



# LEYCON

User manual 300335627\_002\_C0/2016

## High Vacuum Angle Valve BAV DN 16/25/40 ISO-KF

- with electromagnetic actuator EM, single acting with closing spring (NC)
- aluminum version AL
- stainless steel version VA

Part numbers

215004V01	215079V01	215004V02	215079V02
215006V01	215124V01	215006V02	215124V02
215064V01	215134V01	215064V02	215134V02



## 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.

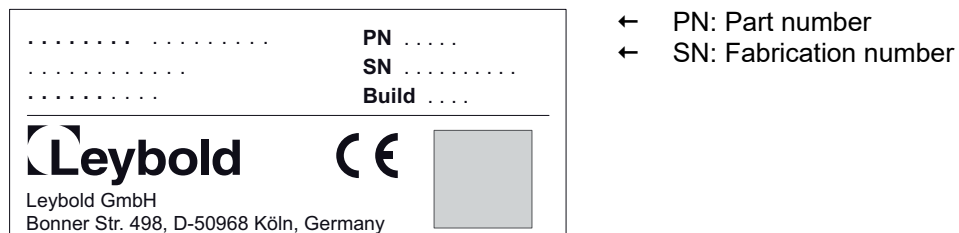


Figure 1-1



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
<b>BAV . . EM AL 200–240 VAC</b>	
ISO KF 16	215004V01
ISO KF 25	215064V01
ISO KF 40	215124V01
<b>BAV . . EM VA 200–240 VAC</b>	
ISO KF 16	215006V01
ISO KF 25	215079V01
ISO KF 40	215134V01
<b>BAV . . EM AL 100–120 VAC</b>	
ISO KF 16	215004V02
ISO KF 25	215064V02
ISO KF 40	215124V02
<b>BAV . . EM VA 100–120 VAC</b>	
ISO KF 16	215006V02
ISO KF 25	215079V02
ISO KF 40	215134V02

Table 1-1

## 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

Item	Material	
	Aluminum version	Stainless steel version
<b>Body</b>	EN AW-6060 (3.3206) EN AW-6061 (3.3211) EN AW-6063 (3.3206) EN AW-6082 (3.2315)	AISI 304 (1.4301, 1.4305)
<b>Valve plate</b>	AISI 316L (1.4404, 1.4435)	AISI 316L (1.4404, 1.4435)
<b>Bellows</b>	AISI 316L (1.4404, 1.4435) AISI 316 Ti (1.4571)	AISI 316L (1.4404, 1.4435) AISI 316 Ti (1.4571)
<b>Bonnet seal, plate seal</b>	Viton®	Viton®

Table 1-2

### General technical data

Type / Item	Value / description		
	DN 16	DN 25	DN 40
<b>Leak rate [mbar l/s]</b>	$\leq 1 \cdot 10^{-9}$		
<b>Pressure range: valve open [mbar], absolute</b>	$1 \cdot 10^{-8}$ to 2000		
<b>Differential pressure on the plate [bar]</b>	$\leq 2$		
<b>Differential pressure at opening [bar]</b>	$\leq 1.2$		
<b>Opening / closing time [s]</b>	$\leq 0.2$		
<b>Weight [kg]</b>			
Angle valve: aluminum	1.3	1.4	1.8
Angle valve: stainless steel	1.3	1.5	2.1
<b>Molecular flow conductance [l/s]</b>	5	14	45


Type / Item	Value / description		
	DN 16	DN 25	DN 40
Mounting position	any		
Switching frequency	maximum 15 cycles per minute at 20 °C		
Operating temperature [°C]	0 to 50		
Cycles until first service	200 000		
<b>Position indicator: contact rating</b>			
Voltage [V AC/DC]	maximum 48		
Current [mA]	maximum 500		
	All valves with position indicator		
Mains voltage	see specification on valve		
Starting power [W]	700 (~100 ms)		
Holding power [W]	10		
Overcurrent protection [A]	2 tripping characteristic «D» (EN 60898)		
Protection class	IP40		

