KIESELMANN
FLUID PROCESS GROUP

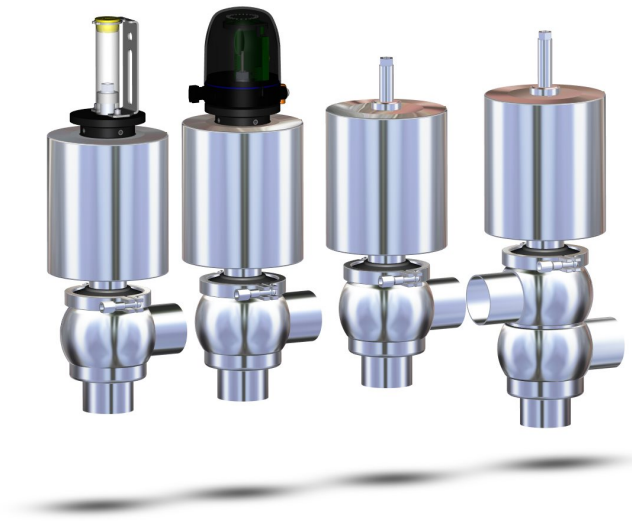
Translation of the original

Operating instruction

KI-DS Single seat valves

Long Stroke Valve

Inclined seat valve:	5501, 5502
Angle valve:	5505, 5506
T-valve:	5507, 5508
Cross valve:	5511, 5512
Two-way-changeover valve:	5513, 5514
Two-way-changeover valve:	5515, 5516
Loop valve:	5517, 5518
Tank outlet valve:	5527, 5528



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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

The Single seat valve is used in the beverage and food industry, in pharmaceutical, bio-engineering, as well as in chemical engineering.

Inclined seat valves, Angle valves, T-valves, Cross valves, Loop valves and Tank outlet valves are used as manually or pneumatically controlled Shut-off valves, Change-over valves are used as Multi-port valves in industrial installations.

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

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

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.

⚠ CAUTION

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

(see technical data)

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 regulationsand 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 70% ±5%).
- Protect seals, bearings and plastic parts for UV light and ozone.

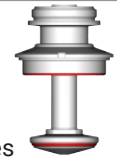
4 Specification

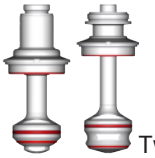
4.1 Modular system

KI-Top control head		feedback unit
		
Stainless steel hood	Transparent hood	Feedback unit with finger guard (E)

Actuator pneumatical	
 ø104	 ø129
 ø167	 ø230

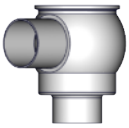
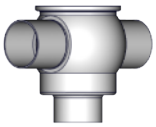
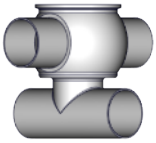
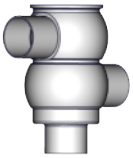
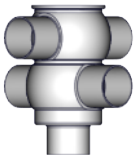
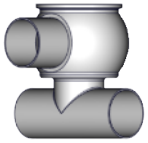
Valve inserts

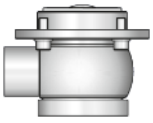
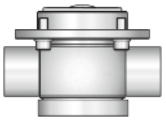

Angle valves


Two way valves

EPDM, HNBR

Valve housing

 Inclined seat valve	 Angle valve	 t-valve
 cross valve	S-S-S  S-S-S-S  Two-way-changeover valve	 Loop valve

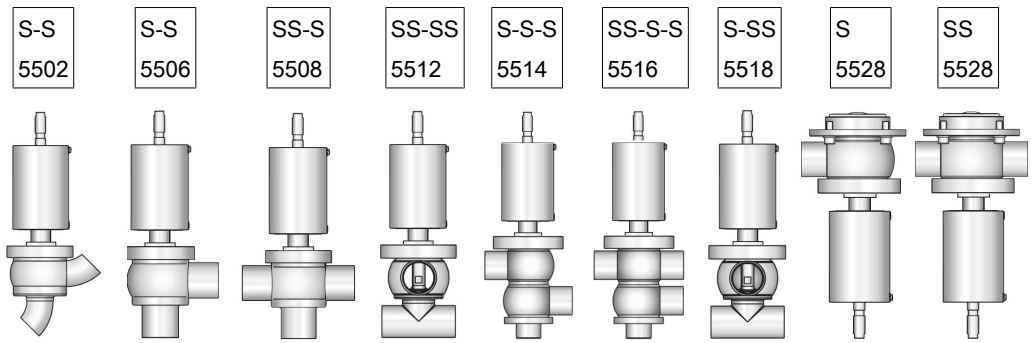
S  SS 

Tank outlet valve

4.1.1 Valve combinations

KI-DS Long Stroke Valve 55xx xxx xxxLxxx

Actuator pneumatical



5 Function and operation

5.1 Description of function

Valve function:	• Inclined seat valve, Angle valve, T-valve, Cross valve, Loop valve, Tank outlet valve – Shut off fluid media in pipelines (see Fig.A and B) • Changeover valve – Control fluid media in pipelines (see Fig.A and B)
Operation:	• pneumatic operation by a lift drive (air/spring or air/air) • manual operation by a crank-handle (open ↺ / close ↻)
Activation:	• Pneumatically over a 3/2-way solenoid valve (see “Pneumatic valve activation“)

Description of function - Lift actuator

Normally closed (NC) Basic position: Valve close	
pneum. operated	→ opens the valve
undivided pneum. operated	→ spring force closes the valve

normal open (NO) Basic position: Valve open	
pneum. operated	→ valve “CLOSE“
undivided pneum. operated	→ spring force opens the valve

double acting (DA) Basic position: not defined[1]	
pneum. operated	→ opens the valve
undivided pneum. operated	→ valve “CLOSE“

1. The valve position is not defined in case of decrease of pressure in the compressed air line.

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

MV = solenoid valve

R = de-aeration, sound absorber

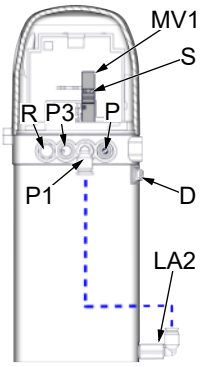
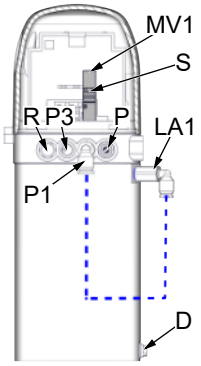
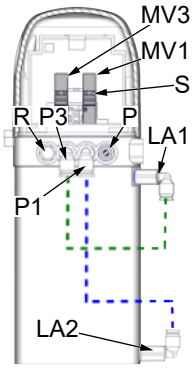
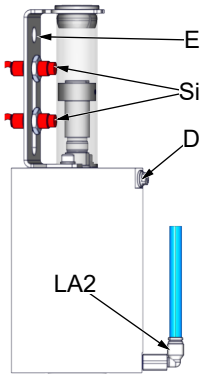
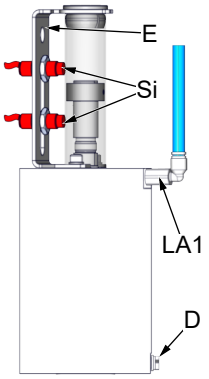
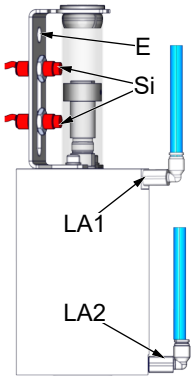
P = compressed-air inlet

