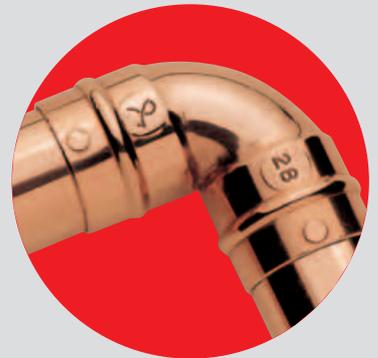
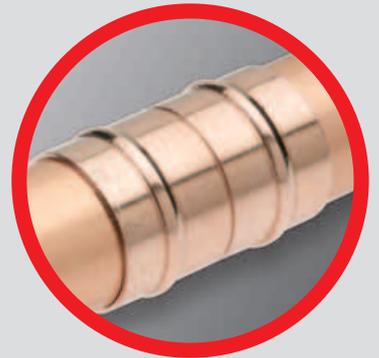
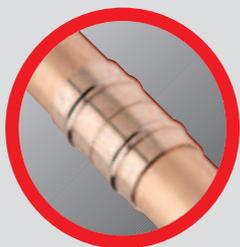


# *Yorkshire*

Integral Solder Ring Fittings



**Yorkshire**



# The principle of the Yorkshire fitting

## CONTENTS

A comprehensive subject index incorporating page and paragraph numbers can be found on page 15 of this databook. Quick-find reference points are as follows:

### Standards

PAGE 06

### Tube compatibility

PAGE 07

### Working temperatures and pressures

PAGE 08

### Specification clauses

PAGE 09

### Installation

PAGE 10 - 13

### Design considerations

PAGE 14

### Subject index

PAGE 15

**d** At Yorkshire we are constantly striving to develop jointing solutions that meet the changing needs of specifiers and installers alike. The Yorkshire Potable suite of integral solder ring capillary fittings has the solid reputation of an established product range, and suits a broad spectrum of applications in the domestic, commercial and industrial sectors.

## The principle of the Yorkshire integral solder ring joint

**e** During the manufacture of these precision-made fittings, a ring of high quality lead-free solder is positioned in each capillary socket. When heat is applied, the solder is released into the gap between the tube and the fitting, resulting in a totally sound joint without the need to end feed additional solder.

## Advantages of Yorkshire

**f** The major advantage of the Yorkshire integral solder ring fitting is that the installer requires no additional solder. This removes any expensive solder waste and the need to estimate the quantity required for a secure, reliable joint. Once heated, the appearance of a complete ring of solder around the mouth of the socket makes it clearly apparent that the joint has been made.

**g** The range is light and neat, with compact dimensions that are ideal for making use of limited space in ducts and other restricted areas. Providing that cleaning and fluxing is properly carried out, Yorkshire integral solder ring fittings can often be installed in locations inaccessible to other fitting types. In addition, the fittings' smooth lines minimise flow restrictions and are unobtrusive on exposed pipelines.

**h** Yorkshire integral solder ring fittings are manufactured from three different types of material – copper, gunmetal or a dezincification resistant alloy (DZR).

**i** The product range is versatile, and results in a visually pleasing finish. Where both functionality and maximum aesthetic appeal are required, for example in bathrooms, a commercial chrome plate finish can be specified. In addition, a polished quality chrome plate finish can be manufactured to special order.

**j** Users of Yorkshire integral solder ring fittings can be confident that they are purchasing an established product with a proven reputation for reliability and quality which spans more than seventy years. As a market leading company, Yorkshire was the first to incorporate lead-free solder into integral solder ring fittings as standard in 1985. All products across the Yorkshire Potable range are clearly branded with the  imprint so users have a visible assurance that no lead is present in the solder of a Yorkshire installation and that fittings comply with the requirements of The Water Supply (Water Fittings) Regulations/Byelaws (Scotland).

## Presenting the range

**k** The Yorkshire integral solder ring range comprises over 900 different items. In addition to standard line fittings, the range includes an extensive selection of heating components, valves and accessories. Specific products, such as general high duty and wedge ring, have been developed for commercial, industrial and engineering applications.



**l** The Yorkshire general range of integral solder ring fittings is manufactured from copper or copper alloy. Available in sizes from 6mm to 67mm, fittings are designed for jointing copper tubes to BS EN 1057 (R220, R250, R290) in hot and cold

## MARKINGS



**a** **THE YP IMPRINT**  
The YP imprint provides visible assurance of a genuine Yorkshire Potable fitting, and that the solder is lead-free.



**b** **UNIVERSAL MARKING**  
All Yorkshire potable fittings manufactured from DZR alloy carry the distinctive CR mark.



**c** **GUNMETAL**  
Some Yorkshire integral solder ring fittings and valves are manufactured from gunmetal, and can be identified by the GM mark on the body.

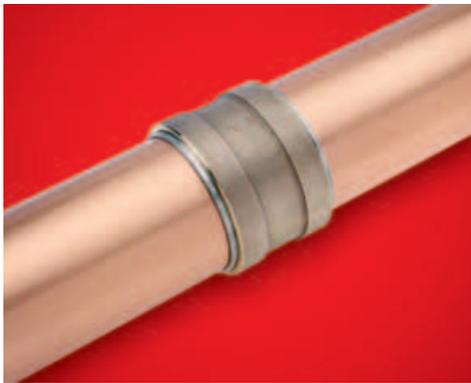


# Introducing the Yorkshire range



water services, in small bore and minibore central heating systems, and in low pressure steam heating and pressurised unvented heating systems. In addition, they can be used in chilled water applications, sanitation services, compressed air lines, gas distribution systems, and engineering pipeline services that convey liquids, oils, air and gases at temperatures up to 110°C. Fittings each contain a precise amount of lead-free solder for a perfect joint every time.

## Yorkshire wedge ring fittings



- a Manufactured from gunmetal or other dezincification resistant alloy, wedge ring fittings are designed for jointing copper tubes to BS EN 1057.
- b Yorkshire wedge ring fittings are manufactured with tapered sockets to ensure that the correct capillary conditions for soft soldering can be created. The annular space between the socket wall and the parallel tube is occupied by the pre-tinned wedge ring, pushed into place by the special assembly jig. The wedge ring enables the correct soldering tolerances to be achieved.
- c The range of standard patterns includes flanges, and is ideal for jointing copper pipelines in potable water services, water heating, sanitation and many engineering applications.



- d The Yorkshire General High Duty (GHD) range of capillary fittings is specially designed for jointing copper and copper alloy tubes that need to operate at higher temperatures or pressures than are permissible with soft solder joints. The range, available in sizes from 6mm to 54mm, is manufactured from gunmetal and contains an integral cadmium-free silver brazing alloy, complying with the compositional requirements of BS EN 1044 alloy Ag103 (formerly BS 1845 alloy Ag14).
- e The GHD range should be used for high temperature heating services such as steam and condensate pipelines. The range is also suitable for use in air conditioning services, vacuum, refrigeration and cryogenic applications; vehicle braking systems; and nitrogen and oxygen gas lines. GHD fittings are available degreased and individually bagged. Additionally, the joint characteristics ensure GHD fittings can be used for hydraulic services where vibration and stresses are exerted, and for specialist services where high temperatures and pressures exist singly or in combination. The heating temperature of 700°C is lower than that required to make a brass brazed joint, thus reducing the risk of overheating the tube and fitting.

