

CONNECT + CONTROL



Pegler Yorkshire



ANTI-SCALD THERMOSTATIC MIXING VALVES

PUTTING YOU IN CONTROL

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PUTTING YOU IN CONTROL

Diverse industry expertise combined with cutting-edge technological innovation mean Pegler Yorkshire's Control solutions help you overcome unique challenges and meet the highest standards in both performance and system aesthetics.

PERFORMANCE WITH PRECISION

Pegler Yorkshire's **Control** products enable you to balance precision flow control, energy efficiency and comfort through innovative products and systems that ensure building performance criteria are met and the resulting installation is easy, efficient and economical to operate.

Our comprehensive **Terrier**, **Meibes** and **Ballorex** product ranges offer proven energy saving solutions, exceptional accuracy and optimised system performance - so, whatever your project or challenge, you can be sure you'll always be in control.

GLOBAL EXPERIENCE, COMBINED EXPERTISE

With over 100 years of manufacturing and innovation combined with extensive industry knowledge and worldwide market experience, Pegler Yorkshire offers the most advanced and complete **Connect & Control** systems on a global scale.

As one of Britain's largest and most respected manufacturers and suppliers of products for the plumbing and heating industries, Pegler Yorkshire is confident we can provide you with all the connection, control and support your project needs.

For more information visit
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Pegler Yorkshire is pleased to be associated with several influential industry organisations:



Brass

The Brass Page for specifiers, designers, engineers and manufacturers



British Electrotechnical Allied Manufacturers Association



Construction Products Association



The Copper Development Association



Scottish and Northern Ireland Plumbing Employers Federation



Builders Merchants Federation



Institute of Plumbing



The UK District Energy Association



The Chartered Institution of Building Services Engineers



INTRODUCTION

Choosing the best possible solution for the job is critical where the issue concerned is as important as helping to prevent scalding.

Offering full compliance with all Regulations and Best Practice, the comprehensive Pegler range of anti-scald Thermostatic Mixing Valves (TMVs) combines high quality manufacture and top-of-the-range performance with remarkable ease of installation and servicing. Pegler anti-scald TMVs are the ideal choice for eliminating the risk of scalding in healthcare, public and educational buildings, commercial and domestic projects. They are WRAS approved as suitable for sinks, wash basins, baths, bidets, single point showers, hair wash sprays and domestic hot water systems.

Independently tested and approved to BuildCert TMV3 and TMV2 schemes gives added security when specifying.



FEATURES

- ✚ Simplicity of installation and servicing
- ✚ Sensibly priced to offer best value
- ✚ BuildCert TMV3 and TMV2 scheme third party approvals in one model
- ✚ Compliant with NHS Model Engineering Specification DO8
- ✚ Choice of standard, easy to service union connections or 90° angle valve combination
- ✚ Factory pre-set but easy to adjust to suit site conditions
- ✚ Complete with internal strainers and non-return valves
- ✚ Laser-etched bar code on body (below) provides unique record of product traceability



- ✚ Inlets and outlets protected by plastic caps to prevent contamination of the element and the valve lubricant
- ✚ Screw-fixed, tamper-proof cap to prevent unauthorised adjustment of the valve temperature setting
- ✚ Each carton is security sealed to avoid stock contamination and provide better audit control
- ✚ Chrome finish for easy cleaning
- ✚ Meets requirements of Building Regulations amendment April 2010, Part G, Section G3



PRODUCT OVERVIEW

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PEG402 / PEG402UA / PEG402UAX ANTI-SCALD THERMOSTATIC MIXING VALVES

Pegler anti-scald mixing valves are designed to eliminate the risk of scalding and are suitable for use in a wide range of public, health care, social, commercial and domestic applications.

FEATURES

- + Suitable for sinks, wash basins, bath, bidets, single point showers, hair wash sprays and domestic hot water systems
- + Simple to install and service
- + Temperature pre-set to 43°C, but easily adjustable on site
- + WRAS approved for a wide variety of uses
- + Complies with NHS Model Engineering Specification DO8
- + Choice of standard, easy to service union connections or 90° angle valve combination
- + 15mm and 22mm sizes.





