APV
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Operating Manual

DELTA MS4

Diaphragm Valve with fan support

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

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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

ppa. Baumbach

Manager Research and Development

Table of Contents

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.
- Electric and pneumatic connections must be separated.
- Before any maintenance of the valve, the line and cleaning systems must be **depressurized** and discharged if possible.

- **Do not reach into the open valve.**
  Risk of injury!
- Observe service instructions to ensure safe maintenance of the valve. The valve must only be assembled, disassembled and re-assembled by persons who have been trained in APV valves or by APV service team members. If necessary, contact your local APV representative.
- When the diaphragm is damaged, leakages drain off the leakage bore in the yoke area.
- **Attention!**
  Valve design NC (normally closed): Control the actuator with air before releasing the housing screws.
- **Attention!**
  Welded actuators are preloaded by spring force.

Opening of the actuators is strictly forbidden.
Danger to life!

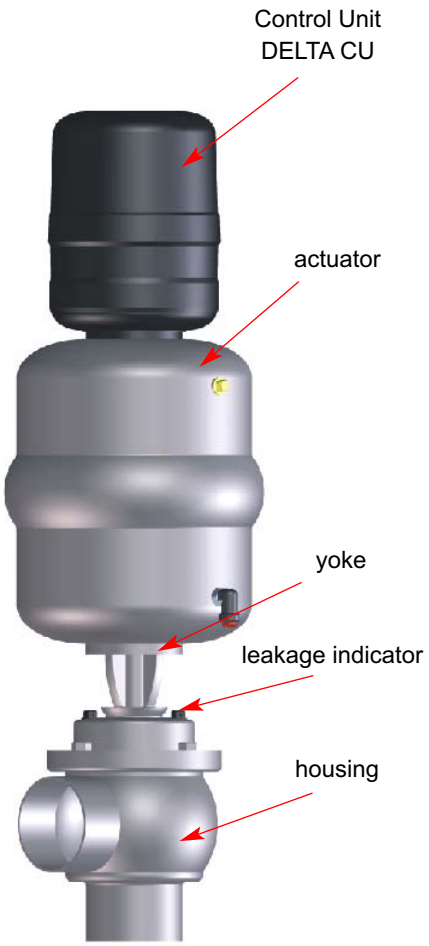
Actuators which are no longer used and / or defective must be disposed in professional manner.

Defective actuators must be returned to your APV Sales & Service company for their professional disposal and free of charge for you.

Please address to your local APV representative.

3. Mode of Operation

DELTA MS4



The diaphragm valves DELTA MS4 have been designed for use in the brewing and beverage industries, in the dairy and food industries as well as for chemical and pharmaceutical applications.

The field of application of the DELTA MS4 valve comprises the safe shut-off of pipeline sections.

DELTA MS4 diaphragm valves offer optimum product protection in hygienic and aseptic applications.
Product safety is provided by the hermetic separation of the product chamber to the exterior (atmosphere) by means of a diaphragm with fan support.

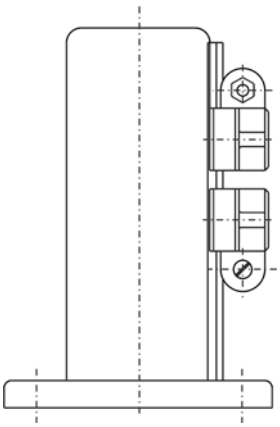
- Operation by pneumatic actuator with air connection, reset by spring force.
- Through different assembly of the actuator, the following designs are possible:

  NC: actuator normally closed (NC); air-to-raise, spring-to-lower
  NO: actuator normally open (NO); air-to-lower, spring-to-raise

- The inner parts of the actuator are maintenance-free.
- Cleaning of the valve interior is undertaken by CIP - cleaning of the pipeline system.
- Leakages at the diaphragm are indicated in the yoke area through a leakage drain.
- For the pneumatic control of the valve, a control unit is mounted on top of the actuator.
- The yellow luminous diodes in the control unit indicate the position of the valve shaft.

4. Auxiliary Equipment

fig. 4.1



VP indicator

4.1 Valve position indication (fig. 4.1)

A valve position indicator can be installed direct at the actuator. Proximity switches to signal the limit position of the valve seat can be installed at the proximity switch holder (PSH) if required.

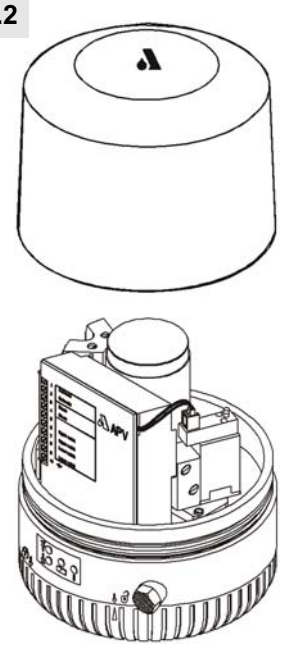
We recommend to use one of our APV standard types: operating distance: 5mm / diameter: 11mm.
If the customer decides to use a valve position indicator other than APV type, we cannot take over any liability for any malfunctions.

4.2 Control Unit (fig. 4.2)

The MS4 valve can be equipped with a control unit.

The following different designs are available:

fig. 4.2



	solenoid valve
Direct Connect ref.-No.	CU31 Direct Connect 16 - 31 - 232/93
Profibus ref.-No.	CU31V 08 - 45 - 001/93
Device Net ref.-No.	CU31 Device Net 16 - 31 - 240/93
AS-interface ref.-No.	CU31 AS-interface 2.1 08 - 45 - 020/93

- For the assembly of the control unit on the MS4 valve an adapter is required.

	adapter
Designation: ref.-No.	CU2 - Adapter SW4 / SD4 / M4 08-48-415/93

4.3 Connections:

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

- threaded connection according to DIN 11851
- threaded connection IDF / ISS according to ISO 2853
- threaded connection RJT according to BS 4825-5
- threaded connection SMS
- threaded connection according to DS 722
- flange connection FGN1 DIN
- flange connection FGN1 Inch
- clamp connection according to DIN 32676
- clamp connection according to ISO 2852

5. Installation

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

- The valve housing can be welded direct into the pipeline (completely dismantable valve insert).

- **Attention:** Observe welding instructions.

5.1 Welding Instructions

MS4

- Before welding of the valve, the valve insert must be dismantled from the housing. Careful handling to avoid damage to the parts is necessary.

- Welding should 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 the valve body is not deformed.

- 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!)

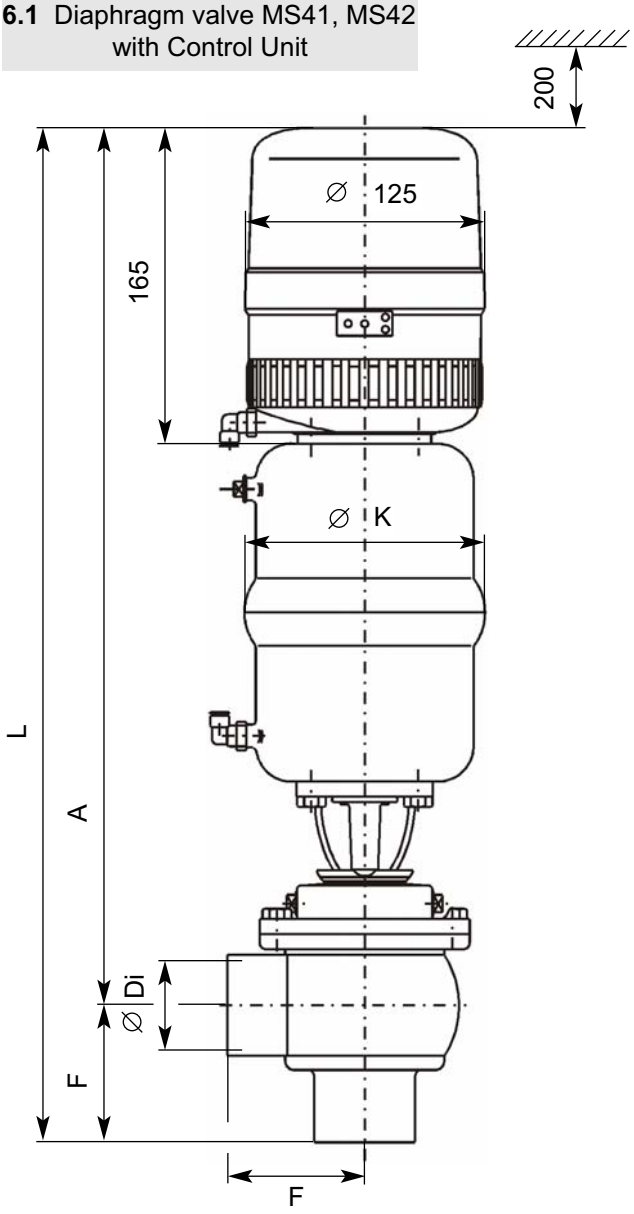
- TIG orbital welding is best.

- After welding of the valve housing or of the mating flanges and after work at the pipelines, the corresponding parts of the installation or pipeline 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.

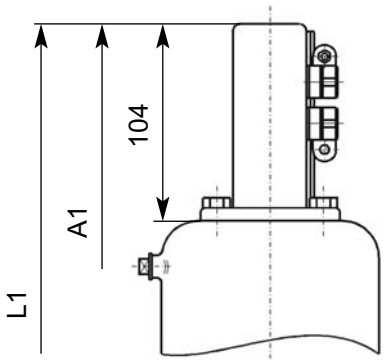
- Any damage resulting from the non-observance of these welding instructions is not subject to our guarantee.

