

BAA S390 Select

SVP change-over valve

DN 25 – 100, DN 1" – 4"

Profile gasket – O-ring, profile gasket – PEEK gasket
Manually and pneum. operated



Änderung	Datum	Name	Änderung	Datum	Name	Änderung	Datum	Name	Änderung	Datum	Name



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Safety instructions



This symbol indicates a direct and immediate danger to the life and health of persons!

Failure to observe these warnings may result in serious damage to health, up to and including life-threatening injuries which may or may not be fatal.



This symbol indicates a potentially hazardous situation!

Das Nichtbeachten dieser Hinweise kann leichte Verletzungen zur Folge haben oder zu Sachbeschädigungen führen.



This sign draws your attention to important information about the proper use of the SVP change-over valve. It is essential for this information to be observed.

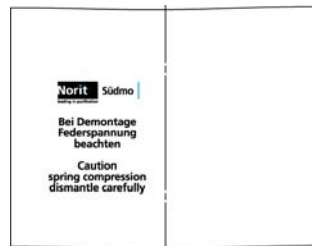
Failure to observe these instructions may cause malfunctions in the valve or in its vicinity.

General

- ⇒ SVP change-over valves from Südmö Components GmbH are manufactured in accordance with state-of-the-art standards and the recognized safety rules. However, these SVP change-over valve may constitute a hazard if used by operating personnel improperly or for a purpose other than the intended one. This may result in a risk to life and limb of the user or of third parties, or cause damage to the SVP change-over valve and other material property.
- ⇒ Each person concerned with installation, commissioning, operation and maintenance of this SVP change-over valve must have read and understood the complete operating instructions, and in particular all safety instructions.
- ⇒ In addition to these operating instructions, the following are of course also valid:
 - pertinent accident prevention regulations
 - generally recognized safety rules
 - national regulations of the country of use
 - in-house work and safety regulations.

Maintenance

- ⇒ Our SVP change-over valves should be maintained and commissioned only by qualified personnel. Qualified personnel in the sense of the operating instruction are persons which are familiar with assembly, commissioning and operation of this product and have corresponding qualifications
 - Training or instruction according to the current standards of the security techniques concerning corresponding care and use of the security devices
 - First Aid training
 - Plants with explosion protection:
Training, instruction or authorization to effect works on explosive plants (pay attention to ATEX requirements).



Sketch A

- ⇒ Before starting maintenance please make sure that:
- discharge of the pipeline
 - please effect only when there is no pressure and no product in the pipeline
 - to be informed about possible dangers which can occur due to the product and to take the corresponding measures (security glove, protecting glasses)
 - cool down the components if required.
 - exclude commissioning of the plant by a third party.
 - counteract against cushion pressure which can occur in isolated pipelines.
 - do assembly in accordance with assembly instructions.
 - if the closing springs are not preloaded when removing the actuator, there might be danger of injury when the clamping joint is loosened because the drive releases spring tension (see label – sketch A)
 - switch off the power supply.
 - take the SVP change-over valve out of the pipeline section if possible.
- ⇒ Any method of working that impairs the safety and function of the SVP change-over valve must be avoided.

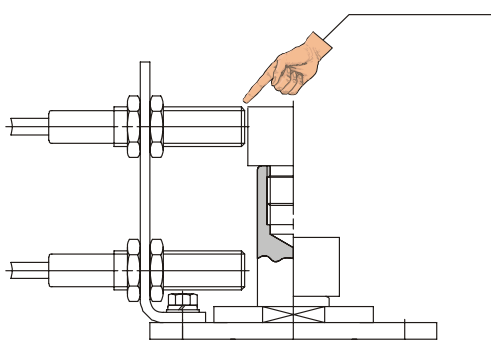
Modification of the SVP change-over valve

- ⇒ The user is obligated to ensure that the SVP change-over valve is always operated in accordance with its designated use and only by safety-conscious persons who are fully aware of the risks involved in its operation. Changes to the SVP change-over valve which impair its functioning or safety must be reported immediately. The user is obligated to ensure that the SVP change-over valve is always operated in technically perfect condition.



Modification of the SVP change-over valve is strictly prohibited.

SVP change-over valves with feedback



Don't put fingers into check-back signal.

⇒ ***Accident risk.***

Fingers can be crushed or cut off.

Storage

- ⇒ Store the valve in a dry place and protect it against external conditions.
- ⇒ Prior to any handling (dismantling of housings / actuators) store valves at least for 24 h in a dry place at a temperature of $\geq 5^{\circ}$ C.

Operation



Danger

Never touch the valve or piping system when hot products are in processing or during sterilization. Observe strictly the technical data. We cannot be held liable for an incorrect use of the valve.

Spare parts

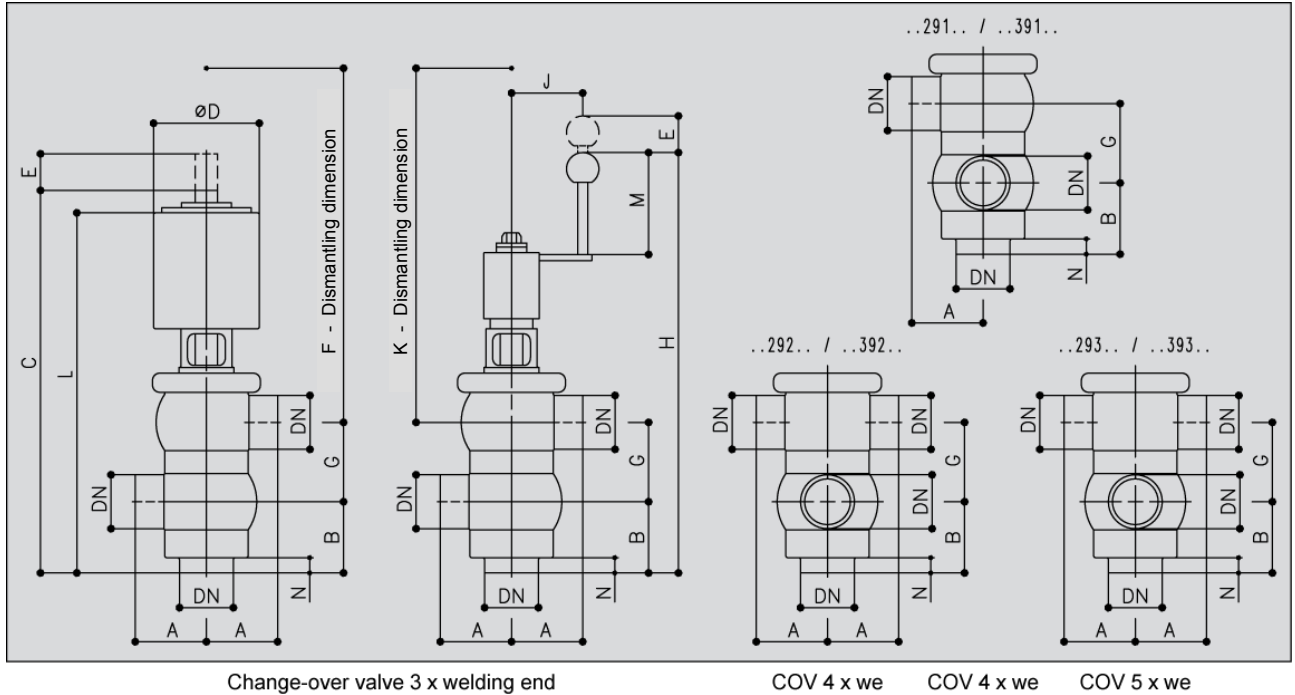


Caution

Please use only original Norit Südmo spare parts. Norit Südmo spare parts see list of spare parts. Exclusion of liability by using other spare parts.

Technical data

Dimensions



DN	Tube	A	B	C	øD	E	F	G	H	J	K	L	M	N
Metric														
25														
40														
50														
65														
80														
100 *														
O.D. tube														
1"	ø25,4 x 1,65	80	50	310	104	20	315	50,1	356	70	355	292	100	25,5
1 ½"	ø38,1 x 1,65	80	55	334	104	20	340	62,8	380	70	390	316	100	25,5
2"	ø50,8 x 1,65	100	65	358	104	25	370	75,5	405	70	415	345	100	25,5
2 ½"	ø63,5 x 1,65	100	70	426	129	30	450	88,2	453	100	475	413	100	25,5
3"	ø76,1 x 1,65	120	80	514	154	40	540	100,8	483	100	505	501	100	25,5
4" *	ø101,6 x 2,11	150	90	718	154	40	710	125,4	529	100	565	693	100	25,5

* = Pneum. valves standard with booster size II

Valve use

Application:	change-over valve
For use in:	Low-germ processes
Shut-off tightness:	6 bar max.
Vacuum:	Leakage rate (mbar x l/s) = $1,5 \times 10^{-5}$

Materials

Seal materials SVP change-over valve - profile gasket – O-ring

⇒ EPDM:

Temperature for **continuous** application in air: -40° C bis +130° C

Resistant to:

Hot water	to 100° C
Steam	to 130° C for continuous application, to 150° C for short time
Wort:	to 100° C
Sodium hydroxide	to 100° C and concentration to 5 %
Nitric acid	to 60° C and concentration to 3 %
Peracetic acid	to 80° C and concentration to 0,7 %
Raspberry flavor	room temperature
Cherry flavor	room temperature

Seal materials SVP change-over valve - profile gasket – PEEK gasket

⇒ PEEK natur / EPDM

Temperature for continuous application in air: -25° C bis +130° C

Resistant to:

Hot water	to 100° C
Steam	to 130° C for continuous application, to 150° C for short time
Wort:	to 100° C
Sodium hydroxide	to 100° C and concentration to 5 %
Nitric acid	to 60° C and concentration to 3 %
Peracetic acid	to 80° C and concentration to 0,7 %
Raspberry flavor	room temperature
Cherry flavor	room temperature



The application parameters depend on:

- ⇒ application duration per day
- ⇒ switching intervals
- ⇒ kind of product, temperature etc...
- ⇒ type of cleaning (CIP / SIP)

Stainless steel

In contact with product:	1.4404
Not in contact with product:	1.4301

CIP-Cleaning

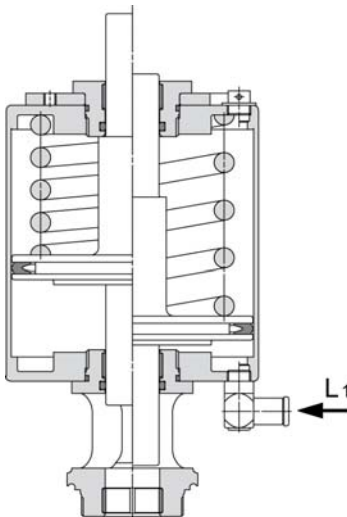


- ⇒ Valve inner chambers must be cleaned regularly
- ⇒ Observe the safety information sheets issued by the detergent manufacturers !
- ⇒ Only use detergents which are non-abrasive and non-aggressive towards seals and stainless steel.

Surfaces

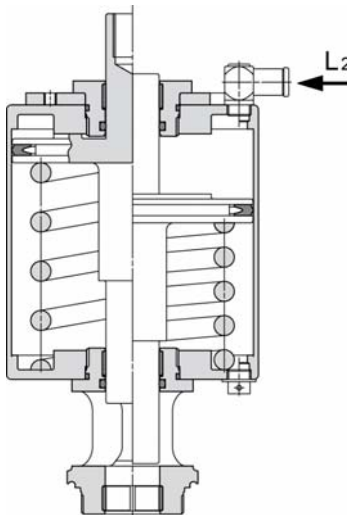
Surfaces in contact with product:	$R_a \leq 0,8 \mu\text{m}$
Optional:	E-polished
Surfaces not in contact with product:	bright-turned, $R_a \leq 1,6 \mu\text{m}$

Pneum. actuator



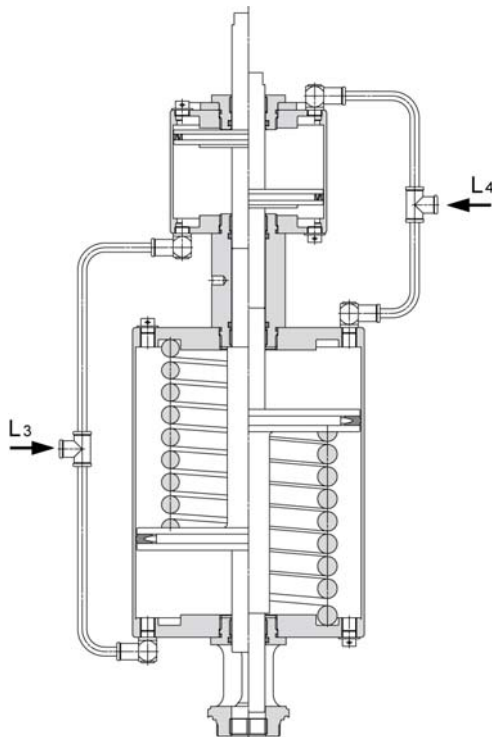
Function air opened – spring closed

- ⇒ Position "closed"
 - ⇒ control air pressure 0 bar on connection L₁.
 - ⇒ safety position
- ⇒ Position "open"
 - ⇒ control air pressure 6 bar on connection L₁.



Function spring opened – air closed

- ⇒ Position "open"
 - ⇒ control air pressure 0 bar on connection L₂.
 - ⇒ safety position
- ⇒ Position "closed"
 - ⇒ control air pressure 6 bar on connection L₂.



