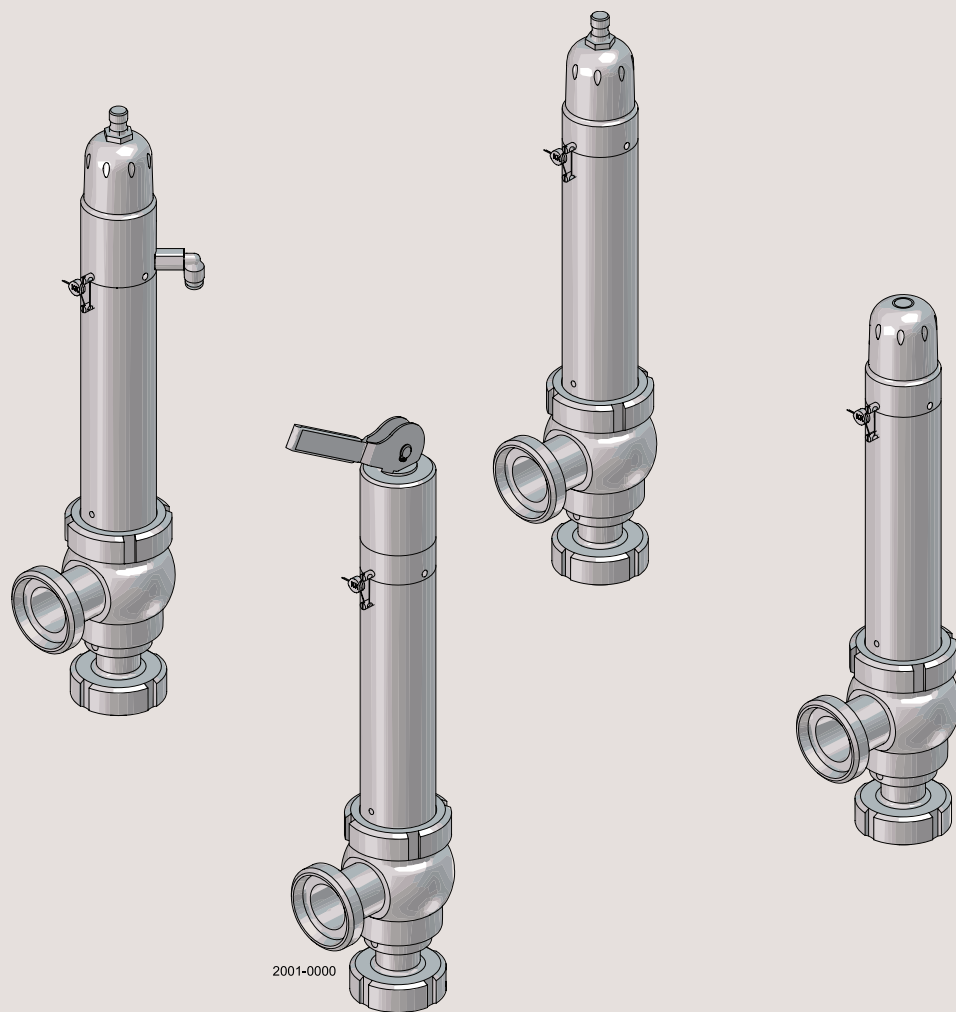




# Instruction Manual

## Alfa Laval Safety Valve



ESE03058-EN7

2022-10

Original manual



The information herein is correct at the time of issue but may be subject to change without prior notice

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# 1 Declarations of Conformity

## EU Declaration of Conformity

The Designated Company

Alfa Laval Kolding A/S, Albuen 31, DK-6000 Kolding, Denmark, +45 79 32 22 00

Company name, address and phone number

Hereby declare that

Safety valve

Designation

6357

Type

Serial number from AAB000000001 to AAB999999999

is in conformity with the following directives with amendments:

- Machinery Directive 2006/42/EC
- Pressure Equipment Directive 2014/68/EC

The person authorised to compile the technical file is the signer of this document.

Global Product Quality Manager

Title

Lars Kruse Andersen

Name

Kolding, Denmark

Place

2022-10-01

Date (YYYY-MM-DD)



Signature

This Declaration of Conformity replaces Declaration of Conformity dated 2015-10-14



# 1 Declarations of Conformity

## UK Declaration of Conformity

The Designated Company

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Safety valve

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is in conformity with the following directives with amendments:

- The Supply of Machinery (Safety) Regulations 2008
- The Pressure Equipment (Safety) Regulations 2016

Signed on behalf of: Alfa Laval Kolding A/S

Global Product Quality Manager

Title

Lars Kruse Andersen

Name

Kolding, Denmark

Place

2022-10-01

Date (YYYY-MM-DD)



Signature

DoC Revison\_01\_102022



## 2 Safety

---

*Unsafe practices and other important information are emphasised in this manual.  
Warnings are emphasised by means of special signs.*

---

### 2.1 Important information

---

**Always read the manual before using the valve!**

#### **WARNING**

Indicates that special procedures must be followed to avoid serious personal injury.

#### **CAUTION**

Indicates that special procedures must be followed to avoid damage to the valve.

#### **NOTE**

Indicates important information to simplify or clarify procedures.

---

### 2.2 Warning signs

---

General warning:



Caustic agents:



### 2.3 Safety precautions

---

#### **Installation:**

**Always** observe the technical data (see chapter 6 Technical data).  
**Always** release compressed air after use.



#### **Operation:**

**Always** observe the technical data (see chapter 6 Technical data).  
**Never** touch the valve or the pipelines when processing hot liquids or when sterilising.



**Always** handle lye and acid with great care.



#### **Maintenance:**

**Always** observe the technical data (see chapter 6 Technical data).  
**Always** release compressed air after use.  
The valve must **never** be hot when servicing it.  
The valve/actuator and the pipelines must never be pressurised when servicing the valve/actuator.  
**Never** stick your fingers through the valve ports if the valve is supplied with compressed air.  
**Always** use Alfa Laval genuine spare parts. The warranty of Alfa Laval products is dependent on the use of Alfa Laval genuine spare parts



#### **Transportation:**

**Always** ensure that compressed air is released.  
**Always** ensure that all connections are disconnected before attempting to remove the valve from the installation.  
**Always** drain liquid out of valves before transportation.  
**Always** use predesignated lifting points if defined.  
**Always** secure sufficient fixing of the valve during transportation - if specially designed packaging material is available it must be used.

---

*The instruction manual is part of the delivery.  
Study the instructions carefully.  
The items refer to the parts list and service kits section.*

### 3.1 Unpacking/delivery

#### Step 1

##### CAUTION

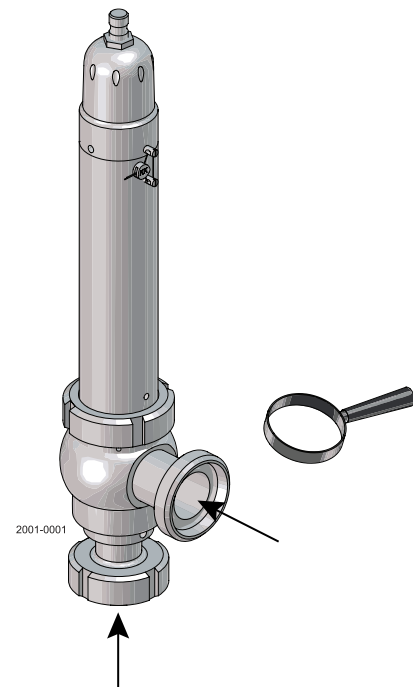
Alfa Laval cannot be held responsible for incorrect unpacking.

#### Check the delivery:

1. Complete valve.
2. Delivery note.

#### Step 2

1. Clean the valve of possible packing materials.
2. Inspect the valve for visible transport damage.
3. Avoid damaging air and pipe connections.



### 3.2 General installation

#### Step 1



**Always** read the technical data thoroughly.  
See chapter 6 Technical data



**Always** release compressed air after use.

##### CAUTION

Alfa Laval cannot be held responsible for incorrect installation.

## 3 Installation

---

*The instruction manual is part of the delivery.*

*Study the instructions carefully.*

*The items refer to the parts list and service kits section.*

---

### Step 2

Avoid stressing the valve as this can cause deformation of the sealing area and malfunction of the valve (leakage or faulty indication).

Pay special attention to:

- Vibrations
- Thermal expansion of the tubes
- Excessive welding
- Overloading of the pipelines

### Fittings:

Ensure that the connections are tight.

### Air connection of actuator:

Connect compressed air correctly.

### Pay special attention to warnings!

---

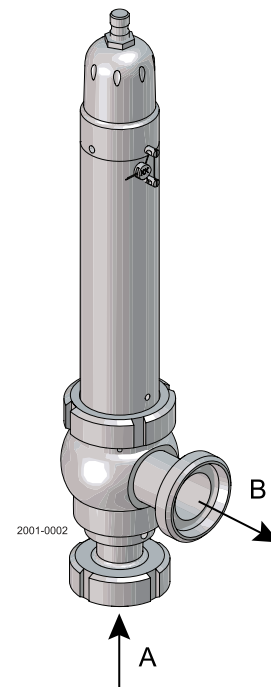
### Step 3

Preferably, the safety valve should be installed vertically on connection "A".

If mounted horizontal the set pressure will be a bit lower than specified due to the missing weight of the piston. Highest effect on DN80 and DN100. Safety valves with a set pressure of  $\leq 0.5$  bar are generally installed vertically.

The valve should be installed so that no fluids remain in the housing.

External dynamic effects caused by installation must be avoided.





Study the instructions carefully.

### 3.3 Indication and control equipment (optional extras)

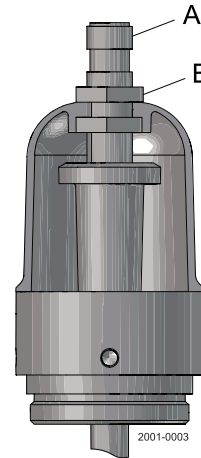
#### CAUTION!

The indication and control equipment must be electrically installed by authorised personnel only.

- Inductive proximity switches:

It is recommended to adjust the sensor (A) so it will give feedback when the valve is closed.

Lock the sensor with the nut (B).



#### Sensor data:

Type: Inductive IFT 217

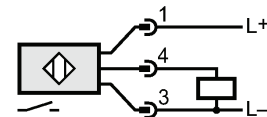
Thread (A): M12x1

Electrical design: DC PNP

Operating voltage[V]: 10..36 DC

Output function: Normally open

Connection cables - see "Automation/accessories" in our "Close at hand" catalogue.



#### Function :

In closed position the sensor is adjusted to give a feedback signal.

When piston raises up the sensor dips into the sleeve and loses the feedback signal.

### 3.4 Recycling information

#### Unpacking

- Packing material consists of wood, plastics, cardboard boxes and in some cases metal straps.
- Wooden and cardboard boxes can be reused, recycled or used for energy recovery.
- Plastics should be recycled or burnt at a licensed waste incineration plant.
- Metal straps should be sent for material recycling.

#### Maintenance

- During maintenance, oil and wear parts in the machine are replaced.
- All metal should be sent for material recycling.
- Worn out or defective electronic parts should be sent to a licensed handler for material recycling.
- Oil and all non-metal wear parts must be taken care of in agreement with local regulations.

#### Scrapping

- At the end of use, the equipment shall be recycled according to relevant local regulations. Besides the equipment itself, any hazardous residues from the process liquid must be considered and dealt with in a proper manner. When in doubt, or in the absence of local regulations, please contact your local Alfa Laval sales company.

