


OPERATING AND MAINTENANCE INSTRUCTIONS/
SPARE PARTS

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Honeywell

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1. General

Our leaflet 610.00 gives full information with technical data , different versions and dimensions of the pilot HON 610 (RS 10d).

Our brochure "General Operating Instructions for Gas Pressure Regulators and Safety Devices" will be useful to fit the valve into the line, put it into service and find faults that might disturb its operation.

The construction, set-up, supervision and maintenance of gas pressure regulating stations are subject to special technical rules which should be strictly observed, in particular those given by the DVGW Worksheets G 490, G 491, and G 495.

The frequency of periodical maintenance to be foreseen for the safety shut-off valve HON 711 should be determined according to the prevailing service conditions and the type and composition of the gaseous medium. We, therefore, abstain from imposing any fixed intervals and would rather refer you to the recommendations given by the DVGW Worksheet G 495.

For maintenance all parts are to be cleaned and subjected to a thorough visual inspection. A visual inspection should not be omitted when the course of operation or performance tests have shown lack of response accuracy. Particular care should be given to the checking of sealings and diaphragms, as well as of all carrying and movable parts, engagement and release systems of the tripping and measuring devices and of closing springs. 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.

We recommend to keep all parts that are specially marked in the spare parts lists in stock for prompt maintenance availability.

2. Special Operation Instructions

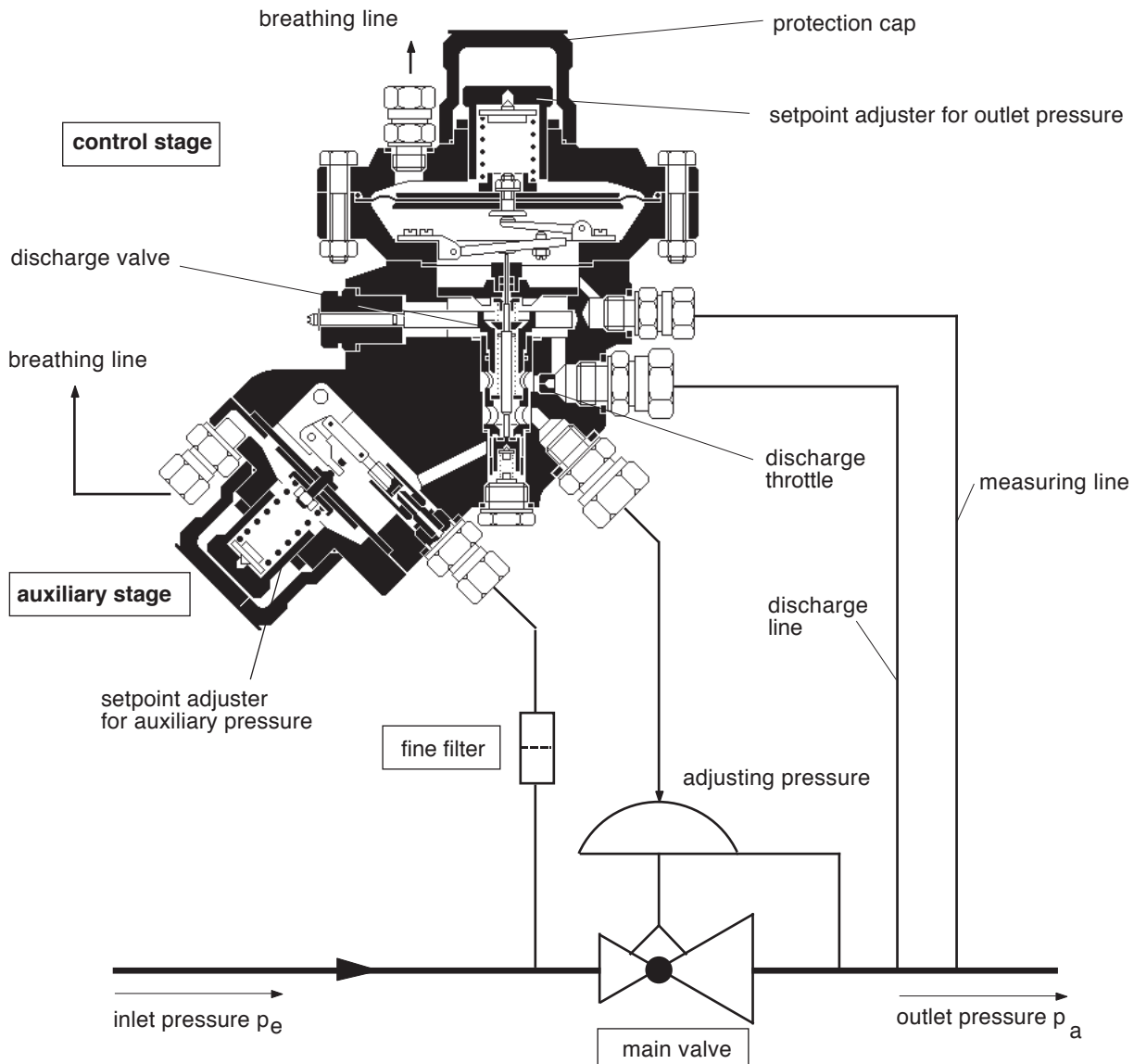
2.1 Adjustment of the auxiliary pressure

The height of the adjusted auxiliary pressure influences the regulating procedure of the device.

