



"OBSOLETE"

Diaphragm Valve

DELTA M3/MF3

Operating Instructions

Rev. 3

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1. **General:**

The operation instructions have to be read and observed by the competent operating and maintenance personnel.

We wish to point out that we do not accept any liability for any damage or malfunctions resulting from non-compliance with the operation instructions. The right is reserved to make technical changes with regard to the descriptions and data given.

2. **Safety instructions:**

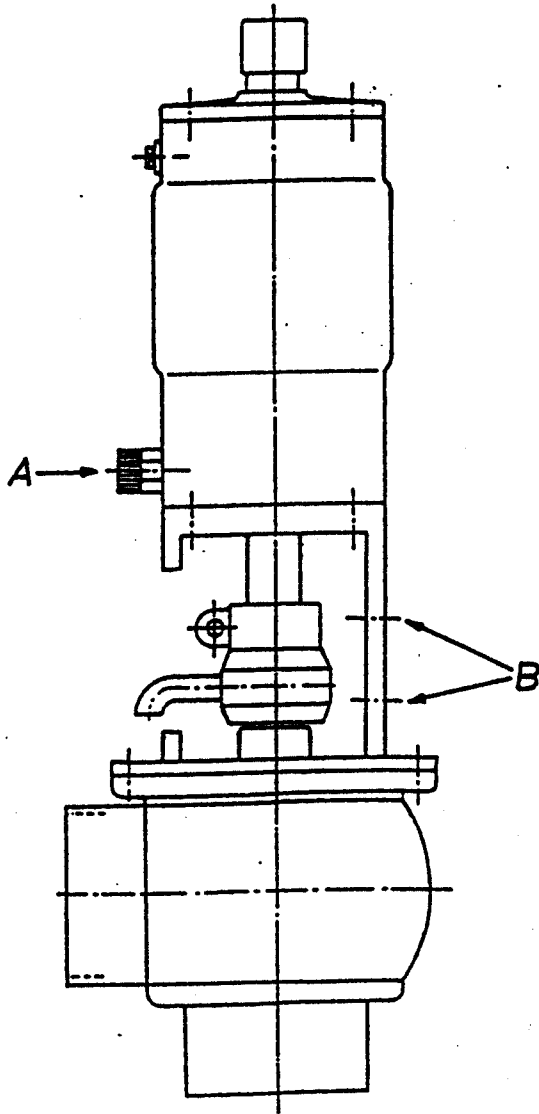
Danger!

- Danger of injury when valve is suddenly actuated!
- Observe assembly instructions to ensure safe maintenance of valve.
- In case of wear at the diaphragm or stainless steel bellow, leakage will drain out of the leakage pipe in the yoke area.
- Before carrying out maintenance works, the pipe system has to be made pressureless.



3. Mode of operation:

- Separation and change-over of piping sections.
- Operation by pneumatic actuator with air connection at (A), spring to close.
- The opening cross-section nearly corresponds to the inner cross-section of the piping system.
- The valve interior is cleaned during CIP of the piping system.



4. Characteristics:

- The following designs can be achieved by mounting the actuator in different ways:
FS: spring to close
FH: spring to open
(Fig. shows FS type)
- The internal parts of the actuator are maintenance-free.
- No static shaft seal in the product area (shaft either enclosed by hyperboloid diaphragm or stainless steel bellow).
- Wear at the diaphragm or at the stainless steel bellow can immediately be recognized by a leakage in the yoke area.



- Diaphragm can be interchanged with stainless steel bellow without any problems.
- Proximity switches with LED or micro switches may be fitted to the yoke of the valve (B).

Optionally a control unit with solenoid valve and feed-back switches (either proximity or micro switches) may be mounted on top of the actuator.

- Different housing types are available (please refer to catalogue).
- Optimum cleanability (no dead pockets).

5. **Installation:**

- Installation should ensure that liquids can drain off from the valve body, i.e. preference should be given to vertical installation.
- Valves may be welded directly into pipe lines (valve insert is completely detachable).

6. **Maintenance:**

- Removal and installation of seals according to assembly instructions.
- Lightly grease all seals before installation.

Recommendation:

APV-food-grade grease for EPDM and Viton

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

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

or

APV-food-grade-grease for Silicon and Perbunan

(1 kg/can - Ref.-No. 000 70-01-017/93)

(40 g/tube - Ref.-No. 000 70-01-016/93)

! You must **not** use grease containing mineral oil with EPDM-seals.

! You must **not** use silicon based grease with silicon seals.

- Assembly of valve and conversion of FS or FH type according to assembly instruction.



Failure remedies (item numbers refer to the spare parts drawing)

- Valve leaks: Replace seat seal (2), check line pressure (for allowable line pressure please refer to chapter 9).

- Leakage between housing and yoke flange
With M3: Check proper installation of diaphragm (7) and/or check if flange bolts are properly tightened (17).

With MF3: Replace O-ring (6) and/or check if flange bolts are properly tightened (16).

- Leakage out of the pipe in the yoke area
With M3 replace diaphragm (7).
With MF3 replace complete stainless steel bellow (see spare parts list).

- Leakage of actuator: Remove actuator (13 or 14 resp.) from valve and replace O-rings (item 2, RN 261.4)

- Actuator does not work, air leaks continuously through venting plug (item 3, RN 261.4): Replace complete actuator

- Valve feed-back switch does instruction not work or only inaccurately: Finely adjust according to assembly (III.L).

7. Materials:

Different combinations of materials are possible.

Housing, seat, stainless steel bellow 1.4571

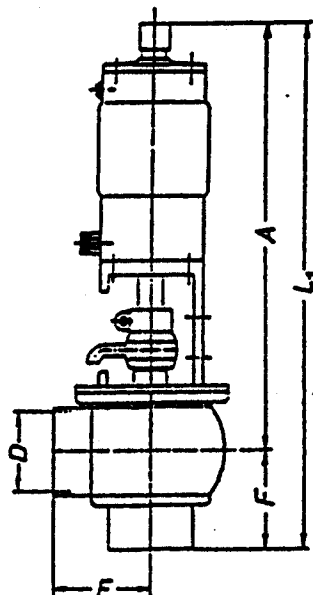
Actuator, shaft, coupling, cam, guide pieces, yoke 1.4301

Guide bushing Teflon

Diaphragm, seat seal, O-rings EPDM, Silicone, Viton

Air connection PA6.6

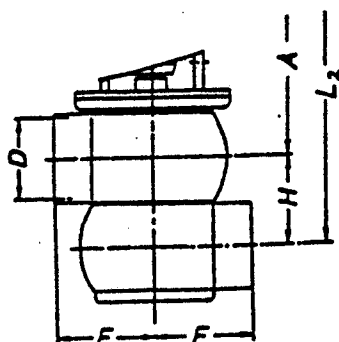
8. Dimensions: (given in mm)



