

T 3095 EN

Accessories · Differential pressure and flow regulators

Series 42 Self-operated Regulators



Application

Accessories for Series 42 Differential Pressure and Flow Regulators:

Compression-type fittings · Needle valves · Compensation chambers · Orifice plates · Welding neck flanges · Control lines

Screw fittings

Compression-type fitting

Straight stud ends with parallel thread according to DIN 2353 to connect control lines to the valve

- G ¼ threaded connection for pipe with 8, 10 or 12 mm outside diameter.

Screw joint with restriction

Pipe screw fitting with restriction to dampen vibrations in the control line.

Various cross-sections available depending on the volume of the diaphragm actuator.

Needle valve

To shut off the control lines and also to dampen any vibration.

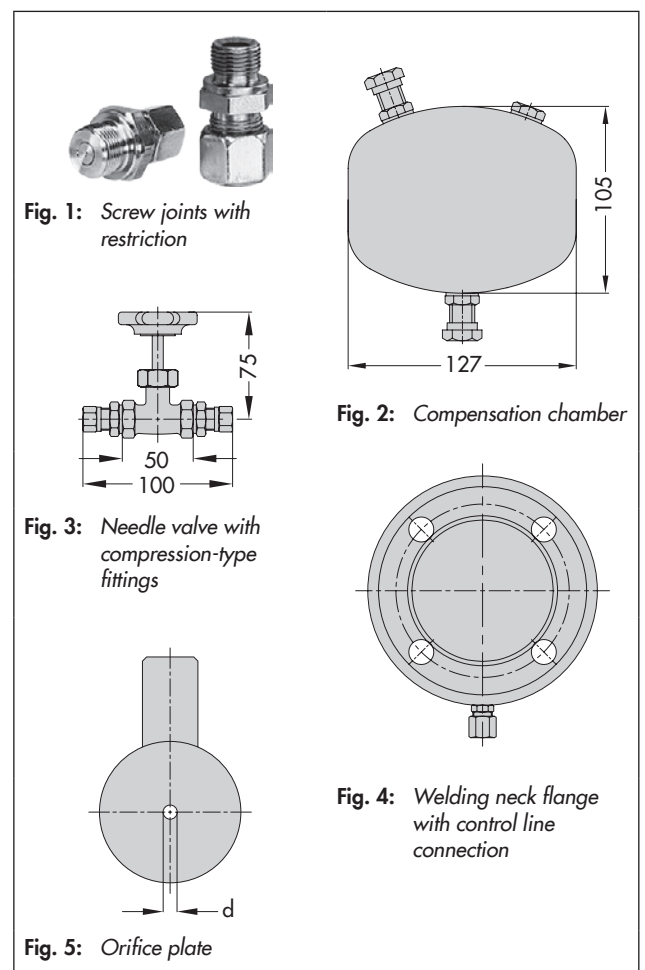
- Steel **body** · (stainless steel on request)
- G ¼ female thread

Compensation chamber

Used to protect the operating diaphragm in the actuator against high temperatures.

Required for medium temperatures above 150 °C.

- Max. permissible pressure 40 bar (gauge)
- **Case** made of sheet steel S235JR (1.0037)
- Two assembled condensation chambers with mounting brackets form a cool-down battery.
- Control line connections with two compression-type fittings for pipes with an outside diameter of 8 mm (special version: for pipe with an outside diameter of 10 or 12 mm).



Orifice plate

To create a differential pressure Δp

Required when using a differential pressure regulator as a flow regulator.

- Available for DN 15 to 300
- **Material:** stainless steel 1.4571

The orifice bore diameter (d) is calculated based on the technical data.

The orifice plate is mounted between the inlet flange of the differential pressure regulator and an additional welding neck flange (see Fig. 1 to Fig. 6).

Welding neck flange

For flow control with an orifice plate.

- Valve sizes DN 15 to 300
- Pressure rating PN 16, 25 and 40
- Control line connection: compression-type fitting for pipe with 8 mm outside diameter
- The dimensions correspond with DIN EN 1092-1, flange type 11.

For simultaneous measurement and indication of the flow rate, the use of an orifice plate (orifice flange) and a flow meter must be used.

Double adapter

For connection of a second control thermostat or a second actuator.