LA = air supply

S = Slide switch for manual operation of the solenoid valve

Si = Sensor inductive

E = sensor mounting

Valve function	Pneum. activation via control head with solenoid valves (MV)	Pneum. activation via external solenoid valves (MV external)
NC	NO	DA
		
		

Antriebsart: normal closed (NC)		
Valve OPEN by pressurised air	control air feed P ➟ MV1 ➟ P1/LA2	control air feed ext. MV ➟ LA2
Valve CLOSED by spring tension	de-aeration LA2/P1 ➟ MV1 ➟ R	de-aeration LA2 ➟ ext. MV

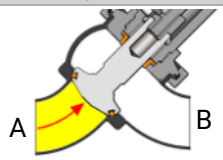
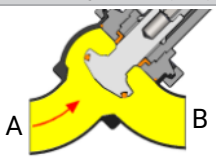
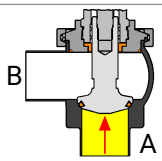
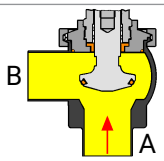
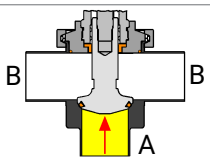
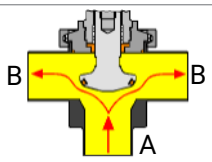
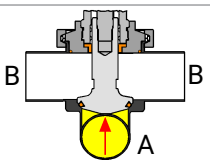
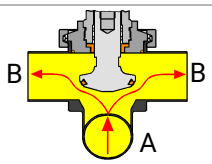
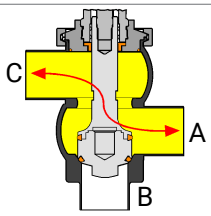
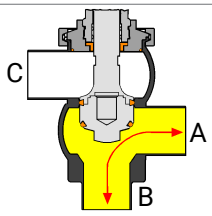
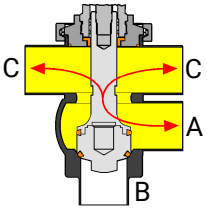
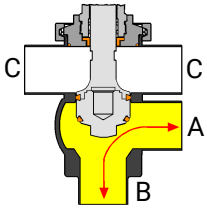
Kind of actuator: air open - air close (DA)		
Valve OPEN by pressurised air	control air feed P ➟ MV1 ➟ P1/LA2	control air feed ext. MV ➟ LA2
Valve CLOSED by pressurised air	control air feed P ➟ MV3 ➟ P3/LA1	control air feed ext. MV ➟ LA1

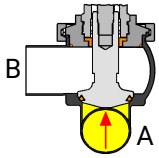
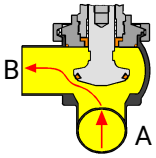
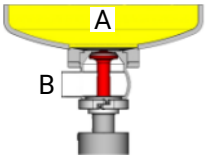
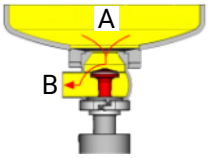
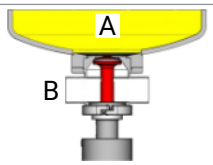
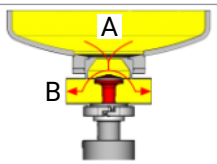
Kind of actuator: normal open (NO)		
Valve OPEN by spring tension	de-aeration P1/LA1 ➟ MV1 ➟ R	de-aeration LA1 ➟ ext. MV
Valve CLOSED by pressurised air	control air feed P ➟ MV1 ➟ P1/LA1	control air feed ext. MV ➟ LA1

5.4 Valve basic position:

INFORMATION

- Actuator AIR/AIR : Valve assemblies with double acting actuators will fall into an un-defined stroke position.
- Actuator AIR/SPRING: The basic position of the valve is closed or opened depending on the kind of actuator.

Basic positon: Kind of actuation:	Valve closed Normally closed (NC)	Valve open Normally open (NO)
Type: 5502 **S-S** Inclined seat valve	 Line A - B closed	 Line A - B open
Type: 5506 **S-S** Angle valve	 Line A - B closed	 Line A - B open
Type: 5508 **SS-S** t-valve	 Line A - B closed	 Line A - B open
Type: 5512 **SS-SS** cross valve	 Line A - B closed	 Line A - B open
Type: 5514 **S-S-S** Changeover valve	 Line A - B closed Line A - C open	 Line A - B open Line A- C closed
Type: 5516 **SS-S-S** Changeover valve	 Line A - B closed Line A - C open	 Line A - B open Line A - C closed

Basic positon: Kind of actuation:	Valve closed Normally closed (NC)	Valve open Normally open (NO)
Type: 5518 **S-SS** Loop valve	 Line U - A closed	 Line U - A open
Type: 5528 **S** Tank outlet valve	 Line A - B closed	 Line A - B open
Type: 5528 **SS** Tank outlet valve	 Line U - AB closed	 Line U - AB open

6 Commissioning, service and maintenance

6.1 Commissioning

6.1.1 Installation instructions

Fitting position

- The installation position is without importance.

NOTICE

If installed horizontally, some minor residual liquids will remain in the ball-shape of the 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 Maintenance

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; 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.

6.3 Cleaning

Cleaning of the inner housing is performed with the pipe cleaning system.

7 Technical data

7.1 Operating pressure

Assignment of the pneumatic actuators to the valve types

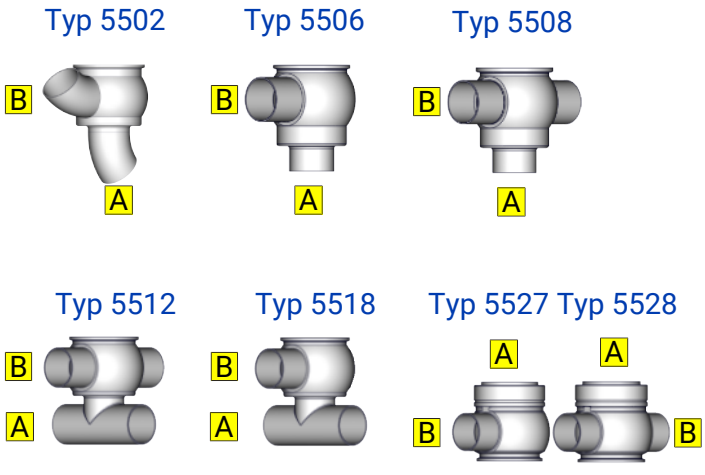
ND Inch	25 1	40 1½	50 2	65 2½	80 3	100 4
Actuator for valve types 5502; 5506; 5508; 5512; 5518; 5528	Ø 104	Ø 104	Ø 167	Ø 167	Ø 230	Ø 230
Actuator for valve types 5514; 5516	Ø 104	Ø 129	Ø 167	Ø 167	Ø 230	Ø 230

