KIESELMANN
FLUID PROCESS GROUP

Translation of the original

Operating Instructions

Type 582x



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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.
	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

Based upon its functions, the double seat valve is suitable for use in the food and beverages, in pharmaceutical, biotechnological and chemical industries. It is used mainly in combinations with several other double seat valves for the purpose of emptying and filling containers with the possibility of connecting several pipes to one tank. The valve is designed for media characteristics according to DGRL 2014/68/EG for group 2 (media condition gaseous or liquid).

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 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.



⚠ WARNING

Risk of injury by moving parts

When dismount the clamp coupling, the spring preloaded valve insert (air open - spring close) may incur serious injuries by jumping out of the housing.

- First pneumatically open the valve before disassembling the clamp coupling, so that upstroke the piston.
- Remove the valve core.
- Remove the control air line at valve insert.

⇨ Ensure that the actuator is unpressurized.



⚠ 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

Risk of injury by pre-stressed pressure spring.

The actuator is spring-loaded. When disassembling the actuator, components that jump out may cause injuries.

- For dismantling please observe the separate assembly instructions.
- We recommend having the manufacturer do the maintenance work required for the actuation.



⚠ WARNING

ATEX - Guidelines

If the valve or the plant is operated in a potentially explosive atmosphere, the valid ATEX directive of the EC and the installation instructions in this operating manual must be observed.



⚠ CAUTION

Damage to the pneumatic actuator when actuated by compressed air!

If actuated by compressed air at the pneumatic actuator (connection P), the actuator can be damaged.

➢ The valve insert must be completely assembled before the pneumatic actuator is pressurized with compressed air.

- Only now may the valve insert be actuated with compressed air at the connection (P).



⚠ CAUTION

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

(see technical data)



⚠ CAUTION

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



⚠ CAUTION

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



⚠ 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



⚠ 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

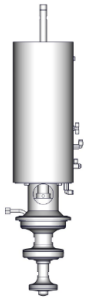
Recommendation for longer storage

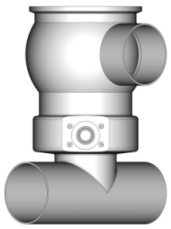
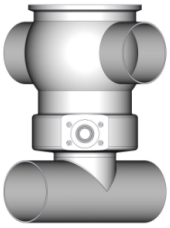
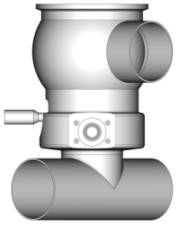
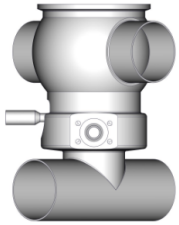
We recommend regularly checking the product and the prevailing storage conditions during long storage times.

- 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.

4 Modular system

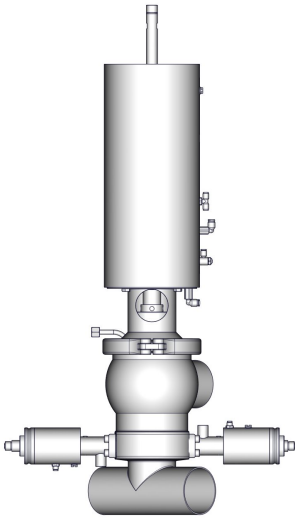
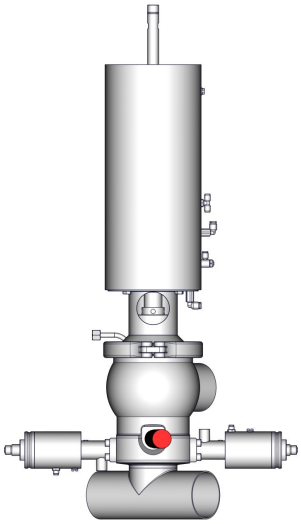
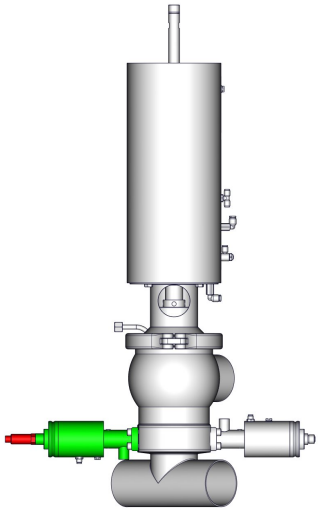
Control head KI-Top		feedback unit
		
Cap: Stainless steel	Cap: Transparent	with Contact protection

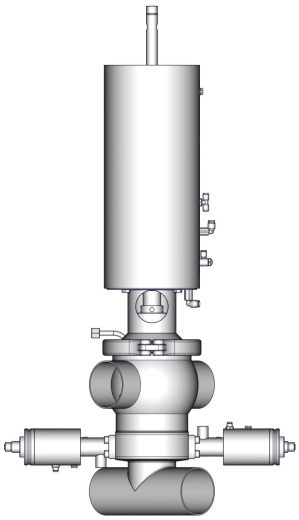
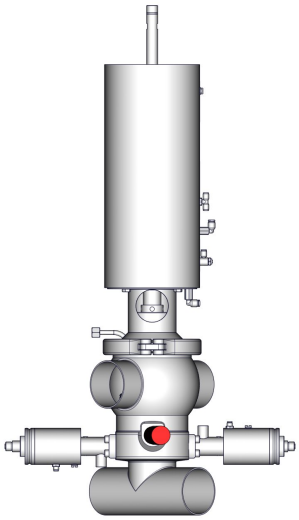
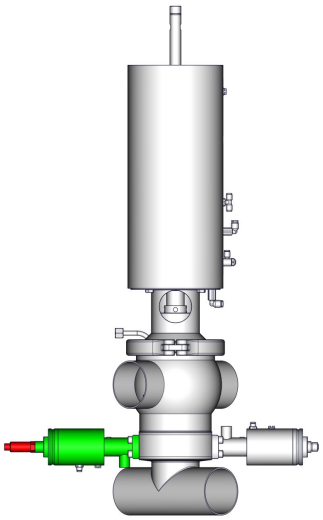
Drive pneumatic

PTFE / k-flex | PTFE / EPDM

Valve housing	
S - SS	SS - SS
	
	
with PT100	with PT100

4.1 Valve design

GEMBRA-Aseptic Double seat valve

with Valve housing S - SS		
without PT100	with PT100 in the Valve housing	with PT100 in the Outlet valve
		

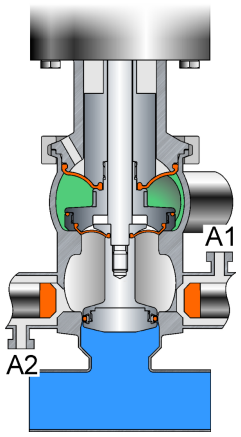
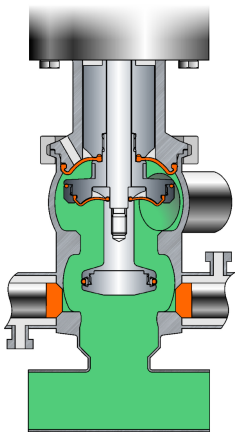
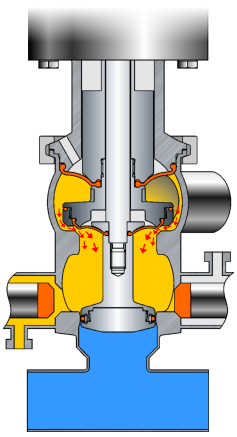
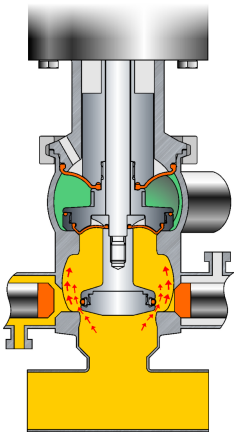
with Valve housing SS - SS		
without PT100	with PT100 in the Valve housing	with PT100 in the Outlet valve
		

5 Function and operation

5.1 Description of function

Due to the combined diaphragm sealing at a locking and leakage space respectively, safe separation of media is reliably guaranteed.

Cleaning and sterilisation of the locking and leakage space can be carried out inline via lifting/clocking of one the valve seats.

Valve closed	Valve open	lifting upper seat	lifting lower seat
			
• Steril barrier active • Drain outlet A2 pulsed • Steril supply A1 active	• Steril barrier inactive	• Steril barrier inactive • Drain outlet A2 open	• Steril barrier inactive • Drain outlet A2 open

5.2 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.

5.3 Pneumatic valve activation

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.

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 ATEX - Guidelines

For valves or plants/installations that are operated in the ATEX area, sufficient bonding (grounding) must be ensured (see valid ATEX Guidelines EG).

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*

*) 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.

6.3 Cleaning

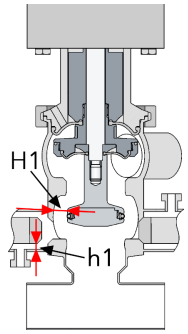
Cleaning

The upper and lower process housing is cleaned via pipeline cleaning. As part of the cleaning program, the leakage chamber and the drain pipe can be cleaned by cycling the valve discs. Cleaning via the purge valves of the sterile barrier is not recommended.

