



KIESELMANN

FLUID PROCESS GROUP

Translation of the original

Operating Instructions

Double seat valves

Type 568x

DN25 - DN100

OD 1 Inch - OD 4 Inch

Seal material: EPDM, HNBR, FKM



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Table of contents

1	General informations	4
1.1	Informations for your safety	4
1.2	Marking of security instructions	4
1.3	General designated use	4
1.4	Personnel	4
1.5	Modifications, spare parts, accessories	5
1.6	General instructions	5
2	Safety instructions	6
2.1	Intended use	6
2.2	General notes	6
2.3	General safety instructions	6
3	Delivery, transport and storage	8
3.1	Delivery	8
3.2	Transport	8
3.3	Storage	8
4	Specification	9
4.1	Modular system	9
5	Function and operation	10
5.1	Description of function	10
5.2	Control system and position indicator	10
5.3	Pneumatic valve activation	11
6	Commissioning, service and maintenance	12
6.1	Commissioning	12
6.1.1	Installation instructions	12
6.1.2	General welding guidelines	12
6.1.3	Use in EX area	12
6.2	Service	13
6.2.1	Maintenance table	13
6.3	Cleaning	13
7	Technical data	14
7.1	Double seat valve Type 568x	14
7.2	KV - value	14
7.3	Torques	14
7.4	Cleaning flow rate	15
8	Disassembly and assembly	16
8.1	Disassembly	16
8.1.1	Assembly valve insert VE	17
8.1.2	Replacement wear parts	17
8.2	Assembly	21
8.2.1	Seals (D4)	24
8.2.2	Shaft sealing	24
9	Drawings and dimensions	25
9.1	Double seat valve	25
9.1.1	Valve insert (VE) DN 25	26
9.1.2	Valve insert (VE) DN 40 - DN 65	27
9.1.3	Lantern with rinsing connection	28
9.1.4	Control units	28
9.1.5	Dimensions	29
10	Wearing parts	30
10.1	Double seat valve Type 568x DN25 / OD 1 Inch	30
10.1.1	Valve inserts and Wear part kits	30
10.2	Double seat valve Type 568x DN40 - DN150 / 1,5" - 4"	33
10.2.1	Valve inserts and Wear part kits	33
11	Classification	37
11.1	Structure of Order Number	37
12	Appendix	39
12.1	Declaration of incorporation	39

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

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.

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 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

Use in EX areas

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

**⚠ 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

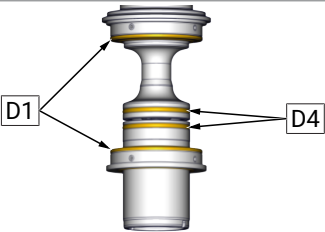
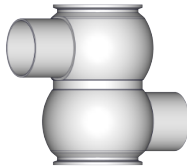
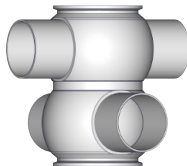
Recommendation for longer storage

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 Specification

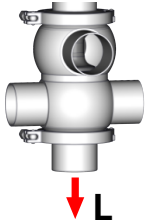
4.1 Modular system

KI-Top control head		feedback unit
		
Stainless steel hood	Transparent hood	Feedback unit with finger guard (E)
pneum. Linear actuator		
		
Ø109		Ø135
Valve insert		
		
Sealing material		
Shaft seal D1 - k-flex - EPDM - HNBR - FKM		valve disc Sealing ring D4 - k-flex
Valve housing		
		
Type 56x1 (T-L)	Type 56x2 (L-L)	
		
Type 56x3 (L-T)	Type 56x4 (T-T)	

5 Function and operation

5.1 Description of function

The valve is opened in direction 'X' by means of control air, and is closed from top to bottom by means of spring power without any leakage. Different media fed from the tank or the piping system are separated in a leakage-free fashion by means of two, independently acting valve discs with double seal function. Any leaks occurring due to damaged valve plate seals are drained to the exterior without pressure via the leakage discharge (L).



The valve opens from the top down by means of control air and closes bottom to top by means of spring tension without loss of product. In the closed setting, mix-proof separation of the media flowing in the upper and lower valve chambers is ensured by two independently closed valve plates. Any leaks occurring due to damaged valve plate seals are drained to the exterior without pressure via the leakage discharge (L).

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

Valve functions	Pneum. activation via control head with solenoid valves (MV)	Pneum. activation via external Solenoid valves (MV external)
main lift valve "OPEN"	Control supply air P - MV1 - P1/LA1	Control supply air ext.MV1 - LA1
main lift valve "CLOSE"	Ventilation P1/LA1 - MV1 - R valve is closing by spring	Ventilation LA1 - ext.MV1 valve is closing by spring
lifting lower seat	OPEN = control air feed P - MV2 - P2/LA2	OPEN = control air feed ext.MV2 - P - LA2
	CLOSE = de-aeration P2/LA2 - MV2 - R valve is closing by spring	CLOSE = de-aeration LA2 - P - ext.MV2 valve is closing by spring
Lifting upper seat	OPEN = control air feed P - MV3 - P3/LA3	OPEN = control air feed ext.MV3 - LA3
	CLOSE = de-aeration P3/LA3 - MV3 - R valve is closing by spring	CLOSE = de-aeration LA3 - ext.MV3 valve is closing by spring
	control unit and solenoid valves	external pneum. activation
MV = Solenoid valve MV1 = main stroke valve open MV2 = lifting lower seat MV3 = lifting upper seat R = Ventilation silencer P = Supply air connection LA = Air connection S = Slide switch for manual operation of the solenoid valves Si = Sensors M12x1 E = mounting kit for feedback unit		

6 Commissioning, service and maintenance

6.1 Commissioning



NOTICE

Checking the solenoid valves in the control head

Before using the valve for the first time, the function of the solenoid valves in the control head must be checked.

- Remove the hood on control head.
- Connect the supply air to the control head
- Check the valve functions using the slide switches on the solenoid valve

⇒ Please also read the [documentation for control heads!](#)

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 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)

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.

Maintenance - Lift actuator

The actuator is maintenance-free and non-removable.

6.2.1 Maintenance table

	Annually	Additional information
6.2 Service	1	

1 - Maintenance personnel

6.3 Cleaning

Cleaning of the housing is performed with the pipe cleaning system. As part of the cleaning program, the leakage chamber and the drain pipe can be cleaned by cycling the valve discs. The valve disc shaft is also cleaned when the upper valve disc is cycled.

Alternatively, the leakage chamber and the shaft of the upper valve disc can be cleaned by means of the external rinsing connection. For cleaning the shaft, the upper valve disc has to be lifted.

7 Technical data

7.1 Double seat valve Type 568x

Model	Double seat valve	
Size	DIN: DN25 - DN100 Inch: OD1 - OD4	
Connection type	Weld-on end EN 10357	
Temperature range	Ambient temperature: (air)	+4°C to +45°C
	Operating temperature: (depends on medium)	-5°C to +100°C
	Sterilisation temperature: (SIP 30 min)	EPDM +140°C HNBR +100°C FKM +100°C
Operating pressure	DN 25 - DN 100 = max. 10 bar OD 1 - OD 4 = max. 10 bar	
Leakage rate	A (EN 12266-1)	
Control air	Control air pressure:	5,5 - 8,0 bar
	Control air quality:	ISO 8573-1:2010 [3:(≤5 µm):4:4]
Material (in contact with product)	Stainless steel:	1.4404 / AISI 316L
	Surface:	Ra ≤ 0,8µm, e-polished
	Sealing material:	EPDM HNBR FKM

7.2 KV - value

ND Inch	25 1	40 1½	50 2	65 2½	80 3	100 4	125 5	150 6
flow direction:	[m³/h]							
transition-flow at top↔	26	50	95	150	240	380	580	940
transition-flow at bottom ↔	26	55	100	155	250	390	590	940
from bottom to top ↑	16	26	45	72	98	155	245	370
from top to bottom ↓	16	24	43	67	93	150	240	330

7.3 Torques

Torque: clamp coupling

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

7.4 Cleaning flow rate

Cleaning parameters for the leakage chamber

Cleaning step	valve disc lifting	DIN Inch	25 1	40 1½	50 2	65 2½	80 3	100 4	125 5	150 6
Pre-Rinse	-	lifting upper seat	0,97	1,10	1,1	1,38	1,66	2,08	2,50	4,02
Lye 80°C	3 x 5 sec.									
Intermediate rinse	2 x 5 sec.		(l/s bei 3bar)							
Acid	3 x 5 sec.	lifting lower seat	0,54	0,69	0,69	0,83	0,83	1,25	1,66	2,50
Final rinse	2 x 5 sec.									

