

Operating Manual

DELTA SWmini4

Single Seat Valve DN10, 15, 20



Read and understand this manual prior to operating or servicing this product.



Declaration of Conformity for Valves and Valve Manifolds

APV Rosista GmbH, Zechenstr. 49, D-59425 Unna-Königsborn
as manufacturer with sole responsibility declares that the

**double seat valves of the series D2, SD4, SDT4, SDM4, SWcip4, DSV,
DA3, DE3, DEU3, DET3, DKR2, DKRT2, DKRH2**
in the nominal diameters DN 25 - 150, 1" - 6" and 1 Sh5 - 6 Sh5

butterfly valves of the series SV1 and SVS 1 F
in the nominal diameters DN 25 - 100, DN 125 - 250 and 1" - 4"

ball cocks of the series KH, KHV
in the nominal diameters DN 15 - 100

**single seat, diaphragm and spring loaded valves of the series
S2, SW4, SWmini4, SWT4, M3, MF3, M4, MF4, MP4, MS4, AP1, APT1, CPV, RG4,
RGM4, RGE4, RGEM4, PR2, PR3, PR4, SI2, UF3, VRA, VRAH**
in the nominal diameters DN 10 - 150, 1/2" - 4" and 1 Sh5 - 6 Sh5


and the valve manifolds installed thereof

meet the requirements of the Directives 89/392/EEC (amendment 93/44/EEC),
replaced by 98/37/EC and GSG - 9.GSGV.

For official inspections, APV Rosista GmbH presents
a technical documentation according to appendix V of the Machinery Directive,
this documentation consisting of documents of the development and construction,
description of measures taken to meet the conformity and to correspond with
the basic requirements on safety and health, incl. an analysis of the remaining risks
as well as an operating manual with safety instructions.

The conformity of the valves and valve manifolds is guaranteed.

D-59425 Unna-Königsborn, June 04, 2008
APV Rosista GmbH



Manager Research and Development

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SWmini 41 - 44 -FS, VSM, CU DN10,15,20	RN 01.054.815
SWmini 41 - 44 -FS, VSM, CU 1/2", 3/4", 1"	RN 01.054.816
Actuator	RN 01.054.88

1. General Terms

This operating manual has to be read carefully and observed by the competent operating and maintenance personnel.

We have to point out that we will not accept any liability for damage or malfunctions resulting from the non-compliance with this operating manual.

Descriptions and data given herein are subject to technical changes.

2. Safety Instructions

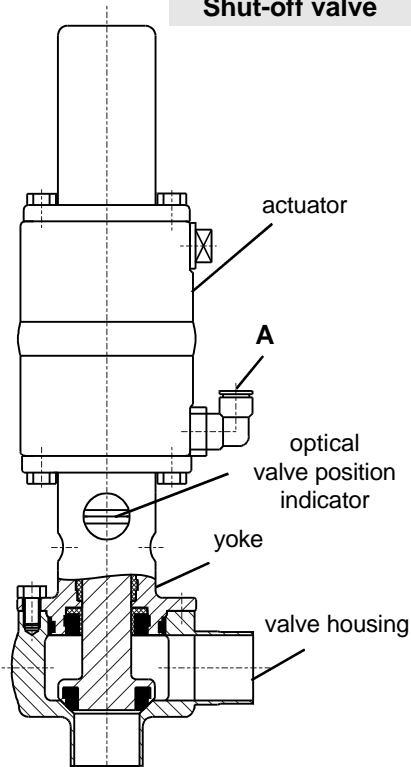


DANGER!

- The technical safety symbol draws your attention to important directions for operating safety. You will find it wherever the activities described are bearing risks of personal injury.
- Electric and pneumatic connections must be separated.
- Before any maintenance of the valve, the line system must be **depressurized**.
- **Do not reach into the open valve.**
- Risk of injury by suddenly operating valve. In dismantled state there is the risk of bruising at movable parts of the valve.
- Observe service instructions to ensure safe maintenance of the valve.
- **Attention!**
With valve design NC (normally closed / air-to-raise, spring-to-lower): Before releasing the housing screws, the valve insert must be relieved by controlling the actuator.
- The welded actuator is under spring load, **do not** open it by force.

3. Mode of Operation

Shut-off valve



The Shut-Off and Change-Over Valves DELTA SWmini4 (DN10, 15, 20) have been developed for the use in the brewing and beverage industries, in dairy and food applications as well as for the chemical and pharmaceutical industries.

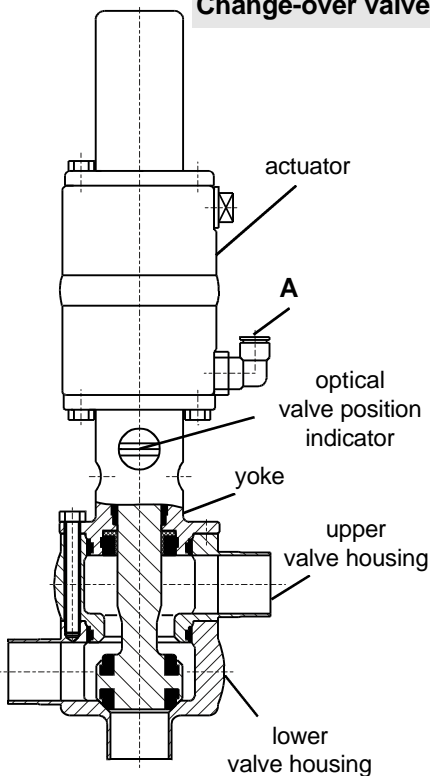
The valves are designed for universal applications and stand out for their increased mechanical reliability and absolute ease of handling.

The function of the DELTA SWmini4 valve is to shut off and to change over line sections.

- Operation by pneumatic actuator with air connection at **(A)**, reset by spring force.
- By different assembly of the actuator, the following designs are possible:
 - NC (FS):** actuator normally closed (air-to-raise, spring-to-lower)
 - NO (FH):** actuator normally open (air-to-lower, spring-to-raise)
 (illustrations show NC design)

- The inner parts of the actuator are maintenance-free.
- As standard, the valves are manufactured without support for proximity switches.
- The valve position is indicated optically in the yoke area. Indication in the upper yoke bore: Valve position closed NC (FS).

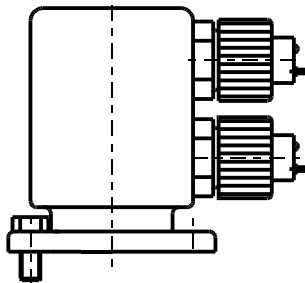
Change-over valve



- The cleaning of the inner area of the valve is carried out during cleaning of the line system.

4. Auxiliary Equipment

support for proximity switch



Valve position indication

- A proximity switch holder for the limit position **NC** or **NO** of the valve shaft can be installed directly on the actuator.
- We recommend to use our APV standard types: operating distance: 5 mm / diameter: 11 mm.

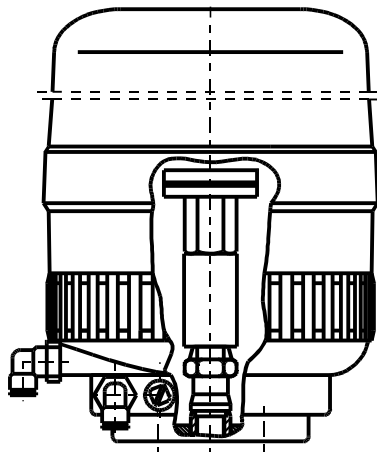
If the operator decides to use valve position indicators other than APV type, we cannot take over any guarantee for a faultless function.

Control Unit

The assembly of a control unit on the DELTA SWmini4 valve is possible.

The following different designs are available:

control unit with adapter

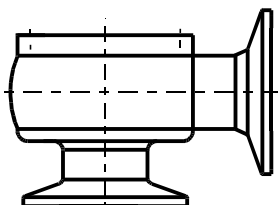


	1 solenoid valve (EMV)
Direct Connect ref.- No.:	CU31 Direct Connect 16 - 31 - 232/93
Profibus ref.- No.:	CU21V 16 - 31 - 236/93
Device Net ref.- No.:	CU31 Device Net 16 - 31 - 240/93
AS - Interface ref.- No.:	CU31 AS - Interface 16 - 31 - 244/93

- For the installation of the control unit on the SWmini 4 valve two adapters are required.

adapter	
designation : ref.-No.:	CU adapter - SWmini4 08 - 48 - 355/93
designation : ref.-No.:	CU 2 adapter - SW4 / SD4 / M4 08 - 48 - 415/93

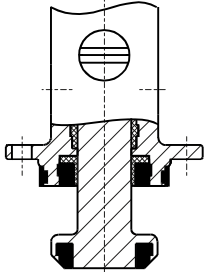
valve housing with clamp connection



Connections: Clamp connection according to ISO 2852 Valves are available complete with clamp connections. The combination of weld ends and clamp connections is possible.

