KIESELMANN
FLUID PROCESS GROUP

# Operating instruction

*- Translation of the original -*

## GEMBRA

## Aseptic Two-way-valve

## Type:584x



9.8.13

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## 2. Information 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.

## 3. Marking of security instructions in the operating manual

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 may cause severe personal injury or death. |
|  | **ATTENTION** | Dangerous situation which may cause slight personal injury or material damages. |
|  | **NOTE** | Marks application hints and other information which is particularly useful. |

# 4. Safety instructions

## 4.1 Field of application

The valve is utilised as a pneumatically controlled shut-off valve for liquid and gas flows in food, beverage, pharmaceutical and chemical industry.
The valve is designed for media characteristics according to article 9 of DGRL 97/23/EG for group 2 (media condition gaseous or liquid).

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

## 4.2 General safety instructions

**DANGER**
- Danger of crushing or amputating limbs.
  Do not reach into the valve housing when in pneumatic mode.
- When removing the valve or valve components from the system, there is a danger of injury from escaping liquids or gases.
  Only dismantle when you are absolutely sure that the system is depressurized and free of liquids and gases.
- Danger of scalding and burns to parts of your body from liquids escaping from the leakage drain (L) (Fig. 8 /Page 9).
  The splash protection fixtures must always be attached to the leakage drain (L).
- The actuation can be dismantled. Danger of injury by prestressed pressure spring. Observe separate installation instructions. We recommend having the manufacturer do the maintenance work required for the actuation.

**ATTENTION**
- When dismantling the retaining clamp, the spring prestressed valve insert can cause injury due to a lifting movement in the direction “X“ (Fig. 8 /Page 9).
  First open the valve pneumatically, then unscrew the retaining clamp.
- To avoid air leaking, only use pneumatic connection parts that have an O-ring seal facing the even surface.
- When mounting the clamps, the max. torque must not be exceeded (see technical Data).
- Steps should be taken to ensure that no external forces are exerted on the fitting.

## 4.3 General notes

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

# 5. Function




Fig. 1

## 5.1 Functional description

The valve is utilised as a pneumatically controlled shut-off valve. Leakage detection takes place via the leakage outlet (L) at the lantern.

### 5.1.1 Actuator: air open - spring close (Lö-Fs)

The valve opens with control air and closes with spring power by means of a lift drive.

### 5.1.2 Actuator: spring open - air close (Fö-Ls)

The valve opens with spring power and closes with control air by means of a lift drive.

### 5.1.3 Actuator: air open - air close (Lö-Ls)

The valve opens and closes with control air by means of a lift drive.

# 6. Installation informations

## 6.1 Installation instructions

The valve must be installed vertically with the actuator at the upwards. Liquid must be able to flow freely from the valve housing. In order to obviate damages, the integration of the pipeline has to be carried out without stress.

## 6.2 Welding guidlines

- Sealing elements integrated in weld components must generally be removed prior to welding. To prevent damage, welding should be undertaken by certified personnel (EN287).
- Use the TIG (tungsten inert gas) welding process.

**NOTE**
*Impurities can cause damage to the seals. Clean inside areas prior to assembly.*

# 7. Maintenance

## 7.1 Maintenance

The maintenance intervals depend on the operating conditions

- temperature, temperature-intervals
- medium and cleaning medium
- pressure
- opening frequency

We recommend replacing the seals every 2 years. The user, however should establish appropriate maintenance intervals according to the condition of the seals.

**NOTE**

| | | **Lubricant recommendation** |
|---|---|---|
| EPDM; Viton; K-flex; 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.

## 7.2 Cleaning

The upper and lower process housing is cleaned via pipeline cleaning.

## 8. Technical data

| | |
|---|---|
| **Model:** | Aseptic Two-way-valve |
| **Valve size:** | DN 40 - 80 |
| **Connection:** | Welding end DIN11850 serie 2 |
| **Temperature range:** | Ambient temperature: +4° to +45°C<br>Product temperature: +0° to +95°C depending on the medium<br>Sterilization temperature: +140°C short time (30min) |
| **Operatins pressure:** | DN40 - 80 = 6 bar |
| **Cleaning pressure:** | 3 bar |
| **Vacuum:** | 1,5 - $10^{-6}$ mbar x $^{l}/_{s}$ (test pressure 0,5mbar) |
| **Control air pressure:** | 5,5 - 8,0 bar |
| **Quality of control air:** | ISO 8573-1 : 2001 quality class 3 |

| **Material:** | **in product contact** | **not in product contact** |
|---|---|---|
| **Stainless steel:** | 1.4404 / AISI316L | 1.4301 / AISI304 |
| **Surfaces:** | RA ≦0,8µm e-pol. | metallic bright, e-pol. |
| **Seals:** | k-flex 150°C<br>EPDM 140°C<br>PTFE | EPDM |

**Tightening moment:**

Retaining clamp: Dimension nominal

| | DN 40 | DN 50 | DN 65 | DN 80 |
|---|---|---|---|---|
| Torque in Nm | 15 | 15 | 25 | 20 |

**Valve lift (mm)**

| | DN 40 | DN 50 | DN 65 | DN 80 |
|---|---|---|---|---|
| Valve stroke | 16 | 16 | 19 | 25 |

## 9. Control system - and interrogation system

### 9.1 Special features valve control -optional-

Optionally, modular valve control 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.