STANDARDS AND APPROVALS

It's Pegler Yorkshire's 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.

APPROVALS



These products have been certified by WRAS and are audited periodically.



BEAMA WASH is a representative trade body for UK companies within European standards activities. It plays a key part in promoting the safety of hot water systems. As part of the BEAMA WASH membership we offer a comprehensive range of thermostatic products approved under the BuildCert scheme.



BUILD CERT SCHEME

- ✚ Independent third party testing and approval scheme.



BUILD CERT TMV3 SCHEME

- ✚ Certifies Type 3 Thermostatic Mixing Valves manufactured to meet the highest specification required by the NHS Estates DO8 standard for Mixing Valves within healthcare premises in the United Kingdom.
- ✚ Complies with BS7942.



BUILD CERT TMV2 SCHEME

- ✚ Certifies Type 2 Thermostatic Mixing Valves for the domestic market. For use in hot water systems in domestic premises.
- ✚ Complies with EN 1111 : 1999 and EN 1287 : 1999.
- ✚ Part G Section G3 of the Building Regulations 2000 amended April 2010 now makes the fitting of these valves mandatory in New Build properties for bath fill applications.



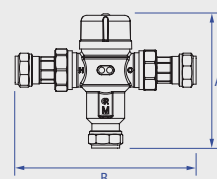
FEATURES

- ✚ Anti-scald mixing valves are designed to eliminate the risk of scalding and are suitable for use in a wide range of applications

ANTI-SCALD THERMOSTATIC MIXING VALVES

PEG402 Thermostatic mixing valves*

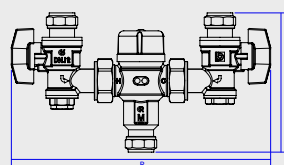
All ends with Prestex compression ends.
Copper x copper.



Size	Finish	a	b	Code
15mm	Chrome plate	94	127	5A1401
22mm	Chrome plate	96	145	5A1402

PEG402UA Thermostatic mixing valves*

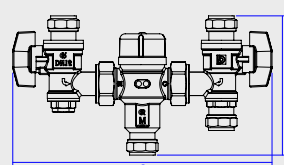
All ends with Prestex compression ends.
Copper x copper. With angle valves.



Size	Finish	a	b	Code
15mm	Chrome plate	94	210	5A1403
22mm	Chrome plate	96	247	5A1404

PEG402UAX Thermostatic mixing valves*

All ends with Prestex compression ends with angle valves
and 'cold' through connection.



Size	Finish	a	b	Code
15mm	Chrome plate	94	210	5A1405
22mm	Chrome plate	96	247	5A1406



TECHNICAL DATA

PEGLER PEG402 TMV3 APPLICATIONS:

GENERAL SPECIFICATION		
	PEG402	PEG402UA/PEG402UAX
Materials	DZR Brass	DZR Brass
Surface finish	Chrome plated	Chrome plated
Water connections 15mm & 22mm	Compression all ends Wafer strainers Single non-return valves on inlets	Compression all ends 90° angle valves with: Single non-return valves Mesh strainer Test point plugs Isolating valves UAX includes add 'cold' outlet

TECHNICAL SPECIFICATION		
PEG402/PEG402UA/PEG402UAX	GENERAL OPERATING PARAMETERS	TMV3 APPROVED PARAMETERS
Minimum mixed temperature	30°C	38°C
Maximum mixed temperature	50°C	46°C
Maximum temperature deviation	+/- 2°C	+/- 2°C
Maximum hot inlet temperature	85°C	65°C
Maximum hot/cold cold/hot inlet pressure ratio	5 to 1	N/A
Maximum static pressure	12 bar	10 bar
Minimum dynamic flow pressure	0.1 bar	0.2 bar
Minimum hot inlet to mixed outlet temperature differential	10°C	10°C
Flow with 0.2 bar differential pressure loss	9.0L/M	9.0L/M
Flow 1.0 bar differential pressure loss	18L/M	18L/M

