

Operating Manual

DELTA SWT4

Tank Outlet Valve



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

Table of Contents :	Page :
1. General Terms	2
2. Safety Instructions	2
3. Mode of Operation	3
4. Auxiliary Equipment	4
4.1 Proximity switch holder (PSH)	
4.2 CONTROL UNIT	
4.3 SWT4 variants	
5. Installation	5 - 6
5.1 Connections (threaded connections/clamp flange connections)	
5.2 Tank-bottom welding flange	
5.3 Welding Instructions	
6. Dimensions / Weights	7
7. Technical Data	8 - 9
8. Maintenance	10
9. Service Instructions	11 - 13
9.1 Dismantling from the line system	
9.2 Disassembly of wear parts (product-wetted parts)	
9.3 Installation of seals and assembly of valve	
9.4 Installation of valve	
10. Service Instructions Actuator	14
10.1 Maintenance of actuator	
10.2 Installation of seals and assembly of actuator	
10.3 Actuator with valve position feedback	
11. Service Instructions	15
Assembly tool for seat seal	
12. Trouble Shooting	16
13. Spare Parts Lists	
13.1 Valve bodies SWT DN	
13.2 Valve bodies SWT Inch	
13.3 Actuator	
13.4 Valve position indicator with proximity switch holder	

1. General Terms

This operating manual should be read carefully by the competent operating and maintenance personnel.

We 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.

- Separate electric and pneumatic connections.
- **Depressurize** the line system before any maintenance work. Clean the valve if possible and drain residual liquids.



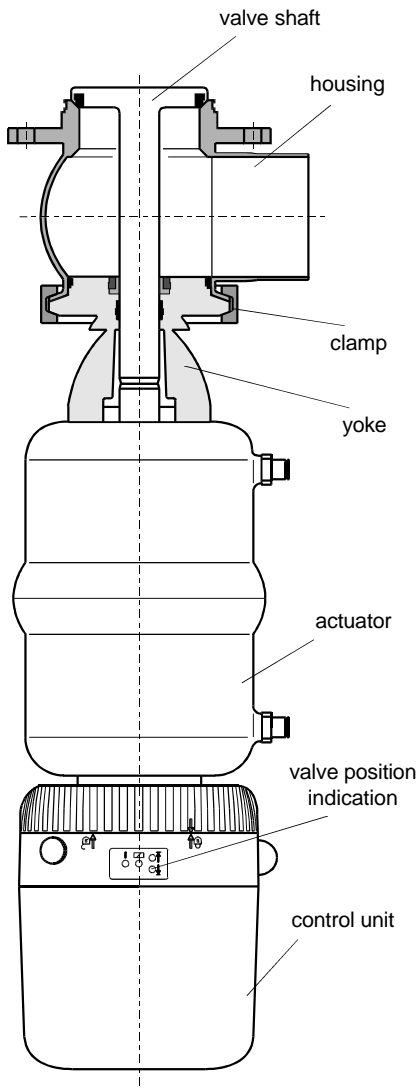
- **Do not reach into the open valve.**

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!**
Valve design NC (normally closed): Before releasing the housing clamp connection, the valve insert must be relieved by controlling the actuator.
- The actuator is under spring load, **do not** open it. **Caution!**
- The valve must only be assembled, disassembled and reinstalled by personnel having been trained in APV valves or by APV fitters. Contact your local APV representatives if necessary.

3. Mode of Operation

valve illustration
actuator normally closed : FS (NC)



The tank outlet valve DELTA SWT4 have been developed for applications in the brewing and beverage, dairy and food industries as well as for chemical and pharmaceutical use.

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

The field of application of the DELTA SWT 4 valve comprises the shut-off of the tank to the line sections.

- Operation by pneumatic actuator with air connection, reset by spring force.
- By different assembly of the actuator, the following designs are possible:
 - NC:** actuator normally closed / air-to-raise, spring-to-lower
 - NO:** actuator normally open / air-to-lower, spring-to-raise
- The inner parts of the actuator need not be serviced.
- Cleaning of the inner valve is effected during the CIP cleaning of the line system. The valve passages are cleaned during the cleaning of the connected pipelines or by the cleaning liquid of the tank cleaning process.
- As standard design for the pneumatic valve control, the valve is equipped with a Control Unit CU31 being placed on the actuator.
- The yellow luminous diodes in the Control Unit indicate the position of the valve shaft.

4. Auxiliary Equipment

4.1 Valve position indication (fig 4.1)

- Alternatively to the Control Unit, proximity switch holders (PSH) to signal the valve position can be mounted to the actuator. Proximity switches to signal the limit position of the valve disk can be mounted to the proximity switch holder if required.

We recommend to use our APV standard:

Type: three-wire proximity switch

Operating distance: 5mm / diameter: 11mm

Operating voltage: 10 - 30 V DC

pnp positive switching, closing function

Installation „non-flush”

Using a valve position indicator other than APV, we cannot accept any liability for a faultless function.

valve position indication

fig 4.1

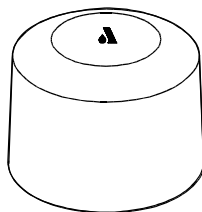
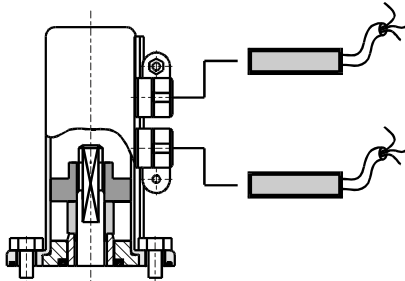


fig 4.2

4.2 CONTROL UNIT (fig 4.2)

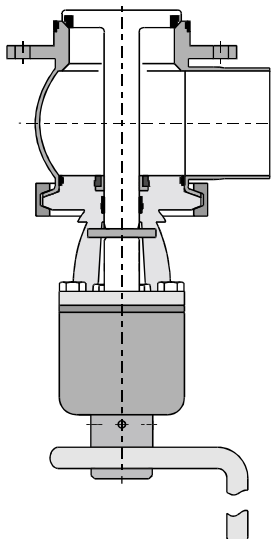
For the start-up as well as assembly and disassembly of the different designs please use the respective manual.

The following different designs are available:

	1 solenoid valve (SV)
Direct Connect Reference No.:	CU31 Direct Connect 16 - 31 - 232/93
Profibus Reference No.:	CU21 V 16 - 31 - 236/93
Device Net Reference No.:	CU31 Device Net 16 - 31 - 240/93
AS-Interface Reference No.:	CU31 AS-Interface 16 - 31 - 244/93

SWT4- with manual operation

fig 4.3



- For the assembly of a Control Unit on the SWT4 valve an adapter is required

	adapter
Designation Referenc No.:	CU2 adapter - SW4, SD4, M4 08 - 48 - 415/93

4.3 SWT4 - variants

- DELTA SWT4 with manual operation (fig 4.3)
- DELTA SWT4 DN 125-150

5. Installation

- The installation must be effected in such a way that liquids can drain off the valve housing and should preferably be provided in vertical installing position.



- The valve housing cannot be welded direct into the pipeline. At the side ports of the valve housing separate connections (flanges, unions or clamps) must be provided.

See fig 5. page 6

- **Attention:** Observe welding instructions.

