

ELSTER RVG G10 - G25

Fit for

Fittings



In the last Profiles we introduced the new Elster RVG G10 - G25 rotary meters. Since then, our 'little one' has become increasingly popular with our customers. It has proved itself in its initial fields of application, especially industrial applications, and in the course of discussions with potential users, further advantages have been discovered.

In very many applications the question of limited space is an important aspect. The best examples are cabinets installed outside the house, which on the one hand, make it easier for the service personnel to access and, on the other, help to avoid costly and time-consuming installations inside the buildings. The gas is typically fed in via a medium-pressure network up to 1 or 5 bar and is reduced within the cabinet to the 22 mbar required for natural gas. An extremely compact solution is the combination of an M2R 2-stage regulator and a G16 RVG (Fig. 1). With a maximum flow rate of 25 m³/h for both devices they are nicely tuned to each other and combine high-quality regulation with high metering accuracy and a wide

Fig. 1: M2R with RVG G16



measuring range. Of course, it is possible to assemble a constellation where the RVG is mounted for a horizontal flow.

Another variation of an RVG and a gas pressure regulator is a reverse constellation where the RVG is upstream of the regulator. The RVG is approved for pressures up to 20 bar and can, therefore, be installed in such a position, unlike a diaphragm meter. One example of a very compact gas metering and regulation system is, for example, the combination of a G25 RVG and an MR 25 G6 for up to 6 bar inlet pressure and a maximum flow rate of approx. 80 m³/h (Q_{max} of the regulator). With this solution in a 2 bar medium-pressure natural gas network, you can achieve the equivalent of a G40 meter ($Q_{max} = 65 \text{ m}^3/\text{h}$) at the outlet side of the gas regulator (Fig. 2).

For billing purposes, standard volumes are required. That's why in this example the 'twin pack' RVG and regulator has been turned into a 'three-some' to include an EK210. Figure 3 shows our space-saving solution, which has yet to be equalled.

Progress has also been made when it comes to the aspect of installation. For the last two years it has been possible to use extrusion technology for the pipe connections instead of soldering and this is approved for both water and gas pipes. This very quick and simple connection technique greatly reduces the installation time and, as an example of a state-of-the-art technology, is becoming more and more important. Naturally enough, the user is also interested in how the new technology can be used to connect the RVG (Table 1).

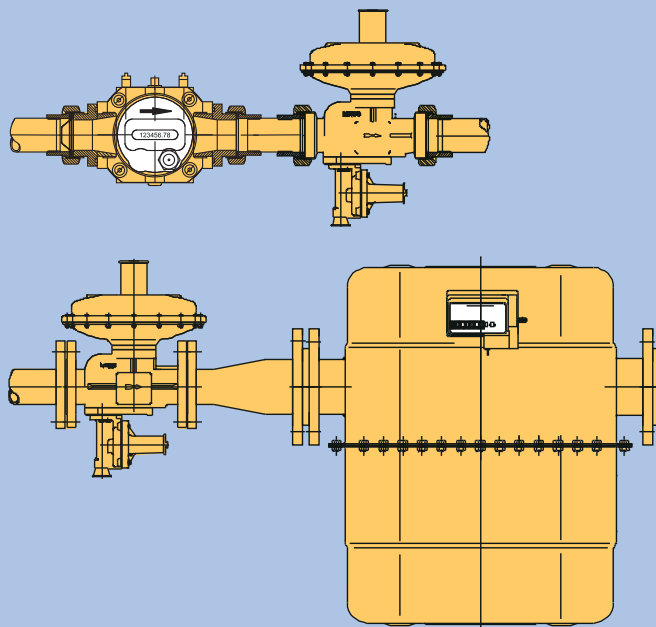


Fig. 3: Combination of G25 RVG, EK210 and MR 25 G6

To show how this works, we have taken the example of the DVGW-approved fittings 'profipress G' from the company Viega, Attendorn (www.viega.de and www.viega.com).

Figure 4 (on the next page) shows the solution using Elster standard brass rotary components and the viega screw connection No. 379 377 (2652) 42 x 1 1/2", which is designed at the outlet

Fig. 2: Small RVG upstream of regulator replacing a large diaphragm meter downstream



for a 1 1/2" pipe. The adaptors mentioned in table 1 are available for smaller pipe diameters. Choosing standard connections as shown means that they are available quickly, more reasonably priced, are easier to store and to order.

Let's talk briefly about the different materials used for the connections. The aluminium housing for the RVG is covered in a layer of HART-COAT®. HART-COAT® layers are electrically insulated and prevent contact corrosion. The brass parts are made of the same material as the fittings and, therefore, ideally suited to each other.

With the new RVG G10 - G25, Elster has developed an innovative product which can easily be installed both in the conventional manner, i.e. screwed, and with the help of the latest extrusion technology. These different installation possibilities mean that the RVG has an advantage over previous solutions. Have you got any questions

Table 1: Example of the DVGW-approved fittings

ELSTER RVG G10 - G25 with brass rotary components	viega, 'profipress G', screw connection, No. 379 377 (2652) 42 x 1 1/2"
Pipe DN 40, 1 1/2"	no additional reduction adaptor
DN 32, 1 1/2"	+ adaptor No. 346 645, 42 x 35
DN 25, 1"	+ adaptor No. 346 645, 42 x 28



Fig. 4: Connection of the RVG + EK210 using extrusion technology with and without pipe adaptors

or comments? We look forward to hearing from you and to working with you to find new applications for our ideas.

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