
INSTRUCTION MANUAL

LW 570 D
DIESEL



LENHARDT & WAGNER GMBH
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INSTRUCTION MANUAL

Issue: 06/04

Compressor type:

LW 570 D

Manufacturer:

Lenhardt & Wagner GmbH
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64653 Lorsch
GermanyTel.: + 49 6251 - 1074 0
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Email: info@lenhardt-wagner.de
Web: www.lenhardt-wagner.de**Application:**

Breathing air and industrial air applications. Large capacity, slow running stationary compressor ideal for professional applications. Highly economical Diesel engine.

Specifications:

- Ready to connect, fully wired with pneumatic/electric compressor control and start/delta start cycle, automatic stop and automatic condensation drain
- Operating panel with start/stop buttons and drain test button, final pressure gauge and hours counter
- Sturdy steel frame, powder coated in RAL 6026
- Stainless steel fuel tank
- All compression pistons with cast iron rings
- Low pressure oil pump
- Oil/water separators after each stage, safety valve for each stage
- Water cooled Diesel engine with starter, generator & batterie
- Breathing air purification in accordance with EN 12021
- Pressure maintaining and non-return valve
- Filling module in the front panel, 4 self venting filling valves, hoses and connections
- HP outlet

Technical Data:

Type:	4 cylinder, 4 stage, air cooled, oil lubricated compressor
Delivery rate:	570 Liter/min. (34.2 m ³ /hr.) 20 cfm
Prime mover:	12.9 kW Yanmar Diesel 3TNE68
Operating temperature:	+5°C < +50°C
Operating pressure:	max. 350 bar
Cooling air requirement:	3,300 m ³ /h
Air outlet temperature:	appr. 8°C above ambient
Breathing air filter capacity:	1,200 m ³ at 20°C (approx. 35 hrs.)
Compressor speed:	1100 RPM
Oil capacity and pressure:	2.5 Liter, 1.8 bar (+/- 0.3 bar)
Fuel capacity:	15.7 ltr.
Fuel Consumption:	3.5 l/h (<i>total running time appr. 4.5 hrs</i>)
Dimensions:	D x W x H (mm)
Weight:	
Noise level:	dB(A) @ 1m distance

Options:

Dual pressure filling module, 200 and 300 bar, pressure reducer, safety valve

S A F E T Y P R E C A U T I O N S

GENERAL REMARKS

CAUTION: Do not open pressure loaded, unconnected filling- or block valves due to high risk of accident.

CAUTION: Always make sure that intake-air is free of toxic gases and exhaust fumes.

CAUTION: Use only filling hoses which are in perfect condition; special attention should be paid to the connecting fittings, check rubber jacket for damage. Immediately replace hoses in case of any faults.

CAUTION: All work on compressors must be carried out while unit is plugged off and depressurized.

SAFETY REGULATIONS

Note the following orders for operating a compressor unit as a filling unit within Germany:

a - Druckbehälterverordnung (DruckbehV) vom 21.04.1989.

b - Technische Regeln Druckgase (TRG 400, 401,402, 730).

Note the following orders if a high-pressure compressor unit is used for industrial applications within Germany:

c - die gesetzlichen Unfallverhütungs-Vorschriften (UVV) der Berufsgenossenschaften:

- **UVV Verdichter (VBG 16)**
- **UVV Druckbehälter(VBG 17)**

If an industrial compressor unit is used as a filling device, regulations **a** & **b** must also be considered.

The manufacturer has payed attention to all the previous mentioned regulations - concerning the manufactur of high pressure compressors - all products are confirm with those regulations.

According to §10 Druckbehälterverordnung, appointed types of pressure tanks must be tested at given intervals:

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- Pressure tanks of groups IV & V must be checked by an expert at intervals stated in paragraphs 4 to 9.
 - Pressure tanks of groups II, III & IV must be checked by an expert, at intervals stated by the operators experience.
 - Repeated checks consist in internal checks and pressure checks. Internal checks according to §1 must be complemented by pressure checks (or other suited checks) if they can not be carried out as desired. Pressure checks according to §1 must be substituted by anti-destructive test procedures, if they can not be carried out due to design features of the pressure tank.
 - §9 Paragraph 9 is applied.

According to §15 Druckbehälterverordnung, a portable pressure tank should only be filled if:

- it is signed with: test sign, test date & date of next test
- the test date stated on the tank is still valid
(see §23 DruckbehV for test intervals)
- it is free of faults which can affect operators or others (damaged valve etc.)

It is only allowed to fill compressed-air tanks - never fill oxygen tanks -
By the use of different threads (DIN 477) it is not possible to connect oxygen bottles directly.

The use of adaptors is strictly prohibited!

According to TRG 402 - Operation of Filling Units -

2. Employees & their Instruction

2.1 Filling devices should only be operated by persons which:

- are at least 18 years of age
- have the required knowledge
- do their work in expected good manner

2.2 Insignificant work can also be done by persons who do not have the experience stated at 2.1 item 1 & 2.1 item 2

2.3 All employees have to be trained prior any work and in adequate intervals - at least once a year - in reference to:

- Danger by handling with pressurized gases
- Safety precautions (especially TRG)
- Instructions in case of accidents, faults & damage
- Handling of safety- & fire-fighting equipment
- Operation & maintenance of filling devices, in reference to the instruction manual.

2.4 All necessary instructions of employees must be recorded (according to 2.3) and confirmed by signature.

2.5 Nummers 2.3 & 2.4 are also valid for short-time employees.

3. Operation

3.1 There must be an instruction manual available for every filling unit. It should be easy to understand, and has to contain all safety relevant informations. Copies and translations should be available to the operator(s).

3.2 Especially dangerous work (repairs, maintenance etc.) which can not be listed in the instruction manual referring to 3.1, can only be done on written order of the manufacturer or an authorized representative person.

5. Filling

5.1 Pressure tanks can only be filled by the medium, to pressure, weight & capacity stated on its housing (see §15.2 DruckbehV).

6. Measures after Filling

6.1 Checking pressure tanks for leaks

All blocking devices and their connections have to be checked, after the filling process, in a suitable way with foambuilding medium or under water, for any air leaks.

6.3 Faults on pressurized tanks

If there are any signs for air leaks or other faults (referring 6.1), which can not be corrected instandy, the tank has to be deflated immediately to avoid any kind of danger (see §21.1 DruckbehV).

9. Inspection & Maintenance of Filling Devices

9.1 Check filling devices for air leaks.

9.1.1 Filling devices or parts of any filling devices can only be put into first-time operation (after repairs, technical changes etc.) if they were checked for leaks by an expert or an authorized person stated by the manufacturer.

9.1.2 Test medium has to be pressure gas (in gas form).

9.1.3 Pressure has to be increased slowly and in steps till maximum working pressure of unit is achieved.

9.1.4 Test proceedings have to be recorded and stored. They must contain:

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- Date of Test
 - Name of Supervisor
 - Name of Expert
 - Designation of Unit (or part of unit)
 - Test Medium
 - Description of Procedure
 - Notice of Faults
 - Notice of Faults Elimination

9.2 Inspection of Flexible Pressure Lines

9.2.1 Flexible lines (hoses & joints) must be checked for their condition prior first use, at least once a year, by an expert of the operating company or the manufacturer.

9.2.2 Test Procedure (referring to 9.2.1) consists of:

1. Examination of external and internal condition
2. Pressure test (1.5 x max. working pressure)

9.2.3 Pressure tests of hoses have to be done by water as test medium. Maintain test pressure for at least 10 minutes. Hoses have to be checked in straight and in rolled condition (roll diameter: 30 x outer dia. of hose).

9.2.3 Test certificates from the manufacturer must be present prior first use, additional ones - verified by an expert of the operating company - at given intervals. All certifications have to be stored and must contain:

- Date of Test
- Name of Expert
- Designation of Unit
- Test Medium
- Description of Procedure
- Notice of Faults
- Notice of Faults Elimination

Test certifications of the manufacturer must further state material, working pressure, and in the case of hoses, a confirmation that they are suitable for pressurized gas.

9.3 Maintenance

9.3.1 Rarely used pressure block devices should be checked in adequate periods of time.

10. Putting Units out of Operation /

Reports of Accidents & Damage

- 10.1 Filling devices must be put out of operation if they are in irregular condition or of danger to the operator (see §34 DruckbehV).
- 10.2 Everyone who operates a filling device, has the duty to report of accidents, fatal injuries and so on, to responsible supervisory authorities (see §34 DruckbehV).
- 10.3 No.10.2 is valid if a pressure tank (capacity 1 ltr. +) bursts or cracks in-/outside a filling device (see §34 DruckbehV).

Additional Remarks

- Read the operation manuals of your compressor and its drive engine carefully
- Allow only qualified personell to run the compressor
- Do not place any objects on compressor while in operation
- Make sure no person or object can accidentally touch any moving parts while running
- Take care that the intake-air is pure and free of toxic gases and exhaust fumes
- All work on compressor must be carred out while compressor is plugged off and depressurized
- Check regulary for leaks by brushing all fittings and coulings with a soup solution
- Never weld high-pressure tubing
- Filling-hoses must be in perfect condition; special attention should be paid to the connecting fittings, check rubber jacket for damage, immediately replace hoses in case of any faults
- On units with an electric motor disconnect the power-cable prior to any work
- Make sure no person is within one meter of the drain-hoses before draining the condensate
- Do not touch the exhaust while the engine is running and within ten minutes after shut-down (on engine-driven units)
- The operator should wear ear protection if exposed to noise of the running compressor for extended periods of time

General Notice

This operation manual contains the operating and maintenance procedures necessary to safely run your **L&W** compressor. We strongly recommend that you read this manual thoroughly prior to operation and follow all the safety precautions precisely. Damage resulting from any deviation from these instructions is excluded from warranty and liability for this product. Be sure to pay attention to the following points:

- Fill only tanks with a valid hydrostatic test date
- Never exceed the working-pressure rating indicated on the tank
- Do proper maintenance of the filtration system

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- Do regular drainage of the condensate system
 - Avoid contaminated air to reach the air intake
 - Do not exceed maximum rpm
 - Read the operation manuals of your compressor and its drive engine carefully
 - Allow only qualified personell to run the compressor
 - Do not place any objects on compressor while in operation
 - Make sure no person or object can accidentally touch any moving parts while running
 - Take care that the intake-air is pure and free of toxic gases and exhaust fumes
 - All work on the compressor must be carred out with compressor shut down and depressurized
 - Check regulary for leaks by brushing all fittings and coulings with a soup solution
 - Never weld high-pressure tubing
 - Filling-hoses must be in perfect condition; special attention should be paid to the connecting fittings
 - Make sure no person is within one meter of the drain-hoses before draining the condensate
 - Do not touch the exhaust while the engine is running and within 15 minutes after shut-down
 - The operator should wear ear protection if exposed to the noise of the running compressor for extended periods of time
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Diesel Engine

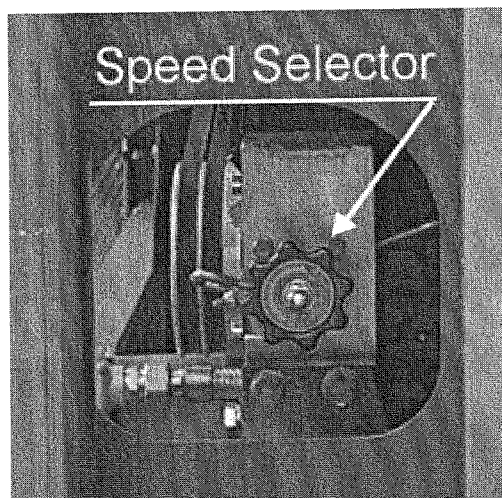
Standard specification:

Yanmar Diesel 3TNE68, power output 12.9 kW @ 3000 rpm.

Engine speed has to be adjusted by the speed selector, see picture below.

Basically the compressor unit is designed to run on either idle or full speed (full load).

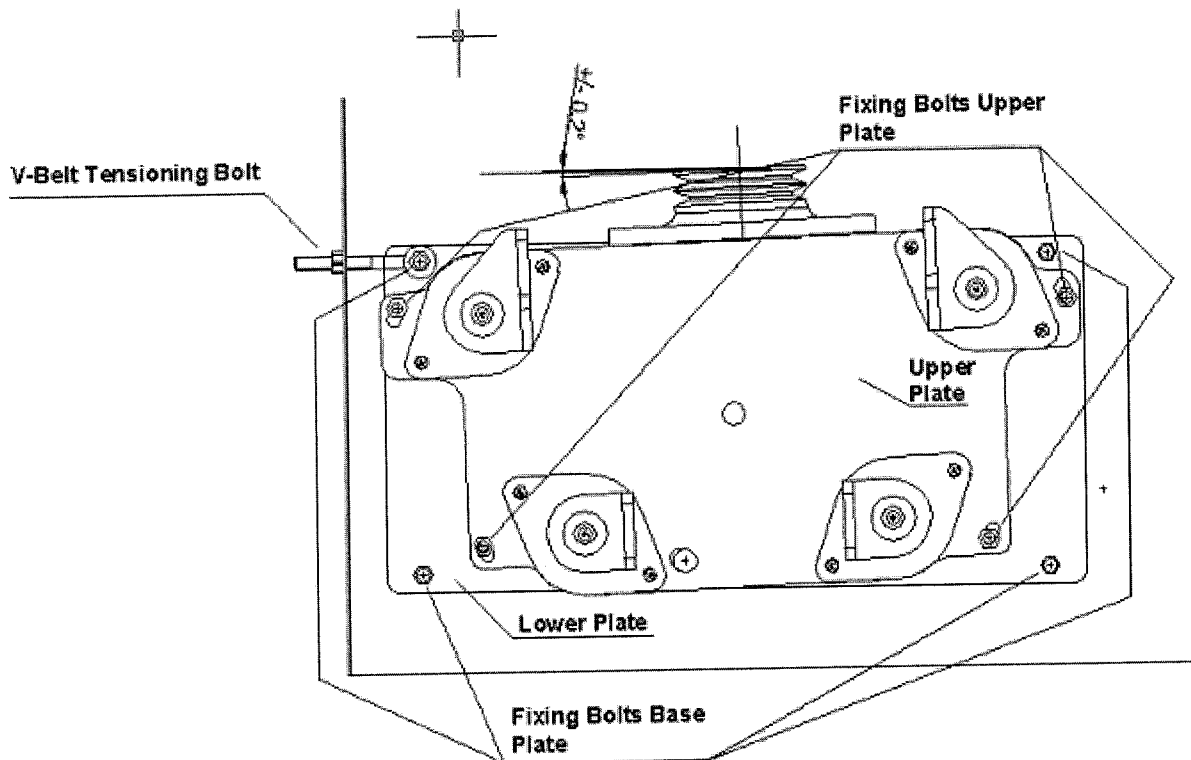
For service informations please see Yanmar instruction manual



How to adjust the V-Belts

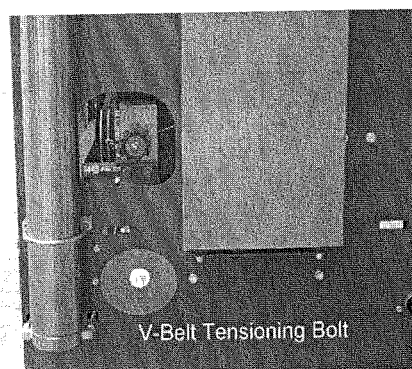
The engine's rubber bearings are mounted on a rotating upper plate which is fixed on the sliding base plate to the compressor chassis.

To get the drive pulley aligned to the compressors flywheel it is necessary to rotate the upper plate anticlockwise on the base plate before the v-belts have been tensioned.



To tension the v-belts slacken the 4 fixing bolts that secure the base plate to the chassis. Thereafter turn the v-belt tensioning bolt until correct v-belt tension has been achieved. Tighten the chassis bolts and re-check alignment of the v-belts. If necessary rotate upper plate on base plate until correct v-belt alignment is achieved.

Correctly adjusted V-belts do not slip when starting the compressor. Over tightening of the V-belt can cause damage to both the engine and compressor bearings.



Installation

Make sure that the compressor always has sufficient amount of cooling air available. To prevent serious damage don't place the unit closer than 0.5 m to anything which can restrict the cooling air flow.

Always ensure good ventilation.

Use air intake hose if necessary (max. length 3 mtr @ inner Ø30mm)

NOTE: Pure intake air is very important!

Operation temperatures: min. +5°C to max. +50 °C

Filling Process

Fill only air tanks which are:

- suitable for final pressure
- have been hydro static tested (check last testing date)

The automatic switch off, or safety valve, has to be checked before tanks can be filled

- Close filling valves
- Start compressor by rotating the ignition key
- Connect tank to compressor - *Filling valve and tank are still closed -*
- First slowly open filling valve
- Open tank valve
- Fill tank to desired pressure
- Close tank valve
- Close filling valve
- Vent filling valve (by turning the small black rubber handwheel)
- Disconnect tank from filling connection
- Turn off compressor by ignition key

Automatic Condensation Dump System

The LW 570 D comes as standard with an auto dump system. Solenoids automatically drain all four condensate separators about every 15 minutes. For testing the system press the green 2-way push button on the dash panel. In standard use the button has to be in the off position (not pushed in).

We recommend to operate the green push button - mounted on the dash panel - every 5 to 10 hours, to check if all auto dump valves are in working order (check if condensate is coming out of the condensate hoses).

Intake Filter

A micro filter cartridge is used as an air intake filter. We recommend that the filter cartridge should be replaced every 60 to 100 working hours, depending on pollution. A dirty, contaminated filter restricts the air intake flow, reduces the compressor's capacity and causes overheating.

Cylinder Heads and Valves

Inlet and outlet valves are located inside the cylinder heads.

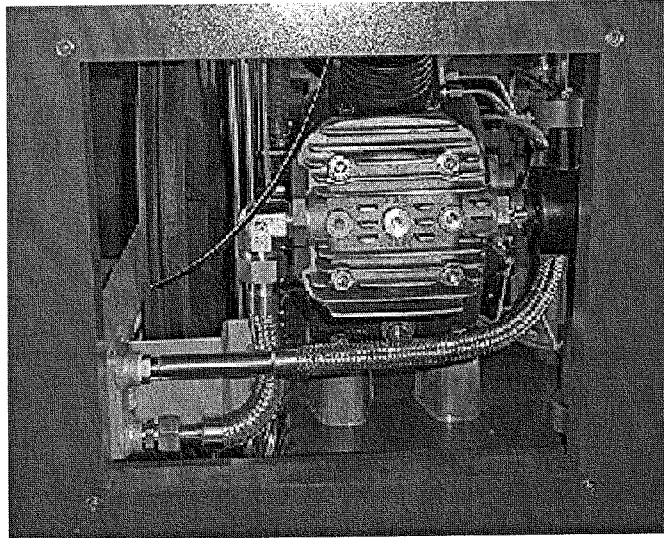
The inlet valve opens on the down stroke.

The outlet valve opens on the upstroke.

All valves should be replaced after 2000 working hours due to normal wear and tear.

To replace valves the cylinder heads have to be removed. All four valves are combined in- & outlet valves. The first and second stage valves are of plate valve design. The third and fourth stage valves use spring operated pistons which act inside of bronze cylinders. These valves sit loose inside the cylinder heads, alloy gasket rings are used as high temperature seals.

There are no special tools required to replace any of these valves.



1st Stage Cylinder Head & Air Intake Housing

Lubrication

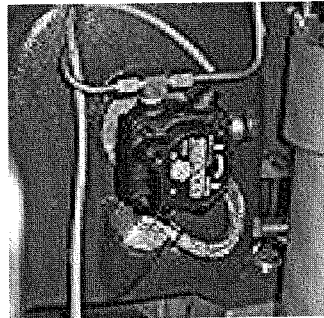
Crankshaft bearings get lubrication by an oil slinger.

1st and 2nd stage are lubricated by spray oil.

3rd & 4th stage are lubricated by a mechanical oil pump

2.5 litre of synthetic oil (order no. L&W 9001) is required for an oil change.

NOTE: The oil level never should be lower than the red marking on the oil level indicator glass (located on the compressor crankcase).



Low pressure Oil Pump with Suction Hose & Pressure Pipes

Starting the Compressor for the first Time

- Place the compressor in a distance of at least 50 cm to anything restricting the cooling air flow (air temperature max. +50 C)
- Check compressor oil level
- Check if air filter cartridge is in place (order no. 450 8022)
- Make sure all filling valves are open
- Make sure that the green push button is not pushed in (off position)
- Turn engine speed selector to full speed position
- Start compressor by starter key
- Run compressor for about 2 minutes
- Close all filling valves
- Run compressor to max. pressure
- Check if end-pressure switch works at max. pressure
- Check compressor unit for air leaks
- Check if auto dump valves are working by pushing the green 2-way push button
- Turn off compressor by ignition key
- Release pressure by filling valves

Safety Valves

Every pressure-stage is equipped with its own safety valve. They protect the unit from over -pressure / load.

Safety valves are adjusted to:

1st Stage: 8 bar

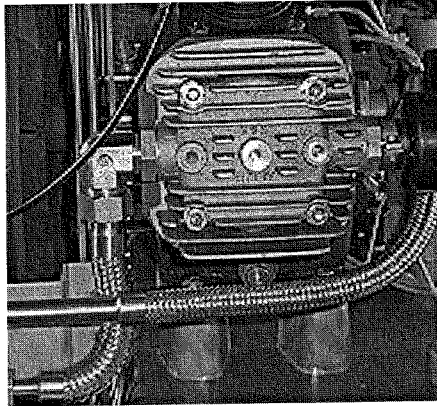
2nd Stage: 22 bar

3rd Stage: 70 bar

4th stage: final pressure

If a safety valve blows it indicates problems with either inlet or outlet valve of the following stage.

NOTE: Faulty safety valves should always be replaced!



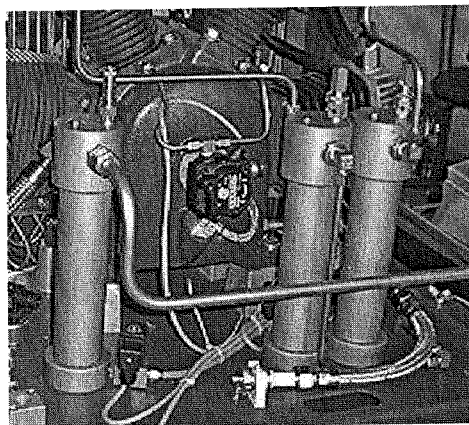
2nd Stage Cylinder Head

Oil / Water Separators

Condensate will be separated after every stage of compression. All four separators have magnetic valves which were controlled by an electronic timer. The timer is located in the electro box compartment and activates the dump valves about every 15 minutes. To release the condensate through the black poly hoses. We recommend to use at least a 20 litre container to collect all condensate. It can then be disposed of like discarded oil.

The drain noise of the high pressure stage is kept to a minimum by using a silencer. All condensate separators have an integrated sinter filter which needs to be replaced in regular intervals (see maintenance list)

We do recommend that they should be cleaned every 1000 working hours. Replace O-rings if necessary.



