

INSTRUCTION MANUAL

LW 300 E & LW 450 E

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INSTRUCTION MANUAL

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Technical Data

Compressor type:	LW 300 E	LW 450 E
Capacity:	300 l/min - 10.6 cfm	450 l/min - 15.9 cfm
Max. pressure:	225 / 330 bar - 3200 / 4700 psi	
Filling connections:	4	4
Compressor rpm:	680	1100
Number of cylinders:	3	3
Auto dumps:	standart	
Auto switch of system:		
Compressor lubrication:	crankshaft : oil slinger 1 st & 2 nd : oil spray stage : mechanical oil pump 3 rd stage : 2.2 litre synthetic oil capacity	
Drive motor:	7.5 Kw @ 3000 rpm 230 Volt; 3-phase; 50 Hz	11 Kw @ 3000 rpm 400 Volt; 3-phase; 50 Hz
Dimensions:	height: 980 mm width: 600 mm length: 1150 mm weight: 280 kg	
Manufacturer:	Lenhardt & Wagner GmbH Im Taubenfang 4 64653 Lorsch Germany	



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Method of Operation

Air comes through a micro filter into the first stage, is compressed and leaves through the heat exchanger into a water / oil separator . A short pipe leads the air into the second cylinder and is further compressed, leaving again through a heat exchanger and the second water /oil separator and then compressed in the third stage to the final pressure. The air then goes through the after cooler and into the mole carbon filter. The purified air goes through a safety valve and into the pressure maintaining valve, there to the air manifold and filling hoses or, if required, into an external filling panel.

Electric Motor(s)

Standard 11 Kw @ 3000 rpm (LW 450 E) - optional 7.5 Kw (LW 300 E).

Motors are mounted by four bolts to adjustable base plate.

- *Special motors on request* -

V-Belt Tension

A correctly adjusted V-belt does just not slip when starting the compressor. To adjust the V-belt tension turn M10 bolt - located next to the left mounting stand of compressor (viewed from back side) - till correct tension is achieved. Over tightening of the V-belt can cause damage to both electric motor- and compressor bearings.

Installation

The compressor should only be connected by a qualified licensed electrician.

NOTE: Check direction of rotation immediately after the first start !

If the direction of rotation is wrong, the oil pump will not pump oil to the third stage and the piston may cease! Furthermore the unit would not be cooled. When facing the front of the compressor, the direction of rotation should be anticlockwise (check arrow on motor). Don't place compressor closer than 0.5 m to any walls and ensure good ventilation.

NOTE: Pure air intake is very important!

Filling Process

Fill only air tanks which are:

- Suitable for final pressure
- 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 green push button
- Connect tank to compressor - *Filling valve and tank are still closed -*
- First slowly open filling valve
- Carefully open tank valve
- Fill tank to desired pressure - *watch pressure gauge -*
- Close tank valve
- Close filling valve - *selfventing type - A hissing sound can be heard*
- Disconnect tank from filling connection
- Turn off compressor by red push button

Automatic Condensation Dump System

The L&W 300 E / 450 E comes as standard with an auto dump system. Magnetic valves open and drain three condensate separators every 15 minutes. We recommend to operate the blue push button - mounted on the dash panel - every 5 to 10 hours, to ensure all three auto dump valves are in working order.

Intake Filter

A micro filter cartridge is used as an air intake filter. We recommend that the filter cartridge should be replaced every 100 working hours at least once a year..

A dirty, contaminated filter restricts the airflow, 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. The valves should be replaced after 6000 working hours due to normal wear and tear. To replace valves the cylinder heads have to be removed. All three valves are combined valves. Inlet and outlet valves form one unit. The first and second stage valves are of plate valve design. The third stage valve uses a spring operated piston in a brass cylinder. This valve sits loose with an O-ring seal in the cylinder head. To change valves no special tools are required.

Lubrication

The crankshaft is lubricated by an oil slinger.

The 1st and 2nd stage is lubricated by spray oil.

The 3rd stage is lubricated by a mechanical oil pump.

2.2 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).

Starting the Compressor for the first Time

- Place the compressor in a distance of at least 50 cm to any walls (air temperature max. 40 °C)
- Check compressor oil level
- Check if air filter cartridge is in place
- Make sure all filling valves are closed
- Start compressor by green push button
- Check direction of rotation - immediately after start
- Run compressor to max. pressure
- Check if end-pressure switch works at max. pressure
- Check compressor unit for air leaks
- Check auto dump valves for function by pushing the blue push button on the dash panel
- Turn off compressor by red push button
- 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: 50 bar

3rd Stage: final pressure

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

NOTE: A faulty safety valve should always be replaced!

Oil / Water Separator

After each stage an oil / water separator (condense separator) is fitted. They were automatically drained every 15 minutes by magnetic valves (auto dumps). The condense separatora are free of maintenance. However, we do recommend that they should be cleaned every 1000 working hours. Replace O-rings if necessary.

Final Air Purifier (Mole Carbon Filter)

The mole carbon filter housing is mounted on the right inside of the compressor housing *capacity: 1.7 litre*. 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

every 33 hours - LW 450 E (@ 20 °C)

every 50 hours - LW 300 E (@ 20 °C)

or more often, depending on humidity and temperature. The cartridges are packed airtight. We recommend that they should be opened just before they will be fitted to the compressor, as they could be saturated with moisture just being exposed to high humidity. To change the filter cartridge stop the compressor. It will then automatically release all remaining air pressure. This can take up to two minutes. Once the unit is free of pressure the filter housing cap can be unscrewed with the filter tool delivered with the compressor. If any pressure remains in the housing, it will be almost impossible to open the filter housing cap. The filter itself can also be unscrewed with the filter tool and replaced by a new one. Screw cap on hand tight.

Pressure Maintaining / Non Return Valve

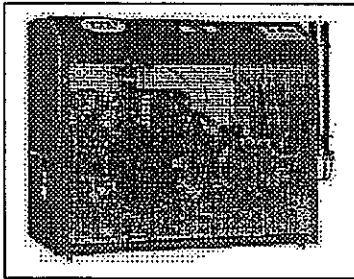
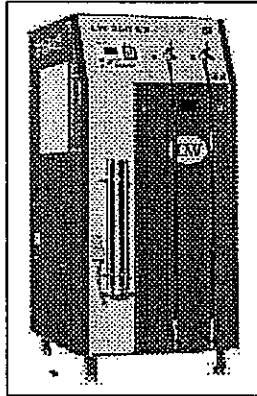
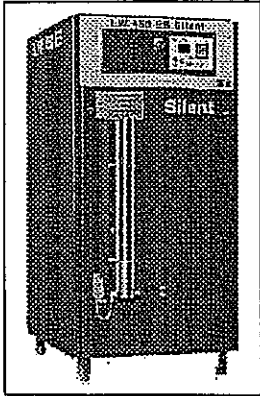
A pressure maintaining / non return valve is fitted ahead of the mole carbon filter housing. It maintains a pressure of not less than 160 bar in the filter housing - optimising the effectiveness of the filter.

Automatic Dumps

Condensate will be separated after each stage of compression. All three separators have magnetic valves which were controlled by an electronic timer. The timer is located in the switchboard compartment and activates the dump valves every 15 minutes - interval is adjustable - to release the condensate through the blue poly hoses. We recommend the use of a 20 litre container to collect all condensate. It can then be disposed of like discarded oil. The drain noise is kept to a minimum with a silencer.



FILTER CARTRIDGE REPLACEMENT INSTRUCTION SHEET L&W STATIONARY COMPRESSORS



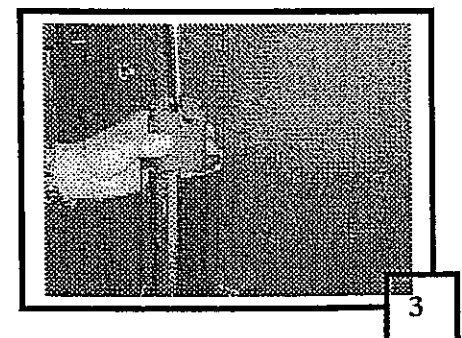
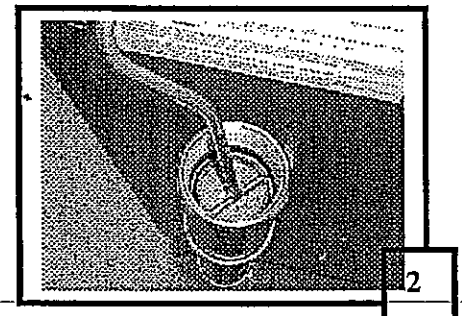
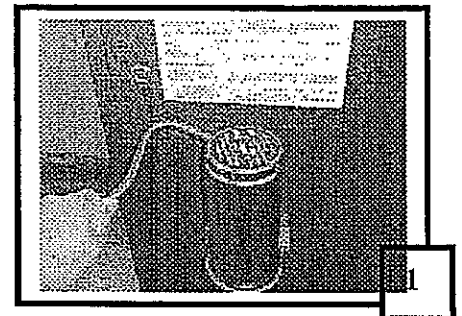
For the periodic filter cartridge change, please follow the time schedule in the instruction manual or the PURACON humidity control indication;
Only use the original filtercartridges 8005 and 8022 (8022 only for the 450 EF Low Noise type)
Do not open the sealing of the new filter cartridge yet!

Before changing the filter cartridge, be sure the compressor is switched off and cannot be inadvertently started. Disconnect it from the power supply or remove the key from the starter (Diesel types).

After switching off the compressor, the automatic drain opens and the pressure in filter housing will be released, this can take up to two minutes.
If only a hand operated drain is mounted, the drain valve of the combined separator / filter housing after the third stage has to be opened to release the pressure.

Filter cartridge replacement:

- Unscrew the filter housing cap anti-clockwise, first with the special cartridge key and then by hand (1)
- Place the other end of the cartridge key in the filter cartridge inside the filter housing (2)
- Unscrew the filter cartridge anti-clockwise and pull the cartridge out of the housing (3)
- Open the packing of the new filter cartridge and place it with the cartridge key in the filter housing (3)
- Screw in the new filter cartridge with the cartridge key hand tight (2)
- Refit the cap of the filter housing clockwise, first by hand and then with the filter key, hand tight (1)
- Close the drain valve of the separator / filter housing if only the hand operated drain is mounted



The filter cartridge replacement is now completed, ensure the old filter cartridge is disposed of correctly at an approved waste point.

