

Pegler

BELMONT COMMERCIAL VALVES



PEGLER 
Valve technology

Pegler Yorkshire

*Unrivalled quality, innovation,
customer service and long-term
value for money*

As part of the global Aalberts Industries NV Group, Pegler Yorkshire is one of Britain's largest and most respected manufacturers of innovative products for the demanding and diverse plumbing and heating industries.

Pegler Yorkshire – a unique story

It was in the late 19th century when two separate and altruistic companies set out on the long road to satisfying the needs of prospective customers and, of course, to profit in the process. Coincidentally located just 30 miles apart, each was driven by the same vision and ideals of a no-compromise culture. Cutting corners was never an option and only the best could ever be good enough.

These two companies were Pegler and Yorkshire Fittings. Although in meeting all the challenges of the 20th and 21st centuries each has changed a great deal, the business ethos common to both never has. And now these two like minds have come together as Pegler Yorkshire – a single source of proven, flow control solutions for installers, specifiers and engineers in the domestic, public and commercial markets.

Reputable and established brands

Just as Pegler and Yorkshire have endured over such a long period, many of the brand names they have created over time are similarly very well established, in many cases as market leaders in their respective categories. The very extensive Pegler Yorkshire product range now comprises more than 15,000 lines – without rival for the choice and coverage it offers and for the number and scope of applications it satisfies.

A mind for innovation

Brands which endure and are not easily displaced must by definition be the product of innovative thinking and technology that continually stand the test of time. Pegler Yorkshire's no-compromise philosophy will always put new product development high on the agenda, based on not only meeting the needs of today's markets, but also anticipating and meeting customers' future needs.

The true value of knowledge

As well as the benefit of unparalleled experience of the flow control market and its growth over many decades, Pegler Yorkshire has strong associations with major industry bodies such as those responsible for determining product and performance standards.

The result is a comprehensive store of knowledge and reference which is invaluable in the key areas of research, development and dealing efficiently and accurately with customer enquiries – particularly with regard to product application and suitability.

A charter for the best in customer service

With so diverse a product range and customer base, Pegler Yorkshire's no-compromise standards of quality, reliability and value for money naturally go hand in hand with the principle of delivering the best in customer service.

Green awareness and responsibilities

Developing products which reduce the carbon footprint by saving water and energy is only one side of the green issues coin. Pegler Yorkshire is also increasingly committed to recycling key production materials (such as brass), eliminating the need for excessive packaging wherever possible, and looking for new ways in which the company's day-to-day operations can be improved to reduce waste and minimise the impact on the environment.

Likewise, social responsibilities such as supporting employee and local community welfare are aspects of the very fabric and philosophy upon which both Pegler and Yorkshire were founded.

Standards

Pegler Yorkshire are dedicated to designing, developing and manufacturing products of the highest quality. We are members of numerous standards committees and take an active part in their development. Our products, where applicable, comply with the relevant British, European and International standards. Whatever the latest developments, we guarantee that our products will always meet the latest and highest standards.



Trade bodies

Pegler Yorkshire is pleased to be associated with several influential industry organisations:





This data book has been produced in clearly defined sections to help the user to find relevant information quickly and easily. At the foot of each page there is a reminder of the brochure sections with the relevant page numbers.

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Section 2

Product range details

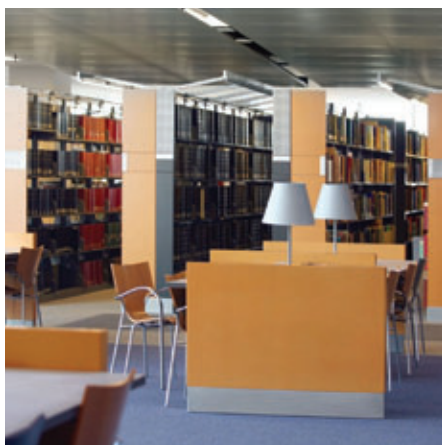
| | |
|--|-------|
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Belmont thermostatic and manual radiator valves deliver key benefits to the entire supply chain from specification through to ongoing cost of ownership.



Benefits to the specifier

Belmont thermostatic radiator valves enable specifiers to achieve significant energy savings, regulatory compliance and exceptional performance using tried and tested, high quality, UK-manufactured products. All of our TRVs are backed by unparalleled specification support with access to our R&D facilities for evaluating specific project requirements.

- *Manufactured and life-tested at our own UK facility*
- *Developed to the highest standards*
- *Innovative, energy-saving features*
- *Flexible range to meet all project requirements*
- *Backed by 100 years of manufacturing expertise*
- *Product quality that is synonymous with the Pegler Yorkshire name*

Benefits for the contractor

Belmont TRVs are quick and easy to install, without the need for specialist tools. Manufactured in the UK, they are competitively priced while delivering the highest quality, backed by Pegler Yorkshire's extensive technical support.

- *Single supply for competitive pricing*
- *Reduced installation time*
- *Wide range of products*
- *High quality, reliable performance*
- *UK manufactured and factory tested before shipping*
- *Energy-efficient to help customers reduce energy bills*

Benefits for the service engineer

Backed by a full warranty and Pegler Yorkshire's technical support, Belmont TRVs are designed for ease of servicing, minimising downtime of the system and inconvenience to the customer. Spares are easy to access and build-up options are available, helping service engineers deliver a high quality service to their customers.

- *Safe and secure*
- *Demountable when required*
- *Long life to maintain energy efficiency and relationship with customer*
- *Easy-to-use feedback process*

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Belmont thermostatic radiator valves

Belmont thermostatic radiator valves have been designed for use on commercial through to residential properties, including combi boiler installations.

The Belmont TRV benefits from a frost setting where the valve is opened automatically at 7°C to prevent the system freezing. It has a built-in patented tamper-resistant feature that is key operated. The TRV also employs a patented 'lift and lock' operation which prevents accidental adjustment.

Features

- Control range of 11°C - 29°C
- Frost setting at 7°C
- Positive shut off for maintenance purposes
- Range limiting locking customised temperature setting
- Approved to EN 215
- Suits copper, iron pipework and PEX*
- Matching manual radiator valves
- 10bar rating
- Horizontal and vertical mounting
- Patented unique lift and lock tamper-resistant mechanism.



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Belmont push-fit thermostatic radiator valves

Speed of installation is a key consideration and Tectite push-fit technology means many fitting complications can be removed, greatly saving installation time on site and resulting in significant cost savings.

The push element of jointing the new Belmont push-fit is instantaneous and the simple, tool-free jointing action requires no secondary operations in awkward areas. This means there is less chance of damaging pipe work as a result.

Features

- Major time saving
- Rapid installation
- Demountable if required
- No special tools required
- High quality finish with chrome plate
- Suitable for Pex, PB, copper and iron
- Approved to EN215
- Horizontal and vertical mounting.



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Belmont thermostatic radiator valve heads

Choice of different thermal heads is available: standard, remote sensing with 2m/8m capillary and remote adjusting in 2m, 5m and 8m capillary lengths. The patented thermal head has a unique head mechanism which operates in standard or lockdown mode. This takes out the requirement for a separate robust head and makes the Belmont solution the first choice for those looking for the benefits of the latest products and service in a cost-effective package.

Features

- Suitable for sealed systems
- Water working pressure up to 10bar (non-shock)
- Approved to EN 215
- White handles as standard
- Screw down lockshield
- Superior grip characteristics on wheel handle
- Comprehensive range of WH, LS and DLS
- Thermal head with anti-theft thermal ring
- Now with rigid lock-down mechanism.



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Belmont thermostatic radiator valve bodies

Belmont thermostatic radiator valves comprise three different body patterns: angle, horizontal and straight. They offer a choice of pre-setting and non pre-setting options.

Chrome plated bodies are standard, and all bodies ensure reverse flow technology with removable glands for future ease of maintenance.

Features

- Approved to EN 215
- Suits copper and iron pipework direct*
- 10bar rating suitable for combi boilers
- Horizontal and vertical mounting
- Insert removal and replacement without draining down when using special tool
- All valves are suitable for 2 pipe systems
- Gland removal without draining down.

*Pegler Yorkshire has a range of push and press connectors in the Tectite range for use with plastic, carbon steel or copper piping.



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Belmont accessories

Belmont thermostatic radiator valve security

Belmont now offers a solution to high risk areas of vandalism – from school at one end of the spectrum to prison at the other – the need to protect radiator valves from abuse and mis-use is crucial to energy efficiency, comfort levels and eliminating the expense of unwanted maintenance and replacement cost.

Belmont accessories

The Belmont range is also supported by additional accessories in order to ensure flexibility, ease of maintenance and after care.

A full range of spares is also available, details of which can be found on the Pegler Yorkshire website.

Features

- Impact resistant cover totally encloses both the radiator valve's thermal casing and thermal ring to prevent access and tampering
- Solid high security clip for easy retrofit mounting
- Metal anti-theft ring also available for replacement work.
- Gland removal tools – repair valves without having to drain the system
- Telescopic tailpiece.



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Belmont manual radiator valves

The Belmont manual radiator valve range offers both traditional handwheel and lockshield styles, along with a new concealed lockshield style in both angled and straight patterns.

A 'no system drain' solution on manual valves allows the spindle 'O' ring's seal to be changed with the system still full of water. The whole head-work may be changed without draining using a gland removal tool. These features minimise down-time, saving both cost and time on site.

Innovations introduced for the first time include a concealed lockshield cap on the manual radiator valve, which requires an allen key to adjust the flow. The lockshield provides tamper resistance, this prevents accidental or vandal adjustment in public areas and ensures protection for system balance.

Features

- Suits a wide range of commercial applications
- Valves can be serviced without draining the system
- Approved to BS 2767-10
- Concealed lockshield with allen key adjustment
- Compression or iron end connection direct.*

*Pegler Yorkshire has a range of push and press connectors in the Tectite range for use with plastic, carbon steel or copper piping.



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Belmont commercial radiator valves

Product overview

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Belmont push-fit manual radiator valves

The Belmont push-fit range has been developed using the wealth of knowledge of Tectite push-fit fittings and heating controls technology Pegler Yorkshire has built up over many years to deliver an integrated push-fit radiator product that truly offers the best of both worlds.

Push-fit successfully combines product quality and speed of installation, whilst being competitively priced.



Features

- Major time saving
- Rapid installation
- Demountable if required
- No special tools required
- High quality finish with chrome plate
- Suitable for Pex, PB, copper and iron
- Approved to BS 2767-10
- Comprehensive range of WH, LS and DLS.



Terrier

Terrier i-temp

Terrier i-temp is a revolutionary programmable radiator thermostat that controls **time** and **temperature** per individual radiator, with the unique ability to Zone areas with complicated isolation of pipe work. Intelligent technology that cuts fuel costs and CO₂ in a cost-effective way by heating only areas at the times required.

Terrier i-temp has built-in communication technology that allows products such as window sensors to be 'taught in'. The sensor signals the i-temp to reduce the temperature setting and immediately stops heat wastage.

A simple, discreet sensor that compensates for our heat wastage habits, especially in commercial environments.

Features

- Create independent time and temperature areas
- Programme flexibility
- Temperature limit and lock down
- Anti tamper and security options
- Save on fuel cost by reducing heating demand
- Automates and reverts to energy saving modes.
- Signals your Terrier i-temp Programmable Radiator Control (PRC) to reduce temperature on window opening
- Signals the Terrier i-temp (PRC) to return to normal operation on window closing
- 5 year battery on window sensor
- Integrates with multiple Terrier i-temp (PRC) and window open sensors for maximum energy savings.



It is Pegler Yorkshire policy to provide a range of products and services which meet, or exceed, the requirements of our customers in respect of quality, cost and delivery.

Standards and approvals

Terrier products are manufactured under quality systems in accordance with EN 29002/ISO 9002 and meet the following British and European standards.

BS 2767-10

Specification for manually operated copper alloy valves for radiators.

BS EN 215:2004

Thermostatic radiator valves. Requirements and test methods.

BS EN 1254-2:1998

Copper and copper alloys. Plumbing fittings. Fittings with compression ends for use with copper tube.

BS EN 1254-3:1998

Copper and copper alloys. Plumbing fittings. Fittings with compression ends for use with plastic pipes.

pr EN 1254-6 (draft)

Copper and copper alloys. Plumbing fittings – Part 6: Fittings with push-fit ends.



ISO is achieved through the continuous improvement of our Quality Management System in line with the requirements of BS EN ISO 9001: 2000.

Guarantees

Where Terrier products are installed and used in accordance with the installation instructions the following guarantees will apply:

| GUARANTEES | |
|------------------------------|---|
| Guarantee period (years) | |
| | 5 |
| Manual radiator valves | ✓ |
| Thermostatic radiator valves | ✓ |

| STANDARDS AND APPROVALS | | | |
|----------------------------------|--|---|-------------------------------|
| Product | Standards | Approvals | Compliant |
| All manual radiator valves | BS 2767-10 ■ Covers pressure testing ■ Size, strength ■ Pressure rating ■ ISO 228 ISO 7 thread standards ■ Up to 10bar pressure | ■ Official BSI (British Standard Institute) ■ Product marked | |
| All thermostatic radiator valves | BS EN215: 2004 – Thermostatic ■ Performance (hysteresis) ■ Dimensions, strength ■ Pressure rating ■ ISO 228 ISO 7 thread standards ■ Up to 10bar pressure | ■ BSI, audited by independent testing body ■ CEN mark fully approved, marking on product | ■ Building Regulations Part L |
| All compression ends | BS 1254 compression ends ■ Strength ■ Pressure testing | ■ Kitemark product | |
| All push-fit ends | pr EN 1254-6 ■ Strength ■ Pressure testing | | |

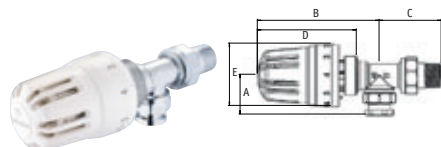
Recommended applications

| RECOMMENDED APPLICATIONS | | | | | | | | | | | | | | |
|--|-----------------------|---------------------------------|-----------|-----------------------|--------------|--------|--------|--------------------|---------|------------------|----------------|--------------|----------------|-----------------|
| | Schools and nurseries | Senior schools and universities | Hospitals | Hospital public areas | Care centres | Office | Hotels | Hotel public areas | Leisure | Public utilities | Energy savings | Tamper proof | Social housing | Flow adjustment |
| Belmont TRV | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Belmont manual radiator valves | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | |
| Belmont locking manual radiator valves | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | |
| Belmont bodies | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| Belmont heads | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Belmont remote sensors | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Belmont remote adjusters | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |

Belmont commercial thermostatic and manual radiator valves

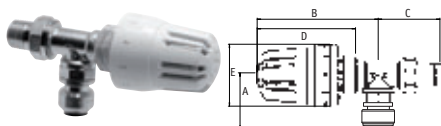
Thermostatic radiator valves to EN 215

Packaged units: bodies and B1301/3 liquid head



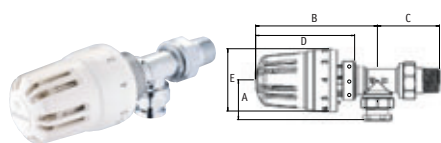
B4451/4 Angle horizontal

| Size | Finish | A | B | C | D | E | Quantity | Order code |
|------------------|-----------------|----|-----|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 34 | 104 | 53 | 84 | 53 | 10 | 686001 |



