KIESELMANN
FLUID PROCESS GROUP

Translation of the original

# Operating Instructions

## Sight glass

### Type: 7005

DN25 - DN150
Glass types: Borosilicate, Soda-lime glass
Seal type: NBR, HNBR, EPDM, FKM, VMQ
Material: 1.4307 (AISI 304L), 1.4404 (AISI 316L)
Housing connection: Weld-on end (S)



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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 very carefully produced, mounted and tested. 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. |
|  | NOTICE | An harmful situation which may result in damages of the product itself or of adjacent vicinity. |
|  | 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.

# 2 Safety instructions

## 2.1 Intended use

The fitting to be built into pipe conduits to allow the inspection of liquids.

## 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



**⚠ WARNING**

**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.



**⚠ WARNING**

**Danger of injury due exceeding the operating pressure**

If the maximum permissible working pressure is exceeded, accident hazard due to bursting of the glass cylinder or discharge of liquids into the atmosphere is possible.

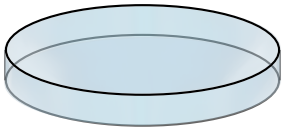
- In order to avoid excess pressure install overpressure protections.
- The fitting position has to be chosen in such a way as to exclude danger of accident. In order to prevent accident hazards, provide appropriate protective devices.

# 3 Modular system

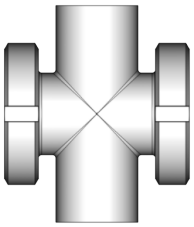
| Sealing material | | | | |
|---|---|---|---|---|
| EPDM | HNBR | NBR | FKM | VMQ |



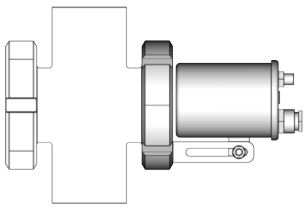
| Material Sight glass | |
|---|---|
| Borosilicate | Soda-lime glass |

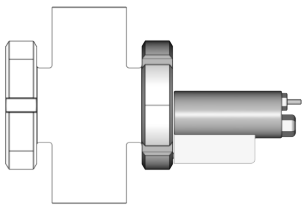


| Version | |
|---|---|
| 2x Sight glass | |



| 2x Sight glass<br>Lighting : Halogen 24 V 20 W | 2x Sight glass<br>Lighting : LED 24 V 2 W |
|---|---|





# 4 Function and operation

## 4.1 Installation instructions

External forces due to the installation must always be avoided.

### Fitting position

- The installation position is without importance.

### 4.1.1 Cleaning

Optimum cleaning is achieved with pipeline cleaning.

## 4.2 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.

# 5 Technical data

| | |
|---|---|
| Model | Sight glass |
| Size | DN25 - DN150 |
| Connection type | Weld-on end DIN EN 10357 |

Temperature range

| | |
|---|---|
| Ambient | +4° to +45°C (air) |
| Operation | +0° to +100°C (medium dependent) |
| Sterilization | EPDM +140°C<br>HNBR +100°C<br>NBR +100°C<br>FKM +100°C<br>VMQ +100°C |

Lighting

| | |
|---|---|
| Sight glass lighting | • Halogen 24V 20W AC/DC IP 65<br>Push button and tilt hinge<br>• LED 24V 2W AC/DC IP 65<br>On/off switch and tilt hinge |

Materials in product contact

| | |
|---|---|
| stainless steel | 1.4307 / AISI 304L<br>1.4404 / AISI 316L |
| Surface | Ra ≤ 0,8µm |
| Sight glass | • Soda-lime glass<br>• Borosilicate |