Water separators with safety valves fitted

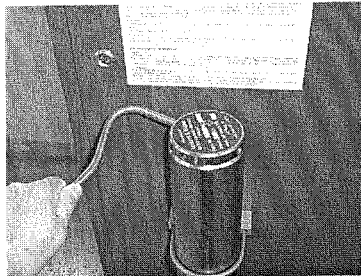
Final Air Purifier (Mole Carbon Filter)

The mole carbon filter housing is mounted on the right hand side of the compressor housing - *capacity: 2.3 litre*, order no of cartridge.: 450 8022 (standard breathing air).

Inside the filter housing a jet blows air on to the housing wall. Oil and water mist condenses and flows to the bottom of the housing. Air then flows through the mole carbon filter cartridge, which purifies the air from moisture and odours. Cartridges should be changed at periods of 38 hours (@ +20°C) or more often, depending on humidity and ambient temperature. All cartridges are vacuum sealed. We recommend that they should be opened just before they will be fitted to the compressor, as they could be saturated with moisture just by being exposed to high humidity.

How to change the filter cartridge:

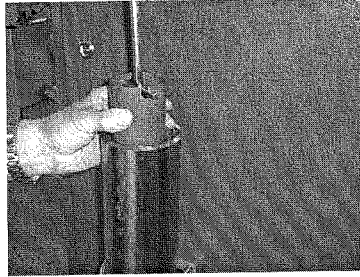
- Run the compressor until pressure gauge shows about 100 bar
- Stop the compressor
- Push in the green condensate button (position ON)
- Turn the ignition key to ON position (*do not restart the compressor*)
- Wait for about 30 seconds until all the pressure has been released by the auto drain system
- Open filling valve to release the filling pressure (gauge now shows 0 bar)
- Unscrew top filter housing by using the special filter tool



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- Place the T-piece end of the filter key in the top of the filter cartridge



- Unscrew the filter cartridge anti-clockwise and pull the cartridge out of the housing

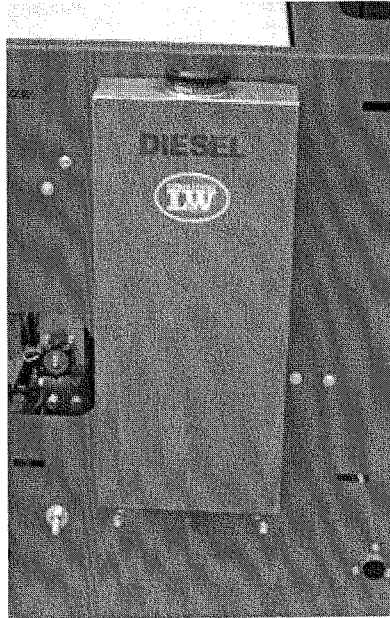


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- Open the packing of the new filter cartridge and place it with the cartridge key in the filter housing
 - Screw in the new filter cartridge hand tight by using the filter tool
 - Refit the cap of the filter housing clockwise, first by hand and then with the filter key
 - After it has been completely screwed in, turn it anticlockwise for 90°

The filter cartridge change is now completed.
Ensure that the old filter cartridge is disposed of correctly at an approved waste point.

Fuel Supply

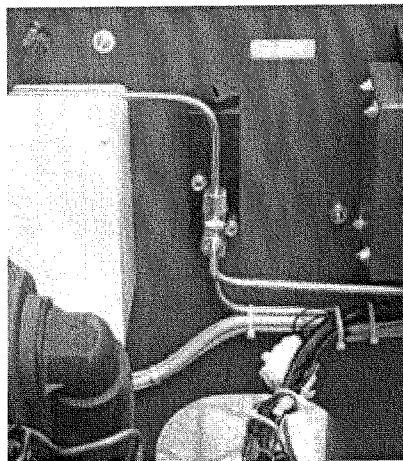
Compressor comes as standard with a stainless steel fuel tank, capacity 15.7 litres.
Do only use proper Diesel fuel to run the engine.
Check in-line fuel filter every 1000 hours and replace if necessary



Fuel tank

Pressure Maintaining / Non Return Valve

A pressure maintaining / non return valve is fitted after of the mole carbon filter housing. It maintains a pressure of at least 150 bar inside the filter housing - optimising the effectiveness of the filter.



Pressure Maintaining-/Non-Return Valve

Maintenance

The compressor oil level has to be checked before each day of use.

Compressor oil change intervals:

1st oil change after 25 working hours

2nd oil change after 75 working hours

and subsequently every 200 working hours - but at least once a year -

Only use synthetic compressor oil (order number LW 9001).

About 2.5 litre of oil is required for an oil change.

The mole carbon filter cartridge has to be changed regularly

(see change of mole carbon filter cartridge)

- Check connections for leaks every 20 working hours
- Change inlet air filter every 100 working hours
- Open and clean condensation separators (first and second stage) every 1000 working hours
- Replace inlet / outlet valves every 6000 working hours

Trouble Shooting

Compressor does not reach end-pressure:

- Check for leaks on pipe connections, magnetic jump valves & heat exchanger. Replace seals or tighten connections.

Air output is decreasing:

- V-belt tension incorrect: Adjust or replace
- Inlet air filter dirty: Replace inlet filter
- Inlet / outlet valves leaking: Clean or replace
- Pistons, piston rings and / or cylinders worn: Replace faulty parts

Blowing safety valve of 1st / 2nd / 3rd stage

- Inlet or outlet valve of the following stage is faulty: Clean valves or replace them

Do never attempt to adjust or repair safety valves - always replace if faulty -

Oil smell in the air

- Mole carbon filter cartridge is saturated: Replace immediately
- Use of wrong type of oil:
It is important to use a synthetic compressor oil which is suitable for breathing air applications.

Compressor runs too hot

- Poor room ventilation: The room temperature should not exceed +40°C
 - Compressor is placed too close to wall (min. distance: 0.5 m)
 - Intake filter is dirty: Replace
 - Air intake hose is too long or too small in diameter
 - Faulty inlet / outlet valves: Clean or replace
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Conservation of Compressor

If the compressor will not be used for a long period of time the following steps should be carried out:

- Run compressor for about 10 to 15 minutes
- Open filling valves and let compressor run for another five minutes
- Turn compressor off - *Auto dumps will automatically release condensate* -
- Close filling valves
- Open the mole carbon filter housing. Lubricate thread with Vaseline and close the housing (used filter cartridge can remain inside)
- Compressor should be stored in a dry & dust free

Before re-starting the compressor the following steps should be carried out:

- Change oil (if the compressor was out of use for more than 12 months)
- Check air intake filter
- Replace the mole carbon filter cartridge
- Check oil level
- Start compressor by green push button (or key 1)
- Run the compressor with open filling valves for 5 minutes
- Close filling valves
- Drive compressor close to 200 bar and control connections for leaks
- Drive compressor to final pressure
- Check if end pressure switch is working

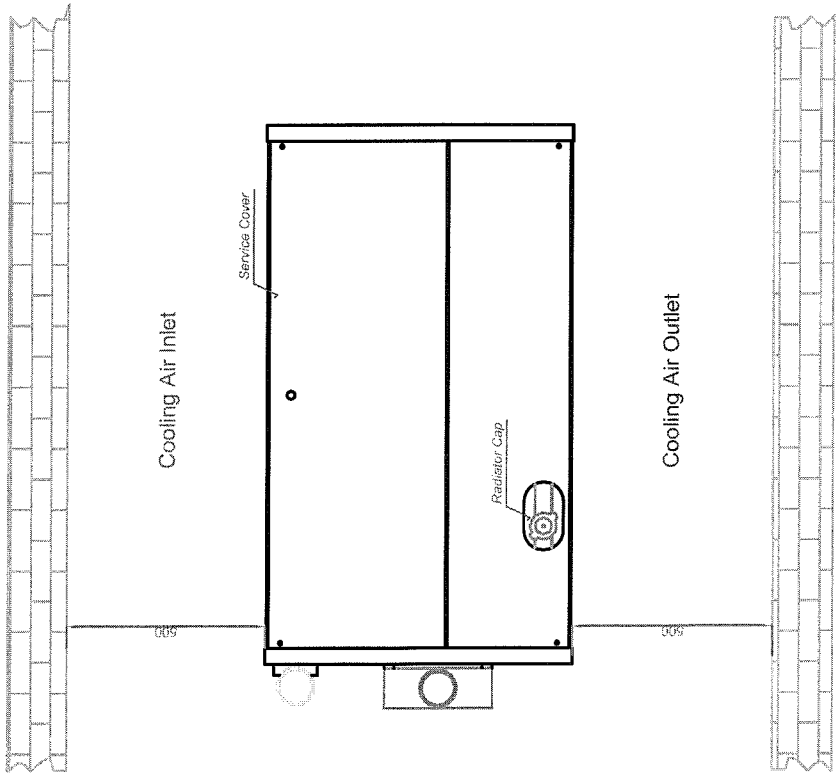
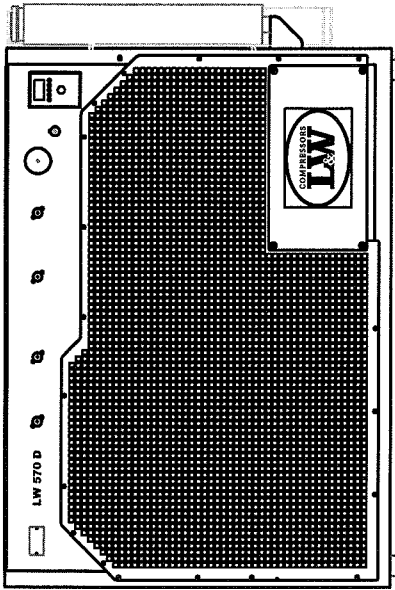
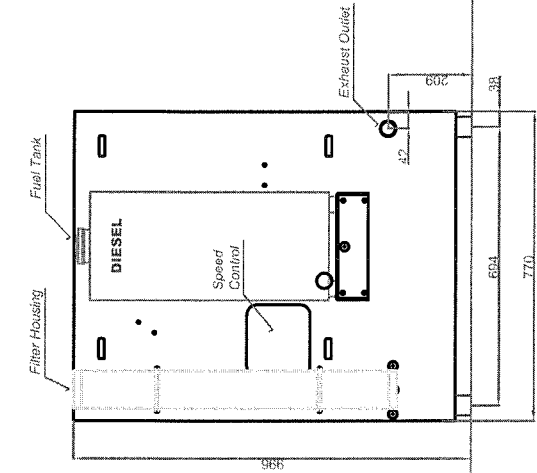
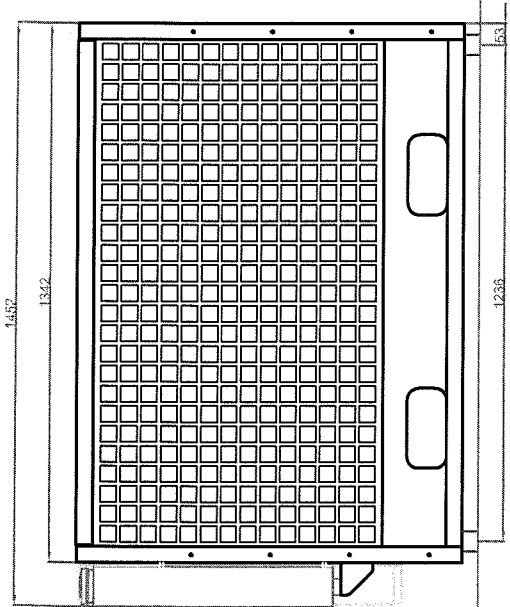
Compressor is now ready for use

Maintenance List

LW 570 D

Routine Service	Intervals	Qty.	Order No.
Replace filter cartridge	every 38 working hours (@ 20 °C)	1	450 8022
Check oil level	before each day of use		
Oil changes	1 st after 25 working hours 2 nd after 75 working hours 3 rd after 275 working hours thereafter every 200 working hours - but at least once a year	2500 ml	450 9001 (1 litre)
Replacing air inlet filter	Depends on degree of pollution - but at least once a year	1	450 7017
Check V-belts	every 200 working hours		000408
Replacing in- & outlet valves	every 2000 working hours	1 st stage: 1 2 nd stage: 1 3 rd stage: 1 4 th stage: 1	450 7030 450 7065 000544 000545
Check pressure maintaining / non-return valve	every 200 working hours		
Check safety devices	once a year this service is exclusively expert work		
Check pressure pipes for air leaks	every 200 working hours		
Clean pressure pipes	Depends on degree of pollution - but at least once a year		
Check filling hoses for damage	before each use - once a year by an expert		
Replace oil suction hose	every 5000 working hours	1	450 4005
Clean sieve of oil pump	every 1000 working hours		
Replace sintered filter of condensate valve	after 1000 working hours - thereafter every 5000 working hours	1	450 2011 b
Replace sintered filter of waterseparators	every 1000 working hours	1 1	450 10004 450 10019
Clean oil / waterseparator and check for corrosion	every 1000 working hours		

Routine Service	Intervals	Qty.	Order No.
Check connections and fixings for correct torque	after 15 working hours - thereafter every 500 working hours		
Replace silencer	every 3000 hours		450 2014



LW 570 D

Overall Dimensions

**LENHARDT &
WAGNER GMBH**

Warranty

<p style="text-align: center;">Twelve Months Limited Warranty</p>
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Important:

For warranty claims this Warranty Registration form must be presented

L&W compressors are warranted against defects in workmanship and materials for a period of twelve months after purchase by the original owner, provided the compressor is run with synthetic compressor oil - subject to and in accordance with the terms and conditions set forth below:

This warranty does not cover damage to the product resulting from improper useage, improper maintenance, neglect of care, alteration or unauthorised repair. The warranty will automatically become void if proper preventive maintenance procedures have not been followed as outlined in the operations manual for this product.

If a claim under this warranty appears to be necessary, return the product, freight repaid, to your **L&W** dealer. Include your name, address and warranty registration. The claim will be honoured and the product repaired at no charge and returned in what your **L&W** dealer determines a reasonable amont of time, provided all necessary parts are in stock. All repairs not covered under the terms of this warranty will be made at the owners expense.

This warranty is non-transferable from the original owner.

The warranty will be extended for the time the product has been in warranty repair. Warranty and operations manual should be kept with the compressor at all times.

Spare Part List LW 570 D

0 6 / 0 4 -

Qty.	Description	Part No.
1	Pipe	000286
1	Pipe	000287
1	Pipe	000288
1	Pipe	000289
1	Pipe	000290
1	Pipe	000291
1	Cover Lid	000292
1	Fuel Tank LW 570 D	000293
1	Tank Bracket	000294
2	Rubber Mountings	000295
2	Rubber Mountings	000296
1	Tank Filler Cap	000297
1	Compressor Housing LW 570 D	000298
1	Service Cover	000299
1	Frontgrating	000300
1	Service Cover Battery	000301
1	Control Box LW 570 D	000302
1	2-way Push Button (green)	000303
1	Electro Box, complete	000304
1	Condensate Pipe	000305
1	Pipe	000306
1	Pipe	000307
1	Pipe	000308
1	Pipe	000309
1	Bracket Air Radiator	000310
1	Bracket Air Radiator	000311
1	Main Bracket Cooling Pipe (left hand side)	000312
1	Main Bracket Cooling Pipe (right hand side)	000313
1	Oil Hose Bracket	000314
1	Cooling Pipe 4 th Stage	000315
1	Cooling Pipe 3 rd Stage	000316
1	Flywheel	000317
1	Fixing Ring Fan Blades	000318
1	Air Radiator 1st Stage	000319
1	Connection	000320

Spare Part List LW 570 D

0 8 / 0 4 -

Qty.	Description	Part No.
1	Bracket Diesel Radiator	000321
1	Bracket Diesel Radiator	000322
1	Engine Bracket	000323
1	Engine Bracket	000324
2	Engine Bracket	000325
1	Upper Engine Plate	000326
1	Lower Engine Plate	000327
1	V-Belt Tensioning Bolt	000328
1	Exhaust Plex Pipe	000329
2	Exhaust Clamp	000330
1	Bracket Heat Exchanger 2 nd Stage	000331
1	Heat Exchanger 2 nd Stage	000332
2	Rail	000333
2	Plastic Hose Heat Exchanger	000334
1	Pipe	000335
1	Pipe	000336
1	Pipe	000337
1	Pipe	000338
2	Solenoid 3 rd & 4 th Stage	000339
1	Spacer	000340
1	Crankcase	000341
1	Valve Head 3 rd Stage	000342
1	Cylinder 3 rd Stage	000343
1	Guide Cylinder 3 rd Stage	000344
1	Cylinder 4 th Stage	000346
1	Guide Cylinder 4 th Stage	000347
1	Valve Head 1 st Stage	000348
1	Upper Gasket Valve 1 st Stage	000349
1	Lower Gasket Valve 1 st Stage	000350
1	Cylinder 1 st Stage	000351
1	Circlip	000353
1	Circlip	000354
1	Oil Pressure Pipe	000355
1	Oil Pressure Pipe	000356
1	Oil Outlet Pipe	000357
1	Crankshaft LW 570, complete	000358

Spare Part List LW 570 D

0 6 / 0 4 -

Qty.	Description	Part No.
1	Piston 1 st Stage	000359
1	Piston Rings 1 st Stage, complete set	000360
1	Piston Pin	000361
1	Piston 2 nd Stage	000362
1	Piston Rings 2 nd Stage, complete set	000363
2	Circlips	000364
1	Piston Rings 3 rd Stage, complete set	000365
1	Piston 3 rd Stage	000366
1	Piston Rings 4 th Stage, complete set	000367
1	Piston 4 th Stage	000368
1	Valve 1 st Stage, complete	000369
1	Electronic Unit 1	000371
1	Electronic Unit	000372
3	Piston Pin	000373
1	Crankshaft Shims	000374
1	Circlip	000375
1	Oil Hose	000376
1	Plastic Clamp Oil Drain Hose	000377
1	Oil Drain Valve	000378
3	Top Water Separator	000379
1	Safety Valve 2 nd Stage	000380
1	Safety Valve 3rd Stage	000381
4	Bolt	000382
1	Brass Adapter Filter Cartridge	000383
1	Jet Filter Housing	000384
4	Filling Hose	000385
4	Plastic Washer	000386
4	Spring	000387
6	Screw	000388
1	Washer V-Belt tensioning Bolt	000390
3	Seal Ring safety Valve G3/8"	000391
3	Bolt	000392
1	Bracket Condensate Separator	000395
12	Bolt	000396
1	Elbow Connection	000397
1	Bolt Engine Plate (long)	000398

Spare Part List LW 570 D

0 6 / 0 4 -

Qty.	Description	Part No.
3	Bolt Engine Plate (short)	000399
1	Outlet Hose 1st Stage	000400
1	Hose 1st Stage Cooler / Water Separator	000401
24	Alloy Clamp 8mm Pipe	000402
24	Threaded Rivet M6	000403
1	Earth Strap	000404
8	Bolt Engine Mounting	000405
1	Shells Exhaust Pipe	000406
1	Exhaust Bracket	000407
2	V-Belt LW 570 D	000408
1	O-Ring Cylinder Flange	000409
3	Connection Rod	000410
1	Connecting Rod 1st Stage	000411
1	O-Ring	000412
4	Bolt	000413
1	Ring	000413
4	Spacer	000414
2	Bolt	000499
1	Main Spring Pressure Maintaining Valve	000506
1	Gasket Ring Pressure Maintaining Valve	000508
1	Lock Nut Pressure Maintaining Valve	000511
1	Spindle Pressure Maintaining Valve	000512
1	Spring Adapter Pressure Maintaining Valve	000513
1	Pin Pressure Maintaining Valve	000514
1	Housing Pressure Maintaining Valve	000515
1	Seal Ring Pressure Maintaining Valve	000516
1	Spring Pressure Maintaining Valve	000517
1	Brass Washer Pressure Maintaining Valve	000518
1	Plastic Piston Pressure Maintaining Valve	000519
1	Inlet Connection Pressure Maintaining Valve	000520
1	Alloy Valve Cap 4th Stage Valve	000533
1	Alloy Valve Cap 3rd Stage Valve	000534
2	Alloy Seal Ring In- & Outlet Valve	000540
1	In- & Outlet Valve 3rd Stage, complete	000544
1	In- & Outlet Valve 4th Stage, complete	000545
1	T-Piece Connection	0101

Spare Part List LW 570 D

0 6 / 0 4 -

Qty.	Description	Part No.
2	Connection Condensate Hose, straight	0131
4	T-Piece Connection	0158
1	Needle Bearing	0261
2	Alloy Ring Solenoids	0393
1	Connection	0409
1	Connection	0410
1	Connection	0414
1	T-Piece Connection	0429
1	Elbow 8L	0431
4	Plug G1/4"	0443
1	Plug	0444
2	Connection	0451
1	Elbow Condensate Hose	0457
1	Bulkhead Connection	0461
4	Bolt	0507
16	Washer	0508
8	Screw	0509
8	Bolt	0512
4	Bolt	0517
1	Filter Tool	20
15	Fan Blades	260 0045
3	Plug	260 0124
23	Bolt	260 0153
26	Screw	260 0154
1	T-Piece Connection	260 0158
15	Washer	260 0162
14	Washer	260 0171
4	Alloy Filling Block	260 0175
4	Tank Connector DIN 200 bar	4044
4	Hanhwheel DIN 200 bar (black)	4045
4	Handwhell DIN 300 bar (red)	4046
4	Tank Connector DIN 300 bar	4048
1	Top of Water Separator	450 10001
1	Twist Disc	450 10002
1	Filter Protection	450 10003
1	Sinter Filter	450 10004

Spare Part List LW 570 D

0 6 / 0 4 -

Qty.	Description	Part No.
1	Centre Disc	450 10005
1	Plastic Disc	450 10006
4	Nut	450 10007
1	O-Ring Water Separator	450 10008
1	Fixing Ring	450 10010
3	Twist Disk	450 10017
3	Filter Protector	450 10018
3	Sinter Filter Water Separator	450 10019
3	Centre Disk	450 10020
9	O-Ring Water Separator	450 10021
3	Ring Water Separator	450 10022
3	Main Tube Water Saparator	450 10023
2	Cover Lid Brass Bushes	450 1014
4	Spring Washer	450 1015
2	Fixing Screw	450 1016
1	Pressure Gauge 0-400 bar, Ø63 mm	450 1025 B
1	Pressure Gauge	450 1025 A
4	Rubber Engine Mounting	450 1046
2	Solenoid 1 st & 2 nd Stage	450 2009
1	Endpressure Switch LW 570 D	450 2013 A
1	Silencer Condensate Separator	450 2014
1	Condensate Bowl	450 2015
1	Inlet Adapter 1 st Stage	450 3000
1	Elbow Connection	450 3001
1	Elbow Connection	450 3002
1	Connection	450 3003
4	Connection	450 3004
2	Connection	450 3007
1	Adapter Oil Suction Hose	450 3009
8	Elbow Connection 8L	450 3010
1	Elbow Connection	450 3011
4	Connection	450 3016
6	Reduction G1/2" / G1/4"	450 3021
1	Connection G8L	450 3022
1	T-Piece Connection	450 3025
1	Battery Rail	450 4032