Table 1-3



**Drawings / Dimensions**

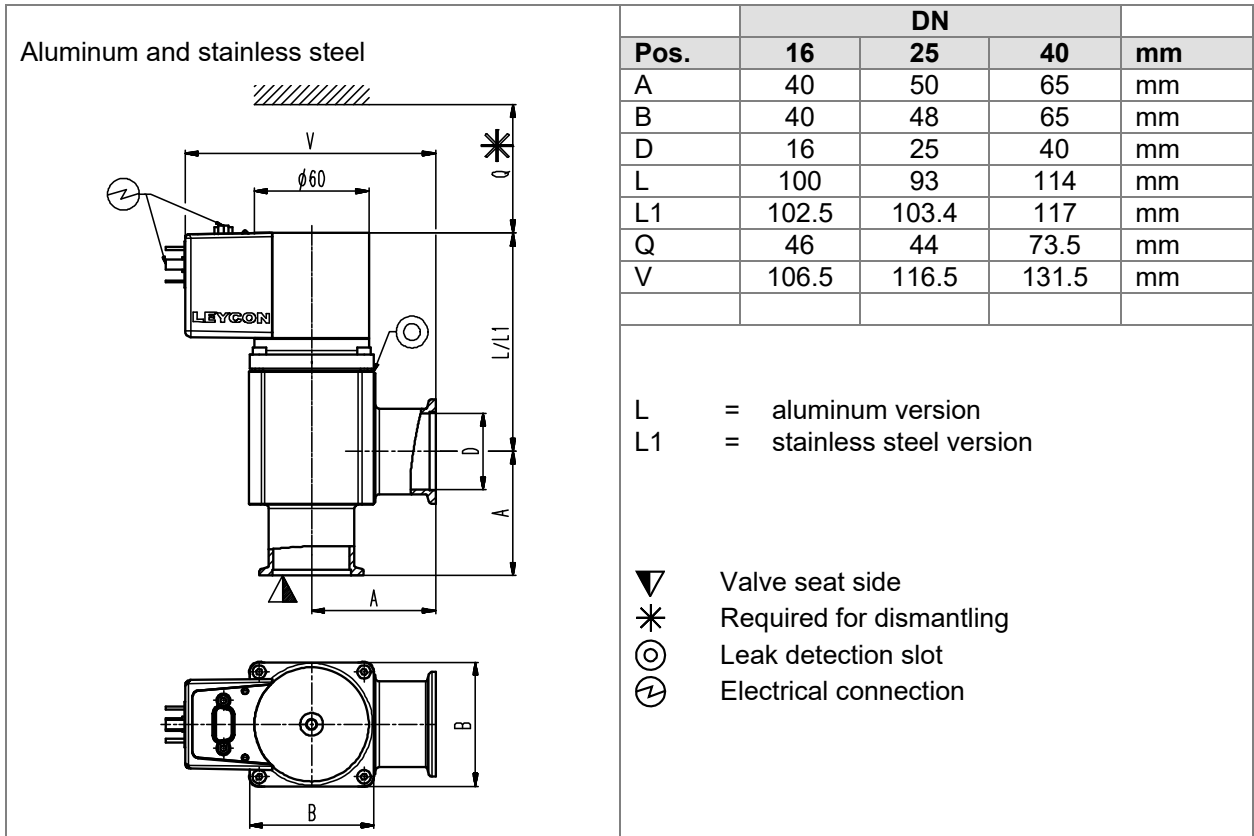


Figure 1-2

## 1.5 Components delivered with the valve

Protective covers on both flanges.

Connector and connector plug for position indicator.

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
	<p><b>Lack of knowledge</b> Failing to read this manual may result in property damage. Firstly, read manual.</p>





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
	<p><b>High risk</b> Indicates a hazardous situation which, if not avoided, will result in death or serious injury.</p>

	⚠ WARNING
	<p><b>Medium risk</b> Indicates a hazardous situation which, if not avoided, could result in death or serious injury.</p>

	⚠ CAUTION
	<p><b>Low risk</b> Indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.</p>

	NOTICE
	<p><b>Command</b> Indicates a hazardous situation which, if not avoided, may result in property damage.</p>

## **2.3 Purpose of use**

### **2.3.1 Permitted use**

- The high vacuum angle valve BAV 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

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

## 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 Design and Function

#### 3.1 Design

This illustration represents DN 25 and DN 40. These valves are equipped with a bellows. The valve DN 16 has no bellows.