## Pipe clips and brackets

- f The Yorkshire range includes a comprehensive selection of pipe clips, stems and brackets for fixing copper tube to a variety of surfaces in sizes from 6mm to 108mm.
- g Saddle bands mount copper tube directly to a surface; and pipe rings, in conjunction with single or two-piece spacing clips, can be used where tubing needs to be mounted away from a surface. Brackets, two-part pipe joint clips and stems provide the installer with additional options for a variety of other installations.

## DURABILITY

- h Yorkshire integral solder ring fittings are made from copper, gunmetal or a dezincification resistant alloy (DZR). Their impermeable nature gives excellent protection against contaminants that can threaten the domestic water supply. In addition, copper and its alloys are recognised as tried and tested plumbing materials on the grounds of corrosion resistance. Properly installed systems can be expected to outlast many of the buildings in which they are installed.

## CHROME PLATE

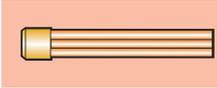


- i The Yorkshire range includes a selection of commercial quality chrome plated fittings and valves. The range is ideal for use where products are on show, for example in kitchens and bathrooms. For maximum aesthetic appeal, Yorkshire fittings are also available with a polished quality chrome plated finish to special order.

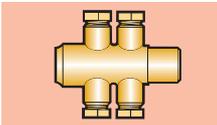
# Heating components and accessories



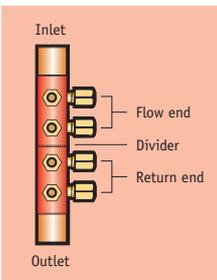
## MANIFOLDS



- a LINEAR FLOW MANIFOLDS**  
The main inlet of the linear flow manifold is connected to the copper tube. Pipework and fittings running from the outlets send the flow out to the radiator(s), and return to a separate linear flow manifold.



- b SIDE ENTRY MANIFOLDS**  
The inlet of the side entry manifold is connected to the copper tube. Pipework and fittings running from the outlets send the flow out to the radiator(s), and return to a separate side entry manifold. Side entry manifolds can be directly connected to one another in various combinations.



- c MICRAFOLD MANIFOLDS**  
The micrafold comprises a flow and a return chamber, separated by a central divider. The outlets on the designated flow end are connected to pipework leading to the valve on the flow end of the radiator(s). Return(s) from the radiator(s) re-enter the manifold via the inlets on the designated return end.

## Heating components

- d** The Yorkshire range incorporates a selection of components specifically for use in domestic and commercial heating systems. All are designed to make installations as quick and economical as possible.
- e** Manifolds enable the main flow and return in a minibore central heating system to be divided into smaller radiator circuits. Unlike more complicated systems, Yorkshire manifolds are supplied as small basic units, which can be coupled together for larger systems. This provides improved system control, a simple layout and keeps circuit resistance low. If required, the heating system can be zoned, with a set of manifolds serving each sector.
- f** The Yorkshire range includes three different types of manifold, all of which are available in 22mm and 28mm sizes, with 8mm and 10mm outlets:
- g** **Linear flow** manifolds have a low flow resistance due to their straight line design. Their copper outlets can be easily connected to the radiator pipework using Yorkshire integral solder ring fittings.
- h** **Side entry** manifolds have an integral solder ring socket at one end, a capillary street end at the other, and compression outlets. Their design allows installers to easily bank together any combination of units.
- i** **Micrafold** manifolds are similar to side entry manifolds, but also incorporate a central divider which gives flow and return in one component.

## Yorkshire waste fittings

- j** Copper, brass and gunmetal integral solder ring waste fittings are available in sizes from 28mm to 54mm for use in standard domestic and commercial waste water systems such as basins, baths, sinks and other sanitary appliances. In addition to line fittings, the range includes shallow and deep seal traps as well as a selection of fittings with rodding eyes to enable inspection and maintenance of the pipework. Bends, tees and crosses have been designed with built in fall, in line with good plumbing practice.

## Accessories

- k** An extensive selection of sundries and accessories complements the Yorkshire range, providing the installer with the means to use Yorkshire integral solder ring fittings most effectively.



- l** Fluxes have been specially developed in three types – Traditional Craftsman's Flux, Yorkshire Flux and Degussa H. Soldering fluxes do not support microbiological growth in potable water supplies, and their residues are non-corrosive. Fluxes prevent oxidation of the copper tube during soldering. This allows the molten solder to "wet" the parent metals, creating a true metallurgical bond. Efficient fluxes also ensure that the maximum strength of the joint can be achieved by aiding the distribution of the solder over the whole jointing service.
- m** **Traditional Craftsman's Flux** will maintain its consistency over a long period of time. It has excellent lubricating properties, which enables close-fitting joints to be readily assembled. It can be used with all types and sizes of soft solder fittings for applications including gas, and is char-resistant to normal heating levels of 250°C.
- n** **Yorkshire Flux**, like Traditional Craftsman's, will maintain its consistency and can be used with all types and sizes of soft solder fittings. However, it must not be used for gas applications.
- o** **Degussa H** ready-mixed paste is for brazing copper and copper alloys, such as Yorkshire General High Duty fittings.
- p** **Yorkshire cleaning pads** are produced from highly abrasive synthetic materials for the effective cleaning of tube ends and fitting sockets prior to fluxing. The pad is not electrically conductive and can be easily washed out with water and reused.
- q** **Yorkshire steel wool**, a more traditional material used for cleaning tubes and fittings, is available in bundles or in pad form.

# Stopvalves, gate valves and plugcocks

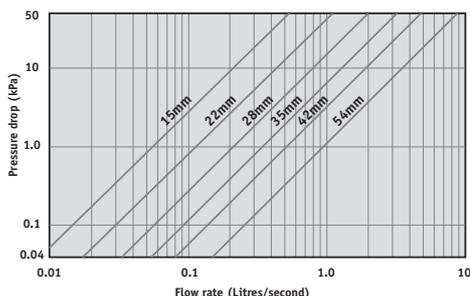


- a **Yorkshire heat resistant mats** are made from woven ceramic fibres, and offer protection to skirtings, paintwork, flooring and decorations from solder splashes and hot flux. Asbestos free, they are useful for conserving heat. Two types are available.
- b A re-rounding tool for R220 copper tube, a tube bender, tube straightener and washers complete the Yorkshire accessories range.

## Yorkshire valves

- c Yorkshire recognises that different service environments place a variety of demands on pipeline systems. With this in mind, a comprehensive selection of valves to suit both domestic and commercial requirements, from central heating and hot and cold water services to oil lines, steam and gas installations, have been developed. Valves have either solder ring or threaded ends, with the former assembled with the same jointing procedure as the Yorkshire integral solder ring fittings.
- d **Stopvalves** are designed for use wherever the flow of hot or cold water services needs to be controlled or regulated.
- e Yorkshire stopvalves are available in sizes from 15mm to 54mm, and are suitable for use with copper tube to BS EN 1057. All have gunmetal bodies, with gunmetal, DZR or duplex brass headworks, and are available with combined draincocks and alternative headworks, including lockshield and easy clean covers. Lockshield stopvalves can be used where operational access needs to be restricted, for instance on exposed pipe runs. Stopvalves with easy clean covers should be used where the stopvalve is highly visible, particularly where hygiene is important. The combined stopvalve and draining tap enables easy isolation with a draining facility. The Yorkshire stopvalve range is available with union ends

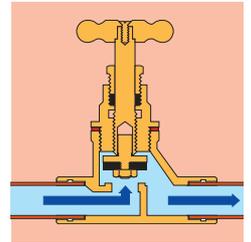
### 1 Pressure drop chart for Yorkshire stopvalves



allowing easy removal of the valve without the need to disturb fixed pipework. All stopvalves have bonded and sealed headworks to provide maximum reliability.