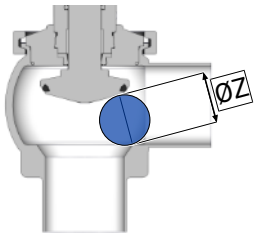
Operating pressure for valves with pneumatic operating

Type: 5502, 5506, 5508, 5512, 5518, 5527, 5528

Nominal size	Stroke	ØZ	Operating direction	Opening pressures / closing pressures [bar] Size of actuator (ØA)								KVS	
				ø104		ø129		ø167		ø230		A →B	B →A
	mm	mm		A	B	A	B	A	B	A	B	m³/h	m³/h
DN 25	18	13	LÖ-FS ↓	10.5	10.7	15.3	16	-	-	-	-	21	24
OD 1“	14	11	FÖ-LS ↑	8.4	11.3	13.6	16	-	-	-	-		
DN 40	30	24.5	LÖ-FS ↓	8.2	12.3	12.0	16	-	-	-	-	43	47
OD 1½“	26.5	22	FÖ-LS ↑	6.0	14.1	12.1	16	-	-	-	-		
DN 50	39	30	LÖ-FS ↓	-	-	-	-	15.5	16	-	-	74	70
OD 2“	36.5	28	FÖ-LS ↑	-	-	-	-	16	16	-	-		
DN 65	55	44.7	LÖ-FS ↓	-	-	-	-	6.3	16	-	-	133	127
OD 2½“	49	41	FÖ-LS ↑	-	-	-	-	11.9	16	-	-		
DN 80	65	54.5	LÖ-FS ↓	-	-	-	-	-	-	11.5	16	195	191
OD 3“	65	54.5	FÖ-LS ↑	-	-	-	-	-	-	15.2	16		
DN 100	80	67.6	LÖ-FS ↓	-	-	-	-	-	-	6.5	14	297	287
OD 4“	77.5	66	FÖ-LS ↑	-	-	-	-	-	-	8.8	11.9		

Table 1 *) Control air pressure: 5,5 bar



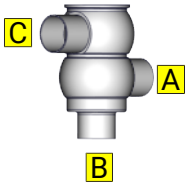


Operating pressure for pneumatic changeover valves

Type 5514, 5516

Nominal size	Stroke	Operating direction	Opening pressures / closing pressures [bar] Size of actuator (ØA)												KVS	
			ø104			ø129			ø167			ø230			A →B	B →A
	mm		A	B	C	A	B	C	A	B	C	A	B	C	m³/h	m³/h
DN 25	21	LÖ-FS ↓	8.0	8.9	6.8	13.8	15.5	10.3	-	-	-	-	-	-	23	15
OD 1“	17	FÖ-LS ↑	8.3	8.6	7.1	13.3	13.7	12.1	-	-	-	-	-	-		
DN 40	28.5	LÖ-FS ↓	8.0	7.7	6.8	13.8	13.4	10.3	-	-	-	-	-	-	46	35
OD 1½“	25.5	FÖ-LS ↑	7.8	7.4	7.1	12.5	11.6	12.1	-	-	-	-	-	-		
DN 50	44	LÖ-FS ↓	-	-	-	-	-	-	16	13	10	-	-	-	-	-
OD 2“	-	FÖ-LS ↑	-	-	-	-	-	-	16	16	7	-	-	-		
DN 65	44	LÖ-FS ↓	-	-	-	-	-	-	10	8	6	-	-	-	-	-
OD 2½“	-	FÖ-LS ↑	-	-	-	-	-	-	11	10	5	-	-	-		
DN 80	65	LÖ-FS ↓	-	-	-	-	-	-	-	-	-	13	11	9	-	-
OD 3“	-	FÖ-LS ↑	-	-	-	-	-	-	-	-	-	16	15	7		
DN 100	65	LÖ-FS ↓	-	-	-	-	-	-	-	-	-	9	8	6	-	-
OD 4“	-	FÖ-LS ↑	-	-	-	-	-	-	-	-	-	10	10	4.5		

Typ 5514



Typ 5516

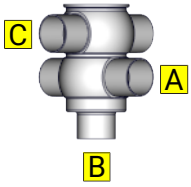
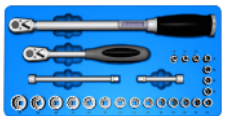


Table 2 *) Control air pressure: 5,5 bar

8 Disassembly and assembly

8.1 Valves with pneumatic operation

T1		Combination wrench-Set	SW 8 - SW 24 SW36, SW41, SW60, SW80	
T10		Joint -pin wrench	Pin Ø6	8027000065-000
T11		Hinged hook wrench	DN25 - DN100 90/155 V2A	8028025100-020
T12a		Articulated face spanner	Pin Ø5, 40 - 80 mm Pin Ø6, 40-80 MM	8028340085-000 8028340080-000
T40		Socket box	SW8 - SW36	-

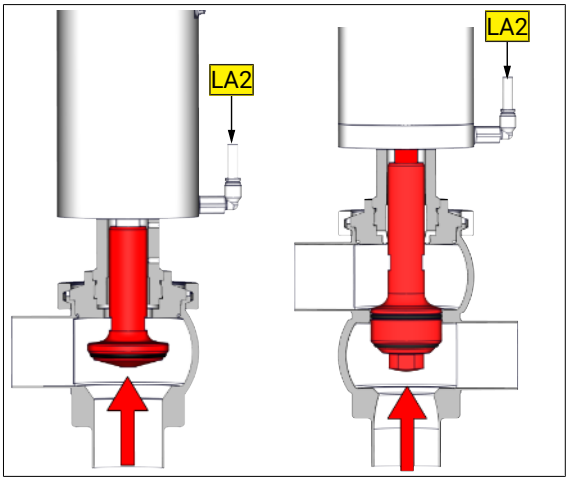
NOTICE

All threaded joint have right-hand thread.

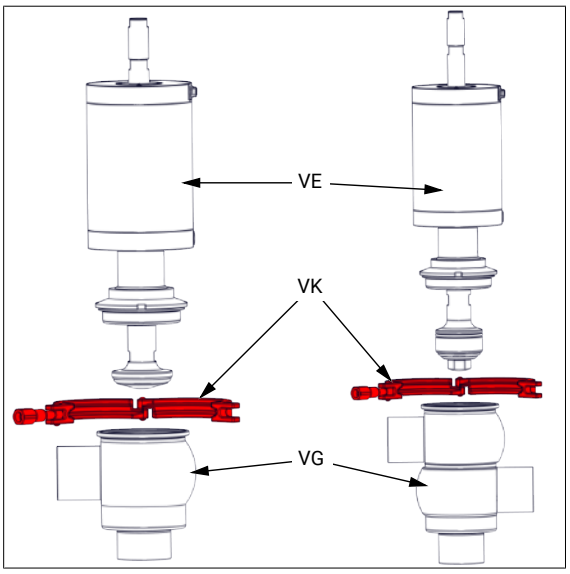
Unscrew and remove control air, steam resp. cleaning lines and electrical lines, complete feedback unit or control head.

Assembly valve insert

- Connect compressed air to LA2 and pressurize the actuator with air.
  - The piston retracts.