Spare Part List LW 570 D

0 6 / 0 4 -

Qty.	Description	Part No.
2	Battery Bracket Bolts	450 4033
4	Nut	450 6004
12	Nut	450 6005
4	Nut	450 6006
6	Nut	450 6007
18	Screw	450 6009
60	Washer	450 6010
8	Washer	450 6011
24	Washer	450 6012
2	Clamp Filter Housing	450 6021
24	Screw	450 6026
10	Nut	450 6027
2	Bolt	450 6028
2	Alloy Bracket Filter Housing	450 6030
2	O-Ring	450 7004 A
1	Valve Head 4th Stage	450 7006
1	Endpressure Safety Valve 225 bar (G3/8")	450 7007
1	Endpressure Safety Valve 330 bar (G3/8")	450 7008
1	Main Roller Bearing	450 7009
1	Paper Gasket	450 7010
1	Oil Pump Drive Adapter	450 7012
1	Oil Pump Flange	450 7013
12	Bolt	450 7014
1	Air Intake Filter Housing, complete	450 7016
1	Air Intake Filter Cartridge	450 7017
1	Oil Pump, complete	450 7018
1	Oil Level Indicator	450 7021
6	Circlips	450 7026 A
3	Gasket Cylinder Flange	450 7028 A
1	Valve Head 2nd Stage	450 7032
1	Safety Valve 1st stage	450 7033
1	Main Bearing Flange	450 7035
1	Crankshaft Seal	450 7037
4	Bolt	450 7042
2	Bolt	450 7044
16	Bolt	450 7044

Spare Part List LW 570 D

0 6 / 0 4 -

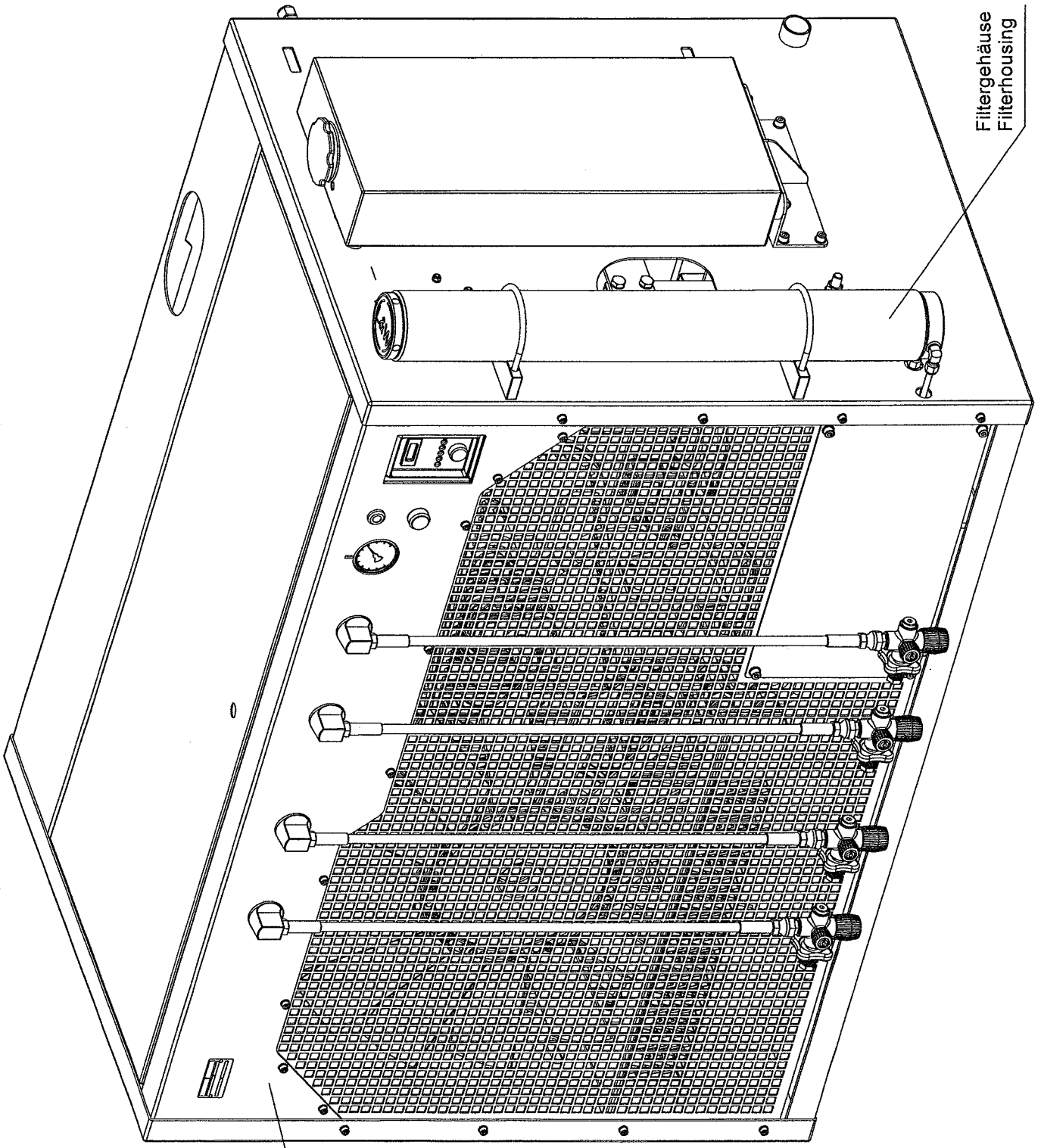
Qty.	Description	Part No.
4	Bolt	450 7046
8	Bolt	450 7051
1	Crankshaft Washer	450 7052
2	Bolt	450 7064
1	Valve 2nd Stage, complete	450 7065
1	Lower Valve Gasket 2nd Stage	450 7066 A
1	Upper Valve Gasket 3rd Stage	450 7066 B
1	Oil Drain Hose	450 7068
1	Woodruff Key	450 7074
20	Copper Washer	450 7075
26	Seal Ring 8mm pipe	450 7079
23	Nut 8L	450 7080
1	Seal Ring	450 7081
1	Nut	450 7082
3	Seal Ring 18mm Pipe	450 7083
3	Connection Nut 18L	450 7084
1	Adapter Crankcase Breather Hose	450 7090
4	Adapter Bolt	450 7092
1	Battery	450 7099
1	Pressure Maintaing Valve, complete	450 8006 B
3	Washer	450 8010
2	O-Ring Filter Housing	450 8011
2	Support Ring	450 8012
1	Filter Housing 2.3 ltr., complete	450 8021
1	Filter Cartridge Breathing Air	450 8022
4	Filling Valve Body	LW 160 / 190 240
4	Connection M16 x 1.5 mm / 10 L	LW 160 / 190 245
4	Bleed Valve Stem	LW 160 / 190 246
4	Shut-Off Valve Stem	LW 160 / 190 247
4	Shut-Off Valve Collar	LW 160 / 190 248
8	Hand Wheel Nut	LW 160 / 190 249
4	Filling Valve Wheel Ø 35 mm	LW 160 / 190 250
4	Bleed Valve Wheel Ø 27 mm	LW 160 / 190 251
4	HP Seat	LW 160 / 190 255
4	Packing Washer	LW 160 / 190 256
4	Washer Copper Ø 8 x 14 x 1 mm	LW 160 / 190 257

Spare Part List LW 570 D

0 6 / 0 4 -

Qty.	Description	Part No.
4	Washer Copper \varnothing 4 x 6 x 3 mm	LW 160 / 190 258
4	Worm Screw M3 x 8 mm	LW 160 / 190 259
4	O-Ring	LW 160 / 190 260
4	O-Ring	LW 160 / 190 261
4	O-Ring Filling Valve Neck 200 bar	LW 160 / 190 262
4	O-Ring Filling Valve Neck 300 bar	LW 160 / 190 264
12	Washer	LW 160 / 190 276
2	Bolt	LW 160 / 190 125
1	Screw	LW 160 / 190 143
8	Bolt	LW 160 / 190 21
1	Block for Safety Valve G3/8"	SHVS

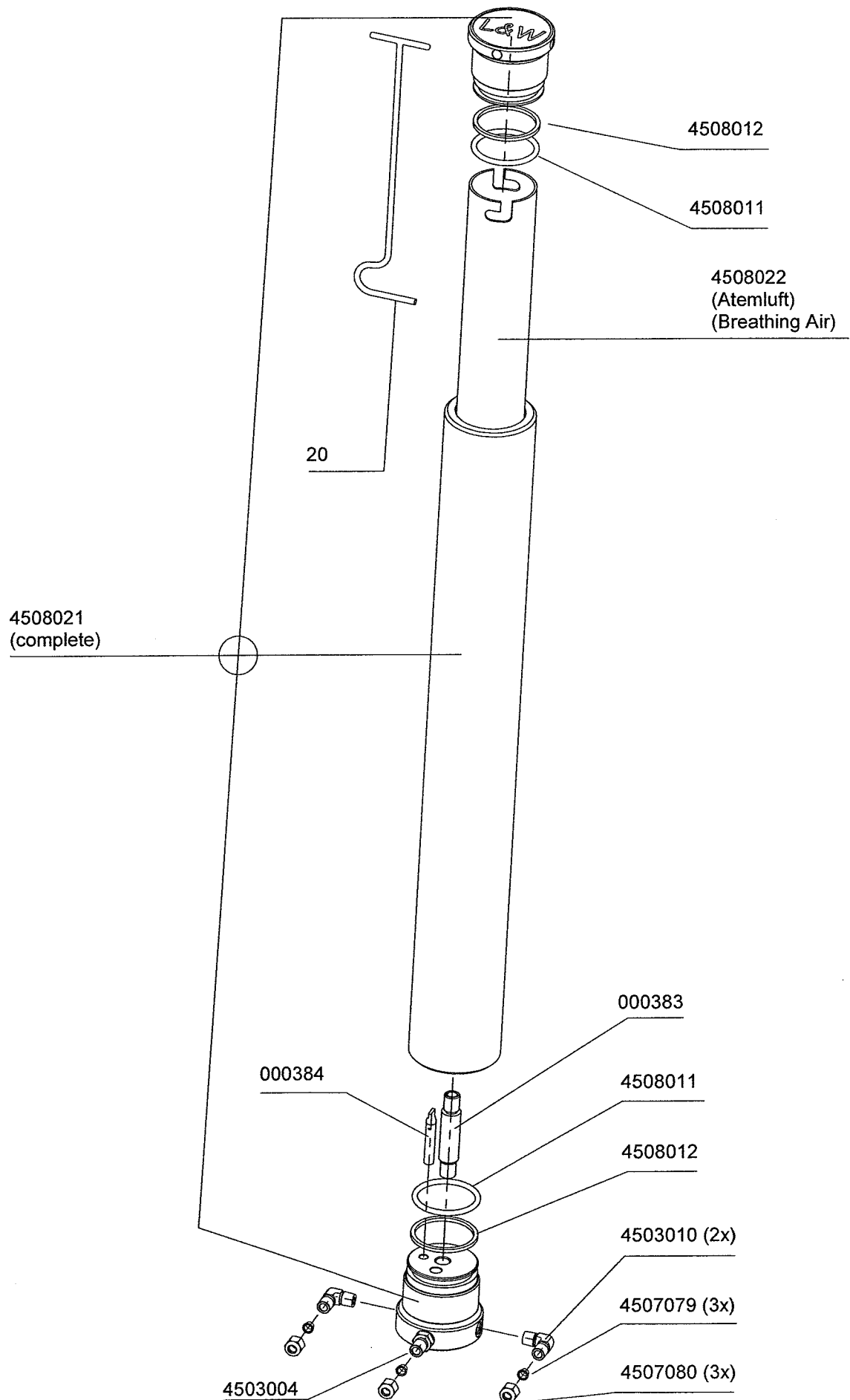
Kompressor: L&W 570 D
Ansicht: Zusammenbau
3D View: Assembly complete



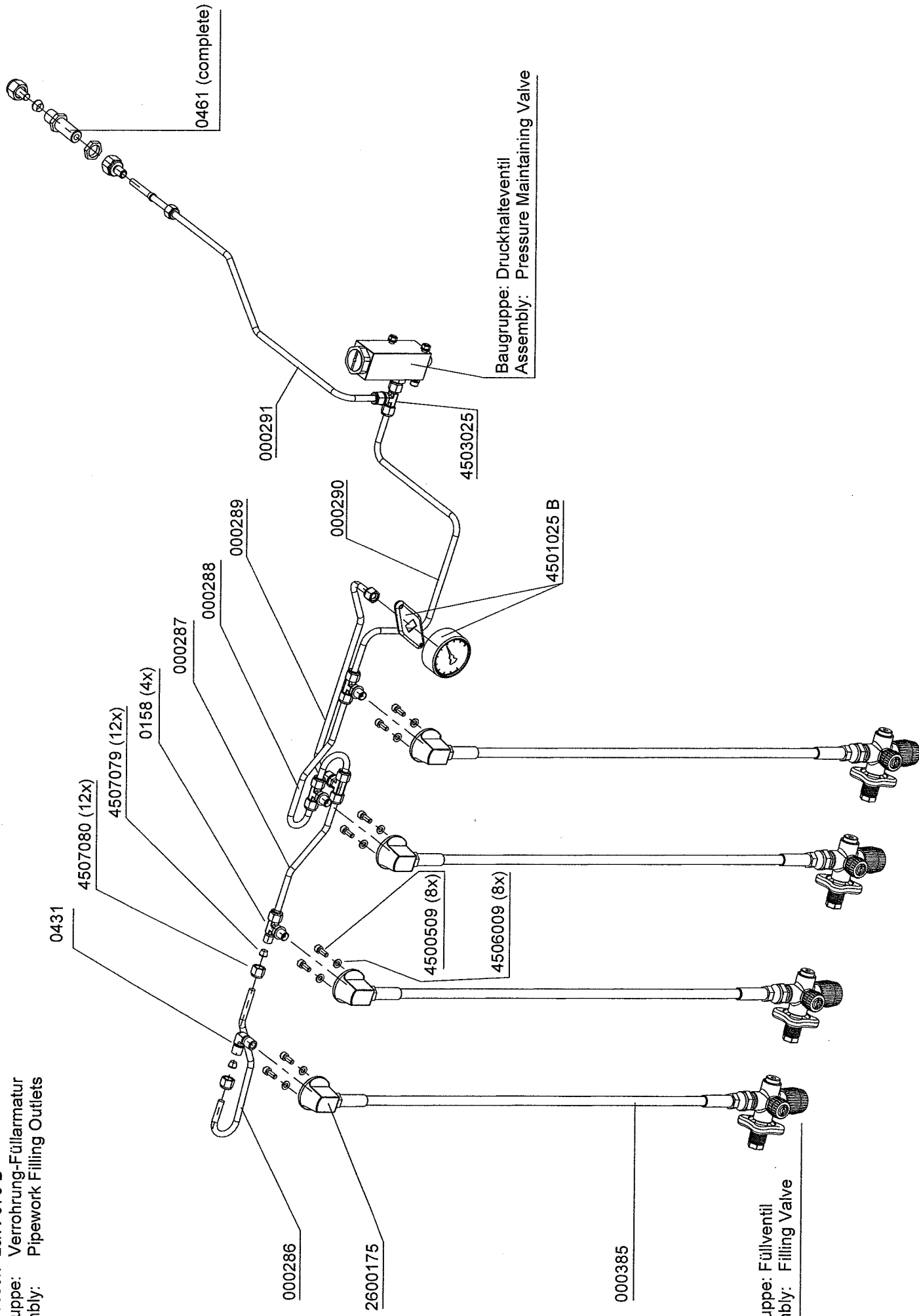
Gehäuse
Housing

Filtergehäuse
Filterhousing

Kompressor: L&W 1300
Baugruppe: Filtergehäuse
Assembly: Filterhousing



Kompressor: L&W 570 D
Baugruppe: Verrohrung-Füllarmatur
Assembly: Pipework Filling Outlets

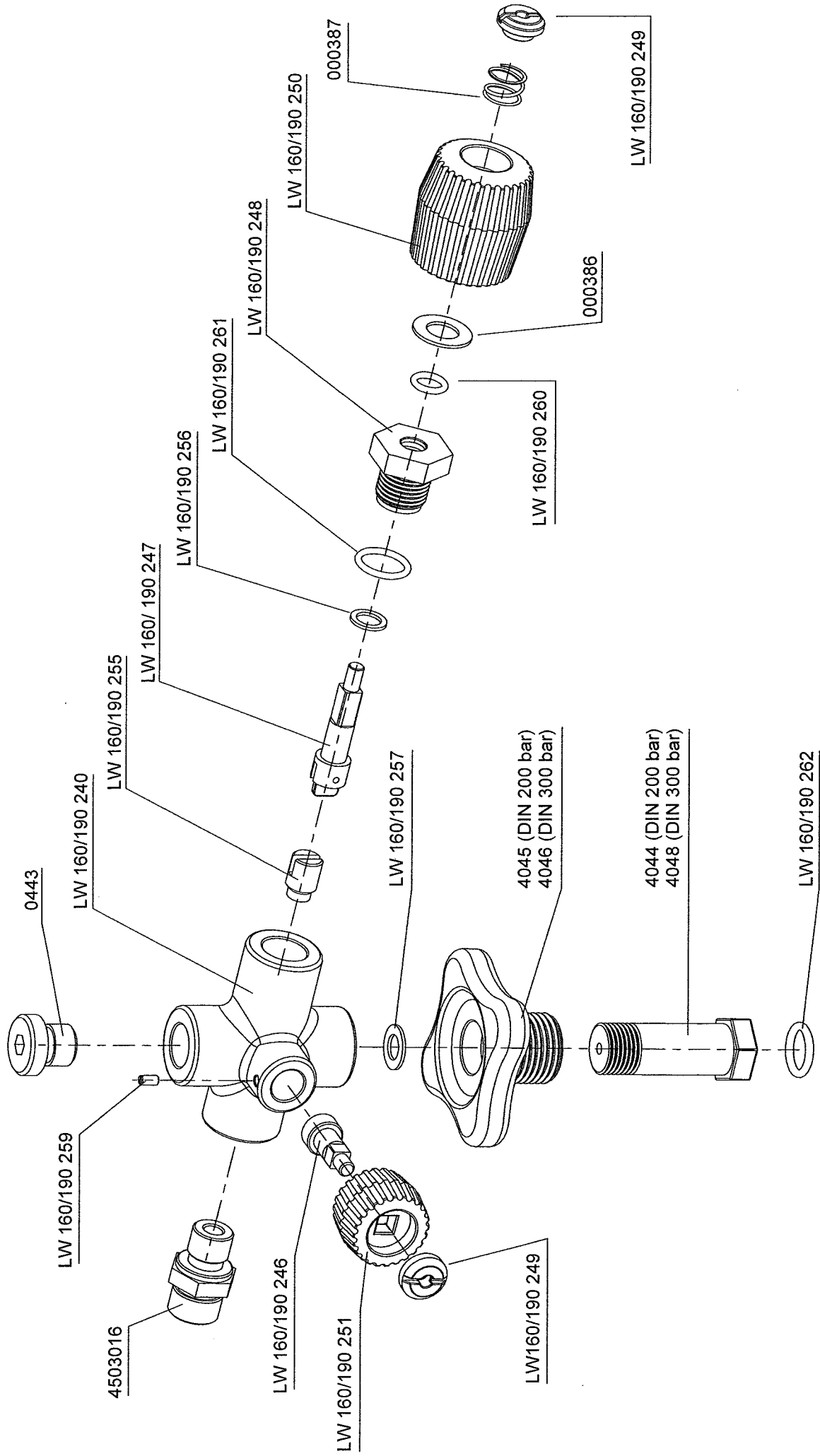


0461 (complete)

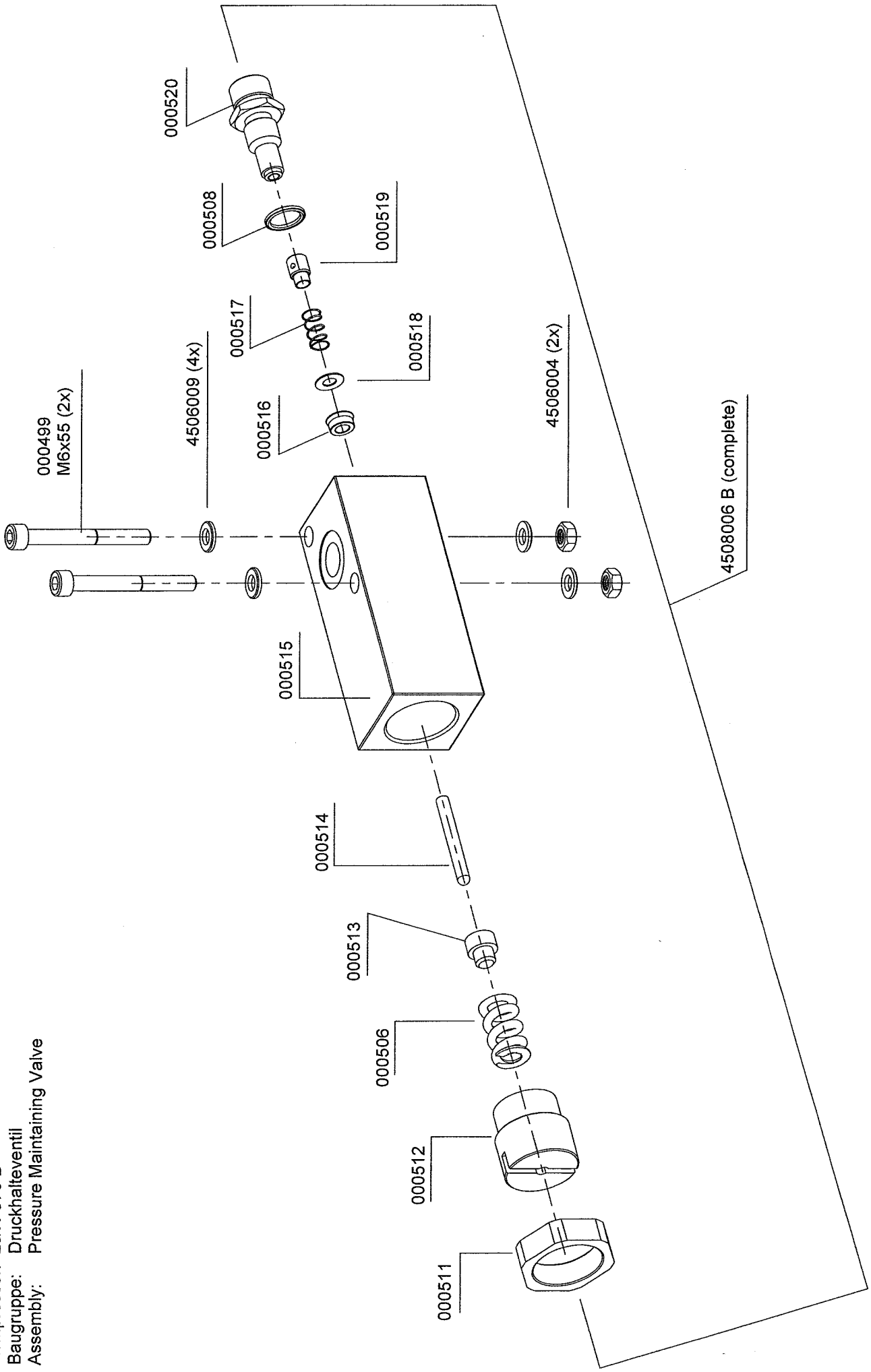
Baugruppe: Druckhalteventil
Assembly: Pressure Maintaining Valve