7 Technical data

7.1 Gembra Aseptic-Double seat valve

Model:	GEMBRA Aseptic-Double seat valve	
Valve size:	DN40 - DN80	
Connections:	Welding end	
Temperature range:	Ambient temperature: Operating temperature: Sterilization temperature:	+4 to +45°C (air) +0 to +95°C (medium dependent) k-flex/PTFE +140°C (SIP 30 min)
Working pressure:	DN 40 - DN65 = max.10 bar DN 80 = max. 8 bar	
Leak rate:	A (EN 12266-1)	
Control air:	Control air pressure: 5,5 - 8,0 bar	Quality of control air: ISO 8573-1:2010 [3:(≤5 µm):4:4]
Materials: (in product contact)	Stainless steel:	1.4404 / AISI316L
	Surfaces:	Ra < 0,8µm metallic bright, blank e-polished
	Sealing material:	k-flex / PTFE EPDM

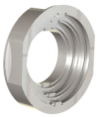
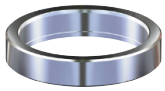


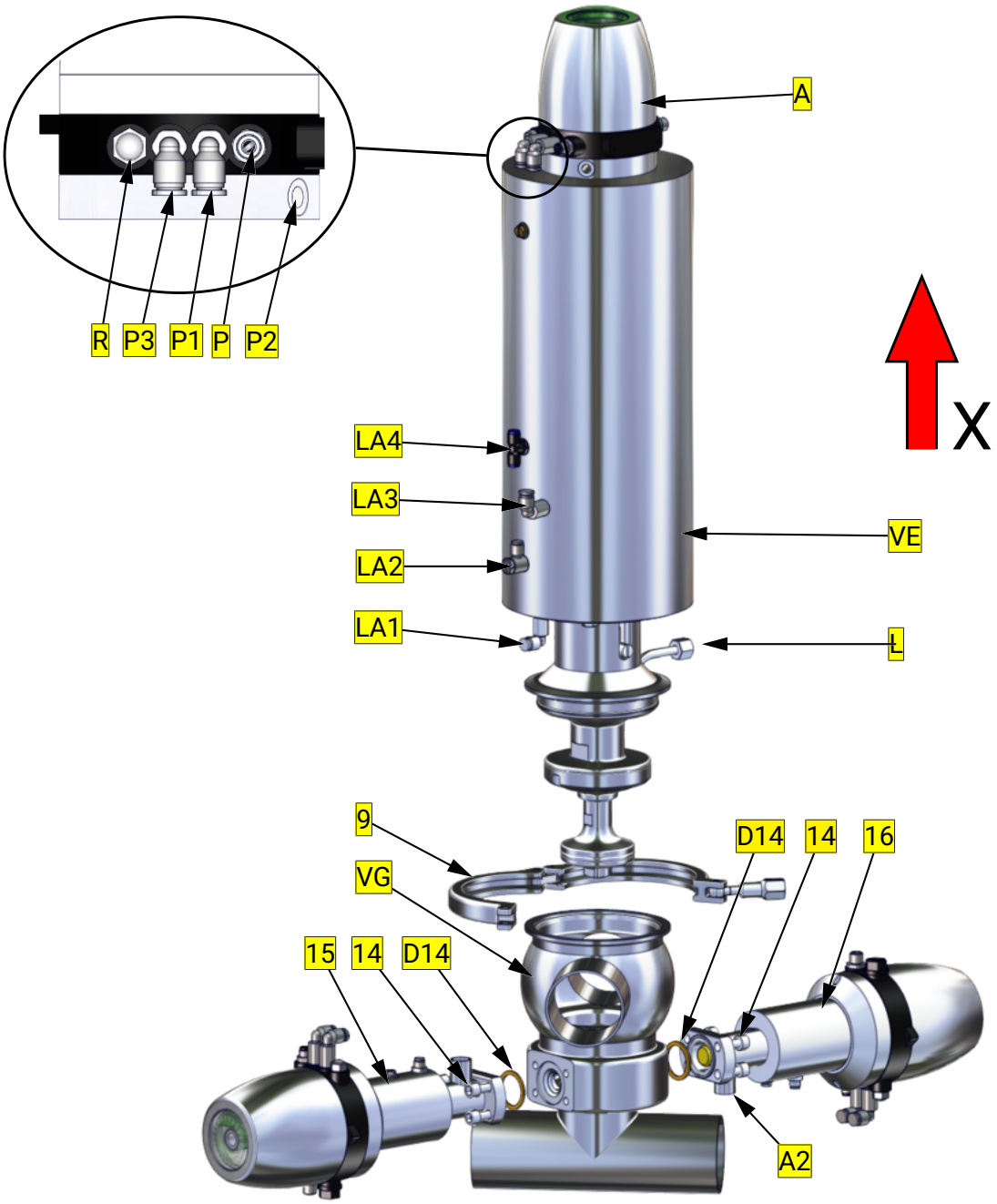
ND	**40**	**50**	**65**	**80**
Inch	**1½**	**2**	**2½**	**3**
Torque [Nm]	15	15	25	25
main lift (mm)	26	26	28	35
narrowest flow area H1 (mm)	12	12	12.5	15
seat lift upper (mm)	2	2	2	2
seat lift lower (mm)	8	8	8	8
main lift (mm)	10	10	10	10
narrowest flow area h1 (mm)	4.5	4.5	4.5	4.5

8 Disassembly and assembly

8.1 Disassembly

Assembly Tools

Tool kit for GEMBRA Aseptic Double seat valve DN40 - DN80			ST4, ST10, ST20, ST21, ST22, ,	5820000010-000
T1		Combination wrench-Set	SW 8 - SW 24	-
ST20 ST21 ST22		Spanner	SW 30 - 32 SW 41 SW 46	8618030032-000 8618041000-001 8618046000-001
T2		Allen key - Set	1.5 - 10	-
T3		Screwdriver Set	Size 2,5 - 10 PH0,PH1	-
T4		Soft-head hammer	-	-
T10		Joint -pin wrench	Pin Ø6	8027000065-000
T31		Round rod	ø5	-
T30		Needle	-	-
ST10		Mounting wrench		5620000000-000
ST4		Centring ring - valve plate seal	DN 40 - 50 DN 65 DN 80 DN 100 DN 125 DN 150	5620050025-020 5620065025-020 5620080025-020 5620100025-020 5620125025-020 5620150025-020



A	Control unit	A2	Leakage drain
D14	Sealing ring	L	Leakage drain
LA1	Activation main stroke	LA2	Activation cycling down
LA3	Activation main stroke	LA4	Activation cycling up
VE	Valve insert	VG	Valve housing
P	Control air supply	P1	Activation main stroke
P2	Activation cycling down	P3	Activation cycling up
R	Sound absorber	9	Clamp coupling
14	Screw	15	Inlet valve
16	Outlet valve		

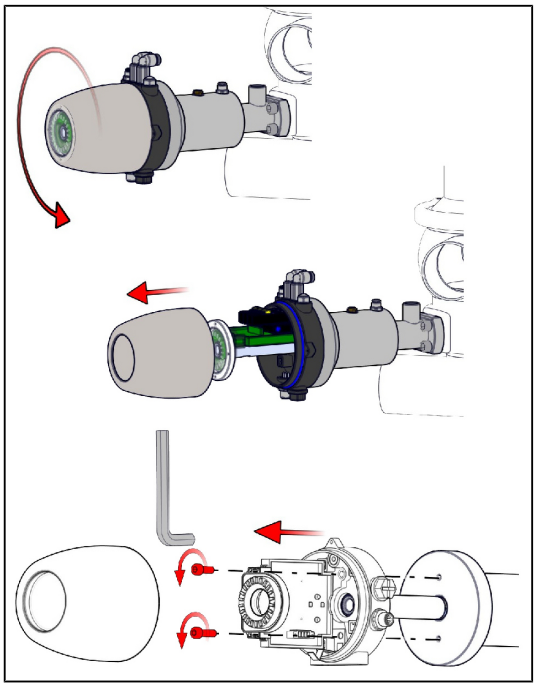
NOTICE

All threaded joint have right-hand thread.

Dismantle pneumatic and electrical connections. Unscrew fittings for CIP,discharge and feed lines.

8.1.1 Disassemble the pilot valves

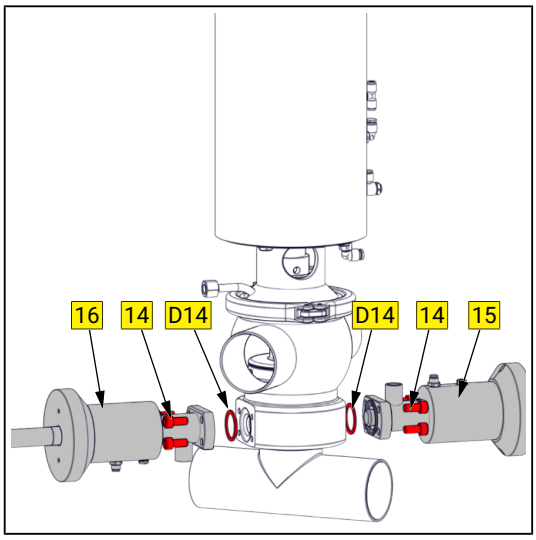
- Dismount the control heads from the pilot valves (Inlet- and outlet valve).



Remove pilot valves

- Unscrew the screws (14).
- Dismount Inlet- and Outlet valve.
- Remove seals (D14).