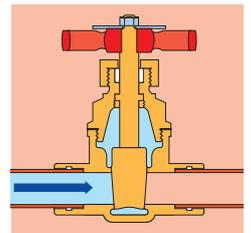
- f **Gate valves** are available in wheelhead and lockshield varieties and are manufactured from corrosion resistant materials including gunmetal. Available in sizes from 15mm to 54mm, the gate valves incorporate high quality PTFE packing, which has hardwearing properties to withstand the effects of harsh service conditions. A precision made wedge positioned at right angles to the flow direction provides the sealing mechanism and the easy regulation of hot or cold water services with minimal flow restriction. Yorkshire gate valves are designed for use with copper tube to BS EN 1057 in hot and cold water services, central heating systems, oil lines, steam installations, compressed air lines and certain chemical supply lines, particularly where a low pressure drop is required.
- g **Plugcocks** are designed for use with copper tube to BS EN 1057 to control the flow of gas in low pressure installations. Manufactured from brass, Yorkshire plugcocks are available in sizes 15mm and 22mm and incorporate an oblong bore. Variants with a drophead are available for use in restricted spaces or for union outlet connections.

## STOPVALVES

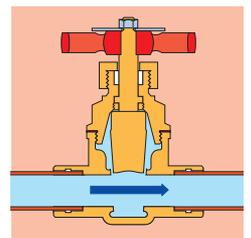


- h **HIGH PERFORMANCE VALVES**  
The stopvalve design incorporates a rubber washer that is screwed down onto a gunmetal seat to provide a seal against mains pressure water.

## GATE VALVES



- i **GATE VALVE**  
In Yorkshire gate valves the primary sealing surfaces are in gunmetal. Flow is controlled by screwing the gate into the valve body.



- j **NON RESTRICTIVE**  
When the valve is fully open the gate moves up into the headwork to leave the flow unhindered.

# Standards and material specifications



## KEYWORD IS QUALITY



FM 27630



- a** **QUALITY SYSTEMS**  
Yorkshire Fittings Ltd is a British Standards Institution registered company.



- b** **EVALUATED BY WRAS**  
The Yorkshire integral solder ring, wedge ring and valves ranges have been certified by WRAS and are audited periodically.



- c** **INTERNATIONAL STANDARDS ORGANISATION**  
International standards are conformed to where appropriate.

## FLUXES

- d** Yorkshire Flux, Traditional Craftsman's Flux and Degussa H are subject to the Control of Substances Hazardous to Health Regulations (COSHH). COSHH sheets are available on our website, [www.yorkshirefittings.co.uk](http://www.yorkshirefittings.co.uk)

## GAS FAMILIES

- e** There are three gas families:
- 1st Family – manufactured gas.
  - 2nd Family – natural gas.
  - 3rd Family – LPG, compressed propane and butane.

- f** We at 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. Yorkshire integral solder ring fittings and valves all 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.

### **g** Yorkshire general range fittings

**WRAS** All Yorkshire integral solder ring general range fittings are listed and comply with the requirements of the United Kingdom Water Regulations/Byelaws (Scotland).

**BS EN 1254 Part 1** Specification for copper and copper alloy fittings with capillary ends for soldering and brazing for use with copper tubes.

**BS EN ISO 228:2003** (formerly BS 2779/ISO 228/1) Specification for tubes and fittings where pressure tight joints are not made on the threads (metric dimensions).

**BS 1010 Part 2** Draw off taps and above ground stopvalves.

**BS 10** (obsolescent) Specification for flanges and bolting for pipes, valves and fittings.

**BS EN 1092-3:2003** (formerly BS 4504 Part 3.3) Specification for copper alloy circular flanges and their joints.

**BS EN 29453** Specification for soft solders.

### **h** Yorkshire wedge ring fittings

**WRAS** approved.

**BS 10** (obsolescent) Refer to Yorkshire general range.

**BS EN 1092-3:2003** (formerly BS 4504 Part 3.3) Refer to Yorkshire general range.

**BS EN 29453** Refer to Yorkshire general range.

### **i** Yorkshire General High Duty

General High Duty fittings are manufactured to Yorkshire's own exacting internal quality standards, with designs based on Lloyds formula.

### **j** Heating components – manifolds

**BS EN 1254 Part 1** Refer to Yorkshire general range.

### **k** Yorkshire waste fittings

**BS EN 29453** Refer to Yorkshire general range.



### **l** Yorkshire stopvalves

**BS 1010 Part 2** Draw off taps, above ground stopvalves and union ends. BS 1010 stopvalve ends are in accordance with BS EN 1254 Part 1.

**BS 2879** Specification for draining taps (screw down pattern).

**BS 5433** Specification for underground stopvalves for water services.

### **m** Yorkshire gate valves

**BS 5154** Specification for copper alloy globe, globe stop and check, check and gate valves. Ends are in accordance with BS EN 1254 Part 1.

### **n** Yorkshire plugcocks

**BS 1552** Specification for manual shut-off valves for use with first and second family gases. Ends are in accordance with BS EN 1254 Part 1.

### **o** Material specifications

The materials used in Yorkshire integral solder ring fittings and valves are manufactured to the following specifications:

**BS EN 1982** Specification for copper and copper alloys, ingots and castings.

**BS EN 12162** Specification for profiles and rectangular bar for general purposes.

**BS EN 12163** Specification for copper and copper alloy rod for general purposes. Including testing for dezincification resistance of alloys CZ121 (CW614N), CZ122 (CW617N) and CZ132 (CW602N).

**BS EN 12164** Specification for copper and copper alloy rod for free machining purposes. Including testing for dezincification resistance of alloys CZ121 (CW614N), CZ122 (CW617N) and CZ132 (CW602N).

**BS EN 12165** Specification for copper and copper alloys, wrought and unwrought forging stocks.

**BS EN 12168** Specification for hollow rod for free machining purposes.

# Guarantees and tube compatibility



## Quality

- a Quality is of paramount importance to Yorkshire. Our products conform to current British, European and International standards where applicable and also meet our own rigorous internal quality approvals. The Company is at the forefront of standards development, and has members on a variety of relevant committees.
- b Yorkshire operates a Quality Management System for the development, manufacture and supply of fittings, tube, valves and accessories which complies with the requirements of BS EN ISO 9001:2000.

## 25 year guarantee

- c Our policy of continuously and rigorously testing Yorkshire integral solder ring products means we are confident they will give you years of trouble free service. To demonstrate the total confidence we have in our products and our commitment to customer service, all Yorkshire integral solder ring fittings and valves are guaranteed against manufacturing defects for 25 years when installed in accordance with our instructions on specified tube materials and applications.

