

Operating Manual
DELTA SDMU4
Double Seal Change - Over Valve
with Membrane



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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Double Seal Change-Over Valve with Diaphragm SDMU 4	
DN design	RN 01.054.68
Tube design	RN 01.054.68-1
Actuator	RN 01.054.86
Leakage valve	RN 01.054.67-1

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 assembly instructions to ensure safe maintenance of the valve.
- Attention!
With valve design NC (normally closed): 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

Double seal change-over valves with diaphragm DELTA SDMU4 were developed for the use in the brewing and beverage industries, in the dairy and food industries as well as in chemical and pharmaceutical applications.

The diaphragm valves offer optimum protection of the product in hygienic and aseptic applications.

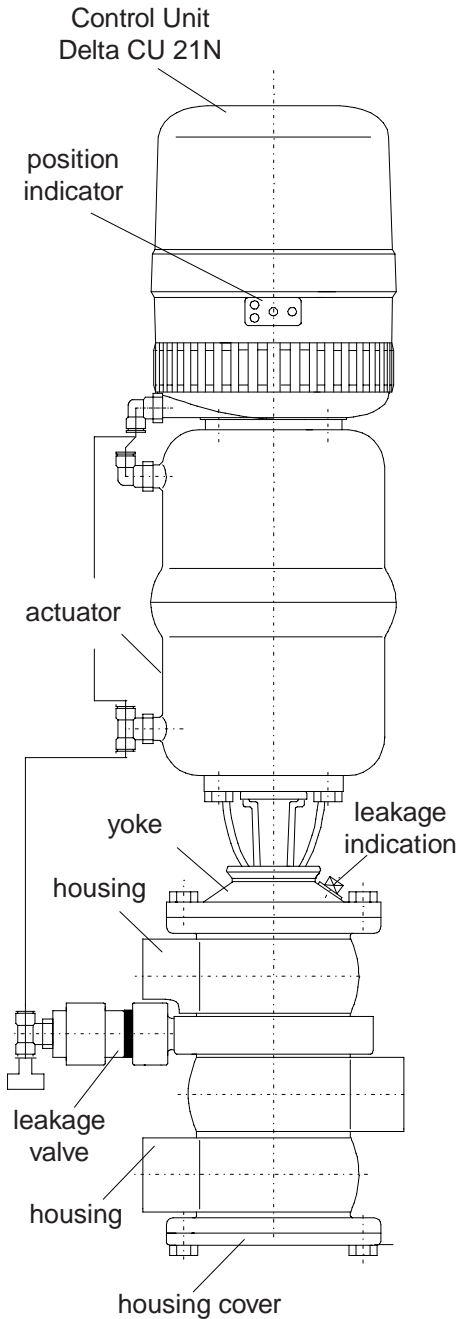
Product safety is achieved by the hermetic separation of the product chambers to the outside (atmosphere) by means of a flexible diaphragm.

- Leakage at the diaphragm is indicated via a leakage indication in the yoke area.

The field of application of the DELTA SDMU4 comprises the safe shut-off and change-over of line sections. The upper and middle housing are separated from one another by two seat seals. A leakage chamber is arranged between the seals, the leakage chamber being forcible closed by the two leakage valves or opened to the atmosphere.

Leakage at the seat seals of the upper valve shaft is discharged via the leakage valves to the atmosphere and indicated.

- Operation by pneumatic actuator with air connection. The actuator is generally mounted normally closed (**NC**).
- The inner parts of the actuator are maintenance-free.
- To avoid pressure hammers, the valve is to be closed against the flow direction of the fluid.
- As standard design a control unit DELTA CU21N with NOT element is installed on top of the actuator for the pneumatic control of the valve. The NOT element fulfills the task to increase the closing forces of the closed valve.
- The yellow luminous diodes in the control unit indicate the position of the valve shaft.
- Observe assembly instructions to ensure safe maintenance of the valve.



4. Auxiliary Equipment

- **Valve position indication**

A proximity switch holder (PSH) for the valve position indication can be installed direct on the actuator.

With SDMU4 valves being equipped with a PSH it must be observed that the max. closing pressure is reduced compared with the valve design being equipped with the control unit DELTA CU21N. (see table, item 8)

Proximity switches to signal the limit position of the valve seat can be installed at the proximity switch holder (PSH) if requested.

We recommend to use one of our APV standard types:
operating distance: 5 mm / diameter: 11 mm.

If the customer decides for a valve position indication other than APV type, we cannot take over any guarantee for a faultless function.

- **Field bus**

The direct assembly of an intelligent control unit DELTA CU21VN, Valve-Net with NOT element (field bus technology) is also possible.

5. Cleaning

For the cleaning of SDMU4 valves one has to distinguish between two areas.

- **The flow chambers**

The passages of the valve are cleaned by the cleaning liquid during the cleaning of the connected pipelines.

- **The leakage chamber**

The cleaning of the leakage chamber is effected via the leakage valves. The cleaning liquid is supplied via one leakage valve and discharged to the atmosphere via the second leakage valve.

The restraint passage of the cleaning liquid provides for a perfect cleaning of the whole leakage chamber.

Under normal conditions, 15 valves DN 25/1T - 100/4T can be cleaned via one spray distribution line DN 25.

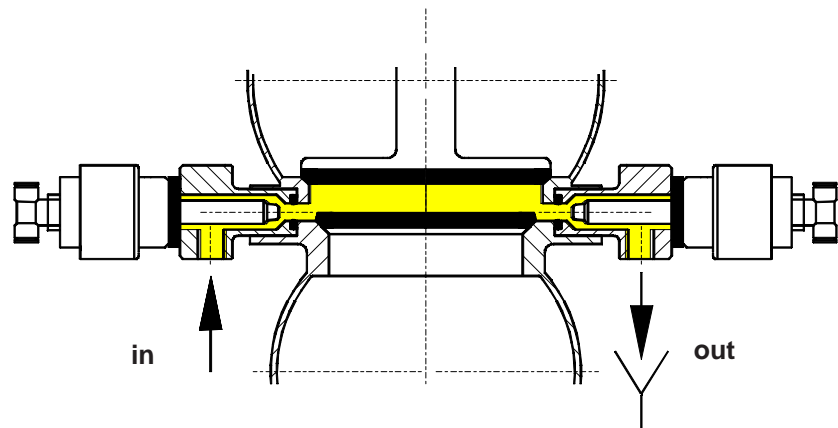
5. Cleaning

Recommendation for cleaning times with usual operating conditions and CIP liquids.

cleaning step	CIP spraying
pre-flushing	3 x 10 sec.
caustic flushing 80 ° C	3 x 10 sec.
intermediate flushing	2 x 10 sec.
acid flushing	3 x 10 sec.
subsequent flushing	2 x 10 sec.

- Depending on the pressure ratio, cleaning temperatures and the degree of soiling, different times have to be adjusted.
- Flushing quantity per CIP spraying about 1,2 ltr / 10 s.
- Cleaning pressure at CIP cleaning connection min. 2 bar
 max. 5 bar.

Cleaning of the leakage chamber via the leakage valves.



