

LEYCON

User manual 17200295_002_C0/2016

High Vacuum Angle Valve BAV DN 16–50 ISO-KF

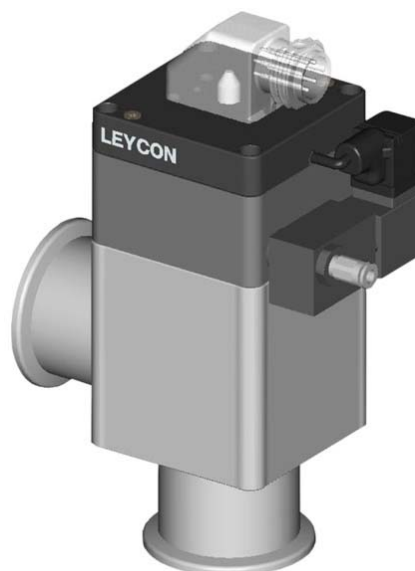
- with pneumatic actuator P
single acting with closing spring (NC)
- with electropneumatic actuator EP
single acting with closing spring (NC)
- with electropneumatic actuator EP
single acting with opening spring (NO)
(DN 16 - 40 ISO-KF, version AL)
- aluminum version AL
- stainless steel version VA

High Vacuum Inline Valve BIV DN 16–50 ISO-KF

- with pneumatic actuator P
single acting with closing spring (NC)
- with electropneumatic actuator EP
single acting with closing spring (NC)
- aluminum version AL
- stainless steel version VA

Part numbers

215130	215339 – 215345	215359 – 215361	215367 – 215369	215391 – 215393
215314 – 215337	215347 – 215357	215363 – 215365	215371 – 215373	215394V01 – 215395V01



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.

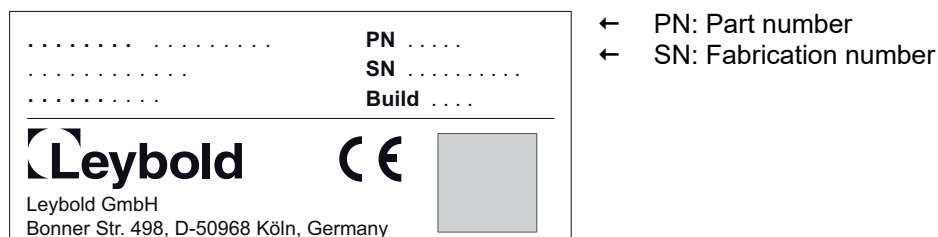


Figure 1-1



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

1.3 Validity of the user manual



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

List of part numbers

Type	Part number		Type	Part number
BAV . . P AL			BAV . . P VA	
ISO KF 16	215315		ISO KF 16	215335
ISO KF 25	215316		ISO KF 25	215336
ISO KF 40	215317		ISO KF 40	215337
ISO KF 50	215318		ISO KF 50	-
BAV . . EP AL 24 VAC			BAV . . EP VA 24 VAC	
ISO KF 16	215319		ISO KF 16	215339
ISO KF 25	215320		ISO KF 25	215340
ISO KF 40	215321		ISO KF 40	215341
ISO KF 50	215322		ISO KF 50	215342
BAV . . EP AL 24 VDC			BAV . . EP VA 24 VDC	
ISO KF 16	215323		ISO KF 16	215347
ISO KF 25	215324		ISO KF 25	215348
ISO KF 40	215325		ISO KF 40	215349
ISO KF 50	215326		ISO KF 50	215350
BAV . . EP AL 115 VAC			BAV . . EP VA 115 VAC	
ISO KF 16	215327		ISO KF 16	215351
ISO KF 25	215328		ISO KF 25	215352
ISO KF 40	215329		ISO KF 40	215353
ISO KF 50	215330		ISO KF 50	215354
BAV . . EP AL 230 VAC			BAV . . EP VA 230 VAC	
ISO KF 16	215331		ISO KF 16	215343
ISO KF 25	215332		ISO KF 25	215344
ISO KF 40	215333		ISO KF 40	215345
ISO KF 50	215334		ISO KF 50	-
BAV . . EP AL 24 VDC ¹				
ISO KF 16	215395V01			
ISO KF 25	215394V01			
ISO KF 40	215130			
ISO KF 50	-			

¹ currentless open (NO model)

Type	Part number		Type	Part number
BIV . . P VA			BIV . . EP VA 24 VAC	
ISO KF 16	215355		ISO KF 16	215359
ISO KF 25	215356		ISO KF 25	215360
ISO KF 40	215357		ISO KF 40	215361
ISO KF 50	-		ISO KF 50	-
BIV . . EP VA 24 VDC			BIV . . EP AL 24 VDC	
ISO KF 16	215367		ISO KF 16	215314
ISO KF 25	215368		ISO KF 25	215391
ISO KF 40	215369		ISO KF 40	215392
ISO KF 50	-		ISO KF 50	215393
BIV . . EP VA 115 VAC			BIV . . EP VA 230 VAC	
ISO KF 16	215371		ISO KF 16	215363
ISO KF 25	215372		ISO KF 25	215364
ISO KF 40	215373		ISO KF 40	215365
ISO KF 50	--		ISO KF 50	-

Table 1-1



Descriptions and illustrations within this user manual refer to the currentless closed valves (NC).