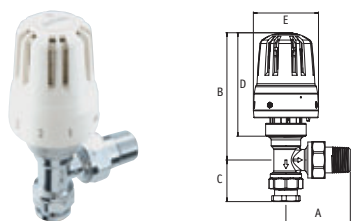
B4451/4 Angle horizontal push-fit

| Size | Finish | A | B | C | D | E | Quantity | Order code |
|------------------|-----------------|----|-----|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 50 | 104 | 53 | 84 | 53 | 10 | 686300 |



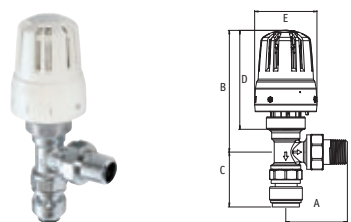
B4451/4 Angle horizontal with anti theft ring

| Size | Finish | A | B | C | D | E | Quantity | Order code |
|------------------|-----------------|----|-----|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 34 | 104 | 53 | 84 | 53 | 10 | 686091 |



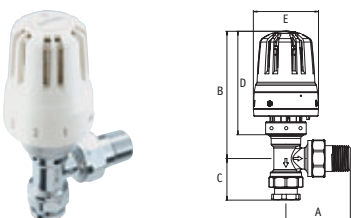
B4452/4 Angle vertical

| Size | Finish | A | B | C | D | E | Quantity | Order code |
|------------------|-----------------|----|-----|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 52 | 104 | 34 | 84 | 53 | 10 | 686002 |



B4452/4 Angle vertical push-fit

| Size | Finish | A | B | C | D | E | Quantity | Order code |
|------------------|-----------------|----|-----|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 52 | 104 | 50 | 84 | 53 | 10 | 686301 |



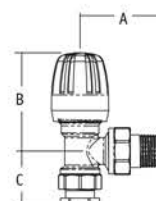
B4452/4 Angle vertical with anti theft ring

| Size | Finish | A | B | C | D | E | Quantity | Order code |
|------------------|-----------------|----|-----|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 52 | 104 | 34 | 84 | 53 | 10 | 686092 |

Manual radiator valves to BS 2767-10

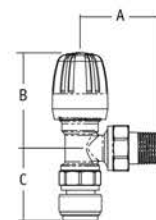
97 WH and CPWH Angle pattern - for copper or iron

| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Matt brass | 53 | 63 | 35 | 10 | 680001 |
| 3/4"/22mm x 3/4" | Matt brass | 63 | 56 | 56 | 5 | 680004 |
| 1/2"/15mm x 1/2" | Chromium plated | 53 | 63 | 35 | 10 | 680007 |
| 3/4"/22mm x 3/4" | Chromium plated | 63 | 56 | 56 | 5 | 680010 |



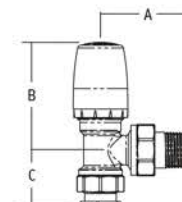
97 CPWH Angle pattern push-fit - for copper, iron or PEX

| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 53 | 63 | 50 | 10 | 680050 |



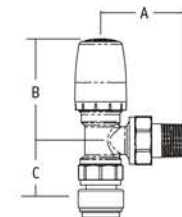
97 LS and CPLS Angle pattern - for copper or iron

| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Matt brass | 53 | 63 | 35 | 10 | 680002 |
| 3/4"/22mm x 3/4" | Matt brass | 61 | 64 | 41 | 5 | 680005 |
| 1/2"/15mm x 1/2" | Chromium plated | 53 | 63 | 35 | 10 | 680008 |
| 3/4"/22mm x 3/4" | Chromium plated | 61 | 64 | 41 | 5 | 680011 |
| 1/2"/18mm x 1/2" | Chromium plated | 61 | 64 | 41 | 5 | 680012 |



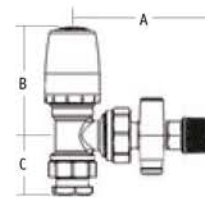
97 CPLS Angle pattern push-fit - for copper or iron

| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 53 | 63 | 50 | 10 | 680051 |

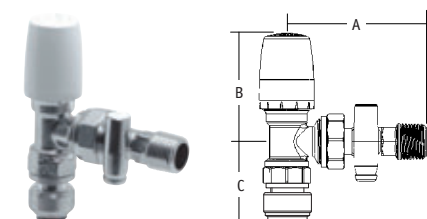


97 CPDLS Angle pattern with drain off - for copper or iron

| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 81 | 63 | 35 | 10 | 680009 |

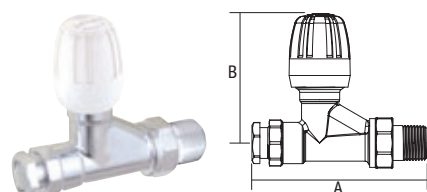


Belmont commercial thermostatic and manual radiator valves



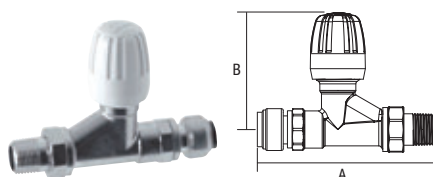
97 CPDLS Angle pattern push-fit with drain off - for copper or iron

| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 81 | 63 | 50 | 10 | 680052 |



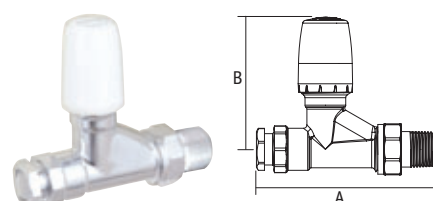
98 WH and CPWH Straight pattern - for copper or iron

| Size | Finish | A | B | Quantity | Order code |
|------------------|-----------------|-----|----|----------|------------|
| 1/2"/15mm x 1/2" | Matt brass | 105 | 78 | 10 | 681001 |
| 3/4"/22mm x 3/4" | Matt brass | 130 | 83 | 5 | 681004 |
| 1/2"/15mm x 1/2" | Chromium plated | 105 | 78 | 10 | 681007 |
| 3/4"/22mm x 3/4" | Chromium plated | 130 | 83 | 5 | 681010 |



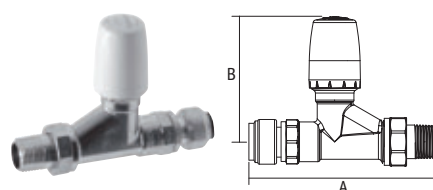
98 CPWH Straight pattern push-fit - for copper or iron

| Size | Finish | A | B | Quantity | Order code |
|------------------|-----------------|-----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 120 | 78 | 10 | 681050 |



98 LS Straight pattern - for copper or iron

| Size | Finish | A | B | Quantity | Order code |
|------------------|-----------------|-----|----|----------|------------|
| 1/2"/15mm x 1/2" | Matt brass | 105 | 78 | 10 | 681002 |
| 3/4"/22mm x 3/4" | Matt brass | 130 | 83 | 5 | 681005 |
| 1/2"/15mm x 1/2" | Chromium plated | 105 | 78 | 10 | 681008 |
| 3/4"/22mm x 3/4" | Chromium plated | 130 | 83 | 5 | 681011 |



98 LS Straight pattern push-fit - for copper or iron

| Size | Finish | A | B | Quantity | Order code |
|------------------|-----------------|-----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 120 | 78 | 10 | 681051 |

Concealed lockshield valve bodies

Anti-adjust – metal cap – for copper or iron pipe

LS 351/3 Angle vertical

| Size | Finish | A | B | C | Quantity | Order code |
|--------------------|-----------------|----|----|----|----------|------------|
| 1/2" / 15mm x 1/2" | Chromium plated | 53 | 39 | 35 | 20 | 686050 |
| 3/4" / 22mm x 3/4" | Chromium plated | 61 | 40 | 41 | 20 | 686051 |



LS 352/4 Straight vertical

| Size | Finish | A | B | Quantity | Order code |
|--------------------|-----------------|-----|----|----------|------------|
| 1/2" / 15mm x 1/2" | Chromium plated | 105 | 54 | 20 | 686052 |
| 3/4" / 22mm x 3/4" | Chromium plated | 130 | 59 | 20 | 686053 |



Thermostatic valve bodies

Valve bodies for normal systems for copper or iron pipe

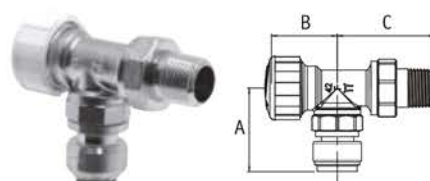
VB 1390/4 Angle horizontal

| Size | Finish | A | B | C | Quantity | Order code |
|--------------------|-----------------|----|----|----|----------|------------|
| 1/2" / 15mm x 1/2" | Chromium plated | 34 | 36 | 53 | 10 | 686030 |
| 3/4" / 22mm x 3/4" | Chromium plated | 38 | 37 | 63 | 5 | 686031 |
| 1/2" / 18mm x 1/2" | Chromium plated | 34 | 36 | 53 | 5 | 686039 |



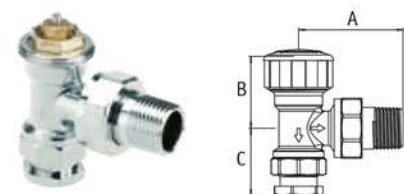
VB 1390/4 Angle horizontal push-fit

| Size | Finish | A | B | C | Quantity | Order code |
|--------------------|-----------------|----|----|----|----------|------------|
| 1/2" / 15mm x 1/2" | Chromium plated | 50 | 36 | 53 | 10 | 686302 |

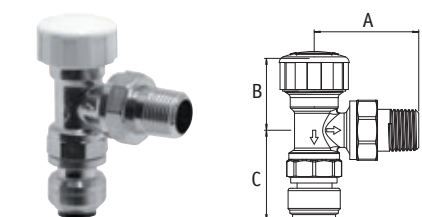


VB 1290/4 Angle vertical

| Size | Finish | A | B | C | Quantity | Order code |
|--------------------|-----------------|----|----|----|----------|------------|
| 1/2" / 15mm x 1/2" | Chromium plated | 53 | 36 | 34 | 10 | 686032 |
| 3/4" / 22mm x 3/4" | Chromium plated | 63 | 37 | 38 | 5 | 686033 |
| 1/2" / 18mm x 1/2" | Chromium plated | 53 | 36 | 34 | 5 | 686040 |

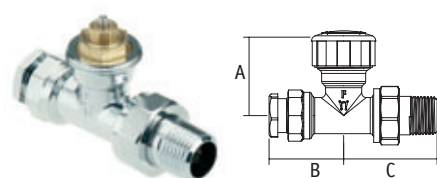


Belmont commercial thermostatic and manual radiator valves



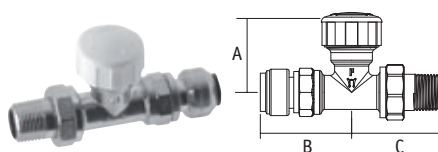
VB 1290/4 Angle vertical push-fit

| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 53 | 36 | 50 | 10 | 686303 |



VB 1490/4 Straight

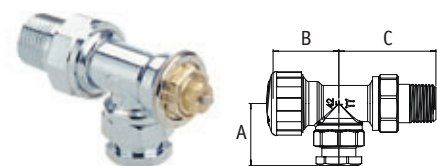
| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 43 | 41 | 51 | 10 | 686034 |
| 3/4"/22mm x 3/4" | Chromium plated | 45 | 47 | 62 | 5 | 686035 |



VB 1490/4 Straight push-fit

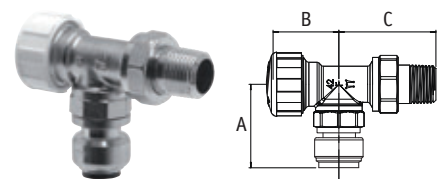
| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 43 | 58 | 51 | 10 | 686304 |

Thermostatic preset valve bodies



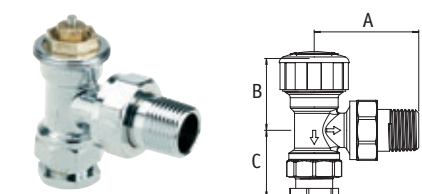
VB 1390/4P Angle horizontal preset

| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 34 | 36 | 53 | 10 | 686080 |
| 3/4"/22mm x 3/4" | Chromium plated | 38 | 37 | 63 | 5 | 686081 |



VB 1390/4P Angle horizontal preset push-fit

| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 50 | 36 | 53 | 10 | 686305 |

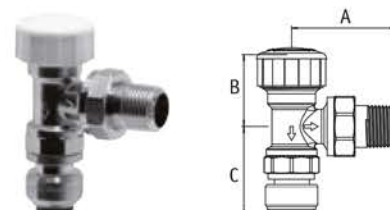


VB 1290/4P Angle vertical preset

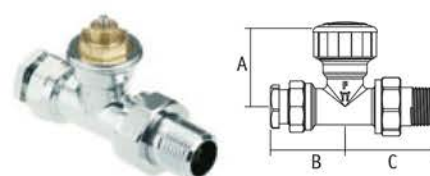
| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 53 | 36 | 34 | 10 | 686082 |
| 3/4"/22mm x 3/4" | Chromium plated | 63 | 37 | 38 | 5 | 686083 |

VB 1290/4P Angle vertical preset push-fit

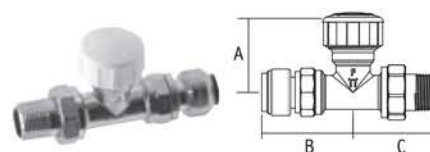
| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 53 | 36 | 50 | 10 | 686306 |

**VB 1490/4P Straight preset**

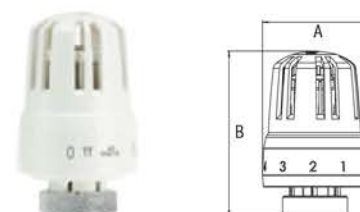
| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 43 | 41 | 51 | 10 | 686084 |
| 3/4"/22mm x 3/4" | Chromium plated | 45 | 47 | 62 | 5 | 686085 |

**VB 1490/4P Straight preset push-fit**

| Size | Finish | A | B | C | Quantity | Order code |
|------------------|-----------------|----|----|----|----------|------------|
| 1/2"/15mm x 1/2" | Chromium plated | 43 | 58 | 51 | 10 | 686307 |

*Thermostatic heads***B1301/4 Liquid TRV head with zero position**

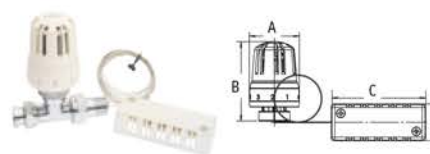
| A | B | Quantity | Order code |
|----|-----------------------|----------|------------|
| 53 | 87 unlocked 84 locked | 1 | 686005 |

**B1301/4 Liquid TRV head with zero position anti-theft**

| A | B | Quantity | Order code |
|----|-----------------------|----------|------------|
| 53 | 87 unlocked 84 locked | 1 | 686095 |