5.1 Connections:

Besides the housings with weld ends, the following connections are alternatively available:

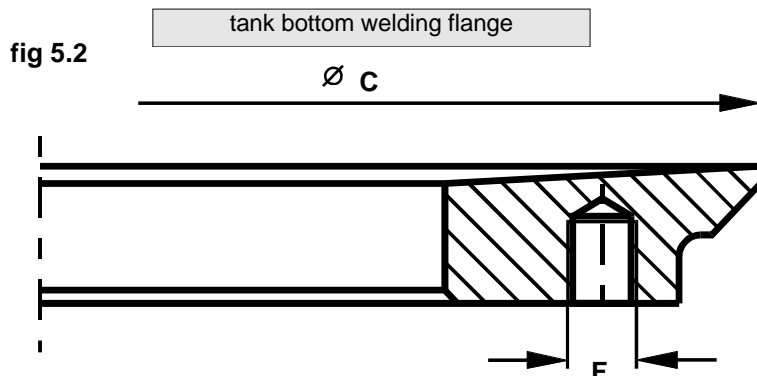
- male part to DIN 11851
- male part IDF / ISS to ISO 2853
- male part RJT acc. to BS 4825-5
- male part SMS
- male part to DS 722
- flange connection FGN1 DIN
- flange connection FGN1 Inch
- clamp connection to DIN 32676
- clamp connection to ISO 2852

5.2 Tank bottom welding flange (fig 5.2)

The tank bottom welding flange for the SWT 4 valve does not form part of the scope of supply.

Order reference numbers for the tank bottom welding flange:

DN	/ inch	Reference No.:
25	1"	31B 15 - 01 - 291/42
40	1,5"	31B 15 - 01 - 291/42
50	2"	31B 15 - 01 - 391/42
65	2,5"	31B 15 - 01 - 441/42
80	3"	31B 15 - 01 - 491/42
100	4"	31B 15 - 01 - 641/42

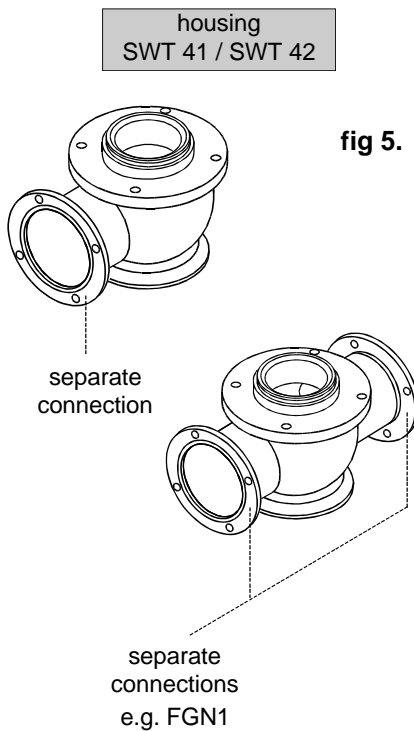


DN	inch	Ø C	F
25	1"	118	M8
40	1,5"	138	M8
50	2"	153	M8
65	2,5"	168	M8
80	3"	223	M10

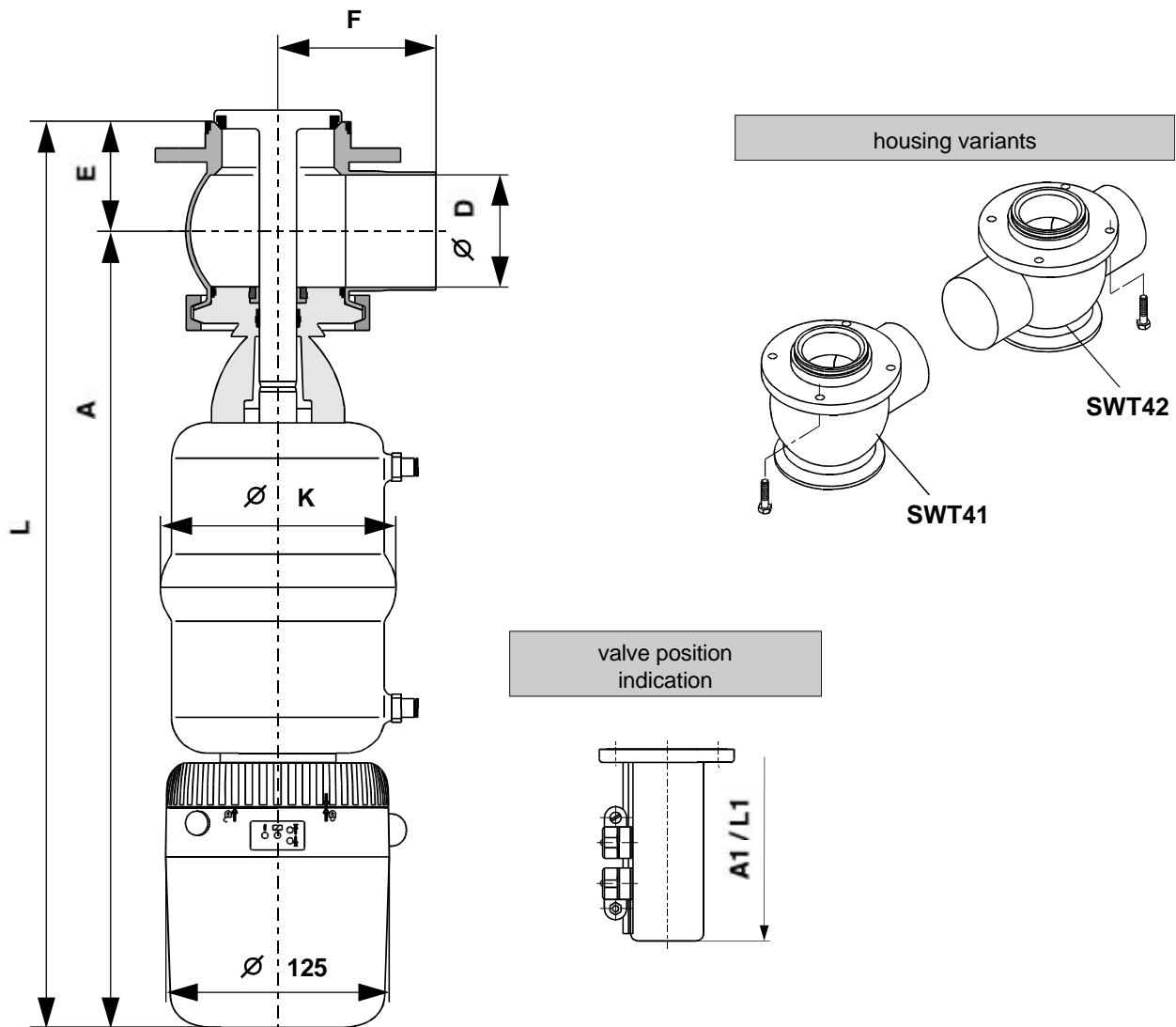
5. Installation

5.3 Welding instructions SWT 4

- **Tank bottom flange:**
Dismantle the tank bottom flange from the valve housing.
See to the positions of the holes (position of valve housing ports) during welding.
 - **Valve housing:**
Before welding of the connections to the valve housing, take the valve insert out of the housing. Remove the housing seal from the tank bottom flange. See to a careful dismantling of the valve insert to avoid damage.
 - Welding may only be carried out by certified welders (EN 287-1). (Seam quality EN 25817 „B“).
 - The welding of the separate connections 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 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 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.
- Nach dem Einschweißen der Anschlüsse an das Ventilgehäuse bzw. nach Rohrleitungsarbeiten, sind die entsprechenden Anlagenteile und Rohrleitungen von Schweißrückständen und Schmutz zu reinigen.
Bei Nichtbeachtung dieser Reinigungsvorschrift können sich Schweißreste oder Schmutzpartikel im Ventil festsetzen und Beschädigungen verursachen.
- Any damage resulting from the nonobservance of these welding instructions is not subject to our guarantee.