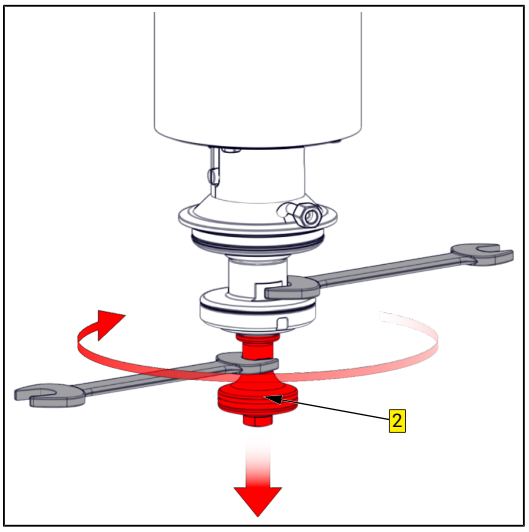
14 = Screws
15 = Inlet valve
16 = Outlet valve
D14 = Seal



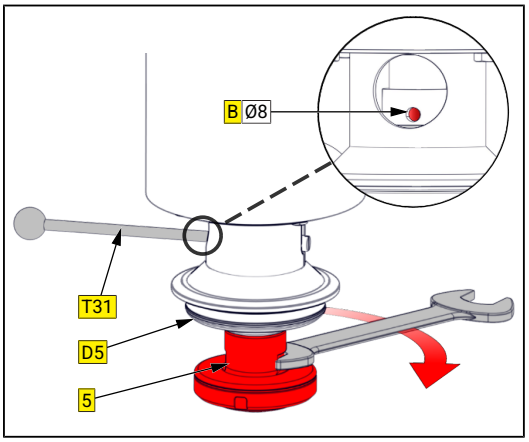
8.1.2 Assembly valve insert VE

8.1.3 Assembly seals D5, D11, D12

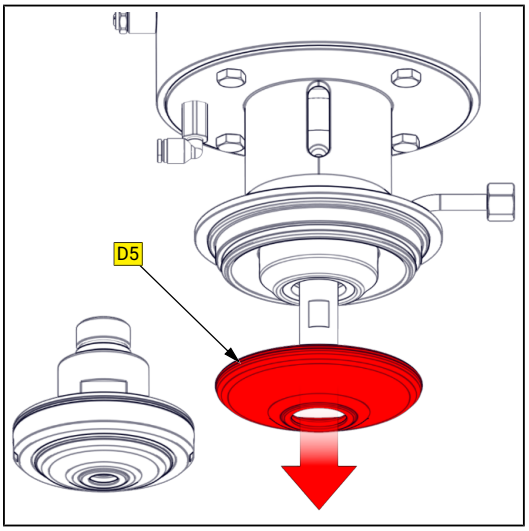
- Unscrew the lower piston (2).



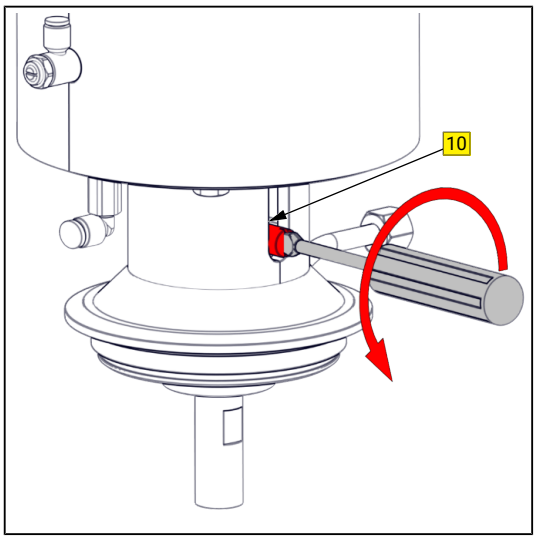
- Screw off the upper piston plate (5) and hold it against with the round rod (T31) (Ø8) in the hole (B).



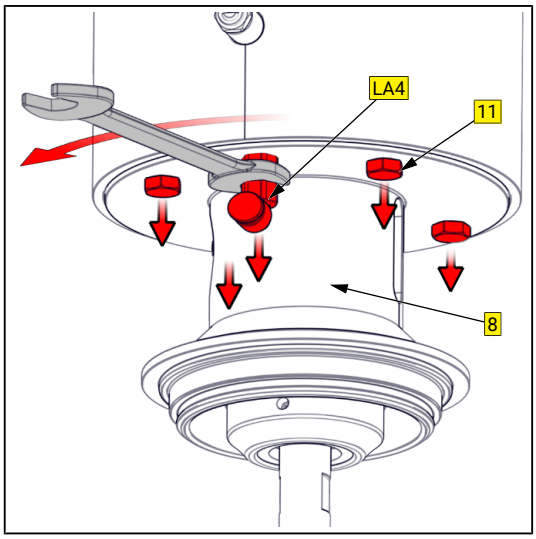
- Dismount the membrane (D2).



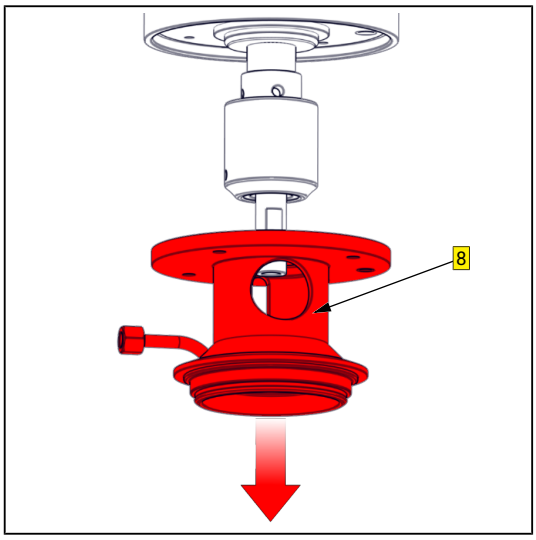
- Unscrew set screw (10).



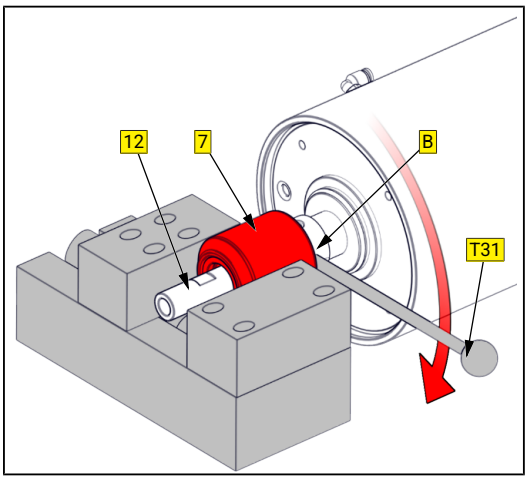
- Unscrew air supply (LA4) and screws (11).



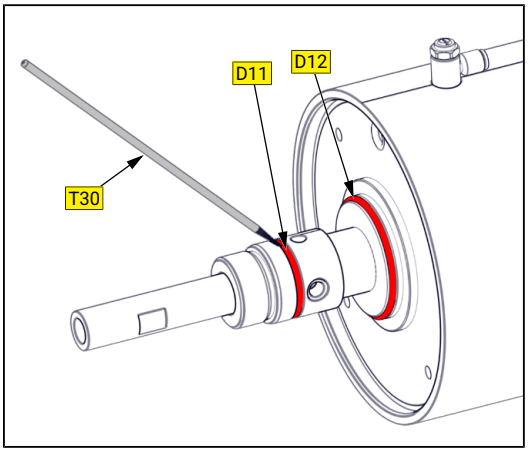
- Remove lantern (8).



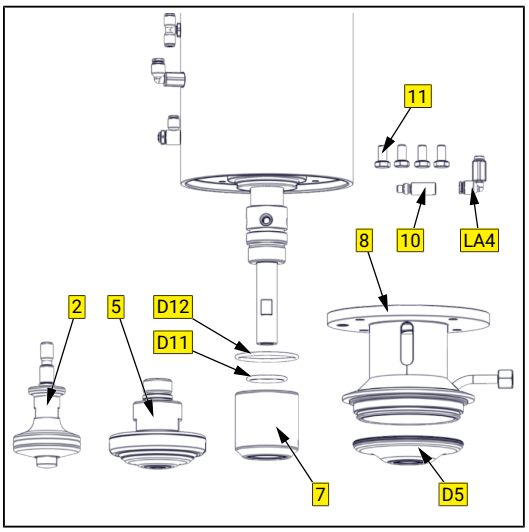
- Tighten the valve insert on the top of the piston (7) between soft jaws in a vice.
- Position the round rod (M4) in the hole (B) and loosen the threaded connection between piston (7) and piston rod (12).
- Open the vise and place the valve insert on the workbench.
- Unscrew piston (7) from piston rod (12).



- Remove the O-rings (D11) and (D12).
- Thoroughly clean and slightly lubricate mounting areas.
- Replace and install O-Rings (D11) and (D12).