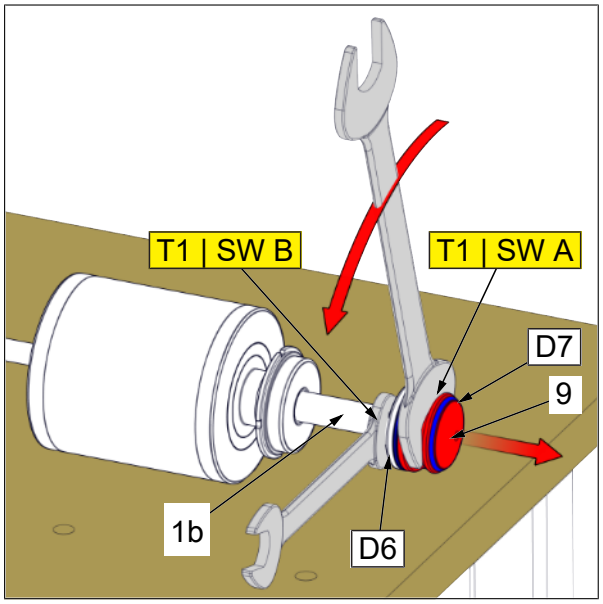


- Unscrew the clamp coupling (VK).
- Remove the complete valve insert with the upper shaft seal (D1) from the housing (VG).
- Disconnect compressed air at LA2 and depressurize the drive - The valve piston move in.
  - The valve piston returns to the basic position.

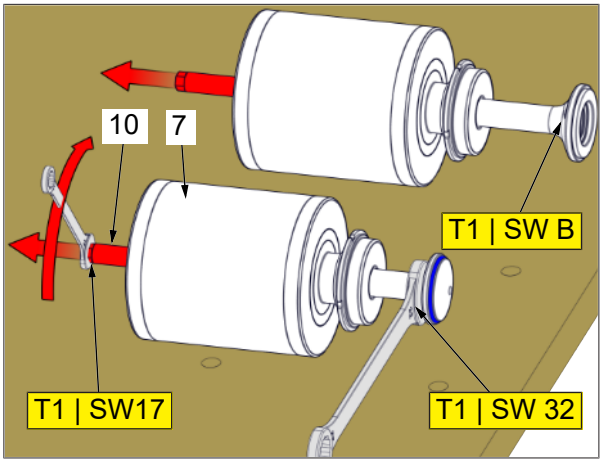


Replacement wear parts

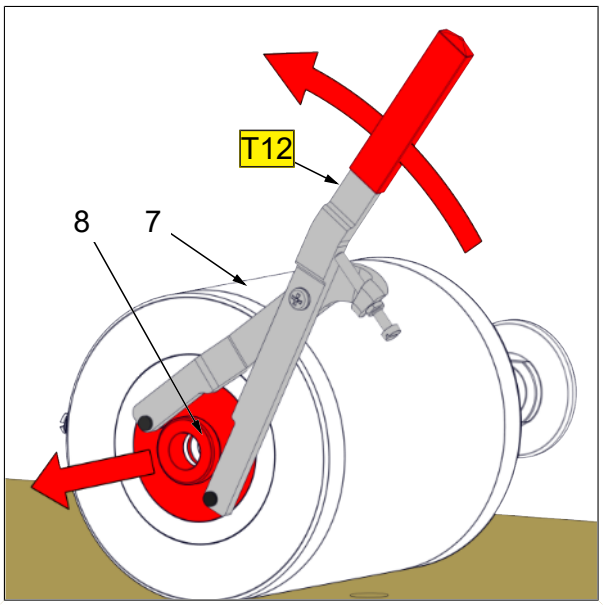
- Changeover valve: Unscrew the piston plate (9) from piston (1b) (SW A/SW B).
- Remove seal (D7) and O-ring (D6).



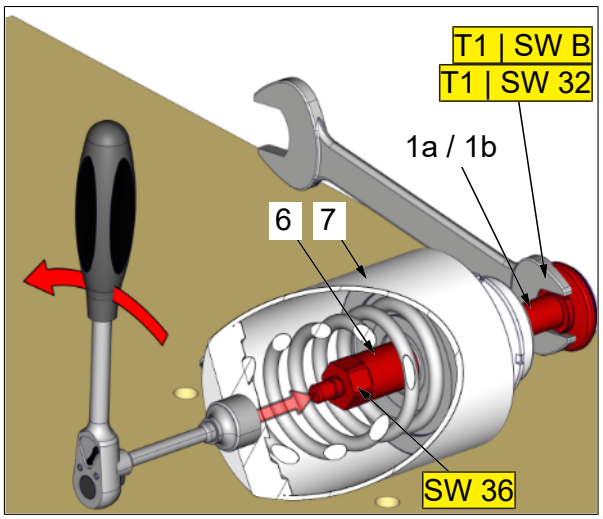
- Unscrew the spindle (10) and pull it out of the actuator (7).



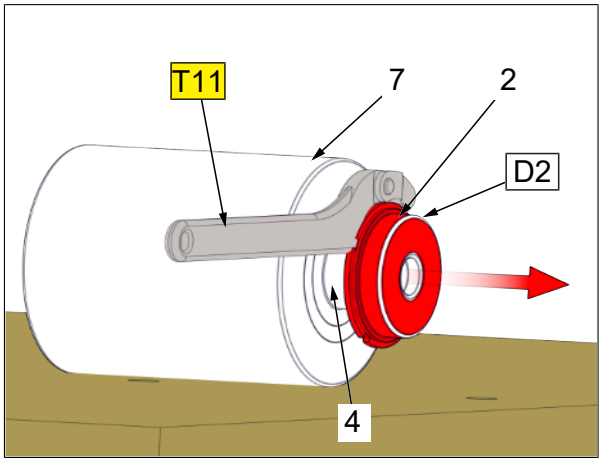
- Unscrew the insert (8) from the actuator (7) with a face spanner T12.
- Remove the O-ring (D4), (D5) from insert (8).



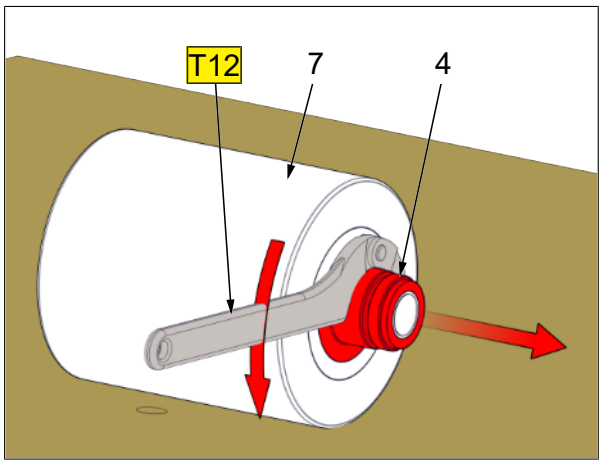
- Unscrew the spindle (6) with a socket spanner. Hold against the piston (1a / 1b).
- Remove the spindle (6) and piston (1a / 1b) from the actuator (7).



- Unscrew the insert (2) from the lantern (4) with an hook wrench.
- Remove shaft seal (D3) and O-ring (D2).