6. Dimensions / Weights



dimensions in mm

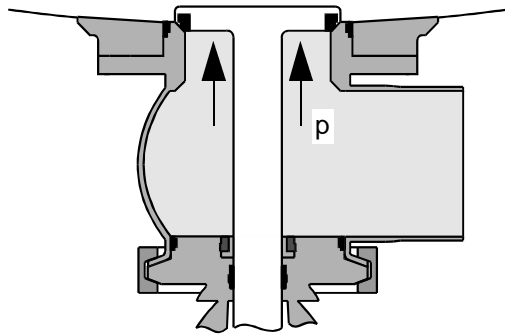
DN	$\varnothing D$	E	F	$\varnothing K$	A	L	A1	L1	weight in kg
25	26	41,5	50	86	398	439,5	338	379,5	5
40	38	47,5	67	86	402	449,5	342	389,5	5
50	50	53,5	72	126	439	492,5	379	432,5	7
65	66	61,5	85	126	447	508,5	387	448,5	7
80	81	69,0	98	189	500	569,0	440	509,0	13
100	100	78,7	111	189	510	588,7	450	528,7	15
inch									
1"	22,6	39,8	50	86	396	435,5	336	375,5	5
1,5"	34,9	45,95	67	86	400	445,95	340	385,95	5
2"	47,6	52,3	72	126	438	490,3	378	430,3	7
2,5"	60,3	58,65	85	126	444	502,65	384	442,65	7
3"	72,9	64,95	90	189	495	559,95	435	499,95	13
4"	97,6	77,3	111	189	508	585,3	448	525,3	15

7. Technical Data

product - wetted parts :	316 L, 1.4404
other parts :	1.4301
seals : standard design :	EPDM
optional :	FPM, VMQ, HNBR
max. product pressure :	10bar
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
max. pneumatic air pressure :	8 bar
min. pneumatic air pressure :	6 bar

(Use dry and clean pneumatic air, only)

**DELTA SWT4 mathematical product pressure in (bar)
at 6 bar pneumatic air pressure**

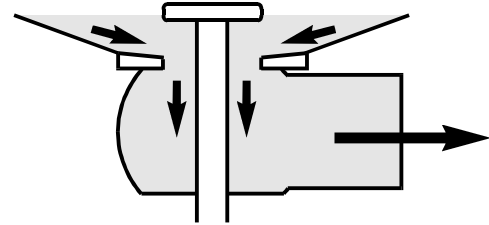
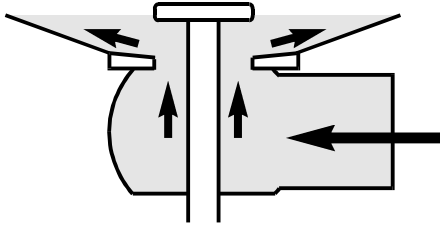


DN / inch	valve normally closed (NC) without NOT - Element		
	Ø actuator in mm		
	Ø 74mm	Ø 110mm	Ø 165mm
25 / 1"	21,2	16,0	
40 / 1,5"	6,0	8,8	
50 / 2"	3,3	6,0	22,8
65 / 2,5"	2,2	5,0	15,3
80 / 3"	1,8	4,1	12,7
100 / 4"		3,3	10,6
		2,1	8,4
			5,5

7. Technical Data

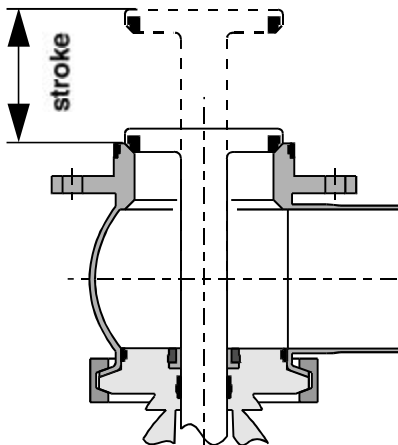
DELTA SWT4

kvs - values in m³ / h



DN	Filling
25	14
40	33
50	58
65	100
80	160
100	245
inch	
1"	10
1,5"	30
2"	54
2,5"	87
3"	137
4"	225

Emptying	
13	
31	
51	
89	
137	
212	
inch	
10	
28	
49	
76	
114	
210	



stroke in mm	
DN	SWT4
25	26
40	28
50	28
65	28
80	28
100	28
inch	
1"	26
1,5"	28
2"	28
2,5"	28
3"	28
4"	28

closing times
for tank outlet valve SWT4
 The opening and closing times of the valves with control unit can be fixed by adjusting the throttle screw at the solenoid valve

closing times in sec. pneumatic air pressure 6 bar			
		hose length	
DN	inch	1m	10m
25	1"	1	2
40	1,5"	1	2
50	2"	3	4
65	2,5"	3	4
80	3"	5	6
100	4"	5	6

8. Maintenance

- The maintenance intervals are different depending on the application and should be determined by the user carrying out temporary checks.
- The valve must not be cleaned with products containing abrasive or polishing material. Especially the valve shaft must not, under any circumstances, be cleaned with such products. Damage to the valve shaft may cause leakages.



- Required tools:
 - 1x wrench SW13
 - 1x wrench SW17
 - 1x wrench SW19
 - 2x wrench SW30
- assembly tool for seat seal (see chapter 11.)
- cleaning rag as well as low-concentrate solution of a suitable cleaning agent.
- Change of seals according to service instructions. The customer should keep spare seals on stock. For valve service actions, complete seal kits including seal grease (see spare parts lists) can also be ordered.
- Assembly of valve and change of valve design, see Service Instructions.
- Provide all seals with a thin layer of grease before their installation!!!!

Recommendation:

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

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

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

or

APV food grade grease for VMQ

(0,6 kg/can - 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.

9. Service Instructions

9.1. Dismantling from the line system

- a. Shut off line pressure and drain off tank.
- b. Detach separate connections at the side ports of the valve housing. Remove hex. screws from the tank bottom flange.
- c. Pull the complete valve carefully out of the tank bottom flange.

9.2 Dismantling of wear parts (product-wetted parts)

- a. **Design with Control Unit:**
Dismount the Control Unit.
(Turn safety ring in anticlockwise direction, see symbols on the Control Unit.