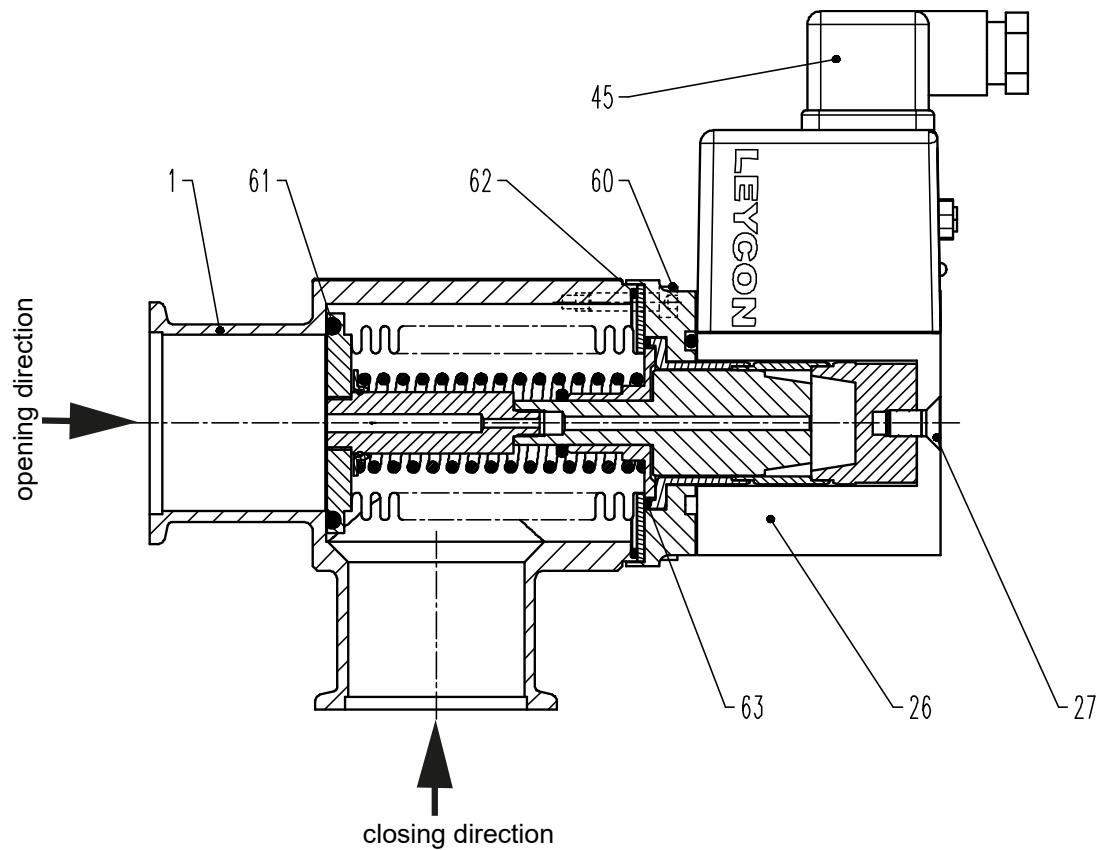


Figure 3-1

1	Body	45	Connector	62	Bonnet seal
26	Electronics	60	Cylinder screw	63	Bonnet seal
27	Countersunk screw	61	Plate seal		

#### 3.2 Function

Valve is closed by a spring and opened electromagnetically.

## 4 Installation

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



Disconnect electrical power during installation and configurations.

	⚠ <b>WARNING</b>
	<p><b>Unqualified personnel</b>                  Inappropriate handling may cause serious injury or property damage.                  Only qualified personnel are allowed to carry out the described work.</p>

	<b>NOTICE</b>
	<p><b>Contamination</b>                  Product may get contaminated because of inadequate handling.                  Always wear cleanroom gloves when handling the product.</p>

	<b>NOTICE</b>
	<p><b>Inappropriate tools</b>                  Sealing surfaces may get damaged.                  Do not use sharp-edged tools.</p>

### 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
	<p><b>Overpressure in the vacuum system &gt;1 bar</b></p> <p>Injury caused by released parts and harm caused by escaping process gases can result if clamps are opened while the vacuum system is pressurized.</p> <p>Do not open any clamps while the vacuum system is pressurized. Use the type of clamps which are suited to overpressure.</p>

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 <sub>A</sub> »		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

A combination of both forces «F<sub>A</sub>» and «M» is not allowed. Please contact Leybold.