6. Dimensions / Weights

6.1 Diaphragm valve MS41, MS42 with Control Unit



Diaphragm valve with valve position indication



housing variants

M41

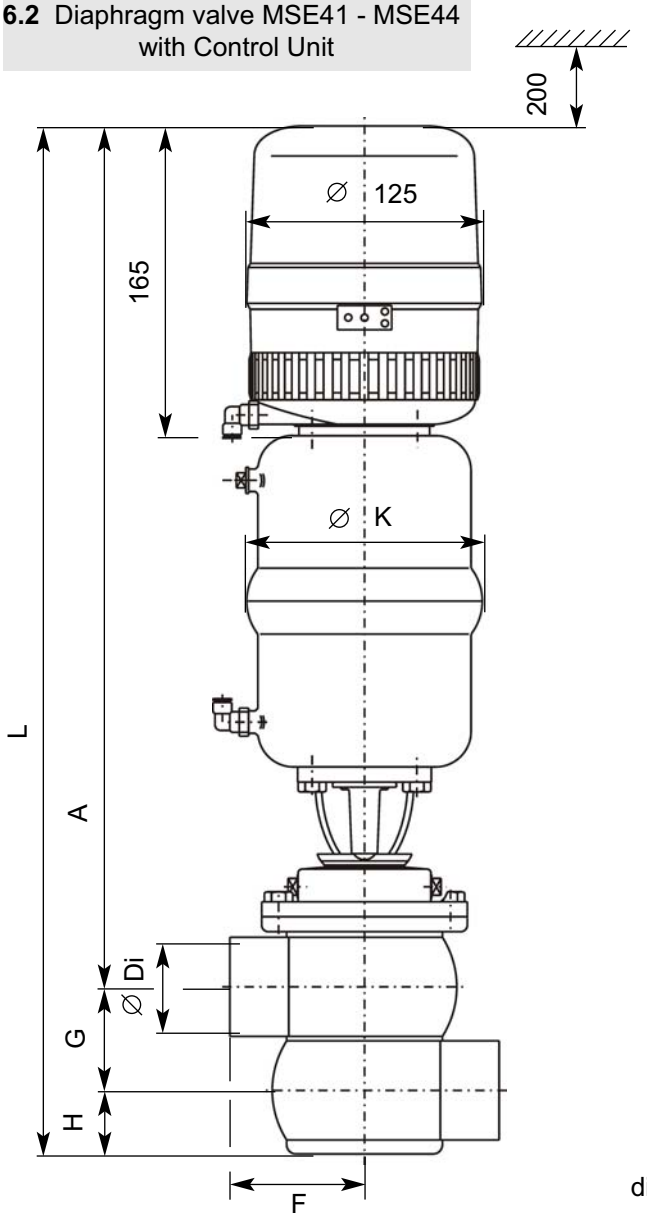
M42

dimensions in mm

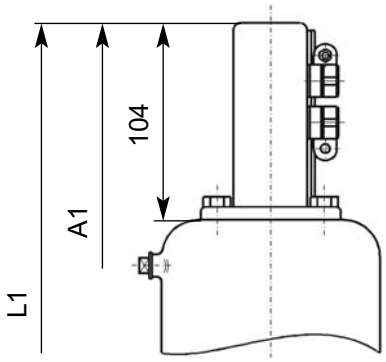
DN	A	A1	ø Di	F	ø K	L	L1	weight in kg
25	408	347	26	50	86	458	397	4,2
40	455,5	394,5	38	67	126	522,5	461,5	7,1
50	461,5	400,5	50	72	126	533,5	472,5	7,1
65	518	457	66	85	189	603	542	7,9
80	527	466	81	98	189	625	564	14,2
100	544	483	100	111	189	655	594	15,2
Inch								
1”	406	345	22,2	50	86	456	395	4,2
1,5”	454	393	34,9	67	126	521	460	7,1
2”	460	399	47,6	72	126	532	471	7,1
2,5”	515	454	60,3	85	189	600	539	7,9
3”	521	460	72,9	100	189	621	560	14,5
4”	543	482	97,6	111	189	654	593	15,2

6. Dimensions / Weights

6.2 Diaphragm valve MSE41 - MSE44 with Control Unit



Diaphragm valve with valve position indication



housing variants

ME41

ME42

ME43

ME44

dimensions in mm

DN	A	A1	ø Di	F	G	H	ø K	L	L1	weight in kg
25	408	347	26	50	32	19	86	459	398	4,7
40	455,5	394,5	38	67	44	28	126	527,5	466,5	7,7
50	461,5	400,5	50	72	56	34	126	551,5	490,5	7,7
65	518	457	66	85	74	42	189	634	573	8,5
80	527	466	81	98	91	49,5	189	667,5	606,5	14,8
100	544	483	100	111	110	59	189	713	652	15,9
Inch										
1”	406	345	22,2	50	28,6	17,3	86	452	391	4,7
1,5”	454	393	34,9	67	41,1	26,5	126	521,6	460,6	7,7
2”	460	399	47,6	72	53,8	32,9	126	546,7	485,7	7,7
2,5”	515	454	60,3	85	68,3	39,1	189	622,4	561,4	8,5
3”	521	460	72,9	100	80,1	45	189	646	585	14,8
4”	543	482	97,6	111	107,6	57,8	189	708,4	647,4	15,9

7. Technical Data

7.1 General

Product-wetted parts:		**316 L, 1.4404**
Other parts:		**1.4301**
Seals:	standard design:	**EPDM**
Options:		**HNBR, VMQ, FPM**
Diaphragm:		**TFM/PTFE 1705**
Actuator:		**1.4301**
max. line pressure:		**10 bar**
max. operating temperature:		**140°C EPDM, HNBR** ***FPM, *VMQ**
short-term load:		**150°C EPDM, HNBR** ***FPM, *VMQ** ***(no steam)**
air connection (for hose) **:**		**6 x 1mm**
max. pneumatic air pressure:		**8 bar**
min. pneumatic air pressure:		**6 bar**
Leakage indicator in yoke area :		**G1/8”**

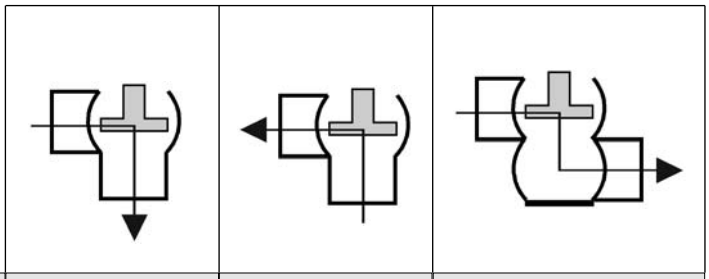
7.2 Specification of compressed air

compressed air quality:	quality class according to DIN/ISO 8573-1
content of solid particles:	***quality class 3*** max. size of solid particles per m³ 10000 of 0,5µm <d<1,0µm 500 of 1,0µm <d<5,0µm
content of water:	***quality class 4*** max. dew point temperature + 3°C For installations at lower temperatures or at higher altitudes, additional measures must be considered to reduce the pressure dew point accordingly.
content of oil:	***quality class 1*** max. 0,01mg/m³

(The oil applied must be compatible with Polyurethane elastomer materials.)

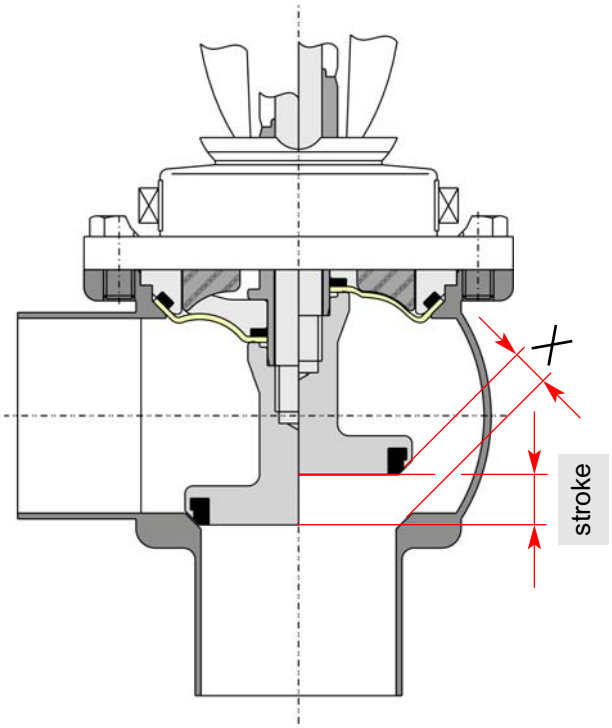
7. Technical Data

7.3 DELTA MS4
kvs - values in m^3 / h



DN	Inch			
25	**1”**	22	22	
40	**1,5”**	42	38	
50	**2”**	73	70	
65	**2,5”**	130	112	
80	**3”**			
100	**4”**	342	276	

7.4 Valve stroke / Opening cross section (X)



dimensions in mm		
DN	**stroke**	**X**
25	8	5,5
40	13	10
50	13	10
65	16	13
80	22,5	19,5
100	28	25
Inch		
1”	8	5,5
1,5”	13	10
2”	13	10
2,5”	16	13
3”	17	14
4”	28	25

7. Technical Data

7.5 For valves equipped with a control unit DELTA CU, the **opening and closing times** can be increased by adjustment of the throttling screw at the solenoid valve.

closing times in sec.
air pressure 6 bar
hose length 1m and 10m.

DN	Inch	1m	10m
25	1”	1	2
	1,5”	1	2
40		3	4
50	2”	3	4
65	2,5”	3	4
80	3”	5	6
100	4”	5	6

8. Maintenance

- The **maintenance intervals** depend on the corresponding application and are to be determined by the user himself 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 agents.
  Damage of the valve shaft can lead to leakages.

- Replacement of seals according to Service Instructions.
  Customer stock keeping of spare seals is recommended.
  For valve service we supply complete seal kits including seal grease (see spare parts lists).

Required tools:
- 1x wrench SW13
- 1x wrench SW17
- 1x wrench SW19
- 1x wrench SW30
- 1x strap wrench
- cleaning rag as well as a low solution of a suitable cleaning agent (observe safety data sheet of cleaning liquid manufacturer).

8. Maintenance

- **All seals must be provided with a thin layer of grease before their installation.**

Recommendation:
APV food-grade grease for EPDM, HNBR and FPM (Viton)
(0,75 kg/ tin - ref.-No. 000 70-01-019/93)
(60 g/ tube - ref.-No. 000 70-01-018/93)

APV food-grade grease for VMQ (Silicone)
(0,60kg/ 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 grease **on Silicone oil basis** for **VMQ** seals.