8 Disassembly and assembly

8.1 Disassembly

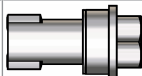
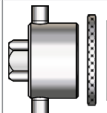
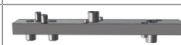


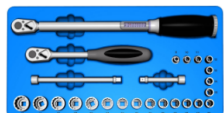
NOTICE

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.

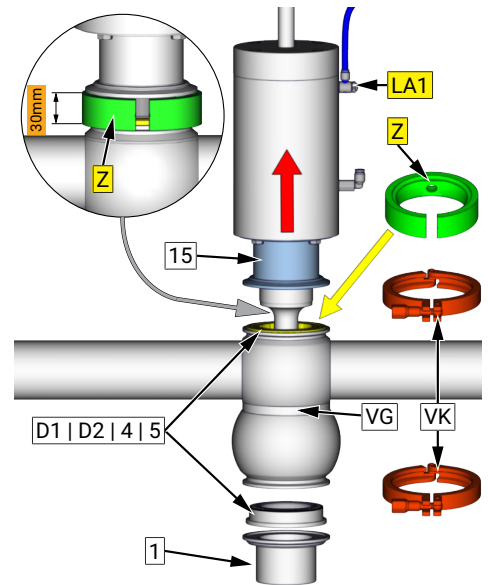
Assembly Tools

Mounting tools sets:			DN40 - DN65	5670 065 100-000	●		
			DN80 - DN100	5670 100 100-000		●	
			DN125 - DN150	5670 150 100-000			●
ST1		Socket	DN40 - DN65	5620 065 131-130	●		
			DN80 - DN150	5620 100 131-130		●	●
ST2		Socket + guide bush (POM) + O-rings	DN40 - DN65	5670 080 105-000	●	●	
			DN80 - DN100	5670 100 105-000		●	
			DN125 - DN150	5670 150 105-000			●
ST3		Eccentric socket	DN40 - DN65	5620 065 134-130	●		
			DN80 - DN150	5620 100 134-130		●	●
ST4		Centring ring	DN40/50	5620 050 025-020	●		
			DN65	5620 065 025-020	●		
			DN80	5620 080 025-020		●	
			DN100	5620 100 025-020		●	
			DN125	5620 125 025-020			●
			DN150	5620 150 025-020			●
T10		Joint -pin wrench	DN40 - DN65	5620 065 015-000	●		
			DN80 - DN150	5620 150 015-000		●	●
ST1 5		Mounting plate	DN40 - DN65	5620 065 121-020	●		
			DN80 - DN100	5620 100 121-020		●	
			DN125 - DN150	5620 150 121-020			●

Pos.	Figure	Designation		Article number
T1		Combination wrench-Set	SW 8 - SW 24	-
T4		Soft-head hammer	-	-
T40		Socket box	SW8 - SW36	-

8.1.1 Assembly valve insert VE

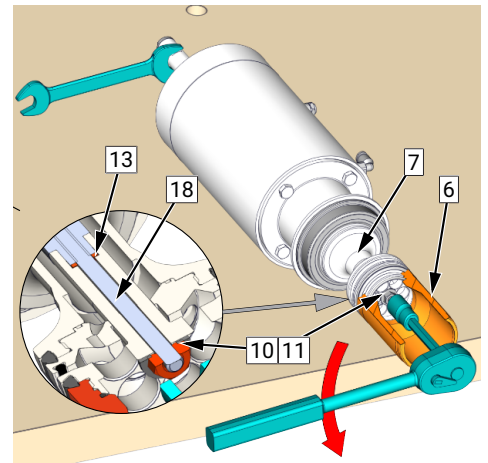
- Unscrew the upper retaining clamp (VK).
- Connect compressed air to LA1 and pressurize the actuator with air.
 - The valve insert lift up of the valve housing (VG).
- Pinch a rubber (Z) between the Lantern (15) and the housing (VG).
- Disconnect compressed air at LA1 and depressurize the drive. - The valve piston move in.
- Remove the complete valve insert with the upper shaft seal (D1) from the housing (VG).
- Unscrew the lower retaining clamp (VK).
- Remove the housing bottom (1) with the lower shaft seal (D1) from the housing (VG).



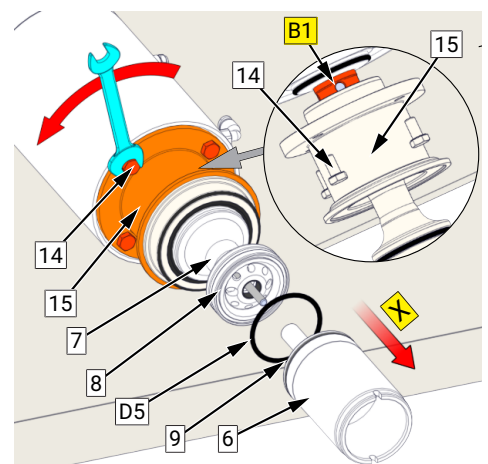
8.1.2 Replacement wear parts

Disassembly

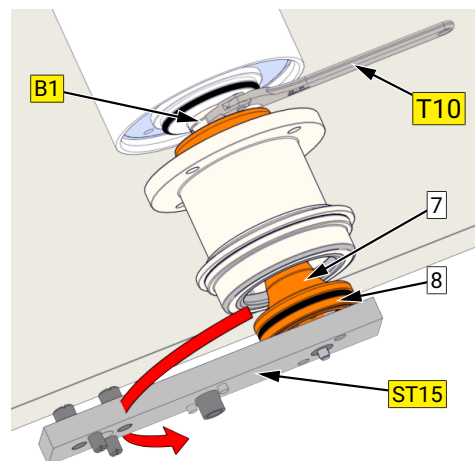
- Unscrew nut (11) and remove disc (10).
- Dismount the upper piston (6) from the upper piston (7) in direction X.
- Remove the split washer (13).



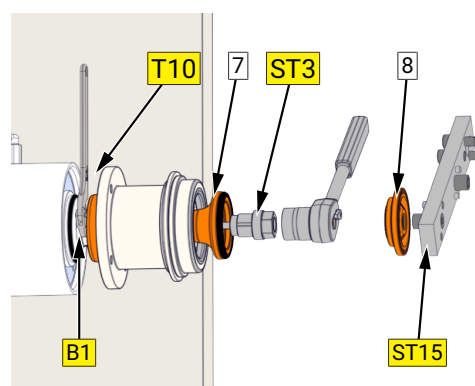
- Remove the O-ring (D5).
- Unscrew the hexagon screws (14).
- Push the lantern (15) in direction 'X' until the hole (B1) is freely visible.



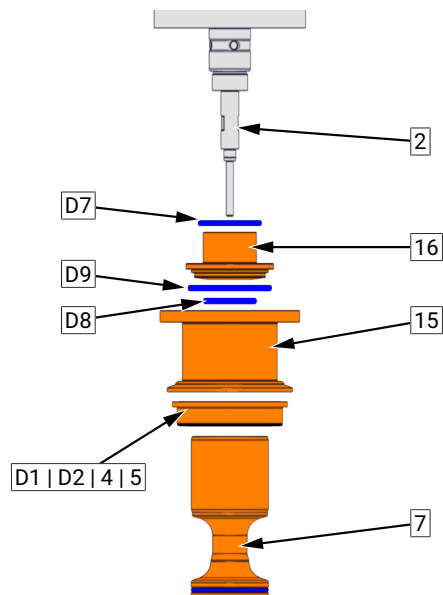
- Unscrew the upper piston (7) with the mounting plate ST15 from piston rod (3).
Counter with the pin wrench T10 at the hole (B1).



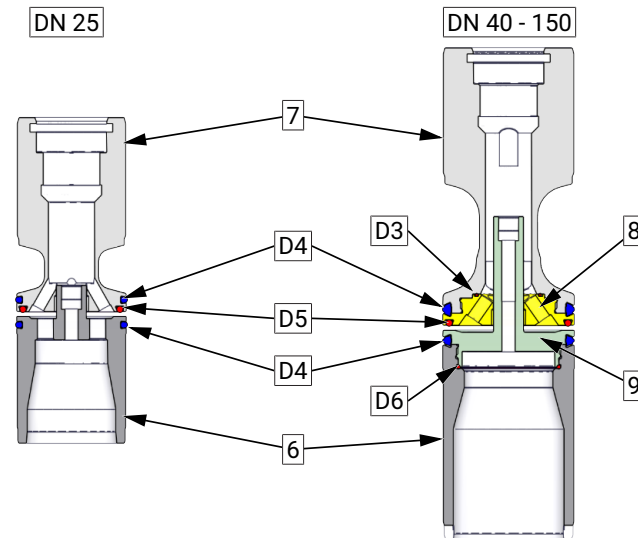
- $\geq 40 / 1\frac{1}{2}$ (valves with divided pistons): Should be untighten the piston plate (8) before piston (7), then unscrew the piston (7) with the eccentric ST3 and a ratchet.