## Tube compatibility

- d Yorkshire integral solder ring capillary fittings are suitable for jointing copper tube, which must meet the requirements of BS EN 1057.
- e **BS EN 1057** Specification for copper and copper alloy – seamless round copper tubes for water (and gas) in sanitary and heating applications.
- f BS EN 1057 includes specified temper conditions (material strength) expressed as an “R” number. Quite simply, the higher the number, the harder the material. As a result, tube diameter, wall thickness, length and the material temper must all be specified for full product designation.
- g **R220** Annealed condition with a tensile strength of 220N/mm<sup>2</sup> supplied in coils and suitable for connection by push-fit, capillary and compression fittings. Can be bent with suitable bending tools.
- h **R250** Half hard condition with a tensile strength of 250N/mm<sup>2</sup> supplied in straight lengths and

suitable for connection by push-fit, press-fit, capillary and compression fittings. Can be bent with suitable bending tools.

- i **R290** Hard condition with a tensile strength of 290N/mm<sup>2</sup> supplied in straight lengths suitable for connection by push-fit, press-fit, capillary and non-manipulative compression fittings. Not suitable for bending.
- j The specifications of copper tube compatible with Yorkshire integral solder ring fittings are detailed in Table 1.
- k Yorkshire General High Duty fittings are also compatible with high duty copper tubes, the use of which will enable maximum system temperature and pressure performance.

## Imperial copper tube

- l Yorkshire integral solder ring fittings with metric or BSP ends are not compatible with imperial copper tube. However, the Yorkshire range includes a number of imperial x metric adaptors, which are specifically designed for the purpose of connecting to imperial copper tube found in an existing installation.

## Stainless steel tube

- m The use of Yorkshire integral/solder ring fittings with stainless steel tube is not recommended.

## TRADE BODIES



- n **CONTACT WITH THE TRADE** Yorkshire Fittings is an industrial associate of the Institute of Plumbing & Heating Engineering [www.iphe.org.uk](http://www.iphe.org.uk)



- o **LINKS WITH MERCHANT GROUPS** Industry trends can be monitored through the BMF. [www.bmf.org.uk](http://www.bmf.org.uk)



- p **LINKS WITH END USER GROUPS** The Company is a member of the Association of Plumbing and Heating Contractors. [www.aphc.co.uk](http://www.aphc.co.uk)



- q **REGIONAL LINKS** Association with regional bodies like SNIPEF also helps to monitor a broad picture of the industry. [www.snipef.org](http://www.snipef.org)

**1 BS EN 1057 Copper tube compatible with Yorkshire integral solder ring fittings and valves**

Outside diameter	Wall thickness								
	0.6mm	0.7mm	0.8mm	0.9mm	1.0mm	1.2mm	1.5mm	2.0mm	2.5mm
6mm	R220/R250		R220/R250						
8mm	R220/R250		R220/R250						
10mm	R250	R220	R220/R250						
12mm	R250		R220/R250						
15mm		R250			R220/R250				
22mm				R250		R220/R250			
28mm				R250		R220/R250			
35mm					R290	R250	R250		
42mm					R290	R250	R250		
54mm					R290	R250		R250	
67mm						R250/R290		R250	
76mm							R290	R250	
108mm							R290		R250



# Working temperatures and pressures

## PRESSURE EQUIPMENT DIRECTIVE (P.E.D.)

**a** From 30th May 2002 most pressure equipment and assemblies on the market in the United Kingdom must comply with the Pressure Equipment Directive (P.E.D.) 1999. Fittings are exempt from the P.E.D. unless they are incorporated into pressure equipment such as pressurised storage containers, heat exchangers, shell and water tube boilers. This means that all Yorkshire fittings are exempt.

Selected Yorkshire valves are classified under the P.E.D. – details are given in the main text.

## WASHERS

**b** Where tap connectors or other fittings are assembled with washers, service temperatures must not exceed 100°C. Washers are not suitable for use on gas service pipelines.

## Working temperatures and pressures

### Yorkshire general range fittings

**c** Yorkshire integral solder ring fittings contain a tin/copper lead-free solder (BS EN 29453 Alloy number 23 Sn99Cu1) with a melting range of 227-235°C. Jointing temperatures can be easily reached using a conventional heat source such as a propane or butane torch. The Yorkshire general range is designed for sustained operation at the service temperatures and pressures shown in Table 1.

### Yorkshire wedge ring fittings

**d** Yorkshire wedge ring fittings of 76mm and 108mm contain a lead free tin/silver solder (Alloy number 29 Sn97Ag3), and those with reduced ends of less than 76mm have a tin/copper solder (Alloy number 23 Sn99Cu1). Fittings perform to the service temperatures and pressures indicated in Table 2.

### Yorkshire General High Duty fittings

**e** Yorkshire General High Duty fittings are designed to joint copper tubes to BS EN 1057. However, a GHD installation will achieve maximum performance (shown in Table 3) when used with high duty copper tube in applications not subject to classification society requirements.



When assembled with copper tube to BS EN 1057, the service temperatures and pressures of Yorkshire General High Duty fittings are limited by the specification of annealed tube used.

### Heating components – manifolds

**f** Manifolds used in heating systems are suitable for use up to a maximum working pressure of 6 bar at 110°C. When used in applications other than heating systems, Yorkshire manifolds perform to the same temperature and pressure ratings as Yorkshire Potable general range fittings.

### Stopvalves

**g** When correctly assembled with copper tube to BS EN 1057, stopvalves perform to a maximum service temperature of 30°C at 16 bar.

### Gate valves

**h** Gatevalves perform to a maximum service temperature of 110°C at 6 bar when correctly assembled with copper tube to BS EN 1057. Yorkshire gate valves also comply with Sound Engineering Practice (S.E.P.) under the Pressure Equipment Directive (P.E.D.) 1999.

### Plugcocks

**i** Yorkshire plugcocks perform to the service temperatures and pressures indicated in Table 4.

### Achieving low temperatures

**1** For products used in water systems, working temperatures of less than 4°C can only be achieved if antifreeze is added to the system. Antifreeze must not be added to potable water systems.

#### 1 Yorkshire general range performance when correctly assembled with copper tube to BS EN 1057

Size	Service temperature			
	Min -40°C	30°C	Max 65°C	110°C
6mm to 54mm	16 bar	16 bar	10 bar	6 bar
67mm	10 bar	10 bar	6 bar	4 bar

#### 2 Yorkshire wedge ring performance when correctly assembled with copper tube to BS EN 1057\*

Size	Service temperature			
	Min -40°C	30°C	Max 65°C	110°C
76mm and 108mm	10 bar	10 bar	5 bar	1 bar

\* Yorkshire's own recommendations

#### 3 Yorkshire General High Duty performance when correctly assembled with high duty tube to the appropriate specification

Size	Service temperature			
	Min -196°C	150°C	Max 175°C	200°C
6mm	242 bar	242 bar	151 bar	61 bar
8mm	202 bar	202 bar	128 bar	51 bar
10mm to 12mm	158 bar	158 bar	99 bar	40 bar
15mm to 54mm	69 bar	69 bar	43 bar	17 bar

#### 4 Yorkshire plugcock performance for first and second family gases when correctly assembled with copper tube to BS EN 1057

Size	Service temperature – MOP 0.35	
	Min -10°C	Max 30°C
15mm to 22mm	0.35 bar	0.35 bar



- a** Once the appropriate Yorkshire product has been selected the use of one of the following specification clauses will provide the exact wording required to ensure that the correct product is used.



### Yorkshire general range specification

- b** "Integral solder ring fittings shall be to BS EN 1254 Part 1, of copper or copper alloy and certified by WRAS. In sizes from 6mm to 54mm, they will be suitable for use with copper tube to BS EN 1057 in hot and cold water services, in central heating systems, low pressure steam heating, and in closed circuit heating systems. They will have a guarantee of 25 years against all manufacturing defects, and be drawn from the Yorkshire general range manufactured by Yorkshire Fittings Limited."