APPROVALS				
PEG402, PEG402UA & PEG402UAX HAVE BEEN APPROVED FOR THE FOLLOWING USES:				
CODE	OPERATING RANGE	SIZE	APPLICATION	MAX TEMP
HP-B	High pressure	15mm, 22mm	Bidet	38°C
HP-S	High pressure	15mm, 22mm	Shower	41°C
HP-W	High pressure	15mm, 22mm	Washbasin	41°C
HP-T44	High pressure	22mm	Bath	44°C
HP-T46	High pressure	22mm	Bath	46°C (assisted)
LP-B	Low pressure	15mm, 22mm	Bidet	38°C
LP-S	Low pressure	15mm, 22mm	Shower	41°C
LP-W	Low pressure	15mm, 22mm	Washbasin	41°C

INSTALLATION CONDITIONS		
UNDER THE TERMS OF THE BUILD CERT TMV3 SCHEME THE VALVE MUST BE INSTALLED UNDER THE FOLLOWING CONDITIONS:		
OPERATING PRESSURE RANGE	LOW PRESSURE	HIGH PRESSURE
Maximum static pressure (bar)	10	10
Flow pressure, hot and cold (bar)	0.2 - 1	1-5
Hot supply temperature (°C)	52 - 65	52 - 65
Cold supply temperature (°C)	5 - 20	5 - 20



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PEGLER PEG402 TMV2 APPLICATIONS:

TECHNICAL SPECIFICATION

PEG402/PEG402UA/PEG402UAX	BS EN 1287 : 1999	BS EN 1111 : 1999
Maximum static pressure (bar)	10.0	10.0
Supply pressure hot and cold (bar)	0.1 - 1.0	1.0 - 5.0
Hot supply (°C)	55 - 65	55 - 65
Cold supply (°C)	Maximum 25	Maximum 25
Mixed water temperature	Maximum 46	Maximum 46

APPROVALS

PEG402, PEG402UA & PEG402UAX HAVE BEEN APPROVED FOR THE FOLLOWING USES:

PEG402, PEG402UA & PEG402UAX	BS EN 1287 : 1999 LOW PRESSURE 0.1 - 1 BAR		BS EN 1111 : 1999 HIGH PRESSURE 1 - 5 BAR	
	15mm	22mm	15mm	22mm
Bidet	✗	✓	✓	✓
Shower	✗	✓	✓	✓
Washbasin	✗	✓	✓	✓
Tub	✗	✗	✓	✓
Bath fill (ISO46 Cold Isolation Test at 46°C)	✗	✗	✓	✓

INSTALLATION CONDITIONS

UNDER THE TERMS OF THE BUILD CERT TMV2 SCHEME THE VALVE MUST BE INSTALLED UNDER THE FOLLOWING CONDITIONS:

OPERATING PRESSURE RANGE	LOW PRESSURE	HIGH PRESSURE
Maximum static pressure (bar)	10	10
Flow pressure, hot and cold (bar)	0.1 - 1	1-5
Hot supply temperature (°C)	55 - 65	55 - 65
Cold supply temperature (°C)	≤ 25	≤ 25

The temperature differential for PEGLER MIXING VALVE must be 10°C

These products are certified under the BuildCert TMV3 and TMV2 schemes and have been independently tested by an approved testing laboratory WRC-NSF and is a Water Regulations Advisory Scheme (WRAS) approved product and listed in the Water Fittings and Materials Directory.



TECHNICAL DATA



PRESSURES

Pressure at the valve inlets must be within the 5:1 ratio under flow conditions. The size and layout of pipework and anti-scald fittings must take this into consideration. Optimum performance is achieved with equal pressure.

- ✚ Minimum Working Pressure 0,1 bar
- ✚ Maximum Working Pressure 5 bar
- ✚ Maximum Static Pressure 10 bar
- ✚ Minimum Flow Rate 5 L/min

See FIG 01 for conditions of normal use.

WATER REGULATIONS

MIXING VALVES must be installed in accordance with local Water Authority Water Regulations (Water Supply (Water Fittings) Regulations 1999). Your attention is therefore drawn to any installation requirements which may be applicable.

This product is fitted with a WRAS approved listed single check valve cartridge for both the hot and cold supplies to the valve. If supplying a submerged outlet additional protection will be required.