SVP actuator with booster

Function air opened – spring closed

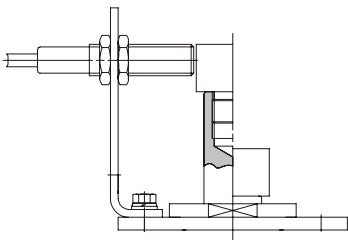
- ⇒ Position "closed"
 - ⇒ control air pressure 0 bar on connection L₃.
 - ⇒ safety position
- ⇒ Position "open"
 - ⇒ control air pressure min. 3 bar on connection L₃.

Function spring opened – air closed

- ⇒ Position "open"
 - ⇒ control air pressure 0 bar on connection L₄.
 - ⇒ safety position
- ⇒ Position "closed"
 - ⇒ control air pressure min. 3 bar on connection L₄.

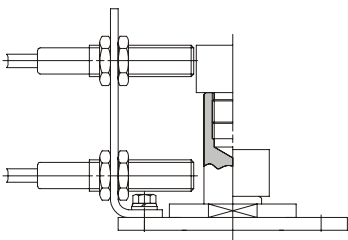
DN 100, DN 4", DN 80-ISO
Pneum. SVP change-over valves spring to open air to close standard with booster

Control systems



Single feedback

- ⇒ signal: open or closed valve position
- ⇒ inductive feedback
 - thread M 12 according to customer order
- ⇒ feedback data
 - refer to the data sheet of the manufacturer of the feedback
- ⇒ mounting set for check-back signal - order number 2125977



Double feedback

- ⇒ signal: open and closed valve position
- ⇒ inductive feedback
 - thread M 12 according to customer order
- ⇒ feedback data
 - refer to the data sheet of the manufacturer of the feedback
- ⇒ mounting set for check-back signal - order number 2125977



Process control head type 1066

Technical data
refer to BA1066

Pneum. connections
refer to BA1066

Electrical connections
refer to BA1066

Maintenance
refer to BA1066



Process control head IntelliTop® type 8680

Technical data
refer to BA 8680

Pneum. connections
refer to BA 8680

Electrical connections
refer to BA 8680

Maintenance
refer to BA 8680

Electrical and pneumatic connections

Electrical connections

Connect up the electrical and pneumatic systems after installing the valve.



Only qualified personnel may do electrical installation

- ⇒ Observe VDE, IEE, IEC power utility and other locally applicable regulations.
- ⇒ Before connecting it up, check to see whether operating voltage and current match specifications.

Pneumatic connections

- ⇒ Angular screw-in-union G 1/8, air hose PE ø 6/4
- ⇒ USA: Angular screw-in-union G 1/8, air hose PE 1/4" (ø6,35)

Air hose

Use always the hose quality according to Norit Südmo order no. 0490227 (6/4 hose) and 0735563 (8/6 hose) or equivalent:

- ⇒ Air hose black
- ⇒ Material: Polyamid 12
Linear coefficient of expansion: 15×10^{-5}
Version according to DIN73378 soft
- ⇒ Max. operating pressure: AD 6/ ID 4 = 27 bar
AD 8/ ID 6 = 19 bar
all pressure indications at 20°C, higher temperatures have a negativ effect on the max. operating pressure



- ⇒ **Use only calibrated hose lines with an outside diameter of 6mm or 1/4" or 8 mm or 5/16" (Tolerance +0,05/-0,1)**
- ⇒ **Cut the hose line only with a special hose cutter otherwise the hoses can be damaged.**
- ⇒ **During inappropriate cutting, the hose can leak at the cutting point which can cause a pressure loss.**
- ⇒ **The length of the hose must be calculated in a way that the hose cannot buckle. If the hose is once buckled it is permanently damaged. This can cause a pressure loss or an interruption of the air supply. Please see manufacturer's instruction regarding the minimum bending radius of the hose.**



⇒ **Insert the air hose tangentially into the connector and fix it. Avoid inclined hoist on the connector as the air hose may buckle and leakages can arise. This can cause a pressure loss or an interruption of the air supply.**

Control air

Control air pressure

SVP actuator	min. 6 bar – max. 8 bar
SVP actuator with booster	min. 3 bar – max. 8 bar
Process control head type 1066	refer to BA 1066
Process control head IntelliTop® type 8680	refer to BA 8680



Only use clean and dry compressed air !

Control air

acc. to DIN/ISO 8573.1

Solid content

Particle size	max. 5 µm
Particle density	max. 5 mg/m ³ (quality grade 3)

Water content

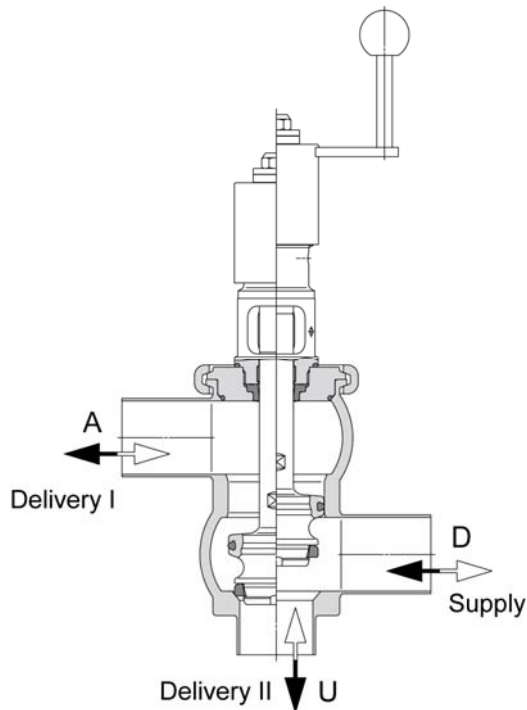
quality grade 3	
Dew point	-20° C or at least 10° C at lowest ambient temperatures

Oil content

quality grade 3, preferable oil free, max. 25 mg oil 1 m³ air

Valve function

SVP change-over valve with manual drive

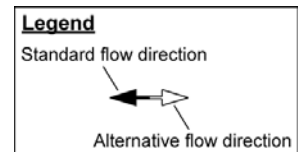


Product path D ⇔ A opened

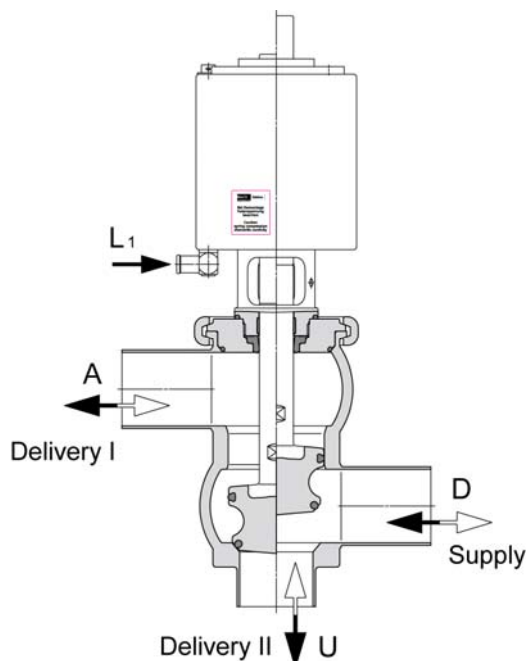
- ⇒ Connection U closed
- ⇒ rotate the hand-crank clockwise to the catch
- ⇒ Locking pressure against product pressure 6 bar

Product path D ⇔ U opened

- ⇒ Connection A closed
- ⇒ rotate the hand-crank counter-clockwise to the catch
- ⇒ Locking pressure against product pressure 6 bar



SVP change-over valve air opened – spring closed

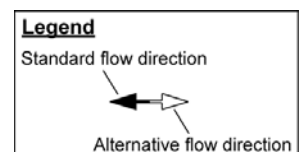


Product path D ⇔ A opened

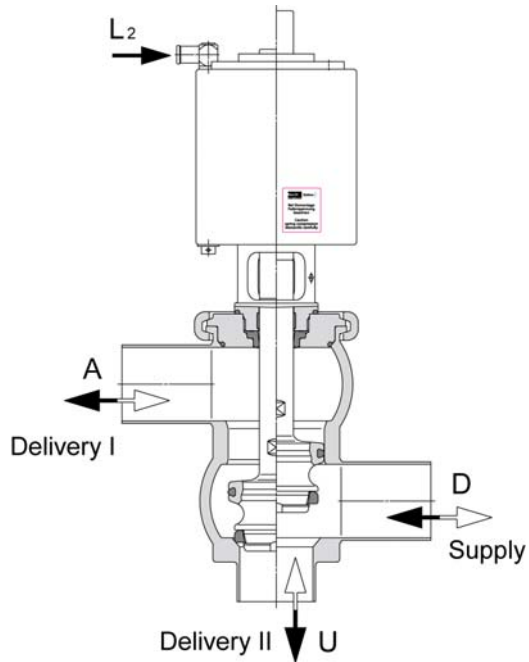
- ⇒ Connection U with elastic force closed
- ⇒ Control air pressure 0 bar on connection L₁
- ⇒ Safety position
- ⇒ Locking pressure against product pressure 6 bar

Product path D ⇔ U opened

- ⇒ Connection A closed
- ⇒ Control air pressure 6 bar on air connection L₁
- ⇒ Locking pressure against product pressure 6 bar



SVP change-over valve spring opened – air closed

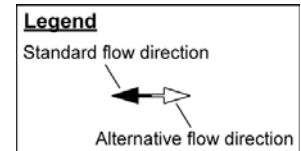


Product path D ⇔ A opened

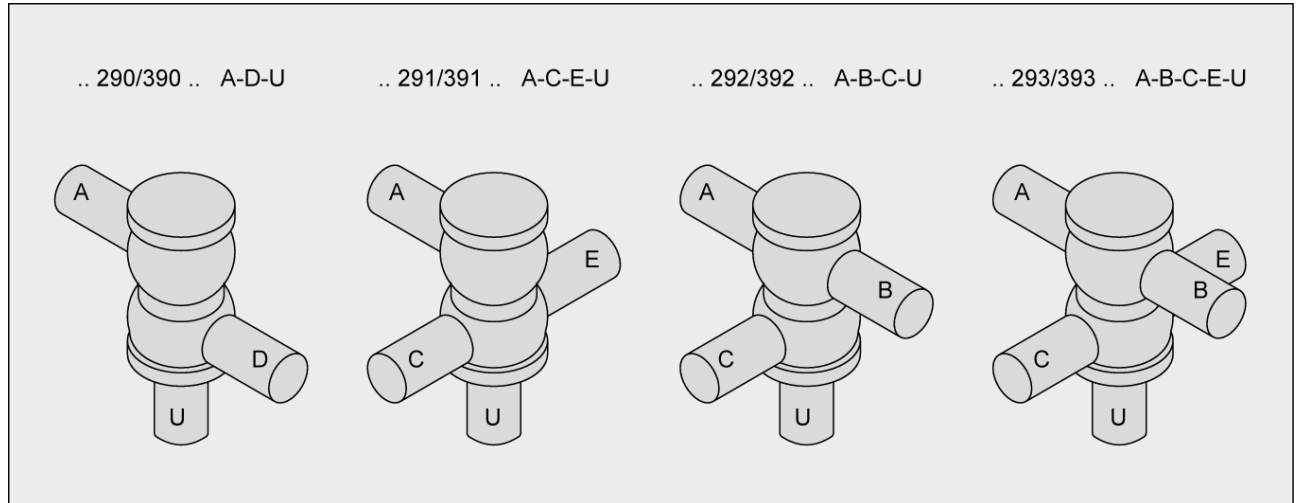
- ⇒ Connection U closed
- ⇒ Control air pressure 6 bar on air connection L₂
- ⇒ Locking pressure against product pressure 6 bar

Product path D ⇔ U opened

- ⇒ Connection A with elastic force closed
- ⇒ Control air pressure 0 bar on air connection L₂
- ⇒ Safety position
- ⇒ Locking pressure against product pressure 6 bar



Valve connection piping



Installation position

Vertical, horizontal

Ensuring that product can drain from valve and piping.

Valve connections

Connection A, B, C, E and U: - welding end
- union connection
- clamp connection
- small flange connection

Welding instructions see page Seite 17.

Installation instructions

Dismantle valve in accordance with page 19.



- ⇒ **Remove seals before welding.**
- ⇒ **Valve housing must be free from stress and distortions when welded.**
- ⇒ **Welding works have to be effected only by approved qualified personnel (DIN 287-1 W11).**
- ⇒ **Do not allow any foreign bodies to enter the piping.**

Installation instructions

General remarks

We strongly recommend that the fittings should be installed by specially trained, qualified personnel.



Caution

Welding works have to be effected only by approved qualified personnel (DIN 287-1 W11).

We cannot be held liable for any loss damage or injury resulting from incorrect installation.

Delivery condition

- ⇒ Factory-tested and adjusted.
- ⇒ Ready for installation or for welding into the piping.

Installation instructions

Installation space

Determine and define the connection axes before starting installation work. Observe the installation dimensions specified in the dimensional drawings.

Ensure that there is sufficient space available for both operation and maintenance, which may include removal.

Installation

Make sure that the fittings and piping are not subjected to tensile or compressive stresses.

Welding instructions

Area of application

Welding of fittings into pipes according to DIN 11850 Reihe 1, 2; OD-Tube; DIN EN ISO 1127

Welding technique

TIG (tungsten inert-gas welding)

Type of welding

- ⇒ Preparation of the welding seam according to DIN 2559 (groove shape I / for I-groove)
- ⇒ Welding seams corresponding to DIN EN ISO 5817 → evaluation group B (high)

Weld preparation

Saw off the pipe ends evenly and at right angles, and debur them (pipe saw M882). Align the welding ends of the valve body and piping radially and axially, ensuring they are fitted flush together (centering device).