### Yorkshire wedge ring specification

- c** "Integral solder wedge ring fittings shall be of gunmetal or copper alloy and certified by WRAS. In sizes of 76mm and 108mm, they will be suitable for use with copper tube to BS EN 1057 in potable water services, heating, sanitation and many engineering applications. They will have a guarantee of 25 years against all manufacturing defects, and be drawn from the Yorkshire wedge ring range manufactured by Yorkshire Fittings Limited."

### Yorkshire General High Duty specification

- d** "Integral solder ring high duty fittings shall be manufactured from gunmetal. In sizes from 6mm to 54mm, they will be suitable for use with heavy duty copper tube to the appropriate specification in high temperature heating services, steam and condensate pipelines, vacuum, refrigeration and cryogenic applications. They will have a guarantee of 25 years against all manufacturing defects, and be drawn from the Yorkshire General High Duty range manufactured by Yorkshire Fittings Limited."

### Manifolds specification

- e** "Manifolds shall be available with outlets in sizes 8mm and 10mm and be suitable for use with copper tube to BS EN 1057 in minibore central heating systems. They will have a guarantee of 25 years against all manufacturing defects, and be drawn from the Yorkshire heating components range manufactured by Yorkshire Fittings Limited."

### Yorkshire waste fittings specification

- f** "Integral solder ring waste fittings shall be of copper or copper alloy. In sizes from 28mm to 54mm, they will be suitable for use with copper tube to BS EN 1057 on waste water services. They will have a guarantee of 25 years against all manufacturing defects, and be drawn from the Yorkshire waste fittings range as manufactured by Yorkshire Fittings Limited."

### Stopvalves specification

- g** "Stopvalves shall be to BS 1010 with ends to BS EN 1254 Part 1, of gunmetal and certified by WRAS. In sizes from 15mm to 54mm, they will be suitable for use with copper tube to BS EN 1057 in hot and cold water services. They will have a guarantee for 25 years against all manufacturing defects, and be drawn from the Yorkshire valves range manufactured by Yorkshire Fittings Limited."

### Gate valves specification

- h** "Gate valves shall be to BS 5154 with ends to BS EN 1254 Part 1, of gunmetal and certified by WRAS. In sizes from 15mm to 54mm, they will be suitable for use with copper tube to BS EN 1057 in hot and cold water services, central heating systems, oil lines, steam installations, compressed air lines and certain chemical supply lines. They will have a guarantee of 25 years against all manufacturing defects, and be drawn from the Yorkshire valves range manufactured by Yorkshire Fittings Limited."

### Plugcocks specification

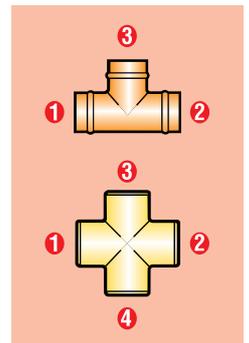
- i** "Plugcocks shall be to BS 1552 with ends to BS EN 1254 Part 1, and be of brass. In sizes 15mm and 22mm, they will be suitable in use with copper tube to BS EN 1057 in first and second family gas services. They will have a guarantee of 25 years against all manufacturing defects, and be drawn from the Yorkshire valves range manufactured by Yorkshire Fittings Limited."

### WEBSITE DOWNLOADS

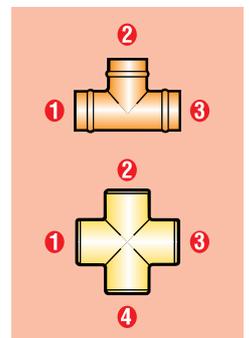
- i** For your convenience the specification clauses on this page are available on our website at [www.yorkshirefittings.co.uk](http://www.yorkshirefittings.co.uk)
- k** Also available on our website to download is a PDF of this and all our other data books, and a comprehensive product catalogue.



### TEE SPECIFICATION



- i** UK SPECIFICATION  
First quote the ends on the run (larger end first) and then the branch.



- ii** EUROPEAN SPECIFICATION  
Quote the larger end first, then the branch, followed by the remaining end.

# Yorkshire general range installation instructions



## INSTALLATION TIPS

- a Best results are obtained when joints are heated as soon as possible after assembly. After heating and subsequent cooling, flush the system – preferably with hot water. Ensure adequate ventilation during heating.
- b Any joints not heated during the working day should be dismantled, cleaned and refluxed prior to reassembly.

## THREADED CONNECTORS

- c A good quality jointing washer should be used when installing fittings with parallel connector threads.
- d Male threaded connectors for jointing pipework to boilers, pumps or backplate elbows have taper male BSP threads and may require the use of jointing materials. A small quantity of inert jointing compound or PTFE tape should be applied to the male thread before installing the fittings.
- e Female threaded connectors have internal threads to BS EN ISO 228:2003 and should be used for general connections from male threaded fittings to copper pipework.
- f Jointing compounds should comply with BS 6956 Part 5 and be WRAS listed. PTFE tape for water and general applications should comply with BS 7786 and satisfy the requirements of BS 6920 Part 1. For gas applications, PTFE tape should comply with BS EN 751-3:1997 (formerly BS 6974).

## STOPVALVES

- g During the soldering operation, stopvalves should be half open and a damp cloth wrapped around the headwork. The headwork of stopvalves are bonded and sealed to provide maximum reliability.

- h The following instructions illustrate just how easy it is to make a Yorkshire integral solder ring joint. The fittings use the principle of capillary attraction to allow solder to fill the gap between fitting and tube to form a completely reliable joint. These instructions cover Yorkshire general range fittings. Details of how to joint wedge ring fittings can be found on page 12; and General High Duty on page 13.

## Preliminaries

- i Select the correct size of tube and fitting for the job. Ensure that both are clean, in good condition and free from damage and imperfections. If the tube is oval or damaged use a re-rounding tool.

## Preparation

- 1. Cut the tube square using a rotary tube cutter wherever possible. If a hacksaw is used to cut the tube, a fine toothed blade should be used.



- 2. Remove any burr from the inside and outside of the tube ends using a fine toothed file or a S120 deburring tool from the XPress accessories range.



- 3. Clean the inside of the fitting socket and the outside of the tube with a Yorkshire cleaning pad, fine sandpaper or steel wool.



## Jointing

- 1. Using a suitable brush, apply adequate – but not excessive – flux to both the outside surface of the tube and the inside surface of the fitting socket. Do not use your finger.

The reliability of soldered joints is greatly influenced by the type of flux used. Yorkshire flux and Traditional Craftsman's flux are specially formulated for jointing copper tubes with Yorkshire integral solder ring fittings. All fluxes are, to some extent, corrosive, but special care should be taken with so-called self cleaning fluxes. Yorkshire flux is not suitable for gas applications.



- 2. Insert the tube into the fitting until it reaches the tube stop, then wipe off any excess flux. Heat the assembled joint until a complete ring of solder appears at the mouth of the fitting.



- 3. Allow the joint to cool without disturbance. Clean the joint generally, wiping off any external flux residues. This will prevent unsightly stains or (in extreme cases) corrosion of pipework. Flush out the pipework.



# Chrome plated installation instructions



## Slip couplings and tees

- a If it is necessary to break into existing pipes for repairs or to fit new branches, slip couplings or tees which have no tube stops make the job easier and avoid disturbing the rest of the system.