- Push the lantern (15) and the upper shaft seal (D1) from the piston (7).
- Dismount the valve lift stop (16).
- Remove seals: Pos. (D1); (D2); (D7); (D8); (D9).



8.1.2.1 Assembly seal (D4)

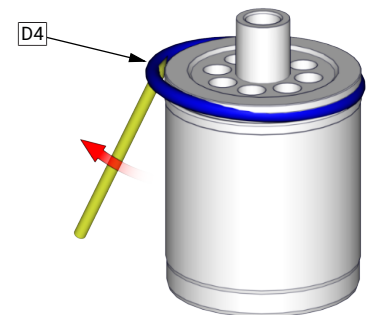


Model Seal (D4)	Piston (6) and (7)	Pair of piston upper (7) and (8) Pair of piston lower (6) and (9)	
	DN 25 / OD 1	DN 40 - 125 / OD 1½-5	DN 150 / OD 6
	Piston <u>not</u> divided ¹	Piston divided	Piston divided
O-ring	x	x	x
Seal with support ring	-	x	-

¹)According their construction from valve size DN 25/1", the pistons (6) and (7) are not divided.

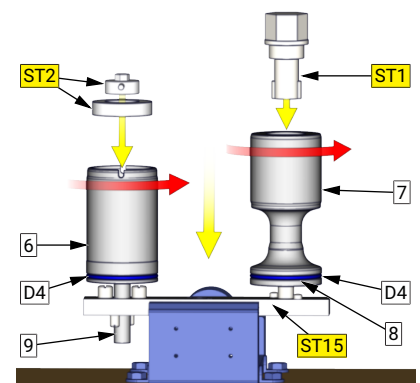
DN25 Dismount (D4) (O-ring version, Piston not divided)

- Puncture the O-ring (D4) with a needle and remove them from the groove of piston (6) and (7).

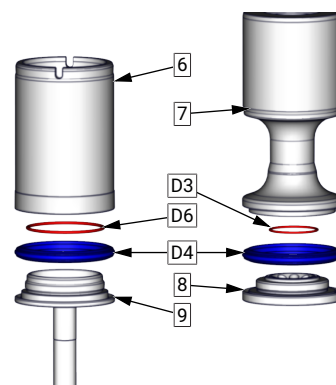


DN40 - DN150 Dismount O-ring (D4) / Seal (D4)

- Clamp the mounting plate ST15 into the vice.
- Put the piston (6) resp. (7) on the mounting plate in the fittingly pins.
- Unscrew the piston (6) from the lower piston plate (9) with the socket ST2 and the mating reducing bush.
- Unscrew the piston (7) from the lower piston plate (8) with the socket ST1.



- Remove seals (D4) resp. O-rings (D4).



8.2 Assembly

Assemble in reverse order.

Thoroughly clean and slightly lubricate mounting areas and running surfaces.



NOTICE

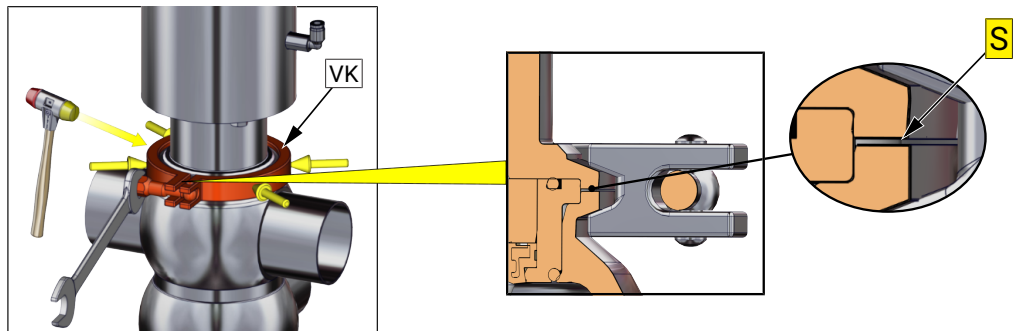
During assembly, the following points must be observed!

Folgen

- Always replace the hexagon lock nut (11) by a new one after unscrewing.
- Carefully fit in the complete valve insert into the casing. When fitting the valve insert and running surfaces onto the piston, do not damage.
- - Check valve functions by manually activating the 3/2-way solenoid valves after assembly!

Mounting clamp coupling (VK)

- For mounting the clamp coupling (VK), 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 (VK) during tightening can be accomplished with a slight beat (please use a soft-head hammer) on the extent of the retaining clamp (VK).
- Beim Anziehen der Verschlussklammer (VK) muss das Drehmoment und die Spaltgröße 'S' (When tightening the clamp coupling (VK), please pay attention to the turning moment and the gap size 'S' ($\leq 0,4\text{mm}$) between casing and lantern/casing bottom.

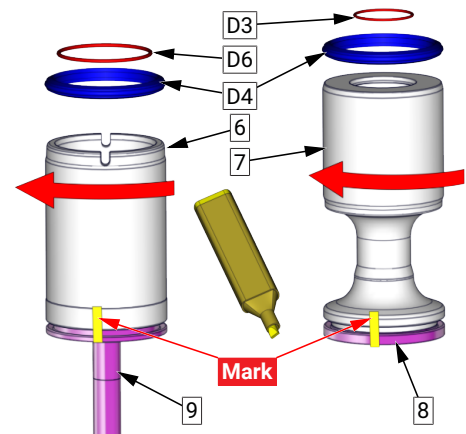


Mounting seal (D4) for divided piston

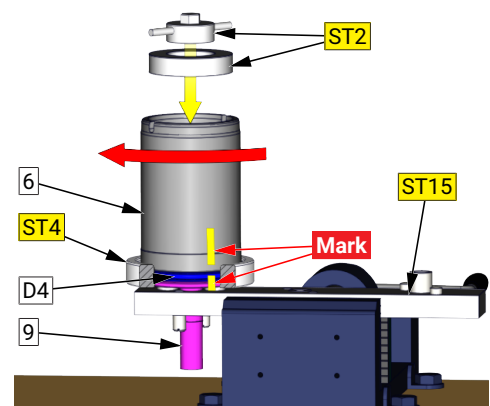
Pair of piston lower = Piston (6) and piston plate (9)

Pair of piston upper = Piston (7) and piston plate (8)

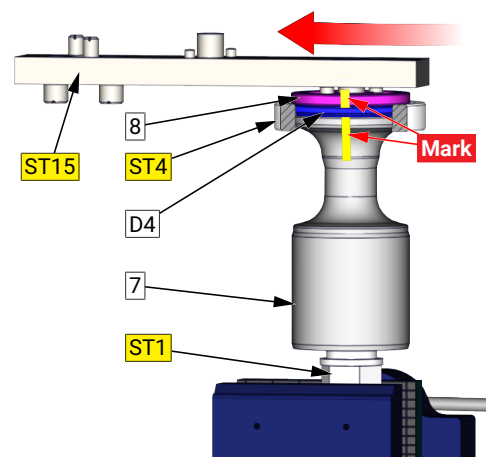
- Remove O-rings (D3) and (D6).
- Screw together the pair of piston (7) / (8) and (6) / (9) without the seal (D4) to the metal limit stop by hand.
- Make a colored mark at the piston surfaces.
- After then, unscrew the pairs of piston again.



- Slide the seal (D4) onto the pistons.
- Screw together the pair of piston by hand again.
- Clamp the mounting plate ST15 into the vice.
- Fix the lower pair of piston (6) / (9) with the piston plate (9) on the mounting plate M6.
- Position the eccentric ring ST4 on seal (D4).
- Screw up the piston (6) with the socket ST2 and a ratchet to the final limit mark.

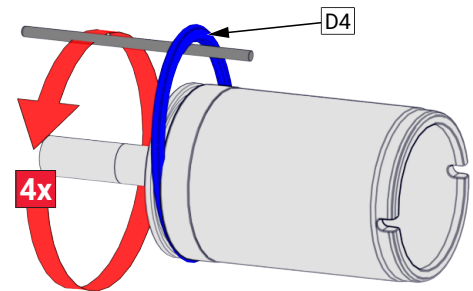


- Clamp the socket ST1 into the vice at the hexagon flat.
- Fix the upper pair of piston (7) / (8) with the piston (7) of the socket ST1.
- Position the eccentric ring ST4 on seal (D4).
- Screw up the piston plate (8) to the final limit mark. Use the mounting plate ST15.



Mounting O-ring (D4) for undivided piston

- Slide the O-ring onto the groove.
Resolve contingently twisting of the seal with
a rod between seal and groove.
Alternately press and roll the O-ring into the
groove with round body.