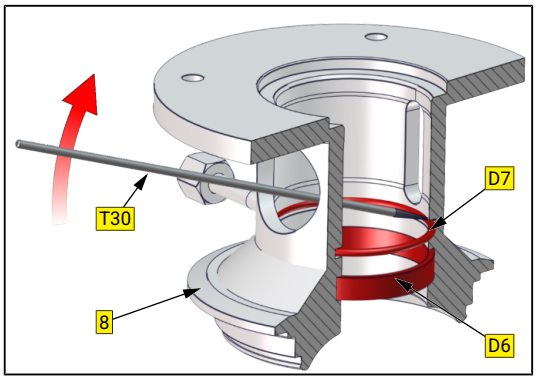


2 = Piston lower
5 = Piston upper
7 = Piston
8 = Lantern
10 = Set screw
11 = Screws
D5 = Membrane
D11 = O-ring
D12 = O-ring
LA4 = air supply

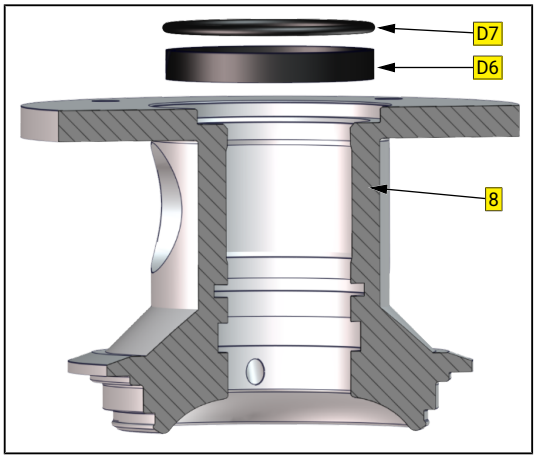


8.1.4 Assembly seals D6, D7

- Puncture the O-ring (D7) and the piston seal (D6) with a needle and remove them carefully from the groove of piston.
- Thoroughly clean and slightly lubricate mounting areas.



- Replace and install O-Ring (D7) and piston seal (D6).



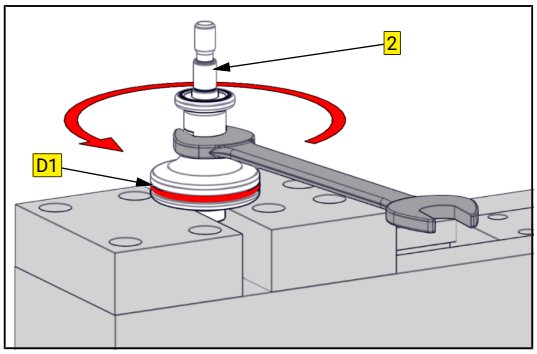
8.1.5 Disassemble lower piston - dismount seal D1

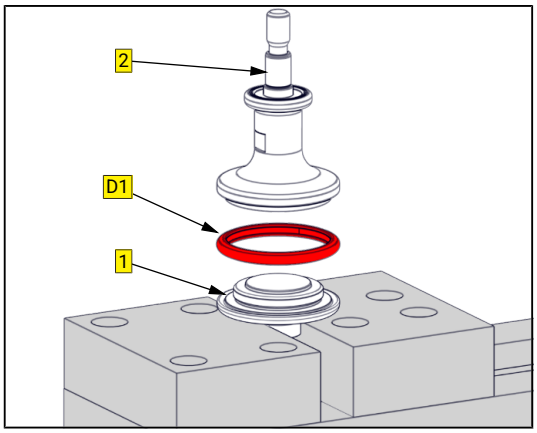
- Tighten the lower piston on the piston plate in a vice. Unscrew piston plate (1) from piston (2) and remove the seal (D1).

1 = Piston plate

2 = Piston

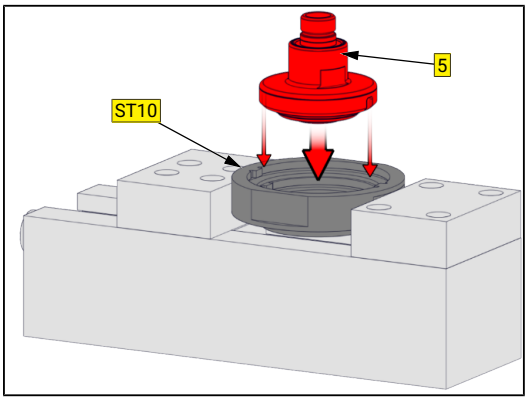
D1 = Seal

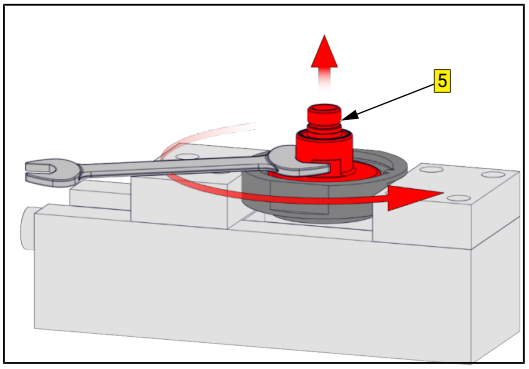


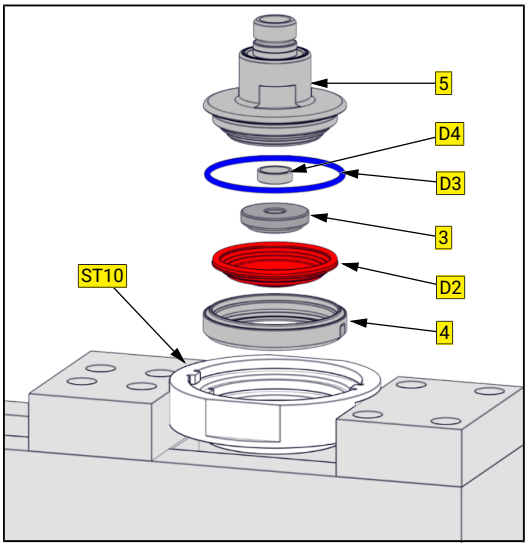


8.1.6 Disassemble upper piston - dismount Membrane D2 and O-Ring D3

- Tighten the mounting tool (ST10) in a vice and insert the complete piston plate (5) into the mounting tool.
- Us a wrench to unscrew the piston (5) from thrust collar (4).
- Remove the membrane (D2), O-Ring (D3) and support ring (3).
- The plain bearing (D4) does not need to be removed.







3 = Backup ring

4 = Thrust collar

5 = Piston

D2 = Membrane

D3 = O-ring

D4 = Plain bearing

ST10 = Mounting tool

8.2 Assembly

- Before installation, thoroughly clean and slightly lubricate mounting areas and running surfaces.
- Assemble in reverse order.

NOTICE

Alternately press and roll the O-rings into the groove with round body.

Performance test

- Check the function according to the specified performance data in the operating state.

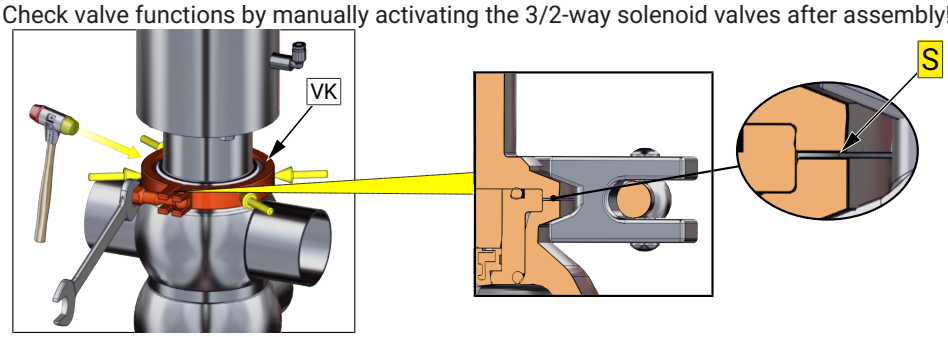
NOTICE

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' (≤ 0,4mm) between the components.
- Check valve functions by manually activating the 3/2-way solenoid valves after assembly!



Torque: clamp coupling

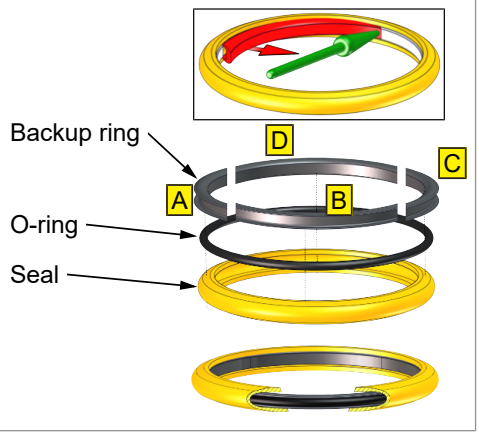
DN	25	40	50	65	80	100
Inch	1	1½	2	2½	3	4
Torque [Nm]	15	15	15	25	25	55

8.2.1 Assembling k-flex Seal (D-1)

Seal D1 - k-flex

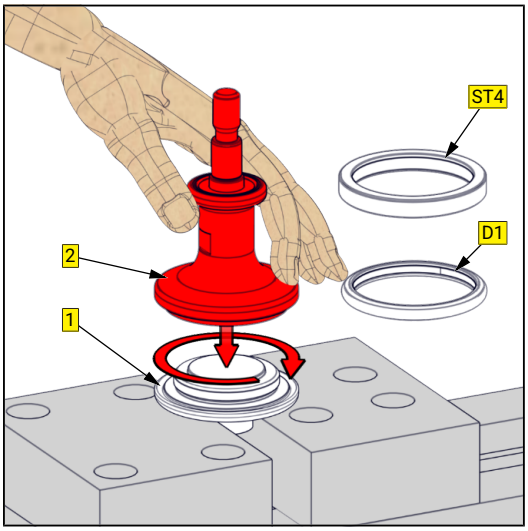
	Nominal diameter	Item number	Material:
k-flex - seal consists of	**DN40-DN50** **DN65** **DN80**	**5621 050 020-114** **5621 065 010-114** **5621 080 010-114**	**k-flex**
Support ring quartered	DN40-DN50 DN65 DN80	5621 050 021-020 5621 065 011-020 5621 080 011-020	1.4301 / AISI304
O-ring	DN40-DN50 DN65 DN80	2304 044 030-159 2304 060 026-159 2304 076 026-159	EPDM
k-flex - seal	DN40-DN50 DN65 DN80	5621 050 022-114 5621 065 012-114 5621 080 012-114	k-flex