M31, 32
MF31, 32

DN	25	40	50	65	80	100
A	365,5	369,5	373,5	379,0	385,5	386,0
øD	26,0	38,0	50,0	66,0	81,0	100,0
F	68,0	67,0	72,0	85,0	98,0	111,0
H	38,0	44,0	56,0	74,0	91,0	110,0
L ¹	433,5	436,5	445,5	464,0	483,5	497,0
L ²	403,5	413,5	429,5	453,0	476,5	496,0
G ¹	5,3	6,1	6,8	10,2	14,0	19,2
G ²	5,9	7,1	8,2	12,0	16,5	22,6

Tube	1"	1,5"	2"	2,5"	3"	4"
A	364,0	368,0	372,0	376,0	381,0	384,0
øD	22,9	35,1	47,8	60,0	72,1	97,6
F	68,0	67,0	72,0	85,0	98,0	111,0
H	35,0	44,0	56,0	68,0	80,0	107,6
L ¹	432,0	435,0	444,0	461,0	479,0	495,0
L ²	399,0	412,0	428,0	444,0	461,0	491,6
G ¹	5,3	6,1	6,8	10,2	14,0	19,2
G ²	5,9	7,1	8,2	12,0	16,5	22,6



ME31, 32, 33, 34
MEF31, 32, 33, 34



Other housing types are available, please refer to catalogue.

G¹ = weight (kg) for M3 or MF3 type

G² = weight (kg) for ME3 or MEF3 type

9. Technical Data:

Line pressure	:	4 bar with standard actuator layout
max. line pressure	:	on request
max. working temperature	:	135° C
short-time steam load	:	150° C

	DN Tube	25 1"	40 1,5"	50 2"	65 2,5" 3"	80	100 4"
	Stroke	8 5	10	12	15	20	25
Air consumption at 6 bar in NL	V	1,4	1,4	1,4	2,2 2,2 3,5	3,5	5
diameters of standard actuator	Ø	80	80	80	100	125	150
in mm					100 125		
flow rates in m ³ / h		25	38	62	101	155	242
		20	33	67	89	136	215

10. Assembly instruction:



• DELTA M3, ME3, MF3, MEF3

The item-numbers refer to the spare parts drawing.

M3 : (DIN-design: RN 01.060.00; Tube-design: RN 01.060.02)

MF3 : (DIN-design: RN 01.060.01)

Item-numbers of actuator refer to drawing RN 261.4.

I. Removal from the line system

- a. Shut off line pressure.
- b. Loosen clamp bolt of proximity support bracket and pull out proximity switch.
- c. **CAUTION!** With FS type apply air to actuator.

DANGER! Do not touch moving valve parts!
Danger of injury if valve suddenly operates.

- d. Remove flange bolts (M3-17; MF3-16) and lift insert out of valve body.
- e. Shut off air pressure.

II. Disassembly of wear parts

- a. With FS type apply air to actuator.
- b. Remove coupling clamp (11) and pull out downwards diaphragm complete with seat and shaft. By doing this, cam (15 or 14) will loosen and O-rings (16 or 15) become accessible.
- c. With MF3: Remove O-ring (6) and washer (7);
with M3: pull out upper guide piece (8).
- d. Loosen bolts (3) and pull out shaft (18 or 17) including washers (4) and segments (5).
- e. With M3 press lower guide piece (6) out of diaphragm (7).
- f. Seat seal (2) has to be destroyed for disassembly.

Actuator

Shut off air pressure and separate yoke (M3-12; MF3-11) from actuator by loosening the flange bolts.

The item-numbers refer to drawing RN 261.4.

- a. Remove cap (7).
- b. Remove bolts (6) and cover (5).
- c. O-rings (2) are now accessible from both ends.

CAUTION! When mounting cover (5), the desired valve type has to be considered:
 FS type = shorter actuator rod above
 FH type = longer actuator rod above

Assembly of the parts has to be done the other way round (slightly grease O-rings).

III. Installation of seals and assembly of valve

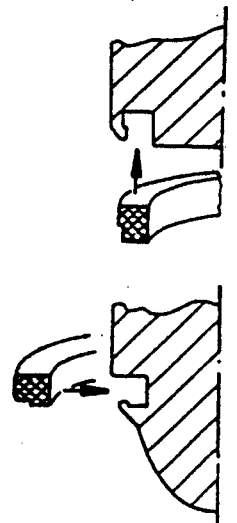
(Slightly grease all seals)

- a. seat seal into flat cone:

Press seat seal (2) by hand crosswise into the groove of the seat, starting with the projection side of the seal. Vent seal groove by using e.g. a blunt screwdriver.

seat seal into modulating cone:

Press slightly greased seal on four places into the groove, the bigger side of the seal ahead. Lead seal on the four projecting loops into the groove using e.g. a small, blunt screw-driver and press in thoroughly by your thumbs. Work alternately on all four loops to obtain a proper fit. Smoothen seal afterwards by pressing it thoroughly using e.g. the grip of a screw-driver. Vent groove up to the groove base by inserting a small screw-driver blade between groove edge and seal inside.



Check proper seat of the seal after installation.



- b. With MF3, pull O-ring (6) on stainless steel bellow.
- c. With M3, pull diaphragm (7, greased inside) on lower guide piece (6) using a blunt plastic spatula or similar tool.
- d. Now carefully insert shaft complete with segment (5), washers (4) and bolts (3) from top into stainless steel bellow or diaphragm and tighten bolts.
- e. With M3 fit upper guide piece (8) to diaphragm.
With MF3, insert ring (7).
- f. Insert shaft (complete with diaphragm or stainless steel bellow) into housing.
- g. With FS type apply air to actuator.
- h. Lead yoke with actuator over shaft. As soon as shaft can be seen in the yoke area, first fit cam (M3-15; MF3-14) and then screw yoke flange against housing flange.
- i. **CAUTION!** With FS type shut off air pressure.
With FH type apply air to actuator.
- DANGER!** Do not touch moving valve parts!
Danger of injury if valve suddenly operates.
- j. Now tighten coupling clamp (10 or 11). Take care that bolt of clamp cannot turn into the feed-back area.
- k. Finally insert feed-back switches and fix them by tightening the clamp bolt. By changing the distance between cam and switch head the pick-up point can be adjusted or corrected.

