

# YORKSHIRE



*Solder ring solutions*



Pegler Yorkshire

# 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. In meeting all the challenges of the 20th and 21st centuries both companies have 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 such a diverse 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 is 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:



Association of Plumbing and Heating Contractors



The Bathroom Manufacturers Association



Construction Products Association

## Brass

The Brass Page for specifiers, designers, engineers and manufacturers



British Plumbing Employers Council



Builders Merchants Federation



The Copper Development Association



The UK Copper Board



Institute of Plumbing



Heating and Ventilating Contractors Association



Thermostatic Mixing Valve Manufacturers Association

Thermostatic Mixing Valve Manufacturers Association



Scottish and Northern Ireland Plumbing Employers Federation



Yorkshire recommends contacting OFTEC for fuel oils advice. [www.oftec.co.uk](http://www.oftec.co.uk)





*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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## *Solder ring solutions*

# *The principle of the Yorkshire fitting*

At Pegler 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.

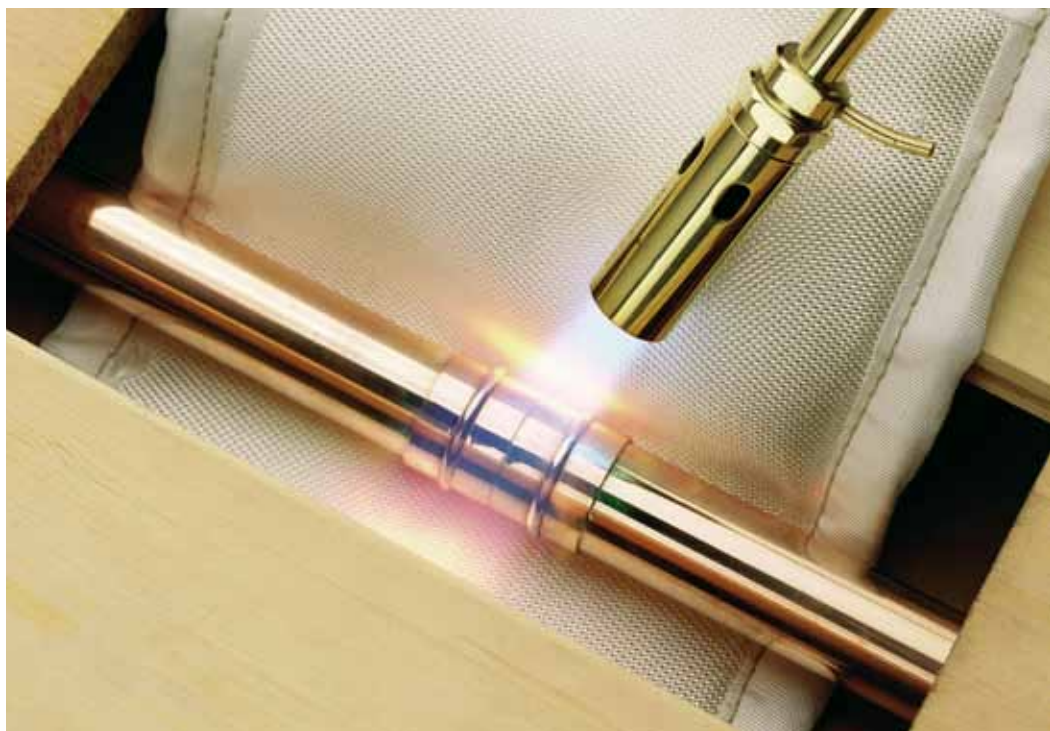
### **The Yorkshire integral solder ring joint**

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**

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.

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.



### **Durability**

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.

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.

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 eighty years. As a market leading company, Pegler 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 imprinted YP logo 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).

The Yorkshire integral solder ring range comprises over 700 different items. In addition to standard line fittings, the range includes an extensive selection of heating components and accessories. Products, such as general high duty have been developed for commercial, industrial and engineering applications.

**YORKSHIRE**

**General fittings**

The Yorkshire general range of integral solder ring fittings is designed for jointing copper tubes to BS EN 1057 (R220, R250 and R290) in a wide range of applications.

**Features**

- Available in sizes from 6mm to 67mm
- Manufactured from copper or copper alloy
- Suitable for use in hot and cold water services for potable water, in small bore and mini bore central heating systems, and in low pressure steam heating and pressurised unvented heating systems and in chilled water applications

- Also suitable for 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
- Each fitting contain a precise amount of lead-free solder for a perfect joint every time



**YORKSHIRE**

**Heating components**

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.

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.

**Features**

- The Yorkshire range includes three different types of manifold, all of which are available in 22mm and 28mm sizes, with 8mm and 10mm outlets

- Option of linear, side entry and macrafold manifolds
- Manifolds enable the main flow and return in a minibore central heating system to be divided into smaller radiator circuits
- Linear flow manifolds have a low flow resistance due to their straight line design and their copper outlets can be easily connected to the radiator pipework using Yorkshire integral solder ring fittings
- Side entry manifolds enable installers to easily bank together any combination of units and can be directly connected to one another in various combinations
- Micrafold manifolds are similar to side entry manifolds, but also incorporate a central divider which gives flow and return in one component





# Solder ring solutions

## Product overview

### Waste fittings

Copper, brass and gunmetal integral solder ring waste fittings are available for standard domestic and commercial waste water systems such as basins, baths, sinks and other sanitary appliances.

**Features**

- Available in sizes from 28mm to 54mm
- 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



### General High Duty fittings

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.

**Features**

- Available in sizes from 6mm to 54mm
- Manufactured from gunmetal and containing an integral cadmium-free silver brazing alloy, complying with the compositional requirements of BS EN 1044 alloy Ag103 (formerly BS 1845 alloy Ag14)
- Suitable for high temperature heating services such as steam and condensate pipelines
- Also suitable for use in air conditioning services, vacuum, refrigeration and cryogenic applications; vehicle braking systems; and nitrogen and oxygen gas lines
- 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
- GHD fittings are available degreased and individually bagged



**YORKSHIRE**

## Chrome plated fittings

The Yorkshire range includes a selection of commercial quality chrome plated fittings which are ideal for use where products are on show, for example in kitchens and bathrooms.

### Features

- Available in sizes from 6mm to 54mm
- Manufactured from copper or copper alloy
- Suitable for use in hot and cold potable water services, in small bore and mini bore central heating systems, and in low pressure steam heating and pressurised unvented heating systems and in chilled water applications
- For maximum aesthetic appeal also available with a polished chrome plated finish to special order



**YORKSHIRE**

## Accessories and sundries

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.

### Features

- Fluxes have been specially developed in three types – Traditional Craftsman's Flux, Yorkshire Flux and Degussa H
- Yorkshire cleaning pads are produced from highly abrasive synthetic materials for the effective cleaning of tube ends and fitting sockets prior to fluxing and are not electrically conductive
- Yorkshire steel wool, a more traditional material used for cleaning tubes and fittings, is available in bundles or in pad form
- Yorkshire heat resistant mats are made from asbestos-free woven ceramic fibres, and offer protection to skirtings, paintwork, flooring and decorations from solder splashes and hot flux



### Pipe clips and brackets

The Yorkshire range includes a comprehensive selection of pipe clips, stems and brackets for fixing copper tube to a variety of surfaces and provides the installer with a wide choice of options for a variety of installations.

#### Features

- Available in sizes from 6mm to 108mm
- Saddle bands mount copper tube directly to a surface
- Pipe rings, in conjunction with single or two-piece spacing clips, can be used where tubing needs to be mounted away from a surface





It is 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.

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.

## Guarantees

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.

## Quality

Quality is of paramount importance to Pegler 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. Pegler 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.

## International Standards Organisation

International standards are conformed to where appropriate.



FM 27630



Pegler Yorkshire is a British Standards Institution registered company.

PRODUCT APPROVALS		
Product	WRAS	Kitemark
Yorkshire general	✓	✓
Yorkshire chrome plate	✓	✓
Yorkshire general high duty	✓	✓
Yorkshire manifolds	✓	✓

## Evaluated by WRAS

The Yorkshire integral solder ring range has been certified by WRAS and is audited periodically.



## 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 1010 Part 2** Draw off taps and above ground stop valves.

**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 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 ISO 9453:2006** Specification for soft solders.

## Yorkshire general high duty fittings

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

**ISO7/EN 10226-1** (formerly BS 21/ ISO 7) Specification for tubes and fittings where pressure-tight joints are made on the threads (metric dimensions).

## Heating components – manifolds

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

## Yorkshire waste fittings

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

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 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.

## Markings



### The YP imprint

The YP imprint provides visible assurance of a genuine Yorkshire potable fitting and that the solder is lead free.



### Universal Marking

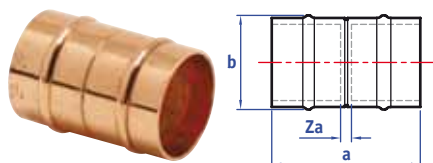
All Yorkshire potable fittings manufactured from DZR alloy carry the distinctive mark.



### Gunmetal

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

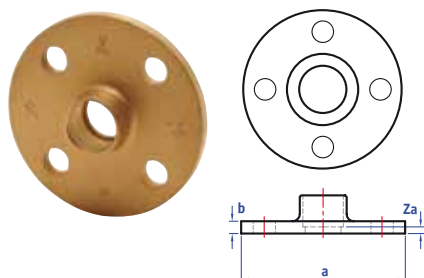
## Integral lead-free solder ring fittings for copper



### YP1 Straight coupling

Size	a	b	Za	Order code
6mm	19	9	2	08000
8mm	20	11	2	08001
10mm	22	13	2	08003
12mm	26	15	2	08005
<b>15mm•</b>	30	19	2	08010
<b>22mm•</b>	40	26	2	08020
28mm	47	33	3	08030
35mm	59	40	2	08032
42mm	65	47	2	08034
54mm	77	60	2	08035
67mm	79	73	2	08036

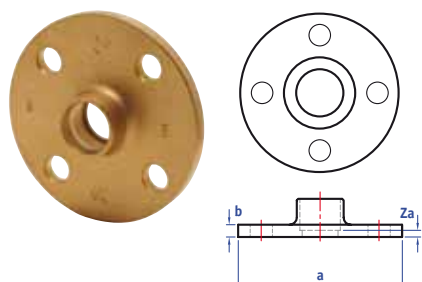
Suitable for: Copper x copper



### YP1FD Flanged connector

Size	a	b	Za	Holes	Order code
28mm	115	8	4	4	08075
35mm	121	8	8	4	08076
42mm	134	9	8	4	08077
54mm	153	10	5	4	08078

Suitable for: Copper x BS flange



### YP1FM Metric flanged connector

Size	a	b	Za	Holes	Order code
28mm	115	8	4	4	08082
35mm	140	8	4	4	08083
42mm	150	9	5	4	08084
54mm	165	11	5	4	08085
67mm	185	13	6	4	08086

Suitable for: Copper x metric flange

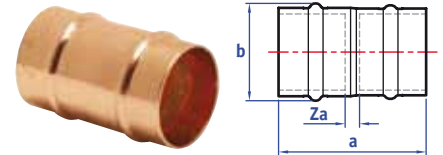
•These items comprise the YPS range.

