

Gas Pressure Regulator RMG 332



**Operation and Maintenance,
Spare Parts**

332.20
edition 04/1998

Serving the Gas Industry - WORLDWIDE



1. General

The "Technical Description 332.00" for the gas pressure regulator of series RMG 332 contains technical data, versions and dimensions.

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

Accessories are described in the following brochures:

pilot:	RS 10d	General Description	610.00
		Operation and Maintenance, Spare Parts	610.20
safety shut-off:	K1a, K2a (RMG 673)	General Description	720.00
		Operation and Maintenance, Spare Parts	673.20
safety shut-off:	K4, K5 (RMG 674)	General Description	720.00
		Operation and Maintenance, Spare Parts	674.20
filter:	RMG 905	General Description	905.00
		Operation and Maintenance, Spare Parts	905.20

The construction, set-up, supervision and maintenance of gas pressure pressure stations are subject to various national technical rules, which should be strictly observed. In Germany please refer to the DVGW-Worksheets G 490, G 491 and G 495.

The frequency of periodical maintenance of gas pressure regulator RMG 332 should be determined according to the prevailing conditions and the type and composition of the gaseous medium. We, therefore, abstain from imposing any fixed intervals. In Germany please refer to the recommendations given by the DVGW-Worksheets 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 functional tests have shown lack of regulating accuracy.

Particular care should be given to the checking of sealings and diaphragms, as well as carrying and moving parts. Damaged parts should be replaced by new ones.

The item numbers referred to in the maintenance instructions are identical with those of spare parts drawings and spare parts lists. We recommend to keep all parts that are marked "W" in the spare parts lists in stock for prompt maintenance availability.

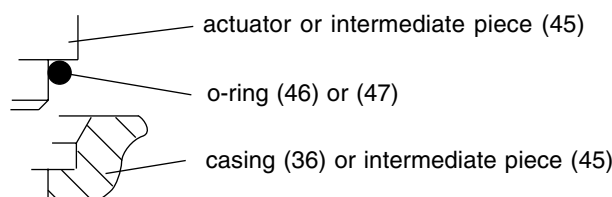
2. Special maintenance instructions

o-rings (170, 219)

Note! These o-rings must be fitted without lubrication. They are only intended to seal the reducing adapter (169, 220) in position.

o-rings (46, 47)

The o-ring must be positioned as shown in the following diagram when fitting the actuator or intermediate piece.

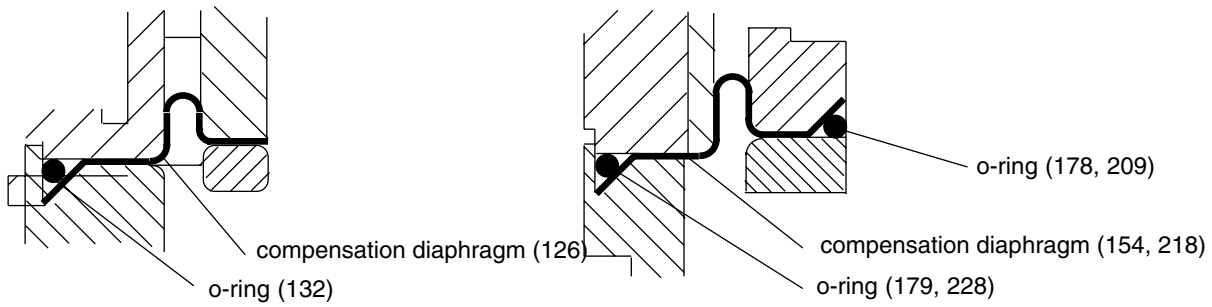


Compensation diaphragm (126, 154, 218)

During assembly the correct position of the compensation diaphragm must be observed

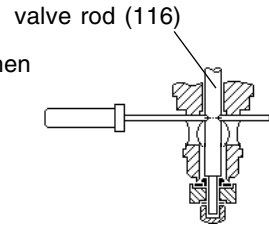
see page 10

see pages 12, 14



valve rod (116, 172, 222)

To avoid distortion of the diaphragm the valve rod must be secured against twisting when loosening or tightening the screws (177, 227) or nuts (108, 131, 161, 210). For this purpose the valve rod (116) has been fitted with a cross hole, and the valve rod (172, 222) can be held using a 11 mm spanner.



cylindrical screw (177, 227)

The cylindrical screw contains a longitudinal bore hole for pressure compensation. Therefore, it must not be replaced by an ordinary pan head screw.

valve seat (129, 159)

Over time different construction designs have been delivered.

		design			
		until Sept. 1987	until March 1992	from April 1992	from August 1995
valve seat dia. in mm	20				
	33				
	25				
	31				
	41				
	50				
60					
80					
100					

Nowadays the valve plate with diameter 20 mm is supplied together with a vulcanised sealing. The valve plate for diameters 25, 31, 33, 41, 50, 60, 80, 100 have been fitted with an additional relief holes.