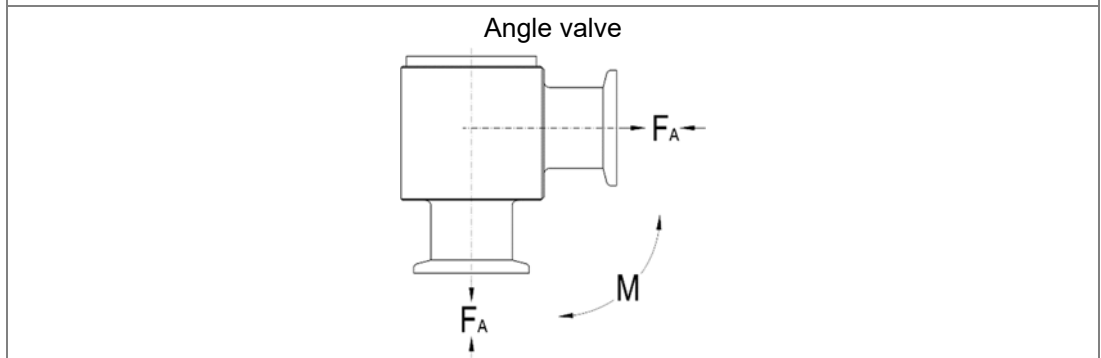




Table 4-1






Keep the protective lids.

4. Check that the vacuum connections are leak tight.

**4.3 Electrical connection**

	 <b>DANGER</b>
	<p><b>Electric shock</b></p> <p>Parts being under voltage will result in serious injury or death. Do not touch parts being under voltage.</p>

	 <b>CAUTION</b>
	<p><b>Valve in open position</b></p> <p>Risk of injury when connecting electrical power to the valve.</p> <p>Connect electrical power only when:</p> <ul style="list-style-type: none"> <li>- valve is installed in the vacuum system</li> <li>- moving parts cannot be touched</li> </ul>

	<b>NOTICE</b>
	<p><b>Wrong voltage</b></p> <p>Electrical components may get damaged.</p> <p>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».</p>

1. Read part number from the identification plate; also see chapter «1.2 Identification of product».
2. Connect electrical power according to your needs. There are three possibilities:
  - Valve operation at safety low voltage control  
see «Figure 4-1» on page 19.
  - Valve operation at line voltage control without position indicator;  
see «Figure 4-2» on page 19.
  - Valve operation at line voltage control with position indicator;  
see «Figure 4-3» on page 19.

