

## APV DELTA RGE4 - MFS + MFH

MODULATING VALVE

FORM NO.: 178509 REVISION: UK-3

READ AND UNDERSTAND THIS MANUAL PRIOR TO OPERATING OR SERVICING THIS PRODUCT.





## EU Declaration of Conformity for Valves and Valve Manifolds

SPX FLOW TECHNOLOGY GERMANY GMBH  
Gottlieb-Daimler-Str. 13, D-59439 Holzwickede  
herewith declares that the

**APV double seal and double seat valves of the series  
SD4, SDT4, SDU4, SDMS4, SDMSU4, SDTMS4, SWcip4, DSV,  
DA3, DA3SLD, DE3, DEU3, DET3, DKR2, DKRT2, DKRH2**  
in the nominal diameters DN 25 - 150, ISO 1" – 6" and 1 Sh5 - 6 Sh5

**APV butterfly valves of the series SV1 and SVS1F, SVL and SVSL**  
in the nominal diameters DN 25 - 100, DN 125 - 250 and ISO 1" – 4"

**APV ball valves of the series KHI, KHV**  
in the nominal diameters DN 15 - 100

**APV single seat, diaphragm and spring loaded valves of the series  
S2, SW4, SWhp4, SW4DPF, SWmini4, SWT4, SWS4, MF4, MS4, MSP4, AP/T1, CPV,  
RG4, RG4DPF, RGMS4, RGE4, RGE4DPF, RGEMS4, PR2, PRD2, SI2, UF/R3, VRA/H**  
in the nominal diameters DN 10 - 150, ISO 1/2" – 4" and 1 Sh5 - 6 Sh5

and the valve manifolds installed thereof

meet the requirements of the Directives 2006/42/EC (superseding 89/392/EEC  
and 98/37/EC) and ProdSG (superseding GPSG - 9.GPSGV).

For official inspections, SPX FLOW presents  
a technical documentation according to Appendix VII 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 risks,  
as well as an operating manual with safety instructions.

The conformity of the valves and valve manifolds is guaranteed.

Authorised person for the documentation:  
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<b>RGE4 DN/Inch design</b>	<b>RN 01.170.2</b>
<b>RG4 pneumatic actuator MAT 3277 MFS spring closed and MFH spring open with digital electro-pneumatic positioner IP3730</b>	<b>RN 01.170.13-1</b>
<b>RG4 pneumatic actuator MAT 3277 MFS spring closed and MFH spring open with integrated positioner IP 3767, IP 3725 or P 3766 (electro-pneumatic or pneumatic)</b>	<b>RN 01.170.13-2</b>
<b>RG4 pneumatic actuator MAT 271 MFS spring closed and MFH spring open</b>	<b>RN 01.170.13-3</b>
<b>RGE4 Inch - 3-A design</b>	<b>RN 01.170.10</b>



## 1. General Terms

This instruction manual must be read and observed by the responsible 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 instruction 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 and material assets.



- In dismantled valve state, do not reach into the yoke area or operating area (positioners). Risk of injury by sudden operation of the valve.



- Before assembly or disassembly (e.g. seal replacement or other) the electric and pneumatic connecting lines must be removed.



- Do not reach into the valve housing in disassembled state. Otherwise, observe instructions for valve in assembled state.

- Schedule regular maintenance of the valve including the replacement of seals and bearing bushes to prevent leakage.



- Depressurize the line system and discharge the lines, if possible, before any maintenance work.

- Observe Service Instructions to ensure safe maintenance of the valve.

- The valve must be assembled, operated, disassembled, maintained and repaired only by trained persons.  
Please contact your local SPX FLOW representative if required.

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### 3. Intended Use

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The intended use as field of application of the DELTA RGE4 modulating valves is the flow and pressure control of fluids and gases.

Its use is permissible only within the admissible pressure and temperature margins and under consideration of chemical and corrosive influences.

Any use exceeding the margins and specifications set forth, is considered to be not intended.

Any damage resulting therefrom is not within the responsibility of the manufacturer.

The user will bear the full risk.

#### **Attention!**

Improper use of the valve leads to:

- damage
- leakage
- destruction
- Failures in the production process are possible.

Arbitrary, constructive changes at the valve will influence safety as well as the intended functionality of the valve and are not permissible.

#### **Authorizations and External Evaluations:**

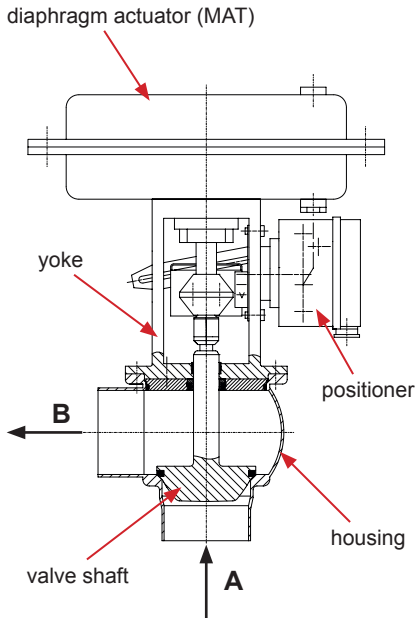
3-A Sanitary Standards, Inc.



## 4. Mode of Operation

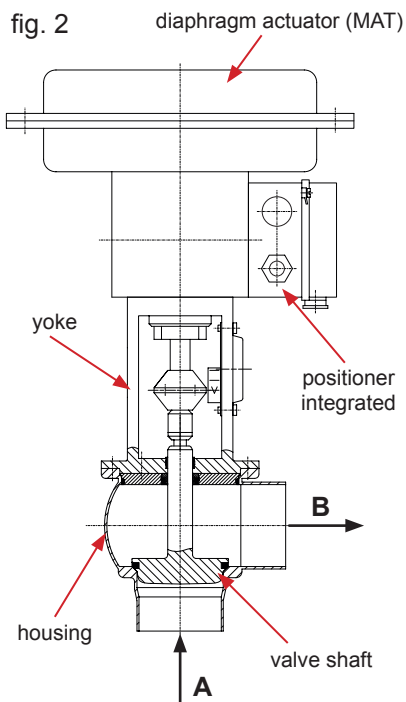
### RGE valve with diaphragm actuator MAT 271 and positioner according to Namur

fig. 1



### RGE valve with diaphragm actuator MAT 3277 and positioner integrated

fig. 2



#### 4.1. General terms

The hygienic modulating valves DELTA RGE4 are suited for the continuous control of element flows in the beverage and food industries, the chemical and pharmaceutical industries. The modulating valves are suited for flow and pressure control of fluids and gases.

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

- In its basic construction, the RGE4 modulating valve is designed as corner valve and, thus, ensures a good diversion of liquid flows. The flow direction is from **A** to **B**.
- The body being free from dead spaces proves optimum cleaning conditions. The crevice-free sealing of the individual parts of the body is effected by profile seals, eliminating any source of infection.
- The relation between flow and cone stroke is defined by the characteristics.
- It is distinguished between linear and equal-percentage characteristics.
- At the nominal dimensions DN25, 40, 1" and 1.5" beside the characteristics, the kvs value can be changed (see chapter 8.4.).
- The connections for the electric and pneumatic supply are located laterally at the positioner.
- An optical position indication (stroke indication) is arranged in the yoke area.

The pneumatic actuator provides the path and the force to open or to close the control element. The diaphragm actuator is suited for longer actuating distances at minimum self-friction.

The positioners at the RGE4 valve either are fastened laterally at the yoke (according to Namur, fig. 1) or form part of the unit diaphragm actuator/positioner (integrated design, fig. 2).

As a standard, electropneumatic positioners are used. The control signal normally amounts from 4 to 20 mA. However, pneumatic positioners can also be used. In this case the control signal normally amounts from 0.2 to 1.0 bar.

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## 4. Mode of Operation

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- Depending on the requirements, the modulating valve can be operated in normally open (NO) (air-to-lower, spring-to-raise) or normally closed (NC) (air-to-raise, spring-to-lower) design.

**MFS** - diaphragm actuator, normally closed.

The actuator opens by control pressure and closes by spring pressure.

**MFH** - diaphragm actuator, normally open.

The actuator closes by control pressure and opens by spring pressure.

To meet the various requirements, diaphragm actuators are supplied with different control pressures.

Installation and operating instructions of diaphragm actuators MAT 271 and MAT 3277 see <http://www.samson.de> / Product Documentation (EB 8310-6).

The positioner provides for the predetermined allocation of the valve position and control signal. It compares the control signal issued by the control device with the stroke of the control element and emits the pneumatic control pressure as an output signal. Installation and operating instructions of positioner see <http://www.samson.de> / Product Documentation

- **Installation according to Namur**

**Positioner IP763 and P765**

Electropneumatic positioner type 4763

(Samson Installation and operating instructions EB 8359-2)

Pneumatic positioner type 4765

(Samson Installation and operating instructions EB 8359-1)

- **Installation Integrated**

Electropneumatic positioner IP 3730 - in different designs

Standard design: IP 3730-1

(Samson Installation and operating instructions EB 8384-1)

Low cost design: IP 3725

(Samson Installation and operating instructions EB 8394)

Electropneumatic positioner: P3766

(Samson Installation and operating instructions EB 8355-1)

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## 5. Cleaning

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### 5.1. Flow chambers

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

The compatibility of the individually selected cleaning processes and liquids with the respectively used seal material must be verified.