## Adapting imperial to metric with Yorkshire

- b Occasionally a Yorkshire integral solder ring fitting may need to be connected to an older installation where imperial sized copper tube has been used. If this is the case, simply use a Yorkshire imperial to metric coupling adaptor, one end of which fits on to imperial pipe, and the other on to metric pipe. Adaptors are available in several combinations.

## Unmade ends

- c If an end of a Yorkshire general range fitting is to remain unmade, a short length of correctly sized, uncleaned tube should be inserted into the end(s) to be left unjointed. This section should be kept cool by wrapping a wet rag around it whilst heating the remaining ends.

## Taking apart and remaking Yorkshire joints

- d The re-use of Yorkshire integral solder ring fittings is generally not recommended, as the joints are difficult to disconnect owing to the intermetallic bonding between the solder and the copper of the fitting and tube. However, in some situations, joints can be remade by fluxing the tinned portion of the tube and reinserting this into the fitting. The joint can then be heated and lead-free solder

end-fed. If a new tube is to be used, clean and flux the tube before assembly. End feed lead-free solder at the mouth of the socket after reheating.

## Using Yorkshire general range fittings with chrome plated copper tube

Solder will not bond to chrome plate, meaning the plating needs to be removed from copper tube before a joint is made. The same preliminaries and preparation guidelines apply.

1. For the distance the tube goes into the fitting, remove the chrome plating using a coarse emery cloth, followed by fine sandpaper or Yorkshire cleaning pad.



2. After applying flux, heat the joint in the usual manner.

3. Remove any discolouration of the chromium by washing the fitting with soap and warm water immediately after the joint has cooled.



## LOCAL WATER AUTHORITY

- f It's wise to take the advice of the Local Water Authority into account when it comes to pipework accessibility.

## UNION FITTINGS

- g Yorkshire union fittings have metal-to-metal cone joints. To avoid leaks, care should be taken to protect the jointing faces from damage. Use a WRAS listed jointing compound or apply a sufficient amount of PTFE tape to obtain completely satisfactory results. Tighten the joint with a spanner.

## SYSTEM TESTING

- h We recommend all systems are thoroughly tested upon completion. In hydraulic based installations the system may be tested to 1.5 times the working pressure of the system (see tables on page 8 for data). If higher test pressures are required advice should be sought from Yorkshire Fittings.
- i On completion, compressed air pipeline systems must be properly tested. The system designer and installation contractor must ensure safe methods are selected for system testing which will comply with all current Health and Safety regulations.
- j This may include testing compressed air lines with fluids or compressed air at a limited pressure, or a combination. In any event we do not recommend the maximum working pressure of the product be exceeded during this procedure.
- k N.B. The maximum temperature and pressure range in any system is dictated by the component with the lowest performance rating.

# Yorkshire wedge ring installation instructions

## EQUIPOTENTIAL BONDING

- a** Ensure all metallic pipework systems comply with the equipotential bonding requirements of the current edition of the IEE electrical wiring regulations (BS 7671:2001).
- b** All Yorkshire integral solder ring fittings provide electrical continuity when the joint has been completed with copper tube.
- c** After all plumbing work has been completed, always ensure continuity checks are conducted by a qualified electrical in accordance with regulations.

### **d** Making a Yorkshire wedge ring joint

The same preliminaries and preparation guidelines apply as for Yorkshire general range fittings.

- 1.** Using a suitable brush, apply adequate – but not excessive – flux to the tube end, the jointing surfaces of the tapered ring, and socket of the fitting. Do not use your finger.



- 2.** Slip the wedge ring onto the tube with the thinner edge towards the fitting, and push the tube into the fitting up to the tube stop. Press the ring as far as possible into the mouth of the fitting by hand.



- 3.** Using the assembly tool (AT1), unscrew the nuts and open the tool. Place the tool on the fitting and tube, ensuring the captive part engages the shoulder of the fitting. Ensure the sliding part of the tool is free to engage the exposed face of the wedge ring, then completely close both halves of the tool. Under no circumstances should this joint be made without the assembly tool.



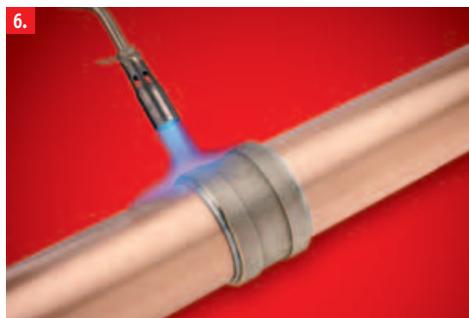
- 4.** Screw both nuts hand-tight then, using an open-ended or good quality adjustable spanner, tighten the nuts alternately, exerting an even

pressure on the wedge ring until it has been pressed home. Do not use excessive force. When pressed home, the tapered wedge ring may be a little above or below the level of the mouth of the fitting.



- 5.** Unscrew the nuts, remove the assembly tool and repeat stages 2 to 4 for the remaining end(s) of the fitting.

- 6.** Heat the joint using a blowlamp with a flame of generous proportions or an air/gas blow torch. Heat each joint separately around the fitting socket and where the tube enters the fitting, taking care not to concentrate the flame at one point. Continue heating until complete rings of solder appear between the tube and the tapered ring, and between the tapered ring and the fitting.



The appearance of these two rings of solder are proof of a sound joint. When the tolerance between tube and fitting is such that the outer end of the tapered ring is below the mouth of the fitting, the two solder rings may join together.

- 7.** Allow the joint to cool without disturbance. Clean the joint generally, wiping off any external flux residues. Flush out the pipework.



# General High Duty installation instructions



## a Making a Yorkshire General High Duty joint

The same preliminaries apply as for Yorkshire general range fittings.

## b Preparation

The preparation of Yorkshire General High Duty fittings differs only slightly to those for Yorkshire general range fittings. Details of these differences are as follows:

1. A hacksaw should be used to cut the tube – a rotary cutter must not be used for this application as it can reduce the diameter of the tube ends.
2. An alumina based paper or cloth can also be used to clean the fitting socket as an alternative to a Yorkshire cleaning pad or fine sandpaper. Steel wool should not be used.
3. General High Duty fittings require the use of the correct flux. We recommend Degussa "H" ready mixed paste, although satisfactory joints can be made using other suitable silver brazing alloy fluxes.

Silver brazing alloy fluxes must be used with care and always in a well ventilated area. If powder flux is used, this should be mixed with clean water and blended into a creamy paste. Mix the required amount of flux and keep the powder in the container dry, replacing the lid immediately after use. Any excess mixed flux should be discarded.

## c Jointing

1. Using a suitable brush, apply adequate – but not excessive – flux to both the outside surface of the tube to a length slightly greater than the



socket depth and the inside surface of the fitting socket. Do not use your finger.



2. Insert the tube into the fitting until it reaches the tube stop, using a twisting action to ensure the spread of flux. Ensure the tubes are correctly lined up and adequately supported – otherwise distortion or cracking may occur when at brazing temperature.

3. Heat the socket and tube gently using an oxy/gas, oxy/acetylene or oxy/propane torch to approximately 700°C - a visible red heat in poor daylight. Use a large, soft, neutral or slightly reducing flame, keep the torch moving, and continue heating until a complete ring of solder appears around the socket mouth - this is proof of a sound joint. Continue to heat generally for a few seconds. Repeat this method for each joint in turn.