The double adapter is mounted between the bellows housing and the actuator to apply a second controlled variable, e.g. to limit the temperature (see Data Sheet

► T 3019 for details about the double adapter). The overall height of the regulator increases correspondingly.

Ready-mounted control lines with accessories

For transmitting the pressure to the diaphragm of the regulator.

We recommend using a stainless steel 8x1 mm tube as a control line.

Optionally, we offer various regulator models with ready-mounted control lines, needle valves and compensation chambers. The drawings in Fig. 8 show the various options and configurations.

Control lines with accessories: arrangement according to drawing 1120-1180-x. The designation in brackets (x) applies to valves balanced by a diaphragm.

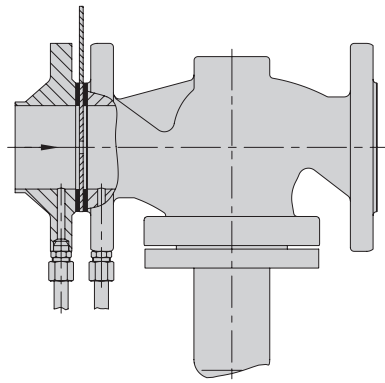


Fig. 6: Welding neck flange with orifice plate (assembled)

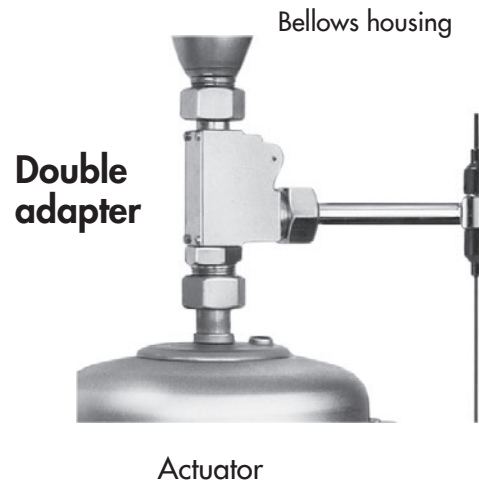


Fig. 7: Double adapter

Differential pressure regulators for installation in the return flow pipe · Type 2421 and Type 2422 Valve

