

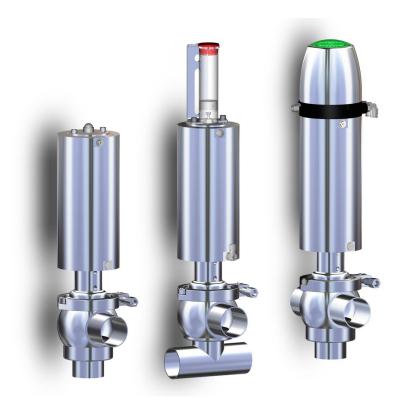
Translation of the original

# **Operating Instructions**

# KI-DS Overflow valve

Type 557x

KI-DS Angle valve 5571 KI-DS T-valve 5572 KI-DS Cross valve 5573 KI-DS Loop valve 5575



ENGLISH EN

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### 1 General informations

#### 1.1 Informations for your safety

We are pleased that you have decided for a high-class KIESELMANN product. With correct application and adequate maintenance, our products provide long time and reliable operation.

Before installation and initiation, please carefully read this instruction manual and the security advices contained in it. This guarantees reliable and safe operation of this product and your plant respectively. Please note that an incorrect application of the process components may lead to great material damages and personal injury.

In case of damages caused by non observance of this instruction manual, incorrect initiation, handling or external interference, guarantee and warranty will lapse!

Our products are produced, mounted and tested with high diligence. However, if there is still a reason for complaint, we will naturally try to give you entire satisfaction within the scope of our warranty. We will be at your disposal also after expiration of the warranty. In addition, you will also find all necessary instructions and spare part data for maintenance in this instruction manual. If you don't want to carry out the maintenance by yourself, our KIESELMANN - service team will naturally be at your disposal.

#### 1.2 Marking of security instructions

Hints are available in the chapter "safety instructions" or directly before the respective operation instruction. The hints are highlighted with a danger symbol and a signal word. Texts beside these symbols have to be read and adhered to by all means. Please continue with the text and with the handling at the valve only afterwards.

| Symbol | Signal word | Meaning   |
|--------|-------------|---|
|        | DANGER      | Imminent danger which will result severe personal injury or death.                              |
|        | WARNING     | Imminent danger which may result severe personal injury or death.                               |
|        | CAUTION     | Dangerous situation which may cause slight personal injury or material damages.                 |
| 1      | NOTICE      | An harmful situation which may result in damages of the product itself or of adjacent vicinity. |
| 1      | INFORMATION | Marks application hints and other information which is particularly useful.                     |

#### 1.3 General designated use

The fitting is designed exclusively for the purposes described below. Using the fitting for purposes other than those mentioned is considered contrary to its designated use. KIESELMANN cannot be held liable for any damage resulting from such use. The risk of such misuse lies entirely with the user. The prerequisite for the reliable and safe operation of the fitting is proper transportation and storage as well as competent installation and assembly. Operating the fitting within the limits of its designated use also involves observing the operating, inspection and maintenance instructions.

#### 1.4 Personnel

Personnel entrusted with the operation and maintenance of the tank safety system must have the suitable qualification to carry out their tasks. They must be informed about possible dangers and must understand and observe the safety instructions given in the relevant manual. Only allow qualified personnel to make electrical connections.



### 1.5 Modifications, spare parts, accessories

Unauthorized modifications, additions or conversions which affect the safety of the fitting are not permitted. Safety devices must not be bypassed, removed or made inactive. Only use original spare parts and accessories recommended by the manufacturer.

#### 1.6 General instructions

The user is obliged to operate the fitting only when it is in good working order. In addition to the instructions given in the operating manual, please observe the relevant accident prevention regulations, generally accepted safety regulations, regulations effective in the country of installation, working and safety instructions effective in the user's plant.

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# 2 Safety instructions

#### 2.1 Intended use

The overflow valve is used to set the liquid pressure in a section of a closed circular pipeline, in tanks and vessels in plants of the food and drink industry, pharmaceutical and chemical industries as well as in biotechnology.

#### 2.2 General notes



#### **NOTICE - observe the operating instructions**

To avoid danger and damage, the fitting must be used in accordance with the safety instructions and technical data contained in the operating instructions.



#### NOTICE

All data are in line with the current state of development. Subject to change as a result of technical progress.

#### 2.3 General safety instructions



#### **MARNING**

#### Risk of injury by moving parts

Do not grab into the valve when the actuator is pressurized. Limbs can be crushing or amputating.

- Remove the control air line before dismantling.
- Ensure that the actuator is unpressurized.



#### **MARNING**

#### Risk of injury by outflowing medium

Dismantling the valve or valve assemblies from the plant can cause injuries.

- Medias flowing through the leakage drain outlet are to be drained off without splashing into a discharge arrangement.
- Carry the disassembling only if when the plant has been rendered pressure-less and free of liquid and gas.



### **A** CAUTION

When mounting the clamps, the max. torque must not be exceeded.

(see technical data)



#### **A** CAUTION

To avoid air leaking, only use pneumatic connection parts that have an O-ring seal facing the even surface.



