

Pressure Reducer RMG 218 (D118aV)



**Operation and Maintenance,
Spare Parts**

218.20
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Serving the Gas Industry - WORLDWIDE



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1. General

For the pressure reducer RMG 218 (D118aV) the detailed information leaflet 218.00 is available, containing specifications, designs and measurements.

The RMG publication "General operating instructions for gas pressure regulators and safety devices" provides information on installation, commissioning, and operation, and contains notices on fault removal.

For installing, monitoring and maintaining gas pressure regulator systems the relevant national regulations must be strictly observed. (In Germany please refer to the DVGW worksheets G 490, G491, and G 495).

The time intervals for maintenance works on the pressure reducer RMG 218 (D118aV) depend largely on the operating conditions and the composition of the gas. Therefore, no fixed maintenance intervals can be prescribed.

During maintenance all components must be cleaned and thoroughly checked for safety. A visual check is required even if irregularities were found during operation or functional checks.

The check must cover seals and membranes in particular as well as any guiding components. Damaged components must be renewed.

The item numbers mentioned in the maintenance notices correspond to those in the spare part drawing and spare parts list.

Note It is recommended to keep the parts marked EV in the spare parts list in stock for maintenance purposes.

1.1 Authorised persons (acc. to German DVGW rules)

Specialist

Due to his professional training, practical involvement and experience, the specialist is sufficiently familiar with the repair of gas systems, their components and sub-assemblies. He must be acquainted with the tasks and functions of gas systems, the relevant regulations, directives and the general technical rules, and must be able to act independently.

Skilled worker

The skilled worker must have special proven knowledge of a particular maintenance measure. He must be sufficiently acquainted with the relevant regulations to safeguard a proper execution of the tasks delegated to him.


Instructed person

An instructed person is whoever has been trained in the delegated tasks.

	Instructed person	Skilled worker	Specialist
Visual check			
Inspection			
Functional check			
Maintenance / repair			plus 2nd person
Re-commissioning			
Operation of bypass lines			

1.2 Safety instructions

Safety notices are indicated by the following **key words** or **symbols** in this operating instruction

	Used for: Danger to equipment and the environment
Note	Additional information

2. Special operating instructions

Changes in set-point values

Set-point increases are made by turning the set-point screw clockwise.

After changing a set-point, the set-point adjusters must be secured by using the following components.

- Intermediate pressure stage - Nut
- Pilot control stage- Flat head screw

Set-point changes are not possible for the safety relief valve of the intermediate pressure stage.
(Fixed preset of approx. 10 bar)

3. Special maintenance instructions

- The link between the lever and the lever ring must be centered: The center position is found by turning the diaphragm clockwise or anti-clockwise up to the stop.