There must be no gap at the flush-fitted welding ends as the corrosion resistance of the welded joint would be impaired by the escaping forming gas.

Welding

Connect the forming gas. Tack at 3 or 4 points. Type of welding: TIG-manual or orbital (automatic welding).

Weld filler materials

Material allocation

Material of parts to be welded	Suitable weld filler materials		
	1.4430	1.4440	1.4519
1.4404	X		
1.4435	X	X	X
1.4571	X	X	

Weld finishing

Interior

Weld finishing not required. Improvement of surface finish by grinding (at accessible points).

Exterior

Weld finishing methods

- ⇒ pickling - dispose pickling paste correctly
- ⇒ brushing
- ⇒ grinding
- ⇒ polishing

Cleaning

Clean thoroughly before assembly.

Assembly

Assemble the fittings in accordance with the assembly instructions.

Dismantling – Assembly

Before disassembly

Do assembly in accordance with assembly instructions.

Please always take the following steps before loosening the valve connections and clamp connection on the valve housing:



- ⇒ **Ensure that there is no work being done in that area when doing service and maintenance work.**
- ⇒ **evacuate all pipeline elements leading to the SVP change-over valve and clean or rinse if necessary.**
- ⇒ **Shut off the control air if not required for disassembly.**
- ⇒ **Preload closing springs with auxiliary assembly air when removing the actuator of spring-closed valves.**
- ⇒ **if the closing springs are not preloaded when removing the actuator, there might be danger of injury when the clamping joint is loosened because the drive releases spring tension**
- ⇒ **switch off the power supply.**
- ⇒ **take the SVP change-over valve out of the pipeline section if possible.**

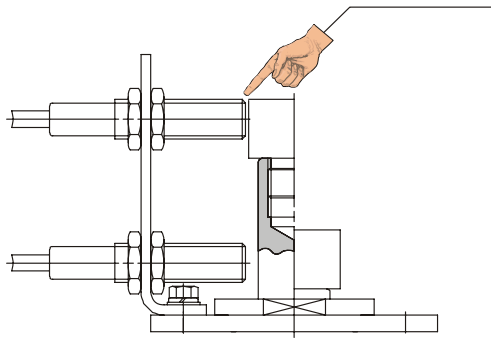
Before assembly, clean and grease the sliding surfaces and lubricate the sealing elements.

Seal materials	Grease type
EPDM	PARALIQ GTE 703
PEEK	No grease
NBR	RENOLIT SI 410 M



- ⇒ **if a different grease is used**
→ **it may attack seals.**
- ⇒ **Use of grease with PEEK seal elements not necessary.**
- ⇒ **please do not use mineral or animal greases.**
- ⇒ **Don't use grease based on petroleum.**

SVP change-over valves with feedback



Danger

Don't put fingers into check-back signal.

⇒ ***Accident risk.***

Fingers can be crushed or cut off.

Spare parts






Caution

Please use only original Norit Südmo spare parts

Norit Südmo spare parts see list of spare parts

exclusion of liability by using other spare parts.

Mounting tools - Profile gasket – O-ring

Tool	for	Order no.	Use
Piercer ø6 	DN 25 – DN 100 DN 1" – DN 4"	2123663	SVP change-over valve, manually operated
forked open jaw wrench SW 17 – 19 	DN 25 – DN 100 DN 1" – DN 4"	0098558	SVP change-over valve, manually operated Pneum. SVP change-over valve
hock wrench with finger 45/50 	DN 25 – DN 100 DN 1" – DN 4"	2153550	SVP change-over valve, manually operated Pneum. SVP change-over valve

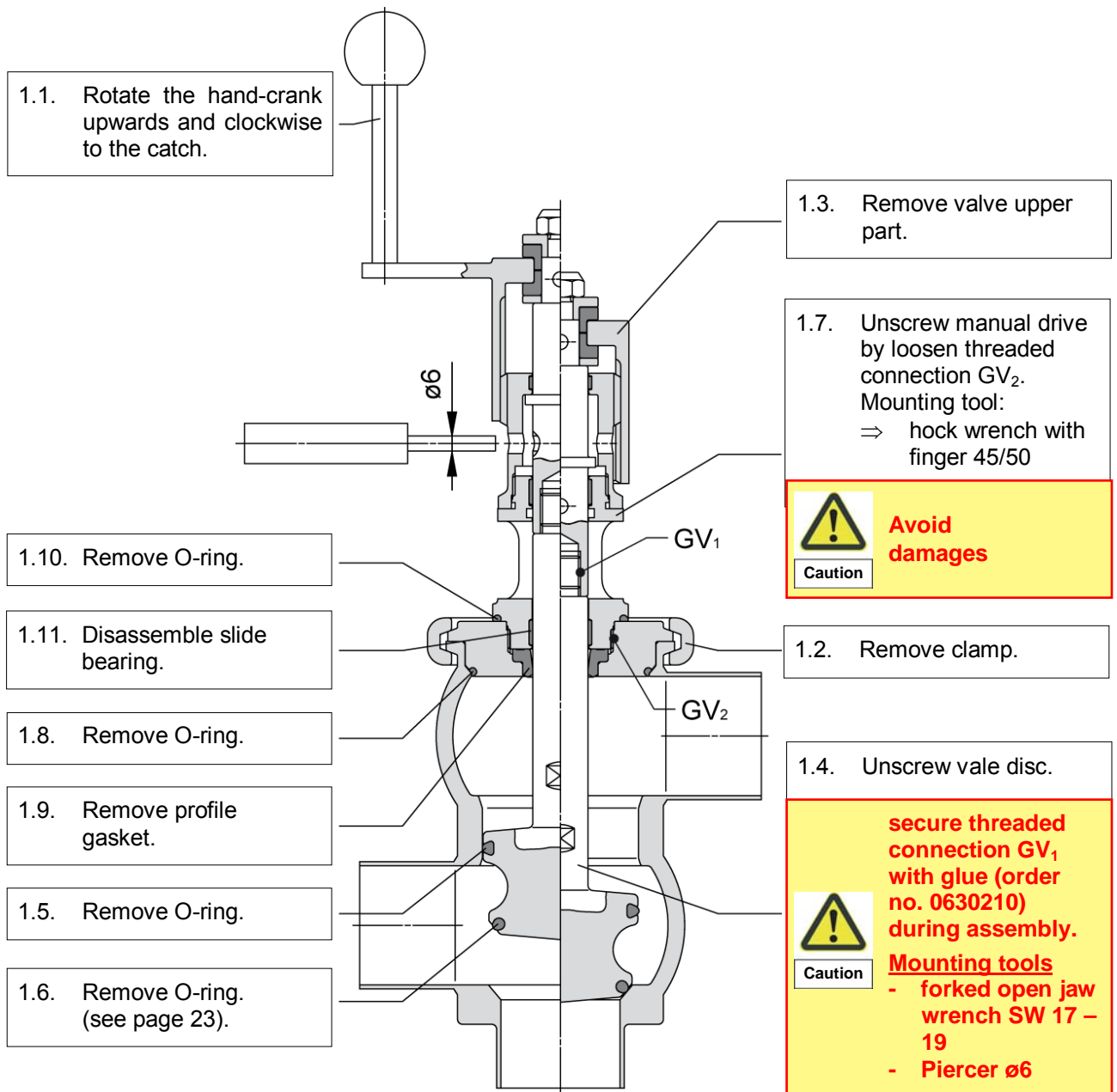
SVP change-over valve, manually operated - Profile gasket – O-ring

Disassembly

In succession 1.1. – 1.11.

Assembly

In succession 1.11. – 1.1.



Pneum. SVP change-over valve - Profile gasket – O-ring

Disassembly

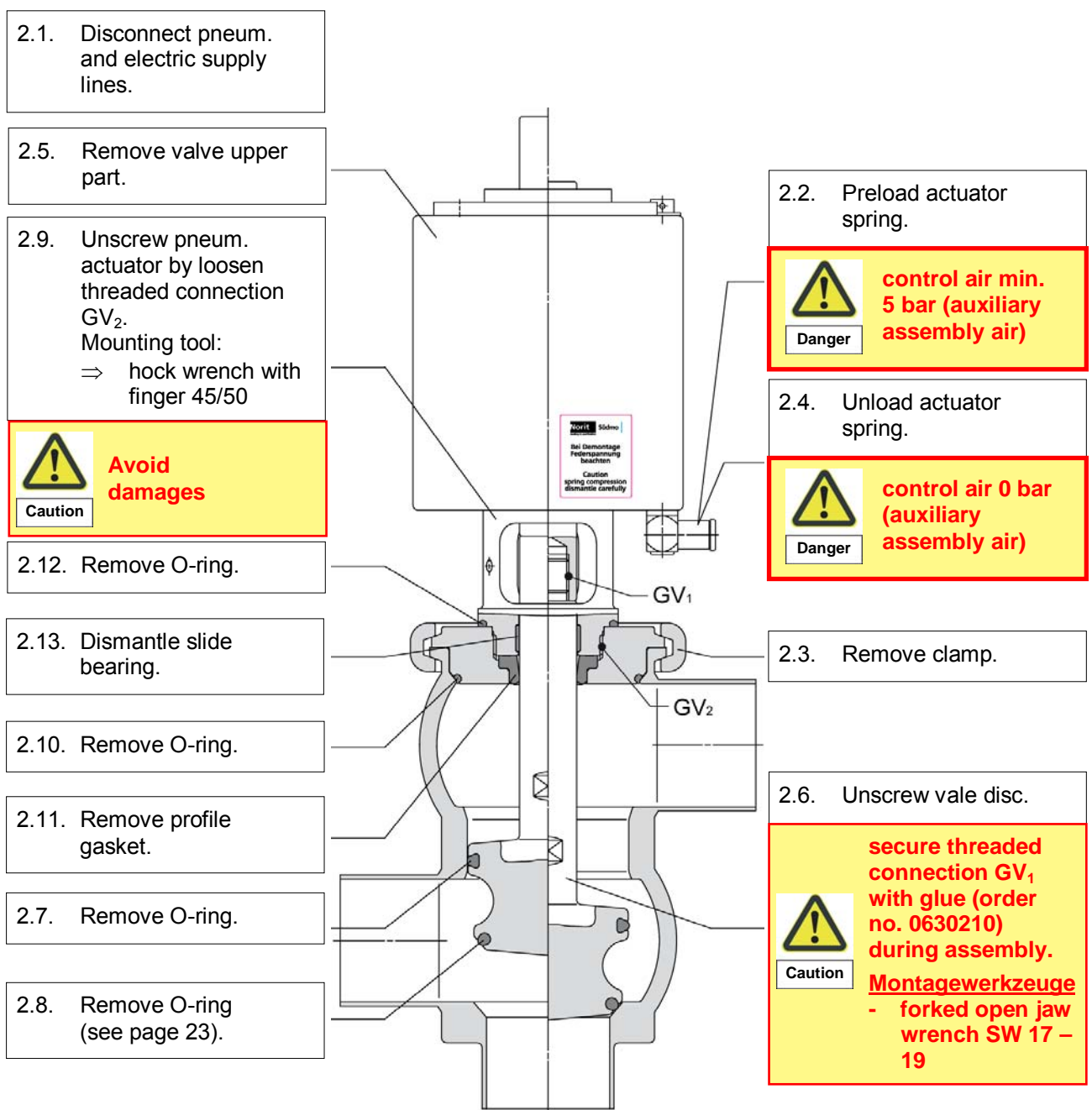
In succession 2.1. – 2.13.

Steps 2.2. and 2.4. only required with the drive function air-opened – spring closed.

Assembly

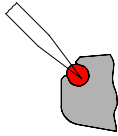
In succession 2.13. – 2.1.

Steps 2.2. and 2.4. only required with the drive function air-opened – spring closed.



Assembly instructions - Profile gasket – O-ring

Removal



- ⇒ O-ring is installed in positive contact under pretension.
- ⇒ It must be removed as shown in drawing.



Caution

Don't damage sealing groove (edges of groove).

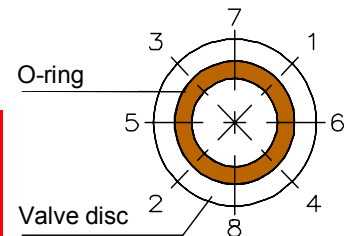
Installation

- ⇒ Press O-ring in sequence 1 – 2, 3 – 4 etc. into groove.
- ⇒ Roll O-ring section by section 1 – 6, 5 – 2 etc into groove.
- ⇒ Use round object of plastic or wood for installation.





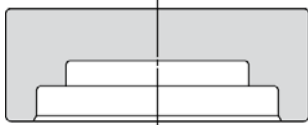



Caution

Avoid drilling and damging the O-ring by assembly.



