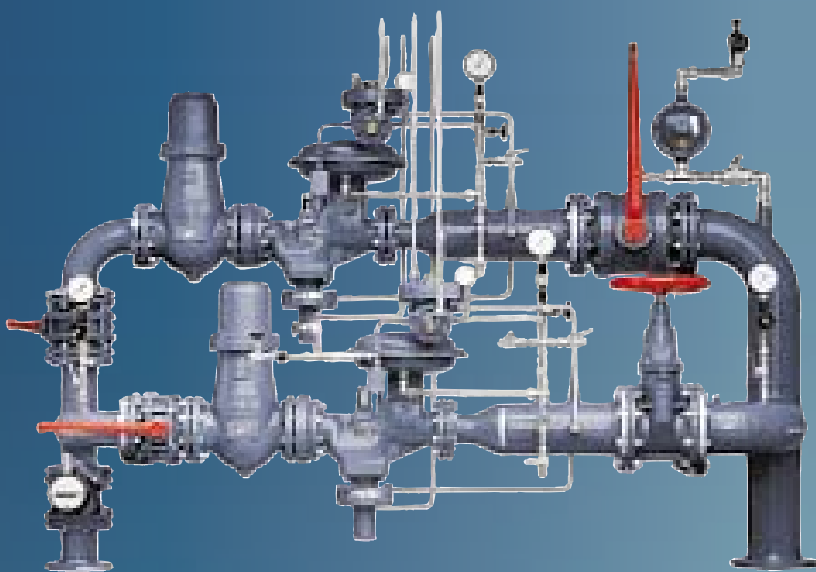


SERVING THE GAS INDUSTRY WORLDWIDE



General operating instructions

FOR RMG GAS PRESSURE REGULATORS AND SAFETY DEVICES



GENERAL OPERATING INSTRUCTIONS

2

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GENERAL OPERATING INSTRUCTIONS

HAZARD WARNING SIGNS

Safety advice in these operating instructions is indicated by the following **signs** and **symbols**:

Hazard warning signs, general

| Sign | Meaning: |
|---|--|
|  | Risk of personal injury |
|  | Risk of damage to property and the environment |
|  | Additional information |

1. GENERAL

These General Operating Instructions describe the installation, removal and operation of gas pressure regulators (GPR) for outlet pressure control, safety shut-off valves (SSVs) and safety relief valves (SRVs). Please refer to the relevant guidelines, particularly DVGW technical rules G 491 and G 495, for information regarding design, finish, supervision and maintenance.



For technical data and special features of a particular product, please refer to the relevant product brochures, test certificates and type plates.



Gas pressure regulators may be commissioned, decommissioned and serviced by qualified personnel only.



Pressure outside the specified range may result in internal and external damage to the gas pressure regulators.



Gas pressure regulators and components may be opened only in an unpressurised state.

2. INSTALLATION

Gas pressure regulators and safety devices must be installed without pipe distortion. The arrow on the main valve housing must indicate the flow direction (except RMG 790 in the return section). Pressure regulators are usually installed in an upright position with horizontal gas flow (see installation examples and technical product information for the relevant regulator). Pilots and actuators of indirect-acting pressure regulators must always be installed in the normal position. The installation position may affect the function and therefore specific technical data, e.g. setting range W_d , accuracy class AC, lock-up pressure class SG and accuracy group AG.

Please refer to the relevant manual and maintenance instructions for information about alternative installation positions.

2.1 Design of outlet measuring pipe

Choose a pipe section with stabilised flow for the measuring point. Make sure that no installations that could disrupt the flow are installed immediately upstream or downstream of the measuring point, e.g. orifice plates, expansions, bends, branches, shut-off valves etc.

RMG general recommendation for outlet measuring pipe:

- Maximum flow rate at the measuring point up to approx. 25 m/s depending on station operating conditions.
- Flow rates in excess of 25 m/s may be possible with certain station arrangements, e.g. gas regulating lines for gas motors and gas burners. Please contact RMG for further information.
- In the low-pressure range up to approx. 250 mbar we recommend approx. 15 to 20 m/s maximum. Even lower flow rates may be used in certain cases.

GENERAL OPERATING INSTRUCTIONS

Upstream of the measuring point, general

Depending on the design of the station, the length L_{uR} of the uninterrupted pipe must be 2.5 to 5 x DN of the pipe, subject to the design of the gas pressure regulator or any downstream pipe expansion.