Screw torque figures

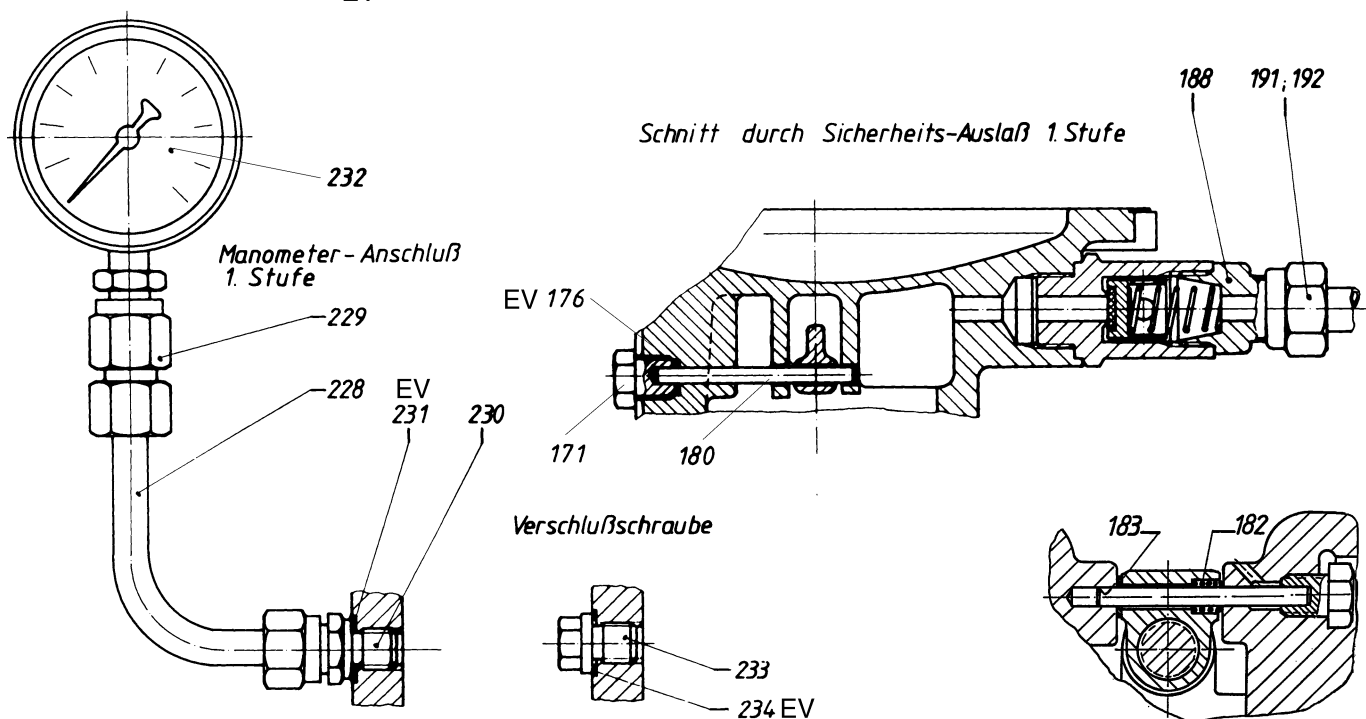
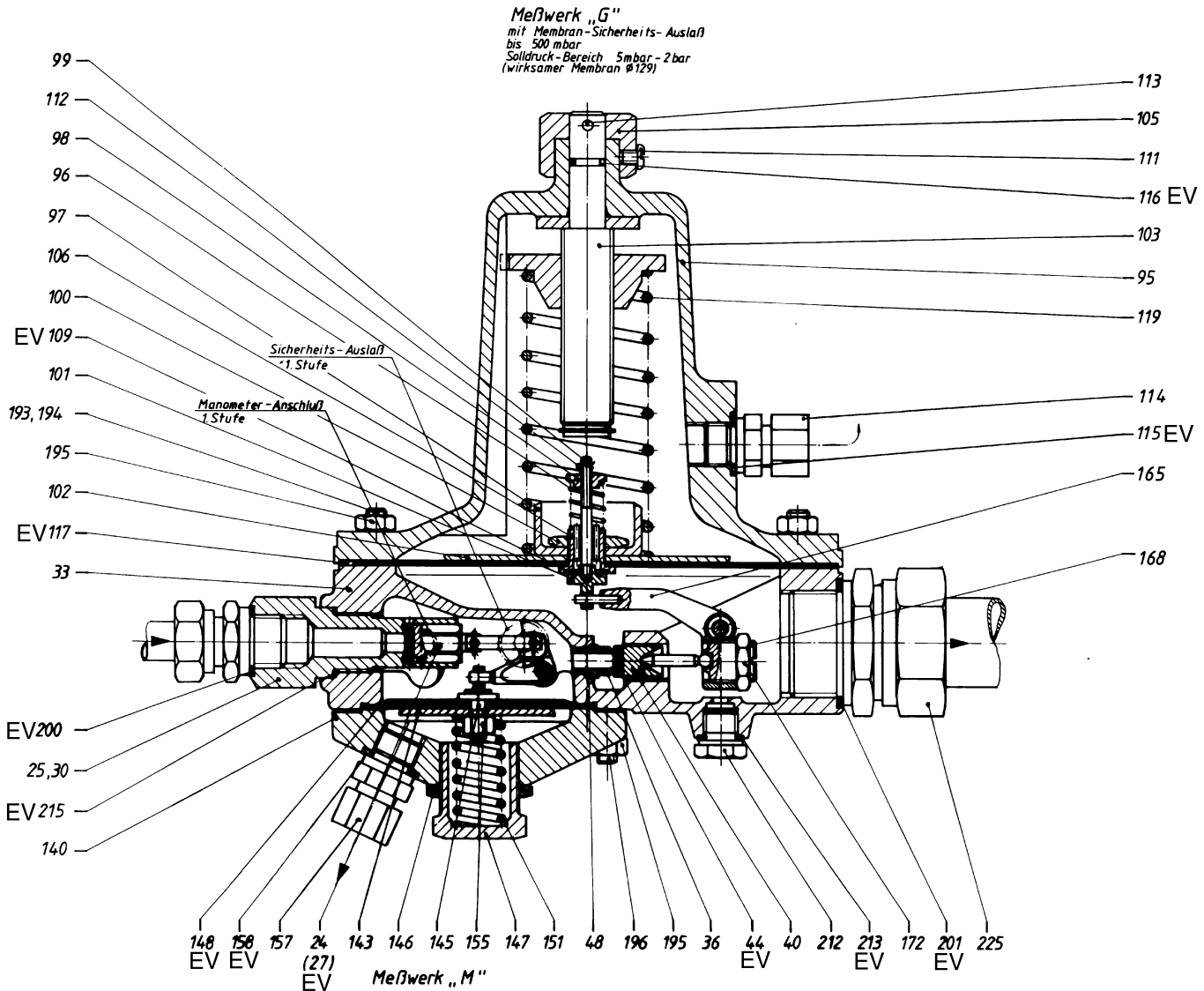
Hexagonal screw/ Hexagonal nut	Torque M_A in Nm
193	15
195	15