5. Installation

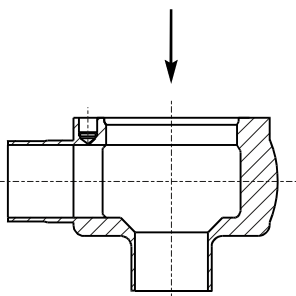
shut-off valve



- Installation has to be done in such a way that fluids can drain off the valve housing and is preferably to be realized in vertical position.

- **Shut-off valve SWmini41 / 42:**

The valve housings can be welded direct into the pipeline (completely dismantable valve insert with actuator).



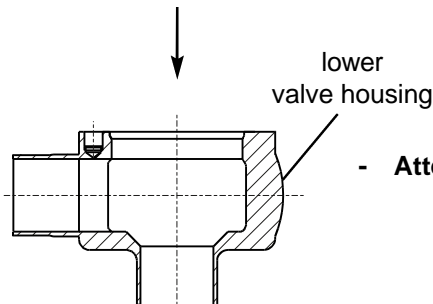
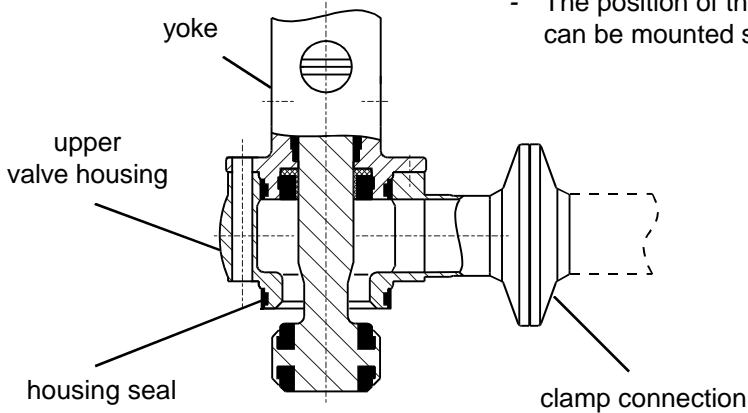
- **Change-over valve SWmini 43 / 44:**

One or two detachable connections e.g. (clamps, etc.) must be assembled to the ports of the upper housing to provide for disassembly (e.g. for seal replacement).



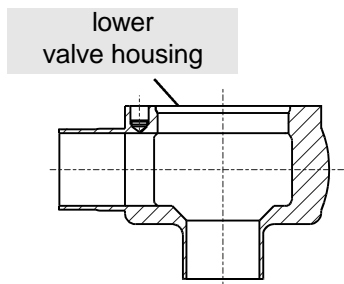
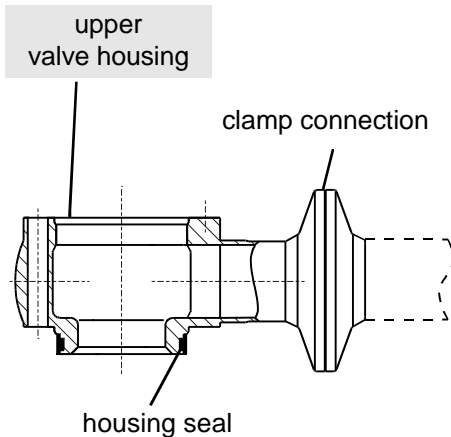
change-over valve

- The position of the medium and upper housing ports to each other can be mounted staggered by 90° through the screw connections.



- **Attention: Observe welding instructions.**

5.1 Welding Instructions



Shut-off valve SWmini41 / 42

- Before welding of the valves, remove the valve insert from the housing (see chapter 10.I.c. - d.).
See to a careful handling of the parts to avoid damage.

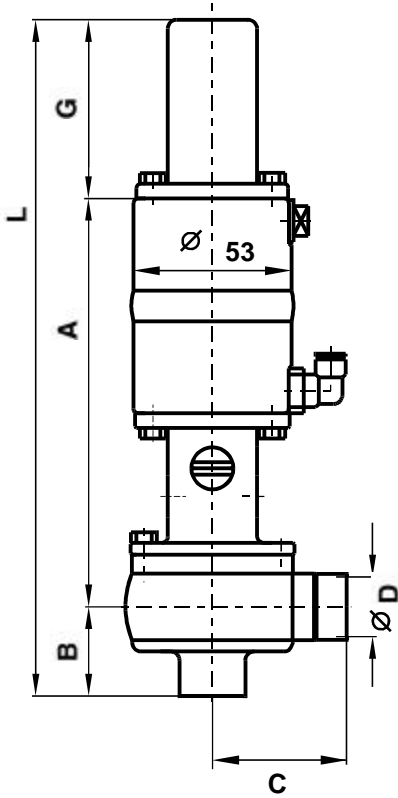
Change-over valve SW mini 43 / 44

- The lower housing part **(1)**, only, can be welded direct into the pipe system.
Before welding of the lower housing, partly dismantle the valve (see chapter 11.I.d. - e. and 11.II. a. - d.).
Remove the lower housing seal from the upper housing.
Provide the upper housing and the upper pipeline with detachable connections (flange, clamps, etc.).
See to a careful handling to avoid damage to the parts.

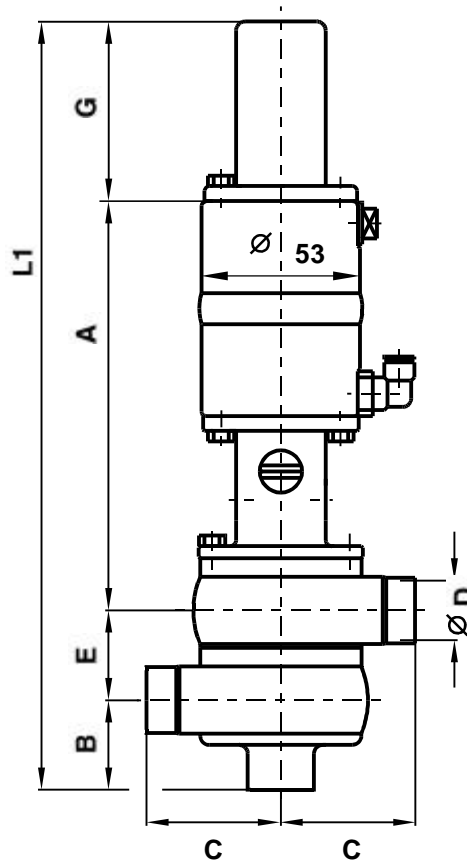
- Welding may only be carried out by certified welders (EN 287-1). (Seam quality EN 25817 „B“).
- The welding of the valve housings must be undertaken in such a way that deformation strain cannot be transferred from the outside to the valve body.
- The preparation of the weld must be carried out in butt manner as a square butt joint without air. (Consider shrinkage!)
- TIG orbital welding is best!
- After welding of the valve housings or of the mating flanges and after work at the pipelines, the corresponding parts of the installation or pipelines must be cleaned from welding residues and soiling. If these cleaning instructions are not observed, welding residues and dirt particles can settle in the valve and cause damage.
- Any damage resulting from the nonobservance of these welding instructions is not subject to our guarantee.