To obtain a high precision of regulation, which is connected to a smaller closing pressure, an auxiliary pressure should be adjusted as high as possible in the stabilization of the gas pressure regulation device.

According to the application the following advised values must be applied:

gas pressure regulation unit used in a pressure regulation device:	height of the auxiliary pressure over the outlet pressure with a main valve	
	HON 200	HON 322, 332, 408, 409
with direct following high guide network, f.i. hand over stations	approx. 2 - 4 bar	approx. 1 - 2 bar
with direct following second pressure or flow regulation valve, f.i. in a heat gas line	approx. 1 - 2 bar	approx. 0,5 - 1 bar

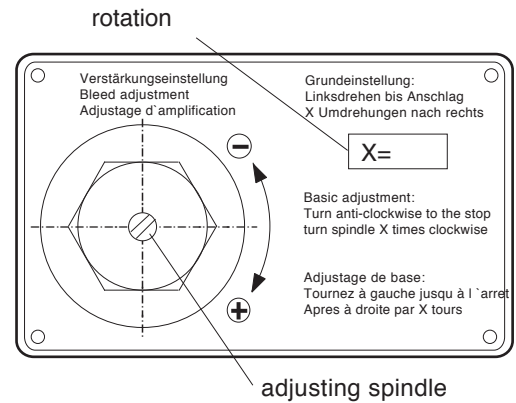


Principal switch drawing of the pilot HON 610 (RS 10d) with a switch gear

2.2 Adjustment of the discharge valve

The discharge valve is delivered from the plant with the main adjustment. The necessary rotation of the spindle for this adjustment is given on the picture situated on the pilot (see drawing on the right).

By turning the spindle left to the bleed adjustment " - ", it is possible to adapt the device to special operation instructions -additionally to change the auxiliary pressure- f.i. by regulation variations of "pressure picks" after a quick closing of the stop organ preswitched.



3. Special Maintenance Instructions

3.1 Auxiliary pressure stage (see page 8)

Diaphragm (68)

By dismantling, put the cover (69) off, put the diaphragm (68) on the side of the inlet pressure connection and hang the diaphragm on the side outside the joint (80).

Sealing cone (81)

To dismantle the sealing cone, the screws (98) must be unscrewed and the complete joint (80) must be put off. A mark of the sleeve corner (83) on the sealing surface of the sealing cone (81) is normal.

By installing the sealing cone, the position of the lever joint must be controlled after the installation of the joint and newly adjusted if necessary.

The correct adjustment is given if the lever is manually put out (piston in closing position) and the superior corner of the lever is parallel to the diaphragm support.

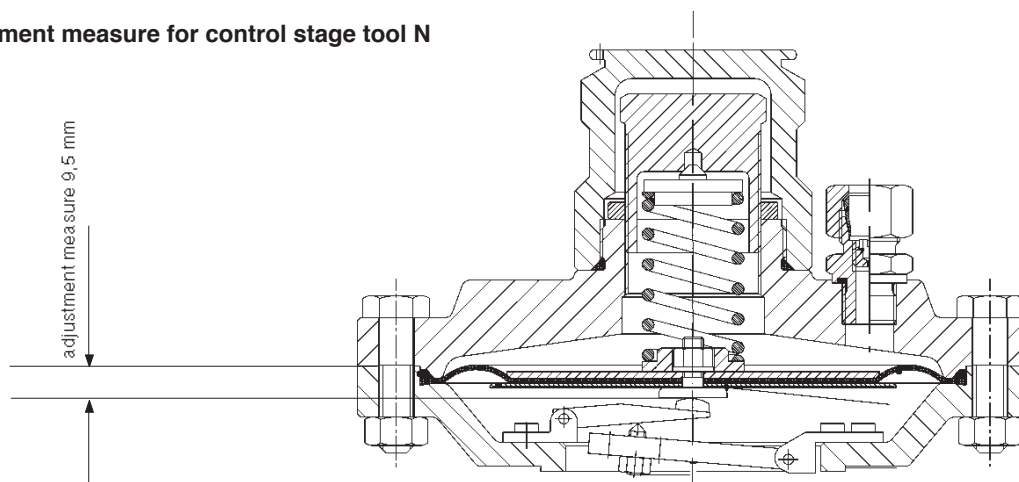
A possible and necessary correction is obtained by underlaying the different thicker sealing rings (51, 85) under the intermediary piece.