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 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 - 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 synthetic compressor oil

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
 - Intake hose is too long or too small in diameter
 - Faulty inlet / outlet valves: Clean or replace
 - Wrong direction of rotation
-

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 botton
- 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

OPERATION MANUAL

LW ECC



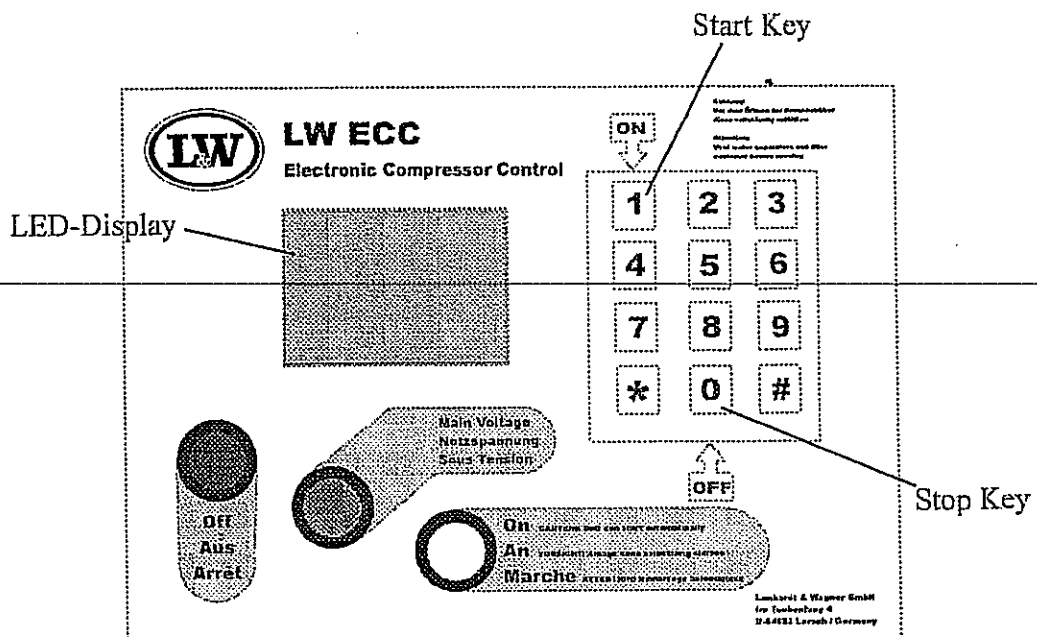
L E N H A R D T & W A G N E R G M B H

ELECTRONIC COMPRESSOR CONTROL LW ECC

LW 300 E & LW 450 E compressors are equipped with the all-electrical, computer supported control system **LW ECC** - as an option. It is very easy to operate and allows multiple & individual settings.

Compressor Control System LW ECC

- Graphic capable LCD-Display with Keys
- Automatic- & Semi-Automatic Operation Mode
- Automatic Dump System
- Integrated Counter for Operation Hours
- Maintenance Intervals automatically displayed
- Spare Part Numbers automatically displayed
- Fully adjustable Pressure Ranges
- Easy to operate Menu
- Faults will be displayed
- Check of End-pressure Safety Valve possible
- Remote Controlled Maintenance / Fault Analysis by Modem possible
- Extentable by additional Modules (external Filling Panel)



Immediately after connecting the compressor, the ECC-display shows the following mainmenu:

MAINMENU

Charging	0 min	Present filling time in minutes
Total	0,0 h	total operation hours
Start : 1	Stop : 0	Key 1 to start compressor / Key 0 to stop compressor
Help : *	OFF	* Key leads to submenus Current Operation State = Off
End Press.	0 bar	Present Filling Pressure

The following keys are activated in this menu:

Key	Function
1	Start - Starts the compressor (any time)
0	Stop - Stops the compressor (any time)
*	Leads to the submenus

After typing *key the following menu appears:

SELECTION MENU

M100

Selection:	
2	Readings
3	Settings
4	Test
5	Statistics
6	Maintenance
7	Operation Mode
(M100)	Return : #

Key 2 lead to submenu "Readings"
 Key 3 lead to submenu "Settings"
 Key 4 lead to submenu "Test"
 Key 5 lead to submenu "Statistics"
 Key 6 lead to submenu "Maintenance"
 Key 7 lead to submenu "Operation Mode"
 Key # leads back to "Mainmenu"

[(M100) tells that you are presently on menu page 100]

Remark:

Beside the listed numbers, keys 1 + 0 are always activated to start / stop the compressor unit

READINGS MENU**M200**

Readings:	
2	End Pressure
3	Press. Stage 1
4	Press. Stage 2
5	Temperature A
6	Temperature B
9	Close
(M200)	Return : #

Key 2 shows the current filling pressure

*Key 3 shows the current pressure of the 1st stage**

*Key 4 shows the current pressure of the 2nd stage**

*Key 5 shows the current temperature of the 3rd stage**

*Key 6 shows the current temperature inside the cabinet**

Key 9 lead back to "Selection Menu"

Key # leads back to "Mainmenu"

** = Option*

[(M200) tells that you are presently on menu page 200]

SETTINGS MENU**M300**

Settings:	
2	Stop Pressure
3	Restart Pressure
9	Close
(M300)	Return : #

Key 2 leads to submenu "Set Stop Pressure"

Key 3 leads to submenu "Set Restart Pressure"

Key 9 leads to submenu "Selection"

Key # leads back to "Mainmenu"

Remark:

Restart pressure is only valid if compressors runs in automatic mode (see M700)

Set Stop Pressure

M320

Set
Stop Pressure:
 Actual: 330 bar
 7 New Value:
 >> XXX bar
 (050, , 333)
 8 Confirm
 (M320) Return: #

Current stop pressure
Key 7 if stop pressure should be changed
XXX indicates modified stop pressure
Chooseable pressure range for stop pressure
Key 8 confirms new stop pressure
Key # leads back to "Mainmenu"

Set Restart Pressure

M330

[only valid if compressor runs in automatic mode (M700)]

Set
Restart Pressure:
 Actual: 180 bar
 7 New Value:
 >> XXX bar
 (030, , 310)
 8 Confirm
 (M330) Return: #

Current restart pressure
Key 7 if restart pressure should be changed
XXX indicates modified stop pressure
Chooseable pressure range for restart pressure
Key 8 confirms new restart pressure
Key # leads back to "Mainmenu"

Remark:

Restart pressure must be at least 20 bar lower than current stop pressure

TEST MENU**M400**

Test:	
2	Solenoids
3	Safety Valve
4	Test Stop
9	Close
(M400)	Return : #

Key 2 leads to submenu "Test Solenoids"

Key 3 leads to submenu "Test Safety Valve"

Key 4 leads to submenu "Test Stop without Venting"

Key 9 leads back to submenu "Selection"

Key # leads back to "Mainmenu"

Test Solenoids**M420**

Test Solenoids:	
3	open
7	close
9	Close
(M420)	Return : #

Key 3 opens solenoids

Key 7 closes solenoids

Key 9 leads back to submenu "Test"

Key # leads back to "Mainmenu"

Remark:

This menu can not be left when solenoids are open (*reclose first by key 7*)

Test Safety Valve

M430

Test
Safety Valve:

Close Filling
Valves ! .

5 Start 0 Stop
9 Close
(M430) Return #

Key 5 to start test

Key 0 to stop test

Key 9 leads back to submenu "Test"

Key # leads back to "Mainmenu"

Remark:

Please close all filling valves /-panels before the test start. Compressor will run up to its maximum pressure, which is limited by the end-pressure safety valve. It will not stop at "Stop Pressure" (see menu M320).

Test Stop

M440

Test Stop
without Venting:

5 Stop
6 Vent
Pressure 188 bar
9 Close
(M440) Return #

Key 5 stops compressor during run

Key 6 vents compressor after test is finished

Shows current filling pressure

Key 9 leads back to submenu "Test"

Key # leads back to "Mainmenu"

Remark:

This test can only be carried out after compressor has been started (key 1). The main reason for it is to check the unit for air leaks

Receipt Maintenance**M680**

Receipt Maintenance	
2	Oil Change
3	Sinter Filters
4	Silencer
5	Valves
9	Close
(M680)	Return #

*Key 2 receipts oil change**Key 3 receipts change of sinter filters**Key 4 receipts change of silencer**Key 5 receipts change of valves**Key 9 leads back to submenu "Remaining Hours"**Key # leads back to "Mainmenu"*

Display confirms any reset of "Remaining Hours" with the following message:

Receipt Maintenance	
Operation Hours Meter Set!	
9	Close
(M680)	Return #

*Key 9 leads back to submenu "Remaining Hours"**Key # leads back to "Mainmenu"*

OPERATION MODE MENU

M700

Operation Mode:	
2	Automatic
3	Semi-Automatic
4	Top Up
5	Language
9	Close
(M700)	Return #

Key 2 activates automatic mode (storage tanks)

Key 3 activates semi-automatic mode

Key 4 activates top up mode (option)

Key 5 leads to "Language Menu"

Key 9 leads back to submenu "Selection"

Key # leads back to "Mainmenu"

Remark:

Current modes are displayed in fat letters

Attention:

Compressor can start automatically in automatic mode (depending on restart pressure, see M330).