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

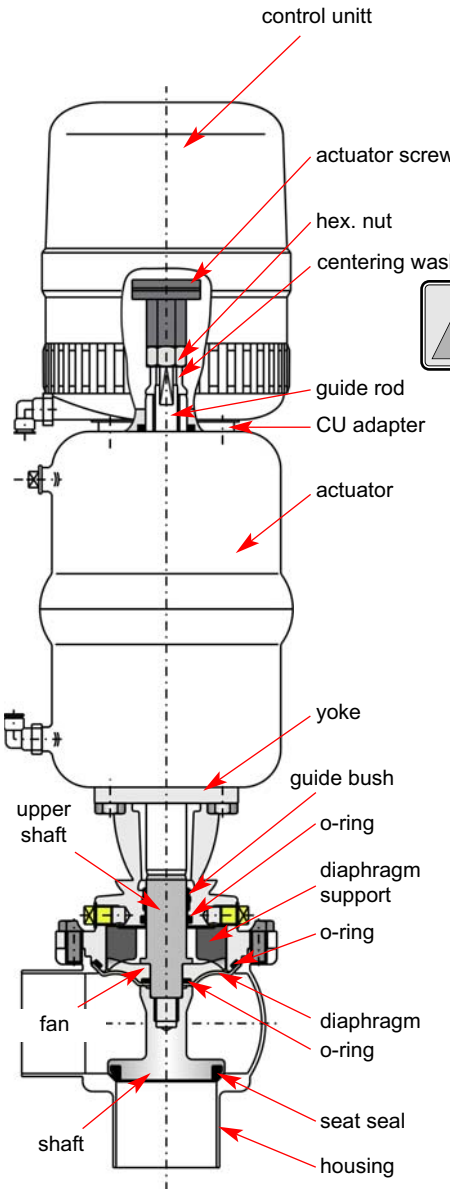
Recommendation for screw retention:
Type: **Loctite 243 semi-solid**
(5ml - ref.-No. 00070-01-110/93)
(50ml - ref.-No. 00070-01-111/93)

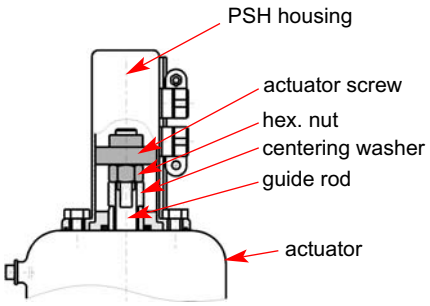
8.1 Assembly tool

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

M4 assembly tool		
DN	**Inch**	**reference No.**
25	1”	000 51 - 13 - 110/17
40	1,5”	000 51 - 13 - 111/17
50	2”	000 51 - 13 - 112/17
65	2,5”	000 51 - 13 - 113/17
	3”	000 51 - 13 - 121/17
80		000 51 - 13 - 114/17
100	4”	000 51 - 13 - 115/17

9. Service Instructions





9.1. Dismantling from the line system DELTA MS4

The reference numbers refer to the spare parts drawings

MS4 :		DIN design	**RN 01.064.9**
		Inch design	**RN 01.064.9-1**
	3A-	**Inch design**	**RN 01.064.9-2**

1. Shut off the line pressure and discharge lines if possible.
2. **NC version: Control actuator with air.**

   Do not touch movable parts!
   Risk of injury.
3. Remove the hex. screws **(14)** and lift the complete valve insert with actuator out of the housing.
4. **NC version: Shut off compressed air and remove compressed air connection.**
5. **Design with Control Unit:**
   Remove the control unit.
   (Turn safety ring in anticlockwise direction, see symbols on the control unit).

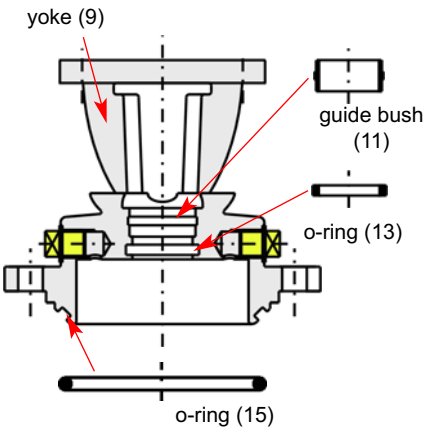
   = open = closed

- **Design with valve position indicator:**
  Remove the proximity switches. Detach the indicator housing **(proximity switch holder)** from the actuator.

9.2. Dismantling of wear parts (product-wetted parts)

1. **Design with control unit and valve position indication:**
   At first, unscrew the actuator screw. Release the hex. nut **(22),** while holding up the centering washer **(21).**
   Remove the centering washer.
2. Extract the shaft with guide rod **(3)**, diaphragm **(5)**, fan **(6)**, upper shaft **(4)** and diaphragm support **(7)** from the actuator **(14)**. Remove the seat seal **(2)** and o-ring **(16)**.
3. Remove the yoke **(9)** from the actuator **(17)**.
   - Actuator can be maintained.
   (see 10. Service Instructions - Actuator).
4. Detach the o-rings **(15, 13)** and guide bush **(11)** from the yoke **(9)**.
5. Clean the valve housing, yoke, actuator and shaft with a low 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

All seals must be provided with a thin layer of grease before their installation.

1. Insert the guide bush **(11)** and o-ring **(13)** in the yoke **(9)**. Insert the o-ring **(15)** in the groove of the yoke. Fasten the yoke **(9)** at the actuator **(17)**.

2. Install the seat seal **(2)** in the lower valve shaft **(3)**. **(see Service Instructions 11.)**

3. Install the o-ring **(16)** in the fan **(6)**. Place diaphragm and fan on the upper shaft.

4. Wind the protective pipe over the thread of the guide rod.

5. Pass the guide rod through the upper shaft with diaphragm and fan until it stops on the lower shaft. Insert the diaphragm support into the fan.

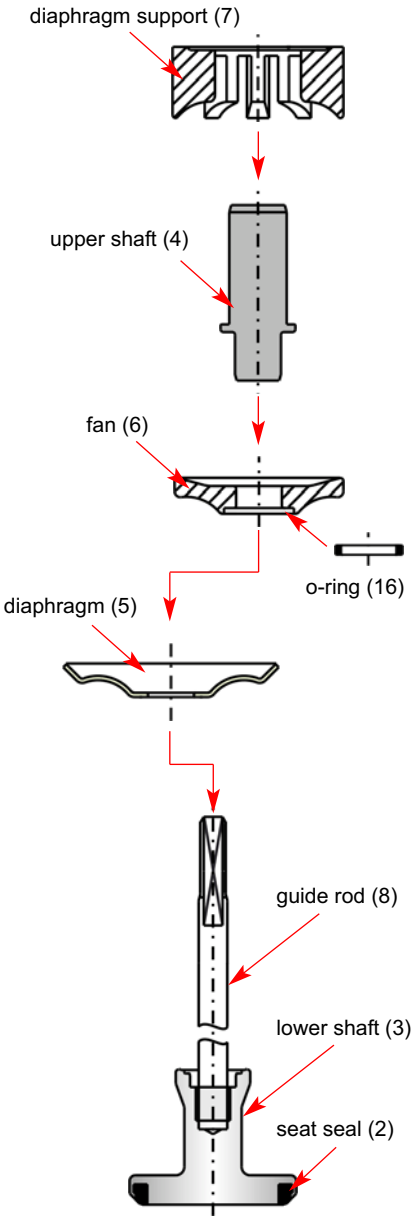
! **Toothing of fan and diaphragm support must interlock.**

6. Insert the pre-assembled lower shaft with guide rod, diaphragm, fan, upper shaft and diaphragm support through the yoke (9) and actuator (17).

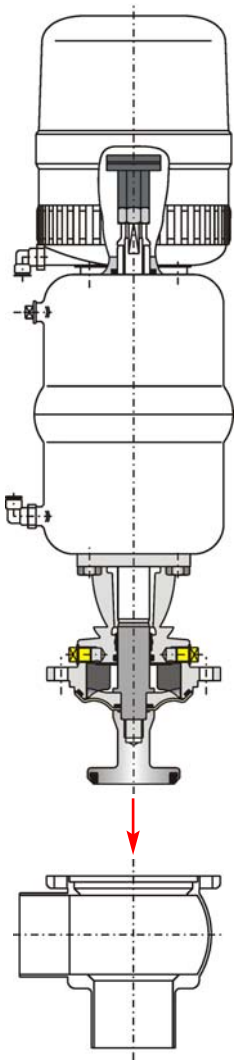
- The upper shaft must be guided through the guide bush into the yoke in **smooth-running** manner. In case of mechanical stiffness, check the right fit of the guide bush.

7. **Design with control unit and valve position indication**
Place the centering washer **(21)**. Apply a drop of a screw locker, e.g. type Loctite, semi-solid, on the thread of the guide rod. Screw on the hex. nut **(22)** and fasten it with a **tightening torque of Md = 40 Nm**. Hold up the centering washer during this process.

! **Control Unit:** Fasten the plastic actuator screw.
! **Valve position indicator:**
Fasten the metallic actuator screw.



9. Service Instructions



9.4. Installation of DELTA MS4 valve

1. **Design with Control Unit:**
   Fasten the adapter on the actuator.
   Place the control unit **(26)** on the adapter **(27)** and fasten it with the ring.

   Design with valve position indication:
   Fasten the housing of the valve position indication **(24)**.

2. **Version NC: During the assembly of the valve insert observe the following:**

- **Control** the actuator **(version: NC) with pneumatic air min 6bar.**
  Carefully place the valve insert into the valve housing.
  The diaphragm **(5)** must not be damaged during the installation in the valve housing. Tighten the hex. screws **(14)** crosswise in the housing flange.

Do not reach for movable parts!
Risk of injury.

! Version NC: Shut off air supply.

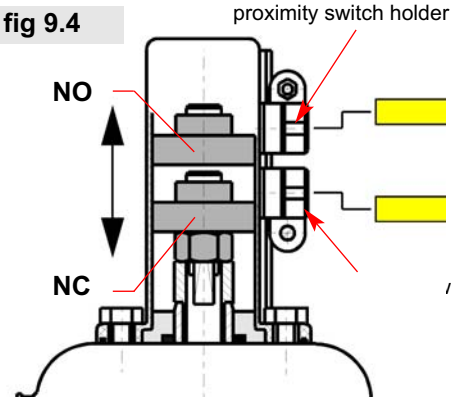
3. **Check the basic adjustment of the valve position indication.**
- By turning the positioning screw in the control unit, the shift points can be adjusted.

4. Design with **valve position indication**:
   Push in the proximity switches and fasten them.
- Readjust the proximity switches if necessary.