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## 6. Installation

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### 6.1. General terms

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

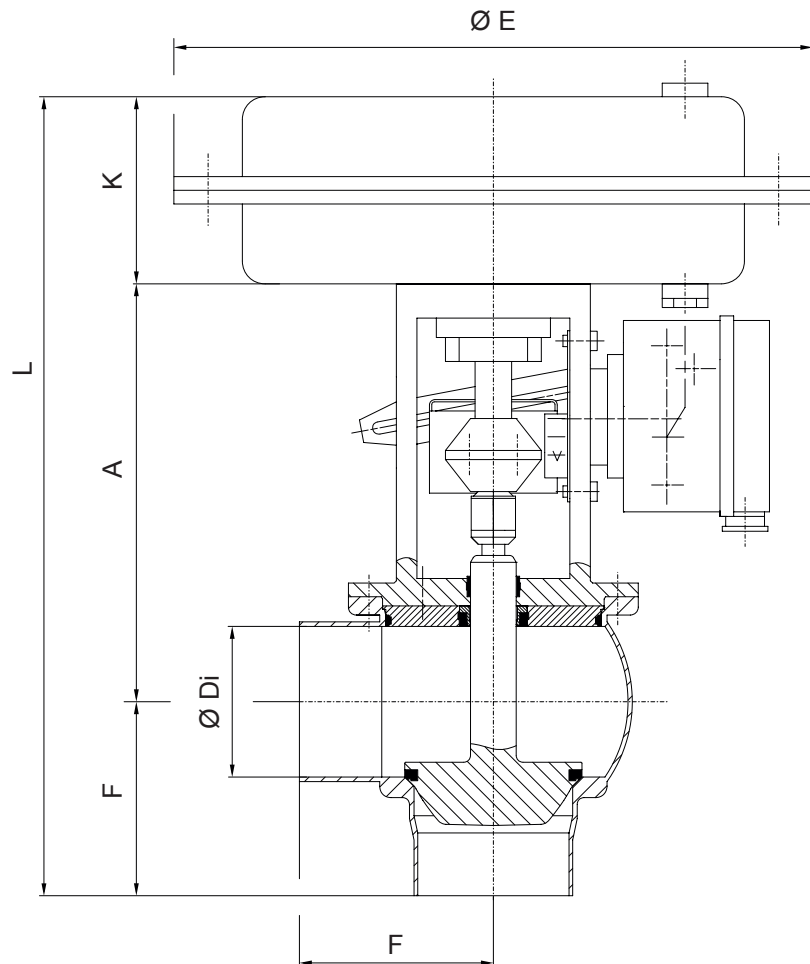
**Attention!** Observe Welding Instructions 6.2.

### 6.2. Welding Instructions

- Before welding of the valves, the insert with actuator and positioner must be dismantled from the valve housing. Careful handling without damage to the parts must be provided.
- Welding may only be carried out by certified welders (DIN EN ISO 9606-1) (seam quality DIN EN ISO 5817).
- The welding of the valve housings must be effected in such a way that deformation strain cannot be transferred from the outside to the valve body.
- The preparation of the weld seam up to 3 mm thickness must be carried out in butt manner as a square butt joint without air. (Consider shrinkage!)
- TIG orbital welding is best!
- After welding of the valve housing and after work at the pipelines, the corresponding parts of the installation and pipelines must be cleaned from welding residues and soiling before operation of the valves to avoid damage to the valves and seals. 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.
- Welding directives for aseptic applications shall be drawn from the AWS/ANSI Directives and EHEDG Guidelines.

## 7. Dimensions / Weights

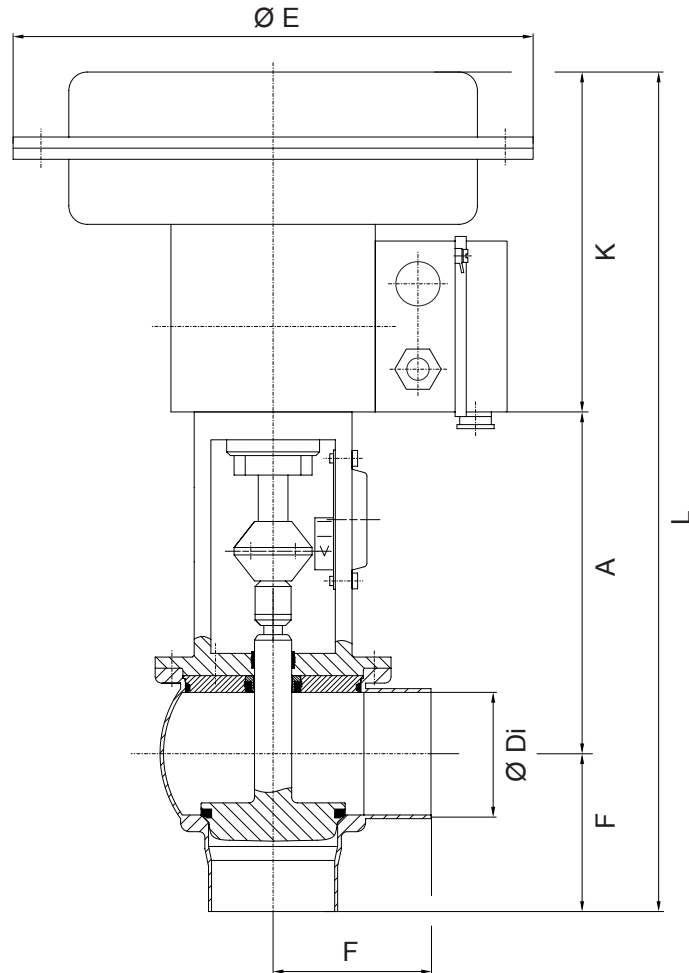
### 7.1 Installation of positioner according to Namur



Dimensions in mm								weight in kg
DN	actuating surface (cm <sup>2</sup> )	A	Ø Di	Ø E	F	K	L	
25	120	163,5	26	168	50	69	282,5	9,0
40	120/240	169,5	38	168/240	67	69/62	305,5/298,5	10,5/11,5
50	240	175,5	50	240	72	62	309,5	13,5
65	240/350	184,0	66	240/280	85	62/82	331/351	14,8/15,8
80	350	191,5	81	280	98	82	371,5	17,0
100	350	201,0	100	280	111	82	394	19,4
Inch								
1"	120	161,6	22,2	168	50	69	280,6	9,0
1,5"	120/240	167,9	34,8	168/240	67	69/62	303,9/296,9	10,5/11,5
2"	240	174,3	47,6	240	72	62	308,3	13,5
2,5"	240/350	181,2	60,3	240/280	85	62/82	328,2/348,2	14,8/15,8
3"	350	187,5	72,9	280	90	82	359,5	17,0
4"	350	199,8	97,6	280	111	82	392,8	19,4

## 7. Dimensions / Weights

### 7.2 Installation of positioner integrated



Dimensions in mm								weight in kg
DN	actuating surface (cm <sup>2</sup> )	A	Ø Di	Ø E	F	K	L	
25	120	163,5	26	168	50	158	371,5	9,0
40	120/240	169,5	38	168/240	67	158/166	394,5/402,5	10,5/11,5
50	240	175,5	50	240	72	166	413,5	13,5
65	240/350	184,0	66	240/280	85	166/186	435/455	14,8/15,8
80	350	191,5	81	280	98	186	475	17,0
100	350	201,0	100	280	111	186	498	19,4
Inch								
1"	120	161,6	22,2	168	50	158	396,6	9,0
1,5"	120/240	167,9	34,8	168/240	67	158/166	392,9/400,9	10,5/11,5
2"	240	174,3	47,6	240	72	166	412,3	13,5
2,5"	240/350	181,2	60,3	240/280	85	166/186	432,2/452,2	14,8/15,8
3"	350	187,5	72,9	280	90	186	463,5	17,0
4"	350	199,8	97,6	280	111	186	496,8	19,4

## 8. Technical Data

### 8.1. General data

- Max. permissible operating pressure:
 

DN25 - DN65	25 bar
1" - 2,5" Inch	25 bar
DN80 - DN100	16 bar
3" - 4" Inch	16 bar
  
- Correcting ratio: 1: 50
  
- Standard design:
 

housing 1.4404
inner surface
ground Ra 1.6 µm
outer surface satin finish
  
- Air pressure of diaphragm actuator:
 

max. 6 bar
(min. 0.4 bar above max. control pressure, e.g. 0.6 - 3 bar, *min.: 3.4 bar)
  
- Reference variable of electro-pneumatic positioner: 4 - 20 mA
  
- Reference variable of pneumatic positioner: 0,2 - 1 bar
  
- Max. operating temperature:
 

135 °C EPDM, HNBR
*FPM, *VMQ
- **Short-term load:**

<b>140 °C EPDM, HNBR</b>
*FPM, *VMQ
*(no steam)
  
- Ambient temperature: 0 - 40 °C

## 8. Technical Data

### 8.2. Compressed air quality

- compressed air quality: quality class according to DIN ISO 8573-1
- content of solid particles: quality class 3  
max. size of solid particles per m<sup>3</sup>  
10000 of 0,5 µm < d < 1,0 µm  
500 of 1,0 µm < d < 5,0 µm
- content of water: quality class 3  
max. dew point temperature -20 °C  
For installations at lower temperatures or at higher altitudes, additional measures must be considered to reduce the pressure dew point accordingly.
- content of oil: quality class 1  
max. 0,01mg/m<sup>3</sup>

The oil applied must be compatible with Polyurethane elastomer materials.

### 8.3. Materials

RGE4 Components	Materials
housing, valve shaft, housing cover	1.4404 (DIN EN 10088)
valve yoke	1.4308 (DIN EN 10088)
coupling (compl.) screws, nuts	1.4301 (DIN EN 10088)
housing seal	standard: EPDM option: HNBR, FPM
seat seal	standard: EPDM option: HNBR, FPM, VMQ
shaft seal	standard: PTFE combined with EPDM option: HNBR, FPM, VMQ
guide bushing	PA 6
type label	PVC adhesive

## 8. Technical Data

### 8.3. Materials

Diaphragm actuator	Materials
diaphragm halves	steel sheet plastic coated or aluminium pressure casting
rolling diaphragm	NBR or EPDM with reinforcement
connecting rod, nut	1.4301 (DIN EN 10088)
spring	1.1250 or 1.7102 plastic coated
Positioner	Materials
housing	aluminium pressure casting, plastic coated or plastic (IP3725)
external parts	1.4301 and 1.4104 (DIN EN 10088)

### 8.4. Kvs values in m<sup>3</sup>/h, Valve stroke in mm, Ø Valve seat (S) in mm

DN25 / 1"		DN40 / 1,5"		1,5"		1,5"		DN 50 / 2"		DN 65 / 2,5"		DN 80 / 3"		DN 100 / 4"	
stroke: 15		stroke: 15		stroke: 15		stroke: 15		stroke: 15		stroke: 15		stroke: 15		stroke: 15	
Kvs	S Ø	Kvs	S Ø	Kvs	S Ø	Kvs	S Ø	Kvs	S Ø	Kvs	S Ø	Kvs	S Ø	Kvs	S Ø
10,0	26	25	38	10,0	26	4,0	13	40	50	63	66	100	81	160	100
6,3		16		6,3		2,5									



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## 9. Maintenance

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The maintenance intervals depend on the application and should be determined by the user carrying out regular checks.