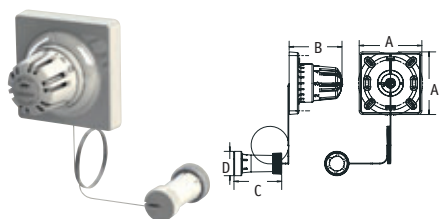
**B1401/4 Liquid TRV head with remote sensor**

| | A | B | C | D | Quantity | Order code |
|----|----|-----------------------|-----|----|----------|------------|
| 2m | 53 | 87 unlocked 84 locked | 100 | 39 | 1 | 686006 |
| 8m | 53 | 87 unlocked 84 locked | 100 | 39 | 1 | 686009 |



Belmont commercial thermostatic and manual radiator valves

Thermostatic heads



B1701/4 Liquid TRV head with remote adjuster

| Sensor | A | B | | C | D | Quantity | Order code |
|--------|----|-------------|-----------|------|----|----------|------------|
| 2m | 85 | 75 unlocked | 72 locked | 64.7 | 33 | 1 | 686011 |
| 5m | 85 | 75 unlocked | 72 locked | 64.7 | 33 | 1 | 686012 |
| 8m | 85 | 75 unlocked | 72 locked | 64.7 | 33 | 1 | 686013 |

Accessories



Belmont robust anti-vandal cover

| Quantity | Order code |
|----------|------------|
| 1 | 686121 |



Belmont high security clip

| Quantity | Order code |
|----------|------------|
| 1 | 686120 |



Belmont anti-theft thermal ring

| Quantity | Order code |
|----------|------------|
| 10 | 686122 |



Belmont anti-theft thermal ring tool

| Quantity | Order code |
|----------|------------|
| 1 | 686123 |

Gland removal tool

| Quantity | Order code |
|----------|------------|
| 1 | 686200 |



Telescopic tail

| Size | Quantity | Order code |
|----------|----------|------------|
| 1/2" BSP | Pair | 686124 |

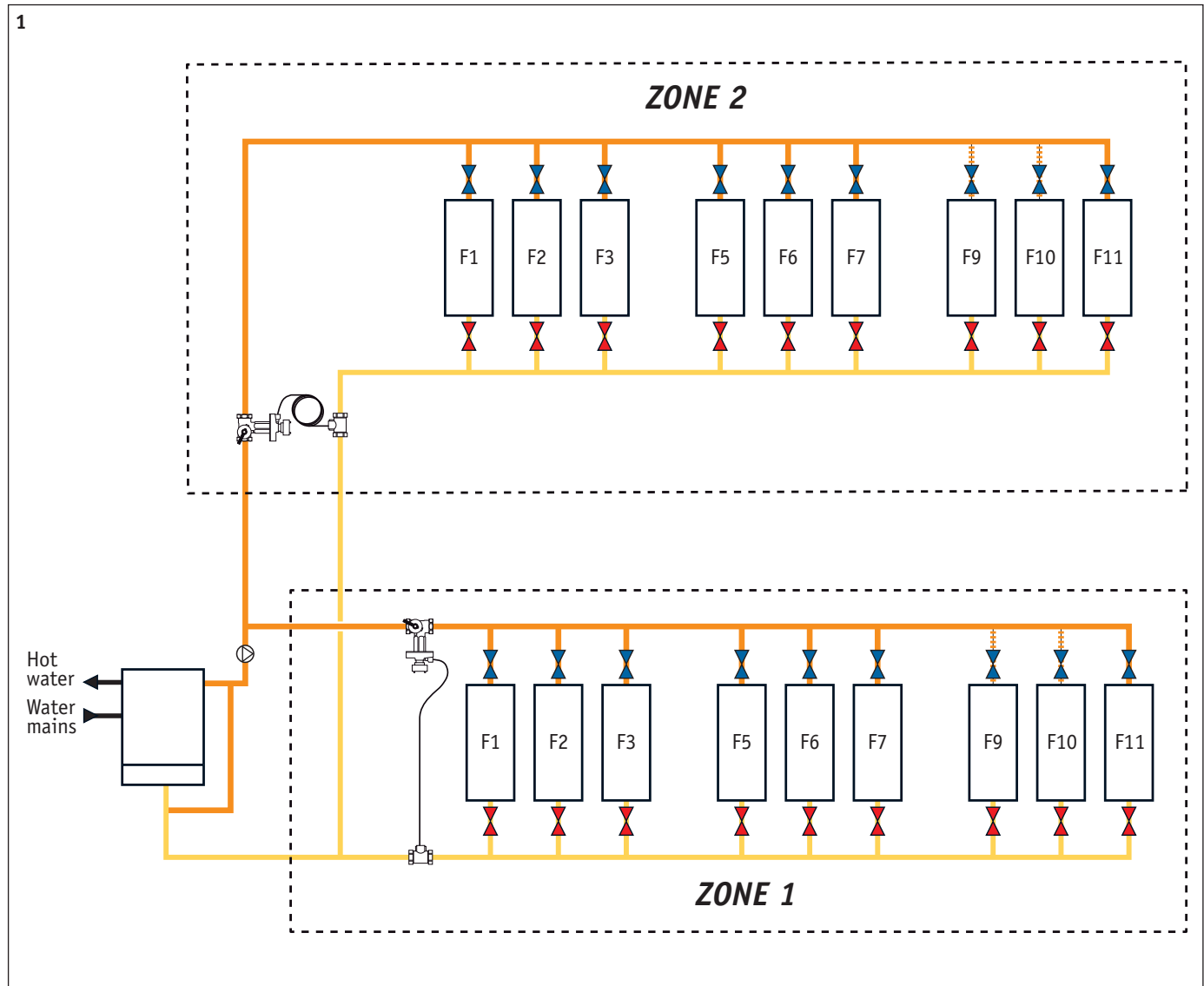


Belmont accessories

| | Size | Quantity | Order code |
|--|------|----------|------------|
| Retaining clips for capillary tube (B 1401/3 & B 1701/3) 20 clips/nails per set | – | 10 sets | 686104 |
| Iron pipe connection without nut | 1/2" | 10 | 686105 |
| Iron pipe connection without nut | 3/4" | 10 | 686106 |
| Copper compression fitting For 3/4" valve bodies (black cap only) | 22mm | 10 | 686107 |
| Remote sensor housing | – | 1 | 686117 |
| B 1301/3 & B 1401/3 locking/limiting pins | – | 20 | 686101 |

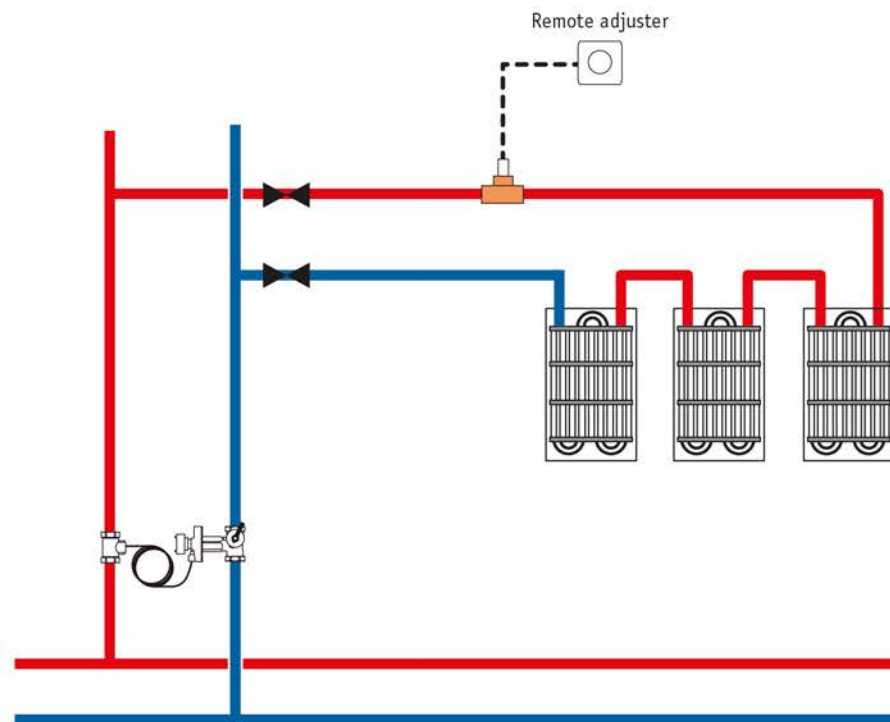
All drawings are representations of various systems.

Types of system



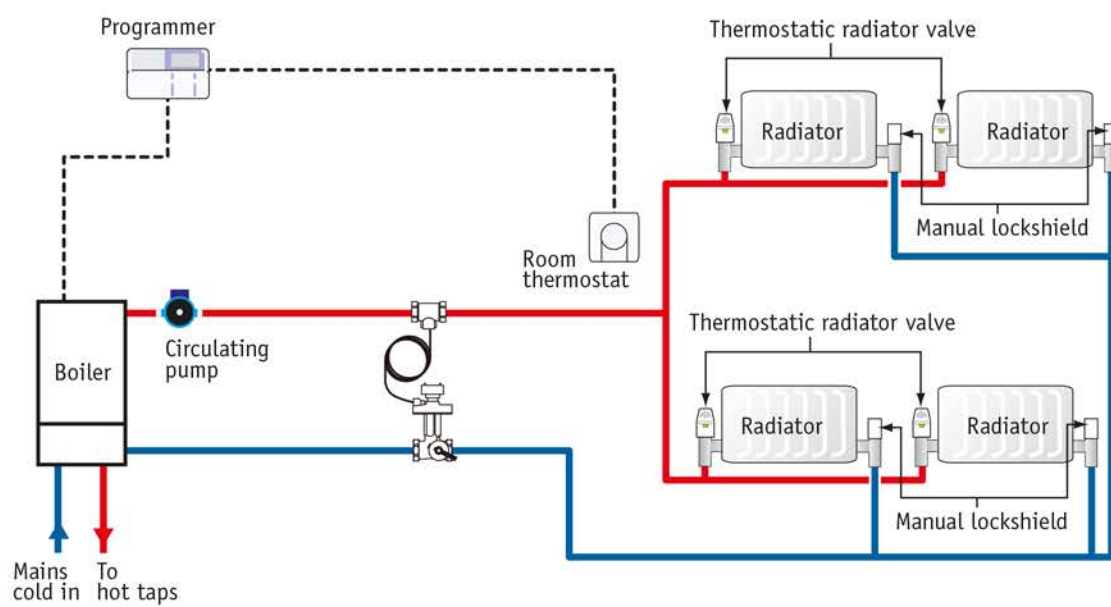
Commercial system example

2



Panel radiator system

3



Combination boiler

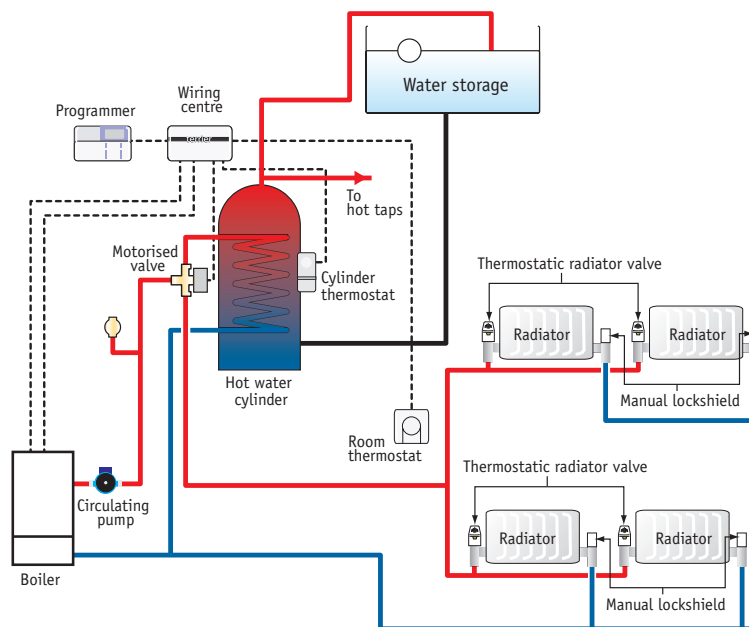
Pegler

Belmont commercial radiator valves

Technical data

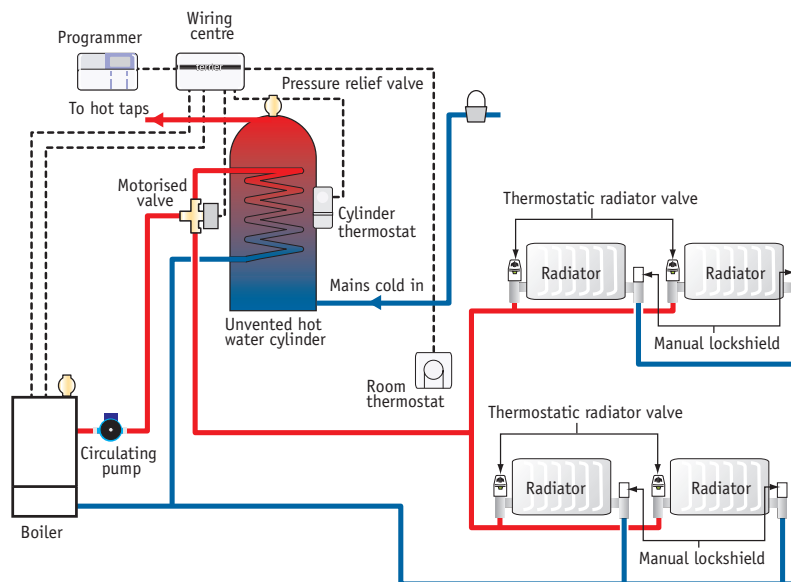
Applications

4



Sealed system vented DHW

5



Sealed system unvented DHW

TYPES OF SYSTEM

| | Gravity hot water system (1) | Fully pumped system (2) | Sealed system vented DHW (3) | Sealed system unvented DHW (4) | Combination boiler (5) | Commercial system example (6) |
|------------------------------|------------------------------|-------------------------|------------------------------|--------------------------------|------------------------|-------------------------------|
| Product recommended | | | | | | |
| Thermostatic radiator valves | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Manual radiator valves | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Introduction

In line with the HM Government's non-domestic Building Services Compliance Guide, Pegler Yorkshire promotes the importance of correct system design and best practice.

Installation of effective controls has a major impact on the energy consumption of heating and hot water systems and can lead to improved energy efficiency, reduced running cost and lower carbon dioxide (CO2) emissions.