- If a gas pressure regulator with built-in expansion is used and:
 - the nominal width of the pipe is the same as the downstream nominal width of the gas pressure regulator
→ L_{uR} min. 2.5 x DN
 - the nominal width of the pipe is the next largest standard nominal width
→ L_{uR} min. 3 x DN
 - the nominal width of the pipe is twice the standard nominal jump
→ L_{uR} min. 4 x DN
 - the nominal width of the pipe is more than twice the standard nominal jump
→ L_{uR} min. 5 x DN
- If the outlet pipe size of a gas pressure regulator is the same as the inlet pipe size and:
 - the nominal width of the pipe is the next largest standard nominal width
→ L_{uR} min. 4 x DN
 - the nominal width of the pipe is twice the standard nominal jump
→ L_{uR} min. 5 x DN

Downstream of the measuring point

- L_{uR} min. 1.5 x DN for thermometer immersion sleeves
- L_{uR} min. 1.5 x DN for reductions and expansions, depending on the station operating conditions
- L_{uR} min. 3 x DN for shut-off valves (gate valves, controlling flaps, ball valves with reduced bore)
- L_{uR} min. 4 x DN for T-pieces

Further recommendations

- Shut-off valves with uninterrupted flow (e.g. ball valves with full bore) and, where appropriate, pipe bends (depending on design) are not regarded as disruptive to measuring line connections.
- No restrictions apply to gas meters (turbine gas meters including flow meters, ultrasonic flow meters, vortex gas meters, but not rotary meters) with regard to the positioning of measuring lines; they are not regarded as flow-impeding for measuring line configurations.
- For rotary gas meters the minimum distance between the gas pressure regulator or reducer/expansion and the gas meter must be → L_{uR} min. 3 x DN.
Measuring line connections downstream of gas meters must be separated by a distance of → L_{uR} min. 2 x DN.
- When using shut-off valves (reduced bore), we recommend a distance of → L_{uR} min. 3 x DN downstream of a measuring line connection.
- Allowances must be made for pressure losses from gas meters where applicable, depending on the station operating conditions.

All these statements are RMG recommendations

These recommendations also relate to guidance on measuring line connection conditions in standards (DIN) EN 334 and (DIN) EN 14382. Responsibility lies strictly with the station operator.

The following plant schematics illustrate the basic design types.

2.2 Leak testing (testing for external leak tightness)

Gas pressure regulators (GPR) and safety shut-off valves (SSV) are pressure and leak tested by the manufacturer in accordance with (DIN) EN 334 (GPR, SBV) and (DIN) EN 14382 (SSV).

In compliance with DVGW technical rules G 491, the fully assembled station must be leak tested in situ with air or with inert gas at 1.1 times the maximum permitted operating pressure (MIP_u , MIP_d).

$$MIP = 1.1 \cdot MOP_{u,d}$$

Inlet chamber

- Chamber up to the main valve of the gas pressure regulator
Test pressure $MIP_u = 1.1 \cdot MOP_u$

Outlet chamber

- Chamber between the main valve of the gas pressure regulator (GPR) and the first downstream shut-off valve.
We recommend using 1.1 times the maximum response pressure p_{dso} specified on the safety shut-off valve (SSV).
Recommended test pressure $MIP_d = 1.1 \cdot p_{dso}$ (but max. $MIP_d = 1.1 \cdot MOP_d$).
(MIP_d must not be exceeded, even allowing for the accuracy group AG of the SSV(s).)

Outlet chamber downstream of the valves

- Chamber downstream of the first shut-off valve downstream of the gas pressure regulator
Test pressure $MIP_d = 1.1 MOP_d$.

Note

Always apply the test pressure slowly and evenly.

Please note:

Pressure in the outlet chamber \leq pressure in the inlet chamber

Pressure increase always from the inlet side (inlet chamber)

Pressure decrease always from the outlet side (outlet chamber)



With direct-acting pressure regulators (without auxiliary power), the outlet pressure acting on the main valve must never be more than 0.5 bar above the setpoint.

Therefore with a setpoint spring adjustment of 0.2 bar, for example, the test pressure in the outlet chamber must not exceed $0.5 + 0.2 = 0.7$ bar.

