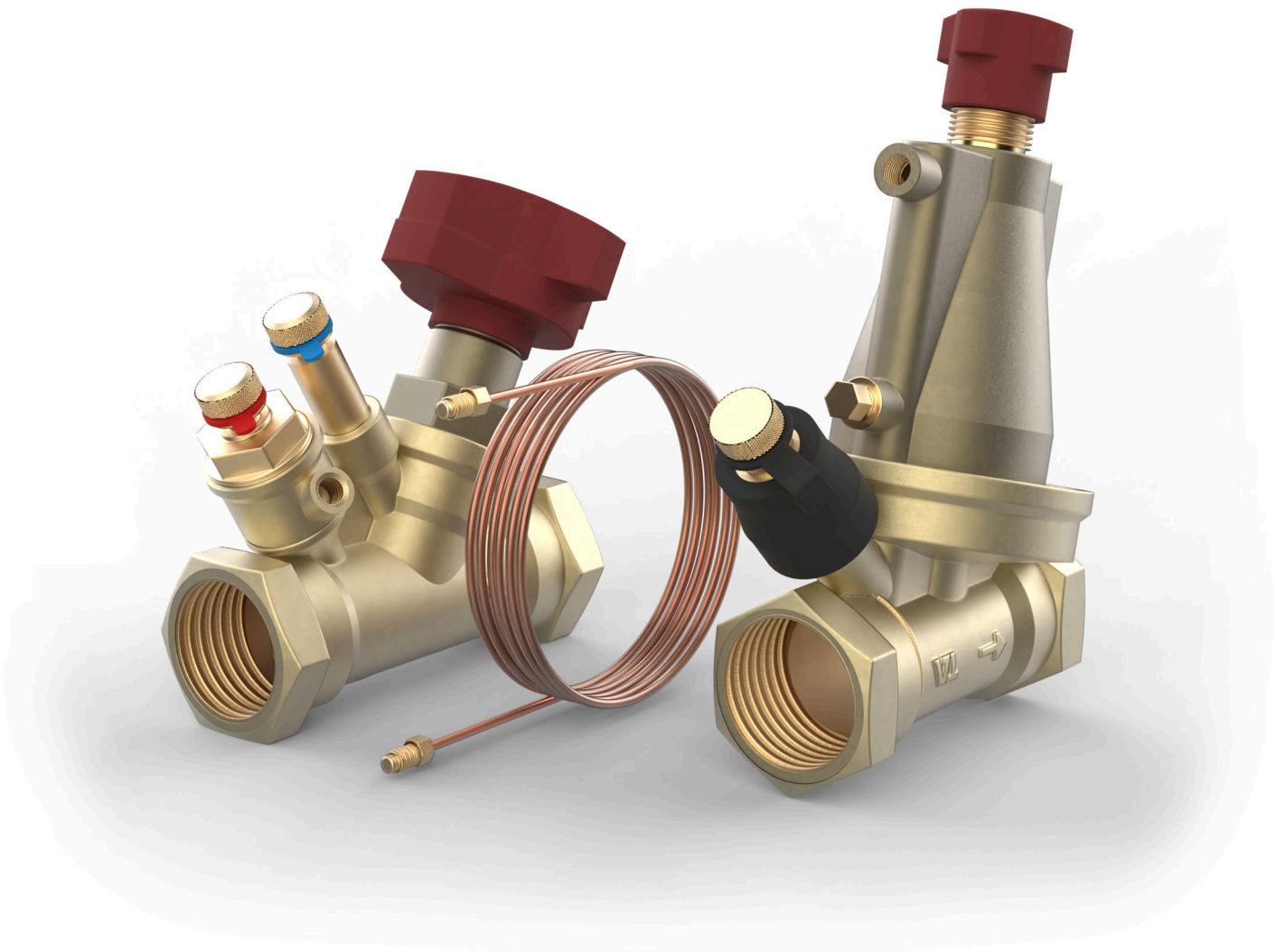
INT

Instructions for Use

Differential pressure regulator set



For Fonterra radiant heating and cooling

Model
1289

viega

Table of contents

1 About these instructions for use

1.1 Target groups

The information in this instruction manual is directed at the following groups of people:

- Heating and plumbing experts and trained personnel

Individuals without the abovementioned training or qualification are not permitted to mount, install and, if required, maintain this product. This restriction does not extend to possible operating instructions.

