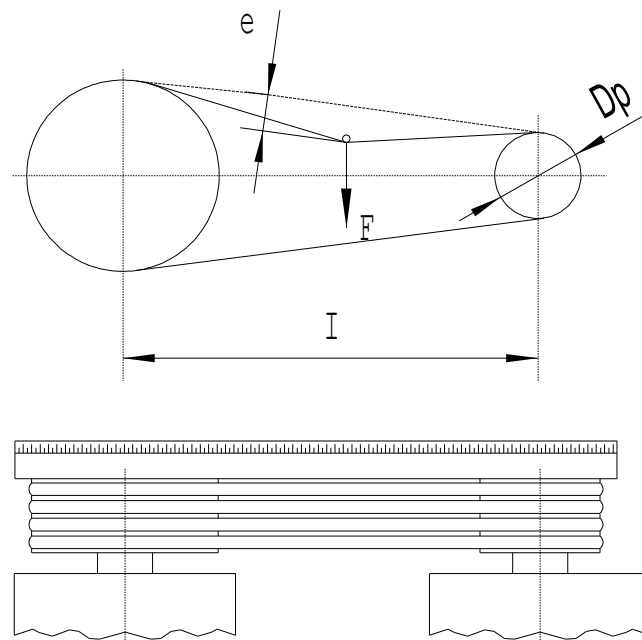


Fig. 50



NOTE: Check the tension of each V-belt, loading the V-belt with the force F indicated in the table the deflection **E** must have the following value

$$e = I \times E / 100$$



WARNING: Excessive belt tension could damage the blower and the motor

During this operation check the alignment of the V-belts using a scale as per figure 50
Fix the feet of the motor



WARNING: Check the V-belt tension after the first 8 hours of operation

6.3 Assembling of the piping

Install the suction and discharge silencers using suitable hoisting devices



WARNING: The silencers with DN higher than 150 weight more than 50 kg.



WARNING: The silencers do not induce loads and/or tension onto the blower nozzles

Install the elastic connectors.

Connect the main piping



WARNING: The suction and discharge pipes do not stress the blower nozzles with their weight or with the thermal expansion.



NOTE: After tightening the flanges of the piping check that the blower rotate easily by hand

Connect the auxiliary pipes

6.4 Putting into operation

Follow the instructions of the Operating and Maintenance instructions manual of the blower

7.1 TECHNICAL TABLES

7.1 Weight of the main components

Blower		Main components					
Size	Blower [kg]	Rotor [kg]	Casing [kg]	Cover [kg]	Sump [kg]	Gear [kg]	Bearing [kg]
15	36	4	9	6	3	5	0,1
25	41	5	12				
35	82	9	25	14	9	2,6	0,5
45	92	11	30				
46	105	15	38				
55	144	18	39	21	12	3	1
65	160	23	44				
66	174	30	52				
75	210	34	58	28	17	5	1,5
85	250	46	83				
86	272	58	92				
95	410	44	95	48	30	9	2,5
105	495	50	136				
106	590	61	160				
115	540	108	134	68	39	17	4
125	605	125	172				
126	670	165	230				
135	910	178	233	102	74	32	10
145	1040	226	305				
155	1180	264	365				
165	1790	340	436	195	132	65	10
175	1890	408	550				
205	2870	585	680	310	182	110	17
225	3270	755	942				

7.2 Bearings

Blower	Bearings		
	Pos. 31	Pos. 32	Pos. 33
15 25	NJ 205 E	6304-C3	3205-C3
35 45 46	NJ 2208	6207-C3	3207-C3
55 65 66	NJ 310 E	6308-C3	3309-C3
75 85 86	NJ 312 E	6310-C3	3310-C3
95 105 106	NJ 314 E	6312-C3	3312-C3
115 125 126	22316	6314-C3	22314
135 145 155	22319	6317-C3	22317
165 175	23222	22319	22319
205 225	23226	22226	22322

7.3 Tightening torques

7.3.1 Screws and nuts

<i>Blower</i>	<i>Tightening torque</i> [Nm]							
	<i>Nut</i>	<i>Screw</i>						
	Pos. 27A	Pos. 27B	Pos. 83	Pos. 84	Pos. 90	Pos. 92A	Pos. 403	Pos. 407
15-25	-	50	-	10	25	-	25	-
35-45-46	-	50	-	25	50	50	50	25
55-65-66	-	50	-	25	50	50	50	25
75-85-86	-	80	-	86	86	-	86	25
95-105-106	-	80	-	86	137	137	86	25
115-125-126	-	110	-	86	137	-	137	25
135-145-155	450	120	137	86	214	214	214	-
165-175	550	550	137	86	432	432	-	-
205-225	650	650	214	86	744	-	-	-

7.3.2 Plugs and sight glasses

<i>Blower</i>	<i>Tightening torque</i> [Nm]							
	Pos. 72	Pos. 73	Pos. 75	Pos. 75C	Pos. 76	Pos. 77	Pos. 78	Pos. 79
15-25	20	-	30	30	20	20	30	15
35-45-46	20	15	-	-	30	20	30	30
55-65-66	20	15	-	-	30	20	30	30
75-85-86	20	15	-	-	45	20	45	45
95-105-106	20	15	-	-	45	30	45	45
115-125-126	20	15	-	-	30	30	60	-
135-145-155	20	15	-	-	30	30	60	-
165-175	20	15	-	-	60	60	90	-
205-225	20	15	-	-	60	60	90	-

7.4 Clearances

Blower	Rotor Cover 5A	Rotor Cover 5B	Rotor / Casing		Rotor / Rotor		Gear
			Inlet side	Outlet side	Inlet side	Outlet side	
15	17-25	8-10	10-16	6-8	18-24	12-15	4-7
25							
35	17-24	8-12	14-18	6-10	22-27	12-18	5-8
45							
46	16-26						
55	18-26	8-12	18-22	6-12	25-35	13-18	5-8
65							
66	25-30						
75	26-30	12-16	27-35	8-15	30-38	15-22	5-9
85							
86	34-40						
95	35-40	14-18	28-35	8-15	35-42	15-24	5-9
105							
106							
115	45-50	22-27	40-50	12-21	42-48	19-25	5-9
125							
126	50-55						
135	60-75	35-45	45-55	18-28	45-64	25-36	5-9
145							
155							
165	70-80	40-50	70-80	20-30	73-80	35-40	12-16
175							
205	80-100	50-60	80-90	25-35	85-90	40-50	12-16
225							