- Yorkshire Integral Solder Ring Fittings are precision made with a ring of high quality lead-free solder incorporated in the fitting
- No additional solder is required, removing any potential for solder waste
- Available in sizes from 6-67mm, ideal for use in hot and cold water services and for potable water

### YP1IM Slip adaptor coupling

Size	a	b	Za	Order code
1/2" x 15mm	29	19	1	08040
3/4" x 22mm	41	27	2	08050
1" x 28mm	47	33	1	08052
1 1/4" x 35mm	59	40	2	08054
1 1/2" x 42mm	66	48	3	08055

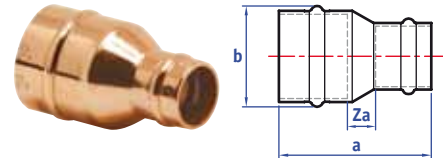
Suitable for: Copper x copper



### YP1R Reducing coupling

Size	a	b	Za	Order code
8 x 6mm	20	11	2	08056
10 x 8mm	24	13	4	08057
15 x 8mm	33	19	8	08058
15 x 10mm	32	19	6	08059
15 x 12mm	31	19	4	08060
22 x 8mm	42	26	14	08061
22 x 10mm	43	26	13	08062
22 x 15mm	40	26	6	08063
28 x 15mm	50	33	12	08065
28 x 22mm	48	33	7	08066
35 x 22mm	64	40	12	08067
35 x 28mm	58	40	8	08068
42 x 28mm	67	48	14	08069
42 x 35mm	69	48	9	08070
54 x 35mm	87	60	16	08071
54 x 42mm	84	60	14	08072

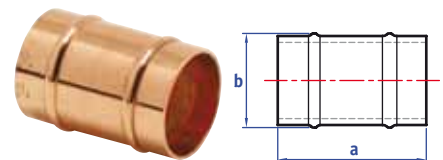
Suitable for: Copper x copper



### YP1 Slip straight coupling, slip pattern

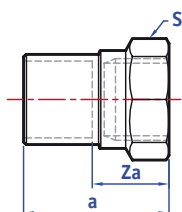
Size	a	b	Order code
15mm	30	19	08037
22mm	40	26	08038
28mm	47	33	08039

Suitable for: Copper x copper





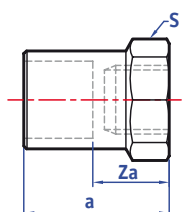
## Integral lead-free solder ring fittings for copper



### YP2 Adaptor coupling

Size	a	Za	S	Order code
8mm x 1/4"	25	16	19	08087
15mm x 1/2"	38	20	26	08090
22mm x 3/4"	38	20	31	08092
28mm x 1"	48	26	39	08093
35mm x 1 1/4"	56	29	48	08094
42mm x 1 1/2"	60	29	55	08095
54mm x 2"	70	33	66	08096

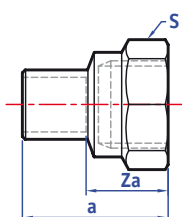
Suitable for: Copper x BSP parallel female thread



### YP2LC Female reducing connector

Size	a	Za	S	Order code
12mm x 1/4"	26	15	18	08100
15mm x 1/4"	22	8	20	08101
15mm x 3/8"	30	16	23	08102
22mm x 1/2"	38	19	28	08103

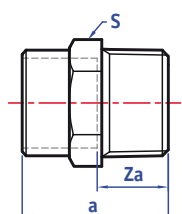
Suitable for: Copper x reduced BSP parallel female thread



### YP2LI Female reducing connector

Size	a	Za	S	Order code
1/4" x 15mm	35	21	32	08106

Suitable for: Copper x BSP female thread



### YP3 Straight male connector

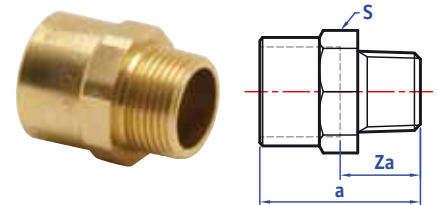
Size	a	Za	S	Order code
8mm x 1/4"	24	14	15	08111
15mm x 1/2"	33	19	24	08114
22mm x 3/4"	37	18	29	08116
28mm x 1"	43	21	37	08118
35mm x 1 1/4"	51	25	45	08119
42mm x 1 1/2"	56	25	51	08120
54mm x 2"	68	32	68	08121
67mm x 2 1/2"	75	30	78	08123

Suitable for: Copper x BSP taper male thread

### YP3LC Male reducing connector

Size	<i>a</i>	<i>Za</i>	<i>S</i>	Order code
15mm x 1/4"	28	15	19	08129
15mm x 3/8"	29	15	19	08132
22mm x 1/2"	37	18	28	08133
28mm x 3/4"	41	19	34	08134

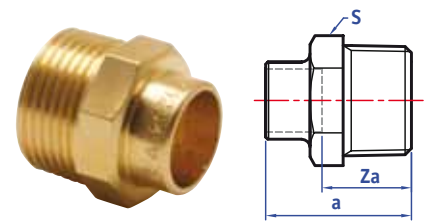
Suitable for: Copper x BSP taper male end



### YP3LI Male reducing connector

Size	<i>a</i>	<i>Za</i>	<i>S</i>	Order code
1/2" x 12mm	30	18	22	08142
3/4" x 15mm	34	21	27	08143
1" x 22mm	38	19	35	08144

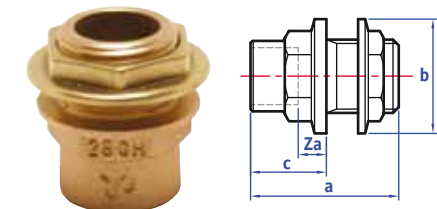
Suitable for: Copper x BSP taper male end



### YP5 Tank connector

Size	<i>a</i>	<i>b</i>	<i>c</i>	<i>Za</i>	Order code
15mm x 1/2"	40	31	21	7	08160
22mm x 3/4"	42	45	22	3	08161
28mm x 1"	49	50	27	5	08162
35mm x 1 1/4"	59	56	32	6	08163
42mm x 1 1/2"	69	63	35	4	08164
54mm x 2"	82	77	42	5	08165

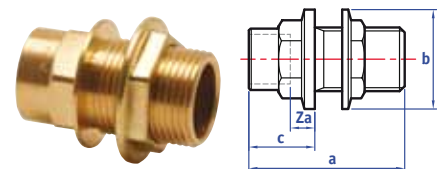
Suitable for: Copper x BSP parallel male thread with backnut



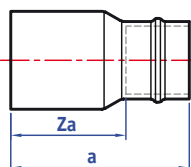
### YP5FC Tank connector

Size	<i>a</i>	<i>b</i>	<i>c</i>	<i>Za</i>	Order code
15mm x 1/2"	59	35	20	6	08180
22mm x 3/4"	58	37	20	1	08181
28mm x 1"	64	44	25	3	08182

Suitable for: Copper x BSP parallel male thread with backnut



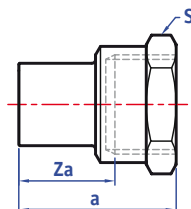
## Integral lead-free solder ring fittings for copper



### YP6 Reducer

Size	a	Za	Order code
8 x 6mm	21	14	08190
10 x 8mm	25	13	08191
12 x 6mm	21	13	08192
12 x 8mm	27	17	08193
15 x 8mm	31	21	08194
15 x 10mm	31	22	08196
15 x 12mm	30	20	08198
22 x 12mm	40	28	08199
<b>22 x 15mm</b> •	41	26	08200
28 x 15mm	48	33	08202
28 x 22mm	49	30	08204
35 x 15mm	54	42	08206
35 x 22mm	58	58	08207
35 x 28mm	54	33	08208
42 x 15mm	72	57	08209
42 x 22mm	70	48	08210
42 x 28mm	67	43	08211
42 x 35mm	66	38	08212
54 x 15mm	86	71	08213
54 x 22mm	75	55	08214
54 x 28mm	81	58	08215
54 x 35mm	81	52	08216
54 x 42mm	78	48	08217
67 x 28mm	83	61	08218
67 x 35mm	85	57	08219
67 x 42mm	89	55	08220
67 x 54mm	90	53	08221

Suitable for: Copper x large end for insertion into fitting



### YP7 Female adaptor

Size	a	Za	S	Order code
15mm x 1/2"	35	22	26	08223
22mm x 3/4"	43	27	32	08224
28mm x 1"	49	30	40	08225
35mm x 1 1/4"	58	36	50	08226
42mm x 1 1/2"	64	48	55	08227
54mm x 2"	73	49	66	08228

Suitable for: Male copper for insertion into fitting x BSP parallel female thread

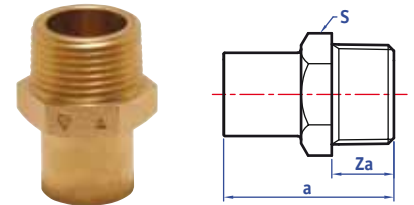
•These items comprise the YPS range.