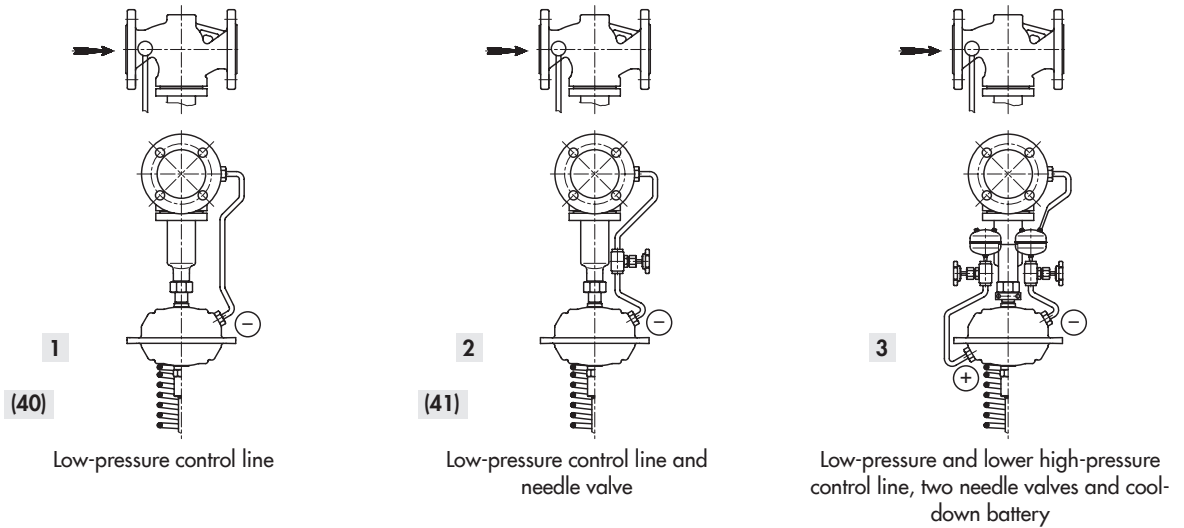
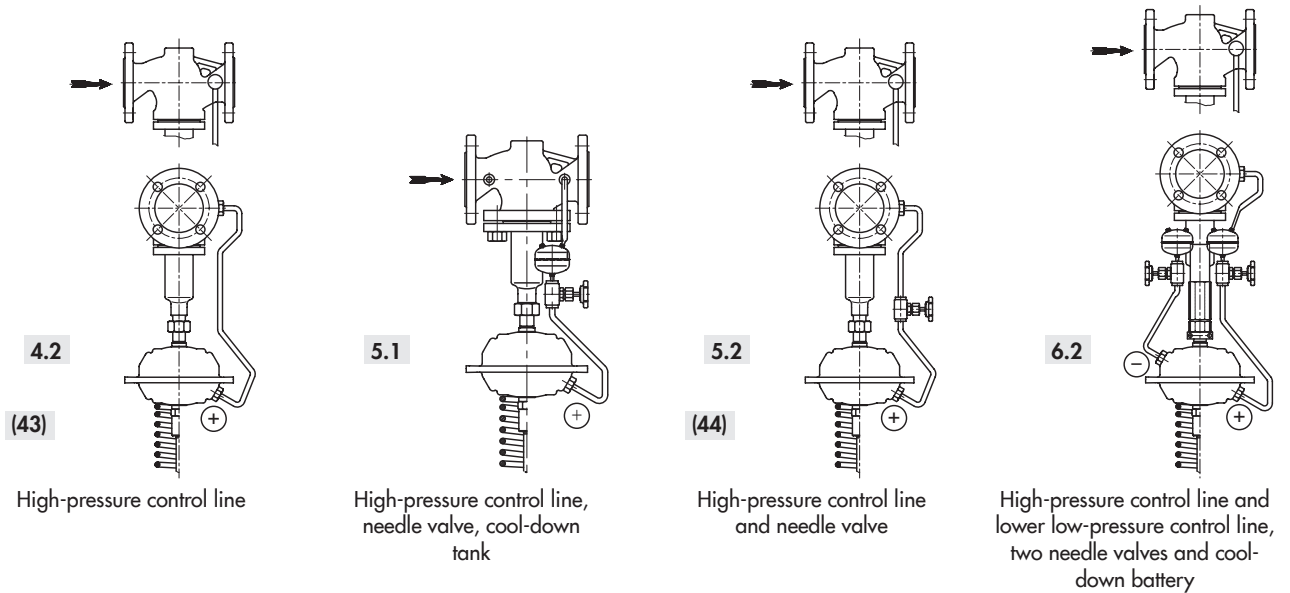


Fig. 8.1: Ready-mounted control lines for Type 42-24 and Type 42-28 for installation in the return flow pipe

Differential pressure regulators for installation in the flow pipe · Type 2422 Valve



Note: the distance piece is no longer needed for regulators manufactured after July 2010.

Fig. 8.2: Ready-mounted control lines for Type 42-24 and Type 42-28 for installation in the flow pipe

Fig. 8: Control lines with accessories

i Note

- Further versions on request
- Control lines represented by the broken line must be installed on site.