**4.3.1 Valve operation at safety low voltage control with position indicator**

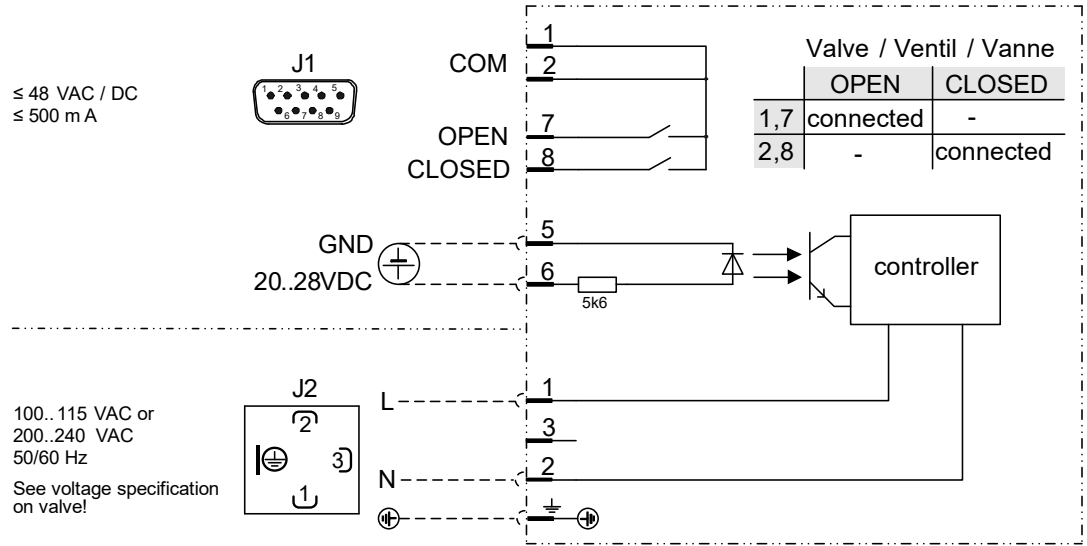


Figure 4-1 Wiring diagram

**4.3.2 Valve operation at line voltage control without position indicator**

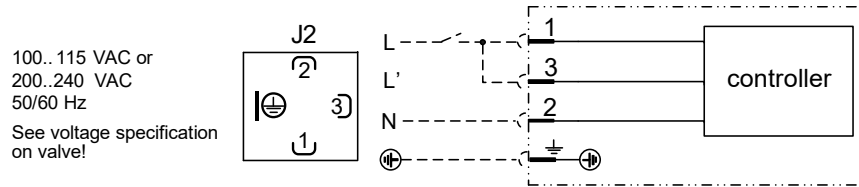


Figure 4-2 Wiring diagram

**4.3.3 Valve operation at line voltage control with position indicator**

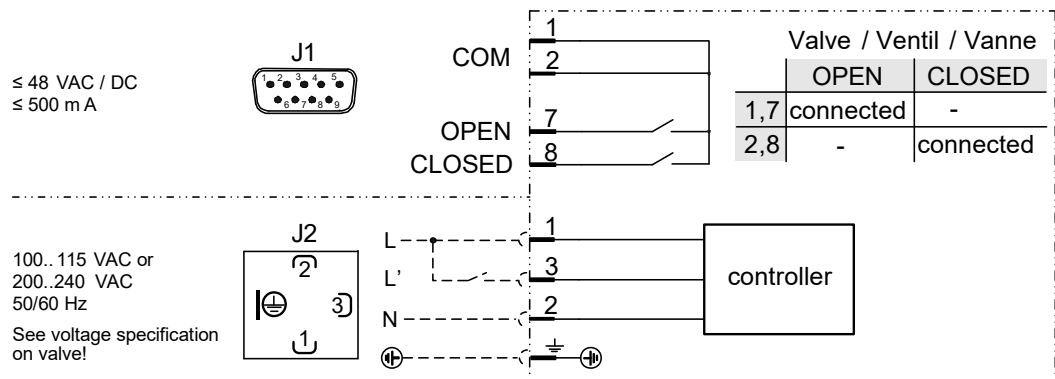






Figure 4-3 Wiring diagram


## 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.

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

	 <b>CAUTION</b>
	<p><b>Hot surfaces</b>                  Risk of burning when touching hot surfaces.                  Take safety measures in order that the valve cannot be touched during operation.</p>

	<b>NOTICE</b>
	<p><b>Wrong voltage</b>                  Electrical components may get damaged.                  Make sure that the mains voltage is in conformity with the voltage specified on the pilot valve; see chapter «1.4 Technical data».</p>

	<b>NOTICE</b>
	<p><b>Overheating of the coil</b>                  Coil may get damaged.                  Perform no more than 15 opening / closing cycles per minute.</p>

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 electromagnetically.

### 5.1.1 Operation with safety low voltage control

See wiring diagram in «Figure 4-1» on page 19.

Activate the valve:	Supply AC voltage to J2 (pin 1 and 2).
Open the valve:	Supply DC voltage to J1 (pin 5 and 6).
Close the valve:	Remove DC voltage from J1 (pin 5 and 6).
Position indicator:	The switching outputs of the position indicator are active and indicate the valve position as long as voltage is supplied to J2. In addition, the valve position is indicated by LEDs: Green LED illuminated = valve open Orange LED illuminated = valve closed.

### 5.1.2 Operation with line voltage control without position indicator

See wiring diagram in «Figure 4-2» on page 19.

Preparation:	Inlay bridge between pin 1 and 3.
Open the valve:	Supply AC voltage to J2 (pin 1 and 2).
Close the valve:	Remove AC voltage from J2 (pin 1 and 2).
Position indicator:	The valve position is indicated by LED as long as voltage is supplied to J2: Green LED illuminated = valve open.

