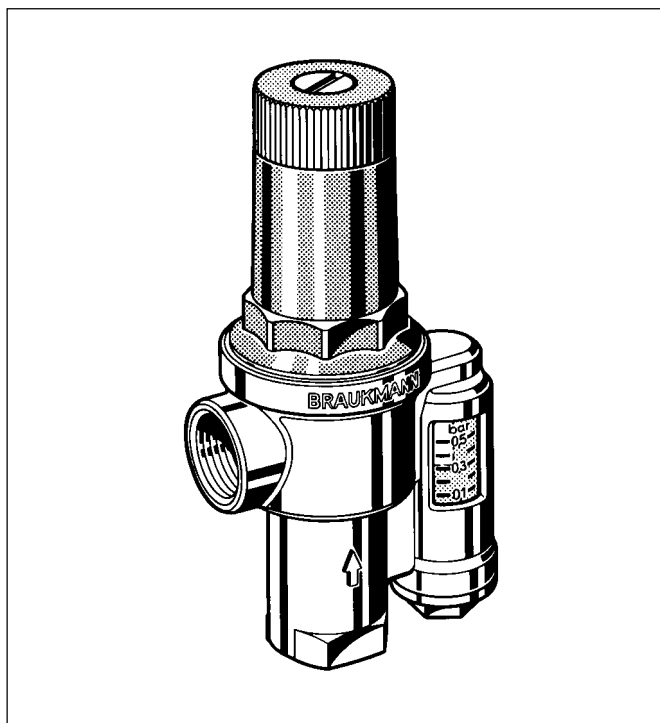


DU146

AUTOMATIC BYPASS AND DIFFERENTIAL PRESSURE VALVE WITH DIFFERENTIAL PRESSURE INDICATOR

PRODUCT DATA



Design

The bypass and differential pressure valve comprises:

- Body with internally threaded inlet and outlet
- Spring bonnet
- Display tube for differential pressure indication
- Adjustment facility
- Valve disc
- Spring

Materials

- Unpolished brass housing
- High-grade synthetic material spring bonnet
- High-temperature resistant synthetic material display tube
- High-quality synthetic material adjuster knob
- Brass valve disc
- Stainless-steel spring
- EPDM seals

Application

The DU146 automatic bypass and differential pressure valve is used to maintain constant differential pressure in a heating system. It reduces flow noise in a system, particularly as thermostatic radiator valves are closing. The boiler return temperature is raised and this reduces the corrosion caused by flue gas condensation. In addition, when radiator valves are closed it also maintains flow over the temperature sensor on the boiler to ensure proper operation of external temperature compensating controls. On gas fired water heaters it guarantees a minimum flow circulation when thermostats or radiator valves are closed.

Features

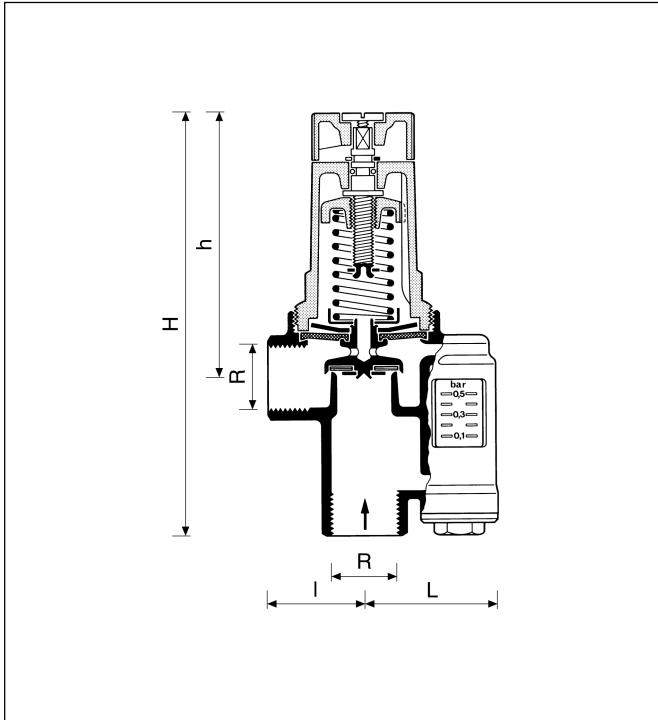
- Simple installation between the flow and return pipe-work
- Minimises flow noise
- No external controls required
- Differential pressure finely adjustable
- Simple adjustment using the integral differential pressure indicator
- Hinders boiler corrosion
- Setting value is in meters water column
- Tried and tested