3.2 Control stage - Tool M and N (see p. 6 and 8)

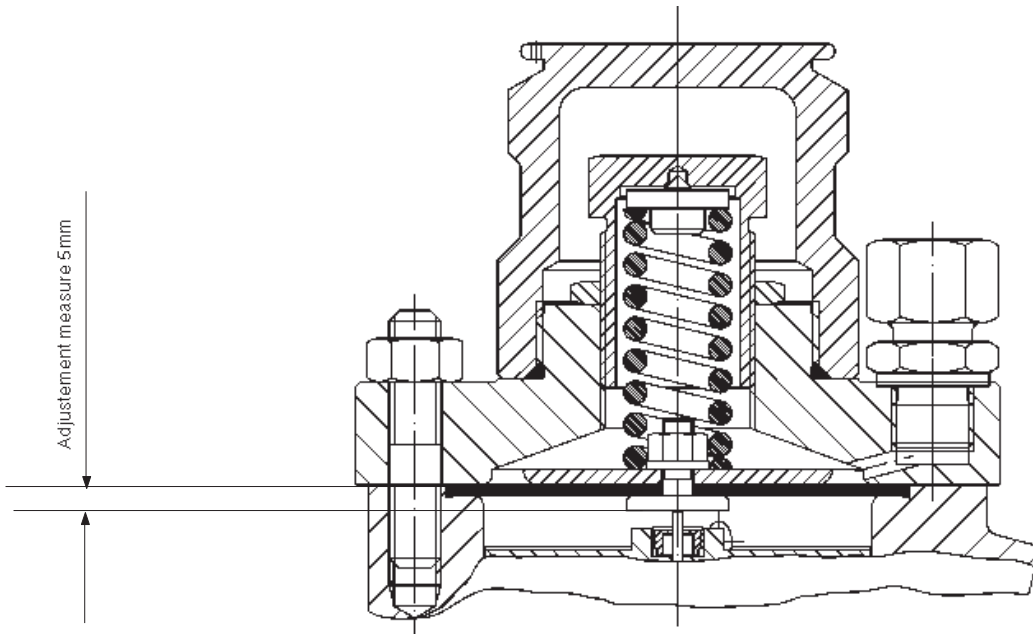
Control rod (16, 76)

The control rod must lightly slide in its conduction. By installing the new parts in the outlet pressure stage the adjustment measure of the rod must be controlled according to the measurement tool and be corrected if necessary. The adjustment measure must be put off according to the following drawing.

Adjustment measure for control stage tool N



Adjustement measure for control stage tool M



Beware: The measure controls occur for an incorporated control pin (16, 76), that is to say the control rod (20) is on the piston (23), the sleeve is still closed. The control rod is delivered with an excessive length and must for this reason be shorted by replacing corresponding to the adjustment measure and lastly borderless rounded .

Piston (23)

The piston of the control stage must lightly slide in its conduction.

