

LEYCON

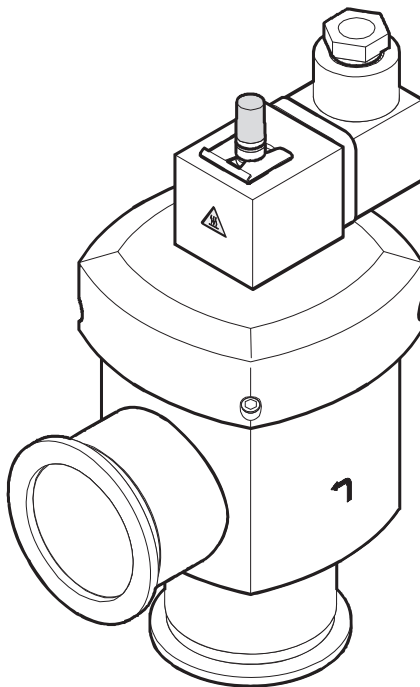
User manual GA06233_002_C0/2016

Safety valves SECUVAC® DN 16/25/40 ISO-KF

- with venting valve
- with interference suppression kit (optionally)

Part numbers

215 015	215 065	215 135
215 016	215 066	215 136
215 017	215 067	215 137



Imprint

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Original document The German language version of this user manual is the original document. All other languages are a translation of the original user manual. In case of deviations the information within the original user manual is valid.

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1 Description of product

1.1 Important information



This symbol points to a very important statement that requires particular attention.

Example:



Leybold disclaims any liability for damages resulting from inappropriate packaging.

1.2 Identification of product

The fabrication number and part number are fixed on the product directly or by means of an identification plate.

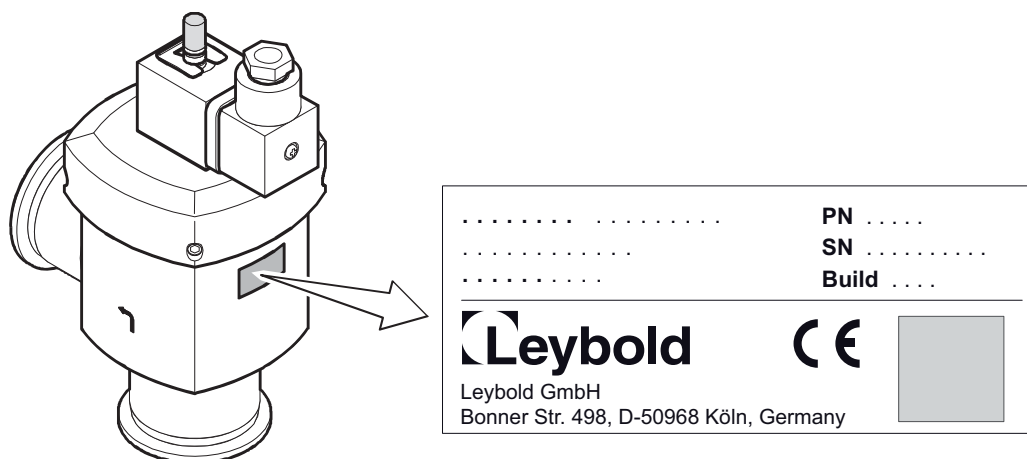


Figure 1-1

PN: Part number

SN: Fabrication number



In all communications with Leybold, please specify the information on the product nameplate.



SECUVAC® is a registered trademark of the Leybold GmbH.

1.3 Validity of the user manual



This document applies to products with the part numbers below-mentioned.

List of part numbers

Type	Supply voltage	Part number
DN 16 ISO-KF	24 VDC $\pm 10\%$	215 015
DN 16 ISO-KF	90 ... 126 VAC / 50 ... 60 Hz	215 016
DN 16 ISO-KF	180 ... 253 VAC / 50 ... 60 Hz	215 017
DN 25 ISO-KF	24 VDC $\pm 10\%$	215 065
DN 25 ISO-KF	90 ... 126 VAC / 50 ... 60 Hz	215 066
DN 25 ISO-KF	180 ... 253 VAC / 50 ... 60 Hz	215 067
DN 40 ISO-KF	24 VDC $\pm 10\%$	215 135
DN 40 ISO-KF	90 ... 126 VAC / 50 ... 60 Hz	215 136
DN 40 ISO-KF	180 ... 253 VAC / 50 ... 60 Hz	215 137

Table 1-1



If not indicated otherwise in the legends, the illustrations in this document correspond to the safety valve with the nominal diameter DN 40 ISO-KF. They apply to safety valves with other nominal diameters by analogy.

1.4 Technical data

Material

Item	Material
Valve housing	Aluminium
Flange	Aluminium
Seals	FPM

Table 1-2

General technical data

Type / Item	Value / Description		
	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Type	SECUVAC® safety valve		
Pressure range [mbar], absolute	$1 \cdot 10^{-8}$ to 1000		
Pressure difference Δp [mbar]			
For closing ¹	>150		
For opening ¹	<150		
Switching times [s]			
Opening time	< 15		
Closing time	< 0.1		
Response time	< 0.05		
Conductance [l/s] ²	3.8	11	30.5
Mounting position	any		
Tightness [mbar l/s]			
Housing	< 1×10^{-9}		
Valve plate	< 1×10^{-5}		
Venting valve	< 1×10^{-7}		

¹ ... the safety valve. For more information see chapter «5 Operation».

² For air with molecular flow.

	Value / Description		
Type / Item	DN 16 ISO-KF	DN 25 ISO-KF	DN 40 ISO-KF
Temperatures [°C]			
Ambient temperature	5 to 50		
Pilot valve			
Ambiance 20 °C	<55		
Ambiance 50 °C	<80		
Bakeout temperature			
Housing	<60		
Actuator	<50		
Nominal voltage	see product nameplate		
Nominal power			
DC [W]	2.5		
AC [VA]	5 pickup / 3.7 holding		
Type of connection	cable socket according to DIN 43650		
Duty cycle	100% i.e. continuous duty possible		
Weight [kg]	0.3	0.5	0.9
Protection category	IP 65 according to DIN 40 050		

Table 1-3

Dimensions [mm]

DN 16 ISO-KF

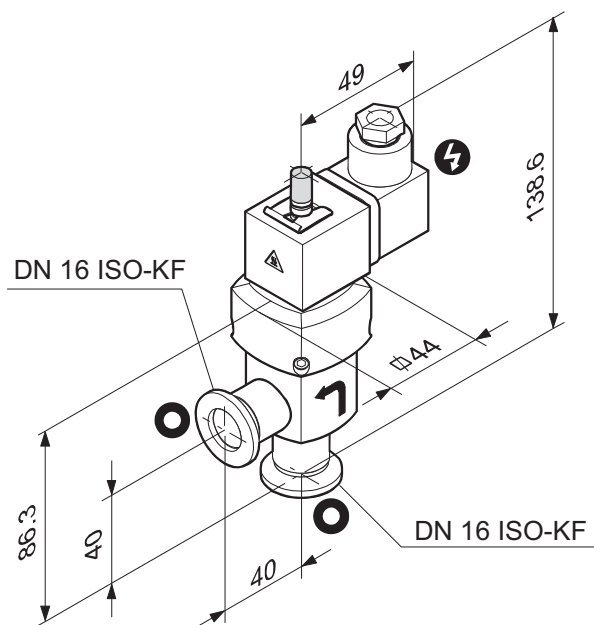


Figure 1-2

DN 25 ISO-KF

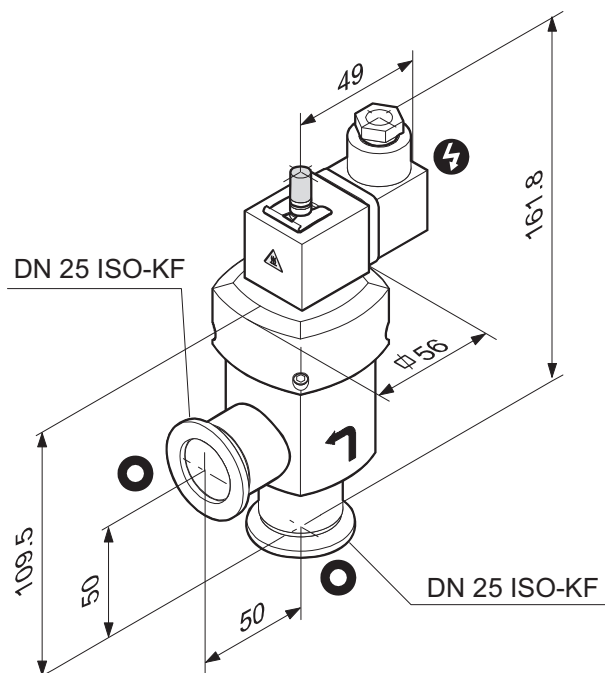


Figure 1-3

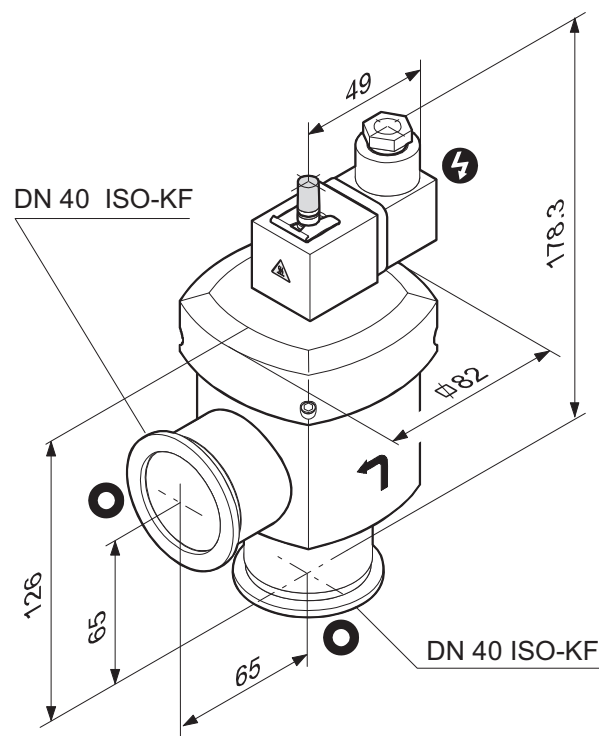
DN 40 ISO-KF

Figure 1-4



Flow direction



Power connection



Protective lid

1.5 Components delivered with the valve

Protective covers on both flanges.

The original document of this user manual in German language is also enclosed.

1.6 Warranty

Leybold assumes no liability if the end-user or third parties:

- disregard the information in this document
- use the product in a non-conforming manner
- make any kind of interventions (modifications, alterations etc.) on the product
- use the product with accessories, options, and add-ons not listed in the corresponding product documentation.

Failures due to contamination or wear and tear, as well as expendable parts (e.g. seals), are not covered by the warranty.

Improperly accomplished maintenance work may reduce the safety, lifetime and performance of the product and lead to refusal of warranty claims.



Maintenance work not described in this user manual may only be carried out by the Leybold service staff or by specialists trained and authorized by Leybold.

2 Safety

2.1 Compulsory reading material

Read this chapter prior to performing any work with or on the product. It contains important information that is significant for your own personal safety. This chapter must have been read and understood by all persons who perform any kind of work with or on the product during any stage of its serviceable life.

	NOTICE Lack of knowledge Failing to read this manual may result in property damage. Firstly, read manual.
---	--



This user manual is an integral part of a comprehensive documentation belonging to a complete technical system. It must be stored together with the other documentation and accessible for anybody who is authorized to work with the system at any time.

2.2 Danger levels

	! DANGER High risk Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
---	--

	! WARNING Medium risk Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
---	---

	! CAUTION Low risk Indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.
---	---

	NOTICE Command Indicates a hazardous situation which, if not avoided, may result in property damage.
---	---

2.3 Purpose of use

2.3.1 Permitted use

- When the backing pump is switched off or in the event of a power failure, the safety valve SECUVAC® shuts off the vacuum system and vents the backing pump.
- Use product for clean and dry vacuum applications only. Observe the specification in «1.4 Technical data».

2.3.2 Adverse use

- Use of the product for liquid gas.
- Use of the product without instruction or outside of the permitted limits.
- Detaching of hazard notices, disabling safety systems.
- Conducting any kind of interventions (modifications, alterations etc.) on the product.
- Use with accessories and options, which are not mentioned in the corresponding product documentation.
- Either use, not explicitly mentioned as permitted use, applies as adverse use.

2.4 Obligations / area of responsibility

2.4.1 Manufacturer

Leybold GmbH as manufacturer is responsible for supplying the product, with its user manual and original accessories, in a completely safe condition.

2.4.2 Operator



The operator is the person in charge of the product. The operator ensures that the product is used in accordance with the instructions, and the safety of the equipment in use. Training and deployment of personnel who use the product is also the operator's charge.

The operator has the following duties:

- To know local, operative regulations regarding safety and accident prevention.
- To assure that the national laws and directives are respected.
- To understand safety indications on the product, and instructions in the user manual.
- To immediately inform the manufacturer, if safety shortcomings of the product or its use occur.
- To check the sound condition of the product regularly and to assure the execution of the maintenance works mandated.



The end-user assumes the responsibility in conjunction with the process media used.

2.5 Personnel qualifications

	 WARNING
	Unqualified personnel Inappropriate handling may cause serious injury or property damage. Only qualified personnel are allowed to carry out the described work.

2.6 General Safety Instructions

- Adhere to the applicable regulations and take the necessary precautions for the process media used.
Consider possible reactions between the materials and the process media.
Consider possible reactions of the process media due to the heat generated by the product.
- Adhere to the applicable regulations and take the necessary precautions for all work you are going to do and consider the safety instructions in this document.
- Before beginning to work, find out whether any vacuum components are contaminated.
Adhere to the relevant regulations and take the necessary precautions when handling contaminated parts.

2.7 Safety labels

Label	Part No.	Location on valve
	T-9001-155	On protective covers of flanges
	253198	On valve body or actuators

Table 2-1

3 Function

The safety valve SECUVAC® shuts off the vacuum system and vents the backing pump:

- when the backing pump is switched off,
- or in the event of a power failure.