Isolating valves must be installed on the hot and cold connectors.

Strainers must be installed on the hot and cold inlet connections as provided.



ADJUSTMENT AND COMMISSIONING

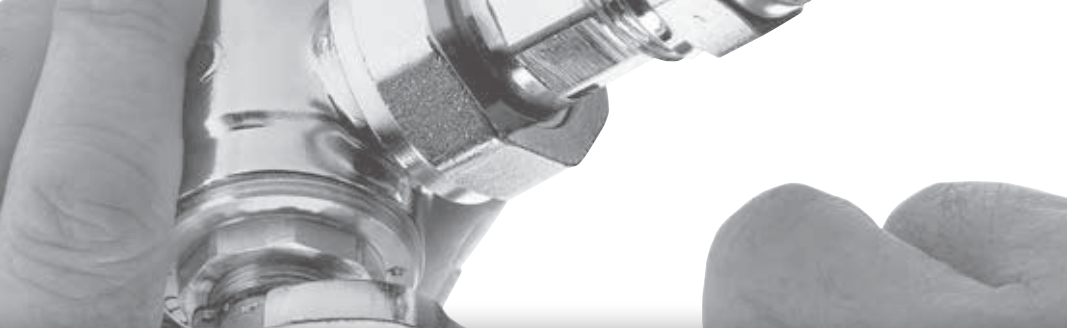
The thermostatic controller is supplied factory pre-set at 43°C. However, installation conditions will dictate that the product be adjusted on site. To adjust the temperature supply remove the plastic cap on top of the valve and adjust with a close fitting spanner.

- ✚ To increase the temperature turn anti-clockwise
- ✚ To decrease the temperature turn clockwise
- ✚ To set the valve to a maximum recommended mixed water temperature, see table below.

APPLICATION	MIXED WATER TEMPERATURE °C
Shower	41°C
Washbasin	41°C
Bidet	38°C
Bath	44°C

The temperatures and pressures must be stabilised and checked before commissioning (allow mixed water to flow for 1 minute prior final setting). All parameters must be in accordance with TABLE 1 above.

Note: After adjustment replace the cap to prevent tampering. This valve must not be used to mix water above a temperature of 46°C. **Hot water can burn and it is strongly recommended that both comfort and safety levels are considered when selecting a set temperature.**

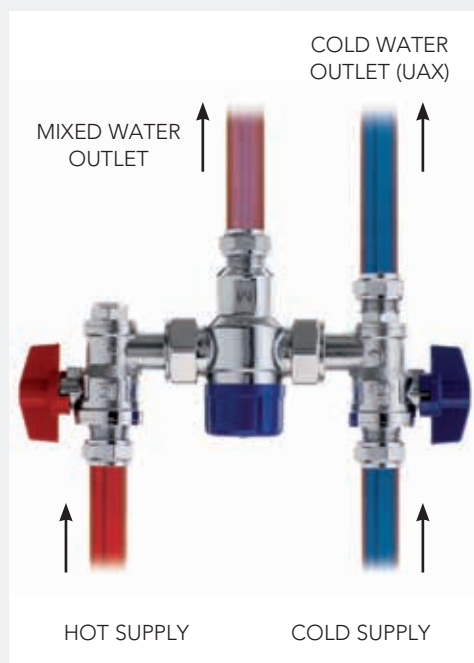


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INSTALLATION

Pegler anti-scald thermostatic mixing valves are fitted with internal strainers but where debris is a particular problem we recommend the fitting of serviceable external strainers. They can be fitted in any orientation provided the hot and cold supplies are connected as marked on the valve body (C = cold supply - blue, H = hot supply - red).

The Pegler TMV range is supplied with compression connections for copper tube. Thermostatic mixing valves are temperature sensitive devices and must not be subjected to extreme temperatures, either hot or cold, in use or installation.



Note: We would recommend the fitting of full bore servicing valves on the inlet supplies to aid any future isolation requirements. To ensure proper performance of the mixing valves, they should always be fully open during operation. Isolation valves should be installed as close as practicable to the mixing valve inlets. The UA & UAX versions are supplied complete with both strainers and full bore isolating valves.