= open



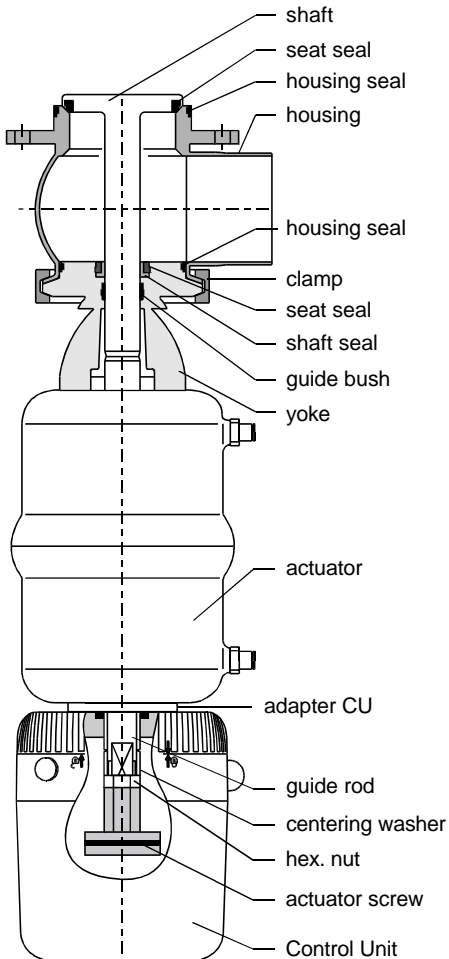
= closed

- b. Unscrew the actuator screw from the guide rod. Remove the adapter of the Control Unit.
- c. **Valve design NC: Control actuator with air.**



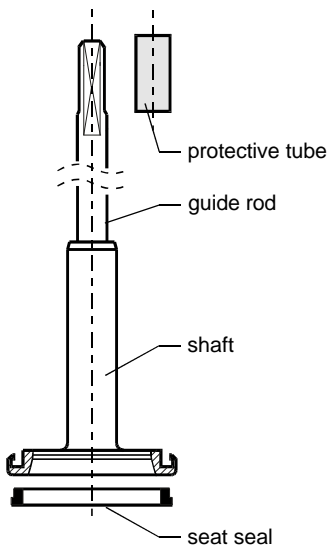
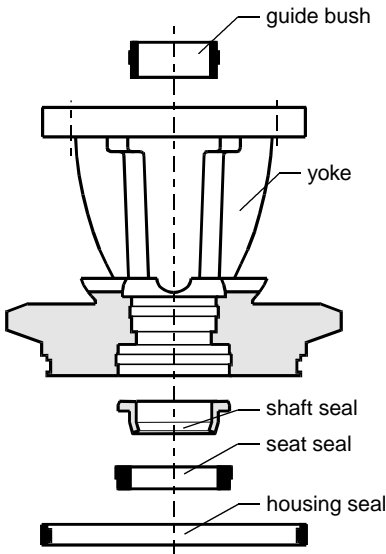
**Do not reach for movable valve parts!
Risk of injury by sudden valve actuation.**


- d. Unscrew the hex. nut by holding the centering washer, take off the centering washer.
- e. Shut off compressed air and remove compressed air supply.
- f. Pull the valve shaft out of the actuator. Remove the seat seal.
- g. Remove the clamp.
- h. Lift the actuator with yoke out of the valve housing. Remove the housing seal from the valve housing.
- i. Unscrew the yoke from the actuator. Remove housing seal, guide bush, seat seal and shaft seal from the yoke.
- j. Clean the valve housing, yoke, actuator, valve shaft with a low-concentrate solution of a cleaning agent. Never use cleaning agents containing abrasive or polishing material.



9. Service Instructions

9.3 Installation of seals and assembly of valve



- a. Insert the guide bush into the yoke.
Place the shaft seal and press in the slightly greased seat seal.
See to the correct installing direction.
 - b. Slightly grease the housing seal and insert it into the groove of the yoke. Install the yoke at the actuator.
 - c. Put the yoke with actuator in the valve housing and fasten it with the clamp.
 - d. Insert the seat seal into the shaft. Use the APV assembly tool, see chapter 11, to install the seat seal. Slightly grease the seat seal before its installation.
If installed manually, vent the seal groove with a thin object between the seal and groove wall.
 - e. Connect compressed air supply.
 - f. **Valve design NC: Control actuator with air.**
-  **Do not touch movable parts!**
Risk of injury by sudden valve actuation.
- g. Pull the protective pipe via the thread of the guide rod.
Push the shaft through the housing, yoke and actuator, place the centering washer and fasten it with the hex. nut.
Hold up the centering washer during this process.
Tightening torque: 40 Nm.
 - h. **Valve design NC : Shut off compressed air supply.**
 - i. Slightly grease the housing seal and insert it into the groove of the valve housing.

9. Service Instructions

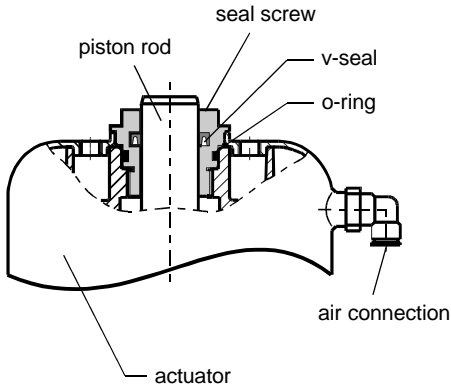
9.4 Installation of valve

- a. Install the adapter for the Control Unit on the actuator.
Fasten the actuator screw with Loctite on the guide rod.
 - Recommendation: Loctite
 - Type: Loctite 243 semi-solid
 - (5ml - ref.-No. 00070-01-110/93)
 - (50ml - ref.-No. 00070-01-111/93)
- b. Place the Control Unit on the adapter and secure it with the fastening ring.
- c. Carefully insert the valve into the tank bottom flange and tighten it with the hex. screws.
Do not damage the housing seal during this process.
- d. Fasten the separate connections at the valve housing.
- e. Connect compressed air supply.
- f. **Check basic adjustment of the valve position feedback.**
 - The shift points can be adjusted by turning the positioning screw in the Control Unit.

10. Service Instructions Actuator

10.1 Maintenance actuator

- a. Remove the air hoses from the actuator.
- b. Remove inner hex. screws from the adapter of the Control Unit.
- c. Unscrew the two seal screws with a spanner SW30 while holding up the actuator with a strap wrench.



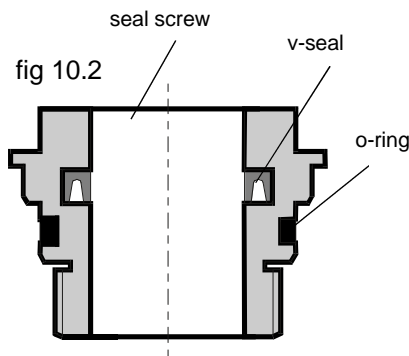
10.2 Installation of seals and assembly of actuator

- a. Install the greased o-rings and v-seals in the seal screws (fig. 10.2) **See to the correct installing direction of the v-seal.**
- b. Slide the seal screws over the piston rod at both sides of the actuator and tighten them.
- c. Fasten the adapter for the Control Unit and the yoke on the actuator.

Attention: Observe position of adapter.