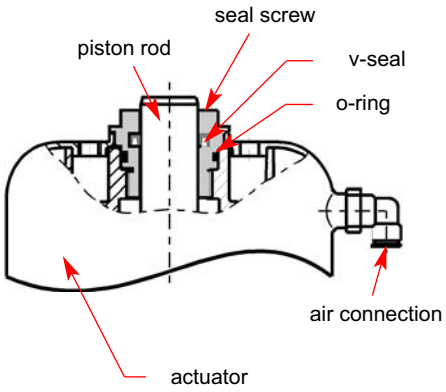
5. **Adjustement of proximity switches: (fig. 9.4)**
- Drive the actuator into a limit position.
- Drive the corresponding proximity switch into the corresponding position. For this purpose release the positioning screw and move the holder until the corresponding signal is indicated. Then, continue to slide the holder by 2 to 3 mm in order to secure the indication. Fasten the positioning screw.
- Position the actuator in the other limit position and carry out the positioning of the second proximity switch.

- Upper valve position indication: valve NO “normally open” (air-to-lower, spring-to-raise)
- Lower valve position indication: valve NC “normally closed” (air-to-raise, spring-to-lower)

fig 9.4



10. Service Instructions - Actuator



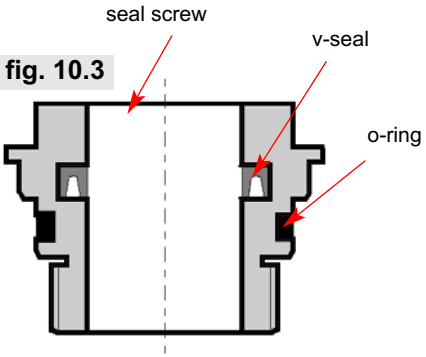


fig. 10.3

10.1. Maintenance of Actuator

1. Remove the air hoses from the actuator.
2. Remove the inner hexagon screws from the adapter of the control unit. - Remove the adapter.

10.2. Dismantling of seals

1. Unscrew the two seal screws with a spanner SW 30 while holding up the actuator with a strap wrench.
2. Remove o-rings and v-seals.

10.3. Installation of seals and assembly of actuator

1. Install the slightly greased o-rings and v-seals in the seal screws **(fig. 10.3)**.
   See to the right direction of installation of the v-seal.
2. Push the seal screws over the piston at both sides of the actuator and tighten them.
3. Fasten the adapter of the control unit and the yoke on the actuator.

   Attention: **Observe the position of the adapter.**

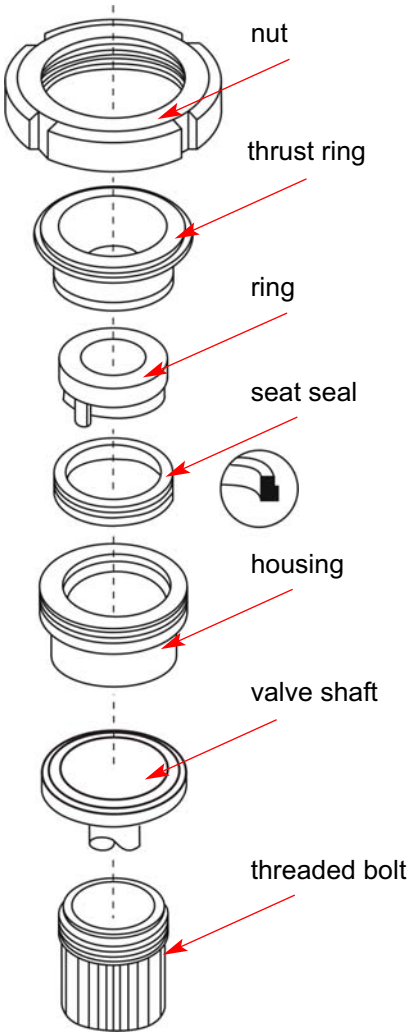
   Attention: **Consider the required valve design NC or NO during the installation of the adapter and the yoke.**
   NC (FS) = normally closed (air-to-raise, spring-to-lower)
   NO (FH) = normally open (air-to-lower, spring-to-raise)
4. Fix the air hoses.

10.4. Reconstruction of valve design from normally closed (NC) to normally open (NO)

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

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

11. Service Instructions



Attention: **By means of the assembly tool the seat seal of single seat valves can be installed, only.**

The assembly tool consists of:

- nut
- thrust ring
- ring with venting plug
- housing
- threaded bolt.

11.1. 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. Clamp the housing in a vice.
3. Slightly grease the seat seal with APV food-grade grease. Then pull the seal onto the ring until stop by means of the venting plug.
4. Introduce 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 until stop by means of a hook spanner.
6. Release the nut. Pull the ring and thrust ring out of the housing.
7. Take the housing out of the vice, unscrew the threaded bolts. Take the valve shaft out of the housing.

Check the correct fit of the seat seal.

12. Trouble Shooting

F a i l u r e	*R e m e d y*
Valve closed and pressure in upper housing	
Valve is untight.	**Replace seat seal (2).** **Check line pressure (max. 10bar).**
Leakage at the leakage bore in the area of the valve yoke	Check tightening torque of locknut. **Replace diaphragm (5) and o-ring (16).**
Leakage between housing and yoke flange	**Replace o-rings (15).**
Actuator	
Air escapes at the actuator rod.	**Replace o-ring (2) at the upper part** **of the actuator.**
Actuator does not work (air escapes permanently from the venting plug).	**Replace the complete actuator.**
Valve position indication	
No feedback.	**Carry out fine adjustment.**

13. Spare Parts Lists

(see annex)

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:

- required number of parts
- reference number
- designation.

Data are subject to change.

BA MS4 0000002
ID-No.: H 3 2 3 2 7 8

UK

Translation of original manual

Rev. 0

WHERE IDEAS MEET INDUSTRY

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.

APV
AN SPX BRAND

DELTA MS4

Ersatzteillisten/Spare Parts Lists

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

SPX®

Ersatzteilliste: spare parts list:

Membranventil fan support MS4 FS-CU und VSM
Diaphragm valve fan support MS4 FS-CU and PSH
DN25-100

Besteht aus 4 Blatt Blatt 1

	Datum	Name
Gezeichnet	15.06.07	Trytko
Geprüft	26.09.07	Schulz
Normgepr.		

Datum	06/07
Name	Trytko

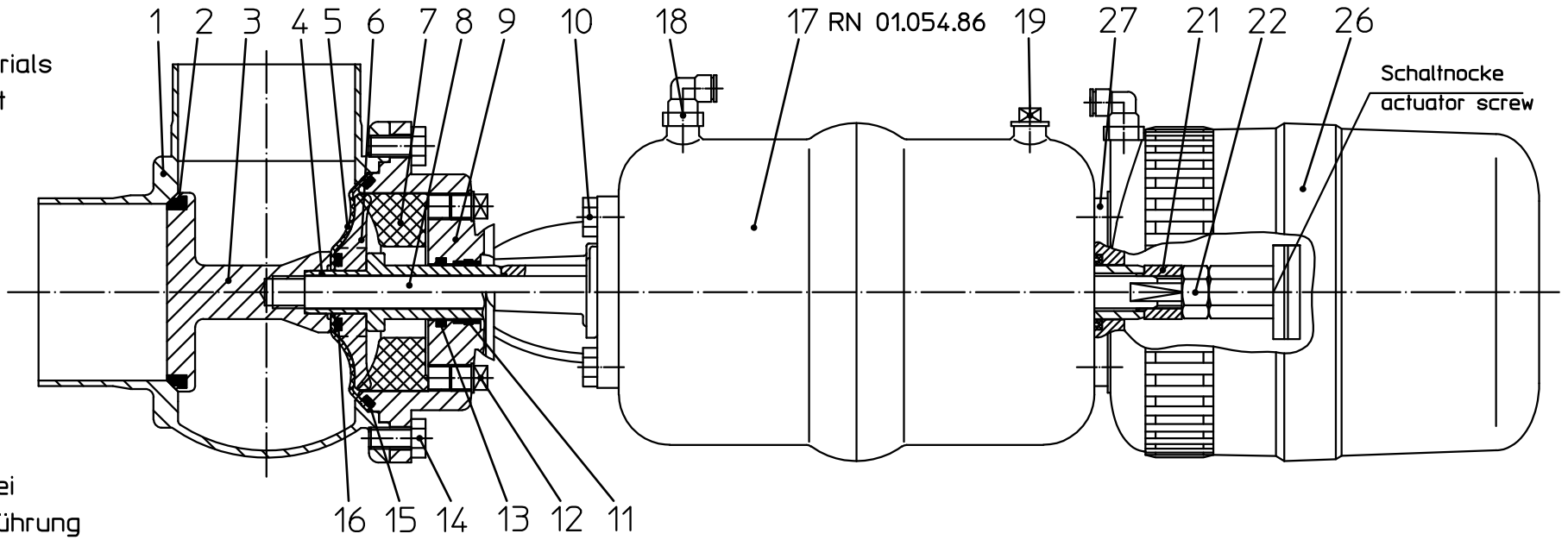
APV Rosista GmbH
D-59425 Unna
Germany

RN 01.064.9

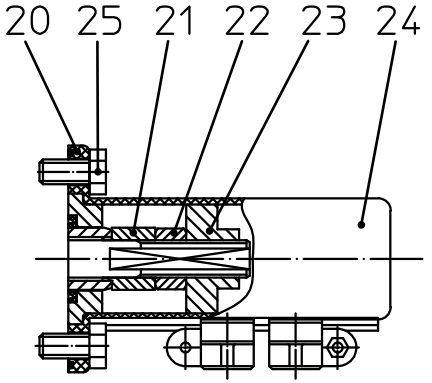
Es stehen verschiedene Dichtungswerkstoffe zur Verfügung.
Bitte WS-Nr. ergänzen

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



** Pos. 18 und 19 nur bei Steuerkopf 3A0-Ausführung
item. 18 and 19 only for actuator 3A0-design



Ventil Standardversion / valve in standard design
000-Ausführung: 1.4404 Außenoberfläche matt-glänzend
000-design: 1.4404 outer surface satin finisch.
Ventil in 3A-Version / valve in 3A-design
3A0-Ausführung: 1.4404 Außenoberfläche blank geschliffen
3A0-design: 1.4404 outer surface bright ground finish.