6. Dimensions / Weights

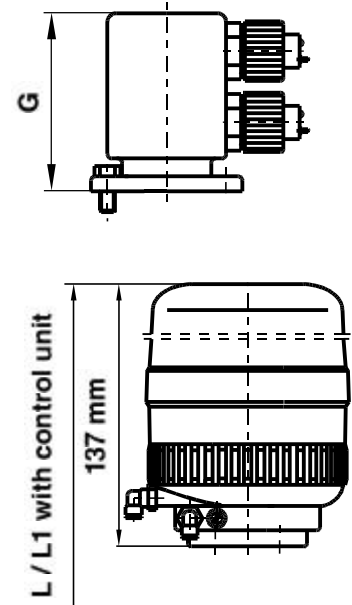
**Shut-off valve SWmini 41, 42
with weld ends**



**Change-over valve SWmini 43, 44
with weld ends**



Proximity switch holder



weights in kg SWmini 41, 42	
DN 10	1,55
DN 15	1,6
DN 20	1,75

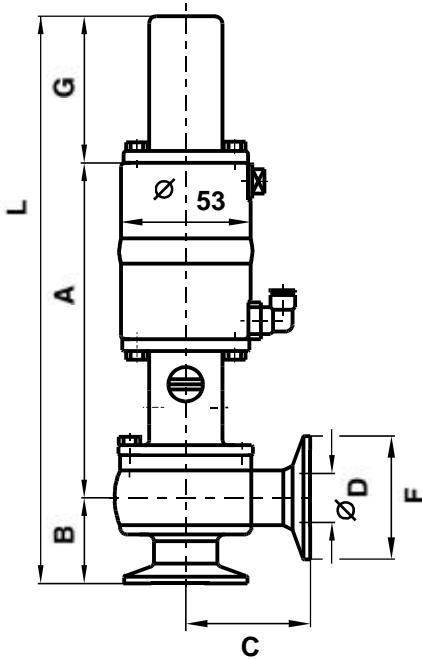
weights in kg SWmini 43, 44	
DN 10	1,8
DN 15	1,9
DN 20	2,1

**SWmini4 with weld ends
dimensions in mm**

DN	A	B	C	Ø D	E	G	L	L1	L / L1 with control unit	
									SWmini 41 / 42	SWmini 43 / 44
10	133	25	45	10	20	60	218	238	295	315
15	135	28	45	16	26	60	223	249	300	326
20	137	30	45	20	30	60	227	257	304	334

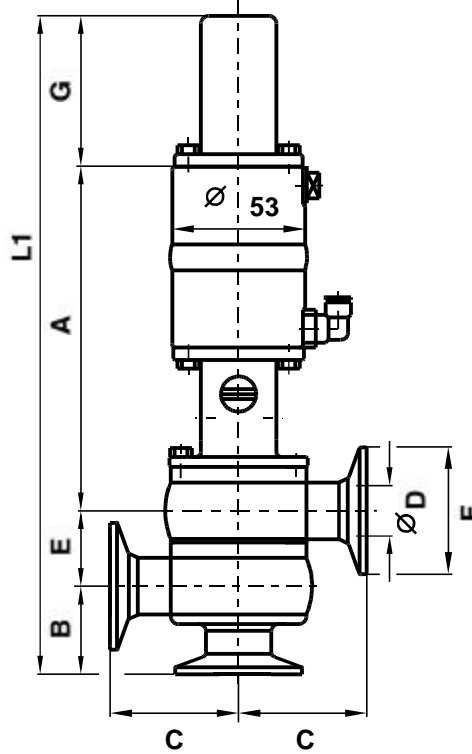
6.1 Dimensions / Weights

**Shut-off Valve SWmini 41, 42
with clamp connection**



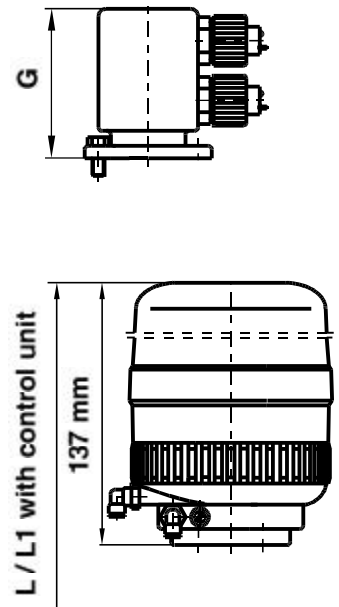
weights in kg SWmini 41, 42	
DN 10	1,6
DN 15	1,65
DN 20	1,8

**Change-over valve SWmini 43, 44
with clamp connection**



weights in kg SWmini 43, 44	
DN 10	1,9
DN 15	2,0
DN 20	2,3

Proximity switch holder



**SWmini4 with clamp connection
dimensions in mm**

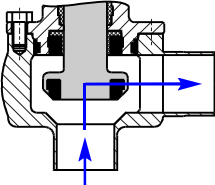
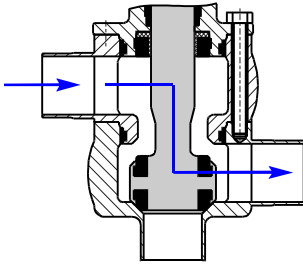
DN	A	B	C	Ø D	E	F	G	L	L1	L / L1 with control unit	
										SWmini 41 / 42	SWmini 43 / 44
10	133	30	50	10	20	34	60	223	242	299	319
15	135	33	50	16	26	34	60	228	254	305	331
20	137	35	50	20	30	34	60	232	262	309	339
inch											
1/2"	133	30	50	10	20	34	60	223	242	299	319
3/4"	135	33	50	16	26	34	60	228	254	305	331
1"	137	35	50	22,6	30	50,5	60	232	262	309	339

7. Technical Data

line pressure :	5 bar
max. operating temperature :	135°C EPDM, HNBR *FPM, *VMQ
short-term load:	140°C EPDM, HNBR *FPM, *VMQ *(no steam)
air connection (for hose) :	6x1mm standard 1/4" option
max. pneumatic air pressure :	10 bar
min. pneumatic air pressure :	6 bar

(Use dry and clean pneumatic air, only.)

DN	shut-off valve SWmini 41, 42		change-over valve SWmini 43, 44	
	stroke in mm	closing pressure in bar	stroke in mm	closing pressure in bar
10	4	8	5	8
15	7	8	7	8
20	7	6,5	7	6,5

kvs values in m ³ /h		
	shut-off valve	change-over valve
		
DN		
10	2,7 m ³ /h	2,5 m ³ /h
15	7,0 m ³ /h	5,0 m ³ /h
20	9,0 m ³ /h	7,5 m ³ /h

8. Materials

product wetted parts

- housing, upper housing, yoke,
valve shaft : **1.4404**

other parts

- actuator, actuator screw, centering washer,
screws, guide rod, nut : **1.4301**
- cover, covering cap,
proximity switch holder : **PA 12 schwarz**

seals

- housing seals : **EPDM**
option : **FPM, VMQ, HNBR**
- shaft seal : **EPDM / PTFE**
option : **VMQ / PTFE**
FPM / PTFE
HNBR / PTFE
- actuator seal : **NBR**
quadring **NBR**
o-ring
- guide bush **PTFE**

9. Maintenance

- The **maintenance intervals** depend on the corresponding application and are to be determined by the operator himself carrying out **temporary checks**.
- Required tools:
 - 1x spanner SW 8
 - 1x spanner SW 13
 - 1x spanner SW 17
 - 1x spanner SW 19
- For the valve service we supply complete seal kits (see spare parts lists).
With the order of a complete seal kit, the appropriate grease is included in the scope of supply.
- Exchange of seals is done according to service instructions.
- Assembly of the valve and change of valve design **NC (FS)** or **NO (FH)**, see service instructions.
- Installation of actuator, see service instructions.
- The inner parts of the actuator are maintenance-free.
- **Slightly grease all seals before their installation.**
Attention! No matter what type of application, use only those greases being suited for the respective seal material !

Recommendation:

APV food-grade-grease for **EPDM, FPM, HNBR and NBR**

(0,75 kg/ tin - ref.-No. 000 70-01-019/93)

(60 g/ tube - ref.-No. 000 70-01-018/93)

oder

APV food-grade-grease for **VMQ (Silicone)**

(0,6 kg/ tin - ref.-No. 000 70-01-017/93)

(60 g/ tube - ref.-No. 000 70-01-016/93)

!!! Do not use grease containing mineral oil for EPDM seals !!!
!!! Do not use Silicone-based grease for VMQ seals !!!

Assembly tool for seat seal

To simplify the installation of the seat seal in the valve shaft, the following assembly tools are available.