NOTE

Clearances expressed in 1/100 mm

Clearances measured according to table

264468 at page 85 Rotor/casing

clearance measured with vertical shaft

end Rotor/casing clearance measured

rotating the shaft in the operating

direction and recovering the gear

clearance Rotor/rotor inlet side

clearance measured in the positions

2,6,10 of the table 264468

Rotor/rotor outlet side clearance

measured in the positions 4,8,12 of the

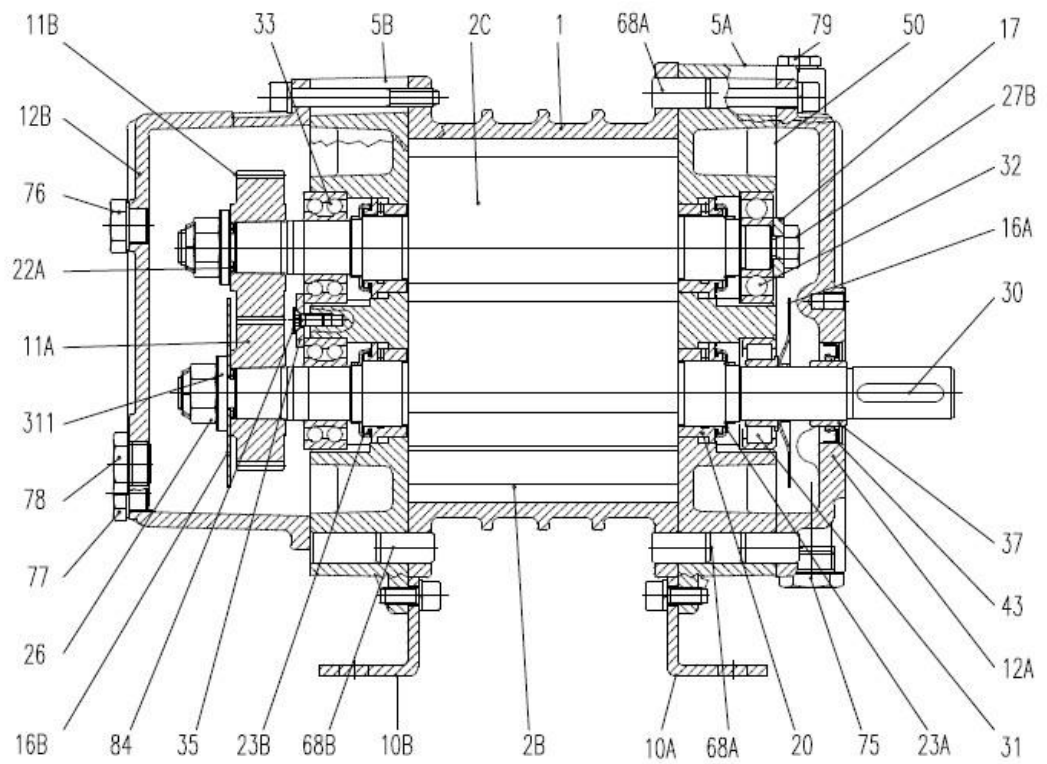
table 264468

7.6 References for gear tightening

Blower	L Wedging		Ms Tightening torque for the nut ring 26			Oil injection connection
	Min [mm]	Max [mm]	Type of nut	Ms [Nm]	Tolerance [Nm]	
15-25	0,90	1,10	M 16 X 2	100	0 +10	-
35-45-46	3,40	3,50	GUP 30 X 1,5	300	0 +10	G 1/4
55-65-66	3,65	3,75	GUP 40 X 1,5	600	0 +15	G 1/4
75-85-86	4,10	4,60	GUP 45 X 1,5	800	0 +20	G 1/4
95-105-106	5,30	5,40	GUP 55 X 2,0	1200	0 +30	G 3/8
115-125-126	5,80	5,90	GUP 65 X 2,0	1500	0 +35	G 3/4
135-145-155	7,20	7,30	GUP 75 X 2,0	2000	0 +50	G 3/4
165-175	8,05	8,15	GUP 85 X 2,0	2900	0 +75	G 3/4
205-225	9,40	9,50	GUP 100 X 2,0	4500	0 +100	G 3/4