Ersatzteilliste: spare parts list:
 Membranventil M3, ME3-FS DN 25-100
 Diaphragm valve M3,ME3-FS DN 25-100
 Ausführung / execution:2

Besteht aus 3 Blatt Blatt 1

	Datum	Name
Gezeichnet	18.1.99	Trytko
Geprüft	20.1.99	Schulz
Normgepr.	20.1.99	Plümper



Datum	1/99	10/01										
Name	Trytko	Trytko										

RN 01.060.00

Ausführung 2 gültig ab 1997

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

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

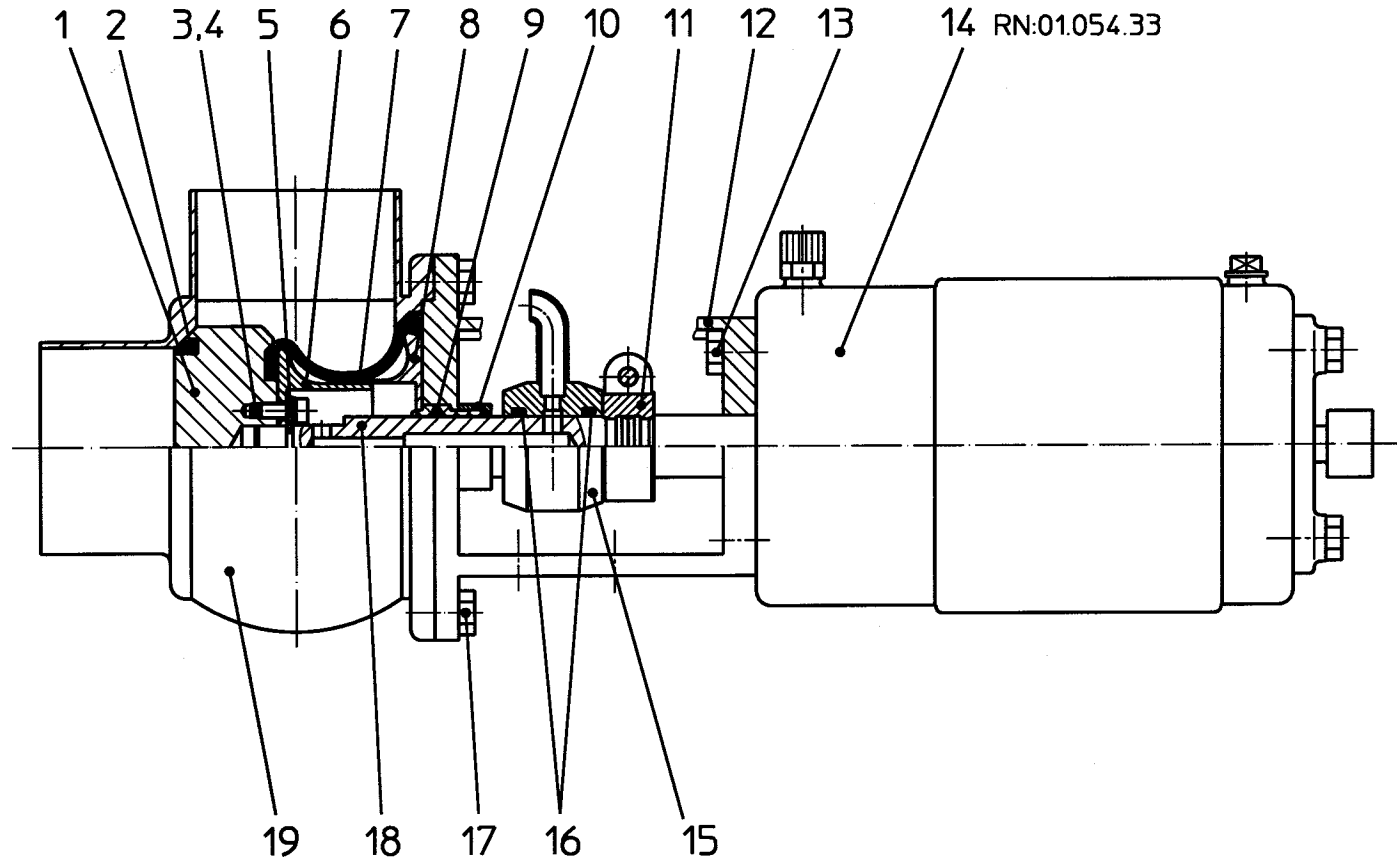
* Dichtungswerkstoff/seal material:


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

**Membranwerkstoff

Diaphragm material:

- ../33-HNBR HDF70
- ../53-VMQ/Silicone QPF70
- ../93-EPDM EPL70



Ersatzteilliste: spare parts list: Membranventil M3, ME3-FS DN25-100 Diaphragm valve M3, ME3-FS DN25-100 Ausführung / execution:2	Blatt <u>2</u>				Datum	18.1.99	Name	Trytko	 APV Rosista GmbH D-59425 Urena Germany
					Gezeichnet	18.1.99	Trytko		
	Geprüft	20.1.99	Schulz						
		Normgepr.	20.1.99	Plümper					
	Datum	1/99	03/00						RN 01.060.00
	Name	Trytko	Trytko						

Pos item	Menge quantity	Benennung description	DN							125	150
			25	40	50	65	80	100			
			WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
1	1	Ventilsitz Valve seat	39-01-059/42	39-01-060/42	39-01-061/42	39-01-062/42	39-01-064/42	39-01-066/42			
2	1	Tellerdichtung Seat seal	58-33-393/	=	58-33-443/	58-33-493/	58-33-543/	58-33-643/			
3	4	Zyl. Schraube Cyl. screw	DIN 912, 6912 M5x12 65-05-053/13	M5x12 =	M5x12 =	M5x12 =	M8x20 65-06-118/13	M8x25 65-05-122/13			
4	4	Federring Spring washer	67-09-100/13	=	=	=	67-09-200/13	=			
5	2	Segment für Membranventil Segment for diaphragm valve	22-44-005/13	=	=	=	22-44-008/13	=			
6	1	Unteres Führungsstück Lower guide	22-14-026/13	=	22-14-051/13	22-14-015/13	22-14-102/13	22-14-127/13			
7	1	Membrane Diaphragm	** 58-23-276/	=	58-23-326/	58-23-378/	58-23-429/	58-23-479/			
8	1	Oberes Führungsstück Upper guide	39-19-380/13	=	39-19-430/13	39-19-480/13	39-19-530/13	39-19-630/13			
9	1	Führungsbuchse Bushing	08-01-140/93	=	=	=	=	=			
10	1	Anschlagring Stopper	08-39-130/17	=	=	=	=	=			
11	1	Kupplung Coupling	08-52-110/13	=	=	=	=	=			
12	1	Laterne Yoke	16-40-435/17	=	=	16-40-485/17	16-40-535/17	16-40-635/17			
13	4	Skt. Schraube Hex. screw	DIN 933 M8x14 65-01-079/15	=	=	=	=	=			
14	1	Steuerkopf Actuator	16-31-301/17	=	=	16-31-302/17	16-31-303/17	16-31-304/17			
15	1	Schaltnocke Operating cam	08-60-108/13	08-60-109/13	08-60-113/13	08-60-110/13	08-60-111/13	08-60-112/13			
16	2	O-Ring O-ring	OR 20.2-3 58-06-078/83	=	=	=	=	=			
17	4	Skt. Schraube Hex. screw	DIN 933 M8x16 65-01-081/15	M8x16 =	M8x16 =	M8x16 =	M10x16 65-01-130/15	M10x16 =			
18	1	Ven. Schaft Valve shaft	39-22-276/42	39-22-376/42	39-22-426/42	39-22-476/42	39-22-526/42	39-22-626/42			
19	1	Gehäuse Housing	M31 39-41-284/47	39-41-384/47	39-41-434/47	39-41-484/47	39-41-534/47	39-41-634/47			
	1	Gehäuse Housing	M32 39-42-284/47	39-42-384/47	39-42-434/47	39-42-484/47	39-42-534/47	39-42-634/47			

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Ersatzteilliste: spare parts list:
 Membranventil MF3, MEF3-FS DN 25-100
 Diaphragm valve MF3,MEF3-FS DN 25-100

Besteht aus 3 Blatt Blatt 1

Datum	7/90	5/96	10/01						
Name	Trytko	Trytko	Trytko						

	Datum	Name
Gezeichnet	10.7.90	Trytko
Geprüft	10.10.90	Schulz
Normgepr.		