Mounting tools - Profile gasket – PEEK gasket

Tool	for	Order no.	Use
<p>Piercer ø6</p> 	<p>DN 25 – DN 100 DN 1" – DN 4"</p>	2123663	SVP change-over valve, manually operated
<p>forked open jaw wrench SW 17 – 19</p> 	<p>DN 25 – DN 100 DN 1" – DN 4"</p>	0098558	SVP change-over valve, manually operated Pneum. SVP change-over valve
<p>hock wrench with finger 45/50</p> 	<p>DN 25 – DN 100 DN 1" – DN 4"</p>	2153550	SVP change-over valve, manually operated Pneum. SVP change-over valve
<p>Soldering iron</p> 	<p>DN 25 – DN 100 DN 1" – DN 4"</p>		SVP change-over valve, manually operated Pneum. SVP change-over valve
<p>Punch</p> 	<p>DN 25 / DN 1" DN 40 / DN 1 1/2" DN 50 / DN 2" DN 65 / DN 2 1/2" DN 80 / DN 3" DN 100 / DN 4"</p>	<p>2152517 2152518 2152519 2152520 2152581</p>	SVP change-over valve, manually operated Pneum. SVP change-over valve
<p>Holding fixture</p> 	<p>DN 25 – DN 100 DN 1" – DN 4"</p>	2152582	SVP change-over valve, manually operated Pneum. SVP change-over valve

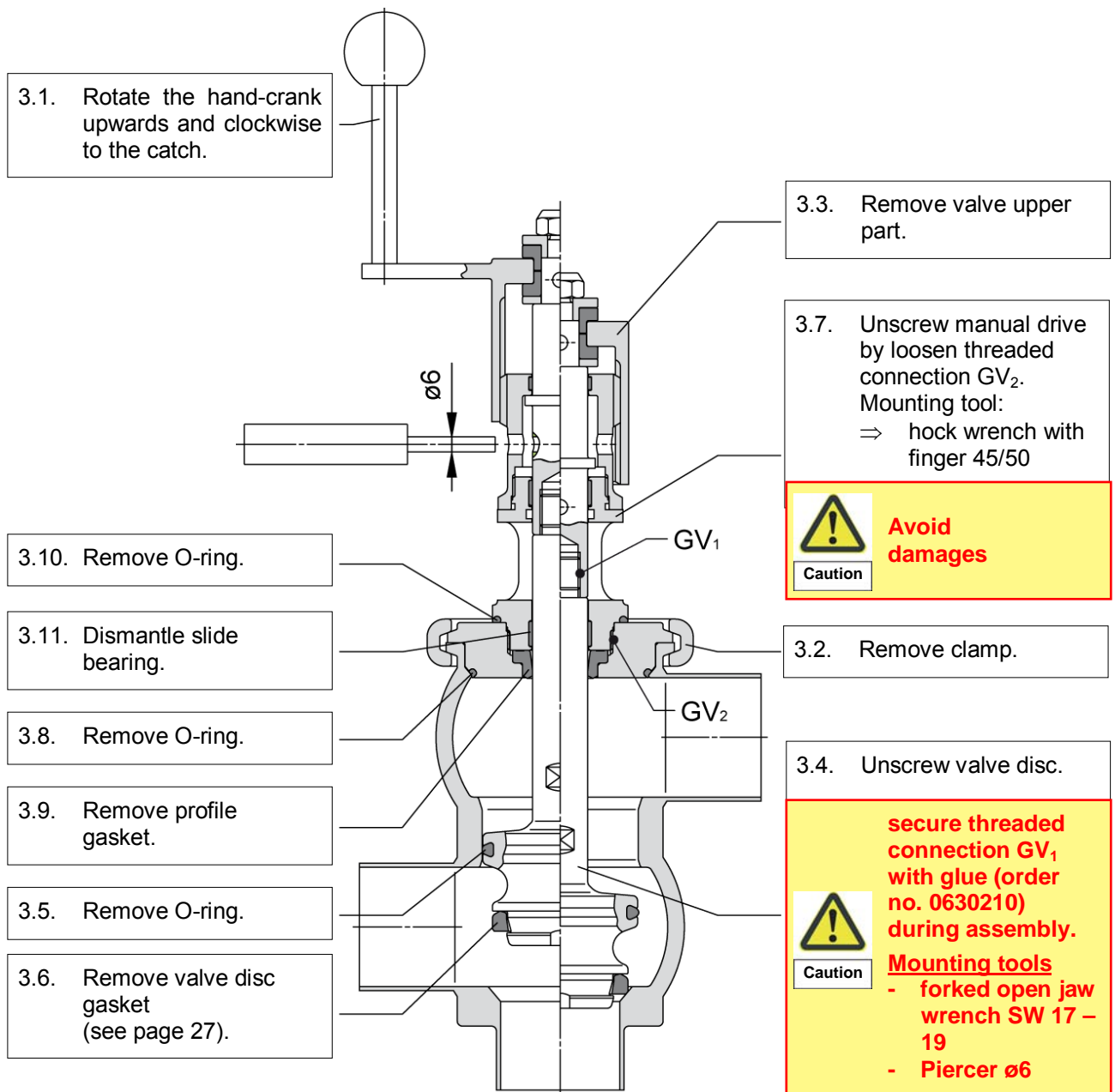
SVP change-over valve, manually operated - Profile gasket – PEEK gasket

Disassembly

In succession 3.1. – 3.11.

Assembly

In succession 3.11. – 3.1.



Pneum. SVP change-over valve - Profile gasket – PEEK gasket

Disassembly

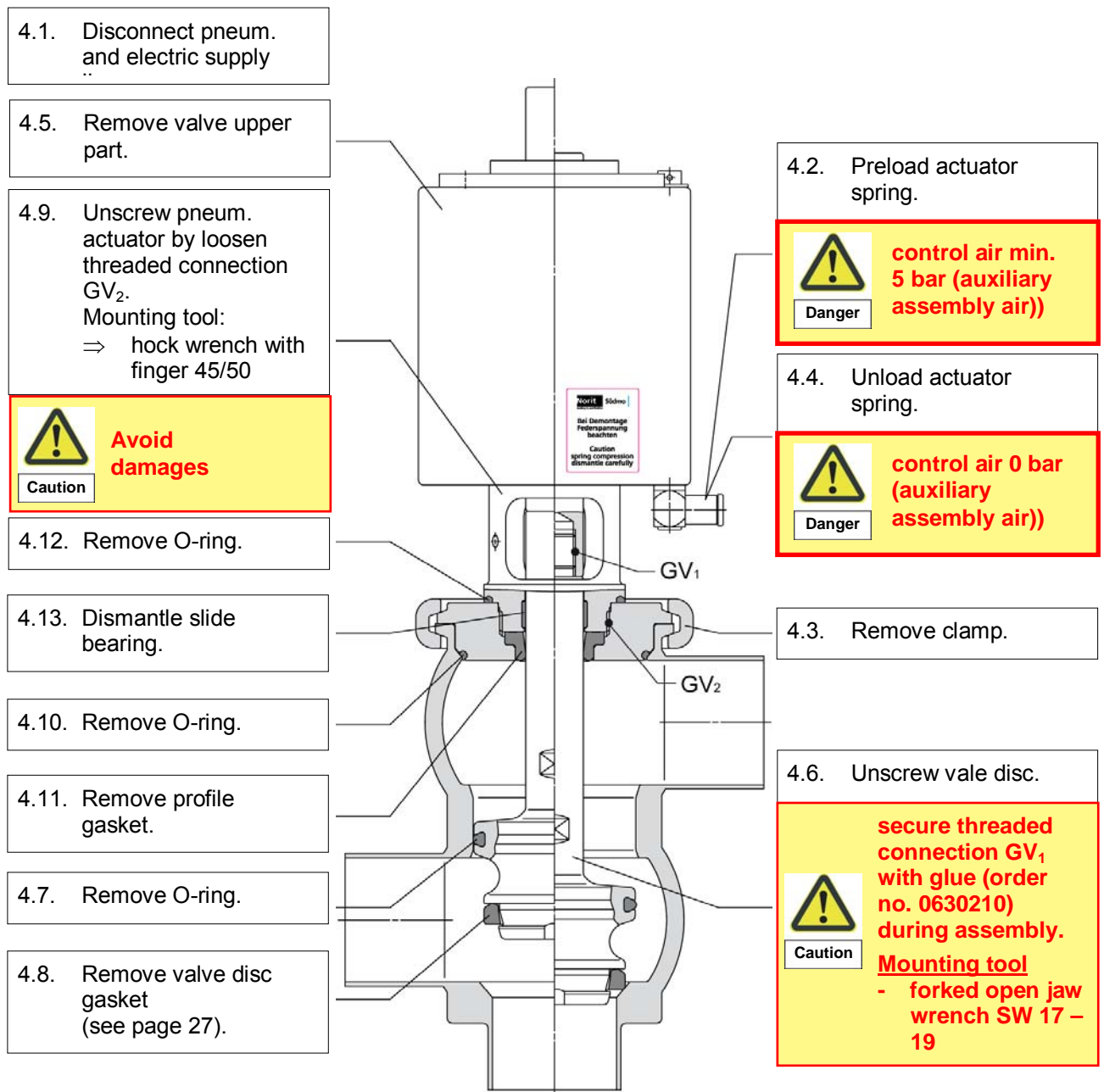
In succession 4.1. – 4.13.

Steps 4.2. and 4.4. only required with the drive function air-opened – spring closed.

Assembly

In succession 4.13. – 4.1.

Steps 4.2. and 4.4. only required with the drive function air-opened – spring closed.



Assembly instructions - Profile gasket – PEEK gasket

Assembly

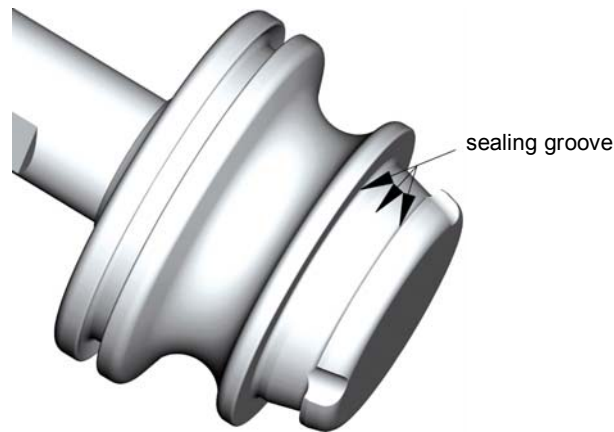
Cut the valve disc gasket with the soldering iron (soldering point temperature min. 380°C)



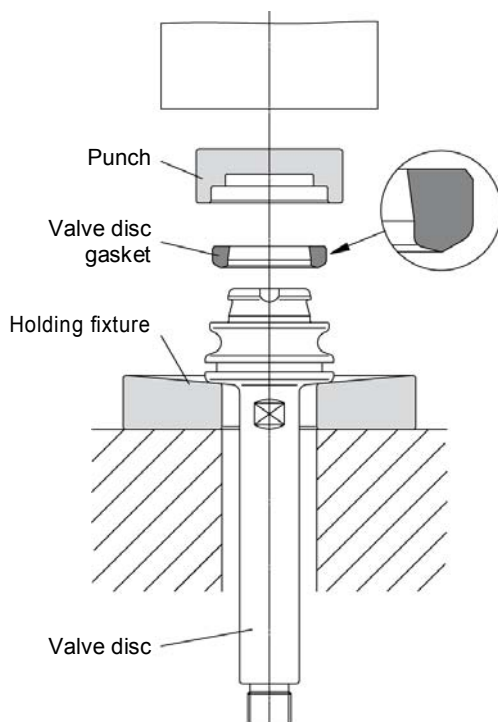
Caution

In order to avoid personal injuries and damages of the valve disc, please do not cut the valve disc gasket with a knife, a saw or something similar.

⇒ Do not damage the sealing groove



Installation



⇒ Tools and devices required:

- lifting devices, press, upright drilling: hydr., pneum. or mech.
- Punch - Order no. acc. to page 25
- Holding fixture - Order no. acc. to page 25

⇒ Positioning of the holding fixture and the valve disc in the direction of the lifting acc. to the assembly drawing.

⇒ Insert valve disc gasket

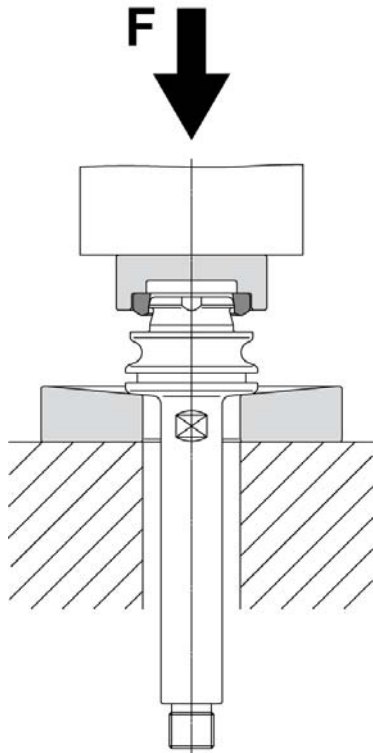


Pay attention to the installation position of the valve disc gasket !

⇒ Insert punch on the valve disc gasket

Operating instructions

SVP change-over valve, manually and pneum. operated
Profile gasket – O-ring, profile gasket – PEEK gasket
DN 25 – 100, DN 1" – 4"



⇒ Attach press in a slow lifting on the punch and put it into the nut. As soon as the gasket is snapped into the nut, stop lifting immediately.



Do not press the gasket against the limit stop.

⇒ If there is a pressure against the limit stop the valve disc gasket can be damaged.



Caution

For the assembly of the valve disc gasket do NOT use a hammer.