### YP8 Male adaptor

Size	a	Za	S	Order code
15mm x 1/2"	15	37	24	08230
22mm x 3/4"	15	45	29	08231
28mm x 1"	18	50	35	08232
35mm x 1 1/4"	19	59	43	08233
42mm x 1 1/2"	20	64	49	08234
54mm x 2"	22	73	61	08235

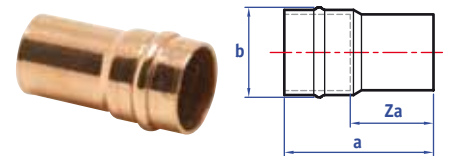
Suitable for: Male copper for insertion into fitting x BSP taper male thread



### YP9 Adaptor

Size	a	b	Za	Order code
1/2" x 15mm	33	18	17	08238
3/4" x 22mm	43	20	24	08239
1" x 28mm	49	32	27	08240
1 1/4" x 35mm	61	38	34	08241
1 1/2" x 42mm	68	48	36	08242
2" x 54mm	79	59	45	08243

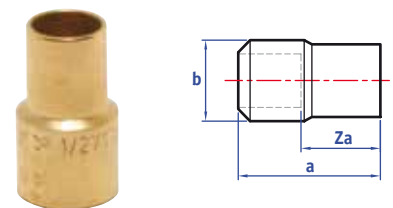
Suitable for: Imperial female copper x metric male copper



### YP9B Non-standard adaptor

Size	a	b	Za	Order code
1/2" 17G x 15mm	34	19	19	08245

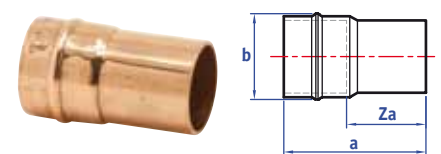
Suitable for: Adapts imperial tube of older 17G standard to metric fittings



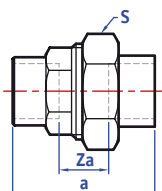
### YP99 Adaptor

Size	a	b	Za	Order code
15mm x 1/2"	34	18	20	08920
22mm x 3/4"	44	24	24	08921
28mm x 1"	53	32	31	08922
35mm x 1 1/4"	63	40	36	08923
42mm x 1 1/2"	71	48	38	08924

Suitable for: Metric/imperial female copper x male copper



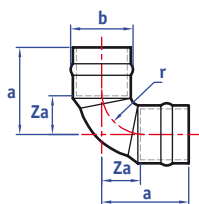
## Integral lead-free solder ring fittings for copper



### YP11 Union coupling

Size	a	Za	S	Order code
8mm	36	18	22	08250
15mm	59	30	31	08251
22mm	69	29	37	08252
28mm	69	25	46	08253
35mm	69	23	53	08254
42mm	81	19	65	08255
54mm	97	23	82	08256
67mm	92	15	96	08257

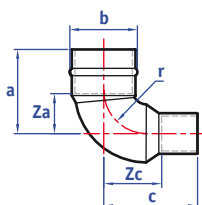
Suitable for: Copper x copper



### YP12 Elbow

Size	a	b	Za	r	Order code
6mm	13	10	5	-	08265
8mm	18	11	8	10	08266
10mm	21	12	10	12	08268
12mm	25	16	13	14	08270
<b>15mm•</b>	26	19	12	12	08280
<b>22mm•</b>	36	27	16	26	08290
28mm	41	32	19	34	08300
35mm	50	40	22	25	08302
42mm	58	48	27	49	08304
54mm	71	60	34	63	08306
67mm	84	74	45	78	08308

Suitable for: Copper x copper



### YP12R Reducing elbow

Size	a	b	c	Za	Zc	Order code
22 x 15mm	30	27	28	11	13	08310
28 x 22mm	36	35	34	14	15	08311

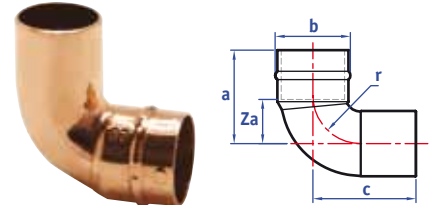
Suitable for: Copper x copper

•These items comprise the YPS range.

**YP12S Street elbow**

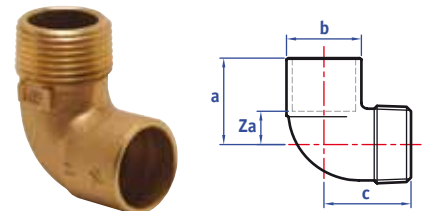
Size	a	b	c	Za	Order code
8mm	23	11	46	13	08315
10mm	30	13	50	19	08316
<b>15mm•</b>	29	19	35	14	08318
22mm	43	27	45	22	08320
28mm	40	32	44	19	08322
35mm	50	40	52	23	08324
42mm	58	49	65	26	08325

Suitable for: Female copper x male copper for insertion into fitting

**YP13 Male elbow**

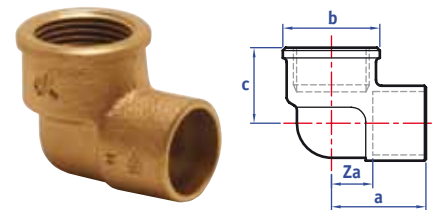
Size	a	b	c	Za	Order code
15mm x 1/2"	24	21	34	9	08333
22mm x 3/4"	31	27	34	13	08334
28mm x 1"	38	34	46	16	08335
35mm x 1 1/4"	45	41	48	19	08336
42mm x 1 1/2"	51	48	52	20	08337

Suitable for: Copper x BSP taper male thread

**YP14 Female elbow**

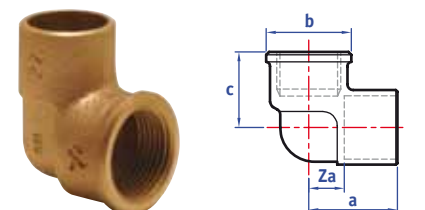
Size	a	b	c	Za	Order code
15mm x 1/2"	26	28	22	13	08351
22mm x 3/4"	33	35	27	14	08353
28mm x 1"	40	42	33	18	08354

Suitable for: Copper x BSP parallel female thread

**YP14LC Reducing female elbow**

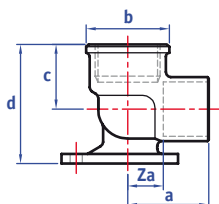
Size	a	b	c	Za	Order code
22mm x 1/2"	30	28	28	11	08362

Suitable for: Copper x reduced female end





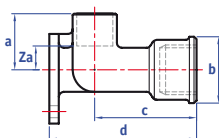
## Integral lead-free solder ring fittings for copper



### YP15 Backplate elbow, 3 hole

Size	a	b	c	d	Za	Order code
15mm x 1/2"	26	28	31	41	11	08365
22mm x 3/4"	33	34	27	49	15	08367

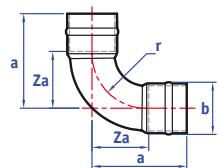
Suitable for: Copper x BSP parallel female thread



### YP15LN Backplate elbow, 3 hole, extended nose

Size	a	b	c	d	Za	Order code
15mm x 1/2"	24	30	51	70	11	08377

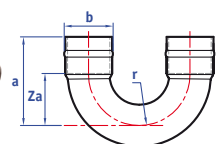
Suitable for: Copper x BSP parallel female thread



### YP18 Slow bend

Size	a	b	r	Za	Order code
15mm	31	19	32	17	08390
22mm	47	27	47	28	08391
28mm	56	32	59	34	08392

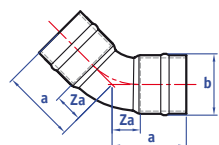
Suitable for: Copper x copper



### YP20 Return bend

Size	a	b	r	Za	Order code
15mm	35	20	19	21	08400
22mm	52	27	33	32	08401
28mm	59	33	32	37	08402

Suitable for: Copper x copper



### YP21 Obtuse elbow

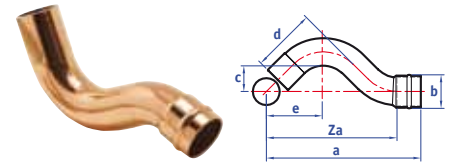
Size	a	b	Za	Order code
15mm	22	19	8	08410
22mm	29	26	10	08412
28mm	38	33	15	08414
35mm	42	40	14	08416
42mm	47	48	15	08417
54mm	56	60	19	08418
67mm	59	77	21	08419

Suitable for: Copper x copper

## YP22 Partial crossover

Size	a	b	c	d	e	Za	Order code
15mm	115	19	18	40	40	86	08420
22mm	150	26	20	52	48	105	08422

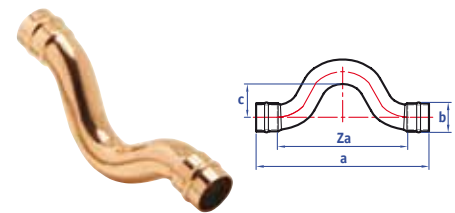
Suitable for: Female copper x male copper for insertion in to fitting



## YP23 Full crossover

Size	a	b	c	Za	Order code
15mm	120	19	20	91	08430
22mm	148	26	20	112	08432

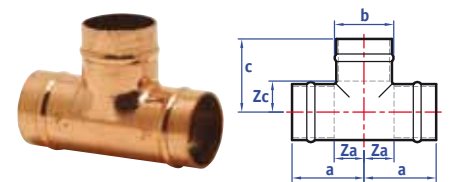
Suitable for: Copper x copper



## YP24 Equal tee

Size	a	b	c	Za	Zc	Order code
6mm	13	10	13	5	5	08440
8mm	16	12	16	6	6	08441
10mm	18	14	18	7	7	08443
12mm	20	15	20	8	8	08445
<b>15mm•</b>	24	19	24	10	10	08450
<b>22mm•</b>	32	26	32	13	13	08460
28mm	38	33	38	16	16	08462
35mm	49	40	49	20	20	08464
42mm	56	48	56	25	25	08466
54mm	65	60	65	30	30	08467
67mm	77	73	77	37	37	08468

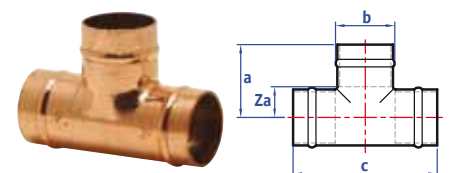
Suitable for: All ends for copper



## YP24IM Slip Adaptor tee, slip pattern

Size UK	European	a	b	c	Za	Order code UK
1/2" x 1/2" x 15mm	1/2" x 15mm x 1/2"	24	18	47	9	08470

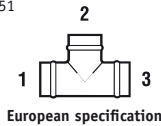
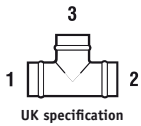
Suitable for: All ends for copper



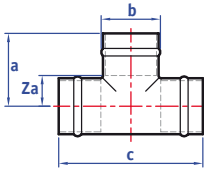
•These items comprise the YPS range.