IN-SERVICE TESTING

The purpose of in-service tests is to regularly monitor and record the performance of the thermostatic mixing valve. Deterioration in performance can indicate the need for service work on the valve and/or the water supplies.

The normal service frequency is one year for TMV2 valves but site conditions may mean that the service checks should be undertaken more frequently. It is recommended that the service procedure in the NHS Document DO8 is followed for all TMV3 approved valves. Maximum continuous temperatures during testing should not exceed the following values:

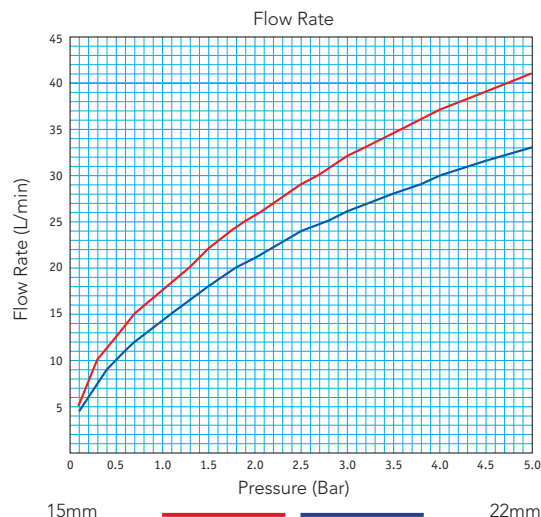
- + Bidet 40°C
- + Shower 43°C
- + Washbasin 43°C
- + Bath 44°C
- + Bath 46°C (for assisted bathing)

If it is found to be impossible to obtain the correct setting point a service is required. Pegler anti-scald thermostatic mixing valves should not normally require part replacement. However, a full range of spares is available on request and is detailed in the fitting instructions included with each product.

MAINTENANCE

Since the installed supply conditions are likely to be different from those applied in the laboratory tests, it is appropriate, at commissioning, to carry out some simple checks and tests on each mixing valve to provide a performance reference point for future in-service tests. For further information on service tests and maintenance refer to the installation instructions.

FIG 01
PEG402,
PEG402UA
& PEG402UAX
TMV3/2
ANTI-SCALD
MIXING VALVES





TECHNICAL DATA

PRODUCT SELECTION CRITERIA

ENVIRONMENT	APPLIANCE	IS A TMV REQUIRED BY LEGISLATION OR AUTHORITATIVE GUIDANCE?	IS A TMV RECOMMENDED BY LEGISLATION OR AUTHORITATIVE GUIDANCE?	IS A TMV SUGGESTED BEST PRACTICE?	VALVE TYPE	REFERENCE DOCUMENTS
Private dwelling	Bath Basin Shower	Yes		Yes Yes	TMV2* TMV2 TMV2	Building Regulations 2010 Edition, Section G3
Housing association dwelling	Bath Basin Shower		Yes	Yes Yes	TMV2 TMV2 TMV2	Housing Corp Standard (1.2.1.33a)
Housing association dwelling for the elderly	Bath Basin Shower	Yes Yes Yes			TMV2 TMV2 TMV2	Housing Corp Standard (1.2.1.58 and 1.2.1.59)
Hotel	Bath Basin Shower			Yes Yes Yes	TMV2 TMV2 TMV2	Guidance to the Water Regulations (G18.5)
NHS nursing home	Bath Basin Shower		Yes Yes Yes		TMV3 TMV3 TMV3	NHS Health Guidance Note, Care Standards Act 2000, Care Homes Regulation 2001, DO8
Private nursing home	Bath Basin Shower		Yes Yes Yes		TMV3 TMV3 TMV3	Guidance to the Water Regulations (G18.6), Care Standards Act 2000, Care Homes Regulations 2001, HSE Care Homes Guidance
Young persons' care home	Bath Basin Shower	Yes Yes Yes			TMV3 TMV3 TMV3	DoH National Minimum Standards Children's Homes Regulations, Care Standards Act 2000, Care Homes Regulations 2001, HSE Care Homes Guidance
Schools, including nursery	Bath Shower Bath	Yes Yes, but 43°C max	Yes		TMV2 TMV2 TMV2	Building Bulletin 87, 2nd Edition, The School Premises Regulations/National Minimum Care Standards section 25.8
Schools for the severely disabled including nursery	Bath Shower Bath	Yes Yes, but 43°C max	Yes		TMV3 TMV3 TMV3	Building Bulletin 87, 2nd Edition, The School Premises Regulations if residential, Care Standards Act
NHS hospital	Bath Basin Shower	Yes Yes Yes			TMV3 TMV3 TMV3	NHS Health Guidance Note, DO8
Private hospital	Bath Basin Shower		Yes Yes Yes		TMV3 TMV3 TMV3	Guidance to the Water Regulations (G18.6)

