

Operating Manual **DELTA M4**Membrane Valve











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 $1^{\circ}-4^{\circ}$

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	S				Page
1.	General Terms					2
2.	Safety Instructio	ns				2
3.	Mode of Operation	on				3
4.	Auxiliary Equipm	nent				4
5.	Installation					5
5.1	Welding Instructi	ions				5
6.	Dimensions / We	ight	S			6 - 7
7.	Technical Data					8 - 9
8.	Maintenance					10
9.	Service Instruction M4, MT4, MP4, M		, MTP4			11 - 15
10.	Modification of A	ctua	ator			16
11.	Assembly Tool fo			over/di	vert valves)	17
12.	Service Instruction MES 4	ons				18 - 20
13.	Trouble Shooting	3				21
14.	Spare Parts Lists	8				
	Single Seat Valve DN design R	es M RN	4, ME 4, N 01.064.0	IT4 /	inch desig	n RN 01.064.1
	Single Seat Valve DN design R	es M RN	P 4, MEP 4 01.064.2	I, MTP /		n RN 01.064.3
	Change - Over / I DN design R	Dive RN	rt Valves IV 01.064.4	IES 4 /	inch desig	n RN 01.064.5
	Actuator R	RN	01.054.86			







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



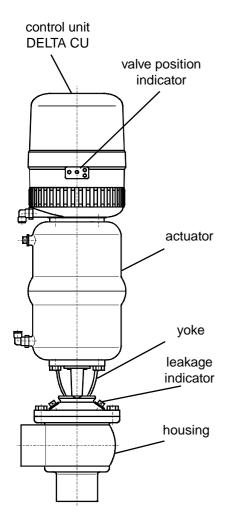
Danger!

- 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 system 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.
- If the membrane is damaged, leakages drain off the leakage bore in the yoke area.
- Attention!
 With valve design NC (normally closed):
 control the actuator with air before releasing the
 housing screws.
- The welded actuator is under spring load, **do not** open it.





3. Mode of Operation



Membrane valves DELTA M4 have been developed for use in the brewing and beverage industries, dairy and food applications as well as in the chemical and pharmaceutical industries.

The function of the DELTA M4 valve is to shut off line sections.

The membrane valves offer optimum protection of the product in hygienic and aseptic applications. Product safety is provided by the hermetic separation of the product chamber from the environment (atmosphere) by a flexible membrane.

- Operation by pneumatic actuator with air connection, reset by spring force.
- By different assembly of the actuator, the following designs can be realized:

NC: actuator normally closed

("fail-down": air-to-raise, spring-to-lower)

NO: actuator normally open

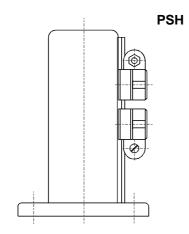
("fail-up": air-to-lower, spring-to-raise)

- The inner parts of the actuator are maitenance-free.
- The cleaning of the inner area of the valve is undertaken during CIP cleaning of the line system.
- Leakages at the membrane are indicated at the leakage drain in the yoke area.
- For the pneumatic control of the valve, a control unit is installed on top of the actuator.
- The yellow luminous diodes installed in the control unit indicate the position of the valve rod.
- For aggressive products, the MP design of the inner parts with a membrane shaft out of TFM should be used.





4. Auxiliary Equipment



- Valve position indication

For the valve position indication, a proximity switch holder **(PSH)** can be installed direct on the actuator.

To signal the limit position of the valve seat, proximity switches can be mounted to the holder if required.

We recommend our APV standard types: operating distance: 5 mm / diameter: 11 mm.

If the user decides to apply valve position indicators other than APV type, we cannot take over the liability for any malfunctions resulting therefrom.

- Control Unit

The assembly of a control unit on the M4 valve is possible.

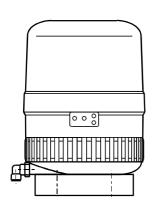
The following designs are available:

	1 solenoid valve
Direct Connect	CU31 Direct Connect
refNo.:	16-31-232/93
Profibus	CU21V
refNo.:	16-31-236/93
Device Net	CU31 Device Net
refNo.:	16-31-240/93
AS - Interface	CU31 AS - Interface
refNo.:	16-31-244/93

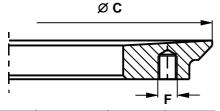
- For the assembly of the control unit on the M4 valve an adapter is required.

	adapter
Designation:	CU 2 adapter - SW4 / SD4 / M4
refNo.:	08-48-415/93

control unit with adapter



tank bottom welding flange



DN	inch	ØС	F
25	1"	138	M8
40	1,5"	153	M8
50	2"	168	M8
65	2,5" / 3"	200	M10
80		223	M10
100	4"	258	M10

The tank bottom welding flange for the MT4 valve does not form part of the scope of supply.

Order reference numbers for the tank bottom welding flange:

DN	inch	refNo.:
25	1"	31B 15 - 01 - 391/42
40	1,5"	31B 15 - 01 - 441/42
50	2"	31B 15 - 01 - 491/42
65	2,5" / 3"	31B 15 - 01 - 541/42
80		31B 15 - 01 - 641/42
100	4"	31B 15 - 01 - 691/42





5. Installation

- The installation of the valve must be undertaken in such a manner that fluids can drain off the valve housing and should be provided preferably 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

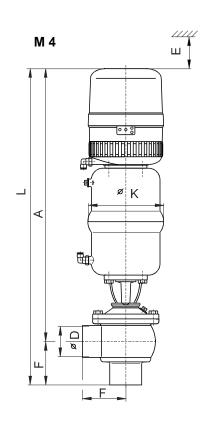
- Before welding of the valve, the valve insert must be dismantled from the housing. Careful handling to avoid damage to the parts is necessary.
- Welding should only be carried out by certified welders (EN 287-1).
 (Seam quality EN 25817 "B").
- The welding of the valve housings must be undertaken in 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 as a square butt joint without air. (Consider shrinkage!)
- TIG orbital welding is best!
- After welding of the valve housings or of the mating flanges and after work at the pipelines, the corresponding parts of the installation or pipelines must be cleaned from welding residues and soiling. If these cleaning instructions are not observed, welding residues and dirt particles can settle in the valve and cause damage.
- Any damage resulting from the non-observance of these welding instructions is not subject to our guarantee.

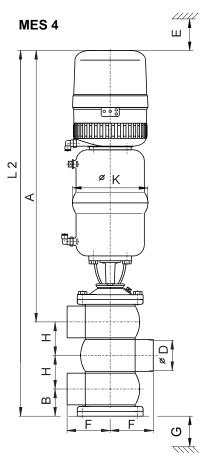


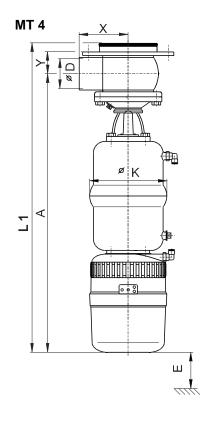


6. Dimensions / Weights

6.1 M4 Valves with control unit DELTA CU







	Dimensions in mm										Weight in kg M4 / MT4	Weight in kg MES4			
DN	Α	В	Øр	F	Н	ØΚ	L	L1	L2	Х	Υ	Е	G*		
25	406	29,5	26	50	32	86	456	446	500	65	26,0	200	290	4,2	7,4
40	445	37,5	38	67	44	126	512	490	571	75	29,5	200	300	7,1	11,0
50	451	45,5	50	72	56	126	523	509	609	80	37,5	200	310	7,1	12,0
65	460	52,0	66	85	74	126	545	524	660	95	46,0	200	330	7,9	13,5
80	516	59,5	81	98	91	189	614	587	758	108	53,5	200	380	14,2	21,0
100	528	69,0	100	111	110	189	639	613	817	125	65,0	200	400	15,2	26,5
inch															
1"	405	28,0	22,2	50	28,6	86	455	443	490	65	24,5	200	290	4,2	7,4
1,5"	443	37,0	34,9	67	41,1	126	510	486	562	75	28,0	200	300	7,1	11,0
2"	449	43,0	47,6	72	53,8	126	521	506	600	80	36,5	200	310	7,1	12,0
2,5"	454	49,0	60,3	85	68,0	126	539	515	639	95	43,0	200	330		13,5
3"	463	55,0	72,9	90	80,1	189	553	530	678	95	49,0	200	380		21,0
4"	526	68,0	97,6	111	107,6	189	637	609	809	125	64,0	200	400	15,3	26,5

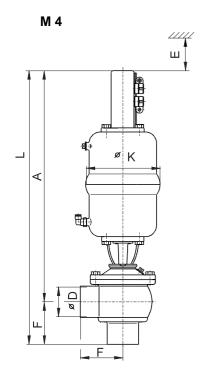
^{*} If necessary, dimension **G** can be reduced by unscrewing shaft / guide rod.

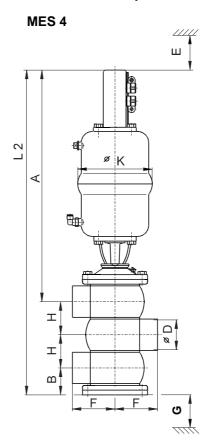


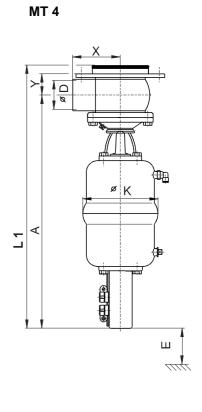


6. Dimensions / Weights

6.2 M4 Valves with valve position indication (proximity switch holder)







	Dimensions in mm										Weight in kg M4 / MT4	Weight in kg MES4			
DN	Α	В	ØD	F	Н	ØK	L	L1	L2	Х	Υ	Е	G*		
25	348	29,5	26	50	32	86	398	388	442	65	26,0	200	290	3,2	6,4
40	387	37,5	38	67	44	126	454	432	513	75	29,5	200	300	6,1	10,0
50	393	45,5	50	72	56	126	465	451	551	80	37,5	200	310	6,1	11,0
65	402	52,0	66	85	74	126	487	466	603	95	46,0	200	330	6,9	12,5
80	458	59,5	81	98	91	189	556	529	700	108	53,5	200	380	13,2	20,0
100	470	69,0	100	111	110	189	581	555	760	125	65,0	200	400	14,3	25,5
inch															
1"	347	28,0	22,2	50	28,6	86	397	385	432	65	24,5	200	290	3,2	6,4
1,5"	385	37,0	34,9	67	41,1	126	452	428	504	75	28,0	200	300	6,1	10,0
2"	391	43,0	47,6	72	53,8	126	463	448	542	80	36,5	200	310	6,1	11,0
2,5"	396	49,0	60,3	85	68,0	126	481	457	581	95	43,0	200	330		12,5
3"	405	55,0	72,9	90	80,1	189	495	472	620	95	49,0	200	380		20,0
4"	468	68,0	97,6	111	107,6	189	579	551	751	125	64,0	200	400	14,3	25,5

 $f \star$ If necessary, dimension f G can be reduced by unscrewing shaft / guide rod.





7. Technical Data

Product - wetted parts: 316 L, 1.4404

Other parts: 1.4301

Seals: standard: EPDM
Option: HNBR

Membrane: TFM / EPDM

Option: membrane shaft MP4 TFM

Actuator: 1.4301

Max. line pressure: 5 bar

Max. operating temperature : 135°C EPDM, HNBR
Short-term steam load: 140°C EPDM, HNBR

Short-term steam load: 140°C EPDM, HNBR

Air connection (for hose): 6 x 1mm
Max. pneumatic air pressure: 8 bar
Min. pneumatic air pressure: 6 bar

(Dry and clean pneumatic air must be used only!)

The opening and closing times of valves equipped with a control unit DELTA CU can be fixed by adjusting the throttle at the solenoid valve.

closing times in sec. control pressure 6 bar hose length 1m a. 10m.

		1m	10m
DN	inch		
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

movement in mm

		single seat valves	change-over/divert valve
DN	inch		
25	1"	8	5
40	1,5"	13	10
50	2"	13	10
65	2,5"	16	13
	3"	16	13
80		21	18
100	4"	25	22





7. Technical Data

DELTA M4 kvs values in ${\rm m}^3$ / h

		single - seat valves					
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				

		change-over / divert valves				
DN	inch					
25	1"					
40	1,5"					
50	2"					
65	2,5"	65	65			
80	3"					
100	4"					





8. Maintenance

- The maintenance intervals depend on the corresponding application and are to be determined by the operator himself carrying out temporary checks.

Tools required:

- 1x spanner SW10 (DN 25 / 1")

1x spanner SW131x spanner SW171x spanner SW19

- The assembly and disassembly as well as the exchange of seals is done according to the service instructions.
- All seals must be provided with a thin layer of grease before their installation.
- The membrane must be provided with a thin layer of grease at the product- averted side.

Recommendation:

APV-food-grade grease for EPDM and HNBR

(0,75 kg/ can - WS-Nr. 000 70-01-019/93) (60 g/ tube - WS-Nr. 000 70-01-018/93)

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

Recommendation for screw retention Typ: Loctite 243 semi-solid

(5ml - WS-Nr.00070-01-110/93) (50ml - WS-Nr.00070-01-111/93)

To simplify the installation of the seat seal, an assembly tool is available.

	as	sembly tool M4
DN	inch	refNo.:
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



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9. Service Instructions



actuator screw

9.1 Dismantling from the line system M4 / MT4, (MP4 / MTP4)

a. Shut off line pressure and discharge lines and tanks if possibe.

b. Valve design NC: control actuator with air.



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Do not touch movable parts! Risk of injury.

c. Remove housing screws **(11)** and lift complete valve insert including actuator out of the housing.

d. Valve design NC: cut off compressed air.

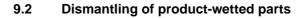
e. CU design: remove the control unit by turning the

locking ring.

Valve position indicator: remove proximity switches.

Detach indicator housing

(proximity switch holder) from actuator.



The item numbers refer to the spare parts drawings M4, ME4, MT4: DN design RN 01.064.0

inch design RN 01.064.1

a. CU design and valve position indicator:

First of all, release actuator screw. Release the locking nut (21), while holding up the centering washer (16). Remove the centering washer.

b. Pull lower valve shaft (3) out of the actuator (13), remove seat seal (2).

c. Remove membrane (4) and upper valve shaft (5).

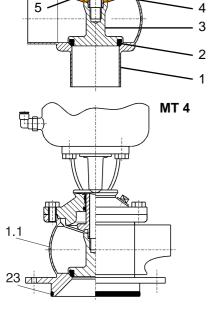
Only with valves of the nominal dimensions DN 25 / 1" must the membrane (4) be removed as follows:

Twist valve shaft off the guide rod. Remove membrane (4) and upper valve shaft (5).

d. Remove yoke (8) from actuator (13).

e. Detach O-ring (6) and guide bush (7) from the yoke (8).