RN 01.060.01

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

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

* Dichtungswerkstoff/seal material:

- ../13-VMQ/Silicone
- ../73-FPM
- ../93-EPDM

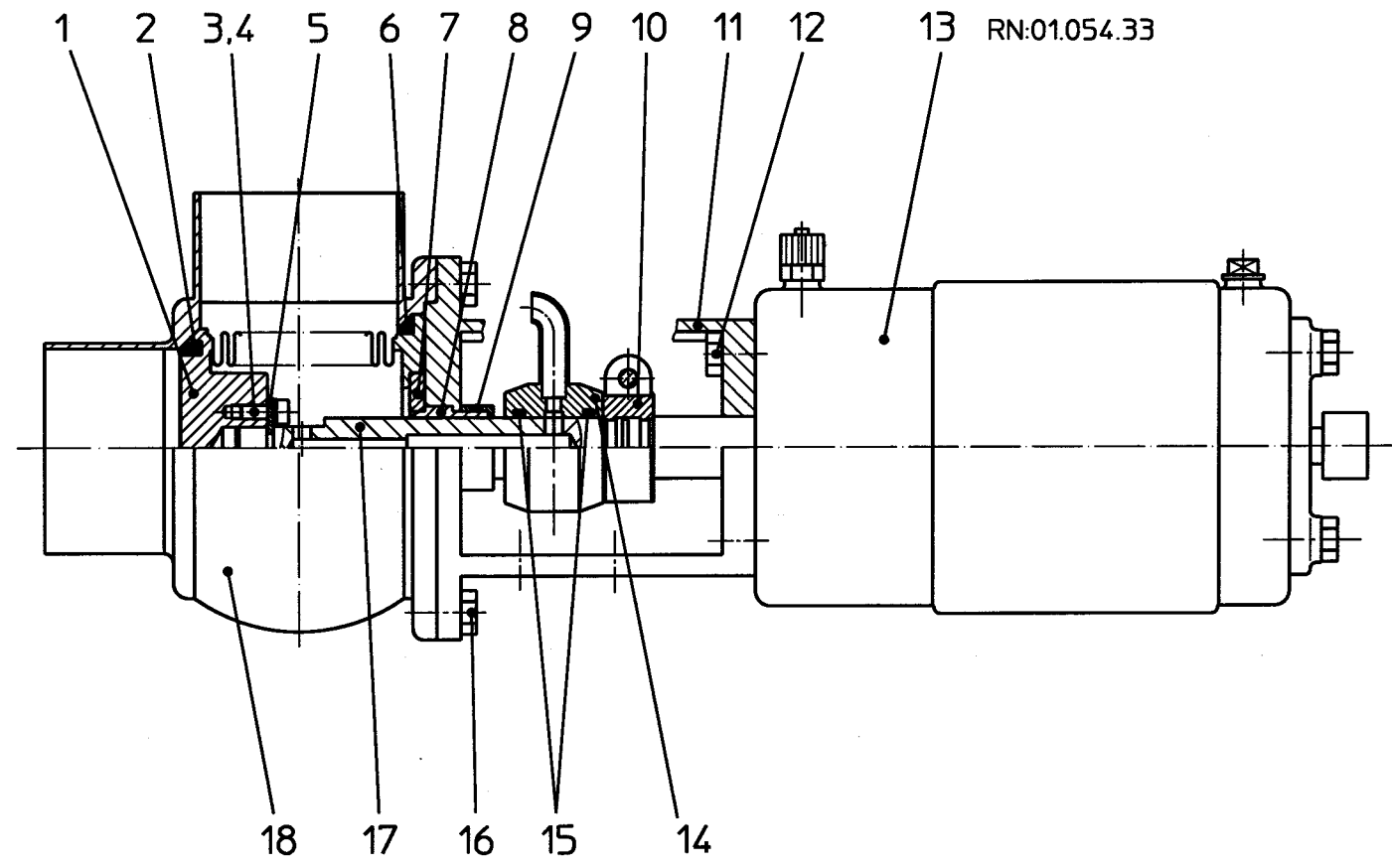
O-Ring:

- ../53-VMQ/Silicone
- ../63-EPDM
- ../73-FPM

**Werkstoff metallisch+Dichtung/

Material metallic+seal:

- ../60-VMQ/Silicone-1.4404
- ../73-FPM-1.4404
- ../93-EPDM-1.4404



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02/94

Ersatzteilliste: spare parts list:
 Membranventil MF3, MEF3-FS DN25-100
 Diaphragm valve MF3, MEF3-FS DN25-100