Range of Application

For pumped hot water heating systems

Specifications

Medium	Hot water
Operating temperature	max. 110°C (230°F)
Operating pressure	max. 3,0 bar (43,5 P.S.I.)
Differential pressure	Adjustable between 0,05...0,5 bar (0,7...7,3 P.S.I.) Set during manufacture at 0,2 bar (2,9 P.S.I.)
Connection size	3/4" and 1 1/4"



Function

At equal pressure between the inlet and outlet side the valve is closed. The valve disc is pushed by a spring against the valve seat. If there is a pressure difference between the inlet and outlet sides, then a force is exerted on the valve disc and against the spring. If this force exceeds the force of the spring, then the valve begins to open in proportion to the rise in differential pressure and maintains a constant bypass flow as indicated on the flow diagram.

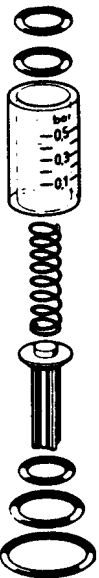
Versions

A = Standard version
 Special versions on request

Type R	Dimensions				for installations 90/70 up to		Ordering-No.
	L	I	H	h	ca. kW	approx. kcal/h	
3/4"	36	50	160	100	70	60 000	DU146-3/4 A
1 1/4"	51	58	213	155	232	200 000	DU146-1 1/4 A

