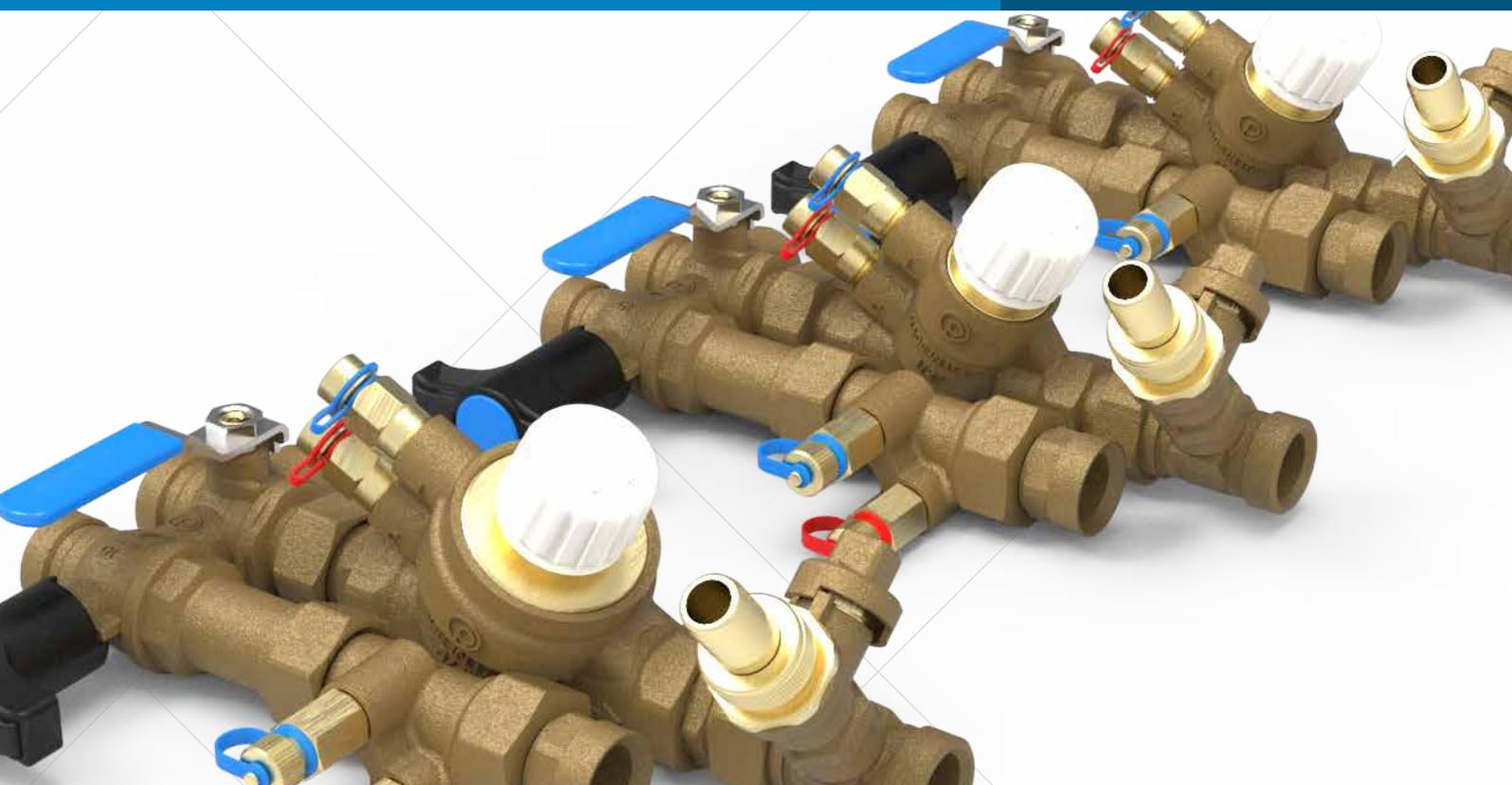


PREFABRICATED



XTERMINATOR X4 - X4D

VALVE ASSEMBLIES



Engineered **terminal unit connection sets** for the **flow limitation and temperature control** of terminal units in heating and chilled water systems

XTERMINATOR PRODUCT DETAILS

Pettinaroli UK Xterminator® is a range of engineered terminal unit connection sets (also referred to as terminal valve assemblies) which incorporates a suite of valves and fittings to optimise and maintain control of a fan coil, chilled beam or other terminal unit.