In large parts this is valid for the currentless open valves (NO) as well. Differences are identified and highlighted, if existing.

1.4 Technical data

Standard valves see chapter «1.3 Validity of the user manual».

For special valves which are not listed in chapter «1.3 Validity of the user manual» the product data sheet is applicable in addition.

Material

	Material	
Item	Aluminum version	Stainless steel version
Body	Aluminium (AlMgSi)	Stainless steel (AISI 304)
Actuator	Aluminium	Aluminium
Valve plate	AISI 316L	AISI 316L
Bellows	AISI 316L (1.4404, 1.4435) AISI 316 Ti (1.4571)	AISI 316L (1.4404) AISI 316 Ti (1.4571)
Bonnet seal, plate seal	Viton®	Viton®
Cover of position indicator	Plastic	Plastic

Table 1-2

General technical data

	Value / description			
Type / Item	DN 16	DN 25	DN 40	DN 50
Leak rate [mbar l/s]	$\leq 1 \cdot 10^{-9}$			
Pressure range: valve open [mbar], absolute	$1 \cdot 10^{-8}$ to 5000			
Differential pressure on the plate [bar]				
In opening direction ²	≤ 2			
In closing direction ²	≤ 5			
Differential pressure at opening [bar]	≤ 2 in either direction			

² see «Figure 3-1»

	Value / description			
Type / Item	DN 16	DN 25	DN 40	DN 50
Switching times [ms]				
Opening time (4 bar pneumatic pressure)	< 100	< 120	< 250	< 400
Closing time (8 bar pneumatic pressure)	< 100	< 210	< 550	< 650
Weight [kg]				
Angle valve: aluminum	0.24	0.36	0.92	1.34
Angle valve: stainless steel	0.3	0.47	1.08	1.52
Inline valve: aluminum	0.32	0.49	1.3	2.19
Inline valve: stainless steel	0.74	0.47	1.16	–
Volume of air cylinder [l]	0.004	0.011	0.035	0.047
Connection: hose plug-in connector, Ø [mm]	4			
Compressed air pressure (min. – max. overpressure) [bar / psi]	4 – 8 / 58 – 116			
Molecular flow conductance [l/s]	5	14	45	80
Mounting position	any			
Switching frequency [1/min]	≤ 100			≤ 50
Admissible temperature [°C]				
Valve body aluminium	0 to 120			
Valve body stainless steel	0 to 150			
Actuator	0 to 120			
Cover of position indicator	0 to 80			
Pilot valve	0 to 80			
Cycles until first service	10 millions (except wearing parts such as sealing elements and position indicators) under clean, static conditions and at max. 80°C			

	Value / description			
Type / Item	DN 16	DN 25	DN 40	DN 50
Position indicator: contact rating				
Voltage [V AC/DC]	5 to 50			
Current [mA]	5 to 100			
Power [W]	1.0			
	All valves with position indicator			
Pilot valve				
Voltage	see specification on pilot valve (range $\pm 10\%$)			
Power				
DC [W]	≤ 2.5			
AC [VA]	≤ 4.8 starting / 3.6 holding current			
Protection class	IP50			