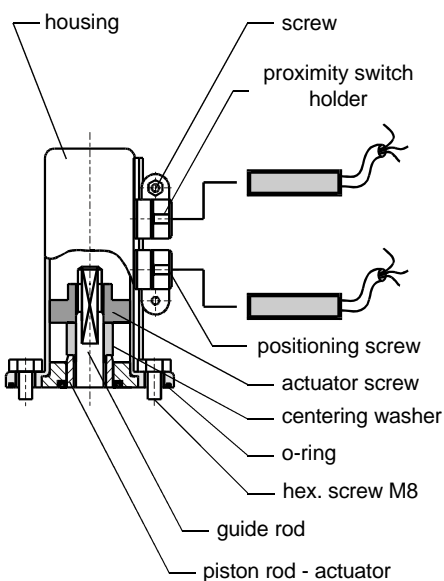
Attention: Consider the required valve design NC or NO during the installation of the adapter and yoke.
 NC = normally closed / air-to-raise, spring-to-lower
 NO = normally open / air-to-lower, spring-to-raise

- d. Fasten air hoses.



10.3 Actuator with valve position indicator Assembly of holder

1. Install the actuator screw on the actuator.
2. Equip the housing with the o-ring.
3. Fasten the housing by means of the 4 hex. screws M8 on the actuator.
4. Release the screws at the proximity switch holder and insert the corresponding proximity switches. Then fasten the screws.
5. Place the actuator in one limit position.
6. Place the corresponding proximity switch in the corresponding position. Release the positioning screw and move the holder until the corresponding signal is indicated. Then continue the movement by 2 to 3 mm to secure indication. Fasten the positioning screw.
7. Place the actuator in the other limit position and carry out positioning of the second proximity switch.



11. Service Instructions

Assembly tool for seat seal

The assembly tool consists of:

- nut
- thrust ring
- ring with venting nose
- housing
- threaded bolt

Installation of the seat seal in the valve shaft

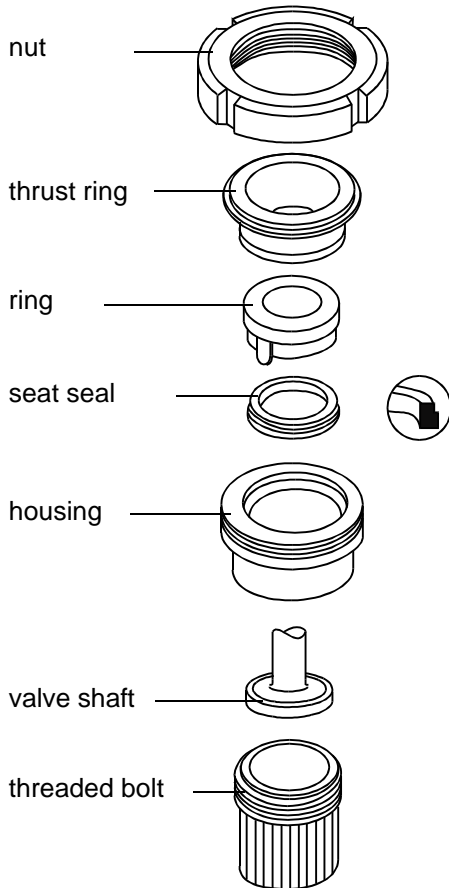
1. Insert the valve shaft into the housing in such a way that the seal groove is in the housing.
2. Clamp the shaft into the housing by means of the threaded bolt. Clamp the housing into a vice.
3. Slightly grease the seat seal with APV food-grade grease. Then install the seal on the ring with the venting nose until it stops.
4. Introduce the ring with the installed seat seal into the housing and press it down until it stops sensibly.
5. Insert the thrust ring into the housing. Screw on the nut and tighten it with a hook spanner until it stops.
6. Release the nut. Take ring and thrust ring off the housing.
7. Take housing out of the vice, take off the threaded bolt. Detach the valve shaft from the housing.

Check the even fit of the seat seal.

Assembly tool for seat seal

To simplify the installation of the seat seal, the following assembly tools are available:

assembly tool SW4		
DN	inch	Reference No.:
25	1"	51 - 13 - 110/17
40	1,5"	51 - 13 - 111/17
50	2"	51 - 13 - 112/17
	2,5"	51 - 13 - 120/17
65	3"	51 - 13 - 113/17
	3"	51 - 13 - 121/17
80	3"	51 - 13 - 114/17
100	4"	51 - 13 - 115/17



12. Trouble Shooting

Failure	Remendy
<i>Valve closed, pressure in tank</i>	
Leakage between tank bottom flange and valve housing flange	Replace housing seal.
<i>Valve closed, pressure in housing</i>	
Leakage in clamp area and valve housing	Replace housing seal. Check line pressure: Permissible line pressure, see table page 8
Leakage at upper valve shaft in valve yoke area	Replace shaft seal, seat seal and guide bushes.
<i>Actuator</i>	
Air escapes at the actuator rod	Replace o-ring at the upper side of actuator.
Actuator does not work (air escapes permanently from the vent plug.)	Replace complete actuator.
<i>Valve position feedback</i>	
No feedback	Carry out fine adjustment.

13. Spare Parts Lists

The reference numbers of the spare parts for the different valve designs and sizes are included in the attached spare parts drawings with corresponding lists.

Please indicate the following data to place an order for spare parts:

- number of required parts
- reference number
- designation.

BA SWT4 000002
ID-No.: H 3 1 2 1 6 2
Translation of original manual



rev. 0



Your local contact:



APV
Zechenstraße 49
D-59425 Unna

Phone: +49(0) 23 03/ 108-0 Fax: +49(0) 23 03 / 108-210

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

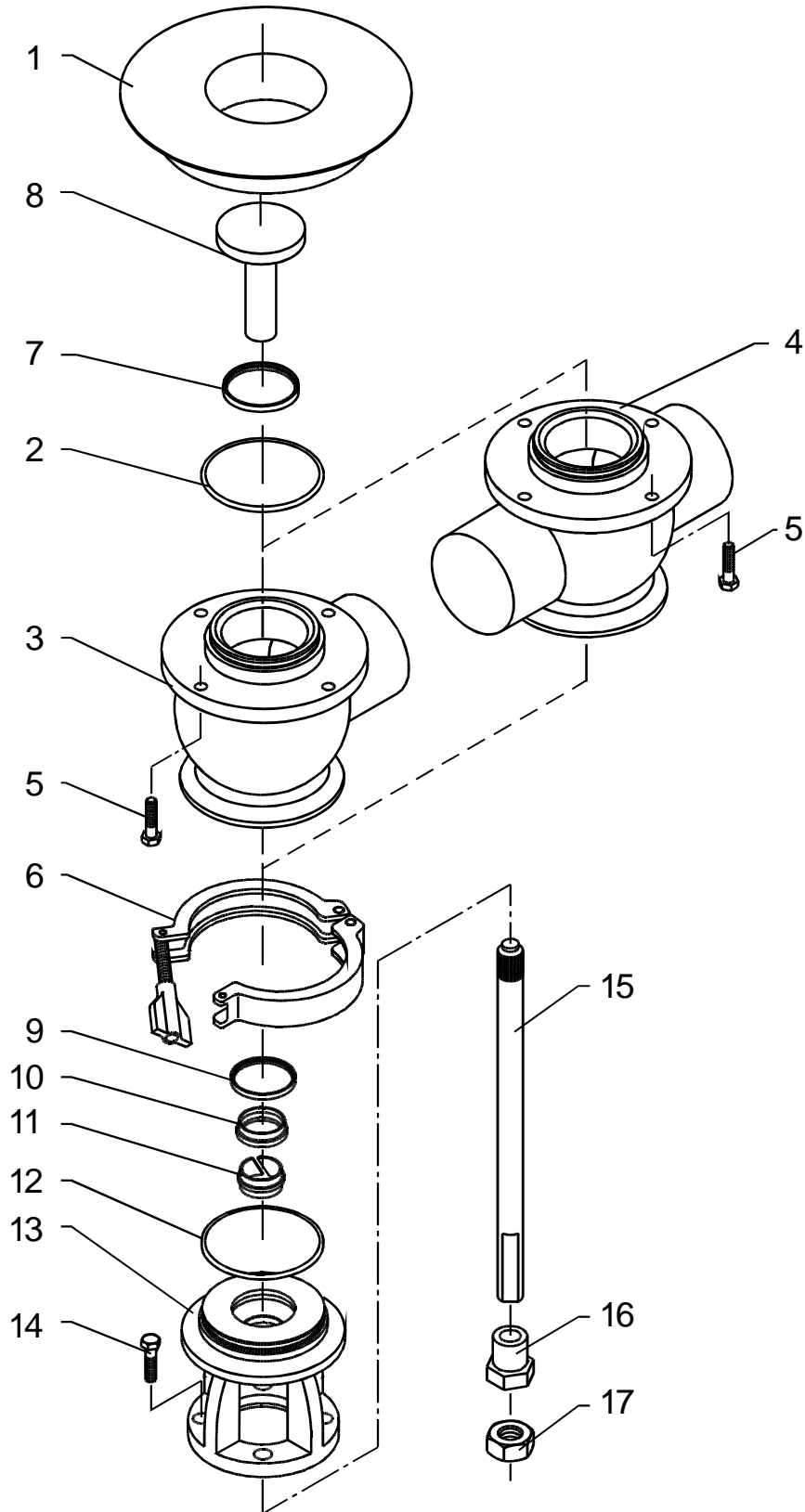
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13.1 Ventilgehäuse / Valve body