Baugruppe: Füllventil
Assembly: Filling Valve

Kompressor: L&W 570 D
 Baugruppe: Füllventil
 Assembly: Filling Valve



Kompressor: L&W 570 D
Baugruppe: Druckhalteventil
Assembly: Pressure Maintaining Valve



Kompressor: L&W 570 D

Ansicht: Zusammenbau ohne Gehäuse
3D-View: Assembly without Housing

Baugruppe: Kühler Stufe 3+4

Assembly: Cooling Pipe 3rd & 4th Stage

Baugruppe: Lüfterrad

Assembly: Flywheel & Cooling Fan

Baugruppe: Kühler Stufe 1

Assembly: Cooling Pipe 1st Stage

Baugruppe: Kühler Stufe 2
Assembly: Cooling Pipe 2nd Stage

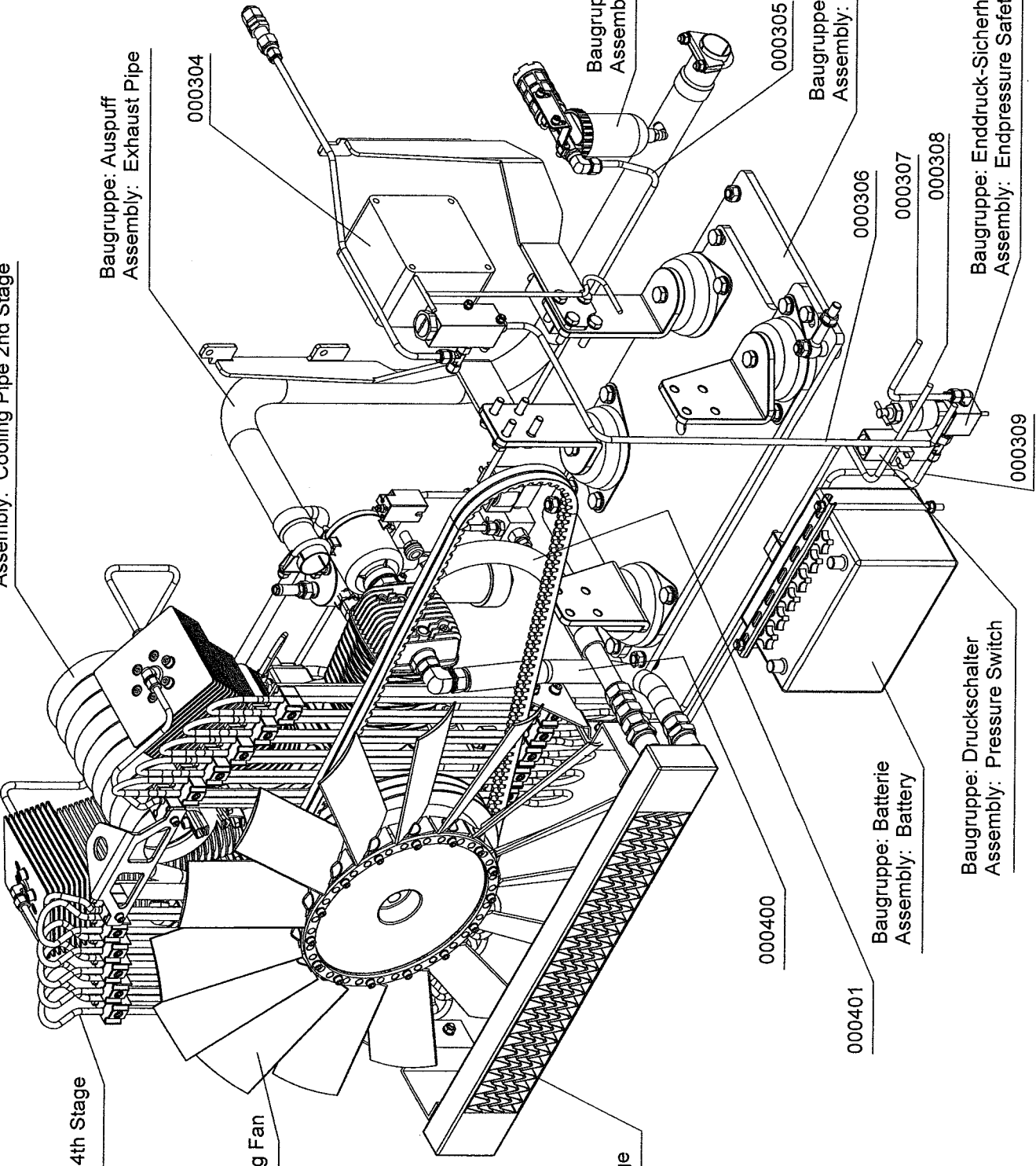
Baugruppe: Auspuff
Assembly: Exhaust Pipe

Baugruppe: Ölabscheider
Assembly: Oil Separator

Baugruppe: Motorkonsole
Assembly: Engine Brackets

Baugruppe: Druckschalter
Assembly: Pressure Switch

Baugruppe: Enddruck-Sicherheitsventil
Assembly: Endpressure Safety Valve



000304

000400

000401

000305

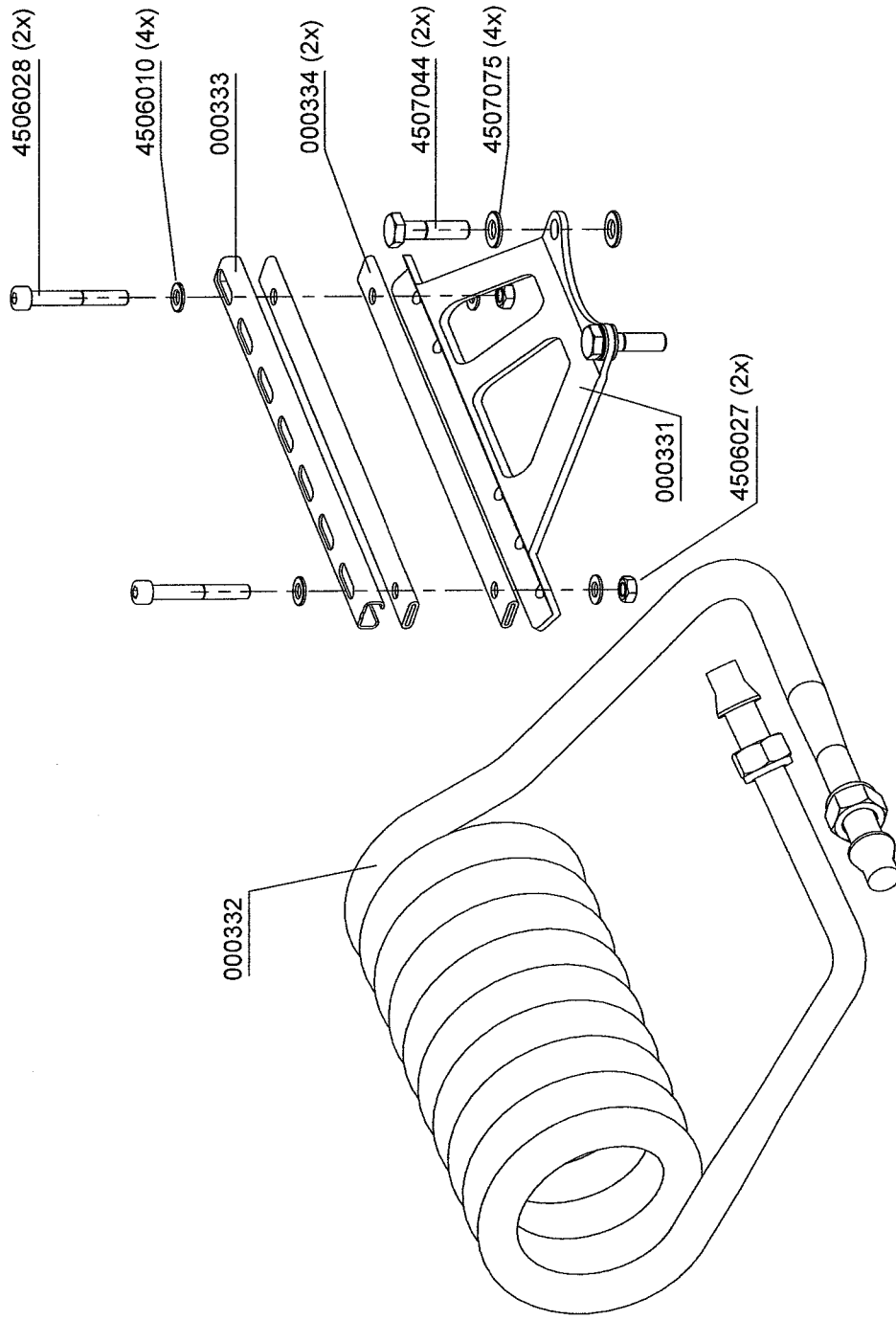
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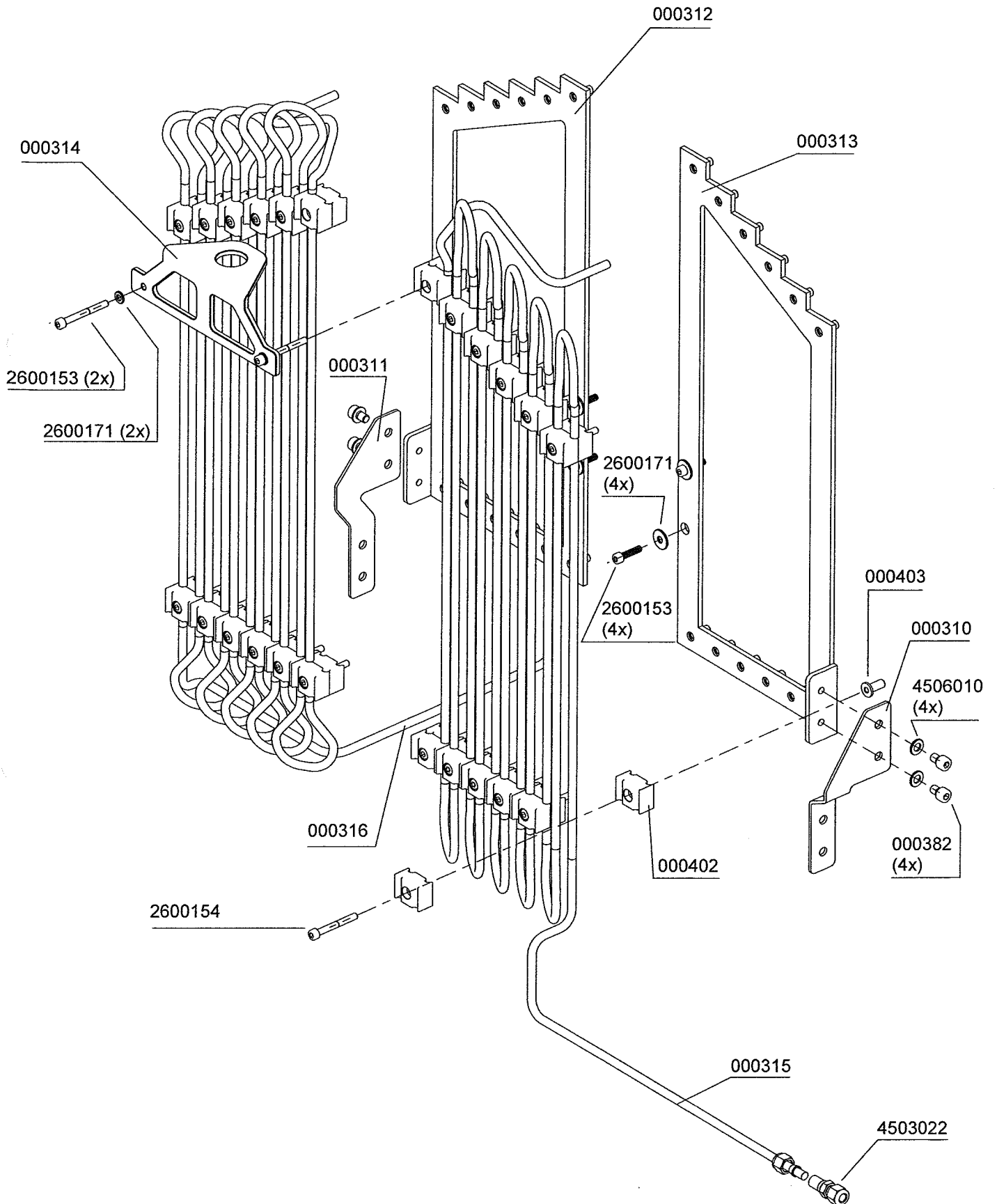
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000309

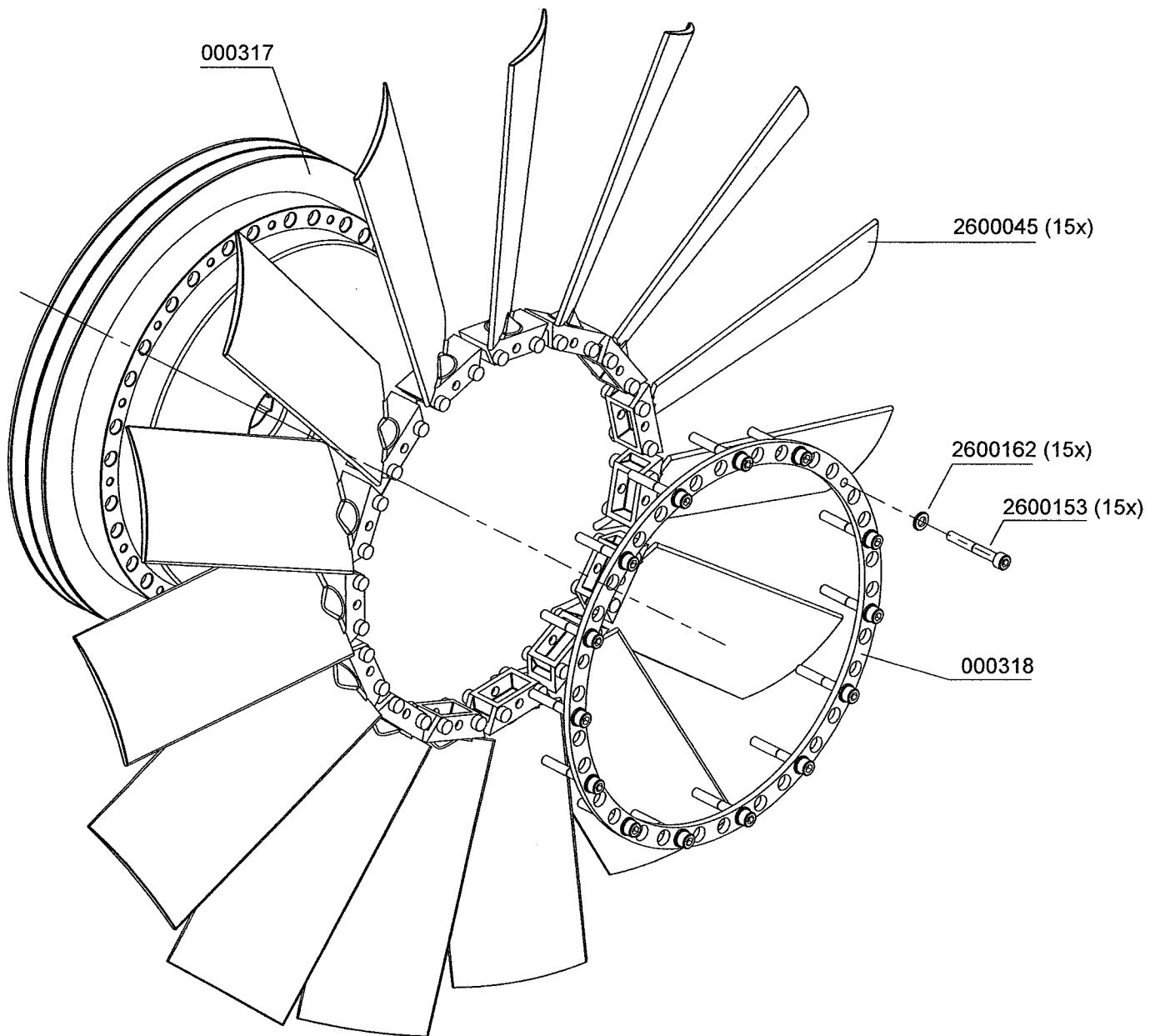
Kompressor: L&W 570 D
Baugruppe: Kühlwendel-Stufe 2
Assembly: Cooling Pipe 2nd Stage



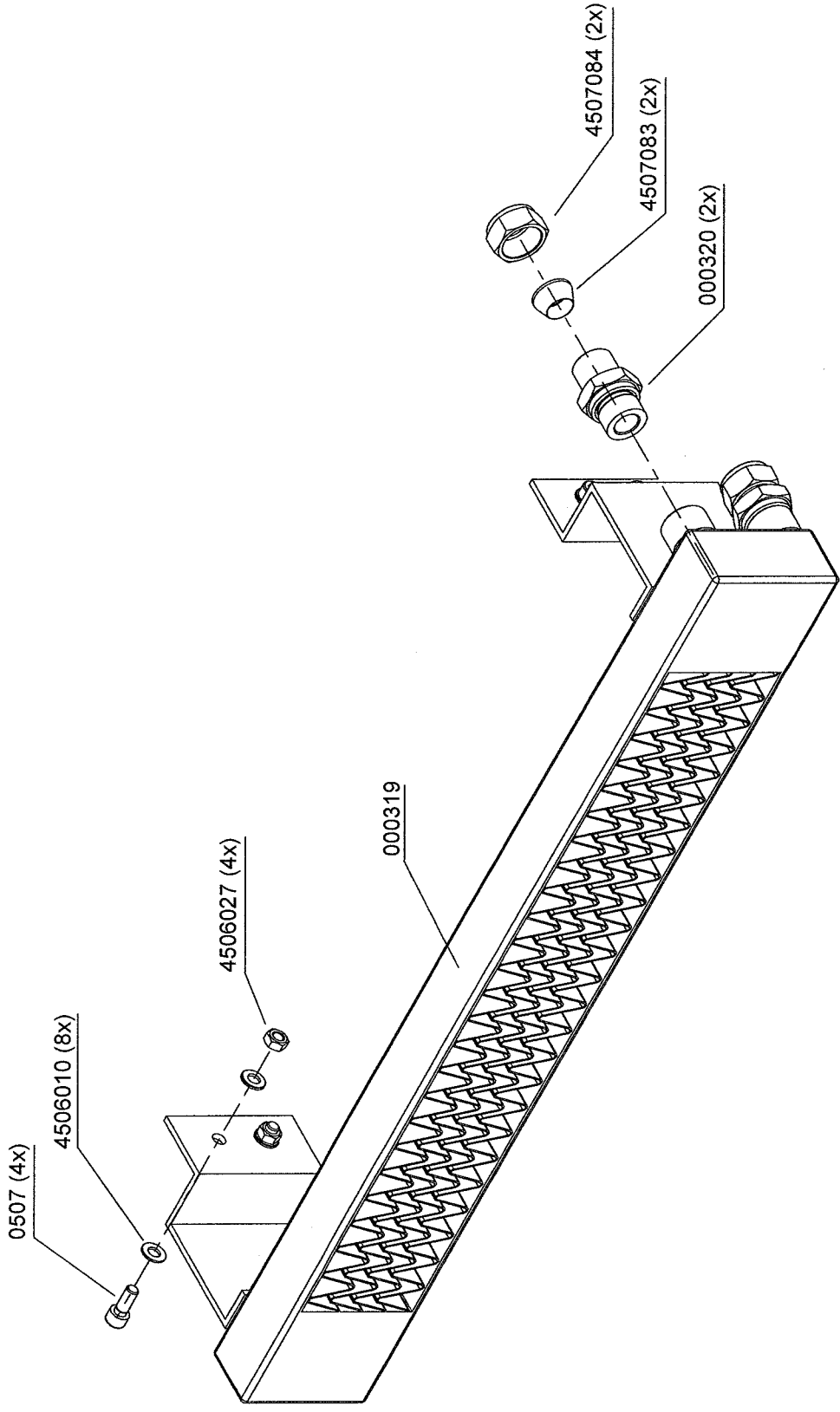
Kompressor: L&W 570 D
Baugruppe: Kühler Stufe 3 & 4
Assembly: Cooling Pipes 3rd & 4th Stage



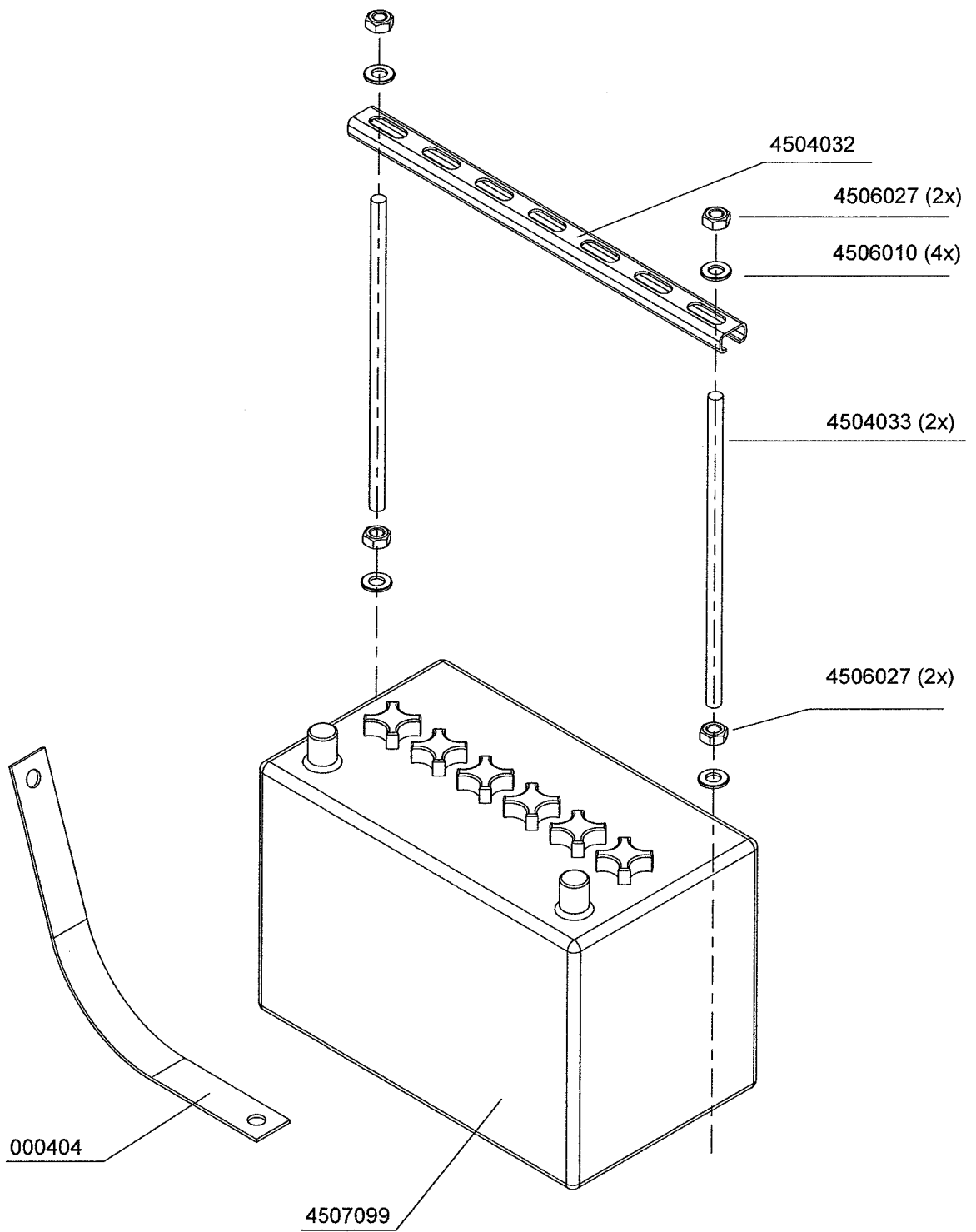
Kompressor: L&W 570 D
Baugruppe: Lüfterrad
Assembly: Flywheel & Cooling Fan