Assembly tool for SWmini 41 / 42 / 43 / 44	
DN	ref.-No.:
10	000 - 51 - 13 - 052/17
15	000 - 51 - 13 - 051/17
20	000 - 51 - 13 - 050/17

10. Service Instructions Shut-Off Valve

Shut-off valve DELTA SWmini4

The item numbers refer to the corresponding spare parts lists
SWmini 41-44 FS, VSM, CU RN 01.054.815
RN 01.054.816

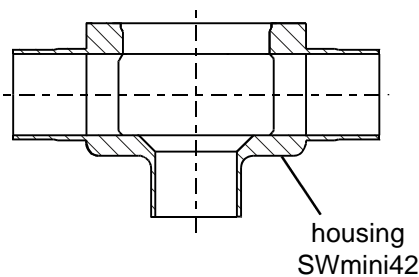
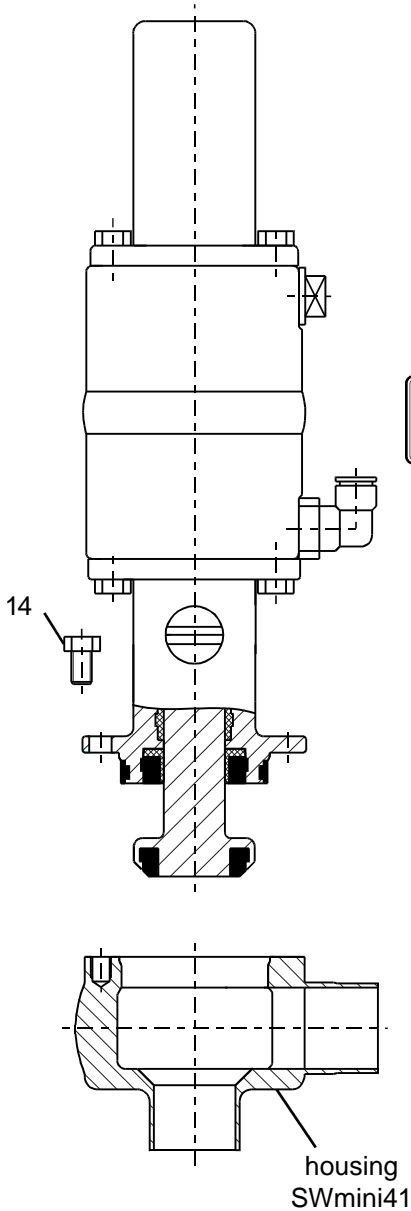
I. Dismantling from the line system

- a. Shut off line pressure and discharge lines if possible.
- b. Detach electric connections.
 - Proximity switches at the proximity switch holder.
 - Control Unit, see operating manual.
- c. Valve design NC: control actuator with air.



Do not reach for movable parts!
Risk of injury.

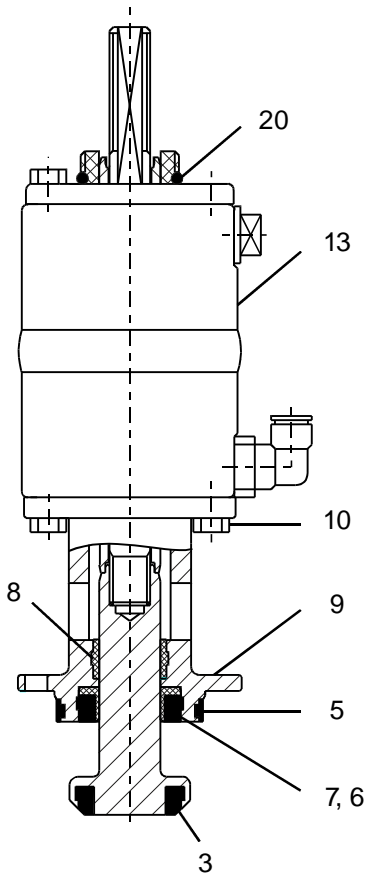
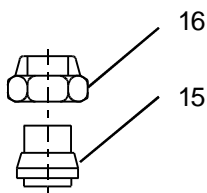
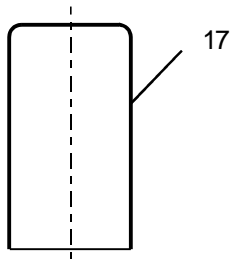
- d. Remove screws (14) M5x12.
 Withdraw the insert from the housing .
- e. Cut off compressed air and remove compressed air supply.



10. Service Instructions Shut-Off Valve

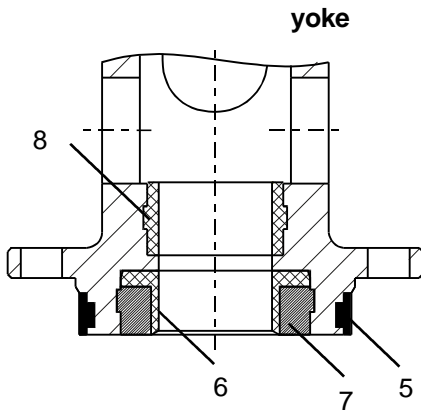
II. Dismantling of wear parts

- a. Remove the covering cap (17).
 - **Valve design with proximity switch holder:**
Remove proximity switch holder (18) and actuator screw (19).
 - **Valve design with control unit:**
Remove cover, actuator screw and guide rod extension (24).
Remove the control unit.
- b. Unscrew the safety nut (16) while holding up the centering washer (15), take off centering washer.
- c. Withdraw the valve shaft (4) with guide rod (12) to the bottom.
- d. Separate the yoke (9) from the actuator (13) by releasing the hex. screws (10).
Remove the washer (11) from the yoke.
- e. Remove the o-ring (20).
- f. Take off the seat seal (3) by means of a pointed object from the valve shaft.
- g. Remove the housing seal (5).
- h. Dismantle guide bush (8), seat seal (7) and shaft seal (6) from the yoke.



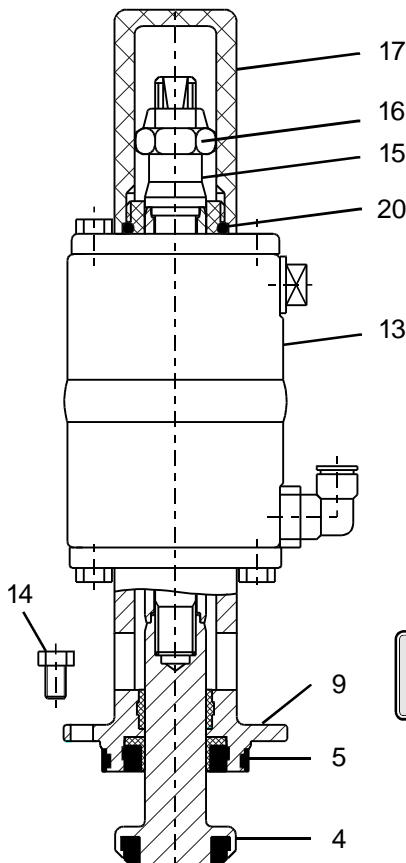
! Replacement of actuator seals, see chapter 12,
Service Instructions Actuator.

10. Service Instructions Shut-Off Valve



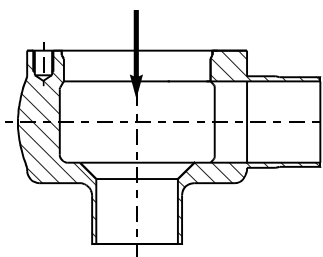
III. Installation of wear parts

- a. Insert the guide bush (8) into the yoke (9). Insert the shaft seal (6) and press in the slightly greased seat seal (3).
See to the correct mounting direction.
- b. Slightly grease the housing seal (5) and insert it into the groove of the yoke.
- c. Install the seat seal (7) by means of the assembly tool (see item 13.) in the valve shaft (4).
- d. Place the washer (11) in the yoke (9). Mount the yoke at the actuator (13).
- e. Slide the valve shaft (4) through the yoke (9) and the actuator (13), place the centering washer (15) and tighten it with the safety nut (16). Hold up the centering washer during this process.
- f. Insert the o-ring (20) in the actuator cover.
- g. Fasten the covering cap (17).
 - **Valve design with proximity switch holder:**
Fasten actuator screw (19) and proximity switch holder (18).
 - **Valve design with control unit:**
Fasten control unit (without cover).
Fasten guide rod extension (24) and actuator screw.
Tighten the cover.



IV. Assembly of valve

- a. Carefully place the valve insert in the housing and slightly screw the hex. screws (14) M5x12 in the threaded bore (do not tighten). The housing seal (5) must not be damaged during this process.
- b. Connect compressed air supply.
- c. **Valve design NC: control actuator with air.**
Do not reach for movable valve parts!
Risk of injury by sudden valve actuation.
- d. **Tighten** the hex. screws (14).
- e. Disconnect pneumatic air.
- f. Connect electric connections.
 - Plug proximity switches in their holders and fasten them.