Never work on a unit which is connected to main voltage

HAZARD:

Remove main plug before doing any maintenance work

Language Menu

M704

Language:	
2	German
3	English
4	French
5	Italian
6	
7	
(M704)	Return #

Key 2 activates german language

Key 3 activates english language

Key 4 activates french language

Key 5 activates italian language

Key 6 leads back to submenu "Operation Mode"

Key 7 leads back to submenu "Operation Mode"

Key # leads back to "Mainmenu"

Maintenance List

LW 300 E & LW 450 E

Routine Service	Intervals	Qty.	Order No.
Replace filter cartridge	LW 300 E: every 50 working hours (@ 20 °C) LW 450 E: every 33 working hours (@ 20 °C)	1	LW 300 / 450 8005
Check oil level	before each day of use		
Oil changes	1 st after 25 working hours 2 nd after 50 working hours 3 rd after 200 working hours thereafter every 200 working hours - but at least once a year	2200 ml	LW 300 / 450 9001 (1 litre)
Replacing air inlet filter	Depends on degree of pollution - but at least once a year	1	LW 300 / 450 7017
Check V-belt	every 200 working hours		
Replacing in- & outlet valves	every 6000 working hours	1 st stage: 1 2 nd stage: 1 3 rd stage: 1	LW 300 / 450 7030 LW 300 / 450 7065 LW 300 / 450 7005
Check pressure maintaining / non-return valve	every 200 working hours		
Check safety devices	at least one 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	LW 300 / 450 4005
Clean sieve of oil pump	every 5000 working hours		
Replace sintered filter of condensate valve	after 1000 working hours - thereafter every 5000 working hours	1	LW 300 / 450 2011 b

Maintenance List - *contin*

Routine Service	Intervals	Qty
Replace sintered filter of waterseparators	every 1000 working hours	1 004 1 019
Clean oil / waterseparator and check for corrosion	every 1000 working hours	
Check connections and fixings for correct torque	after 15 working hours - thereafter every 500 working hours	

Warranty

Six Months Limited Warranty

Important:

For warranty claims this Warranty Registration form must be presented

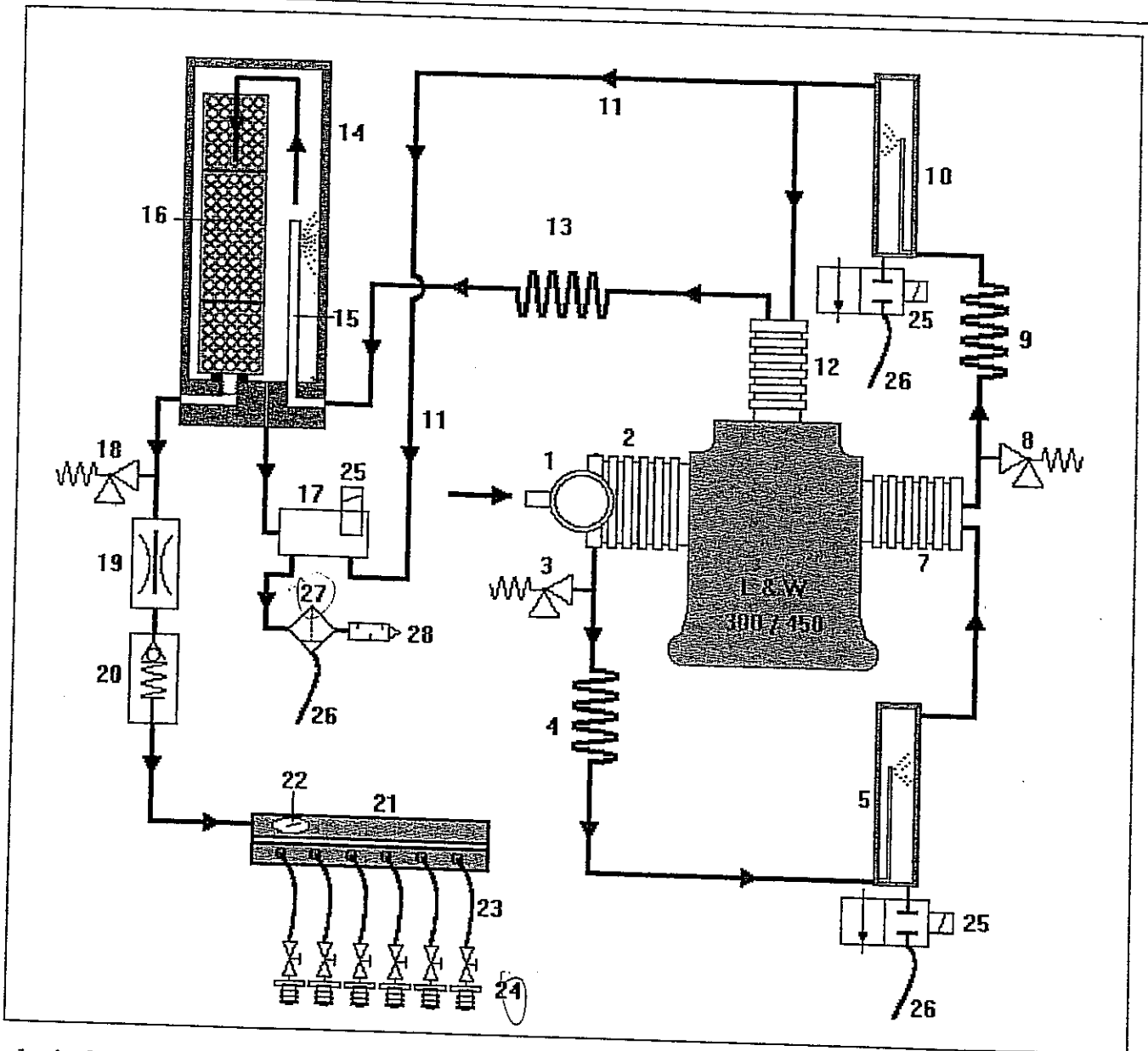
L&W compressors are warranted against defects in workmanship and materials for a period of six months after purchase by the original owner, provided the compressor is run with synthetic compressor oil - subject to and in accordance with the terms and conditions set forth below:

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. This warranty and operations manual should be kept with the compressor at all times.



- | | | | |
|--------------------------------------|------------------------------------|------------------------------------|--------------------------------|
| 1. intake filter | 16. longlife filter cartridge | 1. Ansaugfilter | 16. filterpatrone |
| 2. 1st stage | 17. condensate valve | 2. 1. Stufe | 17. Kondensat Ventil |
| 3. safety valve 1st stage | 18. safety valve 3rd stage | 3. Sicherheitsventil 1. Stufe | 18. Sicherheitsventil 3. Stufe |
| 4. intercooler 1st | 19. pressure maintaining valve | 4. Wärmetauscher 1. Stufe | 19. Druckhalteventil |
| 5. intermediate separator 1st stage | 20. non return-valve | 5. Wasserabscheider 1. Stufe | 20. Rückschlagventil |
| 6. condensate drain valve | 21. fillingpanel (option) | 6. Entwässerungsventil 1. Stufe | 21. Fülleiste (Option) |
| 7. 2nd stage | 22. pressure gauge | 7. 2. Stufe | 22. manometer |
| 8. safety valve 2nd stage | 23. filling hoses (option) | 8. Sicherheitsventil 2. Stufe | 23. Füllschläuche (Option) |
| 9. intercooler 2nd stage | 24. safety filling valves (option) | 9. Wärmetauscher 2. Stufe | 24. Sicherheits Füllventile |
| 10. intermediate separator 2nd stage | 25. solenoid valve | 10. Wasserabscheider 2. Stufe | 25. Magnet Ventil |
| 11. counter pressure tube | 26. dewatering hose | 11. Gegendruck Leitung | 26. Entwässerungsschlauch |
| 12. 3rd stage | 27. filter-water separator | 12. 3. Stufe | 27. Filter Wasserabscheider ✓ |
| 13. aftercooler 3rd stage | 28. silencer | 13. Kühlschleife 3. Stufe | 28. Schalldämpfer |
| 14. separator and filter assembly | | 14. Filtergehäuse/Wasserabscheider | |
| 15. jet | | 15. Spühdüse | |

Spare Part List LW 300 E & LW 450 E

Qty.	Description	Part No.	
1	Console sheet	LW 300 / 450	1001
4	Plastic feet	LW 300 / 450	1002
1	V-belt tensioning screw compl. with nut	LW 300 / 450	1003
1	Housing right side	LW 300 / 450	1004
1	Housing left side	LW 300 / 450	1008
1	Grating back side	LW 300 / 450	1008 b
1	Grating front side compl. <i>consists of:</i>	LW 300 / 450	1009
1	Grating	LW 300 / 450	1010
2	Fixing bars for grating	LW 300 / 450	1011
1	Housing lid	LW 300 / 450	1013
2	Cover lid brass bushes	LW 300 / 450	1014
4	Spring washers	LW 300 / 450	1015
2	Fixing screws	LW 300 / 450	1016
1	Sticker instruction manual (cover lid)	LW 300 / 450	1018
1	Dash panel (specification: 1 manometer)	LW 300 / 450	1019
1	Dash panel (specification: 3 manometer)	LW 300 / 450	1020
1	L&W type sign	LW 300 / 450	1021
1	L&W sticker	LW 300 / 450	1022
1	Foam rubber stripe - self adhesive type	LW 300 / 450	1023
4	Filling hose clamp (plastic)	LW 300 / 450	1024
1	Pressure gauge compl., 0-40 bar	LW 300 / 450	1025 a
1	Pressure gauge compl., 0-400 bar	LW 300 / 450	1025 b

Spare Part List LW 300 E & LW 450 E

Qty.	Description	Part No.	
1	Hose for pressure gauge - lenght: 600 mm	LW 300 / 450	1026
1	Hose for pressure gauge - lenght: 700 mm	LW 300 / 450	1027
1	Counter for working hours 230 Volt	LW 300 / 450	1028
1	Counter for working hours 115 Volt	LW 300 / 450	1029
2	Solenoid for dewatering system 1 st & 2 nd stage 230 Volt	LW 300 / 450	2009 b
1	Magnetic valve 3 rd stage	LW 300 / 450	2010
1	Repair set	LW 300 / 450	2010 b
1	Condensate valve	LW 300 / 450	2011
1	Repair set for condensate valve	LW 300 / 450	2011 a
1	Filter sintered	LW 300 / 450	2011 b
1	Pressure switch for auto stop	LW 300 / 450	2013
1	Silencer for water separator 3 rd stage	LW 300 / 450	2014
1	Filter housing compl. with bracket	LW 300 / 450	2015
1	Timer for condensate valve	LW 300 / 450	2016
1	Adaptor for air intake filter	LW 300 / 450	3000
1	Connection 90° outlet side	LW 300 / 450	3001
1	Reducing connection	LW 300 / 450	3002
1	Reducing connection	LW 300 / 450	3002
1	Connection 90° outlet side	LW 300 / 450	3001
1	Connection straight - inlet side	LW 300 / 450	3003
1	Connection straight - inlet side	LW 300 / 450	3004
1	Connection 90° outlet side	LW 300 / 450	3005

Spare Part List LW 300 E & LW 450 E

Qty.	Description	LW 300 / 450	Part No.
1	Connection oil pump suction side G¼" / 8	LW 300 / 450	3004
1	Connection oil pump pressure side	LW 300 / 450	3006
1	Connection oil tube - 3 rd stage	LW 300 / 450	3007
1	90° Connection	LW 300 / 450	3008
1	Oil suction adapter	LW 300 / 450	3009
3	90° Connection	LW 300 / 450	3010
1	90° Connection inlet side	LW 300 / 450	3001
1	90° Connection outlet side	LW 300 / 450	3011
1	90° Connection inlet side	LW 300 / 450	3001
1	Reducing connection	LW 300 / 450	3012
1	90° Connection outlet side	LW 300 / 450	3010
2	Double connection G1/8"	LW 300 / 450	3013
2	Connection straight G1/8" / 8 for condensate hose	LW 300 / 450	3015
2	Connection straight	LW 300 / 450	3014
4	Connection straight G¼" / 10	LW 300 / 450	3016
1	Connection straight G¼" / 8	LW 300 / 450	3004
2	Connection straight G¼" / 8	LW 300 / 450	3004
3	90° joint G¼" / 8	LW 300 / 450	3010
1	Reducer connection	LW 300 / 450	3012
1	90° joint G¼" / 8	LW 300 / 450	3017
1	Connection G1/8" / 6mm	LW 300 / 450	3018
1	Connection - pressure switch	LW 300 / 450	3019
1	Connection distributor block to pressure switch	LW 300 / 450	3020