SWT DN



13.1 Ventilgehäuse / Valve body

SWT DN

Pos.	Stk./Qty.	Benennung	Description	DN25	DN40	DN50	DN65	DN80	DN100	
				Ws. - Nr. / Part No.						
-	-	Tankventil komplett	Complete tank valve							
1	1	Flansch	Flange	31B 15-01-291/42	31B 15-01-291/42	31B 15-01-391/42	31B 15-01-441/42	31B 15-01-491/42	31B 15-01-641/42	
2	1	Gehäusedichtung	Housing Seal	58-33-292/**	58-33-292/**	58-33-392/**	58-33-442/**	58-33-492/**	58-33-642/**	
3	1	Gehäuse SWT41	L -valvebody	15-71-280/47	15-71-380/47	15-71-430/47	15-71-480/47	15-71-530/47	15-71-630/47	
4	1	Gehäuse SWT42	T -valvebody	15-72-280/47	15-72-380/47	15-72-430/47	15-72-480/47	15-72-530/47	15-72-630/47	
5	4	Skt. Schraube	Hex. Screw	DIN EN 24017-M8x14-A2-70						M10x14-A2-70
6	1	Gelenkklemme	Clamp	42-40-287/17	42-40-387/17	42-40-437/17	42-40-487/17	42-40-537/17	42-40-637/17	
7	1	Tellerdichtung	Seat seal	58-33-293/**	58-33-393/**	58-33-443/**	58-33-493/**	58-33-543/**	58-33-643/**	
8	1	Ventilschaft	Valve Shaft	15-25-280/42	15-25-380/42	15-25-430/42	15-25-480/42	15-25-530/42	15-25-630/42	
9	1	Tellerdichtung	Seat Seal	58-33-293/**	58-33-293/**	58-33-293/**	58-33-293/**	58-33-293/**	58-33-293/**	
10	1	Schaftdichtung	Shaft seal	58-33-150/26	58-33-150/26	58-33-150/26	58-33-150/26	58-33-150/26	58-33-150/26	
11	1	Führungsbuchse	Bushing	08-01-178/23	08-01-178/23	08-01-178/23	08-01-178/23	08-01-178/23	08-01-178/23	
12	1	Gehäusedichtung	Housing Seal	58-33-267/**	58-33-292/**	58-33-124/**	58-33-442/**	58-33-492/**	58-33-127/**	
13	1	Laterne	Yoke	15-40-960/47	15-40-961/47	15-40-962/47	15-40-963/47	15-40-966/47	15-40-967/47	
14	4	Skt. Schraube	Hex. Screw	DIN EN 24017-M8x16-A2-70						DIN EN 24017-M8x20-A2-70
15	1	Zugstange	Guide rod	15-23-850/12	15-23-850/12	15-23-851/12	15-23-851/12	15-23-852/12	15-23-852/12	
16	1	Zentrierscheibe	Centering washer	15-28-940/12	15-28-940/12	15-28-940/12	15-28-940/12	15-28-940/12	15-28-940/12	
17	1	Skt. Mutter M12	Hex. Nut M12	65-50-101/15	65-50-101/15	65-50-101/15	65-50-101/15	65-50-101/15	65-50-101/15	

** /33: HNBR; /73: FPM (Viton); /93: EPDM; /13: VMQ (Silikon)***

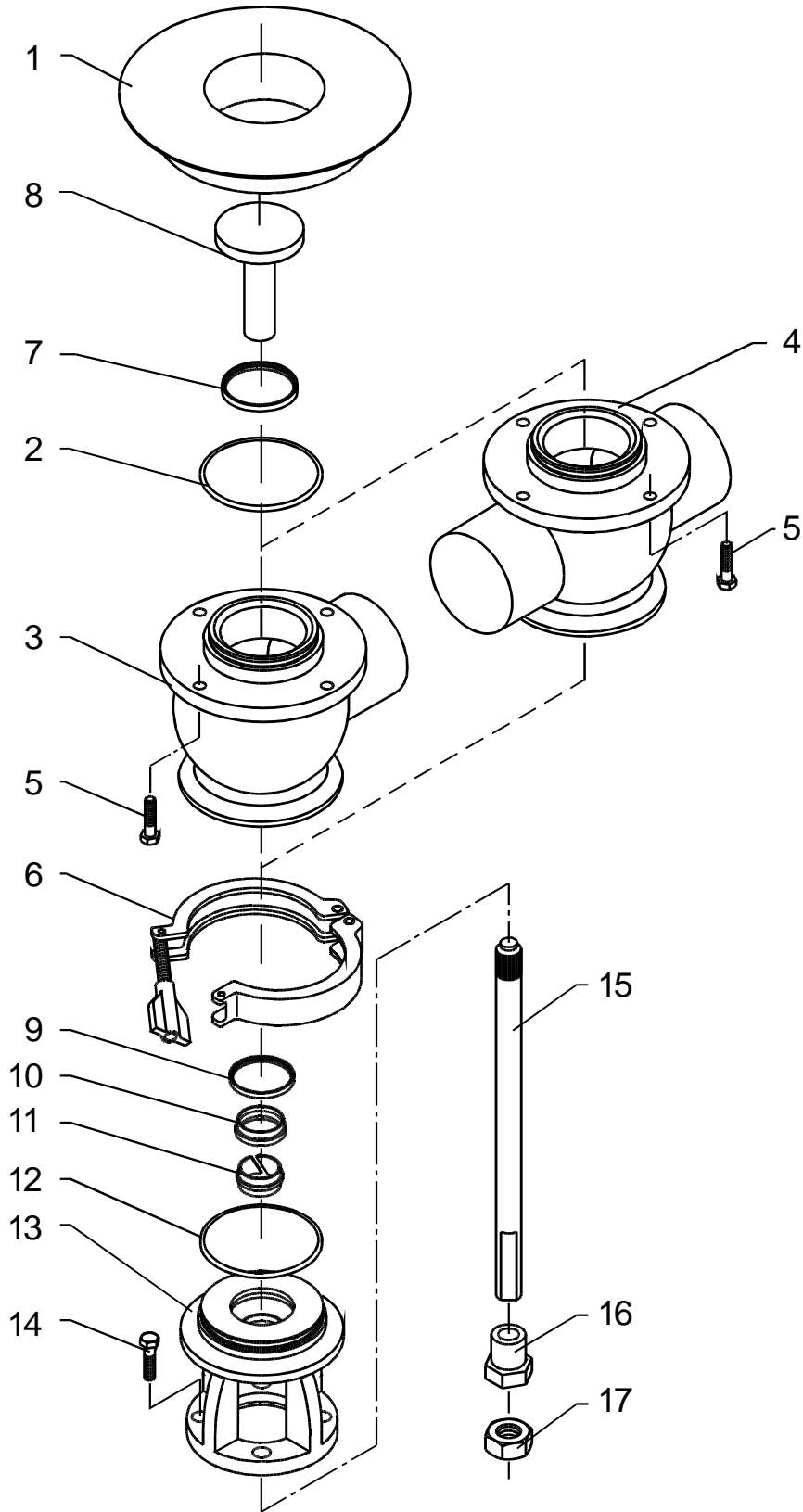
 *** Bei VMQ Dichtungswerkstoff der (Pos. 6 und 8) wird die Gehäusedichtung (Pos. 11) in HNBR eingesetzt.
 When seat seals (pos. 6 and 8) are made of silicone, the body seal (pos. 11) is to be made of HNBR