## 4 Operation

Study the instructions carefully and pay special attention to the warnings!  
The valve is automatically or manually operated by means of an actuator or a handle.

### 4.1 Operation

#### Step 1



**Always** read the technical data thoroughly.  
(see chapter 6 Technical data)

#### Step 2



**Never** touch the valve or the pipelines when processing hot liquids or when sterilising.

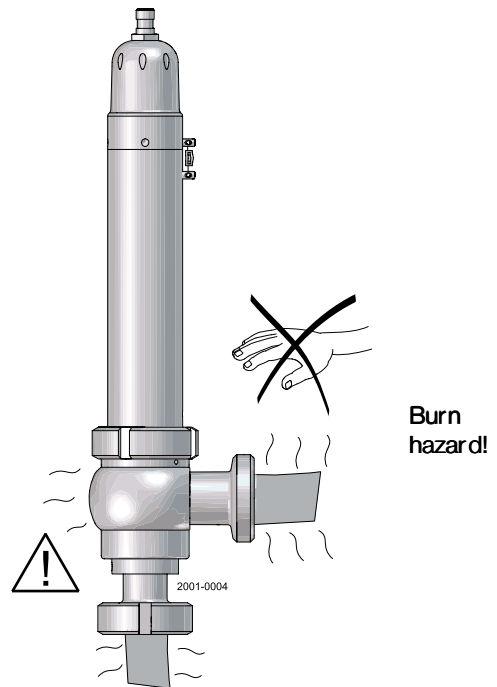
The safety valve is used to prevent inadmissible overpressures of fluid media in tanks, containers and plant sections. Generally, the set pressure is greater than the operating pressure.

The valve is sprung open if the operating pressure increases and reaches the set pressure.

In the case of a pressure increase, the flow rate is kept constant depending on the max. permissible operating pressure.

#### CAUTION

Alfa Laval cannot be held responsible for incorrect operation.



### 4.2 Fault-finding

#### NOTE

Study the maintenance instructions carefully before replacing worn parts - see section 5.1 General maintenance

| Problem                               | Cause/result                                                     | Repair                                                                            |
|---------------------------------------|------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Internal leakage                      | Worn O-rings                                                     | Replace the O-rings                                                               |
| External leakage                      | Worn flange O-rings<br>Worn stem sealing unit                    | Replace all seals                                                                 |
| Valve cannot be activated (pneumatic) | Air pressure too low.<br>Incorrect elastomer material (swelling) | Check and correct air pressure<br>Select another elastomer-sealing material grade |

The valve is designed for cleaning in place (CIP).  
 Study the instructions carefully and pay special attention to the warnings!  
 NaOH = Caustic soda.  
 HNO<sub>3</sub> = Nitric acid.

4.3 Recommended cleaning

Step 1



**Always** handle lye and acid with great care.

Caustic danger!



**Always** use rubber gloves!

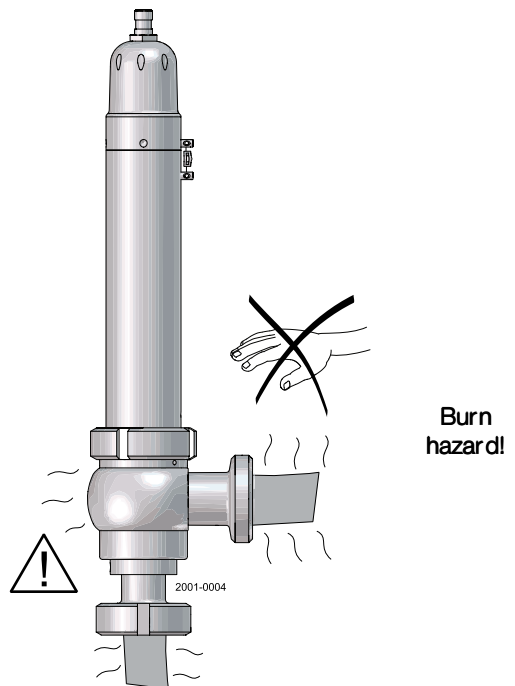


**Always** use protective goggles!

Step 2



**Never** touch the valve or the pipelines when sterilising.



Step 3

Examples of cleaning agents:

Use clean water, free from chlorides.

1. 1% by weight NaOH at 70°C

|                        |   |                           |   |                 |
|------------------------|---|---------------------------|---|-----------------|
| 1 kg (2.2 lbs)<br>NaOH | + | 100 l (26.4 gal)<br>water | = | Cleaning agent. |
|------------------------|---|---------------------------|---|-----------------|

2. 0.5% by weight HNO<sub>3</sub> at 70°C (158°F)

|                                          |   |                           |   |                 |
|------------------------------------------|---|---------------------------|---|-----------------|
| 0.7 l (0.18 gal)<br>53% HNO <sub>3</sub> | + | 100 l (26.4 gal)<br>water | = | Cleaning agent. |
|------------------------------------------|---|---------------------------|---|-----------------|

|                              |   |                           |   |                 |
|------------------------------|---|---------------------------|---|-----------------|
| 2.2 l (0.58 gal)<br>33% NaOH | + | 100 l (26.4 gal)<br>water | = | Cleaning agent. |
|------------------------------|---|---------------------------|---|-----------------|

## 4 Operation

---

*The valve is designed for cleaning in place (CIP).*

*Study the instructions carefully and pay special attention to the warnings!*

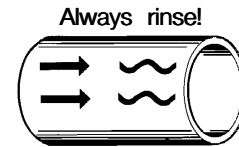
*NaOH = Caustic soda.*

*HNO<sub>3</sub> = Nitric acid.*

---

### Step 4

1. Avoid excessive concentration of the cleaning agent.  
⇒ Dose gradually
2. Adjust the cleaning flow to the process.  
⇒ Sterilisation of milk/viscous liquids  
⇒ Increase the cleaning flow
3. **Always** rinse well with clean water after the cleaning.



Clean water    Cleaning agents

### CAUTION!

The cleaning agents must be stored/disposed of in accordance with current rules/directives.

---

To secure optimum cleaning of the cavity between valve during the cleaning cycle, please follow the recommendations below

#### Standard version:

It is not possible to clean the valve inside the valve cavity.

#### Pneumatic version:

Supply air to the air connection when cleaning the valve.

#### Manual override version:

Turn the handle 180 degrees when cleaning the valve

---

Maintain the valve and the actuator carefully.

Study the instructions carefully and pay special attention to the warnings!

**Always** use Alfa Laval genuine spare parts, and keep service kits in stock.

The warranty of Alfa Laval products is dependent on the use of Alfa Laval genuine spare parts.

### 5.1 General maintenance

#### Step 1



**Always** read the technical data thoroughly.

See chapter 6 Technical data



**Always** release compressed air after use.

#### NOTE

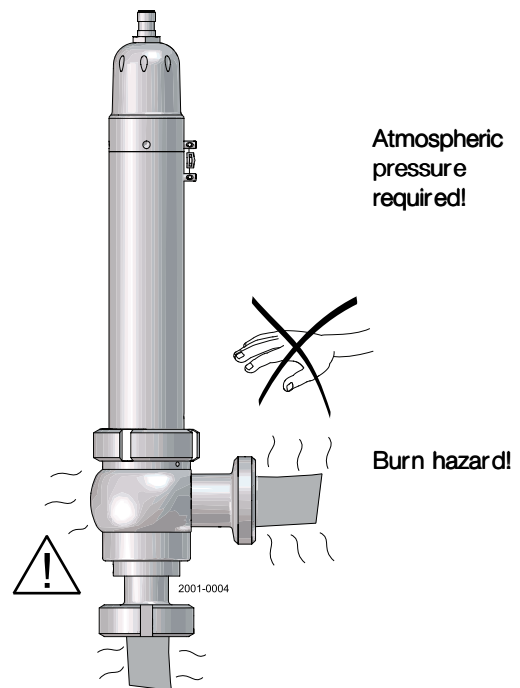
All scrap must be stored/discharged in accordance with current rules/directives.

#### Step 2



**Never** service the valve when it is hot.

The valve/actuator and the pipelines must **never** be pressurised when servicing the valve/actuator.



## 5 Maintenance

Maintain the valve and the actuator carefully.

Study the instructions carefully and pay special attention to the warnings!

**Always** use Alfa Laval genuine spare parts, and keep service kits in stock.

The warranty of Alfa Laval products is dependent on the use of Alfa Laval genuine spare parts.

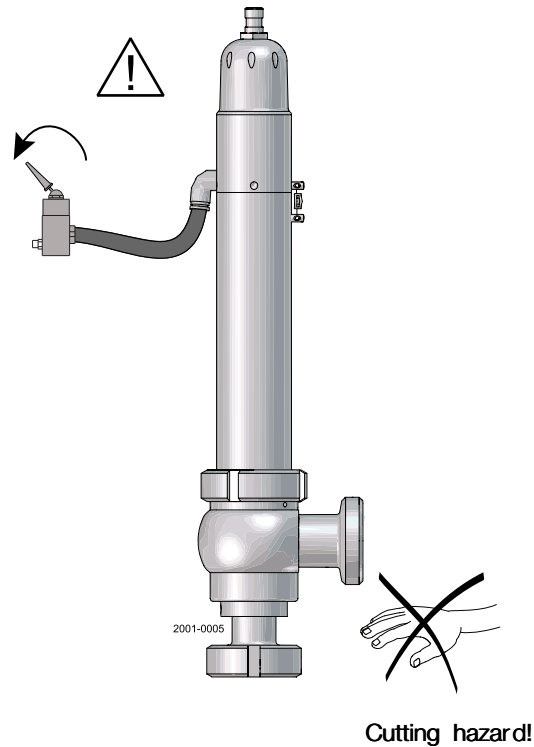
### Step 3



**Never** stick your fingers through the valve ports if the actuator is supplied with compressed air.

The maintenance intervals depend on the operating conditions.

- Temperature and temperature intervals
- Product and cleaning medium
- Pressure and opening frequency



**Cutting hazard!**

### NOTE!

#### Lubrication recommendation

| Material               | Lubricant                |
|------------------------|--------------------------|
| EPDM, Viton, NBR, HNBR | Klüber Paraliq GTE703*   |
| Silicone               | Klüber Sintheso pro AA2* |
| Thread                 | Interflon Food*          |

\*) It is only permitted to use approved lubricants if the respective fitting is used for the production of food or drink. Please observe the relevant safety data sheets of the manufacturers of lubricants.

### Recommended spare parts:

Service kits - see section 7 Parts list and service kits

Order service kits from the service kits list - see section 7 Parts list and service kits

| Product wetted seals                                          |                                                                                                                                                                                                                                 |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Preventive maintenance                                        | <b>Replace after 12 months</b>                                                                                                                                                                                                  |
| Maintenance after leakage<br>(leakage normally starts slowly) | <b>Replace at the end of the day</b>                                                                                                                                                                                            |
| Planned maintenance                                           | <ul style="list-style-type: none"> <li>- Regular inspection for leakage and smooth operation</li> <li>- Keep a record of the valve</li> <li>- Use the statistics for planning of inspections and future maintenance.</li> </ul> |

Study the instructions carefully.

The items refer to the parts list and service kits section - see section 7 Parts list and service kits.