The safety valve SECUVAC® consists of the following modules:

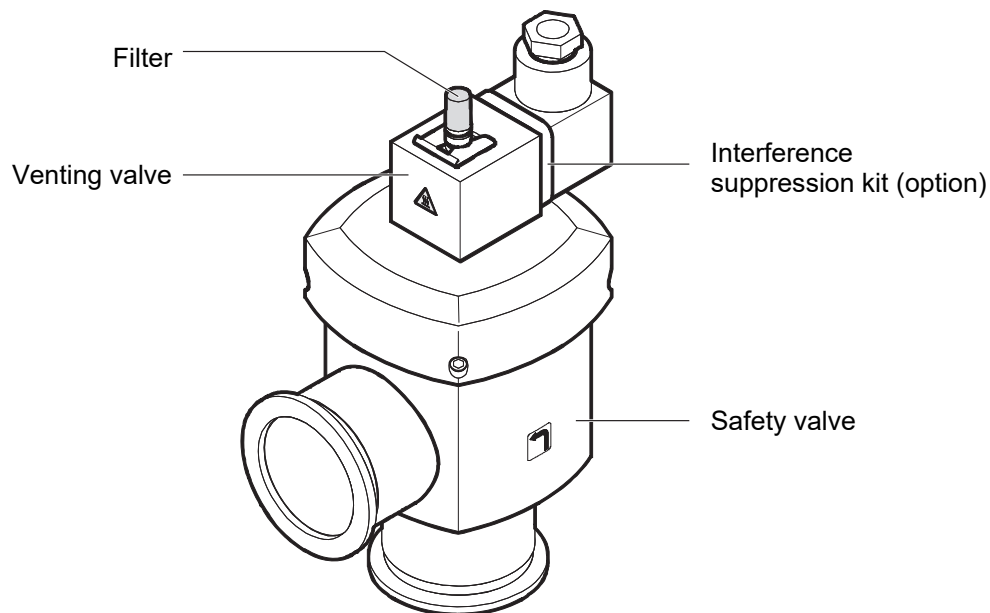


Figure 3-1



For prevention of interference with sensitive equipment near the safety valve, an optional interference suppression kit can be built in; see chapter «11 Spare parts and accessories».

4 Installation

The subsequent notes need to be observed for all installation works!



Disconnect electrical power during installation and configurations.



WARNING

Unqualified personnel

Inappropriate handling may cause serious injury or property damage.
Only qualified personnel are allowed to carry out the described work.



NOTICE

Contamination

Product may get contaminated because of inadequate handling.
Always wear cleanroom gloves when handling the product.



NOTICE

Inappropriate tools

Sealing surfaces may get damaged.
Do not use sharp-edged tools.

4.1 Unpacking



- Before unpacking, check whether the packaging shows transport damages and the goods could be damaged.
- Check whether the goods are complete and in impeccable condition. If you have any objections, please contact the local agency immediately; see backside of the document.
- Store the original packaging material. It may be useful if products must be returned.



Remove the protective covers from the valve only at the moment when the valve is being installed into the system. Keep unprotected sealing surfaces clean and do not damage them.

4.2 Installation into the system

4.2.1 Vacuum connection

	⚠ DANGER Overpressure in the vacuum system >1 bar Injury caused by released parts and harm caused by escaping process gases can result if clamps are opened while the vacuum system is pressurized. Do not open any clamps while the vacuum system is pressurized. Use the type of clamps which are suited to overpressure.
---	--

1. Remove the protective lids and connect the safety valve to the backing pump and vacuum system.

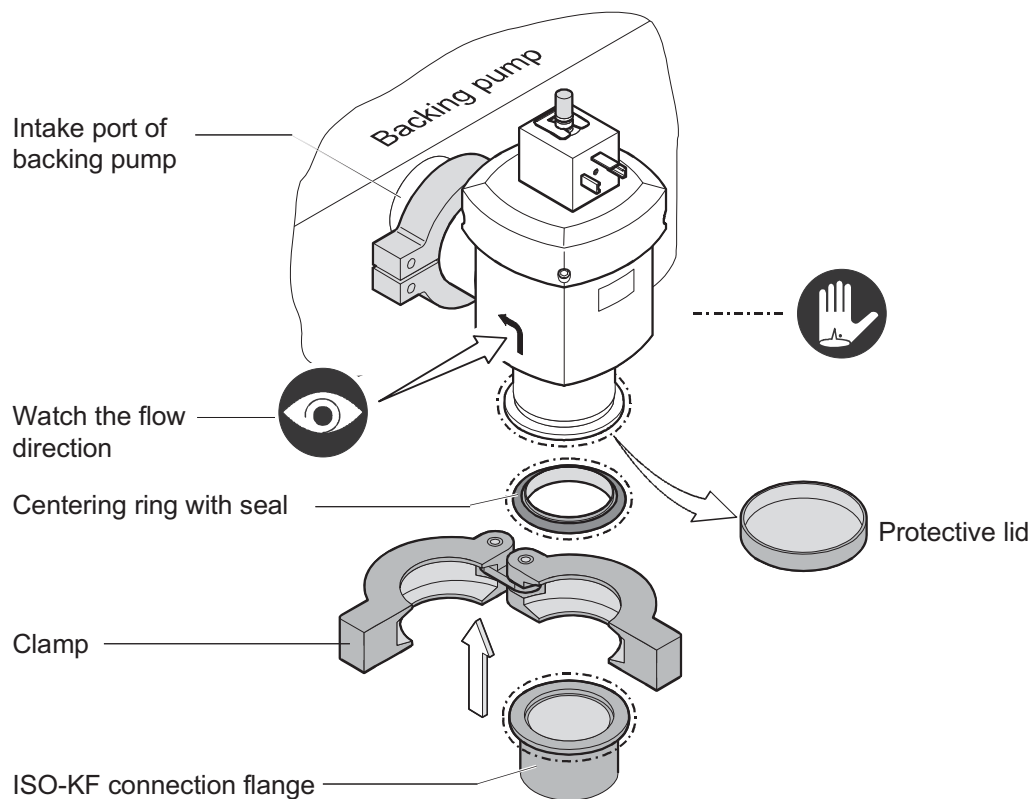


Figure 4-1



Keep the protective lids.

2. Check that the vacuum connections are leak tight.

4.2.2 Electrical connection

	⚠ DANGER Electric shock Parts being under voltage will result in serious injury or death. Before connecting or disconnecting the product, turn off the control system.
	NOTICE Wrong voltage Incorrect voltages can destroy the product. The rating of the supply voltage must correspond to the nominal voltage of the pilot valve.



An interference suppression kit preventing any interference from affecting other equipment operating in the vicinity is available as option; see chapter «11 Spare parts and accessories».

Example of a circuit diagram



Connect the magnetic coil of the of the vent valve in parallel with the drive motor of the backing pump.

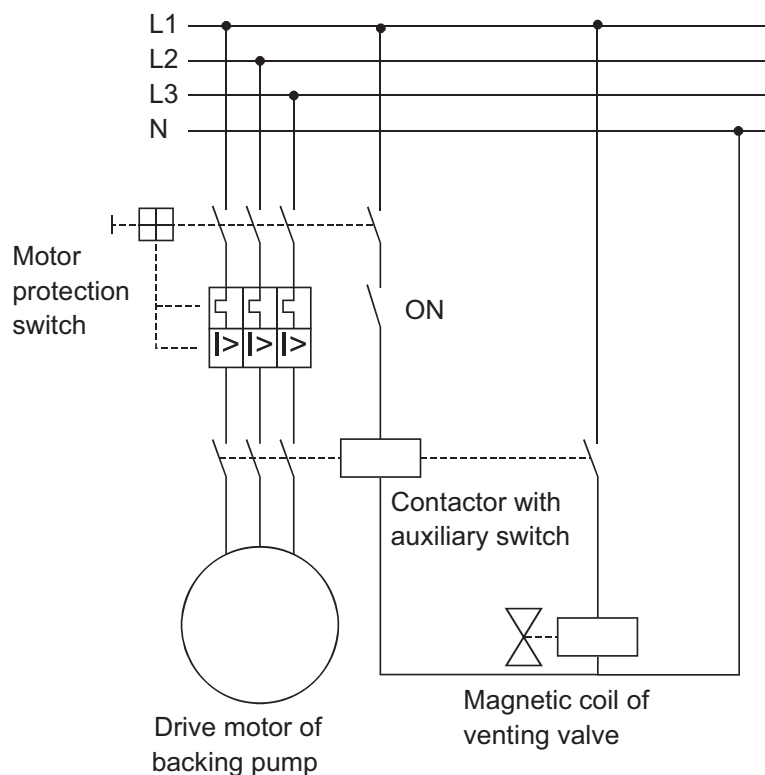


Figure 4-2

Disassembling the cable socket

1. Unfasten the lock screw and pull the cable socket.

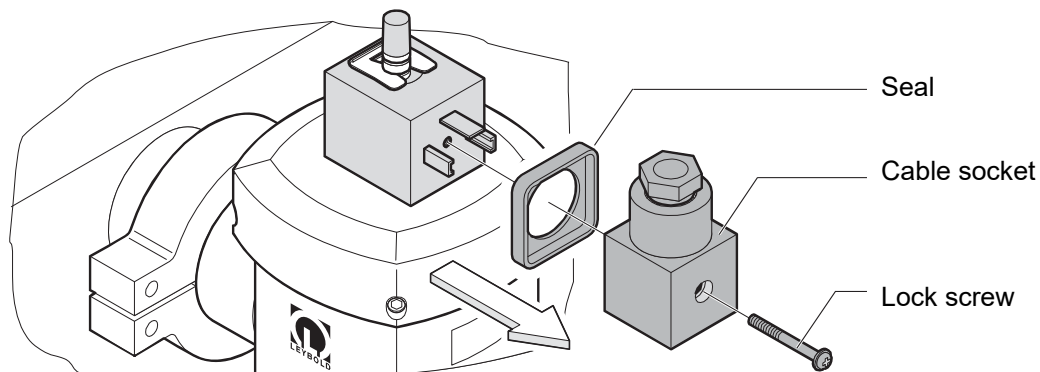


Figure 4-3

Preparing the cable socket

2. Remove the insert.

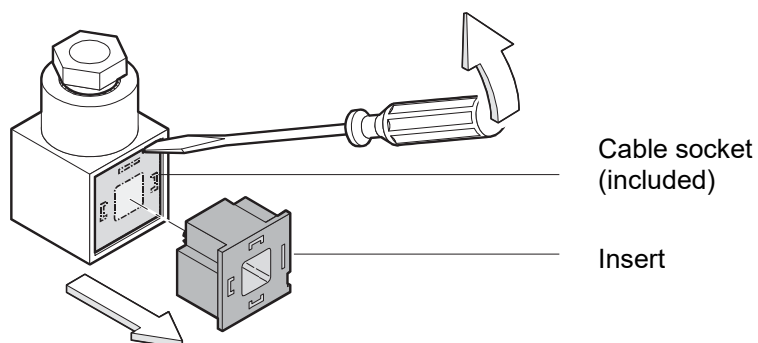


Figure 4-4

3. Unscrew the strain relief and remove the cable gland.

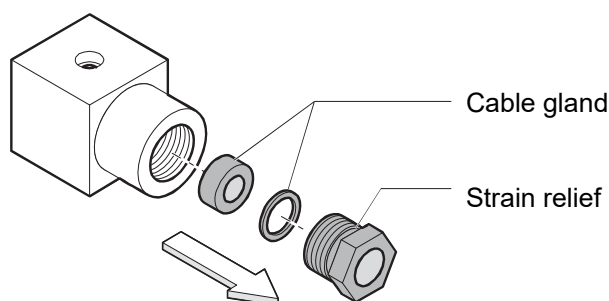


Figure 4-5

Preparing and connecting the cable

4. Slide the nut, washer, seal, and housing on the cable.

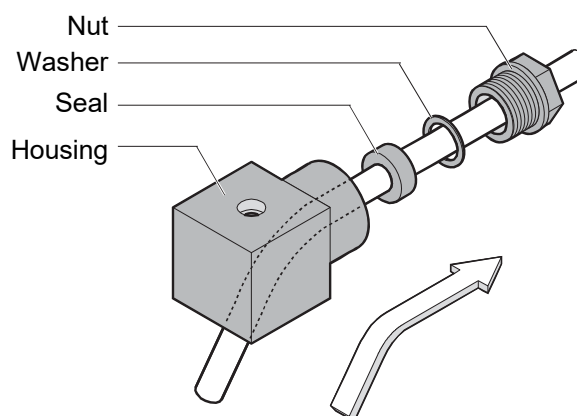


Figure 4-6

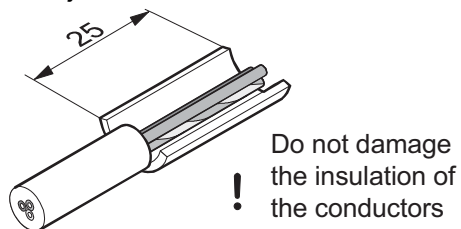


The cable must meet the following specifications:

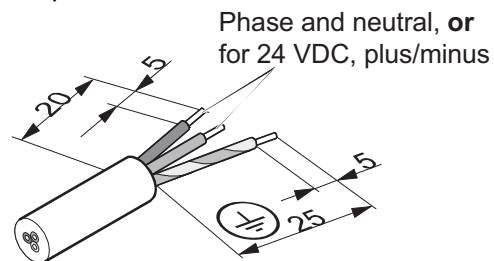
- flexible
- Conductor crosssection 0.75 mm²
- 3 conductors including ground conductor

5. Prepare the cable: skin jacket → strip insulation → twist strands → install and crimp terminal sleeves

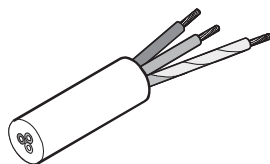
Skin jacket



Strip insulation



Twist strands



Install and crimp terminal sleeves

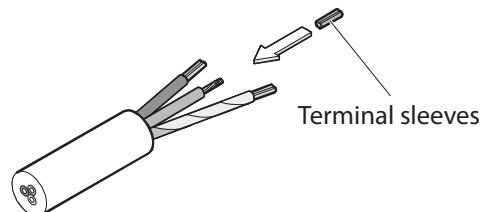


Figure 4-7

6. Connect the cable.

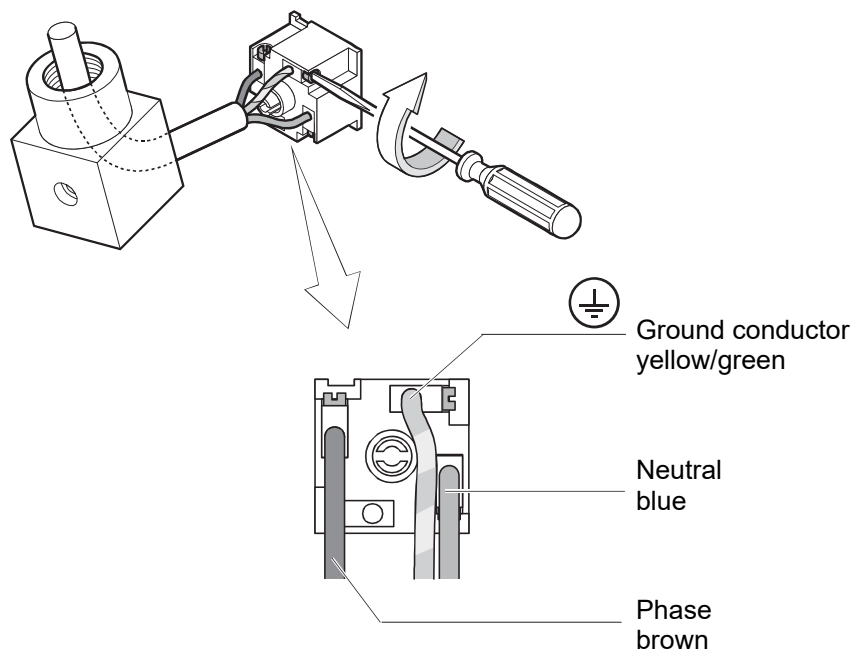
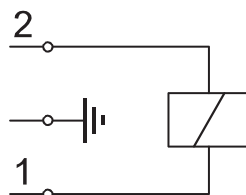


Figure 4-8

24 VDC $\pm 10\%$
 90 ... 126 VAC, 50 ... 60 Hz
 180 ... 253 VAC, 50 ... 60 Hz



The polarity need not be taken into consideration in the 24 VDC version.
 For safety reasons, we recommend connecting the ground conductor also in
 the 24 VDC version.