Differential pressure regulator (opening) · Type 2421 and Type 2422 Valve

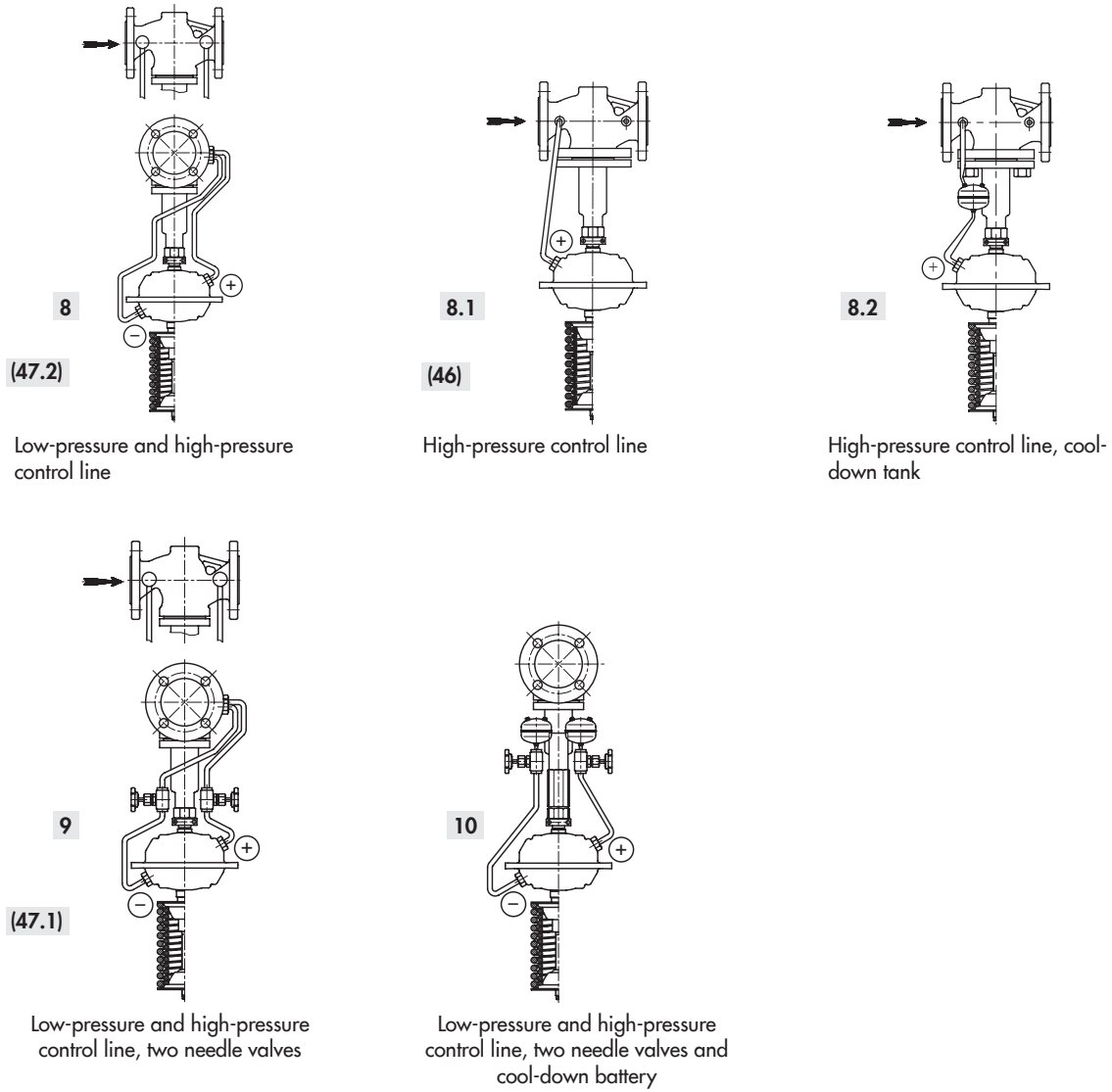


Fig. 8.3: Ready-mounted control lines for Type 42-20 and Type 42-25

Type 2423 and Type 2423 E Valve

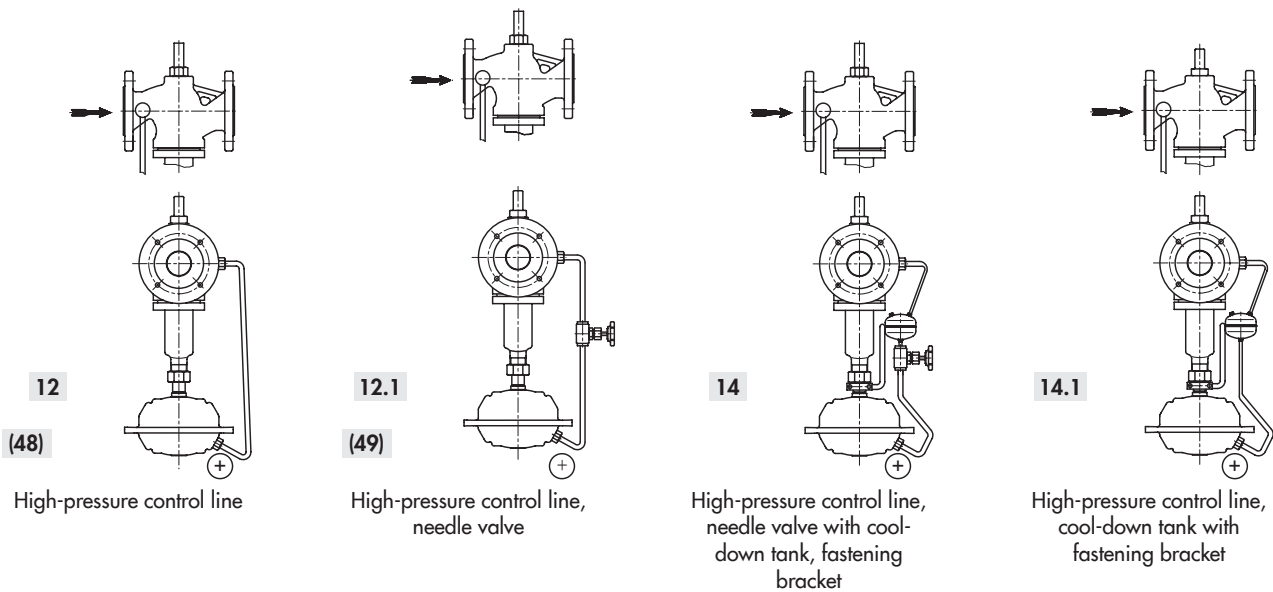


Fig. 8.4: Ready-mounted control lines for Type 42-36