### 5.2 Disassembly and assembly

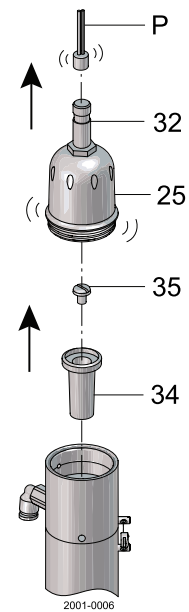
#### Step 1

#### DN25 - Replacement the product wetted seals

1. Remove electrical lines, sensor mounting and control air!
2. Unscrew the electrical lines (P) from sensor (32).
3. Unscrew hood (25).
4. Unscrew the screw (35) and remove the bracket (34).

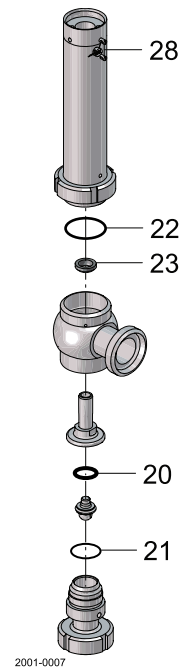
#### For pneumatic version

5. Dismantle the circlip (19) and remove the disc (18).



#### NOTE

Without removing the sealing (28) and changing the set pressure the following seals are replaced:  
 Shaft sealing (23), O-rings (20), (21) and (22).



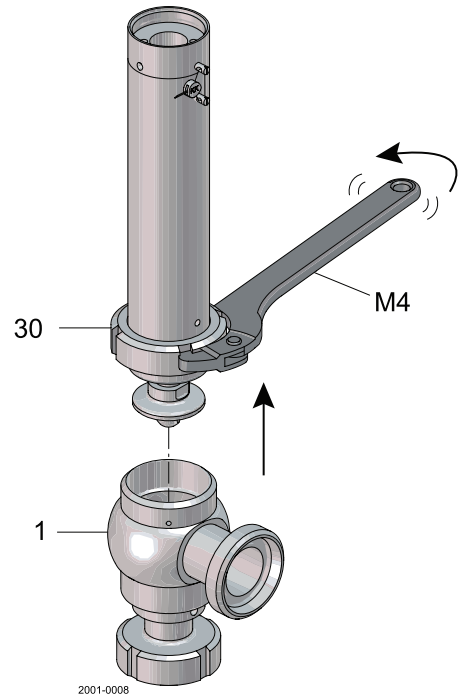
## 5 Maintenance

Study the instructions carefully.

The items refer to the parts list and service kits section - see section 7 Parts list and service kits.

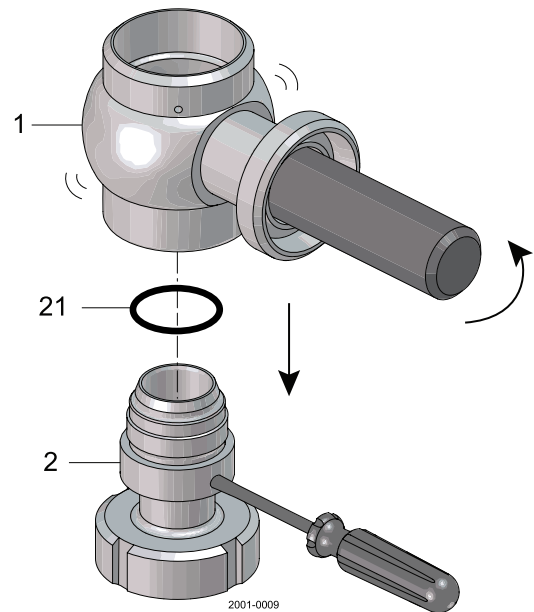
### Step 2

1. Unscrew the slotted nut (30) from the housing (1) with a hook wrench (M4).
2. Dismantle the complete valve insert from the housing (1).



### Step 3

- Unscrew the housing (1) from the screw in socket (2) and remove the O-ring (21).





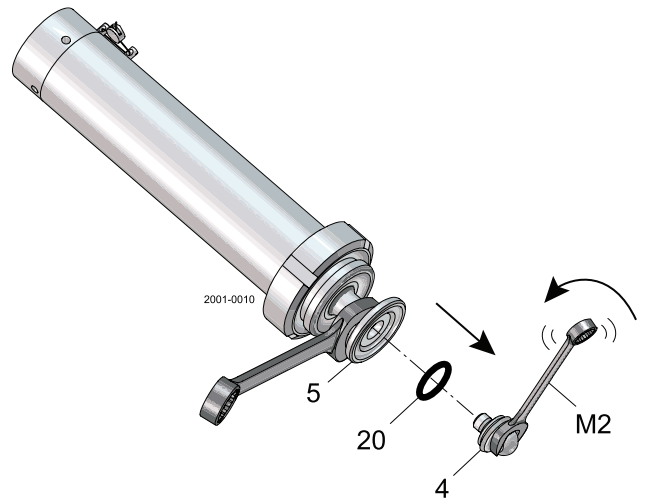
## 5 Maintenance

Study the instructions carefully.

The items refer to the parts list and service kits section - see section 7 Parts list and service kits.

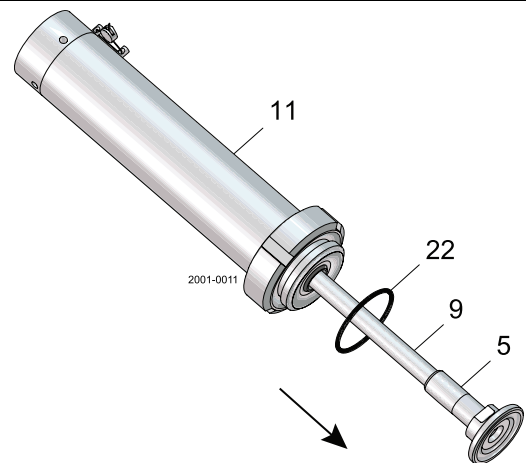
### Step 4

1. Unscrew the piston plate (4) from the piston (5).
2. Remove O-ring (20).



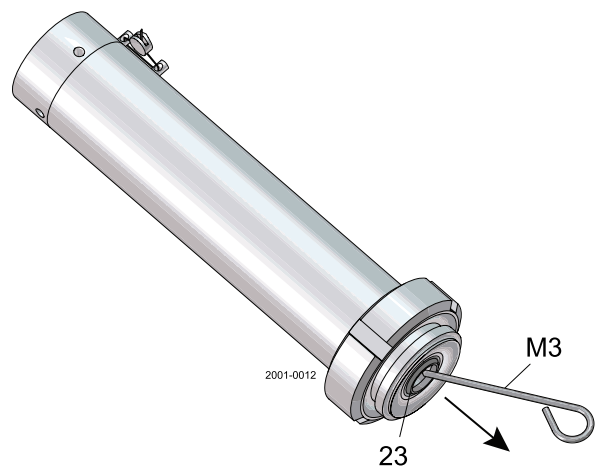
### Step 5

1. Remove the piston (5) and piston rod (9) axially out of the housing (11).
2. Remove O-ring (22).



### Step 6

Puncture the shaft sealing (23) at the centre with a pointed tool (M3) and remove it from the groove.



## 5 Maintenance

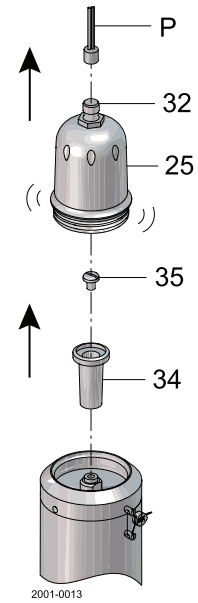
Study the instructions carefully.

The items refer to the parts list and service kits section - see section 7 Parts list and service kits.

### DN40-100 - Replacement the product wetted seals

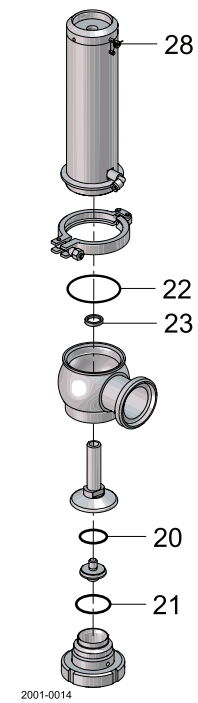
#### Step 1

1. Remove electrical lines, sensor mounting and control air.
2. Unscrew the electrical liner (P) from sensor (32).
3. Unscrew the screw (35) and remove bracket (34).



#### Step 2

Without removing the sealing (28) and changing the set pressure the following seals are replaced, Shaft sealing (23), O-rings (20), (21) and (22).

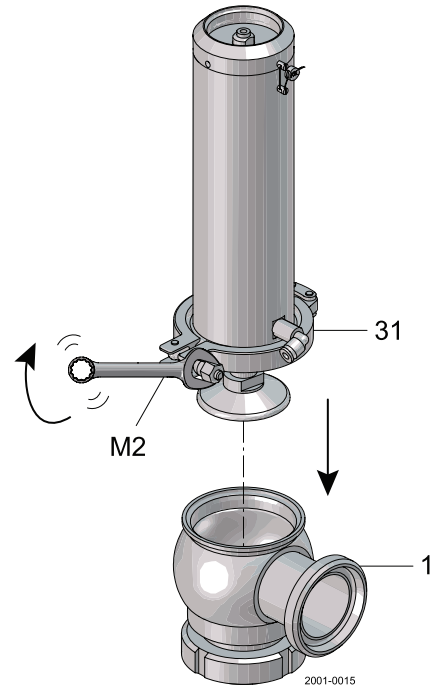


Study the instructions carefully.

The items refer to the parts list and service kits section - see section 7 Parts list and service kits.

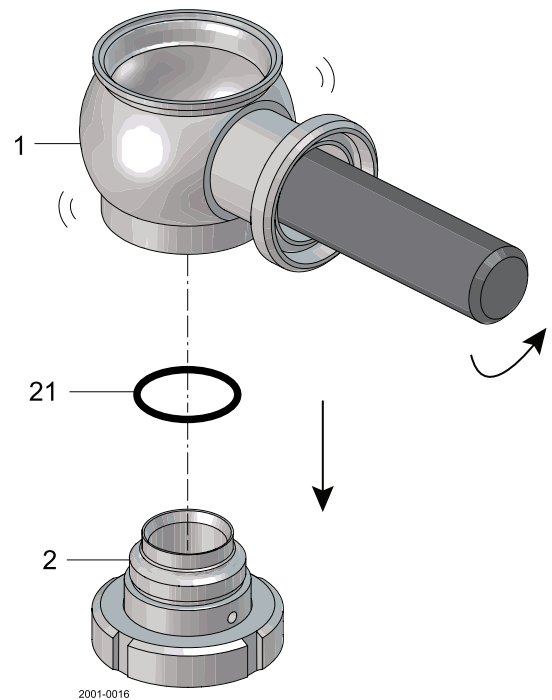
### Step 3

1. Unscrew the clamp coupling (31).
2. Dismantle the complete valve insert from the housing (1).



### Step 4

- Unscrew housing (1) from the screw-in socket (2) and remove the O-rings (21).