Spare Part List **LW 300 E & LW 450 E**

Qty.	Description	Part No.
1	Reducing connection	LW 300 / 450 3021
1	Connection straight	LW 300 / 450 3022
1	Cooling tube	LW 300 / 450 3032
2	Filling hose 1.3 m	LW 300 / 450 4000
1	Filling hose 1.5 m	LW 300 / 450 4001
1	Filling hose 1.6 m	LW 300 / 450 4002
1	Tube water separator to 2 nd stage	LW 300 / 450 4003
1	Tube water separator 2 nd to 3 rd stage	LW 300 / 450 4004
1	Tube oil pump inlet	LW 300 / 450 4005
1	Tube oil pump outlet	LW 300 / 450 4006
1	Tube filter housing to safety valve	LW 300 / 450 4007
1	Tube safety valve to pressure maintaining valve	LW 300 / 450 4008
1	Tube pressure maintaining valve to distributor block	LW 300 / 450 4009
1	Heat exchanger 1 st stage to water separator 1 st stage	LW 300 / 450 4010
1	Heat exchanger 2 nd stage to water separator 2 nd stage	LW 300 / 450 4011
1	Cooling tube outlet 3 rd stage to filter housing	LW 300 / 450 4014
1	Dewatering tube filter housing to condensate magnetic valve 3 rd stage	LW 300 / 450 4015
1	Tube condensate magnetic valve 3 rd stage to water separator with silencer	LW 300 / 450 4016
3	Condensate releasing hose	LW 300 / 450 4017
1	Hose	LW 300 / 450 4013
4	Hose	LW 300 / 450 4012
4	Bar	LW 300 / 450 4018

Spare Part List **LW 300 E & LW 450 E**

Qty.	Description	Part No.	
2	Bracket	LW 300 / 450	4019
2	Nut square head	LW 300 / 450	4020
1	Tube bracket (8 mm) single (plastic)	LW 300 / 450	5002
1	Tube bracket (8 mm) double (plastic)	LW 300 / 450	5003
1	Bracket for condensate magnetic valve 3 rd stage	LW 300 / 450	5004
2	Sheet bracket for filterhousing to panel right side	LW 300 / 450	5005
26	Allen screw M10 x 20 mm	LW 300 / 450	6001
14	Allen screw M6 x 16 mm (front grating)	LW 300 / 450	6002
30	Nut M5	LW 300 / 450	6003
30	Nut M6	LW 300 / 450	6004
30	Nut M8	LW 300 / 450	6005
30	Nut M10	LW 300 / 450	6006
30	Nut M12	LW 300 / 450	6007
30	Washer for M5	LW 300 / 450	6008
30	Washer for M6	LW 300 / 450	6009
30	Washer for M8	LW 300 / 450	6010
30	Washer for M10	LW 300 / 450	6011
30	Washer for M12	LW 300 / 450	6012
4	Fixing screws for electric motor M12 x 40 mm	LW 300 / 450	6013
4	Fixing screws for compressor block M10 x 40 mm	LW 300 / 450	6014
2	Fixing screws for pressure maintaining valve M6x 50 mm	LW 300 / 450	6015
2	Fixing screws for air distributor block M6 x 10 mm	LW 300 / 450	6016
2	Fixing screws for condense releasing valve M8	LW 300 / 450	6017

Spare Part List LW 300 E & LW 450 E

Qty.	Description		Part No.
	x 90 mm		
2	Fixing screws for water separator 1 st stage M8 x 20 mm	LW 300 / 450	6018
2	Fixing screws for safety valve block M6 x 45 mm	LW 300 / 450	6019
1	Fixing screw for pulley motor M10 x 20 mm	LW 300 / 450	6020
2	Fixing bow for filter housing	LW 300 / 450	6021
1	Fixing screws for water separator 2 nd stage M12 x 20 mm	LW 300 / 450	6024
2	Fixing screws for water separator 3 rd stage	LW 300 / 450	6025
2	Fixing screws for water separator 3 rd stage	LW 300 / 450	6026
4	Nut M8	LW 300 / 450	6027
4	Allen screw	LW 300 / 450	6028
2	Allen screw	LW 300 / 450	6029
1	High pressure piston 3 rd stage compl. with piston rings & bolt	LW 300 / 450	7001
1	Bolt	LW 300 / 450	7001 a
2	Safety clamps	LW 300 / 450	7001 b
9	Set piston rings 3 rd stage Ø 18 mm	LW 300 / 450	7002
1	Guide cylinder 3 rd stage Ø 42 mm	LW 300 / 450	7003
1	Gasket guide cylinder	LW 300 / 450	7003 a
1	High pressure cylinder 3 rd stage Ø 18 mm	LW 300 / 450	7004
	O-ring	LW 300 / 450	7004 a
1	Suction & pressure valve 3 rd stage compl. with gasket & alloy valve cover	LW 300 / 450	7005
1	Valve head 3 rd stage	LW 300 / 450	7006
1	Safety valve 3 rd stage G3/8" - 225 bar	LW 300 / 450	7007

Spare Part List **LW 300 E & LW 450 E**

Qty.	Description	Part No.	
1	Safety valve 3 rd stage G3/8" - 330 bar	LW 300 / 450	7008
1	Roller bearing 6308	LW 300 / 450	7009
1	Gasket for crankshaft flange cover	LW 300 / 450	7010
1	Oil pump driving flange	LW 300 / 450	7012
1	Fixing flange for oil pump	LW 300 / 450	7013
4	Allen screws 3 rd stage M8 x 70 mm 8.8	LW 300 / 450	7014
2	Allen screws 3 rd stage M8 x 85 mm 8.8	LW 300 / 450	7015
1	Air intake filter compl. with filter cartridge	LW 300 / 450	7016
1	Air intake cartridge	LW 300 / 450	7017
1	Oil pump compl.	LW 300 / 450	7018
1	O-ring Ø 27 x 2.5 mm (between pump & fixing flange)	LW 300 / 450	7019
1	Crankcase with lead / bronze bearing GZ 1050	LW 300 / 450	7020
1	Oil level indicator M35 x 1.5 mm with gasket	LW 300 / 450	7021
1	Crankshaft compl.	LW 300 / 450	7022
3	Safety clamps & discs	LW 300 / 450	7023
1	Connecting rod 1 st stage compl. (150 mm center distance)	LW 300 / 450	7024
2	Connecting rod 2 nd & 3 rd stage incl. bearing Ø 16 x 22 mm	LW 300 / 450	7025
1	Piston 1 st stage compl. with bolt, safety clamps & piston rings Ø 95 mm	LW 300 / 450	7026
1	Set piston rings Ø 95 mm	LW 300 / 450	7027
1	Cylinder 1 st stage Ø 95 mm	LW 300 / 450	7028
1	Gasket cylinder 1 st stage	LW 300 / 450	7028 a
1	Cylinder 2 nd stage Ø 42 mm	LW 300 / 450	7029

Spare Part List LW 300 E & LW 450 E

Qty.	Description	Part No.
1	Gasket cylinder 2 nd stage	LW 300 / 450 7029 a
1	Valve 1 st stage	LW 300 / 450 7030
1	Gasket valve 1 st stage (bottom side)	LW 300 / 450 7030 a
1	Gasket valve 1 st stage (top side)	LW 300 / 450 7030 b
1	Cylinder head - thread G3/8" 1 st stage - for valve Ø 102 mm	LW 300 / 450 7031
1	Cylinder head - thread G3/8" 2 nd stage for valve Ø 71 mm	LW 300 / 450 7032
1	Safety valve compl. G3/8" 1 st stage	LW 300 / 450 7033
1	Safety valve compl. G3/8" 2 nd stage	LW 300 / 450 7034
1	Bearing cover	LW 300 / 450 7035
1	Oil filling hose with plug	LW 300 / 450 7036
1	Shaft seal ring Ø 40 x 72 x 10 mm	LW 300 / 450 7037
1	Fan pulley (12.5 x Ø 620 mm)	LW 300 / 450 7038
1	Set screws & seal rings	LW 300 / 450 7039
8	Screws (hexagonal) M6 x 16 mm DIN 933 - 8.8 for bearing cover	LW 300 / 450 7040
8	Seal rings CU HB 90 - 100 Ø 6.2 x 10.0 x 1.5 mm	LW 300 / 450 7041
1	Screw M10 x 45 mm DIN 912 - 8.8 for crankshaft counterweight	LW 300 / 450 7042
1	Spring washer A10 DIN 127	LW 300 / 450 7043
8	Screws M10 x 25 DIN 933 - 8.8 cylinder flange 1 st & 2 nd stage	LW 300 / 450 7044
4	Screw M10 x 60 mm DIN 912 - 8.8 cylinder head 1 st stage	LW 300 / 450 7045
4	Screw M8 x 60 mm DIN 912 - 8.8 cylinder head 2 nd stage	LW 300 / 450 7046

Spare Part List **LW 300 E & LW 450 E**

Qty.	Description	Part No.
4	Washer zinc plated Ø 16 x 10.2 x 1.5 mm cylinder head 1 st stage	LW 300 / 450 7047
4	Washer zinc plated Ø 13 x 8.2 x 1.5 mm cylinder head 2 nd stage	LW 300 / 450 7048
1	Distance bolt M8 x 49 mm cylinder head 1 st stage	LW 300 / 450 7049
1	Key A8 x 7 x 35 mm	LW 300 / 450 7050
1	Screw M12 x 30 mm for pulley	LW 300 / 450 7051
1	Washer Ø 40 x 12.5 x 4 mm for pulley	LW 300 / 450 7052
1	Electric motor 400 Volt, 50 Hz, 3000 rpm, 11 kW	LW 300 / 450 7053
1	Electric motor 400 Volt, 50 Hz, 3000 rpm, 7.5 kW	LW 300 / 450 7054
1	Hose nippel	LW 300 / 450 7055
1	Pulley Ø 155 mm	LW 300 / 450 7056
1	Pulley Ø 230 mm	LW 300 / 450 7057
1	V-belt LW 450 SPA 2332	LW 300 / 450 7058
1	V-belt LW 300 SPA 2240	LW 300 / 450 7059
1	Piston compl. 2 nd stage Ø 42 mm	LW 300 / 450 7060
4	Piston rings 2 nd stage Ø 42 mm	LW 300 / 450 7061
1	Oil ring	LW 300 / 450 7062
2	Bracket	LW 300 / 450 7063
2	Screws M6 x 10 mm	LW 300 / 450 7064
1	Valve 2 nd stage	LW 300 / 450 7065
1	Lower Copper Gasket, Valve 2 nd Stage	LW 300 / 450 7066 a
1	Upper Paper Gasket, Valve 2 nd Stage	LW 300 / 450 7066 b
1	Connection oil outlet	LW 300 / 450 7067

