

OPERATING AND MAINTENANCE INSTRUCTIONS/
SPARE PARTS

EDITION 01/2017

**Serving the Gas Industry
Worldwide**

Honeywell

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1. General

In addition to this leaflet 402.20 concerning "Operation and Maintenance, Spare Parts" of the regulator HON 402, the brochure 402.00 gives full information about all relevant technical data, description of function, the available different versions, and the dimensions.

Due to the special design and operation of the HON 402, we recommend to study and observe the special instructions within these leaflets as well:

| | | | |
|----------------|---------------|--|--------|
| Pilot: | HON 630/640 | General Description | 630.00 |
| | | Operation and Maintenance, Spare Parts | 630.20 |
| SAV: | HON 720 / 721 | General Description | 402.00 |
| | | Operation and Maintenance, Spare Parts | |
| | | Control Devices K1a, K2a | 673.20 |
| | | Control Devices K4, K5, K6 | 674.20 |
| | | Control Devices K10a, K12, K13, K16, K17 | 672.20 |
| Filter: | HON 905 | General Description | 905.00 |
| | | Operation and Maintenance, Spare Parts | 905.20 |

The Honeywell brochure "General operating instructions for gas pressure regulators and safety devices" will be useful to fit the regulator into the line, put it into service and find faults that might disturb its operation. Please also check if the construction, set-up, supervision and maintenance of gas pressure regulating stations may be subject to special national regulations. These technical rules should be observed strictly (Within Germany observe the DVGW worksheets G 490, G 491, G 495).

The frequency of periodical maintenance of gas pressure regulators and other components of the regulating line is strongly dependant on the prevailing service conditions, the type and composition of the gaseous medium, the ambient temperature and on dust and dirt withing the pipe system. We therefore abstain from imposing any fixed intervals and would rather advise testing out the necessary maintenance intervals, starting with short gaps (i.e. quarter of a year) for maintenance disassembly, and then increasing the intervals to a maximum of 2 years, if no defects within the spare parts show up.

For maintenance all parts are to be cleaned and subjected to a thorough visual inspection. Complete dismantling together with visual inspection should not be omitted when the course of operation or performance tests have shown lack of accuracy.

Particular care should be given to the checking of sealings and diaphragms, as well as the closing spring and all movable parts. Damaged parts should be replaced by new ones.

The item numbers referred to in the maintenance instructions are identical with those of the spare parts drawings and spare parts lists.

Note! We recommend to keep all parts marked "EV" in stock for maintenance availability.

1.1 Appointed workmen

Experts

Thanks to his technical training, his practical work and his experience, the expert has sufficient knowledge in the field of maintaining complete gas facilities as well as the single devices with their constructional elements and sub-groups. He must be acquainted with the purpose and the tasks of gas pressure regulating facilities, with the relevant laws, guidelines and general technical rules, and must also be capable of deciding and acting on his own.

Qualified employee

The qualified employee must possess special, proven knowledge for the certain task he is about to perform. He is acquainted with the general rules and regulations, and it is guaranteed that he can carry out tasks correctly when ordered to do so.

Instructed person




A person trained to accomplish simple tasks.

| Tasks and workmen | instructed person | qualified employee | expert |
|--------------------------------------|-------------------|--------------------|--------------------------------------|
| Visual checks | | | |
| Inspection | | | |
| Functional tests | | | |
| Maintenance / repairs | | | additional 2nd person required |
| Putting into operation / re-starting | | | |
| Operation using by-pass lines | | | |

1.2 Security Instructions

1.2.1 Risk characteristics, general

Security instructions are marked in the operating instructions by the following **signal words** or **symbols** :

| Designation | Used by: |
|---|--|
|  | Risk of injury to personnel |
|  | Risk of damaging equipment and environment |
|  | Additional information or requirements |

2. Special Operating Instructions

2.1 Start-up:

 **Note!**

 **Caution!**

 **Note!**

 **Caution!**

- Close the outlet gate valve
- Release completely the setpoint springs of the pilots HON 620, 630, 640 of the load limiting stage and of the auxiliary pressure stage (only valid for the HON pilot 630) by turning the setpoint adjusting screw (218) counter-clockwise.
(The complete releasing of the setpoint screws is at least recommendable for start-up)
- Open the start-up valve. The existing start-up valve assures a pressure compensation on the expansion diaphragm (6, 107)
- Pressurize slowly.
- The start-up valve (107, 125, 135) must be absolutely re-closed.
- Adjust the setpoint of the load limiting unit of pilot HON 630 to approximately 5 bar above the outlet pressure (p_a).
- Open the outlet gate valve slowly.
- Increase slowly the setpoint value with the adjusting screw (218) until the device takes over the gas supply and the outlet pressure p_{as} wanted is adjusted.

2.2 Shut-down:

- Close the outlet gate valve
or
- Turn the setpoint screw slowly counter-clockwise (release)

3. Special Maintenance Operations

3.1 Main Valve

- Expansion diaphragm (6, 107)

The expansion diaphragm must be put into the corresponding seat of the main valve (11, 52, 113) without distortions. A diaphragm having a too big outer diameter must be replaced.

- Noise reduction (180)

When mounting the metal foam ring (180), please see that the working surface on the ring shows downwards (showing to the outlet surface of the seat of the main valve)

- Foamed disc / foamed ring (102, 105) from the pipe size DN 80

The damping elements (102, 105) must be replaced for each maintenance.
The damping disc situated on the diaphragm plate must be fixed to the part (104) with bounding agent (Loctite 454).

3.2 Pilot HON 620

3.2.1

- **Double diaphragm system**

By releasing the screw connection (207) between the parts (208) and (209) the double diaphragm system can be dismantled and visually controlled.

Diaphragms (210) must be inspected on porous places or on the detachment of the rubber coating. For the dismantlement of the screws (212) are released from the stay bolts (216).

If damages are noticed on the piston sealing (241), the bolts must be replaced.
Unscrew the pistons (241 premounted part) of the amplifying valve out of the piston guide (240) by releasing the hexagonal nut (241).

Note!

The sealing edge of the orifice (239) of the amplifying valve should not show any mechanical damages.

To mount each part of the double diaphragm system, please care about the following remarks:

Note!

- **Premounted piston (241)**

The piston is mounted with a suspension spring and provided with a corresponding distance dimension for the amplifying valve.

If the pilot was maintained, the piston must be replaced (higher closing pressure).



Warning

- **Diaphragm fixing (211, 214)**

The rounded-off side on the diaphragm plates (211, 214) must show to the diaphragm (210).

3.2.2

- **Pressure compensating element (303) from DN 80**

Control the easy-running of the pressure compensating pin or grease it with silicone grease.

3.2.3

- **Lubricants**

All parts must be greased according to the lubricants lists (see lubricants charts on the next page).

3.3

• Torques

| screw pos. no. | torque M _A in Nm | | | |
|-------------------|--------------------------------|---------------|---------------|----------------|
| | DN 25 [Nm] | DN 50 [Nm] | DN 80 [Nm] | DN 100 [Nm] |
| 1 | 10 | 10 | - | - |
| 5 | 50 | 50 | - | - |
| 13 | 12 | 12 | - | - |
| 15 | 12 | 12 | - | - |
| 56 | - | 50 | | |
| 103 | - | - | 20 | 20 |
| 106 | - | - | 50 | 50 |
| 110 | - | - | 12 | 12 |
| 120 | - | - | 50 | 50 |
| 188 | - | - | 50 | 50 |
| 204 | 25 | 25 | 25 | 25 |
| 207 | 30 | 30 | 30 | 30 |
| 212 | 6 | 6 | 6 | 6 |

3.4

• Lubricants

| element (grease slightly) | lubricant | HON-part no. |
|---|----------------------|---|
| all o-rings mounting swelling of expansion diaphragm (6, 107) switching balls (510) ball bearing intermediary spaces (529) | silicone grease | can 1,0 kg 00 027 079 tube 0,1 kg 00 027 081 |
| all fixing screws and all pipe connections | high pressure grease | 00 027 058 |

3.5

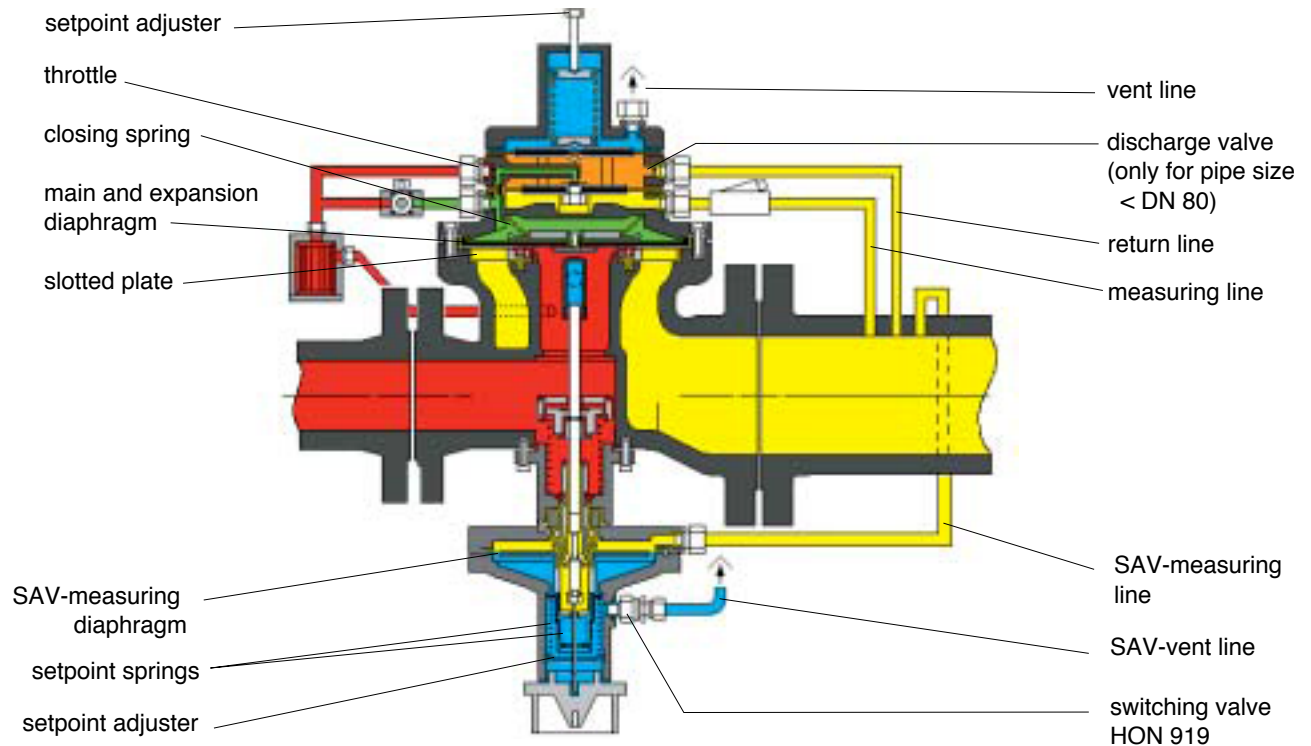
• Screw seals

| element | means | |
|-------------------------|---------------------|--|
| cylinder screw (1, 103) | LOCTITE**) Type 221 | |

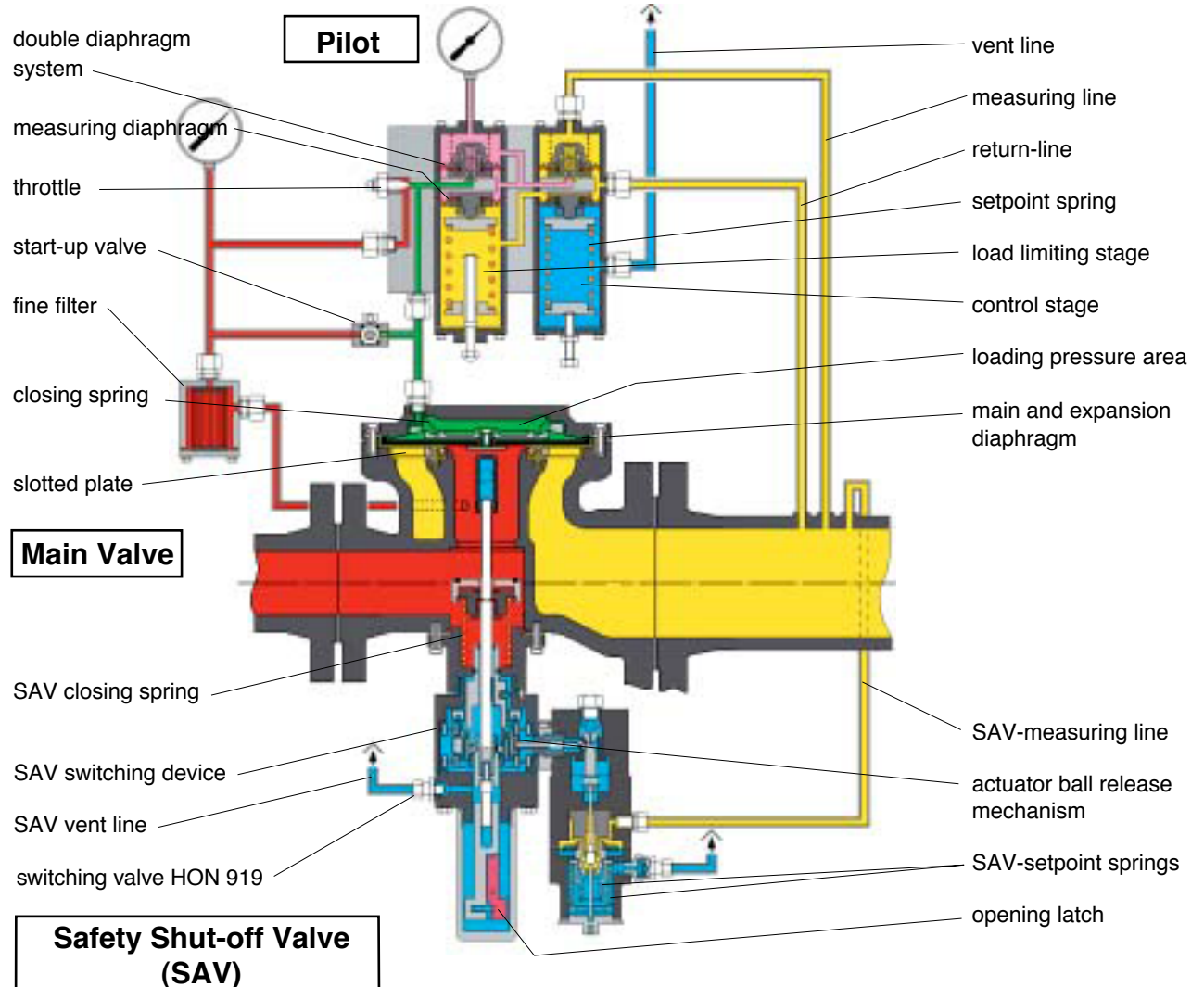
**) is to be found in specialized stores

3.6 Examples of different pilot combinations without or with outlet expansion

a) HON 402 without outlet expansion, f.i. with pilot HON 620 and SAV-unit HON 720 / K4



b) HON 402 with outlet expansion, f.i. with pilot HON 630a and SAV-unit HON 721 / K12