#### **A** CAUTION

Before starting the system, the entire pipeline system must be thoroughly cleaned.



#### **A** CAUTION

Steps should be taken to ensure that no external forces are exerted on the fitting.

### 3 Delivery, transport and storage

#### 3.1 Delivery

- · Immediately after receipt check the delivery for completeness and transport damages.
- · Remove the packaging from the product.
- · Retain packaging material, or expose of according to local regulations.

#### 3.2 Transport



### **A** CAUTION

#### Risk of injury and damage to the product

During the transport the generally acknowledged rules of technology, the national accident prevention regulations and company internal work and safety regulations must be observed.

#### 3.3 Storage



#### **NOTICE**

#### Damage to the product due to improper storage!

Observe storage instructions

avoid a prolonged storage



#### **INFORMATION**

#### Recommendation for longer storage

We recommend regularly checking the product and the prevailing storage conditions during long storage times.

- · To avoid damage to seals and bearings,
  - products up to DN 125 / OD 5 inch should be stored horizontally for maximum 6 months.
  - products larger than DN 125 / 5 inch, should be stored in the upright position with the actuator on top.
- · Don't store any objects on the products.
- · Protect the products for wetness, dust and dirt.
- The product should be stored in a dry and well ventilated room at a constant temperature (optimal indoor temperature: 25 C±5; indoor humidity data 60% ±5%).
- · Protect seals, bearings and plastic parts for UV light and ozone.

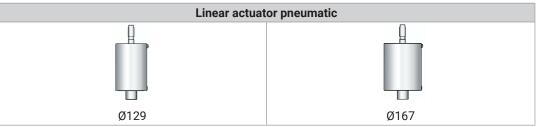
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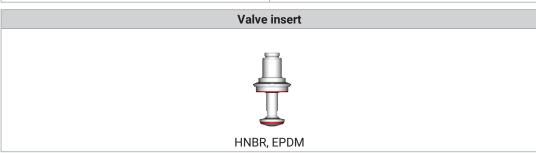


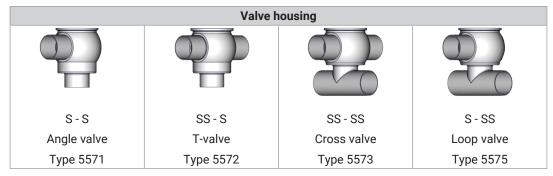
# 4 Specification

## 4.1 Modular system

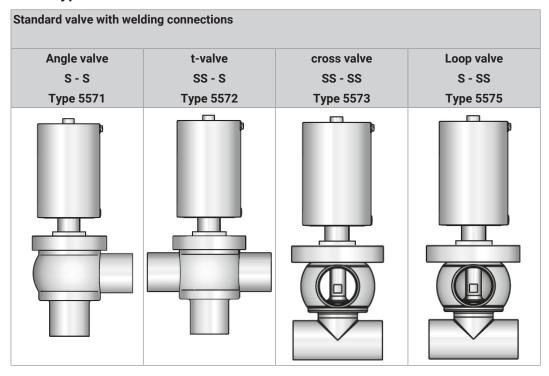








# 4.2 Valve types



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# 5 Function and operation

#### 5.1 Description of function

The overflow valve is used to relieve pressure in plants or vessels event of impermissible pressures of liquid media. The leaking medium can be discharged controlled to the atmosphere or can be fed back into a closed system or forwarded.

#### 5.1.1 Adjusting range / Actuator type

There are two types of actuator (Ø 104 mm and Ø 167 mm) available for overflow valves type 557x. Both drive types are equipped with different pressure springs. A total of 5 different drive variables are obtained which are used depending on the nominal width for the appropriate setting ranges.

| Nominal size | Adjusting range | Act   | uator Type Ø | 104   | Actuator 7 | Гуре Ø167 |
|--------------|-----------------|-------|--------------|-------|------------|-----------|
|              | [bar]           | No. 1 | No. 3        | No. 4 | No. 6      | No. 8     |
|              |                 |       |              |       |            | 1         |
| DN 25        | 0,5 - 5,0       | X     |              |       |            |           |
| 1"           | 3,0 - 10,0      |       | Χ            |       |            |           |
|              | 7,0 - 14,0      |       |              | X     |            |           |
| DN 40        | 0,5 - 5,0       | X     |              |       |            |           |
|              |                 | ^     |              |       |            |           |
| 1½"          | 3,0 - 10,0      |       | Х            |       |            |           |
|              | 7,0 - 14,0      |       |              | Х     |            |           |
| DN 50        | 0,5 - 7,0       |       | Х            |       |            |           |
| 2"           | 3,0 - 10,0      |       |              | Х     |            |           |
|              | 9,0 - 15,0      |       |              |       |            | X         |
|              |                 |       |              |       |            |           |
| DN 65        | 0,5 - 4,0       |       | X            |       |            |           |
| 2½"          | 2,0 - 6,5       |       |              |       | X          |           |
|              | 7,0 - 15,0      |       |              |       |            | Χ         |
| 511.00       |                 |       | V            |       | 1          | I         |
| DN 80        | 0,5 - 3,0       |       | X            |       |            |           |
| 3"           | 2,0 - 5,5       |       |              |       | X          |           |
|              | 4,0 - 10,5      |       |              |       |            | X         |
| DN 100       | 0,5 - 4,0       |       |              |       | Х          |           |
| 4"           | 3,0 - 7,0       |       |              |       |            | X         |