Fig. 8 Control lines with accessories

Differential pressure and flow regulators/flow limiters for installation in the return flow pipe

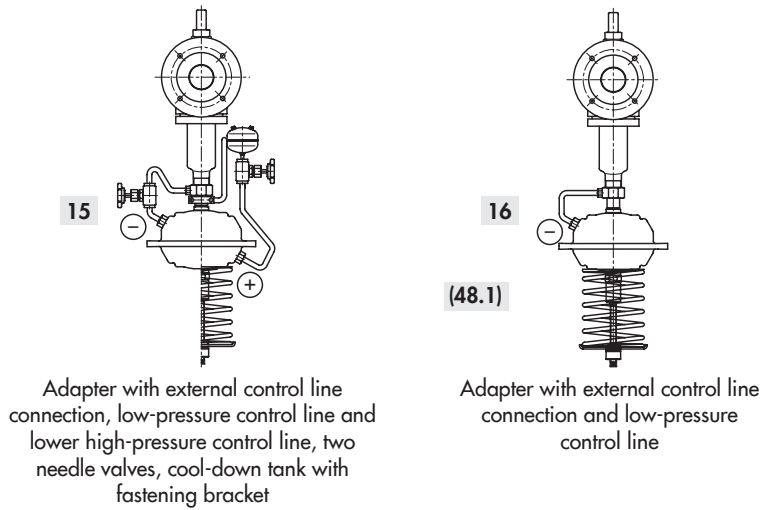


Fig. 8.5: Ready-mounted control lines for Type 42-34 and Type 42-38 for installation in the return flow pipe