11. Service Instructions Change-Over Valve

Change-over valve DELTA SWmini4

The item numbers refer to the corresponding spare parts lists
SWmini 41-44 FS, VSM, CU RN 01.054.815
RN 01.054.816

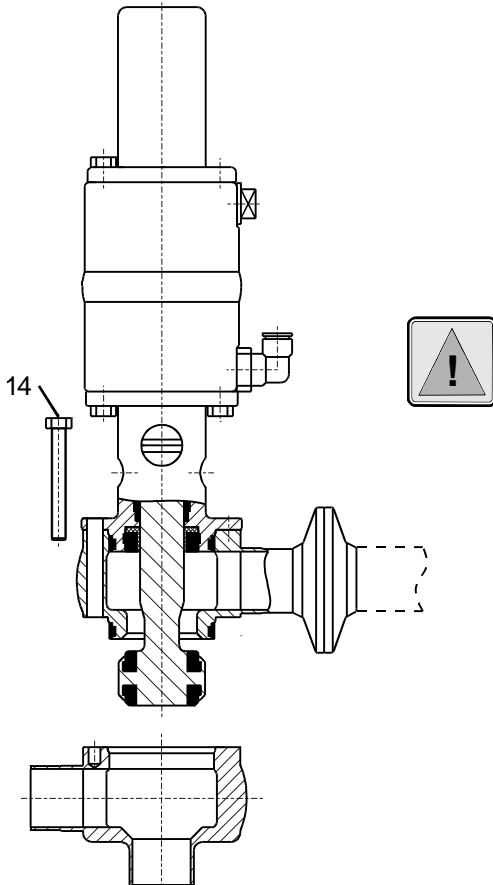
I. Disassembly from line system

- a. Shut off line pressure and discharge lines if possible.
- b. Release clamp and flange connection at the upper housing.
- c. Detach electric connections.
 - Proximity switch from holder.
 - Control Unit, see operating manual.

d. Valve design NC: control actuator with air.

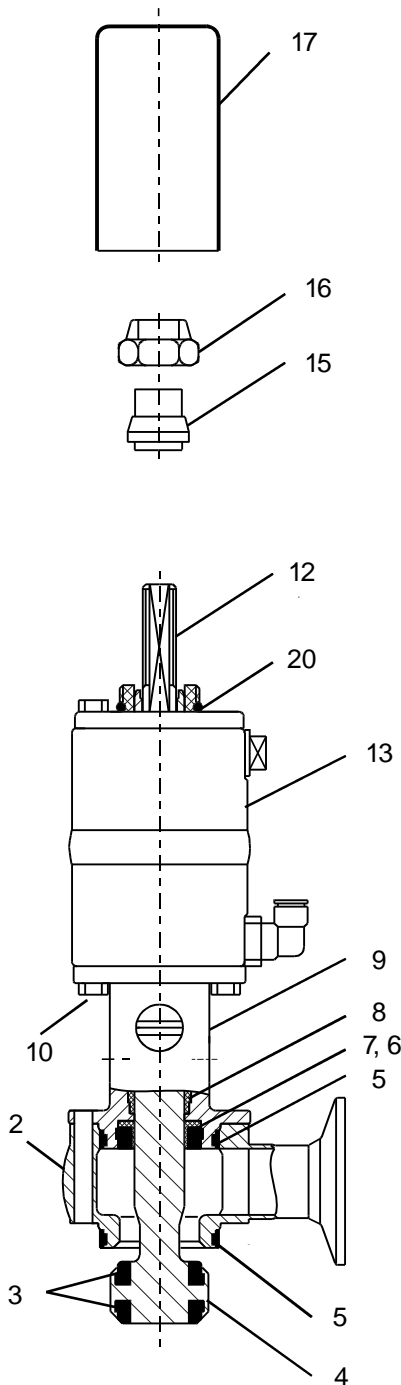
Do not reach for movable parts!
Risk of injury by sudden valve actuation.

- e. Remove the hex. screws (14) M5x40.
 Withdraw the valve insert with the upper housing from the lower housing.
- f. Cut off compressed air and remove compressed air supply.



11. Service Instructions Change-Over Valve

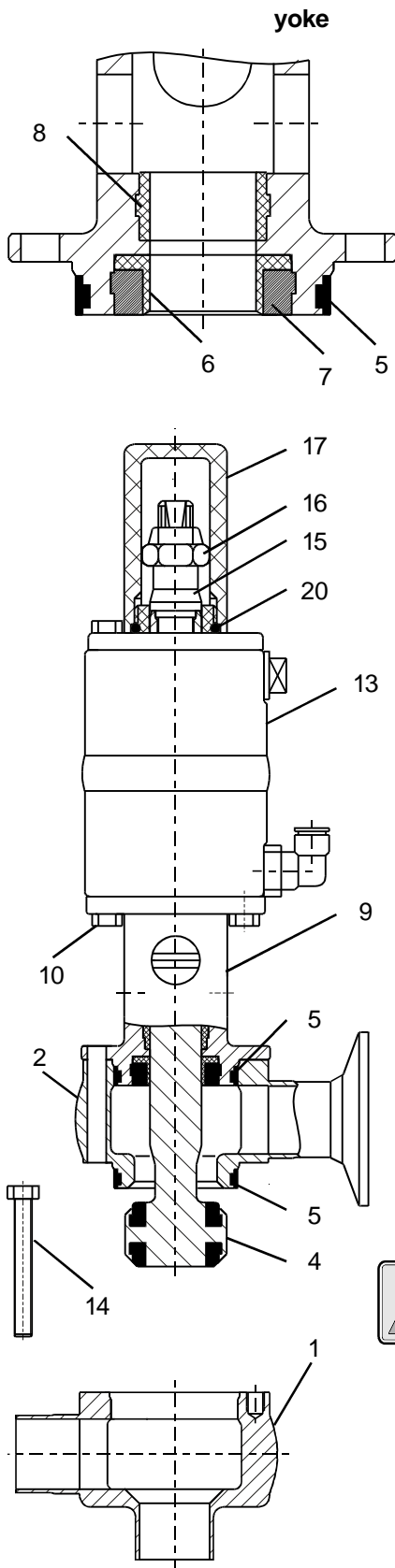
II. Dismantling of wear parts



- a. Remove the covering cap (17).
 - **Valve design with proximity switch holder:**
Remove proximity switch holder (18) and actuator screw (19).
 - **Valve design with control unit:**
Remove cover, actuator screw and guide rod extension (24).
Remove the control unit.
- b. Unscrew the safety nut (16) while holding up the centering washer (15), take off centering washer.
- c. Withdraw the valve shaft (4) with guide rod (12) to the bottom.
- d. Withdraw upper housing (2) and remove the housing seal (5).
- e. Separate the yoke (9) from the actuator (13) by releasing the hex. screws (10).
Remove the washer (11) from the yoke.
- f. Remove the o-ring (20).
- g. Take off the seat seal (3) by means of a pointed object from the valve shaft (4).
- h. Remove the housing seal (5) from the yoke (9).
- i. Dismantle the guide bush (8), seat seal (7) and shaft seal (6) from the yoke.

! Replacement of actuator seals, see chapter 12, Service Instructions Actuator.

11. Service Instructions Change-Over Valve



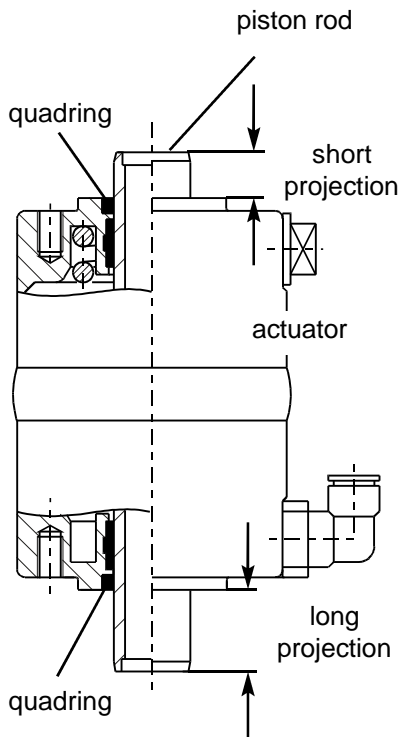
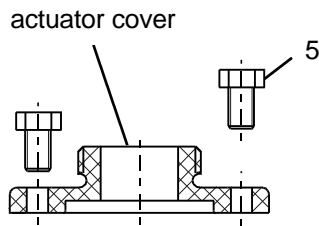
III. Installation of wear parts

- a. Insert the guide bush (8) into the yoke (9).
Insert the shaft seal (6) and press in the slightly greased seat seal (7).
See to the correct mounting direction.
- b. Slightly grease the housing seals (5) and insert them into the groove of the yoke (9) and of the upper housing (2).
- c. Install the seat seal (3) by means of the assembly tool (see item 13.) in the valve shaft (4).
- d. Place the washer (11) in the yoke (9).
Mount the yoke at the actuator (13).
- e. Press the yoke with actuator in the upper housing (2).
Attention: Do not damage the housing seal (5).
Observe bore positions of housing and yoke.
- f. Slide the valve shaft (4) through the housing (2), yoke (9) and actuator (13), place the centering washer (15) and tighten it with the safety nut (16). Hold up the centering washer during this process.
- g. Insert the o-ring (20) in the actuator cover.
- h. Fasten the covering cap (17).
 - **Valve design with proximity switch holder:**
Fasten actuator screw (19) and proximity switch holder (18).
 - **Valve design with control unit:**
Fasten control unit (without cover).
Fasten guide rod extension (24) and actuator screw.
Tighten the cover.