6. Installation

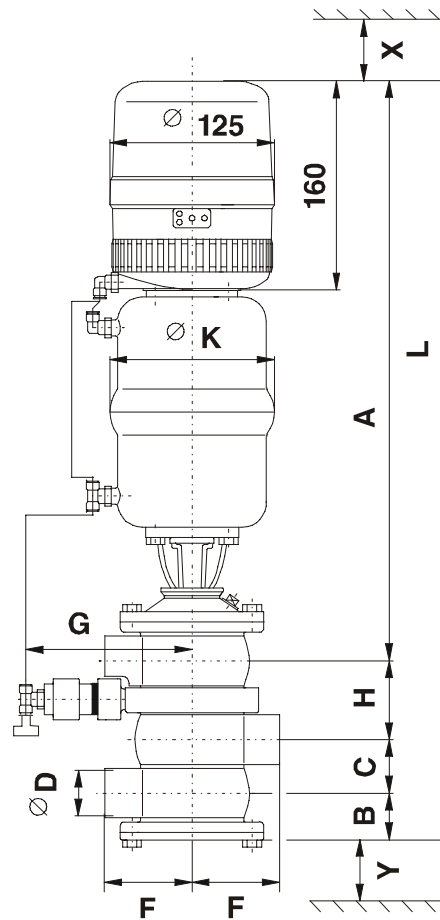
- Installation has to be done in such a way that fluids can drain off the valve housing and is preferably to be realized in vertical position.
- **Attention:** Observe welding instructions.

6.1 Welding Instructions

SDMU4

- Before welding of the valve, the valve insert must be dismantled from the housing. The lower housing seal has to be removed as well. 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 effected in such a way that deformation strain cannot be transferred from the outside to the valve body.
- The preparation of the weld seam up to 3 mm thickness must be carried out in butt manner as a square butt joint without air. (Consider shrinkage!)
- TIG orbital welding should be aimed at!
- 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.

7. Dimensions / Weights



dimensions in mm													
DN	A	B	C	Ø D	F	G	H	Ø K	L	stroke in mm	install. dimensions in mm		weight in Kg SDMU 4
											Y	X	
25		29.5	32	26.0	50								
40	446.2	37.5	44	38.0	67	130	63.5	126	591.2	10	300	200	
50	453.5	43.5	56	50.0	72	132	75.5	126	630.5	10	330	200	
65		52.0	74	66.0	85								
80		59.5	91	81.0	98								
Tube													
1T		27.8	28.6	22.6	50								
1.5T	444.8	36.1	40.8	34.9	67	130	60.4	126	581.9	10	300	200	
2T	451.9	44.4	53.8	47.6	72	132	73.1	126	623.2	10	330	200	
2.5T		49.0	68.0	60.3	85								
3T		55.1	80.9	72.9	90								

8. Technical Data

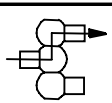
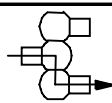
Product-wetted parts:	316 L, 1.4404
Other parts:	1.4301
Seals:	
Standard:	EPDM
Option:	HNBR
Membrane:	TFM / EPDM
Actuators:	1.4301
Max. operating temperature:	140 °C EPDM, HNBR
Sterilization temperature: (short-term)	up to 150 °C EPDM 140 °C HNBR
Air connection (for hose):	6 x 1 mm
Max. pneumatic air pressure:	8 bar
Min. pneumatic air pressure:	6 bar

(Use dry and clean pneumatic air, only.)

Closing times for double seal valves SDMU4

The opening and closing times can be fixed by adjustment of the throttling screw at the solenoid valve.

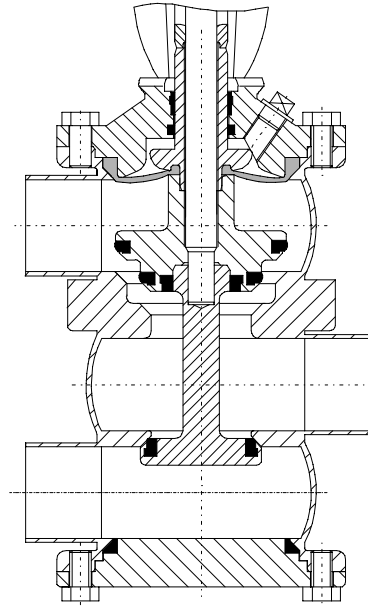
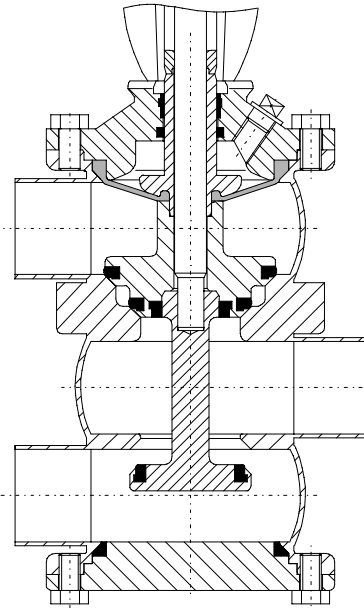
kvs values for SDMU4
valves in (m³/h)

	SDMU 45, SDMU 46	SDMU 45, SDMU 46
DN		
25		
40	38	38
50	70	70
65		
80		
100		
Tube		
1T		
1,5T	38	38
2T	70	70
2,5T		
3T		
4T		

8. Technical Data

Operating position: A / NC (normally closed)

Operating position: B / valve controlled



- Note:** In case of compressed air failure the max. product pressure has to be as indicated in tab. 1. Consider these figures for the design of the valves.
- Due to the seal technology, the max. product pressure is limited to 17,6 bar.
 - The product pressures for the valve position B as indicated in tables 1 and 2 are standard values at a standard compressed air pressure of 5,4 bar.

Table 1

DELTA SDMU4 max. product pressures in (bar) valve normally closed without NOT element or with compressed air failure							
valve position		actuator ∅ 74 mm		actuator ∅ 110 mm		actuator ∅ 165 mm	
		A	B	A	B	A	B
DN	Tube						
25	1T						
40	1,5T			12,9	17,6		
50	2T			8,1	10,5		
65	2,5T						
	3T						
80							

Table 2

DELTA SDMU4 max. product pressures in (bar) valve normally closed and NOT element							
valve position		actuator ∅ 74 mm		actuator ∅ 110 mm		actuator ∅ 165 mm	
		A	B	A	B	A	B
DN	Tube						
25	1T						
40	1,5T			17,6	17,6		
50	2T			17,6	10,5		
65	2,5T						
	3T						
80							

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:
 - 1 x spanner SW13
 - 1 x spanner SW17
 - 1 x spanner SW19
 - 1 x hexagon socket screw key 6 mm.
- Exchange of seals is done according to assembly instructions.
- All seals must be provided with a thin layer of grease before their installation.
- **The diaphragm must be provided with a thin layer of grease from the product-averted side.**

Recommendation:

APV food-grade-grease for EPDM and HNBR

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

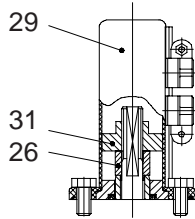
(60 g/tube - ref.-No. 000 70-01-018/93)

- ! **No matter what type of application, use only those greases being suited for the respective seal material !**

10. Service Instructions

Delta SDMU 4

The item numbers refer to the corresponding spare parts lists
Tube: RN 01.054.68-1



I. Dismantling from the line system

a. Shut off the line pressure and discharge the lines if possible.
 Release the connections with the leakage valves.

b. **With design NC:** control actuator with air.