#### 5.2 Opening & closing characteristics

· Opening and closing characteristics for liquids (water) 20°C

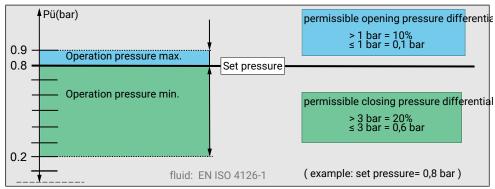


Fig. 1

### 5.3 Control system and position indicator



#### Feedback unit -optional-

Optionally, modular valve control head systems can be installed to the actuator for reading and actuating valve positions. The standard version is a closed system with SPS or ASI-bus switch-on electronics, and integrated 3/2-way solenoid valves. For tough operating conditions we recommend employing a high-grade steel cover.



#### Feedback unit with finger guard -optional-

For the acquisition of the valve positions over inductive initiators (Sensors), a feedback unit is mounted on the actuation. The enquiry takes place over the position of the piston rod.

#### 5.4 Pneumatic valve activation

| Valve function     | Pneum. activation     | Pneum. activation via external solenoid valves |  |  |
|--------------------|-----------------------|--|--|--|
|                    | via control head with |  |  |  |
|                    | solenoid valves (MV)  | (MV external)                                  |  |  |
| Valve OPEN         | control air feed      | control air feed                               |  |  |
| by pressurised air | P → MV1 → P1/LA2      | ext. MV → LA2                                  |  |  |
| Valve CLOSED       | de-aeration           | de-aeration                                    |  |  |
| by spring tension  | LA2/P1 → MV1 → R      | LA2 → ext. MV                                  |  |  |

|  | Control Head        | external          |
|--|---------------------|-------------------|
|  | with solenoid valve | pneum. activation |
| D = De-aeration                                      | MV1                 |                   |
| E = mounting kit for feedback unit                   |                     |                   |
| LA = air supply                                      | P D3 D              | Si                |
| MV = solenoid valve                                  |                     |                   |
| P = compressed-air inlet (control unit)              | P1                  | D                 |
| R = de-aeration, sound absorber                      |                     |                   |
| S = Slide switch, manual operation of solenoid valve |                     |                   |
| Si = Sensors M12x1                                   | LA2                 | LA2               |

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#### 5.5 Pressure setting

#### Adjustment of the set pressure

The adjustment of the set pressure, respectively the opening pressure difference is done by turning the hexagon head (SW14) of the adjusting rod (13). Since the adjusting rod (13) is not directly connected to obturator the adjustment can be done very easily during regular operation.

The setting will be locked by assembling the locking disc (10).

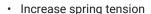


#### **NOTICE**

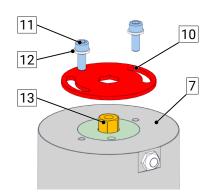
All threaded joint have right-hand thread.

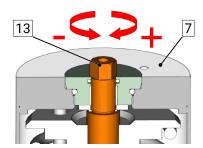
Unscrew and remove control air, steam resp. cleaning lines and electrical lines, complete feedback unit or control head.

- Unscrew the screws (11) and remove the locking disc (10).
- Adjust the set pressure using the hexagon head (SW14) of the adjusting rod (13).



- turn the hexagon head (13) clockwise (+)
- · Reduce spring tension
  - turn the hexagon head (13) counterclockwise (-)
- · Assemble the locking disc (10) to lock the setting.

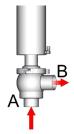




# 6 Commissioning, service and maintenance

#### 6.1 Commissioning

#### 6.1.1 Installation instructions



#### **Fitting position**

The valve must be installed vertically with the actuator at the upwards. Liquid must be able to flow freely from the valve housing.

Valves with a set pressure 

of 0.5 bar are generally installed vertically.

#### 6.1.2 General welding guidelines

Sealing elements integrated in weld components must generally be removed prior to welding. To prevent damage, welding should be undertaken by certified personnel (EN ISO 9606-1). Use the TIG (Tungsten Inert Gas) welding process.



#### **⚠** CAUTION

#### Damage and injuries due to high temperature supply

To avoid a distortion of the components, all welding parts must be welded to stress-relieved. Allow all components to cool before assembling.



#### **NOTICE**

#### Damage due to impurities

Impurities can cause damage to the seals and seals area.

Clean inside areas prior to assembly.

#### 6.1.3 Use in EX area

For valves or plants/installations that are operated in the ATEX area, sufficient bonding (grounding) must be ensured. (see e.g. ATEX Directives EC; UKSI 696:2019-Schedule 25)

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#### 6.2 Service



#### **RECOMMENDATION**

#### Replacement of seals

To achieve optimal maintenance cycles, the following points must be observed!

- When replacement of seals, all product-contacting seals should be replaced.
- Only original spare parts may be installed.

