

Differential Pressure Control Valve (bypass control valve for hydronic systems)

D146M Differential Pressure Control Valves are used to eliminate excessive pump head (pressure) when most radiator valves are closed due to reduced demand. The differential pressure regulator controls flow through a bypass line between supply and return sides of a hydronic heating system. The control valve maintains a constant differential pressure between the two sides by allowing flow through the bypass whenever the difference between the supply and the return exceeds the setpoint.

Flow noise throughout the system is reduced, especially noise due to throttling of valves (low demand). Installation is simple, and requires no electrical hookup. Desired pressure is set by turning the regulating handle while monitoring the built-in differential pressure indicator, or by setting approximate values as specified in the installation instructions supplied with the valve.

Construction

Valve body and bonnet are brass. Other parts of stainless steel or engineered thermoplastics, including Celcon®, Ryton®, Noryl® and EPDM rubber.

Temp. and Pressure Ratings

Max. working pressure – 85 psi
 Differential psi range – 0-17 psi (adjustable)
 Max. Temperature ...230° F (110° C)

Sizes and Connections

3/4" and 1 1/4", angle type, female threaded, NPT

Order Information

Model No.	Size	Description
D146M1032	3/4"	Differential pressure regulator, with gauge
D146M1040	1 1/4"	as above

Celcon™ is a registered trademark of Celanese Corp.
 Ryton™ is a registered trademark of Phillips Chemical Corp.
 Noryl™ is a registered trademark of General Electric, Inc.

Capacities

(based on 20° F normal temperature drop across radiator)

Use 3/4" for 120,000 BTU
 (35 KW) (18 GPM)

Use 1 1/4" for 395,000 BTU
 (115 KW) (50 GPM)

When sizing D146M for large systems where required capacity exceeds that of three 1 1/4" size D146M valves, a hand valve may be installed in parallel with the D146M's, sized to handle the system capacity. By throttling the hand valve (globe type) such that the D146M valves regulate only the amount of overflow which varies rather than the total volume, optimum control characteristics will result. The hand valve may need to be readjusted seasonally or when large changes in heat demand occur.

Dimensions

Size	A	B	C
3/4"	6 1/4	4	1 1/2
1 1/4"	8 1/2	6	2

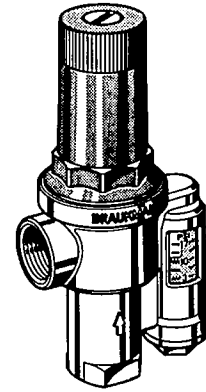
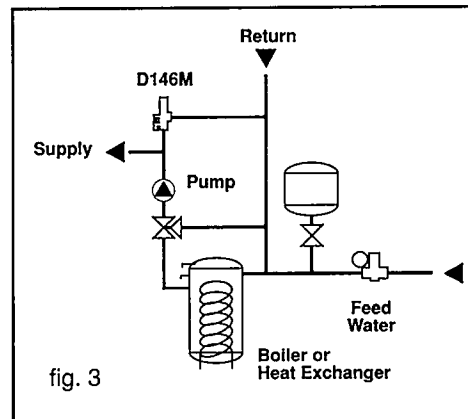


fig. 1

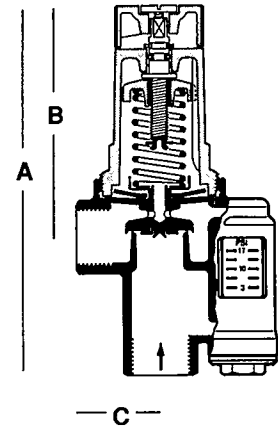


fig. 2