### Tee specification

See page 51



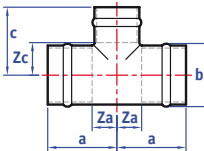
## Integral lead-free solder ring fittings for copper



### YP24 Slip Equal tee, slip pattern

Size	a	c	Za	Order code
15mm	23	47	9	08475

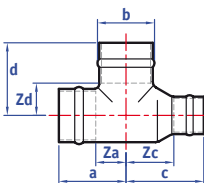
Suitable for: All ends for copper



### YP25 Tee, reduced branch

Size UK	European	a	b	c	Za	Zc	Order code UK
22 x 22 x 10mm	22 x 10 x 22mm	28	26	30	9	19	08484
<b>22 x 22 x 15mm•</b>	<b>22 x 15 x 22mm</b>	28	26	27	9	13	08490
28 x 28 x 15mm	28 x 15 x 28mm	33	32	31	10	16	08492
28 x 28 x 22mm	28 x 22 x 28mm	36	33	37	14	17	08494
35 x 35 x 15mm	35 x 15 x 35mm	39	41	37	12	23	08496
35 x 35 x 22mm	35 x 22 x 35mm	43	41	41	16	22	08497
35 x 35 x 28mm	35 x 28 x 35mm	43	40	45	15	24	08498
42 x 42 x 15mm	42 x 15 x 42mm	47	48	47	15	33	08499
42 x 42 x 22mm	42 x 22 x 42mm	45	48	44	13	23	08500
42 x 42 x 28mm	42 x 28 x 42mm	47	48	46	15	24	08501
42 x 42 x 35mm	42 x 35 x 42mm	53	48	53	22	25	08502
54 x 54 x 15mm	54 x 15 x 54mm	48	61	48	9	34	08503
54 x 54 x 22mm	54 x 22 x 54mm	52	60	49	13	30	08504
54 x 54 x 28mm	54 x 28 x 54mm	54	59	52	17	30	08505
54 x 54 x 35mm	54 x 35 x 54mm	57	60	56	21	29	08506
54 x 54 x 42mm	54 x 42 x 54mm	61	60	64	24	32	08507
67 x 67 x 28mm	67 x 28 x 67mm	57	73	66	17	43	08508

Suitable for: All ends for copper



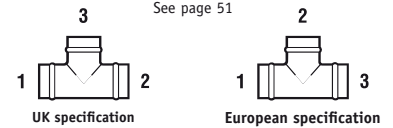
### YP26 Tee, one end reduced

Size UK	European	a	b	c	d	Za	Zc	Zd	Order code UK
22 x 15 x 22mm	22 x 22 x 15mm	32	26	36	32	14	22	13	08510
28 x 15 x 28mm	28 x 28 x 15mm	38	32	43	39	15	29	16	08512
28 x 22 x 28mm	28 x 28 x 22mm	38	32	42	39	15	22	17	08514
35 x 15 x 35mm	35 x 35 x 15mm	48	40	55	48	20	41	20	08516
35 x 22 x 35mm	35 x 35 x 22mm	47	40	54	48	19	30	19	08517
35 x 28 x 35mm	35 x 35 x 28mm	46	40	50	47	18	28	20	08518
42 x 28 x 42mm	42 x 42 x 28mm	55	48	63	55	23	40	23	08519
42 x 35 x 42mm	42 x 42 x 35mm	55	48	60	55	23	28	23	08520
54 x 42 x 54mm	54 x 54 x 42mm	67	60	80	67	29	48	29	08521

Suitable for: All ends for copper

## Tee specification

See page 51

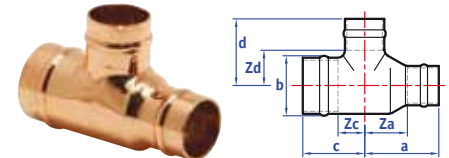


# 2

### YP27 Tee, one end and branch reduced

Size UK	European	a	b	c	d	Za	Zc	Zd	Order code UK
22 x 15 x 15mm	22 x 15 x 15mm	33	26	33	28	19	11	14	08530
28 x 15 x 15mm	28 x 15 x 15mm	36	33	32	32	22	10	17	08532
28 x 15 x 22mm	28 x 22 x 15mm	41	33	35	36	27	13	17	08534
28 x 22 x 15mm	28 x 15 x 22mm	38	33	33	32	19	12	17	08536
28 x 22 x 22mm	28 x 22 x 22mm	40	33	36	37	21	14	19	08538
35 x 22 x 22mm	35 x 22 x 22mm	48	40	42	39	29	15	21	08539
35 x 28 x 15mm	35 x 15 x 28mm	43	40	37	35	19	10	19	08540
35 x 28 x 22mm	35 x 22 x 28mm	45	40	41	35	23	13	16	08541
35 x 28 x 28mm	35 x 28 x 28mm	43	40	42	43	21	13	20	08542
42 x 28 x 28mm	42 x 28 x 28mm	54	47	47	46	21	15	23	08543
42 x 35 x 28mm	42 x 28 x 35mm	53	47	48	46	26	25	22	08544
42 x 35 x 35mm	42 x 35 x 35mm	52	47	47	51	21	15	23	08545
54 x 42 x 42mm	54 x 42 x 42mm	71	60	61	62	34	24	30	08546

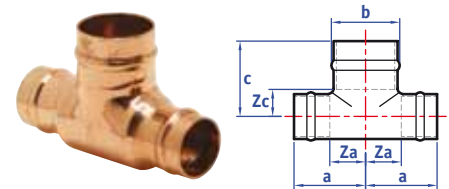
Suitable for: All ends for copper



### YP28 Tee, both ends branch reduced

Size UK	European	a	b	c	Za	Zc	Order code UK
15 x 15 x 22mm	15 x 22 x 15mm	37	26	21	23	12	08551
15 x 15 x 28mm	15 x 28 x 15mm	44	33	40	30	17	08553
22 x 22 x 28mm	22 x 28 x 22mm	34	33	40	14	17	08555
22 x 22 x 35mm	22 x 35 x 22mm	51	40	49	32	22	08557
28 x 28 x 35mm	28 x 35 x 28mm	51	39	51	29	23	08558
35 x 35 x 42mm	35 x 42 x 35mm	60	47	57	32	9	08559

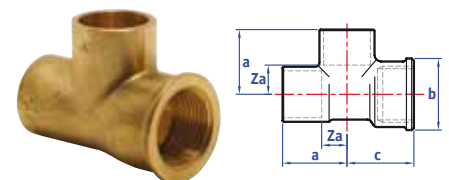
Suitable for: All ends for copper



### YP29 Female tee

Size UK	European	a	b	c	Za	Order code UK
15mm x 1/2" x 15mm	15mm x 15mm x 1/2"	25	28	23	11	08570
22mm x 3/4" x 22mm	22mm x 22mm x 3/4"	32	35	28	13	08572

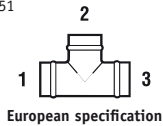
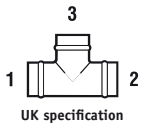
Suitable for: Copper end and branch x BSP parallel female end



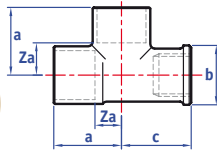
•These items comprise the YPS range.

### Tee specification

See page 51



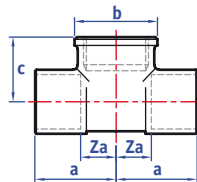
## Integral lead-free solder ring fittings for copper



### YP29R Female tee

Size		a	b	c	Za	Order code
UK	European					UK
22mm x 1/2" x 22mm	22mm x 22mm x 1/2"	31	28	27	12	08575
28mm x 1/2" x 28mm	28mm x 28mm x 1/2"	41	28	38	19	08576
35mm x 1/2" x 35mm	35mm x 35mm x 1/2"	46	28	34	21	08578

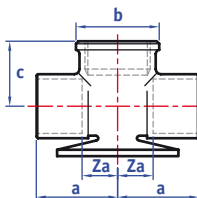
Suitable for: Copper end and branch x reduced female BSP end



### YP30 Female tee

Size		a	b	c	Za	Order code
UK	European					UK
15mm x 15mm x 1/2"	15mm x 1/2" x 15mm	25	28	22	11	08585
22mm x 22mm x 3/4"	22mm x 3/4" x 22mm	33	34	27	14	08587
28mm x 28mm x 1"	28mm x 1" x 28mm	41	42	30	18	08589

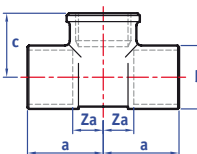
Suitable for: Copper ends x BSP parallel female branch



### YP30BP Backplate tee

Size		a	b	c	Za	Order code
UK	European					UK
15mm x 15mm x 1/2"	15mm x 1/2" x 15mm	28	29	26	15	08600

Suitable for: Copper ends x BSP parallel female branch



### YP30R Female tee

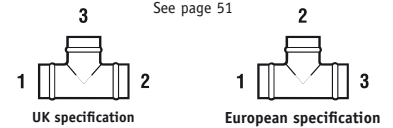
Size		a	b	c	Za	Order code
UK	European					UK
15mm x 15mm x 1/4"	15mm x 1/4" x 15mm	22	20	21	8	08590
22mm x 22mm x 1/2"	22mm x 1/2" x 22mm	30	27	25	12	08591
28mm x 28mm x 1/2"	28mm x 1/2" x 28mm	34	34	28	12	08592
28mm x 28mm x 3/4"	28mm x 3/4" x 28mm	38	34	23	15	08593
35mm x 35mm x 1/2"	35mm x 1/2" x 35mm	38	41	32	11	08594
35mm x 35mm x 3/4"	35mm x 3/4" x 35mm	41	41	36	15	08595
42mm x 42mm x 1/2"	42mm x 1/2" x 42mm	44	49	32	13	08596