Lubricants

Component (grease thinly)	lubricant	part no.
all o-rings, diaphragm tensioning region piston slide face starting torque	silicone grease	00 027 081
thread of set-point adjustment screw/adjustment spindle	assembly paste	00 027 091
all fastening screws and pipe screw connections	high duty grease	00 027 058

4. Spare part drawing RMG 218 (D118aV)

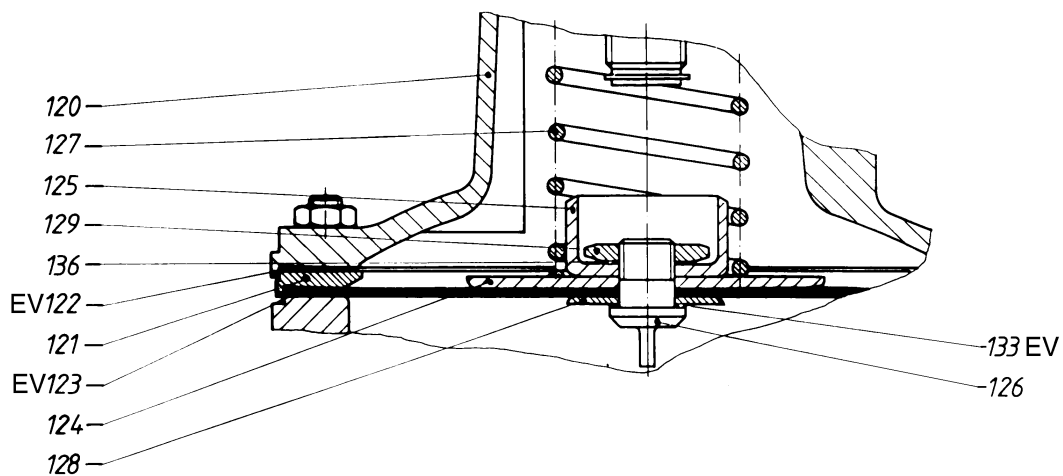
4.1 Spare part drawing with measuring unit "G"