Table 1-3

Drawings / Dimensions

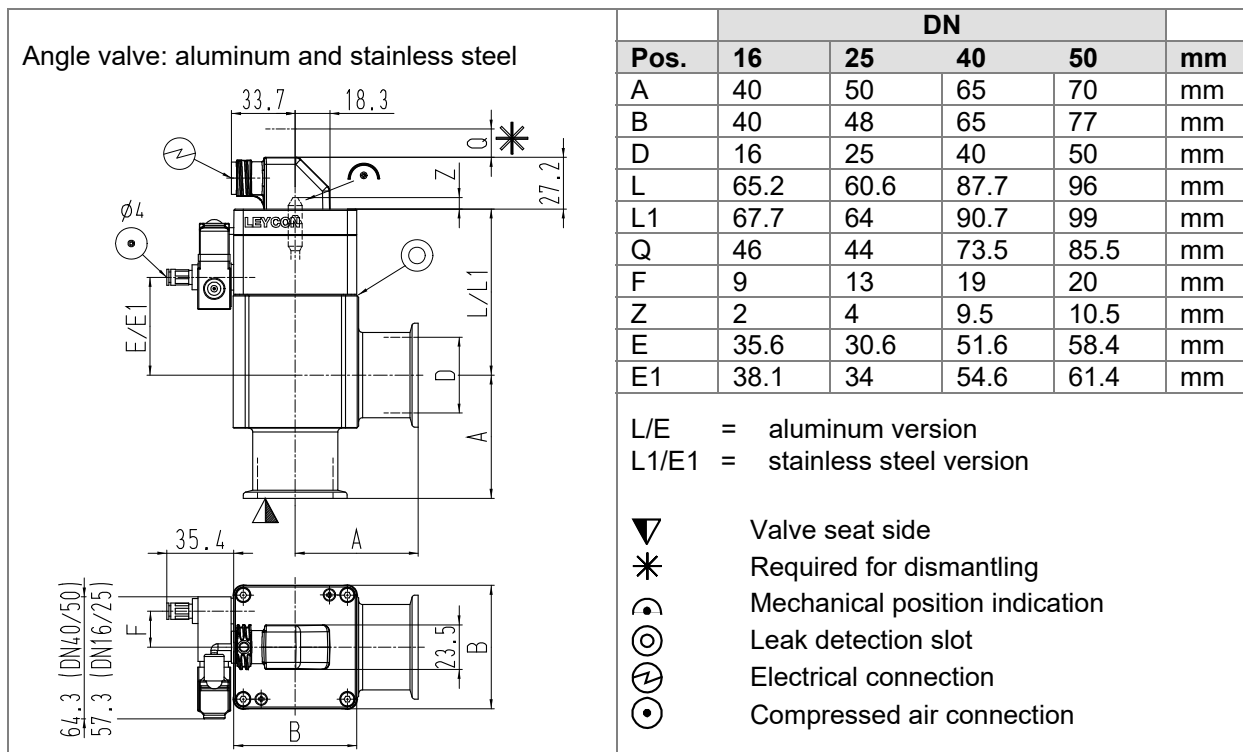


Figure 1-2

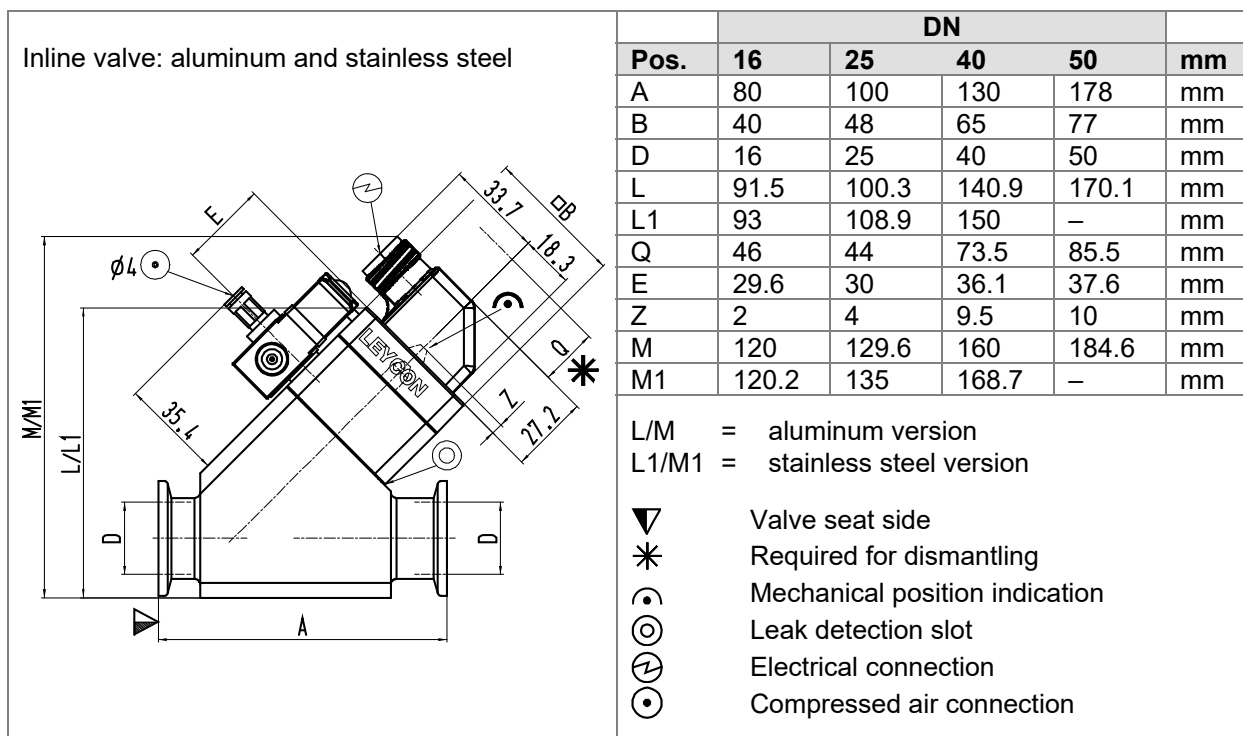


Figure 1-3

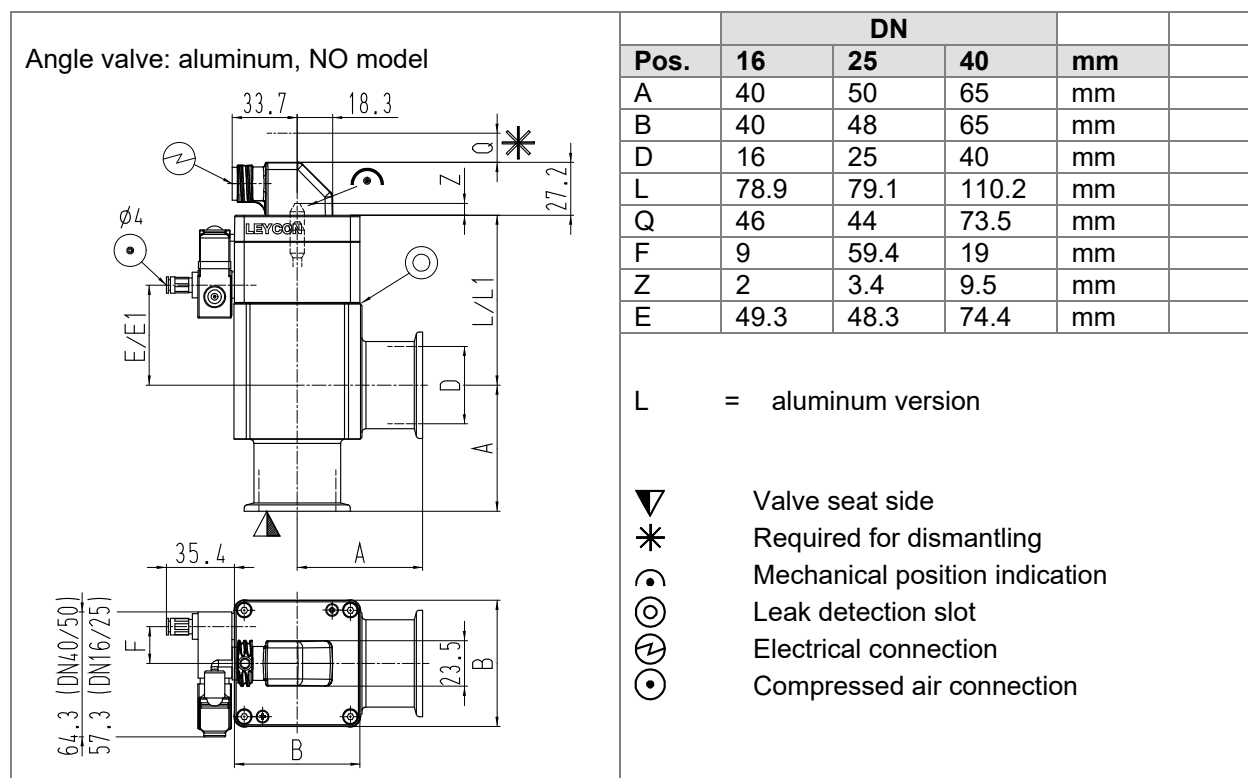


Figure 1-4

1.5 Components delivered with the valve

In addition to the attached hose connector Ø 4 mm, a hose connector Ø 6 mm is supplied separately.

Maximum torque to fasten the hose connector fitting: 0.16 Nm.

Protective covers on both flanges.

Valves with an electrical position indicator are provided with a 7-pole Amphenol connector (see Figure 11-1) ausgestattet. The connector is enclosed.

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

- The high vacuum angle valve BAV as well as the high vacuum inline valve BIV acts as venting and shut-off device within a vacuum system.
- The valve features ISO-KF flanges and is intended for mounting within clamping flange systems.
- Use product for clean and dry vacuum applications only. Observe the specification in chapter «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.
- 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 Design and Function

3.1 Design

This illustration shows an angle valve (NC). The inline valve has a different body shape.