Pneum. actuator

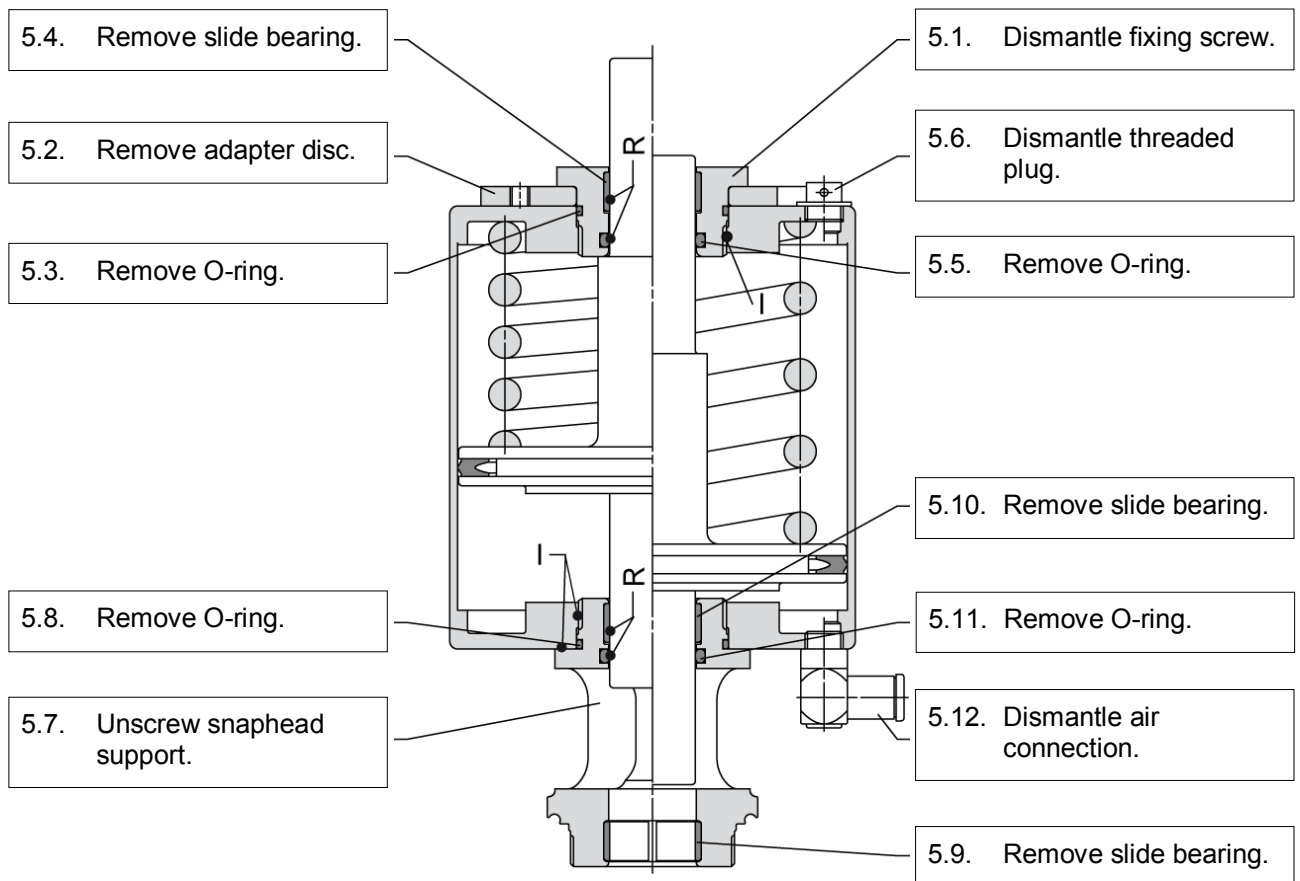
Operation: air opened – spring closed

Disassembly

In succession 5.1. – 5.12.

Assembly

In succession 5.12. – 5.1.



Grease chart

- R = Flowing-on RENOLIT SI 410 M with a brush on the marked surfaces
- I = Skim IFB PW 119 with a brush on the marked surfaces

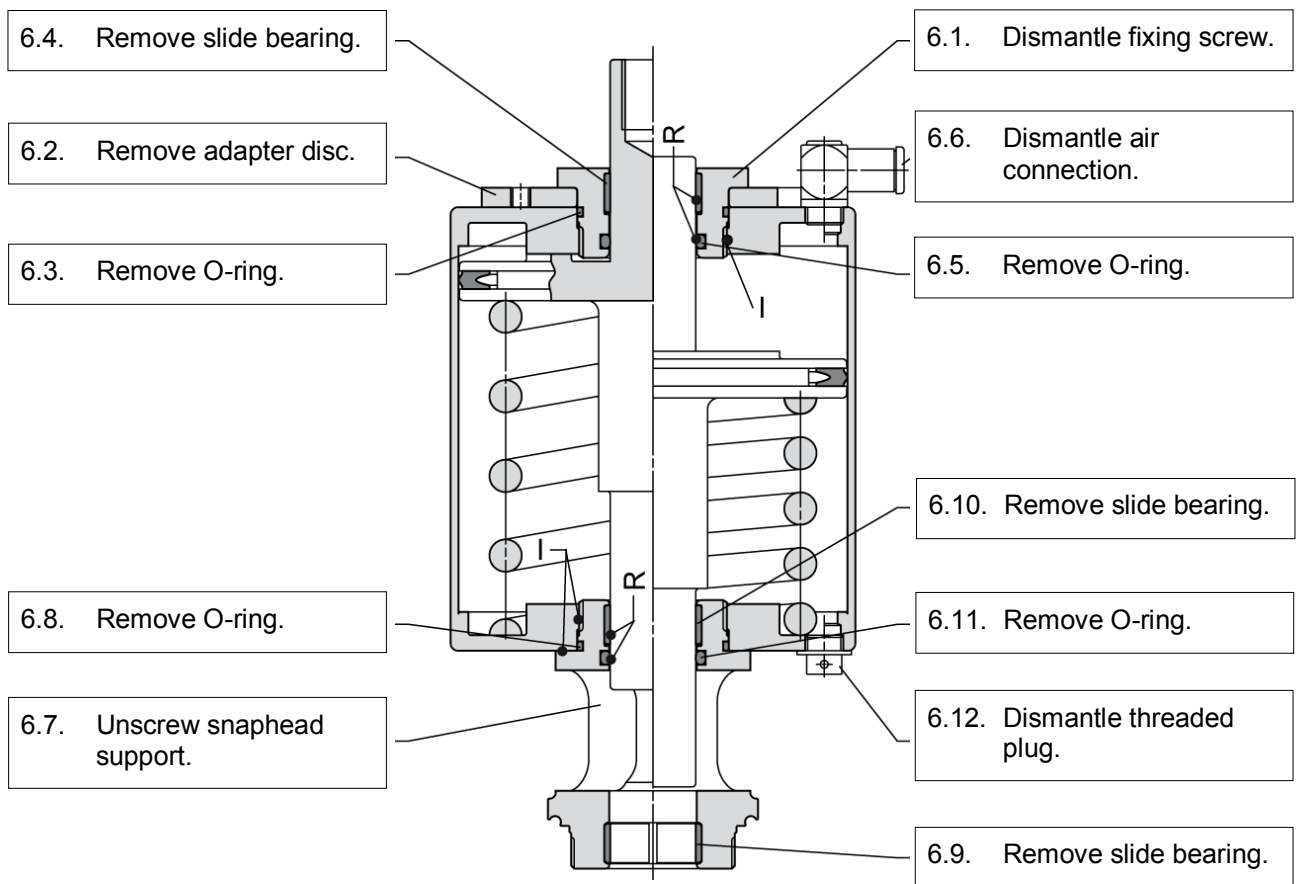
Operation: spring opened – air closed

Disassembly

In succession 6.1. – 6.12.

Assembly

In succession 6.12. – 6.1.

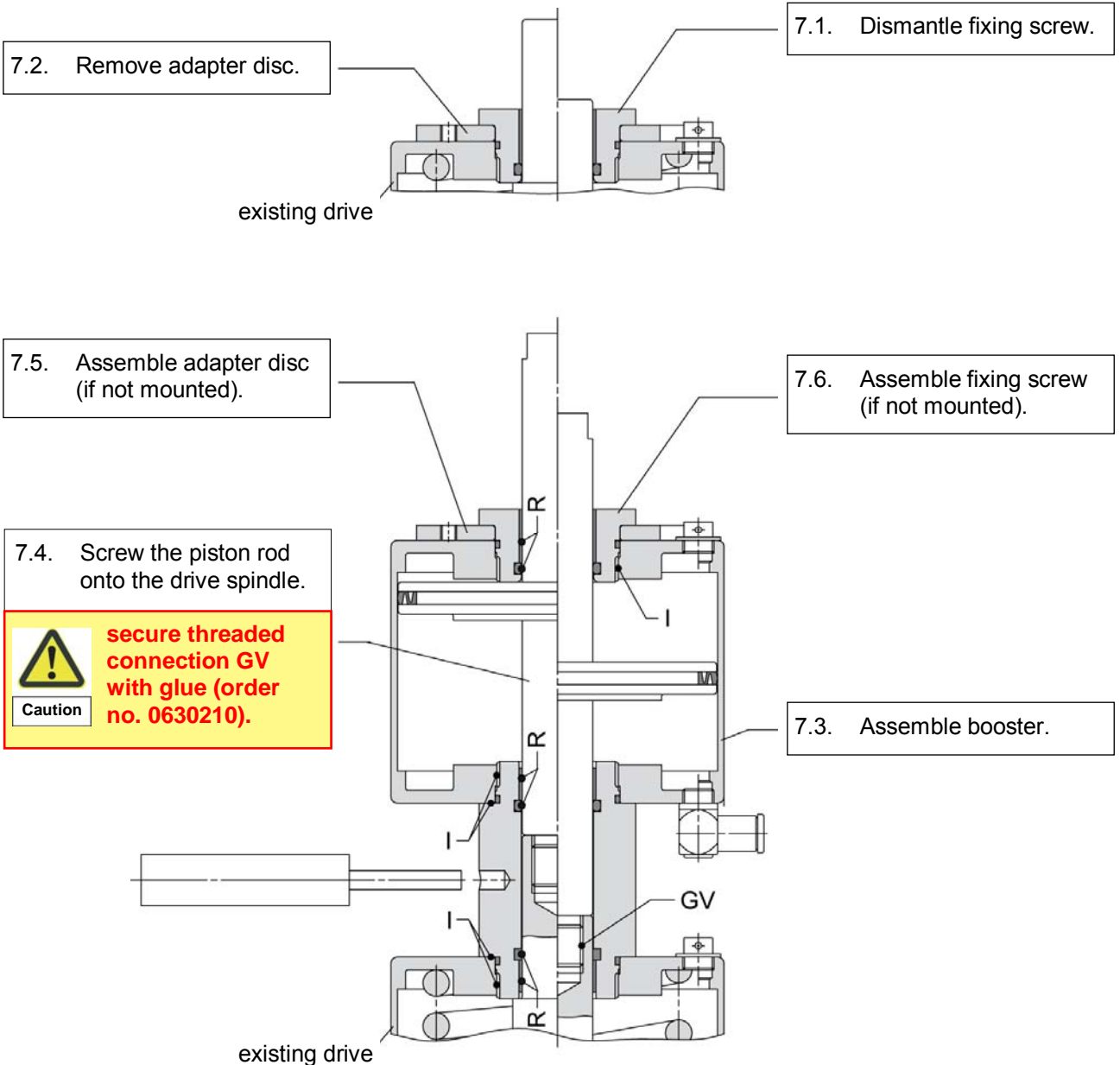


Grease chart

- R = Flowing-on RENOLIT SI 410 M with a brush on the marked surfaces
- I = Skim IFB PW 119 with a brush on the marked surfaces

Pneum. actuator with Booster

Mounting the booster subsequently



Grease chart

- R = Apply RENOLIT SI 410 M with a brush on the marked surfaces
- I = Skim IFB PW 119 with a brush on the marked surfaces

Demontage

Reihenfolge 8.1. – 8.16.

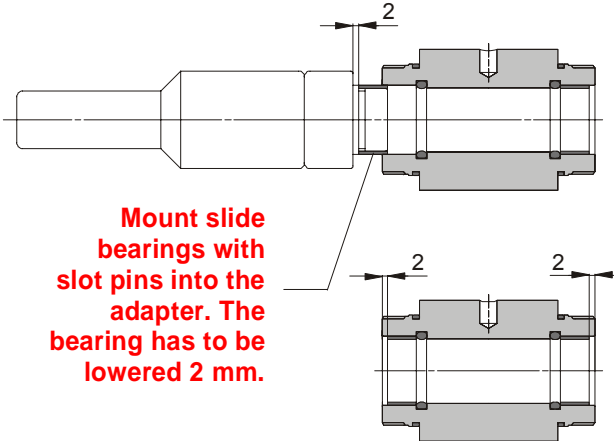
Montage

Reihenfolge 8.16. – 8.1.

Assemble slide bearings into adapter



Caution



Grease chart

R = Apply RENOLIT SI 410 M with a brush on the marked surfaces

I = Skim IFB PW 119 with a brush on the marked surfaces

8.5. Remove slide bearing.

8.3. Remove O-ring.

8.2. Remove adapter disc.

8.9. Dismantle booster.

8.13. Remove O-ring.

8.11. Remove O-ring.

8.14. Remove O-ring.

8.16. Remove O-ring.

8.6. Dismantle piston rod.



Caution

secure threaded connection GV with glue (order no. 0630210) during assembly.