IV. Assembly of valve

- a. Carefully place the valve insert in the housing (1). Check the correct fit of the seal of the clamp or flange connection at the upper housing during this process.
Attention: The housing seal (5) must not be damaged during this process.
- b. Slightly screw the hex. screws (14) M5x40 in the threaded bores (do not tighten).
- c. Connect compressed air supply.
- d. **Valve design NC: control actuator with air.**
Do not reach for movable valve parts!
Risk of injury by sudden valve actuation.
- e. Tighten the hex. screws (14).
- f. Disconnect pneumatic air.
- g. Firmly tighten clamp and flange connections.
- h. Connect electric connections.
 - Plug proximity switches in their holders and fasten them.

12. Service Instructions Actuator



Actuator

The item numbers refer to the corresponding spare parts lists

Actuator: **RN 01.054.88**

SWmini 41-44: **RN 01.054.815 / RN 01.054.816**

I. Disassembly

Attention:

Before starting the disassembly, see to the valve design NC or NO.

- a. Release hex. screws **(5)** and remove actuator cover **(2)** or adapter SWmini4 **(21)** from actuator **(13)**.
- b. Remove quaddings **(6)** from the grooves.

II. Assembly

- a. Provide quaddings **(6)** with a thin grease layer and press them in the seal grooves.
- b. Fasten actuator cover or SWmini4 adapter on the actuator by means of the hex. screws **(5)**.

Attention: Observe valve design **NC** or **NO**.

- **short projection of piston rod = design NC**
- **long projection of piston rod = design NO**

III. Change of valve position NC/NO

By turning the actuator by 180° the required design NC or NO can be determined.

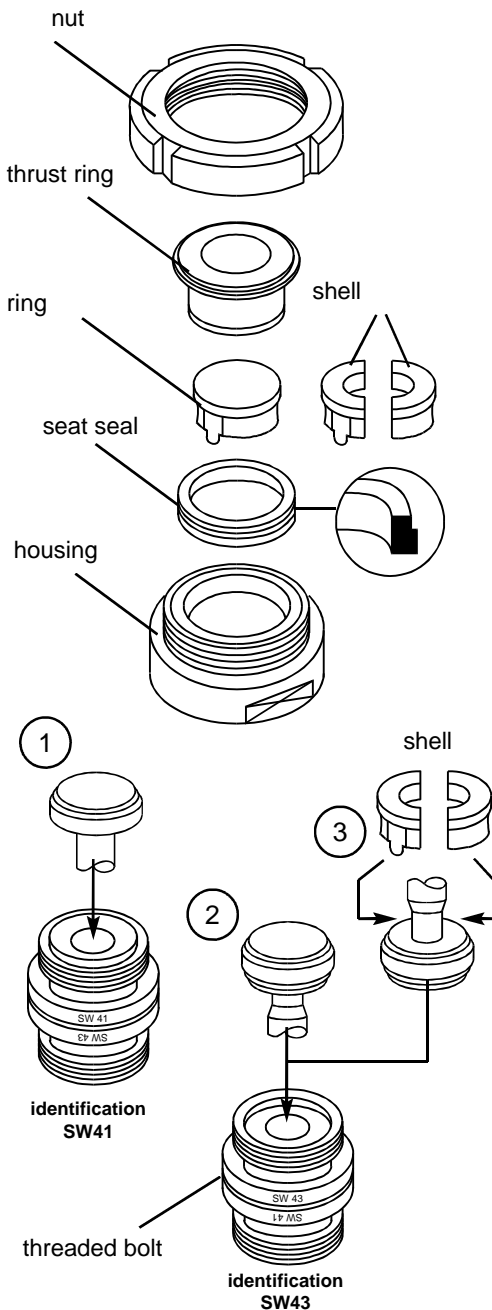
NC (FS) = normally closed (air-to-raise, spring-to-lower)
NO (FH) = normally open (air-to-lower, spring-to-raise)

Crucial for the reconstruction is the assembly of the actuator cover.

Assembly of actuator cover:

- **short projection of piston rod = design NC (FS)**
- **long projection of piston rod = design NO (FH)**

13. Assembly Tool for Seat Seal



The assembly tool consists of:

- nut
- thrust ring
- ring with venting nose
(to be used for the installation of the seat seal in position ① + ②, see illustration).
- two shells, one with venting nose
(to be used for the installation of the seat seal in position ③, see illustration).
- housing
- threaded bolt

Installation of seat seal in valve shaft

1. Insert the valve shaft in the housing in such a way that the seal groove is in the housing.
2. Clamp the shaft in the housing by means of the threaded bolt (observe the corresponding design SW41 or SW43). Clamp the housing in a vice.
3. **Installation ① + ②**
Provide the seat seal with a thin layer of APV food-grade grease. Place the seal on the ring with venting nose until it stops. Introduce the ring with the installed seat seal in the housing and press it down to a sensible stop.
4. **Installation ③**
Provide the seat seal with a thin layer of APV food-grade grease. Place the two shells around the reduced shaft and slide the seat seal over the shaft and over the shells.
5. Slide the thrust ring on the seat seal. Screw on the groove nut and tighten it with a hook spanner until it stops.
6. Release the groove nut. Take thrust ring and ring (shells) off the housing.
7. Take housing out of the vice.
8. Unscrew threaded bolts. Take valve shaft from the housing.

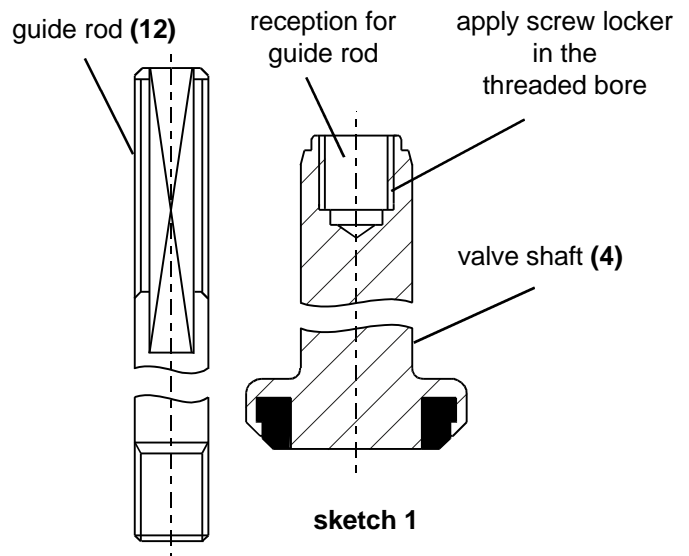
Check the even fit of the seat seal.

Assembly tool for SWmini 41 / 42 / 43 / 44	
DN	ref.-No.:
10	000 - 51 - 13 - 052/17
15	000 - 51 - 13 - 051/17
20	000 - 51 - 13 - 050/17

14. Trouble Shooting

Trouble	Remedy
Leakage between yoke and housing	Replace upper housing seal (5)
Leakage between upper and lower housing	Replace lower housing seal (5) .
Leakage out of the lower yoke bore	Replace guide bush (8), shaft seal (6) and seat seal (7). ! Check surface of valve shaft, replace valve shaft if damaged (see instructions for replacement of guide rod).
Actuator	
Air escapes permanently at the upper und lower piston rod	Replace quadrings (6).
Air escapes permanently from the venting plug	Replace complete actuator (13).

- Instructions
for replacement of guide rod**
- a. Unscrew the guide rod (12) from the lower valve shaft (4).
 - b. Clean the valve shaft (remove grease and impurities).
 - c. Apply a drop of a screw locker (e.g. type: Loctite-semi-solid) in the area of the threaded bore of the lower valve shaft **(see sketch 1)**.
 - d. Clamp the valve shaft in a vice. **(Attention: use protective cover.)**
 - e. Screw in guide rod and tighten it.



15. Spare Parts Lists

(see annex)

BA SWmini4 002
ID-No.: H 2 0 7 9 0 9
Translation of original manual



rev. 0



Your local contact:



APV
Zeichenstraße 49
D-59425 Unna

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For more information about our worldwide locations, approvals, certifications, and local representatives, please visit www.apv.com.