4. Spare part drawing RMG 218 (D118aV)

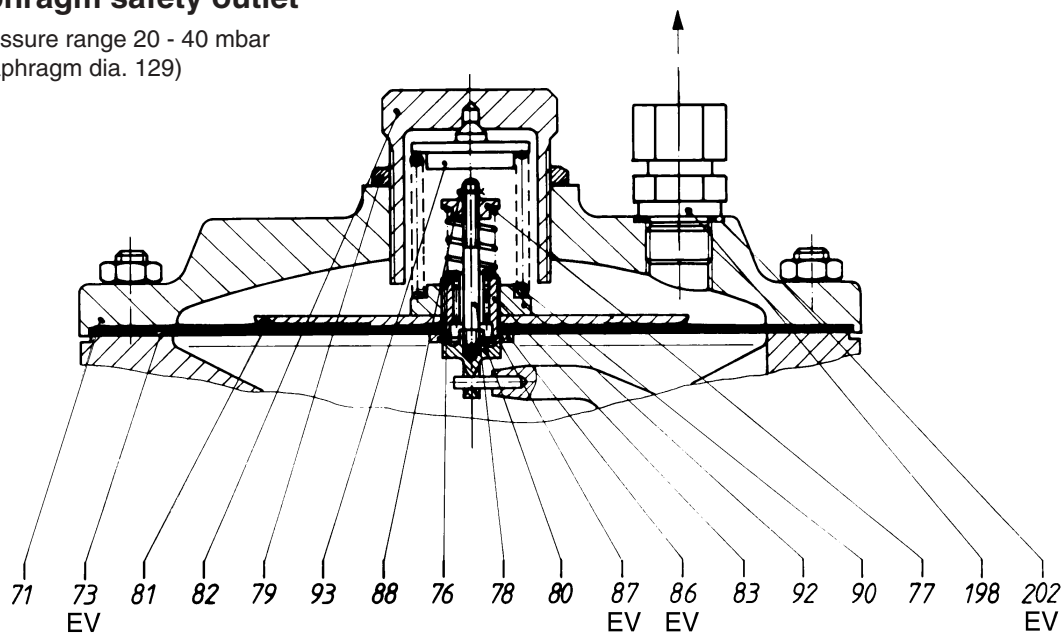
4.2 Spare part drawing with measuring unit "GS"

Set-point pressure range 0.25 - 3.5 bar
(effective diaphragm dia. 115)

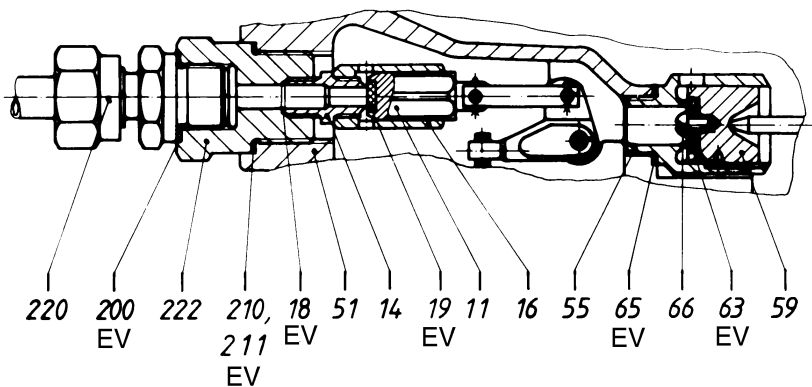


4.3 Spare part drawing with measuring unit "N" with diaphragm safety outlet

Set-point pressure range 20 - 40 mbar
(effective diaphragm dia. 129)