3.3 Torque

pos. no.	torque M _a in Nm
(9)	30
(4)	2,5

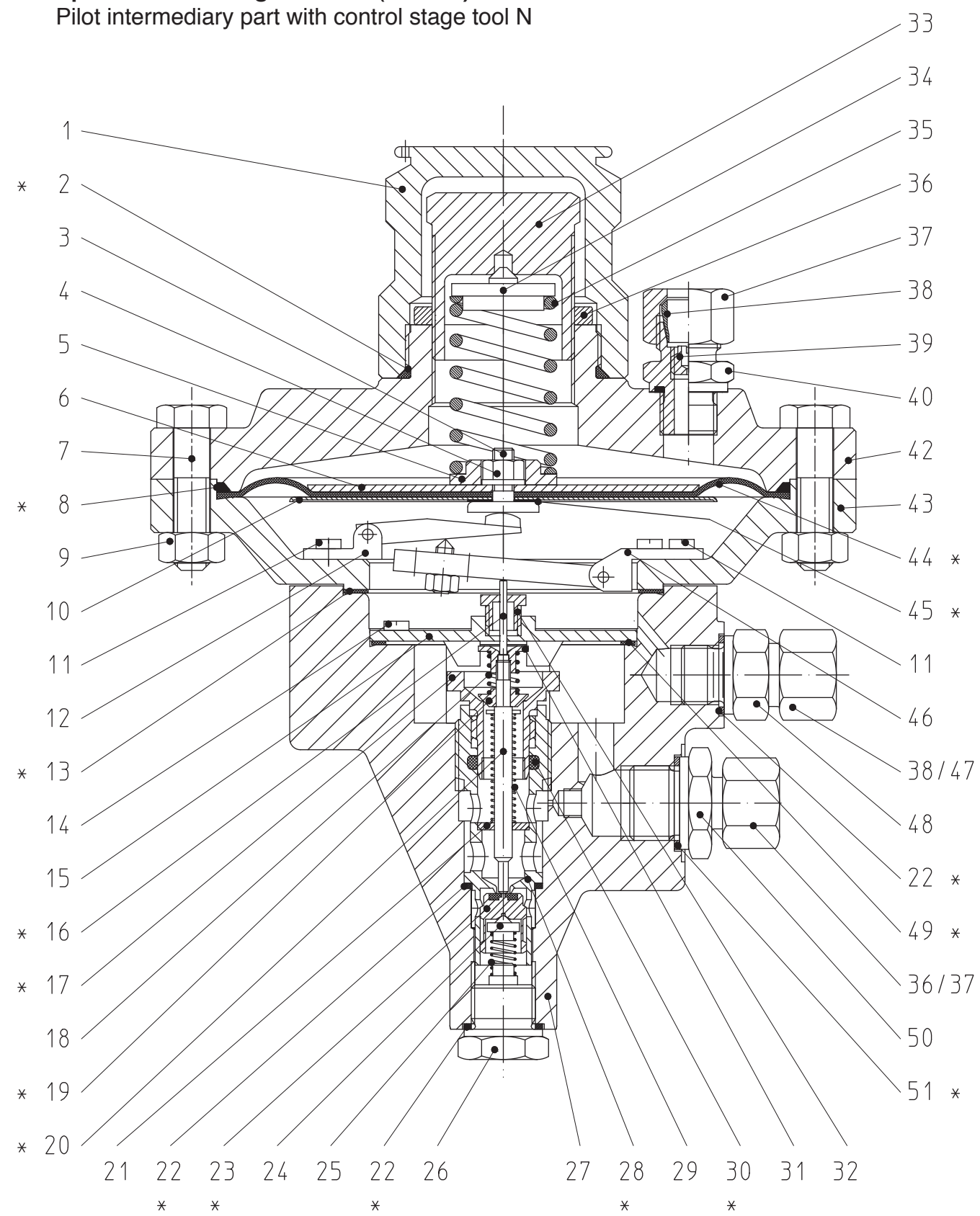
3.4 Lubricants

part (to be greased slightly)	lubricant	part no.
all o-rings, all sliding surfaces and movable parts	silicone grease	00 027 081