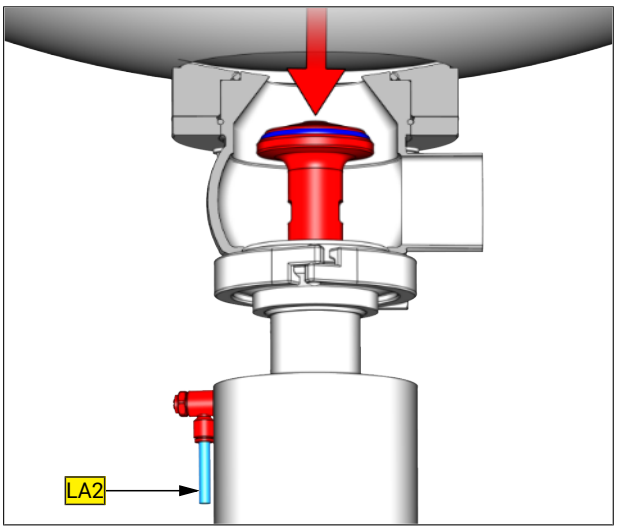
- Unscrew the lantern (4) from the actuator (7) with a hook wrench.
- Remove the O-rings (D4) and (D5).



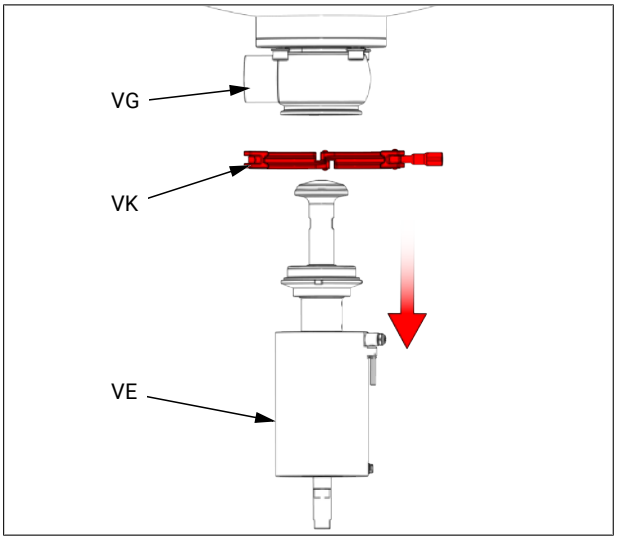
8.2 Tank outlet valve

Assembly valve insert

- Connect compressed air to LA2 and pressurize the actuator with air.
  - The piston retracts.



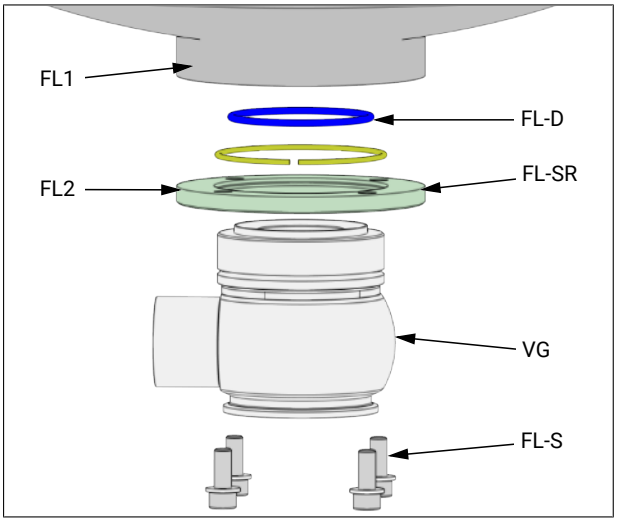
- Unscrew the clamp coupling (VK).
- Remove the complete valve insert with the upper shaft seal (D1) from the housing (VG).
- Disconnect compressed air at LA2 and depressurize the drive - The valve piston move in.
  - The valve piston returns to the basic position.



Replacement wear parts - Valve housing (VG)

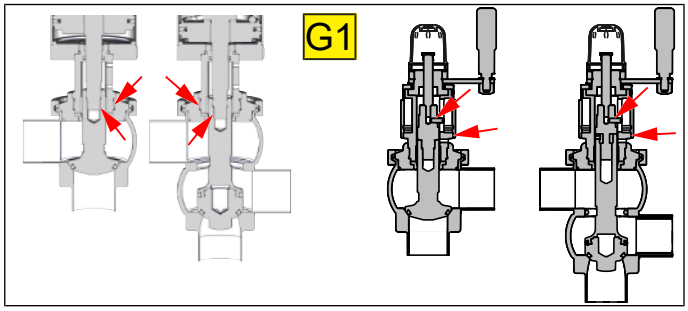
- Unscrew the screw (FI-S).
- Remove valve housing (VG) with flange (FL2) and O-ring (FI-D).
- Dismantling circlip ring (FL-SR) and flange (FL2) from the housing (VG).

NOTICE! Information for the "Disassembly of the valve insert" can be found under Tank outlet valve [▶ 23]



8.3 Assembly

- Mount the threaded connection (G1) with Screw retention detachable (e.g. Loctite 243) .



- 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.

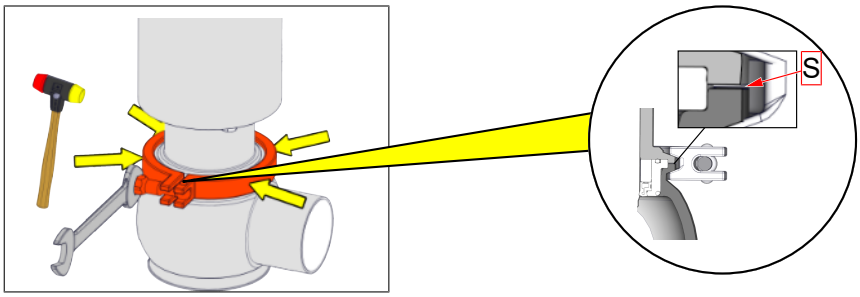
NOTICE

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!



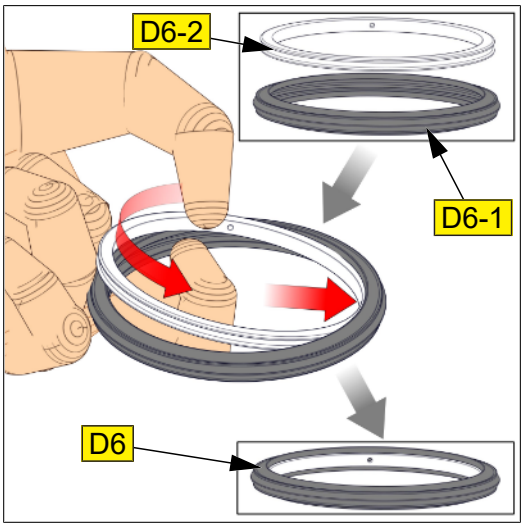
Torques

ND	25	40	50	65	80	100
Inch	1	1½	2	2½	3	4
Clamp coupling (Nm):	15	15	15	25	25	55

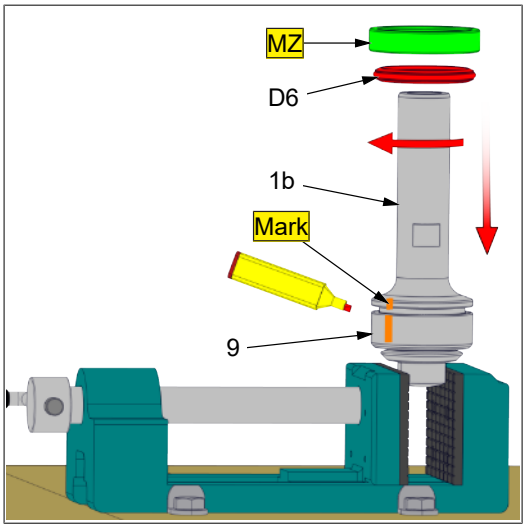
Mounting seal (D6)