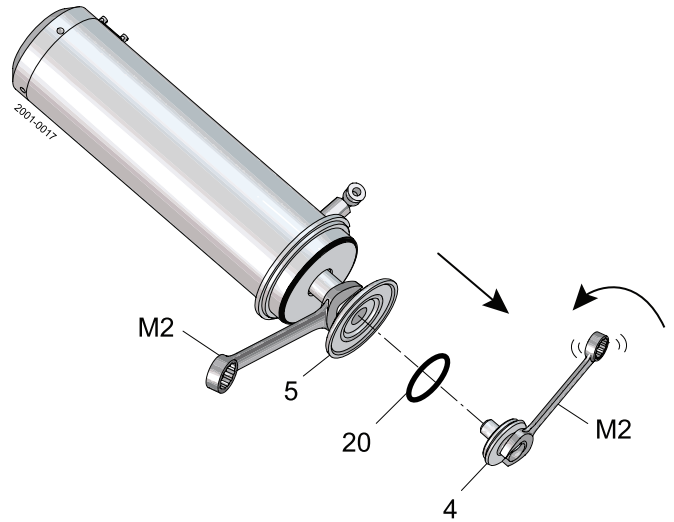
## 5 Maintenance

Study the instructions carefully.

The items refer to the parts list and service kits section - see section 7 Parts list and service kits.

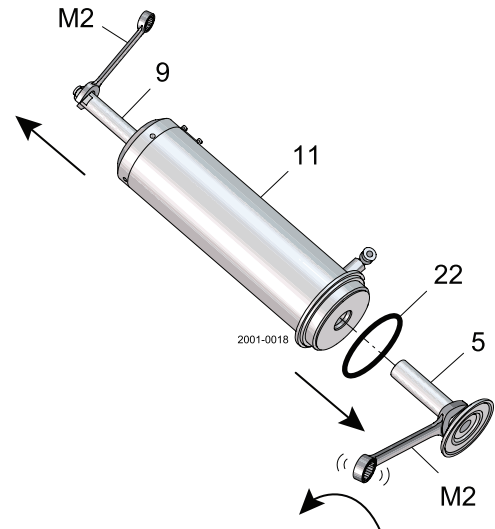
### Step 5

1. Unscrew the piston plate (4) from the piston (5).
2. Remove O-ring (20).



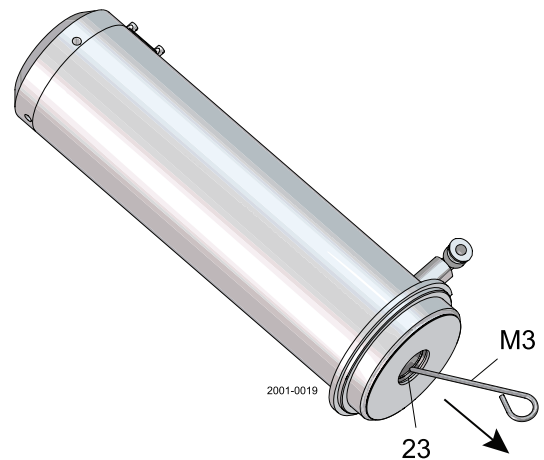
### Step 6

1. Unscrew the piston plate (5) from the piston rod (9).
2. Remove the piston (5) and piston rod (9) axially out of the housing (11).
3. Remove O-ring (22).



### Step 7

- Puncture the shaft sealing (23) at the centre with a pointed tool (M3) and remove it from the groove.



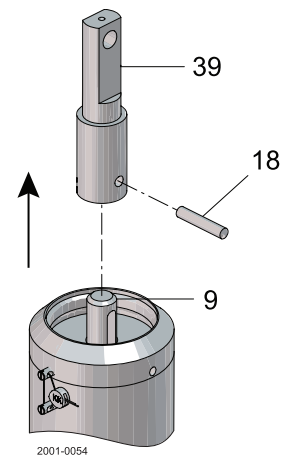
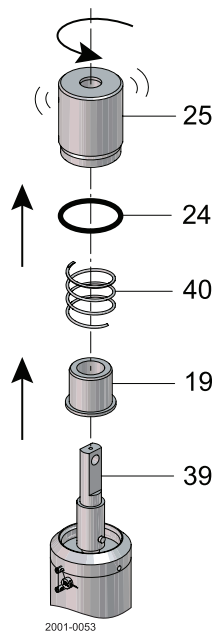
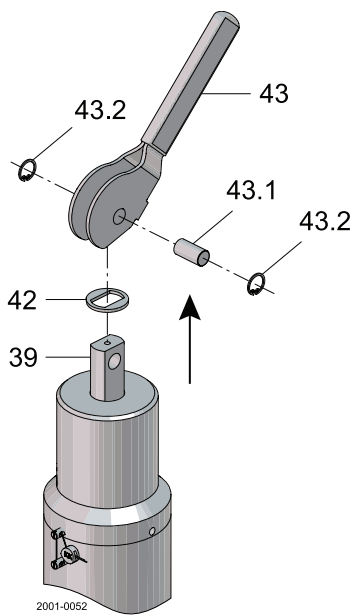
Study the instructions carefully.

The items refer to the parts list and service kits section - see section 7 Parts list and service kits.

### Disassemble - manual lifting only

#### Step 1

1. Dismantle the circlip (43.2) and remove the pin (43.1) from the lever (43).
2. Pull off the lever (43) from the rod (39) and remove the disc (42).
3. Unscrew the hood (25).
4. Remove O-ring (24), pressure spring (40) and spring guide (19).
5. Dismantle the pin (18) and remove the rod (39) from the piston (9).



## 6 Technical data

*It is important to observe the technical data during installation, operation and maintenance.  
Inform the personnel about the technical data.*

### 6.1 Technical data

The Alfa Laval Safety Valve is a spring loaded safety valve used to prevent overpressures in tanks and vessels in the dairy, food and beverage, and biopharm industries to reliably avoid damages to human beings and equipment. It is used to prevent inadmissible over pressures of fluids in tanks, containers and plant sections. From the factory the valve is configured with a set pressure upon request that is greater than the operating pressure. The valve opens against a spring force if the operating pressure increases the set pressure. Preferably, the Alfa Laval Safety Valve should be installed vertically.

| <b>Valve</b>                          |                                 |
|---------------------------------------|---------------------------------|
| Size                                  | DN25-DN100                      |
| Connection standard                   | Liner/nut - male DIN11851       |
| Connection option                     | Flange or clamp                 |
| Temperature ambient                   | +4° C to +45°C                  |
| Temperature product                   | +4° C to +95°C medium-dependent |
| Max. sterilisation temperature, EPDM  | +140°C (SIP 30 min.)            |
| Max. sterilisation temperature, HNBR  | +130°C (SIP 30 min.)            |
| Max. sterilisation temperature, FKM   | +140°C (SIP 30 min.)            |
| <b>Actuator</b>                       |                                 |
| Operating air pressure                | 5.5-8.0 bar                     |
| <b>Materials</b>                      |                                 |
| Product wetted steel parts            | 1.4404/AISI 316L                |
| Other steel parts                     | 1.4301/AISI304                  |
| Surface quality, product wetted parts | Ra 0.8 µm                       |
| External surface finish               | Ra 1.5-2.5 µm e-pol             |
| Product wetted seals, standard        | EPDM (FDA)                      |
| Product wetted seals, option          | HNBR (FDA), FKM (FDA)           |

#### **Noise**

One metre away from – and 1.6 metres above – the exhaust, the noise level of a valve actuator will be approximately 77 dB(a) without a noise damper and approximately 72 dB(a) with a damper, measured at an air pressure of 7 bar.

It is important to observe the technical data during installation, operation and maintenance.  
Inform the personnel about the technical data.

### 6.2 Identification

The image shows a technical data plate for a valve. The plate contains the following information:

- A:** Logo (ALFA LAVAL)
- B:** Order No. #####/###
- C:** Valve No. #####
- D:** Type No. 6357#####
- E:** Size DN ### A<sub>o</sub> #### mm<sup>2</sup>
- F:** K<sub>dr</sub> #.## -L, Lift #.## mm
- G:** T<sub>s</sub> +5/+100°C
- H:** Lift
- I:** CE 0036
- J:** EN ISO 4126-1
- K:** EAC
- L:** MM/YYYY
- M:** AISI 316L
- N:** p<sub>set</sub> #.# bar
- O:** K<sub>dr</sub> #.## -G
- P:** Produced by KIESELMANN GmbH, Paul-Kieselmann-Str. 4-10, 75348 Knittlingen, GERMANY
- Q:** 2001-0059

Legend:

- A. Logo
- B. Order number
- C. Valve number
- D. Manufacturer number
- E. Size
- F. Coefficient of discharge (L = Liquid)
- G. Temperature
- H. Lift
- I. CE-Designation (notified body)
- J. Applicable standards
- K. Approval according to EAC
- L. Date of manufacture
- M. Material
- N. Narrowest flow area
- O. Set pressure
- P. Coefficient of discharge (G = gas)
- Q. Manufacturer

## 6 Technical data

*It is important to observe the technical data during installation, operation and maintenance.  
Inform the personnel about the technical data.*