The installation of Viega products must take place in accordance with the general rules of engineering and the Viega instructions for use.

1.2 Labelling of notes

Warning and advisory texts are set aside from the remainder of the text and are labelled with the relevant pictographs.

DANGER!
This symbol warns of possible life-threatening injury.

WARNING!
This symbol warns of possible serious injury.

CAUTION!
This symbol warns of possible injury.

NOTICE!
This symbol warns of possible damage to property.

This symbol gives additional information and hints.

1.3 About this translated version

This instruction for use contains important information about the choice of product or system, assembly and commissioning as well as intended use and, if required, maintenance measures. The information about the products, their properties and application technology are based on the current standards in Europe (e.g. EN) and/or in Germany (e.g. DIN/DVGW).

Some passages in the text may refer to technical codes in Europe/Germany. These should serve as recommendations in the absence of corresponding national regulations. The relevant national laws, standards, regulations, directives and other technical provisions take priority over the German/European directives specified in this manual: The information herein is not binding for other countries and regions; as said above, they should be understood as a recommendation.

2 Product information

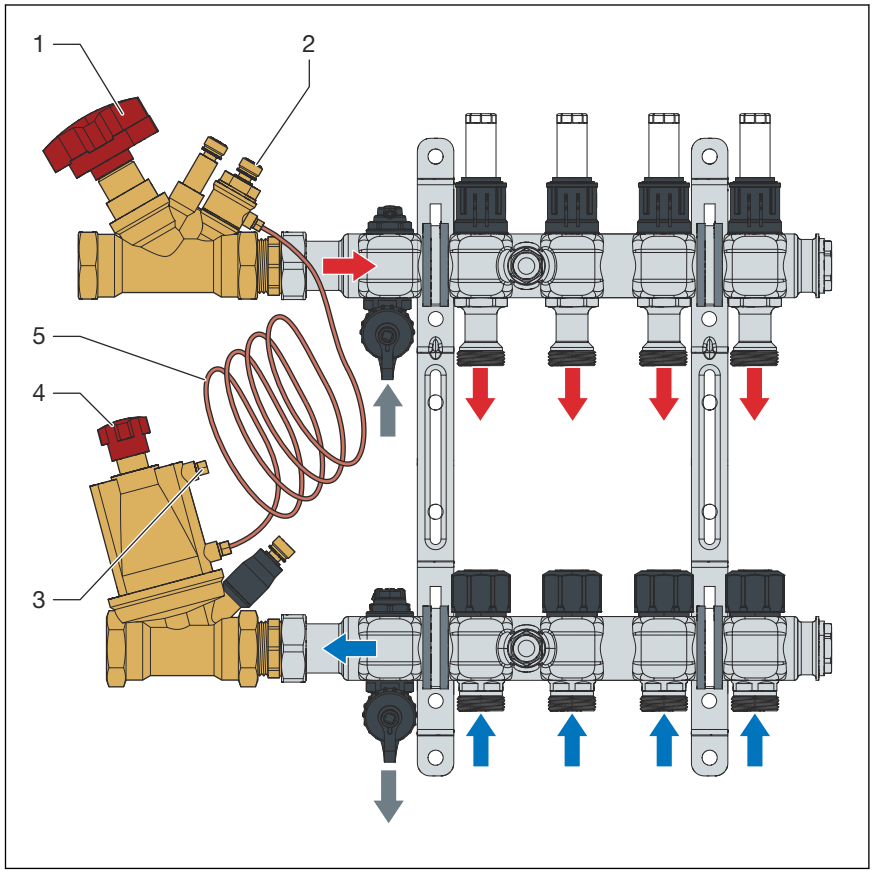
2.1 Intended use

The differential pressure regulator set is suitable for use in heating and cooling systems.

Conversions or modifications of the product are not considered intended use, and are not permitted.