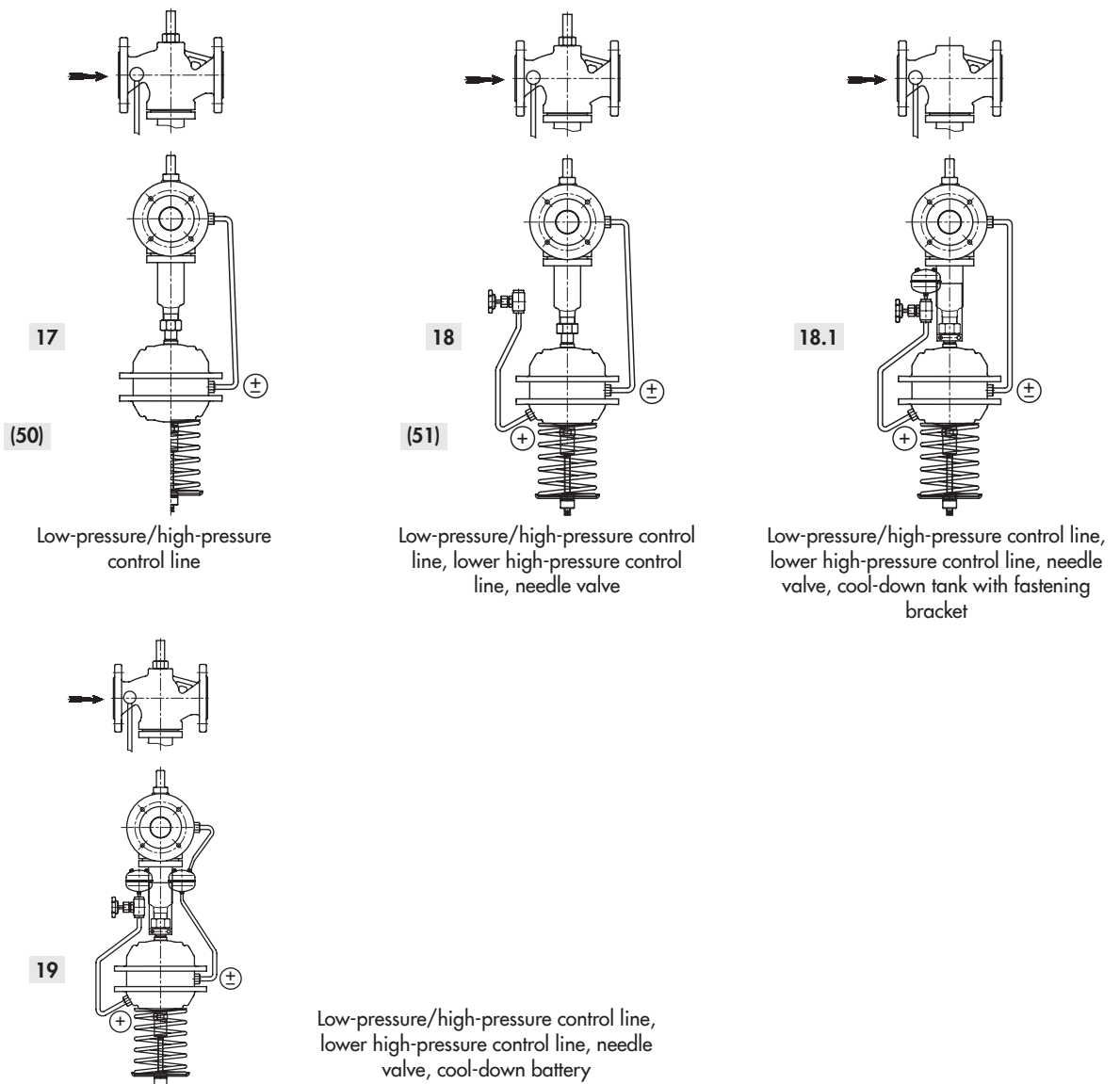


Fig. 8.6: Ready-mounted control lines for Type 42-37 for installation in the return flow pipe