GENERAL OPERATING INSTRUCTIONS

Device designation

2.3 Installation examples

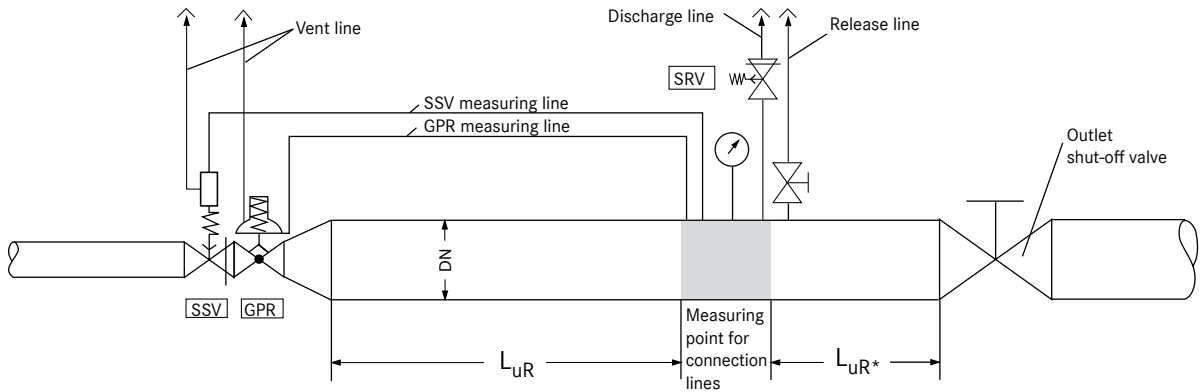


Fig. 1: Gas pressure regulator - direct-acting GPR (without auxiliary power)
- with expansion without noise attenuation downstream of the GPR

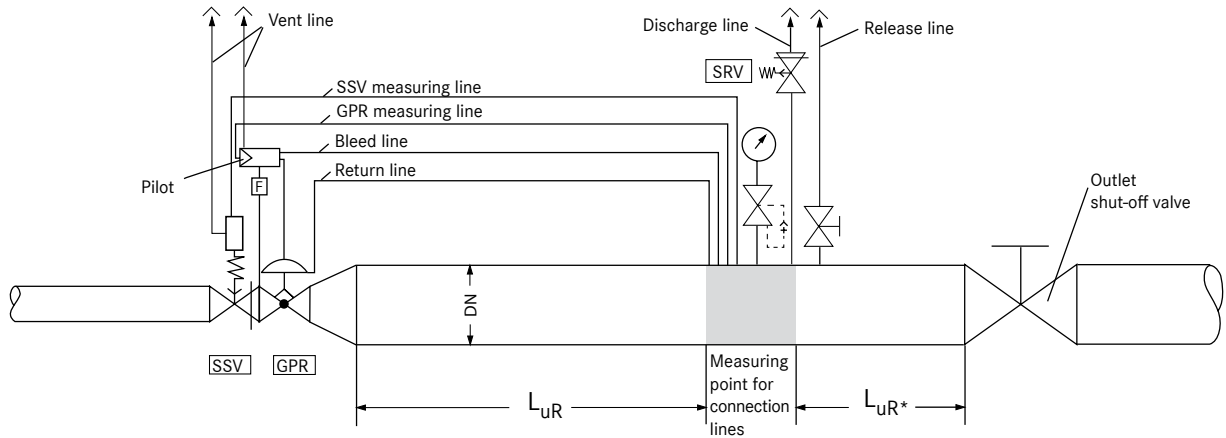


Fig. 2: Gas pressure regulator - indirect-acting GPR (pilot-operated)
- with expansion without noise attenuation downstream of the GPR
- outlet pressure gauge with overpressure protection

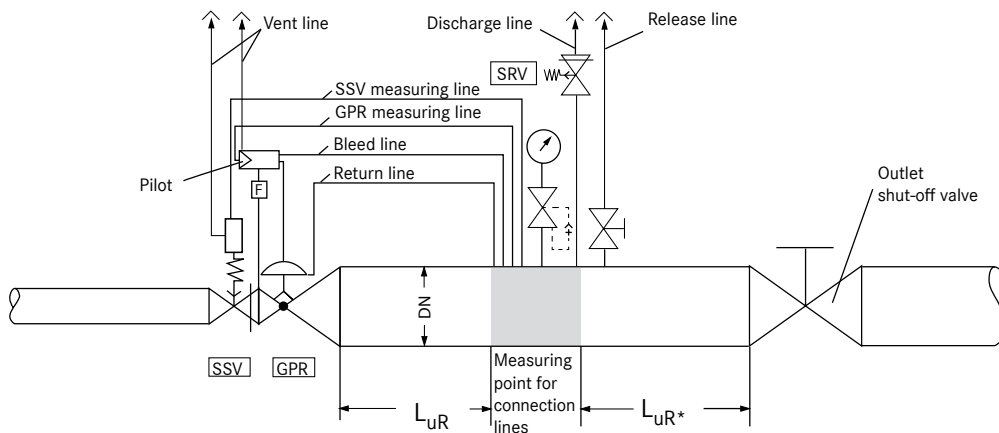


Fig. 3: Gas pressure regulator - indirect-acting GPR (pilot-operated)
- with expansion and integrated noise attenuation
- outlet pressure gauge with overpressure protection