### 5.1.3 Operation with line voltage control and position indicator

See wiring diagram in «Figure 4-3» on page 19.

Activate the valve:	Supply voltage to J2 (pin 1 and 2).
Open the valve:	Supply voltage to J2 (pin 3).
Close the valve:	Remove voltage from J2 (pin 3).
Position indicator:	The switching outputs of the position indicator are active and indicate the valve position as long as voltage is supplied to J2. In addition, the valve position is indicated by LED: Green LED illuminated = valve open.

## 5.2 Operation under increased temperature

See chapter «1.4 Technical data».

## 5.3 Behavior in case of power failure

Valve will be closed leaktight 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.



### 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.

## 6.1 Exchange of vacuum seals

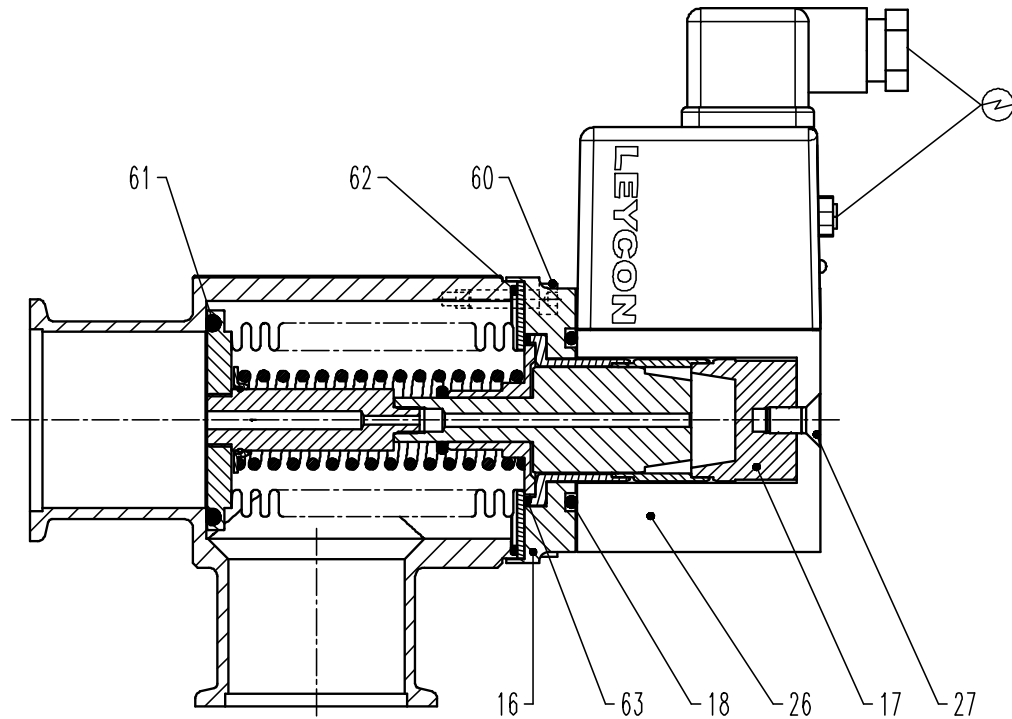


Figure 6-1

16	Bonnet flange	26	Electronics	61	Plate seal
17	Guide tube	27	Countersunk screw	62	Bonnet seal
18	O-ring	60	Cylinder screw	63	Bonnet seal
⊕	Signal connector				

### 6.1.1 Dismount actuator / plate assembly

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

1. Remove signal connector and mains connector (⊕) (customer part).
2. Remove countersunk screw (27).
3. Remove electronics (26).
4. Remove O-ring (18).
5. Untighten cylinder screws (60) evenly in crosswise order and remove screws.
6. Remove bonnet flange (16).
7. Withdraw guide tube (17).
8. Remove bonnet seal (63).

9. Carefully withdraw valve insert from valve body.
10. Remove bonnet seal (62) from seal groove.

### **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. Mount bonnet seal (63).
5. Mount guide tube (17).
6. Mount bonnet flange (16). Do not cant.
7. Tighten cylinder screws (60) evenly in crosswise order in 2 to 3 rounds.
8. Mount O-ring (18).
9. Mount electronics (26).
10. Mount countersunk screw (27).
11. Connect electrical power.
12. Mount signal connector and mains connector (⊖).