Fig. 8 Control lines with accessories

Differential pressure and flow regulators for installation in the flow pipe

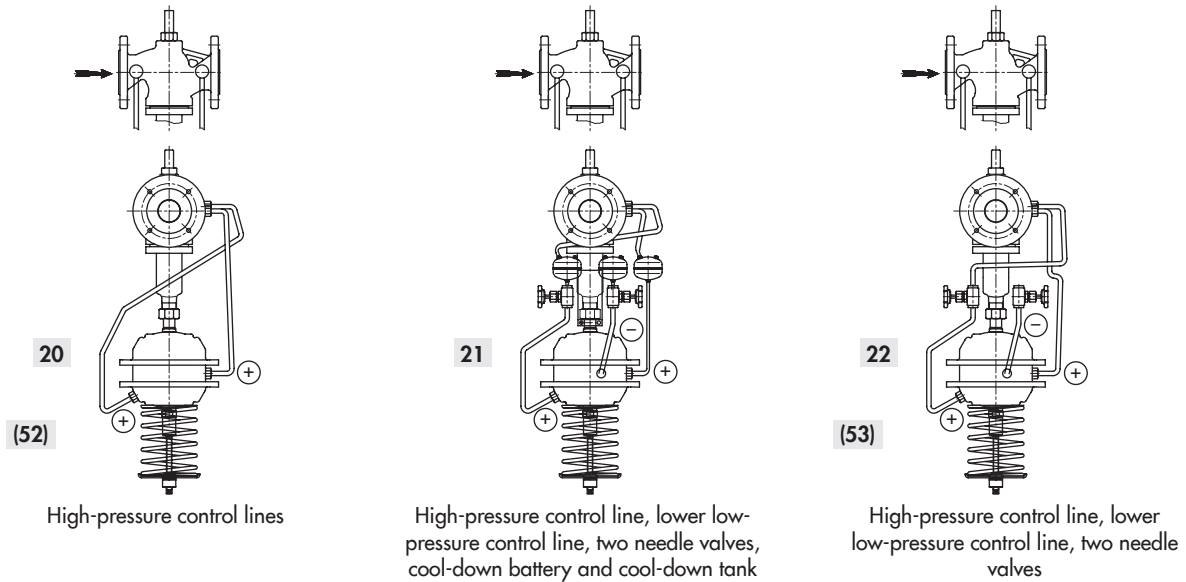


Fig. 8.7: Ready-mounted control lines for **Type 42-39** for installation in the flow pipe

Flow regulator/flow limiter with double adapter

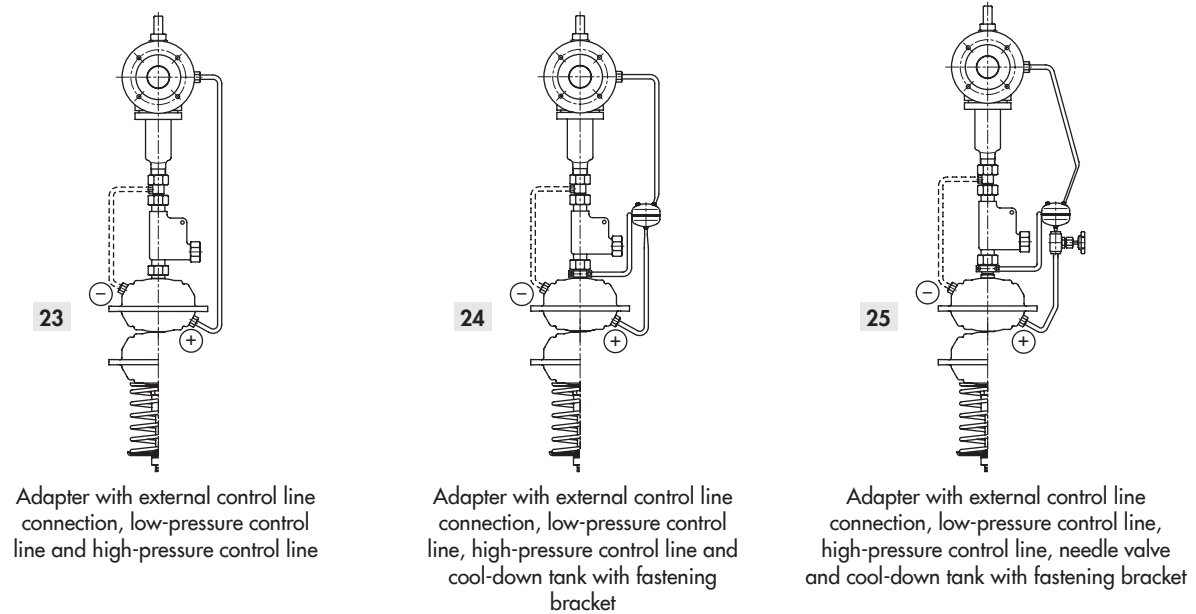


Fig. 8.8: Ready-mounted control lines for **Type 42-36 DoT** and **Type 42-37 DoT**

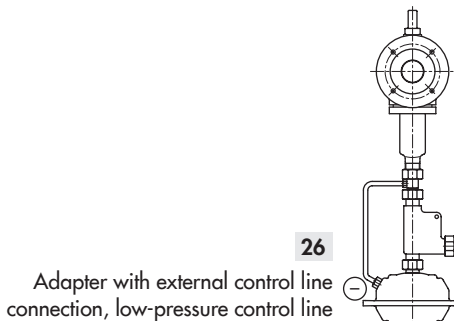
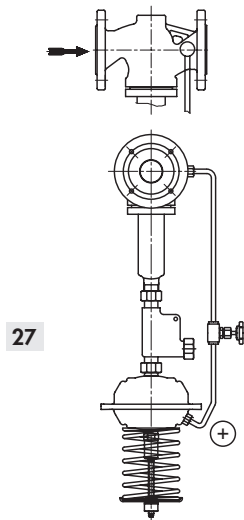