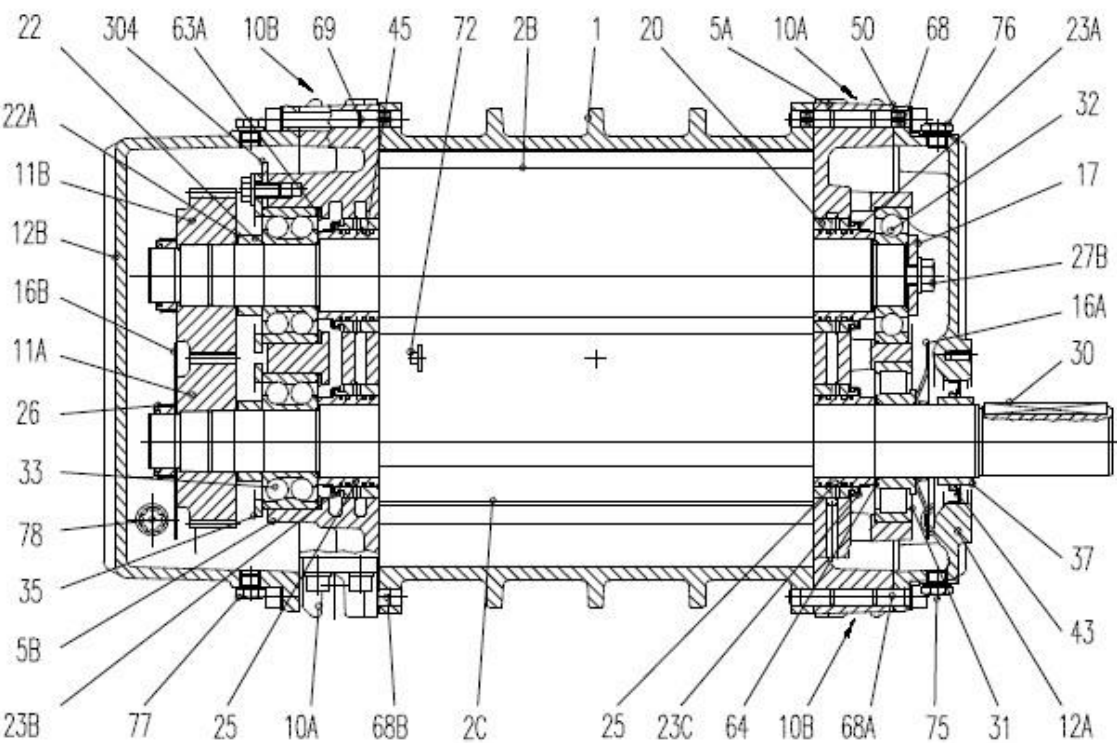
Section 8 Parts Lists

8.1 RBS 15-25 Sectional drawing, **FIGURE 8-3**



Item	Description	Qty	RBS 15	RBS 25
			Part Number	Part Number
1	CASING.....	1	RB3204510301	RB3204520301
2B	ROTOR INTEGRAL P.	1	RB3195680305	RB3195700305
2C	ROTOR INTEGRAL S.	1	RB3195690305	RB3195710305
5A	COVER.....	1	RB3215430301	RB3215430301
5B	COVER.....	1	RB3215430301	RB3215430301
11A	DRIVE GEAR.....	1	RB3117540108	RB3117540108
11B	DRIVE GEAR.....	1	RB3117540108	RB3117540108
12A	OIL SUMP D.E.	1	RB3167140301	RB3167140301
12B	BELT GUARD	1	RB3312160301	RB3312160301
16A	LUBRICATING DISK - DRIVE.....	1	RB3152011203	RB3152011203
16B	LUBRICATING DISK - DRIVEN.....	1	RB3125791203	RB3125791203
17	BEARING LOCK DISK.....	1	RB3152701240	RB3152701240
20	SEALING CHAMBER	4	RB3209830310	RB3209830310
23A	OIL SPLASH DISK.....	2	RB3195721204	RB3195721204
23B	OIL SPLASH DISK.....	2	RB3195721204	RB3195721204
26	NUT M16	2	RB1595600172	RB1595600172
27B	SCREW TE 10X025	1	RB1525000116	RB1525000116
30	KEY 'A'.....	1	RB1805510124	RB1805510124
31	BEARING	1	RB3000440100	RB3000440100
32	BEARING	1	RB1502100100	RB1502100100
33	BEARING	2	RB3000460100	RB3000460100
35	BEARING PLATE.....	1	RB3152070100	RB3152070100
35B	SHAFT PROTECTION	1	RB3158871051	RB3158871051
37	INTERNAL RING	1	RB2022930100	RB2022930100
43	SEAL RING	1	RB3008480954	RB3008480954
50	GASKET	2	RB3159671005	RB3159671005
68A	PIN.....	4	RB3140070124	RB3140070124
68B	PIN.....	2	RB3140070124	RB3140070124
72	PLUG	2	RB1530000309	RB1530000309
75	PLUG	1	RB2035391006	RB2035391006
75C	PLUG	1	RB1518700901	RB1518700901
76	PLUG	1	RB1519000901	RB1519000901
77	PLUG	1	RB1519700901	RB1519700901
78	PLUG	1	RB2035391006	RB2035391006
79	PLUG	2	RB2022880901	RB2022880901

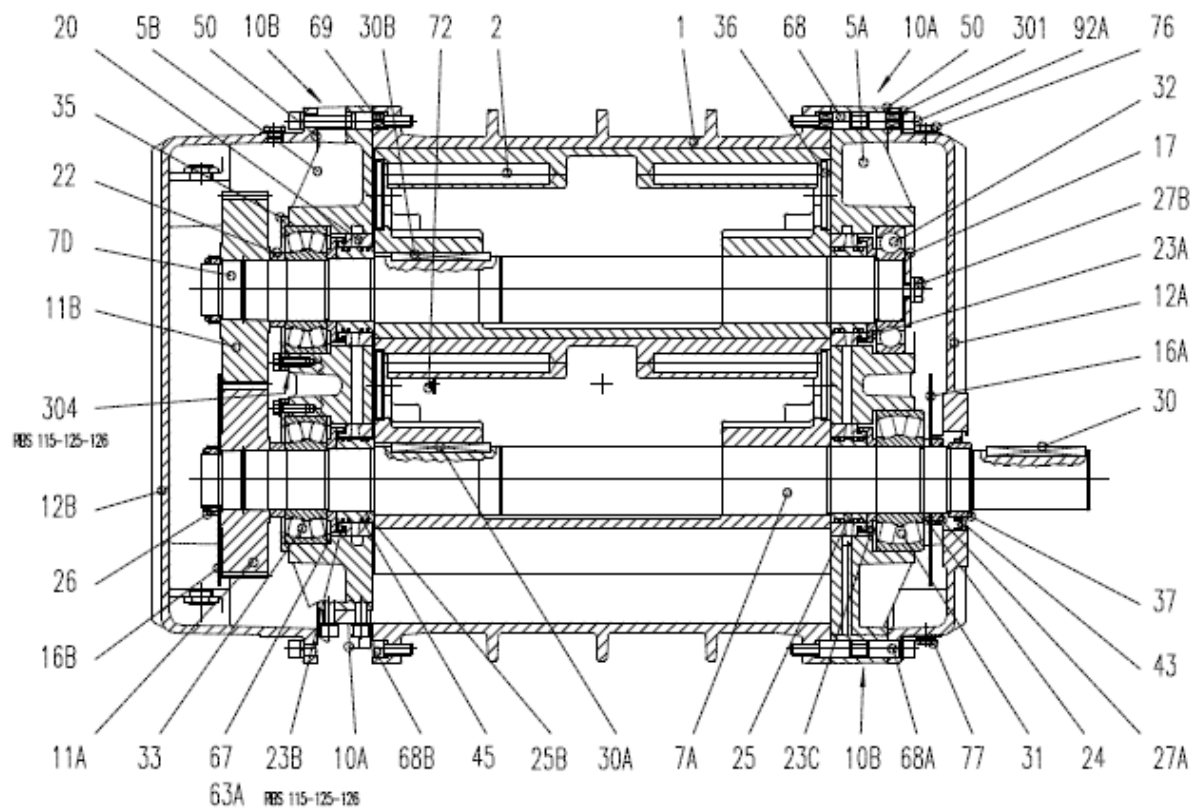
8.2 8.2 RBS 35-106 Sectional drawing, FIGURE 8-2