### 9.2 Proximity switch receiver set -optional-

For the acquisition of the valve positions over inductive initiators, a limit switch support is mounted on the actuation. The enquiry takes place over the position of the piston rod.

## 10. Pneumatic valve actuation

### 10.1 Actuator: air open - spring close (Lö - Fs)

| Valve function | pneumatic Control with MV in Control unit (Fig. 2 /Page 8) | pneumatic Control with external solenoid valve (MV) (Fig. 2 /Page 8) |
|---|---|---|
| Valve "OPEN" | control air feed<br>P ➟ MV1 ➟ P1/LA2<br>Valve is opening by control air | control air feed<br>ext. MV ➟ LA2<br>Valve is opening by control air |
| Valve "CLOSED" | de-aeration<br>LA2/P1 ➟ MV1 ➟ R<br>Valve is closing by spring | de-aeration<br>LA2 ➟ ext. MV<br>Valve is closing by spring |

### 10.2 Actuator: spring open - air close (Fö - Ls)

| Valve function | pneumatic Control with MV in Control unit (Fig. 2 /Page 8) | pneumatic Control with external solenoid valve (MV) (Fig. 2 /Page 8) |
|---|---|---|
| Valve "CLOSED" | control air feed<br>P ➟ MV1 ➟ P1/LA1<br>Valve is closing by control air | control air feed<br>ext. MV ➟ LA1<br>Valve is closing by control air |
| Valve "OPEN" | de-aeration<br>P1/LA1 ➟ MV1 ➟ R<br>Valve is opening by spring | de-aeration<br>LA1 ➟ ext. MV<br>Valve is opening by spring |

### 10.3 Actuator: air open - air close (Lö - Ls)

| Valve function | pneumatic Control with MV in Control unit (Fig. 2 /Page 8) | pneumatic Control with external solenoid valve (MV) (Fig. 2 /Page 8) |
|---|---|---|
| Valve "OPEN" | control air feed<br>P ➟ MV1 ➟ P1/LA2<br>Valve is opening by control air | control air feed<br>ext. MV ➟ LA2<br>Valve is opening by control air |
| Valve "CLOSED" | de-aeration<br>P ➟ MV3 ➟ P3/LA1<br>Valve is closing by control air | de-aeration<br>ext. MV ➟ LA1<br>Valve is closing by control air |

Control unit with Solenoid valve

*MV = Solenoid valve*

*R = de-aeration, sound absorber*

*P = compressed-air inlet (control unit)*

*LA = compressed air inlet (actuation)*

*S = slide switch - manual control (solenoid valves)*

Control head with Initiatoren

*I = Initiatoren*

*H = Angle bracket*

*E = de-aeration*

*LA = Air connection*

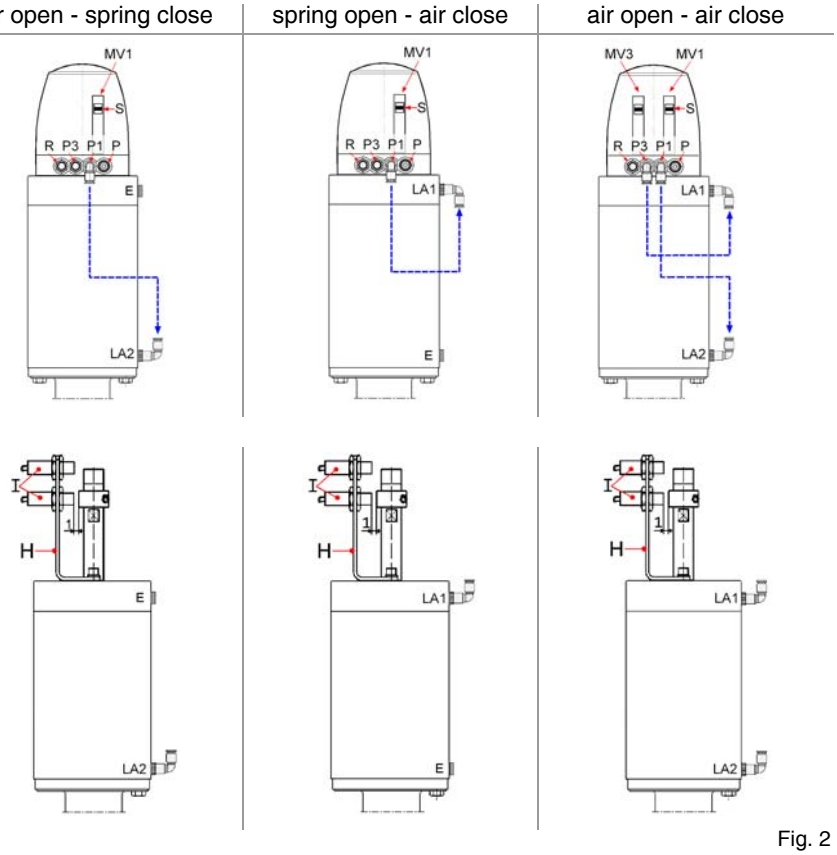



Fig. 2

# 11. Disassembly and assembly

## 11.1 Disassembly valve insert VE

(see Fig. 9 /Page 10)