- Using controls increases operating efficiency when updating older systems, and enables the user to minimise energy consumption by reducing comfort temperatures
- The installation of a minimum standard of controls in a wet system (which previously had no controls) can reduce fuel consumption and CO2 emissions by 17%
- Reducing the heating "on" time by two hours a day can reduce consumption by 6%.

| SYSTEM CONSIDERATIONS | |
|-----------------------|--|
| Product | System Design Consideration |
| Thermostatic | <ul style="list-style-type: none"> ■ Thermostatic radiator valves should be installed with a room thermostat to provide boiler interlock. If more than 50% of the location is fitted with TRVs then an automatic bypass valve will be required. (Terrier TRV, ABV). |
| Manual | <ul style="list-style-type: none"> ■ Radiators in rooms with a controlling room thermostat should have radiators fitted with manual valves on connections. (Terrier manual radiator valves). |

| INSTALLATION BEST PRACTICE | |
|---|--|
| Product | Installation Best Practice |
| Commercial thermostatic radiator valves | <ul style="list-style-type: none"> ■ Installation of TRVs is recommended in a forward flow position, however the Terrier TRV can be installed in either direction with its reverse flow technology ■ For maximum performance the TRV is best fitted at the top of the radiator with the head fitted horizontally away from the radiator ■ Thermostatic heads above the top of the radiator should be avoided ■ For maximum energy efficiency the TRV should be set to "3" for economy setting to reduce fuel bills, in areas of non requirement the valve should be set to a frost setting. ■ Locking and limiting devices should be used when in need of security; Belmont heads have as standard a patented "lift and lock" mechanism to prevent unauthorised adjustment or tampering in public places of high tamper risk areas ■ Avoid installing TRVs in concealed areas, remote adjuster and remote sensors should be installed in order to read temperature accurately ■ To improve efficiency with a balanced system and long term maintenance, presetting valve bodies should be used to allow adjustment to the flow, and minimise the exercise of balancing the system at the event of maintenance ■ When installing radiator valves in large systems it important to select radiator valves with removable glands. The Belmont range has a special tool that allows removal of gland without draining down the system. |
| Commercial manual radiator valves | <ul style="list-style-type: none"> ■ Manual valves can be used on existing and new radiators – subject to the requirements of the Building Regulations ■ Manuals should fitted where the ambient temperature is difficult to control, e.g. kitchen and shower room ■ Manuals can also be used to relieve pressure build up within a heating system ■ Push-fit connection manuals are recommended where the installation is using plastic pipe. |

Tube compatibility

| TUBE COMPATIBILITY | | | | | |
|--------------------|--------|--------|--------|------|--------|
| | Copper | Chrome | PEX/PB | Iron | Carbon |
| Belmont (adaptor)* | ✓ | ✗ | ✓* | ✓ | ✓* |

*Pegler Yorkshire has a range of push connectors in the Tectite range for use with copper and carbon steel tube or PEX pipe.

Belmont thermostatic radiator valves

Nominal flow rates

| | |
|--|---------|
| 1/2" angle and reverse angle forward flow | 206kg/h |
| 1/2" angle and reverse angle reverse flow | 220kg/h |
| 1/2" straight pattern forward and reverse flow | 195kg/h |
| 3/4" patterns | 265kg/h |

| | |
|---------------------------------|----------------|
| Maximum static pressures | 10bar at 120°C |
|---------------------------------|----------------|

| | |
|---------------------------------------|--------|
| Maximum differential pressures | 0.6bar |
|---------------------------------------|--------|

| | |
|-------------------|------|
| Hysteresis | 0.5k |
|-------------------|------|

Differential pressure influence

| | |
|----------------------|--------|
| All variants forward | 0.15k |
| All variants reverse | -0.25k |

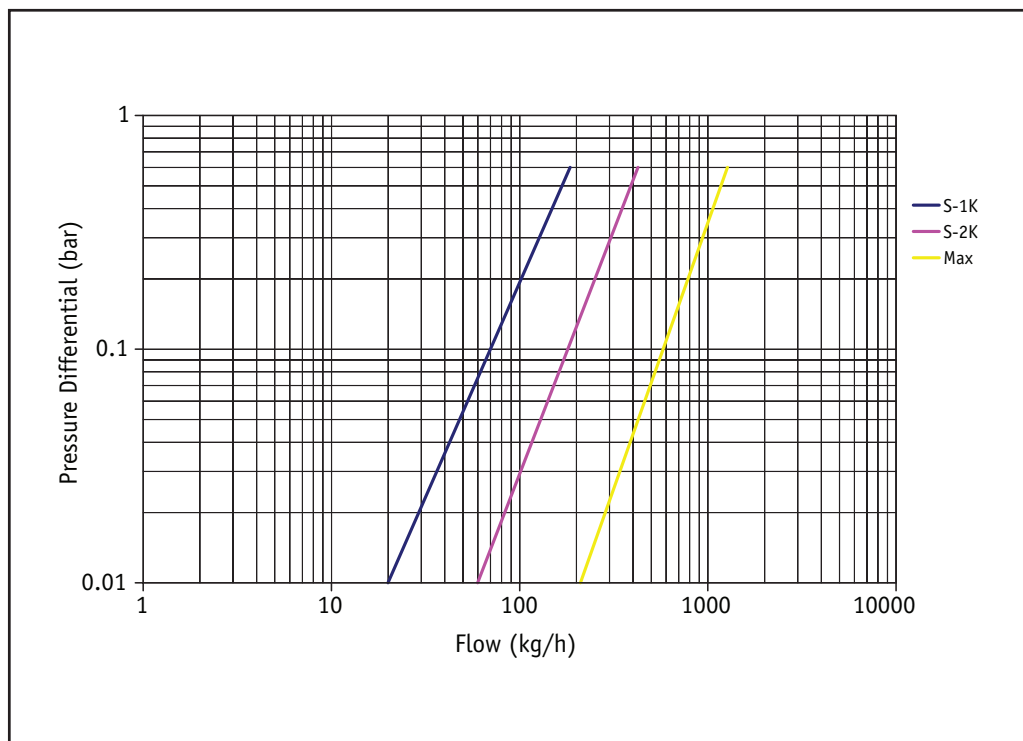
Water temperature influence

| | |
|---|------|
| Fixed thermal head | 0.9k |
| Remote sensing and remote adjusting heads | 0.5k |

Response time

| | |
|------------------------------------|------------|
| All TRV head variants - vertical | 24 minutes |
| All TRV head variants - horizontal | 20 minutes |

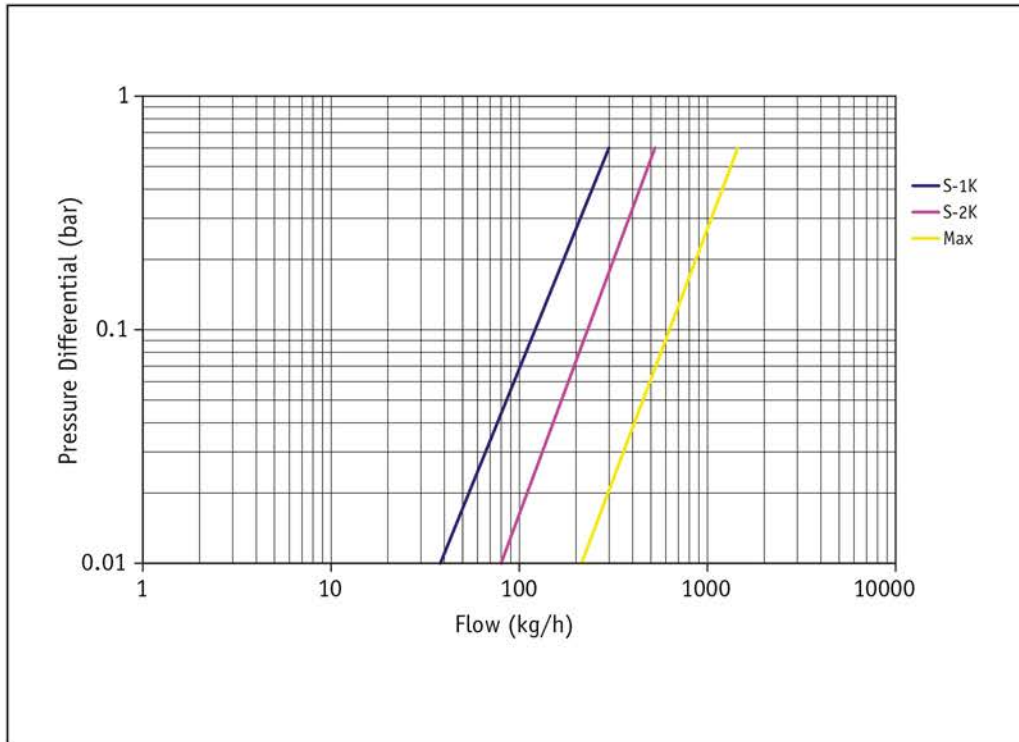
1/2" angle and reverse angle pattern forward flow



| Nominal flow | Seat authority a |
|--------------|------------------|
| 206kg/h | 0.90 |

| Position | kv |
|----------|------|
| S-1K | 0.23 |
| S-2K | 0.52 |
| Max. | 1.74 |

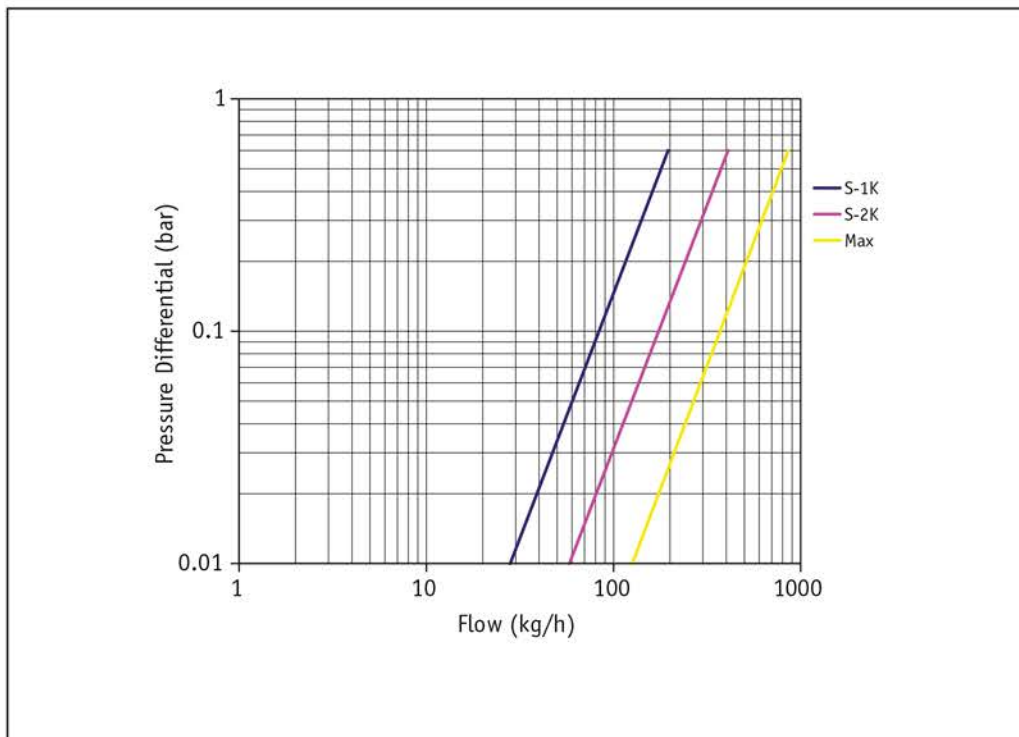
1/2" angle and reverse angle pattern reverse flow



| Nominal flow | Seat authority a |
|--------------|------------------|
| 220kg/h | 0.90 |

| Position | kv |
|----------|------|
| S-1K | 0.38 |
| S-2K | 0.74 |
| Max. | 1.94 |

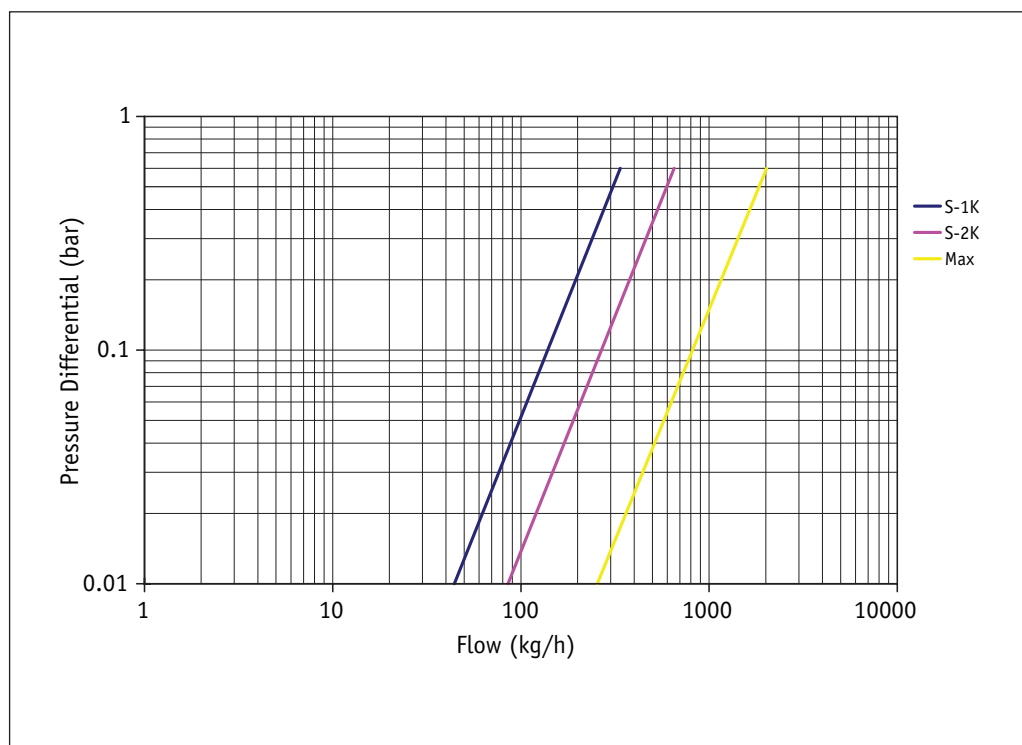
1/2" straight pattern forward and reverse flow



| Nominal flow | Seat authority a |
|--------------|------------------|
| 195kg/h | 0.77 |

| Position | kv |
|----------|------|
| S-1K | 0.25 |
| S-2K | 0.54 |
| Max. | 1.13 |

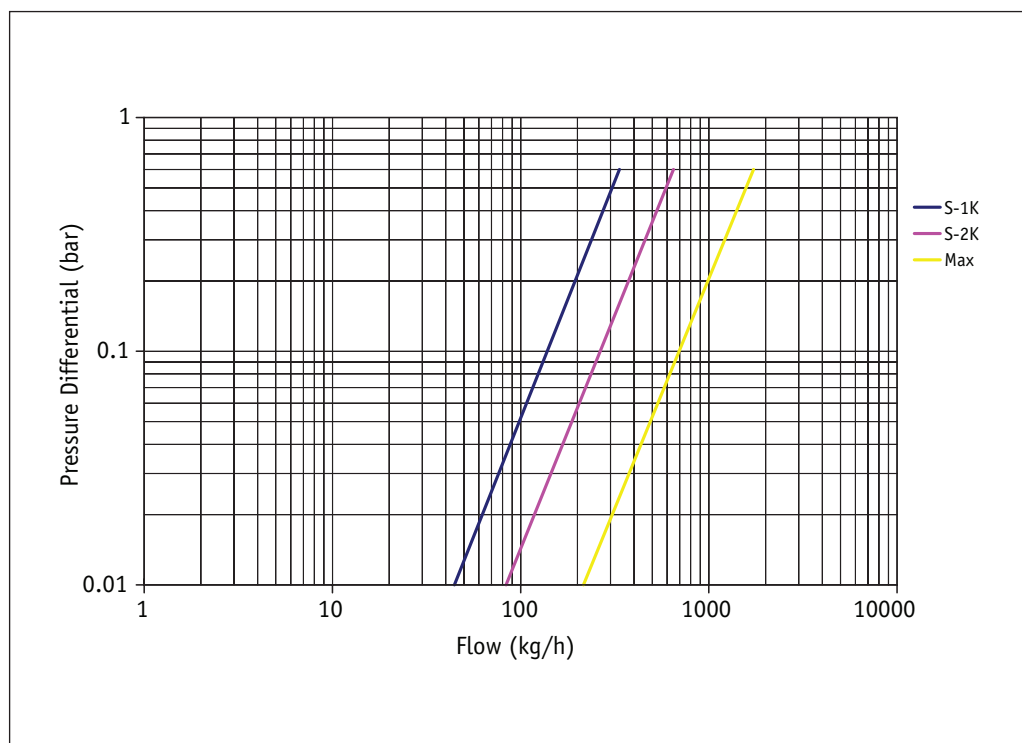
3/4" angle and reverse angle pattern forward and reverse flow



| Nominal flow | Seat authority a |
|--------------|------------------|
| 265kg/h | 0.89 |

| Position | kv |
|----------|------|
| S-1K | 0.44 |
| S-2K | 0.84 |
| Max. | 2.53 |