All units are supplied pre-assembled, pre-tested and are ready for installation.

Different styles are available. There are 'compact' pre-assembled and pre-tested units that are designed for assembly over an extended condensate drip tray within the fan coil unit. These have 40 mm centres and are supplied with either an Axial Pressure Independent Control Valve or a Rotary Pressure Independent Control Valve.

Units that are designed for installation and use with terminal branch pipe work are also available. These incorporate an Axial Pressure Independent Control Valve, a flow measurement venturi, a Filtermate® isolating valve, an optional Filterball® combined isolating valve and strainer, blow down valve and a flushing by-pass valve. They are all arranged at 70 mm or 80 mm centres and allow pipes to be adequately insulated if required.



XTERMINATOR VALVES

All Xterminator® valve sets include a Pressure Independent Control Valve (PICV), isolating valves on both flow and return pipe work, a flushing by-pass and blow down valve, as well as measuring facilities for independent authentication of flow measurement, should this be required.

Uniquely, the Xterminator® is offered with either one of the following PICVs to suit individual requirements:

- Rotary PICVs - when enhanced control via BMS is required
- Axial PICVs – for use when a manual valve or the choice of electronic actuation is required Pettinaroli UK PICVs are available for flow rates between 0.008 l/s and 0.61 l/s.

XTERMINATOR BY-PASSES

A flushing by-pass is incorporated into each Xterminator® unit, as recommended in BSRIA BG29/2011 ("Pre-Commissioning Cleaning of Pipework Systems") and as also referenced in CIBSE Code W "Water Distribution Systems".

The by-pass comprises two through connections, with an integral full bore 3-port ball valve in the top section, which is then linked to the bottom of the unit by way of a perpendicular by-pass section.



XTERMINATOR VENTURIS

All Xterminator® units incorporate an interchangeable venturi for authentication of flow measurement.

A selection of venturis is available, all with proven flow data, having been tested in a complete Xterminator® valve set close-coupled to a typical fan coil unit.

Venturis are sized so that high signals of up to 10kpa can be achieved for ease of reading. Xterminator® units can be configured for both horizontal or vertical, and left or right hand access, dependant upon where the fan coil is to be mounted.

XTERMINATOR ENERGY EFFICIENCY

The Xterminator® range offers the building owner, designer and contractor a versatile range of solutions to optimise flow and temperature control in a building, reducing wasted energy in unoccupied or rarely used spaces. Pettinaroli UK unique and groundbreaking "Remote Commissioning" system allows the actuator on the Rotary PICV to be linked electronically via BACnet to a BMS controller and the building's commissioning package. This connection allows adjustment of the PICV from a remote PC without the need for physical presence in the building, thus avoiding the lengthy and obtrusive work on site in ceiling voids previously associated with manual balancing systems.

XTERMINATOR FEATURES AND BENEFITS

Pettinaroli UK Xterminator® is a complete pre-packaged solution, which **reduces otherwise lengthy design time and removes inherent risks and problems** associated with installing individual and unrelated components.

All Xterminator® units are supplied pre-assembled and pre-tested (at 7 bar air under water) and are individually tagged and labelled indicating valve reference (as determined by the customer for on-site or in-factory tie up), Xterminator® product code and design flow rate.

Pettinaroli UK is **the only company** currently offering a comprehensive choice of PICVs in terminal unit connection sets such as fan coil units, chilled beam and trench heating.