Centring ring MZ 	DN 25/40/50	5620 050 025-020
	DN65	5620 065 025-020
	DN80	5620 080 025-020
	DN100	5620 100 025-020

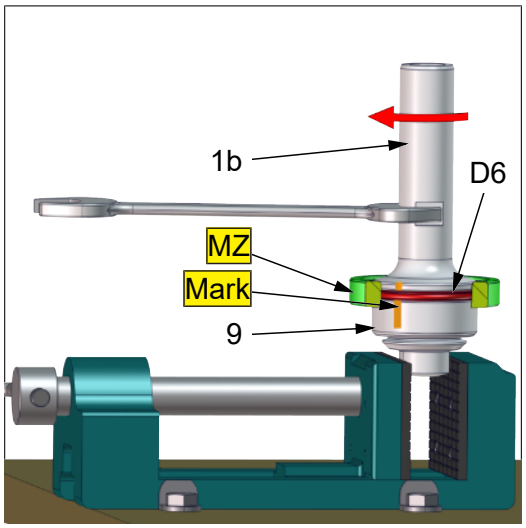
- Install the support ring (D4-2) in the seal jacket (D4-1).



- Clamp piston plate (9) in a vice. Screw together the piston (1b) and piston plate (9) to the metal limit stop by hand.
- Make a colored mark at the piston surfaces.
- After then, unscrew the piston (1b) again.



- Slide the seal (D6) onto the piston (1b).
- Screw together again the piston (1b) into the piston plate (9) by hand.
- Position the centre ring (MZ) on seal (D6).
- Screw up the piston (1b) to the final limit mark.



9 Drawings and dimensions

Angle valves, Two way valves

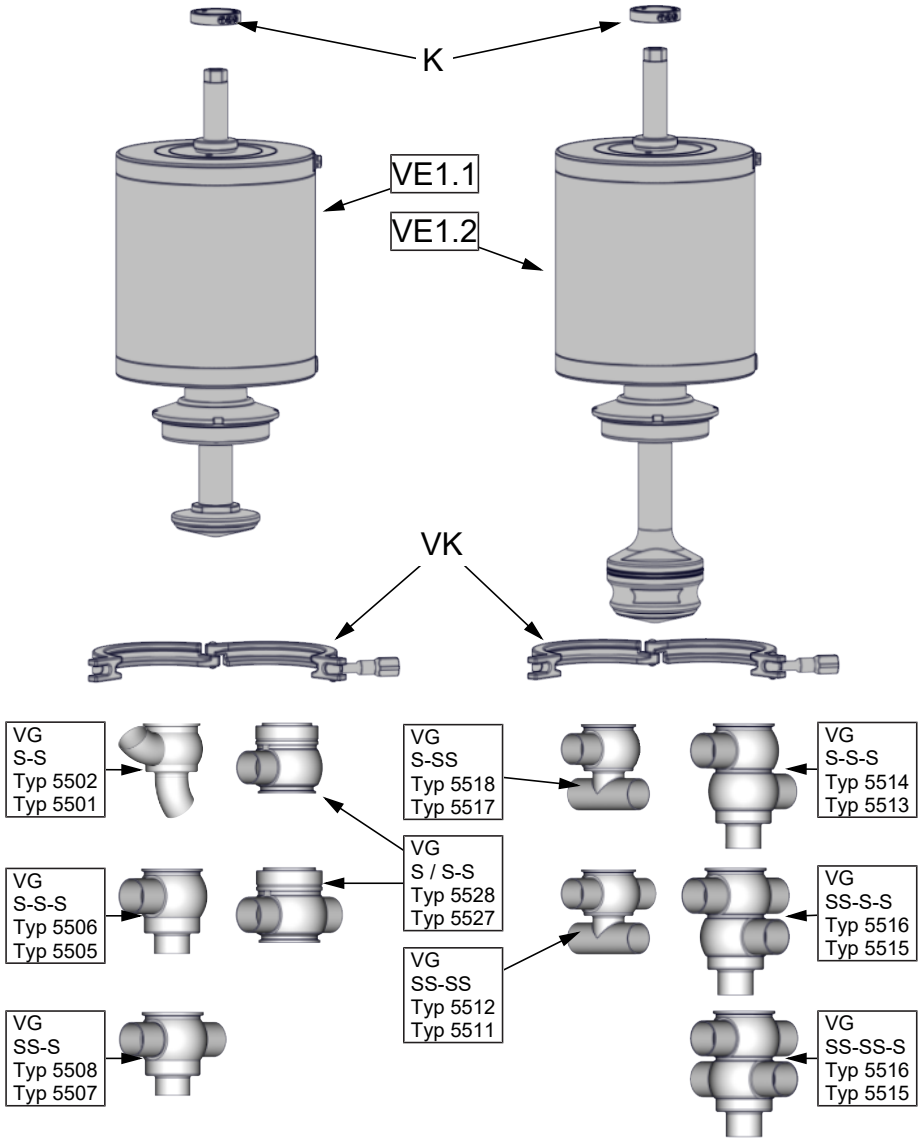
K = Cap

VE = Valve insert

- 1.1 = Angle valve pneumatical
- 1.2 = Changeover valve pneumatical

VK = Clamp coupling

VG = Valve housing



Tank outlet valve

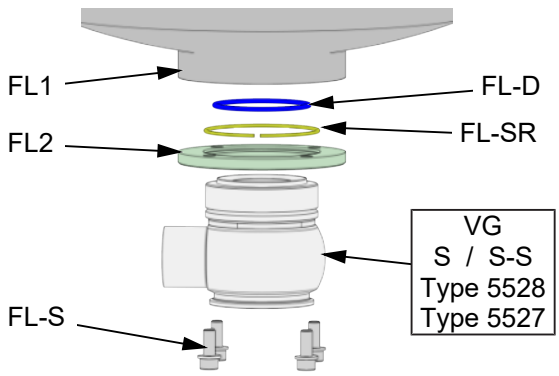
FL1 = Tank flange[1]

FL2 = Housing flange

FL-D = O-ring [1]

FL-S = Screw

FL-SR = Retaining ring



Valve inserts (VE)