8.2.1 Seals (D4)

Seal D4 - Elastomer

Model Seal (D4)	Piston (6) and (7)	Pair of piston upper (7) and (8) Pair of piston lower (6) and (9)	
	DN 25 / OD 1	DN 40-125 / OD 1½-5	DN 150 / OD 6
	Piston <u>not</u> divided ¹	Piston divided	Piston divided
O-ring EPDM	x	x ²	x
O-ring HNBR	x	x ²	x
c) Seal with support ring EPDM	-	x	-
d) Seal with support ring HNBR	-	x	-

1. According their construction from valve size DN 25/1", the pistons (6) and (7) are not divided.

2. O-ring version till 05/2016 thereafter seal EPDM (D4)c / HNBR (D4)d

Seal - Model	
D4 = Seal D4-1 = Seal jacket (seal material) D4-2 = Backup ring	
D4 = O-ring	

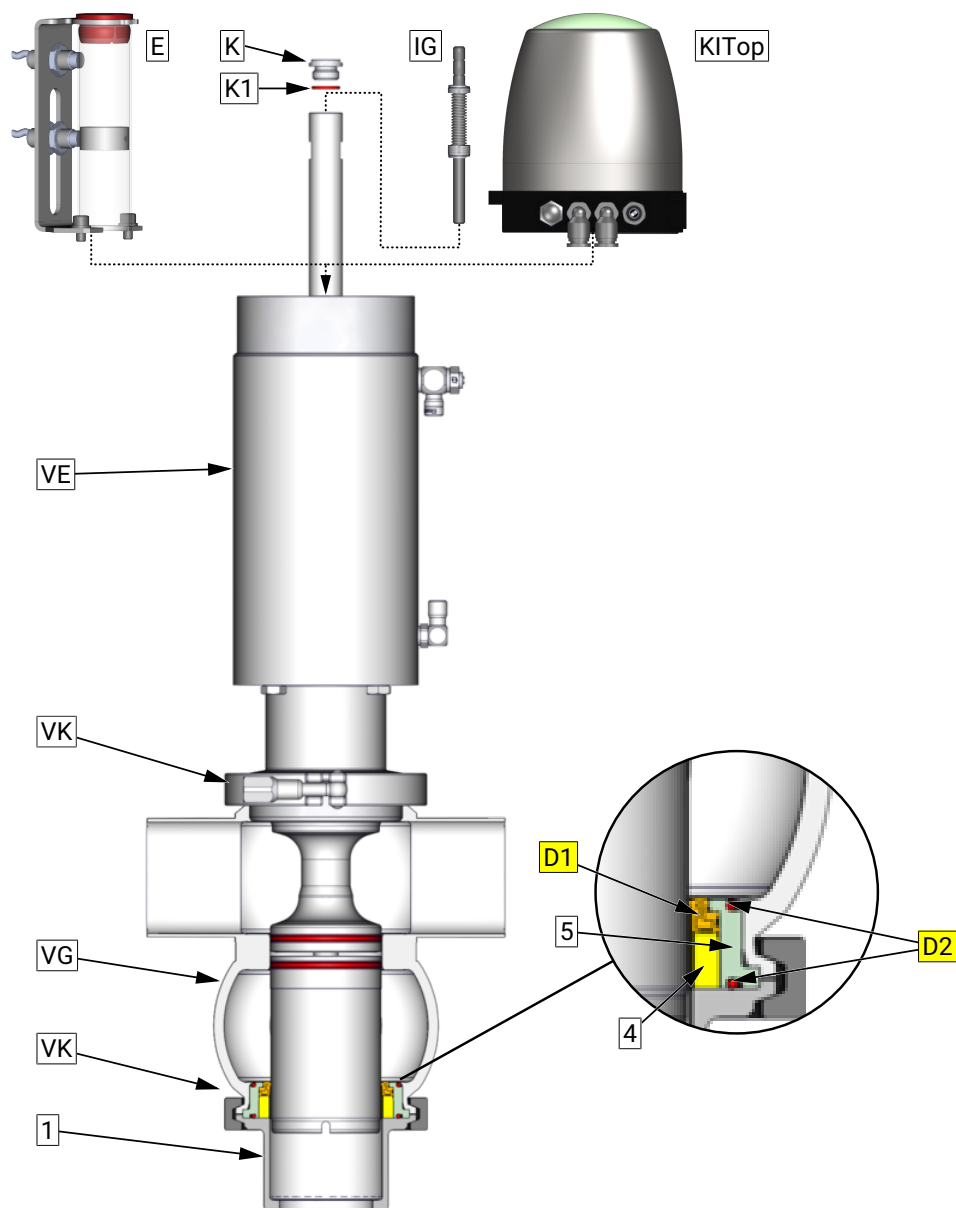
8.2.2 Shaft sealing

Shaft sealing - Elastomer

Shaft seal Elastomer	
D1 = Shaft seal D2 = O-rings 4 = Bearing bush 5 = Housing insert	