If the complete ring of solder does not appear on heating, apply additional flux to the mouth of the socket and end feed the joint with our N165 or N166 cadmium-free silver brazing alloy, or an equivalent to the compositional requirements of BS EN 1044 AG103 (formerly BS 1845 AG14).

4. Allow the joint to cool without disturbance. Clean the joint generally, wiping off any external flux residues. Flush out the pipework.



## PERMANENCE OF GHD JOINTS

- d Joints made with Yorkshire General High Duty fittings should be regarded as permanent. If the system has to be broken into, fittings such as the 11GHD union coupling should be installed at appropriate points. An alternative is the use of bi-metal Endbrazed flanges, in sizes 42mm and 54mm, which will require the end-feeding of solder.

## DISCONNECTING GHD FITTINGS

- e The use of disconnecting fittings allows sections of the installation to be completed on the workbench, avoiding the need to make joints in difficult places. This prefabrication technique is particularly recommended in sizes from 22mm to 54mm.

## GHD UNION FITTINGS

- f Union type fittings such as 11GHD, 65GHD and 69GHD have round nose-to-seal joints.

## IMPERIAL TO METRIC

- g Where the layout permits, the most economical way of adapting from imperial to metric is to use the 9GHD.

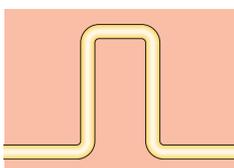


# System design considerations

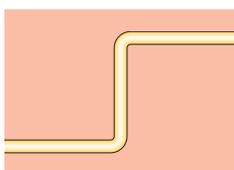
## CHEMICALS

- a** Some contracts may require the use of proprietary chemicals to cleanse and flush pipework before full commissioning. Yorkshire is compatible with a selection of products – contact us to find out more.

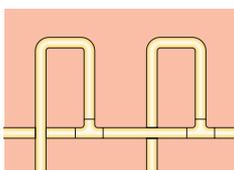
## TECHNIQUES FOR EXPANSION STRESS RELIEF



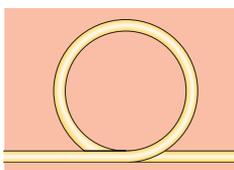
**b** Horseshoe expansion link



**c** Offset



**d** Crossover tee arrangement



**e** Expansion loop  
Suitable for 10mm tube only.

## CORRECT ANCHORING

- f** Always ensure the free length of tube between the branch of the tee and the first anchor point (bracket or radiator valve) is long enough to allow normal thermal movement. Not doing this can lead to installation failure.

- g** Here are details of some of the specific design considerations it is important to take account of when designing and installing pipework systems containing Yorkshire integral solder ring fittings.

### Pipeline supports

- h** Pipelines should always be constructed so that the joints are under neutral or compressive stress. Clipping to support the assembled pipeline is essential and tube manufacturer's recommendations should be adhered to. Yorkshire offers a wide range of pipe clips and brackets to ensure safe and secure installations. Pipe joist clips are also available, and are designed to protect pipework against accidental piercing when nailing or screwing down floorboards. For the maximum spacing of supporting brackets refer to Table 1.

### Insulation

- i** For all Yorkshire installations, we recommend you adhere to the insulation requirements for copper tube as specified by The Water Supply (Water Fittings) Regulations 1999. These can be downloaded from [www.hms.gov.uk](http://www.hms.gov.uk).

### Phenolic foam

- j** When using rigid phenolic foam (or other thermal insulation) to lag pipework, always refer to the

### 1 Maximum spacing of support brackets for internal fixing of copper tube to BS EN 1057 R250 and R290

Sizes	Wall thickness	Horizontal pitch	Vertical pitch
6mm	0.6mm	0.40m	0.60m
8mm	0.6mm	0.60m	0.90m
10mm	0.6mm	0.80m	1.20m
12mm	0.6mm	1.00m	1.50m
15mm	0.7mm	1.20m	1.80m
22mm, 28mm	0.9mm	1.80m	2.40m
35mm, 42mm	1.2mm	2.40m	3.00m
54mm	1.2mm	2.70m	3.00m
67mm	1.2mm	3.00m	3.60m
76mm, 108mm	1.5mm	3.00m	3.60m

### 2 Copper tube expansion

Temperature change	Tube length										
	3m	4m	5m	6m	7m	8m	9m	10m	12m	25m	
10°C	0.5mm	0.7mm	0.9mm	1.0mm	1.2mm	1.4mm	1.5mm	1.7mm	2.0mm	4.3mm	
20°C	1.0mm	1.4mm	1.7mm	2.0mm	2.4mm	2.7mm	3.0mm	3.4mm	4.0mm	8.5mm	
30°C	1.5mm	2.0mm	2.6mm	3.1mm	3.6mm	4.1mm	4.6mm	5.1mm	6.1mm	13mm	
40°C	2.0mm	2.7mm	3.4mm	4.1mm	4.8mm	5.4mm	6.1mm	6.8mm	8.2mm	17mm	
50°C	2.6mm	3.4mm	4.3mm	5.1mm	6.0mm	6.8mm	7.7mm	8.5mm	10.2mm	21mm	
60°C	3.1mm	4.1mm	5.1mm	6.1mm	7.1mm	8.2mm	9.2mm	10.2mm	12.2mm	26mm	
70°C	3.6mm	4.8mm	6.0mm	7.1mm	8.3mm	9.5mm	10.7mm	11.9mm	14.3mm	30mm	
80°C	4.1mm	5.4mm	6.8mm	8.2mm	9.5mm	10.9mm	12.2mm	13.6mm	16.3mm	34mm	
90°C	4.6mm	6.1mm	7.7mm	9.2mm	10.7mm	12.2mm	13.8mm	15.3mm	18.4mm	38mm	
100°C	5.1mm	6.8mm	8.5mm	10.2mm	11.9mm	13.6mm	15.3mm	17.0mm	20.4mm	43mm	

lagging manufacturer's fixing instructions. To avoid the risk of external corrosion of copper pipework the European Phenolic Foam Association recommends that such insulation products be installed with a moisture barrier, such as Densopaste or a plastic covering applied by the tube manufacturer. If you need to add a barrier product, we recommend that all Yorkshire fittings are fully installed and are completely coated before these are applied.

### Thermal movement

- k** Thermal movement is a major consideration when designing and installing plumbing and heating systems, and should be taken into account.
- l** Pipework systems expand and contract with changes in temperature. If they are fixed too rigidly and their movement restricted the installation will be subject to stress. Stress concentrations between "fixed points" – typically found at radiators, valves and other fittings – should be avoided.

### Expansion of copper tube

- m** Copper has a coefficient in linear expansion of  $17 \times 10^{-6}/^{\circ}\text{C}$ . For example, a 10-metre length of copper tube carrying water at  $60^{\circ}\text{C}$  will increase in length by almost 7mm when heated from  $20^{\circ}\text{C}$ . Assuming that temperature cycling of the system is  $20^{\circ}\text{C}$ , there will be a continuous cycle of expansion and contraction of 3.4mm. Refer to Table 2.

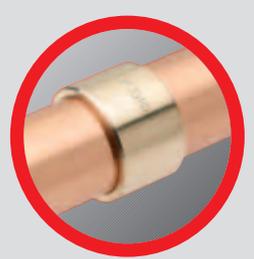
### Covered pipework

- n** Making provision for thermal movement is vital where pipework is installed under screed or plaster, or passes through brick or blockwork.
- o** The preferred practice is to pass tubes and pipes through sleeves or conduits or to lay them in ducts surrounded by loose, non-rigid material such as vermiculite or glass wool. For further information, consult the standard BS 6700:1997.