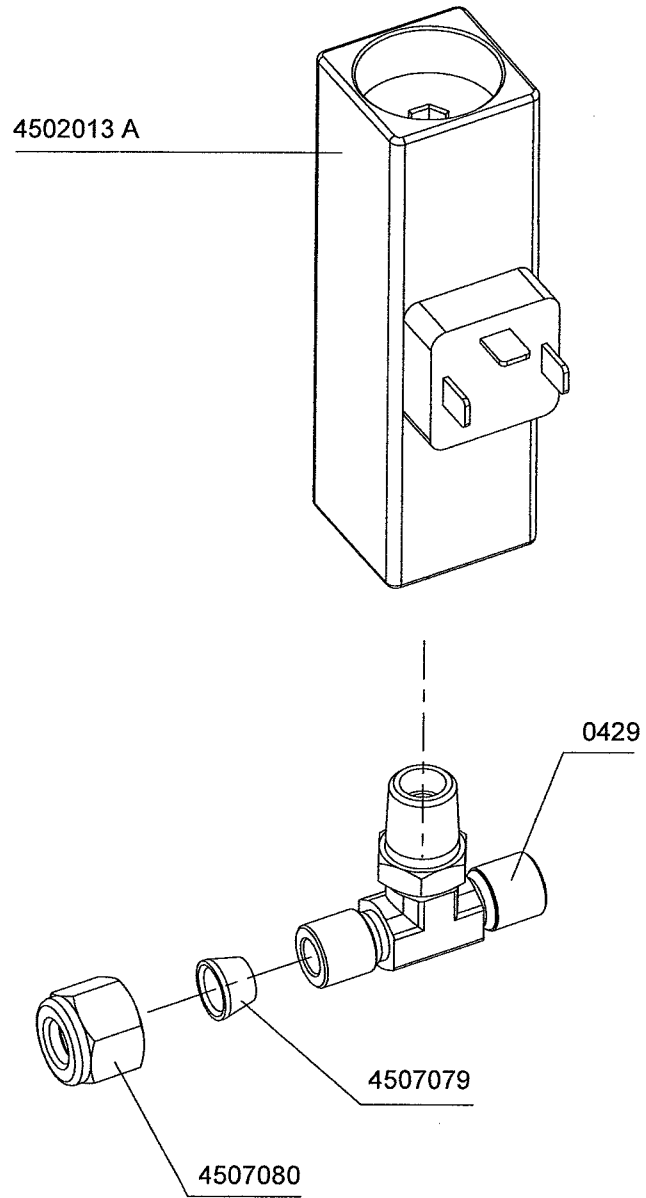
Kompressor: L&W 570 D
Baugruppe: Kühler Stufe 1
Assembly: Radiator 1st Stage



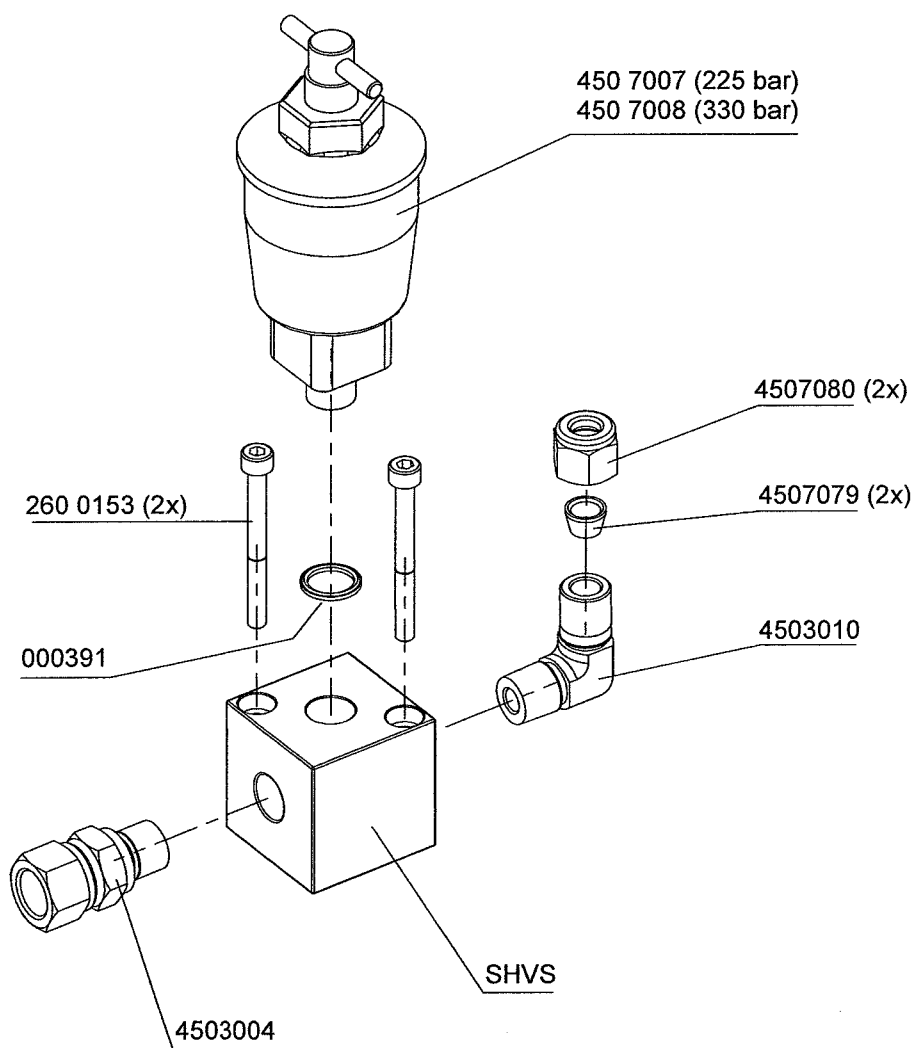
Kompressor: L&W 570 D
Baugruppe: Batterie
Assembly: Battery



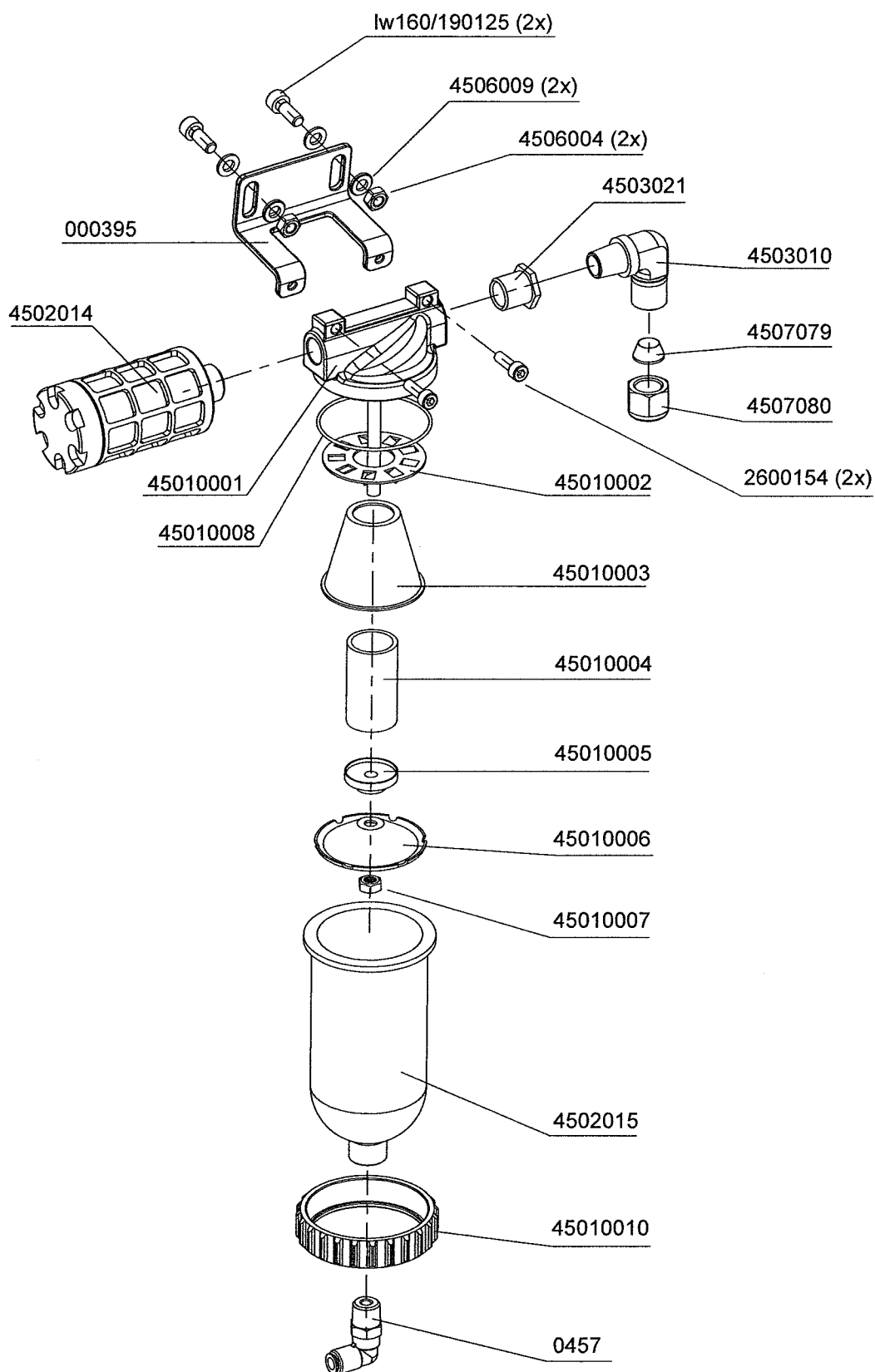
Kompressor: L&W 570 D
Baugruppe: Druckschalter
Assembly: Pressure Switch



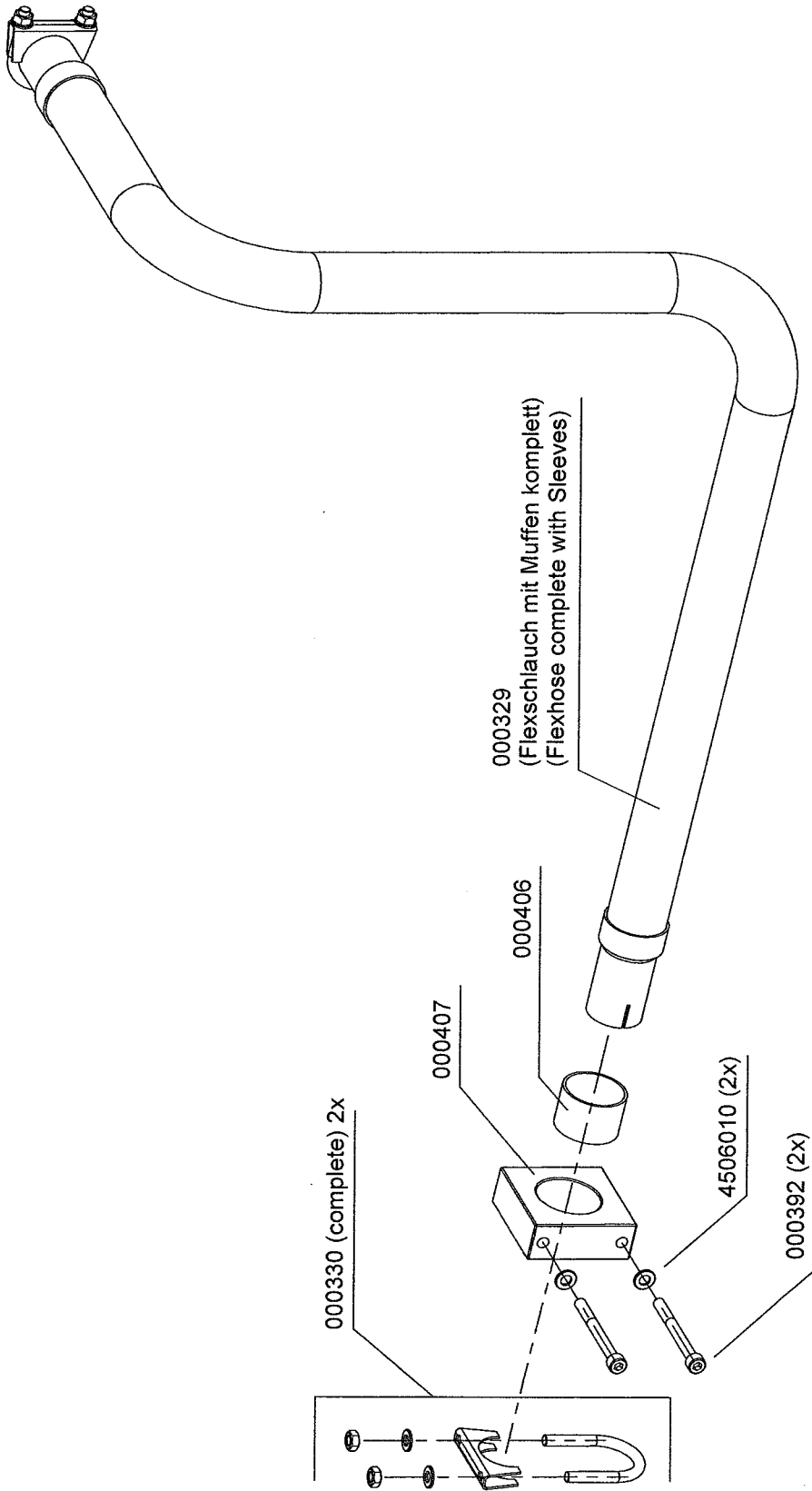
Kompressor: L&W 570 D
Baugruppe: Enddruck-Sicherheitsventil
Assembly: Endpressure Safety Valve



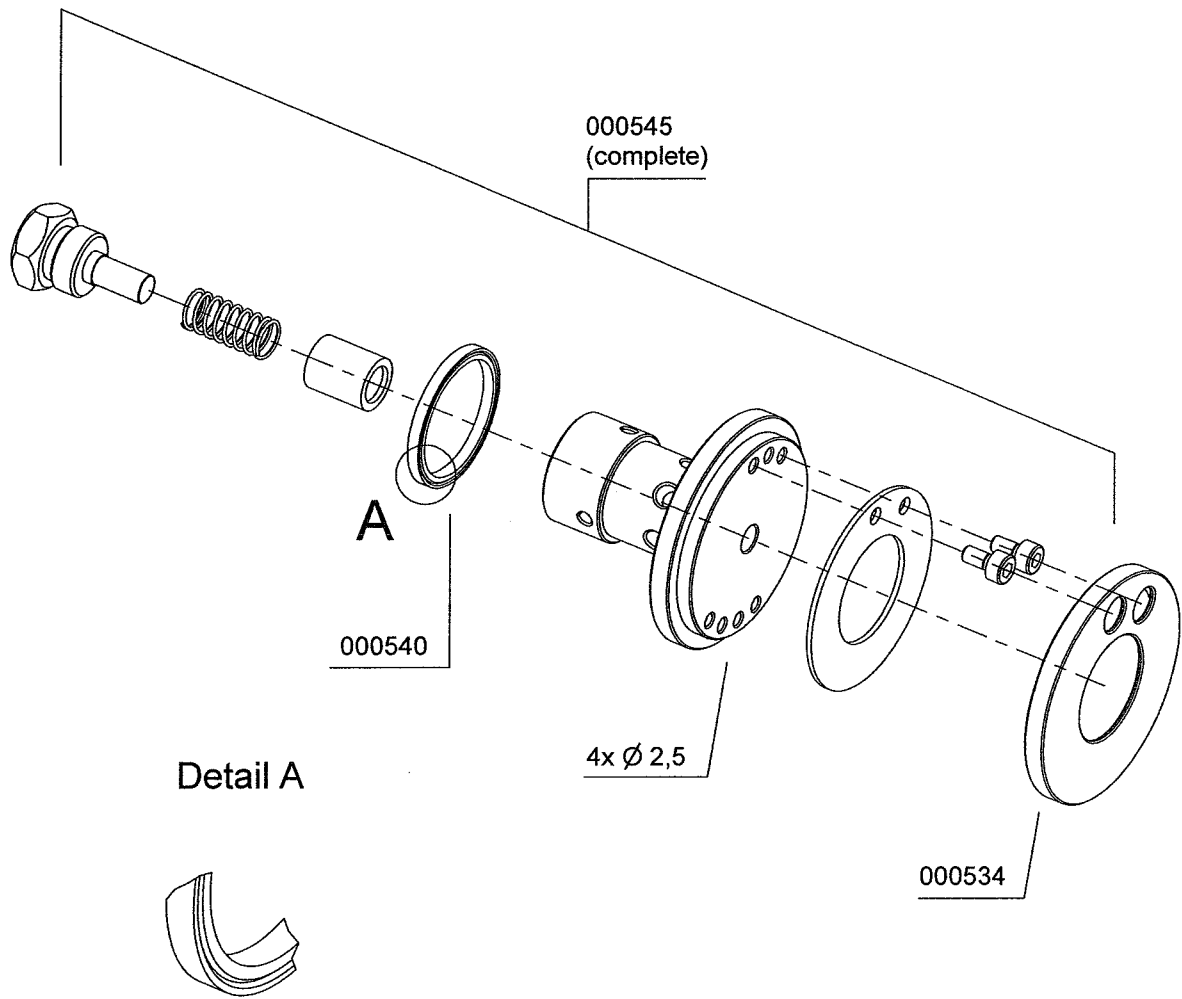
Kompressor: L&W 570 D
Baugruppe: Ölabscheider (Endstufe)
Assembly: Oil Separator (Final Stage)



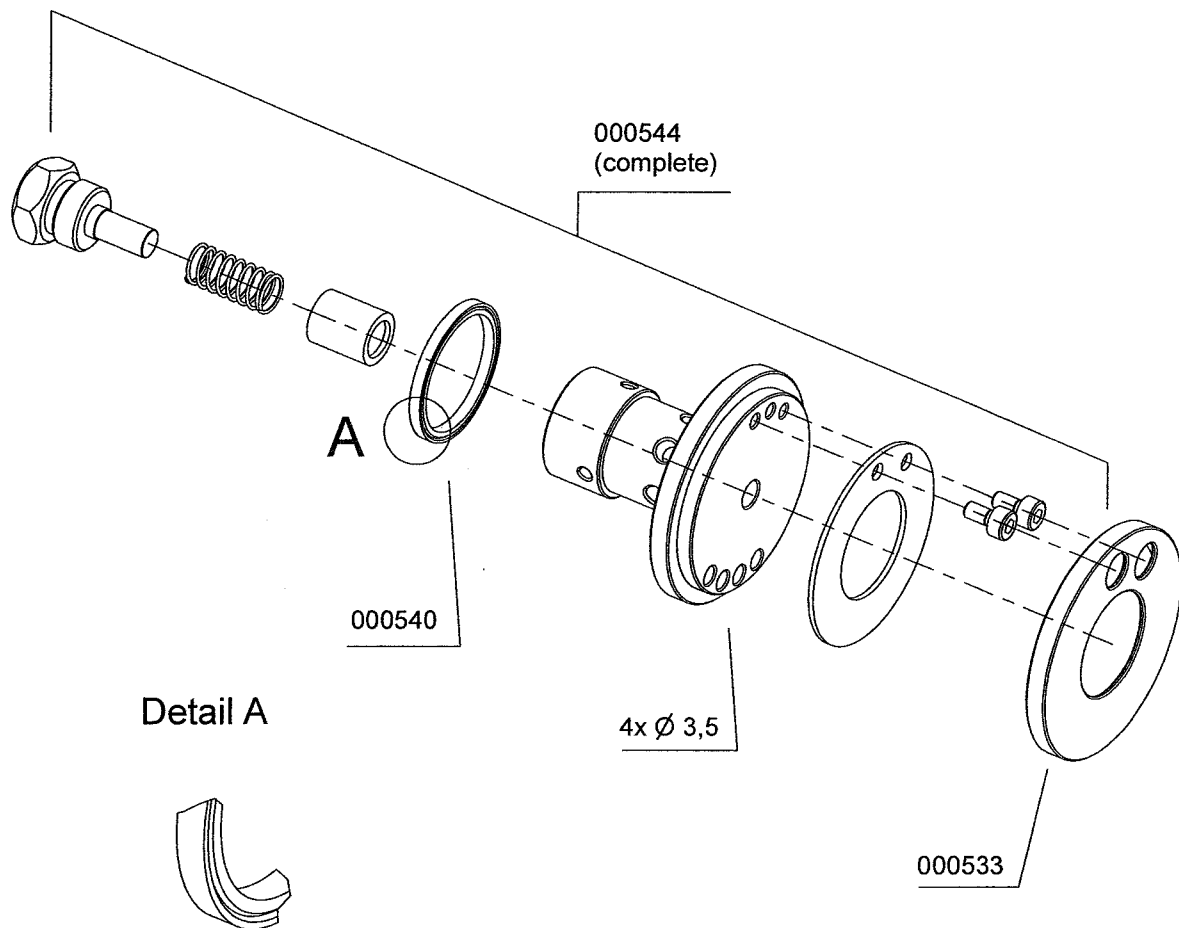
Kompressor: L&W 570 D
Baugruppe: Auspuffrohr
Assembly: Exhaust Pipe