9 Drawings and dimensions

9.1 Double seat valve



1 Housing bottom

5 Housing insert

D2 O-ring

E feedback unit

K Cap

VE Valve insert

VK Locking clip

4 Bearing bush

D1 Shaft seal

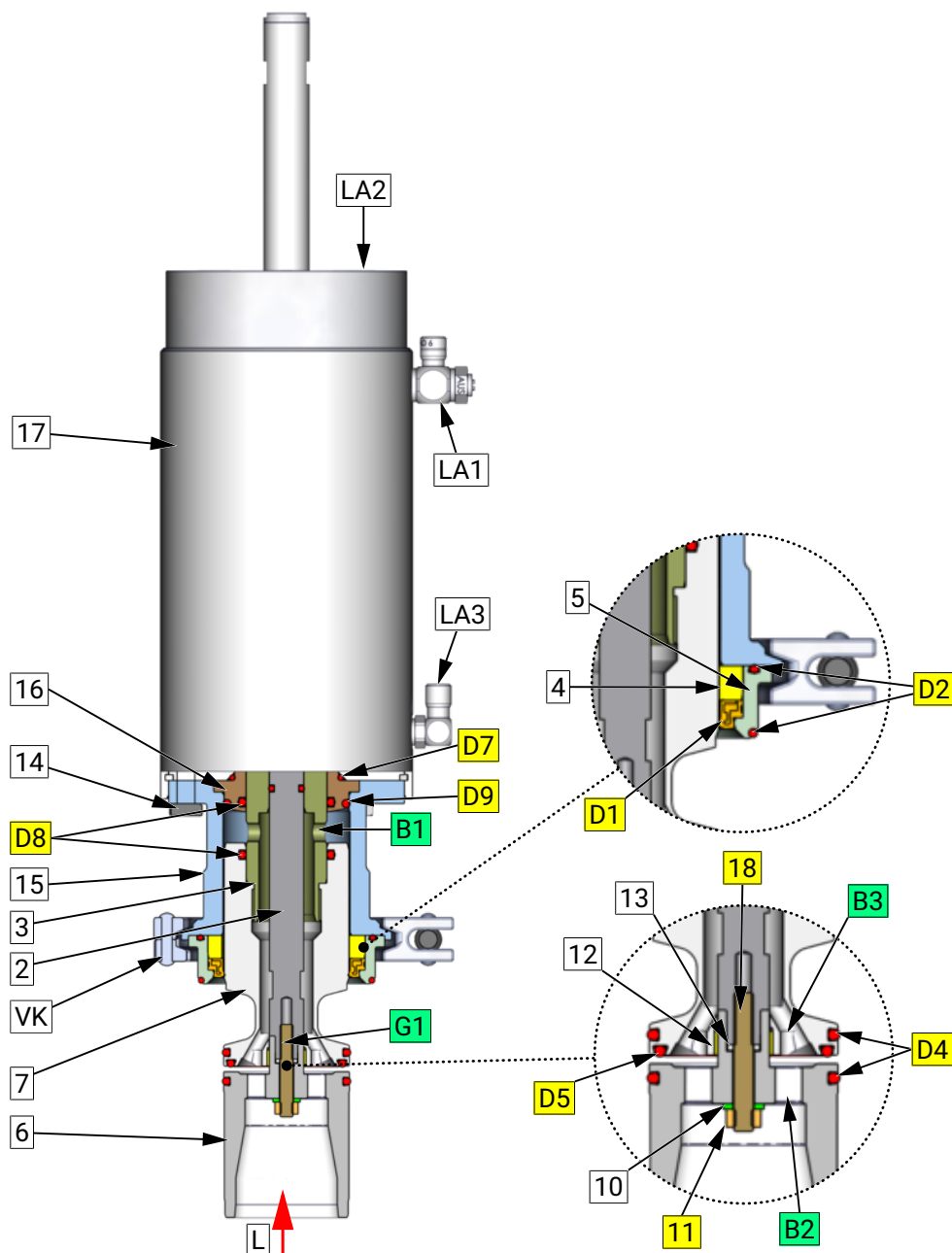
K1 O-ring

IG Pulse generator

KITop Control Head

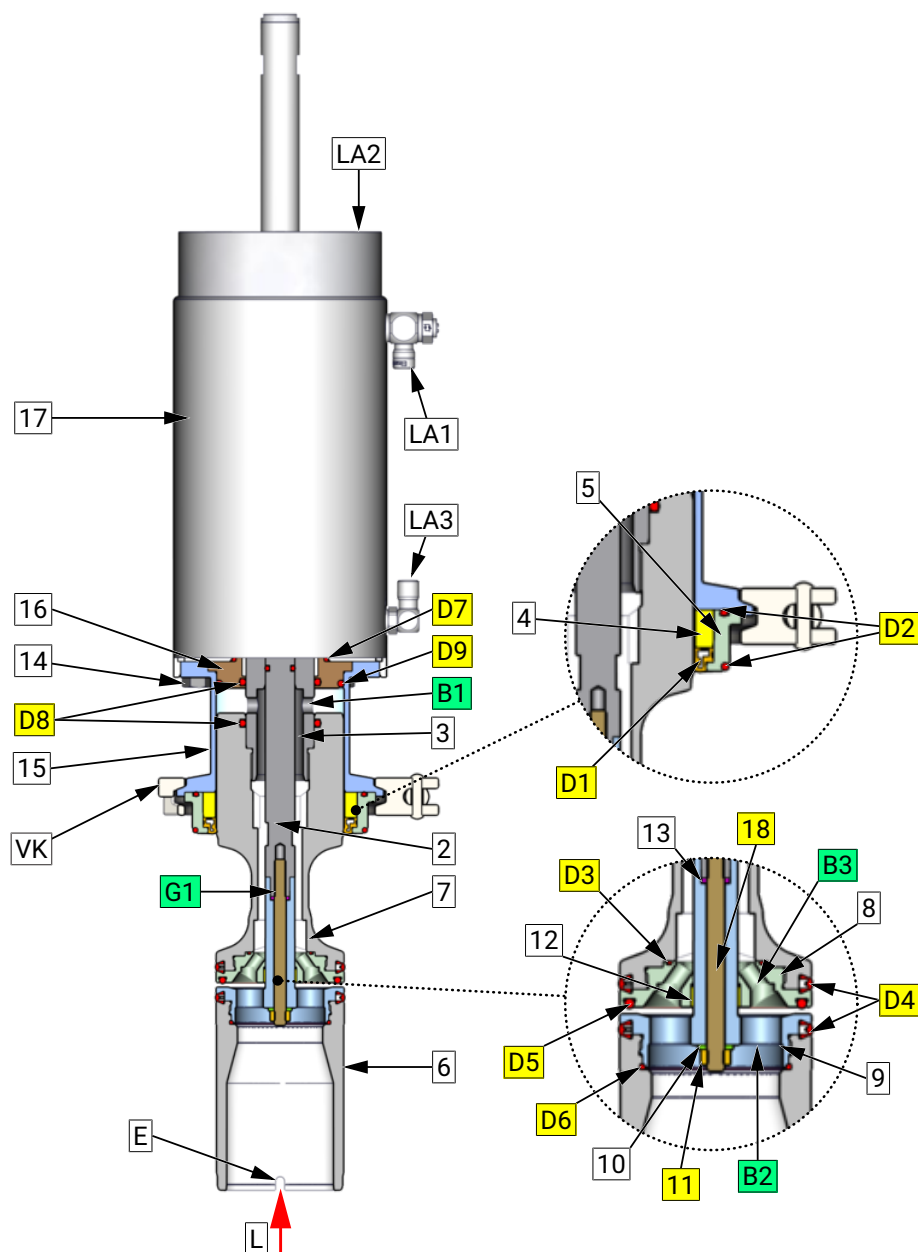
VG Valve housing

9.1.1 Valve insert (VE) DN 25



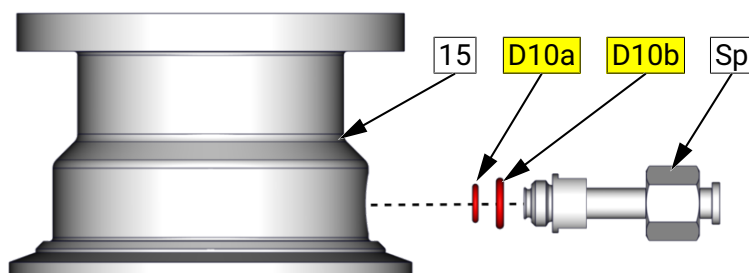
2 Spindle	3 Piston rod
4 Bearing bush	5 Housing insert
6 Piston lower	7 Piston upper
8 -	9 -
10 Washer	11 Hexagon nut
12 Slide bearing	13 Split washer
14 Screw	15 Lantern
16 Valve lift stop	17 pneum. Drive
18 Headless pin	B1 Mounting hole
B2 Mounting hole	B3 Mounting hole
D1 Shaft seal	D2 O-ring
D3 -	D4 Sealing ring
D5 O-ring	D6 -
D7 O-ring	D8 O-ring
D9 O-ring	G1 Thread connection
LA1 Air connection	LA2 Air connection
LA3 Air connection	L Leakage drain

9.1.2 Valve insert (VE) DN 40 - DN 65



2	Spindle	3	Piston rod
4	Bearing bush	5	Housing insert
6	Piston lower	7	Piston upper
8	Piston plate upper	9	Piston plate lower
10	Washer	11	Hexagon nut
12	Slide bearing	13	Split washer
14	Screw	15	Lantern
16	Valve lift stop	17	pneum. Drive
18	Headless pin	B1	Mounting hole
B2	Mounting hole	B3	Mounting hole
D1	Shaft seal	D2	O-ring
D3	O-ring	D4	Sealing ring
D5	O-ring	D6	O-ring
D7	O-ring	D8	O-ring
D9	O-ring	E	Groove
G1	Thread connection	LA1	Air connection
LA2	Air connection	LA3	Air connection
L	Leakage drain		

9.1.3 Lantern with rinsing connection



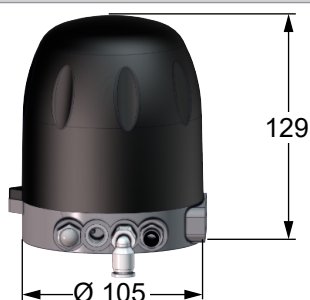
15 Lantern
D10b O-ring

D10a O-ring
Sp Rinsing connection

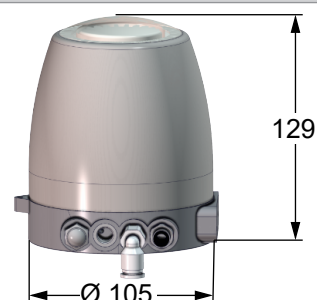
9.1.4 Control units

Control head KI-TOP

with plastic hood - transparent

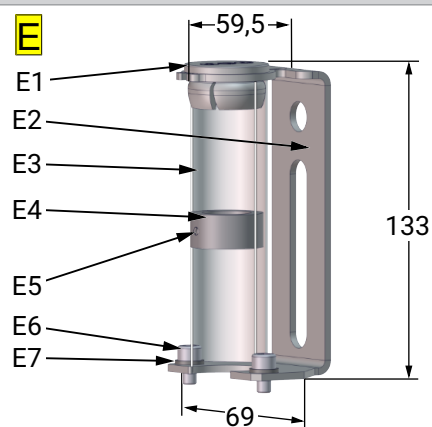


with stainless steel hood



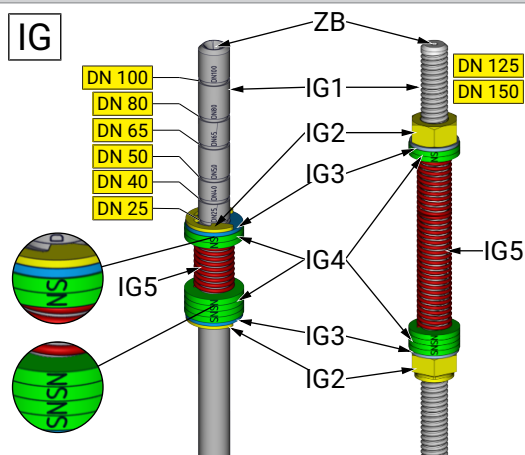
Feedback unit with finger guard (E)