*) Can include shut-off valve with unimpeded flow (ball valve)

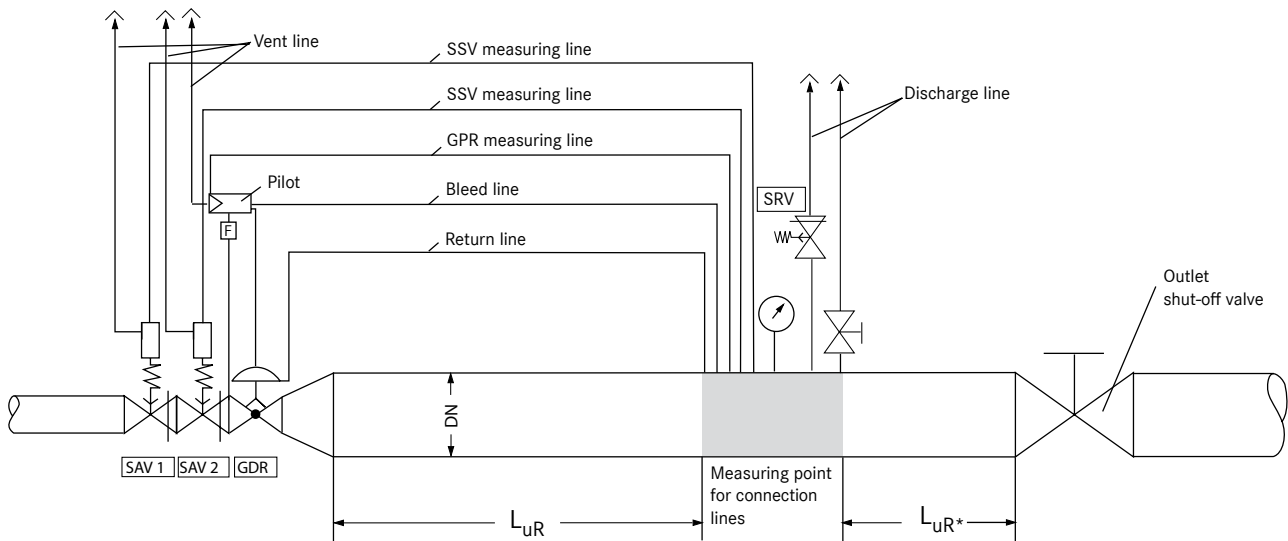


Fig. 4: Gas pressure regulator

- indirect-acting GPR (pilot-operated)
- indirect-acting SSV (pilot-operated) (2-fold)
- with expansion without noise attenuation downstream of the GPR

*) Can include shut-off valve with unimpeded flow (ball valve)

2.4 Impulse lines

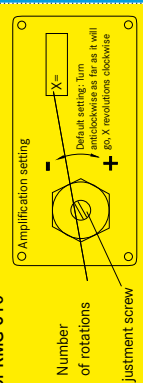
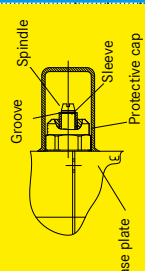
Please refer to the relevant technical product information for the dimensions of lines and thread connections for specific pressure regulators. The lines must be arranged and dimensioned so as to ensure that the pressure regulators function correctly. The measuring line transmits the actual value of the pressure from the measuring point to the measuring diaphragm of a regulating assembly, the pilot of a GPR or SRV or the measuring diaphragm of an SSV actuator. It is connected to the side or the top of the pipework, depending on the device. With safety devices, the measuring line must always be connected without shut-off mechanism upstream of the first shut-off valve on the outlet side. If a measuring line is also connected downstream of the first shut-off valve on the outlet side, 3-way ball valves with negative-value overlap must be used for switching (these ball valves do not have a valve position which allows both measuring lines to be fully closed at the same time). The vent line serves to connect a measuring diaphragm to the atmosphere; in the event of damage to the measuring element (e.g. diaphragm rupture), it can carry gas. Vent lines may be dispensed with under certain operating conditions if vent valves (RMG 915) or safety diaphragm types can be used as an alternative. → Please contact RMG for further information.