(xxx = nominal diameter e.g. 050 for nominal diameter DN50)

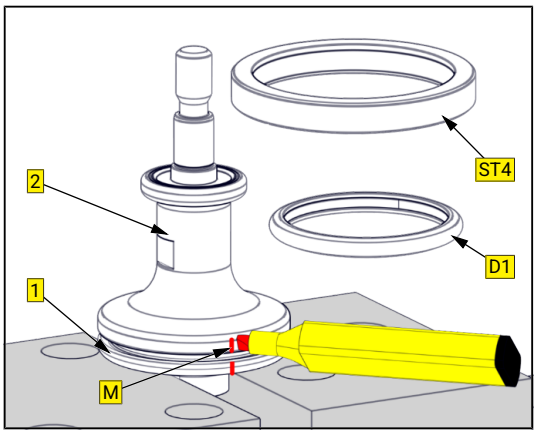
Seal D1 k-flex	
• Install O-Ring in k-flex seal. • Install the support ring shells in the order A, B, C, D	

8.2.2 Mounting k-flex - seal D1

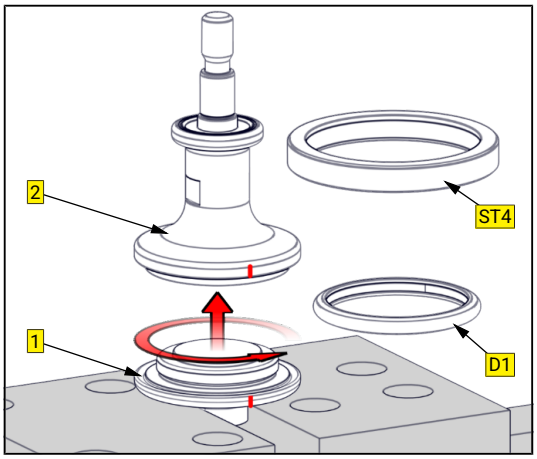
- Clamp piston plate (1) in a vice.
- Screw together the piston plate (1) and piston (2) without the seal (D1) by hand to the metallic stop position.



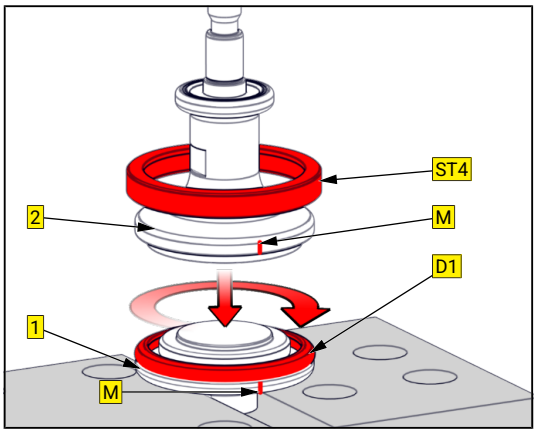
- Make a colored mark at the piston surfaces.



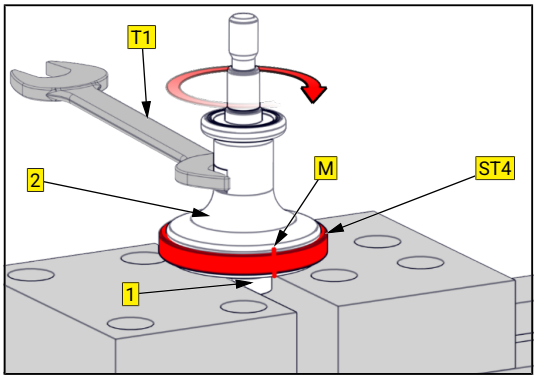
- After then, unscrew the piston (2) from the piston plate (1).



- Push the seal (D1) onto the piston plate (1) and screw the piston (2) into the piston plate (1) by hand.



- For the centring of the sealing ring (D1), the centring ring (ST4) is pushed over the piston (2) and piston plate (1).
- Screw the piston (2) as far as the mark (metallic stop) into the piston, thereby ensuring that the seal is optimally pressed.



1 = Piston plate

2 = Piston

D1 = Seal

M = Mark

ST4 = Centring ring

T1 = Open-end wrench

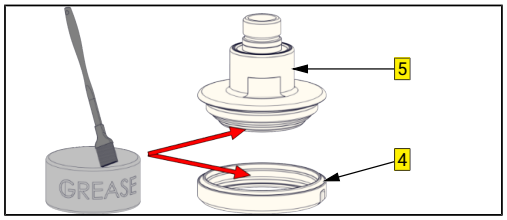
8.2.3 Mounting k-flex seal D2 and D3

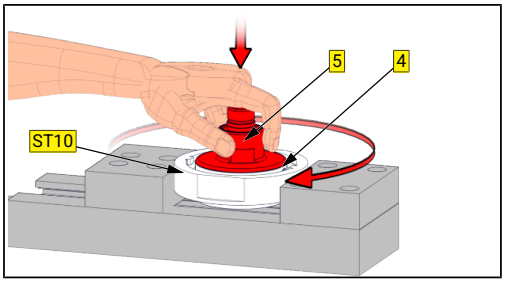
NOTICE

Deformation due to high clamping force

The thrust collar (4) deforms in case of a too high radial clamping force.

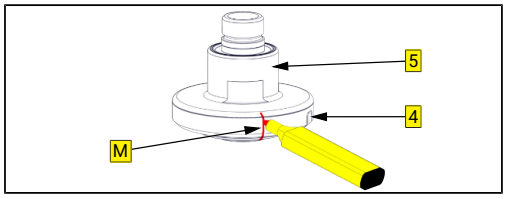
- Slightly grease the thread on the piston plate (5) and the thrust collar (4).
- Tighten the mounting tool (ST10) in the vise.
- Position the piston plate (5) and thrust collar (4) without membrane (D2), O-ring (D3), support ring (3) and plain bearing (D4) onto metal stop and attach a color mark (M).
- Unscrew the piston plate (5) and the thrust collar (4) again.
- Insert the plain bearing (D4) into the piston plate (5). Place the O-ring (D3), support ring (3) and membrane (D2) on the piston plate (5).

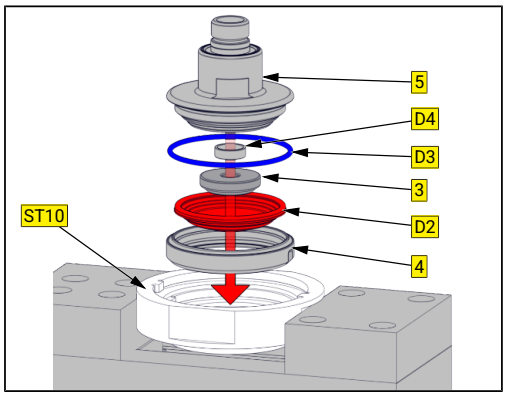




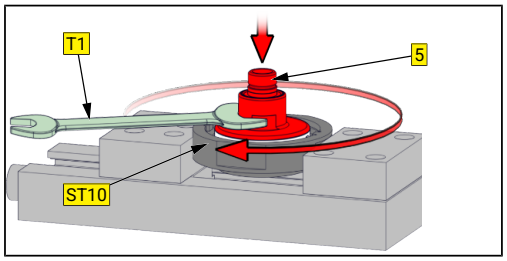
NOTICE! Pay attention to the support ring (3)!

- Place the thrust collar (4) by hand and screw it together.
- Insert the component with the thrust collar (4) into the assembly tool (ST10) and tighten with a wrench (T1) to the color marking (M).



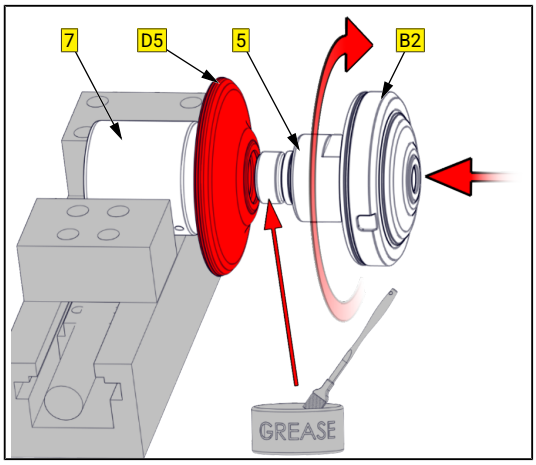


3 = Backup ring
4 = Thrust collar
5 = Piston plate
D2 = Membrane
D3 = O-ring
D4 = Plain bearing
M = Mark
ST10 = Mounting wrench GEMBRA
T1 = Open-end wrench



8.2.4 Mounting Membrane D5

- Tighten the piston (7) between soft jaws in the vice.
- Slide the diaphragm (D5) onto the component (B2).
- Slightly grease the assembly (B2) and screw it into the piston (7).