### Pipework accessibility

- p** It's wise to take advice from the local water authority when it comes to pipework accessibility.

# Yorkshire range data finder



Use the index to find the precise location of specific information about the Yorkshire range. Pages, paragraphs and tables are numbered or lettered throughout the document to help you find the detail you require.

A	PAGE	SECT
Accessories	4	k
Advantages	2	f
Air conditioning	3	e
Anchoring pipework	14	f
Antifreeze	8	j
Applications	2	k
	3	c
	3	e

B	PAGE	SECT
British standards	6	f

C	PAGE	SECT
Central heating	2	l
Chemicals	14	a
Chilled water	2	l
Chrome plated fittings	2	i
	3	i
Clauses (specification)	9	
Cleaning pads	4	p
Compatibility (tube)	7	d
Compressed air	2	l
Condensate pipelines	3	e
Copper tube		
BS EN 1057	7	e
Chrome plated	11	e
Compatibility	7	d
Expansion	14	m
	14	2
High duty	7	k
	8	e
Imperial	7	l
R220	7	g
R250	7	h
R290	7	i
Support brackets	14	1
Covered pipework	14	n
Cryogenic	3	e

D	PAGE	SECT
Degreased	3	e
Densopaste	14	j
Durability	3	h
DZR	2	c
	2	h
	3	h

E	PAGE	SECT
Electrical continuity	12	b
Engineering	2	l
	3	c
Equipotential bonding	12	a
European standards	6	f
Expansion, thermal	14	k
Expansion stress relief	14	b

F	PAGE	SECT
Flow rate	5	1
Fluxes	4	l
	6	d
	13	b

G	PAGE	SECT
Gas	2	l
Gas families	6	e
Gate valves	5	f
	5	i
	8	h
	9	h

General range fittings	PAGE	SECT
Applications	2	l
Installation	10	
Overview	2	l
Performance	8	e
	8	1
Remaking joints	11	d
Specification	9	b
Standards	6	g
Union fittings	11	g

General High Duty (GHD) fittings	PAGE	SECT
Applications	3	e
Degreased	3	e
Installation	13	
Overview	3	d
Performance	8	e
	8	3
Permanence	13	d
Specification	9	d
Standards	6	i
Union fittings	13	f
	7	c
Guarantees	2	c
Gunmetal	2	h

H	PAGE	SECT
Heating components		
Applications	4	d
Overview	4	d
Performance	8	f
Specification	9	e
Standards	6	j
Heat resistant mats	5	a
Hot and cold water	2	l
	3	c
Hydraulic	3	e

I	PAGE	SECT
Imperial adaptors	11	b
Installation	10-13	
Insulation	14	i
ISO	6	c

J	PAGE	SECT
Joining	10-13	

L	PAGE	SECT
Lead-free solder	2	e
	2	j
Linear flow manifold	4	a
	4	g

M	PAGE	SECT
Manifolds	4	a
	4	e

Markings	8	f
Materials	9	e
Materials	2	a
Material specifications	6	o
BS 12162		
BS 12163	6	o
BS 12164	6	o
BS 12165	6	o
BS 12168	6	o
BS EN 1982	6	o
Micrafold	6	o
	4	c
	4	i

N	PAGE	SECT
Nitrogen	3	e

O	PAGE	SECT
Oil	2	l
Oxygen	3	e

P	PAGE	SECT
Performance	8	
Phenolic foam	14	j
Pipe clips	3	f
Pipeline supports	14	h
	14	1
Pipework, covered	14	n
Plugcocks	5	g
	8	i
	8	4
	9	i
Polished chrome plated fittings	2	i
	3	i
Pressure Equipment Directive (P.E.D.)	8	a
	8	h
Pressures	8	
PTFE	10	d

Q	PAGE	SECT
Quality	6	a
	7	a

R	PAGE	SECT
Refrigeration	3	e
Remaking joints	11	d

S	PAGE	SECT
Sanitation	2	l
	3	c
Side entry manifold	4	b
	4	h
Silver brazing alloy	3	d
	13	b
Solder	2	f
Sound Engineering Practice (S.E.P.)	8	h
Specification clauses	9	
Specification of tees	9	l
Stainless steel tube	7	m
Standards		
British	6	f
BS 10	6	g
	6	h
BS 1010 Part 2	6	q
	6	l
BS 1552	6	n

BS 2879	6	l
BS 5154	6	m
BS 5433	6	l
BS 6920 Part 1	10	f
BS 6956 Part 5	10	f
BS 7786	10	f
BS EN 1092-3:2003	6	g
	6	h
BS EN 1254 Part 1	6	g
	6	j
BS EN 29453	6	g
	6	h
	6	k
BS EN 751-3:1997	10	f
BS EN ISO 228:2003	10	e
Steam pipelines	3	e
Steel wool	4	q
Stopvalves	5	d
	5	h
	5	1
	8	g
	9	g
	10	g
Stress relief	14	b
Support brackets	14	h
	14	1
System testing	11	h

T	PAGE	SECT
Tee specification	9	l
Temperatures (service)	8	
Testing (system)	11	h
Thermal movement	14	k
Threaded connectors	10	c
Trade bodies	7	n
Tube	7	d

U	PAGE	SECT
Union fittings		
General range	11	g
GHD	13	f

V	PAGE	SECT
Vacuum	3	e
Vehicle braking systems	3	e

W	PAGE	SECT
Washers	8	b
Waste fittings	4	j
	9	f
Water Authority	11	f
Water Supply Regulations 1999	2	j
	14	i

Wedge ring fittings	PAGE	SECT
Applications	3	c
Installation	12	
Overview	3	a
Performance	8	e
	8	2
Specification	9	c
Standards	6	h
Working temperatures and pressures	8	
WRAS		
	6	b
	6	g
	6	h
	10	f

Y	PAGE	SECT
YP imprint	2	a
	2	j



The perfect commercial partnership



Pegler is an expert in the production of Taps, Mixers and Valve products. It boasts an unrivalled track record for integrity, quality, reliability and innovation.



Yorkshire is a specialist in the production of metal plumbing and heating fittings. It has an established reputation for manufacturing quality products.



# Yorkshire

## Integral Solder Ring Fittings

For further information, please contact your appropriate Sales Office

### HEAD OFFICE SALES

Telephone: 0113 270 6945 / 0113 272 5380  
Fax: 0113 270 5644 / 0113 272 5385

### NORTHERN IRELAND

Telephone: 028 9070 6990  
Fax: 028 9070 6999

### EXPORT

Telephone: +44 (0) 113 270 1104  
Fax: +44 (0) 113 271 6250

Email: [info@yorkshirefittings.co.uk](mailto:info@yorkshirefittings.co.uk)



Yorkshire Fittings Limited, Haigh Park Road, Stourton, Leeds, West Yorkshire, LS10 1RT, England.

[www.yorkshirefittings.co.uk](http://www.yorkshirefittings.co.uk)

Registered Company No. 00401507. Place of Registration: England

All brand names and logo styles are registered trademarks.

Maintaining a policy of continual product development, Yorkshire Fittings Ltd reserve the right to change specifications, design and materials of products listed in this databook without prior notice. LIT.REF: 880301/30001.02.07