2.2 Product description

The differential pressure regulator keeps the differential pressure constant via the load and allows for accurate, silent and stable regulation of the downstream regulating valves.



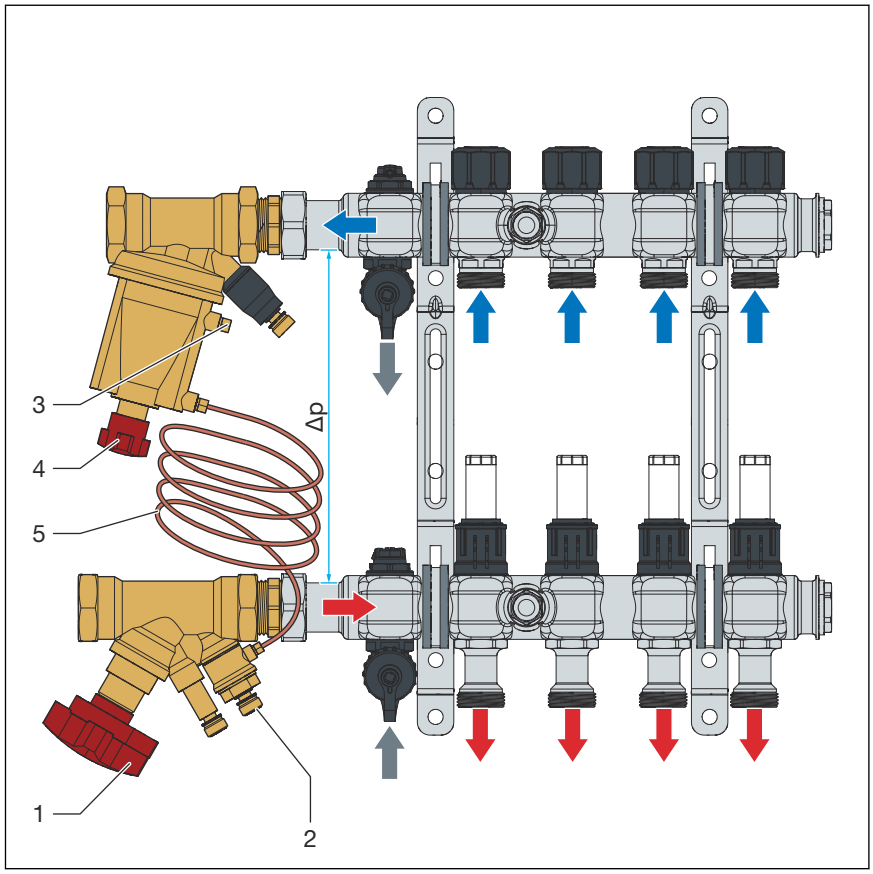
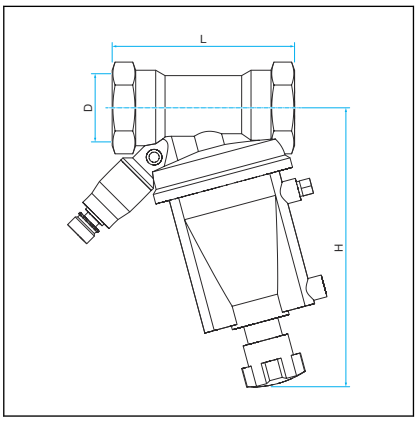


Fig. 1: Differential pressure regulator set overview

1 Circulation regulation valve
2 Differential pressure regulator
3 Bleeder valve
4 Screw
5 Impulse line

2.3 Technical data

Differential pressure regulator



Lockable	Yes
Dimension	DN25
Pressure class	PN16
Maximum operating temperature	120 °C
Minimum operating temperature	-20 °C
Maximum differential pressure (Δpv)	250 kPa
Setting range (Δp)	10* - 60 kPa
H	141 mm