The valve must not be cleaned with products containing abrasive or polishing substances. Especially the valve shafts must not be cleaned with such agents under any circumstances. Damage of the valve shaft can produce leakages.

Replacement of seals according to Service Instructions.  
The customer is recommended to hold spare seals on stock.  
For valve maintenance SPX FLOW supplies complete seal kits including seal grease (pl. see spare parts lists).

**Attention!** Use only food-grade special grease being suited for the respective seal material.

Recommendation:

APV assembly grease for EPDM, FPM, HNBR and NBR  
(0,75 kg/tin - ref.-No. 000 70-01-019/93; H147382)  
(60 g/tube - ref.-No. 000 70-01-018/93; H147381)

or

APV assembly grease for VMQ (Silicone)  
(0,6 kg/tin - ref.-No. 000 70-01-017/93; H147380)  
(60 g/tube - ref.-No. 000 70-01-016/93; H147379)

! Do not use grease containing mineral oil for EPDM seals.

Do not use Silicone-based grease with VMQ seals.

Less suited grease types can influence function and lifetime.

**For the maintenance of diaphragm actuators and positioners see <http://www.samson.de> / Product Documentation.**

## 10. Service Instructions

The item numbers refer to the spare parts drawings:

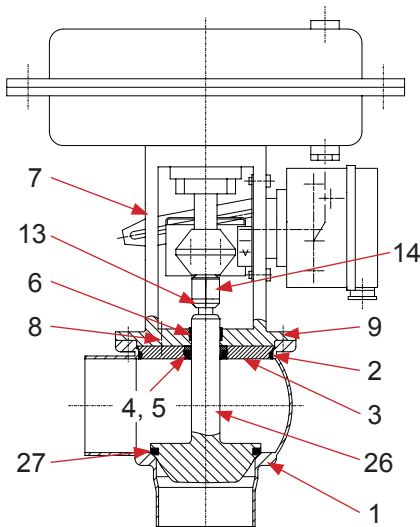
RN 01.170.2 DN 25 - 100; 1" - 4" Inch design

RN 01.170.10 1" - 4" Inch 3-A design

### 10.1. Dismantling from line system



1. Shut off line pressure and drain off pipeline if possible.
2. Shut off compressed air and remove supply line.
3. Shut off control current and remove connecting line.
4. Release housing flange screws (9) and take valve insert with positioner and diaphragm actuator out of the housing (1). If necessary, enter two screws into the threaded holes of the valve yoke (7) and press the insert to the top out of the housing.



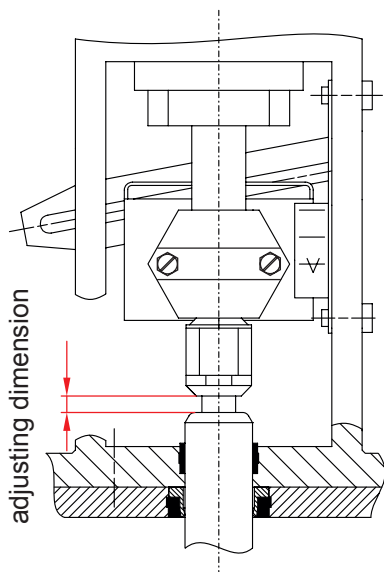
### 10.2. Dismantling of valve to replace wear parts

1. See chapter 10.1. items 1. - 4.

**Attention:** Before detaching the counter nut (13) observe adjusting dimension between counter nut and valve shaft. See fig. 10.2.

2. Release counter nut (13), loosen coupling screws, turn valve shaft (26) out of the coupling head (14) and pull it out of the housing cover (3).
3. Release hex. screw (8) and take housing cover (3) from the valve yoke (7).
4. Remove housing seal (2) from the housing cover (3).
5. Remove shaft seals (5) and seat seal (4) from the housing cover.
6. Remove guide bushing (6) from the yoke (7).
7. Dismantle seat seal (27) from the valve shaft (cone) (24).

fig. 10.2.



### 10.3. Dismantling of valve for change of characteristics or kvs value (for smaller nominal dimensions)

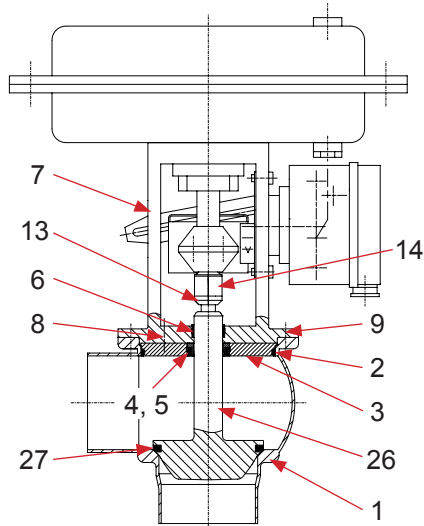
1. See chapter 10.1. items 1. - 4.
2. Release coupling head (14) and counter nut (13) from valve shaft (26). Observe adjusting dimension of counter nut and valve shaft.

## 10. Service Instructions

### 10.4. Assembly of valve with installation of new wear parts

**Attention!**

To guarantee an easy assembly and increased service life of all wear parts (seals, bushings, etc.), the parts must be provided with a thin layer of grease. Do not use sharp-edged tools (screwdriver) for the assembly of the a. m. parts to ensure their full function.



1. Install seat seal (27) on the valve shaft (26) (see item 12.).

**Attention!**

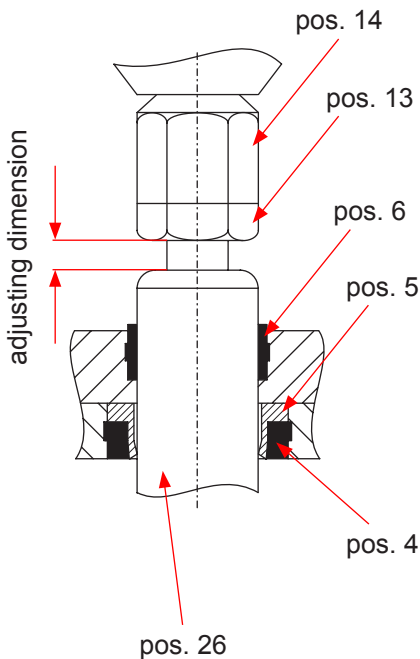
As air must not be trapped in the groove, vent the seal groove with a suitable tool. Check the even fit of the seat seal after installation.

2. Place bushing (6) in the yoke (7).
3. Place the shaft seal (5) in the housing cover and the seat seal (4), afterwards.
4. Screw the housing cover (3) with the valve yoke (7) by hand.
5. Introduce the valve shaft (26) through the housing cover into the valve yoke. Screw the counternut (13) and the coupling head (14) on the thread of the valve shaft only now, as otherwise the shaft seal (5, 4) is destroyed by the hexagon of the coupling or the counternut.

**Attention:**

**Observe adjusting dimension!  
Fasten the counternut.**

Connect the valve shaft and the actuator rod of the diaphragm actuator by means of the coupling.



6. Press valve insert into the housing and take hexagon screws (9) to fasten it crosswise at the housing flange.
7. Tighten coupling and hexagon screw (8).
8. Connect electric and pneumatic lines and re-initialize the positioner.

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## 10. Service Instructions

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### 10.5. Assembly of valve to change characteristics and/or kvs values (for smaller nominal dimensions)

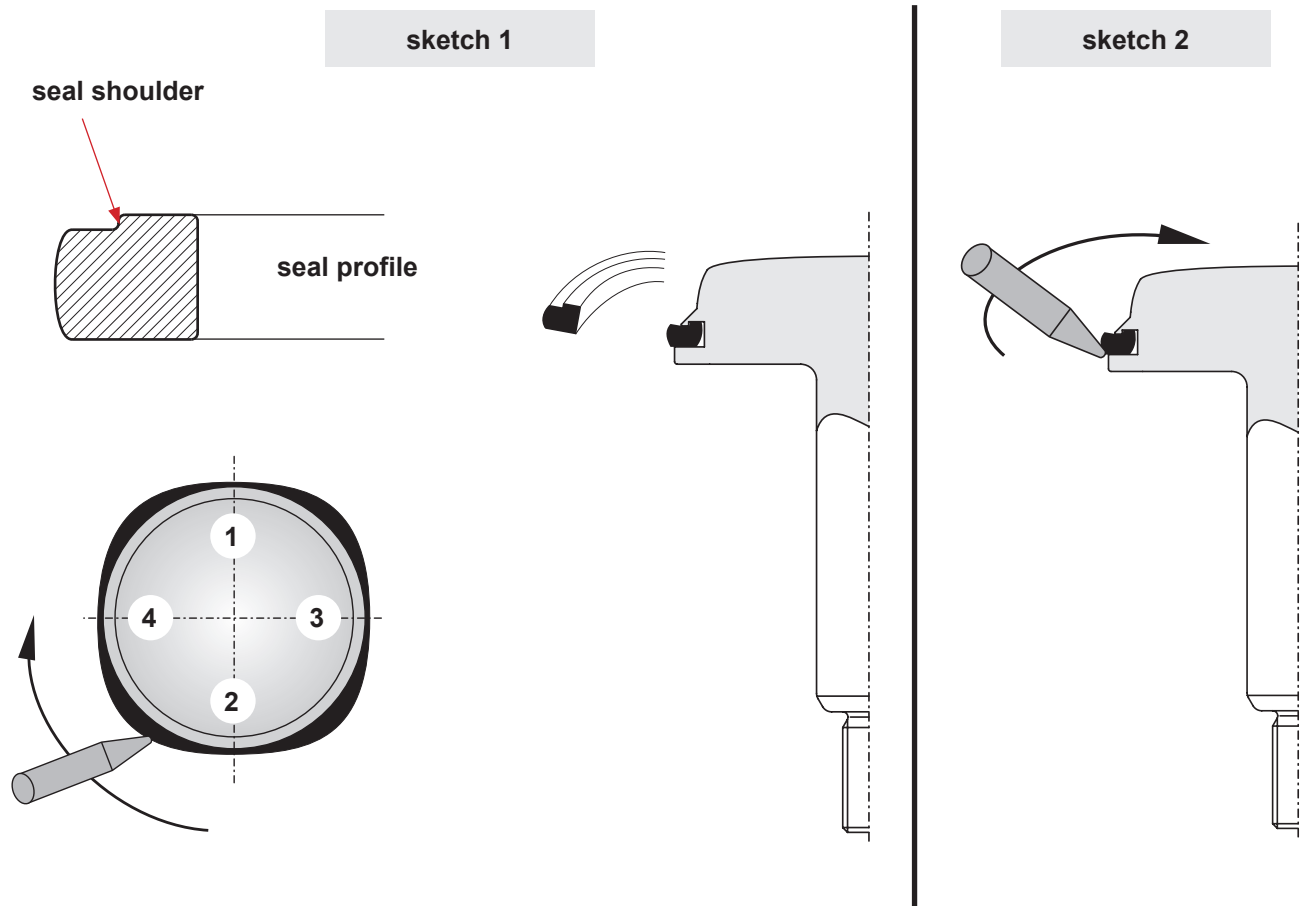
The designation of the shafts to be replaced are indicated in the spare parts lists RN 01.170.2 and RN 01.170.10