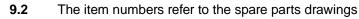
f. MT4 valves: the tank housing seal **(23)** can be replaced.







9. Service Instructions



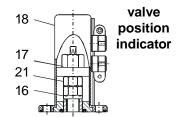
MP4, MEP4, MTP4: DN design RN 01.064.2 inch design RN 01.064.3

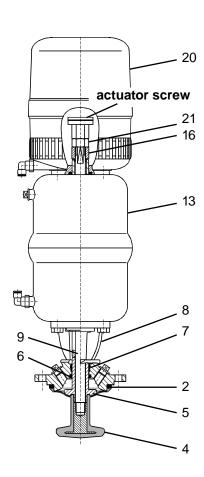
II. Dismantling of product-wetted parts

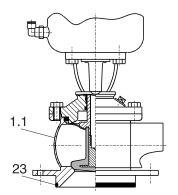
a. CU design and valve position indicator:

First of all, release actuator screw. Release the locking nut **(21)**, while holding up the centering washer **(16)**. Remove the centering washer.

- **b.** Pull membrane shaft **(4)** with guide rod out of the actuator **(13)** and twist membrane shaft off the guide rod **(9)**.
- c. Remove upper valve shaft (5).
- **d.** Dismantle yoke **(8)** from actuator **(13)**.
- e. Remove seal ring (2).
- f. Detach O-ring (6) and guide bush (7) from the yoke (8).
- g. MTP4 valves: the tank housing seal (23) can be replaced.









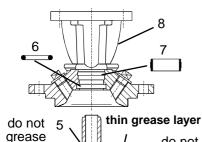


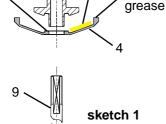
9. **Service Instructions**

17 21 16

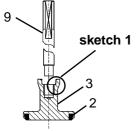
valve position indicator

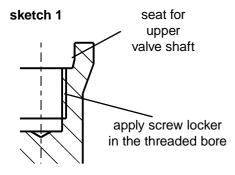
actuator screw 16 21





do not





9.3 Installation of seals and assembly of valve

The item numbers refer to the spare parts drawings M4, ME4, MT4: DN design RN 01.064.0 inch design RN 01.064.1

- a. Insert guide bush (7) and O-ring (6) into the yoke (8). Fasten the yoke (8) at the actuator (13).
- b. Install seat seal (2) in the lower valve shaft (3). For the installation of the seat seal, use the APV assembly tool (see page 17). Grease the seat seal only slightly before its installation. If installed manually, vent the seal groove between the seal and the groove wall with a thin object.
- **c.** Provide the product-averted side of the membrane (4) with a thin layer of grease and place it on the upper valve shaft (5). Put upper valve shaft with membrane on the guide rod (9).
- Only with valves of the nominal dimensions DN 25 / 1" must the lower valve shaft be fastened on the guide rod after a membrane replacement.

The lower shaft must be secured by a drop of a screw locker (e.g. type: Loctite- semi-solid). Apply the agent only in the threaded bore, but not on the thread of the guide rod (see sketch 1). In case of non-observance of these instructions, the two valve shafts can paste up.

- d. Insert lower valve shaft (3) with guide rod (9), membrane (4) and upper valve shaft (5) through the yoke (8) and the actuator (13).
- The upper valve shaft must be led smoothly through the guide bush in the yoke. If the shaft stiffs, check the right fit of the guide bush.

e. CU design and valve position indicator:

Place the centering washer (16). Apply a drop of a screw locker (e.g. type: Loctite - semi-solid) on the thread of the guide rod. Screw on locking nut (21) and fasten it with a tightening torque of **MD = 40 Nm**. Hold up the centering washer during this process. CU: Tighten plastic actuator screw.

Valve position indicator: Fasten metallic actuator screw as locking nut.

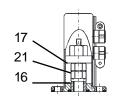
Instructions to replace the guide rod:

for valve dimensions DN 40 - 100 / 1.5" - 4" Unscrew the guide rod (9) from the lower valve shaft (3). Clean the valve shaft (remove grease and impurities). Apply a drop of a screw locker (e.g. type: Loctite - semi-solid) in the area of the threaded bore of the lower valve shaft (see sketch 1). Screw in guide rod and tighten it. In case of non-observance of these instructions, the two valve shafts can paste up.

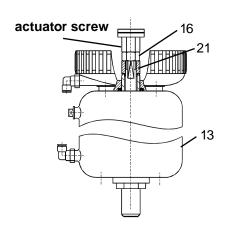


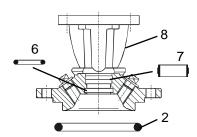


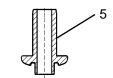
9. **Service Instructions**

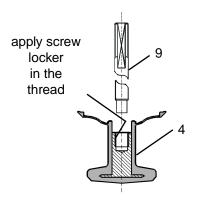


valve position indicator









9.4 Installation of seals and assembly of valve

The item numbers refer to the spare parts drawings MP4, MEP4, MTP4: DN design

RN 01.064.2 inch design RN 01.064.3

a. Insert guide bush (7) and O-ring (6) into the yoke (8). Fasten the yoke (8) at the actuator (13) by means of hex. screws.

b. Slightly grease O-ring (2) and place it on the yoke.

c. Apply a drop of a screw locker (e.g. type: Loctite - semi-solid) in the threaded bore of the membrane shaft. Screw the guide rod (9) in the membrane shaft (4). Place the upper shaft (5).

Only with valves of the nominal dimensions DN 25 / 1T must the upper valve shaft be placed on the guide rod, at first.

d. Insert membrane shaft (4) with guide rod (9) and upper valve shaft (5) through the yoke (8) and the actuator (13).

The upper valve shaft must be led smoothly through the guide bush in the yoke.

If the shaft stiffs, check the right fit of the guide bush.

e. CU design and valve position indicator:

Place the centering washer (16). Apply a drop of a screw locker (e.g. type: Loctite - semi-solid) on the thread of the guide rod. Screw in the locking nut (21) and fasten it with a tightening torque of MD = 40 Nm.

Hold up the centering washer during this process.

CU: Tighten the plastic actuator screw.

Valve position indicator: Fasten the metallic actuator screw

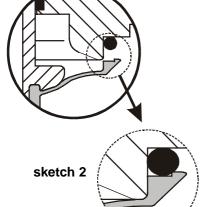
as locking nut.





9. Service Instructions

sketch 1 MP4, MEP4, MTP4



9.5 Installation of valve

M4, MT4, MP4, MEP4, MTP4

a. CU design: place the control unit (20) on the

adapter (22) and secure it by

the ring.

Valve position indicator: fasten the indicator housing (18).

b. To assemble the valve insert in the NC design, proceed as follows:

Place the pre-assembled valve insert (see sketch 1) carefully in the valve housing. The membrane (M4) or the membrane shaft (MP4) must not be damaged during the installation of the valve insert in the housing.

NC design: control actuator with air (see sketch 2). Through the control with air, the yoke on the housing flange lowers. Screw the hex. screws (11) in the housing flange and tighten them crosswise.



Do not touch movable parts! Risk of injury.

! NC design: cut off air.

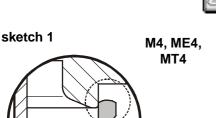
c. Valve position indicator: plug proximity switches and

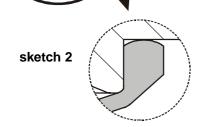
fasten them.

- Adjust proximity switches if necessary.

d. Check basic adjustment of valve position indication.

- By turning the positioning screws in the control unit, the shift points can be adjusted.

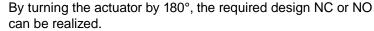






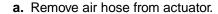


10. Modification of Actuator



NC = normally closed - ("fail - down") NO = normally open - ("fail - up")

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



b. Remove inner hex. screws from the adapter of the control unit.

c. Release the two seal screws (1) by holding up the actuator with a strap wrench. Remove the O-rings (3) as well as the seals (2).

Installation of seals and assembly of actuator

a. Install the greased O-rings (3) and seal (2) in the seal screw (1). See to the right direction of installation of the seal.

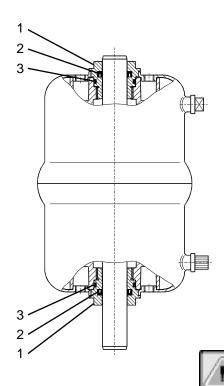
b. On both sides of the actuator, push the seal screws over the piston rod and tighten them.

c. Fasten the adapter for the control unit and the yoke on the actuator.

Attention: Observe position of adapter.

Attention: Consider the required design **NC** or **NO** for the assembly of the adapter and yoke.

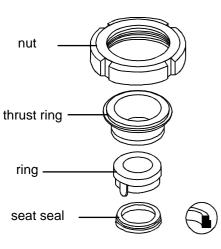
d. Fasten the air hoses.

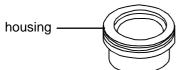


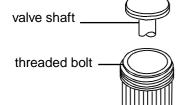




11. Assembly Tool for Seat Seal







Attention: The assembly tool is just suited to install the seat seal in single - seat valves.

The assembly tool consists of:

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

Installation of seat seal in the valve shaft

- **1.** Insert valve shaft into the housing in such a way that the seal groove is in the valve housing.
- **2.** Clamp the shaft with the two threaded bolts in the housing. The housing is clamped in a vise.
- **3.** Slightly grease seat seal with APV food-grade grease. Then, install seal on the ring with venting plug until it stops.
- **4.** Introduce the ring with the installed 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 nut. Pull ring and thrust ring out of the housing.
- **7.** Take housing out of the vise, unscrew threaded bolts. Take the shaft out of the housing.

Check the right fit of the seat seal.

seat seal

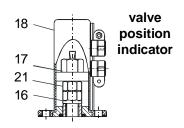
Installation of seat seal for change-over/divert valves

Press the slightly greased seal at four spots, the wide side to the front, into the groove. Lead the seal at the four protuding loops e.g. with a blunt screw driver into the groove and press it in by strong thumb pressure. Work alternately at all four loops to get an even fit. Then smooth the seal with strong pressure, e.g. with the handle of a screw driver. To vent the seal, prick the thin blade of a screw driver between the groove wall and the inner side of the seal down to the groove bottom.





12. Service Instructions



Change-over / Divert valves DELTA MES4

The item numbers refer to the spare parts drawings MES4 **DN** design: **RN 01.064.4** / **inch** design: **RN 01.064.5**

I. Dismantling from the line system

- a. Shut off line pressure and discharge lines if possible.
- b. Valve design NC: control actuator direct with air.



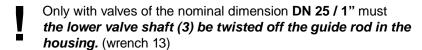
Do not touch movable valve parts! Risk of injury.

c. CU design:

- Lift off the control unit by turning the locking ring. Screw off actuator screw and locking nut (21), while holding up the centering washer (16). Remove centering washer.

Valve position indicator (proximity switch holder):

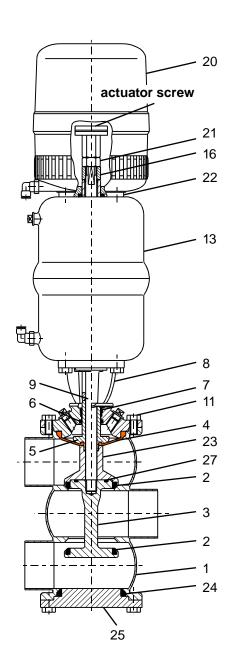
- Remove cover (18) from actuator (13). Release actuator screw (17) and locking nut (21), while holding up the centering washer (16).
 Remove centering washer.
- d. Remove screws at the housing cover (25).
 Detach housing cover and pull off O-ring (24).
- e. Pull lower valve shaft (3) with guide rod (9) to the bottom out of the housing. If the parts stiff, knock on the guide rod with a rubber mallet, while holding the lower valve shaft. Remove seal ring (27).



f. Valve design NC: control with air.

Valve design NO: cut off air.

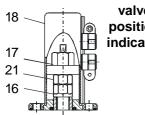
- g. Remove housing screws (11).
- h. Lift actuator (13) with yoke (8) to the top off the housing.
- i. Dismantle upper valve shaft (5), membrane and middle valve shaft (23).
- j. Remove seat seals (2).
- k. Separate yoke from actuator.
- I. Detach O-ring (6) and guide bush (7) from the yoke (8).





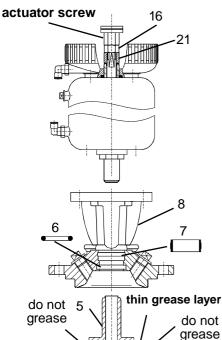


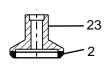
12. Service Instructions



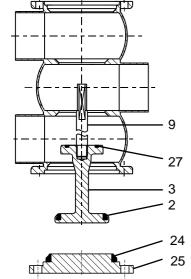


II.





4



Change-over / Divert valves DELTA MES4

The item numbers refer to the spare parts drawings MES4 DN design: RN 01.064.4 / inch design: RN 01.064.5

Installation of seals and assembly of valve

- a. Insert guide bush (7) and O-ring (6) into the yoke (8).
- b. Fasten actuator (13) and yoke (8).
- c. Installation of the lower seat seal (2) in the lower valve shaft (3), see assembly tool, page 17.
- d. Place the upper seat seal (2) in the valve shaft (23).
- e. Insert the middle shaft (23), membrane (4) with the upper shaft (5) into the housing and press the parts together.

f. Valve design NC:

Control the actuator with air. Place the actuator with yoke on the housing. The upper valve shaft must be led **smoothly** through the guide bush in the yoke. If the shaft stiffs, check the right fit of the guide bush. Tighten the yoke with the screws crosswise. Cut off control air.

- g. Place seal ring (27) in the groove of the lower shaft.
- h. Insert the lower valve shaft (3) with guide rod (9) from the bottom into the housing, raise it and hold it fast.

Only with the valves of the nominal dimension DN 25 / 1" apply a drop of a screw locker on the threaded bore of the lower valve shaft before installation with the guide rod. Then push the guide rod (9) from the top through all parts and screw it together with the lower shaft (3) in the housing.

Tightening torque Md = 30 Nm.

i. Place the centering washer (16). Apply a drop of a screw locker (e.g. type: Loctite - semi-solid) on the thread of the guide rod. Screw on the locking nut (21) and fasten it with a tightening torque of Md = 40 Nm). Hold up the centering washer during this process.

Tighten plastic actuator screw. Valve position indicator: Fasten metallic actuator screw as locking nut.

Place the O-ring (24) in the housing cover (25) and tighten the housing cover crosswise.

k. CU design:

Place control unit and fasten it accordingly.

Valve position indicator:

Place proximity switch holder and fasten it accordingly. Plug proximity switches and fasten them.

Adjust proximity switches if necessary.