Blatt 2

Datum	7/90	5/96	1/99	03/00
Name	Trytko	Trytko	Trytko	Trytko

Gezeichnet	Datum	Name
Geprüft	10.7.90	Trytko
Normgepr.	10.10.90	Schulz

APV Rosista GmbH
 D-58425 Unna
 Germany

RN 01.060.01

Pos item	Menge quantity	Benennung description	DN									
			25	40	50	65	80	100	125	150		
			WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	
1	1	Balgeinheit MF3np-Schweißteil SS-bellow unit-welding	42-06-294/44	42-06-394/44	42-06-444/44	42-06-494/44	42-06-544/44	42-06-644/44				
2	1	Tellerdichtung Seat seal	58-33-393/	=	58-33-443/	58-33-493/	58-33-543/	58-33-643/				
3	4	Zyl. Schraube Cyl. screw	M5x12 DIN 912, 6912 65-05-053/13	M5x12 =	M5x12 =	M5x12 =	M8x20 65-06-118/13	M8x25 65-05-122/13				
4	1	Federring Spring washer	67-09-100/13	=	=	=	67-09-200/13	=				
5	1	Segment für Membranventil Segment for diaphragm valve	22-44-005/13	=	=	=	22-44-008/13	=				
6	1	O-Ring O-ring	60-5 58-06-279/	60-5 =	60-5 =	72-5 58-06-331/	100-5 58-06-492/	120-5 58-06-579/				
7	1	Ring für Führungsstück Guide ring	08-39-151/12	=	=	=	08-39-156/12	=				
8	1	Führungsbuchse Bushing	08-01-140/93	=	=	=	=	=				
9	1	Anschlagring Stopper	08-39-130/17	=	=	=	=	=				
10	1	Kupplung Coupling	08-52-110/13	=	=	=	=	=				
11	1	Laterne Yoke	16-40-435/17	=	=	16-40-485/17	16-40-535/17	16-40-635/17				
12	4	Skt. Schraube Hex. screw	DIN 933 M8x14 65-01-079/15	=	=	=	=	=				
13	1	Steuerkopf Actuator	16-31-301/17	=	=	16-31-302/17	16-31-303/17	16-31-304/17				
14	1	Schaltnocke Operating cam	08-60-108/13	08-60-109/13	08-60-113/13	08-60-110/13	08-60-111/13	08-60-112/13				
15	2	O-Ring O-ring	OR 20,2-3 58-06-078/83	=	=	=	=	=				
16	4	Skt. Schraube Hex. screw	DIN 933 M8x16 65-01-081/15	M8x16 =	M8x16 =	M8x16 =	M10x16 65-01-130/15	M10x16 =				
17	1	Ven. Schaft Valve shaft	39-22-276/42	39-22-376/42	39-22-426/42	39-22-476/42	39-22-526/42	39-22-626/42				
18	1	Gehäuse Housing	M31 39-41-284/47	39-41-384/47	39-41-434/47	39-41-484/47	39-41-534/47	39-41-634/47				
	1	Gehäuse Housing	M32 39-42-284/47	39-42-384/47	39-42-434/47	39-42-484/47	39-42-534/47	39-42-634/47				
	1	Gehäuse Housing	ME31 39-45-284/47	39-45-384/47	39-45-434/47	39-45-484/47	39-45-534/47	39-45-634/47				

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Ersatzteilliste: spare parts list:
 Membranventil M3, ME3-FS 1-4 Tube
 Diaphragm valve M3,ME3-FS 1-4 Tube
 Ausführung / execution:2

Besteht aus 3 Blatt Blatt 1

Datum	01/99	10/01							
Name	Trytko	Trytko							

	Datum	Name
Gezeichnet	18.1.99	Trytko
Geprüft	20.1.99	Schulz
Normgepr.	20.1.99	Plümper



RN 01.060.02

Ausführung 2 gültig ab 1997

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

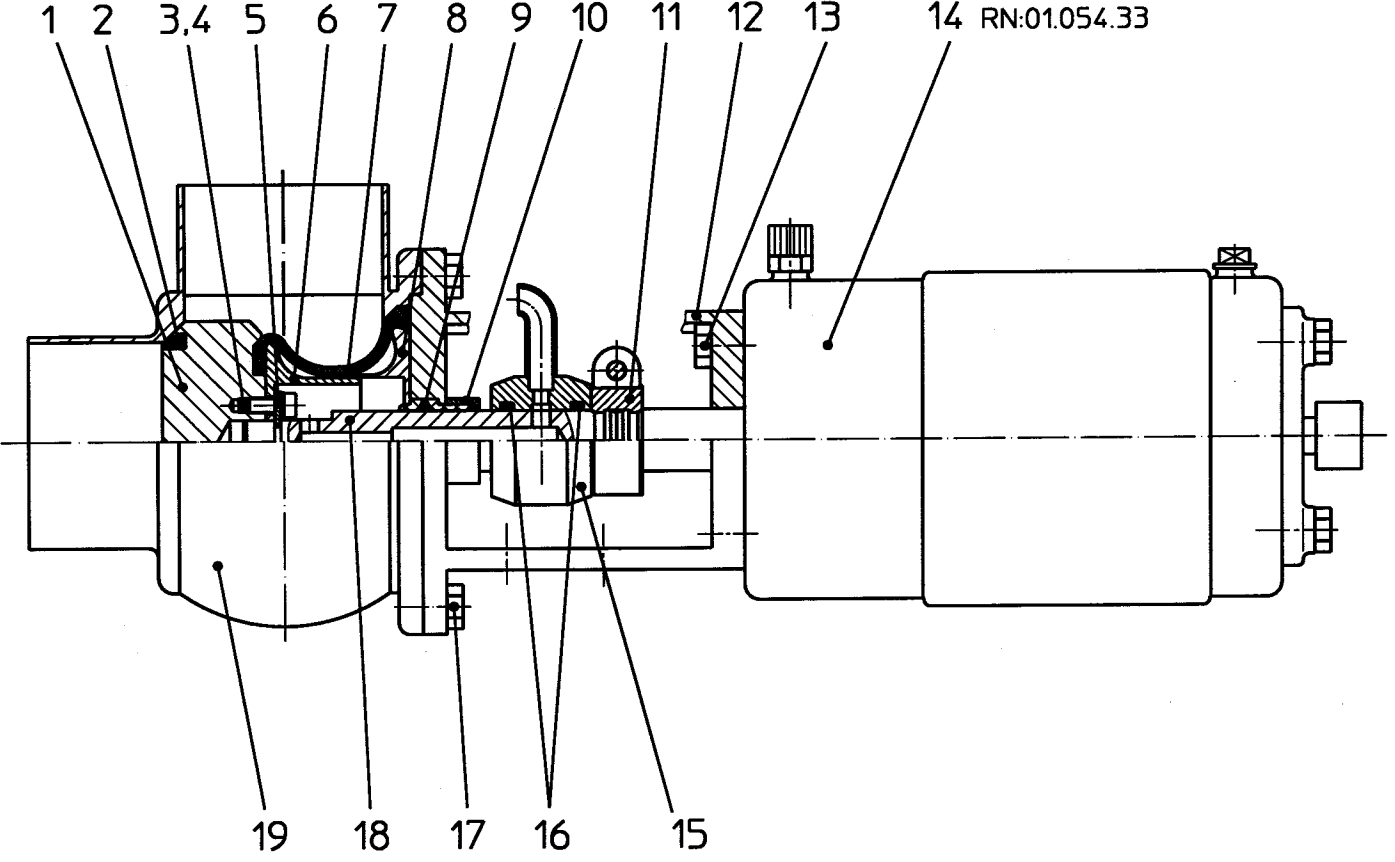
The following seal materials are available (fill in last two digits of ref.-no.)