**NOTE**
*Dismount control air, steam, condensate pipelines and electric lines, complete proximity switch mounting or control heads.*

**Wrench size**

| | SW1 | SW2 | SW3 | B |
|---|---|---|---|---|
| DN40 | 19 | 30 | 17 | ø7 |
| DN50 | 25 | 24 | 17 | ø7 |
| DN65 | 30 | 24 | 17 | ø7 |
| DN80 | 30 | 36 | 17 | ø8 |

### Dismount valve insert with actuator lö-fs

- Connect the compressed air (P) to the air connection (LA2) thereby the piston moves toward X.
- Remove retaining clamp (5) and pull out carefully and without rotary movement the valve insert (VE) from the valve housing (VG).
- Disconnect the compressed air (P) from the air connection (LA2) thereby the piston moves against toward X.

### Dismount valve insert (VE) with actuator ls-fö and lö-ls

- Remove retaining clamp (5) and pull out carefully and without rotary movement the valve insert (VE) from the valve housing (VG).

## 11.2 Exchanging seals

(see Fig. 9 /Page 10)

- Screw off piston plate (1) while holding against at the wrench size (SW2).
- Dismount sealing (D1).
- Develop the pistons (2) and seals (D1a), (D1b) and (D2).
- Screw off the piston (3) at the wrench size (SW2), while holding against with a round rod 8mm at drilling (B).
- Take off carefully the diaphragm (D3) from the upper piston (4) and the lantern (6).
- Screw off the locking screw (8).
- Screw off the screws (10) and remove the lantern (6).
- Remove the sliding bearing (D4) and the O-Ring (D5).
- Unscrew the piston rod (9) and hold against at the wrench size (SW3) (see Fig. 8 /Page 9). Remove the O-Ring (D6).

## 11.3 Assembly

- Thoroughly clean and slightly lubricate mounting areas and running surfaces. Assemble in reverse order.

*NOTE*
*During assembly, tie diaphragm (D3) carefully on lantern (6) and on the upper piston (4). Fig. 3 /Page 7*

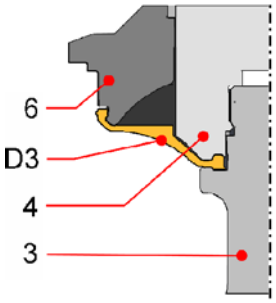



Fig. 3

**Centering ring**

| DN | Order number |
|---|---|
| DN40 | 5620 051 025-020 |
| DN50 | 5620 051 025-020 |
| DN65 | 5620 065 025-020 |
| DN80 | 5620 080 025-020 |
| DN100 | ---------- |

## 11.4 Assembly K-Flex - seal (D2)

- Fit the O-Ring into the k-flex seal.
- Assemble the ring shells as in the Fig. 4 /Page 7 in the order A, B, C, D

## 11.5 Assembly sealing ring (D1) (D2)

- Screw together piston plate (1) and piston (2) and (3) manually to metallic stop position without sealing ring and carry out colour marking (Fig. 5 /Page 7).
- Once again screw off the piston plate (1) and the piston (2) from the piston (3).
- Push the seal (D1a), (D1b) on the piston (2) and push the seal (D2) on the piston (3).
- Screw manually the piston plates (1) and the piston (2) into the piston (3).
- For centring the seal (D2) on the piston (3), the centring ring has to be placed as shown in Fig. 5 /Page 7.
- Screw the piston (1) (SW1) till to the marking into the piston (3). Hold against at the wrench size (SW2)

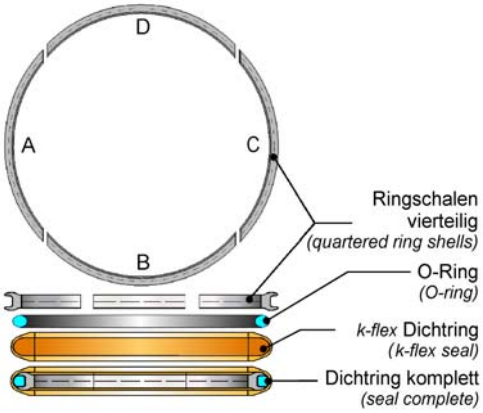



Fig. 4

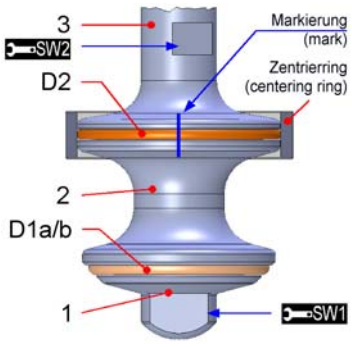



Fig. 5

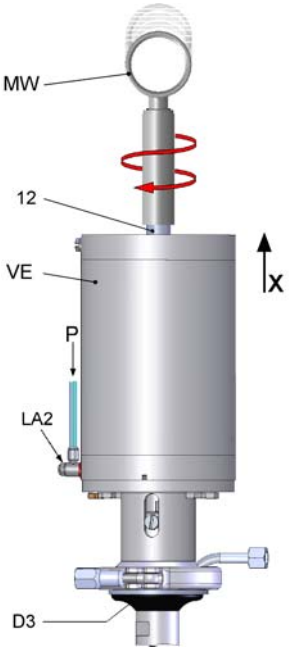
### *11.6 Assemble the valve insert (VE) into the valve housing (VG)*