 Dichtungssatz für SWT41 + SWT42
 Seal kit for SWT41 + SWT42

Pos.	Stk./Qty.	Benennung	Description	DN25	DN40	DN50	DN65	DN80	DN100
				Ws. - Nr. / Part No.					
	1	Dichtungssatz FPM	Seal kit FPM	58-34-630/00	58-34-631/00	58-34-632/00	58-34-633/00	58-34-634/00	58-34-635/00
	1	Dichtungssatz EPDM	Seal kit EPDM	58-34-630/01	58-34-631/01	58-34-632/01	58-34-633/01	58-34-634/01	58-34-635/01
	1	Dichtungssatz VMQ	Seal kit VMQ	58-34-630/02	58-34-631/02	58-34-632/02	58-34-633/02	58-34-634/02	58-34-635/02
	1	Dichtungssatz HNBR	Seal kit HNBR	58-34-630/06	58-34-631/06	58-34-632/06	58-34-633/06	58-34-634/06	58-34-635/06

13.2 Ventilgehäuse / Valve body

SWT Zoll / inch



13.2 Ventilgehäuse / Valve body

SWT Zoll / inch

Pos.	Stk./Qty.	Benennung	Description	1"	1,5"	2"	2,5"	3"	4"	
				Ws. - Nr. / Part No.						
-	-	Tankventil komplett	Complete tank valve							
1	1	Flansch	Flange	31B 15-01-291/42	31B 15-01-291/42	31B 15-01-391/42	31B 15-01-441/42	31B 15-01-491/42	31B 15-01-641/42	
2	1	Gehäusedichtung	Housing Seal	58-33-292/**	58-33-292/**	58-33-392/**	58-33-442/**	58-33-492/**	58-33-642/**	
3	1	Gehäuse SWT41	L -valvebody	15-71-305/47	15-71-405/47	15-71-455/47	15-71-505/47	15-71-555/47	15-71-655/47	
4	1	Gehäuse SWT42	T -valvebody	15-72-305/47	15-72-405/47	15-72-455/47	15-72-505/47	15-72-555/47	15-72-655/47	
5	4	Skt. Schraube	Hex. Screw	DIN EN 24017 - M8x14-A2-70						M10x14-A2-70
6	1	Gelenkklemme	Clamp	42-40-287/17	42-40-387/17	42-40-437/17	42-40-487/17	42-40-537/17	42-40-637/17	
7	1	Tellerdichtung	Seat seal	58-33-293/**	58-33-393/**	58-33-443/**	58-33-109/**	58-33-568/**	58-33-643/**	
8	1	Ventilschaft	Valve Shaft	15-25-305/42	15-25-405/42	15-25-455/42	15-25-505/42	15-25-555/42	15-25-655/42	
9	1	Tellerdichtung	Seat Seal	58-33-293/**	58-33-293/**	58-33-293/**	58-33-293/**	58-33-293/**	58-33-293/**	
10	1	Schaftdichtung	Shaft seal	58-33-150/26	58-33-150/26	58-33-150/26	58-33-150/26	58-33-150/26	58-33-150/26	
11	1	Führungsbuchse	Bushing	08-01-178/23	08-01-178/23	08-01-178/23	08-01-178/23	08-01-178/23	08-01-178/23	
12	1	Gehäusedichtung	Housing Seal	58-33-267/**	58-33-292/**	58-33-124/**	58-33-125/**	58-33-126/**	58-33-127/**	
13	1	Laterne	Yoke	15-40-960/47	15-40-961/47	15-40-962/47	15-40-964/47	15-40-965/47	15-40-967/47	
14	4	Skt. Schraube	Hex. Screw	DIN EN 24017 - M8x16-A2-70				DIN EN 24017 - M8x20-A2-70		
15	1	Zugstange	Guide rod	15-23-850/12	15-23-850/12	15-23-851/12	15-23-851/12	15-23-852/12	15-23-852/12	
16	1	Zentrierscheibe	Centering washer	15-28-940/12	15-28-940/12	15-28-940/12	15-28-940/12	15-28-940/12	15-28-940/12	
17	1	Skt. Mutter M12	Hex. Nut M12	65-50-101/15	65-50-101/15	65-50-101/15	65-50-101/15	65-50-101/15	65-50-101/15	