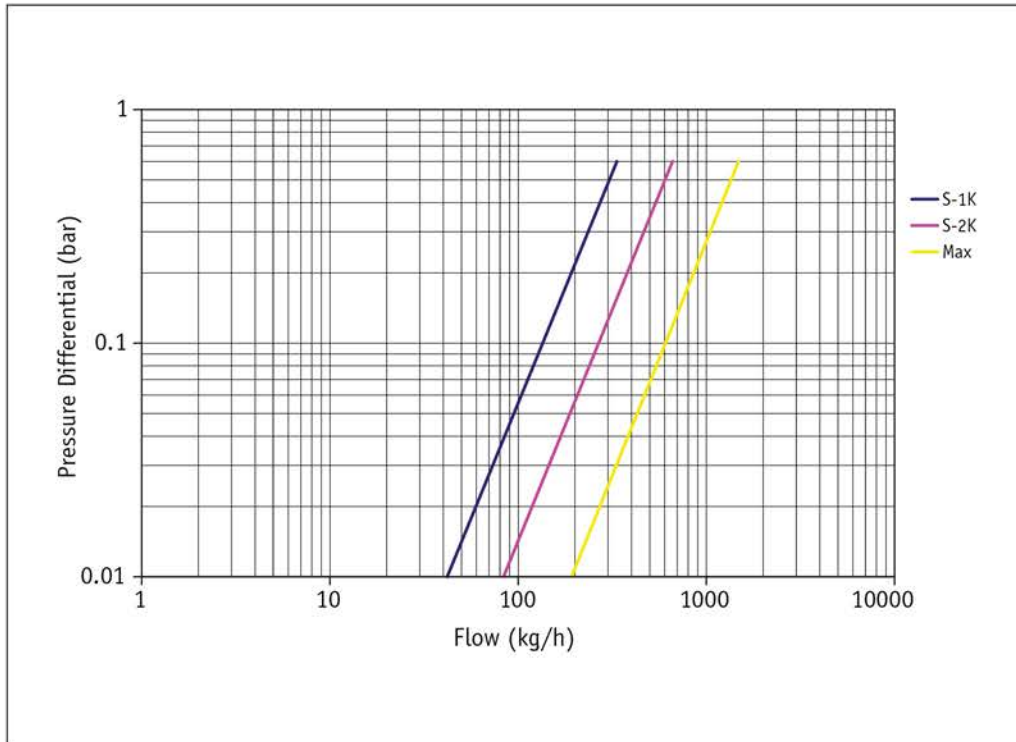
3/4" straight pattern forward flow



| Nominal flow | Seat authority a |
|--------------|------------------|
| 265kg/h | 0.85 |

| Position | kv |
|----------|------|
| S-1K | 0.44 |
| S-2K | 0.84 |
| Max. | 2.15 |

$\frac{3}{4}$ " straight pattern reverse flow

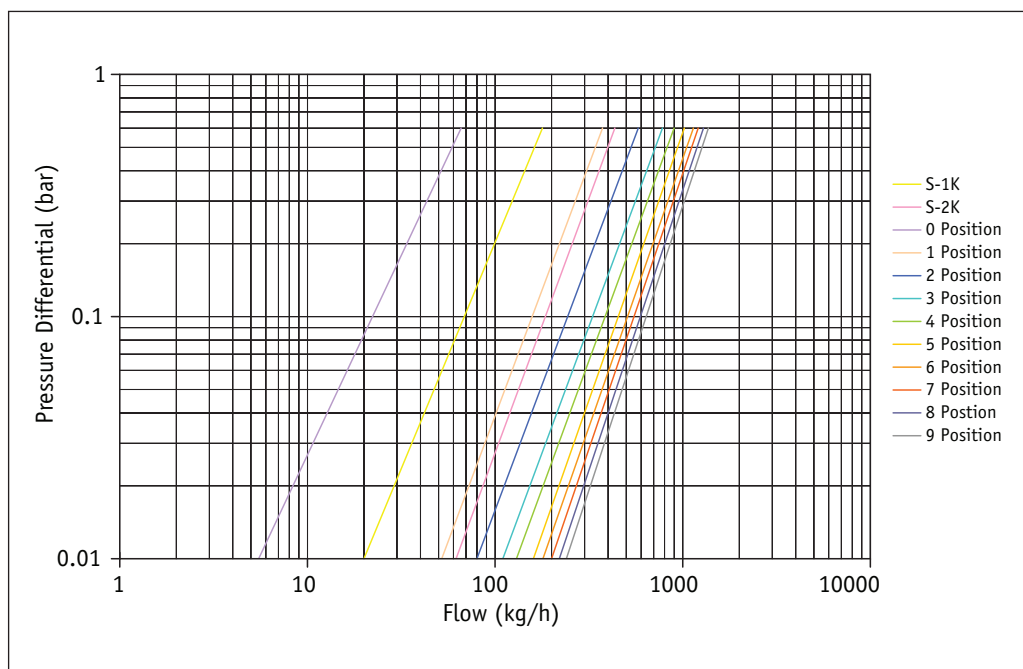


| Nominal flow | Seat authority a |
|--------------|------------------|
| 265kg/h | 0.80 |

| Position | kv |
|----------|------|
| S-1K | 0.44 |
| S-2K | 0.84 |
| Max. | 1.87 |

Belmont pre-set thermostatic radiator valves

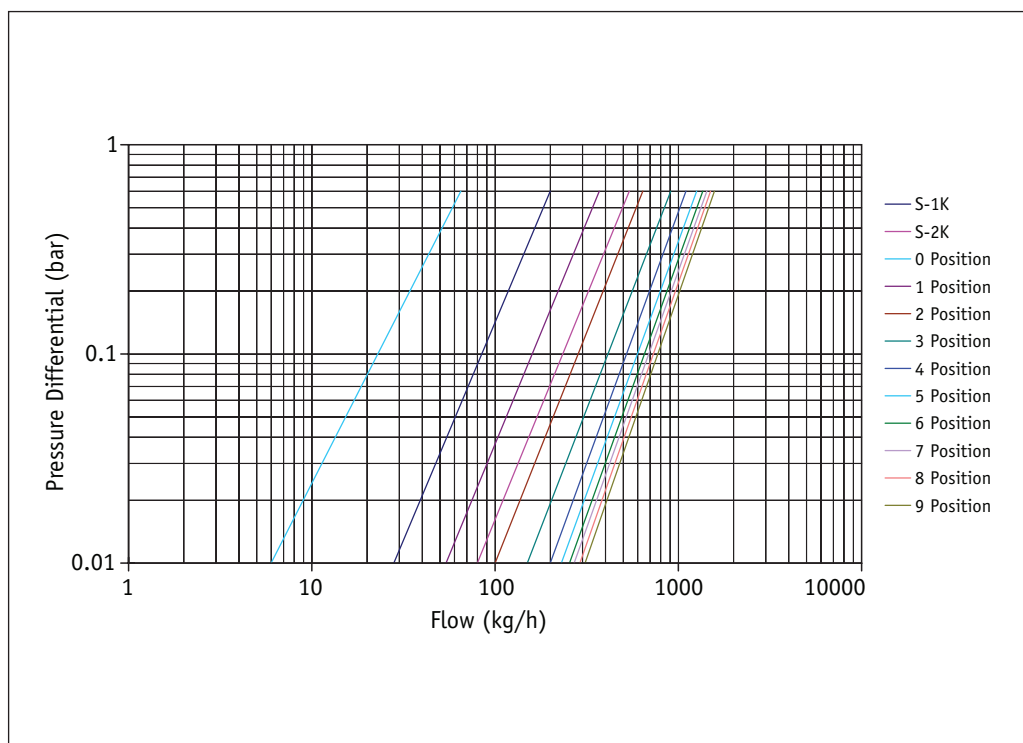
1/2" angle and reverse angle pattern forward flow pre-setting



| Setting | Nominal flow (kg/h) | Seat authority a |
|---------|---------------------|------------------|
| 0 | 44 | 0.00 |
| 1 | 151 | 0.00 |
| 2 | 206 | 0.32 |
| 3 | 206 | 0.63 |
| 4 | 206 | 0.73 |
| 5 | 206 | 0.80 |
| 6 | 206 | 0.85 |
| 7 | 206 | 0.89 |
| 8 | 206 | 0.91 |
| 9 | 206 | 0.94 |

| Position | kv |
|----------|------|
| S-1K | 0.23 |
| S-2K | 0.56 |
| 0 | 0.09 |
| 1 | 0.48 |
| 2 | 0.75 |
| 3 | 1.01 |
| 4 | 1.16 |
| 5 | 1.32 |
| 6 | 1.47 |
| 7 | 1.56 |
| 8 | 1.67 |
| 9 | 1.77 |

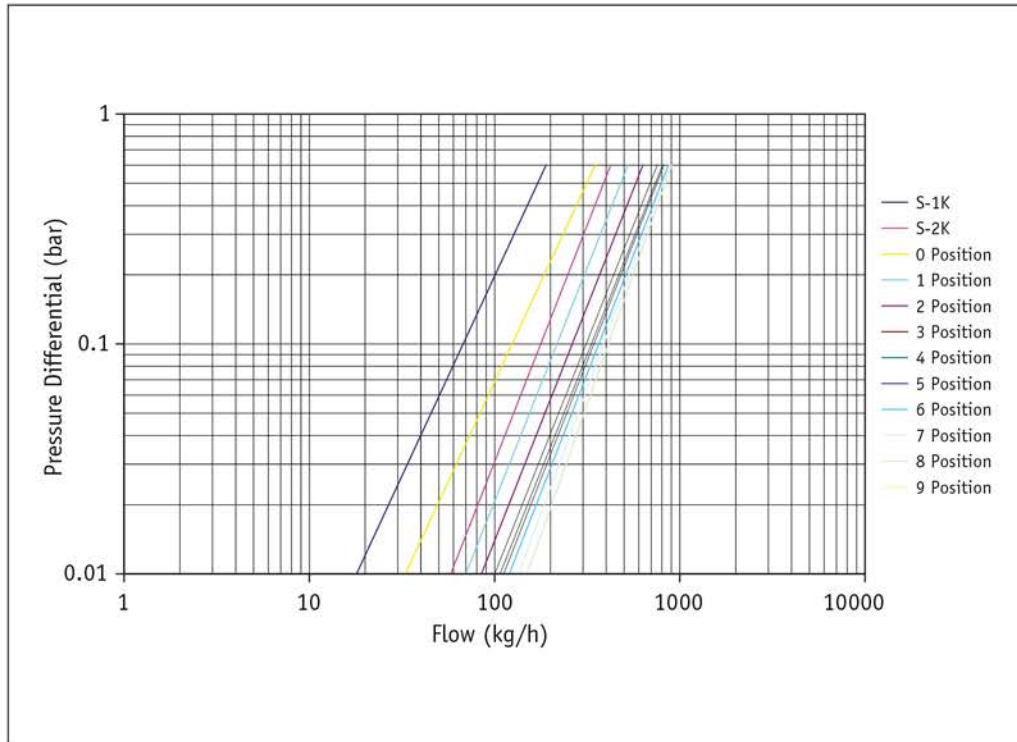
1/2" angle and reverse angle pattern reverse flow pre-setting



| Position | kv |
|----------|------|
| S-1K | 0.26 |
| S-2K | 0.70 |
| 0 | 0.08 |
| 1 | 0.48 |
| 2 | 0.83 |
| 3 | 1.17 |
| 4 | 1.42 |
| 5 | 1.63 |
| 6 | 1.76 |
| 7 | 1.85 |
| 8 | 1.94 |
| 9 | 2.03 |

| Setting | Nominal flow (kg/h) | Seat authority a |
|---------|---------------------|------------------|
| 0 | 45 | 0.00 |
| 1 | 164 | 0.00 |
| 2 | 220 | 0.38 |
| 3 | 220 | 0.68 |
| 4 | 220 | 0.81 |
| 5 | 220 | 0.88 |
| 6 | 220 | 0.91 |
| 7 | 220 | 0.94 |
| 8 | 220 | 0.95 |
| 9 | 220 | 0.96 |

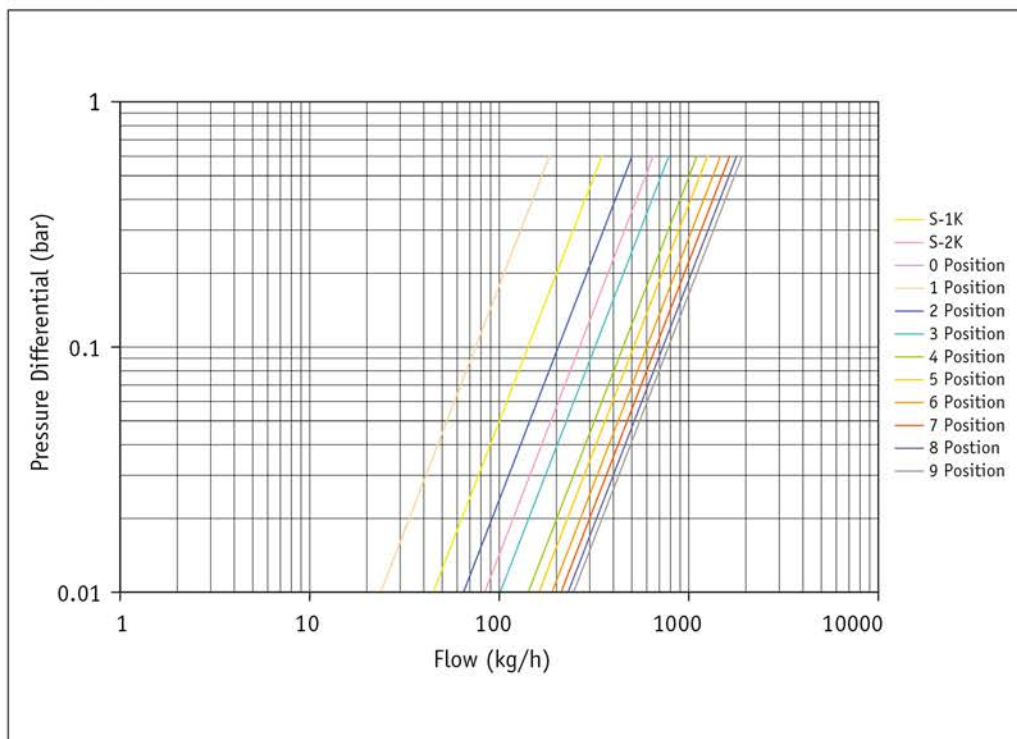
1/2" straight pattern forward and reverse flow pre-setting



| Setting | Nominal flow (kg/h) | Seat authority a |
|---------|---------------------|------------------|
| 0 | 40 | 0.00 |
| 1 | 130 | 0.00 |
| 2 | 195 | 0.22 |
| 3 | 195 | 0.43 |
| 4 | 195 | 0.62 |
| 5 | 195 | 0.69 |
| 6 | 195 | 0.78 |
| 7 | 195 | 0.80 |
| 8 | 195 | 0.81 |
| 9 | 195 | 0.82 |

| Position | kv |
|----------|------|
| S-1K | 0.25 |
| S-2K | 0.55 |
| 0 | 0.45 |
| 1 | 0.68 |
| 2 | 0.82 |
| 3 | 0.98 |
| 4 | 1.04 |
| 5 | 1.06 |
| 6 | 1.12 |
| 7 | 1.14 |
| 8 | 1.17 |
| 9 | 1.20 |