adjusting screw (44, 116) spring plate thread and recession	mounting paste	00 027 091
all fastening and pipe screws	high pressure grease	00 027 058

4. Spare Parts Drawings

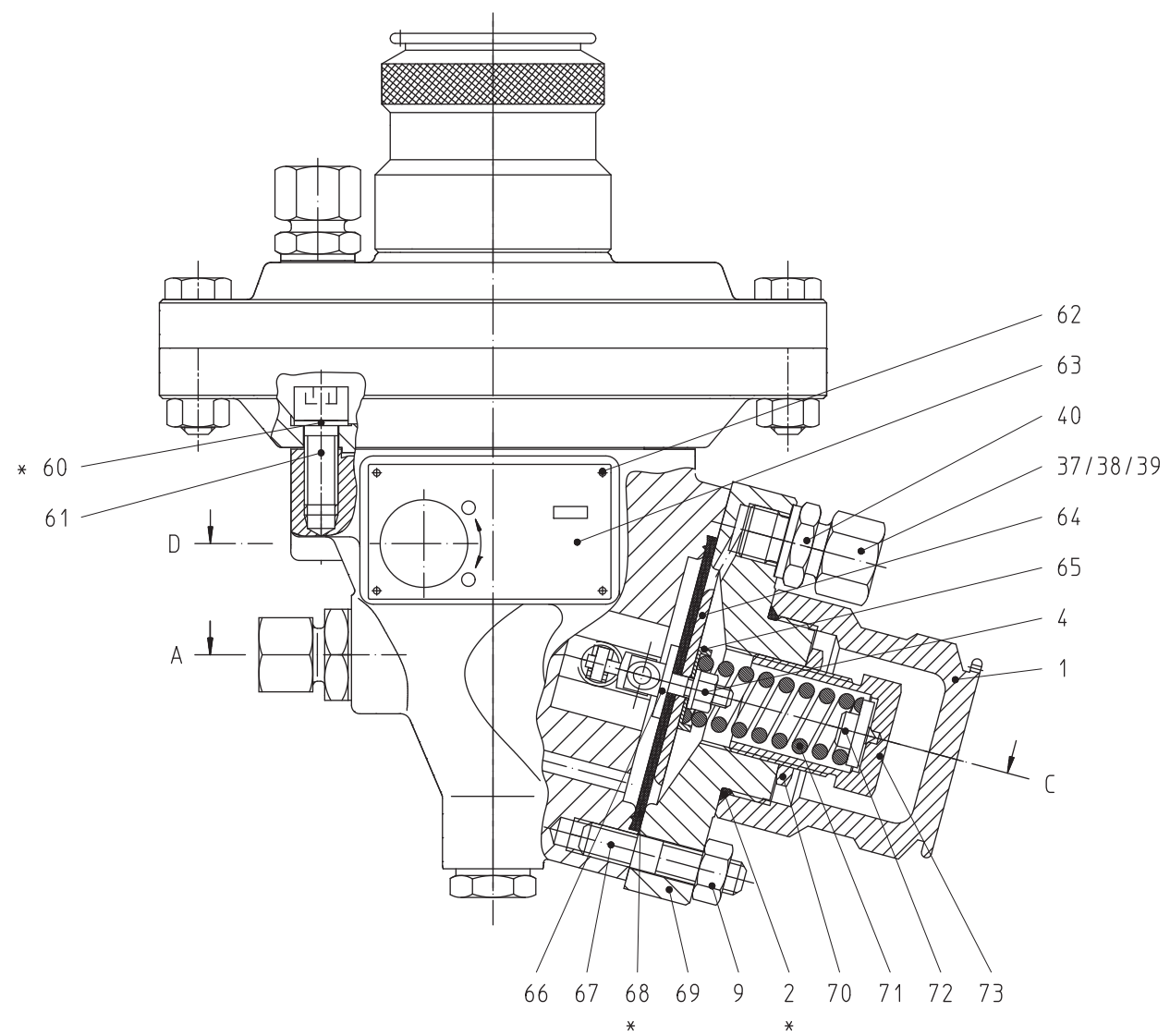
4.1 Spare Part Drawing HON 610 (RS 10d)