**➤ Adjust the installation position of the piston with the mounting tool (MW)**

*MW*



| | Mounting tool MW for GEMBRA Single seat valves | |
|---|---|---|
| | DN40 - DN65 | Art.-No.: 5836 000 065-000 |
| | DN80 | Art.-No.: 5836 000 080-000 |




Actuator: lö-fs Fig. 6

**Kind of actuator: air open - spring close**

- Connect the compressed air (P) to the air connection (LA2) thereby the piston moves toward X.
- Unsrew the cap (15).
- Screw in the mounting tool (MW) as far as possible into the spindle (12).
- Disconnect the compressed air (P) from the air connection (LA2) thereby the valve drives into installation position.

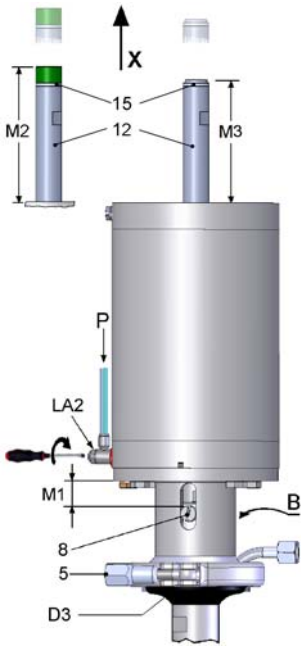
**Kind of actuator: air close - spring open**
**air close - air open**

- Unsrew the cap (15).
- Screw in the mounting tool (MW) as far as possible into the spindle (12).
- Connect the compressed air (P) to the air connection (LA1 air close-spring open) and (LA2 air open-air close) respectively. Fig. 2 /Page 6
- The valve drives into installation position.

**NOTE**
*In this valve position the diaphragm (D3) is in its basic position and is optimally compressed between lantern and housing.*

**➤ Adjust the installation position of the piston <u>without</u> the mounting tool (MW)**

- Connect compressed air (P) to the trottle valve (LA1 ls-fö) and (LA2 lö-ls / lö-fs) respectively.
- According to kind of the actuator the piston drives out or in.
- Close the throttle valve at (LA1 or LA2) with a screwdriver.
- Disconnect the compressed air at the throttle valve (LA1 or LA2).
- The piston stops in the position. Position a calliper on the adjustment dimension M1 or M2.
- Slowly open the throttle valve at (LA1 or LA2), so that the piston drives out or in.
- Close the throttle at the position M1 respectively M2. (If an control head is assembled, the adjustment dimension M1 is measured between the actuator and the pin (8).




Actuator: lö-fs Fig. 7

| | Bore | adjustment dimension for the installation position | | |
|---|---|---|---|---|
| | B | M1 | M2[a] | M3[b] |
| DN40 | ø7 | 18,5 | 107 | 96 |
| DN50 | ø7 | 18,5 | 107 | 96 |
| DN65 | ø8 | 29 | 104 | 93 |
| DN80 | ø8 | 35 | 98 | 87 |

*a. old version*
*b. new version*

**NOTE**
*In this valve position the diaphragm (D3) is in its basic position and is optimally compressed between lantern and housing.*

***Assemble the valve insert into the valve housing***

- Carefully install the valve insert in the housing.

**NOTE**
*When installing the valve seat, do not damage the sealing surfaces on the piston and the housing as well as the seals.*

- Assemble the retaining clamp (5) (Please note the torque data! See the tightening moment in technical data).
- Slowly open the throttle valve again. The piston drives into its basic position.
- Check the valve functions.

## 12. Drawing

### ➤ Aseptic Two way valve GEMBRA Type 5844 und Type 5846

*P = Central air supply*
*P1 = Control air - Valve stroke*

*LA1= Lö-Fs - De-aeration*
*= Fö-Ls - Valve stroke*
*= Lö-Ls - Valve stroke*
*LA2= Lö-Fs - Valve stroke*
*= Fö-Ls - De-aeration*
*= Lö-Ls - Valve stroke*

*A1 = Control head*
*A2 = Proximity switch mounting*
*L = Leakage tell taue G1/4*
*VE = Valve insert*
*VG = Valve housing*

