ESABV22

22mm Automatic Bypass Valve

Installation Instructions

Application

The ESABV22 automatic bypass valves are designed to maintain the water flow in central heating systems fitted with TRVs. They do this by maintaining the desired minimum flow rate through the boiler and limits circulation pressure when water paths may be closed.

TRVs slowly close down after each radiator raises the room temperature. To overcome flow restrictions as TRVs close down, the ABV is adjusted to the required set point. As the system resistance increases due to TRVs closing, the ABV allows flow to increase, in order to maintain the required pre-set system differential pressure.

The regulation provided will reduce system noise that can result from TRVs or zone value is closing, eliminate pump impeller wear that can result from high flow resistance, and enhance the life of the boilers heat exchanger by ensuring minimum flow rate at all times

Installation

The bypass valve should be installed between the flow and return with flow in the direction of the arrow (see Fig 1). If a higher capacity is required for large installations it is possible to install two or more valves in parallel.

Settings

The valve can be manually adjusted from 0.05 Bar to 0.5 Bar. The graph opposite shows the flow curves of the settings at 0.1, 0.2, 0.3, 0.4 and 0.5 Bar. A setting of 0.2 – 0.3 Bar is sufficient for most common installations. If the differential pressure is too low or the bypass flow is too high, the pressure setting should be increased. If the differential pressure is too high or the by-pass flow too low, the pressure setting should be decreased.
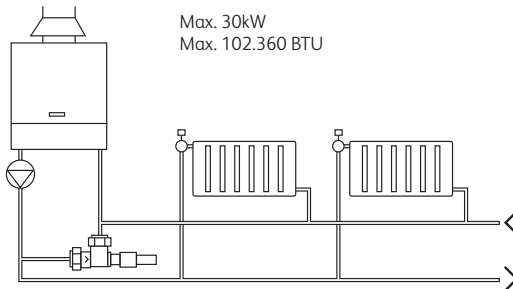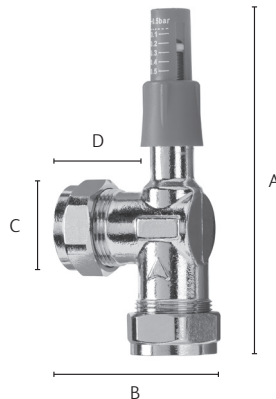
Dimensions

A = 120mm
B = 50mm
C = 35mm
D = 30mm

Max. 30kW
Max. 102.360 BTU

Fig.1 Installation example

ESABV22 Automatic Bypass Valve	
Connections	22mm Compression Joints
Setting Range	0.05 to 0.5
Max Working pressure	16 Bar
Working Temperature	120 °C Intermittent

In the interests of continuous product improvement we reserve the right to alter designs, specifications and materials without prior notice and cannot accept liability for errors.