Pilot intermediary part with control stage tool N

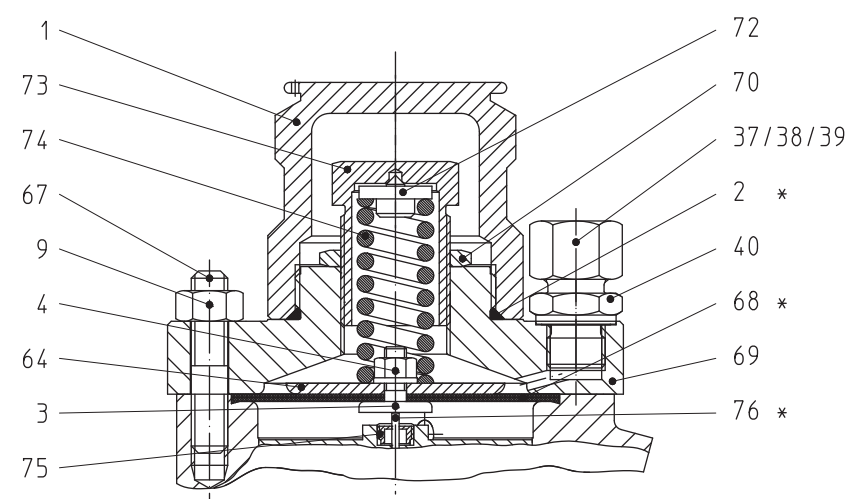


* Parts marked by an asterisk to be kept in stock maintenance

4.2 Spare Parts Drawing HON 610 (RS 10d)
 Control stage tool N, auxiliary pressure stage tool M

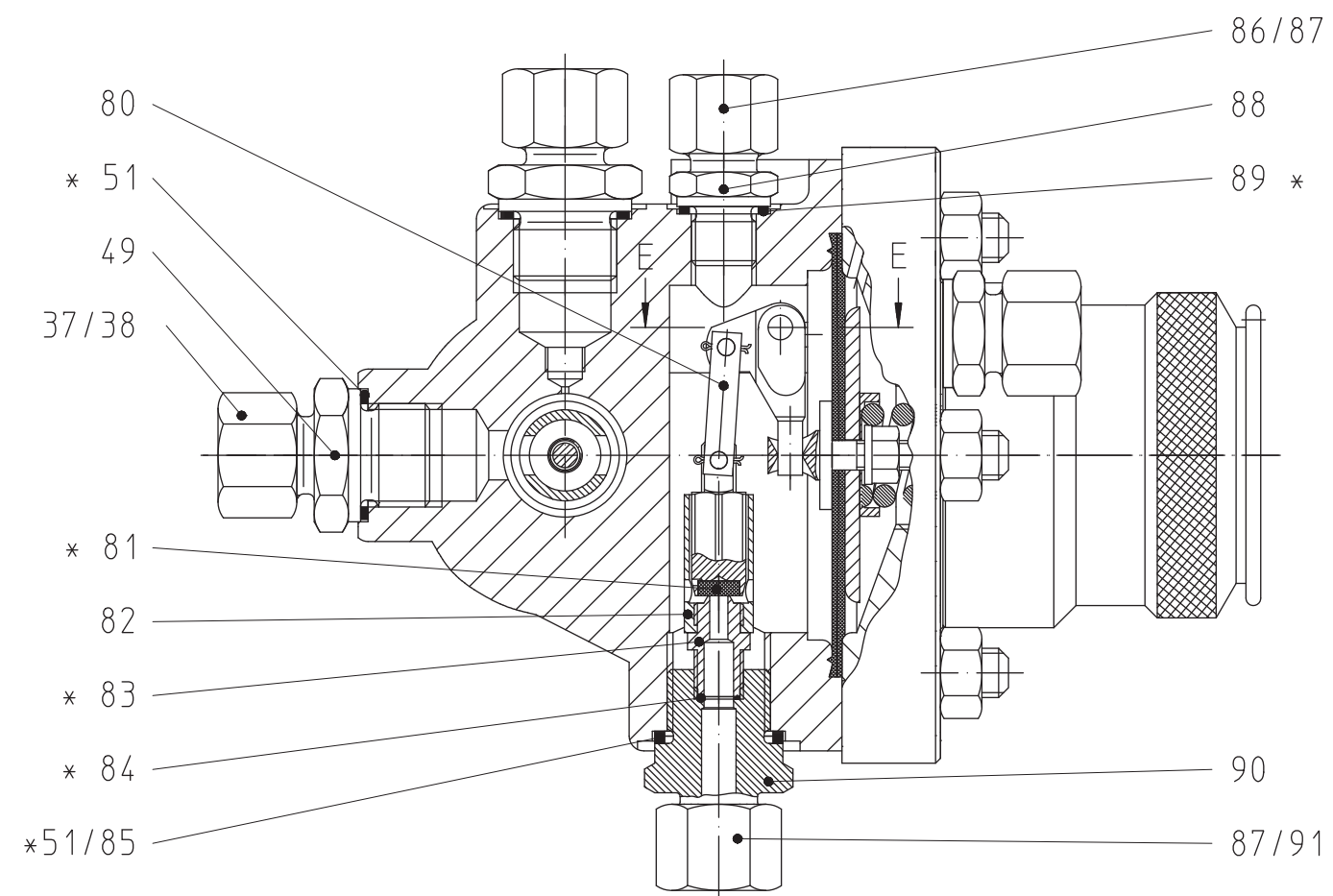


Control stage tool M

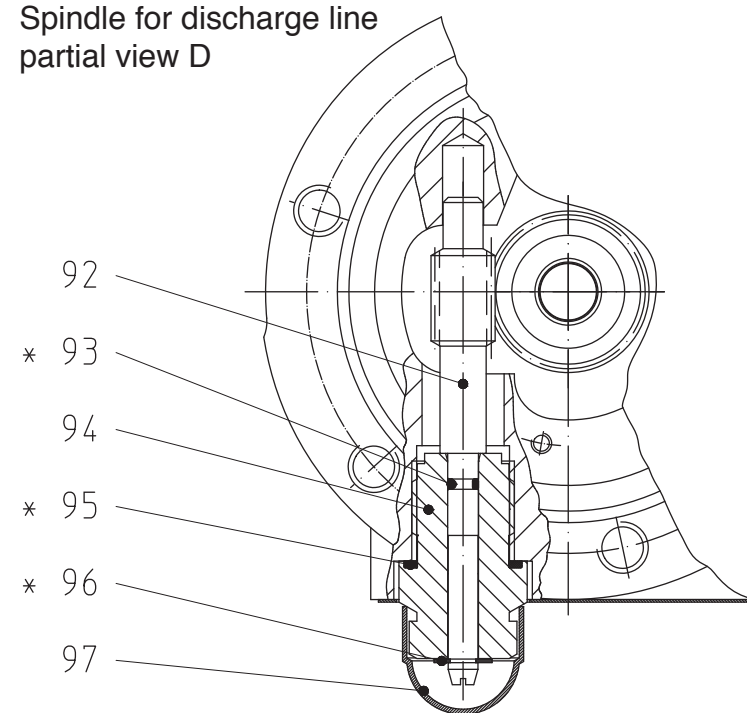


4.3 Spare Parts Drawing HON 610 (RS 10d)

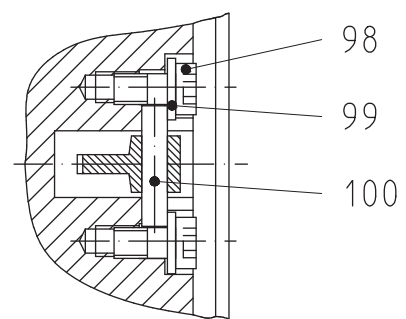
Sleeve for auxiliary pressure stage with lever joint
Sectional view A - C