Some of the great benefits of the Xterminator® include:

- ✓ The **“Compact” design** (XTEEx-3 / XTERX-3), using the BSRIA tested 40mm by-pass assembly, allows installation above the fan coil unit condensate drip tray and eliminates the need for insulation
- ✓ The versatility of the Xterminator allows **configuration in 4 different ways** to suit the installation: horizontal, vertical, left hand or right hand
- ✓ Flow rates can be quickly and easily authenticated through measurement across the easily accessible **integrated venturi**. A choice of venturis is available which allows ultimate flexibility
- ✓ All components are manufactured in **high quality materials** including DZR and forged brass
- ✓ All flushing by-passes have **full-length levers** to ensure positive shut-off in restricted spaces
- ✓ Comprehensive **installation, operating and maintenance instructions** are available for the Xterminator range. These include full details on the setting, pre-setting and commissioning of valves for flow and temperature, flushing and isolation of the unit, back flushing, filling and purging, as well as general maintenance

X4 PRODUCT DETAILS

Pettinaroli UK X4 is the next generation **40 mm centre assembly** that works more ideally in today's buildings and comes as a handy off the shelf solution.

X4 keeps all the great features and benefits of the existing Xterminator Valve Set **adding brand new elements** to the design based on customer feedback.

The **compact 40 mm By-pass** has been designed to include the isolation on both flow and return ports, which can be used to allow mains flushing, back flushing and normal operation. The handles have been designed to **allow access to vertical and horizontal Fan Coil unit tails**.

Pettinaroli UK has taken all of this understanding and has listened to customer feedback to create the X4 Valve Set - a complete off the shelf **solution that makes lives easier**, whatever the application.



X4 FITTING KITS

Pettinaroli UK X4 is designed as standard to cover 90% of requirements with one standard valve set. However, there are **several additional options available** to meet the most common variations, such as:

- **4 Ports** - On PICV systems, 4 port control valves are commonly used to provide a by-pass path to maintain a minimum flow at the ends of branches. This provides protection against minimum pump turn down and a circulation path to keep water treatment chemicals circulating

X4 FEATURES AND BENEFITS

Some of the great **X4 benefits** are:

- ✓ **Long levers** and accessible tee handle - if there's a problem it's essential that the levers are easy to turn
- ✓ **Less leak** paths reducing the number of joints while providing flexibility
- ✓ **Interchangeability**, reduction in length and union nuts allow changes to be made as and when required
- ✓ ½ inch and ¾ inch interchangeable with **no change in length**
- ✓ A **standard assembly** to make life easier - this means that some parts can be changed but extras are added as Fitting Kits, such as four port valves
- ✓ Simple straight forward numbering system meaning **ease of sizing**, ordering and replacements

✓ For flow measurement there's a complete range of six **easy to change Venturi** Flows from 0.008 to 0.4 l/s

Some of the great **Xterminator® Lite features** include:

- ✓ Smaller and compact
- ✓ Left and right handed version
- ✓ Handles are colour coded - red for heating, blue for chilled
- ✓ Upstream diameters for flow measurement included
- ✓ Suitable for vertical and horizontal coils
- ✓ Forged brass components factory assembled and tested
- ✓ Electronic Balancing valves can be included in the assembly

X4D PRODUCT DETAILS

Pettinaroli UK Xterminator® and X4D range of terminal valve assemblies are **designed to include all of the required valves** for controlling and maintaining a Fan Coil Unit or other hydronic terminal unit.

Different configurations are available, including 40mm By-pass assemblies that are offered in a package designed to be installed by the terminal unit manufacturer over an extended condensate drip tray or in a pre insulated box.

Units that are designed for installations and use with terminal branch pipe work are also available in 70mm or 80mm centres. These incorporate an Axial PICV valve Pressure Independent Control Valve, a flow measuring Venturi, a Filtermate® isolating valve.

The **new Dynasty range of PICV valve**, Included in each assembly, has been designed to give all the benefits of the existing PICV valve range with the added advantage of **operating in heavily contaminated water**. The valve has been designed with a **Linear characteristic**. The design of the Dynasty PICV valve also allows the internals to be removed, cleaned and replaced without effecting the performance of the valve.



FEATURES & BENEFITS

- ✓ Compact size
- ✓ Dirt resistant cartridge design
- ✓ Linear characteristic
- ✓ Easily replaceable cartridge
- ✓ Suitable for all type of actuators

X4 - X4D ACTUATORS

It's important to choose the **right actuator to optimise the performance of X4 and X4D**.



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