The discharge line of a safety relief valve (SRV) is used to discharge volumes of gas (e.g. leakage gas) into the atmosphere. The vent lines or discharge lines may be grouped together in a collecting line, provided that this does not impair the functioning of the individual devices. The recommended profile of the collecting line is at least 5x greater than the total profiles of the individual lines. Stand-alone SSV vent lines are recommended for main safety shut-off valves (SSV). Vent lines must not be combined with discharge lines in the same collecting line.

With indirect-acting gas pressure regulators (pilot-operated), the bleed line is used to discharge outflow gas from the pilot into the outlet chamber of the pressure regulator. In some pressure regulators the bleed line is combined with the return line. With pilot-operated gas pressure regulators, the return line feeds the outlet pressure back to the main valve.

3. OPERATING INSTRUCTIONS

| Safety shut-off valve (SSV) | Indirect-acting gas pressure (GPR) direct-acting (without auxiliary power) | Indirect-acting gas pressure (GPR) regulator (pilot-operated) | Safety relief valve (SBV) |
|--|--|---|--|
| <p>3.1</p> <p>Pressurising the station</p> <p>Warning Make sure that the outlet shut-off valve is closed when pressurising the system. Always pressurise slowly. After carrying out maintenance, pressurise the system and perform operational tests as described in 3.2.</p> <p>• Slowly open the by-pass valve or pressure compensating valve of the SSV. This will equalise pressure in the main valve.</p> <p>• Open and engage the SSV, keeping it in the open position until it is securely engaged.</p> <p>Note Maintain the re-engagement differential (see general brochure and section 3.5). An SSV with underpressure release can only be engaged if the pressure at the measuring point corresponds to the operating pressure p.</p> <p>• Close the by-pass valves.</p> | <p>A lock-up pressure corresponding to the preset value is generated in the outlet chamber.</p> <p>Warning Since the pressure regulator is in an unpressurised state, slowly pressurise the inlet pressure.</p> <p>• Set the load limiting pressure. Reference values: -RMG 610 (RS 10d) approx. 0.5 to 1 bar above Pd -Pilot RMG 650 approx. 0.5 to 10 bar above Pd -Pilot RMG 630 approx. 0.5 to 10 bar above Pd For further information, please refer to the operating hints and tips for the relevant product in the spare parts catalogue.</p> <p>• Slowly increase the outlet pressure to the desired value (see sections 3.2.2 and 3.3).</p> | | |
| <p>3.2</p> <p>Operation and performance tests</p> <p>Testing internal leak tightness</p> <p>• Close SSV • Depressure the outlet chamber as far as the outlet shut-off valve • Pressurise the inlet pressure • Test for leaks</p> <p>With two SSVs: • Close the first SSV, open the by-pass valves of the second SSV and test for leaks • Close the by-pass valves on the second SSV • Open the first by-pass valve. Test the second SSV for leaks</p> <p>Testing the response pressure</p> <p>• Slowly increase or decrease the pressure until the response pressure is reached • Repeat the test several times at the same pressure change rate</p> <p>Warning Please observe the re-engagement differentials when performing the test (see general brochure and section 3.5) • Adjust the response pressure setting on the actuator if necessary</p> <p>Setpoint adjustment</p> <p>• To increase setpoint, turn the setpoint adjustment screw clockwise</p> | <p>Testing the lock-up pressure</p> <p>• Pressurisation in accordance with 3.1 • Discharge a small volume of gas via the roof • Slowly close the discharge line A constant lock-up pressure must be maintained within the lock-up pressure group</p> <p>Testing the controlled pressure</p> <p>• For the first operational test, discharge the gas to air via the discharge line The set controlled pressure can be read off from the outlet pressure gauge • Adjust the setpoint of the outlet pressure if necessary</p> <p>Note We recommend setting the setpoint of the outlet pressure to slightly below the pressure of the downstream line system</p> | | <p>Testing internal safety</p> <p>• Increase the pressure in the outlet chamber until the response pressure is reached • Reduce pressure in the outlet chamber to 0.9 times the response pressure • Test for leaks</p> <p>Testing the response pressure</p> <p>• Slowly increase the pressure until the response pressure p_s is reached. The SRV must open • Adjust the response pressure setpoint if necessary</p> |
| <p>3.3</p> <p>Changing the setting range</p> <p>The setting range can be switched to a different setpoint spring when the pressure regulator is pressurised</p> <p>Note When the station is under pressure, the SSV closes when the setpoint spring for overpressure is removed</p> | <p>Warning Please note the final section on Page 7</p> | | <p>Do not insert a different setpoint spring when the safety relief valve is pressurised</p> |