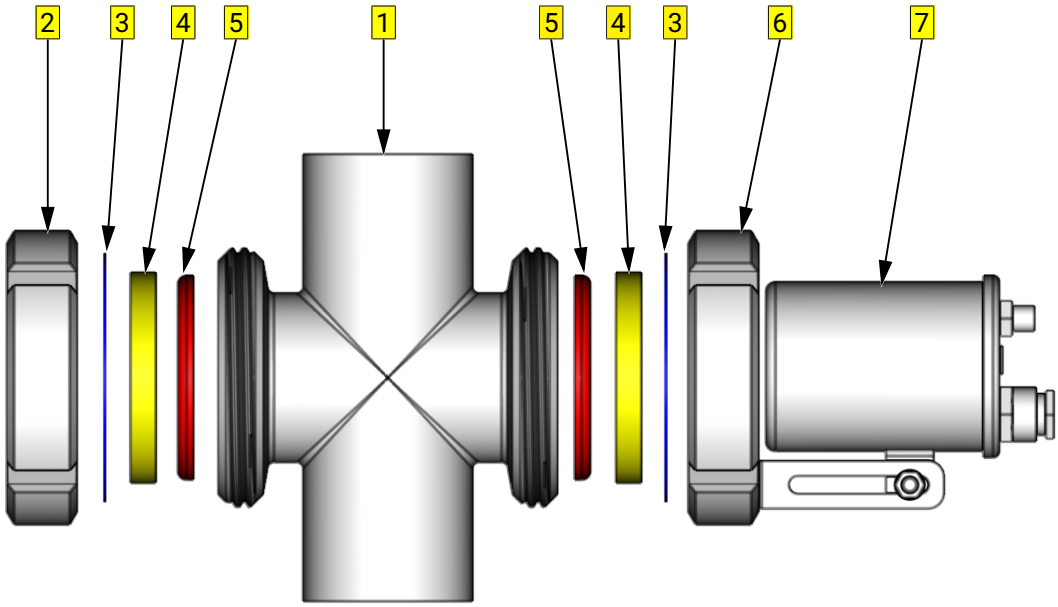
# 6 Disassembly and assembly

### Disassembly

- Unscrew the slotted nut (2) and slotted nut (6) with lighting.
- Remove the glass (3), seal ring (4) and slide ring (5) from the fitting (1).

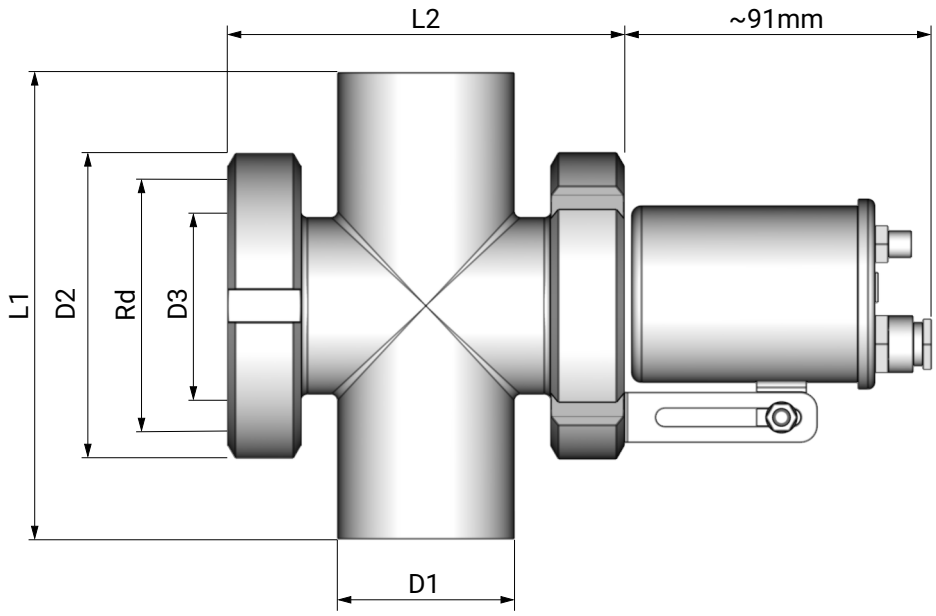
### Assembly

- Assemble in reverse order.




| | | | |
|---|---|---|---|
| 1 | Housing | 2 | Slotted nut |
| 3 | Sliding ring | 4 | Sight glass |
| 5 | Sealing ring | 6 | Slotted nut |
| 7 | Lighting | | |