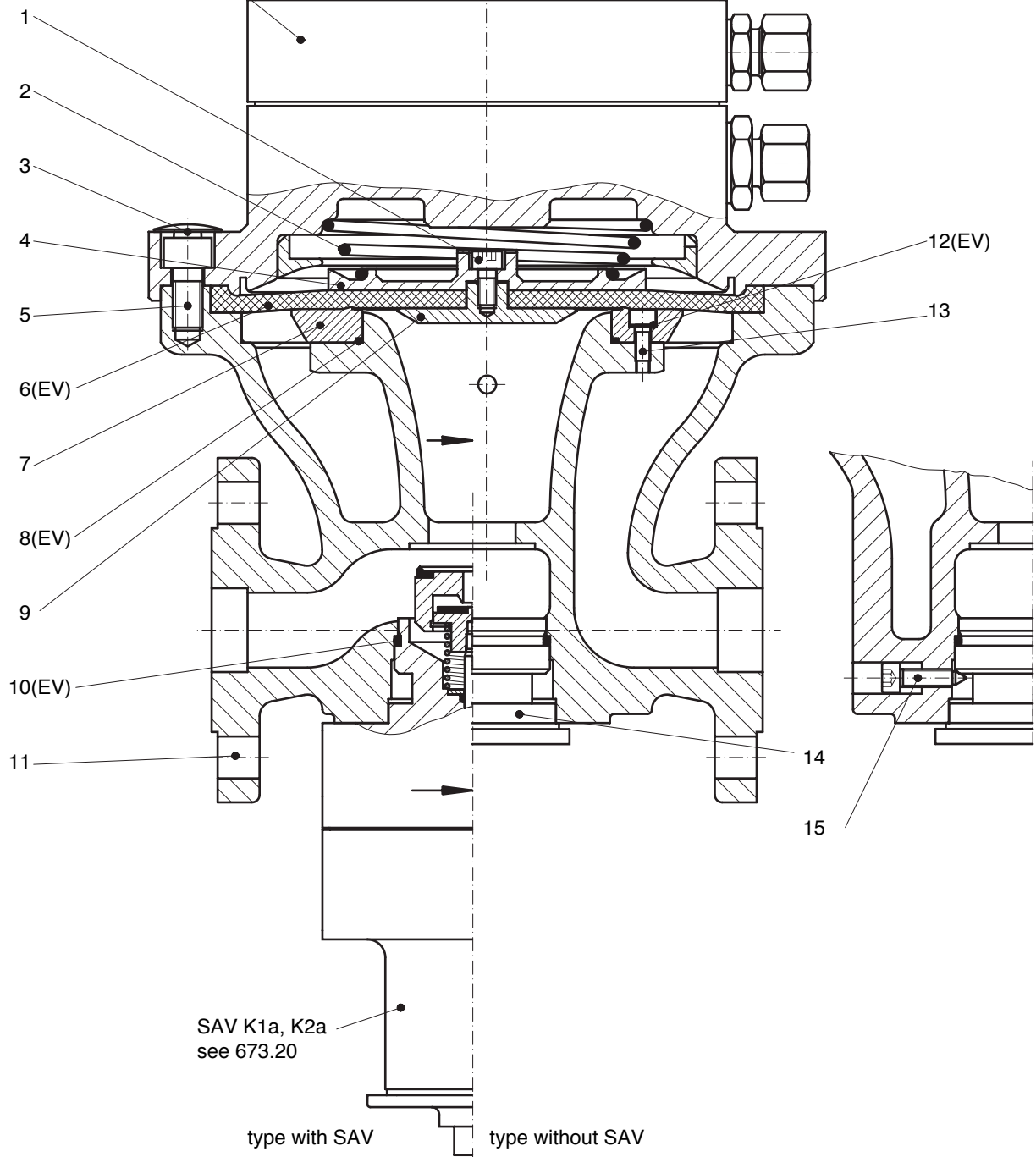


4. Spare Parts Drawings

4.1 Spare Parts Drawing HON 402 DN 25

from serial number 95 10 157 88
see spare parts list p. 21

HON 620 see page 12

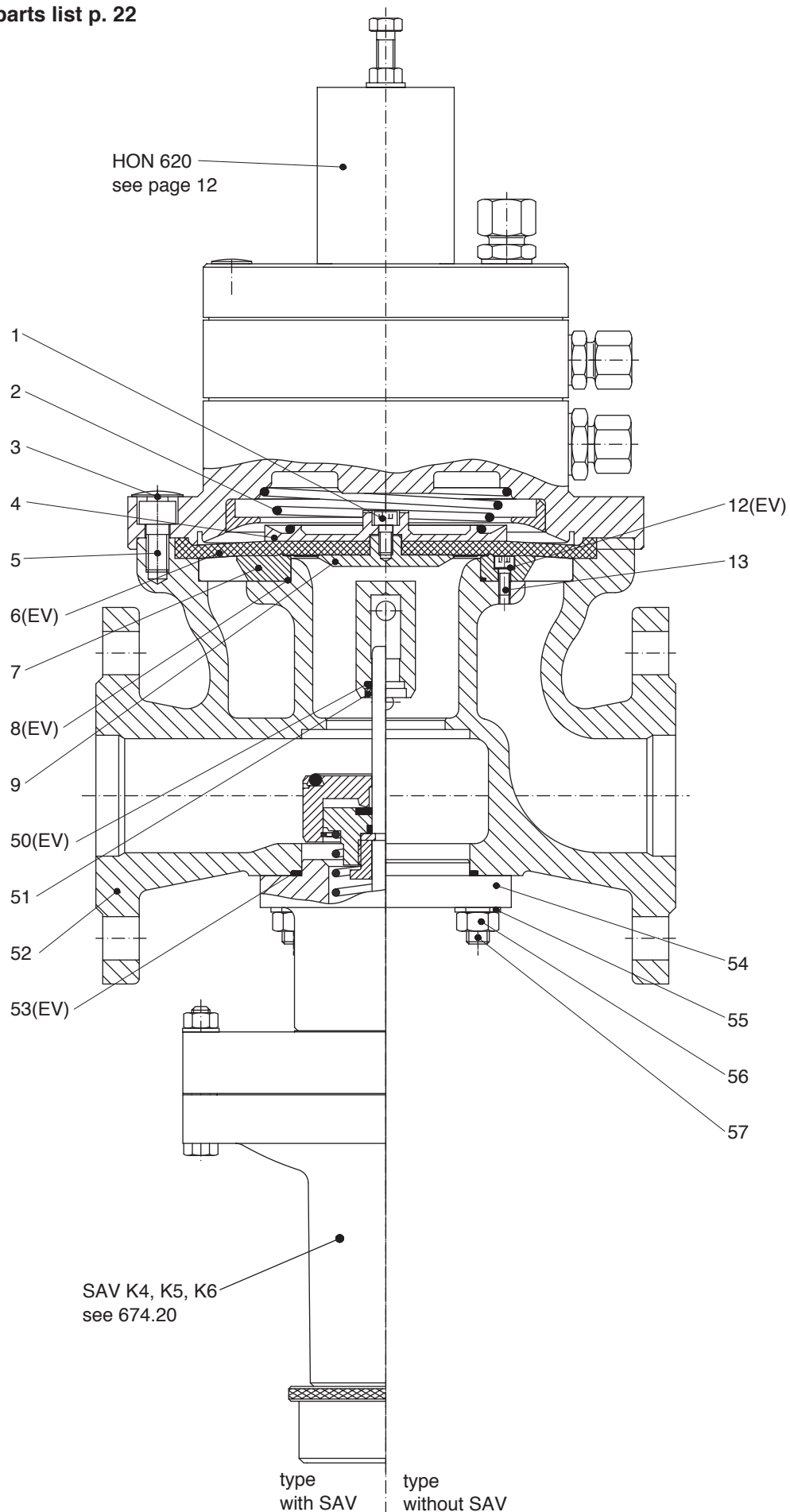


Note! Parts marked by EV are to be kept in stock for maintenance

4.2 Spare Parts Drawing HON 402 DN E 50

Type from serial number.: 95 10 157 88

see spare parts list p. 22



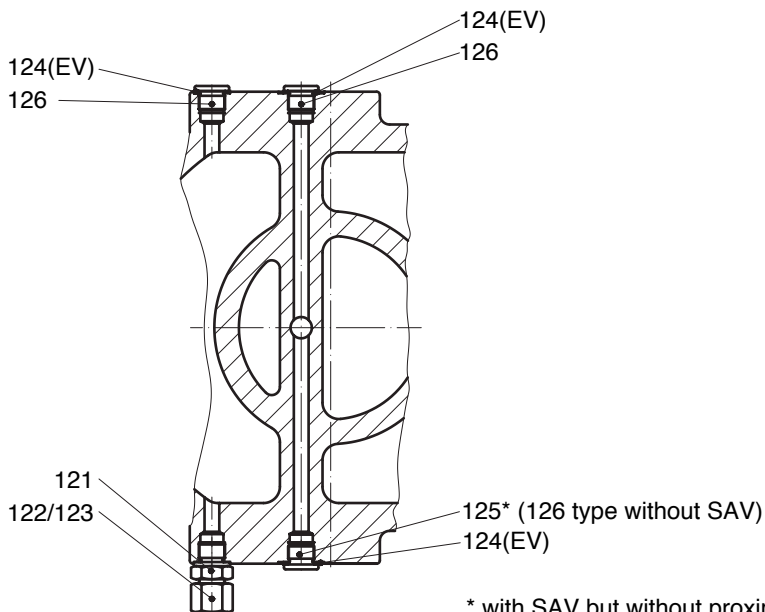
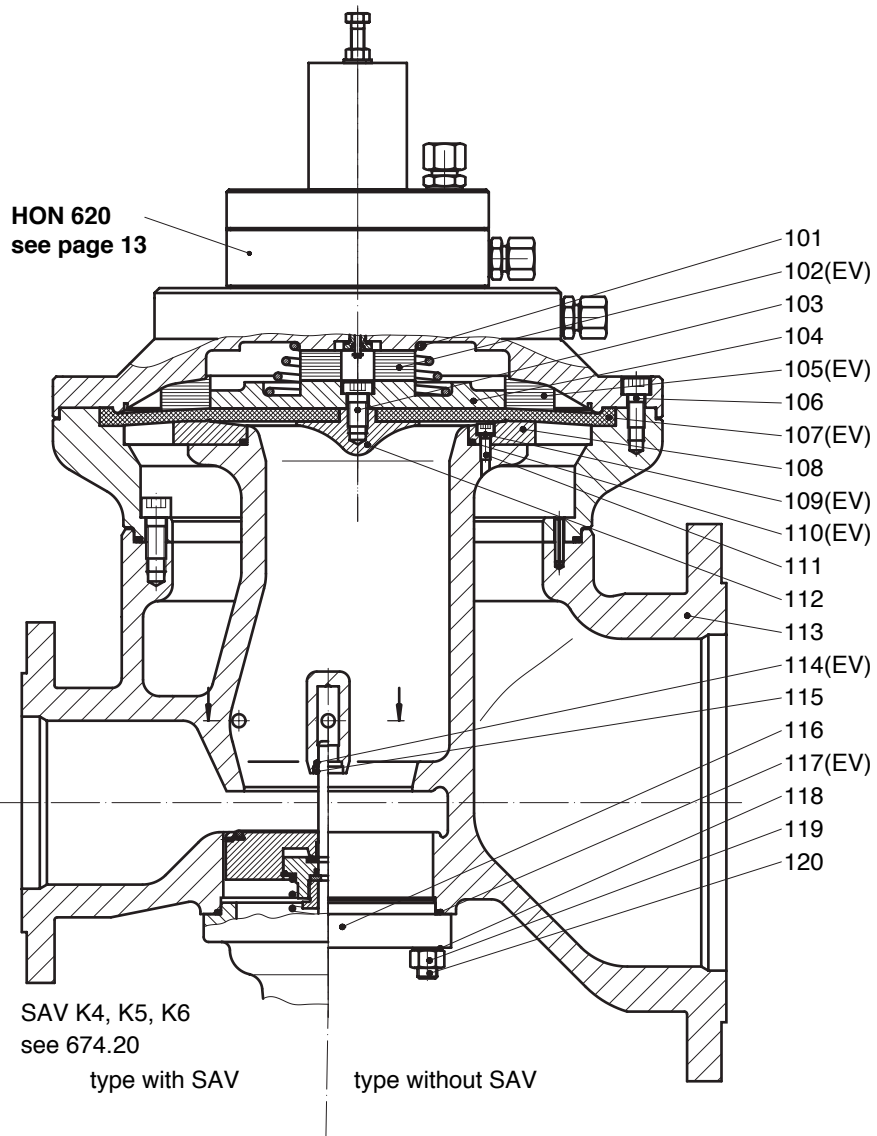
Note! Parts marked by EV are to be kept in stock for maintenance

4.3 Spare Parts Drawing HON 402 DN E 80 to DNE 100

(type marked DN 100/200)

from serial number 95 041 4600

see spare parts list p. 21, 22



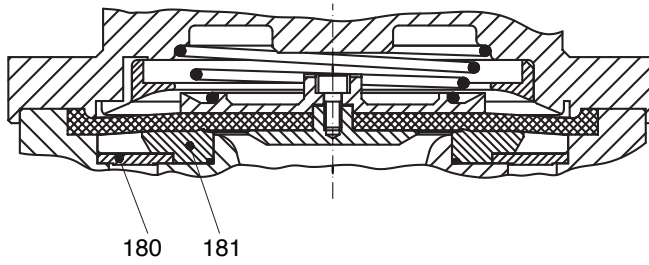
* with SAV but without proximity switching device

Note! Parts marked by EV are to be kept in stock for maintenance

Spare Parts Drawing HON 402 Sectional view

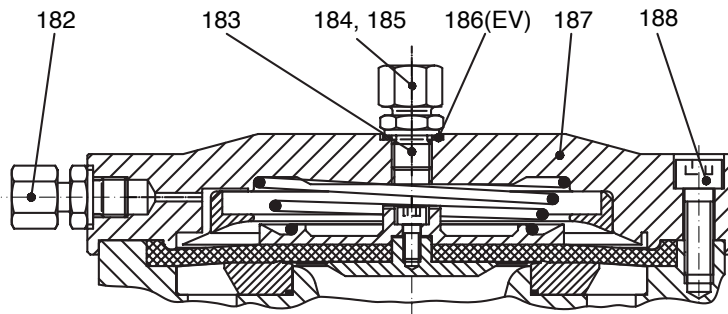
4.4

Type with noise reduction
see spare parts list p. 27



4.5

Type with pilot HON 630/640
see spare parts list p. 27

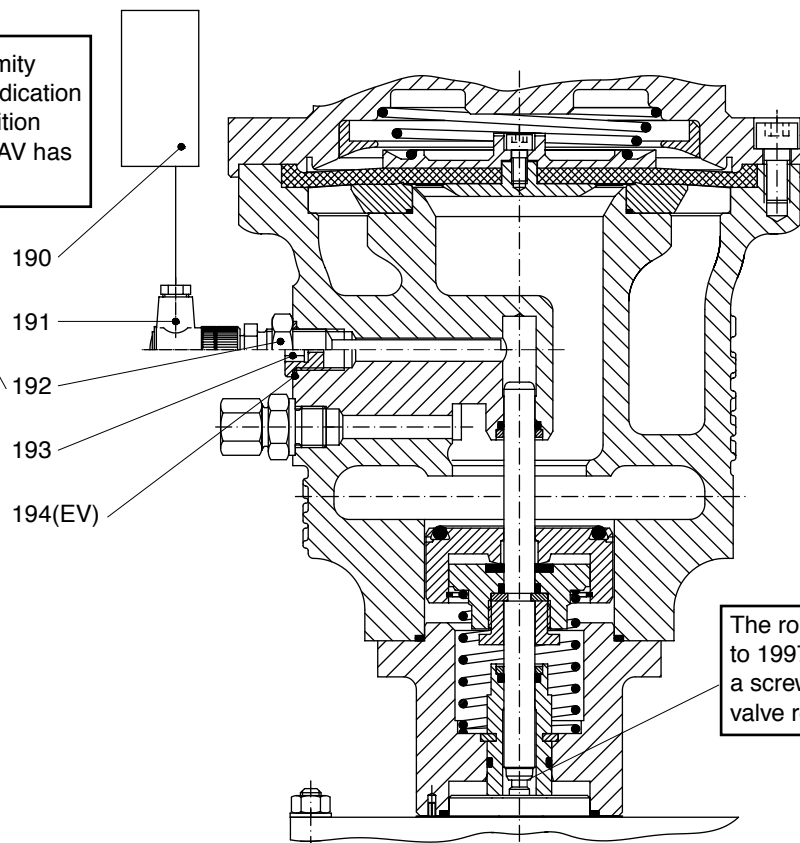


4.6



Type with SAV HON 720 and HON 721
see spare parts list p. 28

The assembly of the proximity initiator (192) for remote indication of the SAV valve plate position **may only** be done if the SAV has been closed completely