- E1 = Cap
- E2 = Angle bracket
- E3 = Shell transparent
- E4 = Set collar
- E5 = Headless pin
- E6 = Allen screw
- E7 = FFlat washer

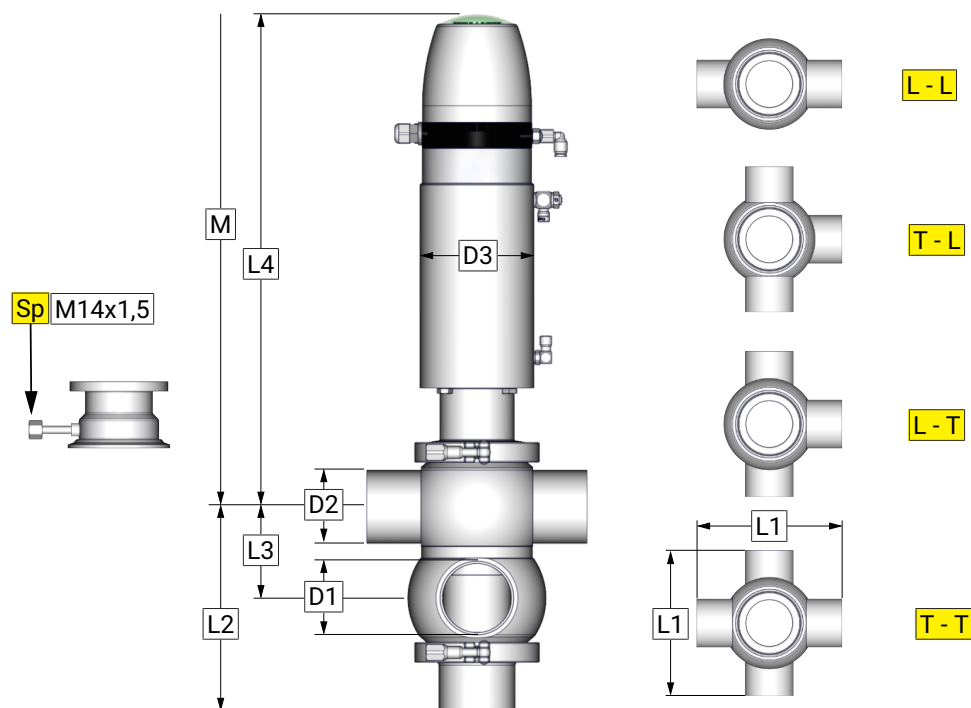


Pulse generator (IG) - Double seat mixproof valve

- IG1 = Threaded rod
- IG2 = Locking ring / Nut
- IG3 = Washer
- IG4 = Magnet
- IG5 = Spring
- ZB = Center hole (Mounting position = TOP)



9.1.5 Dimensions



Nominal size	Dimension [mm]							
	D1	D2	D3	L1	L2	L3	L4	M
DN 40	Ø 41 x 1,5	-	Ø 109	170	133	59	~454	~580
DN 50	Ø 53 x 1,5	-	Ø 109	170	156	71	~453	~600
DN 65	Ø 70 x 2,0	-	Ø 109	210	195	87	~471	~660
DN 80	Ø 85 x 2,0	-	Ø 135	230	230	106	~538	~765
DN 100	Ø 104 x 2,0	-	Ø 135	260	269	125	~565	~830
OD 1½"	Ø38,1 x 1,65	-	Ø 109	170	129	56	~452	~580
OD 2"	Ø50,8 x 1,65	-	Ø 109	170	153	68,5	~452	~600
OD 2½"	Ø63,5 x 1,65	-	Ø 109	210	192	81	~468	~660
OD 3"	Ø 76,2 x 1,65	-	Ø 135	230	221	98	~534	~750
OD 4"	Ø101,6 x 2,0	-	Ø 135	260	266	122	~564	~830

10 Wearing parts

10.1 Double seat valve Type 568x DN25 / OD 1 Inch

10.1.1 Valve inserts and Wear part kits

Gehäusevariante		Dichtung	Artikelnummer	Ventileinsatz VE	Verschleißteilsatz
Standard					
	T - L	EPDM	5681 DN 130 - xxxx	5680 DN 030-041	5670 025 130-000
	L - L		5682 DN 130 - xxxx		
	L - T		5683 DN 130 - xxxx		
	T - T		5684 DN 130 - xxxx		
	T - L	HNBR	5681 DN 420 - xxxx	5680 DN 050-041	5670 025 420-000
	L - L		5682 DN 420 - xxxx		
	L - T		5683 DN 420 - xxxx		
	T - T		5684 DN 420 - xxxx		
	T - L	FKM	5681 DN 140 - xxxx	5680 DN 040-041	5670 025 140-000
	L - L		5682 DN 140 - xxxx		
	L - T		5683 DN 140 - xxxx		
	T - T		5684 DN 140 - xxxx		
Spülanschlusoben					
	T - L	EPDM	5681 DN 760 - xxxx	5680 DN 760-041	5680 025 769-000
	L - L		5682 DN 760 - xxxx		
	L - T		5683 DN 760 - xxxx		
	T - T		5684 DN 760 - xxxx		
	T - L	HNBR	5681 DN 770 - xxxx	5680 DN 770-041	5680 025 779-000
	L - L		5682 DN 770 - xxxx		
	L - T		5683 DN 770 - xxxx		
	T - T		5684 DN 770 - xxxx		
	T - L	FKM	5681 DN 780 - xxxx	5680 DN 780-041	5680 025 789-000
	L - L		5682 DN 780 - xxxx		
	L - T		5683 DN 780 - xxxx		
	T - T		5684 DN 780 - xxxx		

DN = Nominal diameter e.g. ##### 025 ###-### = DN 25, ##### 026 ###-### = 1 Inch,

xxx = Material in product contact / Exterior finish / Control system (see Classification [► 37]),

T = T-housing; L = L-housing

10.1.1.1 Wear parts set EPDM

Double seat valve DN 25 / OD 1 Inch

	Designation	Material	DN 25 / OD 1 Inch	VTS	
VTS	Verschleißteilsatz EPDM	EPDM	5670 025 130-000	●	
	Verschleißteilsatz EPDM - Spülanschlussoben	EPDM	5680 025 769-000		●
11	Sechskantmutter M6	AISI304	8113 006 000-020	●	●
18	Gewindestift M6x40	AISI304	8112 006 040-020	●	●
D1	Schaftdichtung (2x)	EPDM	5622 050 010-069	●	●
D2	O-Ring (4x)	EPDM	2304 069 026-159	●	●
D3	-	-	-	-	-
D4	O-Ring (2x)	EPDM	2304 047 035-159	●	●
D5	O-Ring	EPDM	2304 041 035-159	●	●
D6	-	-	-	-	-
D7	O-Ring	HNBR	2304 042 025-055	●	●
D8	O-Ring (2x)	EPDM	2304 036 035-159	●	●
D9	O-Ring	EPDM	2304 047 035-159	●	●
D10a	O-Ring	EPDM	2304 007 015-159	-	●
D10b	O-Ring	NBR	2304 009 020-055	-	●

10.1.1.2 Wear parts set HNBR

Double seat valve DN 25 / OD 1 Inch

	Designation	Material	DN 25 / OD 1 Inch	VTS	
VTS	Verschleißteilsatz HNBR	HNBR	5670 025 420-000	●	
	Verschleißteilsatz HNBR - Spülanschlussoben	HNBR	5680 025 779-000		●
11	Sechskantmutter M6	AISI304	8113 006 000-020	●	●
18	Gewindestift M6x40	AISI304	8112 006 040-020	●	●
D1	Schaftdichtung (2x)	HNBR	5622 050 010-050	●	●
D2	O-Ring (4x)	HNBR	2304 069 026-050	●	●
D3	-	-	-	-	-
D4	O-Ring (2x)	HNBR	2304 047 035-157	●	●
D5	O-Ring	HNBR	2304 041 035-157	●	●
D6	-	-	-	-	-
D7	O-Ring	NBR	2304 042 025-055	●	●
D8	O-Ring (2x)	EPDM	2304 036 035-159	●	●
D9	O-Ring	EPDM	2304 047 035-159	●	●
D10a	O-Ring	EPDM	2304 007 015-159	-	●
D10b	O-Ring	NBR	2304 009 020-055	-	●