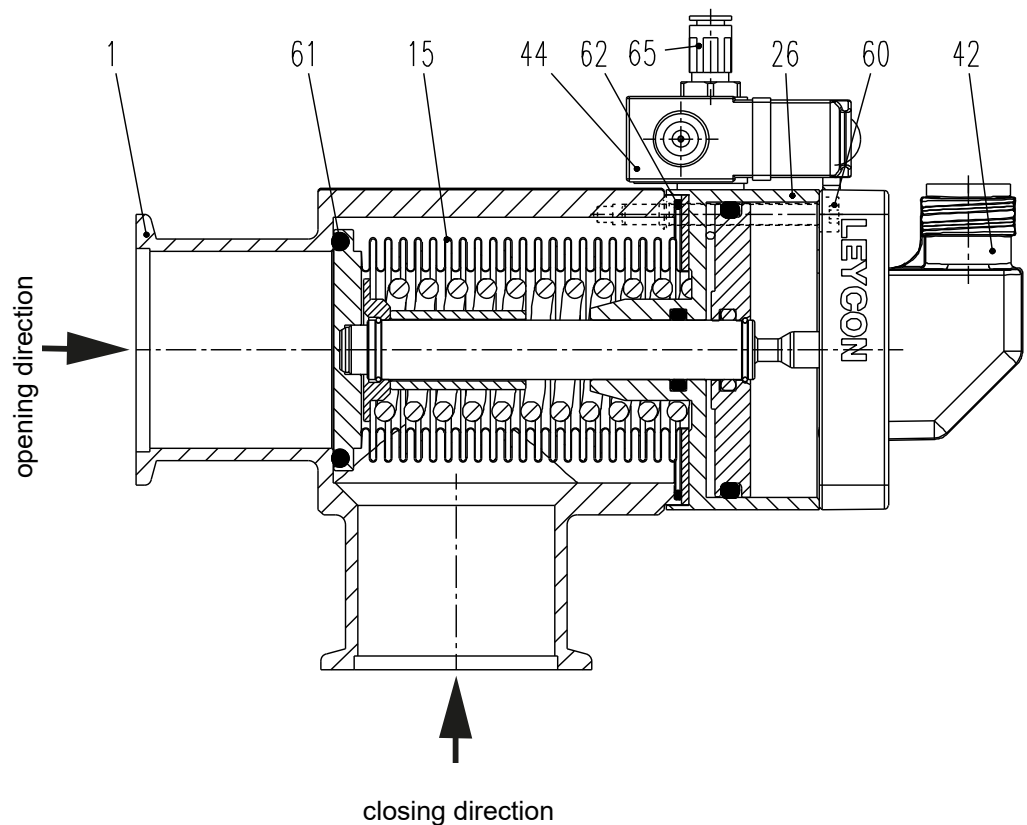


Figure 3-1

1	Body	42	Position indicator and connector	61	Plate seal
15	Bellows	44	Pilot valve	62	Bonnet seal
26	Actuator complete	60	Screws	65	Pneumatic connection

3.2 Function

Valve is closed by a spring (NC) and opened pneumatically.



NO model:
Valve is closed pneumatically and opened by a spring (NO).

4 Installation

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



Disconnect compressed air and 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

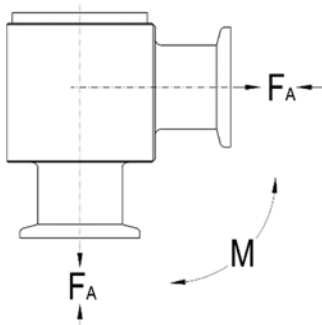
	 DANGER Overpressure in the vacuum system >1 bar Injury caused by released parts and harm caused by escaping process gases can result if clamps are opened while the vacuum system is pressurized. Do not open any clamps while the vacuum system is pressurized. Use the type of clamps which are suited to overpressure.
	 DANGER Overpressure in the vacuum system >2.5 bar KF flange connections with elastomer seals (e.g. O-rings) cannot withstand such pressures. Process media can thus leak and possibly damage your health. Use O-rings provided with an outer centering ring.

1. Remove the protective lids.
2. Check and carefully clean sealing surfaces of valve flanges and counter flanges.
3. Install valve with connection components appropriate for ISO-KF flanges by taking the specification in «Table 4-1» into account.

DN (nom. I. D.)		Axial tensile or compressive force «F _A »		Bending moment «M»	
mm	Inch	N	lbf	Nm	lbf · ft
16	5/8	25	6	1	0.8
25	1	70	16	3	2.2
40	1½	100	22	6	4.5
50	2	150	34	11	8

A combination of both forces «F_A» and «M» is not allowed. Please contact Leybold.

Angle valve



Inline valve

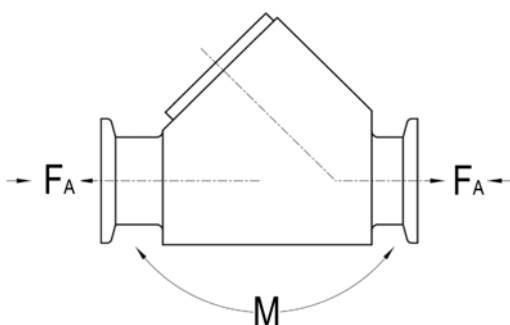


Table 4-1



Keep the protective lids.

4. Check that the vacuum connections are leak tight.

4.3 Compressed air connection

	 CAUTION
	Valve in open position Risk of injury when connecting compressed air to the valve. Connect compressed air only when: – valve is installed in the vacuum system – moving parts cannot be touched



Use clean, dry or slightly oiled air only.



Connection see chapter «1.4 Technical data».

4.4 Electrical connection

	 DANGER
	Electric shock Parts being under voltage will result in serious injury or death. Do not touch parts being under voltage.

	NOTICE
	Wrong voltage Electrical components may get damaged. Make sure that the mains voltage is in conformity with the voltage specified on the pilot valve and on the position indicator; see chapter «1.4 Technical data».