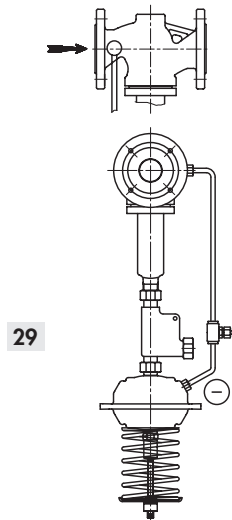
Fig. 8.9: Ready-mounted control lines for **Type 42-34 DoT** and **Type 42-38 DoT** for installation in the return flow pipe

Fig. 8 Control lines with accessories

Temperature and differential pressure regulators for installation in the flow pipe/return flow pipe



27
Type 42-24 DoT, installation in the flow pipe, high-pressure control line and needle valve



29
Type 42-24 DoT, installation in the return flow pipe, low-pressure control line and needle valve

Fig. 8.10: Ready-mounted control lines for Type 42-24 DoT

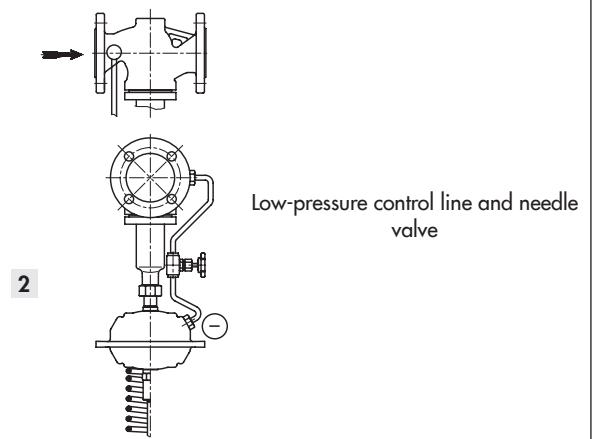
Fig. 8 Control lines with accessories

Ordering control lines with accessories

Example 1:

Type 42-24 Regulator for temperatures up to 150 °C, control line with needle valve, Type 2422 Valve in the return flow pipe, according to Fig. 8.1

"Low-pressure control line and needle valve according to drawing 1120-1180, arrangement 2 "

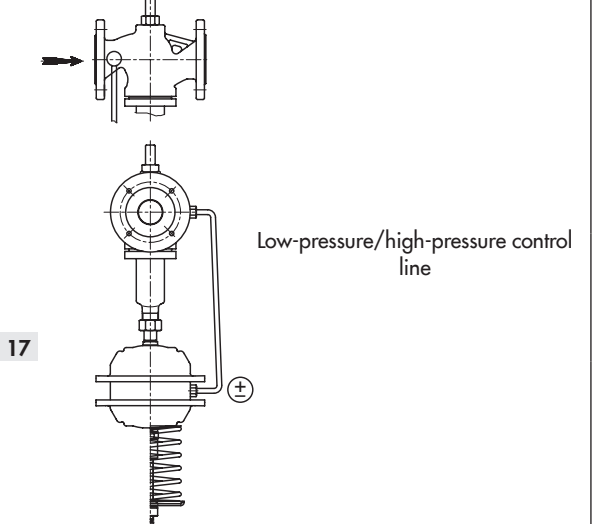


Low-pressure control line and needle valve

Example 2:

Type 42-37 Regulator for temperatures up to 150 °C, control line without needle valve, Type 2423 Valve in the return flow pipe, according to Fig. 8.6

"Low-pressure/high-pressure control line according to 1120-1180, arrangement 17 "



Low-pressure/high-pressure control line

Fig. 9: Ordering examples

Ordering text

Separate accessories

G 1/4 compression-type fitting

G 1/4 screw joint with restriction

Needle valve G 1/4, steel

Compensation chamber with compression-type fitting

Double adapter for regulator ...

DN ...

Orifice plate for DN ...

Welding neck flange with G 1/4 compression-type fitting with control line connection DN ...

PN ...

Ready-mounted control line with accessories (control line kits)

For Type ... Regulator

DN ...

PN ...

According to drawing 1120-1180-x

(see Fig. 8)

For installation in the flow pipe/return flow pipe