It is recommended to upgrade older devices with the new components during maintenance works. Devices supplied prior to September 1987 with valve seat dia. 20 or 33 do not need to be upgraded.

valve sealings (128, 175) for valve seat dia. 33, 25, 31

Depending on the gas medium used, different sealing materials are available. From January 1995 on the material NBR was replaced with Viton for all of the production. Especially when using L-gas (low calorific gas), it is recommended to fit seals made of Viton.

torque table for screws

item no.	torque M_A in Nm
171, 199	5
108, 152, 158, 208	10
104, 144, 194	12
119, 131	15
161, 210	18
177, 195, 207	20
17, 200, 227	40
19	70
11	40 (for DN 50)
70	(for DN 80, DN 100)

lubricants

component (brush lightly)	lubricant	RMG part no.
all o-rings (except items 170, 219)	silicone grease	00 027 081
all sliding faces		
fastening areas and loop areas of the working diaphragm (103, 143, 193)		
all fastening screws and pipe screw connections	high duty grease	00 027 058

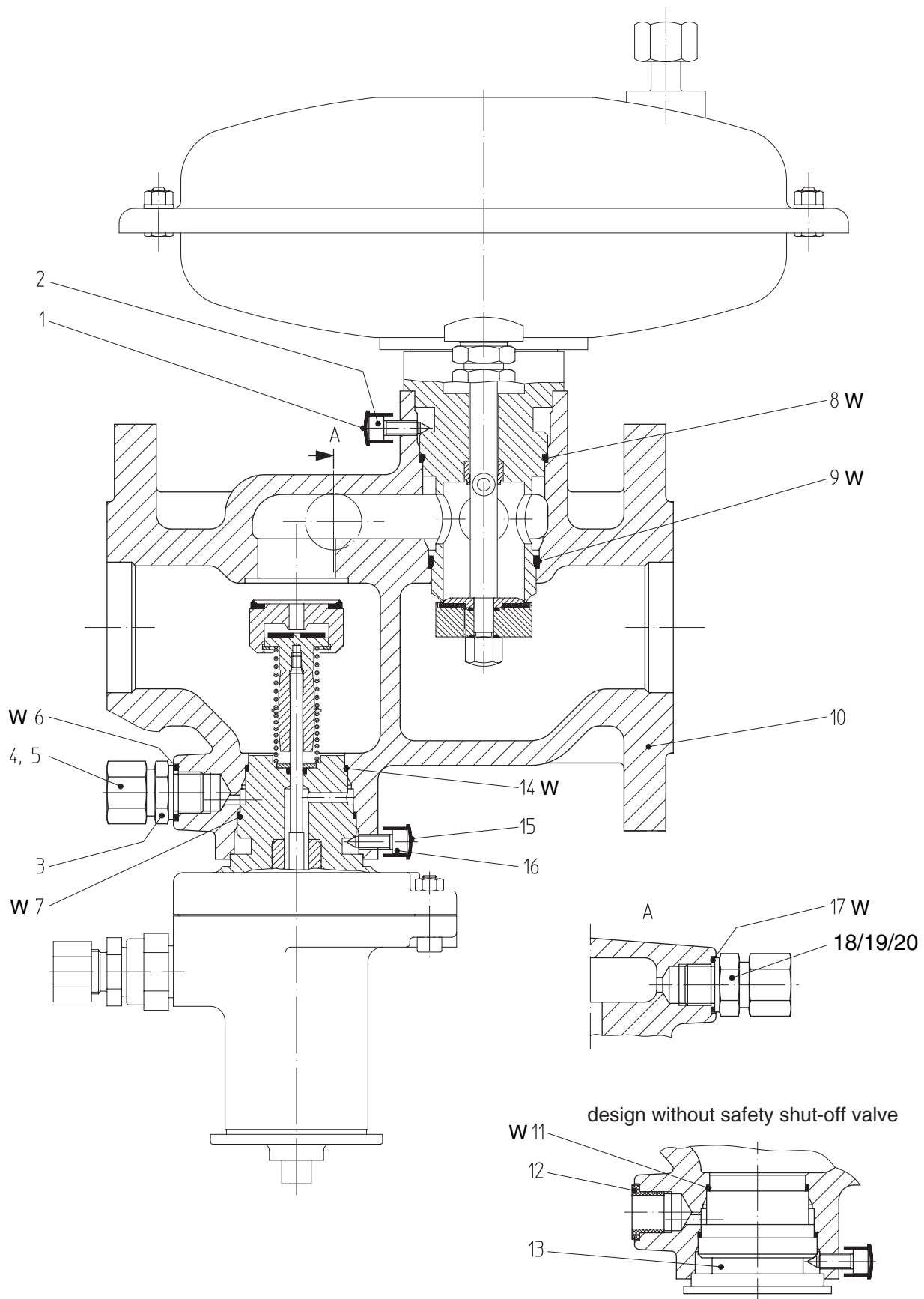
screw locking

component	locking agent	RMG - part no.
cap nut (131) cylindrical screw (177, 227)	LOCTITE	00 026 688

3. Spare parts

3.1 spare part drawing RMG 332 DN 25, DN 50

with actuator 1



Parts marked "W" are to be held in stock for maintenance purposes

**3.2 Spare part list RMG 332 DN 25, DN 50
with actuator 1**

item no.	description	material	part no.	
			Ø 25	Ø 50
1	plug	K	00 026 066	00 026 066
2	cylindrical screw	St	10 004 895	10 004 895
3	connection piece	St	00 030 104	00 030 104
4	union nut	St	00 030 804	00 030 804
5	cutting ring	St	00 030 904	00 030 904
6 W	packing ring	LM	00 018 688	00 018 688
7 W	o-ring	KG	00 020 293	00 020 293
8 W	o-ring	KG	00 020 243	00 020 243
9 W	o-ring	KG	00 020 241	00 020 241
10	casing	GLM	10 004 852	10 004 850
11 W	o-ring	KG	00 020 319	00 020 319
12	plug	K	00 026 067	00 026 067
13	sealing plug	LM	10 004 909	10 004 909
14 W	o-ring	KG	00 020 319	00 020 319
15	plug	K	00 026 066	00 026 066
16	cylindrical screw	St	10 004 895	10 004 895
17	packing ring	LM	00 018 688	00 018 688
18	union piece	St	00 030 102	00 030 102
19	union nut	St	00 030 802	00 030 802
20	cutting ring	St	00 030 903	00 030 903

Parts marked "W" are to be kept in stock for maintenance purposes

material:

St ... steel

K ... plastic material

LM ... aluminium alloy

KG ... rubber-like plastic material

GLM ... cast aluminium

3.4 Spare part list RMG 332 DN 80, DN 100

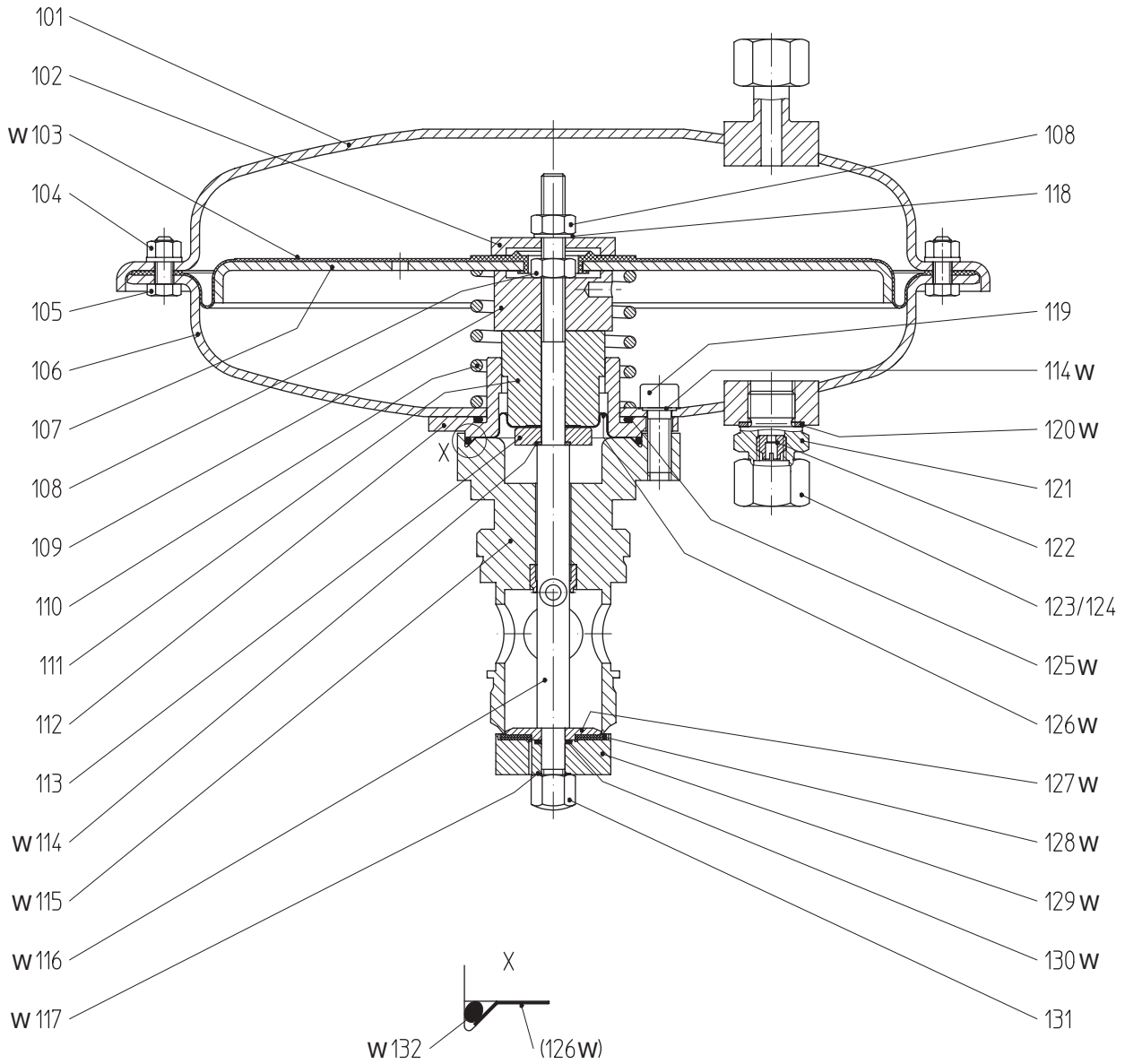
item no.	description	material	part no.	
			DN 80	DN 100
30	hexagonal nut	St	00 005 692	00 013 120
31	locking washer	FSt	00 014 121	00 014 114
32	locking screw	St	00 012 397	00 012 350
33	union piece	St	00 030 024	00 030 024
34 W	packing ring	LM	00 018 789	00 018 789
35	locking screw	St	00 012 324	00 012 324
36	casing, premounted	GLM/St/NSt	10 009 031	10 009 104
38	hexagonal screw	St		00 010 032
39	locking washer	FSt		00 014 121
40	hexagonal nut	St		00 013 120
41	locking washer	St		00 014 114
42 W	o-ring	KG		00 020 246
43 W	o-ring	KG	00 020 246	00 020 427
44	locking screw	St		00 012 350
45	intermediate piece	LM		10 007 204
46 W	o-ring	KG		00 020 425
47 W	o-ring	KG	00 020 259	00 020 259
48	locking screw	St	00 012 067	00 012 067
49	hexagonal nut	St	00 003 399	00 003 399
50	disk	St	00 008 279	00 008 279
51	top sealing plate	LM	10 007 693	10 007 693
52 W	o-ring	KG	00 020 281	00 020 281
53 W	o-ring	KG	00 020 427	00 020 427
54	lower sealing plate	LM	10 007 675	10 007 675
55	locking disk	FSt	00 014 114	00 014 114
56	hexagonal nut	St	00 013 120	00 013 120

Parts marked "W" are to be held in stock for maintenance purposes

material key:

St	... steel	FSt	... spring steel
LM	... aluminium alloy	KG	... rubber-like plastic material
NSt	... stainless steel	GLM	... lcast aluminium