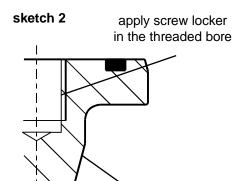




12. Service Instructions

Instructions for replacement of guide rod

of the valve dimensions **DN 40 - 100 / 1,5" - 4"**Unscrew the guide rod **(9)** from the lower valve shaft **(3)**.
Clean the valve shaft (remove grease and impurities).
Apply a drop of a screw locker (e.g. type: Loctite - semi-solid) in the area of the threaded bore of the lower valve shaft **(see sketch 2)**. Screw in guide rod and tighten it. In case of non-observance of these instructions, the lower and medium valve shafts can paste up.



lower valve shaft





13. Trouble Shooting

M4 valve equipped with membrane.

The item numbers refer to the spare parts drawings.

Valve leaks : Replace seat seal (2).

Check line pressure.

- Leakages from the

leakage bore : Check tightening torque

of coupling.

Replace membrane (4).

Leakages between housing

and yoke flange : Check line pressure.

Replace membrane (4).

MP4 valve equipped with membrane shaft.

The item numbers refer to the spare parts drawings.

- Valve leaks : Replace membrane

shaft (4).

Check line pressure.

Leakages from the

leakage bore : Check line pressure.

Replace membrane

shaft (4).

Leakages between housing

and yoke flange : Replace O-ring (2).

Actuator and valve position indication

Air escapes from the

actuator (see spare parts list RN: 01.054.86) Dismantle actuator (13) from valve, replace seal (2) and O-ring (3) in the seal

screw (1).

 Actuator does not operate, air escapes permanently

via the venting plug : Replace actuator.

Valve position indication

is missing or unprecise: Carry out fine adjustment

according to service instructions of control unit.

14. Spare Parts Lists

(see annex)



BA M4 00000002 ID-No.: H 1 7 5 7 6 2



Translation of original manual

rev. 1





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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Ersatzteilliste: spare parts list:

Diaphragm valve M4,ME4,MT4 FS-CU and PSH Membranventil M4,ME4,MT4 FS-CU und VSM

APV Roeista GmbH
D-59425 Urna
Germany

Trytko Name

> 6.7.98 19.8.98 19.8.98

Gezeichnet

Blatt

Blatt

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Besteht aus

Datum

01.064.0

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11/98 03/01

Normgepr. Geprüft

02/94

2/98 Datum Name Dichtungswerkstoffe zur Verfügung. DN25-100 Es stehen verschiedene Bitte WS-Nr. ergänzen

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

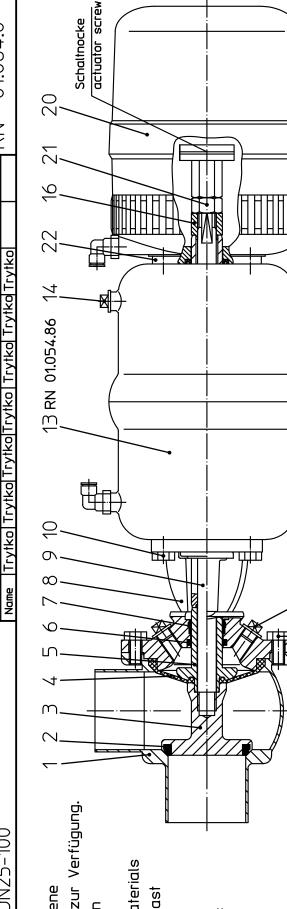
Dichtungswerkstoff: material seals: ./33-HNBR ./93-EPDM ./73-FPM ./13-VMQ *

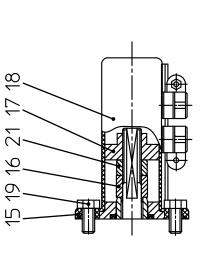
** Dichtungswerkstoff Membrane: seal material of membrane: ../22-TFM/EPDM WS 283

../23-TFM/EPDM WS 287/64 standard design

Standard-Ausführung

3A0-Ausführung 3A0 design







02/94 APV Roeleta GmbH 7 D-59425 Urna Germany 19.8.98 Schulz 19.8.98 Schulz 19.8.98 Plümper Name Datum Gezeichnet Geprüft Normgepr. Blatt 2 TOO TOO II OH / LW / LW / W O' TO' Membranventil M4,ME4,MT4 FS-CU und VSM Ersatzteilliste: spare parts list: Didah

<u>니</u>)iapl	Diaphraam valve M4.ME4.MT4 FS-CU and PSH	.MT4 FS-	-CU and PS	•			Normgepr.	19.8.98 Plumper	┺	
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1	1	Gehäuse Housing	S	39-41-295/47	29-41-395/47	39-41-45/47	39-41-495/47	39-41-545/47	39-41-645/47		
	1	M42	1+2+3S	39-42-295/47	39-42-295/47 39-42-395/47	39-42-445/47 39-42-495/47	39-42-495/47	29-62-242/47	29-42-645/47		
	1	Gehäuse ME41 1+2S Housing	25	39-45-295/47 39-45-395/47	27/56E-57-6E	39-45-445/47	39-45-495/47	39-45-545/47	27/579-57-68		
	1	Gehäuse ME42 1+2+3S Housing	-2+3S	39-46-295/47 39-46-395/47	27/56E-97-6E	27/579-97-6E 27/575-97-6E 27/567-97-6E 27/577-97-6E	39-46-495/47	39-46-545/47	27/579-97-68		
	1	Gehäuse ME43 1+2+3S Housing	+ 2 +3S	39-47-295/47 39-47-395/47	27/56E-27-6E	27/577-27-68	39-47-495/47	39-47-545/47	39-47-645/47		
	1	c ı	ME44 1+2+3+4S	39-48-295/47 39-48-395/47	29-48-395/47	29-48-45/47 39-48-495/47 39-48-545/47	39-48-495/47	39-48-545/47	29-48-645/47		
1.1	1 (Gehäuse MT41 1+2S Housing	.2S	39-43-295/47 39-43-395/47	29-63-395/47	39-43-45/47 39-43-495/47 39-43-545/47 39-43-645/47	39-43-495/47	39-43-545/47	29-43-645/47		
	1	E MT42	1+2+3S	39-44-295/47 39-44-395/47	27/56E-77-6E	39-44-445/47 39-44-495/47	39-44-495/47	39-44-545/47	27/579-77-68		
2	l	Tellerdichtung Seat seal	*	58-33-293/	/E6E-EE-85	28-33-443/	58-33-493/	58-33-543/	/679-66-85		
3	1	Schaft unten Lower valve shaft		39-22-295/42	39-22-295/42 39-22-395/42	39-22-445/45	39-22-495/42	39-22-545/42	39-22-645/42		
`	1		(Standard) **	58-23-295/22 58-23-395/22	58-23-395/22	=	58-23-495/22	58-23-495/22 <mark>58-23-545/22 </mark> 58-23-645/22	58-23-645/22		
4	1	Membrañe Diaphragm (3A0)	**	58-23-295/23 58-23-395/23	58-23-395/23	11	58-23-495/23	58-23-545/23	58-23-645/23		
2	1	Schaft öben Upper valve shaft		39-22-296/42	39-22-296/42 39-22-396/42	=	39-22-496/42	39-22-496/42 39-22-546/42 39-22-646/42	39-22-646/42		
9	1	0-Ring 0-ring		15,3-2,4 58-06-052/83	15,3-2,4 20,2-3 58-06-052/83 58-06-078/64	II	II	II	II		
7	_ H	Führūngsbuchse Bushina		08-01-177/23	08-01-178/23	II	II	=	II		
8	1	Laternē Yoke		39-40-295/47 39-40-395/47	39-40-395/47	II	39-40-495/47	39-40-545/47	39-40-645/47		
6	1 (Zugstange Guide rod		39-23-080/12 39-23-081/12	39-23-081/12	=	=	39-23-083/12	II		
10	4	Skt. Schraube Hex. screw		DIN EN 24017-M8×16-A2-70	.M8x16-A2-70			DIN EN 24017-	EN 24017-M8x20-A2-70		
1	- /	Skt. Schraube Hex. screw		4× DIN EN 24017 -M6×12-A2-70	4× DIN EN 24017-	4× -M8×16-A2-70	×7	8x DIN EN 24017-	8x EN 24017-M10x16-A2-70		
12	2	Entlüftungsstopfen Ventina olua		08-60-005/94	II	II	II	II	II		



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02/94 APV Rosista GmbH DV D-59425 Uma Germany Schulz Trytko Name 6.7.98 Datum Gezeichnet Geprüft Blatt 3 Membranventil M4,ME4,MT4 FS-CU und VSM Ersatzteilliste: spare parts list:

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	Steuerkopf Actuator	17	ø110 15-32-051/17	=	=	ø165 15-32-052/17	=		
_	Entlüftungsstopfen _{G1/8} Ventina olua	3	=	=	=	=	II		
	0-Ring	OR 66x2 NBR	70-75 Shore A	4					
16 1 Ze Ce	Zentrierscheibe Centering nut	15-28-940/12	II	II	=	II	II		
17 1 Sc 0D	Schaltnöcke Operatina cam	08-52-290/97	08-52-291/97	II	II	II	II		
18 1 VS	VSM Gehäuse-SW4 Proximity switch holder housing SW4	15-33-932/93	II	II	II	II	II		
19 4 Sk He	Skt. Sähraube Hex. screw	DIN EN 24017-	24017-M8×16-A2-70						
$\begin{bmatrix} 20 & 1 & C_0 \\ C_0 & C_0 \end{bmatrix}$	Control-Unit Control-Unit CU31 Direct-Connect	16-31-232/93	=	=	=	=	II		
21 1 Sk He	Skt. Mutter Hex. nut	DIN EN ISO 10511-M12-A2	511-M12-A2						
22 1 CU	CU-Adapter CU-adapter	08-48-415/93	11	II	=	II	II		
23 1 Ge	Gehäusedichtung Housing sael	/26E-33-365/	28-33-442/	58-33-492/	/279-33-27/	58-33-642/	58-33-692/		
24 4 Sk He	Skt. Schraube Hex. screw	DIN EN 24017-	24017-M8×14-A2-70		DIN EN 24017-	24017-M10×14-A2-70			
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1 Dic	Dichtungssatz Seal Kit	58-34-365/00 58-34-366/00		58-34-367/00	58-34-368/00	58-34-370/00	58-34-371/00		
1 Dic	Dichtungssatz Seal kit	58-34-365/01 58-34-366/01		58-34-367/01 58-34-368/01	58-34-368/01	58-34-370/01 58-34-371/01	58-34-371/01		
1 Se	Dichtungssatz VMQ/Silicone Seal kit	58-34-365/02	34-365/02 58-34-366/02	58-34-367/02	58-34-368/02	58-34-370/02	58-34-371/02		
1 Dic	Dichtungssatz Seal kit	58-34-365/06 58-34-366/06		58-34-367/06	58-34-368/06	58-34-367/06 58-34-368/06 58-34-370/06 58-34-371/06	58-34-371/06		



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10-59425 Uma
Germany WS-Nr. ref.-no. 150 RN 01.064.0 WS-Nr. ref.-no. 125 Trytko Name 58-34-385/02|58-34-386/02|58-34-387/02|58-34-388/02|58-34-390/02|58-34-391/02 58-34-385/06|58-34-386/06|58-34-387/06|58-34-388/06|58-34-390/06|58-34-391/06 58-34-385/00|58-34-386/00|58-34-387/00|58-34-388/00|58-34-390/00|58-34-391/00 58-34-385/01 |58-34-386/01 |58-34-387/01 |58-34-388/01 |58-34-390/01 |58-34-391/01 WS-Nr. ref.-no. 100 13.11.01 Gezeichnet Normgepr. WS-Nr. ref.-no. Geprüft 80 WS-Nr. ref.-no. 65 Trytko|Trytko 11/01 02/03 WS-Nr. ref.-no. Blatt 4 20 Pos. 2, 4, 6, 21, 23 nur im kompletten Dichtungssatz erhältlich Item. 2, 4, 6, 21, 23 available es complete seal kits only Datum Name WS-Nr. ref.-no. 40 Diaphragm valve M4,ME4,MT4 FS-CU and PSH Membranventil M4,ME4,MT4 FS-CU und VSM WS-Nr. ref.-no. 25 VMQ/Silicone EPDM HNBR FPM DN25-100 Dichtungssatz / seal kit MT. Ersatzteilliste: spare parts list: Benennung description Dichtungssatz Seal kit Dichtungssatz Seal kit Dichtungssatz Seal kit Dichtungssatz Seal kit F 90 Penge Menge Ytitnbup $\overline{}$



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Diaphragm valve M4,ME4,MT4 FS-CU and PSH Membranventil M4,ME4,MT4 FS-CU und VSM

Schulz **Fytko** Name 19.8.98 8.7.98 19.8.98 Datum 02/02 02/03 Gezeichnet Normgepr. Geprüft 06/01 11/01 Blatt Blatt 4 Besteht aus 2/98 Datum 1-4 zoll / inch Ersatzteilliste: spare parts list:

02/94

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

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

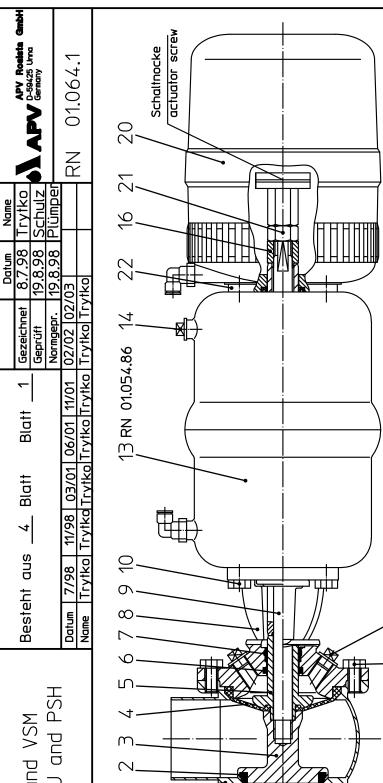
* Dichtungswerkstoff: material seals:

../33-HNBR ../73-FPM ../13-VMQ

../93-EPDM

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

3A0 design





APV Rosista GmbH
D-58425 Urna
Germany Trytko Schulz Name 8.7.98 19.8.98 Datu Gezeichnet Geprüft Blatt 2 Membranventil M4,ME4,MT4 FS-CU und VSM Ersatzteilliste: spare parts list:

).	Diantraa valve M. ME. MT. ES_CII	HVG PUD II				Normgepr.	19.8.98 Plümper		
	ב ב			Datum	7/98 11/98 06		02/02 04/02 02/		Z Z	010641
	P			Name	'rytko Trytko Trytko Trytko		Trytko Trytko Try	Trytko		-
Pos	agr Yiitn	Benenning	٦.,	1,5"	2"	2,5"] "E	7,"		
item	l Met		WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
7	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	39-42-420/47		39-42-470/47 39-42-520/47 39-42-570/47	39-42-570/47	39-42-670/47		
	1	Gehäuse Housing ME41 1+2S	39-45-320/47 39-45-420/47	39-45-420/47		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	39-46-420/47		39-46-470/47 39-46-520/47 39-46-570/47	39-46-570/47	39-46-670/47		
	1	Gehäuse Housing ME43 1+2+3S	39-47-320/47 39-47-420/47	39-47-420/47		39-47-470/47 39-47-520/47 39-47-570/47	39-47-570/47	39-47-670/47		
	7	Gehäuse Housing ME44 1+2+3+4S	39-48-320/47 39-48-420/47	39-48-420/47		39-48-470/47 39-48-520/47 39-48-570/47	39-48-570/47	39-48-670/47		
1.1	1	Gehäuse Housing MT42 1+2S	39-43-320/47 39-43-420/47	39-43-420/47	39-43-470/47	39-43-520/47	39-43-570/47	39-43-670/47		
	7	Gehäuse Housing MT42 1+2+3S	39-44-320/47 39-44-420/47	39-44-420/47	39-44-470/47	39-44-520/47	39-44-570/47	39-44-670/47		
2	1	Tellerdichtung Seat seal	58-33-293/	58-33-393/	58-33-443/	58-33-493/	58-33-568/	58-33-643/		
٣	_	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		
	1	Membrane (Standard) ** Diaphragm	58-23-295/22 58-23-395/22	58-23-395/22	II	58-23-495/22	II	58-23-645/22		
1	_	Membrane (3A0) ** Diaphragm	58-23-295/23 58-23-395/23	58-23-395/23	II	58-23-495/23	II	58-23-645/23		
2	7	Schaft oben Upper valve shaft	39-22-296/42 39-22-396/42	39-22-396/42	11	39-22-496/42	II	39-22-646/42		
9	1	0-ring 0-ring	15,3-2,4 58-06-052/83	20,2–3 58–06–078/64	11	II	11	II		
7	_	Fuhrungsbuchse Bushing	08-01-177/23	08-01-178/23	II	II	II	II		
8	7	Laterne Yoke	39-40-295/47 39-40-395/47	39-40-395/47	11	39-40-495/47	39-40-570/47	39-40-645/47		
δ	_	Zugstange Guide rod	39-23-080/12 39-23-081/12	39-23-081/12	II	II	39-23-083/12	II		
9	7	Skt. Schraube Hex. screw	DIN EN 24017-M8x16-A2-70	M8x16-A2-70			DIN EN 24017-	EN 24017-M8x20-A2-70		
7		Skt. Schraube Hex. screw	4× DIN EN 24017 -M6×12-A2-70 DIN	4× DIN EN 24017-	4× -M8×16-A2-70	×7	×7	8x DIN EN 24017 -M10x16-A2-70		
12	2	Entlüttungsstopten G1/8 Venting plug	08-60-005/94	II	II	II	II	II		



Name Datum Ersatzteilliste: spare parts list:

MONTH TO ULL NAME OF THE PROPERTY OF THE PROPE		Gezeichnet 8.7.98 Trytko 🔼
Membranveniii M4,ME4,MI4 F3-LU una v3M		Seprüft 19.8.98 SCHUIZ
Diaphram valve M4.MF4.MT4 FS-(1)	Z	Normgepr. 19.8.98 Plümper
	Datum 7/98 11/98 4/99 03/01 06/01 1	11/01 04/02 02/03 10/03 PN 01 06 /; 1
UDUI / 110Z 5-1.	Name Trytko Trytko Trytko Trytko Trytko Tr	Trytko Trytko Trytko
€ ti		

Dianhraa	Dianbraam valve M4.MF4.MT4 FS-(1) and PSH	ond PSH				Geprüff Normgepr.	19.8.98 Schulz 19.8.98 Plümper	Z Germany Germany Jer	Germany
ח ז : : : : : :	47ci / Hoz /-t)	Datum	7/98 11/98 4	NA 6/99 03/01 06/01 11/01 04/02 02/03 10/03 NA	11/01 04/	02 02/03 10/0	(3) RN 01.064.1	164.1
	וורוו / ווורוו		Name	Irytko Irytko II	rytko rytko rytko rytko rytko rytko	tko rytko ry	rko I rytko I ryt	0	
el ity		2 7	, U	, C	, i i c		" /		
Pos.gr	Benennung		C'I	7	C'7	٠	4		
Ja Ja Ja Ja Ja Ja Ja Ja Ja Ja Ja Ja Ja J	יייייייייייייייייייייייייייייייייייייי	WŞ-Nr.	WŞ-Nr.	N-SM-	'JN-ŚM	MŞ-Nr.	WŞ-Nr.	N-SM	MŞ-Nr.
<u> </u>	חפטרווטוולוויספט	retno.	retno.	retno.	retno.	retno.	retno.	retno.	retno.

II OH / LW / HW / W O'/ TO' HO	HVQ Pub				Normoenr	19 8 98 Plijmner	19 8 98 Plimner
		Datum	7/98 11/98	4/99 03/01 06/01	11/01	04/02 02/03 10/03	NA
1-4 ZOII / INCU		Name	Trytko Trytko 1	[rytko Trytko Trytl	<o trytko try< td=""><td>rytko Trytko Trytko</td><td></td></o trytko try<>	rytko Trytko Trytko	
		i.	Č	i.	i	•	
		<u>,</u> بر		7,5″	'n	7	

58-34-365/06|58-34-366/06|58-34-367/06|58-34-368/06|58-34-369/06|58-34-371/06

|58-34-365/02|58-34-366/02|58-34-367/02|58-34-368/02|58-34-369/02|58-34-371/02

VMQ/Silicone

Dichtungssatz Seal kit

Seal kit

Dichtungssatz Seal kit

EPDM

FPM

Dichtungssatz Seal kit **Dichtungssatz** HNBR

58-34-365/01 |58-34-366/01 |58-34-367/01 |58-34-368/01 |58-34-369/01 |58-34-371/01

58-34-365/00|58-34-366/00|58-34-367/00|58-34-368/00|58-34-369/00|58-34-371/00

Pos. 2, 4, 6, 21 nur im kompletten Dichtungssatz erhältlich Item. 2, 4, 6, 21 available es complete seal kits only

Dichtungssatz / seal kit M4, ME4

58-33-692/

П

58-33-542/

58-33-492/

58-33-442/

58-33-392/

*

Sehäusedichtung

U-Adapter

22

2

Ä X

7

U-adapter

Skt. Schraube

SCrew

Hex.

4

Housing seal

23

DIN EN 24017-M8×14-A2-70

II

DIN EN 24017-M10×14-A2-70

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15-32-051/17

15-32-050/17

OR 66x2 NBR 70-75 Shore

08-60-005/93

G1/8

Entlüftungsstopfen

Steuerkop Actuator

 ω

Venting plug

4

15-32-052/17

II

II

II

II

08-52-290/97|08-52-291/97

15-28-940/12

DIN EN 24017-M8×16-A2-70

15-33-932/93

Proximity switch holder housing-SW4

Skt. Schraube

Hex. screw Control-Uni

9

<u>Operating cam</u> VSM Gehäuse-SW

8

Zentrierscheibe

0-ring

石

entering nut

9

Schaltnocke

1

DIN EN ISO 10511-M12-A2

16-31-232/93

CU31 Direct-Connect

Control-Unit Skt. Mutter

20

08-48-415/93

II

II

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Ersatzteilliste: spare parts list:

02/94

Trytko Name

13.11.01

Gezeichnet

Blatt 4

Datu

APV Rocieta GmbH
APV D-59425 Urna
Germany WS-Nr. ref.-no. 01.064.1 WS-Nr. ref.-no. Z Z 58-34-385/02|58-34-386/02|58-34-387/02|58-34-388/02|58-34-389/02|58-34-391/02 58-34-385/06|58-34-386/06|58-34-387/06|58-34-388/06|58-34-389/06|58-34-391/06 58-34-385/00|58-34-386/00|58-34-387/00|58-34-388/00|58-34-389/00|58-34-391/00 58-34-385/01 |58-34-386/01 |58-34-387/01 |58-34-388/01 |58-34-389/01 |58-34-391/01 WS-Nr. ref.-no. **7** Normgepr. WS-Nr. ref.-no. Geprüft m WS-Nr. ref.-no. 2,5 Trytko|Trytko| Dietz 11/01 |02/03 | 10/07 WS-Nr. ref.-no. 7 Dichtungssatz / seal kit MT4 Pos. 2, 4, 6, 21, 23 nur im kompletten Dichtungssatz erhältlich Item. 2, 4, 6, 21, 23 available es complete seal kits only Datum Name WS-Nr. ref.-no. <u>"</u> Diaphragm valve M4,ME4,MT4 FS-CU and PSH Membranventil M4,ME4,MT4 FS-CU und VSM WS-Nr. ref.-no. 1-4 zoll / inch VMQ/Silicone EPDM HNBR FPM Benennung description Dichtungssatz Seal kit Dichtungssatz Seal kit Dichtungssatz Seal kit Dichtungssatz Seal kit F POS POS Penge Menge titnbup -



Membranventil MP4,MEP4,MTP4 FS-CU und VSM Ersatzteilliste: spare parts list:

Diaphragm valve MP4,MEP4,MTP4 FS-CU and PSH

APV Roeista GmbH
PV D-59425 Urna
Germany 01.064.2 Z Schulz Trytko Plumper Name 8.7.98 19.8.98 19.8.98 Datum Normgepr. 19. Trytko|Trytko|Trytko|Trytko|Trytko|Trytko Gezeichnet Geprüft 03/01 06/01 11/01 Blatt Blatt 7/98 11/98 m Besteht aus Datum Name DN 25-100

02/94

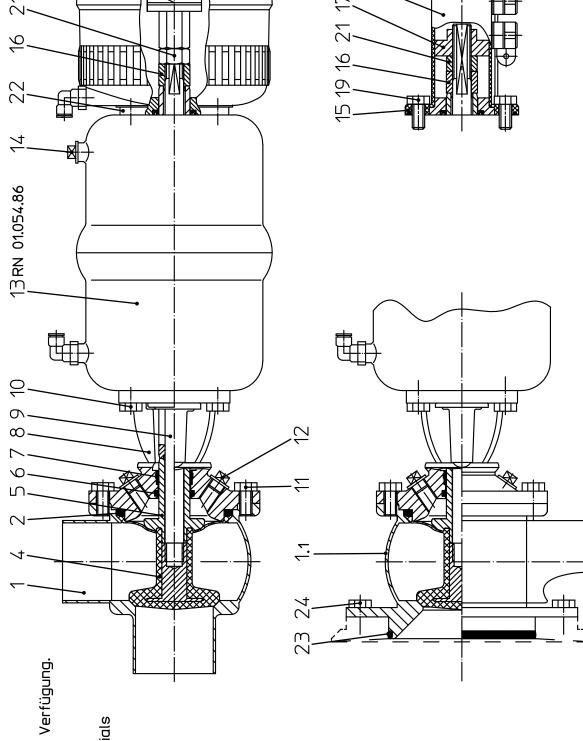
actuator screw Schaltnocke

Dichtungswerkstoffe zur Verfügung. The following seal materials Es stehen verschiedene are available (fill in last Bitte WS-Nr. ergänzen

two digits of ref.-no.)

* Dichtungswerkstoff: material seals: ../33-HNBR

../93-EPDM





8.7.98 Trytko APV Rosista GmbH 19.8.98 Schulz Name Datum Gezeichnet Geprüft Blatt 2 Membranventil MP4,MEP4,MTP4 FS-CU und VSM Ersatzteilliste: spare parts list:

	-							19.0.50 SUITIDITY		
 	ıpnragm valve	Ulaphragm valve MP4,MEP4,MIP4 FS-LU and PSH DN 25-100	S-LU and P	Datum	7/98 11/98		11/01 02/02 02/03 10/03 Trytko	(03 10/03 Tumper (03 10/03 Trytkn Trytkn	A N N	01.064.2
ā6 C	<u>V1111</u>		25	1			N 80	100	125	150
item Men	לחמנ	berrerin iurig description	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
,	1 Gehäuse 1 Housing	MP41 1+2S	39-41-295/47	39-41-395/47	39-41-445/47	39-41-495/47	39-41-545/47	39-41-645/47		
•	1 Gehäuse 1 Housing	MP42 1+2+3S	39-42-295/47	79-42-395/47	39-42-445/47	39-42-495/47	39-42-545/47	39-42-645/47		
-	1 Gehäuse 1 Housing	MEP41 1+2S	39-45-295/47 39-45-395/47	27/56E-57-6E	39-45-445/47 39-45-495/47 39-45-545/47	39-45-495/47	39-45-545/47	39-45-645/47		
-	1 Gehäuse Housing	MEP42 1+2+3S	39-46-295/47 39-46-395/47	39-46-395/47	39-46-445/47	39-46-495/47	39-46-545/47	39-46-645/47		
•	1 Gehäuse 1 Housing	MEP43 1+2+3S	39-47-295/47 39-47-395/47	39-47-395/47	39-47-445/47 39-47-495/47 39-47-545/47 39-47-645/47	39-47-495/47	39-47-545/47	39-47-645/47		
•	1 Gehäuse 1 Housing	MEP44 1+2+3+4S	39-48-295/47	29-48-395/47	39-48-445/47	39-48-495/47	39-48-545/47	39-48-645/47		
1.1	1 Gehäuse 1 Housing	MTP41 1+2S	39-43-295/47 39-43-395/47	39-43-395/47	39-43-445/47 39-43-495/47	39-43-495/47	39-43-545/47	39-43-645/47		
•	1 Gehäuse 1 Housing	MTP42 1+2+3S	39-44-295/47 39-44-395/47	27/56E-77-6E	39-44-445/47	39-44-495/47	39-44-545/47	39-44-645/47		
, 2	1 <mark>0-Ring</mark> 1 <u>0-ring</u>		58-06-157/64 58-06-300/64	62,9-5,33 58-06-300/64	II	75,6-5,33 58-06-345/64	75,6-5,33 101-5,33 109,2-5,7 58-06-345/64 58-06-495/64 58-06-520/64	109,2-5,7 58-06-520/64		
, 7	1 Membranschaft 1 Diaphraam shaft	't aft	39-22-298/22	39-22-398/22	39-22-448/22	39-22-498/22	39-22-548/22	39-22-648/22		
2	oben valve	shaft	39-22-296/42	39-22-296/42 39-22-396/42	II	39-22-496/42	39-22-496/42 39-22-546/42	39-22-646/42		
, 9	1 <mark>0-Ring</mark> 1 0-ring		75,3-2,4 58-06-052/83 58-06-078/64	20,2-3 58-06-078/64	II	II	II	II		
7	1 Führungsbuchse 1 Bushing	ıse	08-01-177/23	08-01-178/23	II	=	II	II		
ω	1 Laternē 1 Yoke		39-40-295/47 39-40-395/47	39-40-395/47	II	39-40-495/47	39-40-545/47	39-40-645/47		
6	1 Zugstange 1 Guide rod		39-23-080/12 39-23-081/12	39-23-081/12	II	II	39-23-083/12	II		
10 4	4 Skt. Schraube Hex. screw	a.	DIN EN 24017-M8x16-A2-70	M8x16-A2-70			DIN EN 24017-	EN 24017-M8x20-A2-70		
11	Skt. Schraube Hex. screw	i	4× DIN EN 24017 -M6×12-A2-70	4× DIN EN 24017-	4× -M8×16-A2-70	×7	8x DIN EN 24017-	8x EN 24017-M10x16-A2-70		
12 2	2 Entlüftungsstopfen Venting plug	opfen G1/8	08-60-005/94	II	II	II	II	II		
<u>,</u>	1 Steuerkopf 1 Actuator		ø74 15-32-050/17	a110 15-32-051/17	II	II	ø165 15-32-052-17	II		



Weitergabe sowie Vervielfältigung dieser Unterlage, Verwertung und Mitteilung ihres frhalts nicht gestattet, soweit nicht schrifflich zugestanden. Verstaß verpflichtet zum Schadensersatz und kann strafrechtliche Folgen haben (Paragraph 18 UWG, Paragraph 106 UHG). Eigentum und alle Rechte, auch für Pätentierteilung und Gebrauchsmustereintragung, vorbehalten. APV Rosista GmbH. Diese Zeichnung wurde mit CAD erstellt und därf nicht von Hand geändert werden.