Suitable for: Copper ends x reduced female BSP branch



## Tee specification

See page 51

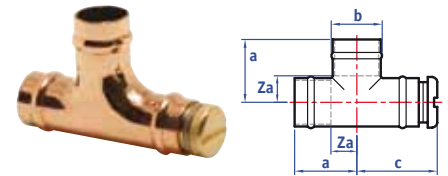


# 2

### YP35 Air vent tee

Size	a	b	c	Za	Order code
15mm	31	19	35	14	08615

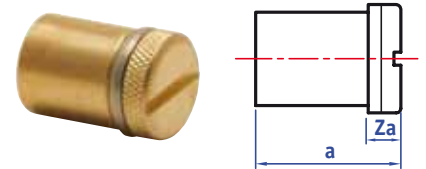
Suitable for: Copper ends



### RV35 Air release valve

Size	a	Za	Order code
15mm	22	6	08620

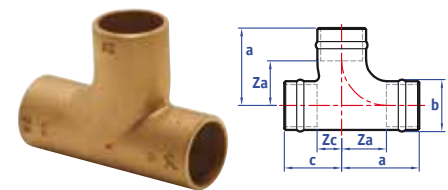
Suitable for: Male copper end



### YP37 Sweep tee 90°

Size	a	c	Za	Zc	Order code
15mm	30	26	14	12	08630
22mm	36	32	18	14	08631
28mm	56	41	33	19	08632

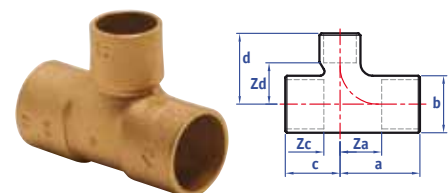
Suitable for: All ends for copper



### YP37R Sweep tee, reduced branch

Size UK	European	a	b	c	d	Za	Zc	Zd	Order code UK
22 x 22 x 15mm	22 x 15 x 22mm	33	27	25	33	15	6	20	08640
28 x 28 x 15mm	28 x 15 x 28mm	45	34	33	44	23	11	31	08641

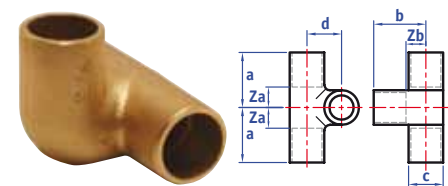
Suitable for: All ends for copper



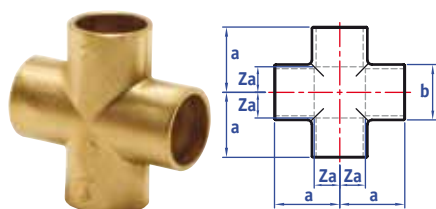
### YP40 Offset tee

Size UK	European	a	b	c	d	Za	Zb	Order code UK
15 x 15 x 15mm	15 x 15 x 15mm	25	25	20	21	12	12	08650
22 x 22 x 15mm	22 x 15 x 22mm	33	33	27	27	14	14	08652
22 x 22 x 22mm	22 x 22 x 22mm	30	26	27	24	11	12	08651

Suitable for: All ends for copper



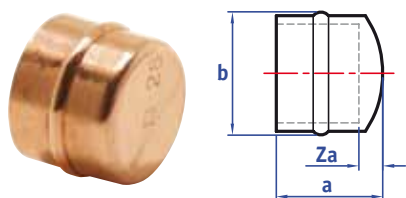
## Integral lead-free solder ring fittings for copper



### YP50 Cross

Size	a	b	Za	Order code
15mm	23	22	11	08660
22mm	32	28	13	08661

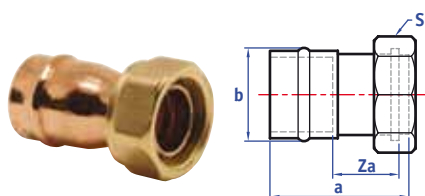
Suitable for: All ends for copper



### YP61 Stop end

Size	a	b	Za	Order code
8mm	14	11	5	08670
10mm	14	13	3	08672
12mm	15	15	3	08674
15mm	16	19	2	08680
22mm	21	26	2	08682
28mm	24	32	2	08684
35mm	32	40	2	08686
42mm	36	48	3	08688
54mm	41	60	2	08690

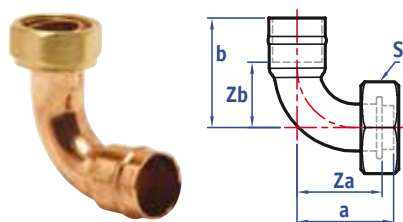
Suitable for: For use on copper tube



### YP62 Tap connector

Size	a	b	Za	S	Order code
15mm x 1/2"•	37	19	16	24	08700
15mm x 3/4"	37	19	18	31	08702
22mm x 1/2"	43	26	21	24	08703
22mm x 3/4"	48	26	26	30	08710

Suitable for: Copper x BSP union nut



### YP63 Bent tap connector

Size	a	b	Za	Zb	S	Order code
15mm x 1/2"	38	27	33	24	24	08720
22mm x 3/4"	51	46	45	27	31	08723

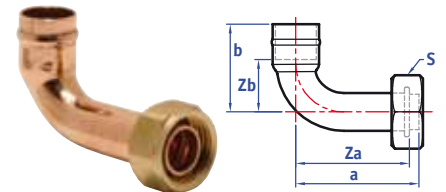
Suitable for: Copper x BSP union nut

•These items comprise the YPS range.

### YP63L Long bent tap connector

Size	a	b	Za	Zb	S	Order code
15mm x 1/2"	55	31	51	14	24	08724

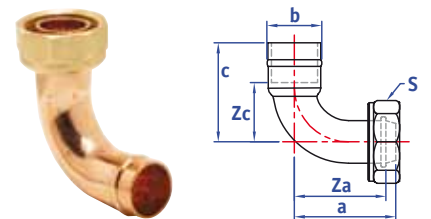
Suitable for: Copper x BSP union nut



### YP64 Bent union adaptor

Size	a	b	c	Za	Zc	S	Order code
22mm x 1"	63	26	52	55	33	37	08732
28mm x 1 1/4"	51	33	54	39	32	46	08734

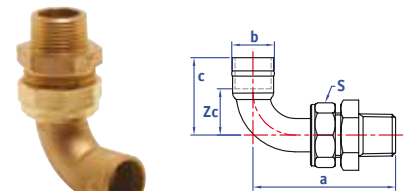
Suitable for: Copper x BSP union nut



### YP65 Bent male union connector

Size	a	b	c	Zc	S	Order code
15mm x 1/2"	82	19	41	26	30	08751
22mm x 3/4"	98	26	52	32	37	08752
28mm x 1"	91	33	53	30	46	08753
35mm x 1 1/4"	107	40	86	60	54	08754
42mm x 1 1/2"	128	47	77	47	65	08755

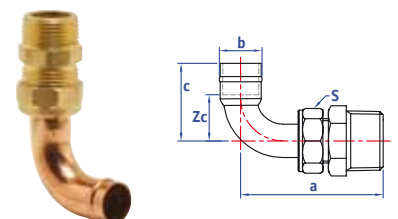
Suitable for: Copper x BSP taper male thread



### YP65R Bent boiler union

Size	a	b	c	Zc	S	Order code
15mm x 1"	107	26	50	31	37	08780

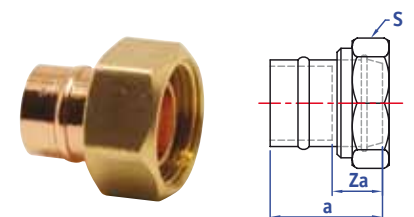
Suitable for: Copper x BSP taper male thread



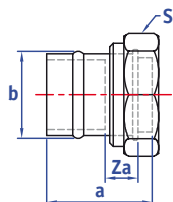
### YP68 Union adaptor

Size	a	Za	S	Order code
15mm x 3/4"	28	5	30	08783
22mm x 1"	35	13	37	08784
28mm x 1 1/4"	36	1	46	08786

Suitable for: Copper x BSP union nut



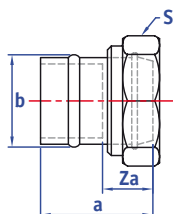
## Integral lead-free solder ring fittings for copper



### YP68CL Union adaptor

Size	a	Za	S	Order code
15mm x 3/4"	21	-	32	08800
22mm x 1"	25	7	37	08801
28mm x 1 1/4"	30	4	46	08802

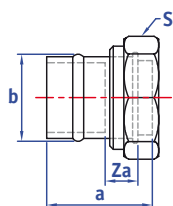
Suitable for: Copper x BSP union nut



### YP68DZR Straight union adaptor

Size	a	Za	S	Order code
15mm x 3/4"	28	5	30	09025
22mm x 1"	35	13	37	09026

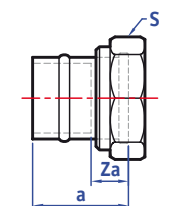
Suitable for: Copper x BSP union nut



### YP68CLDZR Union adaptor

Size	a	Za	S	Order code
15mm x 3/4"	21	-	32	09035
22mm x 1"	25	7	37	09036

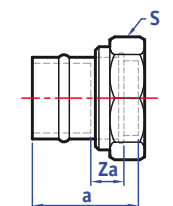
Suitable for: Copper x BSP union nut



### YP68FF Flat faced union adaptor

Size	a	Za	S	Order code
15mm x 3/4"	17	3	30	08796
22mm x 1"	21	2	37	08797

Suitable for: Copper x BSP union nut



### YP68M Meter union connector

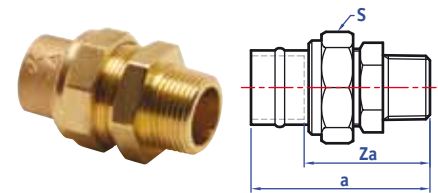
Size	a	Za	S	Order code
22mm x 3/4"	48	24	35	08795

Suitable for: Copper x BSP union nut

**YP69 Straight male union connector**

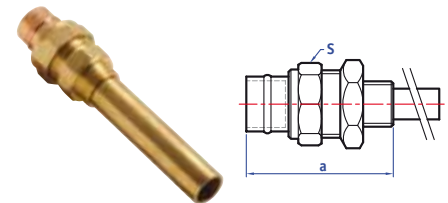
Size	a	Za	S	Order code
15mm x 1/2"	61	46	31	08813
22mm x 3/4"	70	48	37	08814
28mm x 1"	77	54	46	08816
28mm x 1"	73	46	53	08817
35mm x 1 1/4"	86	55	65	08818
54mm x 2"	107	70	82	08819