**3.5 Spare part drawing RMG 332 actuator 1
with valve seat diameter 20 and 33 mm**



parts marked "W" are to be held in stock for maintenance

3.6 Spare part list RMG 332 actuator 1
with valve seat diameter 20 and 33 mm

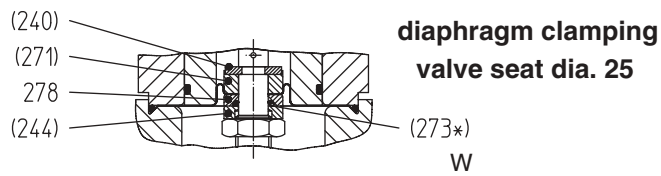
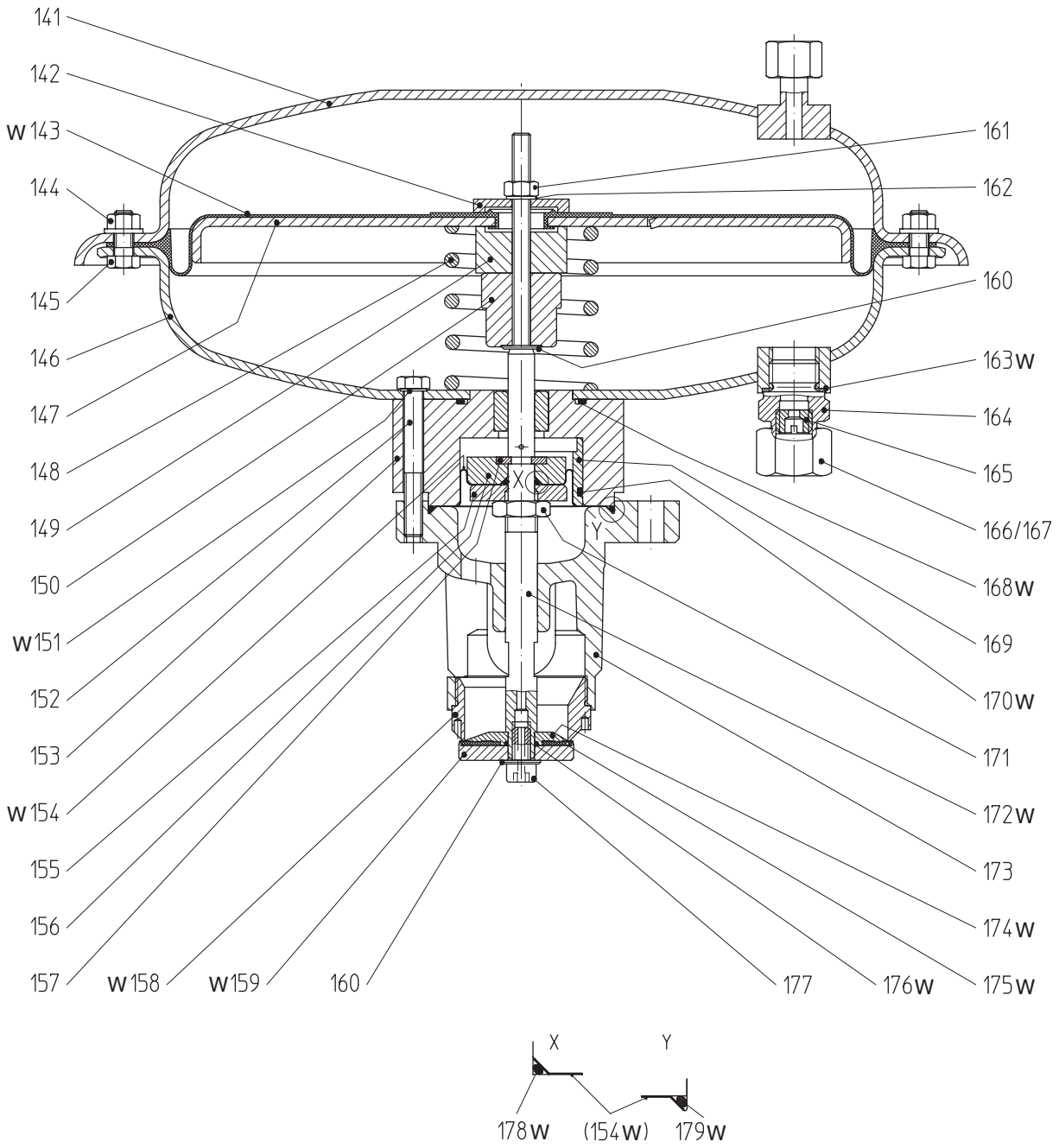
item no.	description	material	part no.	
			Ø 20	Ø 33
101	diaphragm cover, complete	St	10 004 983	10 004 983
102	pressure piece	LM	10 004 992	10 004 992
103 W	rolling diaphragm	KG	10 003 606	10 003 606
104	hexagonal collar nut	St/K	00 013 138	00 013 138
105	hexagonal screw	St	00 008 172	00 008 172
106	diaphragm body, complete	St	10 007 171	10 007 171
107	diaphragm disk	LM	10 003 625	10 003 625
108	hexagonal nut	St	00 005 559	00 005 559
109	distance washer	LM	10 004 991	10 004 991
110	pressure spring	FSt	10 004 978	10 004 978
111	guide piece	Ms	10 004 860	10 004 861
112	intermediate plate	LM	10 004 858	10 004 859
113	pressure disk	LM	10 003 609	10 003 608
114 W	packing ring (4 off)	LM	00 018 710	00 018 710
115 W	orifice, complete	LM/ALBz	10 004 862	10 004 863
116 W	valve stem	NSt	10 004 878	10 004 878
117 W	packing ring	LM	00 018 710	00 018 710
118	locking washer	FSt	00 014 112	00 014 112
119	cylindrical screw	St	00 010 323	00 010 323
120 W	packing ring	LM	00 018 694	00 018 694
121	connection piece	St	10 007 642	10 007 642
122	dosing screw dia. 3 mm	NSt	10 005 098	10 005 098
123	union nut	St	00 030 804	00 030 804
124	cutting ring	St	00 030 904	00 030 904
125 W	o-ring	KG	00 020 306	00 020 306
126 W	compensation diaphragm	KG	10 003 619	10 003 618
127 W	pressure piece	LM	10 003 603	10 003 602
128 W	gasket	KV		10 003 552
129 W	valve disk	LM/KG, LM	10 023 461	10 023 465
130 W	o-ring	KG		00 020 595
131	cap nut	St	00 013 015	00 013 015
132 W	o-ring	KG	00 021 161	00 021 161