02/94

Ersatzteilliste: spare parts list:

Membranventil fan support MS4 FS-CU und VSM
Diaphragm valve fan support MS4 FS-CU and PSH
DN25-100

Blatt 2

	Datum	Name
Gezeichnet	15.06.07	Trytko
Geprüft	26.09.07	Schulz
Normgepr.		

Datum	06/07									
Name	Trytko									

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.064.9

Pos. item	Menge quantity	Benennung description	DN 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.
1	1	Gehäuse M41 1+2S Housing Standardausf. matt-gl. standard design satin fin	000 39-41-295/47	000 39-41-395/47	000 39-41-445/47	000 39-41-495/47	000 39-41-545/47	000 39-41-645/47		
	1	Gehäuse M42 1+2+3S Housing Standardausf. matt-gl. standard design satin fin	000 39-42-295/47	000 39-42-395/47	000 39-42-445/47	000 39-42-495/47	000 39-42-545/47	000 39-42-645/47		
	1	Gehäuse M41 1+2S Housing Ausf.3A-blank design 3A-bright fin.	3A0 39-41-295/43	3A0 39-41-395/43	3A0 39-41-445/43	3A0 39-41-495/43	3A0 39-41-545/43	3A0 39-41-645/43		
	1	Gehäuse M42 1+2+3S Housing Ausf.3A-blank design 3A-bright fin.	3A0 39-42-295/43	3A0 39-42-395/43	3A0 39-42-445/43	3A0 39-42-495/43	3A0 39-42-545/43	3A0 39-42-645/43		
2	1	Tellerdichtung * Seat seal	58-33-293/	58-33-393/	58-33-443/	58-33-493/	58-33-543/	58-33-643/		
3	1	Schaft unten Lower valve shaft Standardausführung standard design	000 39-22-295/42	000 39-22-395/42	000 39-22-445/42	000 39-22-495/42	000 39-22-545/42	000 39-22-645/42		
	1	Schaft unten Lower valve shaft Ausführung 3A design -3A	3A0 39-22-295/43	3A0 39-22-395/43	3A0 39-22-445/43	3A0 39-22-495/43	3A0 39-22-545/43	3A0 39-22-645/43		
4	1	Schaft oben Upper valve shaft	39-22-070/12	39-22-071/12	=	39-22-072/12	39-22-073/12	39-22-074/12		
5	1	Membrane Diaphragm	58-23-050/23	58-23-051/23	=	58-23-052/23	58-23-053/23	58-23-054/23		
6	1	Stern Star	08-48-520/12	08-48-521/12	=	08-48-522/12	08-48-523/12	08-48-524/12		
7	1	Membranunterstützung Fan support	08-48-510/93	08-48-511/93	=	08-48-512/93	08-48-513/93	08-48-514/93		
8	1	Zugstange Guide rod	39-23-080/12	39-23-081/12	=	39-23-083/12	=	39-23-130/12		
9	1	Laterne Yoke Ausf. matt-gl. design satin fin.	000 39-40-040/47	000 39-40-041/47	=	000 39-40-042/47	000 39-40-043/47	000 39-40-044/47		
	1	Laterne Yoke Ausf. 3A-blank design 3A-bright fin.	3A0 39-40-040/43	3A0 39-40-041/43	=	3A0 39-40-042/43	3A0 39-40-043/43	3A0 39-40-044/43		
10	4	Skt. Schraube Hex. screw	DIN EN 24017-M8x16-A2-70				DIN EN 24017-M8x20-A2-70			
11	1	Führungsbuchse Bushing Standardausführung standard design	000 08-01-177/23	000 08-01-178/23	=	=	=	=		
	1	Führungsbuchse Bushing Ausführung -3A design -3A	3A0 08-01-177/23	3A0 08-01-178/23	=	=	=	=		
12	2	Entlüftungsstopfen Venting plug	08-60-005/94	=	=	=	=	=		
13	1	O-Ring O-ring	15,3-2,4 58-06-052/64	20,2-3 58-06-078/64	=	=	=	=		
14		Skt. Schraube Hex. screw	4x DIN EN 24017 -M6x12-A2-70	4x DIN EN 24017-M8x16-A2-70	4x	4x	8x DIN EN 24017-M10x16-A2-70	8x		

02/94

Ersatzteilliste: spare parts list:

Membranventil fan support MS4 FS-CU und VSM
Diaphragm valve fan support MS4 FS-CU and PSH
DN25-100

Blatt 3

	Datum	Name
Gezeichnet	15.06.07	Trytko
Geprüft	26.09.07	Schulz
Normgepr.		

Datum	06/07
Name	Trytko

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.064.9

Pos. item	Menge quantity	Benennung description	DN 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.
15	1	O-Ring O-ring	35-2,5 58-06-154/64	60-3 58-06-277/64	=	76-3,5 58-06-347/64	100-3,5 58-06-491/64	120-3,5 58-06-580/64		
16	1	O-Ring O-ring	11-2,5 58-06-038/64	18-3 58-06-067/64	=	22-3,5 58-06-083/64	24-3,5 58-06-098/64	31,1-3,5 58-06-140/64		
17	1	Steuerkopf Ausf. matt-gl. Actuator exec. satin fin.	ø74 000 15-32-050/17	ø110 000 15-32-051/17	=	ø165 000 15-32-052/17	=	=		
	1	Steuerkopf Ausf. 3A-blank Actuator exec. 3A-bright fin.	ø74 3A0 15-32-059/13	ø110 3A0 15-32-060/13	=	ø165 3A0 15-32-061/13	=	=		
18	1	W-Verschraubung schwenkbar G1/8" 1/4"OD ** W-Union slewable	08-60-811/93	=	=	=	=	=		
19	1	Entlüftungsstopfen G1/8 ** Venting plug	08-60-005/93	=	=	=	=	=		
20	1	O-Ring O-ring	OR 66x2 NBR 70-75-Shore A							
21	1	Zentrierscheibe Centering nut	15-28-940/12	=	=	=	=	=		
22	1	Skt. Mutter Hex. nut	DIN EN ISO 10511-M12-A2							
23	1	Schaltnocke Operating cam	08-52-290/97	08-52-291/97	=	=	=	=		
24	1	VSM Gehäuse-SW4 Proximity switch holder housing SW4	15-33-932/93	=	=	=	=	=		
25	4	Skt. Schraube Hex. screw	DIN EN 24017-M8x16-A2-70							
26	1	Control-Unit CU31 Direct-Connect Control-Unit	16-31-232/93	=	=	=	=	=		
27	1	CU-Adapter CU-adapter	08-48-415/93	=	=	=	=	=		

Ersatzteilliste: spare parts list:

Membranventil fan support MS4 FS-CU und VSM
Diaphragm valve fan support MS4 FS-CU and PSH
DN25-100

Blatt 4

	Datum	Name
Gezeichnet	15.06.07	Trytko
Geprüft	26.09.07	Schulz
Normgepr.		

Datum	06/07									
Name	Trytko									

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.064.9

Pos. item	Menge quantity	Benennung description		DN 25 WS-Nr. ref.-no.	40 WS-Nr. ref.-no.	50 WS-Nr. ref.-no.	65 WS-Nr. ref.-no.	80 WS-Nr. ref.-no.	100 WS-Nr. ref.-no.	125 WS-Nr. ref.-no.	150 WS-Nr. ref.-no.
		Dichtungssatz Standardausführung / seal kit standard design Pos. 2, 5, 11, 13, 15, 16, 22 nur im kompletten Dichtungssatz erhältlich Item. 2, 5, 11, 13, 15, 16, 22 available es complete seal kits only									
	1	Dichtungssatz Seal kit	TFM/FPM	58-36-780/00	58-36-781/00	58-36-782/00	58-36-783/00	58-36-784/00	58-36-785/00		
	1	Dichtungssatz Seal kit	TFM/EPDM	58-36-780/01	58-36-781/01	58-36-782/01	58-36-783/01	58-36-784/01	58-36-785/01		
	1	Dichtungssatz Seal kit	TFM/VMQ	58-36-780/02	58-36-781/02	58-36-782/02	58-36-783/02	58-36-784/02	58-36-785/02		
	1	Dichtungssatz Seal kit	TFM/HNBR	58-36-780/06	58-36-781/06	58-36-782/06	58-36-783/06	58-36-784/06	58-36-785/06		
		Dichtungssatz Ausführung -3A / seal kit design -3A Pos. 2, 5, 11, 13, 15, 16, 22 nur im kompletten Dichtungssatz erhältlich Item. 2, 5, 11, 13, 15, 16, 22 available es complete seal kits only									
	1	Dichtungssatz Seal kit	TFM/FPM-3A	3A0 58-36-780/00	3A0 58-36-781/00	3A0 58-36-782/00	3A0 58-36-783/00	3A0 58-36-784/00	3A0 58-36-785/00		
	1	Dichtungssatz Seal kit	TFM/EPDM-3A	3A0 58-36-780/01	3A0 58-36-781/01	3A0 58-36-782/01	3A0 58-36-783/01	3A0 58-36-784/01	3A0 58-36-785/01		
	1	Dichtungssatz Seal kit	TFM/VMQ-3A	3A0 58-36-780/02	3A0 58-36-781/02	3A0 58-36-782/02	3A0 58-36-783/02	3A0 58-36-784/02	3A0 58-36-785/02		
	1	Dichtungssatz Seal kit	TFM/HNBR-3A	3A0 58-36-780/06	3A0 58-36-781/06	3A0 58-36-782/06	3A0 58-36-783/06	3A0 58-36-784/06	3A0 58-36-785/06		

Ersatzteilliste: spare parts list:

Membranventil fan support MS4, MSE4 FS-CU und VSM
Diaphragm valve fan support MS4, MSE4 FS-CU and PSH
1-4 zoll / inch

Besteht aus 4 Blatt Blatt 1

	Datum	Name
Gezeichnet	28.06.07	Trytko
Geprüft	26.09.08	Schulz
Normgepr.		