1. Read part number from the identification plate; also see chapter «1.2 Identification of product».
2. With the help of chapter «1.3 Validity of the user manual» check whether it is a valve with or without pilot valve.
3. Connect electrical power.
 - Valve without pilot valve; see «Figure 4-1» on page 22.
 - Valve with pilot valve; see «Figure 4-2» on page 22.

4.4.1 Valve with position indicator

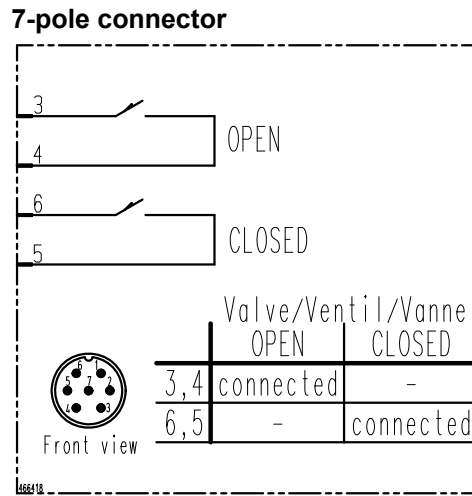
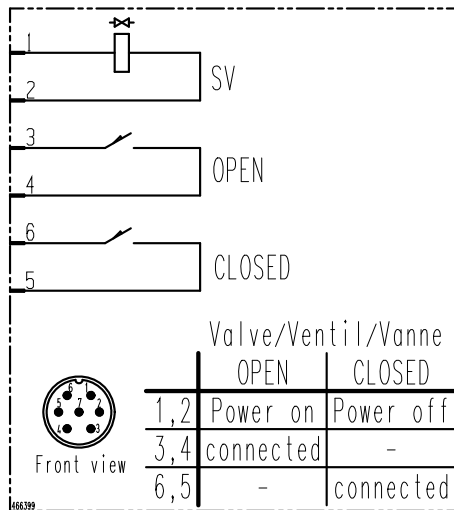


Figure 4-1 Wiring diagram

4.4.2 Valve with pilot valve and position indicator

7-pole connector < 50V



7-pole connector > 50V

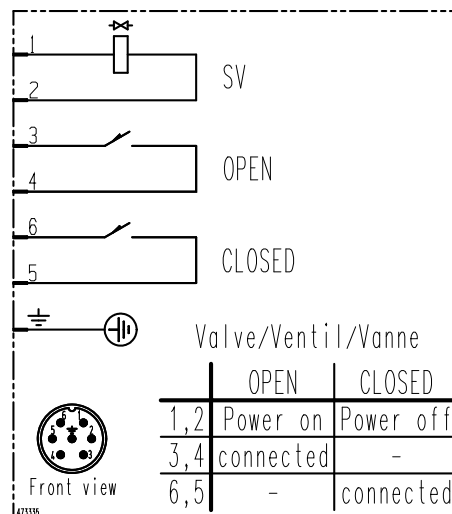


Figure 4-2 Wiring diagram



The polarity of the 24 VDC connection need not to be considered.

5 Operation

Standard valves see chapter «1.3 Validity of the user manual».

For special valves which are not listed in chapter «1.3 Validity of the user manual» the product data sheet is applicable in addition.

	⚠ 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. Take safety measures in order that the valve cannot be touched during operation.

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

5.1 Normal operation

Valve is closed by a spring (NC) and opened pneumatically.

5.2 Operation under increased temperature

See chapter «1.4 Technical data».

5.3 Behavior in case of air pressure drop

Valve closed: Valve remains closed and leaktight.

Valve open: Valve will be closed leaktight by a spring.

5.4 Behavior in case of power failure

Valve will be closed leaktight by a spring.

5.5 Operation of the NO model

- **Normal operation:**
Valve is closed pneumatically and opened by a spring (NO).
- **Behavior in case of air pressure drop:**
Valve closed: Valve will be opened.
Valve open: Valve remains opened.
- **Behavior in case of power failure:**
Valve will be opened by a spring.

6 Maintenance

Under clean operating conditions the valve does not need any maintenance during the specified cycle life; see chapter «1.4 Technical data».



Contamination from the process may require more frequent maintenance.



Disconnect compressed air and 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.



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.



WARNING

Compressed air

Unprofessionally handling compressed air can cause physical injury.
Adhere to the relevant regulations and take the necessary precautions when handling compressed air.



CAUTION

Hot surfaces

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



NOTICE

Discoloration of the plastic cover

The plastic cover may discolor during cleaning with aggressive detergent (e. g. Acetone).
Use mild detergent only.



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.