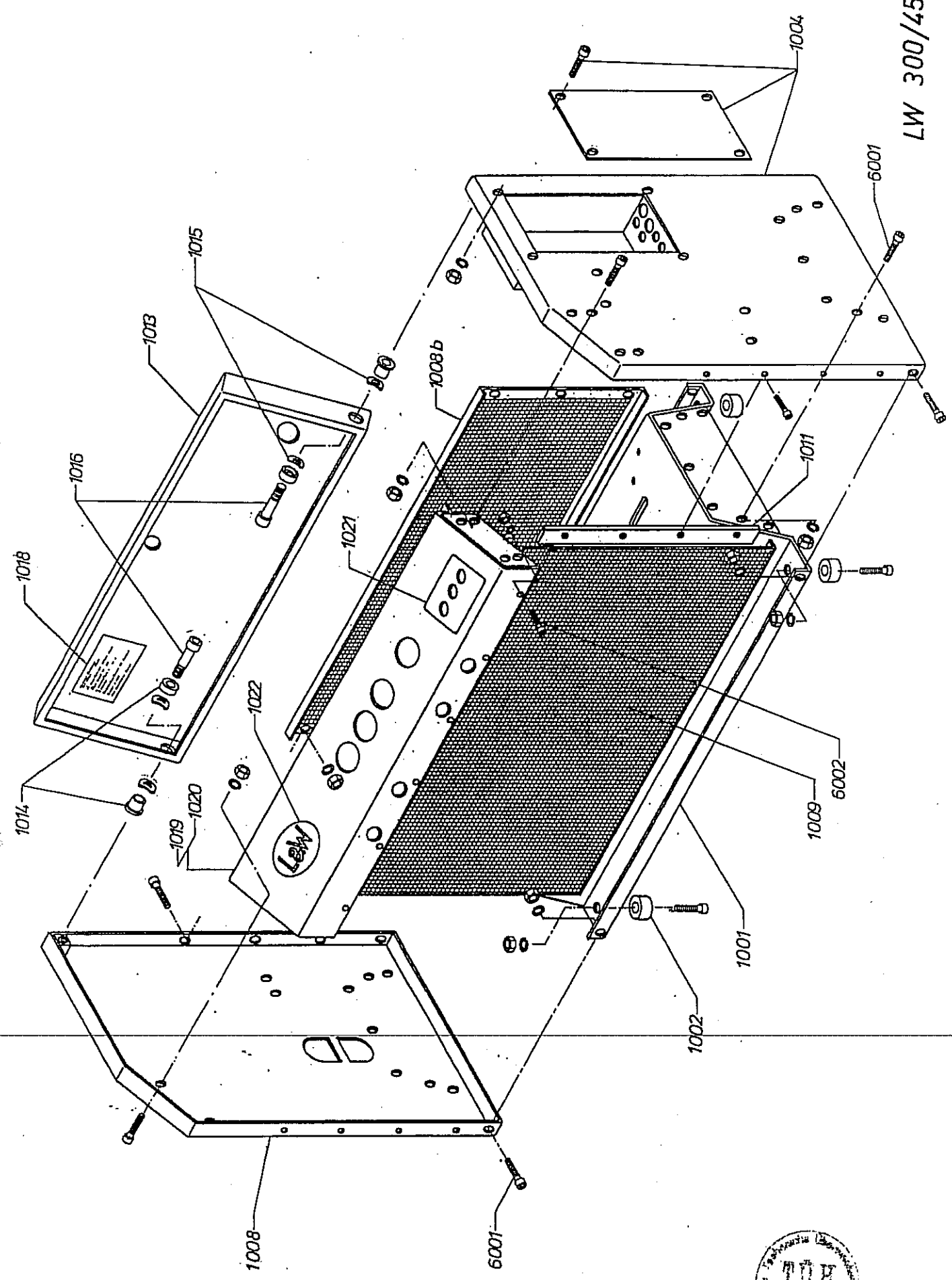
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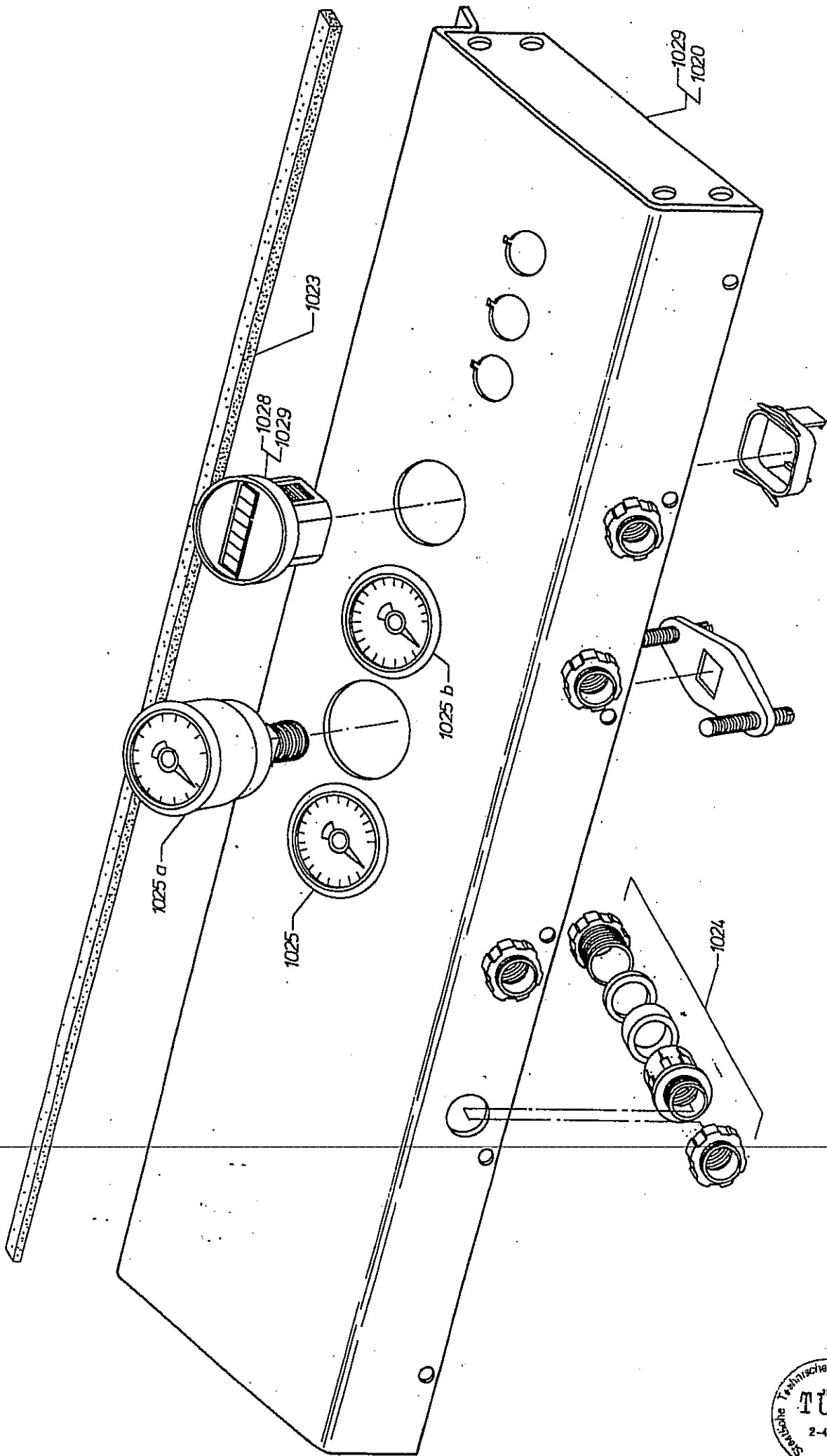
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1	Oil drain hose	LW 300 / 450	7068
1	Oil drain plug	LW 300 / 450	7069
1	Bearing	LW 300 / 450	7070
2	Allen screw	LW 300 / 450	7071
3	Screw	LW 300 / 450	7072
2	Copper gasket	LW 300 / 450	7073
1	Key	LW 300 / 450	7074
12	Copper gasket	LW 300 / 450	7075
6	Copper gasket	LW 300 / 450	7076
1	Check valve	LW 300 / 450	7077
1	Safety valve mounting block G3/8"	LW 300 / 450	7078
15	Seal rings 8 mm	LW 300 / 450	7079
15	Nuts for connection 8 L	LW 300 / 450	7080
2	Seal rings 15 mm	LW 300 / 450	7081
2	Nuts for connection 15 L	LW 300 / 450	7082
4	Seal rings 18 mm	LW 300 / 450	7083
4	Nuts for connection 18 L	LW 300 / 450	7084
1	Air distributor block	LW 300 / 450	8001
1	Filter housing with water separator 330 bar - 1.7 litre	LW 300 / 450	8004
1	Mole carbon filter cartridge	LW 300 / 450	8005
1	Pressure maintaining valve	LW 300 / 450	8006 a
2	O-ring filter housing	LW 300 / 450	8011
2	Support ring	LW 300 / 450	8012