8.1. Dismantle fixing screw.

8.7. Dismantle threaded plug.

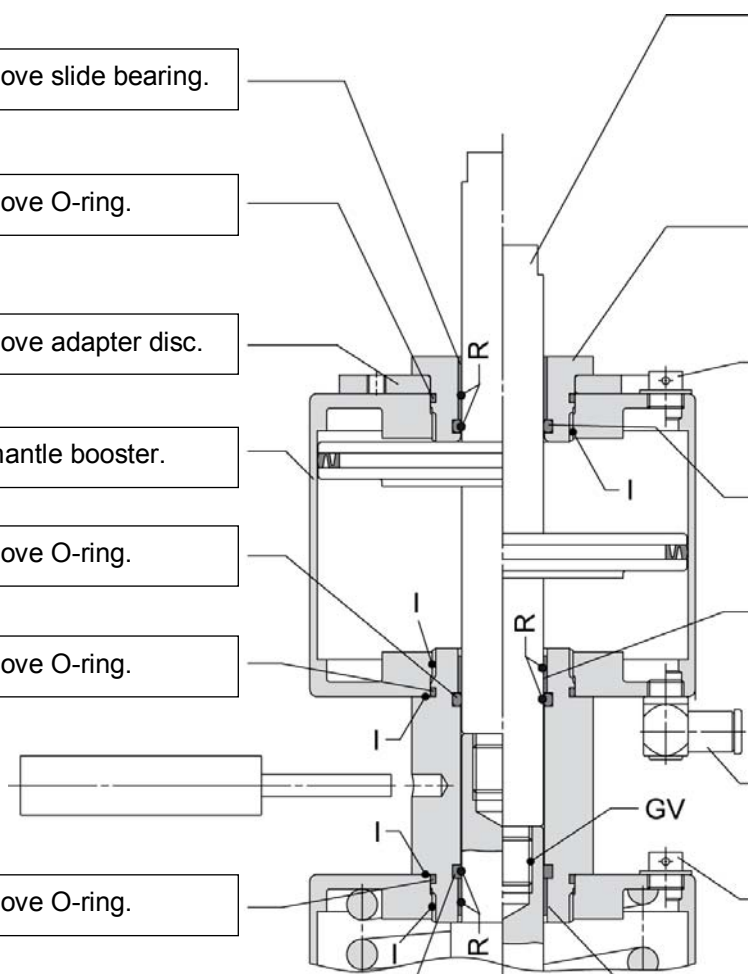
8.4. Remove O-ring.

8.12. Remove slide bearing.

8.8. Dismantle air connection.

8.10. Dismantle adapter.

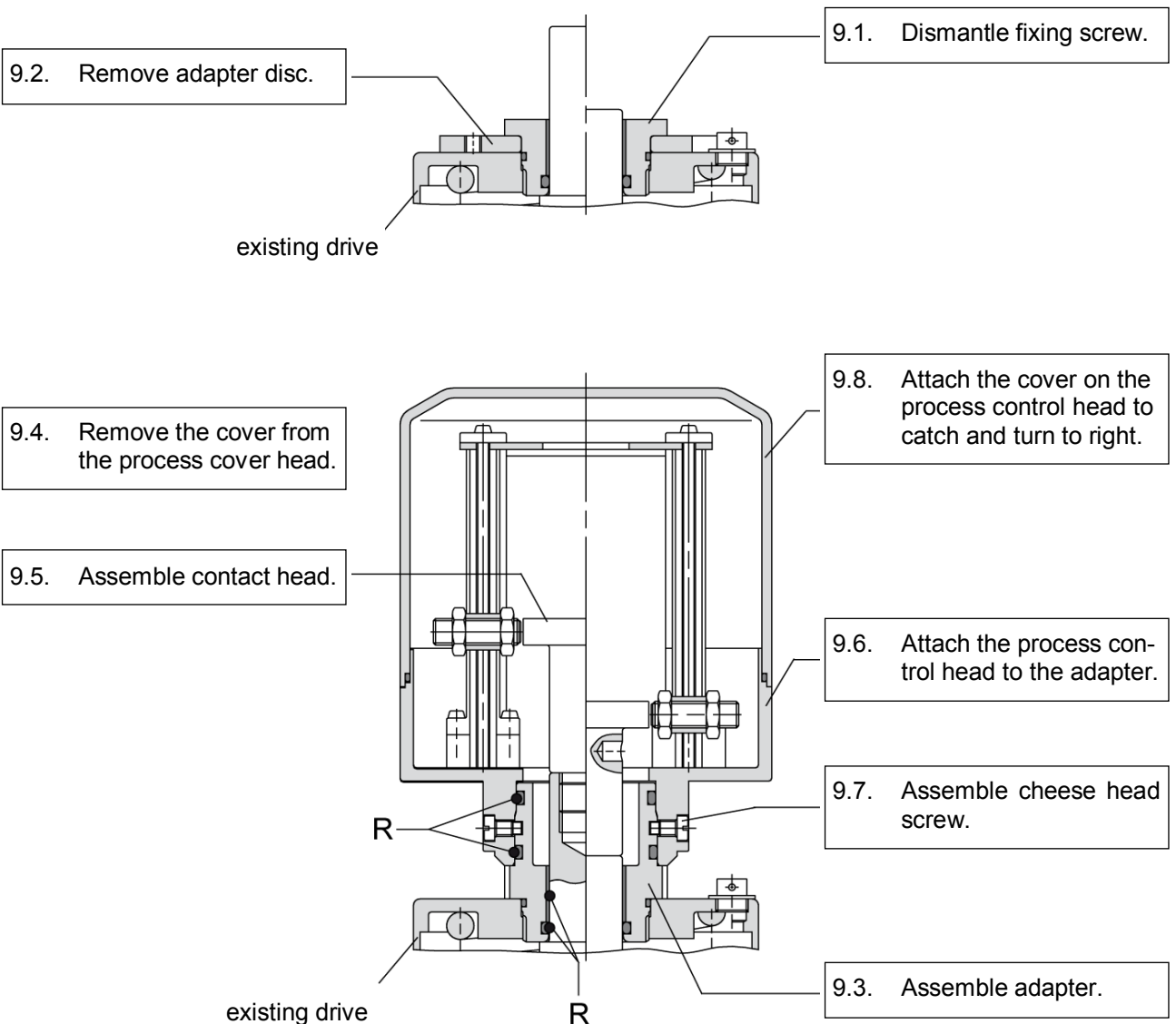
8.15. Remove slide bearing.



Assembly process-control head type 1066

Grease chart

R = Apply RENOLIT SI 410 M with a brush on the marked surfaces



Assembly process-control head IntelliTop® type 8680

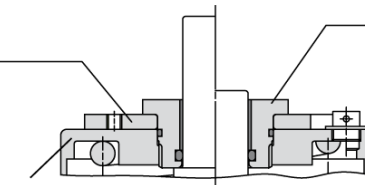
Grease chart

R = Apply RENOLIT SI 410 M with a brush on the marked surfaces

10.2. Remove adapter disc.

10.1. Dismantle fixing screw.

existing drive



10.5. Attach the process control head to the adapter.

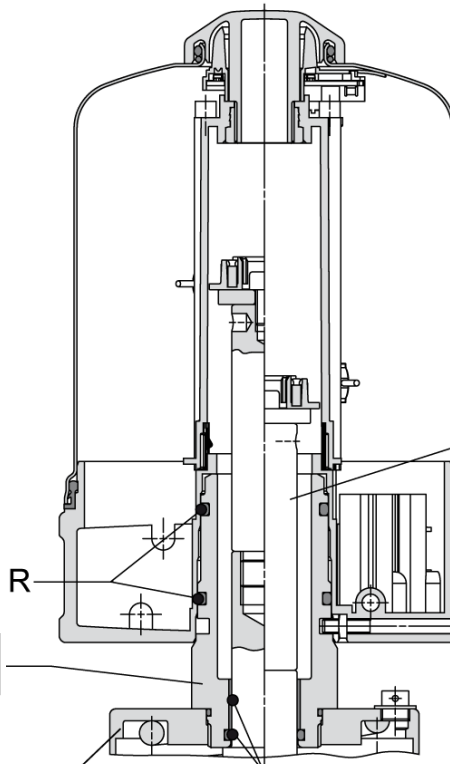
10.4. Assemble contact head.

10.6. Assemble cheese head screw.

10.3. Assemble adapter.

existing drive

R



Start-up



- ⇒ **Ensure that no foreign objects are present in the piping system.**
- ⇒ **Avoid temperature shock!
Component should be heated up carefully till operating temperature is achieved.**

Functional test

Manual version

Test valve by actuating the manual drive.
System must be cleaned before the first product run.

Pneumatic version

Multiple switching of the valve by means of actuation with compressed air.
System must be cleaned before the first product run.

Leak test

Check visually that all seals are free from leaks.
Defective seals must be replaced.

Maintenance

Before maintenance



- ⇒ **Depressurize piping system, drain all liquid and shut off control air supply.**
- ⇒ **Preload closing springs with auxiliary assembly air when removing the actuator of spring-closed valves.**
- ⇒ **if the closing springs are not preloaded when removing the actuator, there might be danger of injury when the clamping joint is loosened because the drive releases spring tension.**
- ⇒ **Pay due regard to the electric supply voltage; switch off the power supply if necessary.**
- ⇒ **Maintenance work must be carried out by qualified and trained personnel only.**

Inspection

Norit Südmo valves do not special maintenance. Between maintenance intervals, however, the seal tightness and correct operation should be verified by means of a periodic visual inspection.

Preventive maintenance

Practice-oriented maintenance intervals can only be determined by the respective user/operator as they are dependent on the following application parameters:

- ⇒ Operating frequency
- ⇒ Switching intervals
- ⇒ Type of product
- ⇒ Type of cleaning (CIP / SIP)


We can recommend the following data as guide values:

- ⇒ for liquids with solid particles and temperatures of 80 °C to 100 °C approx. every 3 – 6 months
- ⇒ for liquids with solid particles and temperatures of 60 °C approx. every 12 months
- ⇒ for liquids without solid particles and with temperatures of max. 60 °C approx. every 24 months.

In cleaning systems, intervals of 12 months are recommended.


The intervals stated above are, of course, based on the assumption that the seal materials are sufficiently chemical-resistant.

Disorder - trouble shooting



Danger

- ⇒ **Never touch the valve or piping system when hot products are in processing or during sterilization.**
- ⇒ **Observe strictly the technical data.**
- ⇒ **We cannot be held liable for an incorrect use of the valve.**



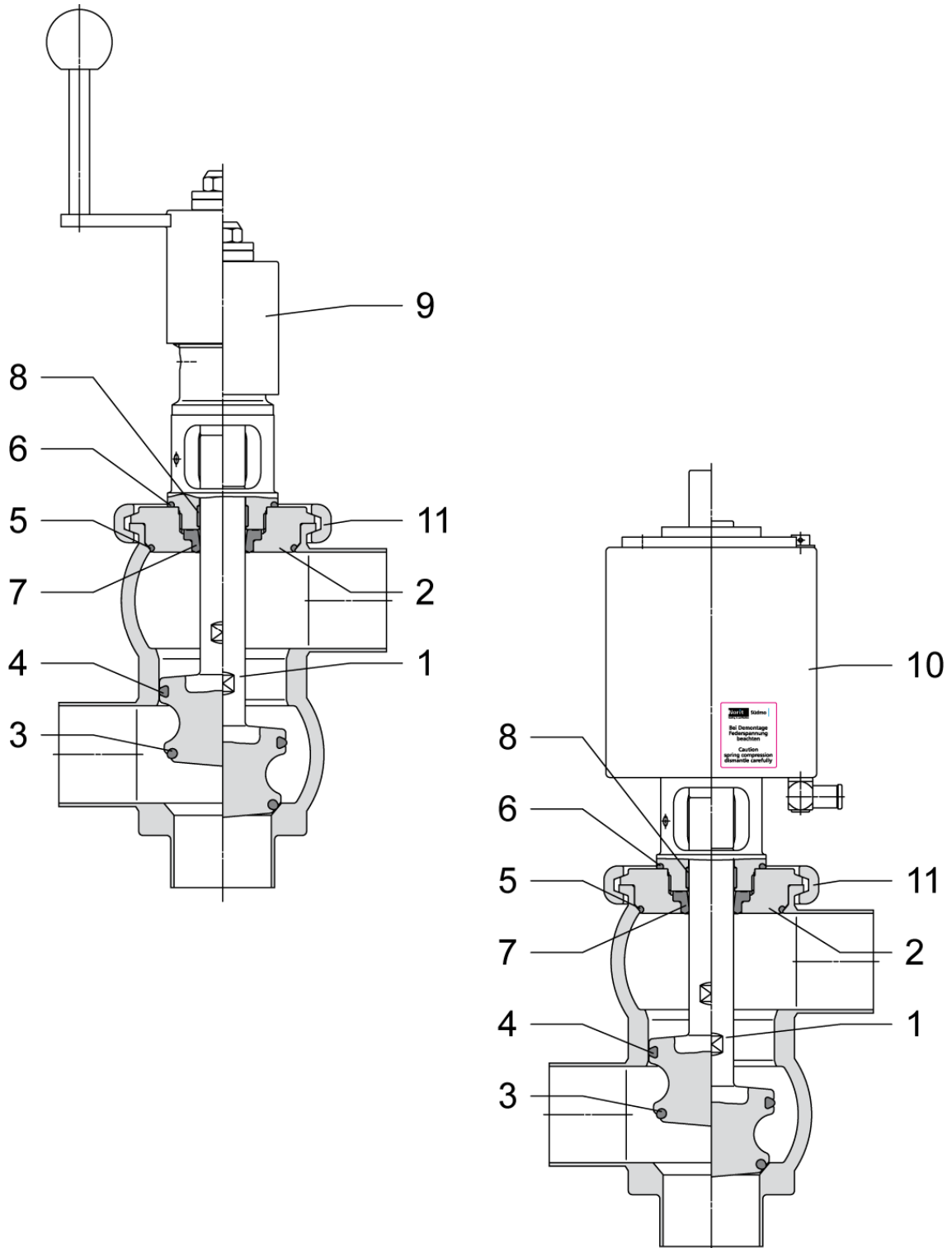
Caution

- ⇒ **In the event of disorders immediately deactivate the valve and secure it against inadvertent reactivation.**
- ⇒ **Defects may only be rectified by qualified personnel observing the safety instructions.**