*5 = Retaining clamp*

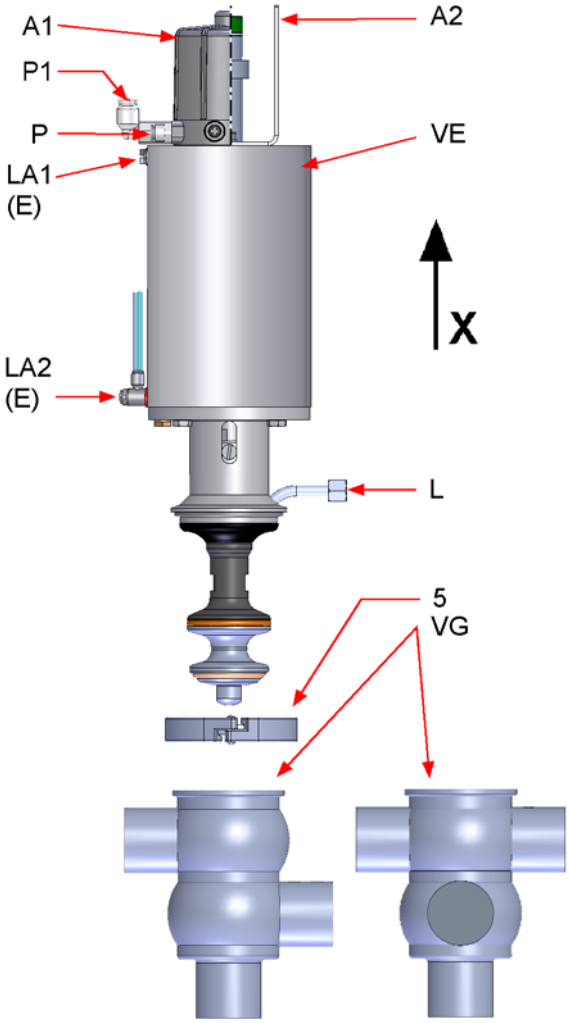
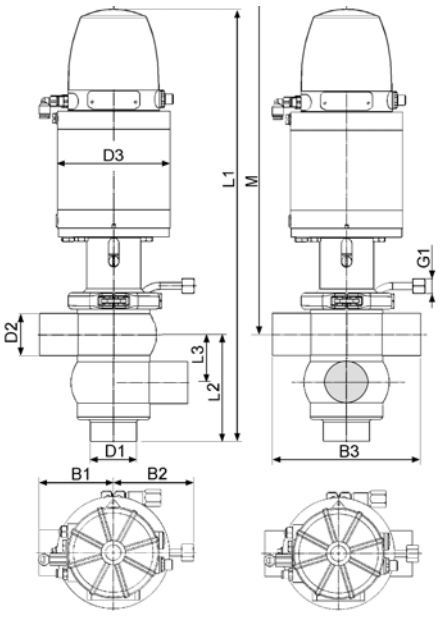



Fig. 8

### 12.1 Dimensions

| Dimension nominal | | DN40 | DN 50 | DN 65 | DN 80 |
|---|---|---|---|---|---|
| | D1 | ø 41x1,5 | ø 53x1,5 | ø 70x2 | ø 85x2 |
| | D2 | ø 41x1,5 | ø 53x1,5 | ø 70x2 | ø 85x2 |
| | D3 | ø 129 | ø 129 | ø 167 | ø 167 |
| | B1 | 85 | 85 | 110 | 121 |
| | B2 | 92 | 92 | 103 | 107 |
| | B3 | 170 | 170 | 220 | 242 |
| | L1 | 570 | 603 | 718 | 772 |
| | L2 | 133 | 145 | 181 | 206 |
| | L3 | 48 | 60 | 76 | 91 |
| | G1 | 1/4 | 1/4 | 1/4 | 1/4 |
| size when completed with Control head | M | 565 | 620 | 740 | 800 |



## ➤ Valve insert

1) *Piston plate*
2) *Piston*
3) *Piston*
4) *Piston upper*
5) *Retaining clamp*
6) *Lantern*
7) *Screw retention*
8) *Locking screw*
9) *Piston rod*
10) *Hexagon screw*
11) *Actuator*
12) *Spindle*
13) *O-Ring*
14) *Position indication*
15) *Cap*

D1) *a) O-Ring*
*b) Seal*
D2) *Seal*
D3) *Diaphragm*
D4) *Plain bearing*
D5) *O-Ring*
D6) *O-Ring*

*VE = Valve insert*
*G1 = Thread connection secured with lock nut removable (e.g. Loctite 243)*
*G2 = Thread connection secured with lock nut high-strength (e.g. Loctite 2701)*
*B = Bore*
*LA2= Throttle valve*