| | | |
|------------|---|--|
| <p>3.4</p> | <p>Commissioning the system</p> <p>Warning Stop screws for releasing samples must be removed; End caps, which serve as an opening aid, must be removed from the valve stem</p> | <p>• After completing sections 3.1 and 3.2: Slowly open the outlet shut-off valve</p> <p>• Slowly increase the setpoint with the adjustment screw until the pressure regulator has taken over the gas supply and the desired outlet pressure p_{ds} is set</p> |
| <p>3.5</p> | <p>Setting instructions</p> <p>Re-engagement differential The re-engagement differential specifies the amount Δp_w by which the pressure must be reduced after an overpressure release or increased after an underpressure release to enable the SSV to be safely re-engaged. The re-engagement differentials are specified in the general brochures or in the RMG booklet.</p> <p>If the SSV actuator is designed to simultaneously protect against over- and underpressure, the minimum pressure difference between p_{ds0} and p_{dsu} must additionally be observed. This is specified in the general brochures. Decommissioning the station</p> | <p>Fitting the regulating device to the regulating line When gas is taken up (outside the lock-up pressure zone or the low flow range), the control response of the GPR must remain stable within the given accuracy class</p> <p>Setting the throttle valve in the measuring line</p> <ul style="list-style-type: none"> In the event of control oscillations, turn the valve clockwise to restrict the flow <p>Note The throttle valve should remain open as far as possible to achieve sufficient actuating speed</p> <p>Note A load limiting pressure changemay require setpoint adjustment</p> <p>Setting the outflow: Avoid changing the factory default setting if possible</p> <ul style="list-style-type: none"> In the event of control deviations, turn the spindle anticlockwise (adjustment screw). Do not exceed 4 turns for RMG 610 <p>Default setting of bleed valve (RMG 610 and RMG 650) and throttling valve of RMG 630 For RMG 610</p>  <p>Turn the adjustment screw to "+," (anticlockwise) as far as it will go; turn the adjustment screw to "-" (clockwise) to return the counter to zero</p> <p>For RMG 650, RMG 630 and RMG 630-1 (formerly 640)</p>  <p>Factory setting: Throttle is rotated 6 times (anticlockwise).</p> |
| <p>3.6</p> | <p>Decommissioning the system</p> | <p>1. Slowly close the outlet shut-off valve</p> <p>or 2. Slowly reduce the outlet pressure via the setpoint adjustment screw until the back-up line has taken over the gas supply</p> <p>or 3. Slowly increase the setpoint of the back-up line until the operating line is decommissioned</p> |

GENERAL OPERATING INSTRUCTIONS

4. TROUBLESHOOTING

4.1 Direct-acting gas pressure regulators (without auxiliary power)

Please refer to the maintenance manuals/spare parts catalogue for maintenance instructions for specific products



Depressurise all housing chambers and associated station parts before installing or removing a device.

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| TROUBLESHOOTING | | | |
|--|------------------------|---|--|
| Fault | Fault detection | Possible cause | Action |
| Excess lock-up pressure no lock-up pressure | Main valve | Compensating diaphragm faulty | Replace diaphragm |
| | | Main valve soiled or damaged | Check valve seat and sealing rings for damage and dirt |
| | | Structural sealing element faulty | Replace sealing rings |
| Unstable outlet pressure pattern (oscillations) | Main valve | Pressure regulator operating in the lock-up pressure range | Tighten the adjustable throttle in the measuring line by turning clockwise (if available) Note: Excess damping reduces the actuating speed. Insert the setpoint spring for the next higher setting range (harder setpoint spring) |
| | Regulating assembly | Oscillating resonance in the regulating line | |
| Excess control deviation | Measuring point | Unsuitable measuring line connection | Choose measuring point with stable flow, check measuring point |
| | Gas pressure regulator | Binding of the regulator due to soiling | Service the regulator |
| | | Measuring or compensating diaphragm faulty or incorrectly installed | Check diaphragm |
| Incorrect pressure peak, excess dynamic lock-up pressure | Gas pressure regulator | Excess damping of the pressure regulator, too dynamic regulating line | Open the adjustable throttle further in the measuring line (turn anticlockwise), check vent lines if necessary, increase the pipe width if the lines are very long. replace vent valve RMG 9 15 with vent line |
| | Regulating line | Excess lock-up speed of downstream shut-off devices | Reduce lock-up speed of shut-off device |

4.2 Pilot-operated gas pressure regulators (with auxiliary power)

Please refer to the maintenance manuals/spare parts catalogue for maintenance instructions for specific products



Depressurise all housing chambers and associated station parts before installing or removing a device.