Assembling the cable socket

7. Push the insert in until it catches.

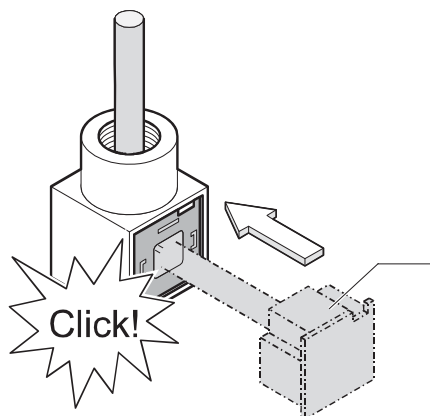


Figure 4-9

Insert with cable can be rotated in steps of 90°.

8. Push the strain relief into the housing.

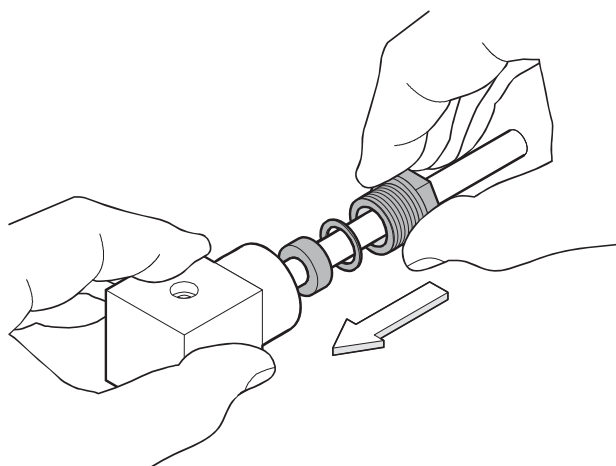


Figure 4-10

9. Tighten the strain relief.

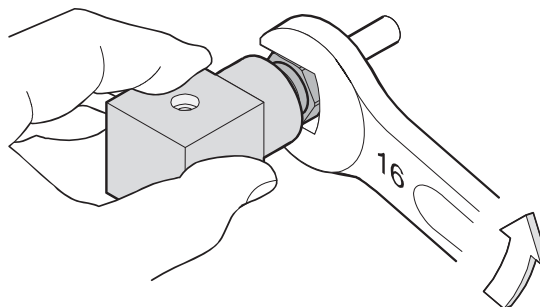


Figure 4-11

Connecting the cable socket

10. Connect the pilot valve to the supply voltage.

- Plug in the cable socket **without using an interference suppression kit** and tighten the locking screw ...

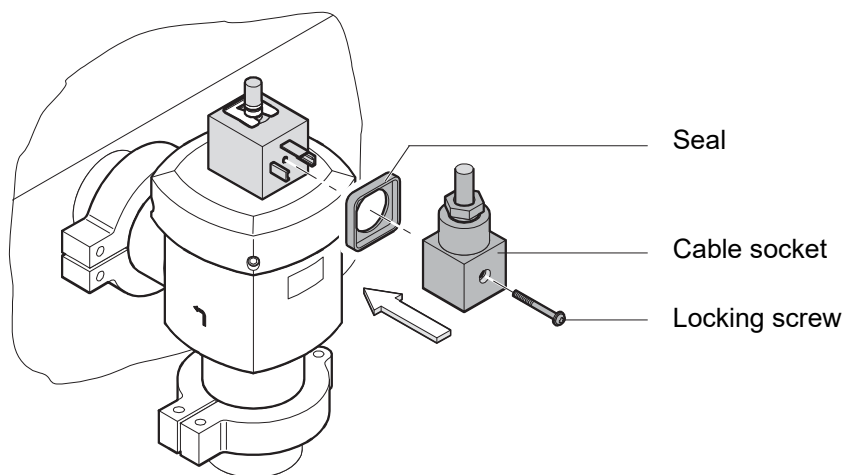


Figure 4-12

- ... **or** plug in the cable socket **after having inserted an interference suppression kit** and tighten the locking screw with 0.6 Nm fastening torque.

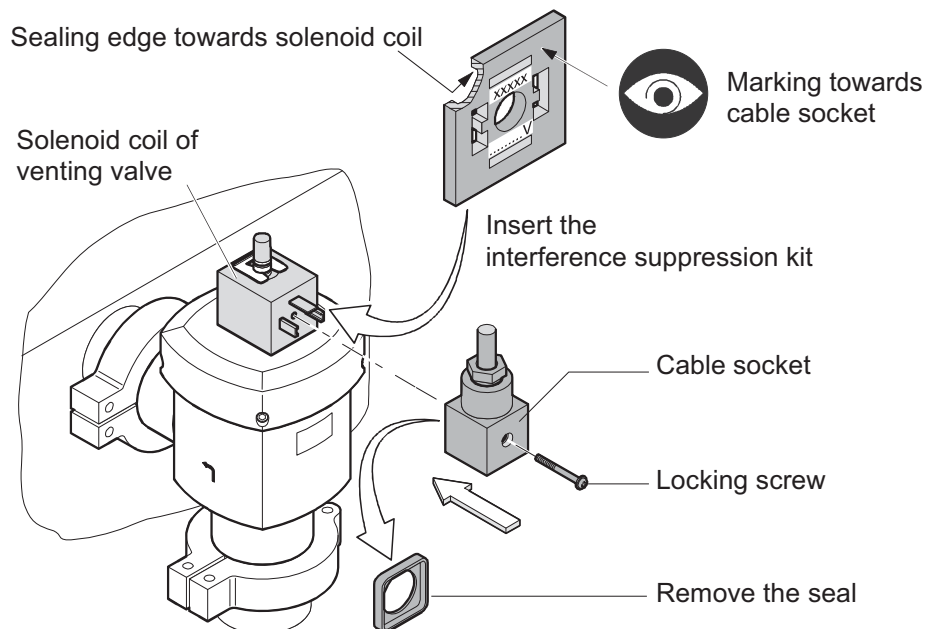


Figure 4-13



NOTICE

Interference with susceptible equipment

Potential interference with susceptible equipment near the pilot valve.

To prevent interference with susceptible equipment near the pilot valve, install the interference suppression kit instead of the sealing profile; see chapter «11 Spare parts and accessories».

11. Connect the cable to the power supply.



⚠ DANGER

Line voltage

Incorrectly grounded products can be extremely hazardous in the event of a fault.

Use only a 3-conductor power cable with protective ground. The power connector may only be plugged into a socket with a protective ground. The protection must not be nullified by an extension cable without protective ground.

5 Operation

	⚠ WARNING Unqualified personnel Inappropriate handling may cause serious injury or property damage. Only qualified personnel are allowed to carry out the described work.
	⚠ CAUTION Hot surfaces Risk of burning when touching hot surfaces. Wear protective gloves.



The product is ready for operation as soon as it has been installed.

If the valve is operated under harsh or dirty conditions, it should be cleaned / maintained before the specified service time has been reached.

Idle position

When the backing pump and vacuum system are under atmospheric pressure, both the vent and safety valve are open.

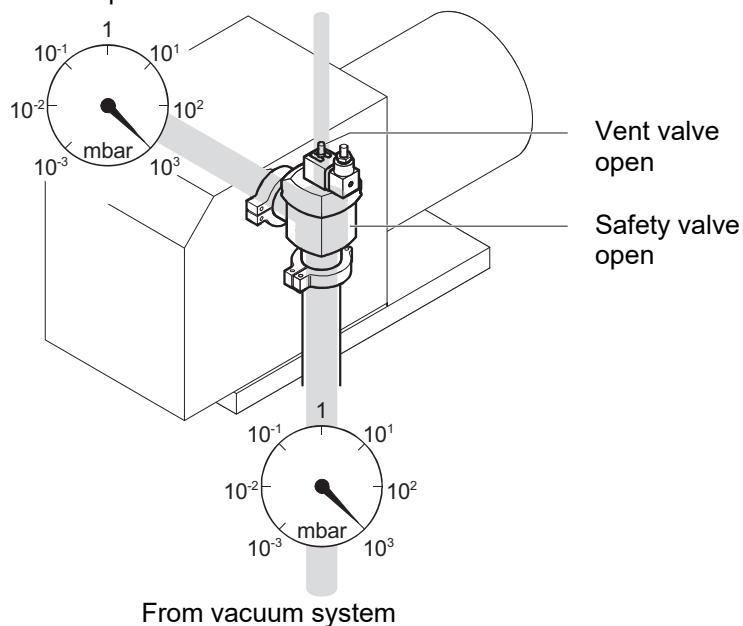


Figure 5-1

Backing pump in operation

When the backing pump is switched on, the vent valve is closed and the vacuum system is evacuated.

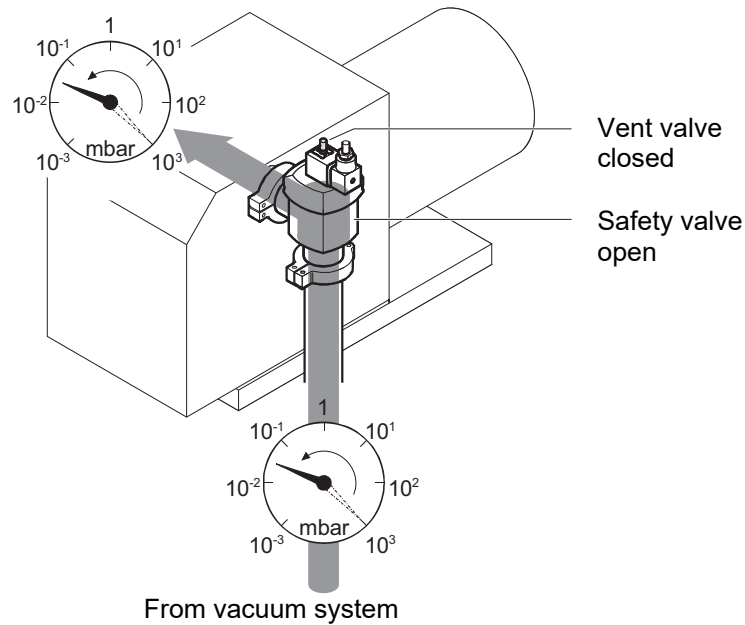


Figure 5-2

Backing pump out of operation

When the backing pump is switched off or in the event of a power failure, the vent valve is opened. Due to the pressure difference between the intruding air and the evacuated vacuum system, the safety valve is closed. Through the open vent valve, air is admitted to the backing pump.

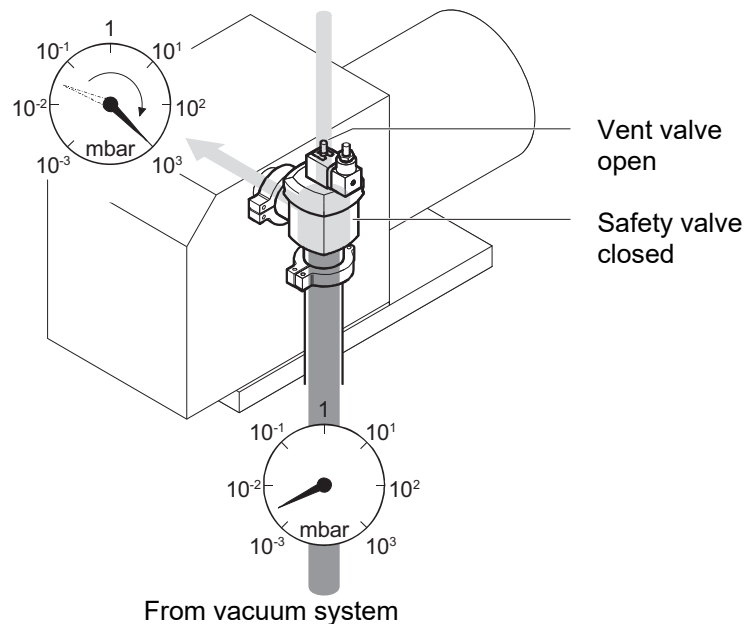


Figure 5-3

Backing pump again in operation

When the backing pump is switched on again, the vent valve is closed.
The safety valve is evacuated

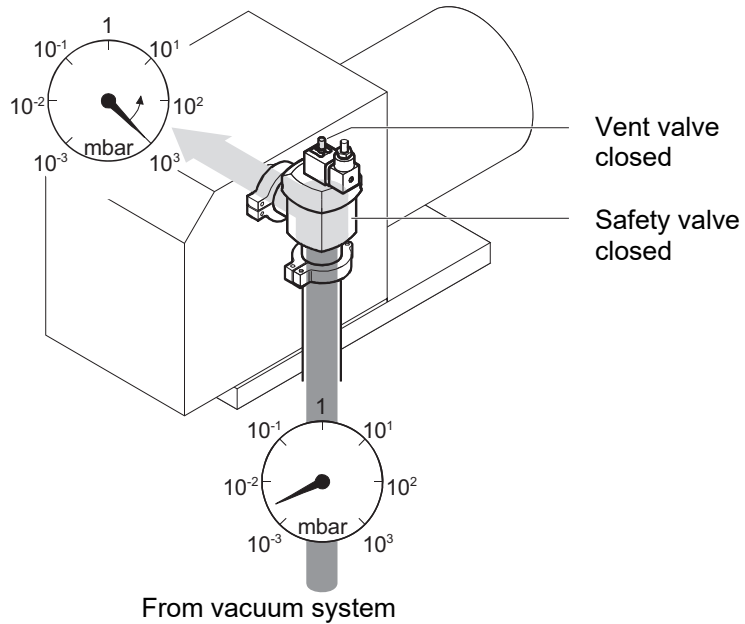


Figure 5-4

... and is opened when the pressure difference Δp to the pressure in the vacuum system drops below 150 mbar.