Item	Description	Qty	RBS 35	RBS 45	RBS 46	RBS 55	RBS 65	RBS 66
			Part Number	Part Number	Part Number	Part Number	Part Number	Part Number
1	CASING RBS	1	RB3175780301	RB3210300301	RB3210310301	RB3166260301	RB3181710301	RB3181720301
2	SHAFT+ROTOR	1	RB3202400305	RB3202420305	RB3202440305	RB3263010305	RB3263030305	RB3263050305
2	SHAFT+ROTOR S.	1	RB3202390305	RB3202410305	RB3202430305	RB3263020305	RB3263040305	RB3263060305
5A	COVER DRIVE SIDE.....	1	RB3202130301	RB3202130301	RB3202130301	RB3188600301	RB3188600301	RB3188600301
5B	COVER DRIVEN SIDE	1	RB3123660301	RB3123660301	RB3123660301	RB3188610301	RB3188610301	RB3188610301
11A	DRIVING GEAR.....	1	RB3176720108	RB3176720108	RB3176720108	RB3182550108	RB3182550108	RB3182550108
11B	DRIVEN GEAR.....	1	RB3176730108	RB3176730108	RB3176730108	RB3182560108	RB3182560108	RB3182560108
12A	OIL SUMP D.E.	1	RB3202330301	RB3202330301	RB3202330301	RB3188620301	RB3188620301	RB3188620301
12B	BELT GUARD LATO ING.....	1	RB3312170301	RB3312170301	RB3312170301	RB3312180301	RB3312180301	RB3312180301
16A	LUBRICATING DISK - DRIVE.....	1	RB3199401203	RB3199401203	RB3199401203	RB3186521203	RB3186521203	RB3186521203
16B	LUBRICATING DISK - DRIVEN.....	1	RB3135821203	RB3135821203	RB3135821203	RB3182591203	RB3182591203	RB3182591203
17	BEARING LOCK DISK.....	1	RB3050770109	RB3050770109	RB3050770109	RB3192730100	RB3192730100	RB3192730100
20	SEALING CHAMBER.....	4	RB3077670318	RB3077670318	RB3077670318	RB3077680318	RB3077680318	RB3077680318
22	GEAR SPACER.....	2	RB3135830157	RB3135830157	RB3135830157	RB3182640157	RB3182640157	RB3182640157
23A	OIL SPLASH DISK.....	1	RB3050791204	RB3050791204	RB3050791204	RB3051201204	RB3051201204	RB3051201204
23B	OIL SPLASH DISK.....	2	RB3050791204	RB3050791204	RB3050791204	RB3051201204	RB3051201204	RB3051201204
23C	OIL SPLASH DISK.....	1	RB3050791204	RB3050791204	RB3050791204	RB3051201204	RB3051201204	RB3051201204
25	SEALING SPACER.....	2	RB3202501252	RB3202501252	RB3202501252	RB3262480310	RB3262480310	RB3262480310
26	LOCK NUT.....	2	RB3005420125	RB3005420125	RB3005420125	RB1506000125	RB1506000125	RB1506000125
27B	SCREW TE.....	1	RB1524400116	RB1524400116	RB1524400116	RB1526900116	RB1526900116	RB1526900116
30	KEY 'A'	1	RB1529100124	RB1529100124	RB1529100124	RB1529300124	RB1529300124	RB1529300124
31	BEARING	1	RB2041610100	RB2041610100	RB2041610100	RB2035190100	RB2035190100	RB2035190100
32	BEARING	1	RB1503000100	RB1503000100	RB1503000100	RB1502400100	RB1502400100	RB1502400100
33	BEARING	2	RB2046180100	RB2046180100	RB2046180100	RB1504400100	RB1504400100	RB1504400100
35	BEARING	2	RB3098000141	RB3098000141	RB3098000141	RB3183150141	RB3183150141	RB3183150141
35B	SHAFT PROTECTION	1	RB3202071051	RB3202071051	RB3202071051	RB3183401051	RB3183401051	RB3183401051
37	INTERNAL RING	1	RB2038620100	RB2038620100	RB2038620100	RB2033490100	RB2033490100	RB2033490100
43	SEAL RING.....	1	RB1987640954	RB1987640954	RB1987640954	RB1978220954	RB1978220954	RB1978220954
45	FLEXIBLE RING.....	16	RB1516100308	RB1516100308	RB1516100308	RB1516200308	RB1516200308	RB1516200308
50	GASKET	2	RB1964741005	RB1964741005	RB1964741005	RB1978031005	RB1978031005	RB1978031005
63A	COMP. RING	8	RB1993790145	RB1993790145	RB1993790145	RB1993800145	RB1993800145	RB1993800145
64	COMP. RING	1	RB2038630145	RB2038630145	RB2038630145	RB2012570145	RB2012570145	RB2012570145
68A	PIN.....	2	RB3098080124	RB3098080124	RB3098080124	RB3098080124	RB3098080124	RB3098080124
68B	PIN.....	1	RB3098080124	RB3098080124	RB3098080124	RB3098080124	RB3098080124	RB3098080124
72	PLUG	2	RB1530000309	RB1530000309	RB1530000309	RB1530000309	RB1530000309	RB1530000309
75	PLUG	2	RB2035010901	RB2035010901	RB2035010901	RB2035010901	RB2035010901	RB2035010901
76	PLUG	2	RB1518700901	RB1518700901	RB1518700901	RB1518700901	RB1518700901	RB1518700901
77	PLUG	4	RB1519700901	RB1519700901	RB1519700901	RB1519800901	RB1519800901	RB1519800901
78	PLUG	4	RB2035391006	RB2035391006	RB2035391006	RB2035391006	RB2035391006	RB2035391006
79	PLUG	2	RB2009420901	RB2009420901	RB2009420901			