#### Maintenance interval

The maintenance intervals depend on the operating conditions "temperature, temperature-intervals, medium, cleaning medium, pressure and opening frequency". We recommend replacing the seals 1-year cycle. The user, however should establish appropriate maintenance intervals according to the condition of the seals.

#### **Lubricant recommendation**

| EPDM; HNBR; NBR; PTFE; FKM; k-flex | - | Klüber Paraliq GTE703*   |
|------------------------------------|---|--------------------------|
| Silicone                           | - | Klüber Sintheso pro AA2* |
| Thread                             | - | Interflon Food*          |

<sup>\*)</sup> 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.

#### Maintenance - Lift actuator

The actuator is maintenance-free and non-removable.

#### 6.3 Cleaning

#### Cleaning

Ideally, cleaning is carried out with pipe system cleaning when the valve is open.

### 7 Technical data

Model

Overflow valve spring close

· pneumatic lifting

· optional with feedback unit

Valve type

Size

Type 5571 Angle valve

Type 5572 T-valve

Type 5573 Cross valve

Type 5575 Loop valve

DN25 - DN100

OD 1 Inch - OD 4 Inch

Connection type

Welding end

EN 10357, Series A DIN 11866, serie C

Liner connection DIN 11851 Threaded piece DIN 11851

Temperature range

Ambient temperature:

+4° to +45°C

(air)

Operating temperature:

+0° to +95°C

(depends on medium)

Sterilisation temperature: EPDM +140°C (SIP 30 min) HNBR +120°C

FKM +140°C

Leakage rate Control air pressure Quality of control air: A (EN 12266-1) 5,5 - 8,0 bar

ISO 8573-1:2010 [3:(≤5 μm):4:4]

Nominal pressure

PN 16

Set pressure

DN 25 / 1" = 0,5 - 14,0 bar

DN 65 / 2½" = 0,5 - 15,0 bar

DN 40 / 1½" = 0,5 - 14,0 bar

DN 80 / 3" = 0,5 - 10,5 bar

DN 50 / 2" = 0,5 - 15,0 bar

DN100 / 4" = 0,5 - 7,0 bar

Material

(in contact with product)

Stainless steel:

1.4301 / AISI 304 1.4404 / AISI 316L

Surface:

Ra ≤ 0,8µm, e-polished

Sealing material: **EPDM** 

**HNBR** 

**FKM** 

Torque: clamp coupling

| DN          | 25 | 40 | 50 | 65   | 80 | 100 |
|-------------|----|----|----|------|----|-----|
| Inch        | 1  | 1½ | 2  | 21/2 | 3  | 4   |
| Torque [Nm] | 15 | 15 | 15 | 25   | 25 | 55  |

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# Disassembly and assembly

#### 8.1 Disassembly

#### **Assembly Tools**

| Item | Figure            | Designation             | Article number             |                |
|------|-------------------|-------------------------|----------------------------|----------------|
| T1   |                   | Combination wrench-Set  | SW 8 - SW 24               | -              |
| T2   |                   | Allen key - Set         | 1.5 - 10                   | -              |
| T10  | All of the second | Joint -pin wrench       | Pin Ø6                     | 8027000065-000 |
| T11  |                   | Hinged hook wrench      | DN25 - DN100<br>90/155 V2A | 8028025100-020 |
| T12a |                   | Articulated face wrench | 40-80mm, Pin Ø6            | 8028340080-000 |



8 | Disassembly and assembly

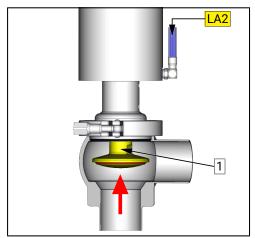
### **NOTICE**

All threaded joint have right-hand thread.

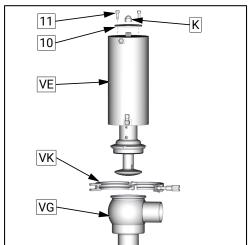
Unscrew and remove control air, steam resp. cleaning lines and electrical lines, complete feedback unit or control head.

#### **Assembly valve insert**

- · Connect compressed air to LA2 and pressurize the actuator with air.
  - The piston (1) retracts.

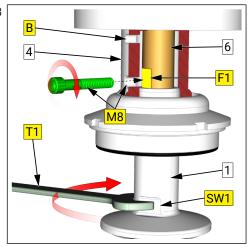


- · Unscrew the clamp coupling (VK). Dismount the valve insert (VE) out of the housing (VG).
- · Disconnect compressed air at air supply LA2.
  - The piston (1) returns to the basic position.
- · Remove cap (K).
- Unscrew the screw (11) and remove the locking disc (10).

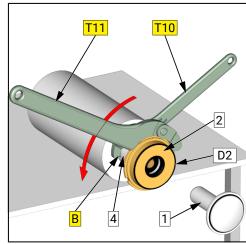


#### Replacement of seals - in product contact

- Fix the piston rod (6). For this, screw a screw M8 into the lantern (4) as far as the surface (F1).
  - Unscrew the piston (1) with a wrench via spanner flat (SW1).