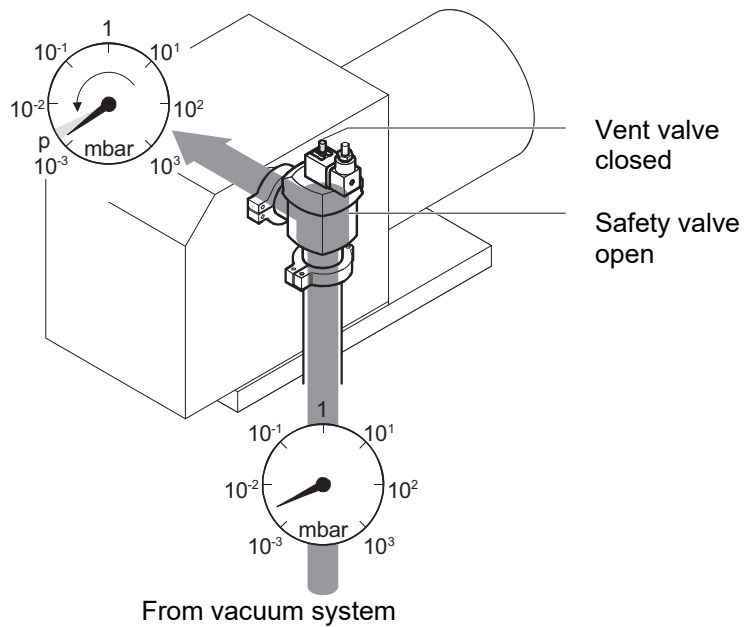


Figure 5-5

Troubleshooting

Error, effect	Possible cause	Troubleshooting
Safety valve leaks	Valve seat dirty.	Disassemble and clean safety valve.
	Seals defective.	Replace diaphragm and seals of valve plate and housing if necessary. See chapter «Replacing the Seals of the Valve Plate and Housing», page 34.
Safety valve opens too slowly	Nozzle on piston clogged.	Disassemble and clean safety valve. Replace nozzle if necessary. See chapter «Replacing the Seals of the Valve Plate and Housing», page 34.
Safety valve closes too slowly	Filter clogged.	Replace filter. See chapter «Replacing the Seals of the Valve Plate and Housing», page 34.
	Pole tube clogged.	Disassemble and clean safety valve. Replace pole tube if necessary. See chapter «Replacing the Seals of the Valve Plate and Housing», page 34.
Vent valve hums	Magnetic shunt does not work properly due to dirt. Magnetic coil may burn out.	Replace pilot valve. See chapter «Replacing or Exchanging the Solenoid Coil», page 36.

Table 5-1

6 Maintenance



Under clean operating conditions the valve does not need any maintenance during the specified cycle life.



Contamination from the process may require more frequent maintenance.



WARNING

Unqualified personnel

Inappropriate handling may cause serious injury or property damage.
Only qualified personnel are allowed to carry out the described work.



WARNING

Contaminated parts

Contaminated parts can be detrimental to health and environment.
Before beginning to work, find out whether any parts are contaminated.
Adhere to the relevant regulations and take the necessary precautions when handling contaminated parts.



CAUTION

Hot surfaces

Risk of burning when touching hot surfaces.
Touch hot surfaces only if the valve has cooled down.



NOTICE

Contamination

Product may get contaminated.
Always wear cleanroom gloves when handling the product.



NOTICE

Inappropriate tools

Sealing surfaces may get damaged.
Do not use sharp-edged tools.



Leybold assumes no liability and the warranty becomes null and void if maintenance works are performed, which are not covered by this user manual.

Dismount the valve

1. Vent the vacuum system and wait until the valve has cooled down to $<55^{\circ}\text{C}$.

	⚠ DANGER
	Electric shock
	Parts being under voltage will result in serious injury or death. Before connecting or disconnecting the product, turn off the control system.

2. Unfasten the locking screw and unplug the cable socket.

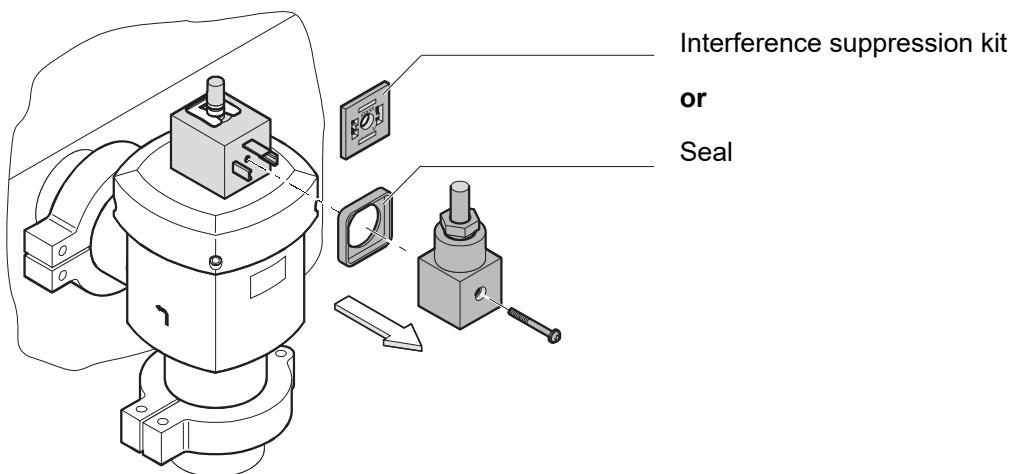


Figure 6-1

3. Disconnect the small flange fittings and put the protective lids in place.

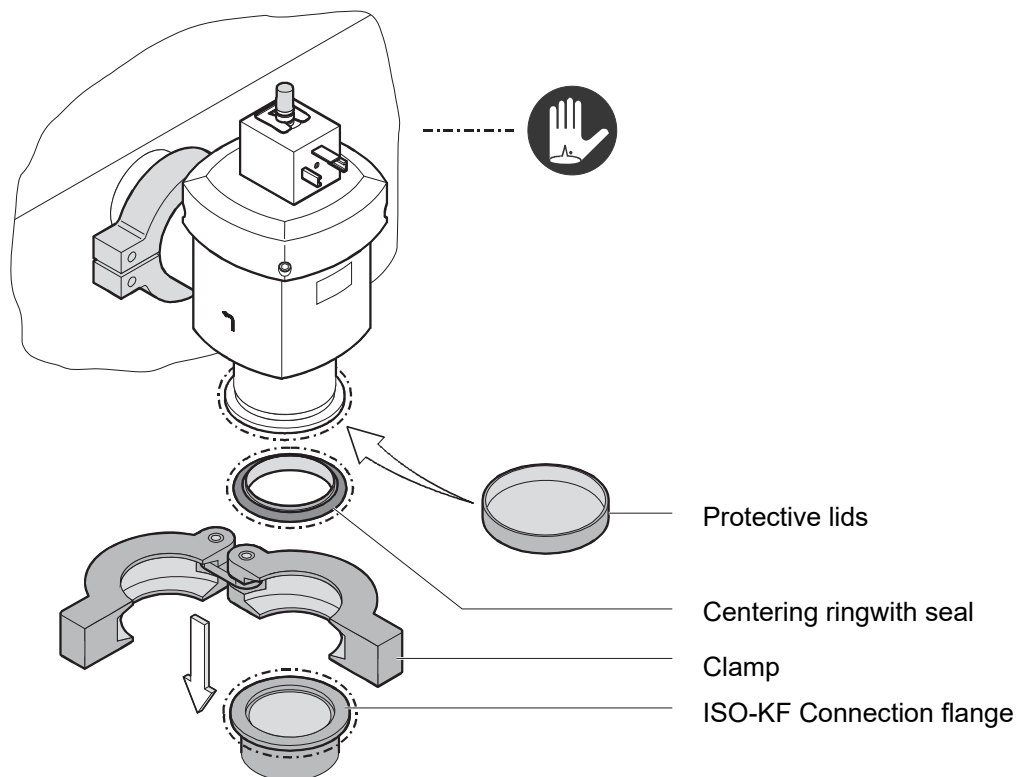


Figure 6-2

Replacing the Filter

Unscrew the filter and replace it.

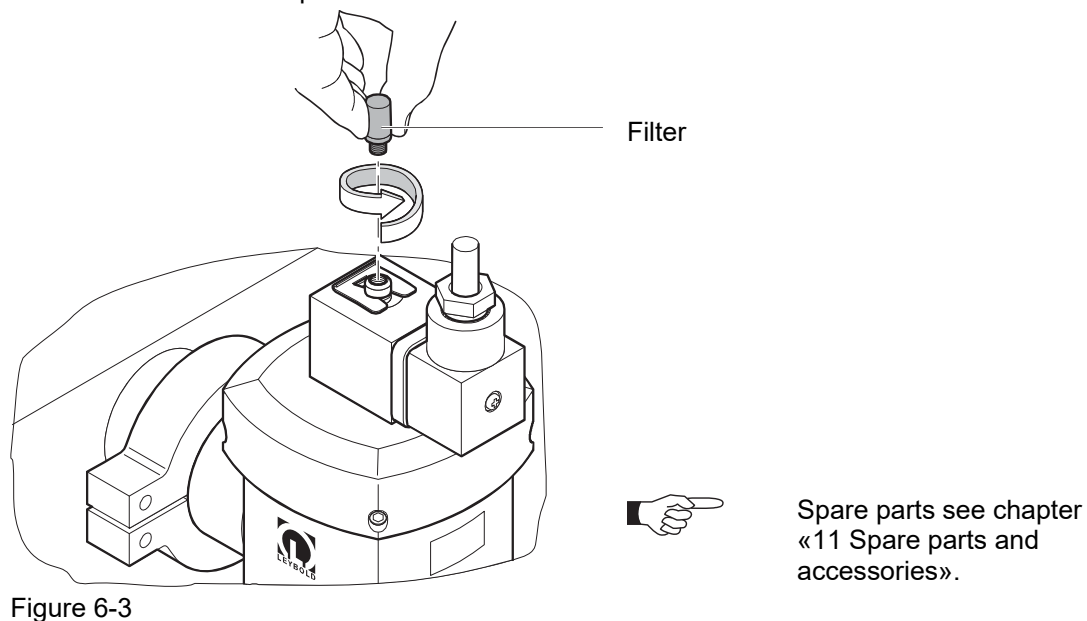


Figure 6-3

Replacing or exchanging the pilot valve

1. Vent the vacuum system and wait until the valve has cooled down to $<55^{\circ}\text{C}$.

	⚠ DANGER
	Electric shock
	Parts being under voltage will result in serious injury or death. Before connecting or disconnecting the product, turn off the control system.

2. Unfasten the lock screw and unplug the connection socket.

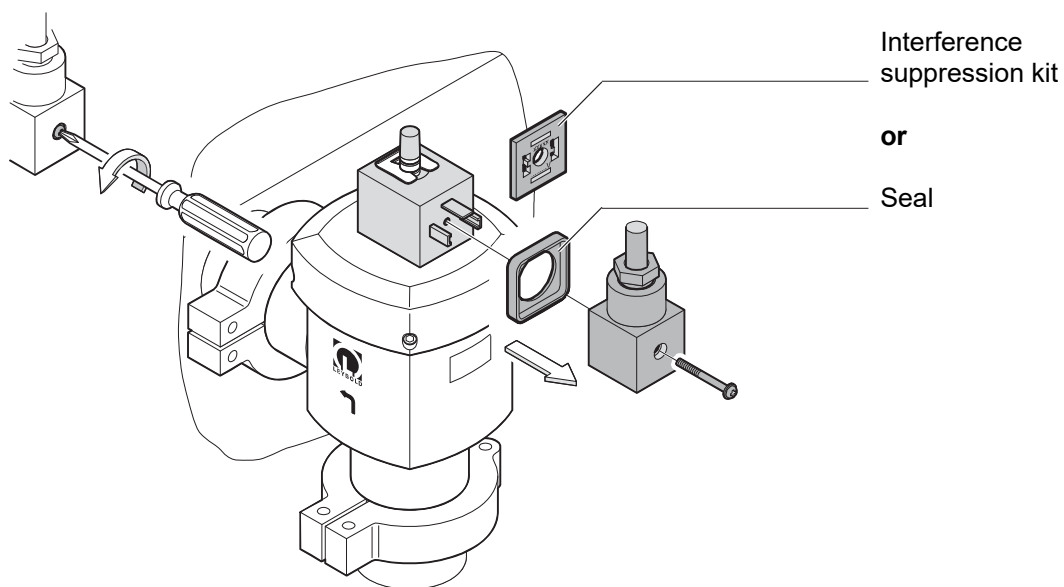


Figure 6-4

3. Remove the clamp and replace the pilot valve.

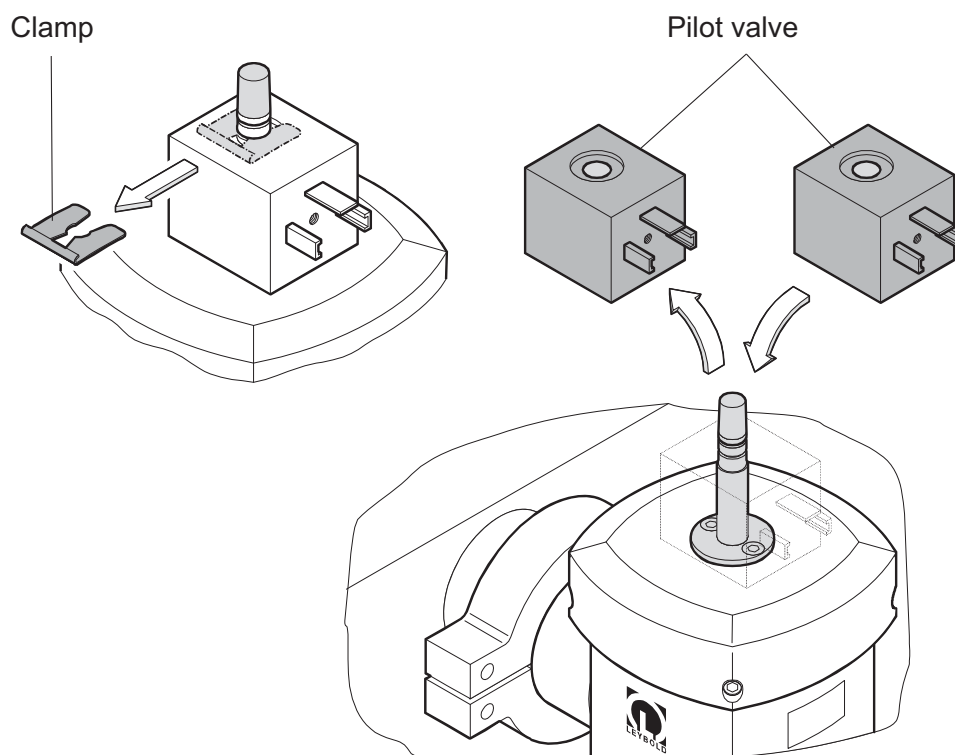


Figure 6-5

NOTICE	
	Wrong line voltage Incorrect voltages can destroy the product. Make sure the nominal voltage of the pilot valve corresponds to the local line voltage ratings.