Item	Description	Qty	RBS 75 Part Number	RBS 85 Part Number	RBS 86 Part Number	RBS 95 Part Number	RBS 105 Part Number	RBS 106 Part Number
1	CASING	1	RB3272480301	RB3181510301	RB3181520301	RB3128190301	RB3206470301	RB3206480301
2	SHAFT+ROTOR P.....	1	RB3181240305	RB3181260305	RB3181280305	RB3206490305	RB3206510305	RB3206530305
2	SHAFT+ROTOR S.	1	RB3181230305	RB3181250305	RB3181270305	RB3206500305	RB3206520305	RB3206540305
5A	COVER DRIVE SIDE /SP	1	RB3188630301	RB3188630301	RB3188630301	RB3206440301	RB3206440301	RB3206440301
5B	COVER DRIVEN SIDE /SP	1	RB3188640301	RB3188640301	RB3188640301	RB3206460301	RB3206460301	RB3206460301
11A	DRIVING GEAR.....	1	RB3182570108	RB3182570108	RB3182570108	RB3206310108	RB3206310108	RB3206310108
11B	DRIVEN GEAR.....	1	RB3182580108	RB3182580108	RB3182580108	RB3206320108	RB3206320108	RB3206320108
12A	OIL SUMP D.E. /SP.....	1	RB3188650301	RB3188650301	RB3188650301	RB3206420301	RB3206420301	RB3206420301
12B	BELT GUARD LATO ING./SP	1	RB3312190301	RB3312190301	RB3312190301	RB3312200301	RB3312200301	RB3312200301
16A	LUBRICATING DISK - DRIVE.....	1	RB3183421203	RB3183421203	RB3183421203	RB3205951203	RB3205951203	RB3205951203
16B	LUBRICATING DISK - DRIVEN.....	1	RB3182601203	RB3182601203	RB3182601203	RB3206351203	RB3206351203	RB3206351203
17	BEARING LOCK DISK.....	1	RB3182630109	RB3182630109	RB3182630109	RB3206360109	RB3206360109	RB3206360109
20	SEALING CHAMBER	4	RB3077690318	RB3077690318	RB3077690318	RB3205880318	RB3205880318	RB3205880318
22	GEAR SPACER.....	2	RB3182650157	RB3182650157	RB3182650157	RB3206340157	RB3206340157	RB3206340157
23A	OIL SPLASH DISK.....	1	RB3052241204	RB3052241204	RB3052241204	RB3205911204	RB3205911204	RB3205911204
23B	OIL SPLASH DISK.....	2	RB3052241204	RB3052241204	RB3052241204	RB3205911204	RB3205911204	RB3205911204
23C	OIL SPLASH DISK.....	1	RB3052241204	RB3052241204	RB3052241204	RB3205911204	RB3205911204	RB3205911204
25	SEALING SPACER.....	2	RB3182670310	RB3182670310	RB3182670310	RB3253100301	RB3253100301	RB3253100301
26	LOCK NUT	2	RB1937640125	RB1937640125	RB1937640125	RB1506300125	RB1506300125	RB1506300125
27B	SCREW TE	1	RB1524600116	RB1524600116	RB1524600116	RB1524600116	RB1524600116	RB1524600116
30	KEY 'A'	1	RB1529400124	RB1529400124	RB1529400124	RB1805490124	RB1805490124	RB1805490124
31	BEARING	1	RB2077930100	RB2077930100	RB2077930100	RB2077950100	RB2077950100	RB2077950100
32	BEARING	1	RB2032920100	RB2032920100	RB2032920100	RB1503200100	RB1503200100	RB1503200100
33	BEARING	2	RB2032930100	RB2032930100	RB2032930100	RB1505000100	RB1505000100	RB1505000100
35	BEARING COVER.....	2	RB3183160141	RB3183160141	RB3183160141	RB3206330141	RB3206330141	RB3206330141
35B	SHAFT PROTECTION	1	RB3183411051	RB3183411051	RB3183411051	RB3206371051	RB3206371051	RB3206371051
37	INTERNAL RING JR.....	1	RB2033500100	RB2033500100	RB2033500100	RB3256110100	RB3256110100	RB3256110100
43	SEAL RING.....	1	RB2033510954	RB2033510954	RB2033510954	RB1891180954	RB1891180954	RB1891180954
45	FLEXIBLE RING	16	RB1516300308	RB1516300308	RB1516300308	RB3253090308	RB3253090308	RB3253090308
50	GASKET	2	RB1937601005	RB1937601005	RB1937601005	RB2200241005	RB2200241005	RB2200241005
63A	COMP. RING	8	RB2018270145	RB2018270145	RB2018270145	RB2309610145	RB2309610145	RB2309610145
64	COMP. RING.....	1	RB2033520145	RB2033520145	RB2033520145	RB2012330145	RB2012330145	RB2012330145
68	PIN.....	2	RB3140060124	RB3140060124	RB3140060124	RB3128490124	RB3128490124	RB3128490124
68A	PIN.....	2	RB3140070124	RB3140070124	RB3140070124	RB3119740124	RB3119740124	RB3119740124
68B	PIN.....	1	RB3140070124	RB3140070124	RB3140070124	RB3119740124	RB3119740124	RB3119740124
69	PIN.....	1	RB3140060124	RB3140060124	RB3140060124	RB3128490124	RB3128490124	RB3128490124
72	PLUG	2	RB1530000309	RB1530000309	RB1530000309	RB1530000309	RB1530000309	RB1530000309
76	PLUG	2	RB2011510901	RB2011510901	RB2011510901	RB2011510901	RB2011510901	RB2011510901
77	PLUG	4	RB2054010901	RB2054010901	RB2054010901	RB1519800901	RB1519800901	RB1519800901
77A	PLUG	2	RB1519700901	RB1519700901	RB1519700901	RB2054010901	RB2054010901	RB2054010901
78	PLUG	4	RB1519301006	RB1519301006	RB1519301006	RB1519301006	RB1519301006	RB1519301006
79	PLUG	2	RB2011300901	RB2011300901	RB2011300901	RB2011300901	RB2011300901	RB2011300901