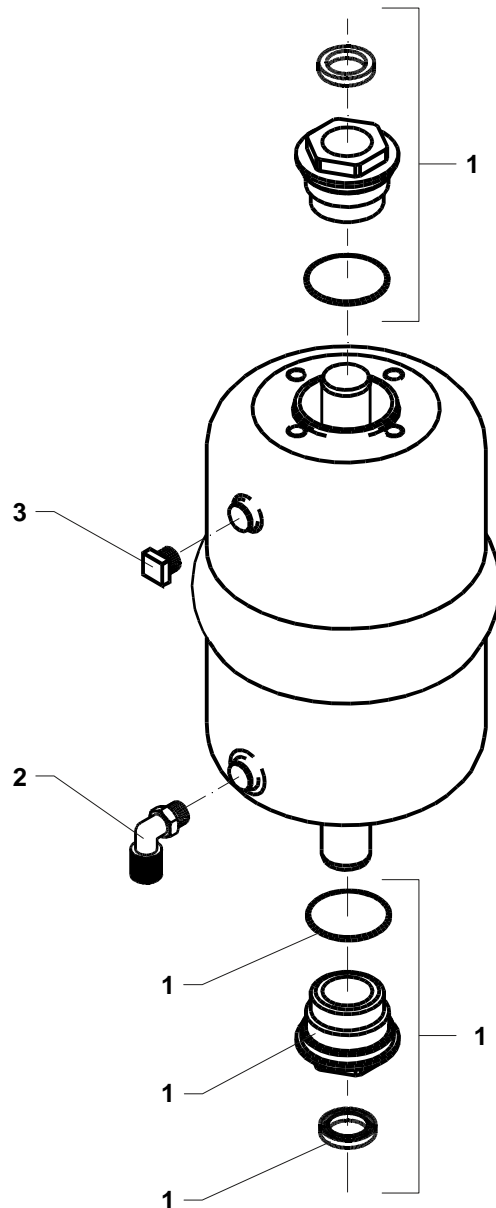
** /33: HNBR; /73: FPM (Viton); /93: EPDM; /13: VMQ (Silikon)***

*** Bei VMQ Dichtungswerkstoff der (Pos. 6 und 8) wird die Gehäusedichtung (Pos. 11) in HNBR eingesetzt.
When seat seals (pos. 6 and 8) are made of silicone, the body seal (pos. 11) is to be made of HNBR

Dichtungssatz für SWT41 + SWT42
Seal kit for SWT41 + SWT42

Pos.	Stk./Qty.	Benennung	Description	1"	1,5"	2"	2,5"	3"	4"
				Ws. - Nr. / Part No.					
	1	Dichtungssatz FPM	Seal kit FPM	58-34-630/00	58-34-631/00	58-34-632/00	58-34-640/00	58-34-641/00	58-34-635/00
	1	Dichtungssatz EPDM	Seal kit EPDM	58-34-630/01	58-34-631/01	58-34-632/01	58-34-640/01	58-34-641/01	58-34-635/01
	1	Dichtungssatz VMQ	Seal kit VMQ	58-34-630/02	58-34-631/02	58-34-632/02	58-34-640/02	58-34-641/02	58-34-635/02
	1	Dichtungssatz HNBR	Seal kit HNBR	58-34-630/06	58-34-631/06	58-34-632/06	58-34-640/06	58-34-641/06	58-34-635/06

13.3 Steuerkopf / Actuator

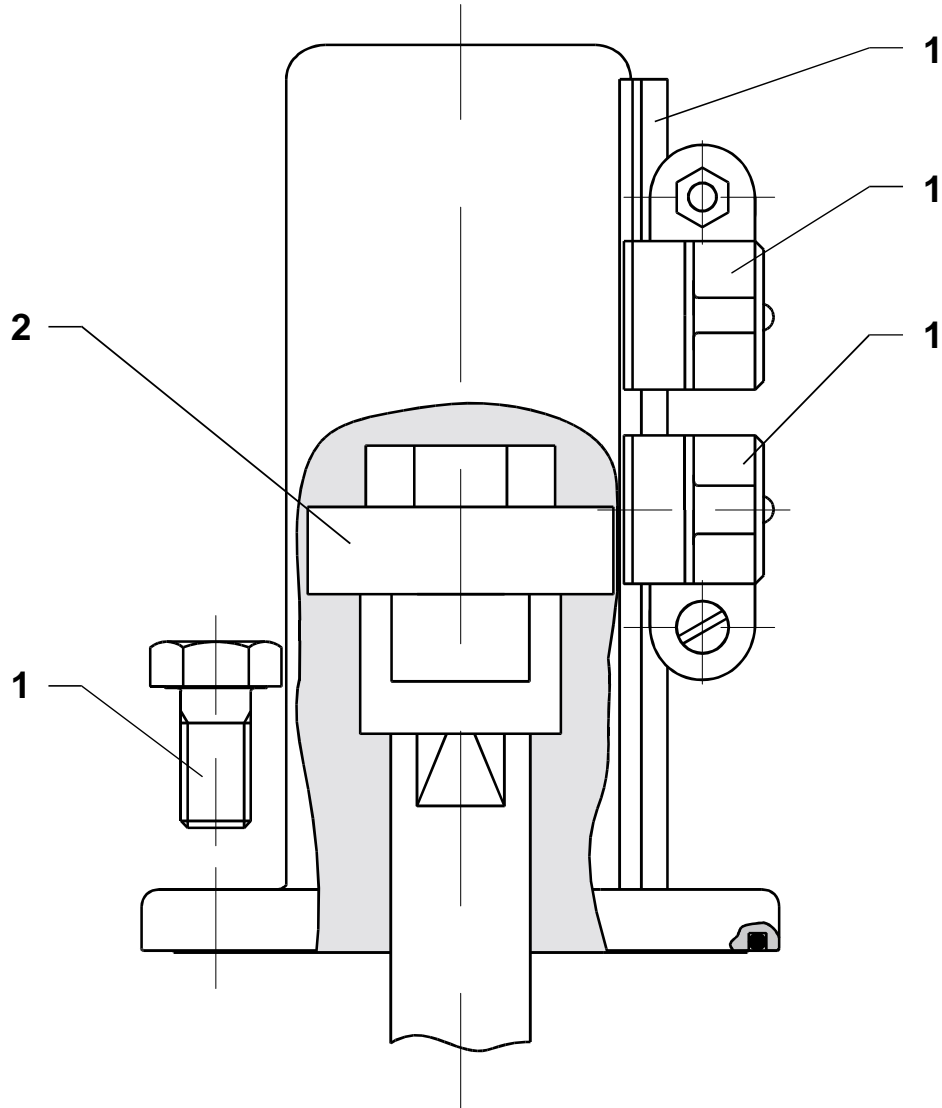


Pos.	Stk./Qty.	Benennung	Description	Ø74	Ø110	Ø165
				Ws.-Nr. / Part No.		
-	-	Steuerkopf kpl.	Actuator complete	15-32-050/17	15-32-051/17	15-32-052/17
-	-	Steuerkopf kpl. - Luft/Luft	Actuator complete Air/Air	15-32-085/17	15-32-086/17	15-32-087/17
1	2	Dichtungsschraube mit O-ring und V-Dichtung	Seal bearing with O-ring and V-seal	15-28-845/93	15-28-845/93	15-28-845/93
2*	1-2	Winkelverschraubung G1/8"	Elbow Connector G1/8"	08-60-750/93	08-60-750/93	08-60-750/93
3	1	Stopfen	Plug	08-60-005/93	08-60-005/93	08-60-005/93

* Der Steuerkopf kpl. und Steuerkopf kpl. Luft / Luft ist standardmäßig mit 2 x Winkelverschraubungen ausgerüstet.

* The actuator cpl. and actuator cpl. air/ air is designed with 2 x Elbow connector by standard.

13.4 Ventilstellungsmeldung mit Initiatorenhalterung Proximitybox with switch holder



Pos.	Stk./Qty.	Benennung	Description	DN 25 / 1"	DN 40 - 100 / 1,5" - 4"
				Ws.-Nr. / Part No.	
1	1	Ventilstellungsmeldung kpl.	Complete Proximitybox	15-33-932/93	15-33-932/93
2	1	Schaltnocke	Actuator screw	08-52-290/97	08-52-291/97