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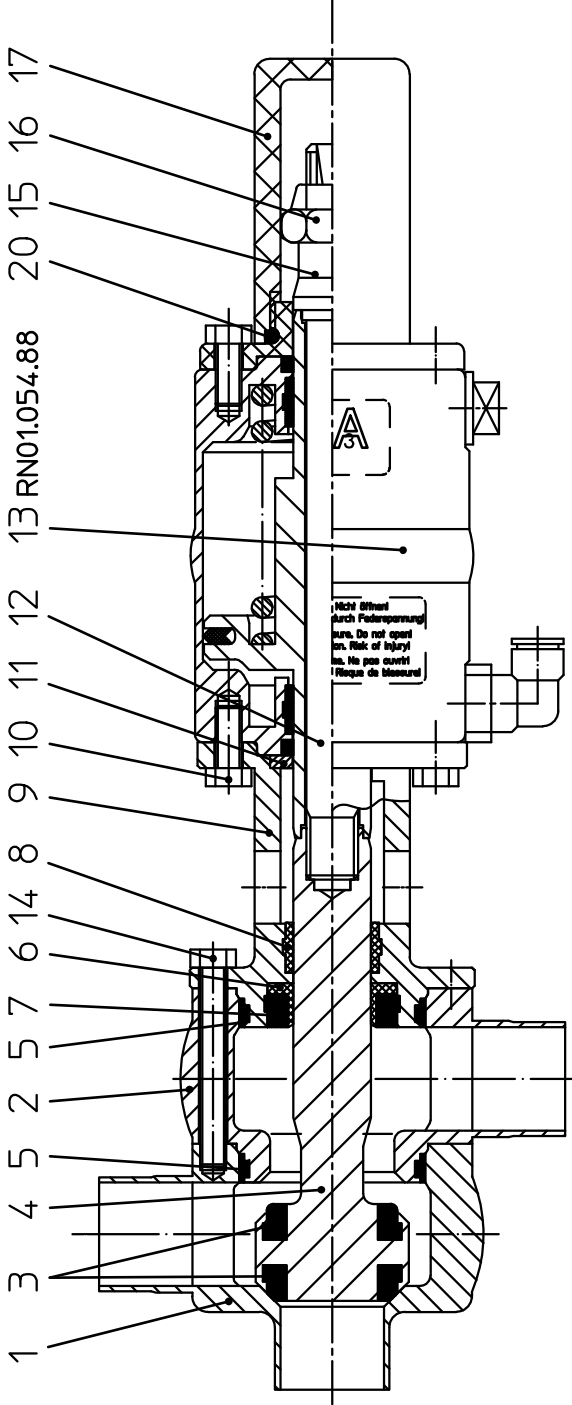


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Ersatzteilliste: spare parts list:		Besteht aus 4 Blatt Blatt 1		Name	
SWmini 41-44 -FS, VSM, CU DN10,15,20		Gezeichnet 12.03.03		Trytko	
Schweißenden und Klemmverbindung		Geprüft 18.03.03		Knöchel	
weld end and clamp connection		Normgepr.			
Datum 03/03		11/03			
Name Trytko		Trytko			
				RN 01.054.815	

APV Rosista GmbH
D-59425 Urra
Germany

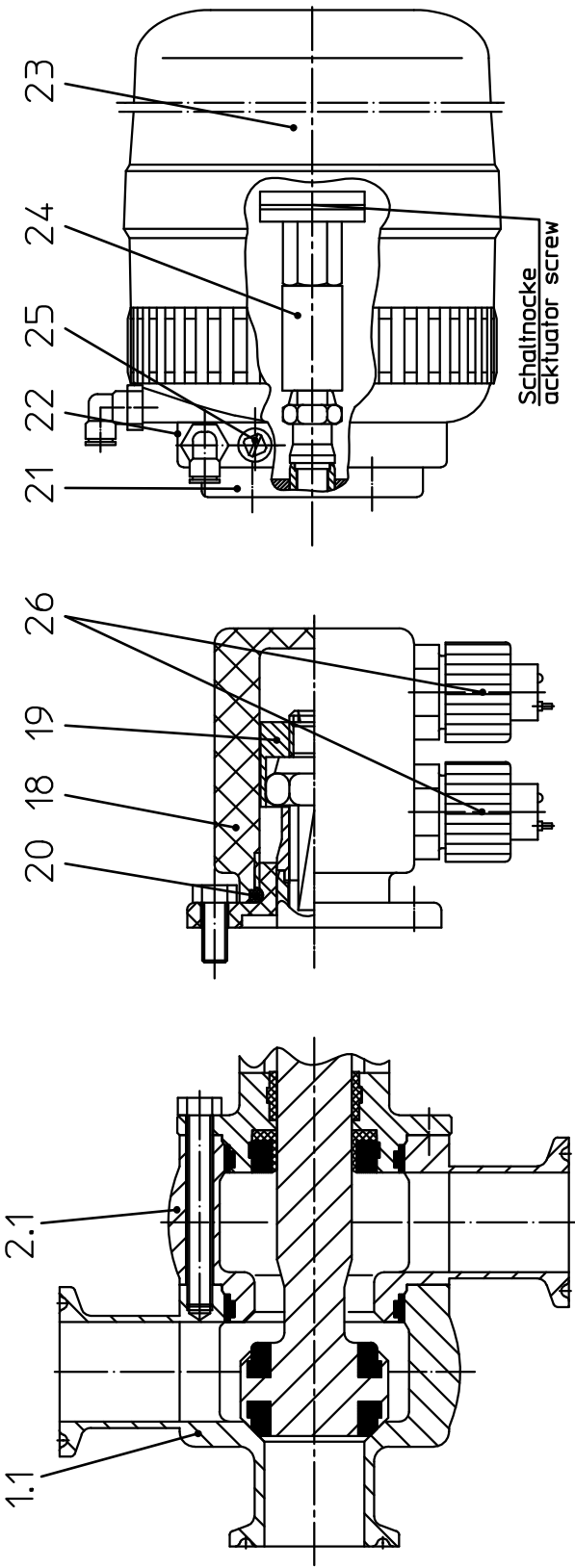


Es stehen verschiedene Dichtungswerkstoffe zur Verfügung. Bitte WS-Nr. ergänzen

The following seal materials are available (fill in last two digits of ref.-no.)

- *Dichtungswerkstoff: material seals:
- ../13-VMQ
- ../33-HNBR
- ../73-FPM
- ../93-EPDM

Gehäusedichtung /housing seal
Bei VMQ (Silikon) wird die HNBR-Gehäusedichtung eingesetzt.
For VMQ (Silicone) take the HNBR-housing seal.



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Ersatzteilliste: spare parts list:

SWmini 41-44 -FS, VSM, CU Clamp
 1/2, 3/4, 1 Zoll/inch

Besteht aus 3 Blatt Blatt 1

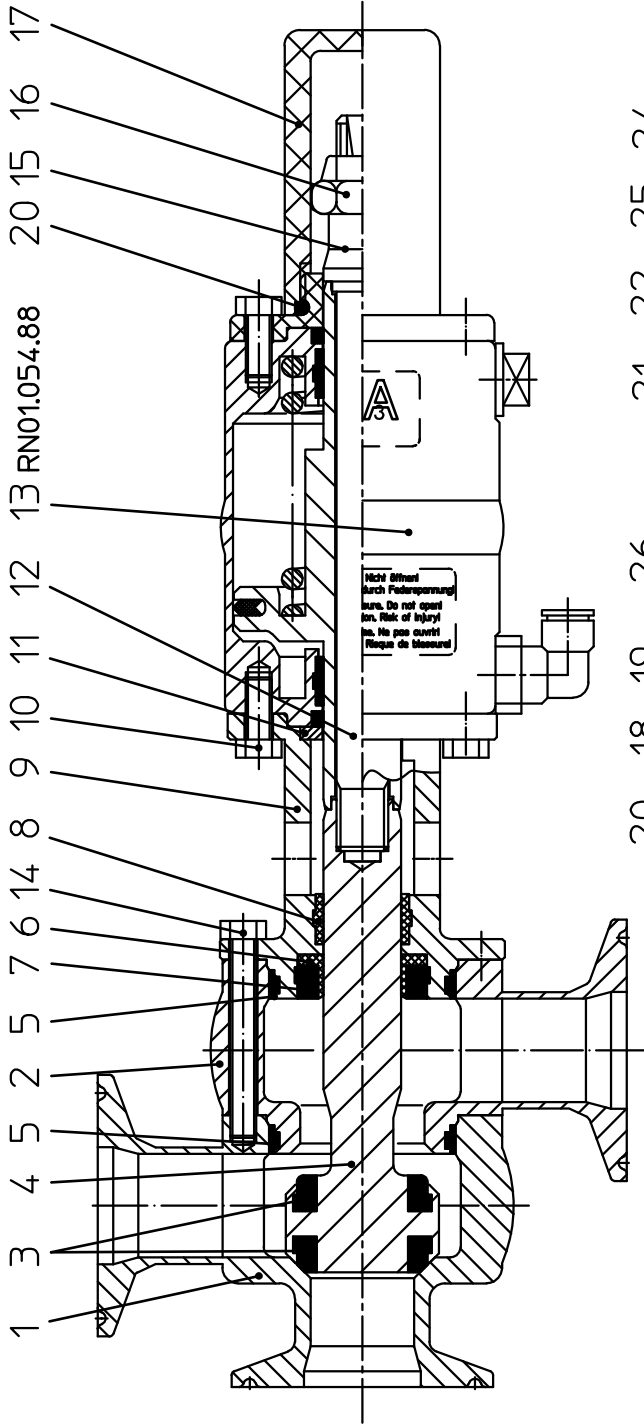
APV Rosista GmbH
 D-59425 Urra
 Germany

Gezeichnet	12.03.03	Trytko
Geprüft	18.03.03	Knöchel
Normgepr.		