6.1 Exchange of vacuum seals

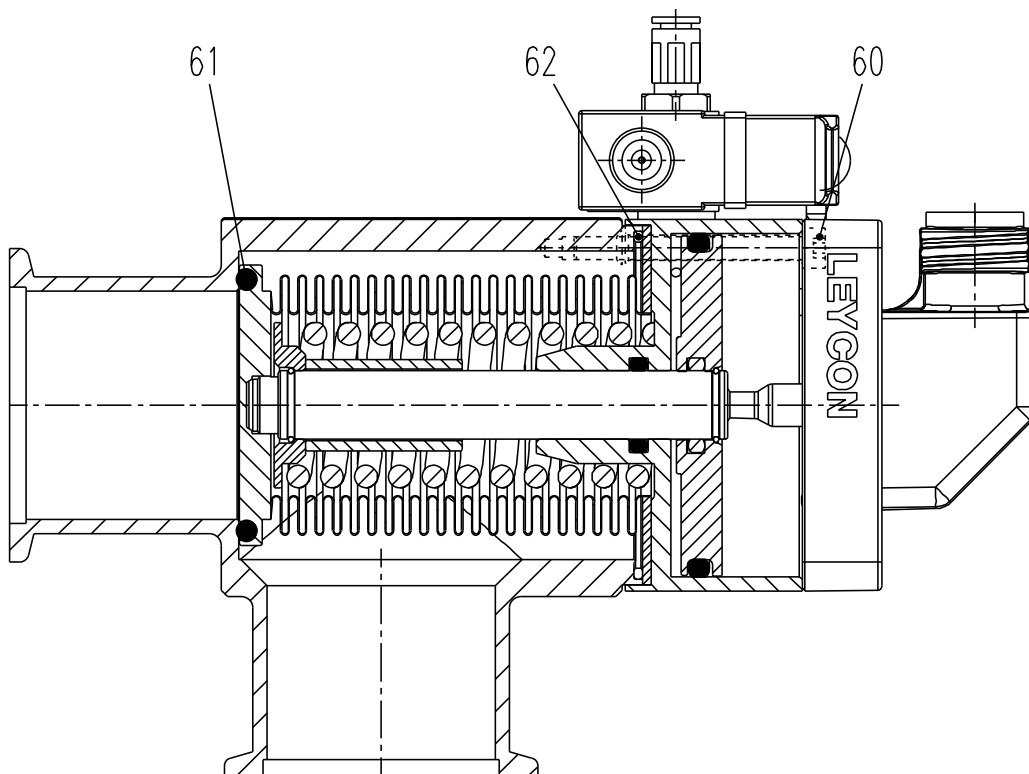


Figure 6-1

60 Screws

61 Plate seal

62 Bonnet seal

6.1.1 Dismount actuator / plate assembly

The item numbers in brackets refer to «Figure 6-1».

1. Loosen and remove screws (60) uniformly and in crosswise order.
2. Withdraw actuator / plate assembly carefully from body.
3. Remove bonnet seal (62) from groove by using an O-ring removal tool.

6.1.2 Replacement of plate seal

1. Remove plate seal (61) from groove by using an O-ring removal tool.
2. Check sealing surface and clean it with a cleanroom wiper soaked with alcohol (2% methyl ethyl ketone).
3. Put new plate seal (61) on groove and press it into groove at 4 opposite spots.
4. Press remaining sections uniformly into groove.

6.1.3 Mount actuator / plate assembly

1. Check sealing surfaces of bonnet flange / valve seat and clean it with a cleanroom wiper.
2. Put bonnet seal (62) into body.
3. Insert actuator / plate assembly carefully.
4. Fasten screws (60) uniformly and in crosswise order in 2 to 3 rounds.

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

1. Vent the vacuum system and wait until the valve has cooled down to <55°C.
2. Disconnect compressed air.
3. Disconnect power supply.
4. Dismount valve from system, attach the protective lids.

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 you place an order for spare parts, please specify the fabrication number of the valve; see chapter «1.2 Identification of product». This is to ensure that the appropriate spare parts are supplied.