### 6.3 Setting range

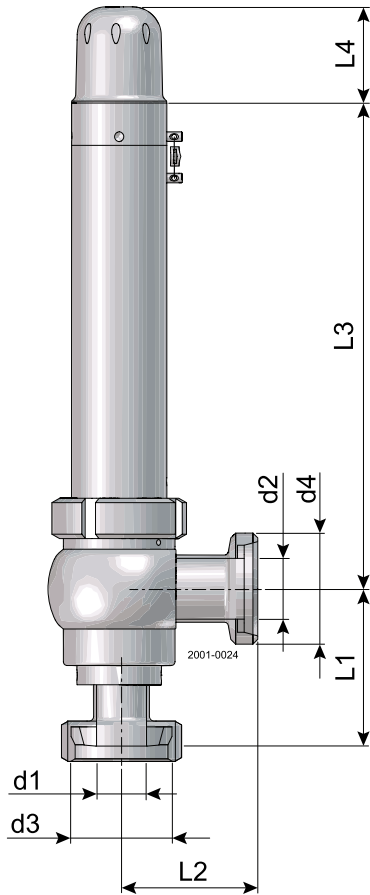
| Nominal pipe size<br>Seal: EPDM | Setting range<br>[bar] | Narrowest flow<br>area DO<br>[mm] | Inlet d2<br>[mm] | Outlet d1<br>[mm] | $\alpha$ -value<br>$K_{dr}$ -L<br>(liquid) | $\alpha$ -value<br>$K_{dr}$ -G<br>(gas) |
|---------------------------------|------------------------|-----------------------------------|------------------|-------------------|--------------------------------------------|-----------------------------------------|
| DN25                            | 0.2-0.9                | 26                                | 26               | 32                | 0.38                                       | 0.43                                    |
|                                 | 1.0-1.5                |                                   |                  |                   | 0.41                                       | 0.43                                    |
|                                 | 1.6-2.0                |                                   |                  |                   | 0.42                                       | *                                       |
|                                 | 2.1-2.5                |                                   |                  |                   | 0.44                                       | *                                       |
|                                 | 2.6-3.0                |                                   |                  |                   | 0.41                                       | *                                       |
|                                 | 3.1-4.5                |                                   |                  |                   | 0.47                                       | *                                       |
|                                 | 4.6-7.0                |                                   |                  |                   | 0.45                                       | *                                       |
| 7.1-12.0                        | 0.40                   | *                                 |                  |                   |                                            |                                         |
| DN40                            | 0.2-1.0                | 32                                | 32               | 38                | 0.50                                       | 0.55                                    |
|                                 | 1.1-1.4                |                                   |                  |                   | 0.39                                       | 0.50                                    |
|                                 | 1.5-2.4                |                                   |                  |                   | 0.46                                       | 0.50                                    |
|                                 | 2.5-3.0                |                                   |                  |                   | 0.48                                       | 0.50                                    |
|                                 | 3.1-4.4                |                                   |                  |                   | 0.38                                       | 0.43                                    |
|                                 | 4.5-7.0                |                                   |                  |                   | 0.44                                       | 0.43                                    |
|                                 | 7.1-12.0               |                                   |                  |                   | 0.35                                       | 0.30                                    |
| DN50                            | 0.2-0.9                | 38                                | 38               | 50                | 0.55                                       | 0.55                                    |
|                                 | 1.0-1.4                |                                   |                  |                   | 0.52                                       | 0.50                                    |
|                                 | 1.5-1.7                |                                   |                  |                   | 0.61                                       | 0.55                                    |
|                                 | 1.8-2.9                |                                   |                  |                   | 0.65                                       | 0.60                                    |
|                                 | 3.0-6.0                |                                   |                  |                   | 0.52                                       | 0.50                                    |
|                                 | 6.1-7.9                |                                   |                  |                   | 0.41                                       | 0.35                                    |
|                                 | 8.0-9.9                |                                   |                  |                   | 0.44                                       | 0.35                                    |
| 10.0-12.0                       | 0.48                   | 0.35                              |                  |                   |                                            |                                         |
| DN65                            | 0.2-0.9                | 50                                | 50               | 66                | 0.39                                       | 0.42                                    |
|                                 | 1.0-1.5                |                                   |                  |                   | 0.52                                       | 0.55                                    |
|                                 | 1.6-2.0                |                                   |                  |                   | 0.49                                       | 0.52                                    |
|                                 | 2.1-3.0                |                                   |                  |                   | 0.54                                       | 0.46                                    |
|                                 | 3.1-7.0                |                                   |                  |                   | 0.54                                       | 0.46                                    |
|                                 | 7.1-9.0                |                                   |                  |                   | 0.53                                       | 0.46                                    |
| DN80                            | 0.3-0.9                | 66                                | 66               | 81                | 0.47                                       | 0.47                                    |
|                                 | 1.0-1.9                |                                   |                  |                   | 0.50                                       | 0.45                                    |
|                                 | 2.0-3.3                |                                   |                  |                   | 0.50                                       | 0.45                                    |
|                                 | 3.4-4.3                |                                   |                  |                   | 0.50                                       | 0.44                                    |
|                                 | 4.4-6.2                |                                   |                  |                   | 0.43                                       | 0.36                                    |
|                                 | 6.3-8.0                |                                   |                  |                   | 0.50                                       | 0.36                                    |
| DN100                           | 0.3-1.1                | 81                                | 81               | 100               | 0.36                                       | 0.41                                    |
|                                 | 1.2-1.8                |                                   |                  |                   | 0.37                                       | 0.41                                    |
|                                 | 1.9-2.4                |                                   |                  |                   | 0.37                                       | 0.32                                    |
|                                 | 2.5-3.2                |                                   |                  |                   | 0.44                                       | 0.32                                    |

\* = not available

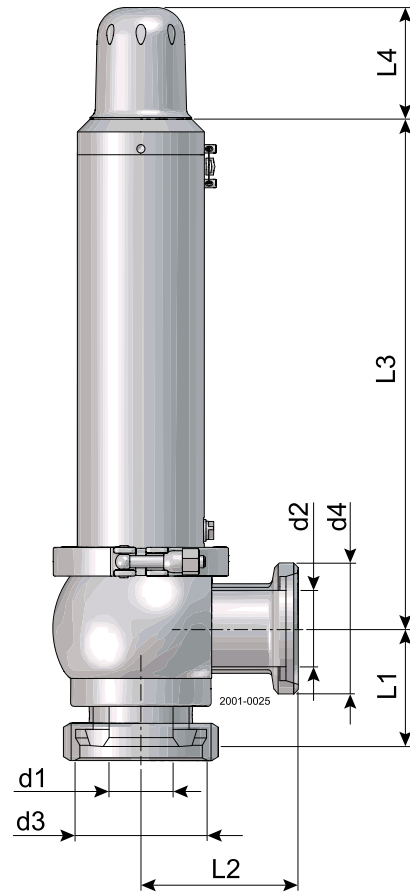


*It is important to observe the technical data during installation, operation and maintenance.  
Inform the personnel about the technical data.*

### 6.4 Dimensions



Standard - DN25

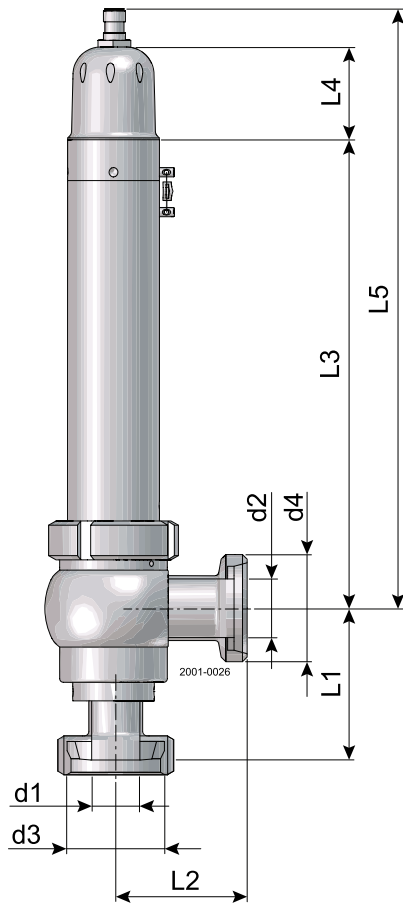


Standard - DN40-DN100

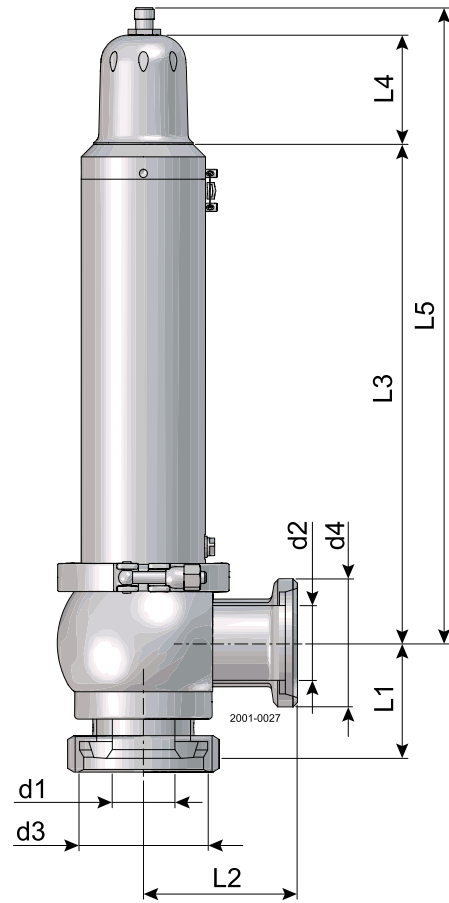
| Size  | d1 | d2  | d3        | d4        | L1  | L2  | L3    | L4 | Kg   |
|-------|----|-----|-----------|-----------|-----|-----|-------|----|------|
| DN25  | 26 | 32  | Rd52x1/6  | Rd58x1/6  | 82  | 72  | 253   | 50 | 6.8  |
| DN40  | 32 | 38  | Rd65x1/6  | Rd65x1/6  | 68  | 82  | 255   | 66 | 9.1  |
| DN50  | 38 | 50  | Rd78x1/6  | Rd78x1/6  | 70  | 93  | 301   | 66 | 1.3  |
| DN65  | 50 | 66  | Rd95x1/6  | Rd95x1/6  | 85  | 105 | 402   | 66 | 15   |
| DN80  | 66 | 81  | Rd110x1/4 | Rd110x1/4 | 100 | 115 | 407.5 | 66 | 22   |
| DN100 | 81 | 100 | Rd130x1/4 | Rd130x1/4 | 130 | 130 | 418   | 66 | 28.2 |

## 6 Technical data

*It is important to observe the technical data during installation, operation and maintenance.  
Inform the personnel about the technical data.*



Standard with inductive sensor - DN25

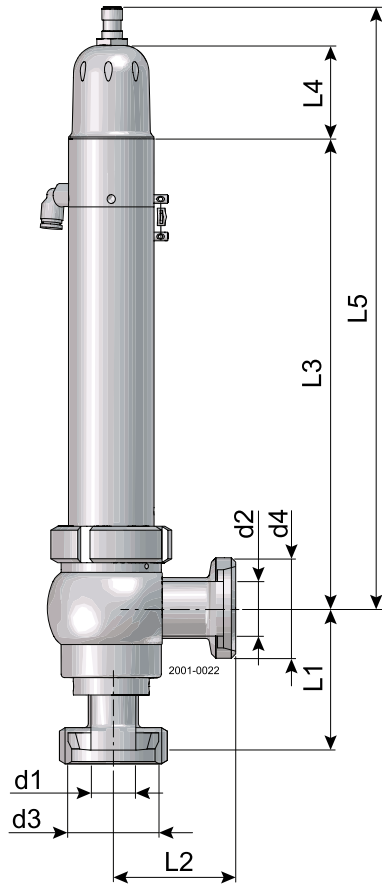


Standard with inductive sensor - DN40-DN100

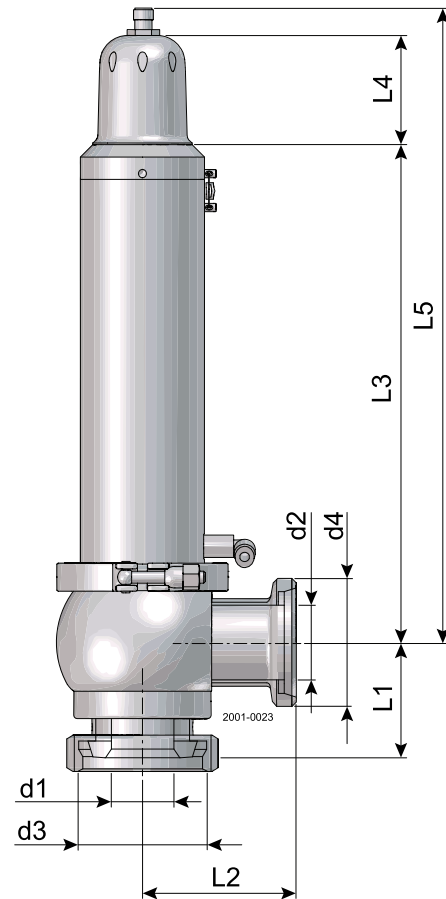
| Size  | d1 | d2  | d3        | d4             | L1  | L2  | L3    | L4 | L5  | Kg   |
|-------|----|-----|-----------|----------------|-----|-----|-------|----|-----|------|
| DN25  | 26 | 32  | Rd52x1/6  | Rd58x1/6       | 82  | 72  | 253   | 50 | 324 | 6.8  |
| DN40  | 32 | 38  | Rd65x1/6  | Rd65x1/6       | 68  | 82  | 255   | 66 | 338 | 9.1  |
| DN50  | 38 | 50  | Rd78x1/6  | Rd78x1/6       | 70  | 93  | 301   | 66 | 384 | 1.3  |
| DN65  | 50 | 66  | Rd95x1/6  | Rd95x1/6       | 85  | 105 | 402   | 66 | 484 | 15   |
| DN80  | 66 | 81  | Rd110x1/4 | Rd110x-<br>1/4 | 100 | 115 | 407.5 | 66 | 489 | 22   |
| DN100 | 81 | 100 | Rd130x1/4 | Rd130x-<br>1/4 | 130 | 130 | 418   | 66 | 501 | 28.2 |