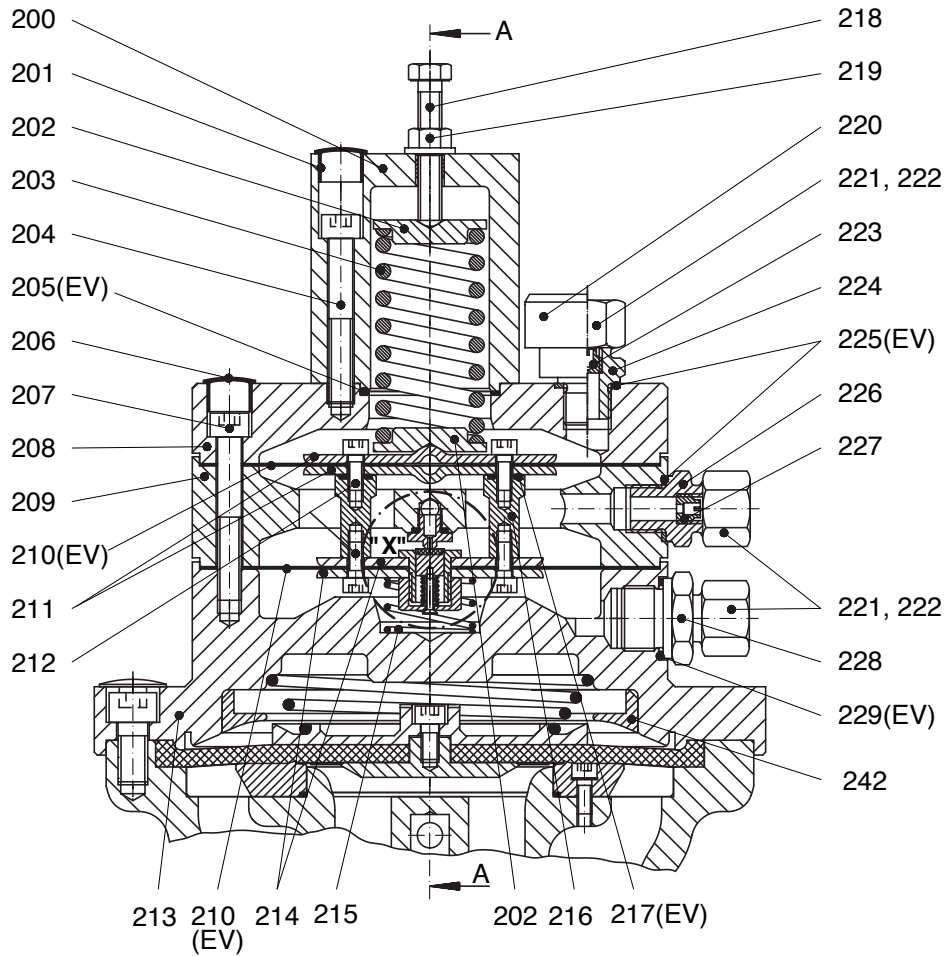


The rolling connection used up to 1997 has been replaced by a screw connection on the valve rod of the SAV HON 720

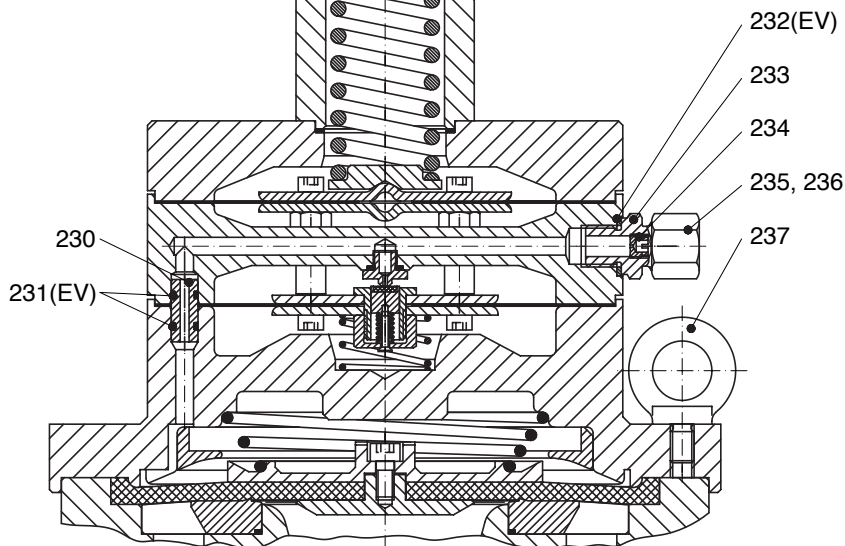
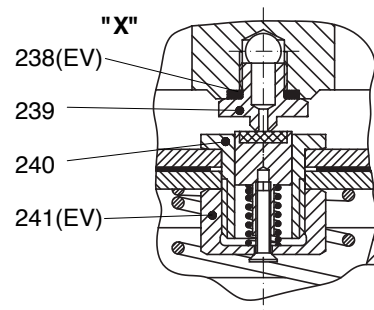
Note! Parts marked by EV are to be kept in stock for maintenance

4.7 Spare Parts Drawing HON 402 DN 25 to DN_E 50 with pilot HON 620

see spare parts list p. 23, 24

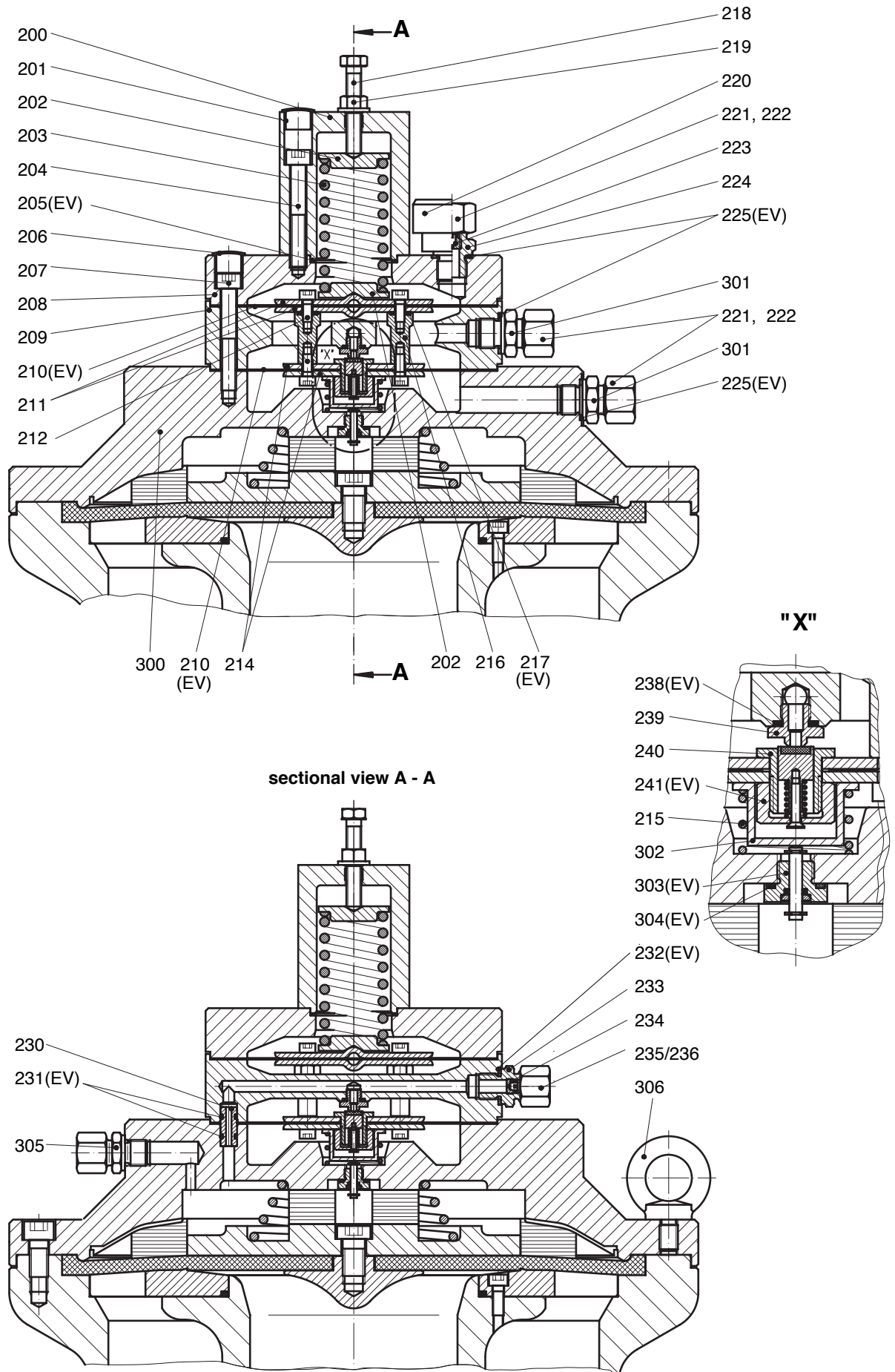


sectional view A - A



Note! Parts marked by EV are to be kept in stock for maintenance

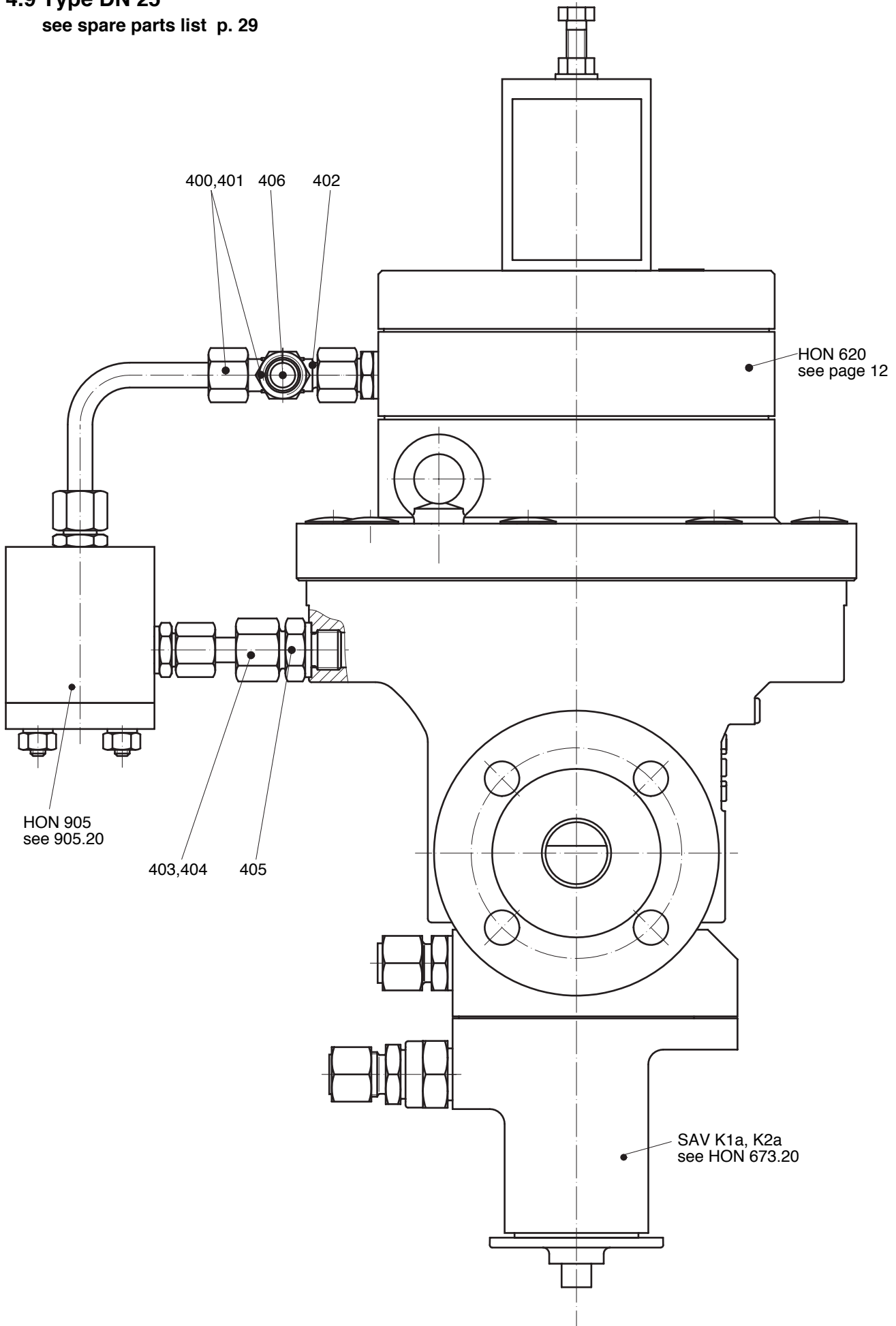
4.8 Spare Parts Drawing HON 402 DN_E 80 to DN_E 100 with pilot HON 620
 see spare parts list p. 25, 26