1. The existing wear parts (seals and bushings) must be checked with regard to their function. Damaged parts must be replaced immediately. (Designation and reference numbers, see spare parts list, chapter 13).
2. See chapter 10.4. items 1. - 6.
3. Fasten the coupling.
4. Connect electric and pneumatic lines and re-initialize the positioner.

## 11. Installation of Seat Seal

### 11.1. Manual installation of seat seal (27)

1. Before assembly, provide the seat seal with a thin layer of grease. The groove for the seat seal should not be greased.
2. Clamp the valve shaft in a vice.  
  
The valve shaft must not be damaged.  
Use protective jaws.
3. Press the slightly greased seal at four spots, the wide side to the front into the groove (**see sketch 1**).
4. Press the seal with an assembly tool (screwdriver with round edges) at four opposite spots **1-2, 3-4** into the groove (**see sketch 1**).
5. Press the seal gradually into the groove. Thereby, work on the opposite spots of the groove. See to an even fit of the seat seal.
6. Afterwards press the assembly tool between the seal shoulder and the groove wall and work around the entire groove wall. During this process, the seal ground is vented and the seal shoulder snaps into place (**see sketch 2**).



## 12. Trouble Shooting

Failure	Remedy
Valve is untight	Replace seat seal (27).
Leakage between housing and yoke flange	Replace housing seal (2).
Leakage in yoke area	Replace guide bushing (6), shaft seal (5) and seat seal (4).
<b>Diaphragm actuator type 271 and 3277</b>	
Air escapes from diaphragm actuator.	Check thread connection. Replace rolling diaphragm if required. Use operating manual: See: <a href="http://www.samson.de/pdf_en/e83106en.pdf">www.samson.de/pdf_en/e83106en.pdf</a>
<b>Positioner type 763</b>	
Valve does not regulate correctly.	Check air connection and air pressure. Check electric connection and control signal. Use operating manual of positioner to find failure. See: <a href="http://www.samson.de/pdf_en/e8359-2en.pdf">www.samson.de/pdf_en/e8359-2en.pdf</a>

## 13. Spare Parts Lists

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

Please indicate the following data when placing an order:

- number of required parts
- reference number
- designation

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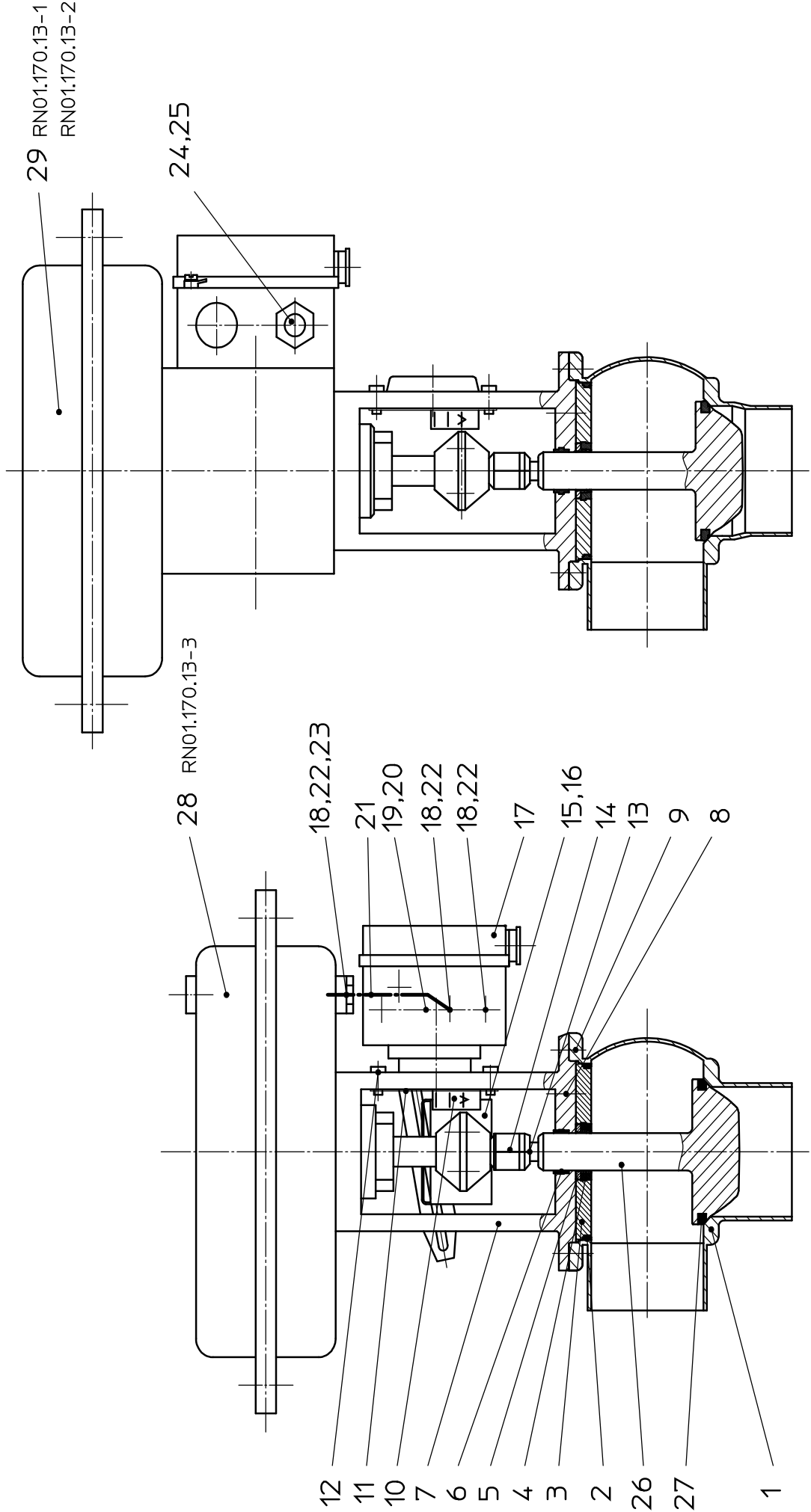
**Ersatzteilliste: spare parts list**

**Regelventil RGE4-Antrieb MAT 3277 oder 271 (MFS oder MFH) 120,240,350,700cm<sup>2</sup> digitaler ei.-pneum. oder pneum. Stellungsregler; lineare oder gleichprozentige Kennlinie. Modulating valve RGE4-with diaphragm actuator MAT 3277 or 271 (spring: closed or open) 120,240 350,700cm<sup>2</sup>, digital elektro-pneum. or pneum. positioner; flow charact. lineare or equal percentage. DN25-100 ; 1-4 Zoll / inch**

Datum: 22.06.15 31.03.16  
 Name: Trytko Trytko  
 Geprüft:

Blatt 1 von 11

**RN 01.170.2**



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Ersatzteilliste: spare parts list

**Regelventil RGE4-Antrieb MAT 3277 oder 271 (MFS oder MFH) 120,240,350,700cm<sup>2</sup> digitaler ei.-pneum. oder pneum. Stellungsregler; lineare oder gleichprozentige Kennlinie. Modulating valve RGE4-with diaphragm actuator MAT 3277 or 271 (spring: closed or open) 120,240 350,700cm<sup>2</sup>, digital elektro-pneum. or pneum. positioner; flow charact. lineare or equal percentage. DN25-100 ; 1-4 Zoll / inch**

Datum:	21.09.15	31.03.16
Name:	Trytko	Trytko
Geprüft:		
Datum:		
Name:		
Geprüft:		