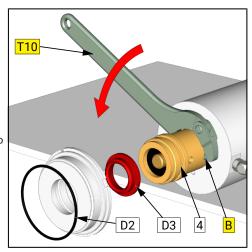
Unscrew with a hook wrench (T11) the insert (2) from the lantern (4). For this, holding on the lantern with a pin wrench T10 at bore (B).



- Remove O-ring (2) and seal (D3).
- Unscrew the lantern (4) from the actuator (7) with a pin wrench T10 at bore (B) and remove it from piston rod (6).
- Remove the O-rings (D4) and (D5).

#### NOTICE!

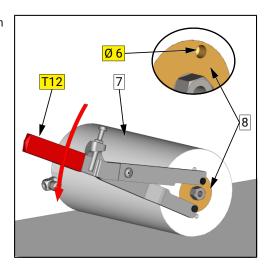
The bearing bushes (3) and (5) and the O-rings (D4) and (D5) do not need to be removed for a product-contacted seal change. The positions are not included in the seal set. If they are worn,please order them (see wearing parts kit).



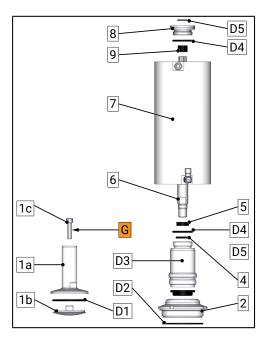
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- Unscrew the insert (8) from the actuator (7) with a pin type face spanner T12.
- Remove the O-rings (D4) and (D5).



Unscrew the screw (1c) from actuator (1a). Remove the plate (1b) nd O-ring (D1) from piston (1a).



#### 8.2 Assembly

Before installation, thoroughly clean and slightly lubricate mounting areas and running surfaces.



#### NOTICE

Mount the threaded connection (G) with Screw retention detachable (e.g. Loctite 243).

- · Assemble in reverse order.
- · Check the function according to the specified performance data in the operating state.



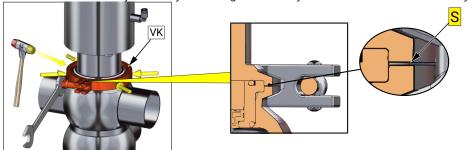
#### **NOTICE**

#### During assembly, the following points must be observed!

Carefully fit in the complete valve insert into the casing. When fitting the valve insert and running surfaces onto the piston, do not damage.

#### Mounting clamp coupling

- For mounting the clamp coupling, please note that it continuously fits form locking to the inclinations of the casing and the lantern/casing bottom.
- The centring of the retaining clamp during tightening can be accomplished with a slight beat (please use a soft-head hammer) on the extent of the retaining clamp.
- When tightening the clamp coupling, please pay attention to the turning moment and the gap size 'S' ( $\leq$  0,4mm) between the components.
- Check valve functions by manually activating the 3/2-way solenoid valves after assembly!



#### Torque: clamp coupling

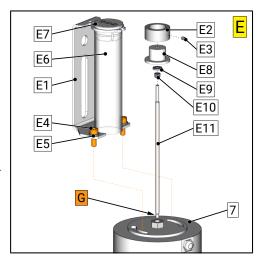
| DN          | 25 | 40 | 50 | 65 | 80 | 100 |
|-------------|----|----|----|----|----|-----|
| Inch        | 1  | 1½ | 2  | 2½ | 3  | 4   |
| Torque [Nm] | 15 | 15 | 15 | 25 | 25 | 55  |

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#### EN

#### Assembly - Feedback unit (E)

- · Unscrew the screws (E4).
- Remove the bracket (E1) complete with cover (E7) and sleeve (E6).
- Unscrew switch shaft (E11) complete with (E2), (E3), (E8), (E9) and (E10) from actuator (7).
- · Loosen the set screw (E3) from switch cam (E2).
- · Remove switch cam (E2) from adapter (E8).



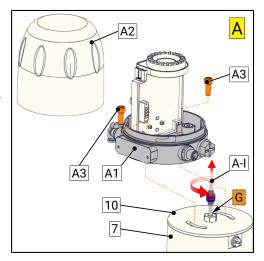


#### **NOTICE**

Mount the threaded connection (G) with Screw retention detachable (e.g. Loctite 243) .

#### Assemble - Control head (A)

- Remove the cover (A2) (bayonet lock).
- · Unscrew screws (A3).
- Remove the control head housing (A1) complete with attachments.
- · Remove locking disc (10).
- Unsrew the pulse generator (A-I) complete from actuator (7).





#### **NOTICE**

Mount the threaded connection (G) with Screw retention detachable (e.g. Loctite 243) .