L	93 mm
D	G1

*) factory setting

Operating range differential pressure regulator

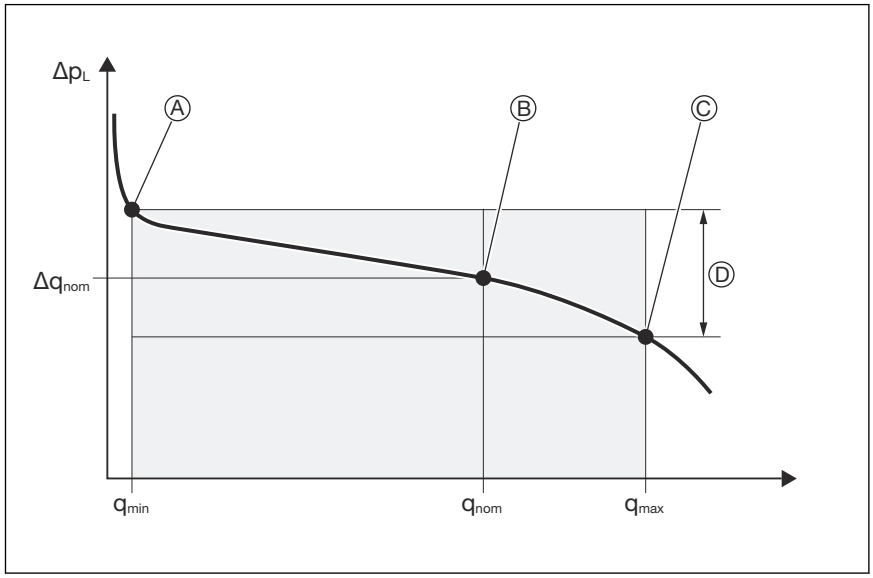
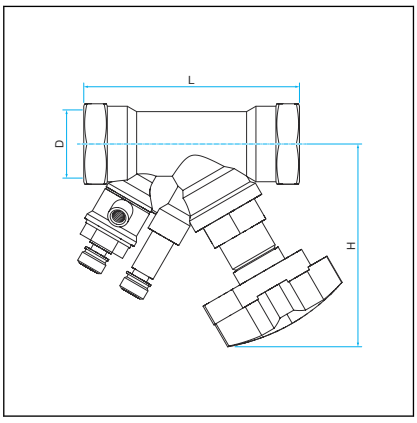


Fig. 2: Operating range of the differential pressure regulator

1 Kv_{min}
2 Kv_{nom}
3 Kv_m
4 Operating range Δp_L ± 25 %

Kv_{min}	Kv_{nom}	Kv_m
0.28	3.8	5.5

Circulation regulation valve



Lockable	Yes
Dimension	DN25
Pressure class	PN20
Maximum operating temperature	120 °C
Minimum operating temperature	-20 °C
H	105 mm
L	110 mm
D	G1

Operating range circulation regulation valve Kv values

DN25	Number of revolutions
0.60	0.5
1.03	1
2.10	1.5
3.62	2
5.30	2.5
6.90	3
8.00	3.5
8.70	4

Pressure loss diagram

The diagram specifies the lowest pressure loss required by the valve to allow it to control at different flow quantities within its proportional range.