02/94 APV Rosista GmbH P D-59425 Urna Germany Schulz Trytko Name 8.7.98 19.8.98 Date Gezeichnet Geprüft m Blatt Membranventil MP4,MEP4,MTP4 FS-CU und VSM Ersatzteilliste: spare parts list:

<u>-</u>	4	TI /OLM /OLM ONION BEDIEF		ユン			Normoenr	Normaeor 19 8 98 Plijmper		
<u>-</u>	ב <u>ֿ</u>	טום טייס טייס איז ווון 4, וווין 4, וווין א ווי איזוא ווון אווס וווס וווס וווס וווס וווס וו		Datum	7/98 11/98 0	1 10/90 10/50	11/01 02/03 10	10/03 08/07		06.7
		DN 25-100			Trytko	Tytko Trytko Tr	ytko Trytko Tr	/tko Trytko		0.4.2
POS	agr ntity	Repend	25	07	l 50	ا وء و	08 N	1000	125	150
item Mer qua	Mer Quai		WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
14	7	Entlüftungsstopfen G1/8 Venting plug	66/500-09-80	=	11	Ħ	II	II		
5	_	0-Ring 0-ring	OR 66x2 NBR 70-75 Shore	70-75 Shore	A					
16	l	Zentrierscheibe Centering nut	15-28-940/12	=	11	=	II	II		
17	1	Schaltnocke Operating cam	08-52-290/97 08-52-291/97	08-52-291/97	11	=	II	II		
18	1	VSM Gehäuse-SW4 Proximity switch holder housing SW4	15-33-932/93	=	II	=	II	II		
19	7	Skt. Schraube Hex. screw	DIN EN 24017-M8×16-A2-70	-M8x16-A2-70						
20	1	Control-Unit	16-31-232/93	=	II	=	II	II		
21	1	Skt. Mutter Hex. nut	DIN EN ISO 10511-M12-A	511-M12-A						
22	1	CU-Adapter CU-adapter	08-48-415/93	II	II	II	II	II		
23	1	Gehäusedichtung Housing seal	58-33-392/	58-33-442/	58-33-492/	58-33-542/	58-33-642/	58-33-692/		
24	7	Skt. Schraube Hex. screw	DIN EN 24017-M8×14-A2-70	-M8×14-A2-70		DIN EN 24017	DIN EN 24017-M10×14-A2-70			
		Dichtungssatz / seal kit MP4, MEP4	_+							

|58-34-400/06|58-34-401/06 |58-34-402/06|58-34-403/06|58-34-404/06|58-34-405/06

|58-34-400/01|58-34-401/01|58-34-402/01|58-34-403/01|58-34-404/01|58-34-405/01

Pos. 2, $\overline{4}$, 6, 7, 21, 23 nur im kompletten Dichtungssatz erhältlich Item. 2, 4, 6, 7, 21, 23 available es complete seal kits only

Dichtungssatz / seal kit MTP4

PTFE/EPDM

Dichtungssatz Seal kit

Dichtungssatz Seal kit

PTFE/HNBR

58-34-420/01 |58-34-421/01 |58-34-422/01 |58-34-423/01 |58-34-424/01 |58-34-425/01

Pos. 2, 4, 6, 7, 21 nur im kompletten Dichtungssatz erhältlich Item. 2, 4, 6, 7, 21 available es complete seal kits only

PTFE

Dichtungssatz Seal kit

~



Membranventil MP4,MEP4,MTP4 FS-CU und VSM Ersatzteilliste: spare parts list:

Diaphragm valve MP4,MEP4,MTP4 FS-CU and PSH

APV Roeista GmbH
PV D-59425 Urna
Germany 02/94 01.064.3 Z Trytko Schulz Name 8.7.98 19.8.98 19.8.98 Datum Trytko|Trytko|Trytko|Trytko|Trytko|Trytko 02/02 02/03 Gezeichnet Normgepr. Geprüft 06/01 11/01 Blatt 7/98 | 11/98 | 03/01 Blatt m Besteht aus Datum Name 1-4 zoll / inch

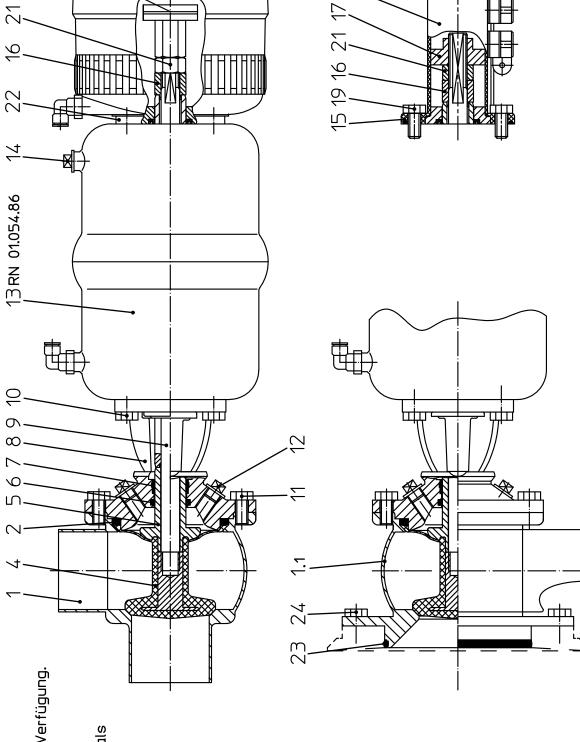
Dichtungswerkstoffe zur Verfügung. The following seal materials Es stehen verschiedene are available (fill in last Bitte WS-Nr. ergänzen

actuator screw Schaltnocke

two digits of ref.-no.)

* Dichtungswerkstoff: material seals: ../33-HNBR

../93-EPDM





Roeista GmbH

Trytko Name 8.7.98 Gezeichnet 7 Blatt MSV Pair (1)-SH 74MFP4MFP4MFP4 FS-(1) Weitergabe sowie Vervielfätligung dieser Unterlage, Verwertung und Mitteilung ihres Irhalts nicht gestattet, soweit nicht schrifflich zugestanden. Verstoß verpflichtet zum Schadensersalt und kann strafrechtliche Falgen haben Paragraph 18 UMG, Paragraph 106 UHG. Eigentum und alle Rechte, auch für Patienterteilung und Gebrauchsmussereintragung, vorbehalten. APV Rosista GmbH. Diese Zeichnung wurde mit CAD erstellt und darf nicht von Hand geändert werden. Ersatzteilliste: spare parts list:

TOO TOT IN OHW YOU WANTED		
10 t / 5	Datum 7/98 11/98 03/01 06/01 11/01 02/02 02/03 10/03 04/04 RN 01 06 /	01067.3
-4 7011 / IIICII	Name Trytko Trytko Trytko Trytko Trytko Trytko Trytko Trytko Trytko) ;
<u>θ</u>		

	01067.3	0.5	_
	NA		
		rytko	_
l 19.6.96 (Piumper)	3 10/03 0	o Trytko T	.,7
Normgepr.	70/70 60/01 60/20 70/20 10/11 10/90 10/60	Trytko Trytko	J.,
	11/01	Trytko	_
	1/01 06/01	rytko Trytko ⁻	2,5*
	11/98 03/0	o Trytko Try	2"
	2//98	Trytko	_
	Datum	Name	1,5"
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VQ(VE 1/1/4/1/1/4/1/1/4 TV-CO	- 1 / 7	/ IIOZ +-I	
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	T/ 101 / 1			7790 11790 0	11 10/0/ 10/0	101 102/02 102	\\\ \\ \\ \\ \\ \\ \\ \\	_	~ /\J
	1-4 2011 / IIICII			Trytko Trytko Trytko Trytko Tryt	ytko Trytko Tr	ytko Trytko Try	Trytko Trytko Try)):
o o o ytitn	Benenning	٦.,	1,5"	2"	2,5"	m —	.,7		
re dua	description	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.

39-42-320/47|39-42-420/47|39-42-470/47|39-42-520/47|39-42-570/47|39-42-670/47

39-41-320/47 |39-41-420/47 |39-41-470/47 |39-41-520/47 |39-41-570/47 |39-41-670/47

39-45-320/47|39-45-420/47|39-45-470/47|39-45-520/47|39-45-570/47|39-45-670/47

39-46-320/47|39-46-420/47|39-46-470/47|39-46-520/47|39-46-570/47|39-46-670/47

39-47-320/47|39-47-420/47|39-47-470/47|39-47-520/47|39-47-570/47|39-47-670/47

39-48-320/47|39-48-420/47|39-48-470/47|39-48-520/47|39-48-570/47|39-48-670/47

MEP44 1+2+3+4S

Sehäuse

Housing

Gehäuse

Housing

sehäuse

Housing

<u> Jehäuse</u>

Housing

Housing

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MTP42 1+2+3S

MTP41 1+2S

MEP43 1+2+3S

MEP42 1+2+3S

MP42 1+2+3S

MP41 1+2S

MEP41 1+2S

Sehäuse

Sehäuse

Housing

Housing

Gehäuse

Housing

39-43-320/47|39-43-420/47|39-43-470/47|39-43-520/47|39-43-570/47|39-43-670/47

39-44-320/47|39-44-420/47|39-44-470/47|39-44-520/47|39-44-570/47|39-44-670/47

58-06-520/64

109,2-5,

39-22-646/42

II

39-22-496/42

II

39-22-296/42 39-22-396/42

58-06-052/83|58-06-078/64

15,3-2,4

pper valve shaft

0-Ring 0-ring

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Diaphraam shaft

Schaft oben

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<u>1embranschaf</u>

0-Ring

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D-rina

-ührungsbuchse

38-01-177/23 |08-01-178/23

II

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П

39-40-295/47|39-40-395/47

39-23-080/12 |39-23-081/12

DIN EN 24017-M8×16-A2-70

II

39-22-323/22|39-22-423/22|39-22-473/22|39-22-523/22|39-22-573/22|39-22-673/22

58-06-345/64 75,6-5,33

Ш

58-06-157/64 |58-06-300/64

62,9-5,33

8x DIN EN 24017 -M10x16-A2-70

× ×

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II

П

ø165 15-32-052/17

II

П

8/4 15-32-050/17 |15-32-051/17

28-60-005/94

G1/8

Enflüffungsstopfen

SCrew

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Venting plug

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Steuerkopf

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Skt. Schraube

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Zugstange

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_aterne Bushing

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Skt. Schraube

dex. screw

DIN EN 24017-M8x20-A2-70

39-40-495/47|39-40-570/47|39-40-645/47

П

39-23-083/12

738 03/01 06/01 71/01 0. ytka Trytka Trytka Trytka Tr	Benennung (1" 1,5" 2" 2,5" 3" 4"	The state of the s
<u>=</u> <u>Y</u> 1	itn	



Ersatzteilliste: spare parts list:

Name

APV Rocista GmbH
D-58425 Uma
Germany WS-Nr. ref.-no. 01.064.3 WS-Nr. ref.-no. 7/98 11/98 4/99 03/01 06/01 11/01 02/03 10/03 08/07 RN Trytko Trytko Trytko Trytko Trytko Trytko Trytko Schulz Trytko 19.8.98 |Plümper 58-34-430/01|58-34-431/01 |58-34-432/01|58-34-433/01|58-34-434/01|58-34-435/01 58-33-692/ WS-Nr. ref.-no. 8.7.98 19.8.98 II П II II II **7** DIN EN 24017-M10×14-A2-70 Gezeichnet Normgepr. WS-Nr. ref.-no. Geprüft II II П II 58-33-542/ WS-Nr. ref.-no. 2,5 П II II II П II 58-33-492/ WS-Nr. ref.-no. Μ ŗ, II II П II Ш Blatt ⋖ Pos. 2, 4, 6, 7, 21 nur im kompletten Dichtungssatz erhältlich Item. 2, 4, 6, 7, 21 available es complete seal kits only OR 66x2 NBR 70-75 Shore 08-52-290/97|08-52-291/97 DIN EN 24017-M8×16-A2-70 DIN EN 24017-M8×14-A2-70 Datum Name 58-33-442/ WS-Nr. ref.-no. DIN EN ISO 10511-M12-A2 <u>"</u> II Diaphragm valve MP4,MEP4,MTP4 FS-CU and PSH Membranventil MP4,MEP4,MTP4 FS-CU und VSM 08-60-005/93 15-33-932/93 08-48-415/93 15-28-940/12 16-31-232/93 58-33-392/ WS-Nr. ref.-no. ₹ 1-4 zoll / inch Dichtungssatz /seal kit MP4, MEP4 Proximity switch holder housing SW4 SKt. Schraube CU31 Direct-Connect PTFE **G1/8** Benennung description Entlüftungsstopfen <u>sehäusedichtung</u> /SM Gehäuse-SW Zentrierscheibe Skt. Schraube Derating cam Dichtungssatz Seal kit entering nut /enting plug Schaltnocke Housing sea Control-Unit Skt. Mutter Control-Unit <u>U-Adapter</u> SCLEW U-adapter SCrew . 자라 **J-Ring** 0-ring Hex. Hex. Menge quantity 4 ~ Pos. tem (20 22 23 24 7 石 9 8 6 4 2

58-34-410/06 | 58-34-411/06 | 58-34-412/06 | 58-34-413/06 | 58-34-414/06 | 58-34-415/06