Note! Parts marked by EV are to be kept in stock for maintenance

4.9 Type DN 25

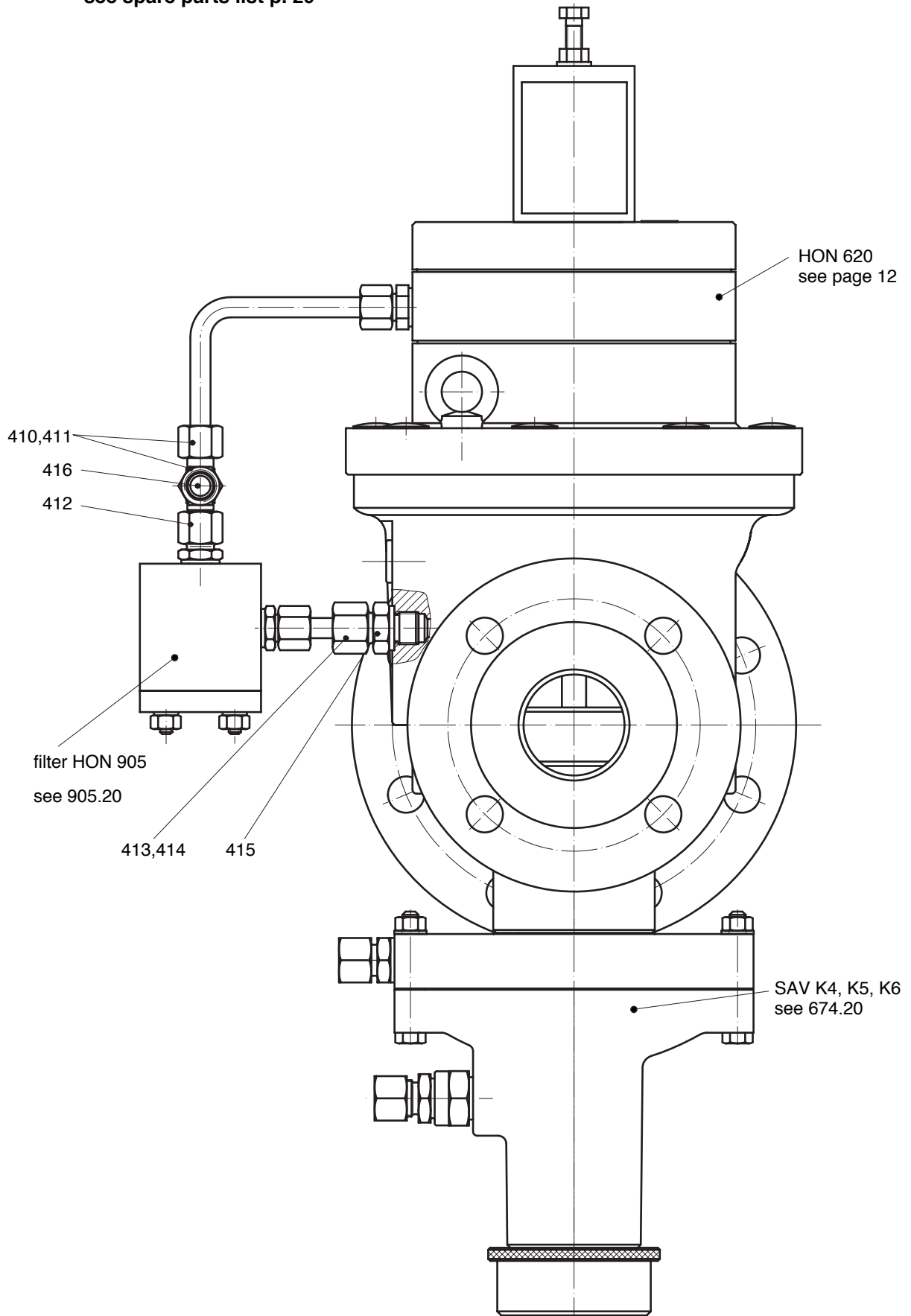
see spare parts list p. 29



Note!

Parts marked by EV are to be kept in stock for maintenance

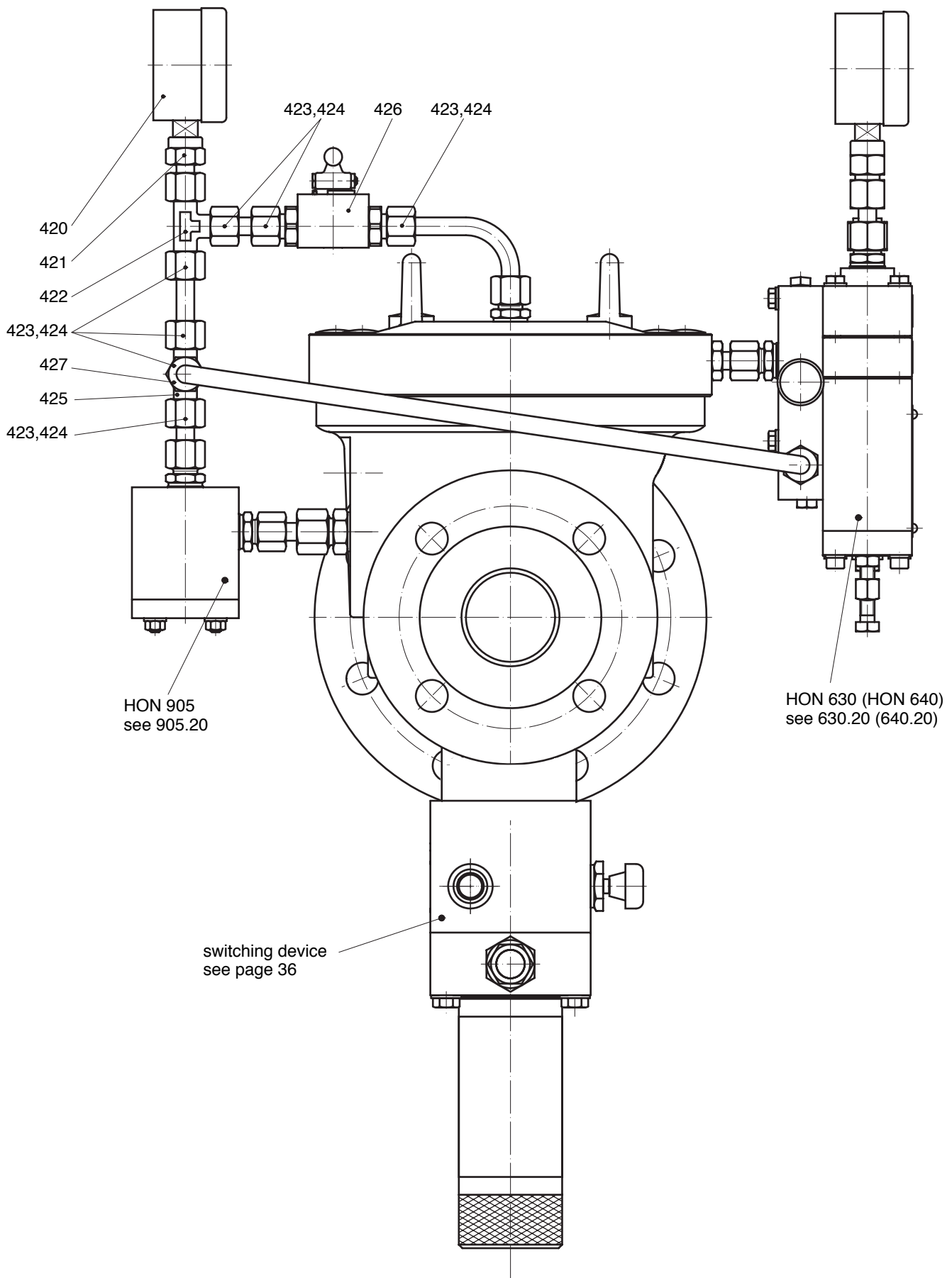
4.10 Type DN_E 50
see spare parts list p. 29



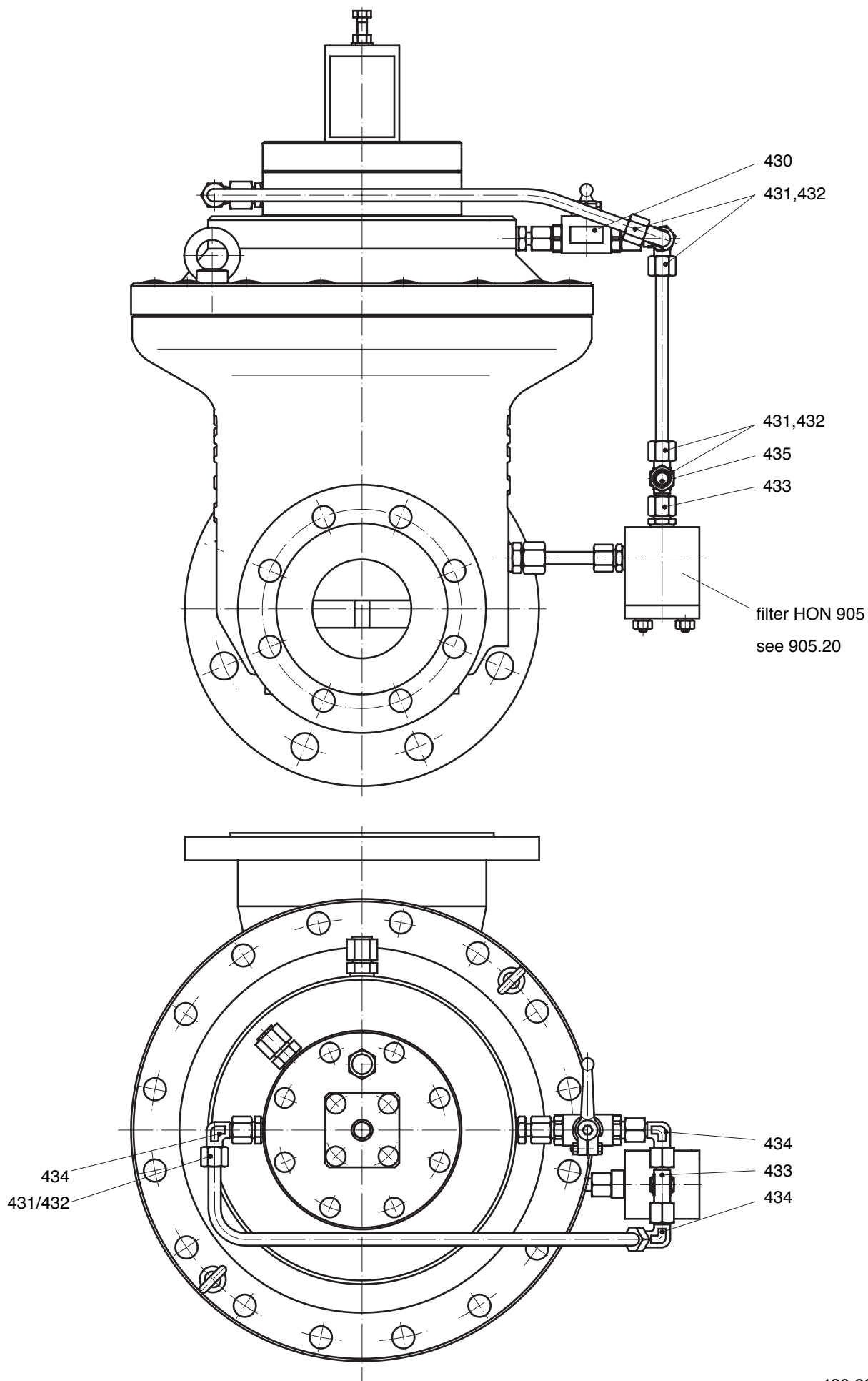
4.11 Type for DN 25 and DN_E 50 with pilot HON 630/640

(marked DN 50/100)

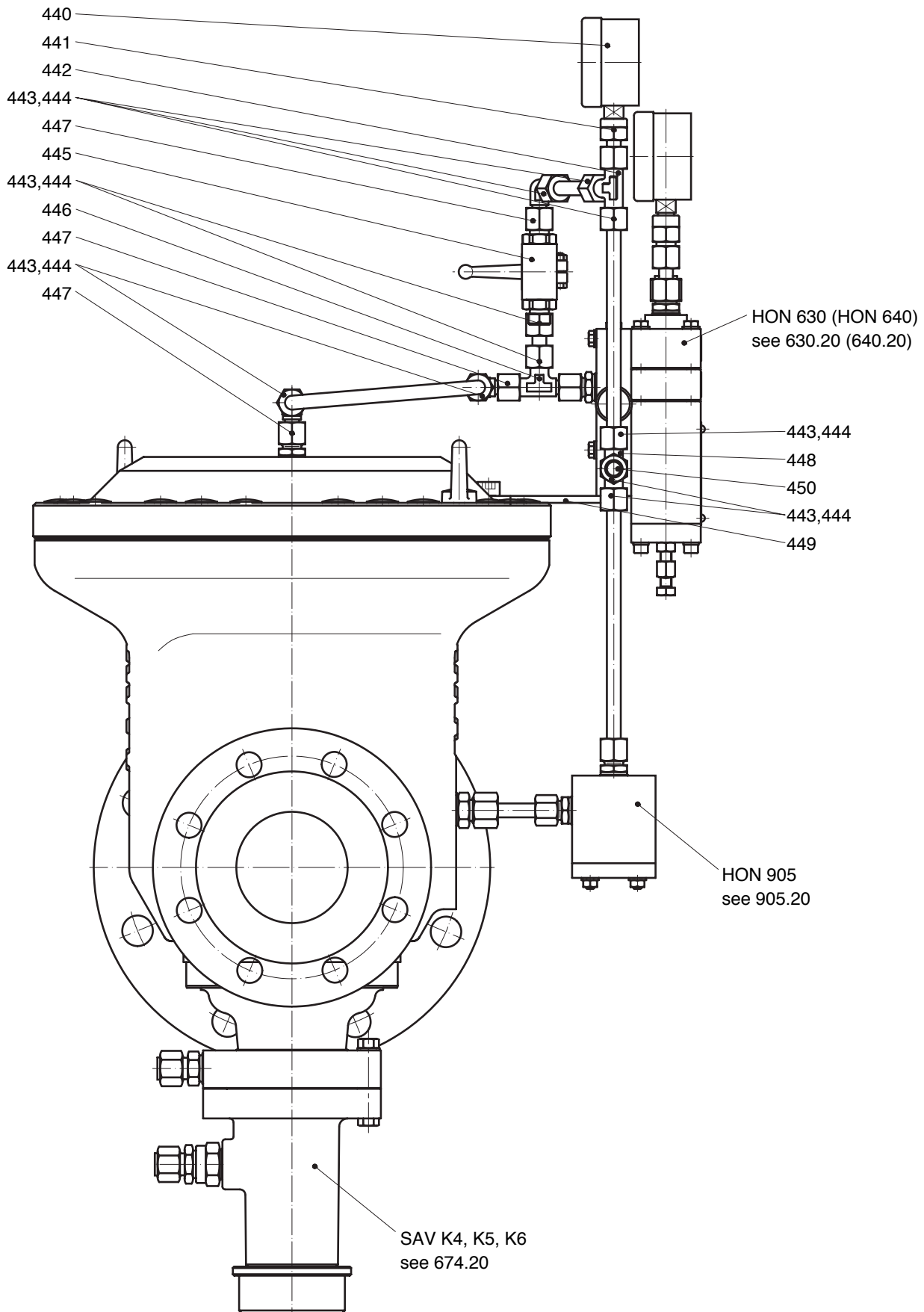
see spare parts list p. 29



4.12 Start-up valve DN_E 80 and DN_E 100 with pilot HON 620 see spare parts p. 30



4.13 Start-up valve for DN_E 80 and DN_E 100 with pilot HON 630/640
 see spare parts list p. 30



5. Spare Parts Lists

5.1 Spare Parts List HON 402 DN 25 from serial no. 951015788

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|-------------------------|------|----|----------|------------|--|--|
| 1 | cylinder screw | 1 | | St | 00 008 177 | | |
| 2 | closing spring | 1 | | NFSt | 10 024 055 | | |
| 3 | cap | 8 | | K | 00 027 786 | | |
| 4 | diaphragm plate | 1 | | LM | 10 021 489 | | |
| 5 | cylinder screw | 8 | | St | 00 008 174 | | |
| 6 | diaphragm | 1 | EV | KG | 10 011 304 | | |
| 7 | expansion piece: | 1 | | LM | 10 021 488 | | |
| 8 | o-ring | 1 | EV | KG | 00 021 074 | | |
| 9 | flow separator | 1 | | LM | 10 021 493 | | |
| 10 | o-ring | 1 | EV | KG | 00 020 243 | | |
| 11 | casing : | | | | | | |
| | pressure stage PN 16/25 | 1 | | GGG | 10 021 484 | | |
| | pressure stage ANSI 150 | 1 | | GGG | 10 021 485 | | |
| 12 | sealing ring | 3 | EV | LM | 00 018 807 | | |
| 13 | cylinder screw | 3 | | St | 00 010 318 | | |
| 14 | locking plate | 1 | | LM | 10 021 533 | | |
| 15 | cylinder screw | 4 | | St | 10 004 895 | | |

see drawing p. 8

Note Parts marked EV are to be kept in stock for maintenance

| | | |
|-------------------------------|-------------------------|--|
| St..... steel | GLM... light metal cast | Cu.... copper |
| NSt.... stainless steel | GZn... zinc cast | K.... plastic material general |
| FSt.... spring steel | MS.... brass | KG.... rubber-like plastic material |
| NFSt.. stainless spring steel | GMs... brass cast | KGt.. plastic material sprayed with Teflon |
| GS..... cast steel | Bz..... bronze | KV.... Viton |
| GGG.. cast with nodular cast | GBz.. bronze cast | KT.... Teflon |
| LM.... light metal | AlBz. aluminium bronze | PGl.... plexiglass |