10.1.1.3 Wear parts kit FKM

Double seat valve DN 25 / OD 1 Inch

	Designation	Material	DN 25 / OD 1 Inch	VTS	
	Verschleißteilsatz FKM	FKM	5670 025 140-000	●	
VTS	Verschleißteilsatz FKM - Spülanschlusoben	FKM	5680 025 789-000		●
11	Sechskantmutter M6	AISI304	8113 006 000-020	●	●
18	Gewindestift M6x40	AISI304	8112 006 040-020	●	●
D1	Schaftdichtung (2x)	HNBR	5622 050 010-050	●	●
D2	O-Ring (4x)	HNBR	2304 069 026-050	●	●
D3	-	-	-	-	-
D4	O-Ring (2x)	HNBR	2304 047 035-157	●	●
D5	O-Ring	HNBR	2304 041 035-157	●	●
D6	-	-	-	-	-
D7	O-Ring	NBR	2304 042 025-055	●	●
D8	O-Ring (2x)	EPDM	2304 036 035-159	●	●
D9	O-Ring	EPDM	2304 047 035-159	●	●
D10a	O-Ring	EPDM	2304 007 015-159	-	●
D10b	O-Ring	NBR	2304 009 020-055	-	●

10.2 Double seat valve Type 568x DN40 - DN150 / 1,5" - 4"

10.2.1 Valve inserts and Wear part kits

Housing variation		Seal	Article number	Valve insert VE	Wear parts kit	
Standard						
	T - L	EPDM	5681 DN 730 - xxxx	5680 DN 730-041	a) 5670 DN 739-020 b) 5670 DN 739-000	= with support ring for (D4) = without support ring for (D4)
	L - L		5682 DN 730 - xxxx			
	L - T		5683 DN 730 - xxxx			
	T - T		5684 DN 730 - xxxx			
	T - L	HNBR	5681 DN 720 - xxxx	5680 DN 720-041	a) 5670 DN 729-020 b) 5670 DN 729-000	= with support ring for (D4) = without support ring for (D4)
	L - L		5682 DN 720 - xxxx			
	L - T		5683 DN 720 - xxxx			
	T - T		5684 DN 720 - xxxx			
	T - L	FKM	5681 DN 740 - xxxx	5680 DN 740-041	a) 5670 DN 749-020 b) 5670 DN 749-051	= with support ring for (D4) = without support ring for (D4)
	L - L		5682 DN 740 - xxxx			
	L - T		5683 DN 740 - xxxx			
	T - T		5684 DN 740 - xxxx			
Rinsing connection upper						
	T - L	EPDM	5681 DN 760 - xxxx	5680 DN 760-041	a) 5680 DN 769-020 b) 5680 DN 769-000	= with support ring for (D4) = without support ring for (D4)
	L - L		5682 DN 760 - xxxx			
	L - T		5683 DN 760 - xxxx			
	T - T		5684 DN 760 - xxxx			
	T - L	HNBR	5681 DN 770 - xxxx	5680 DN 770-041	a) 5680 DN 779-020 b) 5680 DN 779-000	= with support ring for (D4) = without support ring for (D4)
	L - L		5682 DN 770 - xxxx			
	L - T		5683 DN 770 - xxxx			
	T - T		5684 DN 770 - xxxx			
	T - L	FKM	5681 DN 780 - xxxx	5680 DN 780-041	a) 5680 DN 789-020 b) 5680 DN 789-000	= with support ring for (D4) = without support ring for (D4)
	L - L		5682 DN 780 - xxxx			
	L - T		5683 DN 780 - xxxx			
	T - T		5684 DN 780 - xxxx			

DN = Nominal diameter e.g. ##### 025 ###-### = DN 25, ##### 026 ###-### = 1 Inch,

xxx = Material in product contact / Exterior finish / Control system (see Classification ► 37)],

T = T-housing; L = L-housing

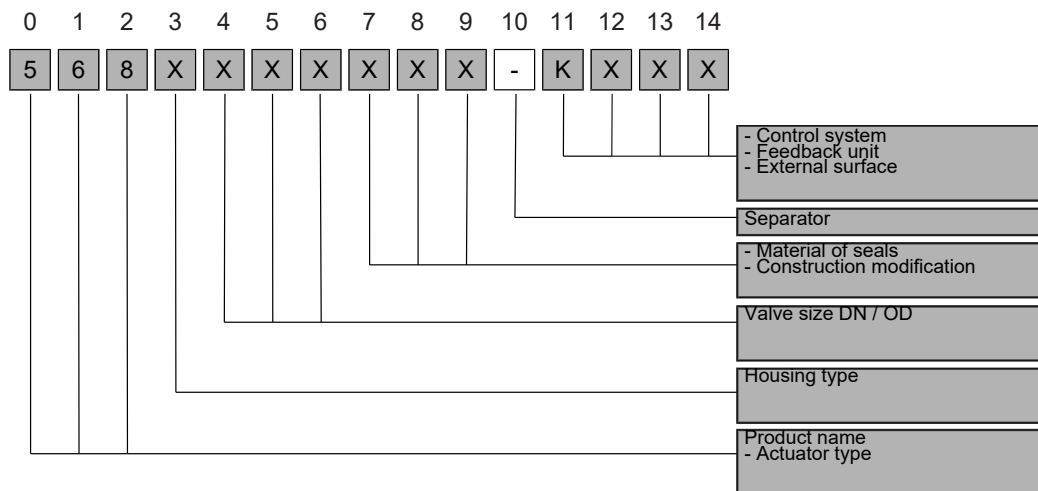
	Designation	Material	DN40 1½Inch	DN50 2 Inch	DN65 2½ Inch	DN80 3 Inch	DN100 4 Inch	WPS				
Wear parts kit (VTS) EPDM - Standard												
WPS	D4 with support ring	a) EPDM	5670 040 739-020	5670 050 739-020	5670 065 739-020	5670 080 739-020	5670 100 739-020	●				
	D4 without support ring	b) EPDM	5670 040 739-000	5670 050 739-000	5670 065 739-000	5670 080 739-000	5670 100 739-000		●			
Wear parts set (VTS) EPDM - rinsing connection upper												
WPS	D4 with support ring	a) EPDM	5680 040 769-020	5680 065 769-020	5680 050 769-020	5680 080 769-020	5680 100 769-020			●		
	D4 without support ring	b) EPDM	5680 040 769-000	5680 065 769-000	5680 050 769-000	5680 080 769-000	5680 100 769-000				●	
11	Hexagon nut	AISI304	8113 006 000-020	8113 006 000-020	8113 006 000-020	8113 008 000-020	8113 008 000-020	●	●	●	●	
18	Headless pin	AISI316L	8112 006 050-040	8112 006 060-040	8112 006 085-040	8112 008 050-040	8112 008 085-040	●	●	●	●	
D1	Shaft seal (2x) complete	EPDM	5622 050 010-069	5622 050 010-069	5622 065 010-069	5622 080 010-069	5622 100 010-069	●	●	●	●	
D2	O-ring (4x)	EPDM	2304 069 026-159	2304 069 026-159	2304 082 026-159	2304 098 035-159	2304 117 035-159	●	●	●	●	
D3	O-ring	EPDM	2304 026 015-170	2304 026 015-170	2304 029 015-170	2304 042 020-170	2304 036 020-170	●	●	●	●	
D4	Seal (2x) two-parts complete with support ring	EPDM	5621 055 025-084	5621 055 025-084	5621 065 025-084	5621 080 025-084	5621 100 025-084	●	●	●	●	
	- Support ring	AISI304L	5621 055 027-020	5621 055 027-020	5621 065 027-020	5621 080 027-020	5621 100 027-020	●	-	●	-	
	- Sealing ring	EPDM	5621 055 026-084	5621 055 026-084	5621 065 026-084	5621 080 026-084	5621 100 026-084	●	●	●	●	
D5	O-ring	EPDM	2304 041 035-159	2304 041 035-159	2304 050 035-159	2304 066 035-159	2304 085 035-159	●	●	●	●	
D6	O-ring	EPDM	2304 038 018-170	2304 038 018-170	2304 048 020-170	2304 057 020-170	2304 076 020-170	●	●	●	●	
D7	O-ring	NBR	2304 042 025-055	2304 042 025-055	2304 042 025-055	2304 046 025-055	2304 046 025-055	●	●	●	●	
D8	O-ring (2x)	EPDM	2304 036 035-159	2304 036 035-159	2304 036 035-159	2304 041 035-159	2304 041 035-159	●	●	●	●	
D9	O-ring	EPDM	2304 047 035-159	2304 047 035-159	2304 057 035-159	2304 069 035-159	2304 092 035-159	●	●	●	●	
D10a	O-ring	EPDM	2304 007 015-159					-	-	●	●	
D10b	O-ring	NBR	2304 009 020-055					-	-	●	●	