Spare Part List LW 300 E & LW 450 E

Qty.	Description	Part No.
1	Bolt & nut of pressure maintaining valve	LW 300 / 450 8013
1	Spring of pressure maintaining valve	LW 300 / 450 8014
1	Cap of pressure maintaining valve	LW 300 / 450 8015
2	O - ring pressure maintaining valve	LW 300 / 450 8016
1	Piston pressure maintaining valve	LW 300 / 450 8017
1	Casting pressure maintaining valve	LW 300 / 450 8018
1	Gasket pressure maintaining valve	LW 300 / 450 8019
1	Screw pressure maintaining valve	LW 300 / 450 8020
1	Block	LW 300 / 450 8023
1	Spring	LW 300 / 450 8024
1	Piston	LW 300 / 450 8025
2	Copper gasket	LW 300 / 450 8026
1	Metal insert	LW 300 / 450 8027
4	Allen head screw	LW 300 / 450 8029
1	Copper gasket	LW 300 / 450 8030
1	L&W synthetic compressor oil - 1 litre bottle	LW 300 / 450 9001
1	Activated carbon granulated 1.5 litre	LW 300 / 450 9004
1	Mole filter granulated 1.5 litre	LW 300 / 450 9005
1	Water separator top	LW 300 / 450 10001
1	Twist disc	LW 300 / 450 10002
1	Filter protector	LW 300 / 450 10003
1	Filter sintered	LW 300 / 450 10004
1	Plate	LW 300 / 450 10005
1	Lid	LW 300 / 450 10006

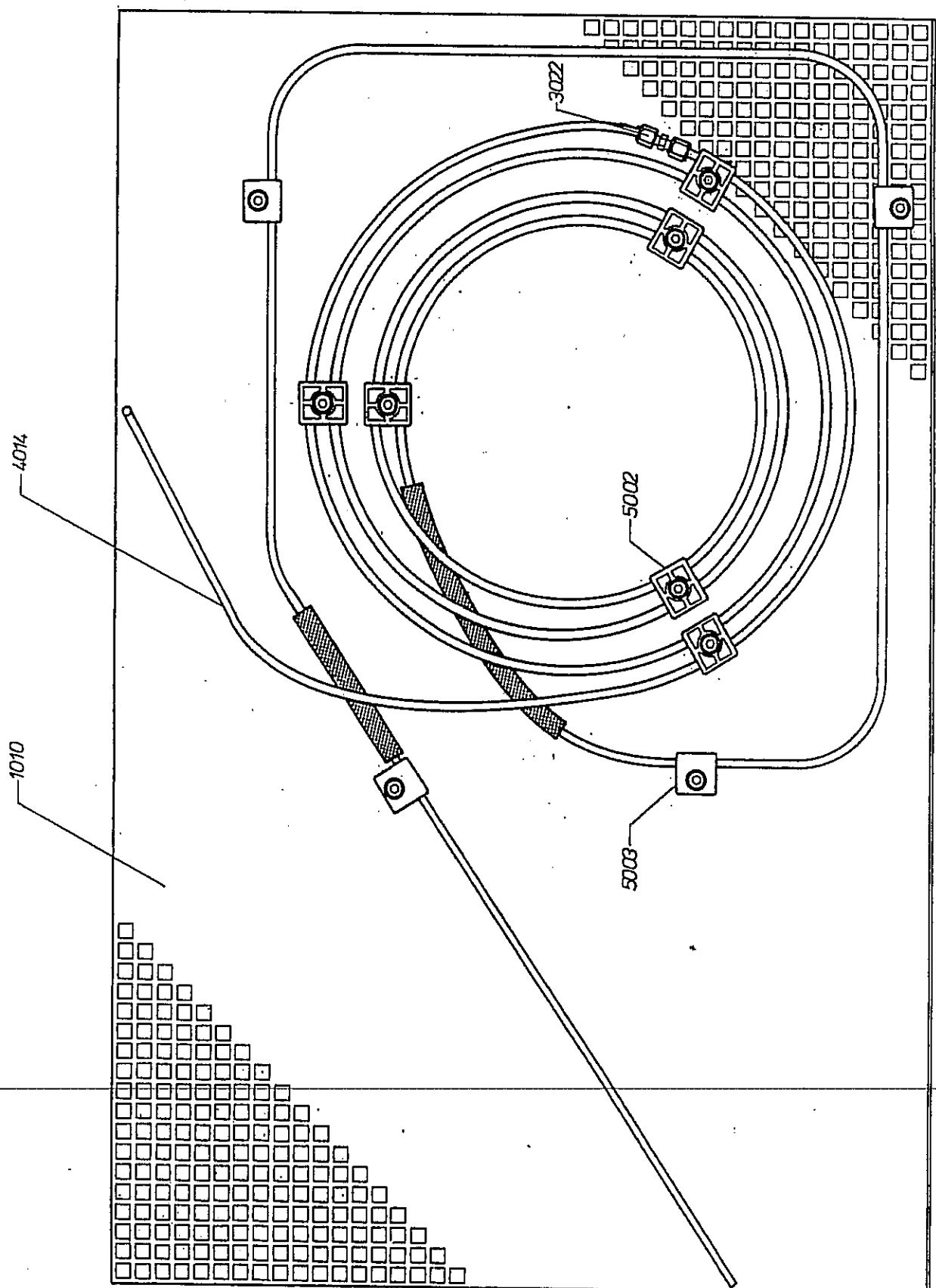
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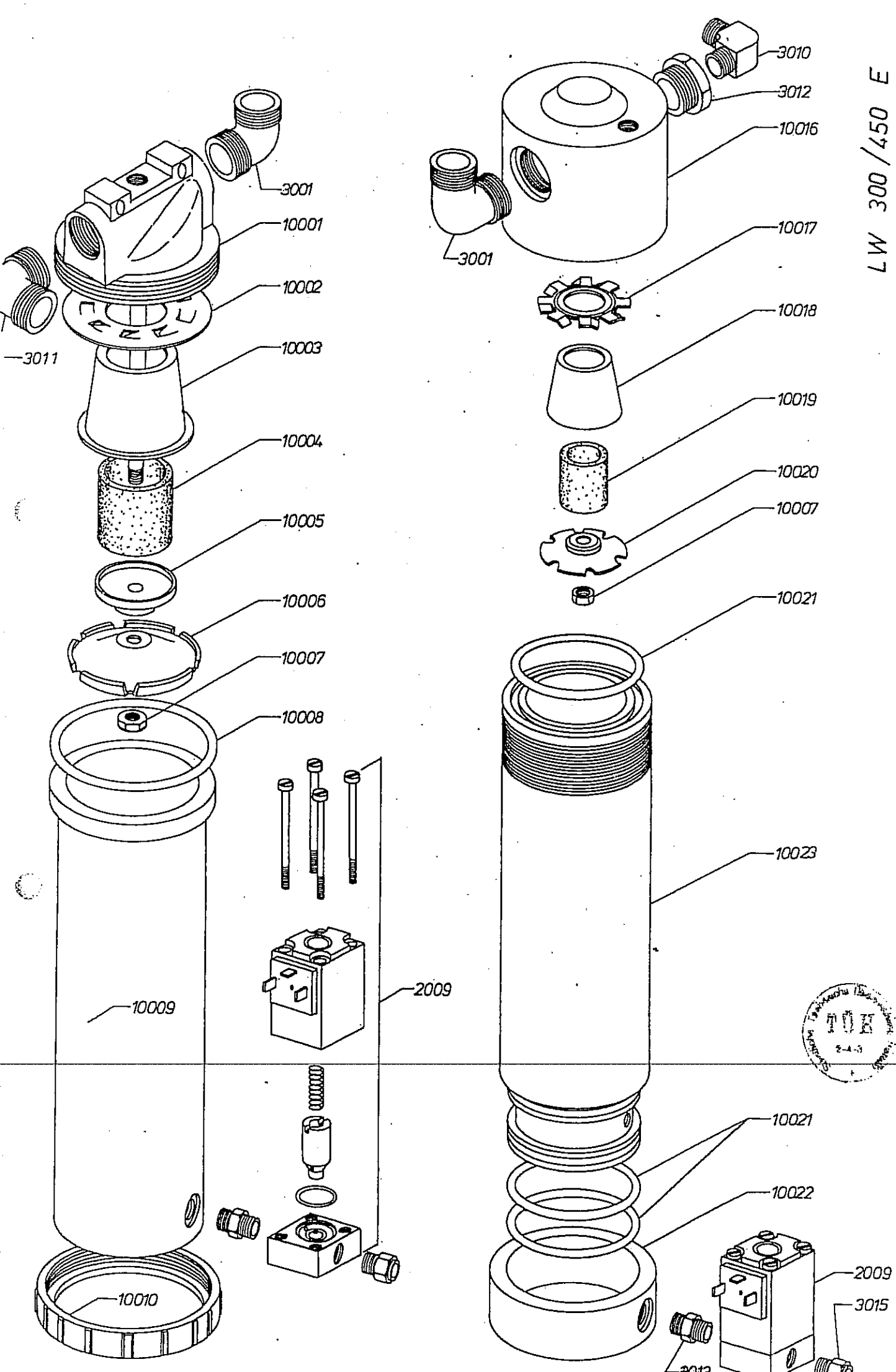