Do not reach for movable parts!
Risk of injury.

c. **With CU design (Control Unit):**

- Lift the control unit by turning the safety ring, remove the operating cam and the hexagon nut (27) by holding against the centering disc (26). Remove the centering disc.

With PSH design (Proximity Switch Holder):

- Remove the cover (29) from the actuator (24) and release the operating cam (31) by holding against the centering disc (26). Remove the centering disc.

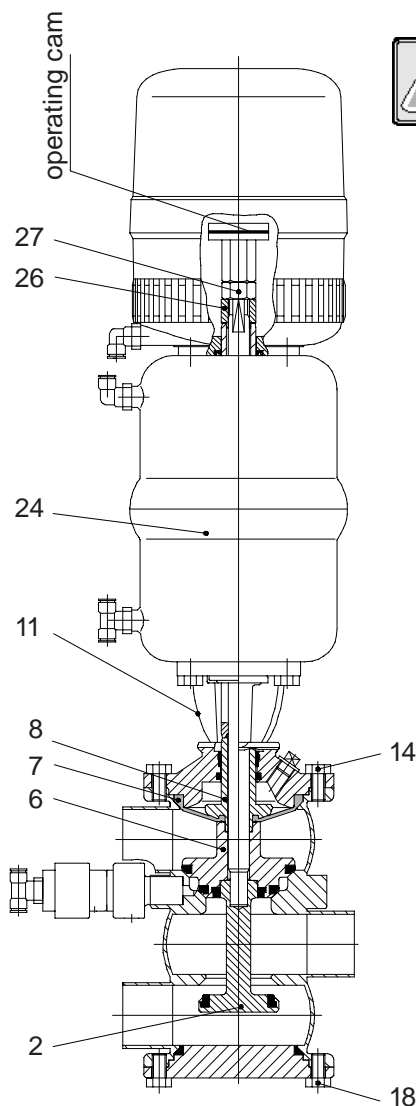
d. Release the hexagon screws (18) and remove the housing cover.

e. Pull the lower valve shaft (2) to the bottom out of the housing.

f. **With NO design:** **Shut off air.**
With NC design: **Control with air.**

g. Remove the hexagon screws (14) from the yoke flange (11).

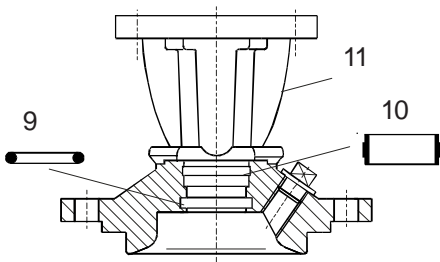
h. Lift the actuator (24) with yoke (11) to the top and out of the housing. The diaphragm (7), the upper shaft M4 (8) and the middle shaft SDMU4 (6) are accessible.



10. Service Instructions

II. Dismantling of seals (service)

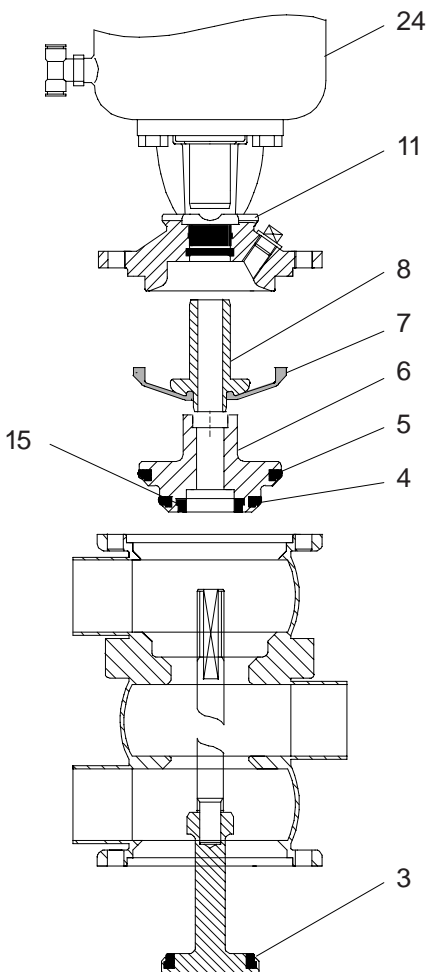
- a. Pull off the O-ring (16) from the housing cover.
- b. Remove the seat seal (3) in the lower valve shaft (2).
- c. Remove the seat seals (4, 5, 15) in the middle valve shaft SDMU4 (6).
- d. Release the yoke (11) from the actuator (24).
- e. Take the O-ring (9) and guide bush (10) out of the yoke (11).



III. Installation of seals and assembly of the valve

The item numbers refer to the spare parts drawings
Tube design: RN 01.054.68-1

- a. Insert the guide bush (10) and the O-ring (9) into the yoke (11).
 (Provide the seals with a thin layer of grease.)
- b. Screw the actuator (24) and the yoke (11) together.
- c. Provide the seat seals with a thin layer of grease before their installation.
 - Use the APV assembly tool, see chapt. 11, for the installation of the lower seat seal (3).
 - For the installation of the seat seals (4, 5) into the seal grooves, the seals have to be inserted by a rounded screw driver. After the installation, the seals have to be vented between the groove wall and seal by the tool. See to the correct position and an even fit of the seals.
- d. Insert the seat seal (15).
- e. Place the middle shaft SDMU4 (6) from the top centrally in the valve housing.
- f. Provide the product-averted side of the diaphragm with a thin layer of grease. Place the diaphragm (7) on the upper shaft M4 (8) and insert it into the yoke (11).
- e. **With valve design NC: Control the actuator with air.**
 Press the complete unit (actuator, yoke, upper shaft M4 with diaphragm) into the housing and tighten the hexagon screws (14) crosswise.



10. Service Instructions

III. Installation of seals and assembly of the valve

- f. Push the lower shaft (2) from the bottom into the housing. Place the centering disc (26) and tighten the hexagon nut (27) with CU design or the operating cam (31) with PSH design. Hold against the centering disc for this purpose.
Tightening moment of $M_d = 40 \text{ Nm}$.

Shut off control air !!!

- g. Lightly grease the O-ring (16) and insert it into the groove of the housing cover (17). Fix the housing cover by means of the hexagon screws (18).

h. With CU design:

Place the control unit and fix it accordingly.

With PSH design:

Place the proximity switch holder and fix it accordingly.

Insert the proximity switches and fix them.

- Readjust the proximity switches if necessary.

- i. Connect the leakage valves.

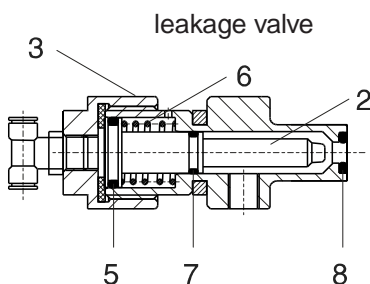
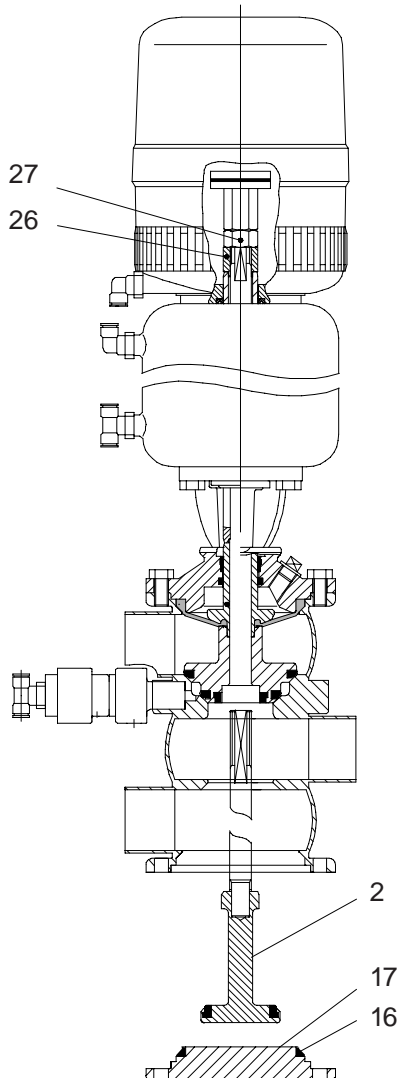
- j. Connect the compressed air supply.