| TROUBLESHOOTING | | | |
|---|-----------------|---|--|
| Fault | Fault detection | Possible cause | Action |
| Excess lock-up pressure | Pilot | Amplifying valve soiled or damaged | Service pilot |
| No lock-up pressure | Pilot | Amplifying valve faulty | Service pilot |
| | Main valve | Main valve leaking due to soiling or damage | Service main valve |
| Main valve does not open during commissioning or loadtransfer | Pilot | Too little amplification | Increase load limiting pressure, reduce outflow |
| | | Diaphragm in pilot faulty | Replace diaphragm |
| GPR does not respond to setpoint adjustment | Filter | Filter soiled | Clean or replace filter set |
| | | Diaphragm in main valve faulty | Replace diaphragm |
| Sudden or slow outlet pressure loss | Main valve | Pressure compensation valve open (with RMG 402/RMG 502) | Close valve |
| | | Valve seat diameter too small | Check design data |
| Sudden or slow outlet pressure loss or increase | Pilot | Diaphragm in pilot faulty | Replace diaphragm |
| | Main valve | Main valve binding | Service the regulator |
| Unstable outlet pressure pattern (oscillations) | Pilot | Excess amplification | Reduce load limiting pressure, increase gas outflow; insert setpoint spring for the next setting range up (harder setpoint spring) |
| | Main valve | Main valve operates in lock-up pressure range | Check design data |
| | Measuring point | Unsuitable measuring line connection | Choose measuring point with stabilised flow, see section 2.1 "Design of outlet measuring pipe" |
| Excess control deviation | Pilot | Too little amplification | Increase load limiting pressure, reduce gas outflow |
| | | | Reduce throttle setting (with RMG 630/650-1 (formerly 640)) |

GENERAL OPERATING INSTRUCTIONS

4.3 Safety shut-off valves

Please refer to the maintenance manuals/spare parts catalogue for maintenance instructions for specific products



Depressurise all housing chambers and associated station parts before installing or removing a device.

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| TROUBLESHOOTING | | | |
|--|-----------------|--|---|
| Fault | Fault detection | Possible cause | Action |
| No internal tightness in the closing position | Main valve | Main valve not tight | Check valve seat and sealing rings for damage and dirt |
| | By-pass valve | By-pass valves open or not tight | Check by-pass valves |
| Main valve will not open | By-pass valve | No pressure compensation at the main valve | Create pressure compensation by opening the by-pass valve |
| Main valve will not engage | Actuator | Difference between response pressure and operating pressure or between upper and lower response pressure too small | Correct response pressure setting (see brochure or RMG booklet for required re-engagement differential) |
| | | Measuring diaphragm in the actuator faulty (only with underpressure release) | Replace diaphragm |
| | Measuring point | Pressure at measuring point too high | Reduce pressure at measuring point to operating pressure |
| | | No pressure at measuring point only with underpressure release | Increase pressure at measuring point to operating pressure |
| | Vent valve | Vent valve discharges insufficient gas from the spring chamber to engage | Unscrew top of spring housing; engage SSV and screw top back down |
| | Tripping device | Release mechanism binding due to soiling | Service tripping device |
| Permitted response pressure deviation exceeded | Actuator | Difference between response pressure and operating pressure or between upper and lower response pressure too small | Observe prescribed re-engagement differential during engagement (see brochure or RMG booklet) |
| | | Measuring diaphragm twisted | Check diaphragm |
| Irregularities in response behaviour | Tripping device | Release mechanism binding due to soiling | Service tripping device |
| | | Elements of the release mechanisms worn | Replace damaged parts |
| | Checking device | Significant variation in pressure changes rates during testing | Apply test pressure slowly and evenly |
| Gas leak via vent lines | Actuator | Measuring diaphragm faulty | Replace diaphragm |

5. LUBRICANTS

| LUBRICANTS | | |
|--|--|--------------------------|
| Application | Lubricant | Remarks |
| O-ring seals stationary or moving | Silicone grease Partsno.: 00 027 081 Tube | Apply sparingly to parts |
| Diaphragm clamping area | | |
| Screwed connections and fastening screws in the housing | | |
| Sliding surfaces of valve stems, sliding guides, spindle bushes | | |
| Moving parts in SSV actuators and tripping devices, Switching bushes, Switching balls and drums, Ball bearings | | |
| Valve sleeves and valves sleeve seals in gas pressure regulators | Unisilicone grease TK 44 N2 Part no.: 00 027 052 Pack | |
| Setpoint adjustment screws (drive screws) Thread material combination: AL/AL | Anti-seize AS450 Parts no.: 00 027 091 Pack | |
| Devices for oxygen | Lubricating oil Parts no.: 00 026 562 Lubricating paste Parts no.: 00 026 563 | |
| Devices for ammonia | Fluorosilicone grease Parts no.: 00 027 660 | Apply sparingly to parts |

Note

Please refer to specific details in the maintenance instructions!