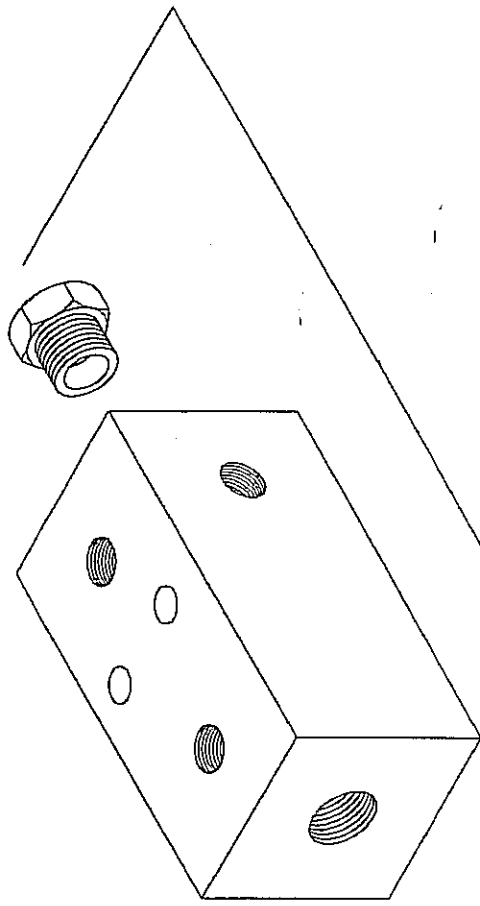
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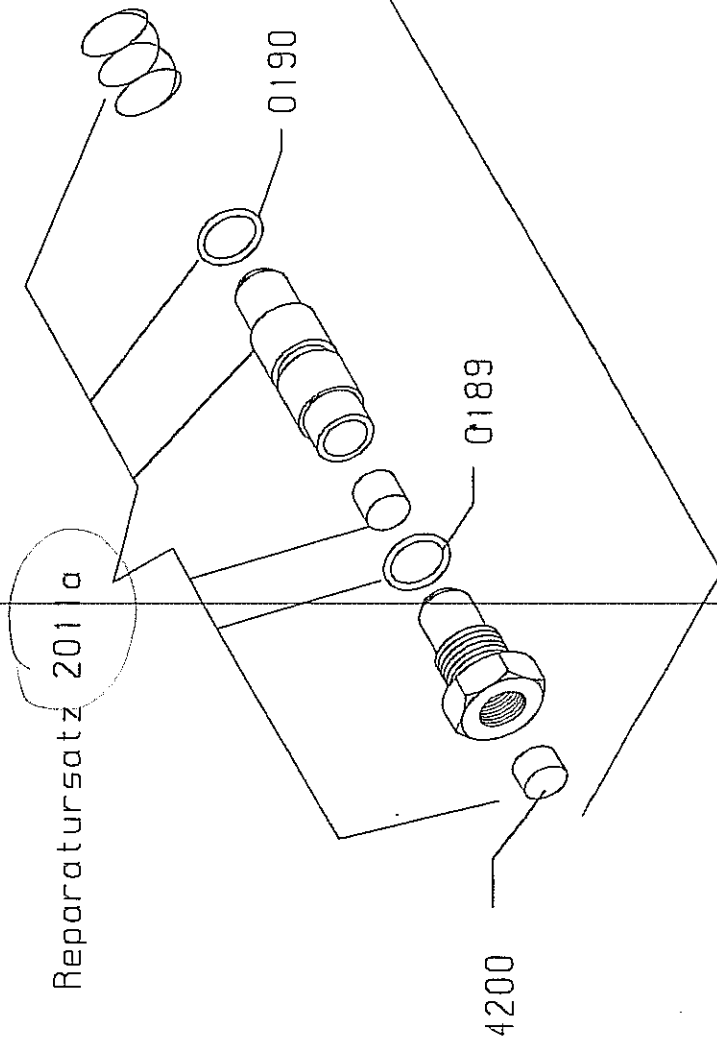




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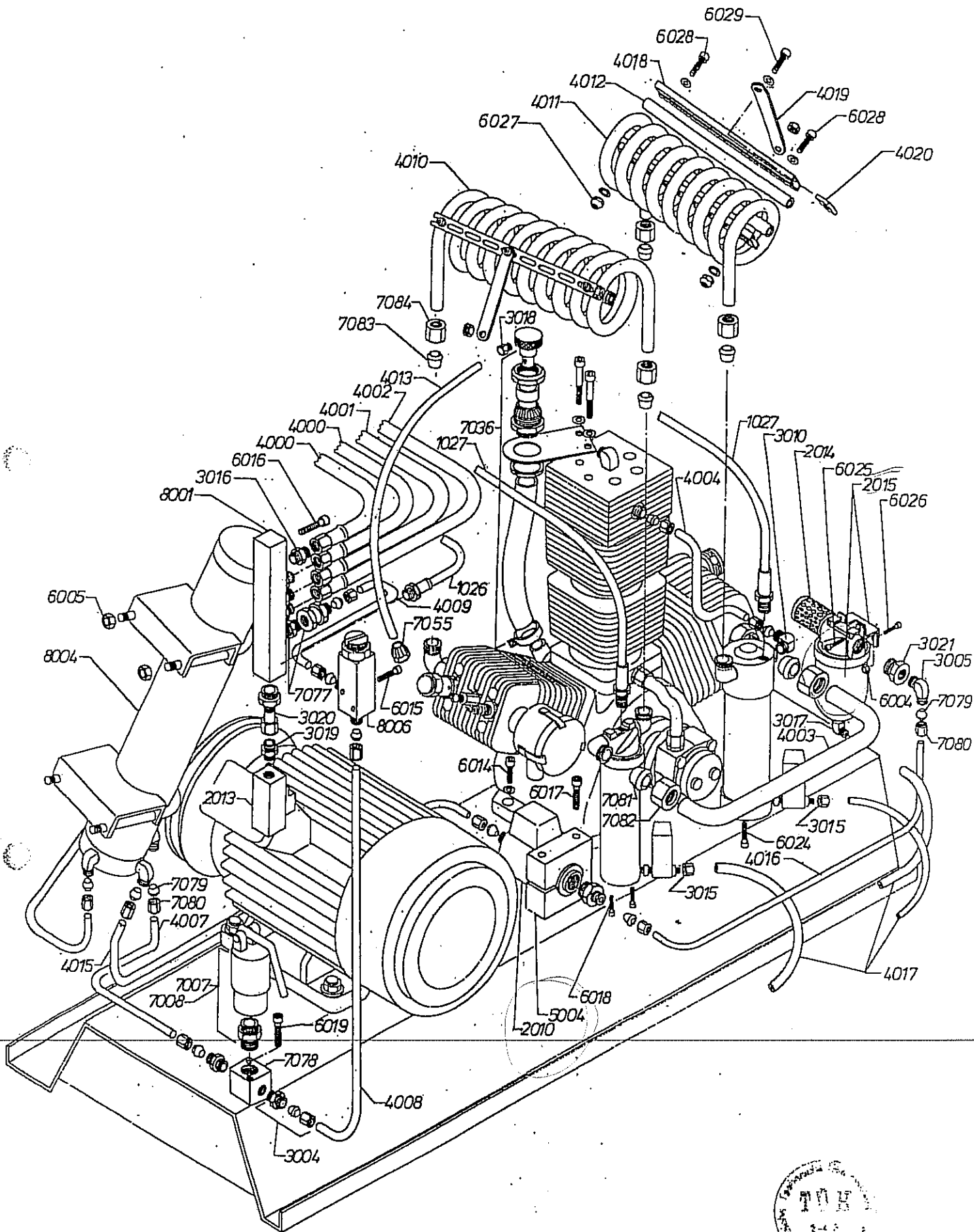


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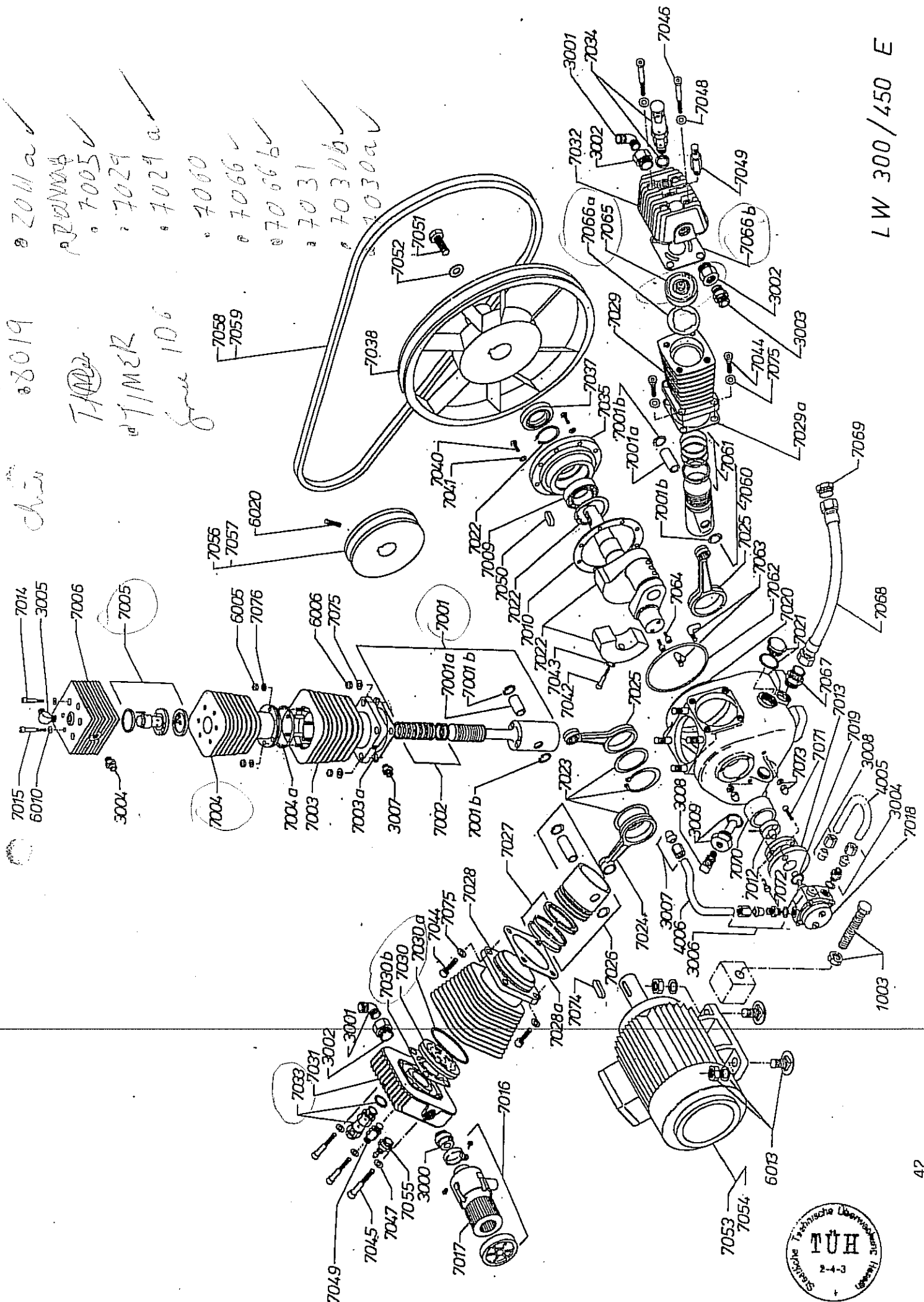


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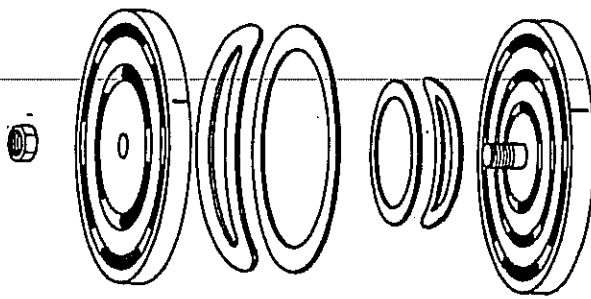
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- 7005 ✓
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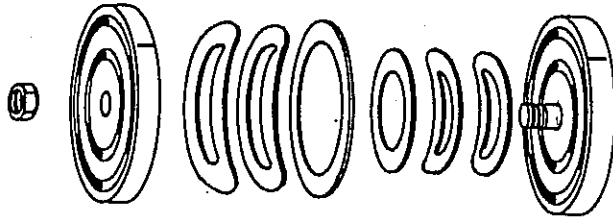