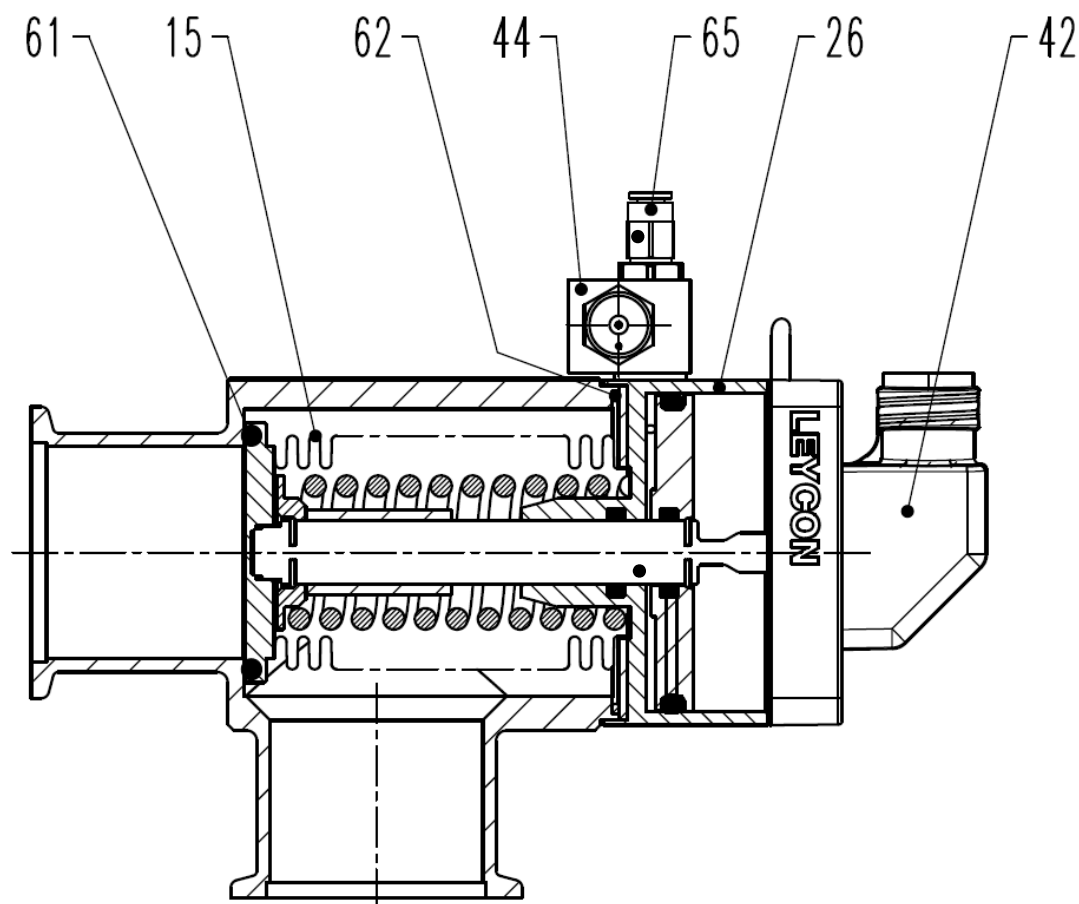


Figure 11-1

Item	Description	Part No.			
		DN 16	DN 25	DN 40	DN 50
15	Bellows	E242292	E233014	E229542	E244980
26	Actuator complete	E232181	E233012	E232509	E245319
42a	Position indicator and connector w/o cable	E339362	E339364	E339366	E339368
42b	Position indicator w/ connector and cable (please specify voltage)	E346533	E346542	E346547	E346555
44	Pilot valve (please specify voltage)	E345632	E345632	E345633	E345633
61 + 62	Seal kit vacuum	EK242324	EK241077	EK241079	EK245556
65a	Quick connector (for 4 mm tube)	EN-7607-023	EN-7607-023	EN-7607-023	EN-7607-023
65b	Quick connector (for 6 mm tube)	EN-7607-172	EN-7607-172	EN-7607-172	EN-7607-172
	7-pole connector enclosed, loose	599998003			

Table 11-1



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

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) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">X</td> <td style="width: 40%;">Tradename:</td> <td style="width: 50%;">Chemical name:</td> </tr> <tr> <td style="text-align: center;">a)</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">b)</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">c)</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">d)</td> <td></td> <td></td> </tr> </table> <table style="width: 100%;"> <tr> <th style="width: 30%;"></th> <th style="width: 10%; text-align: center;">No</th> <th style="width: 10%; text-align: center;">Yes</th> </tr> <tr> <td>2. Are these substances harmful ?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> <tr> <td>3. Dangerous decomposition products when heated ?</td> <td style="text-align: center;">☐</td> <td style="text-align: center;">☐</td> </tr> </table> If yes, which ? _____	X	Tradename:	Chemical name:	a)			b)			c)			d)				No	Yes	2. Are these substances harmful ?	☐	☐	3. Dangerous decomposition products when heated ?	☐	☐
X	Tradename:	Chemical name:																						
a)																								
b)																								
c)																								
d)																								
	No	Yes																						
2. Are these substances harmful ?	☐	☐																						
3. Dangerous decomposition products when heated ?	☐	☐																						

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: HV vacuum valve with pneumatic actuator

Part number: 28441, 28442, 28447, 215130, 215314, 215315, 215316, 215317, 215318, 215319, 215320, 215321, 215322, 215323, 215324, 215325, 215326, 215327, 215328, 215329, 215330, 215331, 215332, 215333, 215334, 215335, 215336, 215337, 215339, 215340, 215341, 215342, 215343, 215344, 215345, 215347, 215348, 215349, 215350, 215351, 215352, 215353, 215354, 215355, 215356, 215357, 215359, 215360, 215361, 215363, 215364, 215365, 215367, 215368, 215369, 215371, 215372, 215373, 215391, 215392, 215393, 215394V01, 215395V01,

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


ppa. Martin Tollner
Head of Product Lines

Cologne, October 24, 2016


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 tuotteeneseen 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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