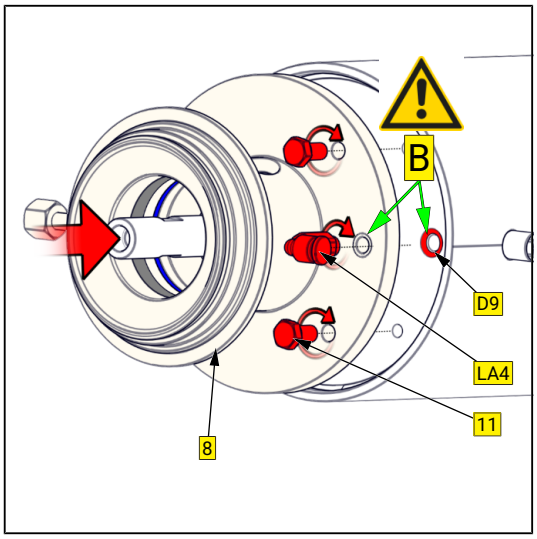
8.2.5 Assembling valve

- Place lantern (8) on the actuator.

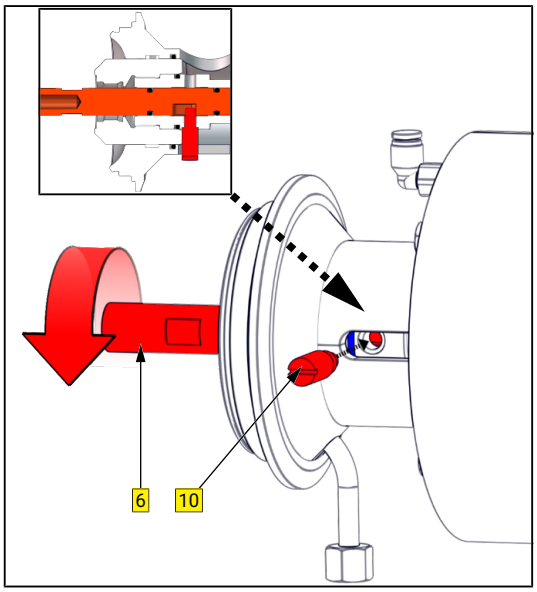
⚠ **CAUTION!** Observe the mounting position of the lantern!

When installing the lantern on the actuator, make sure that the through-hole (B) for the compressed air matches the tapped hole for the air connection (LA4).

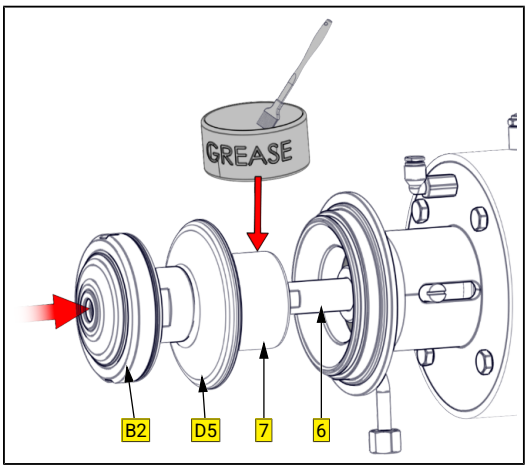
- Screw in the screws (11) but do not tighten. So that no tension results when the piston (7) is installed, the screws (11) are tightened after assembly of the piston (7).
- Mount air connection (LA4).



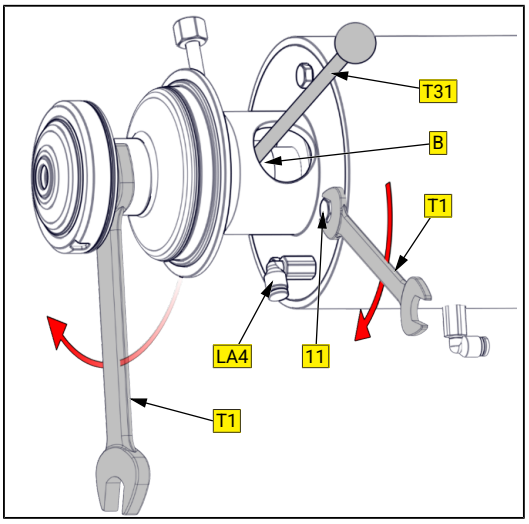
- Turn the spindle (6) until the threaded hole for the set screw (10) and the groove of the spindle (6) are aligned. Screw in the set screw (10).



- Piston (7) thoroughly clean and slightly lubricate the running surfaces.

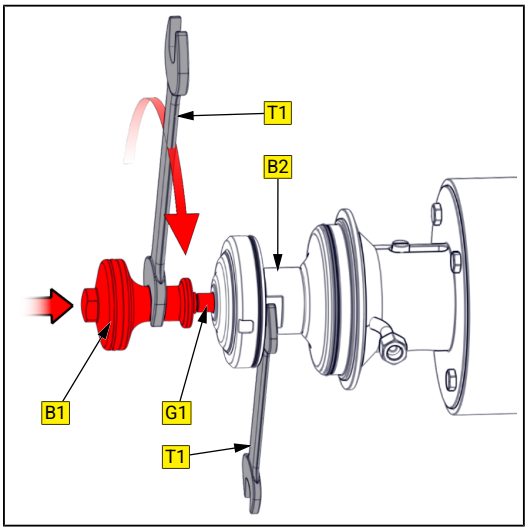


- Screw the piston (7) onto the piston rod (12). For counter pressure use a round rod in the hole (B).
- Now tighten the screws (11) on the lantern crosswise.

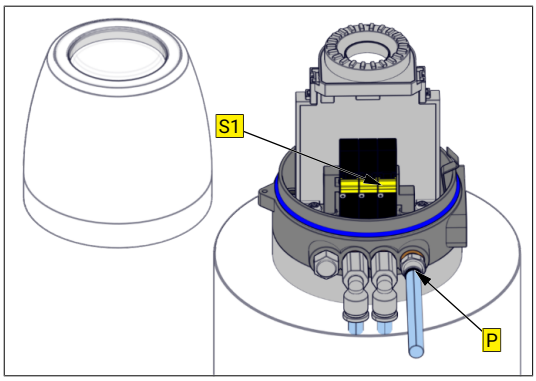


- Screw the component (B1) into the spindle (6).

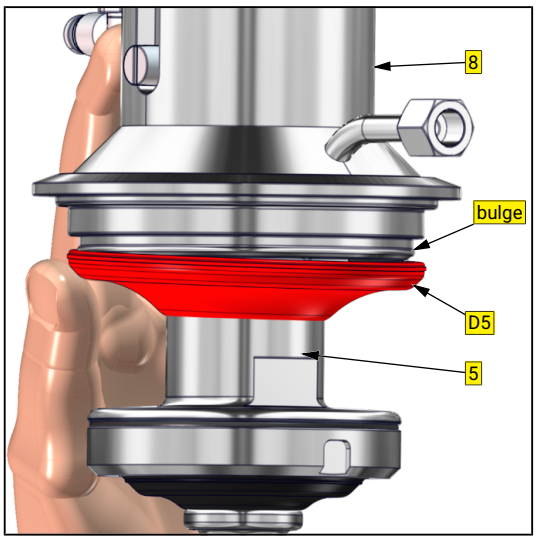
NOTICE! Secure the threaded connection G1 with Screw retention detachable (e.g. Loctite 243) .



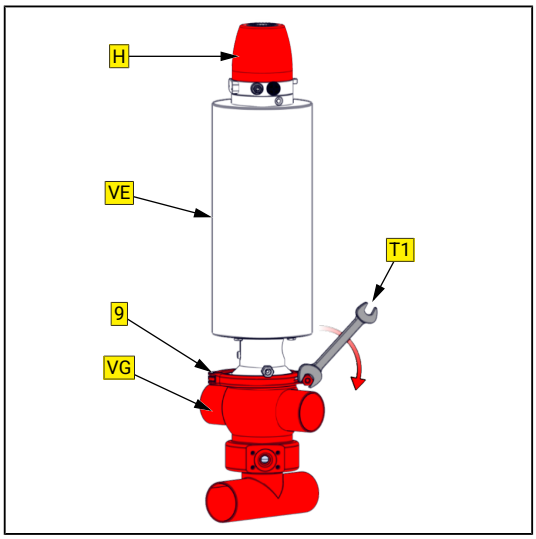
- Remove the hood from the control head.
- Connect the control air to the air connection (P) and lift the upper valve plate by actuating the sliding switch (S1).
- Thereby the Membrane (D5) can be installed more easily.



- Now string up the diaphragm (D5) carefully to the bulge on the lantern (8).



- Install the complete valve insert (VE) into the housing (VG).
- Assemble the clamp coupling (9) and tighten it while observing the torque.
- Disconnect the control air at the air connection (P), the valve moves into the basic position.
- To prevent damage to the control head, re-install the control head cover.