Suitable for: Copper x BSP taper male thread

**YP69DP Straight male union connector with dip pipe**

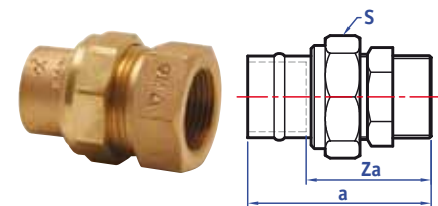
Size	a	Za	S	Order code
22mm x 3/4"	66	45	37	08825

Suitable for: Copper end

**YP69F Straight female union connector**

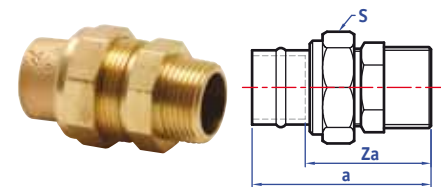
Size	a	Za	S	Order code
15mm x 1/2"	54	35	30	08833
22mm x 3/4"	61	39	37	08834
28mm x 1"	66	44	46	08835
35mm x 1 1/4"	69	43	53	08836
42mm x 1 1/2"	78	47	66	08837
54mm x 2"	93	56	82	08838

Suitable for: Copper x BSP parallel female thread

**YP69P Straight male union connector**

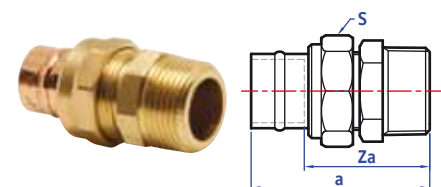
Size	a	Za	S	Order code
15mm x 1/2"	56	33	30	08840
22mm x 3/4"	66	45	37	08841
28mm x 1"	72	36	46	08842
67mm x 2 1/2"	96	48	96	08850

Suitable for: Copper x BSP parallel male thread

**YP69R Straight boiler union**

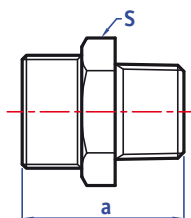
Size	a	Za	S	Order code
22mm x 1"	72	51	37	08855

Suitable for: Copper x BSP taper male thread





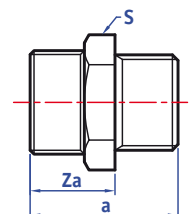
## Integral lead-free solder ring fittings for copper



### YP70 Male nipple

Size	a	S	Order code
1/2" x 3/8"	31	23	08871
3/4" x 1/2"	39	28	08872
1" x 3/4"	41	33	08873
1 1/4" x 1"	46	44	08874

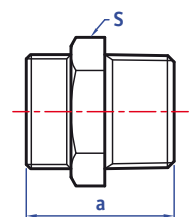
Suitable for: Union thread x BSP taper male thread



### YP70P Male nipple

Size	a	Za	S	Order code
3/4" x 1/2"	30	20	26	08880
1" x 3/4"	34	23	34	08881

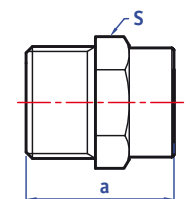
Suitable for: Union thread x BSP parallel male thread



### YP71 Male nipple

Size	a	S	Order code
1/2"	32	22	08885
3/4"	40	27	08886
1"	44	34	08887
1 1/4"	40	44	08888

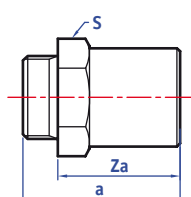
Suitable for: Union thread x BSP taper male thread



### YP72 Female nipple

Size	a	S	Order code
3/4" x 1/2"	31	28	08892
1" x 3/4"	33	34	08893
1 1/4" x 1"	36	44	08894
1 1/2" x 1 1/4"	43	50	08895
2" x 1 1/2"	45	62	08896
2 1/2" x 2"	48	77	08897

Suitable for: Union thread x BSP parallel female thread



### YP115 Extension nipple

Size	a	Za	S	Order code
1/2"	28	16	25	08945
3/4"	33	21	33	08946

Suitable for: Use to give extra length to female ends on YP14, YP15 and YP30

# Heating components

- Manifolds for use in heating systems are compact and cover both linear flow and side entry options
- Initially supplied in small basic units which can be coupled together for larger systems

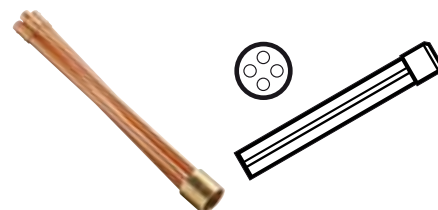
2

## Manifolds

### 1481 Linear flow manifold

Size	Order code
22 x 8mm	80050

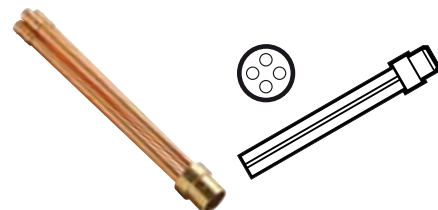
Suitable for: Capillary socket inlet x four soft copper tube outlets



### 1483 Linear flow manifold

Size	Order code
22 x 10mm	80053

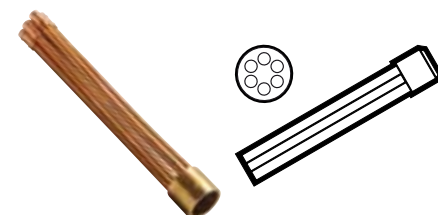
Suitable for: Capillary socket inlet x four soft copper tube outlets



### 1486 Linear flow manifold

Size	D	L	Order code
28 x 8mm	00	00	80060

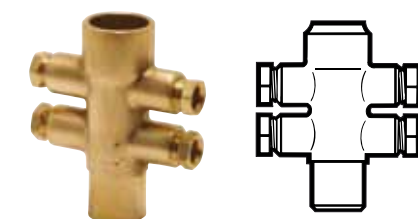
Suitable for: Capillary socket inlet x six soft copper tube outlets



### 1491 Side entry manifold

Size	Order code
22 x 8mm	80070

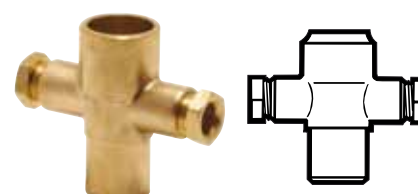
Suitable for: Capillary socket inlet x male end for insertion into fitting x four compression outlets



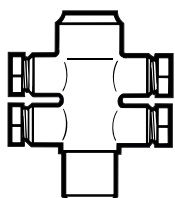
### 1495 Side entry manifold

Size	Order code
22 x 10mm	80072

Suitable for: Capillary socket inlet x male end for insertion into fitting x two compression outlets



## Heating components



### 1496 Side entry manifold

Size	Order code
22 x 10mm	80073

Suitable for: Capillary socket inlet x male end for insertion into fitting x four compression outlets



### 1478A Compression nut

Size	Order code
8mm	80002
10mm	80003

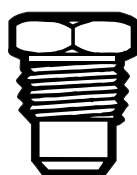
Suitable for: Side entry manifolds



### 1478B Compression ring

Size	Order code
8mm	80011
10mm	80012

Suitable for: Side entry manifolds



### 1478C Blank nut

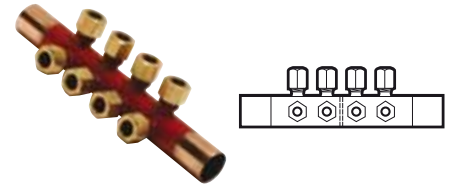
Size	Order code
8mm	80020
10mm	80021

Suitable for: Blanking of outlets. Not required on side entry manifolds

**WM8 Micrafold - 8 outlets**

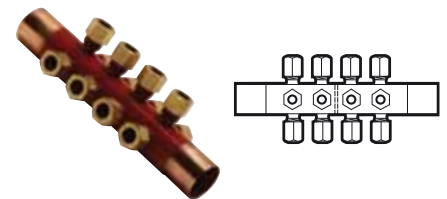
Size	Order code
22 x 10mm	87102

Suitable for: Metric male copper ends x 10mm compression outlets

**WM12 Micrafold - 12 outlets**

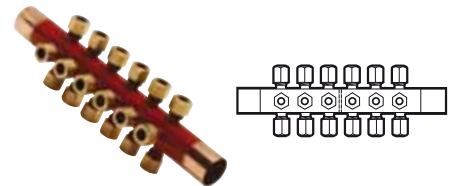
Size	Order code
28 x 10mm	87101

Suitable for: Metric male copper ends x 10mm compression outlets

**WM18 Micrafold - 18 outlets**

Size	Order code
28 x 10mm	87100

Suitable for: Metric male copper ends x 10mm compression outlets

**WM20 Blanking plug**

Size	Order code
10mm	87155

Suitable for: Self sealing

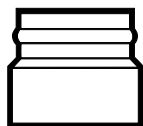
**WM21 Reducing spacer with olive**

Size	Order code
10 x 8mm	87156

Suitable for: Adapting 10mm compression fittings to 8mm tube



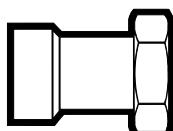
## Waste fittings



### YP6W Reducer

Size	Order code
35 x 28mm	54001
42 x 35mm	54002
54 x 35mm	54003
54 x 42mm	54004

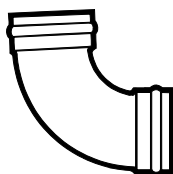
Suitable for: Shorter socket of waste fittings



### YP62W Waste connector

Size	Order code
35mm x 1 1/4"	54006

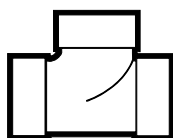
Suitable for: Connecting copper waste pipe to screwed outlet