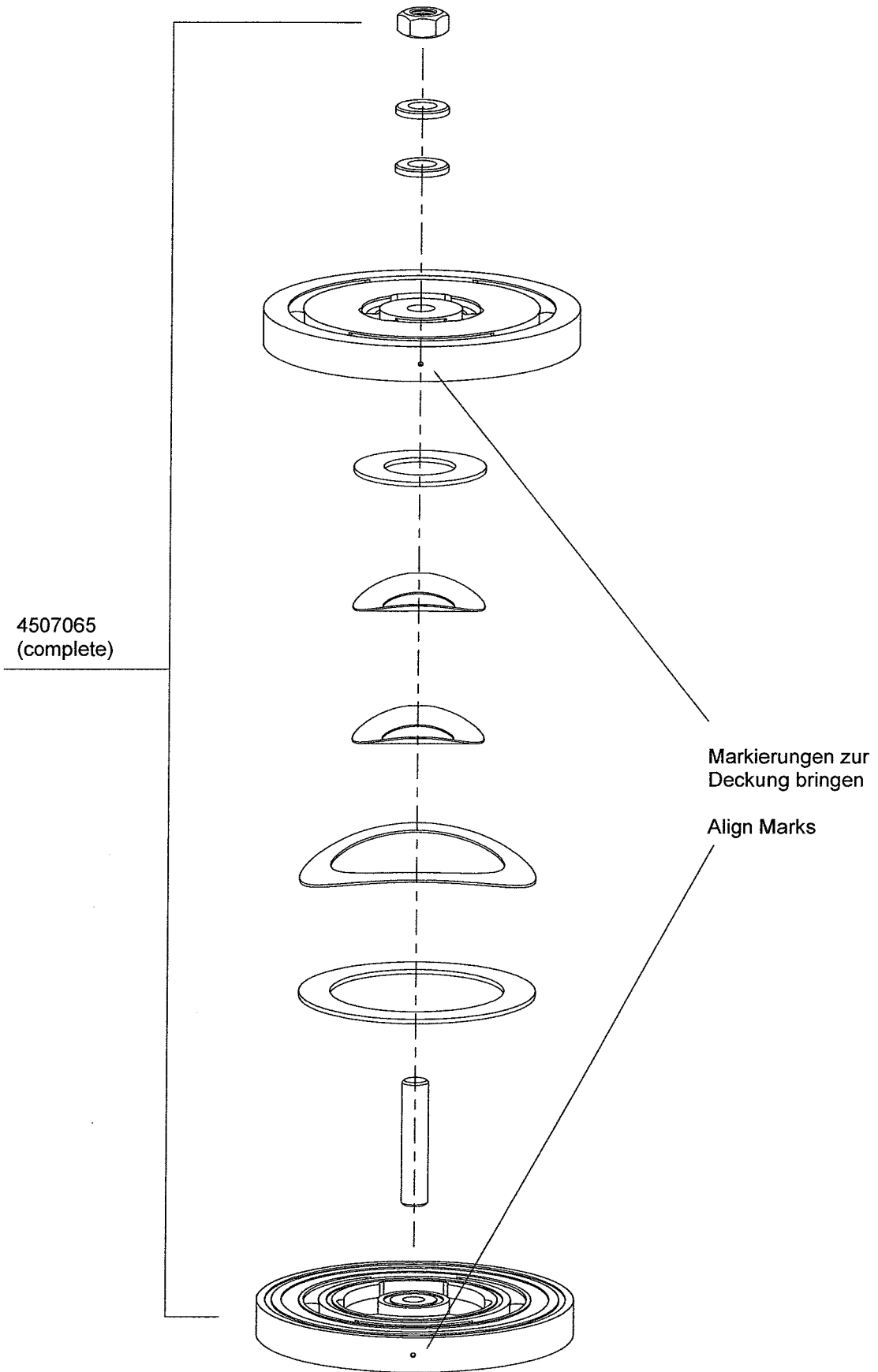
Kompressor: L&W 570 D
Baugruppe: Ventil Stufe 4
Assembly: Valve 4th Stage



Kompressor: L&W 570 D
Baugruppe: Ventil Stufe 3
Assembly: Valve 3rd Stage

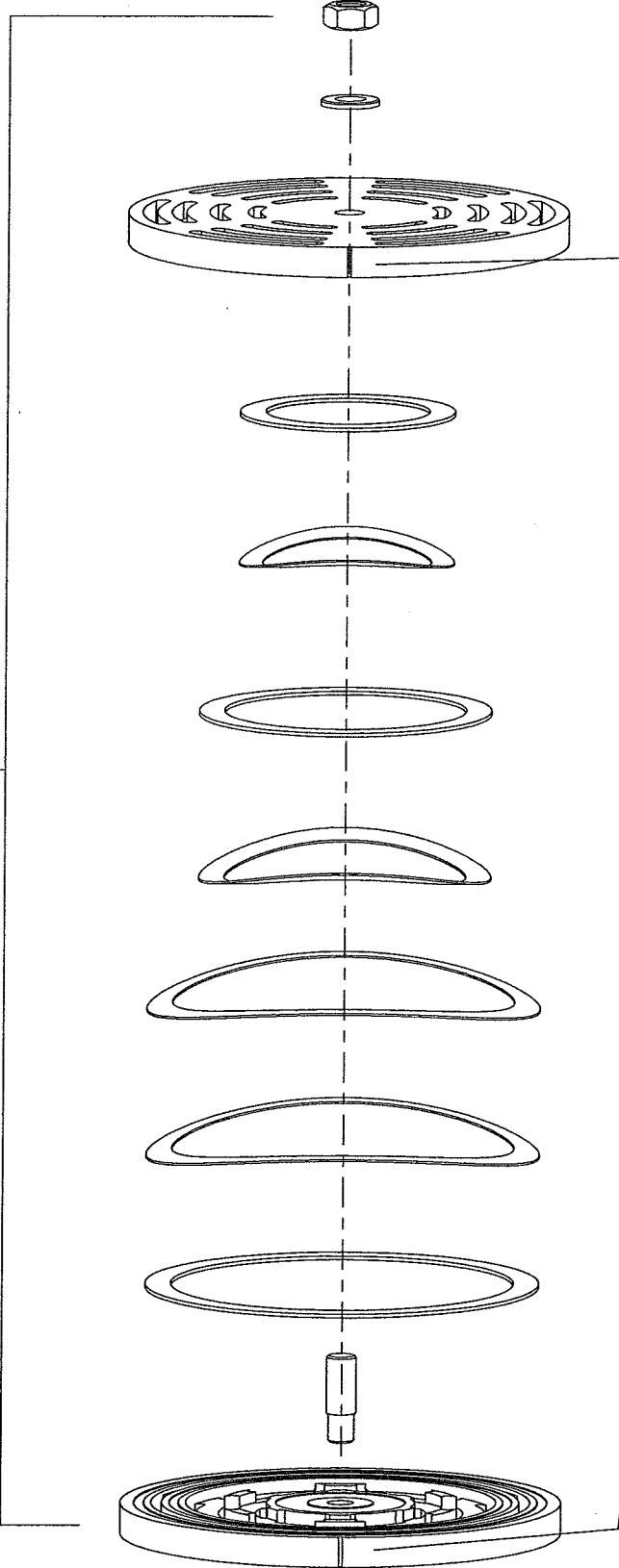


Kompressor: L&W 570 D
Baugruppe: Ventil-Stufe 2
Assembly: Valve 2nd Stage



Kompressor: L&W 570 D
Baugruppe: Ventil-Stufe 1
Assembly: Valve 1st Stage

000369
(complete)

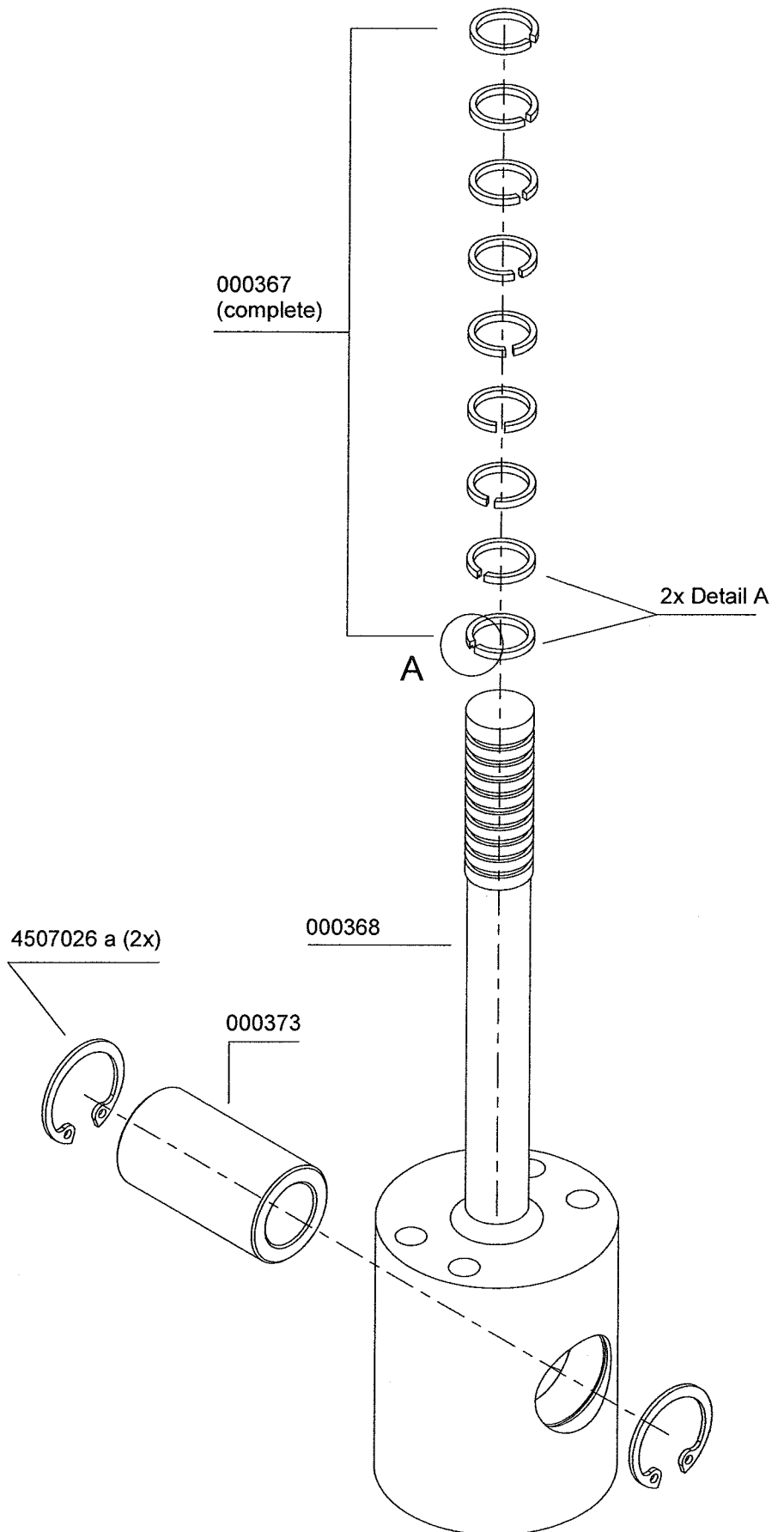
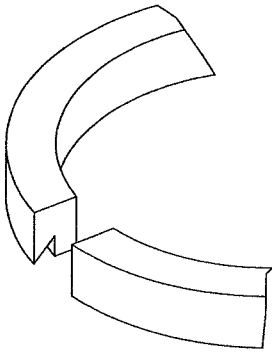


Markierungen in
Deckung bringen

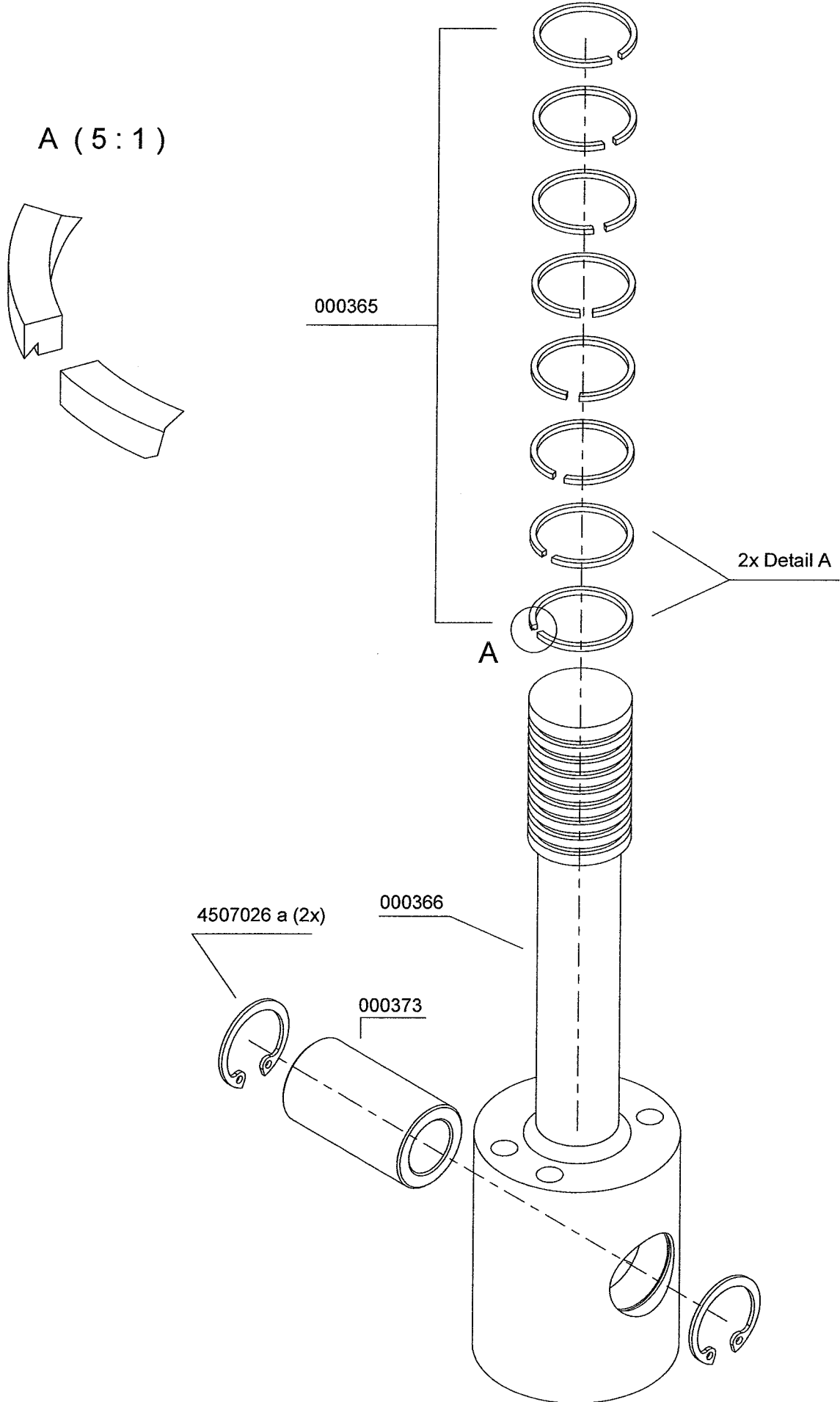
Align Marks

Kompressor: L&W 570 D
Baugruppe: Komplettkolben-Stufe 4
Assembly: Piston 4th Stage

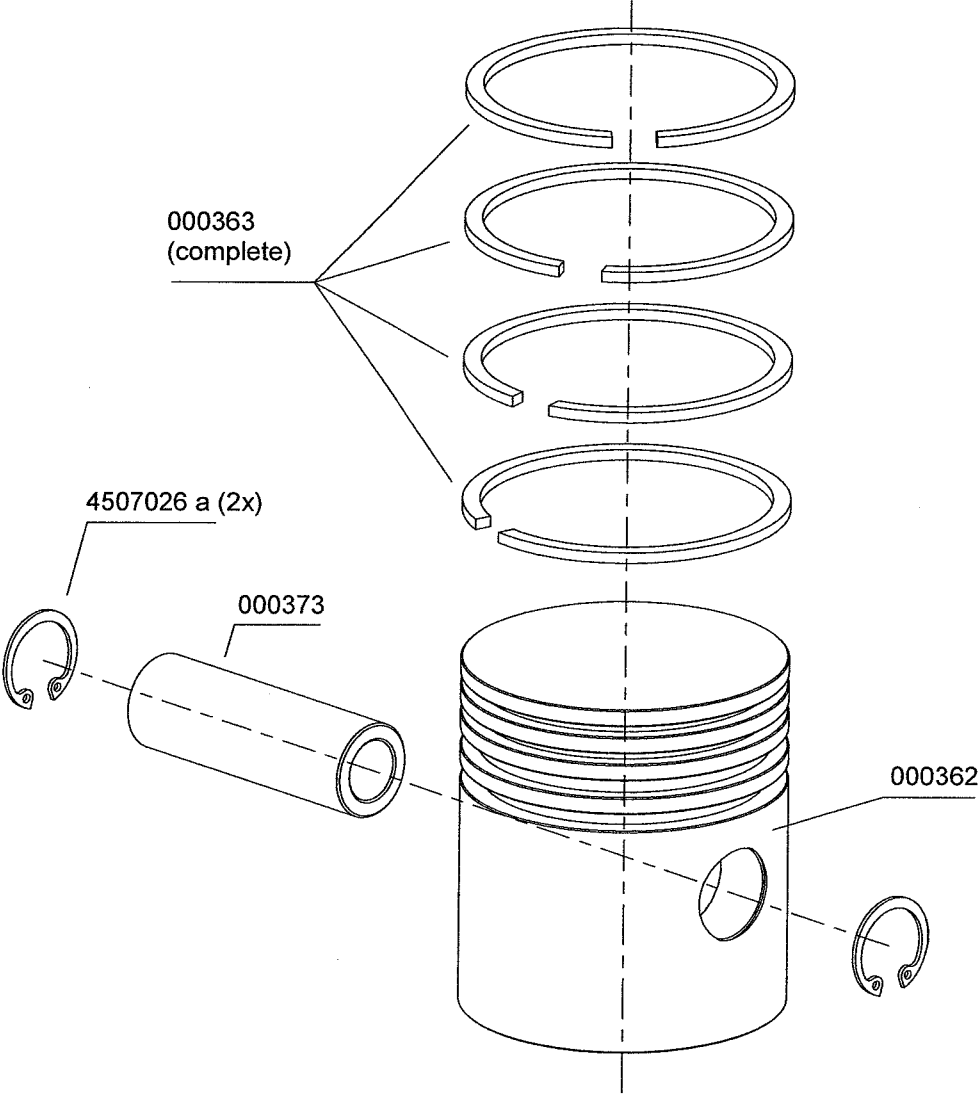
Detail A (5 : 1)



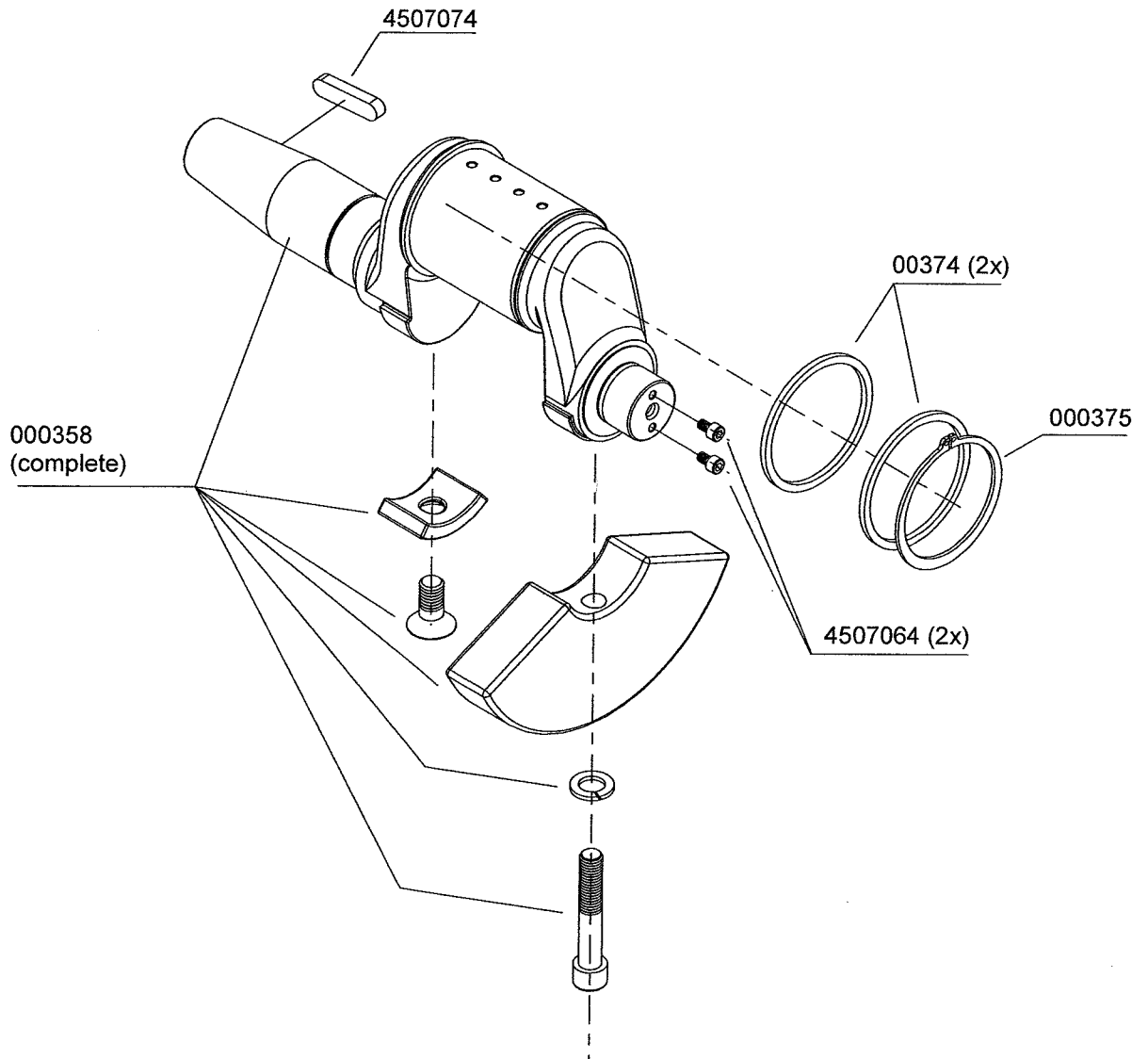
Kompressor: L&W 570 D
Baugruppe: Komplettkolben-Stufe 3
Assembly: Piston 3rd stage



Kompressor: L&W 570 D
Baugruppe: Komplettkolben Stufe 2
Assembly: Piston 2nd Stage