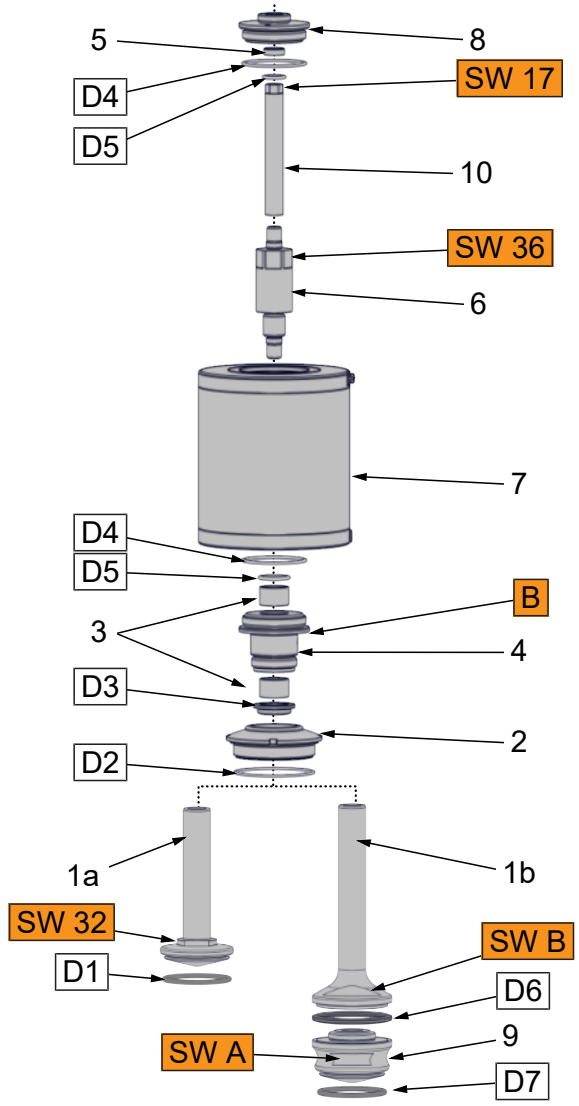
pneumatical DN65

- Angle valve - insert Type: 5506
- Changeover valve - insert Type: 5514

1 = Piston
- a = Angle valve
- b = Changeover valve

2 = Insert
3 = Bearing bush
4 = Lantern
5 = Bearing bush
6 = Spindle
7 = Actuator
8 = Insert - lantern
9 = Piston plate
10 = Spindle

D1 = O-ring
D2 = O-ring
D3 = Shaft seal
D4 = O-rings
D5 = O-rings
D6 = Seal
D7 = O-ring



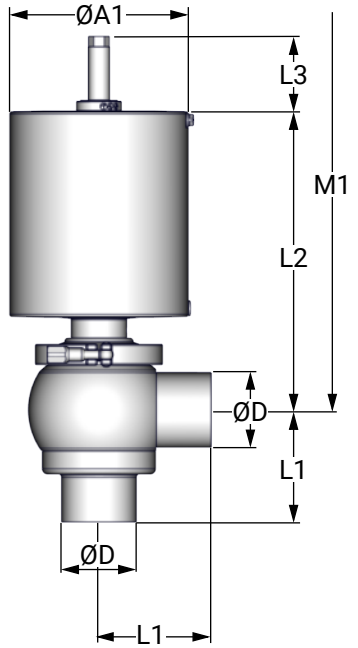
Open-end wrench	Wrench size SW				
Nominal size	**SW A**	**SW B**	**SW 32**	**SW 36**	**SW 17**
DN 25 / 1“	19 mm	24 mm	32 mm	36 mm	17 mm
DN 40/ 1½“	27 mm	36 mm			
DN 50 / 2“	24 mm	41 mm			
DN 65 / 2½“	60 mm*	41 mm			
DN 80 / 3“	80 mm*	36 mm			
DN 100 / 4“	-	-			
DN 125 / 5“	-	-			

*) Special wrench: wrench thickness = max. 12mm (SW 60), max. 15mm (SW 80).

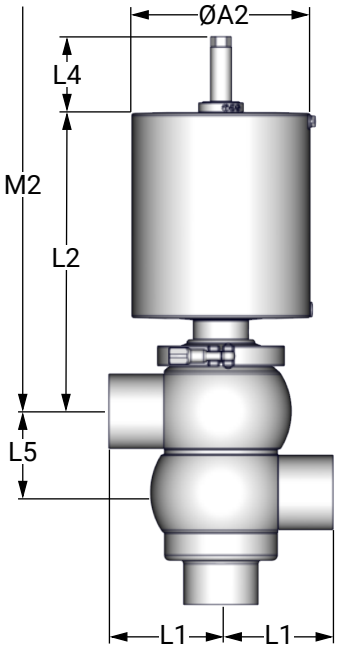
9.1 Dimensions

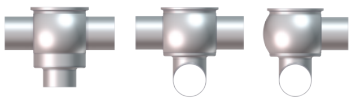
Angle valve, T-valve, Loop valve, Cross valve

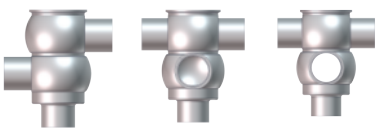
Angle valve, T-valve, Loop valve, Cross valve



Two-way-changeover valve







Nominal size	ØD	ØA1	ØA2	L1	L2	L3	L4	L5	Assembly dimension *		H (stroke)	
									M1	M2	EV	ZWUV
DN 25	Ø 29 x 1,5	ø 104	ø 104	75	330	82	70	36	~ 440	~ 485	18	23
1 Inch	Ø25.4x1.65			75	334	86	75.5	32	~ 440	~ 485	14	17
DN 40	Ø 41 x 1,5	ø 104	ø 129	85	324	70	59	48	~ 460	~ 520	30	34
1½ Inch	Ø38,1 x 1,65			85	326	73.5	67.5	45	~ 460	~ 520	26.5	25.5
DN 50	Ø 53 x 1,5	ø 167	ø 167	85	330	91	86	60	~ 480	~ 620	39	44
2Inch	Ø50,8 x 1,65			85	322	-	-	57.5	-	-	36.5	-
DN 65	Ø 70 x 2,0	ø 167	ø 167	105	338	70	86	76	~ 510	~ 632	55	44
2½ Inch	Ø63,5 x 1,65			105	341	-	-	70	-	-	49	-
DN 80	Ø 85 x 2,0	ø 230	ø 230	115	341	84	84	91	~ 680	~ 813	65	65
3 Inch	Ø76,1 x 2,0			115	337	-	-	83	-	-	65	-
DN 100	Ø 104 x 2,0	ø 230	ø 230	130	351	69	84	110	~ 709	~ 825	80	65
4 Inch	Ø101,6 x 2,0			130	357	-	-	108	-	-	77.5	-

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

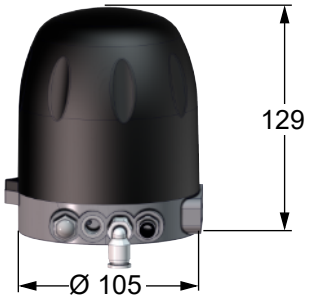
EV = Single seat valve; ZWUV = Two-way-changeover valve