5.2 Spare Parts List x 402 DNE 50 from serial no. 951015788

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|----------------------------|------|----|----------|------------|--|--|
| 1 | cylinder screw | 1 | | St | 00 008 177 | | |
| 2 | closing spring | 1 | | NFSt | 10 024 055 | | |
| 3 | cap | 8 | | K | 00 027 786 | | |
| 4 | diaphragm plate | 1 | | LM | 10 021 489 | | |
| 5 | cylinder screw | 8 | | St | 00 008 174 | | |
| 6 | diaphragm | 1 | EV | KG | 10 011 304 | | |
| 7 | expansion piece | 1 | | LM | 10 021 488 | | |
| 8 | o-ring | 1 | EV | KG | 00 021 074 | | |
| 9 | current separator | 1 | | LM | 10 021 493 | | |
| 12 | sealing ring | 3 | EV | LM | 00 018 807 | | |
| 13 | cylinder screw | 3 | | St | 00 010 318 | | |
| 50 | o-ring | 1 | EV | KV | 00 020 752 | | |
| 51 | disc | 1 | | St | 10 008 559 | | |
| 52 | casing: DN 50/50 | | | | | | |
| | pressure stage PN16/25 | 1 | | GGG | 10 021 498 | | |
| | pressure stage ANSI 150 | 1 | | GGG | 10 021 499 | | |
| | casing: DN 50/50 | | | | | | |
| | pressure stage PN 16/25/40 | 1 | | GS | 10 023 235 | | |
| | pressure stage ANSI 150 | 1 | | GS | 10 023 237 | | |
| | pressure stage ANSI 300 | 1 | | GS | 10 023 239 | | |
| | casing : DN 50/100 | | | | | | |
| | pressure stage PN 16 | 1 | | GS | 10 021 856 | | |
| | pressure stage PN 25/40 | 1 | | GS | 10 021 857 | | |
| | pressure stage ANSI 150 | 1 | | GS | 10 021 858 | | |
| | pressure stage ANSI 300 | 1 | | GS | 10 021 859 | | |
| 53 | o-ring | 1 | EV | KG | 00 020 246 | | |
| 54 | locking plate | 1 | | LM | 10 007 475 | | |
| 55 | disc | 4 | EV | St | 00 014 113 | | |
| 56 | hexagon nut | 4 | | St | 00 005 692 | | |
| 57 | locking screw | 4 | | St | 00 012 376 | | |

see drawing p. 9

Note Parts marked by EV are to be kept in stock for maintenance

| | | |
|-------------------------------|-------------------------|--|
| St..... steel | GLM... light metal cast | Cu.... copper |
| NSt.... stainless steel | GZn... zinc cast | K..... plastic material general |
| FSt.... spring steel | MS.... brass | KG.... rubber-like plastic material |
| NFSt.. stainless spring steel | GMs...brass cast | KGt.. plastic material sprayed with Teflon |
| GS..... cast steel | Bz..... bronze | KV.... Viton |
| GGG.. cast with nodular cast | GBz.. bronze cast | KT.... Teflon |
| LM.... light metal | AIBz. aluminium bronze | PGI.... plexiglass |

5.3 Spare Parts List HON 402 DN 80, DN 80/150 from serial no. 950414600

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|------------------------------|------|----|----------|------------|--|--|
| 101 | closing spring | 1 | | NFSt | 10 023 245 | | |
| 102 | ring | 1 | EV | K | 10 024 056 | | |
| 103 | cylinder screw | 1 | | St | 00 010 620 | | |
| 104 | diaphragm plate | 1 | | LM | 10 024 111 | | |
| 105 | ring | 1 | EV | K | 10 024 057 | | |
| 106 | cylinder screw | 16 | | St | 00 008 174 | | |
| 107 | diaphragm | 1 | EV | KG | 10 011 305 | | |
| 108 | expansion piece | 1 | | LM | 10 021 812 | | |
| 109 | sealing ring | 4 | EV | LM | 00 018 818 | | |
| 110 | o-ring | 1 | EV | KG | 00 021 075 | | |
| 111 | cylinder screw | 4 | | St | 00 010 320 | | |
| 112 | current separator | 1 | | LM | 10 011 237 | | |
| 113 | casing: DN 80 | | | | | | |
| | pressure stage PN 16/25 | 1 | | GGG | 10 021 776 | | |
| | pressure stage ANSI 150 | 1 | | GGG | 10 021 777 | | |
| | pressure stage PN 16 | 1 | | GS | 10 023 271 | | |
| | pressure stage PN 25/40 | 1 | | GS | 10 023 273 | | |
| | pressure stage ANSI 150 | 1 | | GS | 10 023 275 | | |
| | pressure stage ANSI 300 | 1 | | GS | 10 023 277 | | |
| | casing: DN 80/150 | | | | | | |
| | pressure stage PN 16 | 1 | | GS | 10 023 255 | | |
| | pressure stage PN 25/40 | 1 | | GS | 10 023 254 | | |
| | pressure stage ANSI 150 | 1 | | GS | 10 023 256 | | |
| | pressure stage ANSI 300 | 1 | | GS | 10 023 257 | | |
| 114 | o-ring | 1 | EV | KV | 00 020 752 | | |
| 115 | disc | 1 | | St | 10 008 559 | | |
| 116 | closing plate | 1 | | LM | 10 007 675 | | |
| 117 | o-ring | 1 | EV | KG | 00 020 427 | | |
| 118 | disc | 4 | | St | 00 014 114 | | |
| 119 | hexagon nut | 4 | | St | 00 013 120 | | |
| 120 | locking screw | 4 | | St | 00 012 212 | | |
| 121 | nozzle | 1 | | St | 00 030 154 | | |
| 122 | compression joint | 1 | | St | 00 030 903 | | |
| 123 | cap nut | 1 | | St | 00 030 802 | | |
| 124 | sealing ring | 3 | EV | LM | 00 018 694 | | |
| 125 | locking screw (with bore) | 1 | | St | 10 021 474 | | |
| 126 | locking screw (without bore) | 2 | | St | 00 010 381 | | |

see drawing p. 10

Note Parts marked by EV are to be kept in stock for maintenance

| | | |
|-------------------------------|-------------------------|--|
| St..... steel | GLM... light metal cast | Cu.... copper |
| NSt.... stainless steel | GZn... zinc cast | K..... plastic material general |
| FSt.... spring steel | MS.... brass | KG.... rubber-like plastic material |
| NFSt.. stainless spring steel | GMs...brass cast | KGT.. plastic material sprayed with Teflon |
| GS..... cast steel | Bz..... bronze | KV.... Viton |
| GGG.. cast with nodular cast | GBz.. bronze cast | KT.... Teflon |
| LM.... light metal | AIBz. aluminium bronze | PGI.... plexiglass |

5.4 Spare Parts List HON 402 DN100, DN100/200 from serial number 950414600

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|------------------------------|------|----|----------|------------|--|--|
| 101 | closing spring | 1 | | NFSt | 10 023 245 | | |
| 102 | ring | 1 | EV | K | 10 024 044 | | |
| 103 | cylinder screw | 1 | | St | 00 010 620 | | |
| 104 | diaphragm plate | 1 | | LM | 10 024 111 | | |
| 105 | ring | 1 | EV | K | 10 023 632 | | |
| 106 | cylinder screw | 16 | | St | 00 008 174 | | |
| 107 | diaphragm | 1 | EV | KG | 10 011 305 | | |
| 108 | expansion piece | 1 | | LM | 10 021 812 | | |
| 109 | sealing ring | 4 | EV | LM | 00 018 818 | | |
| 110 | o-ring | 1 | EV | KG | 00 021 075 | | |
| 111 | cylinder screw | 4 | | St | 00 010 320 | | |
| 112 | current separator | 1 | | LM | 10 011 237 | | |
| 113 | casing: DN 100 | | | | | | |
| | pressure stage PN 16 | 1 | | GGG | 10 021 778 | | |
| | pressure stage PN 25 | 1 | | GGG | 10 021 933 | | |
| | pressure stage ANSI 150 | 1 | | GGG | 10 021 779 | | |
| | pressure stage PN 16 | 1 | | GS | 10 023 780 | | |
| | pressure stage PN 25/40 | 1 | | GS | 10 023 782 | | |
| | pressure stage ANSI 150 | 1 | | GS | 10 023 784 | | |
| | pressure stage ANSI 300 | 1 | | GS | 10 023 786 | | |
| | casing: DN 100/200 premoun. | | | | | | |
| | pressure stage PN 16 | 1 | | St/GS | 10 021 901 | | |
| | pressure stage PN 25 | 1 | | St/GS | 10 021 903 | | |
| | pressure stage PN 40 | 1 | | St/GS | 10 021 902 | | |
| | pressure stage ANSI 150 | 1 | | St/GS | 10 021 904 | | |
| | pressure stage ANSI 300 | 1 | | St/GS | 10 021 905 | | |
| 114 | o-ring | 1 | EV | KV | 00 020 752 | | |
| 115 | disc | 1 | | St | 10 008 559 | | |
| 116 | locking plate | 1 | | LM | 10 007 675 | | |
| 117 | o-ring | 1 | EV | KG | 00 020 427 | | |
| 118 | disc | 4 | | St | 00 014 114 | | |
| 119 | hexagonal nut | 4 | | St | 00 013 120 | | |
| 120 | locking screw | 4 | | St | 00 012 212 | | |
| 121 | nozzle | 1 | | St | 00 030 154 | | |
| 122 | compression joint | 1 | | St | 00 030 903 | | |
| 123 | cap nut | 1 | | St | 00 030 802 | | |
| 124 | sealing ring | 3 | EV | LM | 00 018 694 | | |
| 125 | locking screw (with bore) | 1 | | St | 10 021 474 | | |
| 126 | locking screw (without bore) | 2 | | St | 00 010 381 | | |

see drawing p.10

Note Parts marked by EV are to be kept in stock for maintenance

| | | |
|-------------------------------|-------------------------|--|
| St..... steel | GLM... light metal cast | Cu.... copper |
| NSt.... stainless steel | GZn... zinc cast | K..... plastic material general |
| FSt.... spring steel | MS.... brass | KG.... rubber-like plastic material |
| NFSt.. stainless spring steel | GMs...brass cast | KGT.. plastic material sprayed with Teflon |
| GS..... cast steel | Bz..... bronze | KV.... Viton |
| GGG.. cast with nodular cast | GBz.. bronze cast | KT.... Teflon |
| LM.... light metal | AlBz. aluminium bronze | PGL... plexiglass |

5.5 Spare Parts List HON 402 / 620, DN 25, DN 50, DN 50/100

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|---------------------|------|----|----------|------------|--|--|
| 200 | spring housing | 1 | | St/LM | 10 021 433 | | |
| 201 | cap | 4 | | K | 00 026 067 | | |
| 202 | spring plate | | | | | | |
| | for spring 10000139 | 2 | | LM | 10 000 114 | | |
| | for spring 10000063 | 2 | | LM | 10 000 114 | | |
| | for spring 10000115 | 2 | | LM | 10 000 114 | | |
| | for spring 10000064 | 2 | | LM | 10 000 148 | | |
| | for spring 10000149 | 2 | | LM | 10 000 148 | | |
| 203 | setpoint spring : | | | | | | |
| | pressure range | | | | | | |
| | 0020 - 0200 mbar | 1 | | FSt | 10 000 139 | | |
| | 0100 - 0500 mbar | 1 | | FSt | 10 000 063 | | |
| | 0200 - 1000 mbar | 1 | | FSt | 10 000 115 | | |
| | 0500 - 2000 mbar | 1 | | FSt | 10 000 064 | | |
| | 1000 - 4000 mbar | 1 | | FSt | 10 000 149 | | |
| 204 | cylinder screw | 4 | | St | 00 010 542 | | |
| 205 | o-ring | 1 | EV | KG | 00 020 293 | | |
| 206 | cap | 8 | | K | 00 026 067 | | |
| 207 | cylinder screw | 8 | | St | 00 010 542 | | |
| 208 | diaphragm cap | 1 | | St/LM | 10 021 432 | | |
| 209 | diaphragm casing | 1 | | LM | 10 021 431 | | |
| 210 | diaphragm | 2 | EV | KG | 10 021 437 | | |
| 211 | diaphragm plate | 2 | | LM | 10 021 435 | | |
| 212 | cylinder screw | 8 | | St | 00 010 318 | | |
| 213 | diaphragm cap | 1 | | St | 10 023 240 | | |
| 214 | diaphragm plate | 2 | | LM | 10 021 436 | | |
| 215 | pressure spring | 1 | | NFSt | 10 012 616 | | |
| 216 | bolt | 4 | | NSt | 10 021 434 | | |
| 217 | o-ring | 4 | EV | KG | 00 020 226 | | |
| 218 | setpoint spring | 1 | | NSt | 10 002 795 | | |
| 219 | hexagon nut | 1 | | St | 00 013 136 | | |
| 220 | HON 915 | 1 | | - | 10 010 570 | | |
| 221 | cap nut | 3 | | St | 00 030 804 | | |
| 222 | compression joint | 3 | | St | 00 030 904 | | |
| 223 | throttle ø 2,0 | 1 | | Ms | 10 005 095 | | |
| 224 | nozzle | 1 | | St | 10 007 642 | | |
| 225 | sealing ring | 2 | EV | LM | 00 018 694 | | |

see drawing p. 12

Note Parts marked by EV are to be kept in stock for maintenance

| | | |
|-------------------------------|-------------------------|--|
| St..... steel | GLM... light metal cast | Cu.... copper |
| NSt.... stainless steel | GZn... zinc cast | K..... plastic material general |
| FSt.... spring steel | MS.... brass | KG.... rubber-like plastic material |
| NFSt.. stainless spring steel | GMs...brass cast | KGT.. plastic material sprayed with Teflon |
| GS..... cast steel | Bz..... bronze | KV.... Viton |
| GGG.. cast with nodular cast | GBz.. bronze cast | KT.... Teflon |
| LM.... light metal | AlBz. aluminium bronze | PGI.... plexiglass |