Disorder	Cause	Trouble shooting
Valve does not work	⇒ Error in the control system	⇒ Check the plant configuration
	⇒ no compressed air	⇒ check the air supply
	⇒ air pressure too low	⇒ Check the air hoses for free passage and leaks
	⇒ Error in the electric system	⇒ Check actuation / process control head and routing of electric lines
Discharge of air from the actuator	⇒ Solenoid valve damaged	⇒ Replace the solenoid valve
	⇒ faulty gaskets at the spindle	⇒ change gaskets
Valve does not close	⇒ faulty gasket in the actuator	⇒ change actuator cylinder
	⇒ Dirt / foreign materials in the seal area	⇒ Clean valve housing and seal area closing sleeve and valve disc
Valve closes too slow	⇒ Actuator seals dry (friction losses)	⇒ Grease the seals - Note grease plan
Leakage on the support or stem extension	⇒ defective gaskets	⇒ change gaskets
Valve closes jerkily	⇒ Seals dry (friction losses)	⇒ Grease the seals - Note grease plan
		⇒ Replace seals

Liste of spare parts

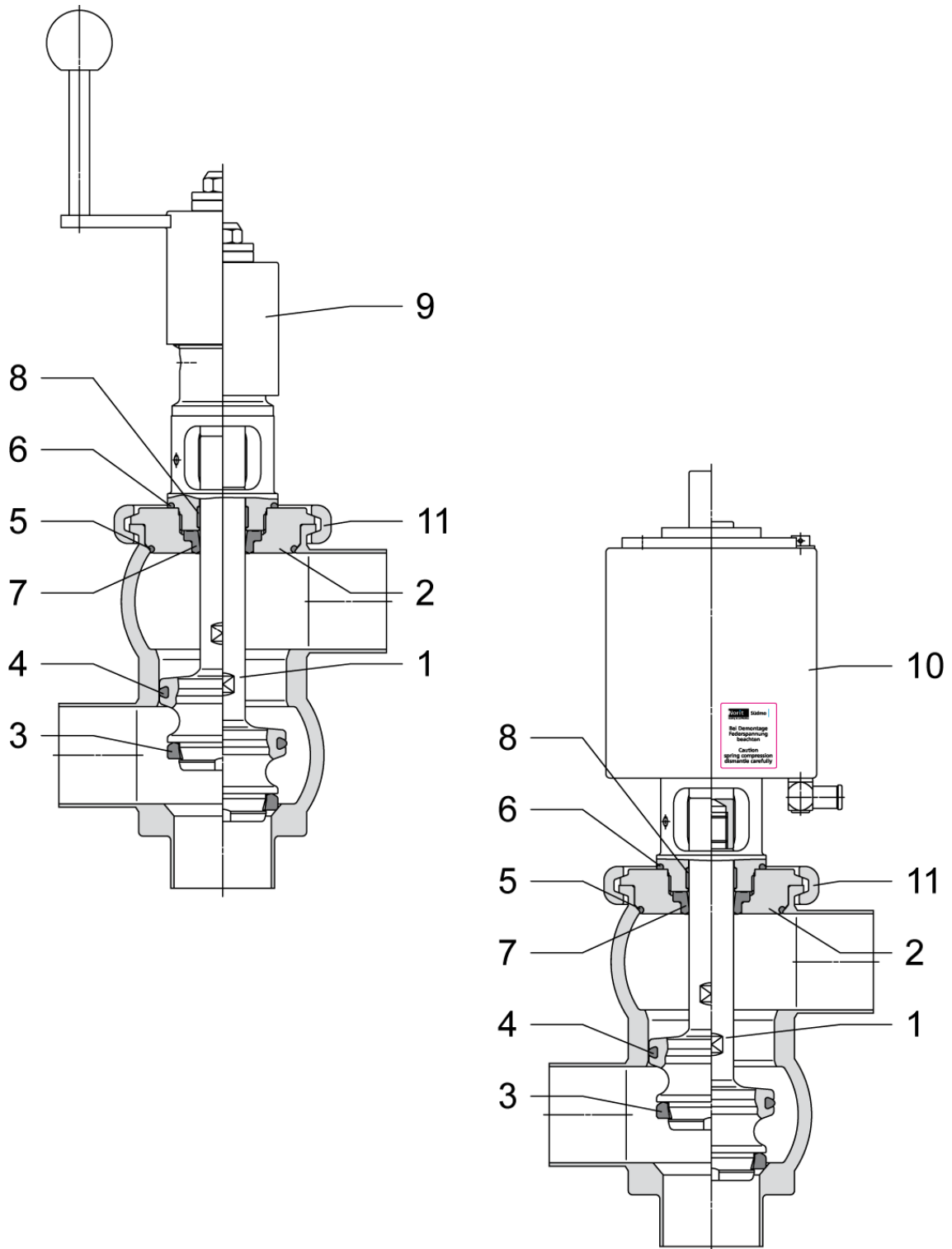
SVP change-over valve - Profile gasket – O-ring



Pos.	Pcs.	Denomination	Material		Order no.		Order no.
1	1	Valve disc	1.4404	DN 25 / DN 1"	2154260	DN 40 / DN 1 1/2"	2154273
2	1	Support	1.4404		2131965		2131965
3	1	O-ring *	EPDM		0029645		2100530
4	1	O-ring *	EPDM		0030148		0030148
5	1	O-ring *	EPDM		0939355		0939355
6	1	O-ring *	EPDM		0962118		0962118
7	1	Profile gasket *	EPDM		2103016		2103016
8	1	Slide bearing *	PEEK		2131741		2131741
9	1	Manual drive					
10	1	Pneum. actuator					
		Air opened – spring closed			2131736		2131736
		Spring opened – air closed		2155652	2155652		
11	1	Clamp	1.4301		0034447	0034447	
	1	Compl. set of gaskets consist. of: *	EPDM		2154285		2154287
<hr/>							
1	1	Valve disc	1.4404	DN 50 / DN 2"	2154278	DN 65 / DN 2 1/2"	2154280
2	1	Support	1.4404		2131744		2131964
3	1	O-ring *	EPDM		0766030		2102723
4	1	O-ring *	EPDM		2102554		0988626
5	1	O-ring *	EPDM		0966796		0690719
6	1	O-ring *	EPDM		0962118		0962118
7	1	Profile gasket *	EPDM		2103016		2103016
8	1	Side bearing *	PEEK		2131741		2131741
9	1	Manual drive					
10	1	Pneum. actuator					
		Air opened – spring closed			2131736		2131737
		Spring opened – air closed		2155652	2155853		
11	1	Clamp	1.4301		0034587	0036590	
	1	Compl. set of gaskets consist. of: *	EPDM		2154101		2154102

Pos.	Pcs.	Denomination	Material		Order no.		Order no.
1	1	Valve disc	1.4404	DN 80 / DN 3"	2131743	DN 100 / DN 4"	2132021
2	1	Support	1.4404		2131745		2131966
3	1	O-ring *	EPDM		2128484		2128485
4	1	O-ring *	EPDM		2128484		2128485
5	1	O-ring *	EPDM		0770669		0953620
6	1	O-Ring *	EPDM		0962118		0962118
7	1	Profile gasket *	EPDM		2103016		2103016
8	1	Slide bearing *	PEEK		2131741		2131741
9	1	Manual drive					
10	1	Pneum. actuator					
		Air opened – spring closed			2131738		2154330
		Spring opened – air closed		2155854	2156074		
11	1	Clamp	1.4301		0034595		2125807
	1	Compl. set of gaskets consist. of: *	EPDM		2154103		2154104

SVP change-over valve - Profile gasket – PEEK gasket

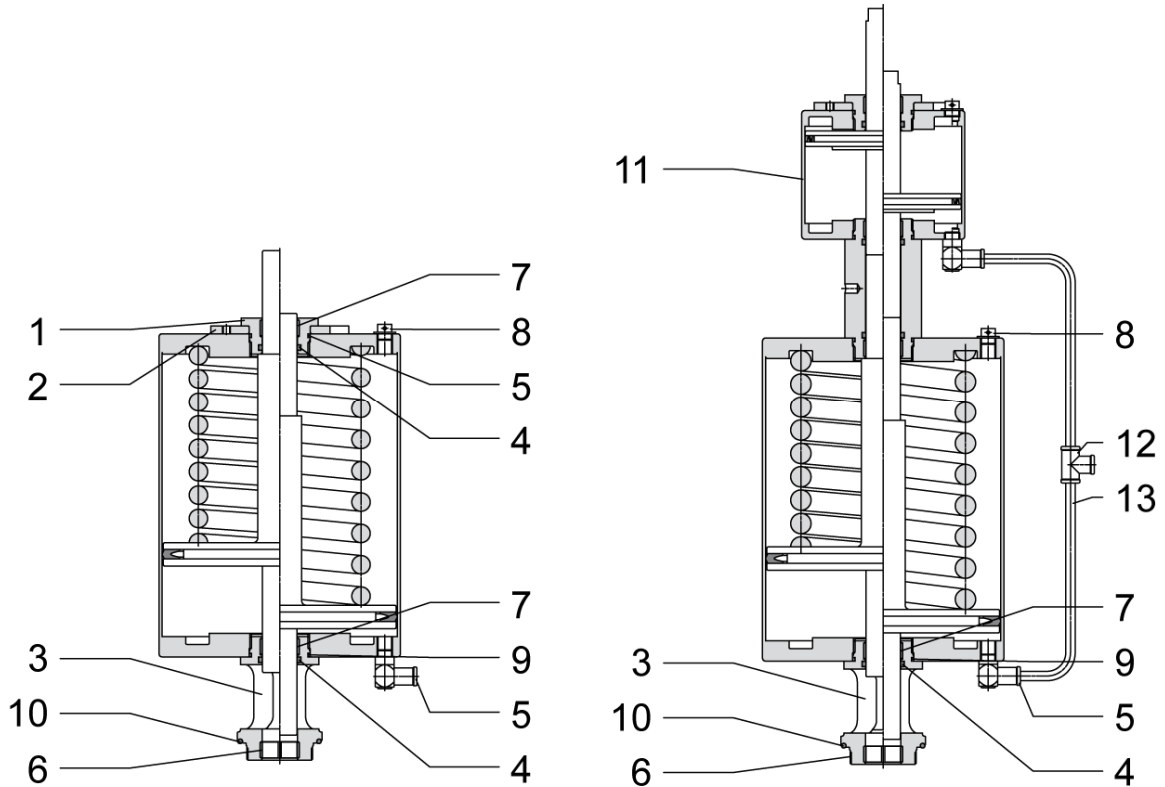


Pos.	Pcs.	Denomination	Material		Order no.		Order no.
1	1	Valve disc	1.4404	DN 25 / DN 1"	2154806	DN 40 / DN 1 1/2"	2154807
2	1	Support	1.4404		2131965		2131965
3	1	Valve disc gasket *	PEEK		2154224		2152511
4	1	O-ring *	EPDM		0029645		2100530
5	1	O-ring *	EPDM		0939355		0939355
6	1	O-ring *	EPDM		0962118		0962118
7	1	Profile gasket *	EPDM		2103016		2103016
8	1	Slide bearing *	PEEK		2131741		2131741
9	1	Manual drive					
10	1	Pneum. actuator					
		Air opened – spring closed			2131736		2131736
		Spring opened – air closed		2155652	2155652		
11	1	Clamp	1.4301	0034447	0034447		
	1	Compl. set of gaskets consist. of: *	PEEK / EPDM		1		
1	1	Valve disc	1.4404	DN 50 / DN 2"	2154808	DN 65 / DN 2 1/2"	2154809
2	1	Support	1.4404		2131744		2131964
3	1	Valve disc gasket *	PEEK		2141955		2152479
4	1	O-ring *	EPDM		2102554		0988626
5	1	O-ring *	EPDM		0966796		0690719
6	1	O-ring *	EPDM		0962118		0962118
7	1	Profile gasket *	EPDM		2103016		2103016
8	1	Slide bearing *	PEEK		2131741		2131741
9	1	Manual drive					
10	1	Pneum. actuator					
		Air opened – spring closed			2131736		2131737
		Spring opened – air closed		2155652	2155853		
11	1	Clamp	1.4301	0034587	0036590		
	1	Compl. set of gaskets consist. of: *	PEEK / EPDM				

Pos.	Pcs.	Denomination	Material		Order no.		Order no.
1	1	Valve disc	1.4404	DN 80 / DN 3"	2154810	DN 100 / DN 4"	2154811
2	1	Support	1.4404		2131745		2131966
3	1	Valve disc gasket *	PEEK		2152480		2154217
4	1	O-ring *	EPDM		2128484		2128485
5	1	O-ring *	EPDM		0770669		0953620
6	1	O-ring *	EPDM		0962118		0962118
7	1	Profile gasket *	EPDM		2103016		2103016
8	1	Slide bearing *	PEEK		2131741		213741
9	1	Manual drive					
10	1	Pneum. actuator					
		Air opened – spring closed			2131738		2132023
		Spring opened – air closed		2155854	2156074		
11	1	Clamp	1.4301		0034595	2125807	
	1	Compl. set of gaskets consist. of: *	PEEK / EPDM				