### YP323 Copper bend 91.5°

Size	Order code
35mm	54033
42mm	54034
54mm	54035

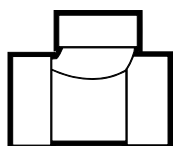
Suitable for: Copper x copper



### YP359 Pitcher tee 88.5° equal ends

Size	Order code
35mm	54055
42mm	54056
54mm	54057

Suitable for: Branch for connection to outlet of tee trap



### YP359R Pitcher tee 88.5° equal ends

Size	Order code
42 x 42 x 35mm	54058
54 x 54 x 35mm	54060
54 x 54 x 42mm	54059

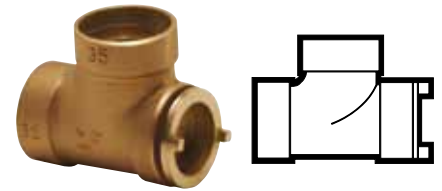
Suitable for: Branch reduced, for connection to outlet of trap tee



- Yorkshire waste are available for standard domestic and commercial water systems such as basins, baths, sinks and other sanitary appliances
- Available with standard flush or with a polished finish
- Available in sizes from 28-54mm

### YP363 Pitcher tee 88.5° with screwed cleaning plug

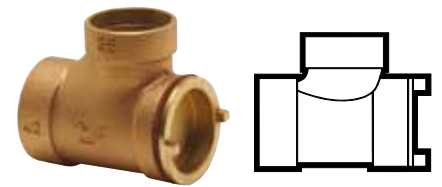
Size	Order code
35mm	54067
42mm	54068
54mm	54069



Suitable for: Branch for connection to outlet of trap tee

### YP363R Pitcher tee 88.5°

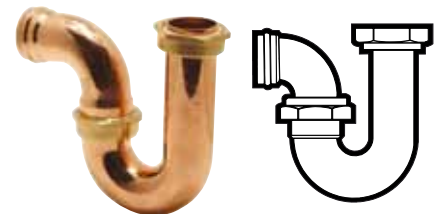
Size	Order code
42 x 42 x 35mm	54070
54 x 54 x 35mm	54071
54 x 54 x 42mm	54072



Suitable for: Branch reduced, for connection to outlet of trap tee

### YP2001 Copper P trap 85° outlet 38mm (1½") seal

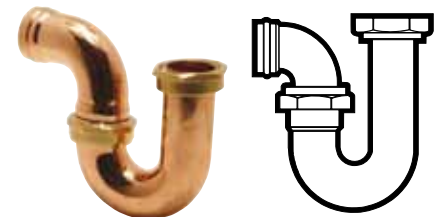
Size	Order code
35mm x 1¼"	54201
42mm x 1½"	54202



Suitable for: Adjustable for depth and direction of outlet

### YP2002 Copper P trap 85° outlet 76mm (3") seal

Size	Order code
35mm x 1¼"	54205
42mm x 1½"	54206



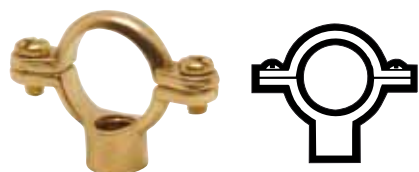
Suitable for: Adjustable for depth and direction of outlet

## Pipe clips and brackets



### 101 Saddle band – copper strip

Size	Order code
15mm	71004
22mm	71005



### 107M Metric single pipe ring – bright dipped finish

Size	Order code
15mm tapped 10mm	72602
22mm tapped 10mm	72603
28mm tapped 10mm	72604



### 110 Hospital bracket – bright dipped finish

Size	Order code
15mm	72536
22mm	72537
28mm	72538



### 111M Metric male backplate

Size	Order code
12 - 108mm	72621

For use with pipe rings 107M



### 116M Metric female backplate

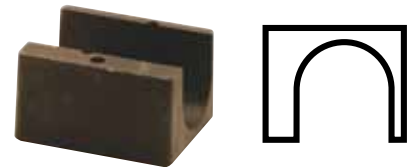
Size	Order code
12 - 108mm	72622

For use with pipe rings 107 and 107DM. Tapped 10mm and suitable for all ring sizes

## Pipe joist clips

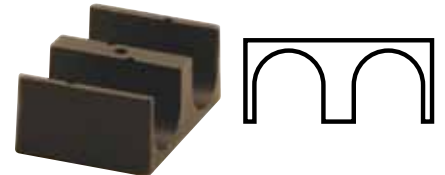
### SPJ Single – two part clip

Size	Order code
15mm	72640
22mm	72641



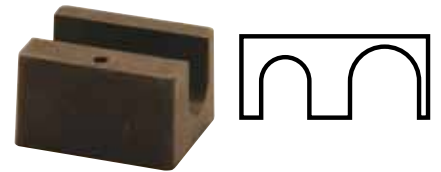
### DPJ Double – two part clip

Size	Order code
15mm	72642
22mm	72643

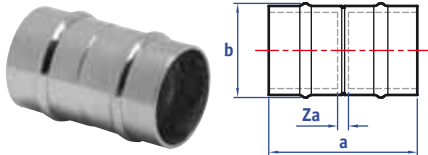


### DPJM Mixed double – two part clip

Size	Order code
15mm + 22mm	72644



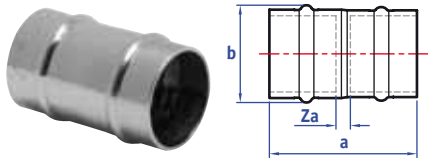
## Chrome plated fittings



### YP1CP Straight coupling

Size	a	b	Za	Order code
8mm	20	11	2	08002
12mm	26	15	2	08006
15mm	30	19	2	08011
22mm	40	26	2	08021
28mm	47	33	3	08031

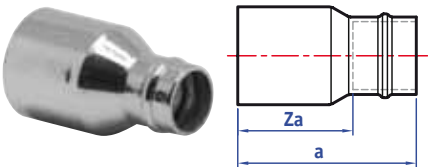
Suitable for: Copper x copper



### YP1IMCP Slip adaptor coupling

Size	a	b	Za	Order code
3/4" x 22mm	41	27	2	08051

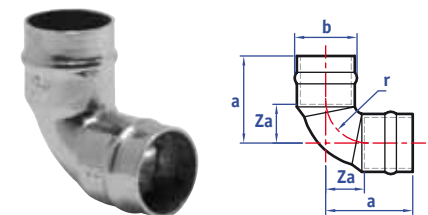
Suitable for: Copper x copper



### YP6CP Reducer

Size	a	Za	Order code
22 x 15mm	41	26	08201
28 x 15mm	48	33	08203
28 x 22mm	49	30	08205

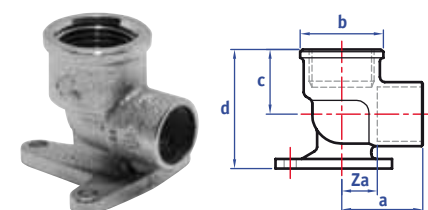
Suitable for: Large male end for insertion into fitting x female fitting



### YP12CP Elbow

Size	a	b	Za	r	Order code
8mm	18	11	8	10	08267
12mm	25	16	13	14	08271
15mm	26	19	12	12	08281
22mm	36	27	16	26	08291
28mm	41	32	19	34	08301

Suitable for: Copper x copper



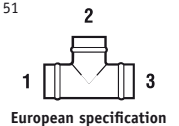
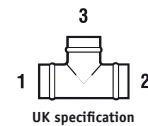
### YP15CP Backplate elbow - 3 hole

Size	a	b	c	d	Za	Order code
15mm x 1/2"	26	28	31	41	11	08366

Suitable for: Copper x BSP parallel female thread

## Tee specification

See page 51



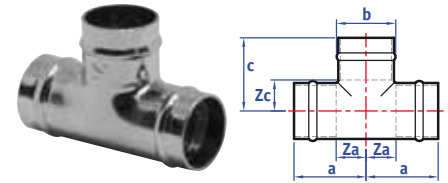
# 2

- Aesthetic appeal or, for maximum effect, order with a polished finish to special order. Ideal for use where products are on show, including kitchens and bathrooms
- Available in size from 6-54mm
- Manufactured from Copper or Copper alloy

### YP24CP Equal tee

Size	a	b	c	Za	Zc	Order code
15mm	24	19	24	10	10	08451
22mm	32	26	32	13	13	08461
28mm	38	33	38	16	16	08463

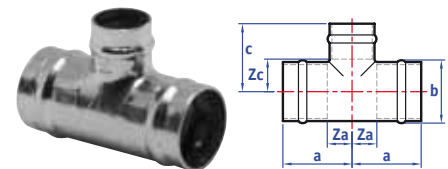
Suitable for: All ends for copper



### YP25CP Tee, reduced branch

Size UK	European	a	b	c	Za	Zc	Order code UK
22 x 22 x 15mm	22 x 15 x 22mm	28	26	27	9	13	08491

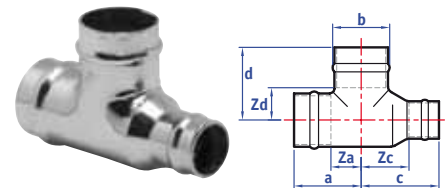
Suitable for: All ends for copper



### YP26CP Tee, one end reduced

Size UK	European	a	b	c	d	Za	Zc	Zd	Order code UK
22 x 15 x 22mm	22 x 22 x 15mm	32	26	36	32	14	22	13	08511

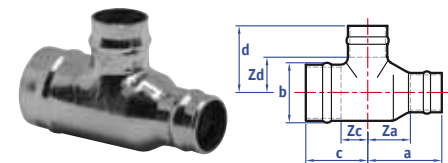
Suitable for: All ends for copper



### YP27CP Tee, one end and branch reduced

Size UK	European	a	b	c	d	Za	Zc	Zd	Order code UK
22 x 15 x 15mm	22 x 15 x 15mm	33	26	33	28	19	11	14	08531

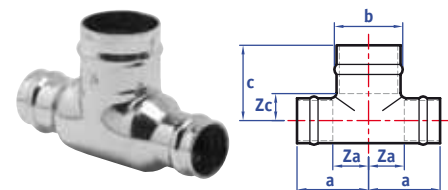
Suitable for: All ends for copper



### YP28CP Tee, both ends reduced

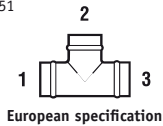
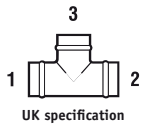
Size UK	European	a	b	c	Za	Zc	Order code UK
15 x 15 x 22mm	15 x 22 x 15mm	37	26	21	23	12	08552