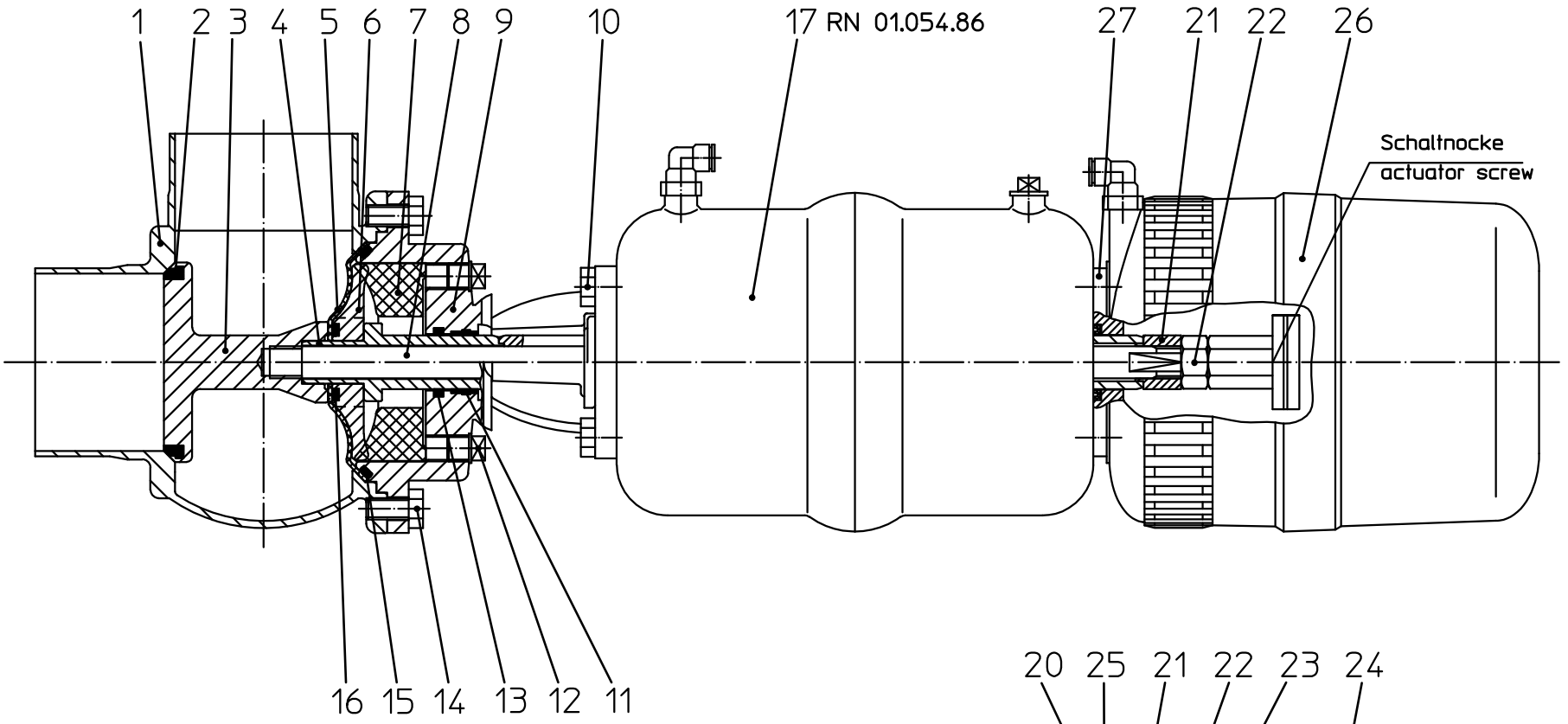
Datum	06/07	06/08								
Name	Trytko	Trytko								

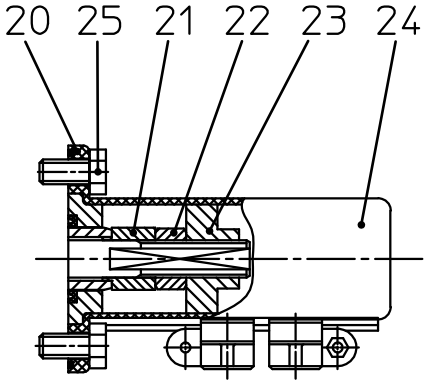
APV Rosista GmbH
D-59425 Unna
Germany

RN 01.064.9-1

Werkstoffvarianten
für Sitzdichtung.
Bitte WS-Nr. ergänzen.
Selection for seat
seals materials.
Fill in last two digits
of ref.-no.

* ../13-VMQ
../33-HNBR
../73-FPM
../93-EPDM





Ersatzteilliste: spare parts list:

Membranventil fan support MS4, MSE4 FS-CU und VSM
Diaphragm valve fan support MS4, MSE4 FS-CU and PSH
1-4 zoll / inch

Blatt 2

	Datum	Name
Gezeichnet	28.06.07	Trytko
Geprüft	29.09.07	Schulz
Normgepr.		

Datum	06/07	06/08								
Name	Trytko	Trytko								

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.064.9-1

Pos. item	Menge quantity	Benennung description	1" WS-Nr. ref.-no.	1,5" WS-Nr. ref.-no.	2" WS-Nr. ref.-no.	2,5" WS-Nr. ref.-no.	3" WS-Nr. ref.-no.	4" WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
1	1	Gehäuse housing M41 1+2S	39-41-320/47	39-41-420/47	39-41-470/47	39-41-520/47	39-41-570/47	39-41-670/47		
	1	Gehäuse housing M42 1+2+3S	39-42-320/47	39-42-420/47	39-42-470/47	39-42-520/47	39-42-570/47	39-42-670/47		
	1	Gehäuse housing ME41 1+2S	39-45-320/47	39-45-420/47	39-45-470/47	39-45-520/47	39-45-570/47	39-45-670/47		
	1	Gehäuse housing ME42 1+2+3S	39-46-320/47	39-46-420/47	39-46-470/47	39-46-520/47	39-46-570/47	39-46-670/47		
	1	Gehäuse housing ME432 1+2+3S	39-47-320/47	39-47-420/47	39-47-470/47	39-47-520/47	39-47-570/47	39-47-670/47		
	1	Gehäuse housing ME44 1+2+3+4S	39-48-320/47	39-48-420/47	39-48-470/47	39-48-520/47	39-48-570/47	39-48-670/47		
2	1	Tellerdichtung seat seal *	58-33-293/	58-33-393/	58-33-443/	58-33-493/	58-33-568/	58-33-643/		
3	1	Schaft unten lower valve shaft	39-22-320/42	39-22-420/42	39-22-470/42	39-22-520/42	39-22-570/42	39-22-670/42		
4	1	Schaft oben upper valve shaft	39-22-070/12	39-22-071/12	=	39-22-072/12	=	39-22-074/12		
5	1	Membrane diaphragm	58-23-050/23	58-23-051/23	=	58-23-052/23	=	58-23-054/23		
6	1	Stern star	08-48-520/12	08-48-521/12	=	08-48-522/12	=	08-48-524/12		
7	1	Membranunterstützung fan support	08-48-510/93	08-48-511/93	=	08-48-512/93	=	08-48-514/93		
8	1	Zugstange guide rod	39-23-080/12	39-23-081/12	=	39-23-083/12	=	39-23-130/12		
9	1	Laterne yoke	39-40-040/47	39-40-041/47	=	39-40-042/47	39-40-046/47	39-40-044/47		
10	4	Skt. Schraube hex. screw	DIN EN 24017-M8x16-A2-70					DIN EN_24017-M8x20-A2-70		
11	1	Führungsbuchse bushing	08-01-177/23	08-01-178/23	=	=	=			
12	2	Entlüftungsstopfen venting plug	08-60-005/94	=	=	=	=	=		
13	1	O-Ring O-ring	15,3-2,4 58-06-052/64	20,2-3 58-06-078/64	=	=	=	=		
14		Skt. Schraube hex. screw	4x DIN EN 24017 -M6x12-A2-70	4x DIN EN 24017-M8x16-A2-70	4x	4x	4x	8xDIN EN 24017 -M10x16-A2-70		
15	1	O-Ring O-ring	35-2,5 58-06-154/64	60-3 58-06-277/64	=	76-3,5 58-06-347/64	=	120-3,5 58-06-580/64		

Ersatzteilliste: spare parts list:

Membranventil fan support MS4, MSE4 FS-CU und VSM
Diaphragm valve fan support MS4, MSE4 FS-CU and PSH
1-4 zoll / inch

Blatt 3

	Datum	Name
Gezeichnet	28.06.07	Trytko
Geprüft	26.09.07	Schulz
Normgepr.		

Datum	06/07	06/08								
Name	Trytko	Trytko								

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.064.9-1

Pos. item	Menge quantity	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.
16	1	O-Ring O-ring	11-2,5 58-06-038/64	18-3 58-06-067/64	=	22-3,5 58-06-083/64	=	31,1-3,5 58-06-140/64		
17	1	Steuerkopf actuator	ø74 15-32-050/17	ø110 15-32-051/17	=	ø165 15-32-052/17	=	=		
18										
19										
20	1	O-Ring O-ring	OR 66x2 NBR 70-75-Shore A							
21	1	Zentrierscheibe centering nut	15-28-940/12	=	=	=	=	=		
22	1	Skt. Mutter hex. nut	DIN EN ISO 10511-M12-A2							
23	1	Schaltnocke operating cam	08-52-290/97	08-52-291/97	=	=	=	=		
24	1	VSM Gehäuse-SW4 proximity switch holder housing SW4	15-33-932/93	=	=	=	=	=		
25	4	Skt. Schraube hex. screw	DIN EN 24017-M8x16-A2-70							
26	1	Control-Unit CU31 Direct-Connect Control-Unit	16-31-232/93	=	=	=	=	=		
27	1	CU-Adapter CU-adapter	08-48-415/93	=	=	=	=	=		

Ersatzteilliste: spare parts list:

Membranventil fan support MS4, MSE4 FS-CU und VSM
Diaphragm valve fan support MS4, MSE4 FS-CU and PSH
1-4 zoll / inch

Blatt 4

	Datum	Name
Gezeichnet	28.06.07	Trytko
Geprüft	26.09.07	Schulz
Normgepr.		