4. Perform the above steps in reverse order to install the product.

Replacing the Seals of the Valve Plate and Housing

1. Dismount the safety valve, see «Dismount the valve», page 30.
2. Unscrew the setscrews.

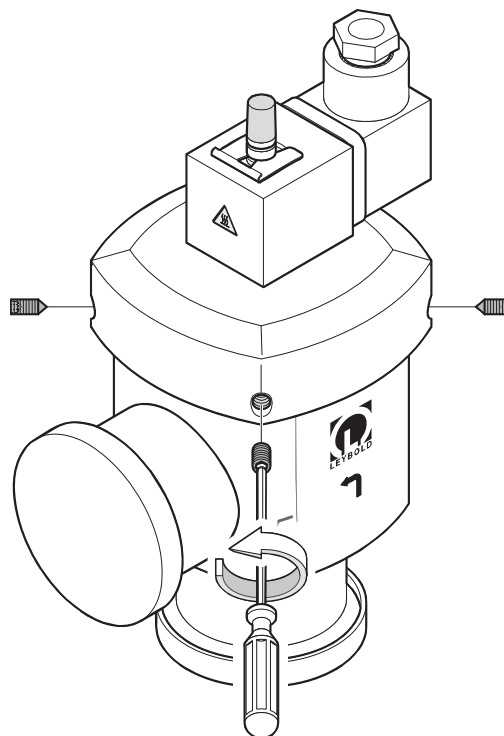


Figure 6-6

3. Turn the safety valve 180° upside down and remove the housing.

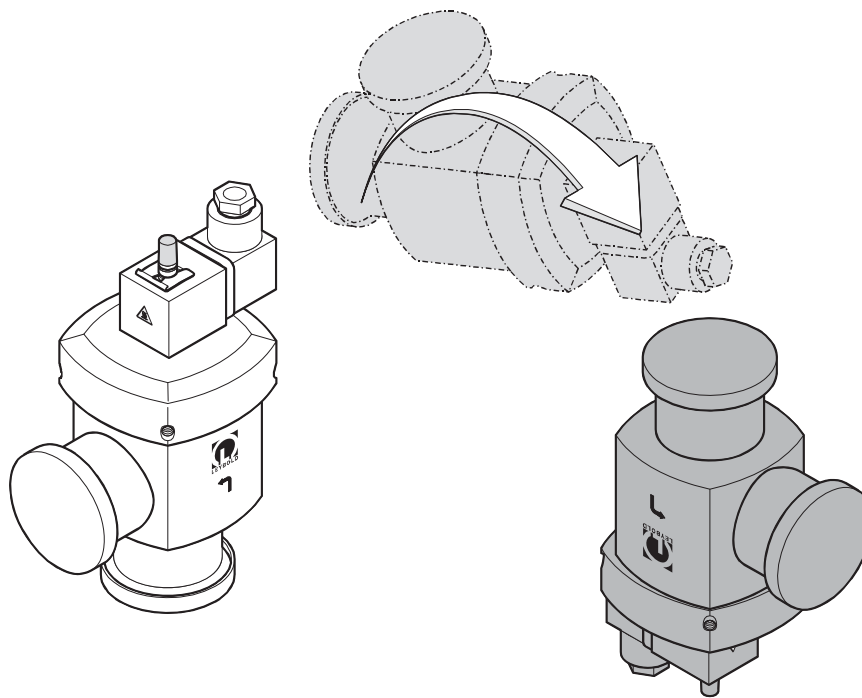


Figure 6-7

4. Carefully remove the seals of the valve plate and housing. Be careful not to damage the sealing surfaces.

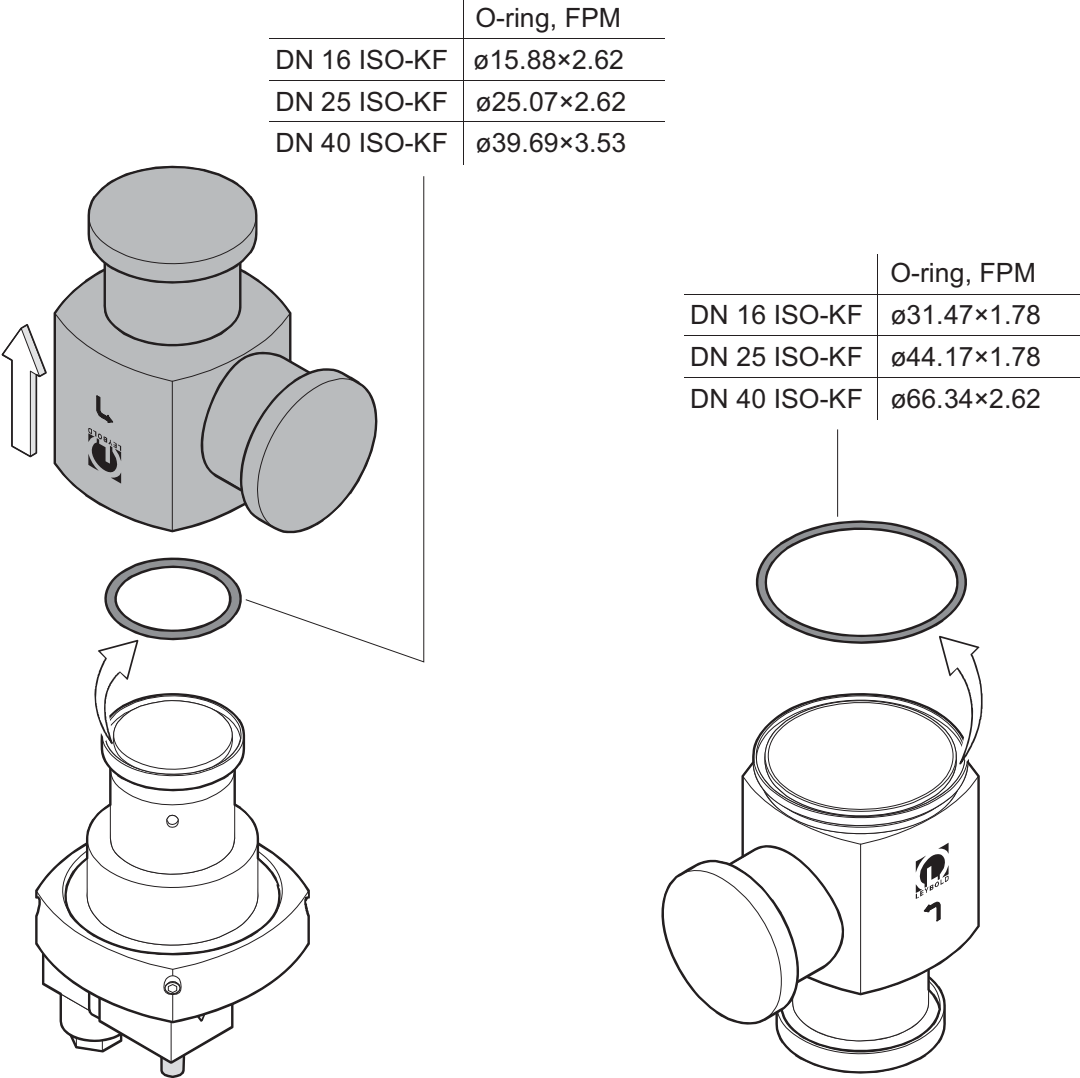


Figure 6-8



When reassembling the safety valve, be careful to insert the O-rings level into the grooves without twisting them.

	 WARNING
	Cleaning agents Cleaning agents can be detrimental to health and environment. Adhere to the relevant regulations and take the necessary precautions when handling cleaning agents and disposing of them. Consider possible reactions with the product materials.

5. Clean the valve plate, guiding sleeve, inside of the housing, and sealing surfaces.
For information about the spare parts see chapter «11 Spare parts and accessories».
 - Carefully clean the parts with a grease solving, non-scouring cleaner.
 - After cleaning, the parts should preferably be rinsed with alcohol and subsequently heated to $\approx 50\text{ }^{\circ}\text{C}$ in an oven or with an industrial blower.
 - Carefully clean the sealing surfaces with a lint-free cloth moistened with alcohol. Allow them to dry.
 - Wipe the seals with a lint-free cloth slightly moistened with vacuum oil.