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|-----------------------------|------|----|----------|------------|--|--|
| 226 | nozzle | 1 | | St | 10 007 642 | | |
| 227 | throttle ø 3,0 | 1 | | NSt | 10 005 098 | | |
| 228 | nozzle | 1 | | St | 00 030 169 | | |
| 229 | sealing ring | 1 | EV | LM | 00 018 787 | | |
| 230 | small connecting tube ø 1,5 | 1 | | NSt | 10 021 442 | | |
| 231 | o-ring | 2 | EV | KG | 00 020 226 | | |
| 232 | sealing ring | 1 | EV | LM | 00 018 842 | | |
| 233 | nozzle | 1 | | St | 10 000 714 | | |
| 234 | throttle ø 0,8 | 1 | | Ms | 10 020 474 | | |
| 235 | cap nut | 1 | | St | 00 030 803 | | |
| 236 | compression ring | 1 | | St | 00 030 903 | | |
| 237 | ring screw | 2 | | St | 00 010 597 | | |
| 238 | o-ring | 1 | | KG | 00 020 341 | | |
| 239 | orifice ø 1,5 | 1 | | Ms | 10 021 438 | | |
| 240 | piston guide | 1 | | NSt | 10 021 441 | | |
| 241 | piston, premounted | 1 | EV | | 10 021 426 | | |
| 242 | ring | 1 | | LM | 18 356 283 | | |

see drawing p. 12

Note Parts marked by EV are to be kept in stock for maintenance

| | | |
|-------------------------------|-------------------------|--|
| St..... steel | GLM... light metal cast | Cu.... copper |
| NSt.... stainless steel | GZn... zinc cast | K..... plastic material general |
| FSt.... spring steel | MS.... brass | KG.... rubber-like plastic material |
| NFSt.. stainless spring steel | GMs...brass cast | KGT.. plastic material sprayed with Teflon |
| GS..... cast steel | Bz..... bronze | KV.... Viton |
| GGG.. cast with nodular cast | GBz.. bronze cast | KT.... Teflon |
| LM.... light metal | AlBz. aluminium bronze | PGI.... plexiglass |

5.6 Spare Parts List H O N 402/620 DN80, DN80/150; DN100, DN100/200

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|---------------------|------|----|----------|------------|--|--|
| 200 | spring housing | 1 | | St/LM | 10 021 433 | | |
| 201 | cap | 4 | | K | 00 026 067 | | |
| 202 | spring plate | | | | | | |
| | for spring 10000139 | 2 | | LM | 10 000 114 | | |
| | for spring 10000063 | 2 | | LM | 10 000 114 | | |
| | for spring 10000115 | 2 | | LM | 10 000 114 | | |
| | for spring 10000064 | 2 | | LM | 10 000 148 | | |
| | for spring 10000149 | 2 | | LM | 10 000 148 | | |
| 203 | setpoint spring: | | | | | | |
| | pressure range | | | | | | |
| | 0020 - 0200 mbar | 1 | | FSt | 10 000 139 | | |
| | 0100 - 0500 mbar | 1 | | FSt | 10 000 063 | | |
| | 0200 - 1000 mbar | 1 | | FSt | 10 000 115 | | |
| | 0500 - 2000 mbar | 1 | | FSt | 10 000 064 | | |
| | 1000 - 4000 mbar | 1 | | FSt | 10 000 149 | | |
| 204 | cylinder screw | 4 | | St | 00 010 542 | | |
| 205 | o-ring | 1 | EV | KG | 00 020 293 | | |
| 206 | cap | 8 | | K | 00 026 067 | | |
| 207 | cylinder screw | 8 | | St | 00 010 542 | | |
| 208 | diaphragm cap | 1 | | St/LM | 10 021 432 | | |
| 209 | diaphragm casing | 1 | | LM | 10 021 431 | | |
| 210 | diaphragm | 2 | EV | KG | 10 021 437 | | |
| 211 | diaphragm plate | 2 | | LM | 10 021 435 | | |
| 212 | cylinder screw | 8 | | St | 00 010 318 | | |
| 214 | diaphragm plate | 2 | | LM | 10 021 436 | | |
| 215 | pressure spring | 1 | | NFSt | 10 012 616 | | |
| 216 | bolt | 4 | | NSt | 10 021 434 | | |
| 217 | o-ring | 4 | EV | KG | 00 020 226 | | |
| 218 | setpoint screw | 1 | | NSt | 10 002 795 | | |
| 219 | hexagon nut | 1 | | St | 00 013 136 | | |
| 220 | RMG 915 | 1 | | - | 10 010 570 | | |
| 221 | cap nut | 3 | | St | 00 030 804 | | |
| 222 | compression joint | 3 | | St | 00 030 904 | | |
| 223 | throttle ø 2,0 | 1 | | Ms | 10 005 095 | | |
| 224 | nozzle | 1 | | St | 10 007 642 | | |
| 225 | sealing ring | 3 | EV | LM | 00 018 694 | | |

see drawing p. 13

Note Parts marked by EV are to be kept in stock for maintenance

| | | |
|-------------------------------|-------------------------|--|
| St..... steel | GLM... light metal cast | Cu.... copper |
| NSt.... stainless steel | GZn... zinc cast | K..... plastic material general |
| FSt.... spring steel | MS.... brass | KG.... rubber-like plastic material |
| NFSt.. stainless spring steel | GMS...brass cast | KGt.. plastic material sprayed with Teflon |
| GS..... cast steel | Bz..... bronze | KV.... Viton |
| GGG.. cast with nodular cast | GBz.. bronze cast | KT.... Teflon |
| LM.... light metal | AIBz. aluminium bronze | PGI.... plexiglass |

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|-----------------------------|------|----|----------|------------|--|--|
| 230 | small connecting tube ø 3,0 | 1 | | NSt | 10 021 871 | | |
| 231 | o-ring | 2 | EV | KG | 00 020 226 | | |
| 232 | sealing ring | 1 | EV | LM | 00 018 842 | | |
| 233 | nozzle | 1 | | St | 10 000 714 | | |
| 234 | throttle ø1,5 | 1 | | NSt | 10 019 340 | | |
| 235 | cap nut | 1 | | St | 00 030 803 | | |
| 236 | compression joint | 1 | | St | 00 030 903 | | |
| 238 | o-ring | 1 | EV | KG | 00 020 341 | | |
| 239 | orifice ø 3,0 | 1 | | Ms | 10 021 852 | | |
| 240 | piston guide | 1 | | NSt | 10 021 441 | | |
| 241 | piston, premounted | 1 | EV | | 10 021 426 | | |
| 300 | diaphragm cap | 1 | | St | 10 024 112 | | |
| 301 | nozzle | 2 | | St | 10 007 642 | | |
| 302 | suspension bush | 1 | | Ms | 10 021 850 | | |
| 303 | compensating element | 1 | EV | | 10 021 899 | | |
| 304 | o-ring | 1 | EV | KG | 00 021 047 | | |
| 305 | nozzle | 1 | | St | 00 030 023 | | |
| 306 | ring screw | 2 | | St | 00 010 487 | | |

Note Parts marked by EV are to be kept in stock for maintenance

| | | |
|-------------------------------|-------------------------|--|
| St..... steel | GLM... light metal cast | Cu.... copper |
| NSt.... stainless steel | GZn... zinc cast | K..... plastic material general |
| FSt.... spring steel | MS.... brass | KG.... rubber-like plastic material |
| NFSt.. stainless spring steel | GMs...brass cast | KGT.. plastic material sprayed with Teflon |
| GS..... cast steel | Bz..... bronze | KV.... Viton |
| GGG.. cast with nodular cast | GBz.. bronze cast | KT.... Teflon |
| LM.... light metal | AlBz. aluminium bronze | PGI.... plexiglass |

5.7 Type with HON 630 / 640

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|-----------------------------------|------|----|----------|------------|--|--|
| 182 | nozzle (only DN 25 and DNE 50) | 1 | | St | 00 030 023 | | |
| 183 | nozzle | 1 | | St | 00 030 111 | | |
| 184 | cap nut (only DN 25, DNE 50) | 1 | | St | 00 030 803 | | |
| 185 | compression joint | 1 | | St | 00 030 903 | | |
| 186 | sealing ring | 1 | EV | LM | 00 018 842 | | |
| 187 | diaphragm cap DN 25 and DNE 50 | 1 | | St | 10 021 889 | | |
| | diaphragm cap DNE 80 and DNE 100 | 1 | | St | 10 024 113 | | |
| 188 | cylinder screw DN 25 u.DNE 50 | 14 | | St | 00 010 400 | | |
| | cylinder screw DNE 80 and DNE 100 | 24 | | St | 00 008 174 | | |

see drawing p.11

5.8 Type with noise reduction

5.8.1 DN_E 25 and DN_E 50

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|----------------------|------|----|----------|------------|--|--|
| 180 | noise reduction/ring | 1 | | | 10 024 014 | | |
| 181 | expansion | 1 | | LM | 10 024 010 | | |

see drawing p.11

5.8.2 DN_E 80 and DN_E 100 :

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|-----------------------|------|----|----------|------------|--|--|
| 180 | noise reduction /ring | 1 | | | 10 024 015 | | |
| 181 | expansion piece | 1 | | LM | 10 024 011 | | |

see drawing p.11

Note Parts marked by EV are to be kept in stock for maintenance

| | | |
|-------------------------------|-------------------------|---|
| St..... steel | GLM... light metal cast | Cu.... copper |
| NSt.... stainless steel | GZn... zinc cast | K..... plastic material general |
| FSt.... spring steel | MS.... brass | KG.... rubber-like plastic material |
| NFSt.. stainless spring steel | GMs...brass cast | KGt... plastic material sprayed with Teflon |
| GS..... cast steel | Bz..... bronze | KV.... Viton |
| GGG.. cast with nodular cast | GBz.. bronze cast | KT.... Teflon |
| LM.... light metal | AIBz aluminium bronze | PGl.... plexiglass |

5.9 Type with SAV HON 720/721 from DNE 50

SAV-remote indication (673.20 is valid for SAV HON 673 K 1a, K 2a)

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|--|------|----|----------|------------|--|--|
| 190 | section amplifier | 1 | | - | 00 024 402 | | |
| 191 | cable socket 90° | 1 | | K | 00 024 099 | | |
| 192 | SAV-remote indication consist. of final control element: (see pos. 52 , 113) | | | | | | |
| | for DN 50/50 GGG | 1 | | - | 10 021 832 | | |
| | for DN 50/50 GS | 1 | | - | 10 021 838 | | |
| | for DN 50/100 GS | 1 | | - | 10 021 838 | | |
| | for DN 80/80 GGG | 1 | | - | 10 021 832 | | |
| | for DN 80/80 GS | 1 | | - | 10 021 832 | | |
| | for DN 80/150 GS | 1 | | - | 10 021 837 | | |
| | for DN 100/100 GGG | 1 | | - | 10 021 832 | | |
| | for DN 100/100 GS | 1 | | - | 10 021 837 | | |
| | for DN 100/200 GS | 1 | | - | 10 021 839 | | |

see drawing p.11

5.9.1 Type without SAV HON 720 and SAV HON 721 from DNE 50

| | | | | | | | |
|-----|---------------|---|----|----|------------|--|--|
| 193 | locking screw | 1 | | St | 00 010 381 | | |
| 194 | sealing ring | 1 | EV | LM | 00 018 694 | | |

see drawing p.11

5.9.2 Type without SAV-remote indication from DNE 50 with SAV HON 720/721

| | | | | | | | |
|-----|---------------|---|----|----|------------|--|--|
| 193 | locking screw | 1 | | St | 10 021 474 | | |
| 194 | sealing ring | 1 | EV | LM | 00 018 694 | | |

see drawing p.11

Note Parts marked by EV are to be kept in stock for maintenance

| | | |
|-------------------------------|-------------------------|--|
| St..... steel | GLM... light metal cast | Cu.... copper |
| NSt.... stainless steel | GZn... zinc cast | K..... plastic material general |
| FSt.... spring steel | MS.... brass | KG.... rubber-like plastic material |
| NFSt.. stainless spring steel | GMs..Messing-Guß | KGT.. plastic material sprayed with Teflon |
| GS..... cast steel | Bz..... bronze | KV.... Viton |
| GGG.. cast with nodular cast | GBz.. bronze cast | KT.... Teflon |
| LM.... light metal | AlBz. aluminium bronze | PGI.... plexiglass |

5.10 Piping HON 402 DN 25 - Type with pilot HON 620

(see page 14)

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|-------------------|------|----|----------|------------|--|--|
| 400 | cap nut | 2 | | St | 00 030 803 | | |
| 401 | compression joint | 1 | | St | 00 030 903 | | |
| 402 | screw connection | 1 | | St | 00 030 622 | | |
| 403 | cap nut | 1 | | St | 00 030 802 | | |
| 404 | compression joint | 1 | | St | 00 030 903 | | |
| 405 | nozzle | 1 | | St | 00 030 154 | | |
| 406 | locking body | 1 | | St | 00 032 004 | | |

5.11 Piping HON 402 DN 50 - Type with pilot HON 620

(see page 15)

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|-------------------|------|----|----------|------------|--|--|
| 410 | cap nut | 2 | | St | 00 030 803 | | |
| 411 | compression joint | 1 | | St | 00 030 903 | | |
| 412 | screw connection | 1 | | St | 00 030 622 | | |
| 413 | cap nut | 1 | | St | 00 030 802 | | |
| 414 | compression joint | 1 | | St | 00 030 903 | | |
| 415 | nozzle | 1 | | St | 00 030 154 | | |
| 416 | locking body | 1 | | St | 00 032 004 | | |

5.12 Start-up valve HON 402 DN 25 and DN 50 Type with pilot HON 630/640

(see page 16)

| pos. no. | description | Qty. | EV | material | stock no. | | |
|----------|----------------------------|------|----|----------|------------|--|--|
| 420 | manometer : | | | | | | |
| | type PN 16 | 1 | | - | 00 026 314 | | |
| | type PN 25 / ANSI 150 | 1 | | - | 00 026 284 | | |
| | type PN 40 | 1 | | - | 00 026 282 | | |
| | type ANSI 300 | 1 | | - | 00 026 283 | | |
| | (pe max = 40 bar) | | | | | | |
| 421 | manometer screw connection | 1 | | St | 00 031 810 | | |
| 422 | screw connection | 1 | | St | 00 031 439 | | |
| 423 | cap nut | 8 | | St | 00 030 803 | | |
| 424 | compression joint | 7 | | St | 00 030 902 | | |
| 425 | screw connection | 1 | | St | 00 031 609 | | |
| 426 | ball valve | 1 | | St | 00 026 457 | | |
| 427 | locking body | 1 | | St | 00 032 004 | | |

see drawing p. 14, 15, 16

Note Parts marked by EV are to be kept in stock for maintenance

| | | |
|-------------------------------|-------------------------|--|
| St..... steel | GLM... light metal cast | Cu..... copper |
| NSt.... stainless steel | GZn... zinc cast | K..... plastic material general |
| FSt.... spring steel | MS.... brass | KG.... rubber-like plastic material |
| NFSt.. stainless spring steel | GMS...brass cast | KGt.. plastic material sprayed with Teflon |
| GS..... cast steel | Bz..... bronze | KV.... Viton |
| GGG.. cast with nodular cast | GBz.. bronze cast | KT.... Teflon |
| LM.... light metal | AIBz. aluminium bronze | PGI.... plexiglass |