Datum	06/07	06/08
Name	Trytko	Trytko

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.064.9-1

Pos. item	Menge quantity	Benennung description	1" WS-Nr. ref.-no.	1,5" WS-Nr. ref.-no.	2" WS-Nr. ref.-no.	2,5" WS-Nr. ref.-no.	3" WS-Nr. ref.-no.	4" WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
		Dichtungssatz MS4+MSE4 Standardausführung / seal kit MS4+MSE4standard design Pos. 2, 5, 11, 13, 15, 16, 22 nur im kompletten Dichtungssatz erhältlich item. 2, 5, 11, 13, 15, 16, 22 available es complete seal kits only								
	1	Dichtungssatz TFM/FPM seal kit	58-36-780/00	58-36-781/00	58-36-782/00	58-36-783/00	58-36-786/00	58-36-785/00		
	1	Dichtungssatz TFM/EPDM seal kit	58-36-780/01	58-36-781/01	58-36-782/01	58-36-783/01	58-36-786/01	58-36-785/01		
	1	Dichtungssatz TFM/VMQ seal kit	58-36-780/02	58-36-781/02	58-36-782/02	58-36-783/02	58-36-786/02	58-36-785/02		
	1	Dichtungssatz TFM/HNBR seal kit	58-36-780/06	58-36-781/06	58-36-782/06	58-36-783/06	58-36-786/06	58-36-785/06		

Ersatzteilliste: spare parts list:

Steuerkopf SW4
Actuator SW4

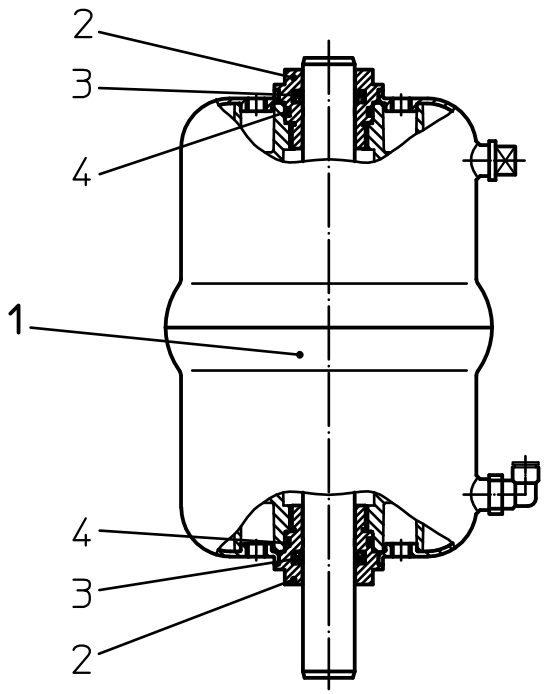
Besteht aus 1 Blatt 1 Blatt

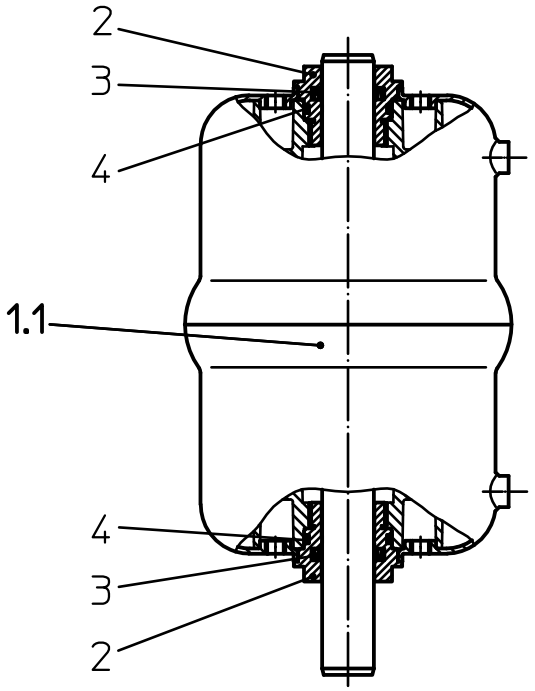
	Datum	Name
Gezeichnet	15.1.98	Trytko
Geprüft	15.1.98	Spliethoff
Normgepr.	19.1.98	Plümper

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

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.054.86





Pos. item	Menge quantity	Benennung description	ø74 WS-Nr. ref.-no.	ø110 WS-Nr. ref.-no.	ø165 WS-Nr. ref.-no.
1		Steuerkopf kpl Feder/Luft Actuator complete spring/air Ausf. matt-gl. design satin fin.	15-32-050/17	15-32-051/17	15-32-052/17
		Steuerkopf kpl Luft/Luft Actuator complete air/air Ausf. matt-gl. design satin fin.	15-32-085/17	15-32-086/17	15-32-087/17
1.1		Steuerkopf kpl Feder/Luft Actuator complete spring/air Ausf. 3A-blank design 3A-bright fin.	3A0 15-32-059/13	3A0 15-32-060/13	3A0 15-32-061/13
		Steuerkopf kpl Luft/Luft Actuator complete air/air Ausf. 3A-blank 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 20x28x4	58-32-010/83	=	=
4	2	O-Ring O-ring 29-2,5	58-06-124/83	=	=

02/94

Ersatzteilliste: spare parts list:

Membranventil fan support MS4, MSE4 FS-CU und VSM
Diaphragm valve fan support MS4, MSE4 FS-CU and PSH 1-4 zoll/inch

A3®

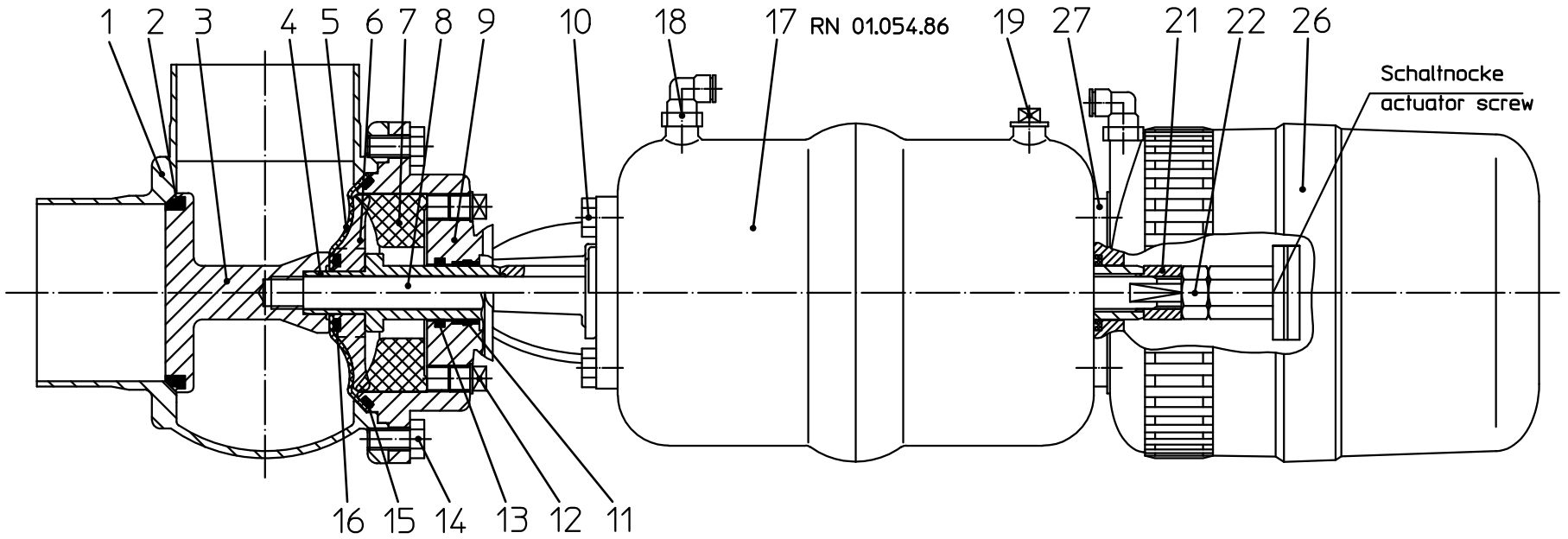
Besteht aus 4 Blatt Blatt 1

	Datum	Name
Gezeichnet	02.06.08	Trytko
Geprüft	19.06.08	Schulz
Normgepr.		

Datum	06/08
Name	Trytko

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.064.9-2

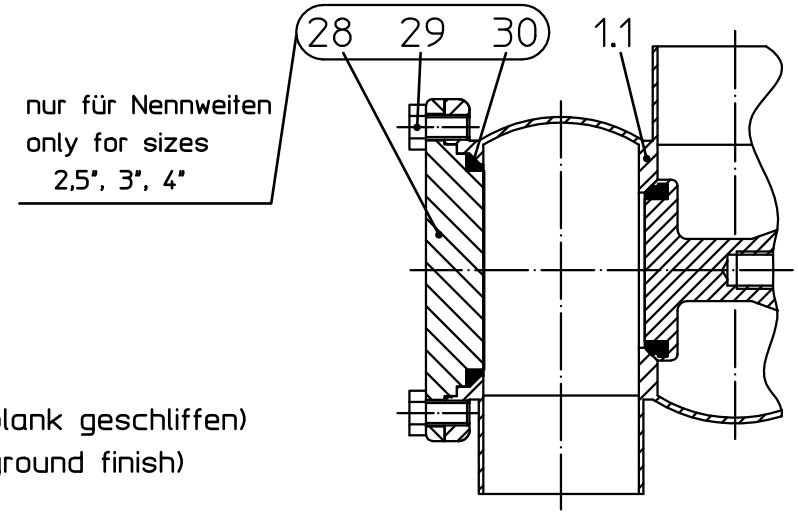


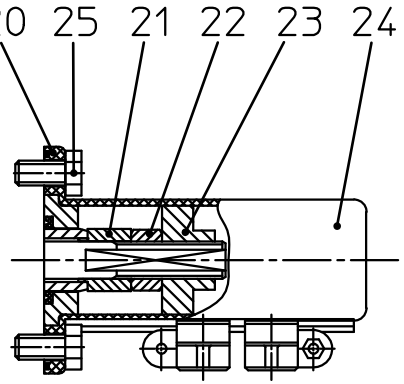
Werkstoffvarianten
für Sitzdichtung.
Bitte WS-Nr. ergänzen.
Selection for seat
seal materials.
Fill in last two digits
of ref.-no.

* ../13-VMQ
../33-HNBR
../73-FPM
../93-EPDM

** Metalloberfläche-außen:
outer metal surfaces:
../43 1.4404- blank geschliffen
1.4404- bright ground finish.
../47 1.4404- matt-glänzend
1.4404- satin finish

*** Pos. 18 und 19 nur bei Steuerkopf 3A-Ausführung (blank geschliffen)
item. 18 and 19 only for actuator 3A-design (bright ground finish)





Ersatzteilliste: spare parts list:

Membranventil fan support MS4, MSE4 FS-CU und VSM
Diaphragm valve fan support MS4, MSE4 FS-CU and PSH 1-4 zoll/inch

A3®

Blatt 2

	Datum	Name
Gezeichnet	02.06.08	Trytko
Geprüft	19.06.08	Schulz
Normgepr.		