8.2 RBS 115-225 Sectional drawing, FIGURE 8-3



Item	Description	Qty	RBS 115	RBS 125	RBS 135	RBS 145
			Part Number	RB3191850301	RB3166290301	RB3194560301
1	CASING	1	RB3129280301	RBAR318618000	RBAR3186380001	RBAR3186400001
2	SHAFT+ROTOR P.	1	RBAR318616000	RBAR318619000	RBAR3186390001	RBAR3186410001
5A	COVER DRIVE SIDE	1	RB3186740301	RB3186740301	RB3186770301	RB3186770301
5B	COVER DRIVEN SIDE	1	RB3163020301	RB3163020301	RB3186780301	RB3186780301
11A	DRIVING GEAR.....	1	RB3176800108	RB3176800108	RB3186470108	RB3186470108
11B	DRIVEN GEAR.....	1	RB3176810108	RB3176810108	RB3186480108	RB3186480108
12A	OIL SUMP D.E.	1	RB3186750301	RB3186750301	RB3312250301	RB3312250301
12B	BELT GUARD LATO ING.....	1	RB3312210301	RB3312210301	RB3312220301	RB3312220301
16A	LUBRICATING DISK - DRIVE.....	1	RB3186271203	RB3186271203	RB2001781203	RB2001781203
16B	LUBRICATING DISK - DRIVEN.....	1	RB1311101203	RB1311101203	RB1403301203	RB1403301203
17	BEARING LOCK DISK.....	1	RB3092870109	RB3092870109	RB3135300109	RB3135300109
20	SEALING CHAMBER	4	RB2000600318	RB2000600318	RB3189300318	RB3189300318
22	GEAR SPACER.....	2	RB3126420157	RB3126420157	RB3135290157	RB3135290157
23A	OIL SPLASH DISK.....	1	RB3092861204	RB3092861204	RB3198661204	RB3198661204
23B	OIL SPLASH DISK.....	2	RB3092861204	RB3092861204	RB3198661204	RB3198661204
23C	OIL SPLASH DISK.....	1	RB3092861204	RB3092861204	RB3198661204	RB3198661204
24	SPACER - LUBRICATING DISK.....	1	RB3186280157	RB3186280157	RB3014790157	RB3014790157
25	SEALING SPACER.....	2	RB3250850301	RB3250850301	RB3203150301	RB3203150301
25B	SEALING SPACER L.I.	2	RB3250860301	RB3250860301	RB3203160301	RB3203160301
26	LOCK NUT	2	RB1507400125	RB1507400125	RB1507000125	RB1507000125
27A	LOCK NUT	1	RB1982930125	RB1982930125	RB2034020125	RB2034020125
27B	SCREW TE	1	RB1998670116	RB1998670116	RB1998670116	RB1998670116
30	KEY 'A'	1	RB1920210124	RB1920210124	RB1501000124	RB1501000124
31	BEARING	1	RB1830760100	RB1830760100	RB1504000100	RB1504000100
32	BEARING	1	RB1918970100	RB1918970100	RB3005370100	RB3005370100
33	BEARING	2	RB1504600100	RB1504600100	RB1504700100	RB1504700100
35	BEARING	2	RB3126440301	RB3126440301	RB3179310301	RB3179310301
35B	SHAFT PROTECTION	1	RB3124151051	RB3124151051	RB3124161051	RB3124161051
36	ROTOR CAP.....	12	RB3229821205	RB3229821205	RB3150441205	RB3150441205
37	INTERNAL RING	1	RB3256270100	RB3256270100	RB3256280100	RB3256280100
43	SEAL RING	1	RB1628200954	RB1628200954	RB1498300954	RB1498300954
45	FLEXIBLE RING	16	RB3250840308	RB3250840308	RB1516600308	RB1516600308
50	GASKET	2	RB2300261005	RB2300261005	RB2300951005	RB2300951005
63A	COMP. RING	8	RB2018570145	RB2018570145	RB3186490100	RB3186490100
68	PIN.....	2	RB3128490124	RB3128490124	RB3125290124	RB3125290124
69	PIN.....	1	RB3128490124	RB3128490124	RB3125290124	RB3125290124
72	PLUG	2	RB1530000309	RB1530000309	RB1530000309	RB1530000309
76	PLUG	2	RB1518900901	RB1518900901	RB1518900901	RB1518900901
77	PLUG	4	RB1519800901	RB1519800901	RB1519800901	RB1519800901
78	PLUG	4	RB1519401006	RB1519401006	RB1519401006	RB1519401006
79	PLUG	2	RB2026730901	RB2026730901	RB2026730901	RB2026730901

Item	Description	Qty	RBS 155	RBS 165	RBS 175	RBS 205	RBS 225
			RB3194570301	RB3163390301	RB3242100301	RB3255340301	RB3312310301
1	CASING	1	RBAR3186420001	RBAR3245220001	RBAR3245240001	RBAR3245260001	RBAR3245280001
2	SHAFT+ROTOR P.	1	RBAR3186430001	RBAR3245230001	RBAR3245250001	RBAR3245270001	RBAR3245290001
5A	COVER DRIVE SIDE	1	RB3186770301	RB3188960301	RB3188960301	RB3206850301	RB3206850301
5B	COVER DRIVEN SIDE	1	RB3186780301	RB3188970301	RB3188970301	RB3206860301	RB3206860301
11A	DRIVING GEAR.....	1	RB3186470108	RB3189240108	RB3189240108	RB3207210108	RB3207210108
11B	DRIVEN GEAR.....	1	RB3186480108	RB3189250108	RB3189250108	RB3207220108	RB3207220108
12A	OIL SUMP D.E.	1	RB3312250301	RB3312260301	RB3312260301	RB3312270301	RB3312270301
12B	BELT GUARD LATO ING.....	1	RB3312220301	RB3312230301	RB3312230301	RB3312240301	RB3312240301
16A	LUBRICATING DISK - DRIVE.....	1	RB2001781203	RB2202540955	RB2202540955	RB2201020955	RB2201020955
16B	LUBRICATING DISK - DRIVEN...	1	RB1403301203	RB3140470955	RB3140470955	RB3150090955	RB3150090955
17	BEARING LOCK DISK.....	1	RB3135300109	RB3189170318	RB3189170318	RB3206660318	RB3206660318
20	SEALING CHAMBER	4	RB3189300318	RB3140500157	RB3140500157	RB3150070157	RB3150070157
22	GEAR SPACER.....	2	RB3135290157	RB2200690955	RB2200690955	RB2200870955	RB2200870955
23A	OIL SPLASH DISK.....	1	RB3198661204	RB2200690955	RB2200690955	RB2200860955	RB2200860955
23B	OIL SPLASH DISK.....	2	RB3198661204	RB2200680955	RB2200680955	RB2200870955	RB2200870955
23C	OIL SPLASH DISK.....	1	RB3198661204	RB3014790157	RB3014790157	RB3150460109	RB3150460109
24A	SPACER - LUBRICATING DISK...	1				RB2001710157	RB2001710157
24	SPACER - LUBRICATING DISK...	1	RB3014790157	RB3245160301	RB3245160301	RB3245170301	RB3245170301
25	SEALING SPACER.....	2	RB3203150301	RB3245390301	RB3245390301	RB3245400301	RB3245400301
25B	SEALING SPACER L.I.	2	RB3203160301	RB3005950125	RB3005950125	RB2022590125	RB2022590125
26	LOCK NUT	2	RB1507000125	RB1507300100	RB1507300100	RB1981830100	RB1981830100
27A	LOCK NUT	1	RB2034020125	RB1888680100	RB1888680100	RB1981830100	RB1981830100
27B	SCREW TE	1	RB1998670116	RB1805500124	RB1805500124	RB1981840124	RB1981840124
30	KEY 'A'	1	RB1501000124	RB3003290100	RB3003290100	RB3005360100	RB3005360100
31	BEARING	1	RB1504000100	RB1504000100	RB1504000100	RB3008090100	RB3008090100
32	BEARING	1	RB3005370100	RB1504000100	RB1504000100	RB1502000100	RB1502000100
33	BEARING	2	RB1504700100	RB1981410955	RB1981410955	RB1981370955	RB1981370955
35	BEARING	2	RB3179310301	RB3150451205	RB3150451205	RB3150451205	RB3150451205
35B	SHAFT PROTECTION	1	RB3124161051	RB2002600108	RB2002600108	RB2005980108	RB2005980108
36	ROTOR CAP.....	12	RB3150441205	RB2039200954	RB2039200954	RB1981810954	RB1981810954
37	INTERNAL RING	1	RB3256280100	RB3245300308	RB3245300308	RB3245310308	RB3245310308
43	SEAL RING	1	RB1498300954	RB2300871005	RB2300871005	RB2300861005	RB2300861005
45	FLEXIBLE RING	16	RB1516600308				
50	GASKET	2	RB2300951005				
63A	COMP. RING	8	RB3186490100	RB2021310145	RB2021310145	RB2054950145	RB2054950145
67	REGULATION RING	2		RB3186800100	RB3186800100	RB3206840100	RB3206840100
68	PIN.....	2	RB3125290124	RB3140520124	RB3140520124	RB3140520124	RB3140520124
68A	PIN.....	2	RB3125240124	RB3140530124	RB3140530124	RB3140530124	RB3140530124
68B	PIN.....	1	RB3125240124	RB3140530124	RB3140530124	RB3140530124	RB3140530124
69	PIN.....	1	RB3125290124	RB3140520124	RB3140520124	RB3140520124	RB3140520124
72	PLUG	2	RB1530000309	RB1530000309	RB1530000309	RB1530000309	RB1530000309
76	PLUG	2	RB1518900901	RB1518900901	RB1518900901	RB1518900901	RB1518900901
77	PLUG	4	RB1519800901	RB1519900901	RB1519900901	RB1519900901	RB1519900901
78	PLUG	4	RB1519401006	RB1836851006	RB1836851006	RB1836851006	RB1836851006
79	PLUG	2	RB2026730901				