Parts marked "W" are to be kept in stock for maintenance purposes

material:

St	... steel	LM	... aluminium alloy	KG	... rubber-like plastic material
FSt	... spring steel	Ms	... brass	K	... plastic material
NSt	... stainless steel	ALBz	... aluminium bronze	KV	... synthetic rubber

**3.7 Spare part drawing RMG 332 actuator 2
with valve seat diameter 25, 31, 41, and 50 mm**



Parts marked "W" are to be kept in stock for maintenance purposes

**3.8 Spare parts list RMG 332 actuator 2
with valve seat diameter 25, 31, 41 and 50 mm**

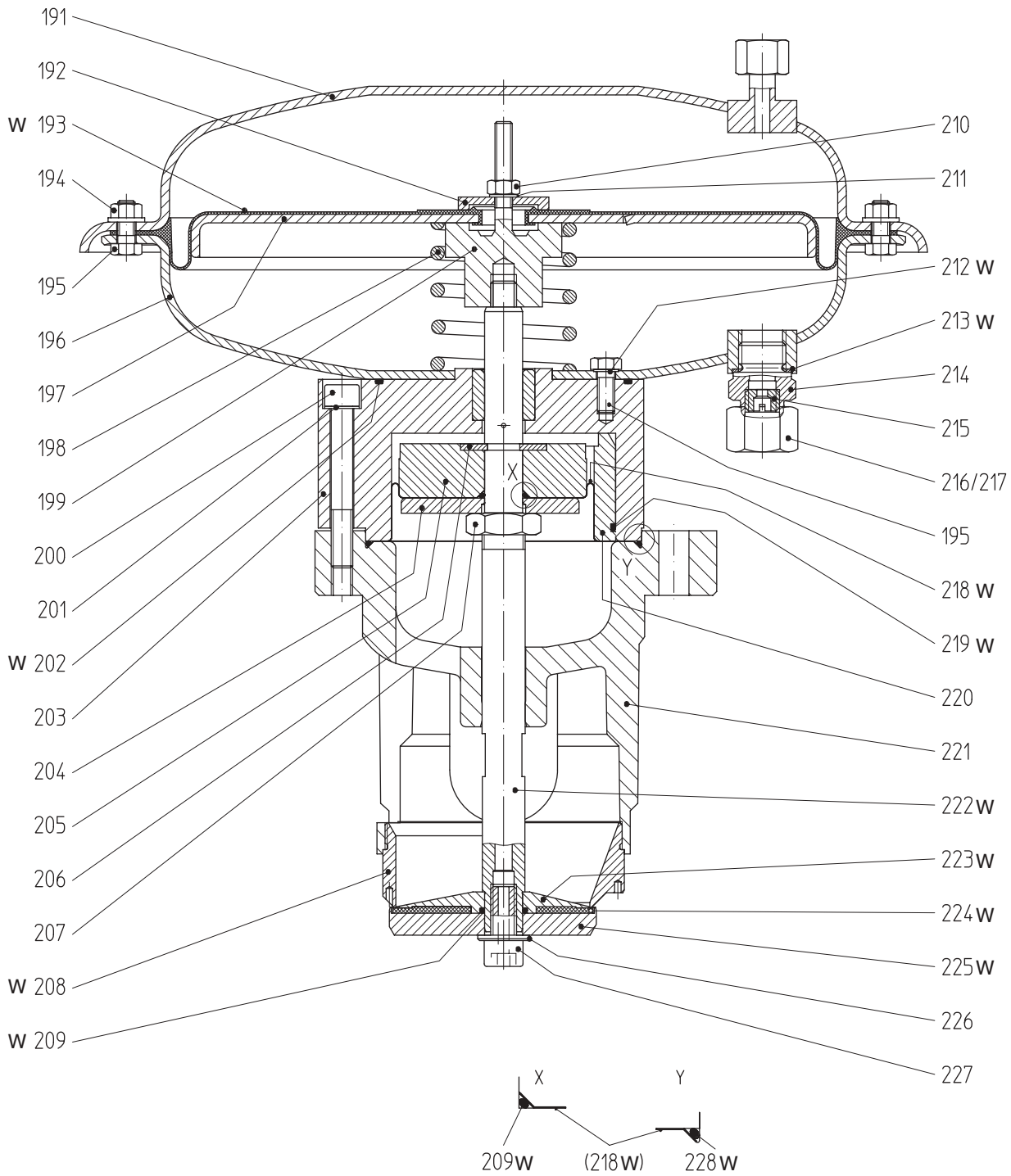
item no.	description	material	part no.			
			Ø 25	Ø 31	Ø 41	Ø 50
141	diaphragm cover, complete	St	10 008 989	10 008 989	10 008 989	10 008 989
142	pressure piece	LM	10 004 992	10 004 992	10 004 992	10 004 992
143 W	rolling diaphragm	KG	10 009 046	10 009 046	10 009 046	10 009 046
144	hexagonal collar nut	St/K	00 013 136	00 013 136	00 013 136	00 013 136
145	hexagonal screw	St	00 010 065	00 010 065	00 010 065	00 010 065
146	diaphragm body, complete	St	10 008 982	10 008 982	10 008 982	10 008 982
147	diaphragm disk	LM	10 009 168	10 009 168	10 009 168	10 009 168
148	pressure spring	FSt	10 008 983	10 008 983	10 008 983	10 008 983
149	distance washer	LM	10 004 991	10 004 991	10 004 991	10 004 991
150	guide piece	Ms	10 004 861	10 004 861	10 004 861	10 004 861
151 W	packing ring	LM	00 018 710	00 018 710	00 018 710	00 018 710
152	hexagonal screw	St	00 010 277	00 010 277	00 010 277	00 010 277
153	intermediate piece, complete	LM/NSt	10 009 180	10 009 180	10 009 180	10 009 180
154 W	compensatilon diaphragm	KG	10 006 186	10 009 086	10 009 087	10 009 188