Datum	03/03	11/03	04/04
Name	Trytko	Trytko	Trytko

Gezeichnet	12.03.03	Trytko
Geprüft	18.03.03	Knöchel
Normgepr.		

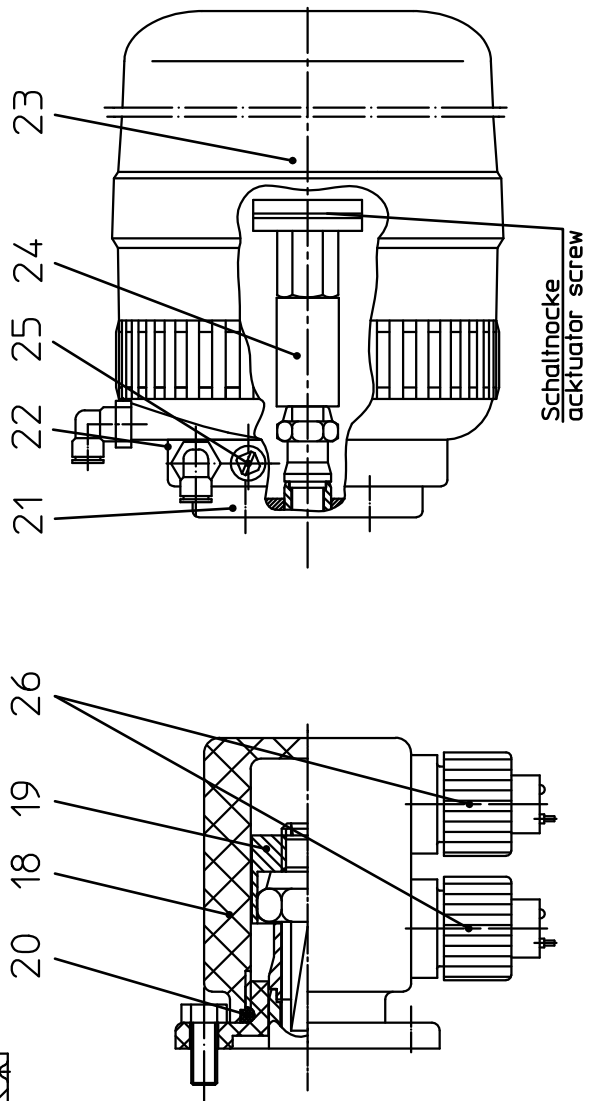
RN	01.054.816
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Es stehen verschiedene Dichtungswerkstoffe zur Verfügung. Bitte WS-Nr. ergänzen
 The following seal materials are available (fill in last two digits of ref.-no.)

- *Dichtungswerkstoff: material seals:
- ../13-VMQ
- ../33-HNBR
- ../73-FPM
- ../93-EPDM

Gehäusedichtung /housing seal
 Bei VMQ wird die HNBR-Gehäusedichtung eingesetzt.
 For VMQ take the HNBR-housing seal.



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Ersatzteilliste: spare parts list:		Blatt <u>3</u>	
SWmini 41-44 -FS, VSM, CU Clamp		Name Trytko	
1/2, 3/4, 1 Zoll/inch		Datum 03/03	
		Name Trytko	
		Datum 11/03	
		Name Trytko	
		Gezeichnet 12.03.03	
		Name Trytko	
		Geprüft 18.03.03	
		Name Knöchel	
		Normgepr.	
		RN 01.054.816	



APV Rosista GmbH
D-58425 Urra
Germany

Pos. item	Benennung description	1/2"	3/4"	1"	1 1/2"	3/4"	1"	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
15	Zentrierscheibe Centering washer	WS-Nr. ref.-no. 15-28-941/12	=	=								
16	Sechskant Mutter selbstsichernd Self-locking nut	DIN EN ISO 10511-M10-A2-70										
17	Abdeckhaube Cover	15-02-172/93	=	=								
18	Initiator-Halterung Support for proximity switch	15-33-936/93	=	=								
19	Schaltknocke Actuator screw	08-52-289/12	=	=								
20	O-Ring O-ring	58-06-078/83	=	=								
21	CU-Adapter SWmini4 CU-adapler SWmini4	08-48-355/93	=	=								
22	CU-Adapter SW4 CU-adapler SW4	08-48-415/93	=	=								
23	Control-Unit Control-Unit	16-31-232/93	=	=								
24	Zugstangenverlängerung Extension of guide rod	15-26-070/93	=	=								
25	Stopfen Plug	08-74-021/93	=	=								
26	Initiatorhalter Proximity switch holder	15-33-918/93	=	=								

Pos. 3, 5, 6, 7, 8, 20 nur im kompletten Dichtungssatz erhältlich												
Item. 3, 5, 6, 7, 8, 20 available es complete seal kits only												
Dichtungssatz / seal kit SWmini4.3+4.4												
1	Dichtungssatz Seal kit	FPM	58-34-861/00	58-34-862/00	58-34-863/00	58-34-867/00	58-34-868/00	58-34-869/00	58-34-868/00	58-34-869/00	58-34-869/00	58-34-869/00
1	Dichtungssatz Seal kit	EPDM	58-34-861/01	58-34-862/01	58-34-863/01	58-34-867/01	58-34-868/01	58-34-869/01	58-34-868/01	58-34-869/01	58-34-869/01	58-34-869/01
1	Dichtungssatz Seal kit	VMQ	58-34-861/02	58-34-862/02	58-34-863/02	58-34-867/02	58-34-868/02	58-34-869/02	58-34-868/02	58-34-869/02	58-34-869/02	58-34-869/02
1	Dichtungssatz Seal kit	HNBR	58-34-861/06	58-34-862/06	58-34-863/06	58-34-867/06	58-34-868/06	58-34-869/06	58-34-868/06	58-34-869/06	58-34-869/06	58-34-869/06

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Ersatzteilliste: spare parts list:
 Steuerkopf SWmini4 Ø50
 Actuator SWmini4 Ø50
 Luftanschluss / air connection: 6mm und/and 1/4 OD

Besteht aus 1 Blatt		Blatt 1	
Datum	02/03	11/03	12/04
Name	Trytko	Trytko	Trytko
Gezeichnet	17.02.03	Trytko	
Geprüft	17.02.03	Knöchel	
Normgepr.			
Name		RN 01.054.88	



Pos. item	Benennung description	Luftanschl. 6 mm WS-Nr. ref.-no.	Luftanschl. 1/4 OD WS-Nr. ref.-no.
	Steuerkopf SWmini4 kpl. Actuator SWmini4 complete	3A0 15-32-079/13	3A0 15-32-080/13
1	Steuerkopf SWmini4 Schweißteil Actuator SWmini4 welded	15-32-079/12	=
2	Deckel Cover	15-02-173/93	=
3	Entlüftungstopfen Venting plug	08-60-005/93	=
4	W-Verschraubung schwenkbar Angular union, slewable	08-60-750/93	08-60-811/93
5	Skt. Schraube Hex. screw	DIN EN 24014-M5x12-A2-70	
6	Quadrang Quadrang	015 QRAR 4114 A	=
7	Warnhinweis für STK SWmini4 Warning hint for actuator SWmini4	08-29-295/93	=
8	Aufkleber 3A-Symbol SW4 und SW4mini Adhesive 3A-Symbol SW4 and SW4mini	08-29-001/93	=