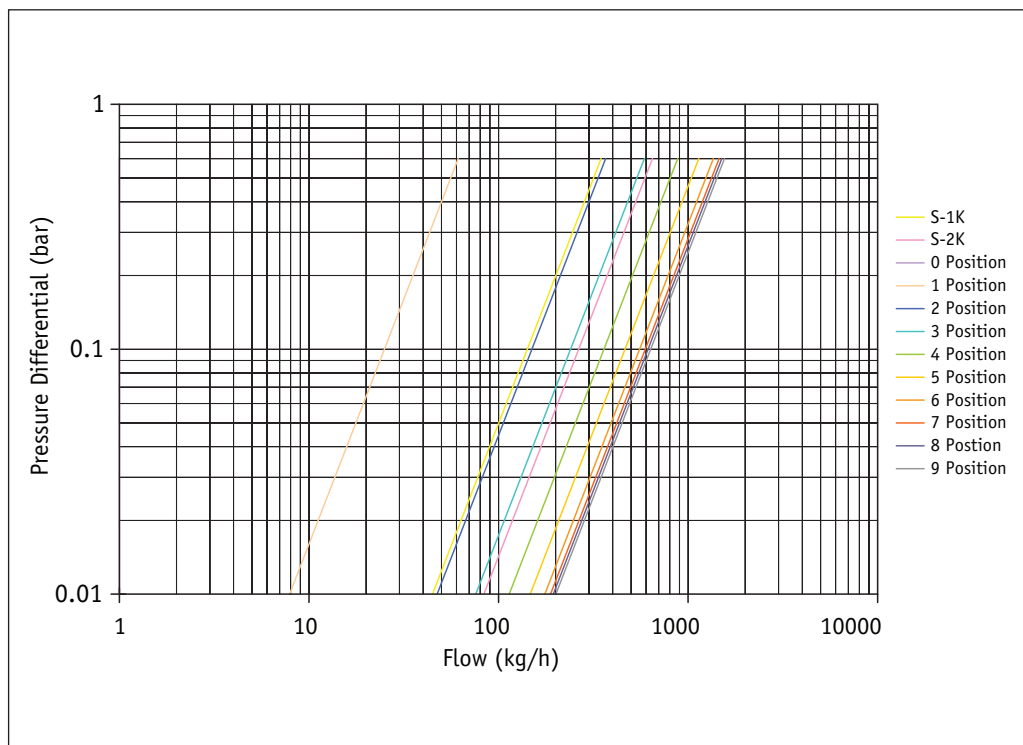
3/4" angle and reverse angle pattern forward and reverse flow pre-setting



| Setting | Nominal flow (kg/h) | Seat authority a |
|---------|---------------------|------------------|
| 0 | 0 | 0 |
| 1 | 75 | 0 |
| 2 | 205 | 0 |
| 3 | 265 | 0.31 |
| 4 | 265 | 0.65 |
| 5 | 265 | 0.73 |
| 6 | 265 | 0.80 |
| 7 | 265 | 0.84 |
| 8 | 265 | 0.87 |
| 9 | 265 | 0.88 |

| Position | kv |
|----------|------|
| S-1K | 0.45 |
| S-2K | 0.84 |
| 0 | 0.00 |
| 1 | 0.24 |
| 2 | 0.65 |
| 3 | 1.01 |
| 4 | 1.42 |
| 5 | 1.62 |
| 6 | 1.90 |
| 7 | 2.12 |
| 8 | 2.31 |
| 9 | 2.47 |

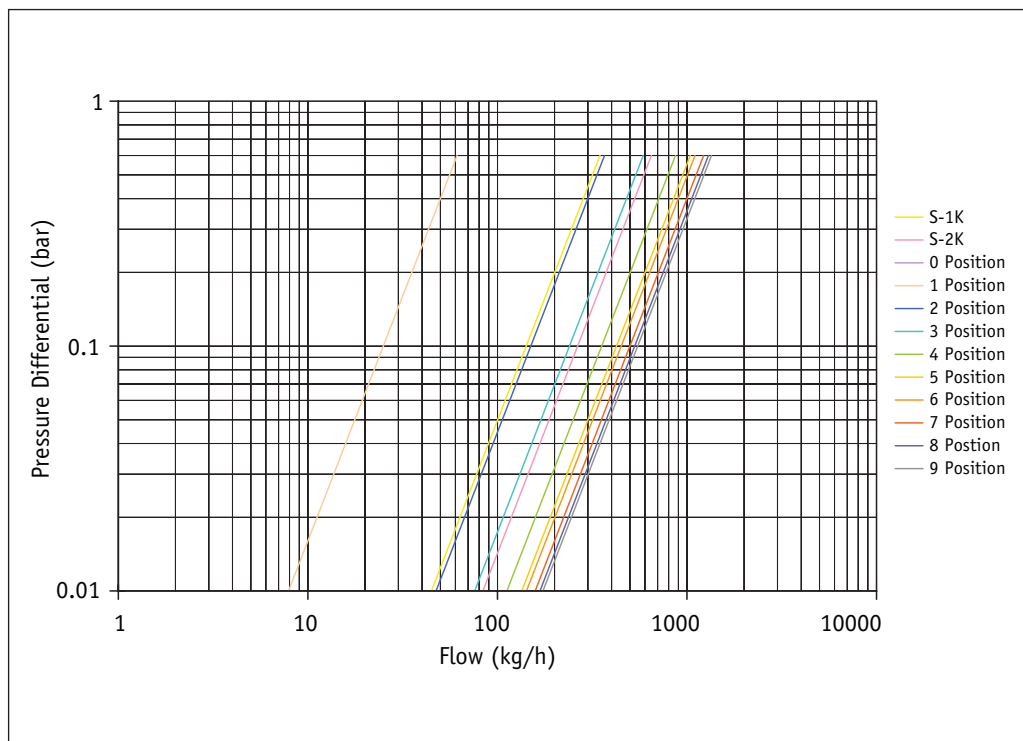
3/4" straight pattern forward flow pre-setting



| Setting | Nominal flow (kg/h) | Seat authority a |
|---------|---------------------|------------------|
| 0 | 0 | 0 |
| 1 | 25 | 0 |
| 2 | 150 | 0 |
| 3 | 240 | 0 |
| 4 | 265 | 0.46 |
| 5 | 265 | 0.68 |
| 6 | 265 | 0.77 |
| 7 | 265 | 0.80 |
| 8 | 265 | 0.81 |
| 9 | 265 | 0.83 |

| Position | kv |
|----------|------|
| S-1K | 0.45 |
| S-2K | 0.84 |
| 0 | 0.00 |
| 1 | 0.08 |
| 2 | 0.47 |
| 3 | 0.76 |
| 4 | 1.14 |
| 5 | 1.47 |
| 6 | 1.76 |
| 7 | 1.88 |
| 8 | 1.94 |
| 9 | 2.01 |

3/4" straight pattern reverse flow pre-setting

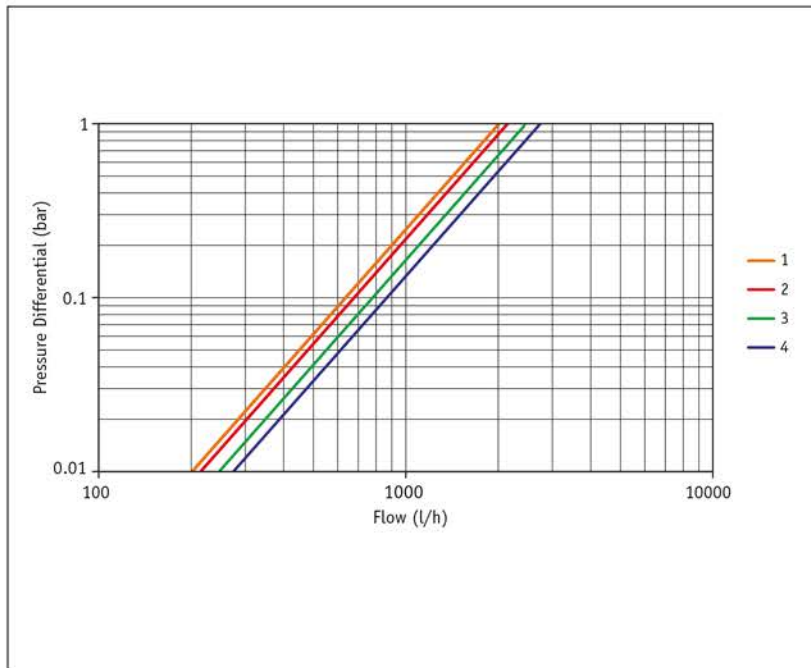


| Setting | Nominal flow (kg/h) | Seat authority a |
|---------|---------------------|------------------|
| 0 | 0 | 0 |
| 1 | 25 | 0 |
| 2 | 150 | 0 |
| 3 | 240 | 0 |
| 4 | 265 | 0.44 |
| 5 | 265 | 0.61 |
| 6 | 265 | 0.65 |
| 7 | 265 | 0.72 |
| 8 | 265 | 0.75 |
| 9 | 265 | 0.77 |

| Position | kv |
|----------|------|
| S-1K | 0.45 |
| S-2K | 0.84 |
| 0 | 0.00 |
| 1 | 0.08 |
| 2 | 0.47 |
| 3 | 0.76 |
| 4 | 1.12 |
| 5 | 1.34 |
| 6 | 1.42 |
| 7 | 1.58 |
| 8 | 1.68 |
| 9 | 1.74 |

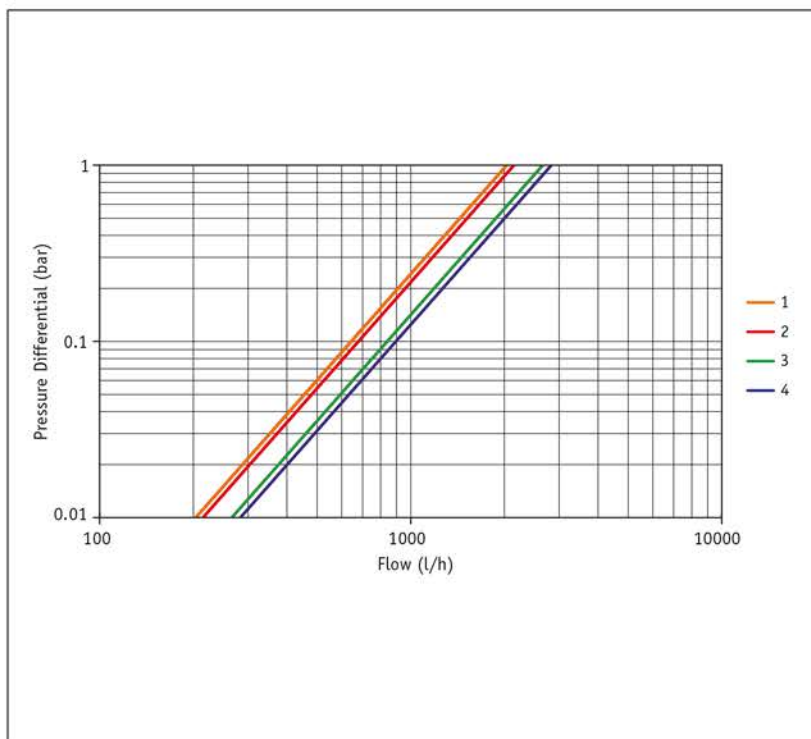
Belmont manual radiator valves

Manual handwheel and lockshield



| | | Pressure (bar) | Flow (l/h) | kv |
|----------------------------------|---|-------------------|---------------|------|
| Straight pattern reverse flow | 1 | 0.01 | 203.9 | 2.04 |
| | | 1 | 2039.1 | |
| Straight pattern forward flow | 2 | 0.01 | 214.8 | 2.15 |
| | | 1 | 2148.0 | |
| Angle pattern reverse flow | 3 | 0.01 | 258.4 | 2.58 |
| | | 1 | 2584.3 | |
| Angle pattern forward flow | 4 | 0.01 | 276.4 | 2.76 |
| | | 1 | 2764.0 | |

Concealed lockshield



| | | Pressure (bar) | Flow (l/h) | kv |
|----------------------------------|---|-------------------|---------------|------|
| Straight pattern reverse flow | 1 | 0.01 | 203.1 | 2.03 |
| | | 1 | 2030.7 | |
| Straight pattern forward flow | 2 | 0.01 | 213.1 | 2.13 |
| | | 1 | 2130.9 | |
| Angle pattern reverse flow | 3 | 0.01 | 267.8 | 2.68 |
| | | 1 | 2678.0 | |
| Angle pattern forward flow | 4 | 0.01 | 289.9 | 2.90 |
| | | 1 | 2898.7 | |