View of orifice dia. 5.5 - 1st stage and dia. 10 - 2nd stage



5. Spare parts list RMG 218 (D118 aV)

item no.	designation	quant	EV	material	part no.
11	joint, premounted for orifice F2, F3,7, F5,5 consisting of:				10 014 452
-	hinge bolt	2		NSt	10 014 451
-	lever link rod	1		Ms	10 014 428
-	lever	1		NSt	10 014 427
-	piston	1		Ms	10 014 454
-	splint	2		NSt	00 015 034
14	orifice, optional:				
-	dia.	1		Ms	10 014 458
-	dia. 3.	1		Ms	10 014 462
-	dia. 5.	1		Ms	10 014 466
16	piston guide	1		Ms	10 014 470
18	packing ring	1	EV	LM	00 018 811
19	gasket	1	EV	KG	10 014 473
24	joint, premounted for orifice F8 consisting of:				10 014 477
-	hinge bolt	2		NSt	10 014 451
-	lever link rod	1		Ms	10 014 428
-	lever	1		NSt	10 014 427
-	piston	1		Ms	10 014 481
-	splint	2		NSt	00 015 034
-	packing ring	1	EV	KG	10 014 485
25	orifice F8, optional:				
-	connection piece - orifice unit G 3/4	1		Ms	10 015 094
-	connection piece - orifice unit G 1/2	1		Ms	10 015 090
27	joint, premounted for orifice F10 consisting of:	1			10 014 489
-	hinge bolt	2		NSt	10 014 451
-	lever link rod	1		Ms	10 014 428
-	lever	1		NSt	10 014 427
-	piston	1		Ms	10 014 491
-	splint	2		NSt	00 015 034
-	button head screw	1		Ms	00 008 608
-	gasket	1	EV	KG	10 014 495
30	orifice F10, optional:				
-	connection piece - orifice unit G 3/4a	1		Ms	10 014 906
-	connection piece - orifice unit G 1/2	1		Ms	10 015 100
33	casing 1st stage up to orifice dia.8, 2nd stage up to orifice dia.7	1		GLM	10 015 109
36	orifice for 2nd stage, optional:				
-	dia. 1.	1		Ms	10 014 503
-	dia. 3.	1		Ms	10 014 506
-	dia. 4.	1		Ms	10 014 509
-	dia. 6	1		Ms	10 014 512
-	dia. 7	1		Ms	10 014 499

5.1 Spare parts list RMG 218 (D118 aV)

item no.	designation	quant	EV	material	part no.
40	piston with pin for 2nd stage, optional:				
-	for orifice dia. 1.	1		Ms/NSt	10 014 528
-	for orifice dia. 3.5, 4.8, 6, 7	1		Ms/NSt	10 015 303
44	gasket	1	EV	KG	10 014 524
48	packing ring	1	EV	LM	00 018 813
51	casing, optional:				
	connection piece G 3/4 1st stage dia. 10, 2nd stage dia. 10	1		GLM	10 015 088
-	connection piece G 5/8, 1st stage dia. 8, 2nd stage dia. 10	1		GLM	10 015 112
55	orifice dia. 10	1		Ms	10 014 533
59	piston with pin	1		NSt	10 014 538
63	gasket	1	EV	KG	10 014 495
65	packing ring	1	EV	LM	00 006 618
66	button head screw	1		Ms	00 008 608
71	cover measuring unit	1		LM	10 009 244
73	diaphragm with	1	EV	KG	10 020 306
-	gasket	2	EV	P	10 015 116
76	pressure spring	1		FSt	10 014 334
77	spring adjustment dial	1		Ms	10 014 542
78	locking screw	1		NSt	10 014 895
79	ring nut	1		LM	10 014 900
80	lever ring for diaphragm safety outlet	1		Ms	10 014 902
81	diaphragm disk	1		St	10 014 820
82	adjustment screw	1		Ms	10 014 910
83	bushing for diaphragm safety outlet	1		Ms	10 014 913
86	gasket	1	EV	KG	00 020 693
87	rubber ring	1	EV	KG	00 006 094
88	splint	1		St	00 005 164
90	pressure spring, optional:				
-	F 1	1		FSt	10 004 334
-	F 2	1		FSt	10 015 469
-	F 11	1		FSt	10 014 936
-	F 12	1		FSt	10 014 935
92	hexagonal nut	1		NSt	10 014 928
93	spring levelling piece	1		NSt	10 014 931
95	cover	1		GLM	10 015 278
96	pressure spring for safety valve, optional:				
-	for F 1 and F 2	1		FSt	10 014 334
-	for F 3, F 4, and F 5	1		FSt	10 014 335
97	lower spring plate	1		LM	10 014 942
98	spring adjustment dial	1		NSt	10 014 543
99	locking screw	1		NSt	10 014 944
100	hexagonal screw	1		St	10 014 964
101	lever ring for diaphragm safety outlet	1		NSt	10 014 903
102	diaphragm disk	1		St	10 014 820