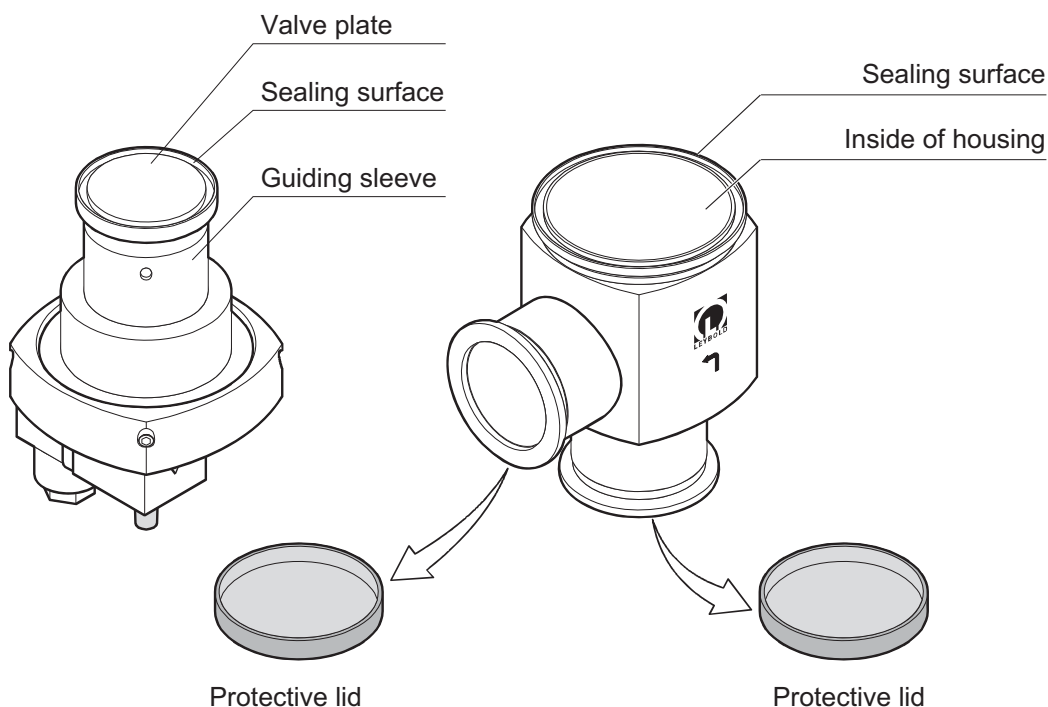


Figure 6-9

6. Reassemble the product by performing the above steps in reverse order.

Disassembling the safety valve

1. Dismount the safety valve, see «Dismount the valve», page 30.
2. Deinstalling the filter, pilot valve and pole tube.

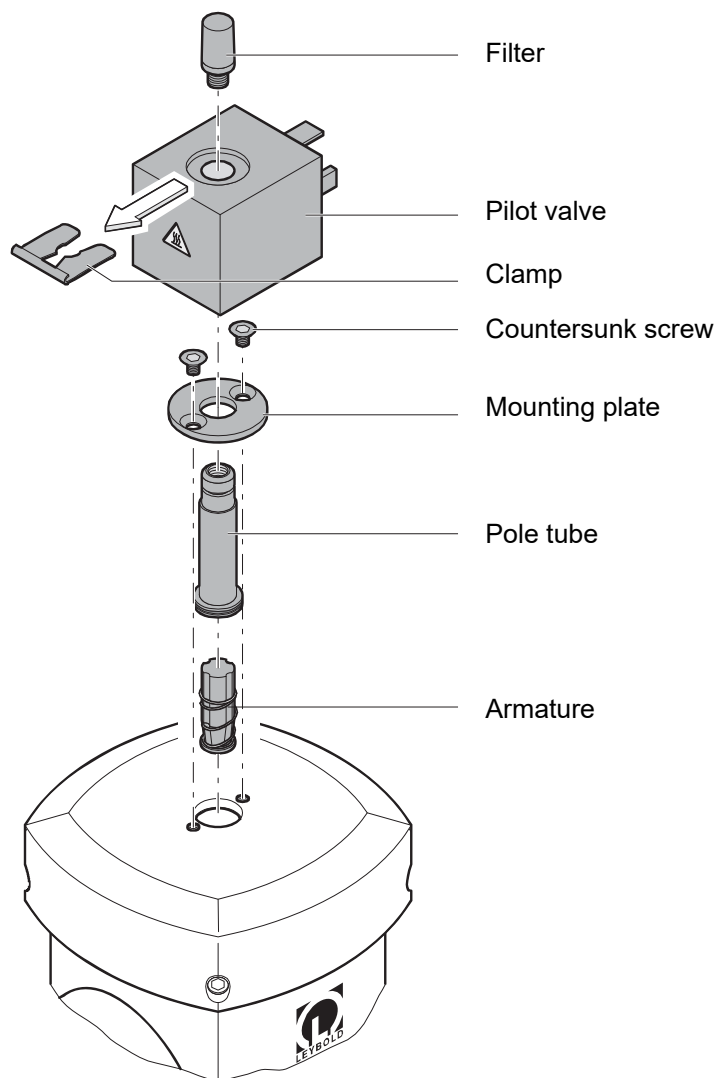


Figure 6-10

3. Disassembling the interior parts.

• **DN 16 ISO-KF:**

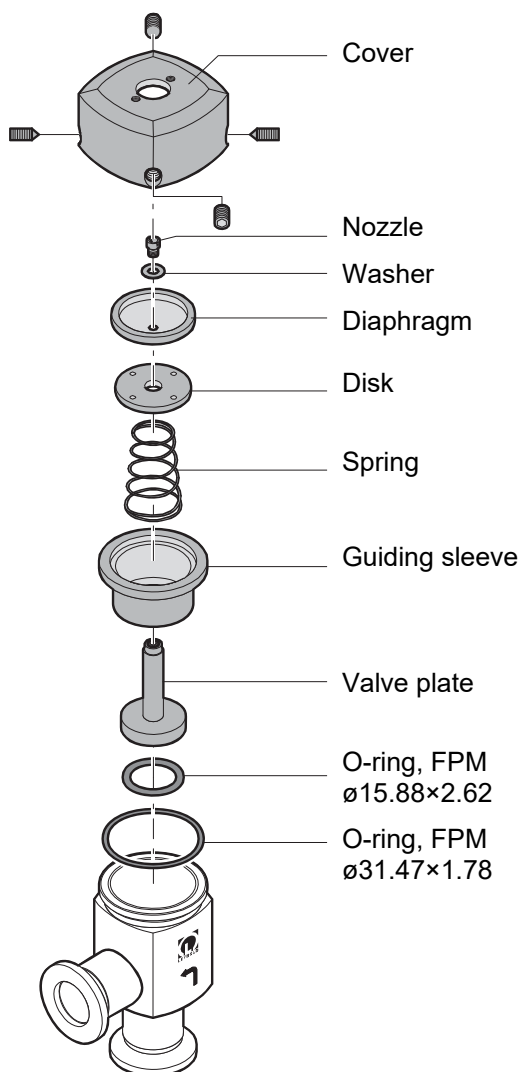


Figure 6-11

• DN 25 ISO-KF:

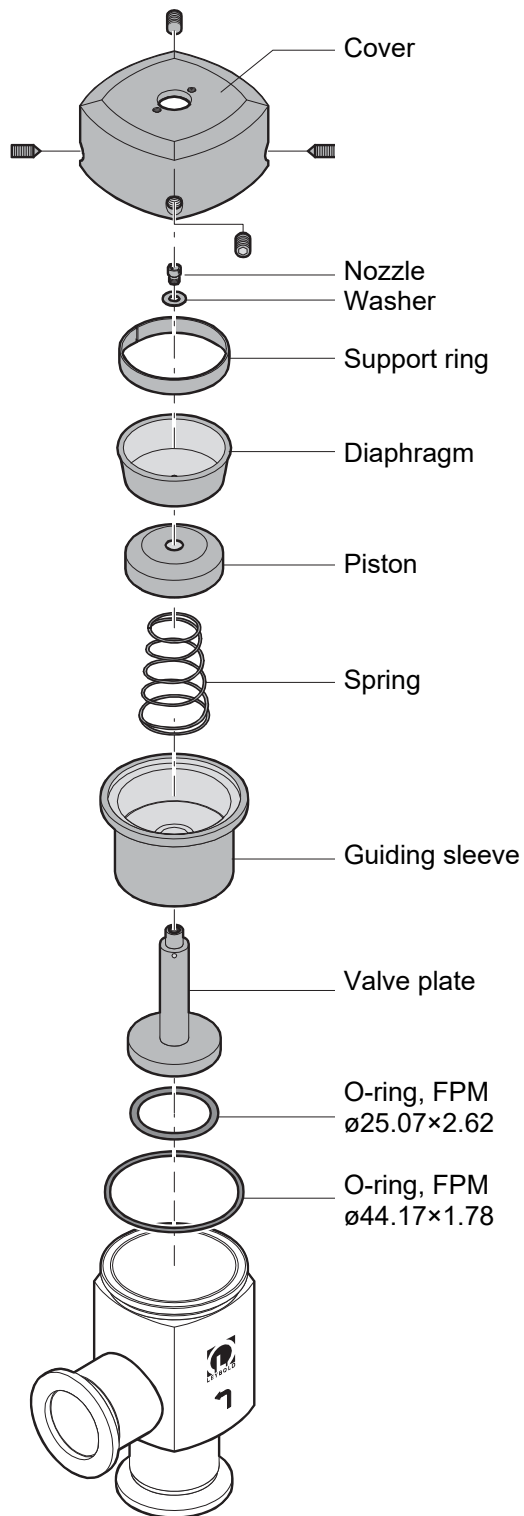


Figure 6-12

• DN 40 ISO-KF:

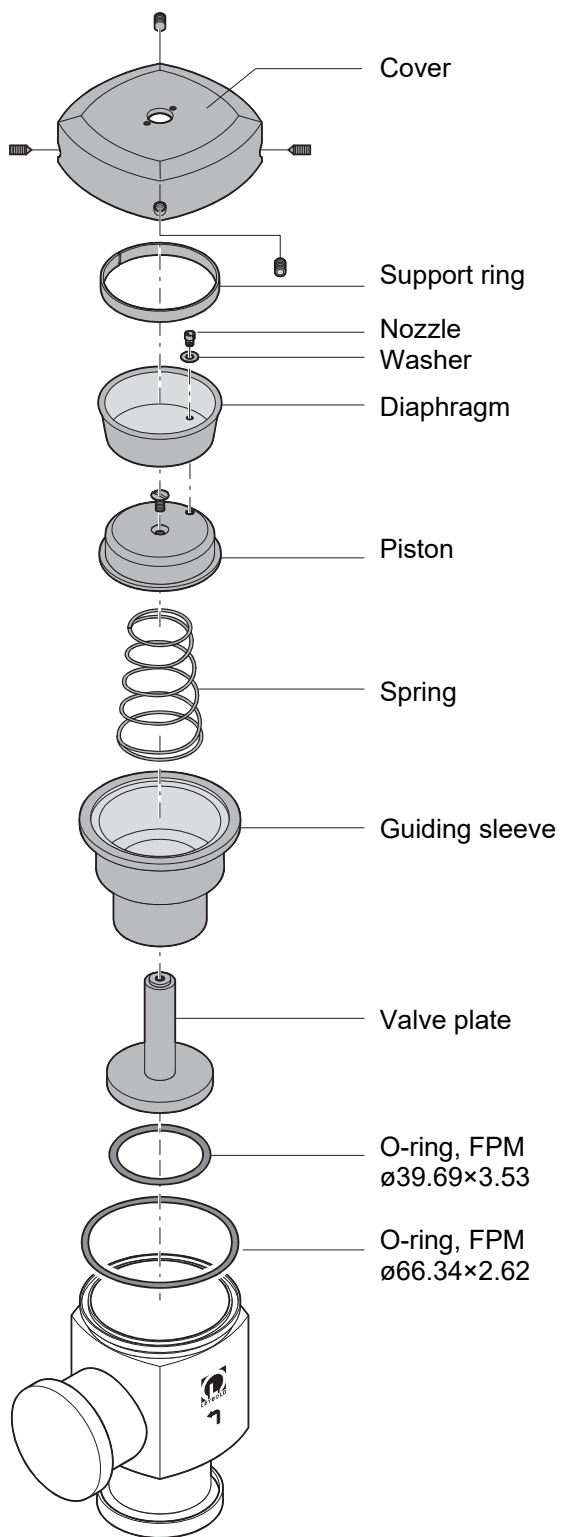


Figure 6-13

	 WARNING Cleaning agents Cleaning agents can be detrimental to health and environment. Adhere to the relevant regulations and take the necessary precautions when handling cleaning agents and disposing of them. Consider possible reactions with the product materials.
---	---

4. **Cleaning the safety valve.**

For information about the spare parts see chapter «11 Spare parts and accessories».

- Clean the parts (except the pilot valve) in an ultrasonic bath or with a grease solving, non-scouring cleaner.
- After cleaning, the parts should preferably be rinsed with alcohol and subsequently heated to $\approx 50^{\circ}\text{C}$ in an oven or with an industrial blower.
- Carefully clean the sealing surfaces with a lint-free cloth moistened with alcohol. Allow them to dry.
- Visually inspect the parts and replace them if necessary.

5. Reassembling the safety valve.

• Reassembling the DN 16 ISO-KF:

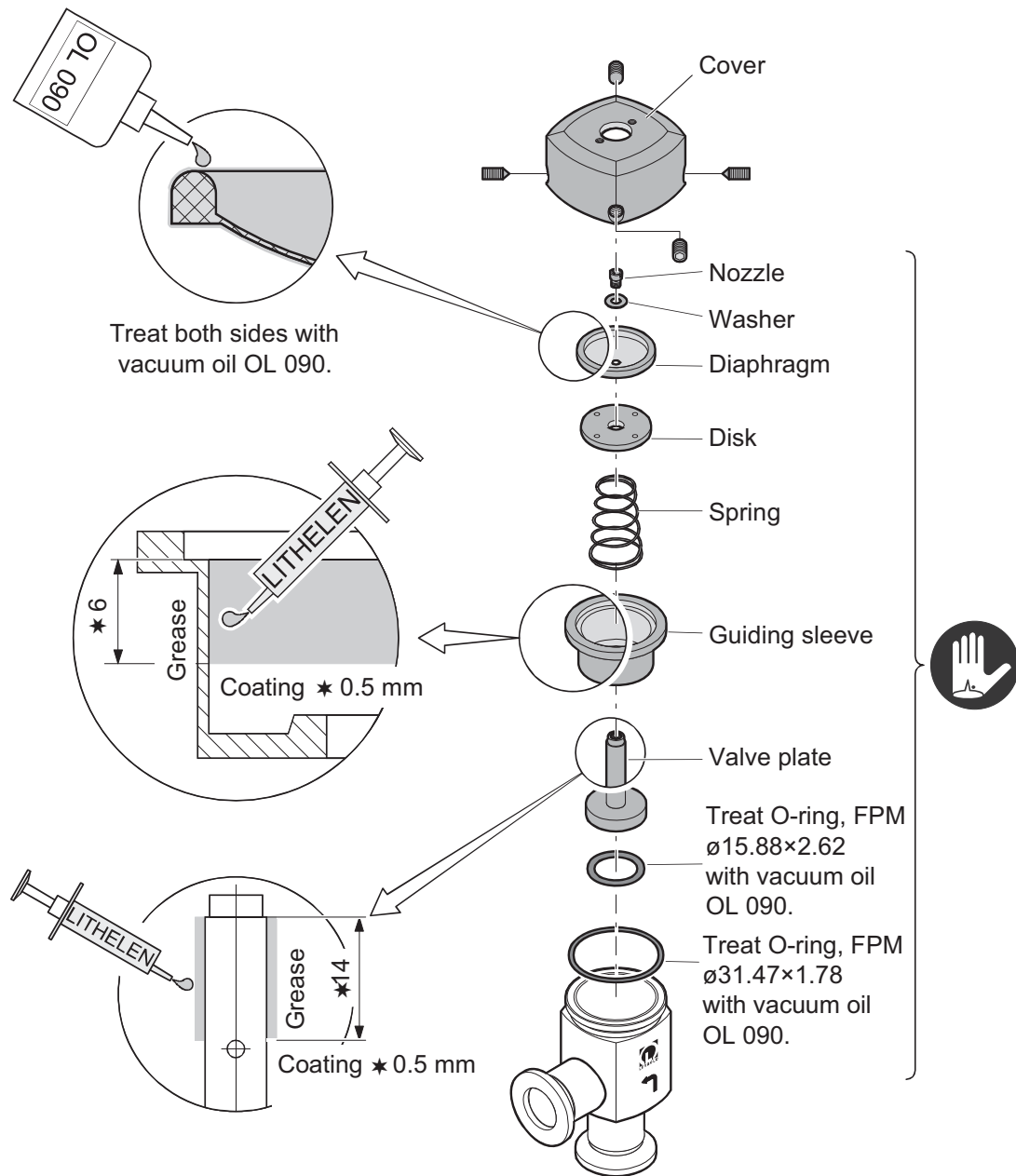


Figure 6-14



When reassembling the product, be careful to insert the O-rings level into the grooves without twisting them.