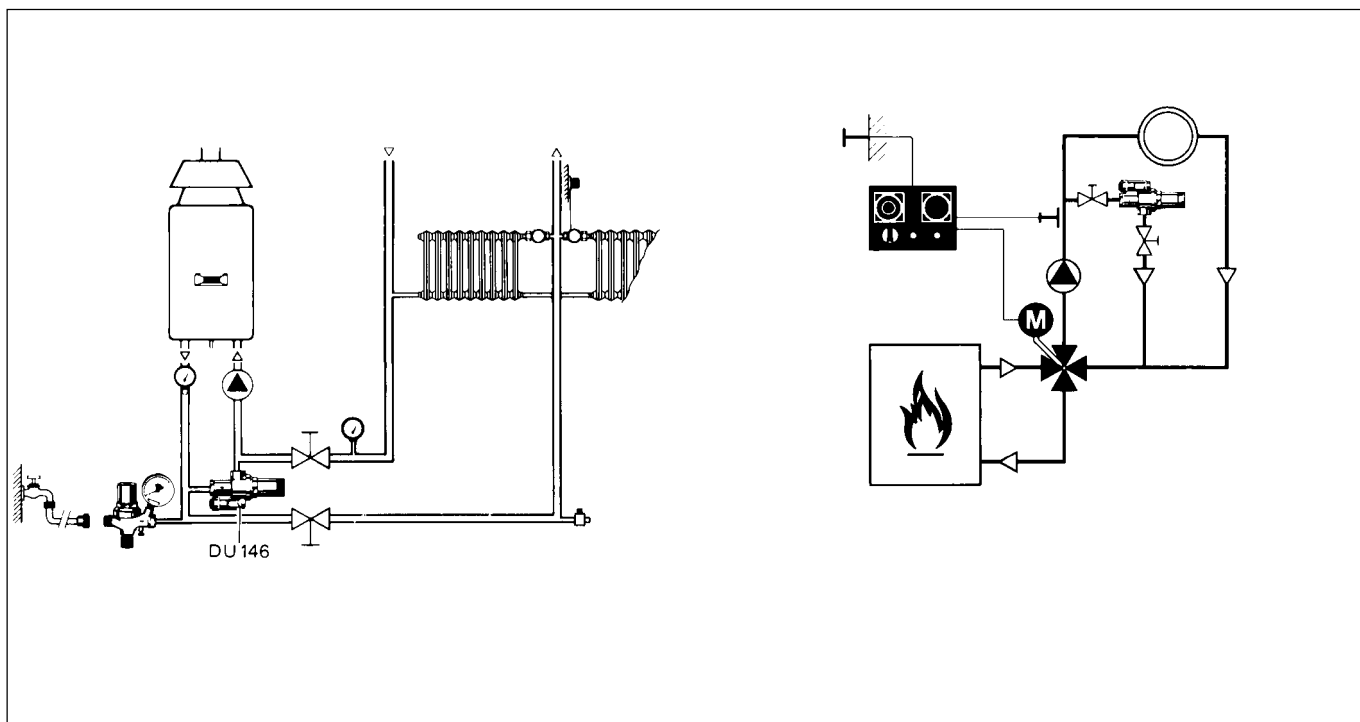
Accessories

Complete indicator tube



For DU146 differential pressure and bypass valve. DU146AH-A

Comprising: Indicator tube, spring, indicator piston and 5 'O' rings



Installation Guidelines

- Simple installation between flow and return
- No external controls required
- Not suitable for district heating installations
- For maintenance purposes it is recommended that shutoff valves be fitted on both sides of the bypass valve

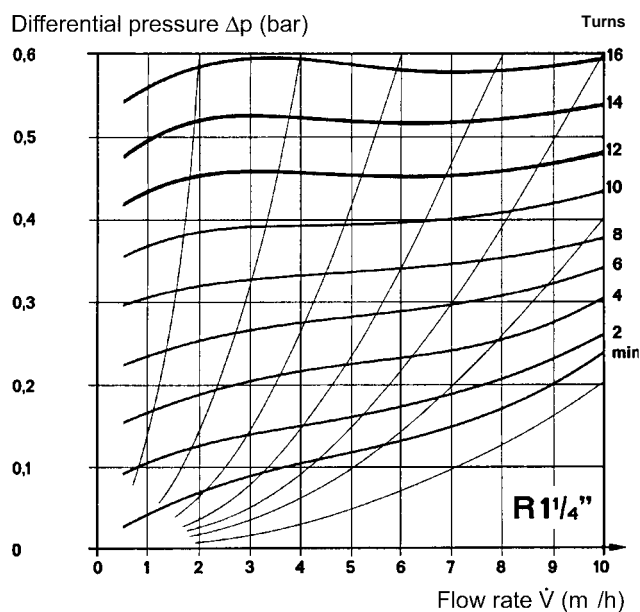
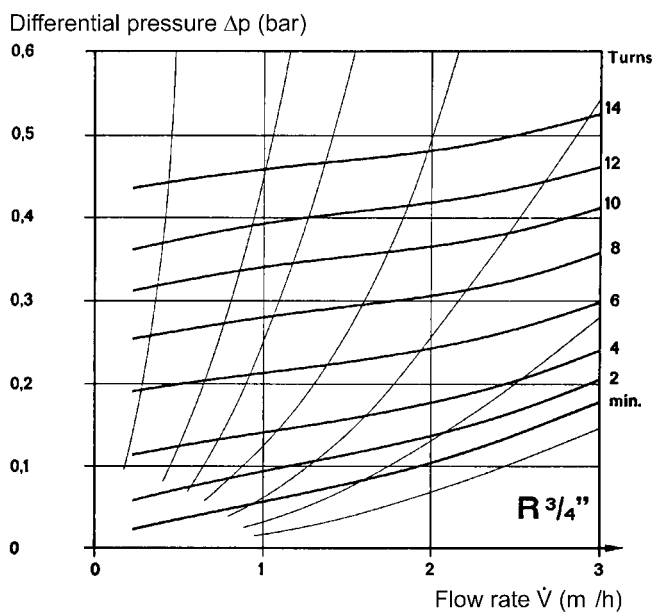
Typical Applications

Automatic bypass and differential pressure valves are installed in heating systems to maintain a constant differential pressure and to minimise water flow noise.

DU 146 can be installed:

- On heating systems with three-way mixer valves
- On heating systems with four-way mixer valves
- On gas-fired hot water circulation heating systems

Flow Diagrams



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