Blatt 2 von 11  
**RN 01.170.2**

pos. item	Menge quantity	Beschreibung description	Material	DN25	1"	DN40	1,5"	DN50	2"
				WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	
1	1	Gehäuse Housing	1.4404	15-56-285/47 H177840	15-56-310/47 H177851	15-56-385/47 H177839	15-56-005/47 H178584	15-56-435/47 H177838	15-56-460/47 H177853
	1	Gehäuse Housing	1.4404						
	1	Gehäuse Housing	1.4404						
	1	Gehäuse Housing	1.4404						
	1	Gehäuse Housing	1.4404						
	1	Gehäuse Housing	1.4404						
2	1	Gehäuse Housing	1.4404	15-57-285/47 H331872	15-57-310/47 H331509	15-57-385/47 H331873	15-57-410/47 H207975		15-57-460/47 H325540
	1	Gehäuse Housing	1.4404						
	1	Gehäuse Housing	1.4404						
	1	Gehäuse Housing	1.4404						
	1	Gehäuse Housing	1.4404						
	1	Gehäuse Housing	1.4404						
3	1	Gehäusedichtung Housing seal	EPDM FDA-konform	58-33-292/93 H77439	58-33-292/93 H77439	58-33-392/93 H77464	58-33-392/93 H77464	58-33-442/93 H77488	
	1	Gehäusedichtung Housing seal	FPM FDA-konform	58-33-292/73 H77438	58-33-292/73 H77463	58-33-392/73 H77463	58-33-392/73 H77463	58-33-442/73 H77487	
	1	Gehäusedichtung Housing seal	HNBR FDA-konform	58-33-292/33 H170017	58-33-292/33 H170017	58-33-392/33 H170018	58-33-392/33 H170018	58-33-442/33 H168714	
4	1	Gehäusedeckel Housing cover	1.4404	15-00-65/42 H156869		15-00-069/42 H156409		15-00-793/42 H148194	
	1	Tellerdichtung Seat seal	EPDM FDA-konform			58-33-293/93 H77442			
	1	Tellerdichtung Seat seal	FPM FDA-konform			58-33-293/73 H77441			
	1	Tellerdichtung Seat seal	HNBR FDA-konform			58-33-293/33 H170176			
1	1	Tellerdichtung Seat seal	VMQ FDA-konform			58-33-293/13 H77440			



Ersatzteilliste: spare parts list

**Regelventil RGE4-Antrieb MAT 3277 oder 271 (MFS oder MFH) 120,240,350,700cm<sup>2</sup> digitaler ei.-pneum. oder pneum. Stellsregler; lineare oder gleichprozentige Kennlinie. Modulating valve RGE4-with diaphragm actuator MAT 3277 or 271 (spring: closed or open) 120,240 350,700cm<sup>2</sup>, digital elektro-pneum. or pneum. positioner; flow charact. lineare or equal percentage. DN25-100 ; 1-4 Zoll / inch**

Datum:	21.09.15	31.03.16
Name:	Trytko	Trytko
Geprüft:		
Datum:		
Name:		
Geprüft:		



Blatt 3 von 11

RN 01.170.2

pos. item	Menge quantity	Beschreibung description	Material	DN25	1"	DN40	1,5"	DN50	2"
5	1	Schaftdichtung Shaft seal	Turcon MF6						
6	1	Führungsbuchse Bushing	PTFE 25% Kohle						
7	1	Laterne Yoke	1.4308	16-40-108/17 H157564				16-40-110/17 H157567	
8	1	Skt. Schraube Hex. Screw	A2-70	65-01-056/13 M6x16 H78751				65-01-081/15 M8x16 H78772	
9	4	Skt. Schraube Hex. Screw	A2-70						
10	1	Hubanzeige Stroke indicator	1.4301						
11	1	Befestigungsblech für Hubanzeige Mounting plate for stroke indicator	1.4301						
12	2	Flachkopfschraube Pan head screw	1.4301						
13	1	Kontermutter Mating nut	1.4301						
14	1	Kupplungskopf klein Hose coupling small	1.4301						
14	1	Kupplungskopf groß Hose coupling great	1.4301						
15	1	Mitnehmerplatte komplett Driving plate complete	1.4301						
16	1	Befestigungswinkel Angle bracket	1.4301						
17	1	Ei.-pn.-Regler IP763 Feder I (Hub 15)	Aluminium Druckguss						
17	1	Pn.-Regler P765 without acces. -lever I	aluminium die casted						
18	3	Winkelverschraub. Elbow union							

08-44-002/15  
H162487

29-03-013/93  
H66919

29-03-004/93  
H66913

08-60-750/93  
H208825









Ersatzteilliste: spare parts list

**Regelventil RGE4-Antrieb MAT 3277 oder 271 (MFS oder MFH) 120,240,350,700cm<sup>2</sup> digitaler ei.-pneum. oder pneum. Stellungsregler; lineare oder gleichprozentige Kennlinie. Modulating valve RGE4-with diaphragm actuator MAT 3277 or 271 (spring: closed or open) 120,240 350,700cm<sup>2</sup>, digital elektro-pneum. or pneum. positioner; flow charact. lineare or equal percentage. DN25-100 ; 1-4 Zoll / inch**

Datum:	21.09.15	31.03.16
Name:	Trytko	Trytko
Geprüft:		
Datum:		
Name:		
Geprüft:		
Blatt 8 von 11		
<b>RN 01.170.2</b>		

pos. item	Menge quantity	Beschreibung description	Material	DN65	2.5"	3"	DN80	DN100	4"
				WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
1	1	Gehäuse Housing RGE41	1.4404	15-56-485/47 H177837	15-56-510/47 H177854	15-56-560/47 H177855	15-56-535/47 H176765	15-56-635/47 H177836	15-56-660/47 H177856
	1	Gehäuse Housing RGE42	1.4404		15-57-510/47 H316082				
	1	Gehäusedichtung Housing seal	EPDM FDA-konform	58-33-492/93 H77512		58-33-567/93 H77558	58-33-542/93 H77543	58-33-642/93 H77583	
2	1	Gehäusedichtung Housing seal	FPM FDA-konform	58-33-492/73 H77511		58-33-567/73 H77557	58-33-542/73 H77542	58-33-642/73 H77582	
	1	Gehäusedichtung Housing seal	HNBR FDA-konform	58-33-492/33 H168759		58-33-567/33 H170013	58-33-542/33 H170075	58-33-642/33 H170074	
3	1	Gehäusedeckel Housing cover	1.4404	15-00-794/42 H151968		15-00-799/42 H159895	15-00-797/42 H156593	15-00-798/42 H159888	
	1	Tellerdichtung Seat seal	EPDM FDA-konform			58-33-293/93 H77442			
	1	Tellerdichtung Seat seal	FPM FDA-konform			58-33-293/73 H77441			
4	1	Tellerdichtung Seat seal	HNBR FDA-konform			58-33-293/33 H170176			
	1	Tellerdichtung Seat seal	VMQ FDA-konform			58-33-293/13 H77440			
5	1	Schaftdichtung Shaft seal	Turcon MF6		3A0 58-33-151/24 H323082				
6	1	Führungsbuchse Bushing 20x9	PTFE 25% Kohle		08-01-178/23 H207154				
7	1	Laterne Yoke	1.4308	16-40-111/17 H157568	16-40-116/17 H159379		16-40-112/17 H157571	16-40-113/17 H157572	
8	1	Skt. Schraube Hex. Screw DIN EN 24017	A2-70		65-01-081/15 M8x16 H78772				
9	1	Skt. Schraube Hex. Screw DIN EN 24017	A2-70	65-01-081/15 4xM8x16 H78772			65-01-130/15 4xM10x16 H78806	65-01-130/15 8xM10x16 H78806	
10	1	Hubanzeige Stroke indicator Hub: 15mm	1.4301			08-29-290/13 H161761			



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Ersatzteilliste: spare parts list

**Regelventil RGE4-Antrieb MAT 3277 oder 271 (MFS oder MFH) 120,240,350,700cm<sup>2</sup> digitaler ei.-pneum. oder pneum. Stellungsregler; lineare oder gleichprozentige Kennlinie. Modulating valve RGE4-with diaphragm actuator MAT 3277 or 271 (spring: closed or open) 120,240 350,700cm<sup>2</sup>, digital elektro-pneum. or pneum. positioner; flow charact. lineare or equal percentage. DN25-100 ; 1-4 Zoll / inch**

pos. item	Menge quantity	Beschreibung description	Material	DN65	2.5"	3"	DN80	DN100	4"	Datum:		Blatt	
										WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
11	1	Befestigungsblech für Hubanzeige Mounting plate for stroke indicator	1.4301							21.09.15	31.03.16	Trytko	Trytko
12	2	Flachkopfschraube Pan head screw	1.4301										
13	1	Kontermutter Mating nut	1.4301										
14	1	Kupplungskopf klein Hose coupling small	1.4301										
	1	Kupplungskopf groß Hose coupling great	1.4301										
15	1	Mitnehmerplatte komplett Driving plate complete	1.4301										
16	1	Befestigungswinkel Angle bracket	1.4301										
17	1	Ei.-pn.Regler IP763 EI.-pn.positionner IP763	Aluminium Druckguss										
	1	Pn.-Regler P765 Pn.-positionner P765	aluminium die casted										
18	3	Winkelverschraub. Elbow union											
19	1	Skt. Schraube Hex. Screw	A2-70										
20	1	Scheibe Wascher	A2-70										
21	1	Schlauch Hose											
22	3	Reduziernippel G1/4" G1/8" Red. Nipple G1/4" G1/8"	MS58										
	2	Reduziernippel G1/4" G1/8" Red. Nipple G1/4" G1/8"	MS58										
23	1	Reduziernippel G3/8" G1/8" Red. Nipple G3/8" G1/8"	MS58										



RN 01.170.2

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Ersatzteilliste: spare parts list

**Regelventil RGE4-Antrieb MAT 3277 oder 271 (MFS oder MFH) 120,240,350,700cm<sup>2</sup> digitaler ei.-pneum. oder pneum. Stellungsregler; lineare oder gleichprozentige Kennlinie. Modulating valve RGE4-with diaphragm actuator MAT 3277 or 271 (spring: closed or open) 120,240 350,700cm<sup>2</sup>, digital elektro-pneum. or pneum. positioner; flow charact. lineare or equal percentage. DN25-100 ; 1-4 Zoll / inch**

Datum:	21.09.15	31.03.16	07.12.17
Name:	Trytko	Trytko	Sender
Geprüft:			Goebel
Datum:			Blatt 10 von 11
Name:			<b>RN 01.170.2</b>
Geprüft:			