# 7 Drawings and dimensions




| Nominal size | Ø D1 | Ø D2 | Ø D3 | Ø Rd | L1 | L2 |
|---|---|---|---|---|---|---|
| DN 25 | 29 x 1,5 | 63 | 26 | Rd 52x1/6 | 100 | 87 |
| DN 32 | 35 x 1,5 | 70 | 33 | Rd 58x1/6 | 110 | 93 |
| DN 40 | 41 x 1,5 | 78 | 38 | Rd 65x1/6 | 120 | 100 |
| DN 50 | 53 x 1,5 | 92 | 50 | Rd 78x1/6 | 140 | 116 |
| DN 65 | 70 x 2,0 | 112 | 66 | Rd 95x1/6 | 160 | 142 |
| DN 80 | 85 x 2,0 | 127 | 81 | Rd 110x1/4 | 180 | 160 |
| DN 100 | 104 x 2,0 | 148 | 100 | Rd 130x1/4 | 200 | 192 |
| DN 125 | 129 x 2,0 | 178 | 125 | Rd 160x1/4 | 375 | 257 |
| DN 150 | 154 x 2,0 | 210 | 150 | Rd 190x1/4 | 450 | 290 |

Table 1 Dimension [mm]

# 8 Wearing parts

| Nominal size | Material | Glass (3) | | Sliding ring (5) |
|---|---|---|---|---|
| | | Borosilicate | Soda-lime glass | PTFE |
| DN 25 | 1.4307 | 7026025000-073 | 7002025000-072 | 8040052026-053 |
| | 1.4404 | [30 bar ] | [25 bar] | |
| DN 32 | 1.4307 | 7026032000-073 | 7002032000-072 | 8040065038-053 |
| | 1.4404 | [30 bar] | [20 bar] | |
| DN 40 | 1.4307 | 7026040000-073 | 7002040000-072 | 8040065038-053 |
| | 1.4404 | [16 bar] | [16 bar] | |
| DN 50 | 1.4307 | 7026050000-073 | 7002050000-072 | 8040078050-053 |
| | 1.4404 | [14 bar] | [10 bar] | |
| DN 65 | 1.4307 | 7026065000-073 | 7002065000-072 | 8040095066-053 |
| | 1.4404 | [8 bar] | [10 bar] | |
| DN 80 | 1.4307 | 7026080000-073 | 7002080000-072 | 8040110081-053 |
| | 1.4404 | [6 bar] | [7 bar] | |
| DN 100 | 1.4307 | 7026100000-073 | 7002100000-072 | 8040130100-053 |
| | 1.4404 | [8 bar] | [7 bar] | |
| DN 125 | 1.4307 | 7026125000-073 | 7002125000-072 | 8040160125-053 |
| | 1.4404 | [7 bar] | [7 bar] | |
| DN 150 | 1.4307 | 7026150000-073 | 7002150000-072 | 8040190150-053 |
| | 1.4404 | [5 bar] | [5 bar] | |

| Nominal size | Sealing ring (4) | | | | |
|---|---|---|---|---|---|
| | EPDM | HNBR | NBR | FKM | VMQ |
| DN 25 | 2005025000-054 | 2004025000-050 | 2004025000-056 | 2008025000-051 | 2007025000-052 |
| DN 32 | 2005032000-054 | 2004032000-050 | 2004032000-056 | 2008032000-051 | 2007032000-052 |
| DN 40 | 2005040000-054 | 2004040000-050 | 2004040000-056 | 2008040000-051 | 2007040000-052 |
| DN 50 | 2005050000-054 | 2004050000-050 | 2004050000-056 | 2008050000-051 | 2007050000-052 |
| DN 65 | 2005065000-054 | 2004065000-050 | 2004065000-056 | 2008065000-051 | 2007065000-052 |
| DN 80 | 2005080000-054 | 2004080000-050 | 2004080000-056 | 2008080000-051 | 2007080000-052 |
| DN 100 | 2005100000-054 | 2004100000-050 | 2004100000-056 | 2008100000-051 | 2007100000-052 |
| DN 125 | 2005125000-054 | 2004125000-050 | 2004125000-056 | 2008125000-051 | 2007125000-052 |
| DN 150 | 2005150000-054 | 2004150000-050 | 2004150000-056 | 2008150000-051 | 2007150000-052 |

# Notes

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