* Dichtungswerkstoff/seal material:

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

** Membranwerkstoff

- Diaphragm material:
- ../33-HNBR HDF70
 - ../53-VMQ/Silicone QPF70
 - ../93-EPDM EPL70



Ersatzteilliste: spare parts list: Membranventil M3, ME3-FS 1-4 Tube Diaphragm valve M3, ME3-FS 1-4 Tube Ausführung / execution:2	Blatt <u>2</u>				Datum	Name	
	Datum		1/99	03/00	Gezeichnet	18.1.99	Trytko
	Name		Trytko	Trytko	Geprüft	20.1.99	Schulz
				Normgepr.	20.1.99	Plümper	
						 APV Rosista GmbH D-50425 Urra Germany	
						RN 01.060.02	

Pos. item	Menge quantity	Benennung description	DN							
			1T	1.5T	2T	2.5T	3T	4T	WS-Nr. ref.-no.	WS-Nr. ref.-no.
			WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
1	1	Ventilsitz Valve seat	39-01-059/42	39-01-060/42	39-01-061/42	39-01-063/42	39-01-065/42	39-01-066/42		
2	1	Tellerdichtung Seat seal	58-33-393/	=	58-33-443/	58-33-493/	58-33-568/	58-33-643/		
3	4	Zyl. Schraube Cyl. screw	M5x12 DIN 912, 6912 65-05-053/13	M5x12 =	M5x12 =	M5x12 =	M5x12 =	M8x25 65-05-122/13		
4	4	Federring Spring washer	67-09-100/13	=	=	=	=	67-09-200/13		
5	2	Segment für Membranventil Segment for diaphragm valve	22-44-005/13	=	=	=	=	22-44-008/13		
6	1	Unteres Führungsstück Lower guide	22-14-026/13	=	22-14-051/13	22-14-015/13	22-14-077/13	22-14-127/13		
7	1	Membrane Diaphragm	58-23-276/	=	58-23-326/	58-23-378/	=	58-23-479/		
8	1	Oberes Führungsstück Upper guide	39-19-380/13	=	39-19-430/13	39-19-480/13	=	39-19-630/13		
9	1	Führungsbuchse Bushing	08-01-140/93	=	=	=	=	=		
10	1	Anschlagring Stopper	08-39-130/17	=	=	=	=	=		
11	1	Kupplung Coupling	08-52-110/13	=	=	=	=	=		
12	1	Laterne Yoke	16-40-435/17	=	=	16-40-485/17	16-40-560/17	16-40-635/17		
13	4	Skt. Schraube Hex. screw	DIN 933 M8x14 65-01-079/15	=	=	=	=	=		
14	1	Steuerkopf Actuator	16-31-301/17	=	=	16-31-302/17	16-31-303/17	16-31-304/17		
15	1	Schaltnocke Operating cam	08-60-108/13	08-60-109/13	08-60-113/13	08-60-110/13	=	08-60-112/13		
16	2	O-Ring O-ring	OR 20.2-3 58-06-078/83	=	=	=	=	=		
17	4	Skt. Schraube Hex. screw	DIN 933 M8x16 65-01-081/15	M8x16 =	M8x16 =	M8x16 =	M8x16 =	M10x16 65-01-130/15		
18	1	Ven. Schaft Valve shaft	39-22-276/42	39-22-376/42	39-22-426/42	39-22-476/42	=	39-22-626/42		
19	1	Gehäuse Housing	M31 39-41-309/47	39-41-409/47	39-41-459/47	39-41-509/47	39-41-559/47	39-41-659/47		
1	1	Gehäuse Housing	M32 39-42-309/47	39-42-409/47	39-42-459/47	39-42-509/47	39-42-559/47	39-42-659/47		

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Ersatzteilliste: spare parts list:

Membranventil MF3, MEF3-FS 1-4 Tube
Diaphragm valve MF3,MEF3-FS 1-4 Tube

Besteht aus 3 Blatt Blatt 1

	Datum	Name
Gezeichnet	10.5.96	Trytko
Geprüft	14.6.96	Schulz
Normgepr.	18.6.96	Marzec

APV Rosista GmbH
D-58425 Unna
Germany

Datum	05/96	10/01							
Name	Trytko	Trytko							

RN 01.060.04

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

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

* Dichtungswerkstoff/seal material:

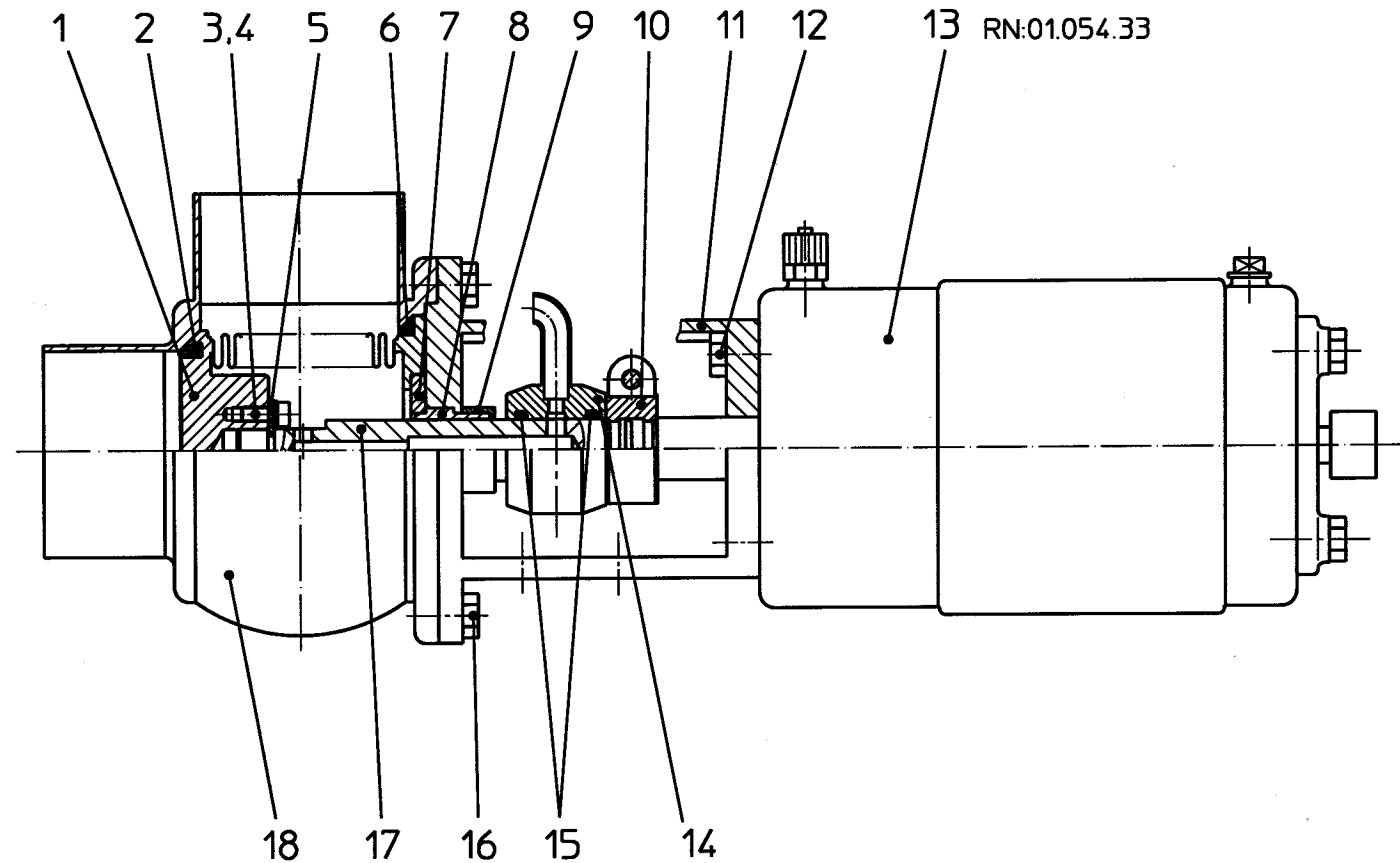
../13-VMQ/Silicone
../73-FPM
../93-EPDM

O-Ring:

../53-VMQ/Silicone
../63-EPDM
../73-FPM

**Werkstoff metallisch+Dichtung/

Material metallic+seal:
../60-VMQ/Silicone-1.4404
../73-FPM-1.4404
../93-EPDM-1.4404



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

02/94

Ersatzteilliste: spare parts list: Membranventil MF3, MEF3-FS 1-4 Tube Diaphragm valve MF3, MEF3-FS 1-4 Tube	Blatt <u>2</u>				Datum	Name		
					Gezeichnet	10.5.96	Tryfko	
	Geprüft	14.6.96	Schulz					
		Normgepr.	18.6.96	Marzec				
	Datum	5/96	03/00					
	Name	Tryfko	Tryfko					
							APV Rosista GmbH D-59425 Urmia Germany	
							RN 01.060.04	

Pos item	Menge quantity	Benennung description	DN							
			1T	1.5T	2T	2.5T	3T	4T		
			WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
1	1	Balgeinheit MF3np-Schweißteil SS-bellow unit-welding	42-06-319/44	42-06-394/44	42-06-444/44	42-06-519/44	42-06-569/44	42-06-644/44		
2	1	Tellerdichtung Seat seal	58-33-393/	=	58-33-443/	58-33-493/	58-33-568/	58-33-643/		
3	4	Zyl. Schraube DIN 912. 6912 Cyl. screw	M5x12 65-05-053/13	M5x12 =	M5x12 =	M5x12 =	M5x12 =	M8x25 65-05-122/13		
4	1	Federring Spring washer	67-09-100/13	=	=	=	67-10-100/13	67-09-200/13		
5	1	Segment für Membranventil Segment for diaphragm valve	22-44-005/13	=	=	=	22-44-005/13	22-44-008/13		
6	1	O-Ring O-ring	60-5 58-06-279/	60-5 =	60-5 =	72-5 58-06-331/	72-5 =	120-5 58-06-579/		
7	1	Ring für Führungsstück Guide ring	08-39-151/12	=	=	=	=	08-39-156/12		
8	1	Führungsbuchse Bushing	08-01-140/93	=	=	=	=	=		
9	1	Anschlagring Stopper	08-39-130/17	=	=	=	=	=		
10	1	Kupplung Coupling	08-52-110/13	=	=	=	=	=		
11	1	Laterne Yoke	16-40-435/17	=	=	16-40-485/17	16-40-560/17	16-40-635/17		
12	4	Skt. Schraube DIN 933 M8x14 Hex. screw	65-01-079/15	=	=	=	=	=		
13	1	Steuerkopf Actuator	16-31-301/17	=	=	16-31-302/17	16-31-303/17	16-31-304/17		
14	1	Schaltnocke Operating cam	08-60-108/13	08-60-109/13	08-60-113/13	08-60-110/13	08-60-110/13	08-60-112/13		
15	2	O-Ring OR 20.2-3 O-ring	58-06-078/83	=	=	=	=	=		
16	4	Skt. Schraube DIN 933 Hex. screw	M8x16 65-01-081/15	M8x16 =	M8x16 =	M8x16 =	M8x16 =	M10x16 65-01-130/15		
17	1	Ven. Schaft Valve shaft	39-22-276/42	39-22-376/42	39-22-426/42	39-22-476/42	=	39-22-676/42		
18	1	Gehäuse M31 Housing	39-41-309/47	39-41-409/47	39-41-459/47	39-41-509/47	39-41-559/47	39-41-659/47		
	1	Gehäuse M32 Housing	39-42-309/47	39-42-409/47	39-42-459/47	39-42-509/47	39-42-559/47	39-42-659/47		
	1	Gehäuse ME31 Housing	39-45-309/47	39-45-409/47	39-45-459/47	39-45-509/47	39-45-559/47			

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Ersatzteilliste: spare parts list:
Membranventil MF3, MEF3-FS 1-4 Tube
Diaphragm valve MF3, MEF3-FS 1-4 Tube

Blatt <u>3</u>		
Datum	05/96	10/01
Name	Trytko	Trytko

Datum		Name	
Gezeichnet	10.5.96	Trytko	
Geprüft	14.6.96	Schulz	
Normgepr.	18.6.96	Marzec	



RN 01.060.04

Pos item	Menge quantity	Benennung description	DN							
			1T	1.5T	2T	2.5T	3T	4T		
			WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
	1	Gehäuse Housing ME32	39-46-309/47	39-46-409/47	39-46-459/47	39-46-509/47	39-46-559/47	39-46-659/47		
	1	Gehäuse Housing ME33	39-47-312/47	39-47-412/47	39-47-462/47	39-47-512/47				
	1	Gehäuse Housing ME34	39-48-309/47	39-48-409/47	39-48-459/47	39-48-509/47				
	1	Balgeinheit MF3np mit Dichtung SS-bellow with seal **	42-06-319/	42-06-394/	42-06-444/	42-06-519/	42-06-569/	42-06-644/		
	1	Dichtungssatz Seal kit EPDM	58-34-358/01	=	58-34-359/01	58-34-360/01	58-34-362/01	58-34-363/01		
	1	Dichtungssatz Seal kit VMQ/Silicone	58-34-358/02	=	58-34-359/02	58-34-360/02	58-34-362/02	58-34-363/02		
	1	Dichtungssatz Seal kit HNBR	58-34-358/06	=	58-34-359/06	58-34-360/06	58-34-362/06	58-34-363/06		

Ersatzteilliste: spare parts list:
 Membrantankauslaufventil METF3-FS DN 25-100
 Diaphragm tank outlet valve METF3-FS DN 25-100

Besteht aus <u>3</u> Blatt Blatt <u>1</u>		Datum	Name
		Gezeichnet	18.2.99 Trytko
		Geprüft	
		Normgepr.	
Datum	2/99		
Name	Trytko		

APV Roseta GmbH
 D-59425 Urna
 Germany

RN 01.063.5

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

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

* Dichtungswerkstoff/seal material:

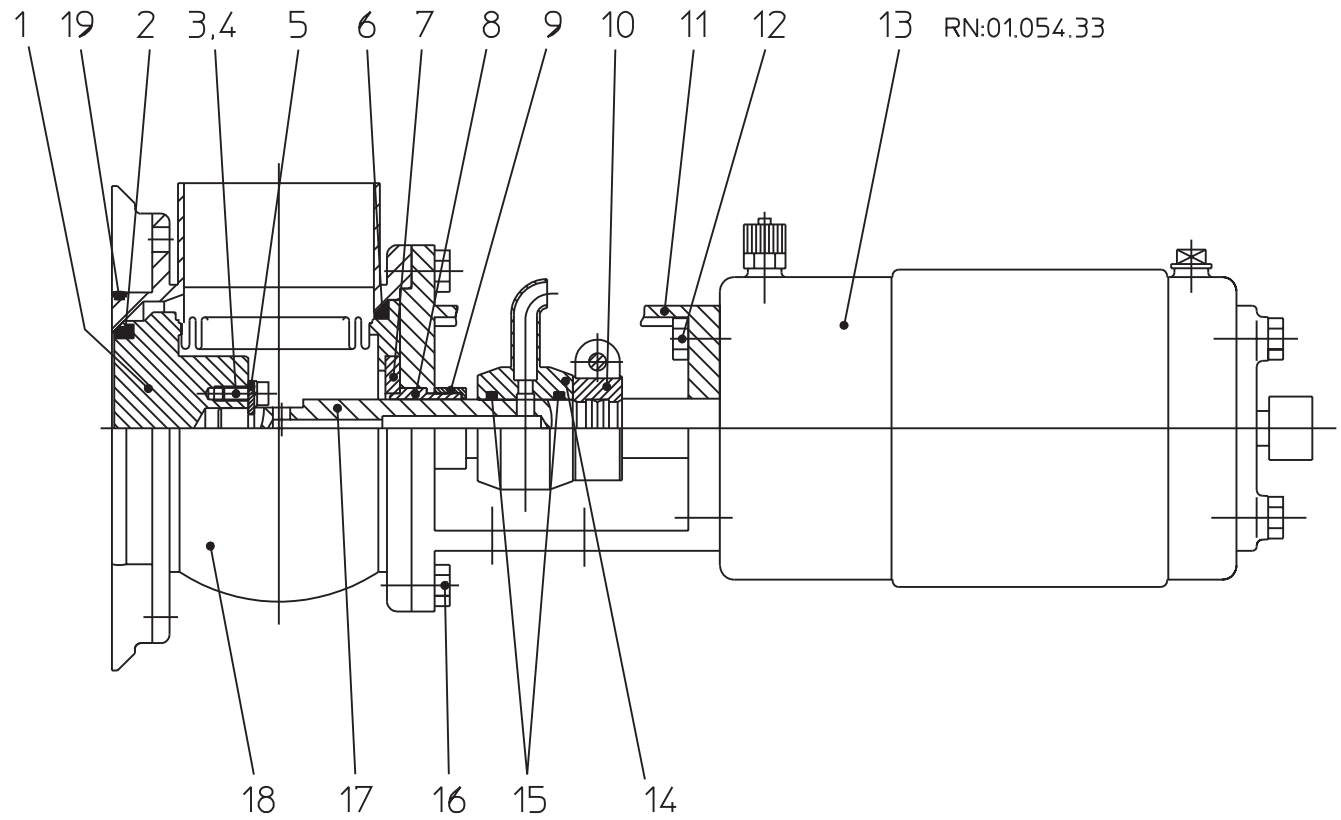
- ../13-Silikon/Silicone
- ../33-HNBR
- ../73-Viton
- ../93-EPDM
- Gehäusedichtung /housing seal
- Bei Silikon wird die EPDM-Gehäusedichtung eingesetzt.
- For Silicone take the EPDM-housing seal.

O-Ring:

- ../33-HNBR
- ../53-Silikon/Silicone
- ../63-EPDM
- ../73-Viton

**Werkstoff metallisch+Dichtung/

- Material metallic+seal:
- ../28-HNBR-1.4404
 - ../58-EPDM-1.4404
 - ../60-Silikon/Silicone-1.4404
 - ../68-Viton-1.4404



Ersatzteilliste: spare parts list:
 Membrantankauslaufventil METF3-FS DN25-100
 Diaphragm tank outlet valve METF3-FS DN25-100

Blatt 2

	Datum	Name
Gezeichnet	18.2.99	Trytko
Geprüft	26.2.99	Schulz
Normgepr.	26.2.99	Sunder



Datum	2/99	03/00							
Name	Trytko	Trytko							

RN 01.063.5

Pos. item	Menge quantity	Benennung description	DN							
			25	40	50	65	80	100	125	150
			WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
1	1	Balgeinheit MF3np-Schweißteil SS-bellow unit-welding	42-06-110/44	42-06-111/44			42-06-069/44			
2	1	Tellerdichtung Seat seal *	58-33-393/	=			58-33-568/			
3	4	Zyl. Schraube DIN 912, 6912 Cyl. screw	M5x12 65-05-053/13	M5x12 =			M8x20 65-06-118/13			
4	1	Federring Spring washer	67-09-100/13	=			67-09-200/13			
5	1	Segment für Membranventil Segment for diaphragm valve	22-44-005/13	=			22-44-008/13			
6	1	O-Ring O-ring *	60-5 58-06-279/	60-5 =			100-5 58-06-492/			
7	1	Ring für Führungsstück Guide ring	08-39-151/12	=			08-39-156/12			
8	1	Führungsbuchse Bushing	08-01-140/93	=			=			
9	1	Anschlagring Stopper	08-39-130/17	=			=			
10	1	Kupplung Coupling	08-52-110/13	=			=			
11	1	Laterne Yoke	16-40-435/17	=			16-40-535/17			
12	4	Skt. Schraube DIN 933 M8x14 Hex. screw	65-01-079/15	=			=			
13	1	Steuerkopf Actuator	16-31-301/17	=			16-31-303/17			
14	1	Schaltnocke Operating cam	08-60-108/13	08-60-109/13			08-60-111/13			
15	2	O-Ring OR 20,2-3 O-ring	58-06-078/83	=			=			
16	4	Skt. Schraube DIN 933 Hex. screw	M8x16 65-01-081/15	M8x16 =			M10x16 65-01-130/15			
17	1	Ven. Schaft Valve shaft	39-22-276/42	39-22-426/42			39-22-526/42			
18	1	Gehäuse MET31 Housing	39-41-059/47	39-41-060/47			39-41-063/47			
	1	Gehäuse MET32 Housing	39-42-044/47	39-42-064/47			39-42-707/47			
19	1	Gehäusedichtung Housing seal *	58-33-392/	=			58-33-542/			

Ersatzteilliste: spare parts list:

Steuerkopf S2 und M3

Actuator S2 and M3

Besteht aus 2 Blatt Blatt 1

	Datum	Name
Gezeichnet	18.12.90	Trylko
Geprüft	20.12.90	Schulz/WB
Normgepr.		


APV Roseta GmbH
 D-59425 Urna
 Germany

Datum	12/90	3/97							
Name	Trylko	Trylko							

RN 01.054.33