GENERAL OPERATING INSTRUCTIONS

6. INSTALLATION TOOLS

| INSTALLATION TOOLS | | | |
|--|---|---|---|
| Device type | Tool | Stock no. | |
| RMG 330 Regulating assembly 1 RMG 361 Regulating assembly 1 | Outlet pressure adjustment 0.02 to 0.5 bar | 00 02 65 02 |  |
| | Outlet pressure adjustment 0.5 to 1.0 bar | 10 00 49 11 |  |
| RMG 300 RMG 835 | Outlet pressure adjustment SRV adjustment | 10 00 42 54 |  |
| RMG 408 | Installation tools | 10 00 78 95 |  |
| Safety shut-off device for RMG 300, RMG 330, RMG 332, RMG 340, RMG 345, RMG 361, RMG 370, RMG 408 Safety shut-off valve (SSV) RMG 720 | SSV adjusting wrench | 10 00 49 12 |  |
| SSV RMG 720 K4, K5, K6 | Tee wrench | 10 00 85 82 |  |
| SSV RMG 720 DN 150 SSV RMG 721 DN 50 - 150 | Tee wrench | 10 00 87 90 |  |
| RMG 361/RMG 370 DN 25 and DN 50 | Bolt + installation tool SSV | 15 80 14 21 |  |
| RMG 361/RMG 370 DN 80 and DN 100 | Bolt + installation tool SSV | 15 80 14 22 |  |
| RMG 361 Regulating assembly 1 RMG 370 regulating assembly 1 | Leakage gas adjusting wrench | 15 80 12 46 |  |
| RMG 402 | Installation tool for SSV o-ring | 10 03 00 34 |  |
| RMG 512 b | Installation cone | DN 25 10 00 22 18 DN 50 10 01 35 47 DN 80 19 08 18 43 DN 100 10 01 36 47 |  |

| INSTALLATION TOOLS | | | |
|---|--|-------------|---|
| Device type | Tool | Stock no. | |
| RMG 265 RMG 267, RMG 268 RMG 630 to RMG 630-1 (640) RMG 650 to RMG 659 RMG 670, RMG 671 | Installation tools | 19 08 33 19 |  |
| RMG 710 DN 25 to DN 150 RMG 711 DN 200 to DN 300 RMG 721 DN 50 to DN 150 | Checking device with adapter for manual release adjustment | 10 00 19 35 |  |
| | Mounting screw M4 (2x) | 10 00 07 16 |  |
| | Jig for manual release adjustment and solenoid release setting | 10 00 19 43 |  |
| RMG 672 K10, K10a, K11, K11a K12, K13, K14 | Jig for actuators | 10 00 19 47 |  |
| RMG 672 K12, K13, K14 | Allan key for SSV adjustment | 00 02 62 66 |  |
| RMG 790 | Adjusting wrench | 10 00 82 99 |  |
| | Test vessel | 87 90 90 00 |  |
| RMG 530 DN 200 to DN 300 | Mounting sleeve for sealing ring | 10 02 44 34 |  |
| RMG 530 DN 50 to DN 300 | Slip-on bushing for motor shaft | 18 35 71 99 |  |

Note: This list does not claim to be exhaustive!

GENERAL OPERATING INSTRUCTIONS

Additional RMG publications

For further information about gas pressure regulators and safety devices, please refer to the following publications in addition to the general operating instructions:

General brochure

- Technical product information -

Contents: TECHNICAL DATA
Dimensions and connections
Design and operation
Installation
Device design
Ordering information

Manual and maintenance/Spare parts

Contents: Specific operational hints and tips
Maintenance instructions
Spare part drawing
Spare parts list

RMG booklet

- Contents:
- Products from the entire RMG GROUP
 - Important technical data for RMG gas pressure regulators
 - incl. flow parameters, setting ranges, accuracy classes and lock-up pressure classes
 - Important technical data for RMG safety devices
 - incl. setting ranges and accuracy groups

SERVING THE GAS INDUSTRY WORLDWIDE



You can count on RMG to provide expertise along the whole gas supply chain, from exploration to supplying the end user. Our reliable products and systems offer you complete control over your instrumentation, safety and control equipment.

We also design and build stations according to your requirements and provide reliable, contemporary solutions to station automation.

Please contact us – we thrive on challenge!

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