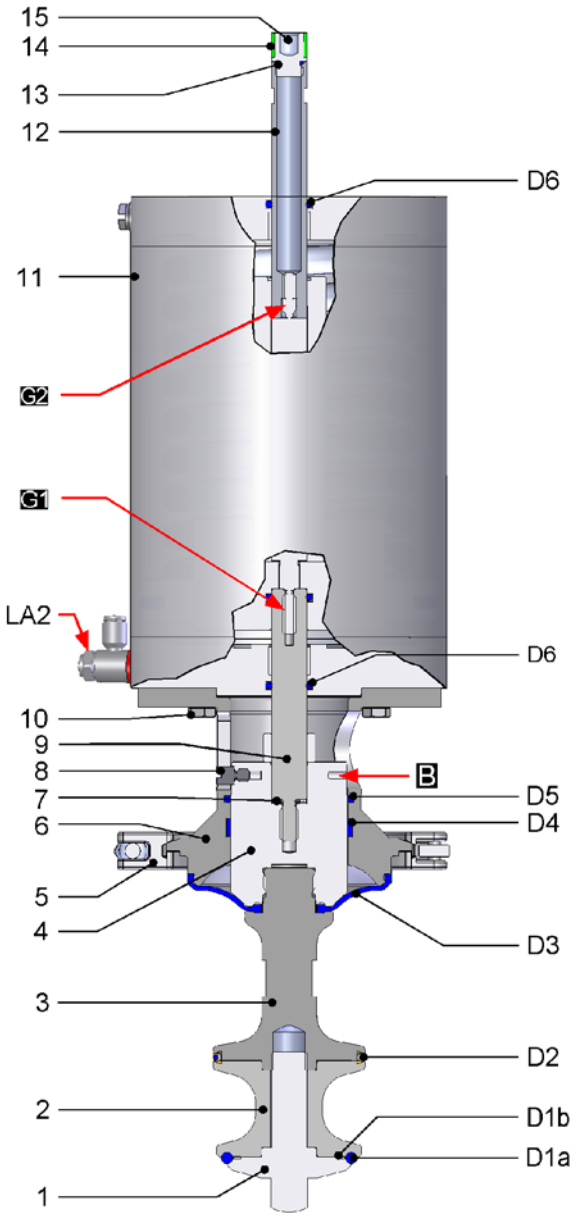



Fig. 9

### ➢ *Wrench size*

| | SW1 | SW2 | SW3 | B1 |
|---|---|---|---|---|
| DN40 | 19 | 30 | 17 | ø7 |
| DN50 | 25 | 24 | 17 | ø7 |
| DN65 | 30 | 24 | 17 | ø7 |
| DN80 | 30 | 36 | 17 | ø8 |

## 13. Manufacturing

### 13.1 Structure of Article number

**5844 050 000 - 041**

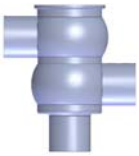
- 041 — Material in product contact / Exterior finish / Interrogation system
- 000 — Material seals in product contact / Construction modifications
- 050 — Valve size
- 000 — Housing types
- 5844 — Product type

### ➤ Product type

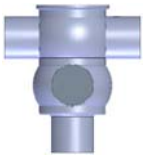
584x = GEMBRA Aseptic Two-way-valve

### ➤ Housing types

*5844 S-S-S*



*5846 SS-S-S*



### ➤ Valve size

DN = Nominal diameter

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| DIN | **025** = DN25 | **040** = DN40 | **050** = DN50 | **065** = DN65 | **080** = DN80 | **100** = DN100 | **125** = DN125 | **150** = DN150 |
| INCH | **026** = DN1 | **038** = DN1½ | **051** = DN2 | **064** = DN2½ | **076** = DN3 | **101** = DN4 | - | - |

### ➤ Material seals / Construction modifications

| | | |
|---|---|---|
| Material seals in product contact: | PTFE / k-flex<br>PTFE / EPDM | |
| Construction modifications: | Type of actuation | - air open - spring close<br>- air close - air close<br>- spring open - air close |

### ➤ Material in product contact / Exterior finish

| | |
|---|---|
| **020** - 1.4301/1.4307 AISI304/307 - bright turned | **040** - 1.4301/1.4307 AISI304/307 - bright turned |
| **021** - 1.4301/1.4307 AISI304/307 - E-polished | **041** - 1.4301/1.4307 AISI304/307 - E-polished |
| **022** - 1.4301/1.4307 AISI304/307 - unpolished, glass-bead blasted | **042** - 1.4301/1.4307 AISI304/307 - unpolished, glass-bead blasted |

### ➤ Interrogation system

| Article number | Control System or Interrogation System (A1, A2) |
|---|---|
| 58xx DN xxx **-041** | Valve without control- or interrogation system |
| 58xx DN xxx **-750** | Valve with Sensor mounting set (5630 005 000-020) |
| 58xx DN xxx **-6xx** | Control head ASi-Bus for GEMBRA-Single seat valves |
| 58xx DN xxx **-K6xx** | Control head KI-Top ASi-Bus for GEMBRA-Single seat valves |
| 58xx DN xxx **-5xx** | Control head SPS for GEMBRA-Single seat valves |
| 58xx DN xxx **-K5xx** | Control head KI-Top SPS for GEMBRA-Single seat valves |