OVERHAUL KITS**RBS 15-25**

Kit	300RBS6010		
Postion	Part Number	Description	Qty
23A	RB3195721204	OIL SPLASH DISK	2
23B	RB3195721204	OIL SPLASH DISK	2
26	RB1595600172	NUT	2
31	RB3000440100	BEARING	1
32	RB1502100100	BEARING	1
33	RB3000460100	BEARING	2
37	RB2022930100	INTERNAL RING	1
43	RB3008480954	SEAL RING	1
50	RB3159671005	GASKET	2
75	RB2035391006	PLUG	1
75C	RB1518700901	PLUG	1
76	RB1519000901	PLUG	1
77	RB1519700901	PLUG	1
78	RB2035391006	PLUG	1
79	RB2022880901	PLUG	2

RBS 35-46

Kit	301RBS6010		
Postion	Part Number	Description	Qty
23A	RB3050791204	OIL SPLASH DISK	1
23B	RB3050791204	OIL SPLASH DISK	2
23C	RB3050791204	OIL SPLASH DISK	1
25	RB3202501252	SEALING SPACER	4
26	RB3005420125	LOCK NUT	2
31	RB2041610100	BEARING	1
32	RB1503000100	BEARING	1
33	RB2046180100	BEARING	2
37	RB2038620100	INTERNAL RING	1
43	RB1987640954	SEAL RING	1
45	RB1516100308	FLEXIBLE RING	16
50	RB1964741005	GASKET	2
63A	RB1993790145	COMP. RING	6
75	RB2035010901	PLUG	1
76	RB1518700901	PLUG	2
77	RB1519700901	PLUG	3

RBS 55-66

Kit	302RBS6010		
Postion	Part Number	Description	Qty
23A	RB3051201204	OIL SPLASH DISK	1
23B	RB3051201204	OIL SPLASH DISK	2
23C	RB3051201204	OIL SPLASH DISK	1
25	RB3262480310	SEALING SPACER	4
26	RB1506000125	LOCK NUT	2
31	RB2035190100	BEARING	1
32	RB1502400100	BEARING	1
33	RB1504400100	BEARING	2
37	RB2033490100	INTERNAL RING	1
43	RB1978220954	SEAL RING	1
45	RB1516200308	FLEXIBLE RING	16
50	RB1978031005	GASKET	2
63A	RB1993800145	COMP. RING	6
75	RB2035010901	PLUG	2
76	RB1518700901	PLUG	2
77	RB1519800901	PLUG	2
78	RB2035391006	PLUG	4

RBS 75-86

Kit	303RBS6010		
Postion	Part Number	Description	Qty
23A	RB3052241204	OIL SPLASH DISK	1
23B	RB3052241204	OIL SPLASH DISK	2
23C	RB3052241204	OIL SPLASH DISK	1
25	RB3182670310	SEALING SPACER	4
26	RB1937640125	LOCK NUT	2
31	RB2077930100	BEARING	1
32	RB2032920100	BEARING	1
33	RB2032930100	BEARING	2
37	RB2033500100	INTERNAL RING	1
43	RB2033510954	SEAL RING	2
45	RB1516300308	FLEXIBLE RING	16
50	RB1937601005	GASKET	2
63A	RB2018270145	COMP. RING	6
76	RB2011510901	PLUG	2
77	RB2054010901	PLUG	2
77	RB1519700901	PLUG	2
78	RB1519301006	PLUG	4
79	RB2011300901	PLUG	2

RBS 95-106

Kit	304RBS6010		
Postion	Part Number	Description	Qty
23A	RB3205911204	OIL SPLASH DISK	1
23B	RB3205911204	OIL SPLASH DISK	2
23C	RB3205911204	OIL SPLASH DISK	1
25	RB3253100301	SEALING SPACER	4
26	RB1506300125	LOCK NUT	2
31	RB2077950100	BEARING	1
32	RB1503200100	BEARING	1
33	RB1505000100	BEARING	2
37	RB3256110100	INTERNAL RING	1
43	RB1891180954	SEAL RING	2
45	RB3253090308	FLEXIBLE RING	16
50	RB2200241005	GASKET	2
63A	RB2309610145	COMP. RING	6
76	RB2011510901	PLUG	2
77	RB1519800901	PLUG	2
78	RB1519301006	PLUG	4
79	RB2011300901	PLUG	2

RBS 115-126

Kit	305RBS6010		
Postion	Part Number	Description	Qty
23A	RB3092861204	OIL SPLASH DISK	1
23B	RB3092861204	OIL SPLASH DISK	2
23C	RB3092861204	OIL SPLASH DISK	1
25	RB3250850301	SEALING SPACER	2
26	RB1507400125	LOCK NUT	2
27A	RB1982930125	LOCK NUT	1
31	RB1830760100	BEARING	1
32	RB1918970100	BEARING	1
33	RB1504600100	BEARING	2
37	RB3256270100	INTERNAL RING	1
43	RB1628200954	SEAL RING	1
45	RB3250840308	FLEXIBLE RING	16
50	RB2300261005	GASKET	2
63A	RB2018570145	COMP. RING	8
76	RB1518900901	PLUG	2
77	RB1519800901	PLUG	4
78	RB1519401006	PLUG	4
79	RB2026730901	PLUG	2