Spindle for discharge line
partial view D

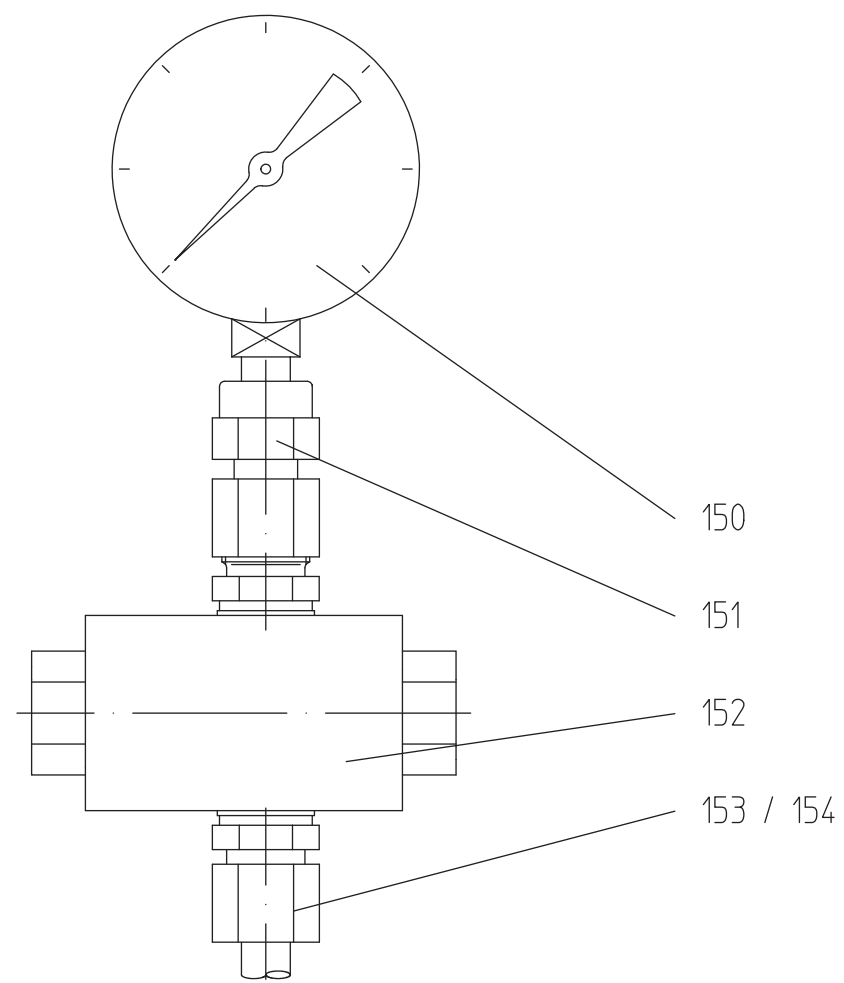


Lever bearing
sectional view E - E



* Parts marked by an asterisk to be kept in stock for maintenance

4.4 Spare Parts Drawing HON 610 (RS 10d)
 Pressure measuring unit for auxiliary pressure stage



pos. no.	description	material	part no. pressure stage of the main valve		
			PN 16	PN 25	> PN 25
150	pressure measuring unit	St/Ms	00 026 891	00 026 891	00 026 281
151	manometer union piece	St	00 031 865	00 031 865	-
152	protection against overpressure HON 925	LM	-	-	89 251 406
153	cap nut	St	00 030 803	00 030 803	-
154	compression joint	St	00 030 903	00 030 903	-

Material - key:

St	... steel	Ms	... brass
LM	... light metal		

5. Spare Parts Lists

5.1 Spare Part List HON 610 (RS 10d)

pos. no.	description	material	order no.
1	cap	LM	10 012 139
2*	o-ring	KG	00 020 307
3	screw	St	10 017 650
4	hexagonal nut	St	00 013 138
5	spring plate, alternatively:		
-	w _h 10 mbar to 40 mbar	LM	10 016 679
-	w _h 20 mbar to 60 mbar	LM	10 017 661
-	w _h 40 mbar to 120 mbar	LM	10 017 661
-	w _h 80 mbar to 200 mbar	LM	10 017 661
-	w _h 100 mbar to 500 mbar	LM	10 016 681
6	diaphragm plate	St	10 016 672
7	hexagonal screw	St	00 010 054
8*	o-ring	KG	00 020 353
9	hexagonal nut	St	00 005 692
10	diaphragm plate	LM	10 017 654
11	cylinder screw	St	00 006 044
12	superior lever bearing, complete	Ms/NSt	10 017 669
13*	sealing ring	KG	00 008 032
14	cylinder screw	St	00 006 543
15	intermediary ground	LM	10 017 588
16*	control pin 21 long	NSt	10 017 930
17*	discharge jet	Ms	10 017 608
18	pressure spring	FSt	10 017 886
19*	discharge cone	NSt	10 017 591
20*	control rod	Ms	10 017 603
21	conduction disc	Ms	10 017 610
22*	sealing ring	LM	00 018 688
23*	piston, already-made part 2nd stage	LM/KG	10 017 893
24	spring compensation piece	LM	10 017 614
25	pressure spring	FSt	10 017 639
26	closing screw	Ms	10 017 606
27	body	LM	10 024 341
28*	control sleeve 2nd stage	LM	10 017 884
29	pressure spring	NFST	10 014 020
30*	o-ring	KG	00 020 003
31	pressure piece	LM	10 017 600
32	sealing screw	Ms	10 017 927
33	adjusting screw	Ms	10 012 140
34	spring compensation piece, alternatively:		
-	w _h 10 mbar to 40 mbar	St	10 014 931
-	w _h 20 mbar to 60 mbar	St	10 014 931
-	w _h 40 mbar to 120 mbar	St	10 014 931
-	w _h 80 mbar to 200 mbar	St	10 014 933
-	w _h 100 mbar to 500 mbar	St	10 014 933