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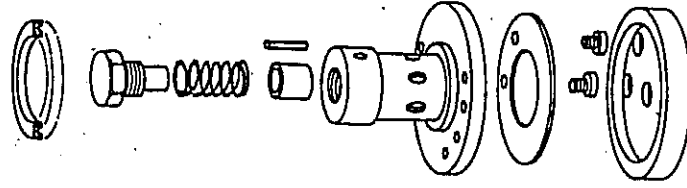




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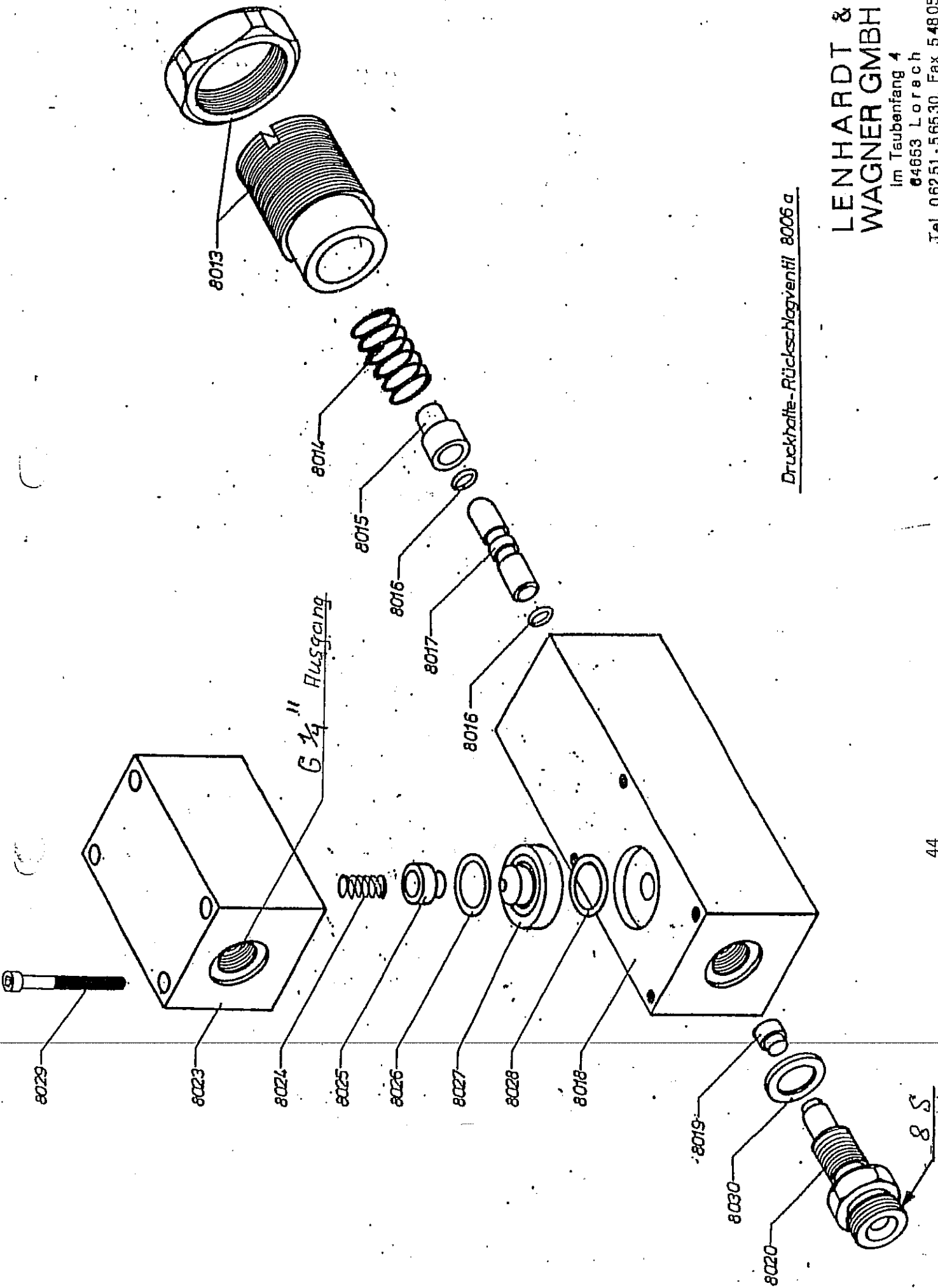


2. Stufe 7065



3. Stufe 7005





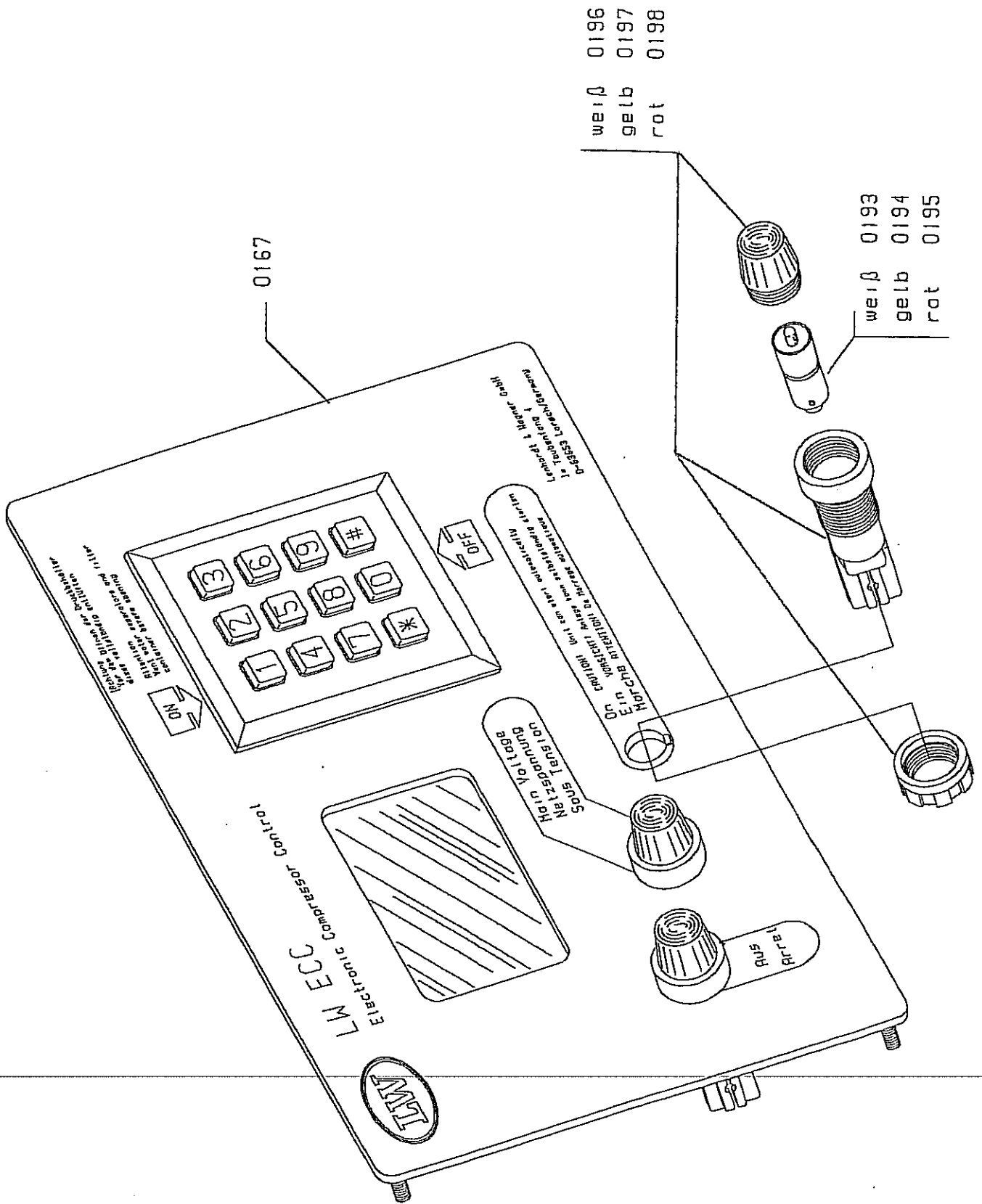
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WAGNER GMBH**

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64663 Lorch

Tel. 06251-56530, Fax 54805



LW 450 ES High Pressure Breathing Air Compressor Maintenance List

Routine Service	Intervals	Order No.	Quantity	Unit Price Euro \$ LP
Replace Filter Cartridge	Every 33 working hours @ 20 ° C	M 450 8022 A M450 8022 K	1 no. 1 no.	E\$100.00 E\$113.40
Oil Changes	a) 1 st after 25 working hours b) 2 nd after 50 working hours c) 3 rd after 200 working hours d) Thereafter every 200 working hours	M 450 9001	3 nos.	E\$106.00
Replace Air Inlet filter	Once a year	M 450 7017	1 no.	E\$24.20
Check & Replace V-belt	a) Check every 200 hours b) Replace when worn	M450 7058 E	1 no.	E\$43.50
Replace Inlet & Outlet Valves	Every 6000 hours	M 450 7030 M 450 7065 E M 450 7005 E	1 no. 1 no. 1 no.	E\$218.60 E\$166.40 E\$158.25
Replace Oil Suction Hose	Every 5000 hours	M 450 4005	1 no.	E\$16.70
Replace Sintered filter Condensate	Every 1000 hours	M 450 2011 B	1 no.	E\$10.25
Replace Sintered filter Water Separator	Every 1000 hours	M 450 1004 E M 450 1019 E	1 no. 1 no.	E\$29.00 E\$29.00

LW 450 ES High Pressure Breathing Air Compressor Maintenance List

Routine Service	Intervals	Order No.	Quantity	Unit Price Euro \$ LP
Replace Pressure Maintenance Valve Kits	Every 200 working hours	M 450 8016	1 set.	E\$1.40
Safety Valve all stages	Every 2 years	M 450 7033	1 no.	E\$80.50
		M 450 7034	1 no.	E\$98.90
		M 450 0008	1 no.	E\$310.00
Replace Oil Pump Kits	Once a year	M 450 7019	1 no.	E\$2.30
Replace Water Condensate Drain Valves Kits	Every 200 hours	M 450 2011	1 no.	E\$73.90