5.13 Piping HON 402 DNE 80 and DNE 100 Type: with pilot HON 620

(see page 17)

| pos. no. | description | Qty. | EV | material | stock no. |
|----------|-------------------|------|----|----------|------------|
| 430 | ball valve | 1 | | St | 00 026 457 |
| 431 | cap nut | 4 | | St | 00 030 803 |
| 432 | compression joint | 3 | | St | 00 030 903 |
| 433 | screw connection | 2 | | St | 00 030 622 |
| 434 | screw connection | 3 | | St | 00 031 207 |
| 435 | locking body | 1 | | St | 00 032 004 |

5.14 Piping HON 402 DNE 80 and DNE 100 Type: with pilot HON 630/640

(see page 18)

| pos. no. | description | Qty. | EV | material | stock no. |
|----------|----------------------------|------|----|----------|------------|
| 440 | manometer: | | | | |
| | type PN 16 | 1 | | - | 00 026 314 |
| | type PN 25 / ANSI 150 | 1 | | - | 00 026 284 |
| | type PN 40 | 1 | | - | 00 026 282 |
| | type ANSI 300 | 1 | | - | 00 026 283 |
| | (pe max = 40 bar) | | | - | |
| 441 | manometer screw connection | 1 | | St | 00 031 810 |
| 442 | screw connection | 1 | | St | 00 031 439 |
| 443 | cap nut | 11 | | St | 00 030 803 |
| 444 | compression joint | 10 | | St | 00 030 903 |
| 445 | ball valve | 1 | | St | 00 026 457 |
| 446 | screw connection | 1 | | St | 00 030 622 |
| 447 | screw connection | 3 | | St | 00 031 207 |
| 448 | screw connection | 1 | | St | 00 031 609 |
| 449 | plate (only for HON 630) | 1 | | St | 10 024 043 |
| 450 | locking body | 1 | | St | 00 032 004 |

see drawing p. 17, 18

Note Parts marked by EV are to be kept in stock for maintenance

| | | |
|-------------------------------|-------------------------|--|
| St..... steel | GLM... light metal cast | Cu..... copper |
| NSt.... stainless steel | GZn... zinc cast | K..... plastic material general |
| FSt.... spring steel | MS.... brass | KG.... rubber-like plastic material |
| NFSt.. stainless spring steel | GMs..Messing-Guß | KGT.. plastic material sprayed with Teflon |
| GS..... cast steel | Bz..... bronze | KV.... Viton |
| GGG.. cast with nodular cast | GBz.. bronze cast | KT.... Teflon |
| LM.... light metal | AlBz.. aluminium bronze | PGL.... plexiglass |

6. Special Operation and Maintenance Instructions - SAV Honeywell System 721

6.1 Switch gear HON 721

6.1.2 Opening of the safety shut-off valve SAV with lever opening mechanism

(type from year of construction 1997, see spare parts drawing on page 36)

- Screw off the cap (548).
- Screw the handle (549) out of the cover casing by turning to the left until the jack lever can be pushed outwards.
- Keep the jack lever pressed while turning clockwise, until it rests on the cover casing. When turning further clockwise the pressure compensating valve is automatically opened. Allow some time (several seconds) for pressure compensation at the SAV-valve plate.
- Pull the SAV open.

6.1.3 Dismantling of the switch bearing (511) and of the ball bearing (529) in the switching device

- The SAV must be brought into a closing position on the control device by manual triggering
- Manual release device (542) and all control devices situated on the switching device must be dismantled.

• Type from 01/97

Unscrew the cap (548) and the handle (549).

The valve rod (514) of the switching device must be clamped with a protection stock. Release the threaded bolts (547) with an Allan key SW 6 out of the SAV-valve rod.

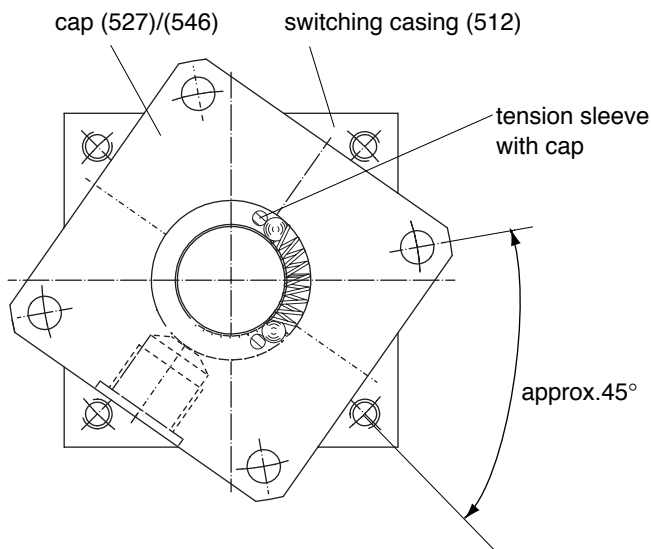
Note!

- Before lifting the cap (527)/(546) the reset-spring (544) must be released. In order to this, the cap (527)/(546) on the switching device (512) must be anti-clockwise rotated approx. of 45° (see drawing 1).

Note!

- To dismantle the switch bearing (511) from the switching casing (512), the tool (part no. 10000716) is screwed into the threaded bores which are situated in the switch bearing (511).

Drawing 1: Switching device - Release of the reset-spring



- Engaging socket (530)
The switching edge of the engaging socket should not be damaged.

Note!

- Switching balls (510)
The switching balls must be damaged and should not be slightly greased with silicone grease (see lubricant charts on page 6).

Note!

- Switch bearing (511)
The switch bearing must function easily and should not be corroded.
By the ball bearings (529) the rooms between the internal and external rings must be filled with silicone grease (see lubricant charts on page 6)

The parts must be mounted in a contrary order. The tensile rod (525)/ threaded bolt (547) must be fastened together with valve rod (514) with Loctite 241**.

** to be found in specialized stores

6.1.4 Priming adjustment of manual release device (542) onto the switch gear

- The priming adjustment of the switching device is only determined by the adjustment of the manual release device.
- Control of the priming adjustment:
all release and control devices as well as electrical magnetic releases must be taken away from the switching device.
- The SAV must be brought into an opening position.
- Mount the control device (part no. 10 001 935) with a distance screw connection (part no. 10 001 942) at any place on the switching device. (Example see drawing 2). The device is impinged with pressure, to detect with which control pressure the release mechanism is disengaged.

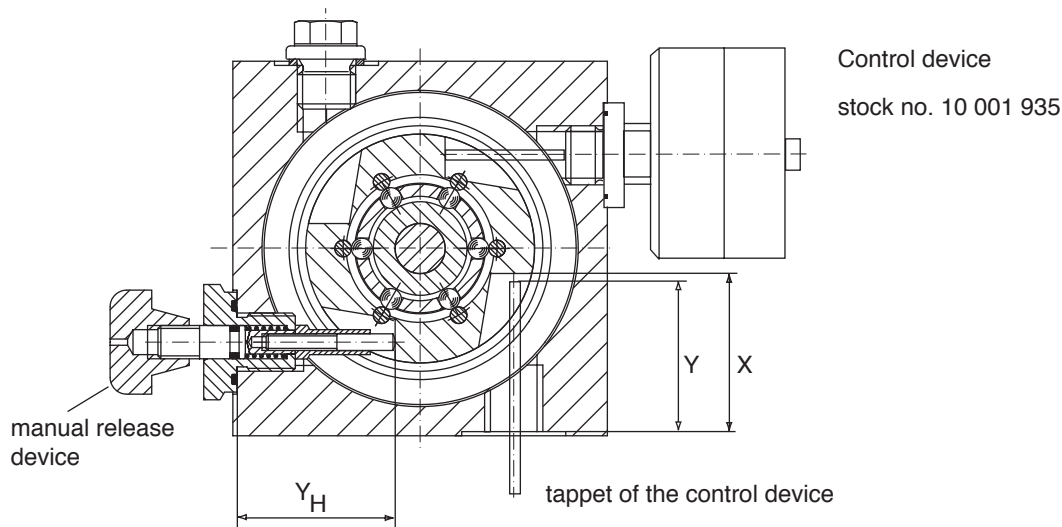
The switching pressure for the releasing must be between 0,35 and 0,4 bar.

In case of variations of those values a correction of the adjustment of the manual release device must be operated.

Switching pressure too low: Reduce the adjusting dimension Y_H on the manual release device (542)

Switching pressure too high: Increase the adjusting dimension Y_H on the manual release device (542)

Drawing 2 : Adjustment of the switching device



Modification of the adjusting dimension Y_H on the manual release device are to be carried out as follows:

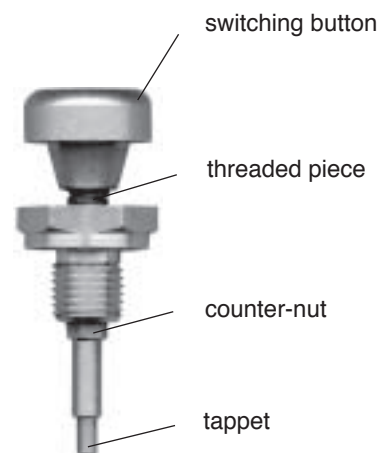
- Clamp the tappet in the vice and release the counter-nut.
- Rotate the switching button to the right -the adjusting dimension Y_H is reduced.
rotate to the left -the adjusting dimension Y_H is increased
- Assure the last adjustment with a counter-nut.

Note!

- The Y_H dimension plant-sided is marked within the switching casing (512) over the manual release device (542). For new adjustments, this dimension data must be corrected.

Caution!

- To replace the manual release device on another side of the switch device always needs controls of the priming adjustment.
- If this dimension is corrected, adjustments of all existing release devices must be controlled.



6.2 Adjustment of the switching device

All release devices (control devices, pressure converter and e-magnets) must be adjusted so that in an opening position of the SAV they have **no direct contacts with the switching surface of the switch bearing**.



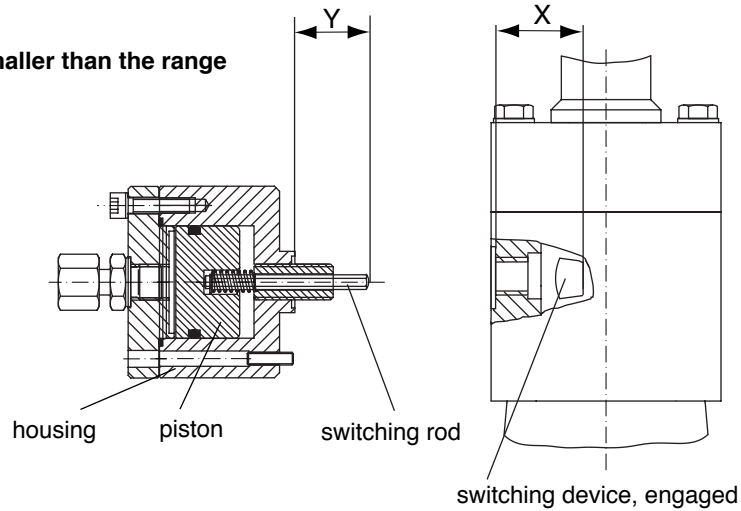
All measurement checks refer to an engaged switching device.

6.2.1 Pneumatic release for control devices with HON 670/671 (K16 /K17 pilot-operated) and pressure converter

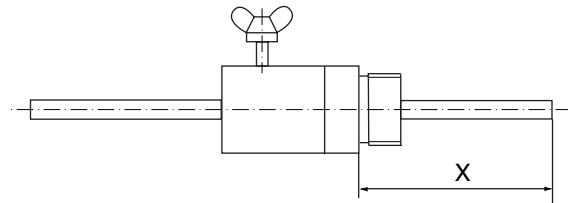
Adjusting dimension Y is smaller than the range

dimension X

$$Y = X - 2 \text{ mm}$$



To determine the range dimension X a jig (Honeywell stock no. 10 001 943) can be helpful!



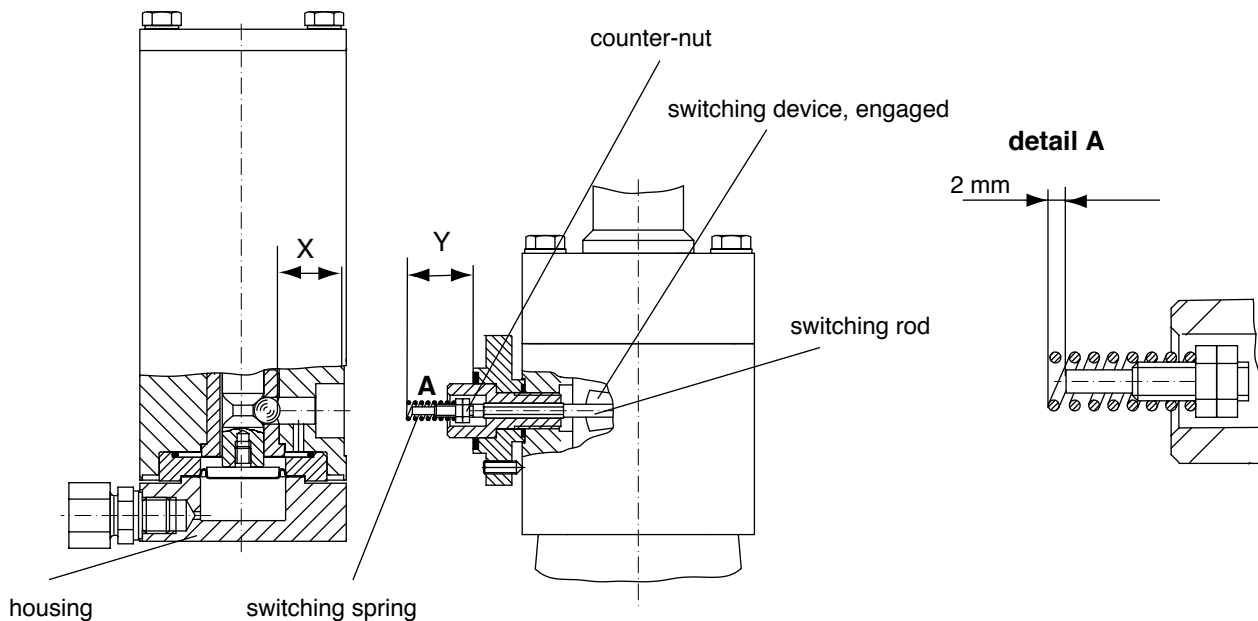
6.2.2 Pneumatic direct release with control devices HON 672 (K10a, K12 and K13)

Adjusting dimension Y = range dimension X

$$Y = X$$

Note!