IV. Maintenance of leakage valves

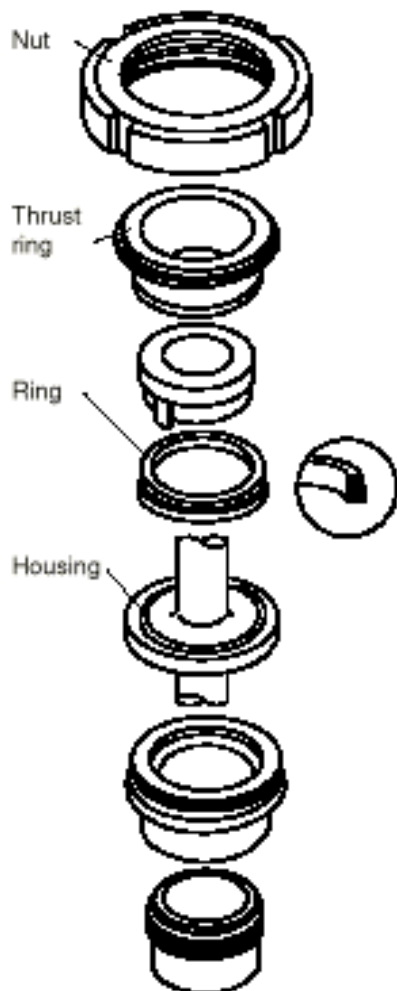
The item numbers refer to the corresponding spare parts list.

Leakage valves RN: 01.054.67.

- a. Pull off the compressed air hoses at the two leakage valves.
- b. Shut off and drain off the CIP supply line.
- c. Remove the CIP supply and drain lines from the leakage valves.
- d. Release the inner hexagon screw and the bracket.
- e. Unscrew the threaded cap (3), pull off the piston (2) and the spring (6).
- f. Dismantle all seals (5, 7, 8).
- g. Assembly is done in reverse order.



11. Assembly tool for seat seal



The assembly tool consists of:

- nut
- thrust ring
- ring with venting plug
- housing

Installation of the seat seal in the valve shaft

1. Insert the valve shaft into the housing in such a manner that the seal groove is in the valve housing.
2. Clamp the shaft in the housing by the threaded bolt.
3. Lightly grease the seat seal.
Use food-grade special grease for this purpose.
Pull the seal onto the ring with venting plug until it stops.
4. Insert the ring with the seat seal into the housing and press it down until it stops.
5. Insert the thrust ring into the housing. Screw on the nut and tighten it by a hook spanner until it stops.
6. Release the nut. Pull the ring and the thrust piece out of the housing.
7. Take the housing out of the vise, open the slewable brackets and take the shaft out of the housing. Check the correct fit of the seat seal.

Assembly tool for the lower seat seal

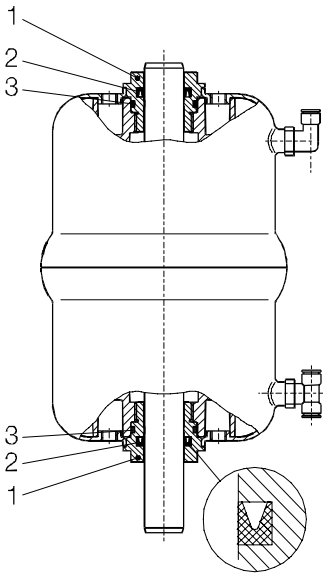
DN	Tube	ref.No.
25	1T	000-51-13-110/17
40	1,5T	000-51-13-111/17
50	2T	000-51-13-112/17
65	2,5T	000-51-13-113/17
	3T	000-51-13-121/17
80		000-51-13-114/17
100	4T	000-51-13-115/17

12. Actuator

I. Maintenance of the actuator

The item numbers refer to the spare parts drawing.
Actuator:RN 01.054.86

- a. Remove the control unit or proximity switch holder.
(see service instructions, chapt. 10.1.-a-h.)
- b. Remove the inner hexagon screw from the adapter **(25)** of the control unit.
- c. Screw off the two seal screws **(1)** by holding against the actuator by a strap wrench. Remove the O-rings **(3)** and the V-seals **(2)**.



II. Installation of seals and assembly of the actuator

- a. Install the lightly greased O-rings **(3)** and the V-seal **(2)** in the seal screw **(1)**.

See to the correct direction of the V-seal.

- b. Push the seal screws over the piston rod at both sides of the actuator and tighten them.
- c. Fix the adapter of the control unit.

Attention: See to the position of the adapter.

Attention: Consider the required valve design
NC = normally closed
NO = normally open
during the assembly of the actuator.

By turning the actuator by 180°, an optional design NC or NO can be determined.

- d. Fix the air hoses.
- e. The assembly of the valve is done in reverse order.

13. Trouble Shooting

The item numbers refer to the respective spare parts drawings.

- Valve is untight, leakages via the leakage valves : Replace seat seals **(4, 5)**.
Check line pressure:
perm. line pressure see 8.
- Leakages at the cylinder of the leakage valve : Replace O-rings **(5, 7, 8)**.
Check cleaning liquid supply.
- Leakages between housing and yoke flange : Replace diaphragm **(7)**.
- Air escapes from the actuator : Dismantle actuator **(24)** from valve, replace seal **(2)** and O-ring **(3)** in the seal screw **(1)**.
(see spare parts list RN 01.054.86)
- Actuator does not work, air escapes permanently via the venting plug : Replace actuator.
- Valve position indication is missing or unprecise : Carry out fine adjustment according to assembly instructions of control unit.

14. Spare Parts Lists

(see annex)

BA SDMU4 00002
ID-No.: H 2 0 2 3 3 2
Translation of original manual



rev. 0



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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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Besteht aus 4 Blatt 1

Gezeichnet 28.10.03 Trytko
 Geprüft 31.10.03 Schulz
 Normgepr.