# 9 Drawings and dimensions

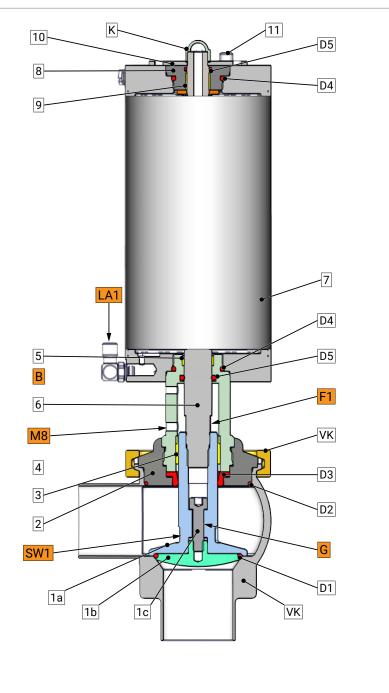
### 9.1 Drawings

#### Standard valve - Angle version

- 1a = Piston
- 1b = Piston plate
- 1c = Screw
- 2 = Insert
- 3 = Bearing bush
- 4 = Lantern
- 5 = Bearing bush
- 6 = Piston rod
- 7 = Actuator
- 8 = Insert lantern
- 9 = Bearing bush
- 10 = Locking disc
- 11 = Screws

#### seals

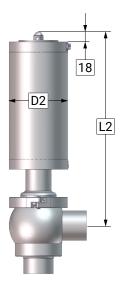
- D1 = 0-ring
- D2 = O-ring
- D3 = Shaft seal
- D4 = 0-ring
- D5 = 0-ring
- B = Hole
- K = Cap
- F1 = Flat
- G = Thread connection secure
- with threaded connection "removable"
- (e.g. Loctite 243)
- LA1 = Air supply (stroke)
- M8 = Thread M8
- SW = Wrench size
- VG = Angle Valve housing
- VK = Clamp coupling

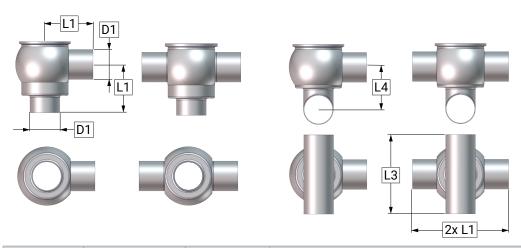


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### 9.2 Dimensions

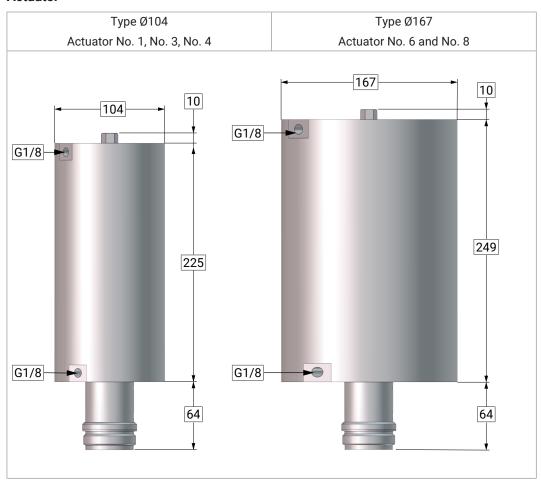




| Nominal size | Adjusting range |      |               |     |        |     |      |
|--------------|-----------------|------|---------------|-----|--------|-----|------|
|              | [bar]           | D2   | D1            | L1  | L2     | L3  | L4   |
| DN 25        | 0,5 - 5,0       | Ø104 |               |     |        |     |      |
|              | 3,0 - 10,0      | Ø104 | Ø 29 x 1,5    | 75  | 333    | 100 | 57   |
|              | 7,0 - 14,0      | Ø104 | Ø 41 x 1,5 85 |     |        |     |      |
| DN 40        | 0,5 - 5,0 Ø104  |      |               |     |        |     |      |
|              | 3,0 - 10,0      | Ø104 | Ø 41 x 1,5    | 85  | 85 328 | 120 | 66   |
|              | 7,0 - 14,0      | Ø104 |               |     |        |     |      |
| DN 50        | 0,5 - 7,0       | Ø104 | 367           | 85  |        |     |      |
|              | 3,0 - 10,0      | Ø104 |               |     | 343    | 140 | 74,5 |
|              | 9,0 - 15,0      | Ø167 |               |     |        |     |      |
| DN 65        | 0,5 - 4,0       | Ø104 |               |     | 351    |     |      |
|              | 2,0 - 6,5       | Ø167 | Ø 70 x 2,0    | 105 | 375    | 160 | 96   |
|              | 7,0 - 15,0      | Ø167 |               |     |        |     |      |
| DN 80        | 0,5 - 3,0       | Ø104 |               |     | 358    |     |      |
|              | 2,0 - 5,5       | Ø167 | Ø 85 x 2,0    | 115 | 382    | 180 | 122  |
|              | 4,0 - 10,5      | Ø167 |               |     |        |     |      |
| DN 100       | 0,5 - 4,0       | Ø167 | Ø 104 x 2,0   | 130 | 390    | 200 | 144  |
|              | 3,0 - 7,0       | Ø167 |               |     |        |     |      |