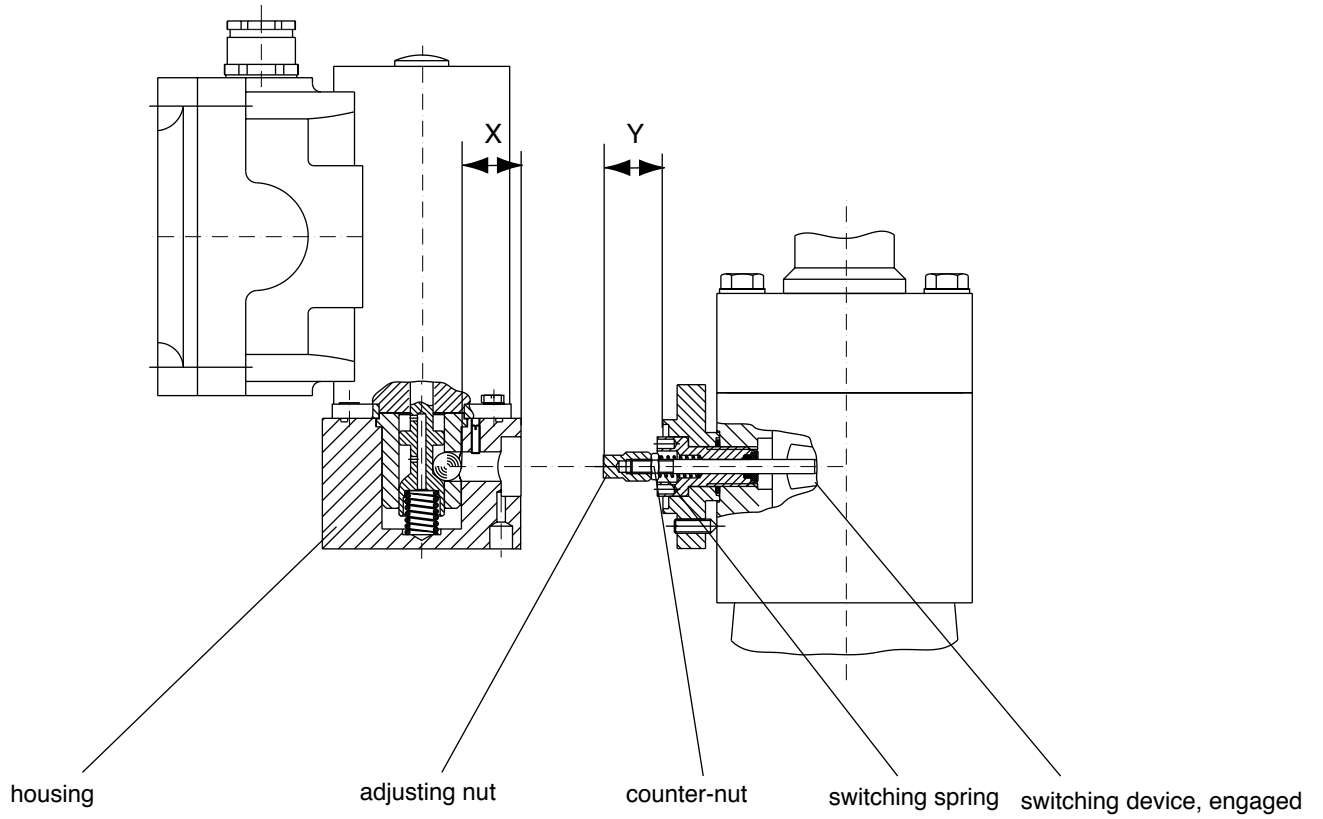
The leading edge of the switching rod must be situated at approx. 2 mm back from the spring (see detail "A").



6.2.3 Electromagnetic release by current failure

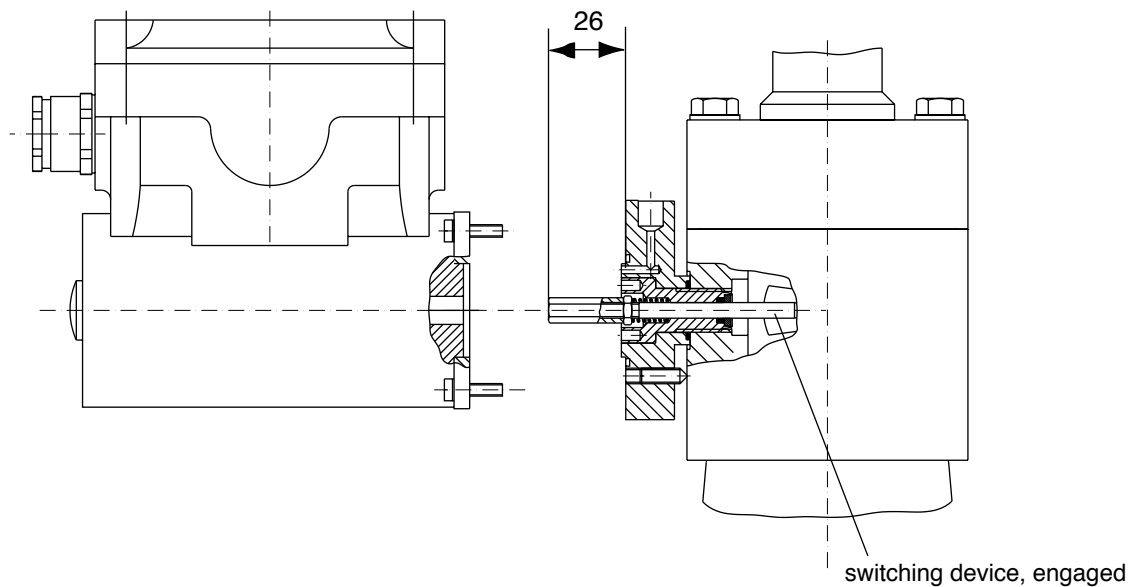
Adjusting dimension Y is smaller than the range dimension X

$$Y = X - 0,2 \text{ mm}$$

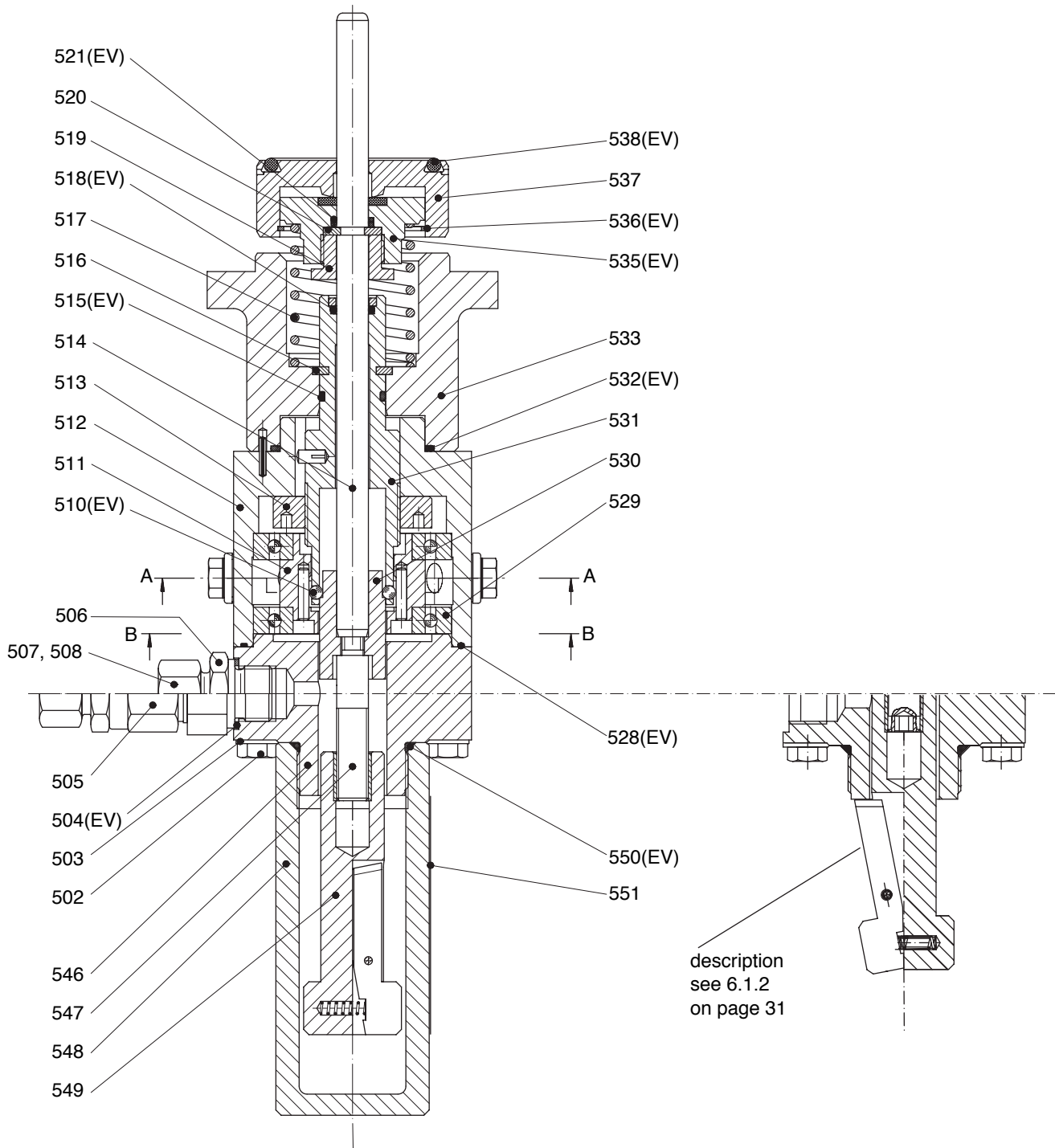


6.2.4 Electromagnetic release by current supply

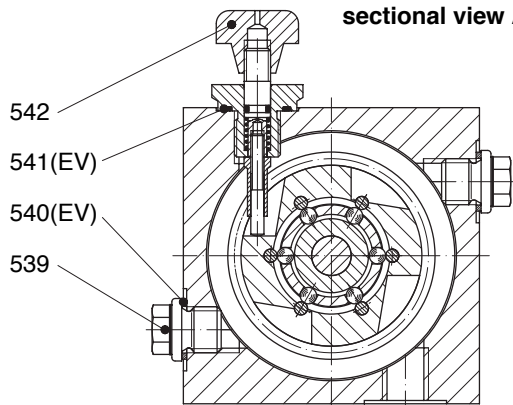
Adjusting dimension Y = 26 mm



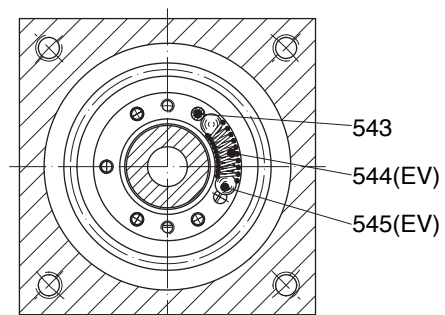
7.2 Spare Parts Drawing HON 721 switching device with lever opening mechanism



sectional view A - A



sectional view B - B



Note!

Parts marked by EV be kept in stock for maintenance

8. Spare Parts Lists SAV-system HON 721

8.1 Spare Parts List HON system 721, DNE 50, 80, 100 (type from 01/1997)

| pos. no. | description | Qty. | EV E | material | stock no. | | |
|----------|---|------|---------|----------|------------|--|--|
| 502 | hexagon screw | 4 | E | St | 00 010 398 | | |
| 503 | disc | 4 | E | St | 00 008 281 | | |
| 504 | sealing ring | 1 | EV | LM | 00 018 684 | | |
| 505* | pilot valve HON 919-1 (for type with HON 672 K 10 a) | 1 | E | | 89 190 000 | | |
| | (for type with HON 672 K 12, K 13) | 1 | E | | 89 190 100 | | |
| 506* | nozzle | 1 | E | St | 00 030 142 | | |
| 507 | cap nut | 1 | E | St | 00 030 804 | | |
| 508 | compression joint | 1 | E | St | 00 030 904 | | |
| 510 | switch ball ø 5 | 6 | E | NSt | 00 005 108 | | |
| 511 | switch bearing, premounted | 1 | E | St | 10 008 771 | | |
| 512 | switch casing, premounted | 1 | E | LM/St | 10 008 749 | | |
| 513 | two-hole nut | 1 | E | St | 10 008 761 | | |
| 514 | valve rod | 1 | E | NSt | 10 021 926 | | |
| 515 | o-ring | 1 | EV | KG | 00 020 383 | | |
| 516 | ring segment | 2 | E | St | 10 007 589 | | |
| 517 | pressure spring | 1 | E | NFSt | 10 008 577 | | |
| 518 | o-ring | 1 | EV | KV | 00 020 752 | | |
| 519 | nut | 1 | E | NSt | 10 008 614 | | |
| 520 | ring segment | 2 | E | St | 10 008 612 | | |
| 521 | o-ring | 1 | EV | KG | 00 020 412 | | |
| 528 | o-ring | 1 | EV | KG | 00 020 320 | | |
| 529 | ball bearing | 1 | E | St | 00 026 236 | | |
| 530 | engaging socket | 1 | E | St | 10 008 765 | | |
| 531 | guide cylinder, premounted | 1 | E | | 10 008 756 | | |
| 532 | o-ring | 1 | EV | KG | 00 020 413 | | |
| 533 | SAV connecting flange for DNE 50 | 1 | E | St | 10 008 500 | | |
| | for DNE 80 | 1 | E | St | 10 008 502 | | |
| | for DNE 100 | 1 | E | St | 10 008 502 | | |
| 535 | valve plate, vulkanized | 1 | EV | LM/KG | 10 008 606 | | |
| 536 | holding ring | 1 | E | FSt | 00 019 127 | | |

Note Parts marked EV to be kept in stock for maintenance

*) according to the type of the control device

| | | |
|-------------------------------------|------------------------|--|
| St..... steel | GZn... zinc cast | K..... plastic material general |
| FSt.... spring steel | MS.... brass | KG.... rubber-like plastic material |
| NFSt.. stainless spring steel | GMS..brass cast | KGT.. rubber-like plastic material sprayed with Teflon |
| NSt.... stainless steel | Bz..... bronze | KV.... Viton |
| GGG.. spheroidal graphite cast iron | GBz.. bronze cast | KT.... Teflon |
| LM.... light metal | AIBz. aluminium bronze | PGI.... plexiglass |

| pos. no. | description | amt. | EV E | material | stock no. |
|----------|--------------------------------|------|---------|----------|------------|
| 537 | valve plate bleed | | E | LM | |
| | for DNE 50 | 1 | | | 10 008 599 |
| | for DNE 80 | 1 | | | 10 008 600 |
| | for DNE 100 | 1 | | | 10 008 601 |
| 538 | o-ring, DN _E 50 | 1 | EV | KG | 00 020 596 |
| | o-ring, DN _E 80 | 1 | EV | KG | 00 020 266 |
| | o-ring, DN _E 100 | 1 | EV | KG | 00 020 268 |
| 539 | locking screw | 2 | E | St | 00 026 175 |
| 540 | sealing ring | 2 | EV | LM | 00 018 689 |
| 541 | o-ring | 1 | EV | KG | 00 020 310 |
| 542 | manual release, complete | 1 | E | | 10 001 179 |
| 543 | tension sleeve (pos. 527, 511) | | E | St | 00 017 186 |
| 544 | spring | 1 | EV | NFSt | 10 001 187 |
| 545 | ball dia. 6,35 | 2 | EV | NSt | 00 003 055 |
| 546 | lid, complete | 1 | E | LM/St | 10 025 111 |
| 547 | threaded bolt | 1 | E | NSt | 10 025 109 |
| 548 | cap M 42 x 1,5 | 1 | E | LM | 10 025 110 |
| 549 | handle, complete | 1 | E | | 10 025 106 |
| 550 | o-ring | 1 | EV | KG | 00 020 434 |
| 551 | plate | 1 | E | K | 10 025 112 |

Notice Parts marked by EV to be kept in stock for maintenance

| | | |
|-------------------------------------|------------------------|--|
| St..... steel | GZn... zink cast | K..... plastic material general |
| FSt.... spring steel | MS.... brass | KG.... rubber-like plastic material |
| NFSt.. stainless spring steel | GMs..brass cast | KGt.. rubber-like plastic material sprayed with Teflon |
| NSt.... stainless steel | Bz..... bronze | KV.... Viton |
| GGG.. spheroidal graphite cast iron | GBz.. bronze cast | KT.... Teflon |
| LM.... light metal | AIBz. aluminium bronze | PGI.... plexiglass |

For More Information

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