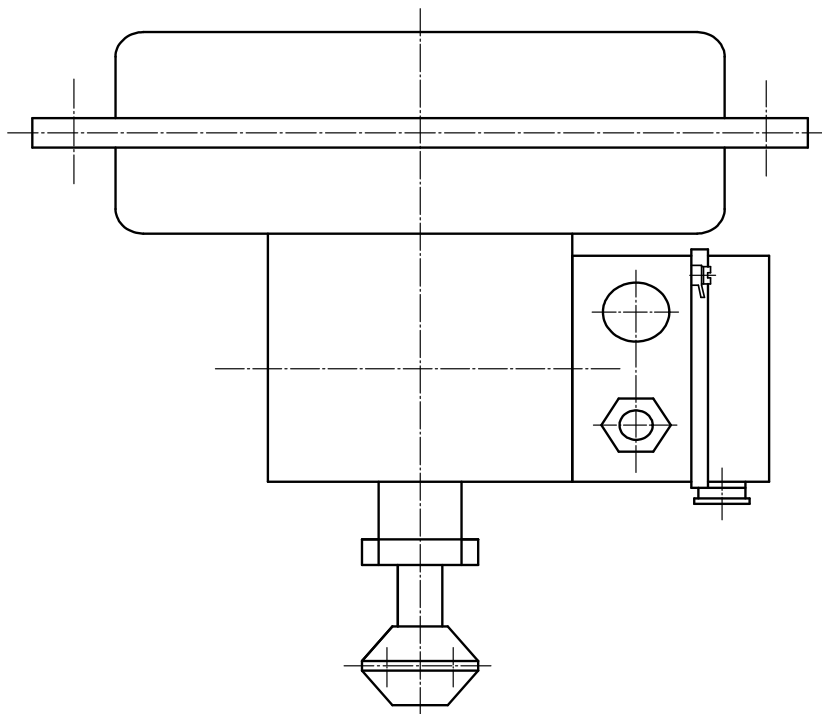


pos. item	Menge quantity	Beschreibung description	Material	DN65	2,5"	3"	DN80	DN100	4"
				WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
24	1	Winkelverschraub. G1/8 ø6mm Elbow union schwenkbar / slewable				08-60-750/93 H208825			
25	1	Reduziernippel G1/4" G1/8" Red. Nipple G1/4" G1/8" beim Antrieb 120-700 for actuator 120-700	MS58			09-14-040/93 H17018			
1		Pneumatischer Stellantrieb MAT 3277+IP3730, IP3725, IP3766, IP3767 (Pos. 29) siehe RN 01.170.13-1 ; RN 01.170.13-2							
1		Pneumatischer Stellantrieb MAT 271+IP763, P765 (Pos. 28) siehe RN 01.170.13-3							
		Pneumatischer Stellantrieb MAT 271+IP763, P765 (item. 28) see RN 01.170.13-3							
		<b>Pos. 2, 4, 5, 6, 27 nur im kompletten Dichtungssatz erhältlich</b>							
		<b>Item 2, 4, 5, 6, 27 available as complete seal kits only</b>							
1		Dichtungssatz Seal kit	FPM	58-34-503/00 H337828	58-34-504/00 H337829	58-34-505/00 H337830	58-34-506/00 H337831		
1		Dichtungssatz Seal kit	EPDM	58-34-503/01 H200224	58-34-504/01 H200225	58-34-505/01 H200226	58-34-506/01 H200227		
1		Dichtungssatz Seal kit	VMQ	58-34-503/02 H336753	58-34-504/02 H325384	58-34-505/02 H337834	58-34-506/02 H337835		
1		Dichtungssatz Seal kit	HNBR	58-34-503/06 H317120	58-34-504/06 H337824	58-34-505/06 H325387	58-34-506/06 H325388		









### MFS-Membrantrieb federschließend / diaphragm actuator NC

Antr.-Fläche Actuator area	Stelldruck Air pressure	IP 3730-0	IP 3730-1 LCD-Anzeige LCD-display	IP 3730-2 LCD-Anzeige LCD-display	IP 3730-3 Hart-Protokoll Hart-protocol	IP 3730-4 Profibus PA	IP 3730-5 Found Fieldbus
120 cm <sup>2</sup>	1,4-2,3 bar	16-31-400/17 H314805	16-31-450/17 H319251	16-31-401/17 H314806	16-31-402/17 H320120	16-31-403/17 H322753	16-31-404/17
240 cm <sup>2</sup>	1,2-2,5 bar	16-31-405/17 H314807	16-31-451/17 H319252	16-31-406/17 H314808	16-31-407/17 H320121	16-31-408/17 H322754	16-31-409/17
350 cm <sup>2</sup>	1,4-2,3 bar	16-31-410/17 H314809	16-31-452/17 H319253	16-31-411/17 H314810	16-31-412/17 H322750	16-31-413/17 H320753	16-31-414/17
	2,1-3,3 bar	16-31-415/17 H314811	16-31-453/17 H319254	16-31-416/17 H314812	16-31-417/17 H322751	16-31-418/17 H320864	16-31-419/17
700 cm <sup>2</sup>	1,4-2,3 bar	16-31-420/17 H314813	16-31-454/17 H319255	16-31-421/17 H314814	16-31-422/17 H322752	16-31-423/17 H322755	16-31-424/17

### MFH-Membrantrieb federhebend / diaphragm actuator NO

Antr.-Fläche Actuator area	Stelldruck Air pressure	IP 3730-0	IP 3730-1 LCD-Anzeige LCD-display	IP 3730-2 LCD-Anzeige LCD-display	IP 3730-3 Hart-Protokoll Hart-protocol	IP 3730-4 Profibus PA	IP 3730-5 Found Fieldbus
120 cm <sup>2</sup>	0,2-1,0 bar	16-31-425/17 H314815	16-31-456/17 H324851	16-31-426/17 H314816	16-31-427/17 H322756	16-31-428/17 H322760	16-31-429/17
240 cm <sup>2</sup>	0,2-1,0 bar	16-31-430/17 H314817	16-31-457/17 H324831	16-31-431/17 H314818	16-31-432/17 H322757	16-31-433/17 H322761	16-31-434/17
350 cm <sup>2</sup>	0,2-1,0 bar	16-31-435/17 H314819	16-31-458/17 H324852	16-31-436/17 H314820	16-31-437/17 H322758	16-31-438/17 H322762	16-31-439/17
700 cm <sup>2</sup>	0,2-1,0 bar	16-31-440/17 H314821	16-31-459/17 H324853	16-31-441/17 H314822	16-31-442/17 H322758	16-31-443/17 H322763	16-31-444/17

Datum:	16.08.11	23.10.13	24.07.15	28.02.17						
Name:	Trytko	Trytko	Trytko	C.Keil						
Geprüft:	Knöchel	Knöchel	Knöchel							

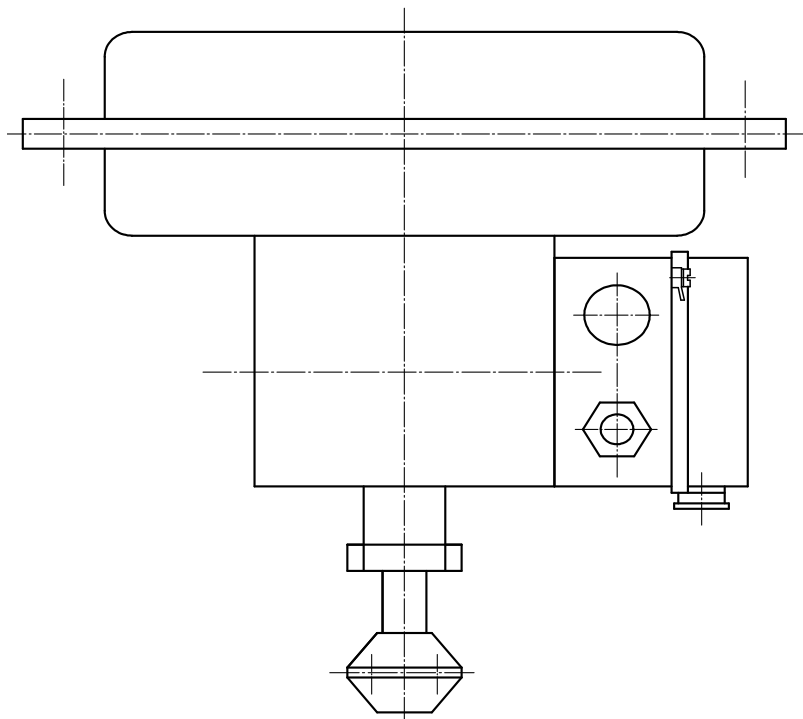


Ersatzteilliste: spare parts list  
**RG4-Pneumat. Stellantrieb MAT 3277 MFS-federschließend und MFH-federhebend  
mit digitalem elektro-pneumatischem Stellungsregler IP3730**  
**RG4-Pneum. actuator MAT 3277 spring closed and open with digital el.-pneum. positioner  
IP 3730**

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Blatt 1 von 1  
**RN 01.170.13-1**

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		Membrantrieb MFS Diaphragm actuator NC			Membrantrieb MFH Diaphragm actuator NO		
Fläche Surface	Hub Stroke	IP 3767	IP 3725	P 3766	IP 3767	P 3725	P 3766
120 cm <sup>2</sup>		1,4-2,3 bar	1,4-2,3 bar	1,4-2,3 bar	0,2-1,0 bar	0,2-1,0 bar	0,2-1,0 bar
	15	16-31-850/17 H157638	16-31-901/17 H166857	16-31-851/17 H157639	16-31-870/17 H157642	16-31-925/17 H329826	16-31-871/17 H157643
	7,5	16-31-896/17 H164415					16-31-906/17 H169722
240 cm <sup>2</sup>		1,2-2,5 bar	1,2-2,5 bar	1,2-2,5 bar	0,2-1,0 bar	0,2-1,0 bar	0,2-1,0 bar
	15	16-31-854/17 H157640	16-31-904/17 H168410	16-31-855/17 H157641	16-31-874/17 H157644	16-31-913/17 H172658	16-31-875/17 H157645
	7,5						16-31-907/17 H169723
350 cm <sup>2</sup>	15	1,3-2,5 bar	1,3-2,5 bar	1,3-2,5 bar	0,2-1,0 bar	0,2-1,0 bar	0,2-1,0 bar
		16-31-858/17 H157581	16-31-905/17 H169224	16-31-860/17 H161014	16-31-878/17 H157636	16-31-926/17 H329827	16-31-879/17 H157637
		2,1-3,3 bar	2,1-3,3 bar	2,1-3,3 bar			
		16-31-859/17 H157583	16-31-947/17 H629946	16-31-861/17 H161015			
700 cm <sup>2</sup>	30	1,4-2,3 bar	1,4-2,3 bar	1,4-2,3 bar	0,2-1,0 bar	0,2-1,0 bar	0,2-1,0 bar
		16-31-864/17 H161016	16-31-919/17 H329825	16-31-865/17 H161017	16-31-884/17 H161018	16-31-927/17 H329828	16-31-885/17 H161019