## 6 Technical data

*It is important to observe the technical data during installation, operation and maintenance.  
Inform the personnel about the technical data.*



Pneumatic lifting with inductive sensor - DN25

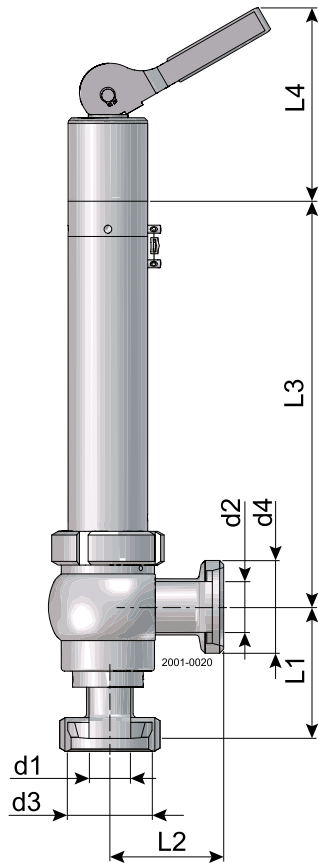


Pneumatic lifting with inductive sensor - DN40-DN100

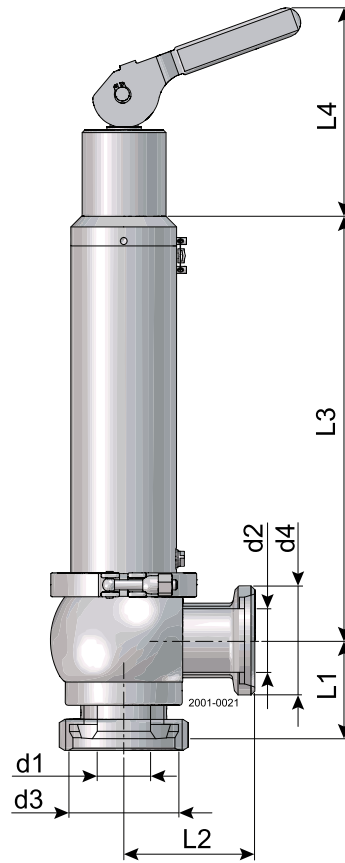
| Size  | d1 | d2  | d3        | d4             | L1  | L2  | L3    | L4 | L5  | Kg   |
|-------|----|-----|-----------|----------------|-----|-----|-------|----|-----|------|
| DN25  | 26 | 32  | Rd52x1/6  | Rd58x1/6       | 82  | 72  | 253   | 50 | 324 | 6.8  |
| DN40  | 32 | 38  | Rd65x1/6  | Rd65x1/6       | 68  | 82  | 255   | 66 | 338 | 9.1  |
| DN50  | 38 | 50  | Rd78x1/6  | Rd78x1/6       | 70  | 93  | 301   | 66 | 384 | 1.3  |
| DN65  | 50 | 66  | Rd95x1/6  | Rd95x1/6       | 85  | 105 | 402   | 66 | 484 | 15   |
| DN80  | 66 | 81  | Rd110x1/4 | Rd110x-<br>1/4 | 100 | 115 | 407.5 | 66 | 489 | 22   |
| DN100 | 81 | 100 | Rd130x1/4 | Rd130x-<br>1/4 | 130 | 130 | 418   | 66 | 501 | 28.2 |

## 6 Technical data

*It is important to observe the technical data during installation, operation and maintenance.  
Inform the personnel about the technical data.*



Manual lifting - DN25

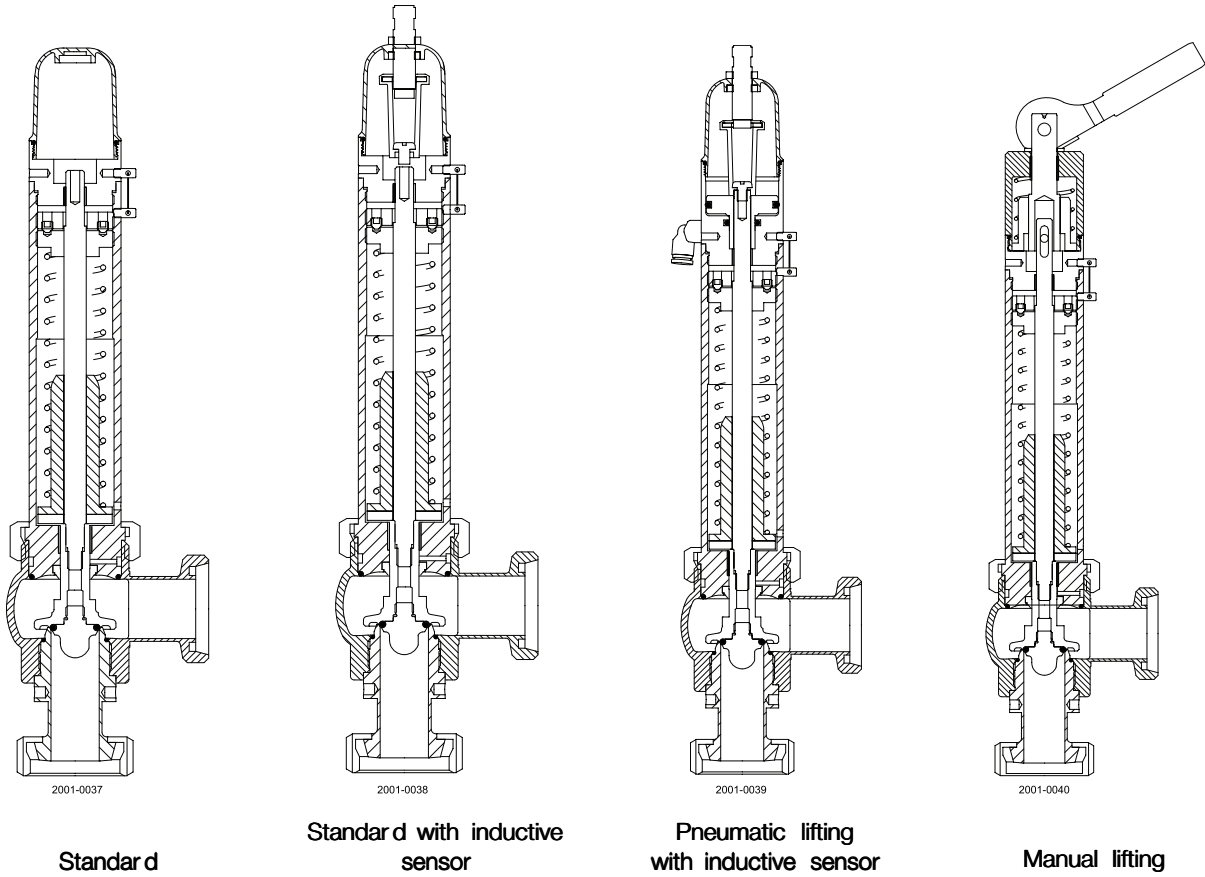


Manual lifting - DN40-DN100

| Size  | d1 | d2  | d3        | d4        | L1  | L2  | L3    | L4          | Kg   |
|-------|----|-----|-----------|-----------|-----|-----|-------|-------------|------|
| DN25  | 26 | 32  | Rd52x1/6  | Rd58x1/6  | 82  | 72  | 253   | 141-182     | 7.5  |
| DN40  | 32 | 38  | Rd65x1/6  | Rd65x1/6  | 68  | 82  | 255   | 152-232     | 10.3 |
| DN50  | 38 | 50  | Rd78x1/6  | Rd78x1/6  | 70  | 93  | 301   | 154-234     | 15.5 |
| DN65  | 50 | 66  | Rd95x1/6  | Rd95x1/6  | 85  | 105 | 402   | 153-233     | 16.2 |
| DN80  | 66 | 81  | Rd110x1/4 | Rd110x1/4 | 100 | 115 | 407.5 | 152.5-232.5 | 23.2 |
| DN100 | 81 | 100 | Rd130x1/4 | Rd130x1/4 | 130 | 130 | 418   | 152-232     | 29.6 |

## 6 Technical data

*It is important to observe the technical data during installation, operation and maintenance.  
Inform the personnel about the technical data.*

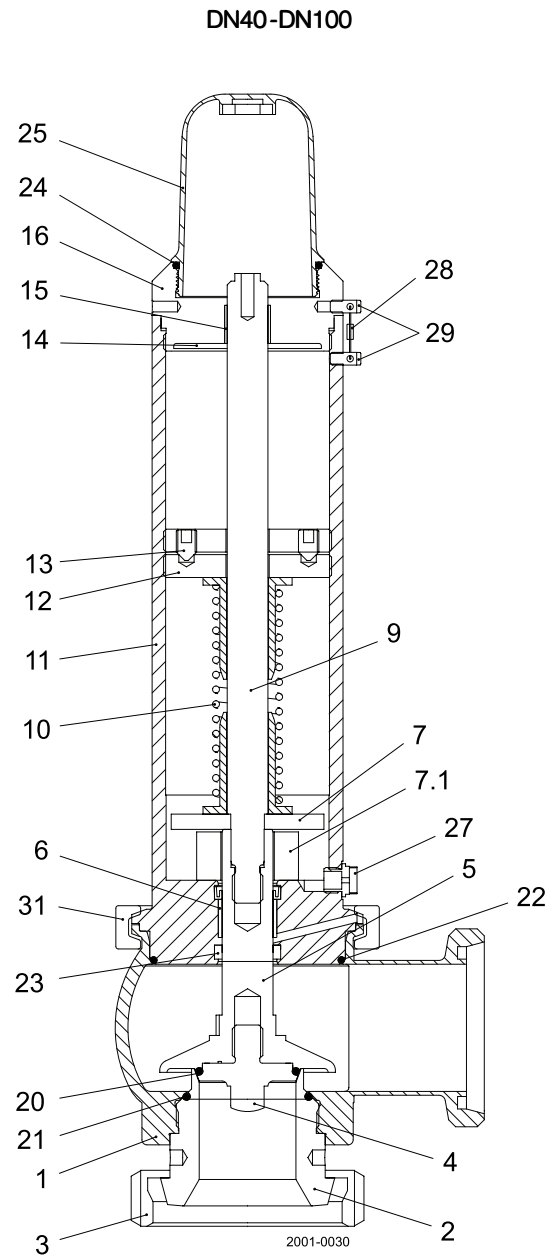
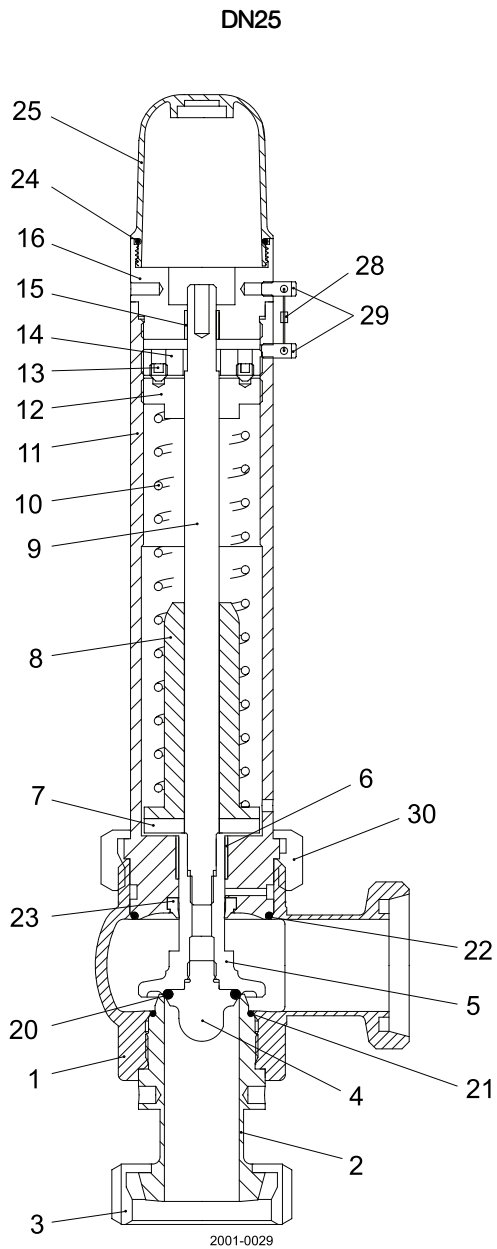


## 7 Parts list and service kits

Always use Alfa Laval genuine spare parts.