RBS 135-155

Kit	306RBS6010		
Postion	Part Number	Description	Qty
23A	RB3198661204	OIL SPLASH DISK	1
23B	RB3198661204	OIL SPLASH DISK	2
23C	RB3198661204	OIL SPLASH DISK	1
25	RB3203150301	SEALING SPACER	2
26	RB1507000125	LOCK NUT	2
27A	RB2034020125	LOCK NUT	1
31	RB1504000100	BEARING	1
32	RB3005370100	BEARING	1
33	RB1504700100	BEARING	2
37	RB3256280100	INTERNAL RING	1
43	RB1498300954	SEAL RING	1
45	RB1516600308	FLEXIBLE RING	16
50	RB2300951005	GASKET	2
76	RB1518900901	PLUG	2
77	RB1519800901	PLUG	4
78	RB1519401006	PLUG	4
79	RB2026730901	PLUG	2

RBS 165-175

Kit	307RBS6010		
Postion	Part Number	Description	Qty
23A	RB2200690955	OIL SPLASH DISK	1
23B	RB2200690955	OIL SPLASH DISK	2
23C	RB2200680955	OIL SPLASH DISK	1
25	RB3245160301	SEALING SPACER	2
26	RB3005950125	LOCK NUT	2
27A	RB1507300100	LOCK NUT	1
31	RB3003290100	BEARING	1
32	RB1504000100	BEARING	1
33	RB1504000100	BEARING	2
37	RB2002600108	INTERNAL RING	1
43	RB2039200954	SEAL RING	1
45	RB3245300308	FLEXIBLE RING	16
50	RB2300871005	GASKET	2
63	RB2021310145	COMP. RING	4
76	RB1518900901	PLUG	2
77	RB1519900901	PLUG	2
78	RB1836851006	PLUG	4

RBS 205-225

Kit	308RBS6010		
Postion	Part Number	Description	Qty
23A	RB2200870955	OIL SPLASH DISK	1
23B	RB2200860955	OIL SPLASH DISK	2
23C	RB2200870955	OIL SPLASH DISK	1
25	RB3245170301	SEALING SPACER	2
26	RB2022590125	LOCK NUT	2
27A	RB1981830100	LOCK NUT	1
31	RB3005360100	BEARING	1
32	RB3008090100	BEARING	1
33	RB1502000100	BEARING	2
37	RB2005980108	INTERNAL RING	1
43	RB1981810954	SEAL RING	1
45	RB3245310308	FLEXIBLE PISTON RI	16
50	RB2300861005	GASKET	2
63	RB2054950145	COMP. RING	4
76	RB1518900901	PLUG	2
77	RB1519900901	PLUG	2
78	RB1836851006	PLUG	4



**WARRANTY
SUTORBILT BLOWERS
Legend SERIES**

GENERAL PROVISIONS AND LIMITATIONS

Gardner Denver (the "Company") warrants to each original retail purchaser ("Purchaser") of its products from the Company or its authorized distributor that such products are, at the time of delivery to the Purchaser, made with good material and workmanship. No warranty is made with respect to:

1. Any product which has been repaired or altered in such a way, in the Company's judgment, as to affect the product adversely.
2. Any product which has, in the Company's judgment, been subject to negligence, accident, improper storage, or improper installation or application.
3. Any product which has not been operated or maintained in accordance with the recommendations of the Company.
4. Components or accessories manufactured, warranted and serviced by others.
5. Any reconditioned or prior owned product.

Claims for items described in (4) above should be submitted directly to the manufacturer.

WARRANTY PERIOD

The Company's obligation under this warranty is limited to repairing or, at its option, replacing, during normal business hours at an authorized service facility of the Company, any part which in its judgment proved not to be as warranted within the applicable Warranty Period as follows.

BARE BLOWERS

Basic grease lubricated bare blowers, consisting of all parts within, are warranted for 18 months from date of initial use or 24 months from date of shipment to the first purchaser, whichever occurs first. Basic dual splash lubricated bare blowers, consisting of all parts within, are warranted for 24 months from date of initial use or 30 months from date of shipment to the first purchaser, whichever occurs first. Any disassembly or partial disassembly of the blower, or failure to return the "unopened" blower per Company instructions, will be cause for denial of warranty.

OTHER COMPONENTS

All other components are warranted for 12 months from date of initial use or 18 months from date of shipment to first purchaser, whichever comes first. The Company reserves the right to withdraw the Warranty where evidence indicates application outside the stated performance area, or where there is evidence of abuse.

LABOR TRANSPORTATION AND INSPECTION

The Company will provide labor, by Company representative or authorized service personnel, for repair or replacement of any product or part thereof which in the Company's judgment is proved not to be as warranted. Labor shall be limited to the amount specified in the Company's labor rate schedule.

Labor costs in excess of the Company rate schedules caused by, but not limited to, location or inaccessibility of equipment, or labor provided by unauthorized service personnel is not provided by this warranty.

All costs of transportation of product, labor or parts claimed not to be as warranted and, of repaired or replacement parts to or from such service facilities shall be borne by the Purchaser. The Company may require the return of any part claimed not to be as warranted to one of its facilities as designated by the Company, transportation prepaid by Purchaser, to establish a claim under this warranty. Replacement parts provided under the terms of the warranty are warranted for the remainder of the Warranty Period of the product upon which installed to the same extent as if such parts were original components.

DISCLAIMER

THE FOREGOING WARRANTY IS EXCLUSIVE AND IT IS EXPRESSLY AGREED THAT, EXCEPT AS TO TITLE, THE COMPANY MAKES NO OTHER WARRANTIES, EXPRESSED, IMPLIED OR STATUTORY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY.

THE REMEDY PROVIDED UNDER THIS WARRANTY SHALL BE THE SOLE, EXCLUSIVE AND ONLY REMEDY AVAILABLE TO THE PURCHASER AND IN NO CASE SHALL THE COMPANY BE SUBJECT TO ANY OTHER OBLIGATIONS OR LIABILITIES. UNDER NO CIRCUMSTANCES SHALL THE COMPANY BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, EXPENSES, LOSSES OR DELAYS HOWSOEVER CAUSED.

No statement, representation, agreement, or understanding, oral or written, made by any agent, distributor, representative, or employee of the Company which is not contained in this Warranty will be binding upon the Company unless made in writing and executed by an officer of the Company.

This warranty shall not be effective as to any claim which is not presented within 30 days after the date upon which the product is claimed not to have been as warranted. Any action for breach of this warranty must be commenced within one year after the date upon which the cause of action occurred.

Any adjustment made pursuant to this warranty shall not be construed as an admission by the Company that any product was not as warranted.



For additional information, contact your local representative or visit:
www.contactgd.com/mobile

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