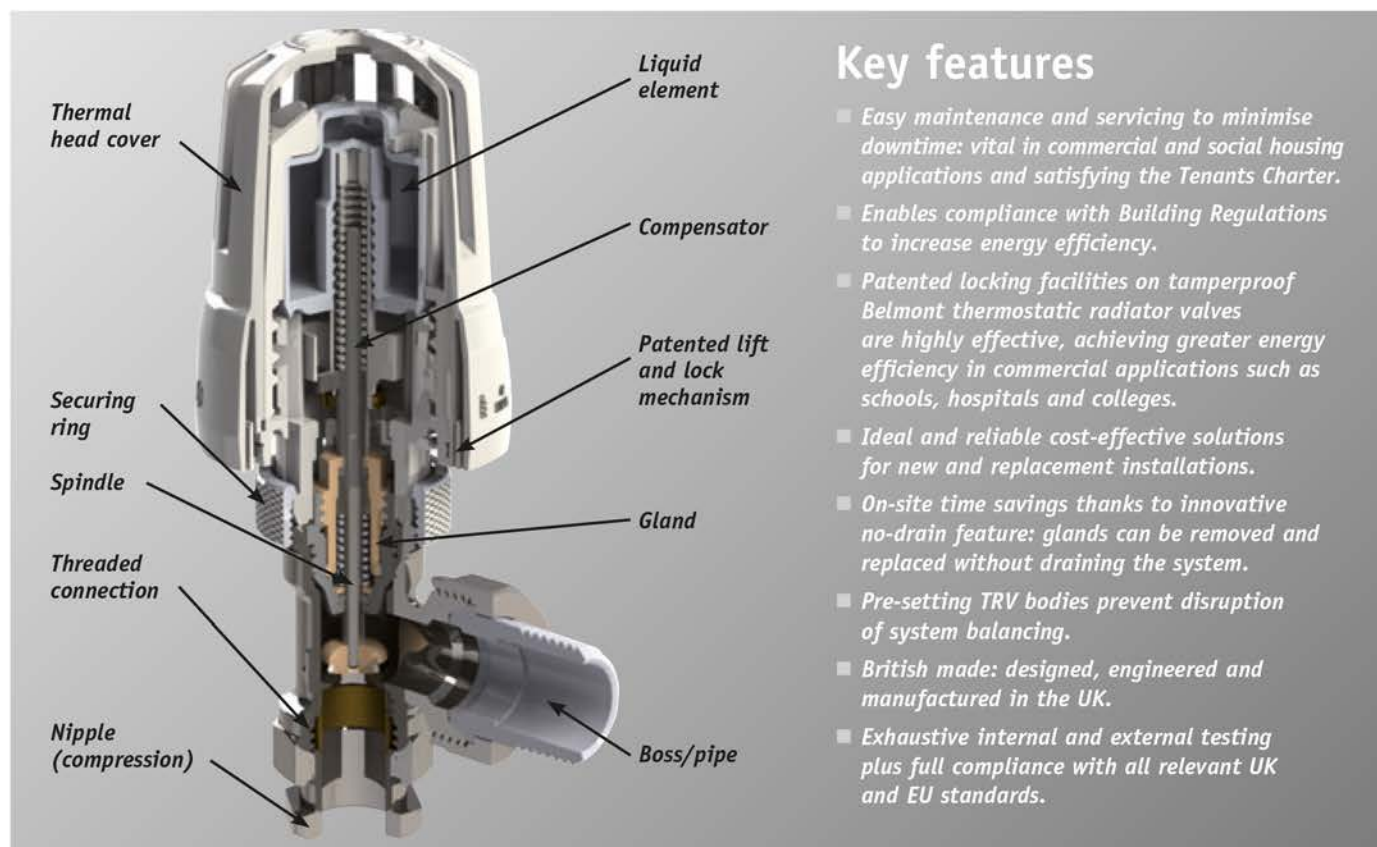
| COMPONENT | TRV/TRV (Push-fit) |
|-------------------------|-------------------------------|
| Body | F.B. BSEN12165 CW617N |
| Valve head | EBB BSEN12164 CW617N |
| Gland | EBB BSEN12164 CW617N |
| Boss/pipe | EBB BSEN12164 CW617N |
| Spindle | 303S31 Stainless steel |
| TRV base | Perlac 205H |
| TRV core cap | Perlac 205H |
| Head assembling ring | Perlac 205H |
| 'O' ring | EPDM EP70 |
| Element | Liquid |
| Thermal ring | EBB BSEN12164 CW617N |
| Compensator barrel | Noryl GTX 830 |
| Element compensator pin | Noryl GTX 830 |
| Nipple | EBB BSEN12164 CW617N |
| Cone | Brass tube BS EN12164: CW606N |
| End connection | DZR brass |
| End connection 'O' ring | EPDM |
| Grab ring | Stainless steel SS316 |

| COMPONENT | Remote adjuster |
|----------------------|--|
| Remote adjuster | Perlac 205H |
| Adjusting handle | Perlac 205H |
| Adjusting base | Perlac 205H |
| Adjusting wall plate | Perlac 205H |
| E type circlip | Carbon Spring steel with poshapte & oil finish |
| Thermal ring | EBB BSEN12164 CW617N |
| Screw | Steel BZP |
| Adjusting wall plate | Perlac 205H |
| Range limiter | Perlac 205H |
| Screw cover | Perlac 205H |
| Element | Liquid |

| COMPONENT | MRV/MRV (Push-fit) |
|-------------------------|-----------------------|
| Body | F.B. BSEN12165 CW617N |
| Valve head | EBB BSEN12164 CW617N |
| Gland | EBB BSEN12164 CW617N |
| Boss/pipe | EBB BSEN12164 CW617N |
| Spindle | EBB BSEN12164 CW617N |
| MRV cap | Perlac 205H |
| Screw | Steel BZP |
| 'O' ring | EPDM EP70 |
| End connection | DZR brass |
| End connection 'O' ring | EPDM |
| Grab ring | Stainless steel SS316 |

| COMPONENT | MRV/MRV (Push-fit) |
|------------|-----------------------|
| Body | F.B. BSEN12165 CW617N |
| Valve head | EBB BSEN12164 CW617N |
| Gland | EBB BSEN12164 CW617N |
| Boss/pipe | EBB BSEN12164 CW617N |
| Spindle | EBB BSEN12164 CW617N |
| MRV cap | Perlac 205H |
| Screw | Steel BZP |
| 'O' ring | EPDM EP70 |

Getting the best out of heating controls is key to ensuring efficiency, safety and cost. The following pages give you the reasons to choose Belmont!



Temperature settings

| 0 | * | 1 | 2 | 3 | 4 | 5 |
|----------|-----|---------|---------|---------|---------|---------|
| Shut off | 7°C | 11–13°C | 15–17°C | 19–21°C | 22–25°C | 27–29°C |

Deviations of a few degrees (K) are possible according to the mode of installation and design of the heating system.

If the approximate temperature values specified in the temperature setting table cannot be reached please contact your heating specialist.

For flow chart information see pages 22 to 29.

Pegler

Belmont commercial radiator valves

Technical data

Operating specifications

Controls in existing non-domestic buildings

Useful information when considering the use of controls when replacing a boiler and improving boiler efficiencies for non-domestic buildings, the HM Government - Non-Domestic

Building Services Compliance Guide provides guidance for this in the tables below.

| RECOMMENDED MINIMUM CONTROLS PACKAGE FOR REPLACEMENT BOILER FOR EXISTING BUILDINGS | |
|---|---|
| <i>Minimum controls package</i> | <i>Suitable controls</i> |
| a. Zone control; and | ■ Zone control is required only for buildings where the floor area is greater than 150m ² . As a minimum, on/off control (e.g. through an isolation valve for unoccupied zones) should be provided. This is achieved by default for a building with a floor area of 150m ² or less. |
| b. Demand control; and | ■ Room thermostats which control through a diverter valve with constant boiler flow water temperature. This method of control is not suitable for condensing boilers. |
| c. Time control | ■ Time clock controls |

Further information can be found in the HM Government - Non-Domestic Building Services Compliance Guide, 2010 edition (2011 amendments) Section 2.6

Heating efficiency credits are awarded for provision of additional measures, such as additional control, that raise the energy efficiency of a system and go beyond recommended minimum standards. Different credits apply to the different measures that are available for heating and hot water technologies.

| HEATING EFFICIENCY CREDITS FOR MEASURES APPLICABLE TO BOILER REPLACEMENT IN EXISTING BUILDINGS | | | |
|---|---|--|--|
| <i>Measures</i> | <i>Heating efficiency credits % points (the maximum that can be claimed is 4% points)</i> | <i>Comments</i> | |
| E i. Thermostatic radiator valves (TRVs) alone. Would also apply to a fan convector systems | 1 | TRVs enable the building temperature to be controlled and therefore reduce the waste of energy | |
| ii. Weather (inside/outside temperature) compensation system using a mixing valve | 1.5 | Provides more accurate prediction of load and hence control | |
| iii. Addition of TRV or temperature zone control to ii above to ensure full building temperature control | 1 | This credit is additional to Eii | |
| F i. A room thermostat or sensor that controls boiler water temperature in relation to heat load. | 0.5 | | |
| ii. Weather (inside/outside temperature) compensation system that is direct acting | 2 | Provides more accurate prediction of load and hence control | |
| iii. Addition of TRV or temperature zone control to i or ii above to ensure full building temperature control | 1 | This credit is additional to Fi or Fii above. Note: Fi and Fii are not used together | |

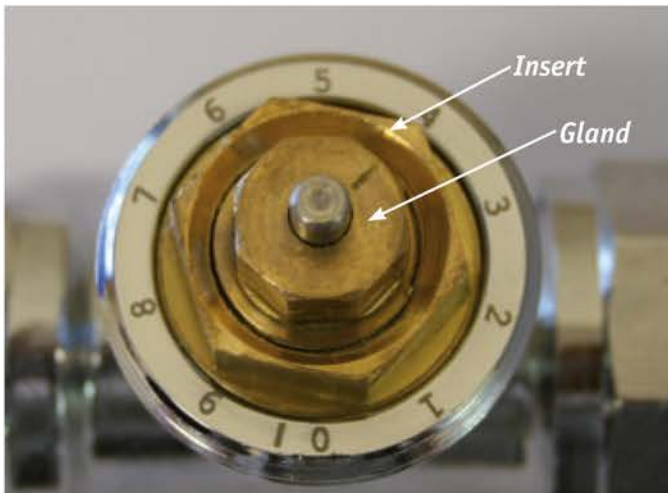
For a complete list, further information can be found in the HM Government - Non-Domestic Building Services Compliance Guide, 2010 edition (2011 amendments) Section 2.7

Explaining Hysteresis

- The 'lag' or difference between the way the TRV opens and closes, measured in °C
- EN215 measures this difference by using a slow rate of increase/decrease in temperature

- Limit of 1°C
- Measures ability of valve to maintain a consistent room temperature within comfort limits

Pre-setting valves



Balancing the system can be laborious and time consuming. Using a lockshield to balance the system is common, but with accidental or intentional adjustment, the system can become unbalanced, reducing the efficiency of the heat output. The closing of a lockshield, the removal of radiator for replacement or decorating purposes can also affect the system.

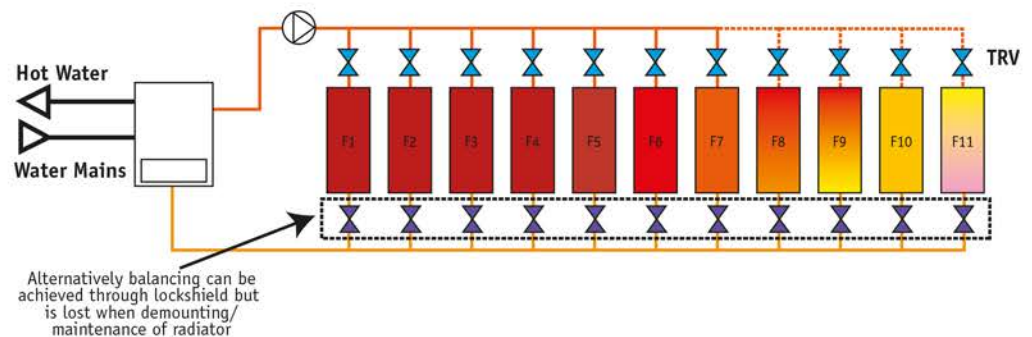
Using a presetting valve provides a unique solution without installing any additional products other than a TRV.

The presetting valve should be applied on all radiators ideally on the flow end. On each valve the gland can be adjusted to control flow allowing pressure to be redirected to the next radiator in line. This is repeated on all radiators in the application allowing the system to be balanced.

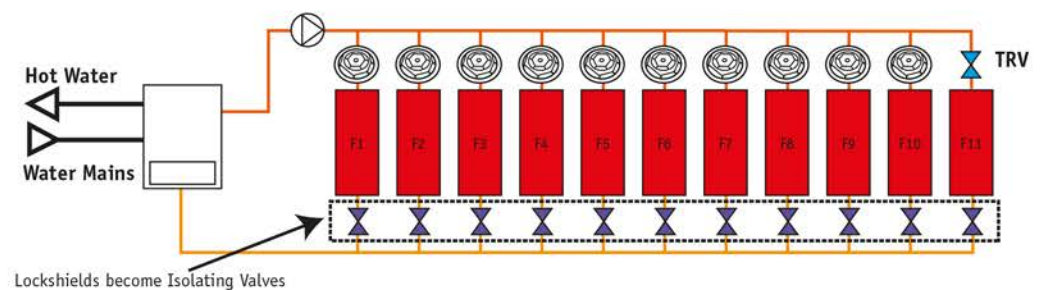


This benefit allows the lockshield to become an isolating valve and ensures that any accidental adjustment can be easily corrected, additionally when radiators are removed or replaced the setting on the valves will remain, saving precious time and avoiding commissioning.

Valve system using TRV



Valve system using pre-setting TRV



The lift and lock mechanism

This is a patented feature of Belmont TRVs and is designed to prevent the head being turned accidentally or deliberately to a higher temperature setting than has been selected.



1. Locked.



2. The TRV head is lifted.



3. The head is turned until the small plastic arrow just above the thermal ring aligns with the required setting number.

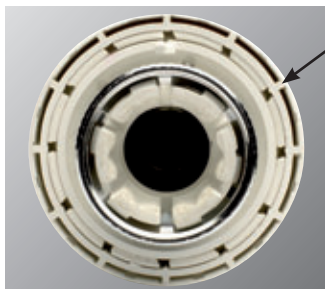


4. The head is pushed down, locking it into place.

Key operated tamper-resistant feature



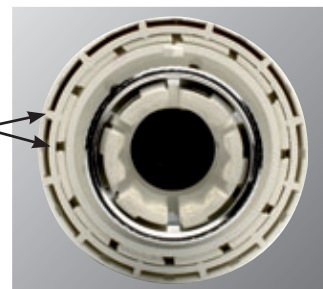
This patented feature is designed to provide even more robust protection from tampering. A special plastic removal tool is provided to carry out the adjustment.



Underside of valve head as supplied.

Lugs on inner ring line up with notches

Inner ring lugs positioned between notches



Underside of valve head with internal ring re-positioned to lock the valve.

Key operated tamper-resistant feature cont.



1. The lugs on the removal tool should be inserted into the grooves on the inner ring of the TRV head.



2. When engaged, the tool is twisted and pulled down to remove the inner ring. The head is lifted and rotated so that the plastic arrow above the thermal ring aligns with the required temperature setting number.



3. The inner ring is re-inserted into the head ensuring that the lugs on it are not aligned with the notches.

4 The head can then be locked and connected to the valve body.

Anti-theft thermal ring



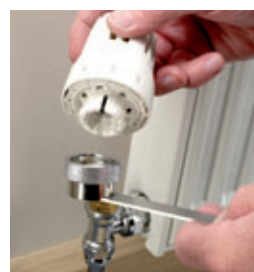
The thermal ring on a Belmont TRV head can be easily removed and replaced with an anti-theft thermal ring using a specially designed ring removal tool.



1. The TRV head is removed from the valve body by unscrewing the thermal ring.



2. The thermal ring is screwed into the threaded adaptor at the base of the tool. This compresses the clips on the TRV head and allows the ring to pop off. The ring becomes more difficult to turn as the compression increases and it is sometimes necessary to use grips to increase leverage.