155	pressure disk	LM	10 009 297	10 009 089	10 009 091	10 009 187
156	diaphragm disk	LM	10 009 295	10 009 088	10 009 090	10 009 186
157	ring segment (2 off)	St	10 008 612	10 008 612	10 008 612	10 008 612
158 W	nozzle	LM	10 006 181	10 009 064	10 009 063	10 009 162
159 W	valve disk	LM	10 023 463	10 023 464	10 023 450	10 023 451
160	disk	St	00 008 281	00 008 281	00 008 281	00 008 281
161	hexagonal nut	St	00 013 140	00 013 140	00 013 140	00 013 140
162	locking washer	FSt	00 014 112	00 014 112	00 014 112	00 014 112
163 W	packing ring	LM	00 018 787	00 018 787	00 018 787	00 018 787
164	connection piece	St	10 007 641	10 007 641	10 007 641	10 007 641
165	dosing screw dia. 5mm	Ms	10 014 038	10 014 038	10 014 038	10 014 038
166	union nut	St	00 030 807	00 030 807	00 030 807	00 030 807
167	cutting ring	St	00 030 906	00 030 906	00 030 906	00 030 906
168 W	o-ring	KG	00 020 325	00 020 325	00 020 325	00 020 325
169	reducer	LM	10 006 188	10 009 082	10 009 083	-
170 W	o-ring	KG	00 020 243	00 020 243	00 020 243	-
171	hexagonal nut	St	10 009 045	10 009 045	10 009 045	10 009 045
172 W	valve stem, complete	Ms/St	10 008 987	10 008 987	10 008 987	10 008 987
173	valve support	GG	10 009 161	10 009 161	10 009 161	10 009 161
174 W	pressure piece	LM	10 006 184	10 009 199	10 009 198	10 009 197
175 W	packing ring	KG	18 355 853	10 009 205	10 009 216	10 009 217
176 W	o-ring	KG	00 020 451	00 020 451	00 020 451	00 020 451
177	cylindrical screw	St	10 009 099	10 009 099	10 009 099	10 009 099
178 W	o-ring	KG	00 020 234	00 020 234	00 020 234	00 020 234
179 W	o-ring	KG	00 020 246	00 020 246	00 020 246	00 020 246
180	sealing washer	LM	10 009 296			