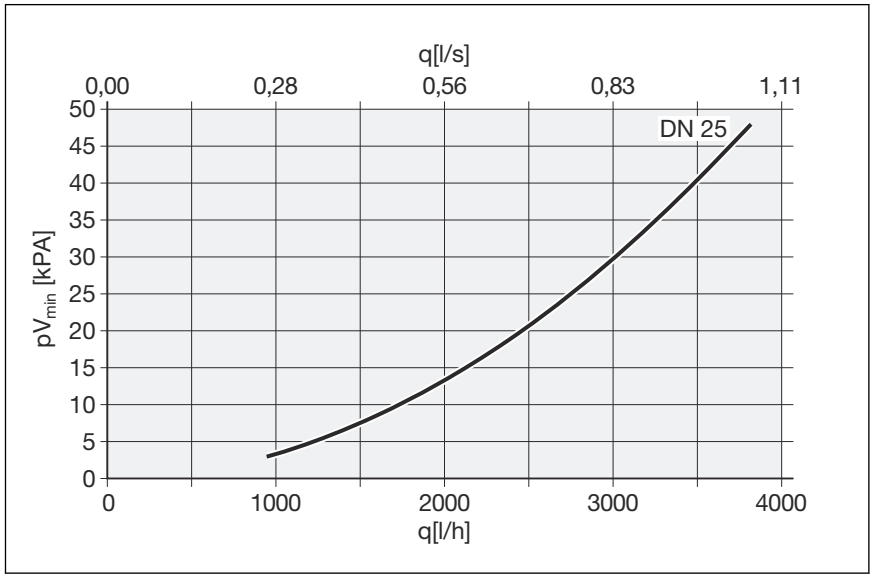


Fig. 3: Pressure loss diagram differential pressure regulator set

3 Handling

3.1 Transport and storage

Observe the following with transport and storage:

- Avoid heavy blows and vibrations.
- Store the components in a clean and dry place.
- Do not remove the components from the packaging until immediately before use.

3.2 General mounting instructions

- The circulation regulation valve (1) is installed in the supply line, the differential pressure regulator (2) in the return flow in the specified flow direction.
- The top of the differential pressure regulator is rotatable.
- If the impulse line needs to be extended, use commercially available 6 mm copper pipe.

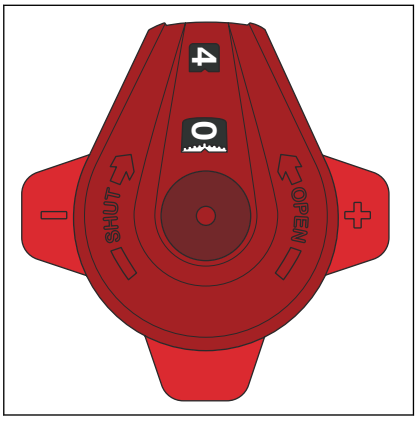
3.3 Assembly

NOTICE!
Use the impulse line (5) supplied as standard. Do not kink the impulse line.

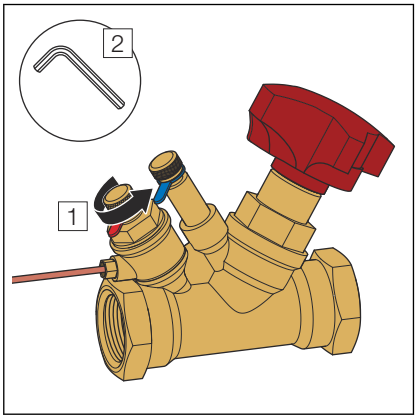
- Connect the two valves with the impulse line (5).
- Loosen the hexagonal screw at the bleeder valve (3) using a size 22 spanner.
- Turn the regulation valve into the desired position.
- Tighten the hexagonal screw at the bleeder valve (3) with a size 22 spanner.

3.4 Settings

Regulation with presettable valves



- Fully open the two valves via the handwheels.
- Fully open the downstream control and thermostat valves, remove actuators if mounted.
- Set all valves at the consumers to the desired flowthrough volume.



- Open the drainage valve with a 5 mm Allen key.
- To vent the system and the impulse line, open the screw (4) until water escapes.
- Set the desired differential pressure at the shut-off handwheel of the differential pressure regulator (2) using a 3 mm Allen key (see calculation documents).

  INFO! Refer to the table to see the correlation between the changes in differential pressure and the handwheel position.

Δp_L[kPa]	Number of revolutions
5	-
10	5*
15	13
20	19
25	23
30	27
35	30
40	33
45	35
50	37
55	39
60	41

* = factory setting (turning clockwise)

Troubleshooting

If the nominal flowthrough volume cannot be reached, the following issues may be the cause of the problem:

- The valves are shut, or the system sections are clogged. Check the system and the hydraulics.
- The consumer circuit needs a higher differential pressure Δp_L than the differential pressure set currently. Check the target value, adjust if necessary.

3.5 Disposal

Separate the product and packaging materials (e. g. paper, metal, plastic or non-ferrous metals) and dispose of in accordance with valid national legal requirements.

Viega GmbH & Co. KG
service-technik@viega.de
viega.com

INT • 2025-07 • VPN140483