

Automatic By-pass Valve Installation instructions

Building Regulations

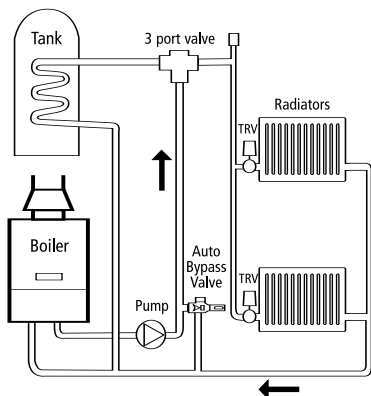
An Automatic Bypass valve (ABV) controls water flow in the Heating Circuit according to the water pressure across it and is used to maintain a minimum flow rate through the boiler and to limit circulation pressure when other water path's are closed. A bypass circuit must be installed if the Boiler manufacturer requires one, or specifies that a minimum flow rate has to be maintained whilst the boiler is firing.

The use of Automatic Bypass Valves, becomes particularly important when heating systems include large numbers of Thermostatic Radiator Valves (TRVs) - whilst the TRVs are open the Automatic Bypass Valve remains closed, however, as the TRVs start to close, the Automatic Bypass Valve starts to open maintaining the required water flow through the boiler. Using an Automatic Bypass Valve is also likely to reduce noise in systems caused by excess water velocities.

Because manual or fixed position valves do not regulate the flow and allow water to bypass even when it is not necessary, Building Regulations require bypass circuits to use Automatic Bypass Valves and not fixed position valves.

Location in System

System with stored hot water



System with combi boiler

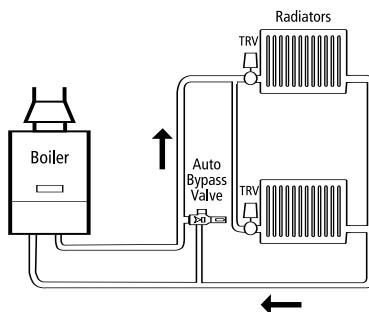
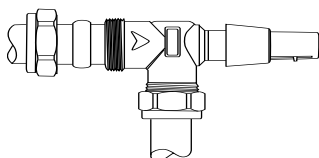


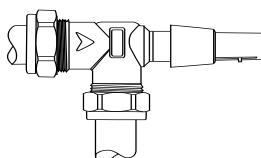
Fig. 1

The by-pass 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.

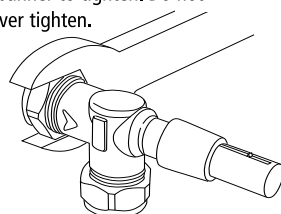
Install the ABV so that the flow direction is in line with arrow on body.



Fully engage pipework into body and screw compression fitting until finger tight.



Use a correctly sized open ended spanner to tighten. Do not over tighten.



Setting Procedure

- 1) Commission and balance the Heating System - take note of the selected pump speed.
- 2) Using the Boiler manufacturer's instruction, find the minimum flow requirement for the Boiler.
- 3) Using the Pump manufacturer's Pump curves determine the available Pump head when operating at the required minimum flow and the selected Pump speed.
- 4) Using the Setting chart, the calculated Pump Head and the minimum Boiler Flow to find the optimum setting for the ABV.

Note: To set the ABV turn the red setting cap until the white pointer corresponds with the required setting (in bar).

Should persistent water velocity noise occur in the Heating System, gradually turn the ABV to a lower setting until the noise is eliminated.

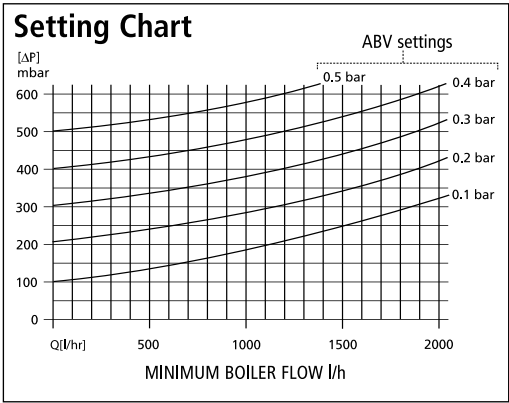
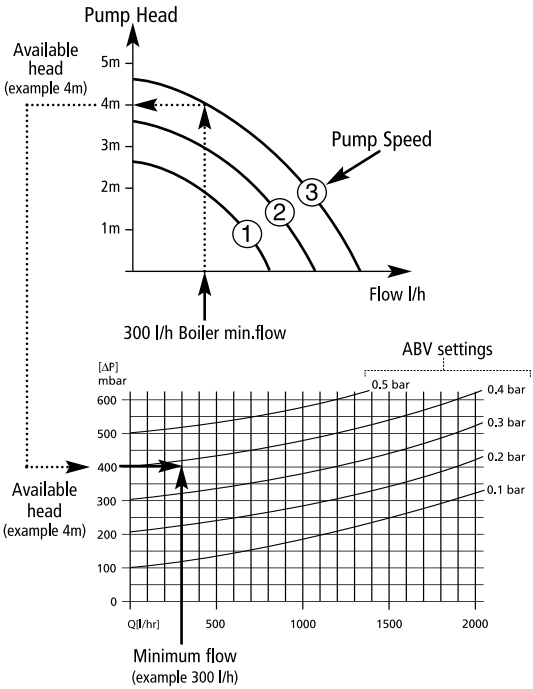


Fig. 2

Example:-
Minimum flow 300 l/h - Pump speed 3.
Pump chart indicates 4m head
(Use Pump Manufactures chart).
Pump head. 1m = 100 mbars



Using setting chart: 4m head/minimum flow 300 l/h
Result = Set ABV to 0.40

Features

- Maintains optimum flow
- Automatic operation
- Set and forget
- Ensures quiet operation
- High quality
- Reliable

Technical data

Connections	22mm compression joints
	0.05 to 0.5 Bar
Maximum Working pressure	10 bar
Maximum flow temperature	120°C intermittent/110°C continuous

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