*DN - Nominal diameter e.g. 58xx 050 000-041*

# 14. Spare parts list

## 14.1 Aseptic Two-way-valve GEMBRA (1.4404 / AISI316L)

| Variants | Seal | Actuator | Article-Nr. | Valve insert VE | Housing VG *AISI316L* | Seal kit |
|---|---|---|---|---|---|---|
| ***Housing style S-S-S*** | | | | | | |
| | **PTFE / k-flex** | **Lö - Fs** | **5844 DN 000-xxx** | **5844 DN 020-041** | | |
| | | **Fö - Ls** | **5844 DN 100-xxx** | **5844 DN 120-041** | **5844 DN 031-041** | **5844 DN 990-000** |
| | | **Lö - Ls** | **5844 DN 300-xxx** | **5844 DN 320-041** | | |
| | **PTFE / EPDM** | **Lö - Fs** | **5844 DN 030-xxx** | **5844 DN 023-041** | | |
| | | **Fö - Ls** | **5844 DN 130-xxx** | **5844 DN 123-041** | **5844 DN 031-041** | **5844 DN 993-000** |
| | | **Lö - Ls** | **5844 DN 330-xxx** | **5844 DN 323-041** | | |
| ***Housing style SS-S-S*** | | | | | | |
| | **PTFE / k-flex** | **Lö - Fs** | **5846 DN 000-xxx** | **5844 DN 020-041** | | |
| | | **Fö - Ls** | **5846 DN 100-xxx** | **5844 DN 120-041** | **5846 DN 031-041** | **5844 DN 990-000** |
| | | **Lö - Ls** | **5846 DN 300-xxx** | **5844 DN 320-041** | | |
| | **PTFE / EPDM** | **Lö - Fs** | **5846 DN 030-xxx** | **5844 DN 023-041** | | |
| | | **Fö - Ls** | **5846 DN 130-xxx** | **5844 DN 123-041** | **5846 DN 031-041** | **5844 DN 993-000** |
| | | **Lö - Ls** | **5846 DN 330-xxx** | **5844 DN 323-041** | | |

*DN = Dimension nominal e.g. 5844 050 000-041*
*xxx = Control- or interrogation system*
*MV = Solenoid valve*
*Lö = air open*
*Ls = air close*
*Fö = spring open*
*Fs = spring close*

### *14.2 Valve inserts Aseptic Two-way-valve GEMBRA (1.4404 / AISI316L)*

| No. | Designation | Material | DN40 | DN50 | DN65 | DN80 |
|---|---|---|---|---|---|---|
| VE | *Valve insert Lö - Fs*<br>*Valve insert Fö - Ls*<br>*Valve insert Lö - Ls* | *PTFE / k-flex*<br>*PTFE / k-flex*<br>*PTFE / k-flex* | *5844 040 020-041*<br>*5844 040 120-041*<br>*5844 040 320-041* | *5844 050 020-041*<br>*5844 050 120-041*<br>*5844 050 320-041* | *5844 065 020-041*<br>*5844 065 120-041*<br>*5844 065 320-041* | *5844 080 020-041*<br>*5844 080 120-041*<br>*5844 080 320-041* |
| VE | *Valve insert Lö - Fs*<br>*Valve insert Fö - Ls*<br>*Valve insert Lö - Ls* | *PTFE / EPDM*<br>*PTFE / EPDM*<br>*PTFE / EPDM* | *5844 040 023-041*<br>*5844 040 123-041*<br>*5844 040 323-041* | *5844 050 023-041*<br>*5844 050 123-041*<br>*5844 050 323-041* | *5844 065 023-041*<br>*5844 065 123-041*<br>*5844 065 323-041* | *5844 080 023-041*<br>*5844 080 123-041*<br>*5844 080 323-041* |
| 1 | *Piston plate* | *AISI316L* | *5844 040 009-040* | *5844 050 009-040* | *5844 065 009-040* | *5844 080 009-040* |
| 2 | *Piston* | *AISI316L* | *5844 040 008-040* | *5844 050 008-040* | *5844 065 008-040* | *5844 080 008-040* |
| 3 | *Piston* | *AISI316L* | *5844 040 007-040* | *5844 050 007-040* | *5844 065 007-040* | *5844 080 007-040* |
| 4 | *Piston upper* | *AISI316L* | *5836 040 007-041* | *5836 040 007-041* | *5836 065 007-041* | *5836 080 007-041* |
| 5 | *Retaining clamp* | *AISI304* | *2122 065 100-020* | *2122 065 100-020* | *2122 115 100-020* | *2122 125 100-020* |
| 6 | *Lantern* | *AISI304* | *5821 050 014-021* | *5821 050 014-021* | *5821 065 014-021* | *5821 080 014-021* |
| 7 | *Washer screw retention* | *AISI316L* | *8135 012 195-040* | *8135 012 195-040* | *8135 012 195-040* | *8135 012 195-040* |
| 8 | *Locking screw* | *AISI304* | *5836 040 008-020* | *5836 040 008-020* | *5836 040 008-020* | *5836 080 008-020* |
| 9 | *Piston rod* | *AISI303* | *5836 040 006-221* | *5836 040 006-221* | *5836 080 006-220* | *5836 080 006-220* |
| 10 | *Hexagon screw* | *AISI304* | *8106 008 020-020* | *8106 008 020-020* | *8106 008 020-020* | *8106 008 020-020* |
| 11 | *Actuator Lö - Fs*<br>*Actuator Fö - Ls*<br>*Actuator Lö - Ls* | *AISI304*<br>*AISI304*<br>*AISI304* | *5200 129 151-032*<br>*5400 129 151-032*<br>*5300 129 151-032* | *5200 129 151-032*<br>*5400 129 151-032*<br>*5300 129 151-032* | *5200 167 151-032*<br>*5400 167 151-032*<br>*5300 167 151-032* | *5200 167 151-032*<br>*5400 167 151-032*<br>*5300 167 151-032* |
| 12 | *Spindle* | *AISI303* | *5622 100 070-220* | *5622 100 070-220* | *5622 100 070-220* | *5622 100 070-220* |
| 13 | *O-Ring* | *EPDM* | *2304 012 020-170* | *2304 012 020-170* | *2304 012 020-170* | *2304 012 020-170* |
| 14 | *Position indication* | *ABS gn* | *5622 100 058-152* | *5622 100 058-152* | *5622 100 058-152* | *5622 100 058-152* |
| 15 | *Cap* | *AISI303* | *5622 100 071-220* | *5622 100 071-220* | *5622 100 071-220* | *5622 100 071-220* |
| | | | | | | |
| | Seal kit - PTFE/EPDM<br>Seal kit - PTFE/k-flex | PTFE/EPDM<br>PTFE/k-flex | 5844 050 993-000<br>5844 050 990-000 | 5844 050 993-000<br>5844 050 990-000 | 5844 065 993-000<br>5844 065 990-000 | 5844 080 993-000<br>5844 080 990-000 |
| D1a<br>D1b | *O-Ring*<br>*Seal* | *k-flex*<br>*PTFE* | *2304 045 060-114*<br>*2352 044 037-053* | *2304 045 060-114*<br>*2352 044 037-053* | *2304 060 060-114*<br>*2352 059 052-053* | *2304 079 060-114*<br>*2354 078 071-053* |
| D2 | *Type: PTFE/EPDM* | *EPDM* | *5621 065 010-084* | *5621 065 010-084* | *5621 080 010-084* | *5621 100 010-084* |
| | *Type: PTFE/k-flex*<br>*- Ring quartered*<br>*- O-Ring*<br>*- k-flex seal* | *k-flex*<br>*AISI304*<br>*EPDM*<br>*k-flex* | *5621 065 010-114*<br>*5621 065 011-020*<br>*2304 060 026-159*<br>*5621 065 012-114* | *5621 065 010-114*<br>*5621 065 011-020*<br>*2304 060 026-159*<br>*5621 065 012-114* | *5621 080 010-114*<br>*5621 080 011-020*<br>*2304 076 026-159*<br>*5621 080 012-114* | *5621 100 010-114*<br>*5621 100 011-020*<br>*2304 095 026-159*<br>*5621 100 012-114* |
| D3 | *Diaphragm* | *PTFE* | *5821 050 020-053* | *5821 050 020-053* | *5821 065 020-053* | *5821 080 020-053* |
| D4 | *Piston guide bush* | *PTFE* | *8051 250 010-081* | *8051 250 010-081* | *8051 190 010-081* | *8051 220 010-081* |
| D5 | *O-Ring* | *EPDM* | *2304 049 035-170* | *2304 049 035-170* | *2304 062 035-159* | *2304 072 035-170* |
| D6 | *O-Ring* | *EPDM* | *2304 019 035-171* | *2304 019 035-171* | *2304 019 035-171* | *2304 019 035-171* |