| Nominal size | Adjusting range | Actuator | Dimension      |     |     |        |      |
|--------------|-----------------|----------|----------------|-----|-----|--------|------|
|              | [bar]           | D2       | D1             | L1  | L2  | L3     | L4   |
|              |                 |          | ·              |     |     |        |      |
| OD 1"        | 0,5 - 5,0       | Ø104     |                |     |     |        |      |
|              | 3,0 - 10,0      | Ø104     | Ø 25,4 x 1,65  | 75  | 329 | 100    | 57   |
|              | 7,0 - 14,0      | Ø104     |                |     |     |        |      |
| OD 1½        |                 |          |                |     |     |        |      |
|              | 3,0 - 10,0      | Ø104     | Ø 38,1 x 1,65  | 85  | 335 | 120 66 | 66   |
|              | 7,0 - 14,0      | Ø104     |                |     |     |        |      |
| OD 2"        | 0,5 - 7,0       | Ø104     |                |     |     |        |      |
|              | 3,0 - 10,0      | Ø104     | Ø 50,8 x 1,65  | 85  | 342 | 140    | 74,5 |
|              | 9,0 - 15,0      | Ø167     | 366            |     |     |        |      |
| OD 2½"       | 0,5 - 4,0       | Ø104     |                | 105 | 348 |        |      |
|              | 2,0 - 6,5       | Ø167     | Ø 63,5 x 1,65  |     | 372 | 160    | 96   |
|              | 7,0 - 15,0      | Ø167     |                |     |     |        |      |
| OD 3"        | 0,5 - 3,0       | Ø104     |                |     | 354 |        |      |
|              | 2,0 - 5,5       | Ø167     | Ø 76,2 x 1,65  | 115 | 378 | 180    | 122  |
|              | 4,0 - 10,5      | Ø167     |                |     |     |        |      |
| OD 4"        | 0,5 - 4,0       | Ø167     | Ø 101,6 x 2,11 | 130 | 390 | 200    | 144  |
|              | 3,0 - 7,0       | Ø167     |                |     |     |        |      |

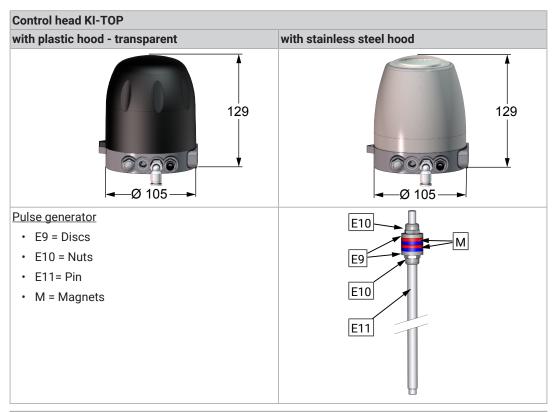
#### **Actuator**



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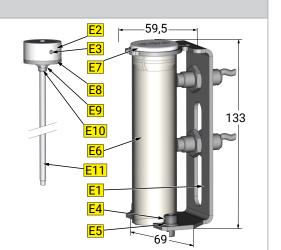
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#### 9.3 Control units



#### Feedback unit with finger guard (E)

- E1 = sensor mounting
- E2 = Switch cam
- E3 = Bolt
- E4 = Cap screws
- E5 = Discs
- E6 = Shell (finger guard)
- E7 = Cap
- E8 = Adapter
- E9 = Disc
- E10 = Nut
- E11 = Pin