58-34-410/01 |58-34-411/01 |58-34-412/01 |58-34-413/01 |58-34-414/01 |58-34-415/01

Pos. 2, 4, 6, 7, 21, 23 nur im kompletten Dichtungssatz erhältlich Item. 2, 4, 6, 7, 21, 23 available es complete seal kits only

Dichtungssatz /seal kit MTP4

PTFE/EPDM

Dichtungssatz

Seal kit

PTFE/HNBR

Dichtungssatz Seal kit



Ersatzteilliste: spare parts list: Membranventil MES4 FS-CU und VSM DN 25-100 Diaphragm valve MES4 FS-CU and PSH

DN 25-100

10 66/7 Datum Ausführung / execution: 1

Geprüft Blatt m

Besteht aus

28.4.99 03.5.99 Gezeichnet

Name

Datum

02/94

APV Roeista GmbH
D-59425 Urna
Germany

01.064.4 Z Schulz **Trytko** 02/02 02/03 08/04 Trytko|Trytko|Trytko|Trytko|Trytko|Trytko|Trytko|Trytko Normgepr (Ausführung 1 gültig bis August 2004 / execution 1 valid until Aug 2004) 06/01 11/01 Blatt 03/01

Dichtungswerkstoffe zur Verfügung. Es stehen verschiedene

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

seal material of membrane: Standard-Ausführung ../22-TFM/EPDM WS 283 standard design

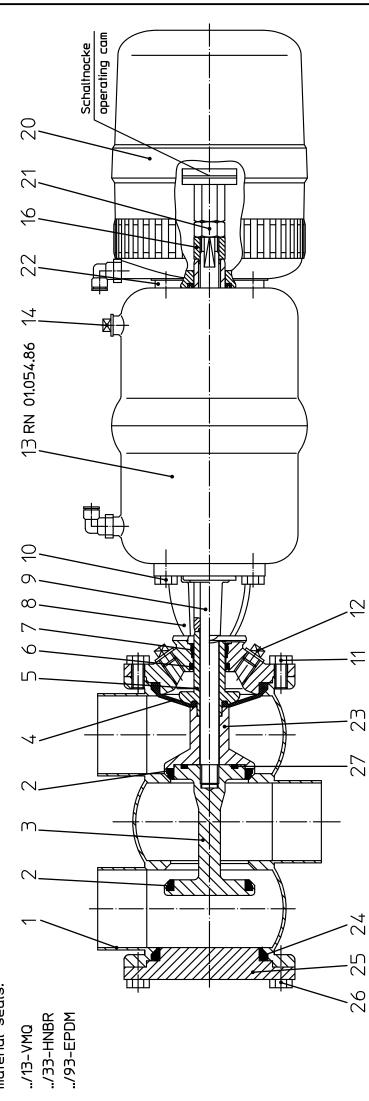
3A0-Ausführung

3A0-design

**Dichtungswerkstoff Membrane: ../23-TFM/EPDM WS 287/64

* Dichtungswerkstoff:

material seals: ../33-HNBR ../13-VMQ





02/94 APV Roelsta GmbH Gezeichnet 128 4 99 Trytkn Datum C <u>a</u> TO NO MON T Ersatzteilliste: spare parts list: Mombraniontil MEC/ EC (1)

Σ.	mbranvent	Membranventil MES4 FS-CU und VSM DN 25-100	SM DN 25-	100	Blatt		Gezeichnet Georüft	28.4.99 Trytko 03.5.99 Schulz	APV	APV Rocista GmbH D-59425 Unna Germany
<u></u>	v mbbragn va	alve MES4 FS-LU and	TVT				٦.			
	•	DN25–100 Ausführung / execution: 1		Datum Name	04/99 01/01 0 Trytko Trytko Ti	14/99 01/01 06/01 11/01 02/02 02/10 02/05 02/10 02/05 02/10	02/03 Trytko	10/03 08/04 Trytko Trytko	RN 01.0	01.064.4
D O	o o o o yfifr		25	ł	95	65	80	100	125	150
item	dnai Wer	description	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
_	1 Gehäuse Housing	MES45 1+2+3S	39-49-295/47	39-49-395/47	39-49-445/47	39-49-495/47	747	39-49-645/47		
	1 Gehäuse Housing	MES46 1+2+3+4S	39-50-295/47	39-50-295/47 39-50-395/47	39-50-445/47	39-50-495/47	39-50-545/47	39-50-645/47		
	Gehäuse Housing	MES48 1+2+3+4S				39-51-485/47				
2	2 Tellerdichtung Seat seal	htung * 	58-33-293/	58-33-393/	58-33-443/	58-33-493/	58-33-543/	58-33-643/		
3	1 Schaft unten Lower valve	nten Jive shaft	39-22-800/42	39-22-800/42 39-22-801/42	39-22-802/42	39-22-803/42	39-22-804/42	39-22-805/42		
,	1 Membrane Diaphraam		58-23-295/22	58-23-295/22 58-23-395/22	II	58-23-495/22	58-23-545/22	58-23-645/22		
†	1 Membrañe Diaphraam	e (3A0) **	58-23-295/23	58-23-295/23 58-23-395/23	II	58-23-495/23	58-23-545/23	58-23-645/23		
2	1 Schaft oben Upper valve	iben silve shaft	39-22-296/42	39-22-296/42 39-22-396/42	II	39-22-496/42	39-22-546/42	39-22-646/42		
9	1 <mark>0-Ring</mark> 0-ring		15,3-2,4 58-06-052/83	15,3-2,4 20,2-3 58-06-052/83 58-06-078/64	II	II	II	II		
7	1 Führüngsbuchse 1 Bushina	sbuchse	08-01-177/23	08-01-178/23	II	II	II	II.		
80	1 Laternē Yoke		39-40-295/47	39-40-295/47 39-40-395/47	II	39-40-495/47	39-40-545/47	39-40-645/47		
6	1 Zugstange Guide rod	je d	39-23-080/12	39-23-082/12	II	=	39-23-054/12	39-23-055/12		
10	4 Skt. Schraube Hex. screw	Jbe	DIN EN 24017-M8x16-A2-70	-M8x16-A2-70			DIN EN 24017-	EN 24017-M8x20-A2-70		
11	Skt. Schrai Hex. screw		4× DIN EN 24017 -M6×12-A2-70	4x DIN EN 24017	4x -M8x16-A2-70	×7	8x DIN EN 24017-	8x EN 24017-M10x16-A2-70		
12	2 Entlüftun Venting (stopfen Ia	08-60-005/94	=	II	=	II	=		
13	1 SteuerKöpf Actuator	ıpf ¯	ø74 15-32-050/17	ø110 15-32-051/17	II	II	ø165 15-32-052/17	II		
14	1 Entlüftun Ventina (Entlüftungsstopfen _{G1/8} Ventina plua	08-60-005/93	II	II	II	II	II		
15			OR 66×2 NBR	70–75 Shore	А					
16	1 Zentrierscheibe Centering nut	icheibe 1 nut	15-28-940/12	II	II	11	II	II		
17	1 Schaltnocke Operatina co	cke cam	08-52-290/97	08-52-291/97	II	II	II	II		



02/94 Name Datum Frantzteilliste: soore oorts list:

L L S	11Zteilliste: spare parts list:	Z INC INC		۲۰ ۲۰		Gezeirhoet	28 / 00 Trv+Lo	_	APV Rosista GmbH
<u>.</u> ב ב	DIGIIVEIIII MESA TS-CO UIO VI	-C7 NI				Georüft			APV D-59425 Uma Germany
Diap	Diaphragm valve MES4 FS-CU and PSH	PST				Normgepr.			,
	DN25-100		Datum	04/99 01/01 0	03/01 06/01 11	11/01 02/02 02,	02/03 10/03 08/04	4 RN 010644	7 79
	Austuhrung / execution: 1		Name	Trytko Trytko Trytko Trytko	ytko Trytko Tr	ytko Trytko Try	Trytka Trytka Trytka Trytka Trytka		- -
ص م عور علائلم	Viiti Cri uneneg	25	07	- 20	65 D	08 Z	100	125	150
item Mar		WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
18	1 VSM Gehäuse-SW4 1 Proximity switch holder housing SW4	15-33-932/93	П	II	II	П	II		
19	4 Skt. Schraube 4 Housing screw	DIN EN 24017-M8×16-A2-70	M8x16-A2-70						
20	1 Control-Unit CU31 Direct-Connect Control-Unit	16-31-232/93	=	11	=	=	II		
21	1 Skt. Mutter 1 Hex. nut	DIN EN ISO 10511-M12-A2	511-M12-A2						
22	1 ICU-Adapter 1 ICU-adapter	08-48-415/93	=	II	=	=	II		
23	Schaft mitte Middle valve shaft	39-22-808/42	39-22-808/42 39-22-809/42	39-22-810/42	39-22-811/42	25/218-22-68	39-22-813/42		
24	1 O-Ring 1 O-ring	36,5-3,2 58-06-157/64	36,5-3,2 62,9-5,33 58-06-157/64 58-06-300/64	=	75,6-5,33 58-06-345/64	101-5,33 58-06-495/64	75,6–5,33 101–5,33 119,2–5,7 58–06–345/64 58–06–495/64 58–06–520/64		
25	1 Gehäusedeckel 1 Housing lid	39-01-230/47 39-01-138/47	39-01-138/47	II	39-01-139/47	39-01-140/47 39-01-143/47	39-01-143/47		
26	Skt. Schraube Housing screw	4× DIN EN 24017 -M6×12-A2-70	7× DIN EN 24017	\(\text{v} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(\text{AV} \) \(×7 C	8× DIN EN 24017-	8x DIN EN 24017-M10x16-A2-70		
27	1 <mark> 0-Ring</mark> 1 <u> 0-ring</u>	11,3-2,4 58-06-050/53	11,3-2,4 20,5-3 58-06-050/53 58-06-078/53		44,2-2,5 58-06-183/53	63,5x3,53 58-06-285/53	28-3 44,2-2,5 63,5×3,53 80×3 58-06-183/53 58-06-183/53		
	Pos. 2, 4, 6, 7, 21, 24, 27 nur im kompletten Dichtungssatz erhältlich	ompletten Dict	ıtungssatz er	hältlich					

Item 2, 4, 6, 7, 21, 24, 27 available es complete seal kits only

58-34-375/01 |58-34-376/01 |58-34-377/01 |58-34-378/01 |58-34-388/01 |58-34-381/01 EPDM Dichtungssatz Seal kit

58-34-375/06|58-34-376/06|58-34-377/06|58-34-378/06|58-34-380/06|58-34-381/06 |58-34-375/02|58-34-376/02|58-34-377/02|58-34-378/02|58-34-380/02|58-34-381/02 Ausführung 1 bis August 2004
Bei Ersatzteilbestellung einer der Schäfte Pos.3 und 23 bitte immer beide Schäfte + Dichtung Schaft (alt Pos.27) WS-Nr: 58-33-020/... bestellen und austauschen. HNBR VΜQ ACHTUNG Dichtungssatz Seal kit Dichtungssatz Seal kit

ATTENTIONII

·ef.-Ńo. 58-33-020/

Execution 1 until August 2004 In case of spare orders for one of the shafts pos. 3 and 23, always order and replace both shafts + shaft seals (old pos. 27)



verpflichtet zum Schadensersatz und kann strafrechtliche Falgen haben foragraph 18 UMG, Paragraph 106 UMG). Eigentum und alle Rechte, auch für Patenterteilung und Gebrauchsmustereinfragung, vorbeholten. APV Rosista GmbH. Diese Zeichnung wurde mit CAD erstellt und darf nicht von Hand geändert werden.

Blatt Blatt m Besteht aus 08/04 Datum Ersatzteilliste: spare parts list: Membranventil MES4 FS-CU und VSM DN 25-100 Diaphragm valve MES4 FS-CU and PSH DN 25-100

**Dichtungswerkstoff Membrane: Ausführung / execution: 2

(Ausführung 2 gültig ab August 2004 / execution 2 valid from Aug 2004) Trytko Name

seal material of membrane:

../22-TFM/EPDM WS 283

Gezeichnet Normgepr. Geprüft

APV Roeista GmbH
PV 59425 Urna
Germany Trytko 25.08.04

01.064.4 Z Name Datum

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

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

../23-TFM/EPDM WS 287/64

standard design

3A0-Ausführung

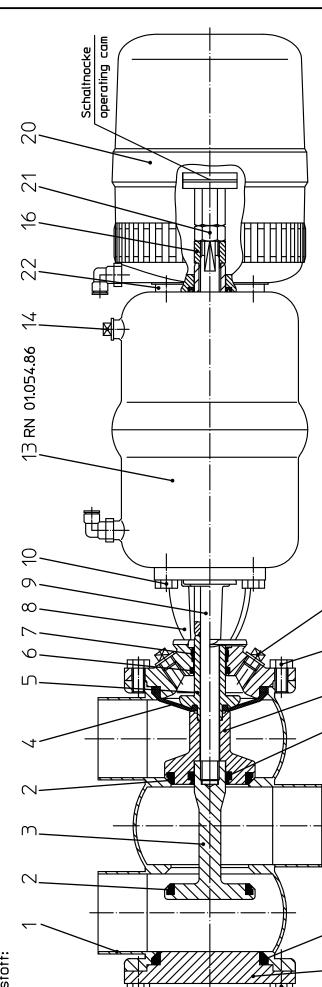
3A0-design

Standard-Ausführung

* Dichtungswerkstoff:

material seals: ../33-HNBR ../13-VMQ

../93-EPDM



nur bei / only for DN 25, 1"