Parts marked by an asterisk * to be kept in stock for maintenance

Material - key:

St	... steel	NFSt	... stainless spring steel	KG	... rubber-like plastic material
FSt	... spring steel	LM	... light metal		
NSt	... stainless steel	Ms	... brass		

5.2 Spare Part List HON 610 (RS 10d)

pos. no.	description	material	order no.
35	pressure spring, alternatively:		
-	w _h 10 mbar to 40 mbar	FSt	10 014 926
-	w _h 20 mbar to 60 mbar	FSt	10 015 469
-	w _h 40 mbar to 120 mbar	FSt	10 016 660
-	w _h 80 mbar to 200 mbar	FSt	10 014 516
-	w _h 100 mbar to 500 mbar	FSt	10 015 161
36	threaded ring	LM	10 014 900
37	cap nut	St	00 030 804
38	compression joint	St	00 030 904
39	dosing screw	Ms	10 005 096
40	threaded adapter	St+KG	10 024 347
42	cover N	LM	10 012 137
43	intermediary ring	LM	10 017 916
44*	diaphragm	KG	10 017 918
45*	sealing ring	KG	00 008 068
46	inferior lever bearing, complete	Ms/NSt	10 017 676
47	cap nut	St	00 030 805
48	nozzle	St	00 030 104
49*	sealing ring	KG	10 017 612
50	union piece	St	00 030 142
51*	sealing ring	LM	00 018 814
60*	USIT ring	St/KG	00 027 858
61	cylinder screw	St	00 010 207
62	button headed dowel needle	St	00 017 220
63	adjusting poster	LM	10 024 342
64	diaphragm plate	St	10 014 983
65	spring conduction plate	LM	10 017 697
66	lever eye	NSt	10 014 993
67	rod screw	St	00 012 203
68*	diaphragm	KG	10 014 989
69	cover M	LM	10 012 138
70	back-nut	St	10 014 996
71	pressure spring	FSt	10 015 005
72	spring compensation piece	St	10 016 656
73	regulation screw	Ms	10 014 999
74	pressure spring, alternatively:		
-	wh 0,1 bar to 1,5 bar	FSt	10 016 654
-	wh 0,2 bar to 2,5 bar	FSt	10 016 655
-	wh 0,3 bar to 3,5 bar	FSt	10 015 005
75	sealing screw	Ms	10 017 688
76*	control rod 17 long	NSt	10 017 691

Parts marked by an asterisk * to be kept in stock for maintenance

Material - key:

St	... steel	NFSt	... stainless spring steel	KG	... rubber-like plastic material
FSt	... spring steel	LM	... light metal		
NSt	... stainless steel	Ms	... brass		

5.3 Spare Part List HON 610 (RS 10d)

pos. no.	description	material	order no.
80	joint, premounted	Ms/NSt	10 014 452
81*	sealing cone, 1st stage	KG	10 014 473
82	piston guide	Ms	10 014 470
83*	orifice	Ms	10 014 462
84*	sealing ring	LM	00 018 811
85*	sealing ring	LM	00 018 815
86	cap nut	St	00 030 803
87	compression ring	St	00 030 903
88	nozzle	St	00 030 110
89*	sealing ring	LM	00 018 689
90	intermediary piece	Ms	10 017 640
91	cap nut	St	00 030 802
92	spindle	Ms	10 024 343
93*	o-ring	KG	00 021 133
94	conduction screw	Ms	10 024 344
95*	o-ring	KG	00 020 382
96*	safety disc	St	00 019 193
97	cap	K	00 026 414
98	cylinder screw	St	00 010 596
99	disc	St	00 008 279
100	bolt	St	10 020 042

Parts marked by an asterisk * to be kept in stock for maintenance

Material - key:

St	... steel	NFSt	... stainless spring steel	KG	... rubber-like plastic material
FSt	... spring steel	LM	... light metal	K	... plastic material
NSt	... stainless steel	Ms	... brass		

For More Information

To learn more about Honeywell's
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