DN	40	50	65	80
Torque [Nm]	15	15	25	25

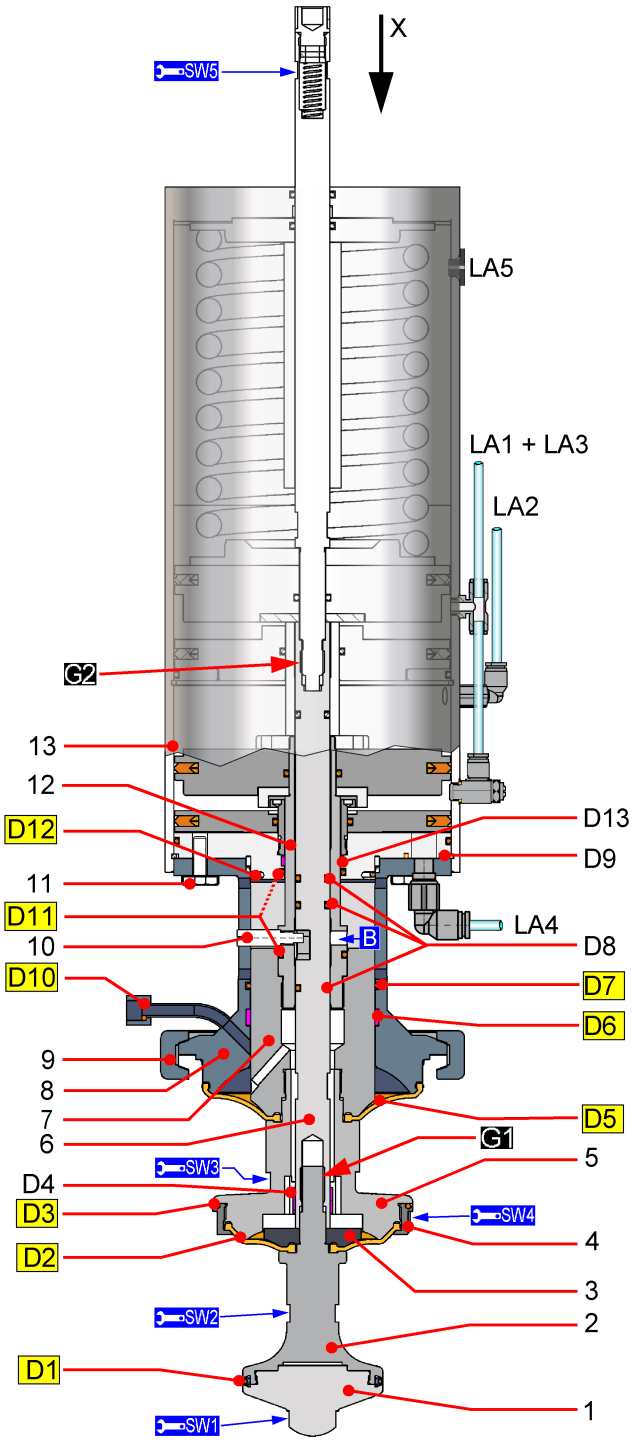
9 Drawings and dimensions

9.1 Drawings

1 = Piston plate
2 = Piston
3 = Backup ring
4 = Thrust collar
5 = Piston plate upper
6 = Spindle
7 = Piston upper
8 = Lantern
9 = Clamp coupling
10 = Set screw
11 = Hexagon screw
12 = Piston rod
13 = Pneum. actuator

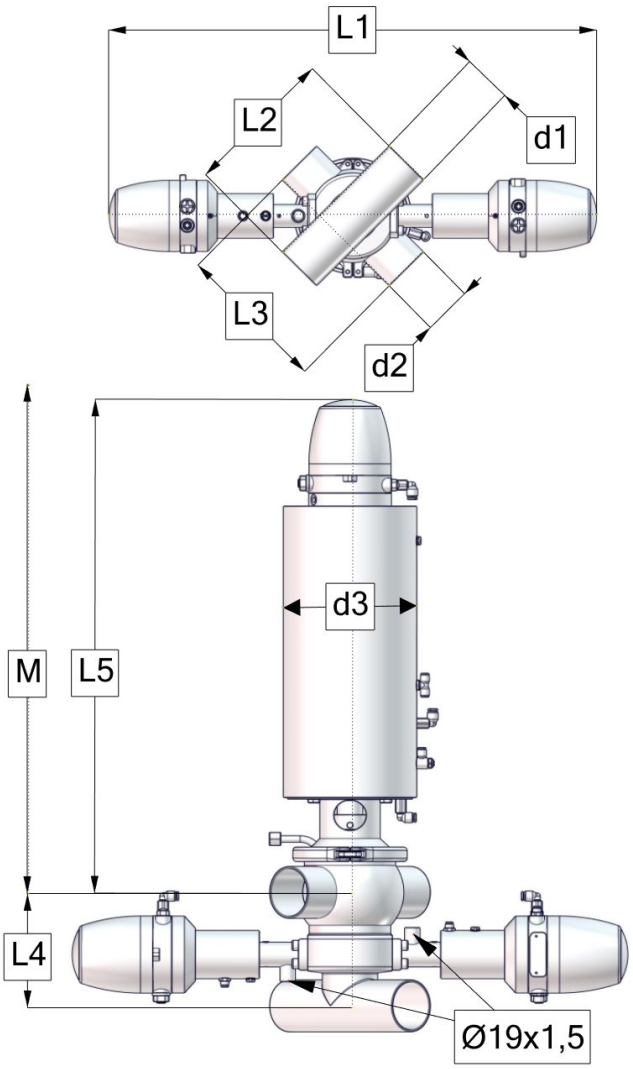
Spare parts

D1 = Seal
D2 = Membrane
D3 = O-ring
D4 = Plain bearing
D5 = Membrane
D6 = Piston seal
D7 = O-ring
D8 = O-rings
D9 = O-ring
D10 = O-ring
D11 = O-rings
D12 = O-ring
D13 = Plain bearing
G1 =Screw retention detachable (e.g. Loctite 243)
G2 =Screw retention detachable (e.g. Loctite 243)
B = Hole
LA1 = Main lift
LA2 = lifting lower seat
LA3 = Main lift
LA4 = lifting upper seat
LA5 = De-aeration or connection for pressure locking - optional



Nominal diameter	SW1	SW2	SW3	SW4	SW5
DN 40 / 1½“	19	17	32	70	17
DN 50 / 2“	19	17	32	70	17
DN 65 / 2½“	19	27	42	90	17
DN 80 / 3“	27	27	46	110	17

9.2 Dimensions

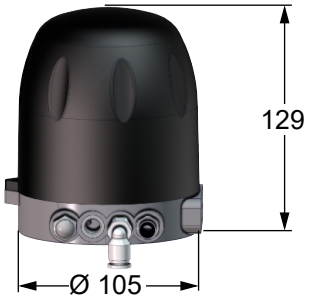
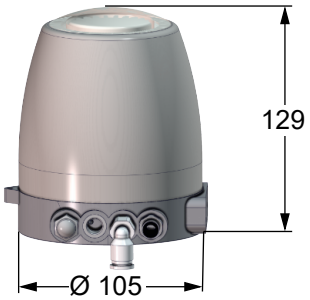


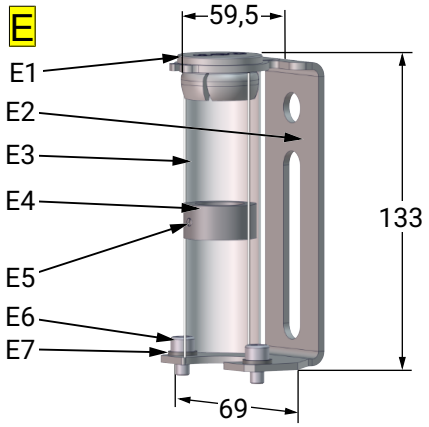
Nominal diameter	d1, d2	d3	L1	L2, L3	L4	L5	M[1]
DN 40 1½ Inch	Ø 41 x 1,5 Ø38,1 x 1,65	Ø 134	689	168	135	584	~ 730
DN 50 2 Inch	Ø 53 x 1,5 Ø50,8 x 1,65	Ø 134	689	168	135	573	~ 750
DN 65 2½ Zoll	Ø 70 x 2,0 Ø63,5 x 1,65	Ø 170	710	220	155	654	~ 860
DN 80 3 Inch	Ø 85 x 2,0 Ø76,1 x 2,0	Ø 170	733	230	190	693	~ 940

Valves that do not meet the catalogue standards, can lead to dimensional deviations.

1. Installation dimension M are incl. control head or sensor mounting

9.3 Control units

Control head KI-TOP	
with plastic hood - transparent	**with stainless steel hood**
	

Feedback unit with finger guard (E)	
• E1 = Cap • E2 = Angle bracket • E3 = Shell transparent • E4 = Set collar • E5 = Headless pin • E6 = Allen screw • E7 = FLat washer	

10 Wearing parts

10.1 Wearing parts list

GEMBRA Aseptik - Double seat valve

Seal	Item number	Temperature sensor PT100	Valve insert VE	Housing VG	Wear parts kit	
k-flex PTFE	5824 DN 000-xxx	-	5820 DN 000-041	5824 DN 001-041	5820 DN 009-041	
	5824 DN 400-xxx	6213 500 001-040		5824 DN 401-041		
EPDM / PTFE	5824 DN 030-xxx	-	5820 DN 030-041	5824 DN 001-041	5820 DN 139-041	
	5824 DN 410-xxx	6213 500 001-040		5824 DN 401-041		