*) Installation dimension M are incl. control head or sensor mounting

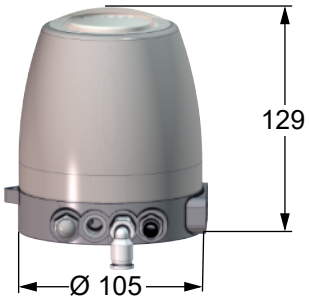
9.2 Query Units

Control head KI-TOP

with plastic hood - transparent



with stainless steel hood

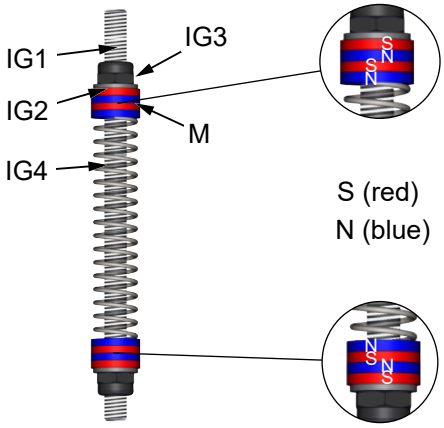


Adapter for control head KI-TOP

- Adapter plate complete
  6125072000-087

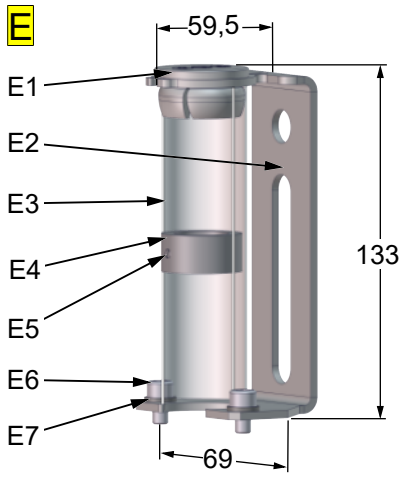
Pulse generator (IG)

- IG1 = Rod
- IG2 = Disc
- IG3 =Nut
- IG4 = Spring
- M = Magnet



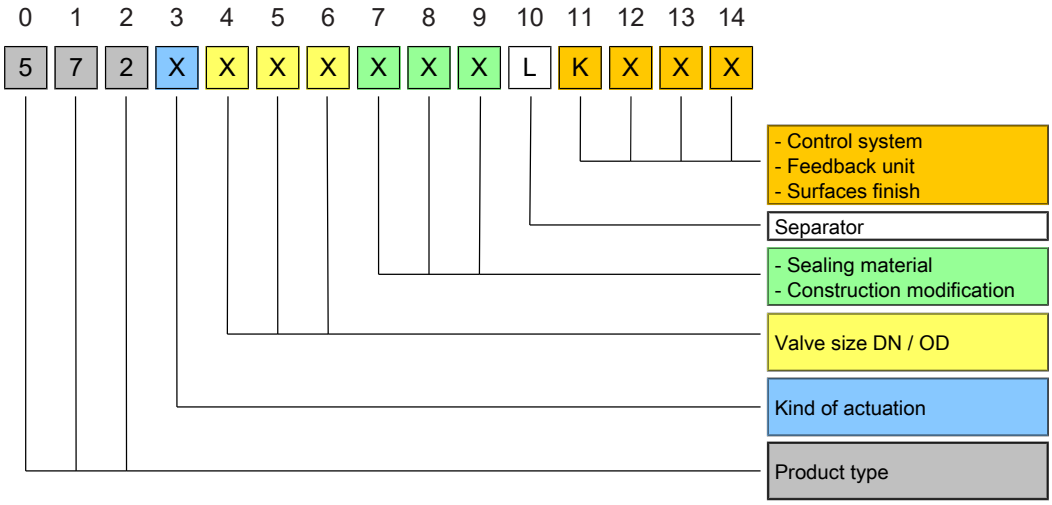
Feedback unit with finger guard (E)

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



10 Classification

10.1 Structure of Order Number



Product name 55xx xxx xxx-xxxx

Type: 55xx Single seat valves KI-DS

Housing type / Kind of actuation 55xx xxx xxx-xxxx

Type	Housing type	Kind of actuation	2	3
5501	S-S Inclined seat valve	manual	0	1
5502		Pneumatic	0	2
5505	S-S Angle valve	manual	0	5
5506		Pneumatic	0	6
5507	SS-S T-valve	manual	0	7
5508		Pneumatic	0	8
5511	SS-SS Cross valve	manual	1	1
5512		Pneumatic	1	2
5513	S-S-S Changeover valve	manual	1	3
5514		Pneumatic	1	4
5515	SS-S-S Changeover valve	manual	1	5
5516		Pneumatic	1	6
5517	S-SS Loop valve	manual	1	7
5518		Pneumatic	1	8
5527	S Tank outlet valve	manual	2	7
	SS Tank outlet valve	manual	2	7
5528	S Tank outlet valve	Pneumatic	2	8
	SS Tank outlet valve	Pneumatic	2	8

Valve size DN/OD 55xx xxx xxx-xxxx

DN	4	5	6		OD	4	5	6
DN 25	0	2	5		OD 1"	0	2	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
DN 100	1	0	0		OD 4 "	1	0	1
DN 125	1	2	5		OD 5"	1	2	7
DN 150	1	5	0		OD 6 "	1	5	2

Material of seal & Design modification 55xx xxx xxx-xxxx

Material of seals & Design modifica						
Type	Housing	Variations of actuation	Seal	7	8	9
5501, 5502	S-S	Normally closed (NC)	EPDM	0	3	0
5505, 5506	S-S		HNBR	0	3	5
5507, 5508	SS-S		FKM	0	3	4
5511, 5512	SS-SS	Normally open (NO)	EPDM	1	3	0
5513, 5514	S-SS		HNBR	1	3	5
5515, 5516	S-S-S		FKM	1	3	4
5517, 5518	SS-S-S	air open - air close (DA)	EPDM	3	3	0
5527; 5528	S		HNBR	3	3	5
			FKM	3	3	4
5527, 5528	SS	Normally closed (NC)	EPDM	2	3	0
			HNBR	2	3	5
			FKM	2	3	4

Separator 55xx xxx xxx-xxxx

Control system and position indicator	-
KI-DS Long Stroke Valve	L

Control system and position indication , External surface 55xx xxx xxx-xxxx

Control system and position indicator	11	12	13	14
Control head SPS (old version)	5	x	x	
Control head ASi-Bus (old version)	6	x	x	
Control head KI-Top SPS	K	5	x	x
Control head KI-Top ASi-Bus	K	6	x	x

Feedback unit	11	12	13	14
Feedback unit with finger guard (5630 005 025-000)	7	5	0	

External surface	11	12	13	14
Valve without control system, External surface, AISI304, blank	0	2	0	
Valve without control system, External surface, AISI304, E-polished	0	2	1	
Valve without control system, External surface, AISI316L, E-polished	0	4	1	

11 Appendix

11.1 Declaration of incorporation

CE

Declaration of incorporation

Translation of the original

Manufacturer / authorised representative:

KIESELMANN GmbH
Paul-Kieselmann-Str. 4-10
75438 Knittlingen
Germany

Authorised representative:
(for compiling technical documents)

Achim Kauselmann
(Documentation / Development)
KIESELMANN GmbH
Paul-Kieselmann-Str. 4-10
75438 Knittlingen
Germany

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

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

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

Commissioning of an incomplete machine must not only carried out if it has been determined that the respective machine into which the incomplete machine is to be installed conforms to the regulations set out in the Directive on Machinery referred to above.

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

- Directive 2014/68/EU
- DIN EN ISO 12100 Safety of machinery

Knittlingen, 21.09.2017

i.V. Uwe Heisswolf
Head of Development

KIESELMANN
FLUID PROCESS GROUP