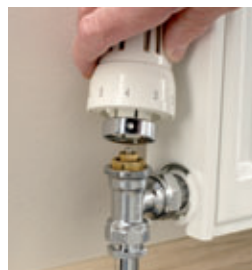
3. The head can then be pulled free of the thermal ring, leaving the ring attached to the tool.



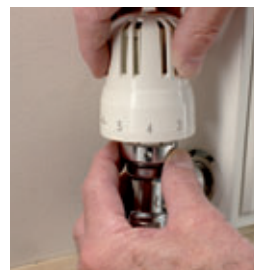
4. An anti-theft thermal ring should be laid on a flat surface with the internal lip uppermost.



5. The TRV head is pressed onto the anti-theft thermal ring until they snap together.



6. The secure thermal head can then be re-attached to the valve body, tightening by hand.



6. The standard thermal ring can be unscrewed and removed from the tool and the 'C' end of the tool used to tighten the ring onto the valve.

The same tool is used if the TRV head needs to be removed in the future.

Robust anti-vandal casing



This is designed to protect the Belmont TRV from deliberate damage, theft or interference with the chosen temperature setting. The pack comprises a transparent plastic upper casing which fits over the head, 2 lower casings with threaded inserts and 2 x TORX screws. A TORX TX10 screwdriver is required to fit it.

1. **The Belmont TRV head should be securely tightened onto the valve body before the anti-vandal casing is fitted.**



2. **The anti-vandal casing should be placed over the TRV head.**



3. **One of the lower casings is fitted below the upper casing. The lugs on the lower casing should engage with one set of the slots on the upper casing. The lower casing will fit snugly below the TRV's thermal ring.**



4. **The second lower casing is fitted to the free half of the upper casing so that the lugs also engage with the remaining slots in the upper casing.**



5. **The screws provided are used to connect the upper and lower casings by engaging them into the brass threaded inserts in the lower casings.**
6. **When correctly installed, the anti-vandal casing should spin freely around the valve head and thermal ring.**

Robust high security ring



This is designed to protect the thermal ring on the Belmont TRV from deliberate interference, preventing the theft of the valve head. The pack comprises 2 high security half rings with threaded inserts and 2 x TORX screws. A TORX TX10 screwdriver is required to fit it.

1. **The Belmont TRV head should be securely tightened onto the valve body before the high security ring is fitted.**



2. **One of the high security half rings is fitted around the TRV's thermal ring, with the pointed edge at the top.**

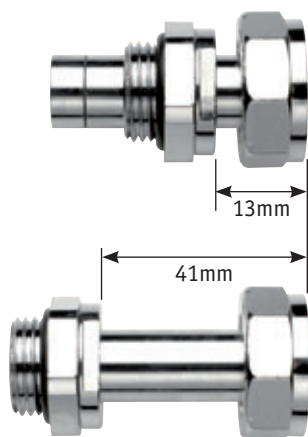


3. **The second high security half ring is fitted to the free half around the TRV's thermal ring so that the two halves fit together.**

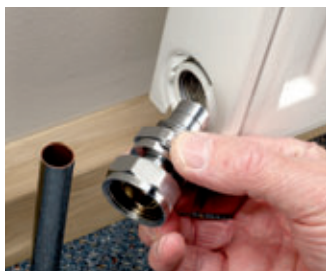


4. **The screws provided are used to connect the two halves together by engaging them into the brass threaded inserts in each half.**
5. **When correctly installed, the high security ring should spin freely around the thermal ring.**

Telescopic tailpiece



This 15mm accessory is designed to provide greater installation flexibility for both new and replacement installations where it enables a Belmont valve to be used to replace an old valve with different dimensions without having to change the pipework.



2. The tailpiece is screwed by hand into the radiator.



2. The new radiator valve is attached to the pipe work and the tailpiece extended and connected to the valve.



2. The tailpiece is tightened into the radiator.

Remote adjusting thermostatic heads

The Belmont range includes a choice of remote adjusting heads. These are especially suited to low surface temperature radiators and can also be positioned away from the radiator when using the sensing head behind a permanent fixture. The remote adjusters can be positioned up to 8 metres from the sensor.



The gland removal tool

This high quality, purpose-designed tool enables a valve insert to be replaced without draining the system.

Where to use the insert fitting tool

Where it has been decided that the thermostatic insert needs to be removed, this can be carried out utilising the insert removal tool. This operation can be undertaken without draining the system,

saving time and expense as any inhibitor held within the system is not lost.

Size range

The Belmont insert fitting tool is supplied in one size which fits all valves.



1. Remove the thermostatic head from the valve body and retain for later use. Next, slightly loosen the valve insert with a 19mm box spanner and screw the fitting tool onto the valve body. Ensure the green drain tap is closed at this point.



2. Open the T handled ball valve and push the fitting tool spindle in, engaging it positively on the valve insert. Turn the assembly tool handwheel anti-clockwise until the valve insert has been removed from the body, and then slowly withdraw it as far as it will go. Close the T handled ball valve.

3. Open the green drain tap remembering to catch any waste water.



4. Unscrew the spindle on the fitting tool, remove the old valve insert and replace it with the new one. Assemble the new insert into the valve body by reversing the removal procedure.

5. After completion drain and remove the fitting tool and firmly tighten the valve insert with a 19mm box spanner. Replace the thermostatic head and set to the desired position.

Pegler

Belmont commercial radiator valves

Technical data -

Connect and control

Terrier

The **Terrier i-temp** is a revolutionary radiator thermostat that controls both time and temperature per individual radiator, with the unique ability to pre-programme at 6 different set points. It also features built-in temperature limit and lock-down modes and, for added security, options include anti-theft devices. Intelligent technology that reduces fuel costs and CO₂ in a cost-effective way.



Pegler

Belmont Thermostatic Radiator Valves - a comprehensive range with high integrity, reliability and quality. A well-known specified product for many years, Belmont offers the technical performance to suit every commercial application. Features include pre-setting radiator valves, removable glands which eliminate the need for a mass drain down and the high flexibility of telescopic radiator tails for retrofitting.



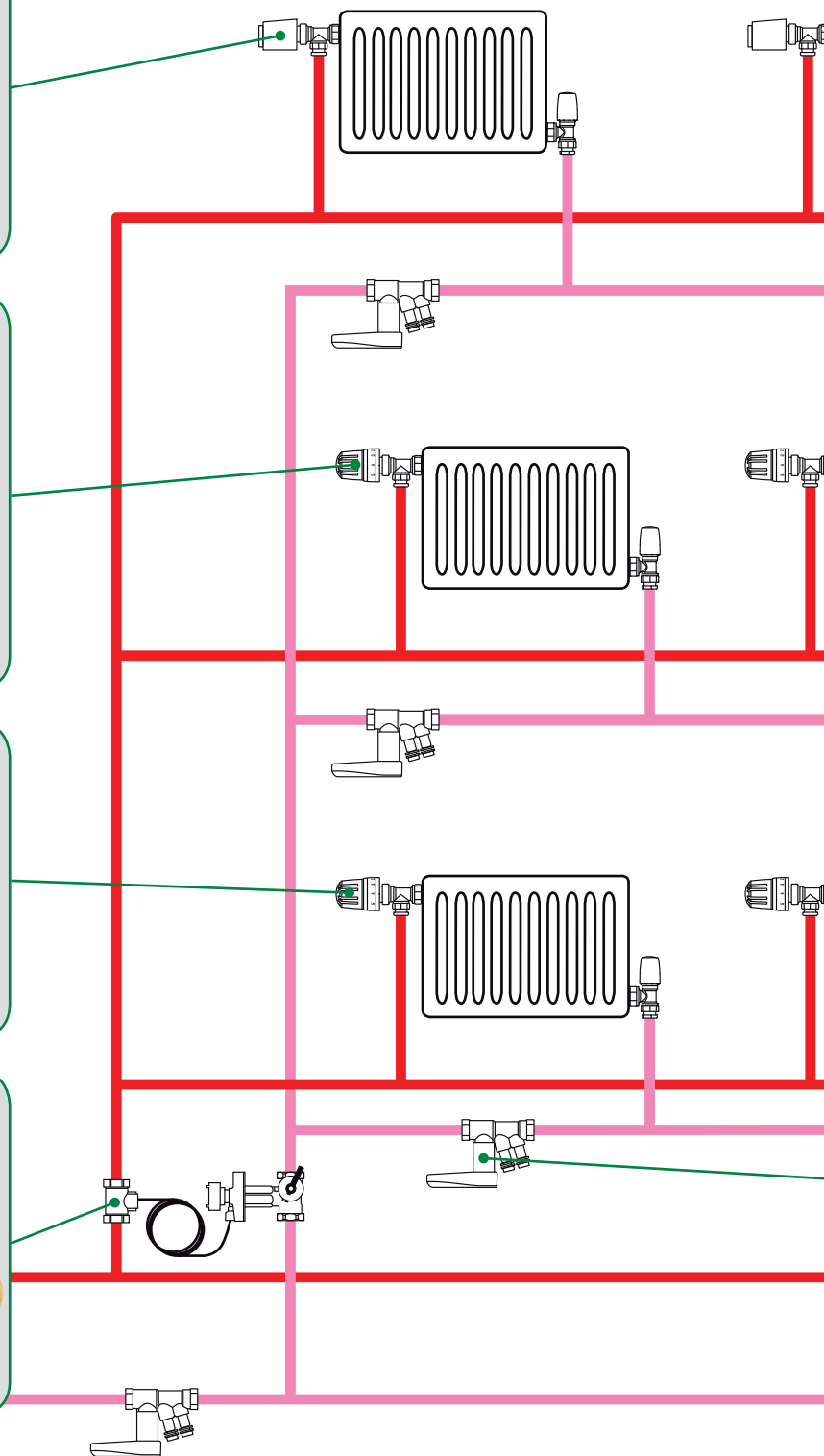
Pegler

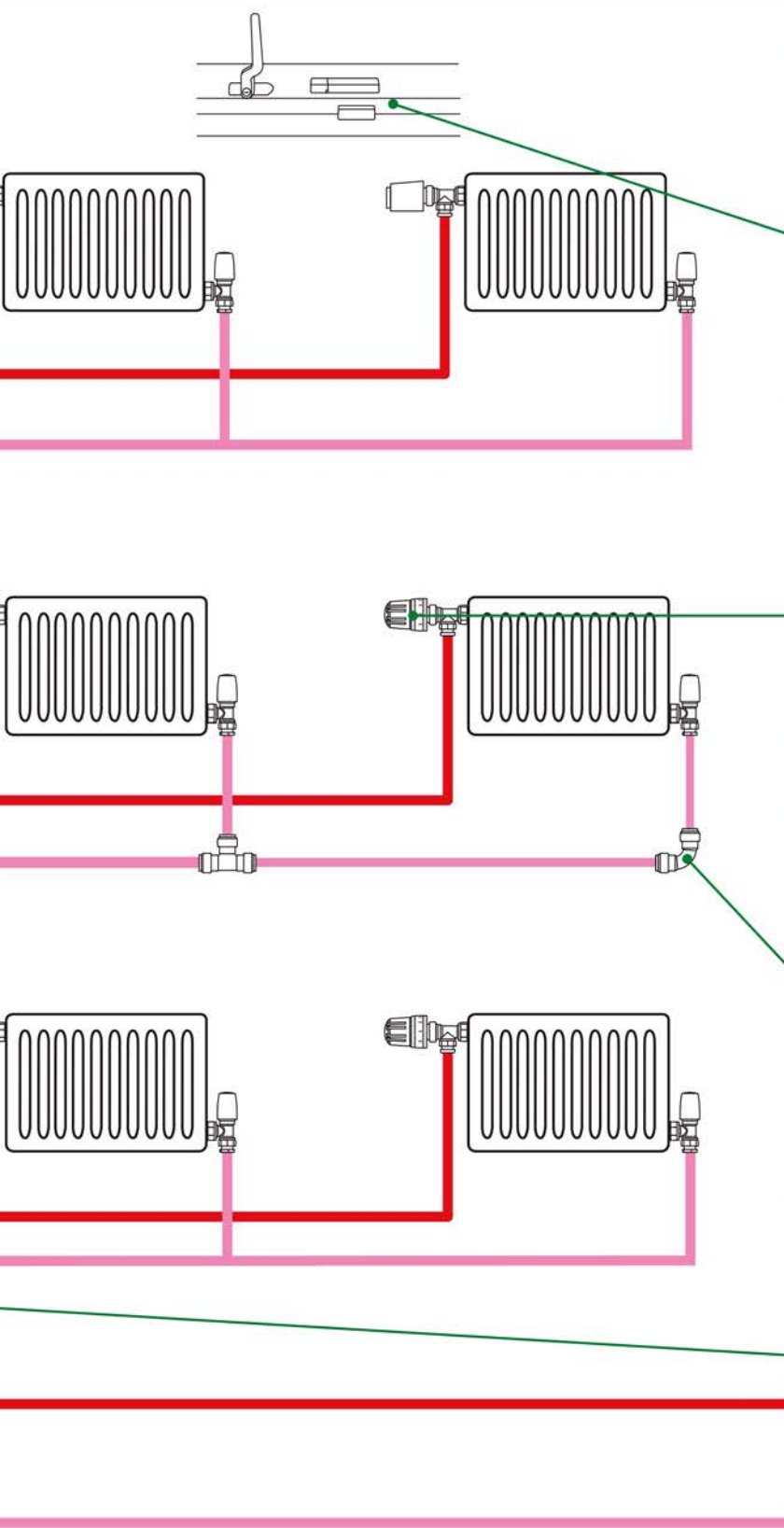
Belmont continuing innovation now comes complete with **Tectite push-fit** precision technology. A truly reliable connection with the huge benefit of speed, saving on laborious installation times. Speed is now a vital asset when competing to secure projects.



Pegler

Pegler Ballorex DP can be used in all hydronic heating and cooling systems where a constant differential pressure is required for a specific section of a system. Pegler Ballorex DP eliminates noise nuisance caused by high differential pressure across radiator thermostats, 2 port control valves and other components in the system.





Terrier

The **Terrier i-temp** has built-in communication technology that allows products such as window sensors to be "taught in". The sensor signals to the i-temp to reduce the temperature setting, immediately stopping heat wastage. A simple and discreet sensor that compensates for our heat wastage habits, especially in commercial environments.



Pegler

Belmont is providing even further security features with innovative anti-theft and vandal-proof devices which ensure that maintenance doesn't become an important issue by preventing misuse or expensive repair costs.



Tectite

Tectite Carbon is an innovative push-fit system that will revolutionise your approach to vented and unvented closed circuit heating and chilled water installations. It combines uniquely the benefits of faster installation, ease of use, high performance and proven reliability.



Pegler

Pegler Ballorex Venturi is a range of static commissioning valves used for the balancing of water-based heating and cooling systems to ensure an evenly distributed flow in individual risers and terminal units. Applications are typically central, district heating or cooling systems, as well as fan coil units, in multi-story and high rise buildings.

Pegler

Belmont commercial radiator valves

Notes





Pegler

BELMONT COMMERCIAL VALVES

eControl

Tectite

XPress

Henco

Terrier

Meibes

Ballorex

Pegler

Prestex

Yorkshire

Endex

Kuterlite



PEGLER 
Valve technology

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