Datum:	16.08.11	20.09.12	23.10.13	24.07.15	28.02.17					
Name:	Trytko	Trytko	Trytko	Trytko	C.Keil					
Geprüft:	Knöchel	Knöchel	Knöchel	Knöchel						



Ersatzteilliste: spare parts list  
**RG4-Pneumat. Stellantrieb MAT 3277 MFS-federschließend und MFH-federhebend mit integriertem Stellungsregler (el-pneum. und pneum.) IP 3767, IP 3725 und P 3766**  
**RG4-Pneum. actuator MAT 3277 spring closed and open with integrated positioner IP 3767, IP 3725 or P 3766 (el-pneum. or pneum.)**

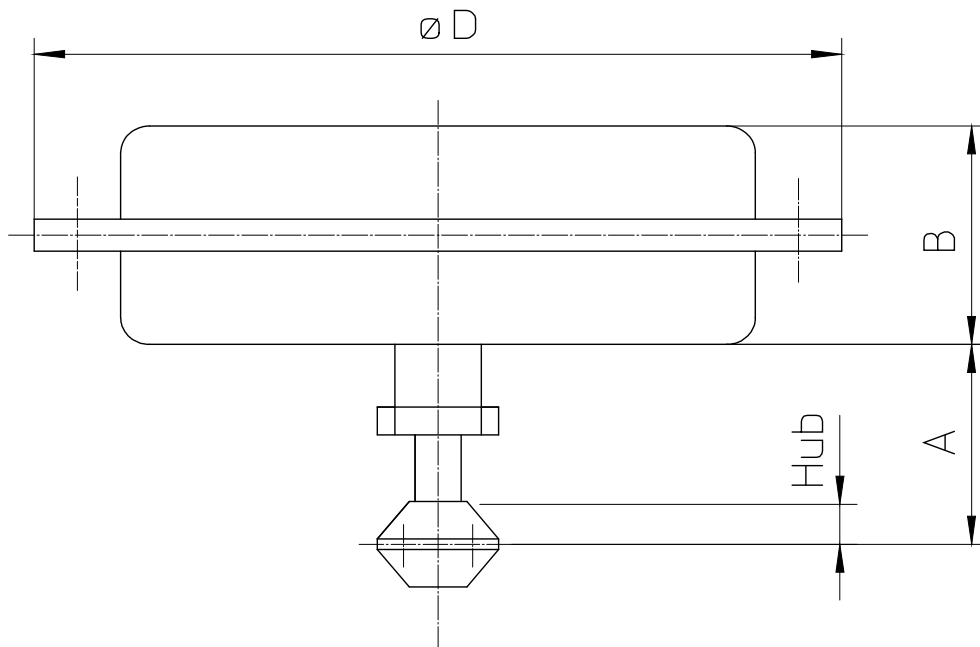
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Blatt 1 von 1

**RN 01.170.13-2**

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Antrieb- Fläche Actuator area	Membrantrieb federschließend MFS diaphragm actuator NC MFS		Membrantrieb federhebend MFH diaphragm actuator NO MFH		Einbaumaße installing dimension			
	Stelldruck Air pressure	WS-Nr. ref.-no.	Stelldruck Air pressure	WS-Nr. ref.-no.	A	B	øD	Hub
	120cm <sup>2</sup>	1,4-2,3 bar	16-31-741/93 H172472	0,2-1,0 bar	16-31-742/93 H172473	73	69	168
240cm <sup>2</sup>	1,3-2,5 bar	16-31-727/93 H39725	0,2-1,0 bar	16-31-735/93 H39733	75	62	240	15
350cm <sup>2</sup>	1,4-2,3 bar	16-31-728/93 H39726	0,2-1,0 bar	16-31-732/93 H39730	75	82	280	15
	2,1-3,3 bar	16-31-738/93 H39736						
700cm <sup>2</sup>	1,4-2,3 bar	16-31-730/93 H39728	0,2-1,0 bar	16-31-767/93 H126157	90	134	390	30

Zu verwenden mit: / to be used with:

Stellungsregler / positioner

-IP 763 • 29-03-013/93 H66919 (elektro-pneum. / electro-pneum.) oder / or

- P 765 • 29-03-004/93 H66913 (pneumatisch / pneumatic)

und / and

Mitnehmerplatte komplett / drive plate complete

08-44-001/15 H162486

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Datum:	21.05.14	24.07.15	02.03.16						
Name:	Trytko	Trytko	Trytko						
Geprüft:	Knöchel	Knöchel	Knöchel						

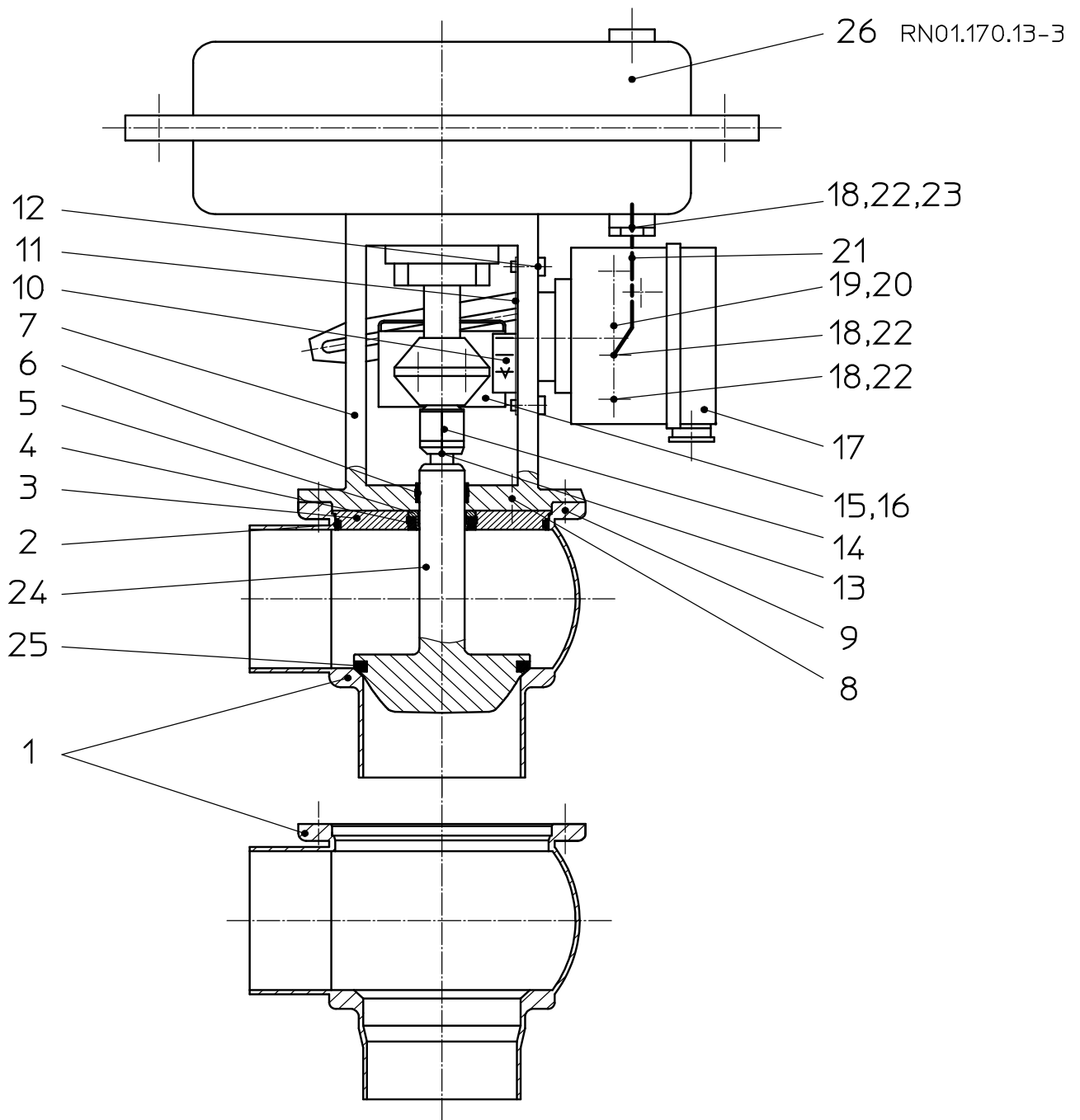


Ersatzteilliste: spare parts list	
<b>RG4-Pneumat. Stellantrieb MAT 271 MFS-federschließend und MFH-federhebend</b>	
<b>RG4-Pneum. actuator MAT 271 spring closed and open</b>	

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Blatt	1 von 1
<b>RN 01.170.13-3</b>	







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Datum:	22.09.15																			
Name:	Trytko																			
Geprüft:																				

Ersatzteilliste: spare parts list  
**Regelventil RGE4-Antrieb MAT 271 (MFS oder MFH) 120,240,350,700cm<sup>2</sup>**  
 digitaler el. pneum. oder pneum. Stellungsregler ; lineare oder gleichprozentige Kennlinie.  
**Modulating valve RGE4-with diaphragm actuator MAT 271 (spring: closed or open) 120,240,350,700cm<sup>2</sup>,**  
 digital electro-pneum. or pneum. positioner ; flow charact. lineare or equal percentage.  
 1-4 Zoll / inch



SPX FLOW  
Germany

Blatt 1 von 7

**RN 01.170.10**

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**Ersatzteilliste: spare parts list**

**Regelventil RGE4-Antrieb MAT 271 (MFS oder MFH) 120,240,350,700cm<sup>2</sup>**

**digitaler el.-pneum. oder pneum. Stellungsregler; lineare oder gleichprozentige Kennlinie.**

**Modulating valve RGE4-with diaphragm actuator MAT 271 (spring: closed or open) 120,240 350,700cm<sup>2</sup>, digital elektro-pneum. or pneum. positioner; flow charact. lineare or equal percentage.**