Pneum. actuator

Operation: air opened – spring closed



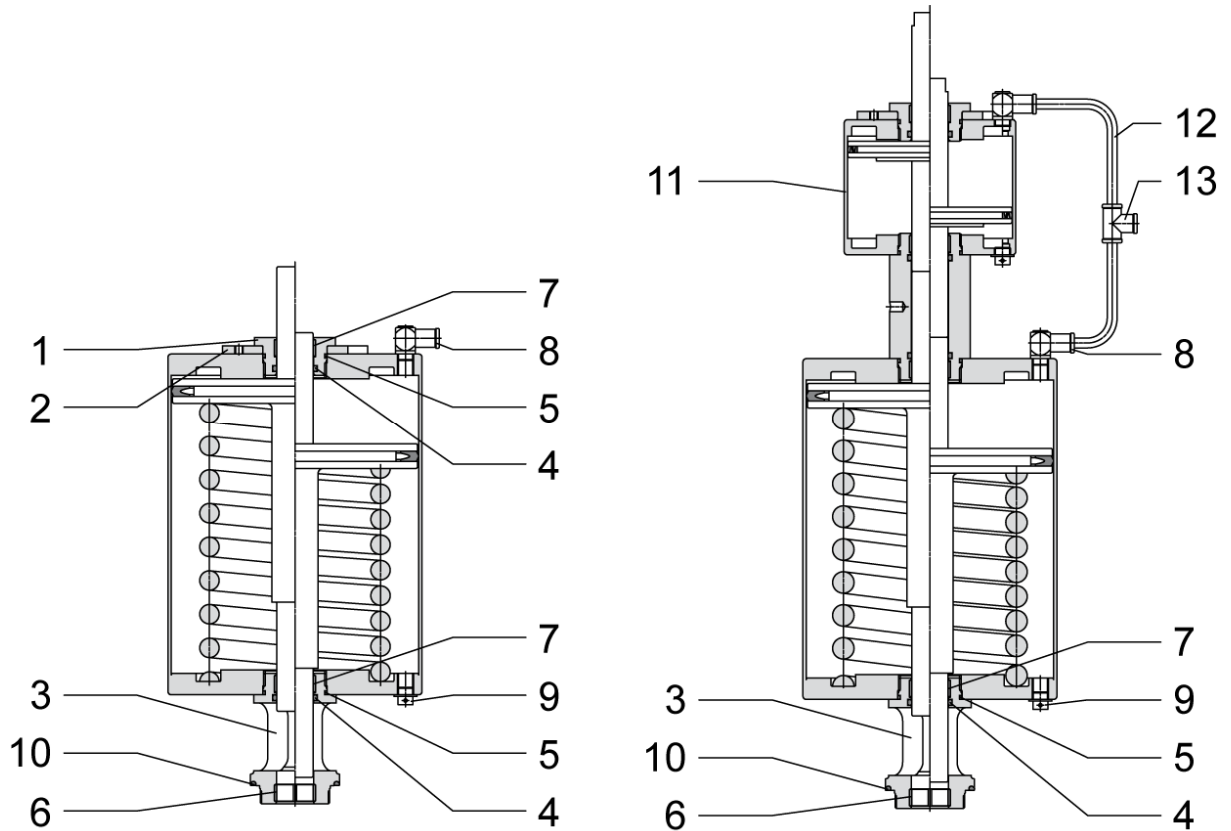
Pos.	Pcs.	Denomination	Material		Order no.		Order no.
	1	Pneum. actuator		DN 25 - 50 / DN 1" - 2"	2131736	DN 65 / DN 2 1/2"	2131737
1	1	Fixing screw	1.4305		2131739		2131739
2	1	Adapter disc	1.4301		2128219		2128219
3	1	Snaphead support	1.4301		2131734		2131734
4	1	O-ring *	NBR		0116723		0116723
5	1	O-ring *	NBR		2128764		2128764
6	1	Slide bearing	PEEK		2131741		213741
7	1	Slide bearing *	Iglidur		2131740		2131740
8	1	Angular screw-in-union			2116513		2116513
9	1	Threaded plug			2128550		2128550
10	1	O-ring *	EPDM		0962118		0962118
	1	Compl. set of gaskets consist. of: *		2132039	2132039		

Operating instructions

SVP change-over valve, manually and pneum. operated
Profile gasket – O-ring, profile gasket – PEEK gasket
DN 25 – 100, DN 1" – 4"

Pos.	Pcs.	Denomination	Material		Order no.		Order no.
		Pneum. actuator			2131738		2154330
1	1	Fixing screw	1.4305	DN 80 / DN 3"	2131739	DN 100 / DN 4"	-----
2	1	Adapter disc	1.4301		2128219		-----
3	1	Snaphead support	1.4301		2131735		2131735
4	1	O-ring *	NBR		0116723		0116723
5	1	O-ring *	NBR		2128764		2128764
6	1	Slide bearing *	PEEK		2131741		2131741
7	1	Slide bearing *	Iglidur		2131740		2131740
8	1	Angular screw-in-union			2116513		2116513
9	1	Threaded plug			2128550		2128550
10	1	O-ring *	EPDM		0962118		0962118
11	1	Booster			-----		2154327
12	1	Tube			-----		0490235
13	1	T-piece			-----		2108589
	1	Compl. set of gaskets consist. of: *			2132039		

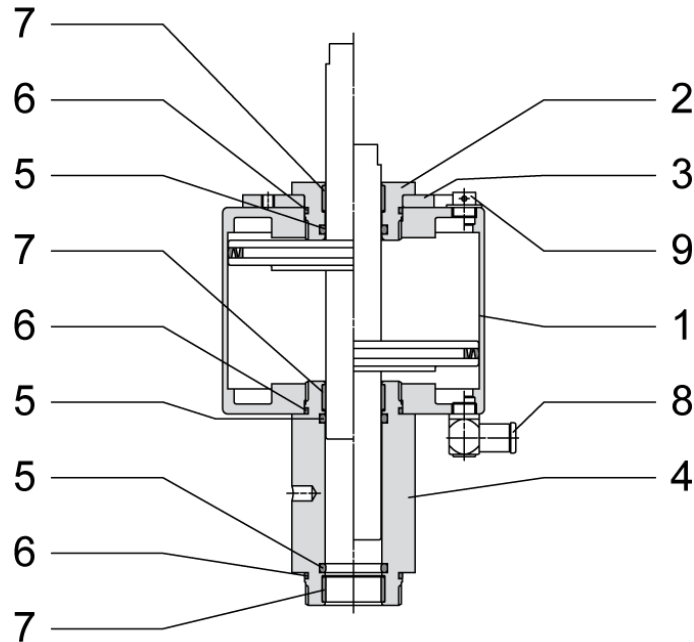
Operation: spring opened – air closed



Pos.	Pcs.	Denomination	Material	Order no.	Order no.
	1	Pneum. actuator			
1	1	Fixing screw	1.4305	2131739	2131739
2	1	Adapter disc	1.4301	2128219	2128219
3	1	Snaphead support	1.4301	2131734	2131734
4	1	O-ring *	NBR	0116723	0116723
5	1	O-ring *	NBR	2128764	2128764
6	1	Slide bearing	PEEK	2131741	213741
7	1	Slide bearing *	Iglidur	2131740	2131740
8	1	Angular screw-in-union		2116513	2116513
9	1	Threaded plug		2128550	2128550
10	1	O-ring *	EPDM	0962118	0962118
	1	Compl. set of gaskets consist. of: *		2132039	2132039

Pos.	Pcs.	Denomination	Material		Order no.		Order no.
		Pneum. Steuerkopf					
1	1	Fixing screw	1.4305	DN 80 / DN 3"	2131739	DN 100 / DN 4"	-----
2	1	Adapter disc	1.4301		2128219		-----
3	1	Snaphead support	1.4301		2131735		2131735
4	1	O-ring *	NBR		0116723		0116723
5	1	O-ring *	NBR		2128764		2128764
6	1	Slide bearing *	PEEK		2131741		2131741
7	1	Slide bearing *	Iglidur		2131740		2131740
8	1	Angular screw-in-union			2116513		2116513
9	1	Threaded plug			2128550		2128550
10	1	O-ring *	EPDM		0962118		0962118
11	1	Booster			-----		2154327
12	1	Tube			-----		0490235
13	1	T-piece			-----		2108589
	1	Compl. set of gaskets consist. of: *			2132039		

Booster



Pos.	Pcs.	Denomination	Material	Order no.	Order no.	Order no.	
	1	Booster			2154327		
1	1	Cylinder		DN 25 – 50 / DN 1" – 2" / DN 25-ISO – 40-ISO	DN 50-ISO – 65-ISO	DN 100 / DN 4" / DN 80-ISO	
2	1	Fixing screw	1.4301				2128572
3	1	Adapter disc	1.4301				2131739
4	1	Adapter	1.4301				2128219
5	3	O-ring *	NBR				2154326
6	3	O-ring *	NBR				0116723
7	3	Slide bearing *	Iglidur				2128764
8	1	Angular screw-in-union					2131740
9	1	Threaded plug	PP				2116513
	1	Compl. set of gaskets consist. of: *					2128550

EC Manufacturer's Declaration

In accordance with the EC Machinery Directive 98/37/EG, Annex II B

We hereby declare on our own sole responsibility that the

SVP change-over valves

Type: S390 Select

Catalogue no.: S390 Select – S393 Select

and the valve manifolds made up thereof and to which this declaration refers, meet the standard(s) and normative document(s) mentioned below.

Applied harmonized European standards

- ⇒ EN 292-1
- ⇒ EN 292-2; EN 60 204-1

Applied national standards and technical specifications

UVV 1.2 (VBG 121) Noise
UVV 10.0 (VBG 5) Power-driven work equipment

Declaration

The valve or valve manifold may not be commissioned until it has been established that the plant into which this valve or valve manifold is to be installed meets the regulations of all relevant and applicable EC directives.

Riesbürg, 19.08.2008



Directing Manager
Oliver Rupp

Declaration of Conformity

according to Annex VII of Directive 97/23/EC

We,

Südmo Components GmbH
Industriestraße 7
73469 Riesbürg-Pflaumloch

declare, that the product

SVP change-over valve

Type: **S290** Select
 S390 Select

Catalogue no.: **S290** Select – **S293** Select
 S390 Select – **S393** Select

to which this declaration is referring to, is in compliance with the directive 97/23/EC and was subjected to the following conformity assessment procedure:

Modul A .

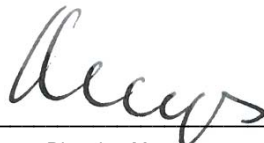
Applied harmonized European standards:

- ⇒ DIN EN 10088-1
- ⇒ DIN EN 10088-2
- ⇒ DIN EN 10088-3
- ⇒ DIN EN 287-1
- ⇒ DIN EN 287-2

Applied other standards and technical specifications:

- ⇒ AD-regulations 2000
- ⇒ DIN EN 12266-1

Riesbürg, 19.08.2008



Directing Manager
Oliver Rupp

Additions to the declaration of conformity

1. Diameters of DN 125 and bigger are not suitable for „Products Group 1 – dangerous“ according to the definition in the pressure equipment directive „guidelines 97/23/EC“ especially „product suitability acc. to article 9“
Already mentioned dangerous products are also defined by the pressure equipment directive „Guideline 97/23/EC“ especially within the data base for dangerous substances.
2. Diameters of DN 25 and smaller are defined according to the definition of the pressure equipment directive „Guideline 97/23/EC“ article 3 paragraphe 3 – good engineering practice - and are not allowed to be marked CE.
3. Valve manifold:
The pressure test for the complete manifold cannot be made in our factory due to production reasons. This test has to be made by the customer during commissioning of the complete installation. The single valves are tested by the manufacturer.

EC manufacturer's declaration for the use in explosion area

According to the EC guideline 94/9/EG

We,

Südmo Components GmbH
Industriestraße 7
73469 Riesbürg-Pflaumloch

declare, that the product

SVP change-over valve

Type: **S290 Select**
 S390 Select

Catalogue no.: **S290 Select – S293 Select**
 S390 Select – S393 Select

has no own potential ignition danger acc. to the EC guideline 94/9/EG article 1 considering below mentioned exceptions and supplements and therefore does not come under the EC guideline 94/9/EC.

This is only valid for valves with the following seal version:

⇒ O-ring

We would like to point out that the classification in groups, categories, zones, protections and temperature class as well as the definition of special conditions **must be defined by the operating company itself.** The following restrictions must be considered.

Exceptions and supplements

- ⇒ The use below surface must be excluded.
- ⇒ You have to take care that no loadings take place.
- ⇒ The maximum surface temperature of the component depends on the temperature of the handled substance, but pneumatic activated components can reach a surface temperature up to +80°C with an environment temperature of +40°C due to internal friction. The substances which can be handled in the component are limited by their ignition and glowing temperature.
- ⇒ These valves can be used in the categories 1, 2 and 3 as well as in all groups. The only exception is the combination of category 1 and explosion group IIC.
- ⇒ Furthermore a compensation of potential of the complete plant has to be assured.
 - The surface diameter of non-conductive elements is < 80 cm²
 - All non-conductive materials are covered by a conductive frame.

Applied European guidelines and standards as well as other rules

- ⇒ EN 1127-1
- ⇒ EN 13463-1
- ⇒ DIN EN 50014

Applied other standards and technical specifications

- ⇒ EC guideline 94/9/EG
- ⇒ BGR 132

Operating instructions

SVP change-over valve, manually and pneum. operated
Profile gasket – O-ring, profile gasket – PEEK gasket
DN 25 – 100, DN 1" – 4"

Parts which are not included in the operating instruction are excluded from the manufacturing declaration. In particular cases, documents have to be ordered separately.

Riesbürg, 19.08.2008



Directing Manager
Oliver Rupp



Operating instructions

SVP change-over valve, manually and pneum. operated
Profile gasket – O-ring, profile gasket – PEEK gasket
DN 25 – 100, DN 1" – 4"

Service adress

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