## 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

	<p style="text-align: center;"><b>⚠ WARNING</b></p> <p><b>Unqualified personnel</b>                  Inappropriate handling may cause serious injury or property damage.                  Only qualified personnel are allowed to carry out the described work.</p>
	<p style="text-align: center;"><b>⚠ CAUTION</b></p> <p><b>Hot surfaces</b>                  Risk of burning when touching hot surfaces.                  Touch hot surfaces only if the valve has cooled down.</p>
	<p style="text-align: center;"><b>NOTICE</b></p> <p><b>Contamination</b>                  Product may get contaminated.                  Always wear cleanroom gloves when handling the product.</p>

### 8.1 Dismounting


1. Disconnect power supply.
2. Dismount valve from system.


### 8.2 Storage


	<p style="text-align: center;"><b>NOTICE</b></p> <p><b>Wrong storage</b>                  Inappropriate temperatures and humidity may cause damage to the product.                  Valve must be stored at:</p> <ul style="list-style-type: none"> <li>– relative humidity between 10% and 70%</li> <li>– temperature between 10 °C and +50 °C</li> <li>– non-condensing environment</li> </ul>
---	--


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

## 9 Packaging and Transport

	<b>⚠ WARNING</b>
	<p><b>Unqualified personnel</b> Inappropriate handling may cause serious injury or property damage. Only qualified personnel are allowed to carry out the described work.</p>

	<b>⚠ WARNING</b>
	<p><b>Harmful substances</b> 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.</p>


	<b>NOTICE</b>
	<p><b>Wrong handling during transport</b> 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.</p>

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



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

**9.1 Packaging**


	NOTICE
	<p><b>Valve in open position</b>                  Valve mechanism may get damaged if valve gate is in open position.                  Make sure that the valve is closed.</p>

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
	<p><b>Inappropriate packaging</b>                  Product may get damaged if inappropriate packaging material is used.                  Always use the original packaging material and handle product with care.</p>



Leybold disclaims any liability for damages resulting from inappropriate packaging.

## 10 Disposal


	<b>! WARNING</b>
	<b>Harmful substances</b> 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

	<b>NOTICE</b>
	<p><b>Non-original spare parts</b>                  Non-original spare parts may cause damage to the product.                  Use original spare parts from Leybold only.</p>



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.

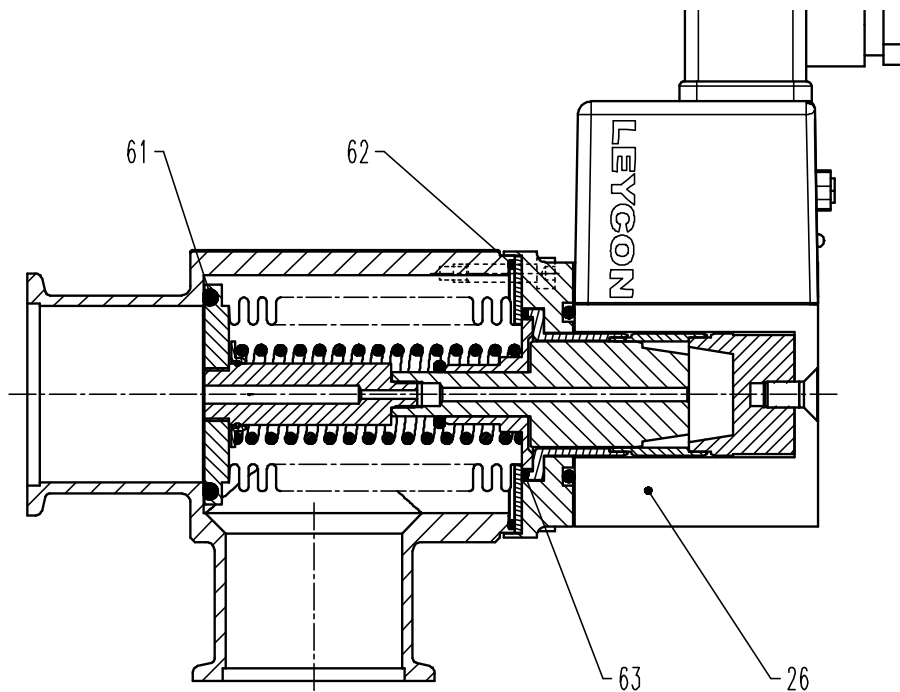


Figure 11-1

Item	Description	Part No.		
		DN 16	DN 25	DN 40
16 – 63 (excl. 26)	Valve insert complete	E565261	E565262	E565265
26	Electronics with coil	E510535	E510535	E510535
61, 62, 63	Seal kit	EK522634	EK522696	EK524286