5.2 Spare parts list RMG 218 (D118 aV)

item no.	designation	quant	EV	material	part no.
103	adjustment spindle complete, consisting of	1		NSt	10 014 949
-	adjustment spindle, premounted	1		NSt	10 020 067
-	top spring plate	1		Ms	10 014 940
-	retaining ring	1		FSt	00 019 022
105	hexagonal set collar	1		NSt	10 014 954
106	bushing for diaphragm safety outlet	1		NSt	10 014 914
109	rubber ring	1	EV	KG	00 006 094
111	button head screw	1		St	00 005 888
112	splint	1		St	00 005 164
113	grooved pin	1		St	00 006 646
114	union piece consisting of:				
-	connection piece	1		St	10 007 639
-	dosing screw	1		Ms	10 005 096
-	union nut	1		St	00 030 805
-	cutting ring	1		St	00 030 904
115	packing ring	1	EV	LM	00 018 688
116	O ring	1	EV	KG	00 020 331
117	diaphragm, optional:				
-	for 0.003 bar to 0.04 bar				
	diaphragm	1	EV	KG	10 020 306
	packing ring	1	EV	KG	00 020 693
-	for 0.03 bar to 2.0 bar				
	diaphragm	1	EV	KG	10 020 305
119	pressure spring for measuring unit G, optional:				
-	F1 0.005 bar to 0.012 bar	1		FSt	10 014 957
-	F2 0.01 bar to 0.04 bar	1		FSt	10 014 958
-	F3 0.03 bar to 0.1 bar	1		FSt	10 014 959
-	F4 0.03 bar to 0.25 bar	1		FSt	10 014 960
-	F5 0.05 bar to 0.5 bar	1		FSt	10 014 961
-	F6 0.1 bar to 1.0 bar	1		FSt	10 014 962
-	F7 0.2 bar to 1.8 bar	1		FSt	10 014 963
-	F8 0.3 bar to 2.0 bar	1		FSt	10 014 964
120	cover	1		GLM	10 015 278
121	intermediate ring	1		GLM	10 015 282
122	packing ring	1	EV	P	10 015 116
123	diaphragm	1	EV	KG	10 020 305
124	diaphragm disk	1		St	10 014 981
125	lower spring plate	1		LM	10 014 942
126	lever ring	1		NSt	10 014 977
127	pressure spring, optional:				
-	F 7 to 2.5 bar	1		FSt	10 014 963
-	F 8 to 3.5 bar	1		FSt	10 014 964
128	diaphragm disk	1		Ms	10 014 971
129	hexagonal nut	1		Ms	10 014 695
133	packing ring	1	EV	KG	00 020 693
136	tooth-lock washer	1		FSt	00 014 107