KIESELMANN
FLUID PROCESS GROUP

# *Declaration of incorporation*

Translation of the original

| | |
|---|---|
| *Manufacturer* / authorised representative: | KIESELMANN GmbH<br>Paul-Kieselmann-Str. 4-10<br>75438 Knittlingen<br>Germany |
| Authorised representative,<br>for compiling technical documents: | Achim Kauselmann<br>KIESELMANN GmbH<br>Paul-Kieselmann-Str. 4-10<br>75438 Knittlingen<br>Germany |

| **Product name** | **Function** |
|---|---|
| pneum. Lift actuators | Stroke movement |
| pneum. Rotary actuators | Rotary movement |
| Ball valves | Media cutoff |
| Butterfly valves | Media cutoff |
| Single seat valves | Media cutoff |
| Flow control valves | Control of liquefied media |
| Throttle valve | Control of liquefied media |
| Overflow valve | Definition of fluid pressure |
| Double seat valve | Media separation |
| Bellow valves | Sampling of liquids |
| Sampling valves | Sampling of liquids |
| Two way valves | Media cutoff |
| Tankdome fitting | Prevention of overpressure and vacuum, Tank cleaning |

The manufacturer hereby states that the above product is considered as an incomplete machine in the sense defined in the Directive 2006/42/EC on Machinery. The above product is exclusively intended to be installed into a machine or an incomplete machine. The said product does not yet conform to all the relevant requirements defined in the Directive on Machinery referred to above for this reason.

The specific technical documents listed in Appendix VII, Part B, have been prepared. The Authorized Agent empowered to compile technical documents may submit the relevant documents if such a request has been properly justified.

Commissioning of an incomplete machine may only be carried out if it has been determined that the respective machine into which the incomplete machine is to be installed conforms to the regulations set out in the Directive on Machinery referred to above.

The above product conforms to the requirements of the directives and harmonized standards specified below:

- DIN EN ISO 12100 Safety of machinery

Knittlingen, 09. 08. 2013

**Klaus Dohle**
General Director