	Designation	Material	DN40 1½Inch	DN50 2 Inch	DN65 2½ Inch	DN80 3 Inch	DN100 4 Inch	WPS				
Wear parts kit (VTS) HNBR - Standard												
WPS	D4 with support ring	a) HNBR	5670 040 729-020	5670 050 729-020	5670 065 729-020	5670 080 729-020	5670 100 729-020	●				
	D4 without support ring	b) HNBR	5670 040 729-000	5670 050 729-000	5670 065 729-000	5670 080 729-000	5670 100 729-000		●			
Wear parts set (VTS) HNBR - rinsing connection upper												
WPS	D4 with support ring	a) HNBR	5680 040 779-020	5680 065 779-020	5680 050 779-020	5680 080 779-020	5680 100 779-020				●	
	D4 without support ring	b) HNBR	5680 040 779-000	5680 065 779-000	5680 050 779-000	5680 080 779-000	5680 100 779-000					●
11	Hexagon nut	AISI304	8113 006 000-020	8113 006 000-020	8113 006 000-020	8113 008 000-020	8113 008 000-020	●	●	●	●	
18	Headless pin	AISI316L	8112 006 050-040	8112 006 060-040	8112 006 085-040	8112 008 050-040	8112 008 085-040	●	●	●	●	
D1	Shaft seal (2x) complete	HNBR	5622 050 010-050	5622 050 010-050	5622 065 010-050	5622 080 010-050	5622 100 010-050	●	●	●	●	
D2	O-ring (4x)	HNBR	2304 069 026-171	2304 069 026-171	2304 082 026-050	2304 098 035-050	2304 117 035-050	●	●	●	●	
D3	O-ring	EPDM	2304 026 015-170	2304 026 015-170	2304 029 015-170	2304 042 020-170	2304 036 020-170	●	●	●	●	
D4	Seal (2x) two-parts complete with support ring	HNBR	5621 055 025-171	5621 055 025-171	5621 065 025-171	5621 080 025-171	5621 100 025-171	●	●	●	●	
	- Support ring	AISI304L	5621 055 027-020	5621 055 027-020	5621 065 027-020	5621 080 027-020	5621 100 027-020	●	-	●	-	
	- Sealing ring	HNBR	5621 055 026-171	5621 055 026-171	5621 065 026-171	5621 080 026-171	5621 100 026-171	●	●	●	●	
D5	O-ring	HNBR	2304 041 035-157	2304 041 035-157	2304 050 035-157	2304 066 035-157	2304 085 035-157	●	●	●	●	
D6	O-ring	EPDM	2304 038 018-170	2304 038 018-170	2304 048 020-170	2304 057 020-170	2304 076 020-170	●	●	●	●	
D7	O-ring	NBR	2304 042 025-055	2304 042 025-055	2304 042 025-055	2304 046 025-055	2304 046 025-055	●	●	●	●	
D8	O-ring (2x)	EPDM	2304 036 035-159	2304 036 035-159	2304 036 035-159	2304 041 035-159	2304 041 035-159	●	●	●	●	
D9	O-ring	EPDM	2304 047 035-159	2304 047 035-159	2304 057 035-159	2304 069 035-159	2304 092 035-159	●	●	●	●	
D10a	O-ring	EPDM	2304 007 015-159					-	-	●	●	
D10b	O-ring	NBR	2304 009 020-055					-	-	●	●	

	Designation	Material	DN40 1½Inch	DN50 2 Inch	DN65 2½ Inch	DN80 3 Inch	DN100 4 Inch	WPS				
Wear parts kit (VTS) FKM - Standard												
WPS	D4 with support ring	a) FKM	5670 040 749-020	5670 050 749-020	5670 065 749-020	5670 080 749-020	5670 100 749-020	●				
	D4 without support ring	b) FKM	5670 040 749-051	5670 050 749-051	5670 065 749-051	5670 080 749-051	5670 100 749-051		●			
Wear parts set (VTS) FKM - rinsing connection upper												
WPS	D4 with support ring	a) FKM	5680 040 789-020	5680 065 789-020	5680 050 789-020	5680 080 789-020	5680 100 789-020			●		
	D4 without support ring	b) FKM	5680 040 789-000	5680 065 789-000	5680 050 789-000	5680 080 789-000	5680 100 789-000				●	
11	Hexagon nut	AISI304	8113 006 000-020	8113 006 000-020	8113 006 000-020	8113 008 000-020	8113 008 000-020	●	●	●	●	
18	Headless pin	AISI316L	8112 006 050-040	8112 006 060-040	8112 006 085-040	8112 008 050-040	8112 008 085-040	●	●	●	●	
D1	Shaft seal (2x) complete	FKM	5622 050 010-051	5622 050 010-051	5622 065 010-051	5622 080 010-051	5622 100 010-051	●	●	●	●	
D2	O-ring (4x)	FKM	2304 069 026-251	2304 069 026-251	2304 082 026-251	2304 098 035-251	2304 117 035-251	●	●	●	●	
D3	O-ring	EPDM	2304 026 015-170	2304 026 015-170	2304 029 015-170	2304 042 020-170	2304 036 020-170	●	●	●	●	
D4	Seal (2x) two-parts complete with support ring	FKM	5621 055 025-251	5621 055 025-251	5621 065 025-251	5621 080 025-251	5621 100 025-251	●	●	●	●	
	- Support ring	AISI304L	5621 055 027-020	5621 055 027-020	5621 065 027-020	5621 080 027-020	5621 100 027-020	●	-	●	-	
	- Sealing ring	FKM	5621 055 026-251	5621 055 026-251	5621 065 026-251	5621 080 026-251	5621 100 026-251	●	●	●	●	
D5	O-ring	FKM	2304 041 035-178	2304 041 035-178	2304 050 035-178	2304 066 035-051	2304 085 035-178	●	●	●	●	
D6	O-ring	EPDM	2304 038 018-170	2304 038 018-170	2304 048 020-170	2304 057 020-170	2304 076 020-170	●	●	●	●	
D7	O-ring	NBR	2304 042 025-055	2304 042 025-055	2304 042 025-055	2304 046 025-055	2304 046 025-055	●	●	●	●	
D8	O-ring (2x)	EPDM	2304 036 035-159	2304 036 035-159	2304 036 035-159	2304 041 035-159	2304 041 035-159	●	●	●	●	
D9	O-ring	EPDM	2304 047 035-159	2304 047 035-159	2304 057 035-159	2304 069 035-159	2304 092 035-159	●	●	●	●	
D10a	O-ring	EPDM	2304 007 015-159					-	-	●	●	
D10b	O-ring	NBR	2304 009 020-055					-	-	●	●	

11 Classification

11.1 Structure of Order Number



Product name

568 x xxx xxx-xxxx	Pos. 0	Pos. 1	Pos. 2
Double seat valve Standard Model 2022	5	6	8

Housing type

xxx X xxx xxx-xxxx	Pos. 3
Housing SS - S	1
Housing S - S	2
Housing S - SS	3
Housing SS - SS	4

Valve size

xxxx XXX xxx-xxxx								
Nominal size	Pos. 4	Pos. 5	Pos. 6		Nominal size	Pos. 4	Pos. 5	Pos. 6
DN 25	0	2	5		DN 80	0	8	0
DN 40	0	4	0		DN 100	1	0	0
DN 50	0	5	0		DN 125	1	2	5
DN 65	0	6	5		DN 150	1	5	0
OD 1"	0	2	6		OD 3"	0	7	6
OD 1 1/2"	0	3	8		OD 4"	1	0	1
OD 2"	0	5	1		OD 5"	1	2	7
OD 2 1/2"	0	6	4		OD 6"	1	5	2

Material of seal / Design modification

xxxx xxx XXX -xxxx	Pos. 7	Pos. 8	Pos. 9
EPDM [DN 25, OD 1"]	1	3	0
HNBR [DN 25, OD 1"]	4	2	0
FKM [DN 25, OD 1"]	1	4	0
EPDM [≥ DN 40, OD 1½"]	7	3	0
HNBR [≥ DN 40, OD 1½"]	7	2	0
FKM [≥ DN 40, OD 1½"]	7	4	0
EPDM - external rinsing connection upper	7	6	0
HNBR - external rinsing connection upper	7	7	0
FKM - external rinsing connection upper	7	8	0

Separator

xxxx xxx xxx - xxxx	Pos. 10
- Standard	-

Control system, position indicator, surfaces

xxxx xxx xxx- XXXX	Pos.11	Pos.12	Pos.13	Pos.14
Valve without control system, External surface AISI304 E-polished	0	2	1	
Valve without control system, External surface AISI316L E-polished	0	4	1	
Valve with feedback (5630 005 025-000)	7	5	0	
Valve with control head, KI-Top SPS for double seat valves	K	5	X	X
Valve with control head, KI-Top ASi-Bus for double seat valves	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

<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.

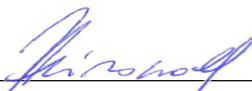
Applied harmonized standards:

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

[illegible]



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