Datum 10/03 Trytko 09/04 Trytko 09/05 Trytko
 Name Trytko Trytko Trytko

Ersatzteilliste: spare parts list:
 Ventil SDMU4 FS-CU und VSM DN 40-100
 Valve SDMU4 FS-CU and PSH DN 40-100

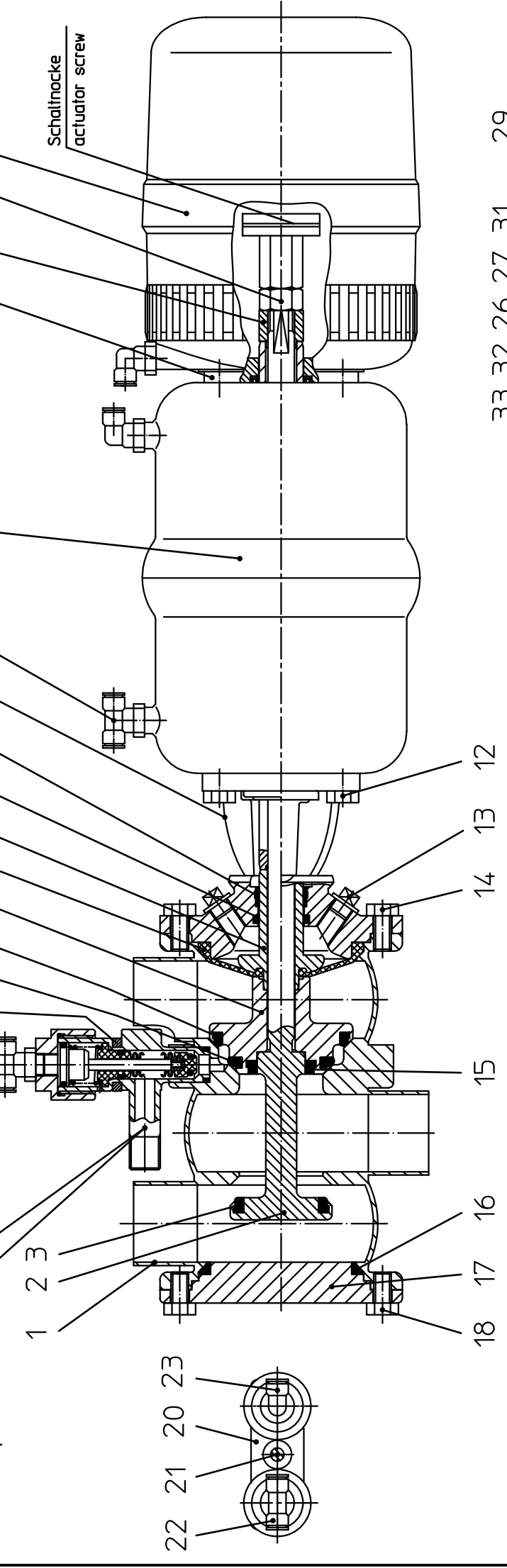
19 RN01.054.67
 gültig bis September 2004
 valid until September 2004

20 21 20 23

24 RN01.054.86

25 26 27 28

29



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

** Dichtungswerkstoff Membrane: seal material of membrane:
 ../22-TFM/EPDM WS 283 Standard-Ausführung standard design
 ../23-TFM/EPDM WS 287/64 3A0-Ausführung 3A0 design

** Dichtungswerkstoff Leckageventil: seal material of leakage valve:
 ../29-1.4404-HNBR
 ../59-1.4404-EPDM
 ../69-1.4404-FPM

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Pos. item	Benennung description	25		40		50		65		80		100		125		150	
		WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
19	Leckageventil Leakage valve		20-37-068/														
19.1	Leckageventil Leakage valve		32-40-615/														
20	Lasche Bracket		08-17-002/12														
21	Zyl. Schraube Cyl. screw		DIN EN ISO 4762-M8x35-A2-70														
22	T-Verschraubung Tee connector		08-63-370/93														
23	W-Verschraubung Angular union		08-63-350/93														
24	Steuerkopf Actuator		15-32-051/17														
25	CU-Adapter CU-adapter		08-48-415/93														
26	Zentrierscheibe Centering nut		15-28-940/12														
27	Skt. Mutter Hex. nut		DIN EN ISO 10511-M12-A2-70														
28	Control-Unit Control-Unit		16-31-232/93														
29	VSM Gehäuse-SW4 Proximity switch holder housing SW4		15-33-932/93														
31	Schaltinocke Operating cam		08-52-291/97														
32	Skt. Schraube Hex. screw		DIN EN 24017-M8x16-A2-70														
33	O-Ring O-ring		OR 66x2 NBR 70-75 Shore A														

Blatt 3

Ventil SDMU4 FS-CU und VSM DN 40-100
Valve SDMU4 FS-CU and PSH DN 40-100

RN 01.054.68

Gezeichnet	28.10.03	Trytko
Geprüft	31.10.03	Schulz
Normgepr.		

Datum	10/03	09/04	09/05
Name	Trytko	Trytko	Trytko



APV Rosista GmbH
D-58425 Urra
Germany

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Ersatzteilliste: spare parts list:

Ventil SDMU4 FS-CU und VSM DN 40-100
 Valve SDMU4 FS-CU and PSH DN 40-100

Blatt 4



APV Rosista GmbH
 D-58425 Unna
 Germany

Gezeichnet	02.09.05	Trytko
Geprüft	02.09.05	Schulz
Normgepr.		

Datum	09/05	08/06				
Name	Trytko	Trytko				

Pos. item	Benennung description	DN						WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
		25	40	50	65	80	100			
Dichtungs- satz	Pos. 3, 4, 5, 7, 9, 15, 16, 27, und Dichtungen Pos. 19 nur im kompletten Dichtungssatz erhältlich Item. 3, 4, 5, 7, 9, 15, 16, 27, and seal item. 19 available as complete seal kits only									
1	Dichtungssatz FPM Seal kit		58-34-479/00	58-34-480/00	58-34-481/00	58-34-482/00	58-34-483/00			
1	Dichtungssatz EPDM Seal kit		58-34-479/01	58-34-480/01	58-34-481/01	58-34-482/01	58-34-483/01			
1	Dichtungssatz VMQ Seal kit		58-34-479/02	58-34-480/02	58-34-481/02	58-34-482/02	58-34-483/02			
1	Dichtungssatz HNBR Seal kit		58-34-479/06	58-34-480/06	58-34-481/06	58-34-482/06	58-34-483/06			

gültig bis September 2004
 valid until September 2004

Dichtungs- satz	Pos. 3, 4, 5, 7, 9, 15, 16, 27, und Dichtungen Pos. 19.1 nur im kompletten Dichtungssatz erhältlich Item. 3, 4, 5, 7, 9, 15, 16, 27, and seal item. 19.1 available as complete seal kits only	gültig ab September 2004 valid from September 2004					
		58-34-961/00	58-34-962/00	58-34-963/00	58-34-964/00	58-34-965/00	58-34-966/00
1	Dichtungssatz FPM Seal kit						
1	Dichtungssatz EPDM Seal kit						
1	Dichtungssatz VMQ Seal kit						
1	Dichtungssatz HNBR Seal kit						

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Ersatzteilliste: spare parts list:

Ventil SDMU4 FS-CU und VSM 1-4 Zoll
 Valve SDMU4 FS-CU and PSH 1-4 inch

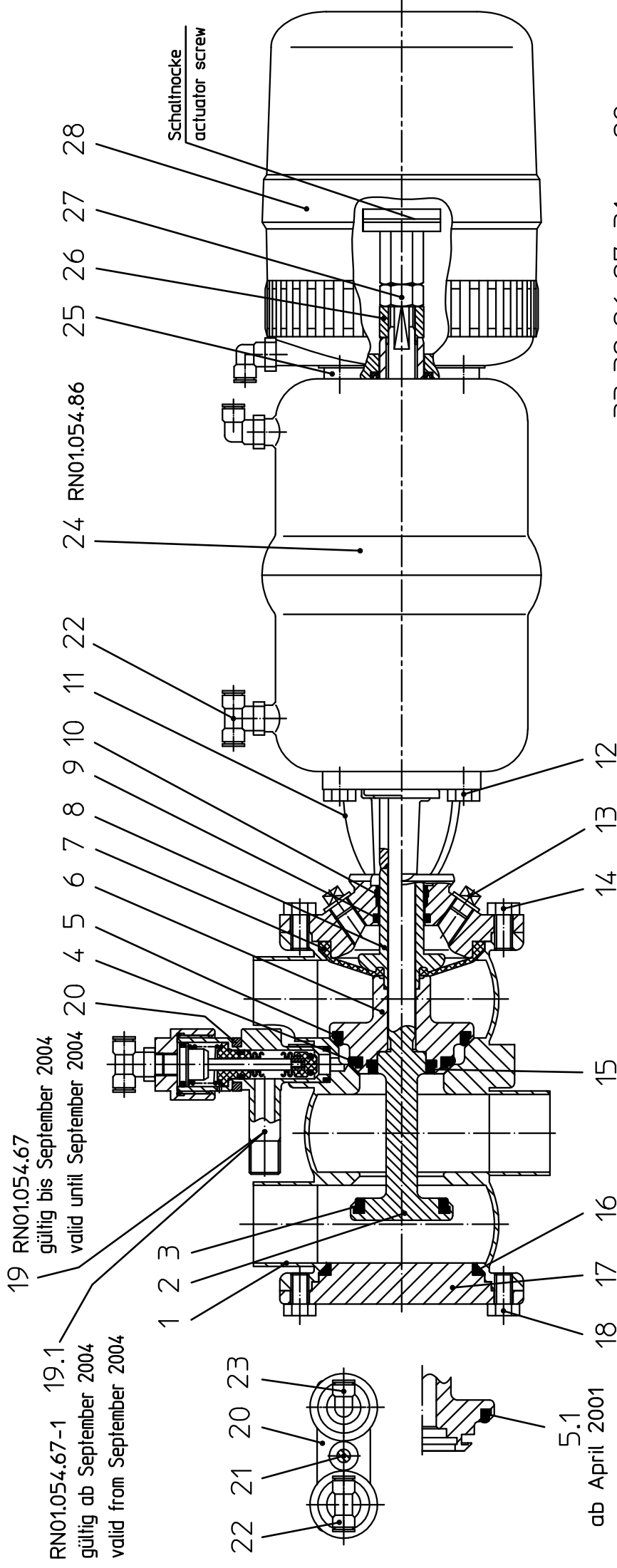
Besteht aus 4 Blatt 1



APV Rosista GmbH
 D-59425 Urra
 Germany

RN 01.054.68-1

Gezeichnet	8.02.00	Trytko	Name	Trytko
Geprüft	3.04.00	Schulz		
Normgepr.	10/03	Trytko	09/05	08/08
	Trytko	Trytko	Trytko	Trytko



19 RN01.054.67

gültig bis September 2004

valid until September 2004

RN01.054.67-1 19.1

gültig ab September 2004

valid from September 2004



22 21 20 23

5.1

ab April 2001

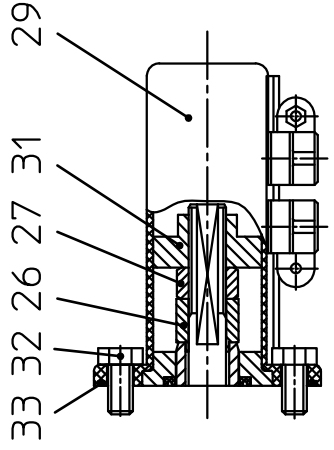
Es stehen verschiedene Dichtungswerkstoffe zur Verfügung. Bitte WS-Nr. ergänzen

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

** Dichtungswerkstoff Leckageventil: seal material of leakage valve:
 ../29-1.4404-HNBR
 ../59-1.4404-EPDM
 ../69-1.4404-FPM

*** Dichtungswerkstoff Membrane: seal material of membrane:
 ../22-TFM/EPDM WS 283
 Standard-Ausführung standard design
 ../23-TFM/EPDM WS 287/64
 3A0-Ausführung 3A0 design



33 32 26 27 31 29

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Ersatzteilliste: spare parts list:

Ventil SDMU4 FS-CU und VSM 1-4 Zoll
 Valve SDMU4 FS-CU and PSH 1-4 inch

Blatt 2



APV Rosista GmbH
 D-58425 Unna
 Germany

RN 01.054.68-1

Pos. item	Benennung description	1"		1.5"		2"		2.5"		3"		4"		WS-Nr. ref.-no.	WS-Nr. ref.-no.
		WS-Nr. ref.-no.		WS-Nr. ref.-no.		WS-Nr. ref.-no.		WS-Nr. ref.-no.		WS-Nr. ref.-no.		WS-Nr. ref.-no.			
1	Gehäuse Housing SDMU45			15-68-415/47		15-68-465/47		15-68-515/47							
1	Gehäuse Housing SDMU46			15-69-415/47		15-69-465/47		15-69-515/47							
2	Schaft unten Lower valve shaft			15-25-418/42		15-25-468/42		15-26-521/42							
3	Tellerdichtung Seat seal lower valve shaft		*	58-33-393/		58-33-443/		58-33-109/							
4	Tellerdichtung Seat seal Mittlerer shaft		*	58-33-394/		58-33-444/		58-33-494/							
5	Tellerdichtung Seat seal Mittlerer shaft		*	58-33-194/		58-33-494/								bis April 2001	
5.1	Tellerdichtung Seat seal Mittlerer shaft		*	58-33-193/		58-33-493/		58-33-546/						ab April 2001	
6	Mittlerer shaft Middle valve shaft SDMU4			15-26-421/42		15-26-471/42		15-25-518/42							
7	Membrane (Standard)		***	58-23-395/22		58-23-495/22		58-23-545/22							
	Diaphragm (3A0)		***	58-23-395/23		58-23-495/23		58-23-545/23							
8	Schaft M4 oben Upper valve shaft M4			39-22-396/42		39-22-496/42		39-22-546/42							
9	O-Ring			20.2-3		=		=							
	O-ring			58-06-078/64		=		=							
10	Führungsbuchse Bushing			08-01-178/23		=		=							
11	Laterne Yoke			39-40-395/47		39-40-495/47		39-40-545/47							
12	Skt. Schraube Hex. screw			DIN EN 24017-M8x16-A2-70		DIN EN 24017-M8x16-A2-70		DIN EN 24017-M8x20-A2-70							
13	Entlüftungstopfen Venting plug		G1/8	08-60-005/94		=		=							
14	Skt. Schraube Hex. screw			DIN EN 24017-M8x16-A2-70		DIN EN 24017-M8x16-A2-70		DIN EN 24017-M10x14-A2-70							
15	Tellerdichtung Seat seal		*	58-33-293/		=		=							
16	O-Ring			62.9-5.33		=		75.6-5.33							
	O-ring			58-06-300/64		=		58-06-345/64							
17	Gehäusedeckel Housing lid			39-01-138/47		=		39-01-139/47							

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Ersatzteilliste: spare parts list:

Ventil SDMU4 FS-CU und VSM 1-4 Zoll
 Valve SDMU4 FS-CU and PSH 1-4 inch

Blatt 3



APV Rosista GmbH
 D-58425 Urra
 Germany

RN 01.054.68-1

Pos. item	Benennung description	1"		1.5"		2"		2.5"		3"		4"		WS-Nr. ref.-no.
		WS-Nr. ref.-no.		WS-Nr. ref.-no.		WS-Nr. ref.-no.		WS-Nr. ref.-no.		WS-Nr. ref.-no.		WS-Nr. ref.-no.		
18	Skt. Schraube Hex. screw			DIN EN 24017-M8x14-A2-70										WS-Nr. ref.-no.
19	Leckageventil Leakage valve		**	20-37-068/	=									WS-Nr. ref.-no.
19.1	Leckageventil Leakage valve		**	32-40-615/	=									WS-Nr. ref.-no.
20	Lasche Bracket			08-17-002/12	=									WS-Nr. ref.-no.
21	Zyl. Schraube Cyl. screw			DIN EN ISO 4762-M8x35-A2-70										WS-Nr. ref.-no.
22	T-Verschraubung Tee connector		G1/8	08-63-370/93	=									WS-Nr. ref.-no.
23	W-Verschraubung Angular union		G1/8	08-63-350/93	=									WS-Nr. ref.-no.
24	Steuerkopf Actuator			15-32-051/17 ø110	=	15-32-052/17 ø165								WS-Nr. ref.-no.
25	CU-Adapter CU-adapter			08-48-415/93	=									WS-Nr. ref.-no.
26	Zentrierscheibe Centering nut			15-28-940/12	=									WS-Nr. ref.-no.
27	Skt. Mutter Hex. nut			DIN EN ISO 10511-M12-A2-70										WS-Nr. ref.-no.
28	Control-Unit Control-Unit		CU31 Direct-Connect	16-31-232/93	=									WS-Nr. ref.-no.
29	VSM Gehäuse-SW4 Proximity switch holder housing SW4			15-33-932/93	=									WS-Nr. ref.-no.
31	Schaltlocke Operating cam			08-52-291/97	=									WS-Nr. ref.-no.
32	Skt. Schraube Hex. screw			DIN EN 24017-M8x16-A2-70										WS-Nr. ref.-no.
33	O-Ring O-ring			OR 66x2 NBR 70-75 Shore A										WS-Nr. ref.-no.

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Ersatzteilliste: spare parts list:

Ventil SDMU4 FS-CU und VSM 1-4 Zoll
 Valve SDMU4 FS-CU and PSH 1-4 inch

Blatt 4

Gezeichnet	02.09.05	Trytko
Geprüft	02.09.05	Schulz
Normgepr.		
Datum	09/05	08/06
Name	Trytko	Trytko

RN 01.054.68-1



APV Rosista GmbH
 D-58425 Unna
 Germany

Pos. item	Benennung description	1"		1,5"		2"		2,5"		3"		4"	
		WS-Nr. ref.-no.		WS-Nr. ref.-no.		WS-Nr. ref.-no.		WS-Nr. ref.-no.		WS-Nr. ref.-no.		WS-Nr. ref.-no.	
1	Dichtungssatz FPM Seal kit			58-34-487/00		58-34-488/00		58-34-489/00					
1	Dichtungssatz EPDM Seal kit			58-34-487/01		58-34-488/01		58-34-489/01					
1	Dichtungssatz VMQ Seal kit			58-34-487/02		58-34-488/02		58-34-489/02					
1	Dichtungssatz HNBR Seal kit			58-34-487/06		58-34-488/06		58-34-489/06					

Pos. 3, 4, 5, 7, 9, 15, 16, 27 und Dichtungen Pos. 19 nur im kompletten Dichtungssatz erhältlich
 item. 3, 4, 5, 7, 9, 15, 16, 27 and seal item. 19 available as complete seal kits only

Dichtungs-
satz
||

Pos. 3, 4, 5.1, 7, 9, 15, 16, 27 und Dichtungen Pos. 19.1 nur im kompletten Dichtungssatz erhältlich
 item. 3, 4, 5.1, 7, 9, 15, 16, 27 and seal item. 19.1 available as complete seal kits only

1	Dichtungssatz FPM Seal kit			58-34-968/00		58-34-969/00		58-34-970/00					
1	Dichtungssatz EPDM Seal kit			58-34-968/01		58-34-969/01		58-34-970/01					
1	Dichtungssatz VMQ Seal kit			58-34-968/02		58-34-969/02		58-34-970/02					
1	Dichtungssatz HNBR Seal kit			58-34-968/06		58-34-969/06		58-34-970/06					

gültig ab April 2001
 valid from April 2001

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02/194

Ersatzteilliste: spare parts list:

Steuerkopf SW4

Actuator SW4

Besteht aus 1 Blatt Blatt 1

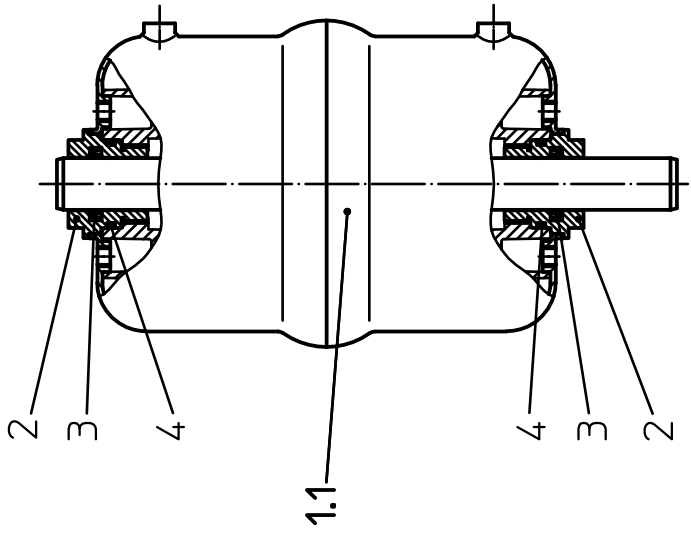
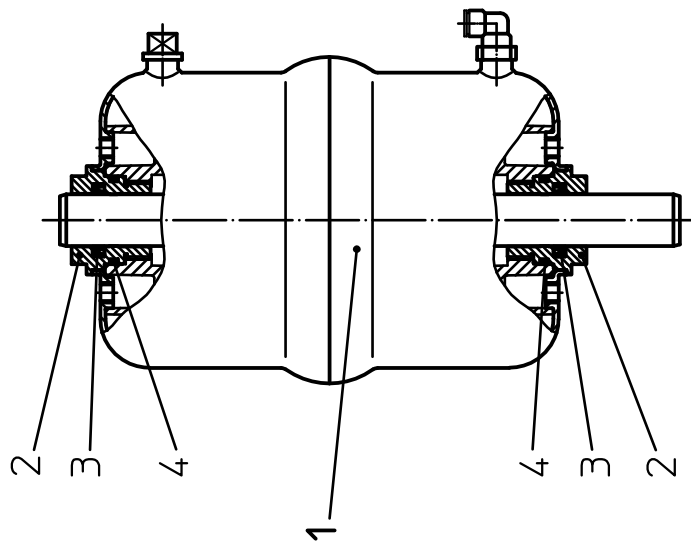
Datum	1/98	12/03	01/06	06/08
Name	Trytko	Trytko	Trytko	Trytko