• Reassembling the DN 25 ISO-KF:

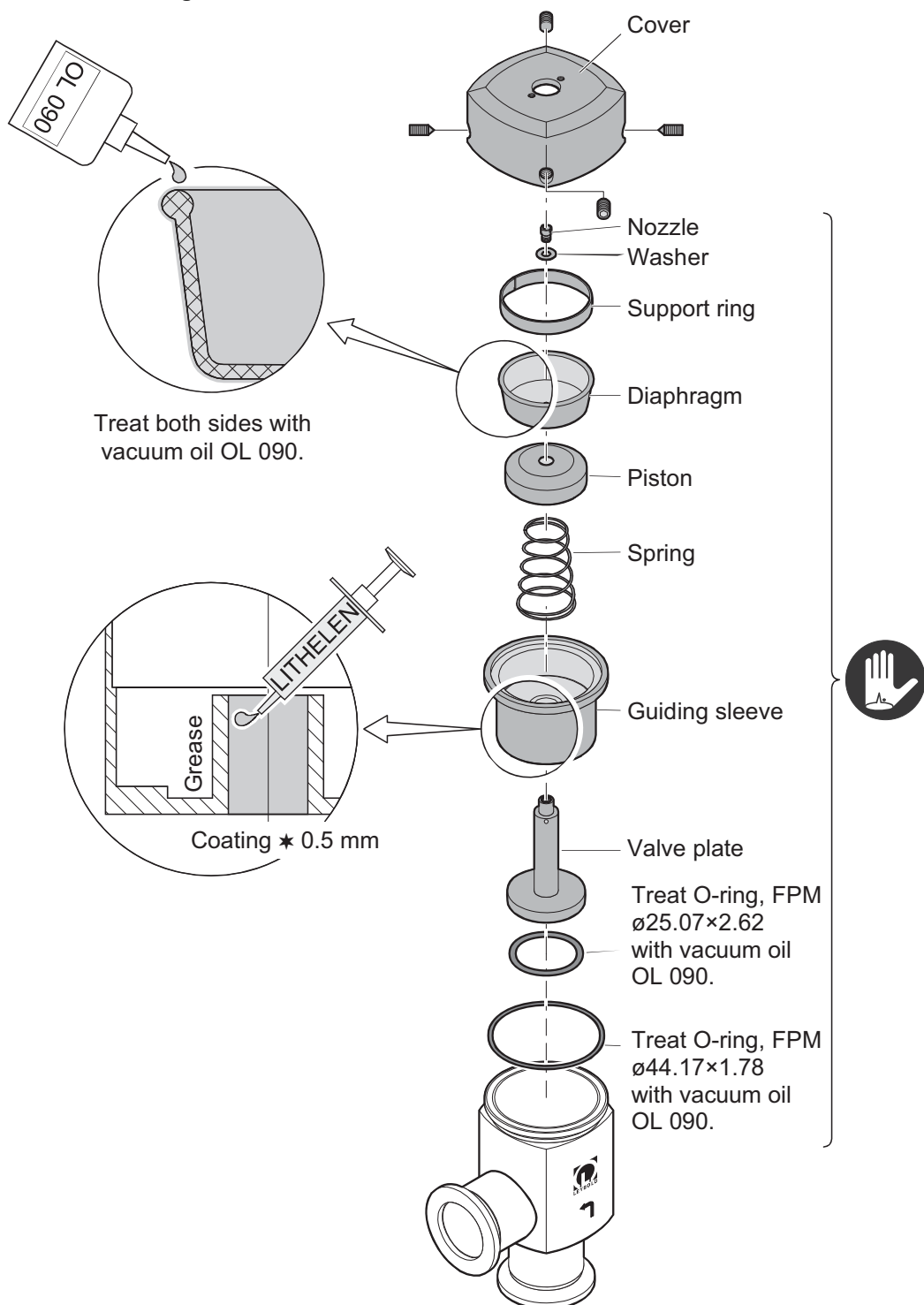


Figure 6-15



When reassembling the product, be careful to insert the O-rings level into the grooves without twisting them.

• Reassembling the DN 40 ISO-KF:

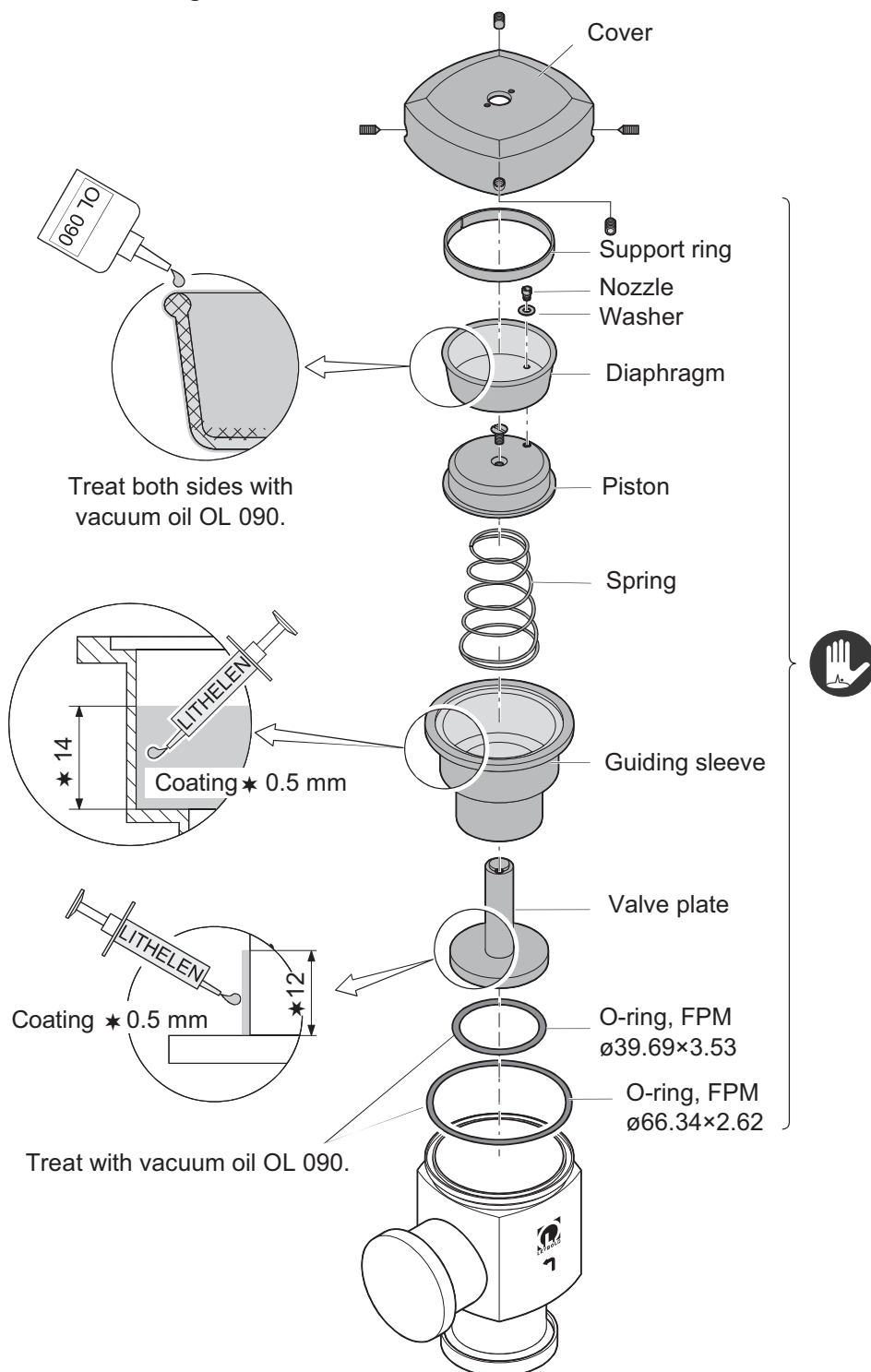


Figure 6-16



When reassembling the product, be careful to insert the O-rings level into the grooves without twisting them.

Reinstalling the filter, pilot valve, and pole tube

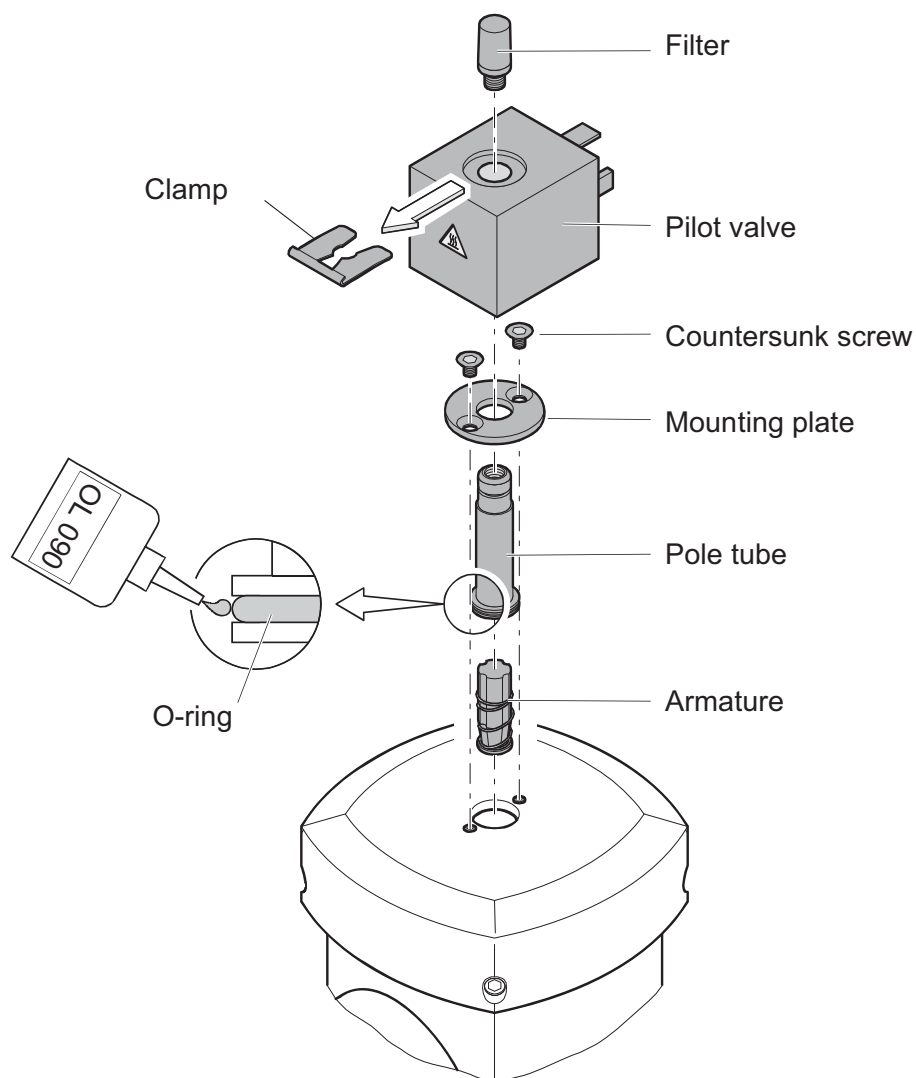


Figure 6-17



Before installation, treat the visible surface of the O-rings with vacuum oil OL 090.

7 Repairs

Repairs may only be carried out by qualified personnel. We recommend having this work carried out by one of our service centers.

You will find the addresses of the service centers on the backside of the document. When contacting us, please always specify the fabrication number of the valve; see chapter «1.2 Identification of product».

8 Dismounting and Storage

	⚠ WARNING Unqualified personnel Inappropriate handling may cause serious injury or property damage. Only qualified personnel are allowed to carry out the described work.
	⚠ CAUTION Hot surfaces Risk of burning when touching hot surfaces. Touch hot surfaces only if the valve has cooled down.
	NOTICE Contamination Product may get contaminated. Always wear cleanroom gloves when handling the product.

8.1 Dismounting

	⚠ WARNING Contaminated parts Contaminated parts can be detrimental to health and environment. Before beginning to work, find out whether any parts are contaminated. Adhere to the relevant regulations and take the necessary precautions when handling contaminated parts.
---	---

1. Vent the vacuum system and wait until the valve has cooled down to <55°C.
2. Unfasten the locking screw and unplug the cable socket.
3. Remove the small flange fitting and put the protective lid in place.



For detailed information about how to dismount the valve see chapter «6 Maintenance».

8.2 Storage

	NOTICE
	Wrong storage Inappropriate temperatures and humidity may cause damage to the product. Valve must be stored at: – relative humidity between 10% and 70% – temperature between 10 °C and +50 °C – non-condensing environment

1. Clean / decontaminate valve.
2. Cover all valve openings with protective covers or foils.

9 Packaging and Transport

	⚠ WARNING Unqualified personnel Inappropriate handling may cause serious injury or property damage. Only qualified personnel are allowed to carry out the described work.
	⚠ WARNING Harmful substances Risk of injury in case of contact with harmful substances. Remove harmful substances (e. g. toxic, caustic or microbiological ones) from product before you return the product to Leybold.
	NOTICE Wrong handling during transport Valve and attached parts may get damaged. Use suitable means to transport the valve. Connectors, connecting cables, position indicators and pilot valves must not be used to lift the valve.
	NOTICE Inappropriate packaging Product may get damaged if inappropriate packaging material is used. Always use the original packaging material and handle product with care.



When returning products, the completed form «12.2 Declaration of chemical contamination» must be enclosed to the shipment.

9.1 Packaging

	NOTICE
	Valve in open position Valve mechanism may get damaged if valve gate is in open position. Make sure that the valve is closed.

1. Cover all valve openings with protective covers or foils.
2. Pack valve appropriately, by using the original packaging material.



Leybold disclaims any liability for damages resulting from inappropriate packaging.

9.2 Transport

	NOTICE
	Inappropriate packaging Product may get damaged if inappropriate packaging material is used. Always use the original packaging material and handle product with care.



Leybold disclaims any liability for damages resulting from inappropriate packaging.

10 Disposal

	 WARNING
	Harmful substances Environmental pollution. Discard products and parts according to the local regulations.

Separating the components

After disassembling the product, separate its components according to the following criteria:

- **Contaminated components**
Contaminated components (radioactive, toxic, caustic, microbiological hazard etc.) must be decontaminated in accordance with the relevant national regulations, separated according to their materials, and disposed of.
- **Other components**
Such components must be separated according to their materials and recycled.

11 Spare parts and accessories



NOTICE

Non-original spare parts

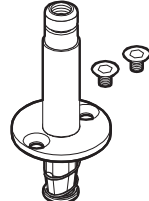
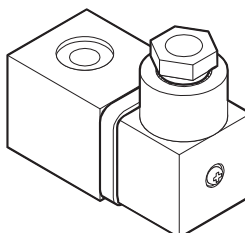
Non-original spare parts may cause damage to the product.

Use original spare parts from Leybold only.

When ordering spare parts or accessories, always indicate:

- all information on the product nameplate
- description and ordering number according to the spare parts or accessories list.