DN = Nominal diameter e.g. 5824 050 000-041 = DN50

xxx = Material in product contact / Exterior finish / Control system

GEMBRA Aseptik - Double seat valve

Pos.	Description	Material	DN 40	DN 50	DN 65	DN 80
VE	Valve insert	PTFE/K-flex	5820 040 000-040	5820 050 000-040	5820 065 000-040	5820 080 000-040
		PTFE/EPDM	5820 040 030-040	5820 050 030-040	5820 065 030-040	5820 080 030-040
1	Piston plate	AISI316L	5821 050 004-040	5821 050 004-040	5821 065 004-040	5821 080 004-040
2	Piston	AISI316L	5821 040 005-040	5821 050 005-040	5821 065 005-040	5821 080 005-040
3	Backup ring	AISI303	5821 040 009-220	5821 050 009-220	5821 065 009-220	5821 080 010-040
4	Thrust collar	AISI316L	5821 050 010-040	5821 050 010-040	5821 065 010-040	5821 080 010-040
5	Piston plate upper	AISI316L	5821 040 006-040	5821 050 006-040	5821 065 006-040	5821 080 006-040
6	Spindle		5821 040 011-220	5821 040 011-220	5821 065 011-220	5821 080 011-220
7	Piston upper	AISI316L	5821 050 007-040	5821 050 007-040	5821 065 007-040	5821 080 007-040
8	Lantern	AISI304	5821 050 014-021	5821 050 014-021	5821 065 014-021	5821 080 014-021
9	Locking clip	AISI304	2122 065 100-020	2122 065 100-020	2122 115 100-020	2122 125 100-020
10	Set screw	AISI304	5821 050 022-020	5821 050 022-020	5821 065 022-020	5821 080 022-020
11	Hexagon screw	AISI304	8106 008 016-020	8106 008 016-020	8106 008 016-020	8106 008 016-020
12	Piston rod	AISI304	5821 050 008-220	5821 050 008-220	5821 065 008-220	5821 080 008-220
13	Drive	----	5820 040 001-021	5820 050 001-021	5820 065 001-021	5820 080 001-021
14	Hexagon socket screws	AISI304	8095 080 020-020	8095 080 020-020	8095 080 020-020	8095 080 020-020
LA1	T-threaded connection G1/8	----	8217 000 008-000	8217 000 008-000	8217 000 008-000	8217 000 008-000
LA2	Elbow screw fitting R1/8	----	8217 000 004-000	8217 000 004-000	8217 000 004-000	8217 000 004-000
LA3	One-way restrictor	----	8218 001 020-000	8218 001 020-000	8218 001 020-000	8218 001 020-000
LA4	Elbow screw fitting R1/8	----	8217 000 004-000	8217 000 004-000	8217 000 004-000	8217 000 004-000

DN = Nominal diameter e.g. 5824 050 000-041 = DN50

xxx = Material in product contact / Exterior finish / Control system

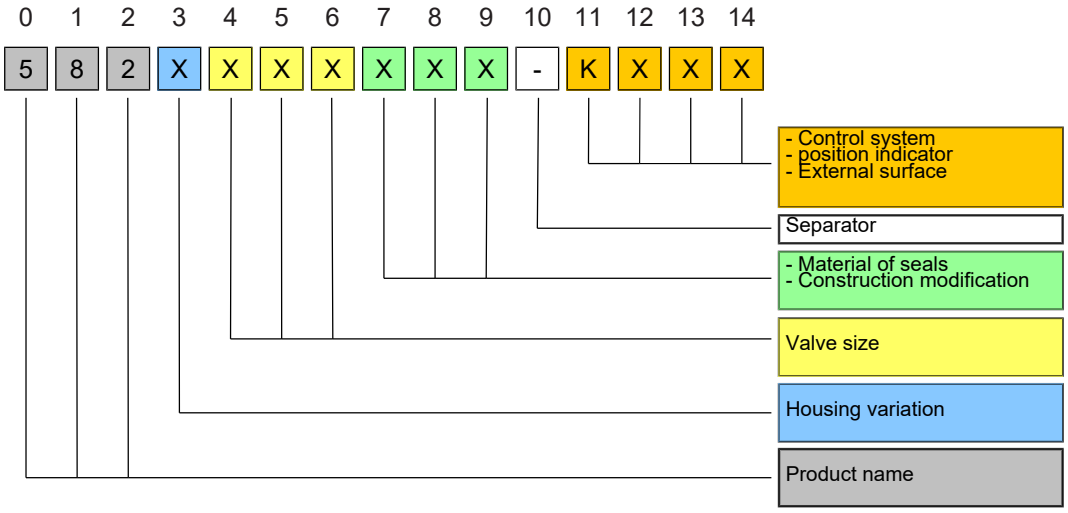
10.2 Wear parts kit

GEMBRA Aseptik - Double seat valve

Pos.			Description	Material	DN 40	DN 50	DN 65	DN 80
			Wear parts kit D1a, D2, D3, D5, D6, D7 ,D11(1x), D12	PTFE/k-flex	5820 050 009-000	5820 050 009-000	5820 065 009-000	5820 080 009-000
			Wear parts kit D1b, D2, D3, D5, D6, D7 ,D11(1x), D12	PTFE/EPDM	5820 050 139-000	5820 050 139-000	5820 065 139-000	5820 080 139-000
		D1a	Seal consists of : I = Seal II - O-ring III = Backup ring	 k-flex EPDM AISI304	5621 050 020-114 5621 050 022-114 2304 044 030-159 5621 050 021-020	5621 050 020-114 5621 050 022-114 2304 044 030-159 5621 050 021-020	5621 065 010-114 5621 065 012-114 2304 060 026-159 5621 065 011-020	5621 080 010-114 5621 080 012-114 2304 076 026-159 5621 080 011-020
			(* Support ring - quartered is not included in seal kit)					
		D1b	Seal	EPDM	5621 050 020-084	5621 050 020-084	5621 065 010-084	5621 080 010-084
		D2	Membrane	PTFE	5820 050 021-194	5820 050 021-194	5820 065 021-194	5820 080 021-194
		D3	Seal with split washer	PTFE	5821 050 010-194	5821 050 010-194	5821 065 010-194	5821 080 010-194
		D4	Plain bearing	XSM	8050 015 007-156	8050 015 007-156	8050 020 015-156	8050 020 015-156
		D5	Membrane	PTFE	5820 050 020-194	5820 050 020-194	5820 065 020-194	5820 080 020-194
		D6	Piston seal hxbxL	PTFE	8051 250 010-081 9,5x2,5x155,9	8051 250 010-081 9,5x2,5x155,9	8051 190 010-081 9,5x2,5x190	8051 220 010-081 9,5x2,5x230
		D7	O-ring	EPDM 85°Sh	2304 049 035-170	2304 049 035-170	2304 063 035-170	2304 072 035-170
		D8	O-ring	EPDM 70°Sh	2304 011 025-159	2304 011 025-159	2304 013 035-159	2304 013 035-159
		D9	O-ring	EPDM 70°Sh	2304 010 025-055	2304 010 025-055	2304 010 025-055	2304 010 025-055
		D10	Seal	EPDM 70°Sh	2354 012 006-054	2354 012 006-054	2354 012 006-054	2354 012 006-054
		D11	O-ring (2x)	EPDM 70°Sh	2304 028 035-159	2304 028 035-159	2304 032 035-159	2304 032 035-159
		D12	O-ring	EPDM 85°Sh	2304 041 035-159	2304 041 035-159	2304 054 035-159	2304 062 035-159
		D13	Plain bearing	XSM	8050 027 005-156	8050 027 005-156	8050 032 005-156	8050 032 005-156
		D14	Seal	k-flex	5822 050 070-114	5822 050 070-114	5822 050 070-114	5822 050 070-114

11 Classification

11.1 Structure of order number



Product name 582x xxx xxx-xxxx

Type	Product name	1	2	3
582x	GEMBRA Aseptic Double seat valve	5	8	2

Housing type 582x xxx xxx-xxxx

Type	Housing type		4
5820	Valve insert	without housing	0
5823	Housing S - SS	with PT100	3
		without PT100	
5824	Housing SS - SS	with PT100	4
		without PT100	

Valve size 582x xxx xxx-xxxx

DN	4	5	6		OD	4	5	6
DN 40	0	4	0		OD 1 1/2"	0	3	8
DN 50	0	5	0		OD 2 "	0	5	1
DN 65	0	6	5		OD 2 1/2"	0	6	4
DN 80	0	8	0		OD 3 "	0	7	6

Material of seal & Design modification 582x xxx xxx-xxxx

Material of seals & Design modifications		7	8	9
	Seal			
Valve insert 5820	PTFE / k-flex	0	0	0
Valve insert 5820	PTFE / EPDM	0	3	0
Standard valve 5823, 5824 without PT100	PTFE / k-flex	0	0	0
Standard valve 5823, 5824 without PT100	PTFE / EPDM	0	3	0
Standard´valve 5823, 5824 with PT100 via housing	PTFE / k-flex	4	0	0
Standard´valve 5823, 5824 with PT100 via housing	PTFE / EPDM	4	1	0
Standard valve 5823, 5824 with PT100 via pilot valve	PTFE / k-flex	4	2	0
Standard valve 5823, 5824 with PT100 via pilot valve	PTFE / EPDM	4	3	0
Valve with PT100 via housing and connection DN50 / DN65	PTFE / k-flex	5	3	4
Valve with PT100 via housing and connection DN65 / DN80	PTFE / k-flex	5	4	4
Valve with PT100 via housing and connection DN50 / DN65	PTFE / EPDM	5	3	5
Valve with PT100 via housing and connection DN65 / DN80	PTFE / EPDM	5	4	5

Separator 582x xxx xxx-xxxx

- KIESELMANN Valve

Control system and position indication , External surface 582x xxx xxx-xxxx

Control system and position indicator	Feedback unit	Surface	11	12	13	14
-	-	AISI304, blank	0	2	0	
-	-	AISI304, e-polished	0	2	1	
		AISI316L, e-polished	0	4	1	
	5630 005 025-000	AISI316L, e-polished	7	5	0	
Control head SPS (old version)		AISI316L, e-polished	5	x	x	
Control head ASi-Bus (old version)		AISI316L, e-polished	6	x	x	
Control head KI-Top SPS		AISI316L, e-polished	K	5	x	x
Control head KI-Top ASi-Bus		AISI316L, e-polished	K	6	x	x

12 Appendix

12.1 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

Designation	Function
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

Notes

KIESELMANN GmbH

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