*TMV2: This BuildCert Scheme is not referenced in the amended Building Regulations. This independent third party approval scheme ensures that products must meet the BS EN 1111 and BS EN 1287 standards that are quoted in the amended Building Regulations.



HOUSING CORP STANDARD

Housing Corporation, Scheme Development Standards, 5th Edition, Housing Corporation 2003.

DO8

Model engineering specifications DO8
Thermostatic mixing valves (healthcare premises), NHS Estates, 1997.

BUILDING BULLETIN 87 2nd EDITION

School Building and Design Unit Department for Education and Skills. Building Bulletin 87 2nd edition, Guidelines for environmental design in schools. DfES 2003, London.

GUIDANCE TO THE WATER REGULATIONS

Department for Environment, Food & Rural Affairs, Water Supply (Water Supply (Water Fittings) Regulations 1999) Guidance Document relating to Schedule 1: Fluid Categories and Schedule 2: Requirements for Water Fittings. DEFRA 1999, London.

DoH NATIONAL MINIMUM STANDARDS CHILDREN'S HOMES REGULATIONS

Department of Health, National Minimum Standards Children's Homes Regulations.

NATIONAL MINIMUM CARE STANDARDS SECTION 25.8

NHS HEALTH GUIDANCE NOTE

National Health Service Guidance note,
Safe hot water and surface temperatures.

HSE CARE HOMES GUIDANCE

Health and Safety Executive, Health and Safety in care homes, HSG 220, HSE 2001.

CARE STANDARDS ACT 2000

CARE HOMES REGULATIONS 2001

CHILDREN'S HOMES REGULATIONS 2001

THE BUILDING REGULATIONS 2000

Sanitation, hot water safety and water efficiency. Approved Document G 2010 Edition, Section G3.



OTHER PRODUCTS

OPTIFLUSH URINAL FLUSH CONTROLLERS

FEATURES

- ✚ Reduces water usage by as much as 80%
- ✚ Battery or mains operated
- ✚ Suitable from 0.05 bar to 12 bar
- ✚ Flushes automatically every 12 hours
- ✚ Easy installation



PEGLER PB300 FULL BORE QUARTER TURN BALL VALVES

FEATURES

- ✚ 15mm – 28mm sizes
- ✚ All sizes rated PN16
- ✚ Blow out and vandal-proof assembly
- ✚ P.T.F.E. (Teflon) ball seals
- ✚ Viton 'O' ring seals
- ✚ Prestex compression ends to EN 1254/2
- ✚ Red 'T' handle as standard with optional blue 'T' handle for cold water applications





CONNECT + CONTROL

TECTITE PT5 PRV PRESSURE REDUCING VALVE

FEATURES

- + 15mm Tectite push-fit ends
- + DZR body
- + Drop tight seal
- + Compact easy set design
- + 0-25 bar inlet pressure range
- + Single gauge connection points
- + Complete with gauge

WRAS
APPROVED
PRODUCT



TECTITE TX802

FEATURES

- + 15mm and 22mm Tectite push-fit ends
- + Double check valve with compression ends
- + to EN 1254/2
- + Anti pollution valve including double check valve cartridge
- + Family E Type D
- + 15mm, 15mm CP, 22mm and 28mm sizes
- + DZR brass body
- + WRAS approved

WRAS
APPROVED
PRODUCT





Pegler Yorkshire

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CONNECT  CONTROL

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