02/94

Memb	יוליים ליים ליים ליים ליים ליים ליים ליי						Datum	<u> </u>	
	Membranventil MES4 FS-CU und VSM DN 25-100	SM DN 25-'	100	Blaff $\frac{2}{}$		Gezeichnet Geprüft	25.08.04 Trytko	S) APV	APV HOSSES GRIDE D-59425 Urna Germany
֡֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝	Iragm valve MES4 FS-LU and	TVT				Normgepr.			
	UNZS-100		H	08/0¢				RN 01.0	01.064.4
			Name	ıyıku		 - -			
Pos Spritt	Benennung	25	40	20	65	N 80	100	125	150
item Mer qua		WS-Nr. refno.	WS-Nr. ref⊓o.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
1	Gehäuse Housing MES45 1+2+3S	39-49-295/47	39-49-395/47	39-49-445/47	39-49-495/47	39-49-545/47	39-49-645/47		
	Gehäuse MES46 1+2+3+4S Housing	39-50-295/47 39-50-395/47	39-50-395/47	39-50-445/47	39-50-495/47	39-50-545/47	39-50-645/47		
1	Gehäuse MES48 1+2+3+4S Housing				39-51-485/47				
2 2	Tellerdichtung Seat seal	58-33-293/	58-33-393/	58-33-443/	58-33-493/	58-33-543/	58-33-643/		
ڪ 1	Schaft unten Lower valve shaft	39-22-800/42 39-22-801/42	39-22-801/42	39-22-802/42	39-22-803/42	39-22-804/42	39-22-805/42		
,		58-23-295/22 58-23-395/22	58-23-395/22	11	58-23-495/22	58-23-545/22	58-23-645/22		
1	Membrane (3A0) ** Diaphraam	58-23-295/23 58-23-395/23	58-23-395/23	II	58-23-495/23	58-23-545/23	58-23-645/23		
5 1	Schaft öben Upper valve shaft	39-22-296/42 39-22-396/42	39-22-396/42	II	39-22-496/42	39-22-546/42	39-22-646/42		
6 1	0-Ring 0-rina	15,3-2,4 20,2-3 58-06-052/83 58-06-078/64	20,2-3 58-06-078/64	II	II	II	II		
7 1	Führungsbuchse Bushing	08-01-177/23 08-01-178/23	08-01-178/23	II	II	II	II		
8	Laternē Yoke	39-40-295/47 39-40-395/47	39-40-395/47	II	39-40-495/47	39-40-545/47	39-40-645/47		
9	Zugstange Guide rod	39-23-080/12 39-23-082/12	39-23-082/12	II	II	39-23-054/12	39-23-055/12		
10 4	Skt. Schraube Hex. screw	DIN EN 24017-M8×16-A2-70	M8x16-A2-70			DIN EN 24017-M8x20-A2-70	M8×20-A2-70		
11	Skt. Schraube Hex. screw	4x DIN EN 24017 -M6x12-A2-70	4× DIN EN 24017	4× -M8×16-A2-70	×7	8x DIN EN 24017-1	8x EN 24017-M10x16-A2-70		
12 2	Entlüftungsstopfen Ventina plua	08-60-005/94	II	II	II	II	=		
13 1	Steuerköpf - Actuator	ø74 15-32-050/17	ø110 15-32-051/17	II	II	ø165 15-32-052/17	II		
14	Entlüftungsstopfen _{G1/8} Venting plug	08-60-005/93	II	II	II	II	II		
15	10-Ring 10-ring	OR 66x2 NBR 70-75	Shore	A					
16 1	Zentrierscheibe Centering nut	15-28-940/12	II	II	II	II	II		
17 1	Schaltnocke Operating cam	08-52-290/97 08-52-291/97	08-52-291/97	II	II	II	II		



02/94 APV Rosista GmbH
D-59425 Urna
Germany 25.08.04 Trytko Name Datum Gezeichnet Geprüft Blatt 3 Ersatzteilliste: spare parts list: Membranventil MES4 FS-CU und VSM DN 25-100 Diaphragm valve MES4 FS-CU and PSH

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	DN25–100 Ausführung / execution: 2		Datum 0	18/04 rytko				RN 01.064.4	7.79
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ite Mer Quai		WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
18	1 IVSM Gehäuse-SW4 1 Proximity switch holder housing SW4	15-33-932/93	=	=	II	=	=		
19 7	4 Skt. Schraube Housing screw	DIN EN 24017-M8×16-A2-70	M8x16-A2-70						
20	1 Control-Unit CU31 Direct-Connect Control-Unit	16-31-232/93	=	=	=	=	=		
21 ,	1 Skt. Mutter 1 Hex. nut	DIN EN ISO 10511-M12-A2	511-M12-A2						
22	1 CU-Adapter 1 CU-adapter	08-48-415/93	=	=	II	=	=		
23	Schaft mitte 1 Middle valve shaft	39-22-808/42	39-22-808/42 39-22-809/42	25/018-22-68	39-22-811/42	39-22-810/42 39-22-811/42 39-22-812/42 39-22-813/42	39-22-813/42		
24	1 0-Ring 1 0-ring	36,5-3,2 58-06-157/64	36,5-3,2 62,9-5,33 58-06-157/64 58-06-300/64	II	75,6-5,33 58-06-345/64	75,6-5,33 101-5,33 119,2-5,7 58-06-345/64 58-06-495/64 58-06-520/64	119,2–5,7 58–06–520/64		
72	Gehäusedeckel Housing lid	39-01-230/47 39-01-138/47	75/861-10-66	II	39-01-139/47	39-01-139/47 39-01-140/47 39-01-143/47	39-01-143/47		
26	Skt. Schraube Housing screw	4× DIN EN 24017 -M6×12-A2-70	4× DIN EN 24017 -M6x12-A2-70 DIN EN 24017	4× '-M8×16-A2-70	×7 0	8x DIN EN 24017-M10x16-A2-70	8x M10x16-A2-70		
27	1 Schaftdichtung * 1 Shaft seal		58-33-020/	=	II	=	II		
27.1	1 0-Ring 1 0-ring	11,3-2,4 58-06-050/53							
	Pos. 2, 4, 6, 7, 21, 24, 27, 27.1 nur im kompletten Dichtungssa	im kompletten	Dichtungssat	tz erhältlich					

58-34-375/06|58-34-376/06|58-34-377/06|58-34-378/06|58-34-380/06|58-34-381/06

58-34-375/01 |58-34-376/01 |58-34-377/01 |58-34-378/01 |58-34-380/01 |58-34-381/01

Item 2, 4, 6, 7, 21, 24, 27, 27,1 available es complete seal kits only

EPDM

Dichtungssatz Seal kit

 $\overline{}$

Dichtungssatz Seal kit

Dichtungssatz Seal kit

_

HNBR

VΜQ

58-34-375/02|58-34-376/02|58-34-377/02|58-34-378/02|58-34-380/02|58-34-381/02



Porplicitier zum Schauensensuck, de Nation, Eigentum und alle Rechte, auch (Paragraph 18 UWG, Paragraph 106 Urhö). Eigentum und alle Rechte, auch für Patententeilung und Gebrauchsmustereintragung, vorbehalten. APV Rosista GmbH. Diese Zeichnung wurde mit CAD erstellt und darf nicht von Hand geändert werden.

Ersatzteilliste: spare parts list: Membranventil MES4 FS-CU und VSM 1-4 zoll

Diaphragm valve MES4 FS-CU and PSH 1-4 inch

(Ausführung 1 gültig bis August 2004 / execution 1 valid until Aug 2004) Ausführung / execution: 1

Blatt m Besteht aus

Geprüft Blatt

06/01 11/01

03/01

1,01

66/7

Datum Name ** Dichtungswerkstoff Membrane:

seal material of membrane:

../22-TFM/EPDM WS 283

Name

Datum

02/94

APV Roelsta GmbH
PV D-59425 Uma
Germany

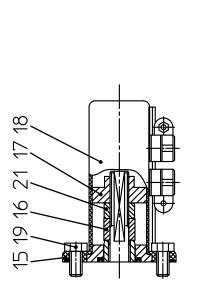
01.064.5 Z Schulz **Trytko** Trytko|Trytko|Trytko|Trytko|Trytko| Trytko| Trytko 02/02 02/03 08/04 28.4.99 03.5.99 Gezeichnet Normgepr.

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

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

* Dichtungswerkstoff:

material seals:



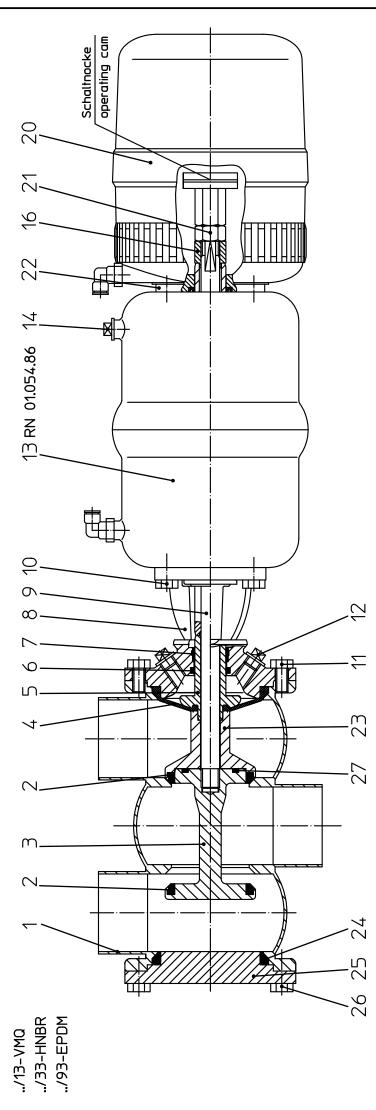
"/23-TFM/EPDM WS 287/64

3A0-Ausführung

3A0 design

standard design

Standard-Ausführung





für Pat Diese 2	enterte eichnur	für Patenterteilung und Gebrauchsmustereintragung, vorbehalten. APV Rosista GimbH. Diese Zeichnung wurde mit CAD erstellt und darf nicht von Hand geändert werden.	a GmbH. erden.							02/94
Ü	satz	Ersatzteilliste: spare parts list:						_		APV Rosista GmbH
Me	mbr	Membranventil MES4 FS-CU und VS	und VSM 1-4 zoll		Blaff		.	03.5.99 Schulz	S) APV	Germany Germany
<u> </u>	ıphr	Diaphragm valve MES4 FS-CU and PSH 1-4 inch Ausführung / execution: 1	PSH 1-4 ii	Datum	04/99 10/03 08 Trytko Trytko Tr	08/04 Trytko	Normgepr.	-	RN 01.0	01.064.5
000	әбі		*		2, 2	2,5"	"m	7,7		
item	Mer quai		WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
7	1	Gehäuse MES45 1+2+3S Housing	39-49-320/47	39-49-420/47	<u> </u>	39-49-520/47	27/025-67-68	39-49-670/47		
	_	Gehäuse MES46 1+2+3+4S Housing	39-50-320/47	39-50-420/47	39-50-470/47	39-50-520/47	39-50-570/47	39-50-670/47		
	1	Gehäuse MES48 1+2+3+4S Housing	39-51-310/47		39-51-460/47					
2	2	Tellerdichtung Seat seal	58-33-293/	58-33-393/	/677-66-85	28-33-493/	7895-28-85	28-33-643/		
3	1		39-22-816/42	39-22-817/42	39-22-818/42	39-22-819/42	39-22-820/43	39-22-821/42		
`	1		58-23-295/22	58-23-395/22	=	58-23-495/22	=	58-23-645/22		
4	_	Membrane (3A0) ** Diaphraam	58-23-295/23	58-23-395/23	II	58-23-495/23	Ħ	58-23-645/23		
2	1	Schaft öben Upper valve shaft	39-22-296/42	39	=	39-22-496/42	=	39-22-646/42		
9	1	O-Ring O-ring	15,3-2,4 58-06-052/83	15,3-2,4 20,2-3 58-06-052/83 58-06-078/64	II	II	II	II		
7	1	Führungsbuchse Bushina	08-01-177/23	08-01-178/23	II	II	II			
8	1	Laternē Yoke	39-40-295/47	39-40-395/47	=	39-40-495/47	29-60-570/47	39-40-645/47		
6	1	Zugstange Guide rod	39-23-080/12	39-23-082/12	=	II	39-23-058/12	39-23-055/12		
10	7	Skt. Schraube Hex. screw	DIN EN 24017-	24017-M8×16-A2-70			DIN EN 24017-	24017-M8x20-A2-70		
11		Skt. Schraube Hex. screw	4× DIN EN 24017 -M6×12-A2-70 DIN	4× DIN EN 24017-	4x EN 24017-M8×16-A2-70	×7	X7	8x DIN EN 24017 -M10x16-A2-70		
12	2	Entlüftungsstopfen Ventina plua	08-60-005/94	II	=	II		=		
13	1	SteuerKopf	ø74 15-32-050/17	ø110 15-32-051/17	II	II	ø165 15-32-052/17	II		
14	1	Entlüftungsstopfen G1/8 Ventina plua	08-60-005/93	II	II	II	II	11		
15	7	0-Ring 0-ring	OR 66x2 NBR	70-75 Shore ,	۷					
16	1	Zentrierscheibe Centering nut	15-28-940/12	II	II	II	H	II		
17	7	Schaltnöcke Operating cam	08-52-290/97	08-52-291/97	II	II	11	II		



02/94 Name Datum

			Χ.
0.:00:1:0	Trytko Trytko Trytko Trytko]	Name Trytko Trytko Trytko Trytko	Austunfung / execution: 1
N 01067.5	02/02 02/03 10/03 08/04 日日	10/11 10/90 10/01 03/01 06/01 unipa	· :
	Normgepr.		Diaphraam valve MES4 FS-(U and PSH 1-4 inch
Germany	Geprüff 03.5.99 Schulz		7 +-
APV Rosista GmbH	Gezeichnet 28,4,99 Trytko	Blatt 3	Morbination MEV TO 11 10 MOV 1 1 10 MOV
	Datum Name		Ersatzteilliste: spare parts list:

	4101 7-1 HVA TOT 1-V4 7V4W 4V1ZV BTT140T1(: 7-1 HSd	 			Normgepr.			
		= - - - -	Datum	70/10 66/7	03/01 06/01 11	11/01 02/02 02/03	_		۷/ E
	Ausführung / execution: 1		<u>"</u> 上	rytko Trytko Tr	ytko Trytko Tr) Trytko	tko Trytko Trytko	HIN 01.004.7	04.)
DL DL	XtiTn Dri Inneneg	₹-	1,5,	2"	2,5"	, m			
item dual		WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
18	1 VSM Gehäuse-SW4 1 Proximity switch holder housing SW4	15-33-932/93	=	=	=	=	=		
19	4 Skt. Schraube 4 Hex. screw	DIN EN 24017-M8×16-A2-70	M8x16-A2-70						
20	1 Control-Unit CU31 Direct-Connect	16-31-232/93	II	=	=	II	II		
21	1 Skt. Mutter 1 Hex. nut	DIN EN ISO 10511-M12-A2	511-M12-A2						
22	1 CU-Adapter 1 CU-adapter	08-48-415/93	II	=	=	II	II		
23	Schaft mitte Middle valve shaft	39-22-824/42 39-22-825/42		39-22-826/42	39-22-827/42	39-22-826/42 39-22-827/42 39-22-828/42 39-22-829/42	39-22-829/42		
24	1 0-Ring 1 0-ring	36,5-3,2 58-06-157/64	36,5-3,2 62,9-5,33 58-06-157/64 58-06-300/64	=	75,6-5,33 58-06-345/64	II	119,2-5,7 58-06-520/64		
25	1 Gehäusedeckel 1 Housing lid	39-01-230/47 39-01-138/47	39-01-138/47	=	39-01-139/47	39-01-139/47 39-01-144/47 39-01-143/47	39-01-143/47		
26	Skt. Schraube Housing screw	4× DIN EN 24017	4x DIN EN 24017-	4× M8×16-A2-70	×7	×7	8x DIN EN 24017 -M10x14-A2-70		
27	1 0-Ring 1 0-ring	11,3-2,4 20,5-3 58-06-050/53 58-06-078/53	20,5-3 58-06-078/53	28-3 58-06-119/53	44,2-2,5 58-06-183/53	28–3 44,2–2,5 50,39–3,53 80–3 58–06–119/53 58–06–183/53 58–06–228/53 58–06–368/53	80-3 58-06-368/53		
	Pos. 2, 4, 6, 7, 21, 24, 27 nur im kompletten Dichtungssatz erhältlich Item. 2, 4, 6, 7, 21, 24, 27 available es complete seal kits only	27 nur im kompletten Dichtungssatz er 27 available es complete seal kits onl	itungssatz er seal kits onl	hältlich y					