Table 11-1

## 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: <input checked="" type="checkbox"/> applicable please mark <b>Repair:</b> <input type="checkbox"/> chargeable <input type="checkbox"/> warranty <b>Exchange:</b> <input type="checkbox"/> chargeable <input type="checkbox"/> warranty <input type="checkbox"/> Exchange already arranged / received <b>Return only:</b> <input type="checkbox"/> rent <input type="checkbox"/> loan <input type="checkbox"/> for credit <b>Calibration:</b> <input type="checkbox"/> DKD <input type="checkbox"/> Factory-calibr. <input type="checkbox"/> Quality test certificate DIN 55350-18-4.2.1																																			
<b>A. Description of the Leybold product:</b> _____ <b>Failure description:</b> _____ Material description : _____ Catalog number: _____ <b>Additional parts:</b> _____ Serial number: _____ <b>Application-Tool:</b> _____ Type of oil (ForeVacuum-Pumps) : _____ <b>Application- Process:</b> _____																																				
<b>B. Condition of the equipment</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:60%;"></th> <th style="width:10%; text-align: center;">No<sup>1)</sup></th> <th style="width:10%; text-align: center;">Yes</th> <th style="width:10%; text-align: center;">No</th> <th style="width:10%;"></th> <th style="width:10%;"></th> <th style="width:10%;"></th> </tr> </thead> <tbody> <tr> <td>1. Has the equipment been used</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>2. Drained (Product/service fluid)</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>3. All openings sealed airtight</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>4. Purged</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table> <p>If yes, which cleaning agent _____                  and which method of cleaning _____</p> <p><sup>1)</sup> If answered with "No", go to D. ←</p>			No <sup>1)</sup>	Yes	No				1. Has the equipment been used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. Drained (Product/service fluid)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. All openings sealed airtight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. Purged	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	No <sup>1)</sup>	Yes	No																																	
1. Has the equipment been used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																														
2. Drained (Product/service fluid)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																														
3. All openings sealed airtight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																														
4. Purged	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																														
<b>C. Description of processed substances (Please fill in absolutely)</b> 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 border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:5%;"></th> <th style="width:30%;">Tradename:</th> <th style="width:65%;">Chemical name:</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">X</td><td></td><td></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> </tbody> </table> <p>2. Are these substances harmful ? <input type="checkbox"/> No <input type="checkbox"/> Yes ←</p> <p>3. Dangerous decomposition products when heated ? <input type="checkbox"/> No <input type="checkbox"/> Yes ←</p> <p>If yes, which ? _____</p> <p><sup>2)</sup> Components contaminated by microbiological, explosive or radioactive products/substances will not be accepted without written evidence of decontamination.</p>			Tradename:	Chemical name:	X			a)			b)			c)			d)																			
	Tradename:	Chemical name:																																		
X																																				
a)																																				
b)																																				
c)																																				
d)																																				

**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 _____ _____	<div style="border: 1px dashed black; width: 100%; height: 100%; text-align: center; padding: 10px;">                     firm stamp                 </div>
--	---	---



## 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:** 17426, 17446, 28444, 28445, 28446, 215021, 215023, 215024,  
215004V01, 215004V02, 215006V01, 215006V02, 215064V01,  
215064V02, 215079V01, 215079V02, 215124V01, 215124V02,  
215134V01, 215134V02

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.

In addition the partly completed machinery is in conformity with the EU Directive 2014/30/EU relating to  
electromagnetic compatibility.

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 beigefügte 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 standartā 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 atstovybę.
Magyar (033)	A termékhez mellékelte használati útmutatót angol és német nyelvű. Ha a használati útmutatót a saját nyelvén (EU) szeretné megkapni, akkor kérjük forduljon az egyik Leybold képviselőhöz.
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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Service:  
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Cheonan-Si  
Chungcheongnam-Do  
Korea 330-290  
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