# 10 Wearing parts

# 10.1 Wearing parts

| Pos. | Material | Pcs. | DN 25               | DN 40               | DN 50               | DN 65               | DN 80               | DN 100              |  |  |  |  |
|------|----------|------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--|--|--|--|
|      |          |      | 1 Inch              | 1½ Inch             | 2 Inch              | 2½ Inch             | 3 Inch              | 4 Inch              |  |  |  |  |
|      |          |      |                     |                     |                     |                     |                     |                     |  |  |  |  |
| 3    | XSM      | 1x   |                     | Bearing bush        |                     |                     |                     |                     |  |  |  |  |
|      |          |      |                     |                     | 8050 028            | 020-156             |                     |                     |  |  |  |  |
| 5    | XSM      | 1x   |                     |                     | Bearin              | g bush              |                     |                     |  |  |  |  |
|      |          |      |                     |                     |                     | 007-156             |                     |                     |  |  |  |  |
| 9    | GSM      | 1x   |                     |                     |                     | g bush              |                     |                     |  |  |  |  |
|      |          |      |                     |                     |                     | 012-060             |                     |                     |  |  |  |  |
|      |          |      | O-ring              | O-ring              | O-ring              | O-ring              | O-ring              | O-ring              |  |  |  |  |
|      | EPDM     | 1x   | 2304 043<br>035-069 | 2304 043<br>035-069 | 2304 054<br>035-170 | 2304 071<br>035-069 | 2304 085<br>035-159 | 2304 104<br>035-159 |  |  |  |  |
| D1   | HNBR     | 1x   | 2304 043<br>035-050 | 2304 043<br>035-050 | 2304 054<br>035-050 | 2304 071<br>035-050 | 2304 085<br>035-050 | 2304 104<br>035-050 |  |  |  |  |
|      | FKM      | 1x   | 2304 043<br>035-051 | 2304 043<br>035-051 | 2304 054<br>035-051 | 2304 071<br>035-051 | 2304 085<br>035-051 | 2304 104<br>035-051 |  |  |  |  |
|      |          |      | O-ring              | 0-ring              | 0-ring              | 0-ring              | 0-ring              | 0-ring              |  |  |  |  |
|      | EPDM     | 1x   | 2304 069<br>026-159 | 2304 069<br>026-159 | 2304 069<br>026-159 | 2304 082<br>026-159 | 2304 098<br>035-159 | 2304 117<br>035-159 |  |  |  |  |
| D2   | HNBR     | 1x   | 2304 069<br>026-171 | 2304 069<br>026-171 | 2304 069<br>026-171 | 2304 082<br>026-050 | 2304 098<br>035-050 | 2304 117<br>035-171 |  |  |  |  |
|      | FKM      | 1x   | 2304 069<br>026-251 | 2304 069<br>026-251 | 2304 069<br>026-251 | 2304 082<br>026-051 | 2304 098<br>035-051 | 2304 117<br>035-051 |  |  |  |  |
|      |          |      |                     |                     | Stem                | sealing             |                     |                     |  |  |  |  |
|      | EPDM     | 1x   |                     |                     | 5506 050            | 009-054             |                     |                     |  |  |  |  |
| D3   | HNBR     | 1x   |                     |                     | 5506 050            | 009-050             |                     |                     |  |  |  |  |
|      | FKM      | 1x   |                     |                     | 5506 050            | 009-251             |                     |                     |  |  |  |  |
| D4   | NBR      | 2x   |                     |                     |                     | ing<br>) 035-055    |                     |                     |  |  |  |  |
| D5   | HNBR     | 2x   |                     |                     |                     | ing                 |                     |                     |  |  |  |  |
|      |          |      |                     |                     | 2304 019            | 035-171             |                     |                     |  |  |  |  |
| D6   | HNBR     | 2x   |                     |                     | O-r                 | ing                 |                     |                     |  |  |  |  |
|      |          |      |                     |                     | 2304 016            | 020-055             |                     |                     |  |  |  |  |

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#### Wear parts kit

• Seal (D1), (D2), (D3)

| Material | DN 25    | DN 40    | DN 50    | DN 65    | DN 80    | DN 100   |
|----------|----------|----------|----------|----------|----------|----------|
|          | 1 Inch   | 1½ Inch  | 2 Inch   | 2½ Inch  | 3 Inch   | 4 Inch   |
|          |          |          |          |          |          |          |
| EPDM     | 5571 025 | 5571 040 | 5571 050 | 5571 065 | 5571 080 | 5571 100 |
|          | 990-054  | 990-054  | 990-054  | 990-054  | 990-054  | 990-054  |
| HNBR     | 5571 025 | 5571 040 | 5571 050 | 5571 065 | 5571 080 | 5571 100 |
|          | 990-050  | 990-050  | 990-050  | 990-050  | 990-050  | 990-050  |
| FKM      | 5571 025 | 5571 040 | 5571 050 | 5571 065 | 5571 080 | 5571 100 |
|          | 990-251  | 990-251  | 990-251  | 990-251  | 990-251  | 990-251  |

## 11 Appendix

### 11.1 Declaration of incorporation

# **Declaration of Incorporation**

according to Directive 2006/42/EC of the European Parliament and the Council of 17 May 2006

Manufacturer: KIESELMANN GmbH Paul-Kieselmann-Str. 4-10 D-75438 Knittlingen

We declare that the following pressure equipment

| <u>Designation</u>                                  | <u>Function</u>                   |
|---|-----------------------------------|
| Pneumatic Linear actuator                           | pneumatically operation of valves |
| Pneumatic Quarter-turn actuator                     | pneumatically operation of valves |
| Butterfly Valve (pneumatically operated)            | Separation of medium flow         |
| Ball Valve (pneumatically operated)                 | Separation of medium flow         |
| Single seat Valve (pneumatically operated)          | Separation of medium flow         |
| Changeover Valve (pneumatically operated)           | Separation of medium flow         |
| Double-Seat mixproof Valve (pneumatically operated) | Separation of medium flow         |
| Control Valve (pneumatically operated)              | Regulation of medium flow         |
| Throttling Valve (pneumatically operated)           | Regulation of medium flow         |
| Tank Outlet Valve (pneumatically operated)          | Separation of medium flow         |
| Sampling Valve (pneumatically operated)             | Separation of medium flow         |
|   |                                   |

complies with the definition of an "incomplete machine" according to Article 2 of the European Machinery Directive 2006/42/EG, when fitted in or merged with other machines or incomplete machines which also comply with the provision of the Directive.

Applied harmonized standards: Directive 2014/68/EU

EN ISO 12100

Person responsible for documentation: Achim Kauselmann

Documentation / Development

KIESELMANN GmbH

Knittlingen, 10.10.2020

i.V. Uwe Heisswolf Head of Development KIESELMANN

FLUID PROCESS GROUP

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| Notes |
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#### KIESELMANN GmbH

Paul-Kieselmann-Str. 4-10 D - 75438 Knittlingen