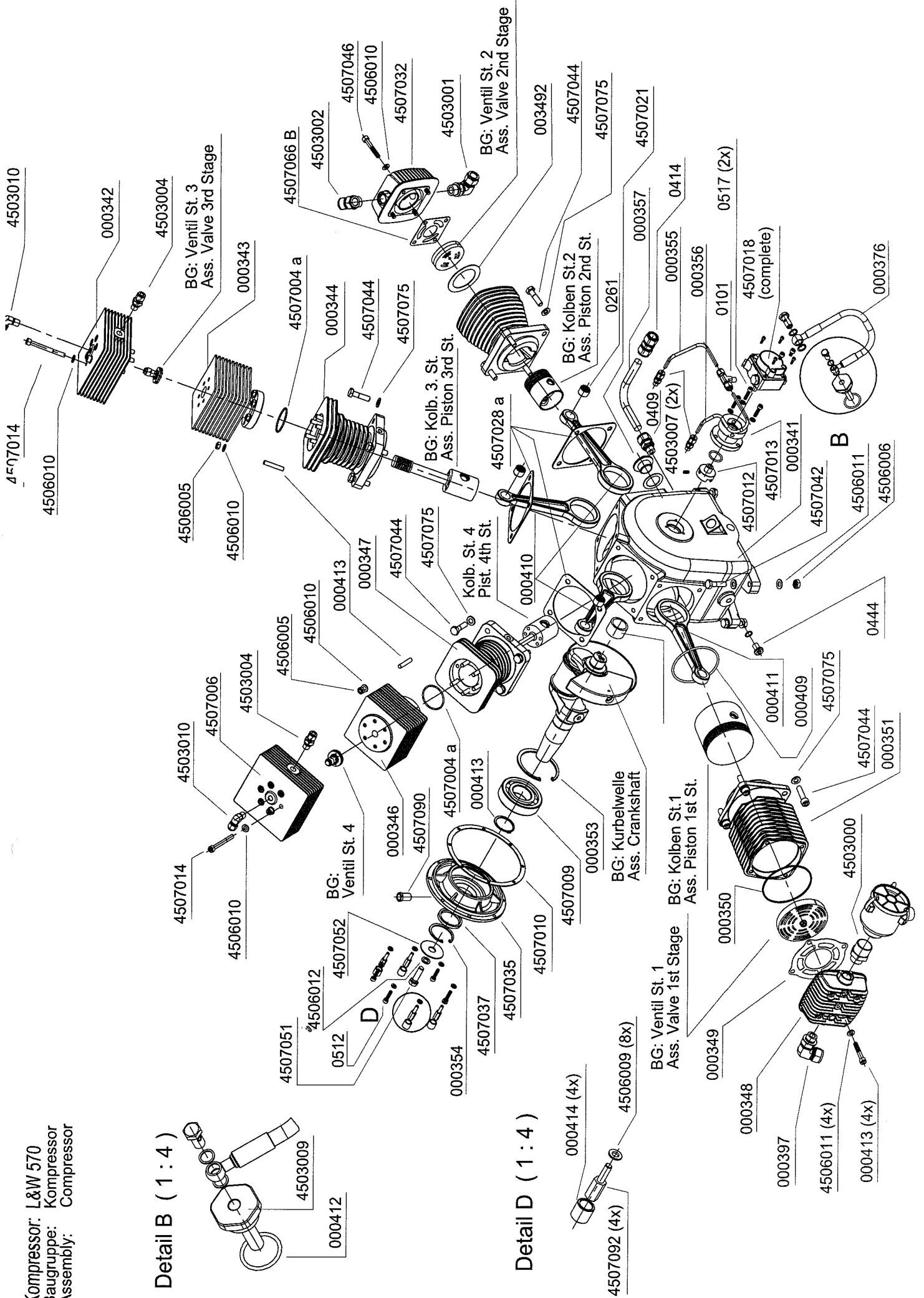
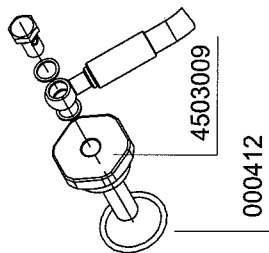


Kompressor: L&W 570 D
Baugruppe: Kurbelwelle
Assembly: Crankshaft

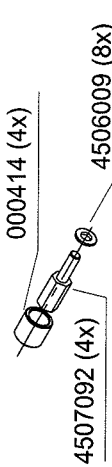


Kompressor: L&W 570
 Baugruppe: Kompressor
 Assembly: Compressor

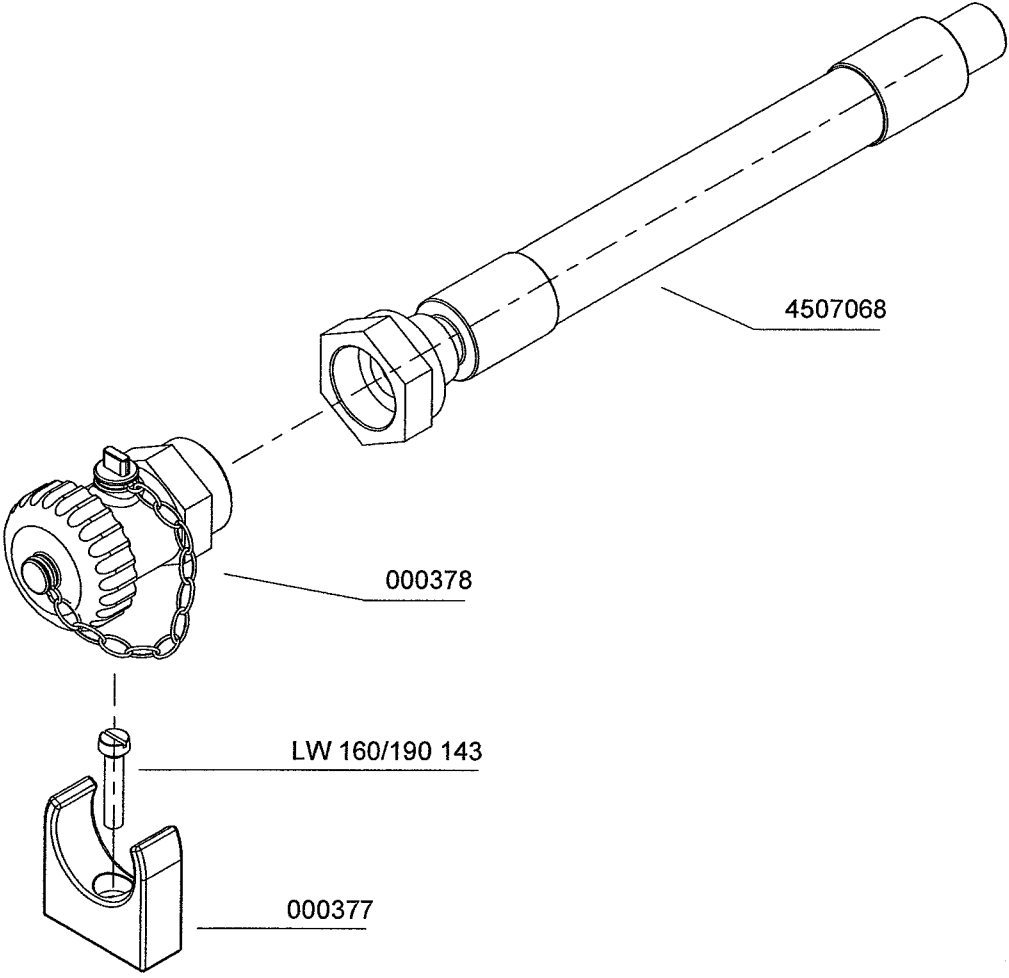
Detail B (1 : 4)



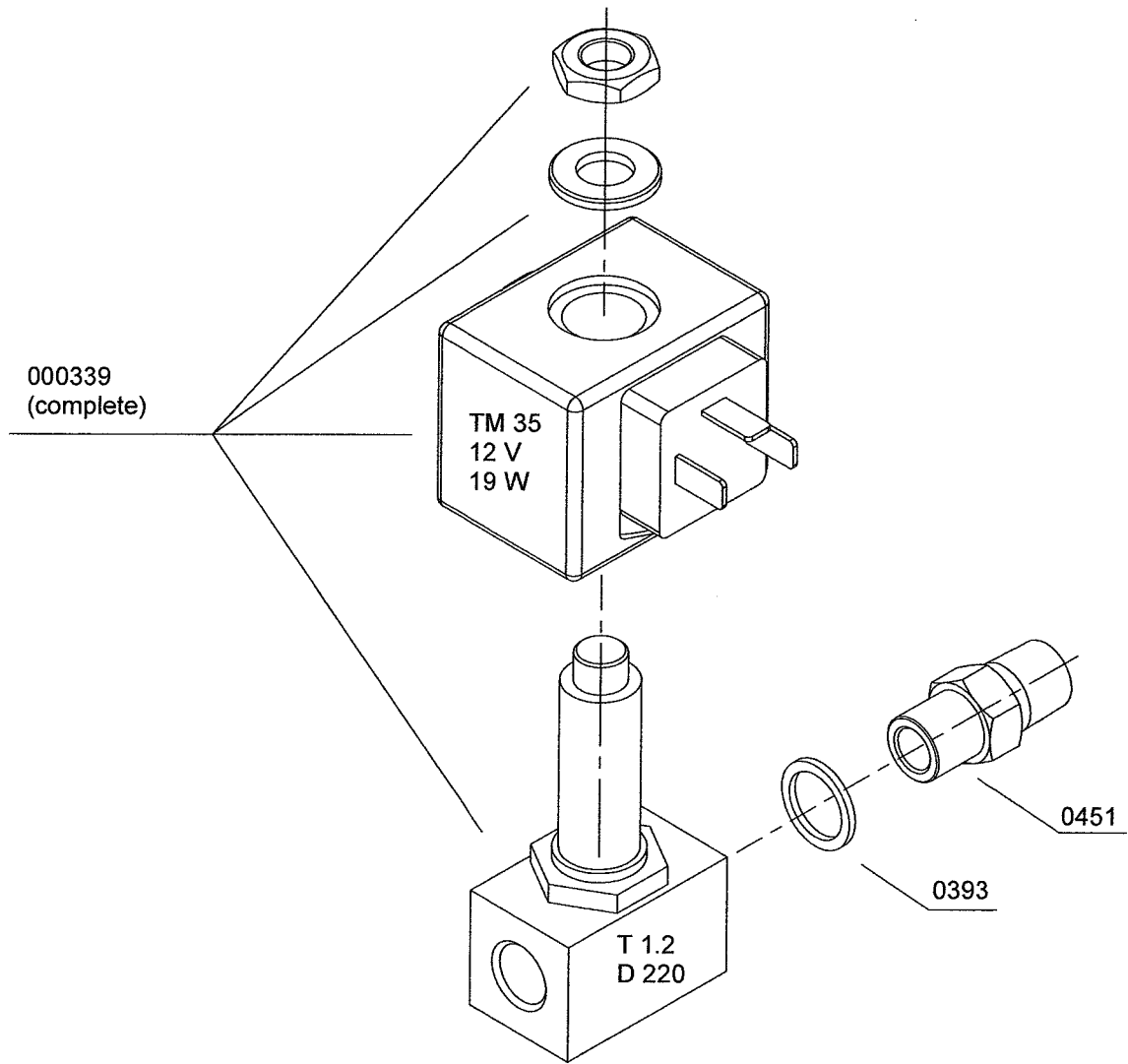
Detail D (1 : 4)



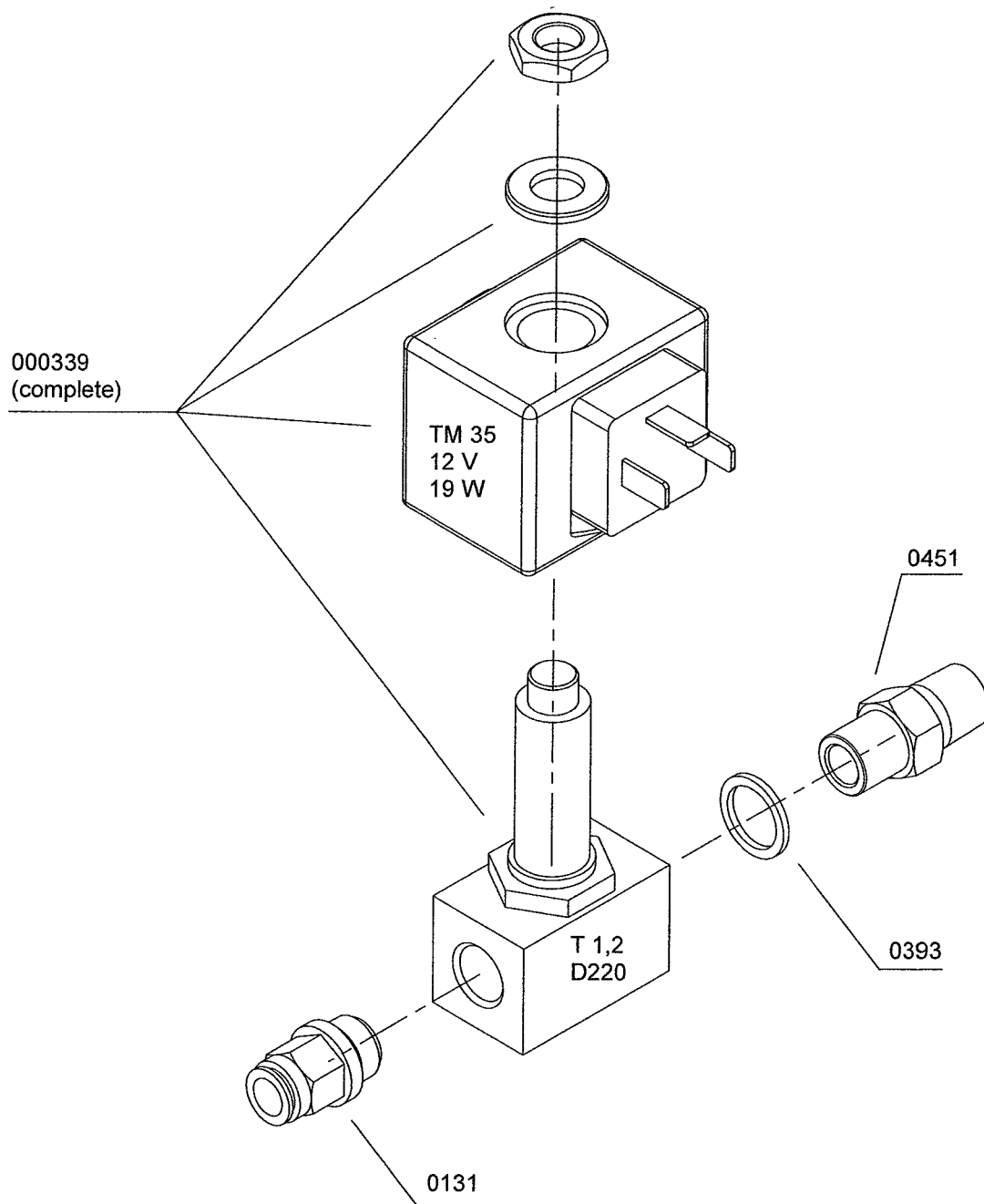
Kompressor: L&W 570 D
Baugruppe: Ölablassschlauch
Assembly: Oil Drain Hose



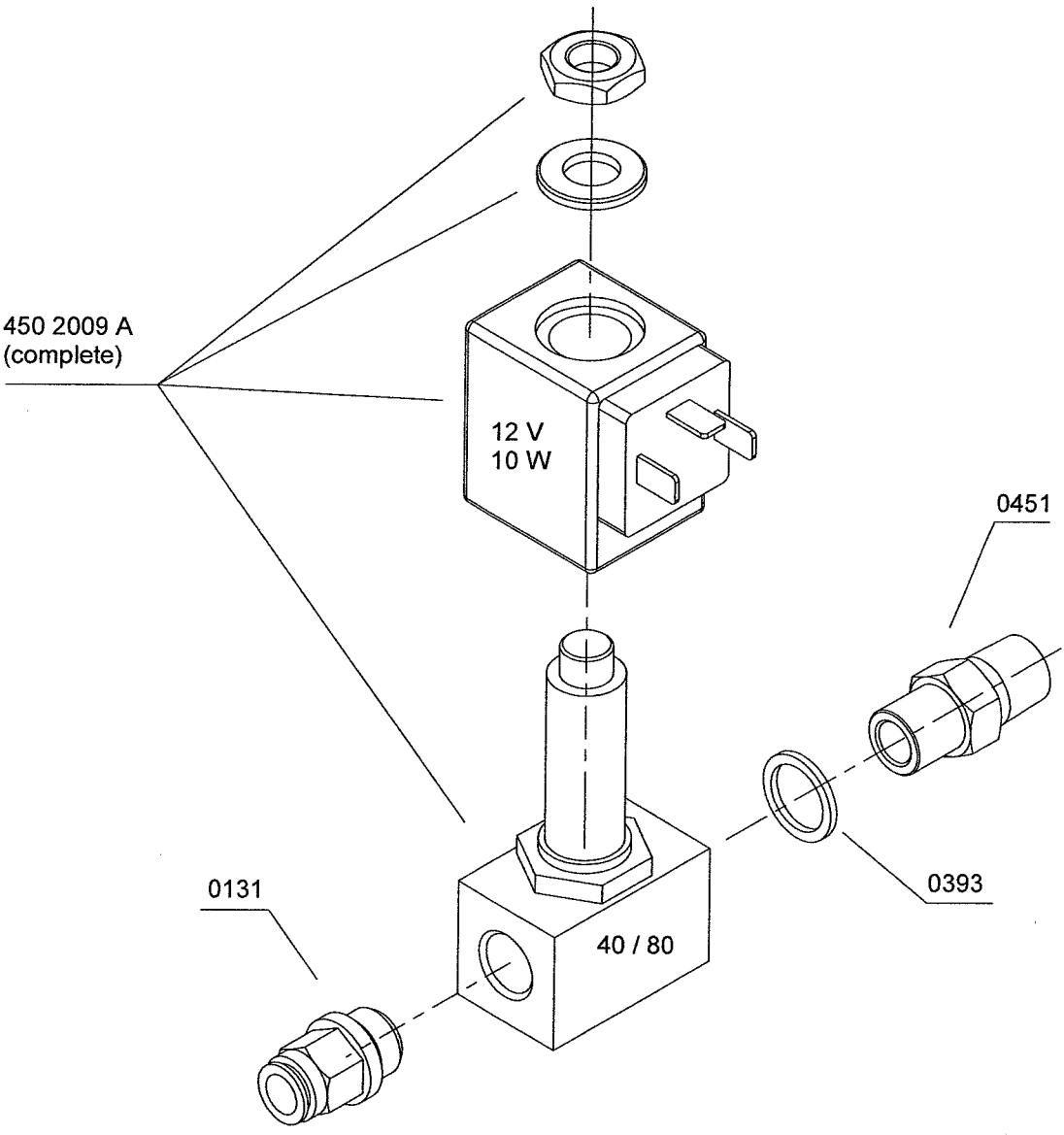
Kompressor: L&W 570 D
Baugruppe: Magnetventil Stufe 4
Assembly: Solenoid 4th Stage



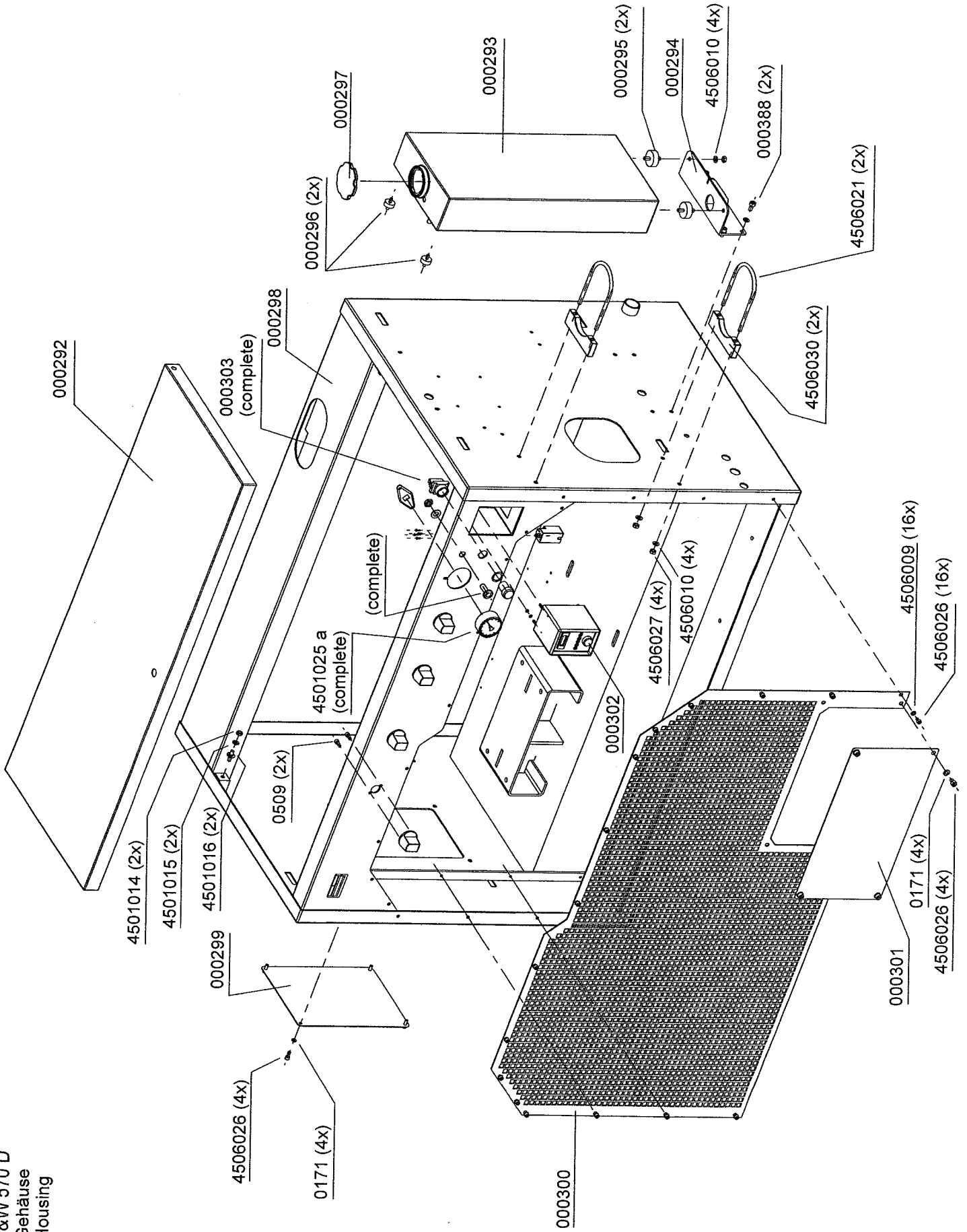
Kompressor: L&W 570 D
Baugruppe: Magnetventil Stufe 3
Assembly: Solenoid 3rd Stage