**1-4 Zoll / inch**

Datum:	22.09.15
Name:	Trytko
Geprüft:	
Datum:	
Name:	
Geprüft:	



Blatt 2 von 7

**RN 01.170.10**

pos. item	Menge quantity	Beschreibung description	Material	1"	1,5"	2"	2,5"	3"	4"
				WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
	1	Gehäuse Ausf. 3A-blank/design 3A-bright fin. Housing	1.4404	3A0 15-56-310/43 H321265	3A0 15-56-460/43 H311117	3A0 15-56-510/43	3A0 15-56-560/43 H327812	3A0 15-56-660/43	
	1	Gehäuse Ausf. matt-gl./ design satin fin. Housing	1.4404	3A0 15-56-310/47	3A0 15-56-460/47	3A0 15-56-510/47	3A0 15-56-560/47 H325072	3A0 15-56-660/47	
	1	Gehäuse Ausf. RGE41-1,5"/kvs 2,5+4,0 Housing	1.4404		3A0 15-56-005/43				
	1	Gehäuse Ausf. 3A-blank/design 3A-bright fin. Housing	1.4404		3A0 15-56-005/47				
	1	Gehäuse Ausf. matt-gl./ design satin fin. Housing	1.4404		3A0 15-56-006/43 H325633				
	1	Gehäuse Ausf. 3A-blank/design 3A-bright fin. Housing	1.4404		3A0 15-56-006/47				
	1	Gehäuse Ausf. matt-gl./ design satin fin. Housing	1.4404		3A0 15-56-410/43 H323655				
	1	Gehäuse Ausf. RGE41-1,5"/kvs 16+25 Housing	1.4404		3A0 15-56-410/47 H323141				
	1	Gehäuse Ausf. 3A-blank/design 3A-bright fin. Housing	1.4404	3A0 15-57-310/43	3A0 15-57-460/43	3A0 15-57-510/43	3A0 15-57-560/43	3A0 15-57-660/43	
	1	Gehäuse Ausf. matt-gl./ design satin fin. Housing	1.4404	3A0 15-57-310/47	3A0 15-57-460/47	3A0 15-57-510/47	3A0 15-57-560/47	3A0 15-57-660/47	
	1	Gehäuse Ausf. RGE42 Housing	1.4404						
	1	Gehäuse Ausf. 3A-blank/design 3A-bright fin. Housing	1.4404		3A0 15-57-005/43				
	1	Gehäuse Ausf. matt-gl./ design satin fin. Housing	1.4404		3A0 15-57-005/47				
	1	Gehäuse Ausf. RGE42-1,5"/kvs 2,5+4,0 Housing	1.4404		3A0 15-57-020/43 H329547				
	1	Gehäuse Ausf. 3A-blank/design 3A-bright fin. Housing	1.4404		3A0 15-57-020/47				
	1	Gehäuse Ausf. matt-gl./ design satin fin. Housing	1.4404		3A0 15-57-020/47				
	1	Gehäuse Ausf. RGE42-1,5"/kvs 6,3+10 Housing	1.4404		3A0 15-57-410/43 H329548				
	1	Gehäuse Ausf. 3A-blank/design 3A-bright fin. Housing	1.4404		3A0 15-57-410/47				
	1	Gehäuse Ausf. matt-gl./ design satin fin. Housing	1.4404		3A0 15-57-410/47				

**Ersatzteilliste: spare parts list**

**Regelventil RGE4-Antrieb MAT 271 (MFS oder MFH) 120,240,350,700cm<sup>2</sup>**

**digitaler el.-pneum. oder pneum. Stellungsregler; lineare oder gleichprozentige Kennlinie.**

**Modulating valve RGE4-with diaphragm actuator MAT 271 (spring: closed or open) 120,240**

**350,700cm<sup>2</sup>, digital elektro-pneum. or pneum. positioner; flow charact. lineare or equal percentage.**

**1-4 Zoll / inch**

Datum:	22.09.15	07.12.17
Name:	Trytko	Sender
Geprüft:		Goebel
Datum:		
Name:		
Geprüft:		

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<b>RN 01.170.10</b>	



pos. item	Menge quantity	Beschreibung description	Material	1"	1,5"	2"	2,5"	3"	4"	
				WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	
1	1	Gehäusedichtung Housing seal	EPDM FDA-konform	58-33-292/93 H77439	58-33-392/93 H77464	58-33-392/93 H77464	58-33-492/93 H77512	58-33-567/93 H77558	58-33-642/93 H77583	
2	1	Gehäusedichtung Housing seal	FPM FDA-konform	58-33-292/73 H77438	58-33-392/73 H77463	58-33-392/73 H77463	58-33-492/73 H77511	58-33-567/73 H77557	58-33-642/73 H77582	
3	1	Gehäusedichtung Housing seal	HNBR FDA-konform	58-33-292/33 H170017	58-33-392/33 H170018	58-33-392/33 H170018	58-33-492/33 H168759	58-33-567/33 H170013	58-33-642/33 H170074	
4	1	Gehäusedeckel Housing cover	1.4404	15-00-65/42 H156869	15-00-069/42 H156409	15-00-069/42 H156409	15-00-794/42 H151968	15-00-799/42 H159895	15-00-798/42 H159888	
	1	Tellerdichtung Seat seal	EPDM FDA-konform	58-33-293/93 H77442						
	1	Tellerdichtung Seat seal	FPM FDA-konform	58-33-293/73 H77441						
	1	Tellerdichtung Seat seal	HNBR FDA-konform	58-33-293/33 H170176						
	1	Tellerdichtung Seat seal	VMQ FDA-konform	58-33-293/13 H77440						
5	1	Schaftdichtung Shaft seal	Turcon MF6	3A0 58-33-151/24 H323082						
6	1	Führungsbuchse Bushing	PEEK	3A0 08-01-178/29 H315800						
7	1	Laterne Yoke	1.4308	3A0 16-40-108/13 H321161	3A0 16-40-109/13 H321126	3A0 16-40-110/13 H311118	3A0 16-40-111/13 H329381	3A0 16-40-116/13 H320035	3A0 16-40-113/13	
	1	Laterne Yoke	1.4308	16-40-108/17 H157564	16-40-109/17 H157765	16-40-110/17 H157567	16-40-111/17 H157568	16-40-116/17 H159379	16-40-113/17 H157572	
8	1	Skt. Schraube Hex. Screw	A2-70	65-01-056/13 M6x16 H78751						65-01-081/15 M8x16 H78772
9	1	Skt. Schraube Hex. Screw	A2-70	65-01-081/15 4xM8x16 H78772						65-01-130/15 8xM10x16 H78806
10	1	Hubanzeige Stroke indicator	1.4301	08-29-290/13 H161761						
11	1	Befestigungsblech für Hubanzeige Mounting plate for stroke indicator	1.4301	08-29-292/13 H161763						

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**Ersatzteilliste: spare parts list**

**Regelventil RGE4-Antrieb MAT 271 (MFS oder MFH) 120,240,350,700cm<sup>2</sup>**

**digitaler el.-pneum. oder pneum. Stellungsregler; lineare oder gleichprozentige Kennlinie.**

**Modulating valve RGE4-with diaphragm actuator MAT 271 (spring: closed or open) 120,240**

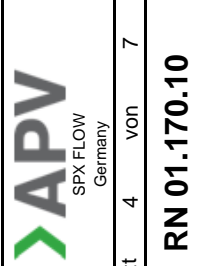
**350,700cm<sup>2</sup>, digital elektro-pneum. or pneum. positioner; flow charact. lineare or equal percentage.**

**1-4 Zoll / inch**

pos. item	Menge quantity	Beschreibung description	Material	1"	1,5"	2"	2,5"	3"	4"
				WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.	WS-Nr. ref.-no.
12	2	Flachkopfschraube Pan head screw DIN EN ISO 1580	1.4301						
13	1	Kontermutter Mating nut Hub: 15mm M10x1	1.4301						
		Tür Antr.-Fläche for actuator area 120cm <sup>2</sup>							
14	1	Kupplungskopf klein Hose coupling small	1.4301						
		Tür Antr.-Fläche for actuator area 240, 350, 700cm <sup>2</sup>							
15	1	Kupplungskopf groß Hose coupling great	1.4301						
		Mitnehmerplatte komplett Driving plate complete	1.4301						
16	1	Befestigungswinkel für kvs 16-160	1.4301						
		Angle bracket für kvs 16-160	1.4301						
17	1	El.-pn.Regler IP763 ohne Zubehör -Hebel I Feder I (Hub 15)	Aluminium Druckguss aluminium die casted						
		El.-pn.positionner IP763							
		Pn.-Regler P765 without acces. -lever I spring I (stroke 15)							
18	3	Winkelverschraub. G1/8 ø6mm							
		Elbow union schwenkbar / slewable							
19	1	Skt. Schraube Hex. Screw DIN EN 24014	A2-70						
		Scheibe Wascher DIN 125 A	A2-70						
21	1	Schlauch Hose 6x1x500							
		Reduziernippel G1/4" G1/8" beim Antrieb 120, 240 for actuator 120, 240	MS58						
22	2	Red. Nipple G1/4" G1/8" beim Antrieb 350, 700 for actuator 350, 700	MS58						
		Reduziernippel G1/4" G1/8" beim Antrieb 350, 700 for actuator 350, 700	MS58						
23	1	Reduziernippel G3/8" G1/8" beim Antrieb 350, 700 for actuator 350, 700	MS58						
		Red. Nipple G3/8" G1/8" beim Antrieb 350, 700 for actuator 350, 700	MS58						
<p><b>Pneumatischer Stellantrieb MAT 271+IP763, P765 (Pos. 26) siehe RN 01.170.13-3</b></p>									
<p><b>Pneumatic actuator MAT 271+IP763, P765 (item. 26) see RN 01.170.13-3</b></p>									

Datum:	22.09.15
Name:	Trytko
Geprüft:	
Datum:	
Name:	
Geprüft:	

Blatt	4	von	7
<b>RN 01.170.10</b>			









# APV DELTA RGE4

MODULATING VALVE

# SPXFLOW

## SPX FLOW

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ISSUED 09/2017 - Translation of Original Manual

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