The warranty of Alfa Laval products is dependent on the use of Alfa Laval genuine spare parts.

### 7.1 Standard, sizes DN25-DN100



## 7 Parts list and service kits

*Always use Alfa Laval genuine spare parts.*

*The warranty of Alfa Laval products is dependent on the use of Alfa Laval genuine spare parts.*

### Parts list

| Pos. | Qty | Denomination                |
|------|-----|-----------------------------|
| 1    | 1   | Body                        |
| 2    | 1   | Screw-in socket             |
| 3    | 1   | Slotted nut                 |
| 4    | 1   | Piston plate                |
| 5    | 1   | Piston                      |
| 6    | 1   | Plain bearing               |
| 7    | 1   | Spring disc                 |
| 7.1  | 1   | Distance ring               |
| 8    | 1   | Spring guide                |
| 9    | 1   | Piston rod                  |
| 10   | 1   | Pressure spring             |
| 11   | 1   | Spring housing              |
| 12   | 1   | Setting disc                |
| 13   | 2   | Headless pin                |
| 14   | 1   | Locking disc                |
| 15   | 1   | Plain bearing               |
| 16   | 1   | Cover plate                 |
| 20 ▲ | 1   | O-ring                      |
| 21 ▲ | 1   | O-ring                      |
| 22 ▲ | 1   | O-ring                      |
| 23 ▲ | 1   | Shaft sealing               |
| 24   | 1   | O-ring                      |
| 25   | 1   | Hood                        |
| 25.1 | 1   | Hood incl. o-ring (pos. 24) |
| 27   | 1   | Screw plug - deaeration     |
| 28   | 1   | SealingSer                  |
| 29   | 2   | Screw                       |
| 30   | 1   | Slotted nut                 |
| 31   | 1   | Clamp coupling              |

### Service kits

| Denomination              | DN25       | DN40       | DN50       | DN65       | DN80       | DN100      |
|---------------------------|------------|------------|------------|------------|------------|------------|
| ▲ Service kit, EPDM ..... | 9614446901 | 9614446902 | 9614446903 | 9614446904 | 9614446905 | 9614446906 |

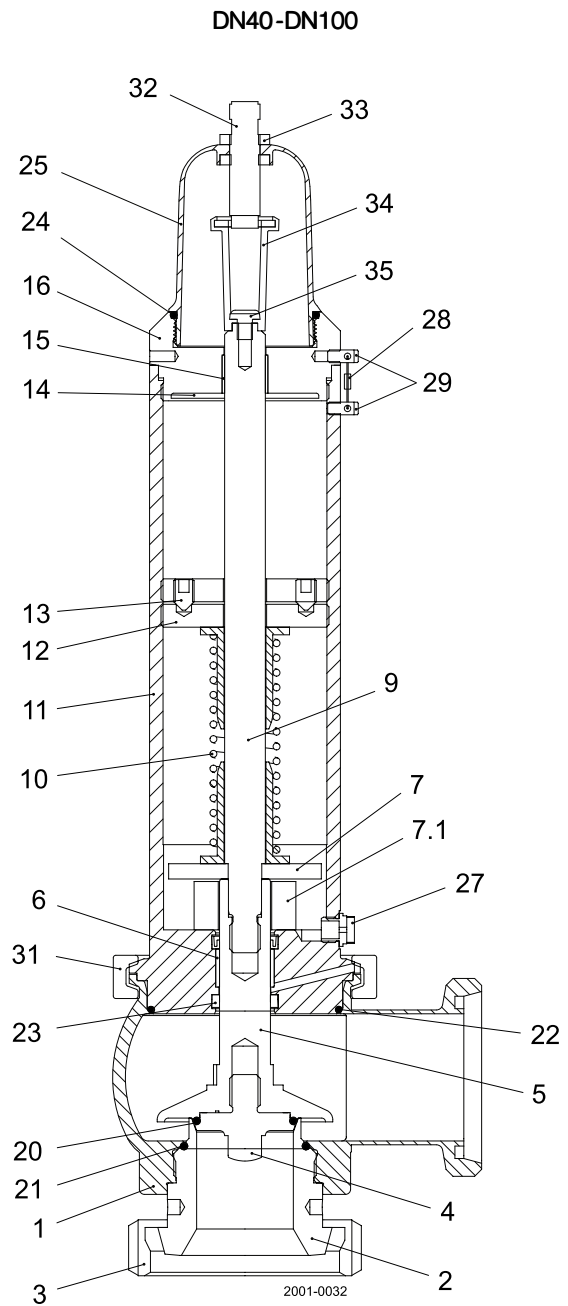
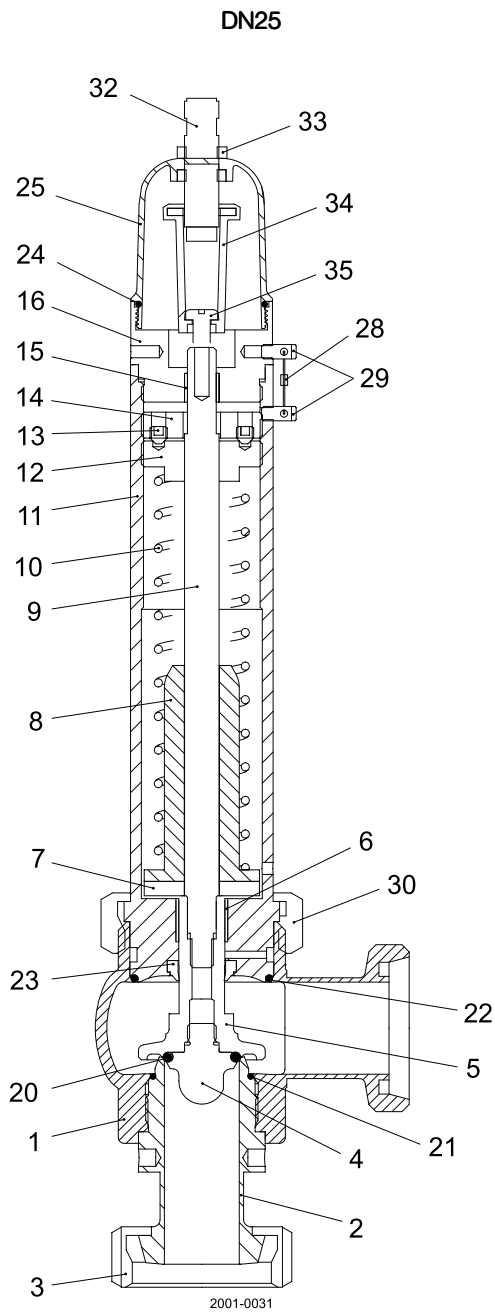
900-728

## 7 Parts list and service kits

Always use Alfa Laval genuine spare parts.

The warranty of Alfa Laval products is dependent on the use of Alfa Laval genuine spare parts.

### 7.2 Standard with inductive sensor, sizes DN25–DN100





## 7 Parts list and service kits

Always use Alfa Laval genuine spare parts.

The warranty of Alfa Laval products is dependent on the use of Alfa Laval genuine spare parts.

### Parts list

| Pos. | Qty | Denomination                |
|------|-----|-----------------------------|
| 1    | 1   | Body                        |
| 2    | 1   | Screw-in socket             |
| 3    | 1   | Slotted nut                 |
| 4    | 1   | Piston plate                |
| 5    | 1   | Piston                      |
| 6    | 1   | Plain bearing               |
| 7    | 1   | Spring disc                 |
| 7.1  | 1   | Distance ring               |
| 8    | 1   | Spring guide                |
| 9    | 1   | Piston rod                  |
| 10   | 1   | Pressure spring             |
| 11   | 1   | Spring housing              |
| 12   | 1   | Setting disc                |
| 13   | 2   | Headless pin                |
| 14   | 1   | Locking disc                |
| 15   | 1   | Plain bearing               |
| 16   | 1   | Cover plate                 |
| 20 ▲ | 1   | O-ring                      |
| 21 ▲ | 1   | O-ring                      |
| 22 ▲ | 1   | O-ring                      |
| 23 ▲ | 1   | Shaft sealing               |
| 24   | 1   | O-ring                      |
| 25   | 1   | Hood                        |
| 25.1 | 1   | Hood incl. o-ring (pos. 24) |
| 27   | 1   | Screw plug - deaeration     |
| 28   | 1   | Sealing                     |
| 29   | 2   | Screw                       |
| 30   | 1   | Slotted nut                 |
| 31   | 1   | Clamp coupling              |
| 32   | 1   | Sensor                      |
| 33   | 1   | Nut                         |
| 34   | 1   | Bracket                     |
| 35   | 1   | Screw                       |