5.3 Spare parts list RMG 218 (D118 aV)

Item no.	Designation	quant.	EV	material	part no.
140	cover	1		LM	10 015 283
143	diaphragm disk	1		St	10 014 983
145	lever ring	1		NSt	10 014 993
146	lock nut	1		St	10 014 996
147	adjusting screw	1		Ms	10 014 999
148	diaphragm	1		KG	10 014 989
151	pressure spring, optional:				
-	to 2.5 bar	1		FSt	10 015 004
-	to 4.0 bar	1		FSt	10 015 005
-	to 8.0 bar	1		FSt	10 015 117
155	lock nut	1		FSt	00 013 138
157	union piece, consisting of:				
-	connection piece	1		St	10 007 639
-	dosing screw	1		Ms	10 005 096
-	union nut	1		St	00 030 805
-	cutting ring	1		St	00 030 904
158	packing ring	1	EV	LM	00 018 688
165	lever	1		LM	10 015 014
168	top spindle with press pin	1		Ms/NSt	10 015 017
171	vent plug	2		St	10 015 023
172	lock nut	1		St	10 015 027
176	packing rin	2	EV	LM	00 018 796
180	straight pin	2		NSt	00 017 049
182	pressure spring	1		FSt	10 016 922
183	disk	1		St	00 006 157
188	safety valve for 10 bar output pressure, consisting of:				
-	valve chamber	1		LM	10 014 073
-	valve face	1		Ms	10 014 078
-	rubber disk	1	EV	KG	10 014 082
-	intermediate piece	1		St	10 015 036
-	pressure spring	1		FSt	10 016 712
191	union nut	1		St	00 030 805
192	cutting ring	1		St	00 030 904
193	hexagonal screw, optional:				
-	measuring unit G and measuring unit	6		St	00 008 168
-	measuring unit GS	6		St	00 010 170
194	locking screw, 2nd stage, optional:				
-	measuring unit G and measuring unit	10		St	00 012 046
-	measuring unit GS	10		St	00 012 082
195	hexagonal nut	16		St	00 005 559
196	locking screw for 1st stage	1		St	00 012 046
198	union piece, consisting of:				
-	connection piece	1		St	10 007 639
-	dosing screw	1		Ms	10 005 096
-	union nut	1		St	00 030 805
-	cutting ring	1		St	00 030 904

5.4 Spare parts list RMG 218 (D118 aV)

item no.	designation	quant	EV	material	part no.
200	packing ring, optional:				
-	for G 3/4	1	EV	LM	00 018 688
-	for G 1/2	1	EV	LM	00 018 684
201	packing ring	1	EV	LM	00 018 785
202	packing ring	1	EV	LM	00 018 688
210	packing ring	1	EV	LM	00 018 814
211	packing ring	1	EV	LM	00 018 815
212	screw plug G 1/4	1		NSt	10 014 009
213	packing ring	1	EV	LM	00 018 689
215	packing ring	1	EV	LM	00 004 428
220	union piece, optional:				
-	for pipe E 10	1		St	00 030 008
-	for pipe E 12	1		St	00 030 010
-	for pipe E 16	1		St	00 030 015
222	intermediate piece, optional:				
-	for pipe E 10 and E 12	1		Ms	10 015 071
-	for pipe E 16	1		Ms	10 015 075
225	union piece	1		St	00 030 029
228	pipe piece	1		St	10 014 053
229	union piece	1		St	00 031 803
230	screwed socket	1		St	18 353 555
231	packing ring	1	EV	LM	00 018 689
232	pressure meter 0-10 bar	1		Ms	00 026 281
233	union piece	1		St	00 026 144
234	packing ring	1	EV	LM	00 018 689

Note Parts marked EV should be kept in stock for maintenance purposes

Material:

St...	steel	Ms...	brass	KG...	rubbery plastic
FSt...	spring steel	LM....	light alloy	P ...	paper
NSt....	rustproof steel	GLM...	light alloy cast		

We supply you with products for gas pressure regulation:



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The RMG Group of Companies on the internet: <http://www.rmg.de>

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We reserve the right for technical changes