Spare parts

Description		Part No.
Filter, 5 pieces		215 701
Pole tube, cpl. , comprising: 2x Countersunk screws 1x Mounting plate 1x Pole tube with O-ring 1x Armature with spring		215 700
Pilot valve with cable socket and clamp 200 ... 230 VAC 100 ... 115 VAC 24 VDC		E215240 E215241 E215242
Seal kit for DN 16 ISO-KF , comprising: Diaphragm High vacuum grease, 50 g (LITHELEN) O-ring, FPM 75 $\varnothing 14 \times 1.78^3$ $\varnothing 15.88 \times 2.62$ $\varnothing 16 \times 1.25^3$ $\varnothing 17 \times 3^3$ $\varnothing 31.47 \times 1.$		E10502

Description	Part No.
Seal kit for DN 25 ISO-KF, comprising: Diaphragm High vacuum grease, 50 g (LITHELEN) O-ring, FPM 75 $\varnothing 14 \times 1.78$ ³ $\varnothing 16 \times 1.25$ ³ $\varnothing 25.07 \times 2.62$ $\varnothing 30 \times 3$ ³ $\varnothing 44.17 \times 1.78$	E10504
Seal kit for DN 40 ISO-KF, comprising: Diaphragm High vacuum grease t, 50 g (LITHELEN) O-ring, FPM 75 $\varnothing 14 \times 1.78$ ³ $\varnothing 16 \times 1.25$ ³ $\varnothing 39.69 \times 3.53$ $\varnothing 45 \times 3$ ³ $\varnothing 66.34 \times 2.62$	E10505

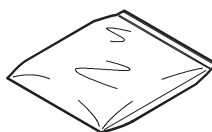
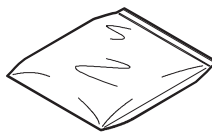


Table 11-1

³ Not needed for this valve.

Accessory

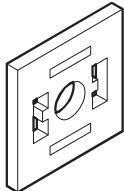
Description		Part No
Interference suppression kit, for 24 VDC		104 96

Table 11-2



Pilot valves with voltage >50 V have an integrated protective conductor in the plug additionally.

Consumables

Description		Part No.
OL 090, 10ml		210 505

Table 11-3

12 Appendix

12.1 Safety information on contamination

Aim and purpose

Each entrepreneur (operating company) is responsible for the health and safety of its employees. The responsibility extends to external personnel carrying out repairs on the site of the operating company and to personnel of contractors.

The enclosed declaration shall inform contractors about contamination of compressors, vacuum pumps and vacuum components returned for repair. Due to this information, the contractor is capable of taking the necessary safety precautions when carrying out repairs.



The same regulations apply for **on-site repairs**.

Preparation for dispatch

Before dispatching the product the operating company must fill out the declaration as per chapter «12.2 Declaration of chemical contamination» and enclose it to the shipping documents. The shipping instructions stated in the relevant user manual must be observed.

For example:

- Drain all service fluids
- Remove filter elements, where applicable
- Close all openings airtight
- Pack products appropriately
- Dispatch products in suitable transport containers



Attach declaration on contamination to the **outside** of the transport container.

12.2 Declaration of chemical contamination

Declaration of Contamination of Compressors, Vacuum Pumps and Components

The repair and / or servicing of compressors, vacuum pumps and components will be carried out only if a correctly completed declaration has been submitted. Non-completion will result in delay. The manufacturer can refuse to accept any equipment without a declaration.

A separate declaration has to be completed for each single component.

This declaration may be completed and signed only by authorized and qualified staff.

Customer/Dep./Institute : _____ Address : _____ _____ Person to contact: _____ Phone : _____ Fax: _____ End user: _____	Reason for return: ☒ applicable please mark Repair: ☐ chargeable ☐ warranty Exchange: ☐ chargeable ☐ warranty ☐ Exchange already arranged / received Return only: ☐ rent ☐ loan ☐ for credit Calibration: ☐ DKD ☐ Factory-calibr. ☐ Quality test certificate DIN 55350-18-4.2.1
--	--

A. Description of the Leybold product: Material description : _____ Catalog number: _____ Serial number: _____ Type of oil (ForeVacuum-Pumps) : _____	Failure description: _____ Additional parts: _____ Application-Tool: _____ Application- Process: _____
--	---

B. Condition of the equipment <table style="width: 100%;"> <tr> <th style="width: 30%;"></th> <th style="width: 10%; text-align: center;">No¹⁾</th> <th style="width: 10%; text-align: center;">Yes</th> <th style="width: 10%; text-align: center;">No</th> </tr> <tr> <td>1. Has the equipment been used</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>2. Drained (Product/service fluid)</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>3. All openings sealed airtight</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>4. Purged</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> </table> If yes, which cleaning agent _____ and which method of cleaning _____ ¹⁾ If answered with "No", go to D.		No ¹⁾	Yes	No	1. Has the equipment been used	☐	☐	☐	2. Drained (Product/service fluid)	☐	☐	☐	3. All openings sealed airtight	☐	☐	☐	4. Purged	☐	☐	☐	Contamination : <table style="width: 100%;"> <tr> <th style="width: 30%;"></th> <th style="width: 10%; text-align: center;">No¹⁾</th> <th style="width: 10%; text-align: center;">Yes</th> </tr> <tr> <td>toxic</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>corrosive</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>flammable</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>explosive ²⁾</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>radioactive ²⁾</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>microbiological ²⁾</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>other harmful substances</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> </table>		No ¹⁾	Yes	toxic	☐	☐	corrosive	☐	☐	flammable	☐	☐	explosive ²⁾	☐	☐	radioactive ²⁾	☐	☐	microbiological ²⁾	☐	☐	other harmful substances	☐	☐
	No ¹⁾	Yes	No																																										
1. Has the equipment been used	☐	☐	☐																																										
2. Drained (Product/service fluid)	☐	☐	☐																																										
3. All openings sealed airtight	☐	☐	☐																																										
4. Purged	☐	☐	☐																																										
	No ¹⁾	Yes																																											
toxic	☐	☐																																											
corrosive	☐	☐																																											
flammable	☐	☐																																											
explosive ²⁾	☐	☐																																											
radioactive ²⁾	☐	☐																																											
microbiological ²⁾	☐	☐																																											
other harmful substances	☐	☐																																											

C. Description of processed substances (Please fill in absolutely)
 1. What substances have come into contact with the equipment ?
 Trade name and / or chemical term of service fluids and substances processed, properties of the substances
 According to safety data sheet (e.g. toxic, inflammable, corrosive, radioactive)

X	Tradename:	Chemical name:
a)		
b)		
c)		
d)		

	No	Yes
2. Are these substances harmful ?	☐	☐
3. Dangerous decomposition products when heated ?	☐	☐

 If yes, which ? _____

²⁾ Components contaminated by microbiological, explosive or radioactive products/substances will not be accepted without written evidence of decontamination.

D. Legally binding declaration

I / we hereby declare that the information supplied on this form is accurate and sufficient to judge any contamination level.

Name of authorized person (block letters) : _____ Date _____	signature of authorized person _____	firm stamp
---	--------------------------------------	---

12.3 Declaration of incorporation



EC Declaration of Incorporation

(Translation of original Declaration of Incorporation)

The manufacturer: Leybold GmbH
Bonner Strasse 498
D-50968 Köln
Germany

herewith declares that the following product:

Product designation: Safety valve

Type designation: SECUVAC

Part number: 215015, 215016, 215017, 215065, 215066, 215067, 215135,
215136, 215137, 215205, 215206, 215207, 215225, 215226,
215227

complies with the following fundamental requirements of the **Machinery Directive (2006/42/EC)**:
Annex I, Paragraph 1.1.2, 1.1.3, 1.1.5, 1.3.1, 1.3.2, 1.3.4, 1.5.1, 1.5.3, 1.5.4

The safety objectives of the Low Voltage Directive 2014/35/EU were complied with in accordance with
Appendix 1 No. 1.5.1 of Machinery Directive 2006/42/EC.

The incomplete machine may only be put into operation after it has been determined that the machine into
which the incomplete machine shall be installed complies with the regulations laid down in the EC
Machinery Directive (2006/42/EC).

The manufacturer commits himself to make the special documentation on the incomplete machine
electronically available to national authorities upon request.

The special engineering documentation belonging to the machine was compiled in accordance with
Annex VII Part B.

Documentation officer: Herbert Etges
T: +49(0)221 347 0
F: +49(0)221 347 1250
documentation@leybold.com

Cologne, October 24, 2016

Cologne, October 24, 2016


ppa. Martin Tollner
Head of Product Lines


ppa. Dr. Monika Mattern-Klosson
Head of Quality & Business Process Management



300503443_000_A1

Čeština (024)	Návod k použití přiložený k tomuto výrobku je standardně k dispozici v němčině a angličtině. Potřebujete-li návod k použití ve svém jazyce (v rámci EU), obraťte se prosím na některou z poboček Leybold.
Dansk (016)	Den medfølgende brugsvejledning til deres produkt fås på to sprog, engelsk og tysk. Hvis en brugsvejledning på eget europæiske sprog ønskes, bedes man tage kontakt til ens Leybold repræsentant.
Deutsch (001)	Die diesem Produkt beigelegte Gebrauchsanleitung liegt standardmäßig in den Sprachen Deutsch und Englisch vor. Für eine Gebrauchsanleitung in Ihrer Landessprache (EU) wenden Sie sich an die Leybold-Niederlassung.
Eesti (028)	Selle tootega kaasnev kasutusjuhend on standardselt saksa ja inglise keeles. Kasutusjuhendi saamiseks teie riigikeeles (EL) pöörduge Leybold-filiaali poole.
Ελληνικά (017)	Οι οδηγίες χρήσης που συνοδεύουν αυτό το προϊόν είναι διαθέσιμες στα γερμανικά και στα αγγλικά. Για οδηγίες χρήσης στη γλώσσα σας (ΕΕ) απευθυνθείτε σε υποκατάστημα της Leybold.
English (002)	The instruction manual supplied with your product is available in two different standard European languages, English and German. If you wish to have a manual in your own European language, please contact your Leybold representative.
Español (006)	Las instrucciones de operación, adjuntas al presente producto, son en alemán e inglés. Para obtener las instrucciones en su idioma nacional (EU), póngase en contacto con su representante de Leybold.
Français (003)	Le mode d'emploi fourni avec ce produit est rédigé en anglais et en allemand. N'hésitez pas à contacter votre agence Leybold si vous avez besoin du mode d'emploi traduit dans la langue de votre pays (union européenne).
Hrvatski (029)	Uz ovaj proizvod standardno su priložena uputstva za upotrebu na njemačkom i engleskom jeziku. Za uputstva na jeziku Vaše zemlje (u EU), obratite se poslovnici Leybold-a.
Italiano (004)	Le istruzioni per l'uso allegate al presente prodotto sono disponibili di norma in lingua tedesca e inglese. Per le istruzioni per l'uso nella propria lingua (UE) si prega di rivolgersi alla filiale Leybold.
Íslenska (034)	Leiðarvísirinn sem fylgir vörinni er gefinn út á tveimur tungumálum, þýsku og ensku. Hafið samband við næsta útibú Leybold varðandi leiðarvísi á tungumáli ykkar (ESB).
Latviešu (030)	Kopā ar jūsu produktu piegādātā lietošanas instrukcija ir pieejama divās dažādās standart Eiropas valodās, angļu un vācu. Ja jūs vēlaties saņemt instrukciju citā Eiropas valodā, sazinieties ar savu Leybold pārstāvi.
Lietuvių (031)	Prie šio produkto pridedamos naudotojo instrukcijos paprastai pateikiamos dviemomis kalbomis - vokiečių ir anglų. Dėl instrukcijos jūsų valstybine kalba (ES), kreipkitės į Leybold atstovą.
Magyar (033)	A termékhez mellékelte használati útmutató angol és német nyelvű. Ha a használati útmutatót a saját nyelvén (EU) szeretné megkapni, akkor kérjük forduljon az egyik Leybold képviselőhez.
Nederlands (010)	De bij dit product bijgevoegde gebruiksaanwijzing is standaard in het Duits en Engels beschikbaar. Voor een gebruiksaanwijzing in uw taal (EU), neem dan contact op met het Leybold-filiaal.
Norsk (020)	Bruksanvisningen som medfølger dette produktet finnes som standard i språkversjonene engelsk og tysk. Ønsker du en bruksanvisning på ditt nasjonale språk (innen EU), henvender du deg til en Leybold-forhandler.
Polski (022)	Instrukcja obsługi załączona do tego produktu dostępna jest w języku niemieckim i angielskim. Po instrukcję obsługi w innym języku urzędowym Unii Europejskiej proszę zgłosić się do siedziby Leybold.
Português (005)	As Instruções de Uso anexas a este produto são fornecidas normalmente nas línguas alemã e inglesa. Para Instruções de Uso na sua língua (UE), queira dirigir-se à sucursal de Leybold.
Română (013)	Manualul de utilizare anexat acestui produs este disponibil în mod standard în limbile germană și engleză. Pentru a obține un manual de utilizare în limba țării dumneavoastră (EU), vă rugăm să vă adresați unei reprezentanțe Leybold.
Slovenčina (023)	Návod na používanie priložený k tomuto produktu je štandardne k dispozícii v nemeckom a anglickom jazyku. Ak potrebujete návod na používanie v jazyku svojej krajiny (EÚ), obráťte sa na pobočku Leybold.
Slovenščina (032)	Priložena navodila so na voljo v dveh različnih evropskih jezikih, angleščini in nemščini. Če želite navodila za uporabo v svojem jeziku (EU), se obrnite na predstavnika Leybold.
Suomi (019)	Tähän tuotteenseen liittyvä käyttöopas on saksan- ja englanninkielellä. Mikäli haluatte käyttöoppaan maanne kielellä (EU), voitte käätyä vastaavan Leybold-toimipisteen puoleen.
Svenska (009)	Den användarmanual som följer med denna produkt finns i standardutförandet på tyska och engelska. Vänd dig till en Leybold-återförsäljare för en användarmanual på ditt språk (gäller EU-språk).
Türkçe (018)	Bu ürünün ekinde bulunan kullanım kılavuzu, standart olarak Almanca ve İngilizce dillerinde bulunmaktadır. Kendi dilinizdeki (AB) kullanım kılavuzu için bir Leybold-Şubesine başvurun.
Български (027)	Приложеният към този продукт указания за употреба в общия случай са налични на немски и на английски език. За указания на Вашия език (ЕС) можете да се обърнете към представителството на Leybold.
Русский (007)	В стандартную комплектацию изделия входит руководство по эксплуатации на немецком и английском языках. За руководством по эксплуатации на языке Вашей страны (ЕС), пожалуйста, обращайтесь в представительство Leybold.

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