Gezeichnet	15.1.98	Name	Trytko
Geprüft	15.1.98		
Normgepr.	19.1.98		



APV Rosista GmbH
D-58425 Unna
Germany

RN 01.054.86



Pos. item	Quantität Menge	Benennung description	Ø74 WS-Nr. ref.-no.	Ø110 WS-Nr. ref.-no.	Ø165 WS-Nr. ref.-no.
1		Steuerkopf kpl Feder/Luft Ausf. matt-gl. Actuator complete spring/air design satin fin.	15-32-050/17	15-32-051/17	15-32-052/17
		Steuerkopf kpl Luft/Luft Ausf. matt-gl. Actuator complete air/air design satin fin.	15-32-085/17	15-32-086/17	15-32-087/17
1.1		Steuerkopf kpl Feder/Luft Ausf. 3A-blank Actuator complete spring/air design 3A-bright fin.	3A0 15-32-059/13	3A0 15-32-060/13	3A0 15-32-061/13
		Steuerkopf kpl Luft/Luft Ausf. 3A-blank Actuator complete air/air design 3A-bright fin.	3A0 15-32-057/13	3A0 15-32-065/13	3A0 15-32-066/13
2	2	Dichtungsschraube Seal screw	15-28-840/93	=	=
3	2	V-Dichtung V-seal	58-32-010/83	=	=
4	2	O-Ring O-ring	58-06-124/83	=	=

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02/194

Ersatzteilliste: spare parts list:		Besteht aus <u>1</u> Blatt		Blatt <u>1</u>		
Leckageventil SD4		Gezeichnet	14.7.98	Name	Trytko	
Leakage valve SD4		Geprüft	21.7.98	Name	Spielthoff	
		Normgepr.	17.8.98	Name	Plümper	
		Datum	7/98	10/02	10/03	09/04
		Name	Trytko	Trytko	Trytko	Trytko



RN 01.054.67

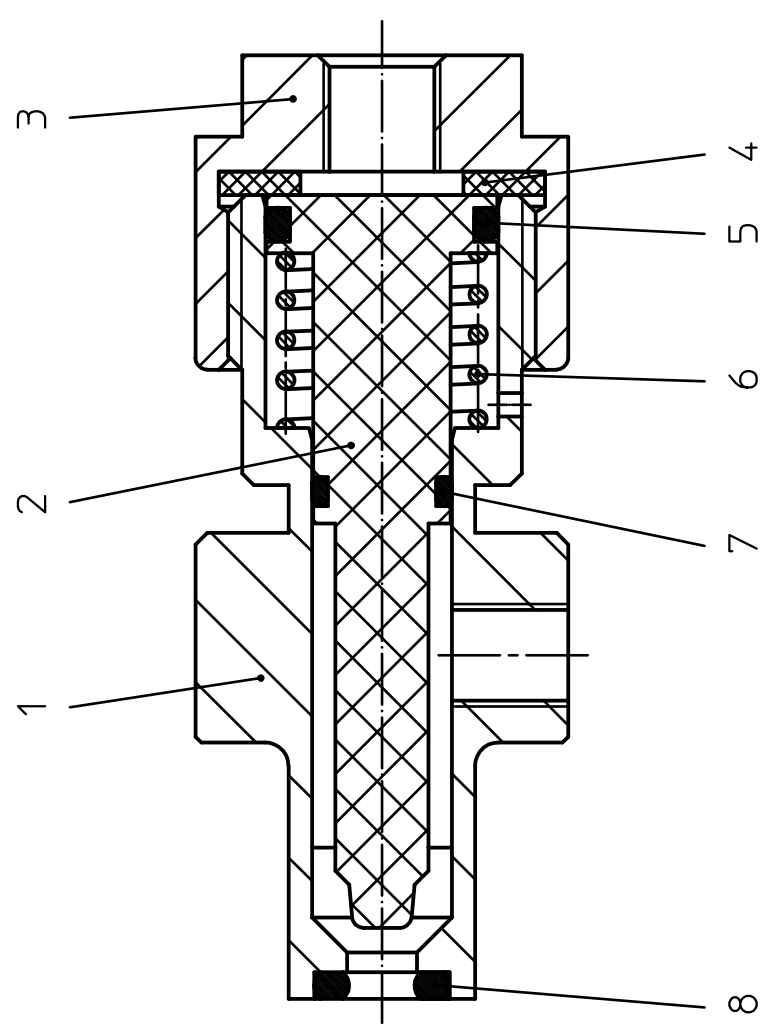
Es stehen verschiedene Dichtungswerkstoffe zur Verfügung.
 Bitte WS-Nr. ergänzen

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

* Dichtungswerkstoff: material seals:
 ../33-HNBR
 ../64-EPDM
 ../73-FPM

** Werkstoff metallisch+Dichtung: material metallic+seal:
 ../29-HNBR-1.4404
 ../59-EPDM-1.4404
 ../69-FPM -1.4404

Pos. item	Benennung description	WS-Nr. ref.-no.
1	Leckageventil Leakage valve	** 20-37-068/
1	Gehäuse Leckageventil Housing leakage valve	21-08-002/47
2	Kolben Piston	15-29-102/93
3	Deckel Leckageventil Cover for leakage valve	21-20-002/17
4	Dichtung Seal	58-01-085/63
5	O-Ring 15,3-2,4	58-06-052/64
6	Feder Leckageventil Spring leakage valve	60-07-002/13
7	O-Ring 8,5-1,8	* 58-06-025/
8	O-Ring 6,0-3,0	* 58-06-016/



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02/94

Besteht aus		1	Blatt	1	Blatt	1
Datum	10/03	09/04	Tryiko	Tryiko	Tryiko	Tryiko
Name	Tryiko	Tryiko	Tryiko	Tryiko	Tryiko	Tryiko
Gezeichnet	30.10.03	Tryiko	Tryiko	Tryiko	Tryiko	Tryiko
Geprüft	04.11.03	Schulz	Schulz	Schulz	Schulz	Schulz
Normgepr.						

APV Rosista GmbH
D-59425 Urra
Germany

RN 01.054.67-1

Ersatzteilliste: spare parts list:
Leckageventil SDMF4
Leakage valve SDMF4

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

- * Werkstoff metallisch+Dichtung material metallic+seal
- .. /29-HNBR-1.4404
- .. /59-EPDM-1.4404
- .. /69-FPM -1.4404
- ** O-Ring / O-ring
- .. /33-HNBR
- .. /73-FPM
- .. /93-EPDM

Pos. / Item	Benennung / description	WS-Nr. / ref.-no.
1	Leckageventil / Leakage valve	* 32-40-615/
1	Deckel Leckageventil / Cover for leakage valve	21-20-002/17
2	Kalben / Piston	15-29-010/42
3	Balgeinheit SDMF4 / Bellow unit SDMF4	42-06-010/92
4	Gehäuse Leckageventil / Housing leakage valve	21-08-170/47
5	O-Ring 22,0-2,5	58-06-091/64
6	O-Ring 15,3-2,4	58-06-052/64
7	Feder Leckageventil / Spring leakage valve	60-07-002/13
8	O-Ring 9-2,5	** 58-06-035/
9	O-Ring 5-2,5	** 58-06-008/
10	O-Ring 12-2,5	** 58-06-045/