1 Dichtungssatz VMQ 58-34-375/02 58-34-377/02 58-34-377/02 58-34-378/02 58-34-379/02 58-34-378/02 58-34-378/02 58-34-378/02 58-34-378/02 58-34-378/02 58-34-378/02 58-34-378/02 58-34-381/02	1 Dichtungssatz 1 Seal kit	EPDM	58-34-375/01 58-34-376/01 58-34-377/01 58-34-378/01 58-34-379/01 58-34-381/01	58-34-376/01	8-34-377/01	58-34-378/01	58-34-379/01	58-34-381/01		
Jssatz HNBR 58-34-375/06 58-34-376/06 58-34-377/0 UNG!!! ung 1 bis August 2004 atzteilbestellung einer der Schäfte Pos.3 und 23 ner beide Schäfte + Dichtung Schaft (alt Pos.27) 58-33-020/ bestellen und austauschen.	1 Dichtungssatz 1 Seal kit	VMQ	58-34-375/02	58-34-376/02	8-34-377/02	58-34-378/02	58-34-379/02	58-34-381/02		
	1 Dichtungssatz 1 Seal kit	HNBR	58-34-375/06	38-34-376/06	90//26-36	58-34-378/06	58-34-379/06	58-34-381/06		
	ACHTUNGIII				- A	LTENTION	=			
	——Ausführung 1 bis Augu	st 2004			Ä	ecution 1 unt	il August 20()4		
	Bei Ersatzřeilbestellung	einer der S	chäfte Pos.3 u	und 23	<u>_</u>	case of spar	e orders for	one of the st	nafts pos. 3 ar	1d 23,
	bitte immer beide Schäf	te + Dichtun	g Schaft (alt F	⁵ 0s.27)	عاد ا	vays order a	nd replace b	oth shafts + s	haft seals (old	l pos.27)
	WS-Nr: 58-33-020/ De	stellen und i	austauschen.		֖֡֟֝֟֟֝֟֟	IVU. DO-DD-	/070			



Ersatzteilliste: spare parts list: Membranventil MES4 FS-CU und VSM 1-4 zoll

APV Roeista GmbH
PV D-59425 Urna
Germany

25.08.04 Trytko

Gezeichnet

Normgepr. Geprüft

Name

Datum

01.064.5

Z

02/94

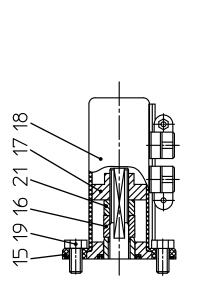
Diaphragm valve MES4 FS-CU and PSH 1-4 inch Ausführung / execution: 2 Es stehen verschiedene

Dichtungswerkstoffe zur Verfügung. Bitte WS-Nr. ergänzen

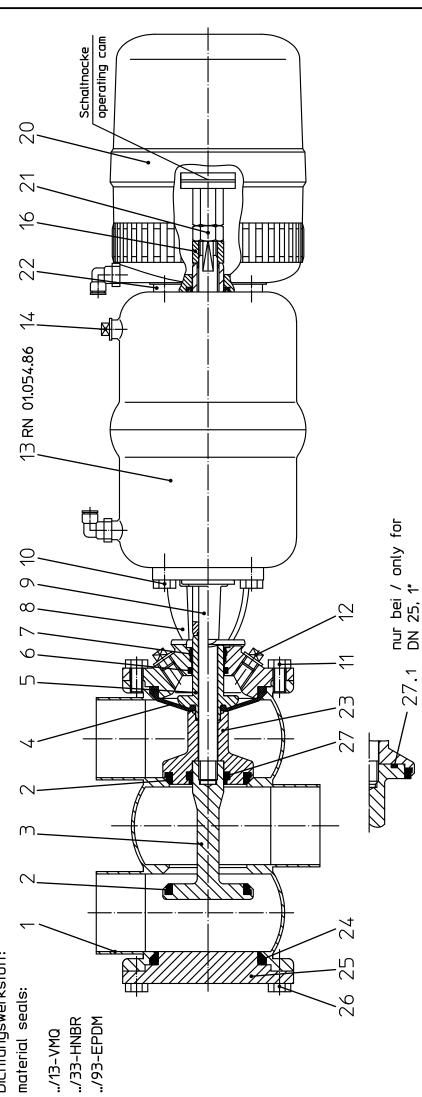
The following seal materials are available (fill in last two digits of ref.-no.)

3A0 design

:Ausführung 2 gültig ab August 2004 / execution 2 valid from Aug 2004) ** Dichtungswerkstoff Membrane: Blatt "/23-TFM/EPDM WS 287/64 seal material of membrane: Standard-Ausführung ../22-TFM/EPDM WS 283 standard design 3A0-Ausführung Blatt m Besteht aus 08/07 Trytko Datum Name



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





fur Par Diese Z	Tenter ter Zeichnur	rur raienierielung und bebrauchsmissereiningging, varbenalien. Ary kossia ambr. Diese Zeichnung wurde mit CAD erstellt und darf nicht von Hand geändert werden.	ı Gmbr. erden.							02/94
Ë	satz	Ersatzteilliste: spare parts list:							_	ABV Boolete Genhu
M	mbr	Membranventil MES4 FS-CU und VSM 1-4 zoll	M 1-4 zoll		Blatt		Gezeichnet Geprüft	25.08.04 rytko	SA APV	APV 0-59425 Uma Germany
	ınhr	HULL 7-1 HSA PUD (1)-SH 75/4 MIND WIND WIND WIND WIND WIND WIND WIND W	PSH 1-4 ii				Normgepr.			
)	<u>.</u> -	Ausführung / execution: 2	= - - -)	Datum (08/04 Trytko				RN 01.0	01.064.5
PO	9gr Kiiin	Beneauland	*	1,5"	2,,	2,5"	"m	7.,		
item	Mer quai		WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.	WS-Nr. refno.
_	1	Gehäuse MES45 1+2+3S Housing	27/02E-67-6E	27/027-67-68	39-49-470/47	39-49-520/47	27/025-67-68	39-49-670/47		
	-	Gehäuse MES46 1+2+3+4S Housing	39-50-320/47	39-50-420/47	39-50-470/47	39-50-520/47	39-50-570/47	39-50-670/47		
	1	Gehäuse MES48 1+2+3+4S Housing	39-51-310/47		39-51-460/47					
2	2	Tellerdichtung Seat seal	28-33-293/	/£6E-£E-85	58-33-443/	58-33-493/	/895-EE-85	58-33-643/		
3	1	Schaft unten Lower valve shaft	39-22-816/42	39-22-81//42	39-22-818/42	39-22-819/42	39-22-820/42	39-22-821/42		
`	1		58-23-295/22	28-23-395/22	=	58-23-495/22	=	58-23-645/22		
4	7	Membrane (3A0) ** Diaphraam	58-23-295/23 58-23-395/23	58-23-395/23	II	58-23-495/23	=	58-23-645/23		
2	1	Schaft öben Upper valve shaft	39-22-26/42	39-22-296/42 39-22-396/42	=	39-22-496/42	=	39-22-646/42		
9	1	0-Ring 0-ring	15,3-2,4 20,2-3 58-06-052/83 58-06-078/64	20,2-3 58-06-078/64	=	=	II	II		
7	1	Führungsbuchse Bushina	08-01-177/23	08-01-178/23	II	=	II	II		
8	1	Laternë Yoke	27/56E-07-6E 27/56Z-07-6E	27/56E-07-6E	II	39-40-495/47	27/025-07-68	39-40-645/47		
6	1	Zugstange Guide rod	39-23-080/12	39-23-082/12	=	=	39-23-058/12	39-23-055/12		
10	7	Skt. Schraube Hex. screw	DIN EN 24017-M8×16-A2-70	M8x16-A2-70			DIN EN 24017-	EN 24017-M8x20-A2-70		
7		Skt. Schraube Hex. screw	4x DIN EN 24017 -M6x12-A2-70	4x DIN EN 24017 -M6x12-A2-70 DIN EN 24017-M8x16-A2-70	4x M8x16-A2-70	×7	×7	8x DIN EN 24017 -M10x16-A2-70		
12	2	Entlüftungsstopfen Ventina olua	08-60-005/94	II	II	=		II		
13	1	SteuerKopf	ø74 15-32-050/17	ø110 15-32-051/17	=	=	ø165 15-32-052/17	II		
14	1	Entlüftungsstopfen _{G1/8} Ventina olua	08-60-005/93	II	=	=	II	II		
15	7	0-Ring 0-ring	OR 66x2 NBR	70-75 Shore A	¥					
16	1	Zentrierscheibe Centering nut	15-28-940/12	=	=	=	II	II		
17	1	Schaltnocke Operatina cam	26/06Z-ZS-80	08-52-291/97	=	=	II	II		



Name

Gezeichnet

APV Rocieta GmbH
APV 0-59425 Urna
Germany WS-Nr. ref.-no. 01.064.5 WS-Nr. ref.-no. Z Trytko 8x din en 24017 -M10x14-A2-70 39-22-824/42|39-22-825/42|39-22-826/42|39-22-827/42|39-22-828/42|39-22-829/42 58-06-520/64 58-34-375/06|58-34-376/06|58-34-377/06|58-34-378/06|58-34-379/06|58-34-381/06 58-34-375/02|58-34-376/02|58-34-377/02|58-34-378/02|58-34-379/02|58-34-381/02 58-34-375/01 |58-34-376/01 |58-34-377/01 |58-34-378/01 |58-34-379/01 |58-34-381/01 39-01-143/47 WS-Nr. ref.-no. 25.08.04 **,**4 II 39-01-139/47 |39-01-144/47 Normgepr. Geprüft WS-Nr. ref.-no. X X m II II 58-06-345/64 WS-Nr. ref.-no. 2,5 П II × 4 II 21, 24, 27, 27.1 nur im kompletten Dichtungssatz erhältlich WS-Nr. ref.-no. m II II Š II Ш 2, 4, 6, 7, 21, 24, 27, 27.1 available es complete seal kits only Blatt 08/04 Trytko 58-06-157/64 | 58-06-300/64 DIN EN 24017-M8×16-A2-70 39-01-230/47 |39-01-138/47 Datum Name 58-33-020/ WS-Nr. ref.-no. DIN EN ISO 10511-M12-A2 <u>"</u> Diaphragm valve MES4 FS-CU and PSH 1-4 inch Ersatzteilliste: spare parts list: Membranventil MES4 FS-CU und VSM 1-4 zoll 58-06-050/53 15-33-932/93 08-48-415/93 16-31-232/93 WS-Nr. ref.-no. 11,3-2,4 -* Proximity switch holder housing SW4 Skt. Schraube Ausführung / execution: 2 CU31 Direct-Connect EPDM HNBR ΔMV Benennung description Middle valve shaft Gehäuse-SW4 Sehäusedeckel **Schaftdichtung** Housing screw Skt. Schraube Dichtungssatz Seal kit **Dichtungssatz** Dichtungssatz Seal kit U-adapter Schaft mitte Control-Unit Skt. Mutter Hex. screw Control-Unil U-Adapter Housing lid haft seal Seal kit 0-Ring 0-ring J-Ring 0-ring tem. G += O == Menge Ytitnbup $\overline{}$ 20 22 23 24 25 26 8 6 27 7



APV Roeista GmbH
PV D-59425 Urna
Germany

15.1.98 Trytko 15.1.98 Spliethoff 19.1.98 Plümper

Gezeichnet Geprüft Normgepr.

Blatt

Name

Datum

RN 01.054.86

Weitergabe sowie Vervielfältigung dieser Unterlage, Verwertung und Mitteilung ihres Inhalts nicht gestattet, soweit nicht schrifflich zugestanden. Verstaß verplichtet zum Schadensersatz und kann strafrechtliche Falgen haben (Paragraph 18 UWG, Paragraph 106 UHG). Eigentum und ist Rechte, auch für Pätenterteilung und Gebrauchsmustereinfragung, vorbehalten. APV Rosista GmbH. Diese Zeichnung wurde mit CAD erstellt und darf nicht von Hand geändert werden.

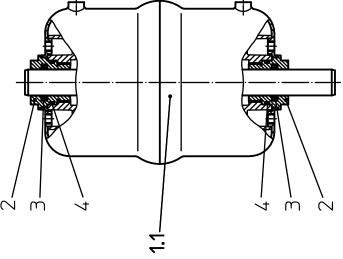
Steuerkopf SW4

Ersatzteilliste: spare parts list:

Actuator SW4

 \mathcal{L}_{1}

1/98 12/03 01/06 06/08 Trytko Trytko Trytko Trytko Blatt μ̈́ 4 Besteht aus Datum Name



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Benennung ø74 ø110 ø165 description WS-Nr. WS-Nr. WS-Nr. Steuerkopf kpl Feder/Luft Ausf. matt-gl. 15-32-050/17 15-32-051/17 15-32-051/17 Actuator complete spring/air design satin fin. 15-32-085/17 15-32-086/17 15-32-08/17 Actuator complete air/dir Ausf. matt-gl. 15-32-085/17 15-32-086/17 15-32-08/17 Steuerkopf kpl Luft/Luft Ausf. matt-gl. 15-32-085/17 15-32-086/17 15-32-08/17 Steuerkopf kpl Feder/Luft Ausf. 3A-blank 3A0 15-32-05/13 3A0 15-32-06/13 3A0 15-32-06/13 Actuator complete spring/air design 3A-bright fin. 3A0 15-32-05/13 3A0 15-32-06/13 3A0 15-32-06/13 Dichtungsschraube 15-28-840/93 = = = V-Dichtung 20x28x4 58-32-010/83 = = V-Seal 0-Ring 58-06-124/83 = =	1						<u>~</u>			
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그 그는 뒤로 뒤로 뒤로 되는 네트 다		Вепепп	description	Feder/Luft ete spring/air	Luft/Luff ete air/air	Feder/Luft Ausf. 3A-blank ete spring/air design 3A-bright fin.	Luft/Luft ete air/air	chraube		
Viitnoup		Pos Apr Ytitn	item 2	•	<u> </u>	7	<u> </u>	2	3	7