### Service kits

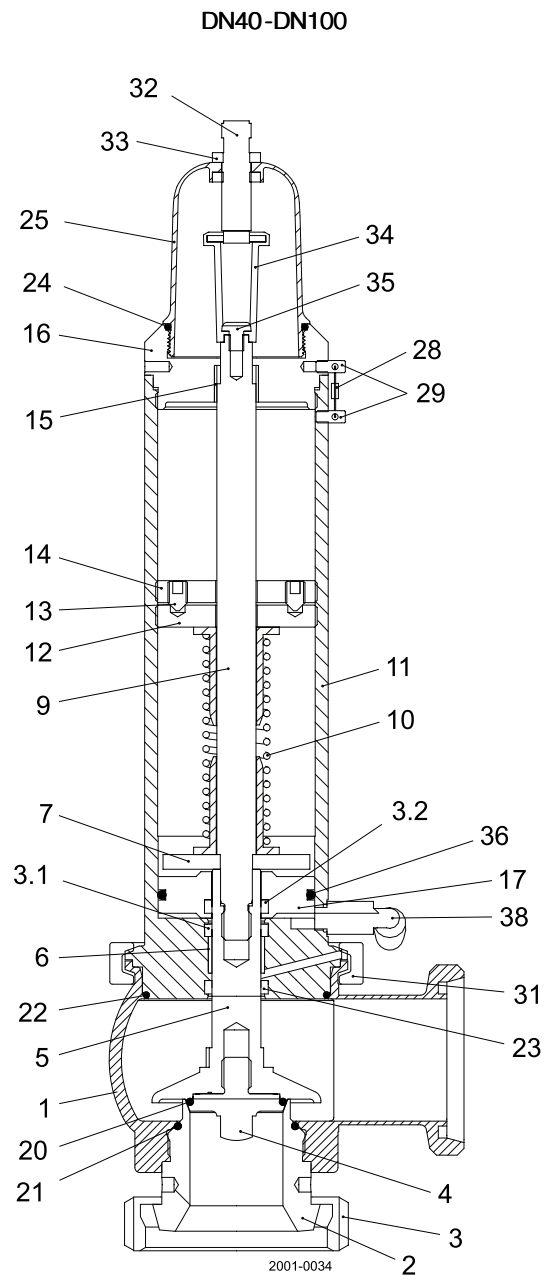
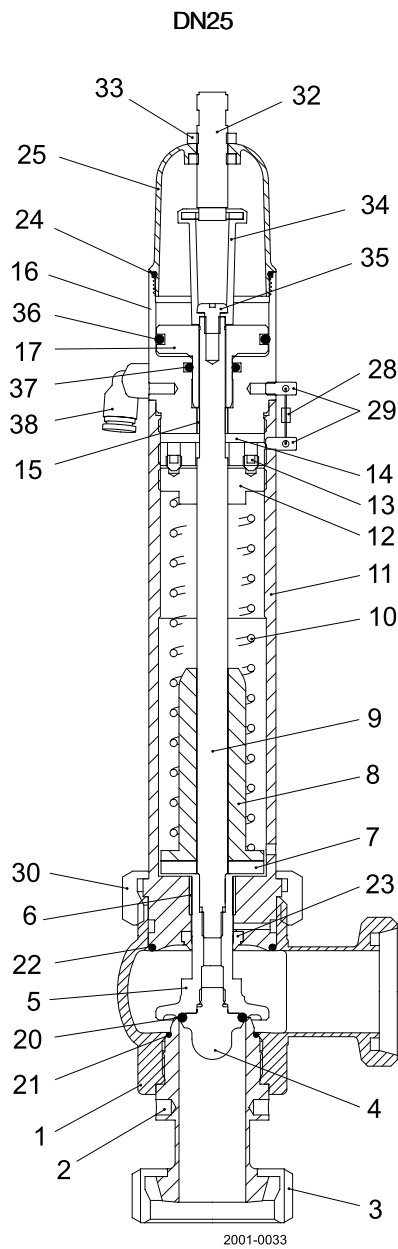
| Denomination              | DN25       | DN40       | DN50       | DN65       | DN80       | DN100      |
|---------------------------|------------|------------|------------|------------|------------|------------|
| ▲ Service kit, EPDM ..... | 9614446901 | 9614446902 | 9614446903 | 9614446904 | 9614446905 | 9614446906 |

## 7 Parts list and service kits

Always use Alfa Laval genuine spare parts.

The warranty of Alfa Laval products is dependent on the use of Alfa Laval genuine spare parts.

### 7.3 Pneumatic lifting with inductive sensor, sizes DN25–DN100



## 7 Parts list and service kits

Always use Alfa Laval genuine spare parts.

The warranty of Alfa Laval products is dependent on the use of Alfa Laval genuine spare parts.

### Parts list

| Pos. | Qty | Denomination                |
|------|-----|-----------------------------|
| 1    | 1   | Body                        |
| 2    | 1   | Screw-in socket             |
| 3    | 1   | Slotted nut                 |
| 3.1  | 1   | Sealing                     |
| 3.2  | 1   | Sealing                     |
| 4    | 1   | Piston plate                |
| 5    | 1   | Piston                      |
| 6    | 1   | Plain bearing               |
| 7    | 1   | Spring disc                 |
| 8    | 1   | Spring guide                |
| 9    | 1   | Piston rod                  |
| 10   | 1   | Pressure spring             |
| 11   | 1   | Spring housing              |
| 12   | 1   | Setting disc                |
| 13   | 2   | Headless pin                |
| 14   | 1   | Locking disc                |
| 15   | 1   | Plain bearing               |
| 16   | 1   | Cover plate                 |
| 17   | 1   | Piston                      |
| 20 ▲ | 1   | O-ring                      |
| 21 ▲ | 1   | O-ring                      |
| 22 ▲ | 1   | O-ring                      |
| 23 ▲ | 1   | Shaft sealing               |
| 24   | 1   | O-ring                      |
| 25   | 1   | Hood                        |
| 25.1 | 1   | Hood incl. o-ring (pos. 24) |
| 28   | 1   | Sealing                     |
| 29   | 2   | Screw                       |
| 30   | 1   | Slotted nut                 |
| 31   | 1   | Clamp coupling              |
| 32   | 1   | Sensor                      |
| 33   | 1   | Nut                         |
| 34   | 1   | Bracket                     |
| 35   | 1   | Screw                       |
| 36   | 1   | O-ring                      |
| 37   | 1   | O-ring                      |
| 38   | 1   | Air connection              |

### Service kits

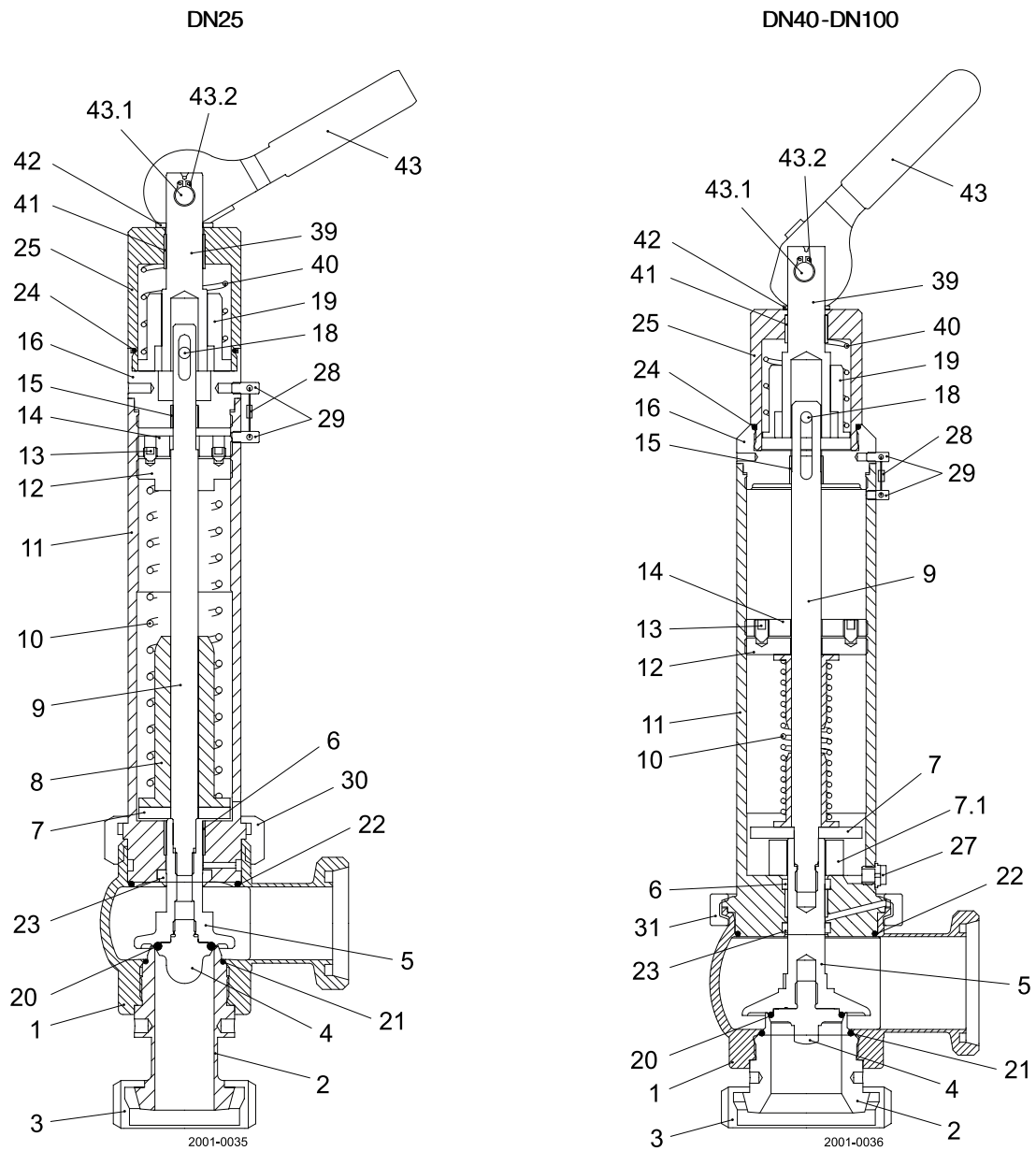
| Denomination              | DN25       | DN40       | DN50       | DN65       | DN80       | DN100      |
|---------------------------|------------|------------|------------|------------|------------|------------|
| ▲ Service kit, EPDM ..... | 9614446901 | 9614446902 | 9614446903 | 9614446904 | 9614446905 | 9614446906 |

## 7 Parts list and service kits

Always use Alfa Laval genuine spare parts.

The warranty of Alfa Laval products is dependent on the use of Alfa Laval genuine spare parts.

### 7.4 Manual lifting, sizes DN25–DN100



## 7 Parts list and service kits

Always use Alfa Laval genuine spare parts.

The warranty of Alfa Laval products is dependent on the use of Alfa Laval genuine spare parts.

### Parts list

| Pos. | Qty | Denomination            |
|------|-----|-------------------------|
| 1    | 1   | Body                    |
| 2    | 1   | Screw-in socket         |
| 3    | 1   | Slotted nut             |
| 4    | 1   | Piston plate            |
| 5    | 1   | Piston                  |
| 6    | 1   | Plain bearing           |
| 7    | 1   | Spring disc             |
| 8    | 1   | Spring guide            |
| 9    | 1   | Piston rod              |
| 10   | 1   | Pressure spring         |
| 11   | 1   | Spring housing          |
| 12   | 1   | Setting disc            |
| 13   | 2   | Headless pin            |
| 14   | 1   | Locking disc            |
| 15   | 1   | Plain bearing           |
| 16   | 1   | Cover plate             |
| 18   | 1   | Pin                     |
| 19   | 1   | Spring guide            |
| 20 ▲ | 1   | O-ring                  |
| 21 ▲ | 1   | O-ring                  |
| 22 ▲ | 1   | O-ring                  |
| 23 ▲ | 1   | Shaft sealing           |
| 24   | 1   | O-ring                  |
| 25   | 1   | Hood                    |
| 27   | 1   | Screw plug - deaeration |
| 28   | 1   | Sealing                 |
| 29   | 2   | Screw                   |
| 30   | 1   | Slotted nut             |
| 31   | 1   | Clamp coupling          |
| 39   | 1   | Rod                     |
| 40   | 1   | Pressure spring         |
| 41   | 1   | Bearing                 |
| 42   | 1   | Disc                    |
| 43   | 1   | Lever                   |
| 43.1 | 1   | Pin                     |
| 43.2 | 1   | Circlip                 |

### Service kits

| Denomination              | DN25       | DN40       | DN50       | DN65       | DN80       | DN100      |
|---------------------------|------------|------------|------------|------------|------------|------------|
| ▲ Service kit, EPDM ..... | 9614446901 | 9614446902 | 9614446903 | 9614446904 | 9614446905 | 9614446906 |

**How to contact Alfa Laval**

Contact details for all countries are continually updated on our website.

Please visit [www.alfalaval.com](http://www.alfalaval.com) to access the information directly.

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