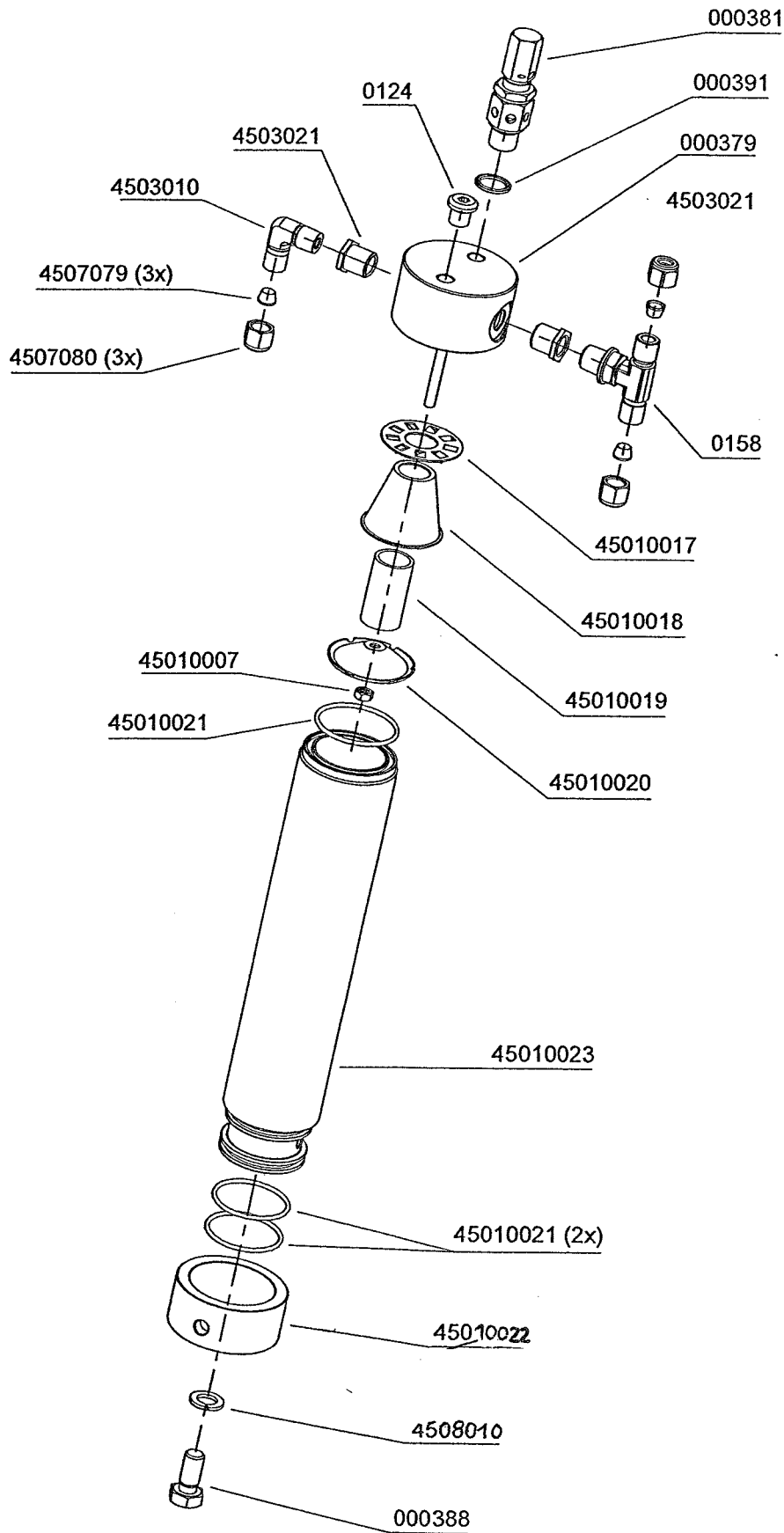
Kompressor: L&W 570 D
Baugruppe: Magnetventil Stufe 1 + 2
Assembly: Solenoid 1st & 2nd Stage



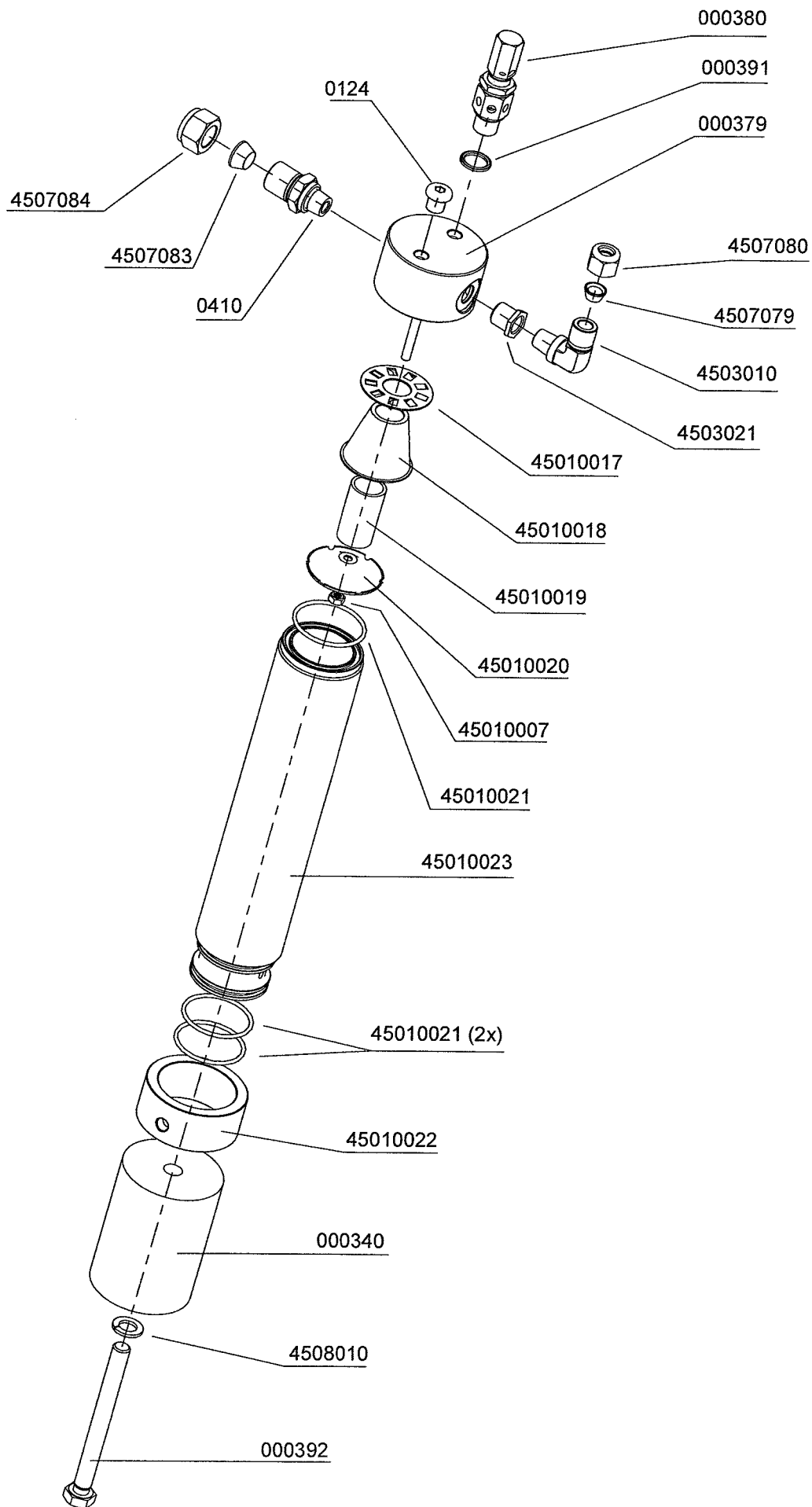
Kompressor: L&W 570 D
 Baugruppe: Gehäuse
 Assembly: Housing



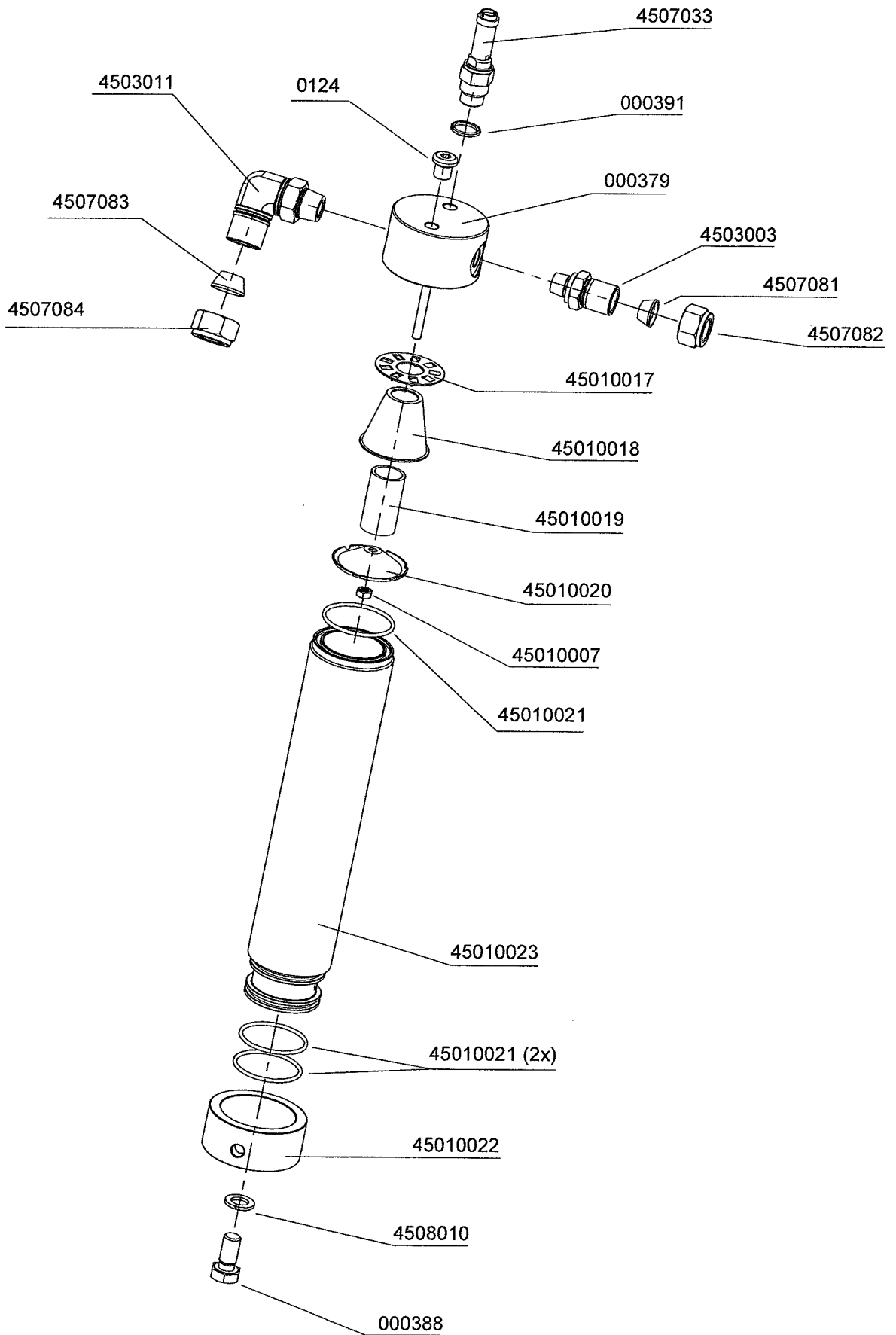
Kompressor: L&W 570 D
Baugruppe: Wasserabscheider Stufe 3
Assembly: Water Separator 3rd Stage



Kompressor: L&W 570 D
Baugruppe: Wasserabscheider Stufe 2
Assembly: Water Separator 2nd Stage



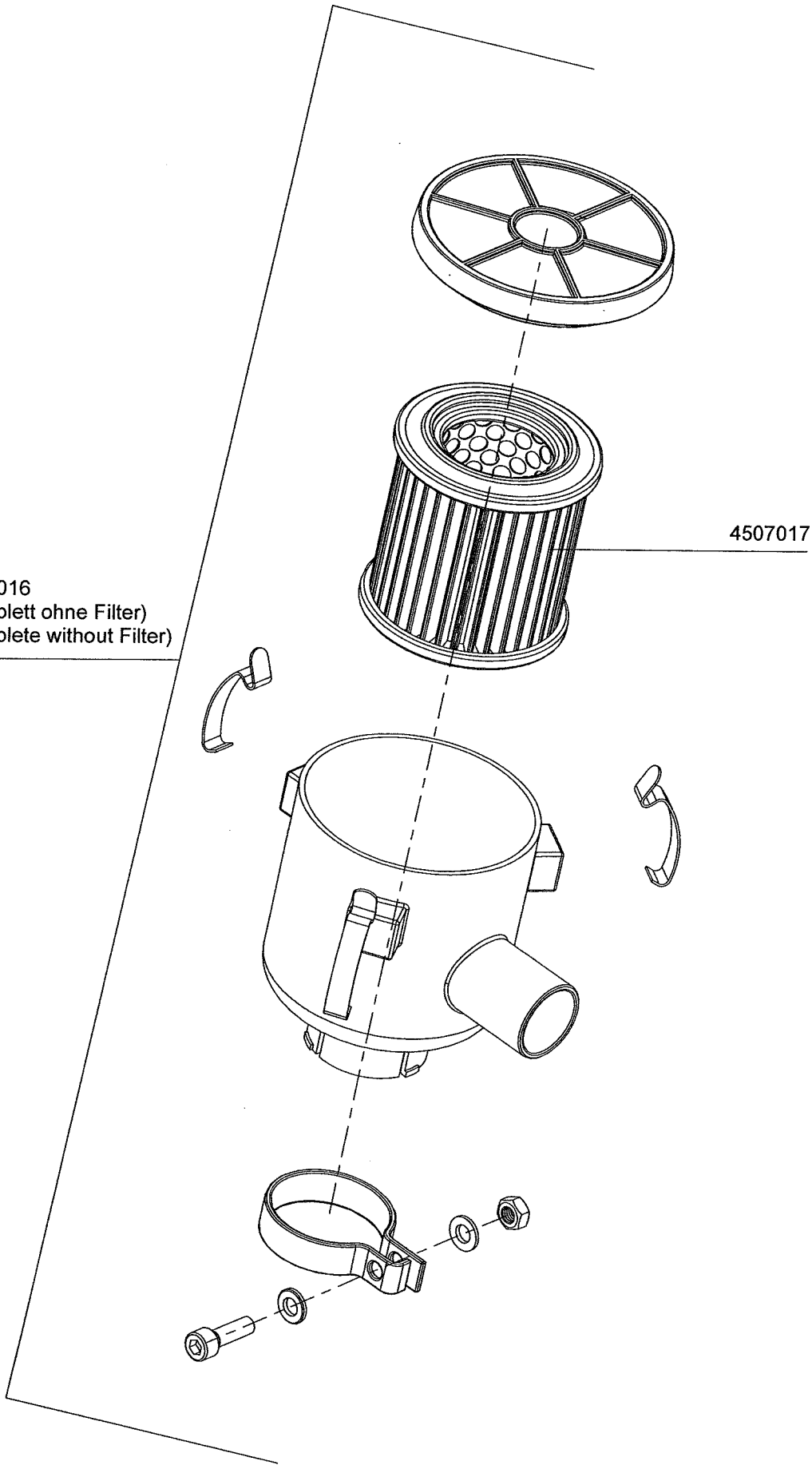
Kompressor: L&W 570 D
Baugruppe: Wasserabscheider Stufe 1
Assembly: Water Separator 1st Stage



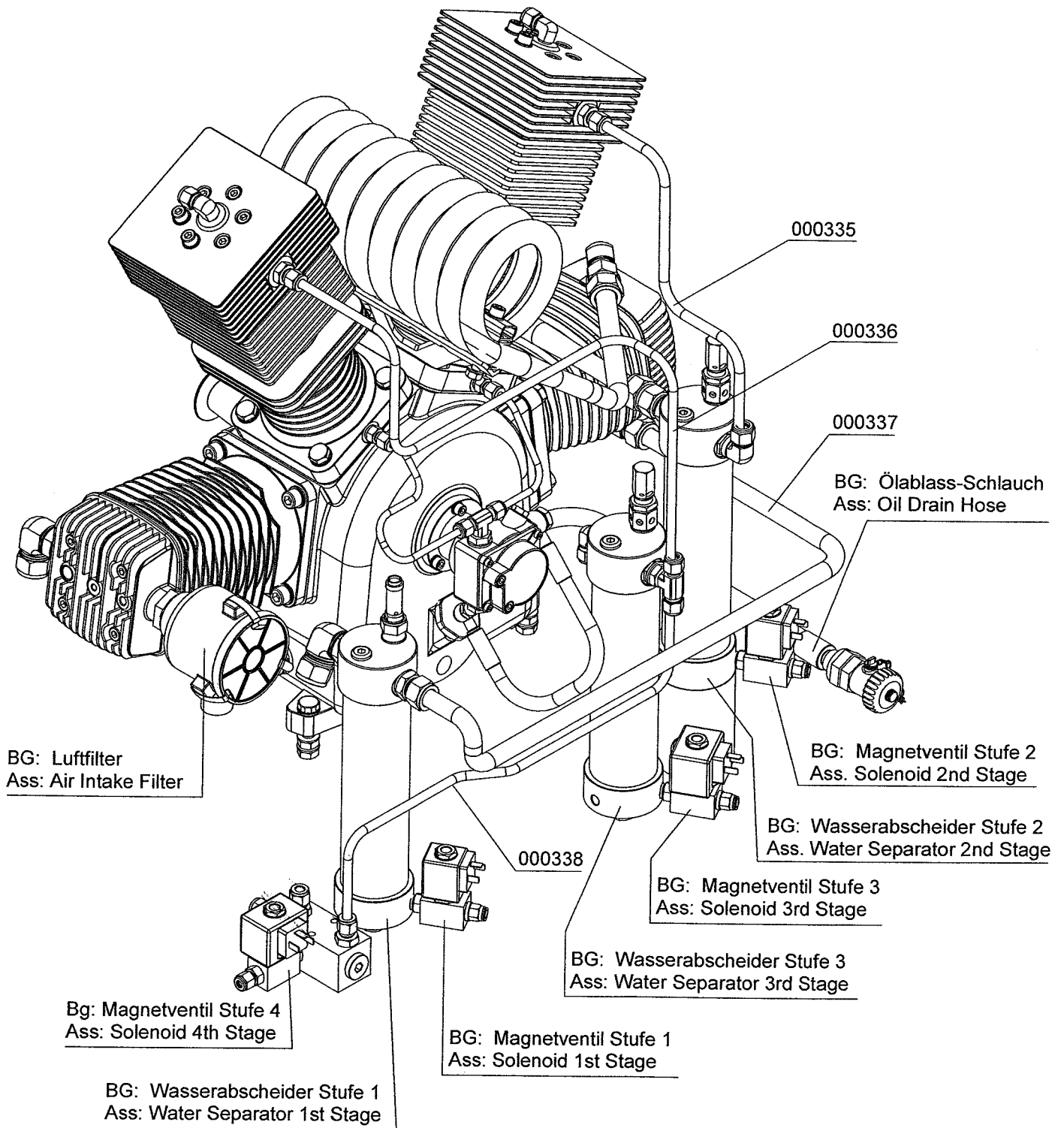
Kompressor: L&W 570 D
Baugruppe: Luftfilter
Assembly: Air-Intake-Filter

4507016
(komplett ohne Filter)
(complete without Filter)

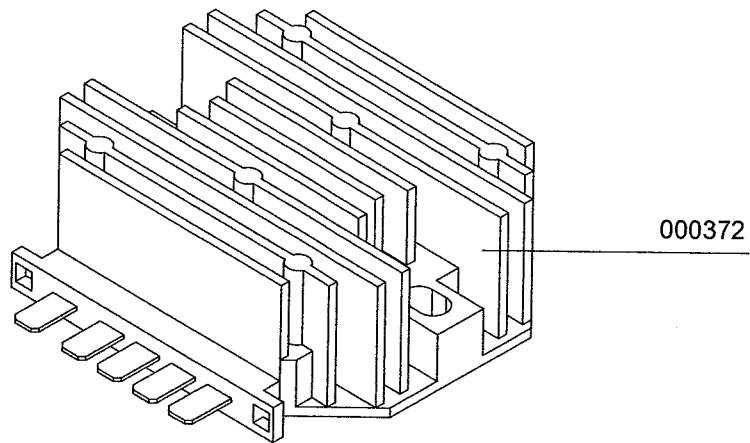
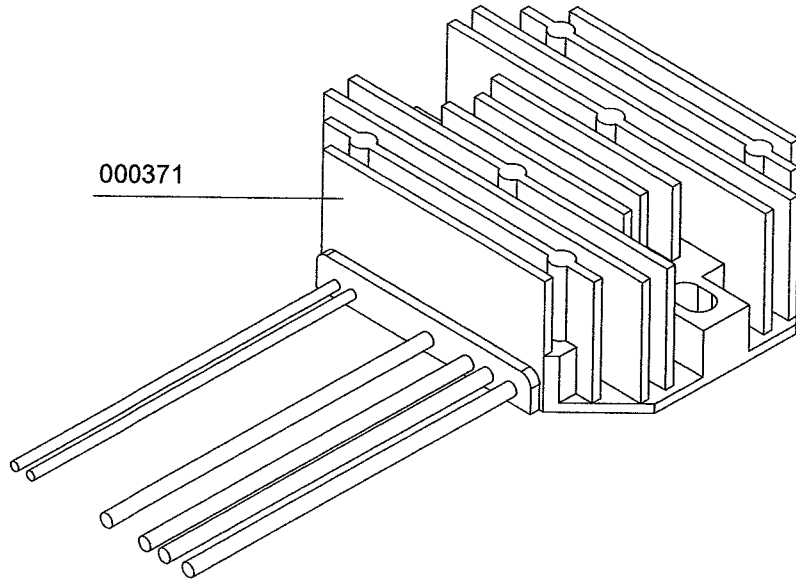
4507017



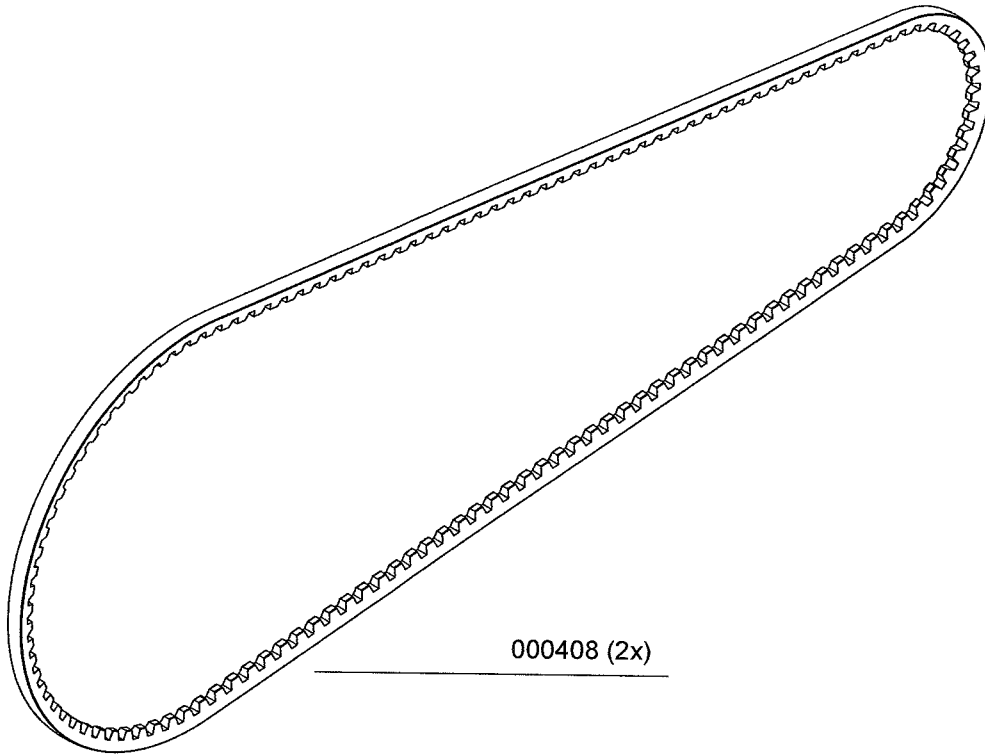
Kompressor: L&W 570 D
Ansicht: Zusammenbau ohne Gehäuse und Rohrverbindungen
3D View: Assembly without Housing & Extended Pipes



Kompressor: L&W 570 D
Teil: Elektronik
Part: Elektronik



Kompressor: L&W 570 D
Teil: Keilriemen
Part: V-Belt



000408 (2x)