Parts marked "W" are to be kept in stock for maintenance purposes

material key:

St	... steel	LM	... aluminium alloy	KG	... rubber-like plastic material
FSt	... spring steel	Ms	... brass	GG	... cast iron with lamellar graphite
NSt	... stainless steel	K	... plastic material	KV	... synthetic rubber

**3.9 Spare part drawing RMG 332 actuator 2
with valve seat diameter Ø 60, 80, 100 mm**



parts marked "W" are to be kept in stock for maintenance purposes

**3.10 Spare parts list RMG 332 actuator 2
with valve seat diameter 60, 80, 100 mm**

item no.	description	material	part no.		
			Ø 60	Ø 80	Ø 100
191	diaphragm cover, complete	St	10 008 989	10 008 989	10 008 989
192	pressure piece	LM	10 004 992	10 004 992	10 004 992
193 W	rolling diaphragm	KG	10 009 046	10 009 046	10 009 046
194	hexagonal collar nut	St/K	00 013 136	00 013 136	00 013 136
195	hexagonal screw	St	00 010 065	00 010 065	00 010 065
196	diaphragm body, complete	St	10 008 982	10 008 982	10 008 982
197	diaphragm disk	LM	10 009 168	10 009 168	10 009 168
198	pressure spring	St	10 008 983	10 008 983	10 008 983
199	guide piece	St	10 008 994	10 008 994	10 008 994
200	cylindrical screw	St	00 010 386	00 010 386	00 010 386
201	locking washer	FSt	00 014 121	00 014 121	00 014 121
202 W	o-ring	KG	00 020 335	00 020 335	00 020 335
203	intermediate piece, complete	LM/NSt	10 009 139	10 009 139	10 009 139
204	pressure disk	LM	10 009 124	10 009 125	10 009 128
205	diaphragm disk	LM	10 009 142	10 009 141	10 009 127
206	ring segment (2 off)	St	10 009 129	10 009 129	10 009 129
207	hexagonal nut	St	10 009 109	10 009 109	10 009 109
208 W	nozzle	LM	10 009 105	10 009 106	10 009 123
209 W	o-ring (2 off)	KG	00 020 442	00 020 442	00 020 442
210	hexagonal nut	St	00 013 140	00 013 140	00 014 112
212 W	packing ring (4 off)	LM	00 018 710	00 018 710	00 018 710
213 W	packing ring	LM	00 018 787	00 018 787	00 018 787
214	connection piece	St	10 007 641	10 007 641	10 007 641
215	dosing screw dia. 5 mm	Ms	10 014 038	10 014 038	10 014 038
216	union nut	St	00 030 807	00 030 807	00 030 807
217	cutting ring	St	00 030 906	00 030 906	00 030 906
218 W	compensation diaphragm	KG	10 009 120	10 009 134	10 009 137
219 W	o-ring	KG	00 020 449	00 020 449	
220	reducer	LM	10 009 114	10 009 115	
221	valve support	GG	10 009 133	10 009 133	10 009 133
222 W	valve stem, complete	Ms/St	10 009 155	10 009 155	10 009 155
223 W	pressure piece	LM	10 009 208	10 009 207	10 009 206
224 W	gasket	KG	10 009 218	10 009 219	10 009 220
225 W	valve disk	LM	10 023 452	10 023 453	10 023 454
226	disk	St	00 008 271	00 008 271	00 008 271
227	cylindrical screw	St	10 009 122	10 009 122	10 009 122
228 W	o-ring	KG	00 020 428	00 020 428	00 020 428

Parts marked "W" are to be kept in stock for maintenance purposes

material key:

St	... steel	LM	... aluminium alloy	KG	... rubber-like plastic material
FSt	... spring steel	Ms	... brass	GG	... grey cast iron
NSt	... stainless steel	K	... plastic material		

We supply you with products for gas pressure regulation:



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