Datum	06/08									
Name	Trytko									

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.064.9-2

Pos. item	Menge quantity	Benennung description	1" WS-Nr. ref.-no.	1,5" WS-Nr. ref.-no.	2" WS-Nr. ref.-no.	2,5" WS-Nr. ref.-no.	3" WS-Nr. ref.-no.	4" WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
1	1	Gehäuse housing M41 1+2S **	3A0 39-41-800/	3A0 39-41-801/	3A0 39-41-802/	3A0 39-41-803/	3A0 39-41-804/	3A0 39-41-805/		
	1	Gehäuse housing M42 1+2+3S **	3A0 39-42-800/	3A0 39-42-801/	3A0 39-42-802/	3A0 39-42-803/	3A0 39-42-804/	3A0 39-42-805/		
1.1	1	Gehäuse housing ME41 1+2S **	3A0 39-45-320/	3A0 39-45-420/	3A0 39-45-470/	3A0 39-45-520/	3A0 39-45-570/	3A0 39-45-670/		
	1	Gehäuse housing ME42 1+2+3S **	3A0 39-46-320/	3A0 39-46-420/	3A0 39-46-470/	3A0 39-46-520/	3A0 39-46-570/	3A0 39-46-670/		
	1	Gehäuse housing ME43 1+2+3S **	3A0 39-47-320/	3A0 39-47-420/	3A0 39-47-470/	3A0 39-47-520/	3A0 39-47-570/	3A0 39-47-670/		
	1	Gehäuse housing ME44 1+2+3+4S **	3A0 39-48-320/	3A0 39-48-420/	3A0 39-48-470/	3A0 39-48-520/	3A0 39-48-570/	3A0 39-48-670/		
2	1	Tellerdichtung seat seal *	58-33-293/	58-33-393/	58-33-443/	58-33-493/	58-33-568/	58-33-643/		
3	1	Schaft unten lower valve shaft	3A0 39-22-320/43	3A0 39-22-420/43	3A0 39-22-470/43	3A0 39-22-520/43	3A0 39-22-570/43	3A0 39-22-670/43		
4	1	Schaft oben upper valve shaft	39-22-070/12	39-22-071/12	=	39-22-072/12	=	39-22-074/12		
5	1	Membrane diaphragm	58-23-050/23	58-23-051/23	=	58-23-052/23	=	58-23-054/23		
6	1	Stern star	08-48-520/12	08-48-521/12	=	08-48-522/12	=	08-48-524/12		
7	1	Membranunterstützung fan support	08-48-510/93	08-48-511/93	=	08-48-512/93	=	08-48-514/93		
8	1	Zugstange guide rod	39-23-080/12	39-23-081/12	=	39-23-083/12	=	39-23-130/12		
9	1	Laterne yoke Ausf. 3A-blank design 3A-bright fin.	3A0 39-40-040/43	3A0 39-40-041/43	=	3A0 39-40-042/43	3A0 39-40-046/43	3A0 39-40-044/43		
	1	Laterne yoke Ausf. matt-gl. design satin fin.	000 39-40-040/47	000 39-40-041/47	=	000 39-40-042/47	000 39-40-046/47	000 39-40-044/47		
10	4	Skt. Schraube hex. screw	DIN EN 24017-M8x16-A2-70					DIN EN 24017-M8x20-A2-70		
11	1	Führungsbuchse bushing	000 08-01-177/23	3A0 08-01-178/23	=	=	=	=		
12	2	Entlüftungsstopfen venting plug	08-60-005/94	=	=	=	=	=		
13	1	O-Ring O-ring	15,3-2,4 58-06-052/64	20,2-3 58-06-078/64	=	=	=	=		
14		Skt. Schraube hex. screw	4x DIN EN 24017 -M6x12-A2-70	4x DIN EN 24017-M8x16-A2-70		4x	4x	8xDIN EN 24017 -M10x16-A2-70		

Ersatzteilliste: spare parts list:

Membranventil fan support MS4, MSE4 FS-CU und VSM
Diaphragm valve fan support MS4, MSE4 FS-CU and PSH 1-4 zoll/inch

A3®

Blatt 3

	Datum	Name
Gezeichnet	02.06.08	Trytko
Geprüft		
Normgepr.		

Datum	06/08
Name	Trytko

APV Rosista GmbH D-59425 Unna Germany

RN 01.064.9-2

Pos. item	Menge quantity	Benennung description	1" WS-Nr. ref.-no.	1,5" WS-Nr. ref.-no.	2" WS-Nr. ref.-no.	2,5" WS-Nr. ref.-no.	3" WS-Nr. ref.-no.	4" WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
15	1	O-Ring O-ring	35-2,5 58-06-154/64	60-3 58-06-277/64	=	76-3,5 58-06-347/64	=	120-3,5 58-06-580/64		
16	1	O-Ring O-ring	11-2,5 58-06-038/64	18-3 58-06-067/64	=	22-3,5 58-06-083/64	=	31,1-3,5 58-06-140/64		
17	1	Steuerkopf Ausf. 3A-blank actuator design 3A-bright fin.	ø74 3A0 15-32-059/13	ø110 3A0 15-32-060/13	=	ø165 3A0 15-32-061/13	=	=		
	1	Steuerkopf Ausf. matt-gl. actuator design satin fin.	ø74 000 15-32-050/17	ø110 000 15-32-051/17	=	ø165 000 15-32-052/17	=	=		
18	1	W-Verschraubung schwenkbar *** G1/8" 1/4"OD W-Union slewable	08-60-811/93	=	=	=	=	=		
19	1	Entlüftungsstopfen G1/8 *** venting plug	08-60-005/93	=	=	=	=	=		
20	1	O-Ring O-ring	OR 66x2 NBR 70-75-Shore A							
21	1	Zentrierscheibe centering nut	15-28-940/12	=	=	=	=	=		
22	1	Skt. Mutter hex. nut	DIN EN ISO 10511-M12-A2							
23	1	Schaltnocke operating cam	08-52-290/97	08-52-291/97	=	=	=	=		
24	1	VSM Gehäuse-SW4 proximity switch holder housing SW4	15-33-932/93	=	=	=	=	=		
25	4	Skt. Schraube hex. screw	DIN EN 24017-M8x16-A2-70							
26	1	Control-Unit CU31 Direct-Connect Control-Unit	16-31-232/93	=	=	=	=	=		
27	1	CU-Adapter CU-adapter	08-48-415/93	=	=	=	=	=		
28	1	Gehäusedeckel housing screw				3A0 39-01-233/43	3A0 39-01-234/43			
29		Skt. Schraube hex. screw				4x DIN EN 24017-M8x16-A2-70	4x			
30	1	O-Ring O-ring				75,6-5,33 58-06-345/64	=	119,2-5,7 58-06-520/64		

Ersatzteilliste: spare parts list:

Membranventil fan support MS4, MSE4 FS-CU und VSM
Diaphragm valve fan support MS4, MSE4 FS-CU and PSH 1-4 zoll/inch

A3

Blatt 4

	Datum	Name
Gezeichnet	02.06.08	Trytko
Geprüft		
Normgepr.		

Datum	06/08
Name	Trytko

APV Rosista GmbH
D-59425 Unna
Germany

RN 01.064.9-2

Pos. item	Menge quantity	Benennung description	1" WS-Nr. ref.-no.	1,5" WS-Nr. ref.-no.	2" WS-Nr. ref.-no.	2,5" WS-Nr. ref.-no.	3" WS-Nr. ref.-no.	4" WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
		Dichtungssatz MS4 Ausführung -3A / seal kit MS4 design -3A Pos. 2, 5, 11, 13, 15, 16, 22 nur im kompletten Dichtungssatz erhältlich item. 2, 5, 11, 13, 15, 16, 22 available es complete seal kits only								
	1	Dichtungssatz seal kit TFM/FPM-3A	3A0 58-36-780/00	3A0 58-36-781/00	3A0 58-36-782/00	3A0 58-36-783/00	3A0 58-36-786/00	3A0 58-36-785/00		
	1	Dichtungssatz seal kit TFM/EPDM-3A	3A0 58-36-780/01	3A0 58-36-781/01	3A0 58-36-782/01	3A0 58-36-783/01	3A0 58-36-786/01	3A0 58-36-785/01		
	1	Dichtungssatz seal kit TFM/VMQ-3A	3A0 58-36-780/02	3A0 58-36-781/02	3A0 58-36-782/02	3A0 58-36-783/02	3A0 58-36-786/02	3A0 58-36-785/02		
	1	Dichtungssatz seal kit TFM/HNBR-3A	3A0 58-36-780/06	3A0 58-36-781/06	3A0 58-36-782/06	3A0 58-36-783/06	3A0 58-36-786/06	3A0 58-36-785/06		
		Dichtungssatz MSE4 Ausführung -3A / seal kit MSE4 design -3A Pos. 2, 5, 11, 13, 15, 16, 22, 30 nur im kompletten Dichtungssatz erhältlich item. 2, 5, 11, 13, 15, 16, 22, 30 available es complete seal kits only								
	1	Dichtungssatz seal kit TFM/FPM-3A	3A0 58-36-780/00	3A0 58-36-781/00	3A0 58-36-782/00	3A0 58-36-843/00	3A0 58-36-846/00	3A0 58-36-845/00		
	1	Dichtungssatz seal kit TFM/EPDM-3A	3A0 58-36-780/01	3A0 58-36-781/01	3A0 58-36-782/01	3A0 58-36-843/01	3A0 58-36-846/01	3A0 58-36-845/01		
	1	Dichtungssatz seal kit TFM/VMQ-3A	3A0 58-36-780/02	3A0 58-36-781/02	3A0 58-36-782/02	3A0 58-36-843/02	3A0 58-36-846/02	3A0 58-36-845/02		
	1	Dichtungssatz seal kit TFM/HNBR-3A	3A0 58-36-780/06	3A0 58-36-781/06	3A0 58-36-782/06	3A0 58-36-843/06	3A0 58-36-846/06	3A0 58-36-845/06		