Suitable for: All ends for copper

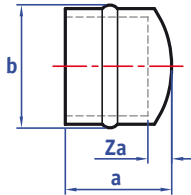




**Tee specification**  
See page 51



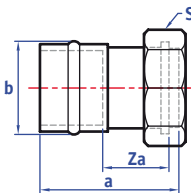
## Chrome plated fittings



### YP61CP Stop end

Size	a	b	Za	Order code
15mm	16	19	2	08681
22mm	21	26	2	08683
28mm	24	32	2	08685

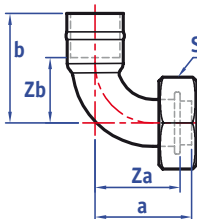
Suitable for: Use with copper tube



### YP62CP Straight tap connector

Size	a	b	Za	S	Order code
15mm x 1/2"	37	19	16	24	08701
22mm x 3/4"	48	26	26	30	08711

Suitable for: Copper x union nut



### YP63CP Bent tap connector

Size	a	b	Za	Zb	S	Order code
15mm x 1/2"	38	27	33	24	24	08721

Suitable for: Copper x union nut

## Accessories and sundries

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

### Accessories

#### 130 Yorkshire flux

Size	Order code
100g carton	70212
500g carton	70213

WRAS approved



#### 131 Traditional craftsman's flux

Size	Order code
100g carton	70214
500g carton	70215

Grease based flux. WRAS approved



#### 145 Cleaning pads

Size	Order code
Pack of 2	71070



#### 146 Steel wool

Size	Order code
450g/1lb pack	21060
16 pad pack	71060



#### CM4 Heat resistant mat

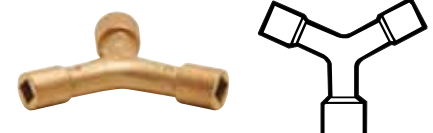
Size	Order code
300mm x 250mm	21063



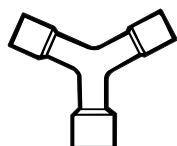
#### SK2 3 Ended key

Size	Order code
15 - 28mm	73190

For lockshield stopvalves



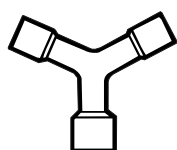
## Accessories and sundries



### SK3 3 Ended key

Size	Order code
35 - 54mm	73191

For lockshield stopvalves



### VK3 3 Ended key

Size	Order code
15 - 54mm	71544

For gunmetal lockshield gate valves



### FW1 Tap connector washers

Size	Order code
3/8"	71220
1/2"	73050
3/4"	73051



### FW2 Union connector washers

Size	Order code
3/4"	71310
1"	71223
1 1/4"	71311

## Sundries



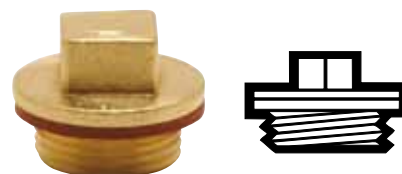
### 450 Brass plug

Size	Order code
1/8"	72625
1/4"	72626
3/8"	72627

Hexagonal head. BSP parallel male thread

**450DZR DZR plug**

Size	Order code
1/2"	72628
3/4"	72629
1"	72630

**456DZR DZR backnut**

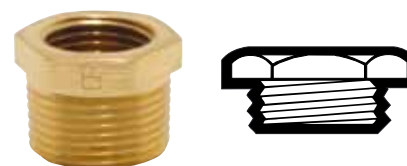
Size	Order code
1/2"	70102
3/4"	70103

*BSP thread with flange*

**464DZR Hexagonal DZR bush**

Size	Order code
1/2" x 1/4"	72696
1/2" x 3/8"	72697
3/4" x 1/2"	72700
1" x 1/2"	72702
1" x 3/4"	72703
1 1/4" x 1"	72706

*Screwed inside and outside, BSP taper male thread*

**470DZR Blank DZR hexagonal nut**

Size	Order code
1/2"	70171
3/4"	70172
1"	70173

*BSP thread. Supplied with a washer*

**472 Hexagonal brass nut**

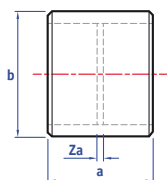
Size	Order code
3/4"	70013
1 1/2"	70016
2"	70017
2 1/2"	70018

*BSP thread. Suitable for use on union fittings in place of standard*



## General high duty

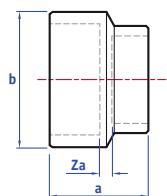
Range of capillary fittings are suitable for use on air conditioning services, vacuum, refrigeration and cryogenic applications; vehicle braking systems; and Nitrogen and Oxygen gas lines. Available in sizes from 6-54mm



### 1GHD Straight coupling

Size	a	b	Za	Order code
8mm	16	12	2	56002
12mm	18	16	2	56004
15mm	15	19	2	56005
22mm	20	27	2	56007
28mm	23	34	2	56008
35mm	27	42	2	56009
42mm	31	50	2	56010
54mm	38	64	2	56011

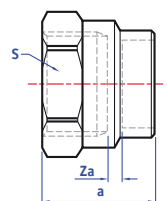
Suitable for: Copper x copper



### 1RGHD Reducing coupling

Size	a	b	Za	Order code
12 x 8mm	18	16	2	56029
15 x 8mm	18	19	3	56032
15 x 12mm	17	19	2	56034
22 x 15mm	19	27	3	56038
28 x 22mm	23	34	2	56042

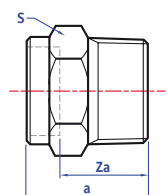
Suitable for: Copper x copper



### 2GHD Straight female connector

Size	a	Za	S	Order code
8mm x 1/4"	25	2	19	56081
15mm x 1/2"	29	3	27	56084
22mm x 3/4"	31	2	32	56086
28mm x 1"	37	2	41	56087

Suitable for: Copper x BSP parallel female thread



### 3GHD Straight male connector

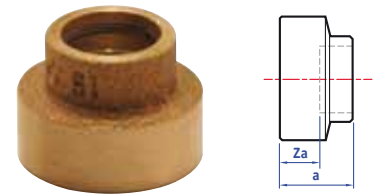
Size	a	Za	S	Order code
8mm x 1/4"	24	17	17	56102
15mm x 1/2"	29	23	23	56105
22mm x 3/4"	34	25	28	56107
28mm x 1"	39	28	36	56108
42mm x 1 1/2"	50	35	55	56110
54mm x 2"	55	37	66	56111

Suitable for: Copper x BSP taper male thread

### 6GHD Reducer

Size	<i>a</i>	<i>Za</i>	Order code
8 x 6mm	12	4	56134
12 x 8mm	10	3	56137
15 x 8mm	10	3	56140
15 x 12mm	10	2	56142
22 x 15mm	11	4	56147
28 x 15mm	20	13	56150
28 x 22mm	13	3	56152
35 x 28mm	14	3	56156
42 x 28mm	23	12	56160
42 x 35mm	17	4	56161
54 x 28mm	28	18	56163
54 x 42mm	20	5	56165

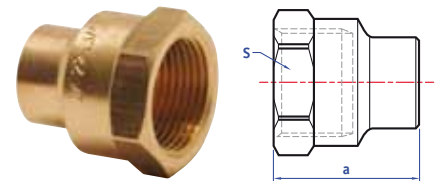
Suitable for: Larger end male copper for insertion into fitting x female copper



### 7GHD Adaptor

Size	<i>a</i>	<i>S</i>	Order code
15mm x 1/2"	34	28	56199

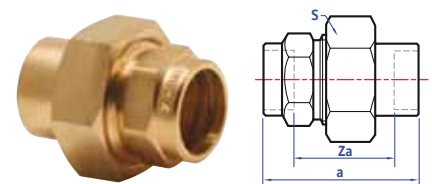
Suitable for: Male copper for insertion into fitting x BSP parallel female thread



### 11GHD Union coupling

Size	<i>a</i>	<i>Za</i>	<i>S</i>	Order code
8mm	40	25	22	56249
12mm	49	33	27	56251
15mm	51	37	32	56252
22mm	58	39	41	56254
28mm	63	41	48	56255
35mm	70	44	55	56256
42mm	75	45	65	56257

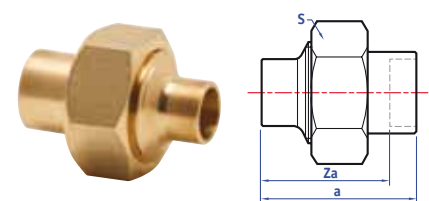
Suitable for: Copper x copper



### 11SGHD Street union coupling

Size	<i>a</i>	<i>Za</i>	<i>S</i>	Order code
12mm	45	37	27	56270
15mm	45	38	32	56271

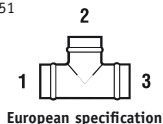
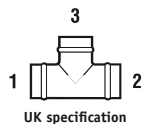
Suitable for: Female copper x male copper for insertion into fitting



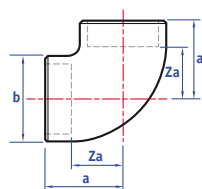


**Tee specification**

See page 51



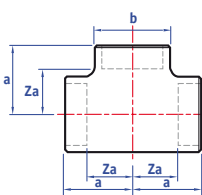
## General high duty



### 12GHD Elbow

Size	a	b	Za	Order code
8mm	15	12	8	56289
12mm	18	16	10	56291
15mm	20	20	13	56292
22mm	25	28	16	56294
28mm	32	35	21	56295
35mm	37	43	24	56296
42mm	41	51	26	56297
54mm	55	65	37	56298

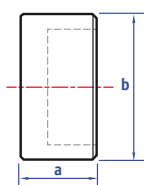
Suitable for: Copper x copper



### 24GHD Equal tee

Size	a	b	Za	Order code
8mm	15	12	8	56336
12mm	18	17	10	56338
15mm	20	20	13	56339
22mm	26	28	16	56341
28mm	32	35	21	56342
35mm	37	43	25	56343
42mm	41	51	27	56344
54mm	55	66	37	56345

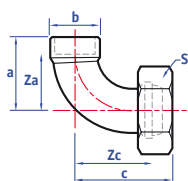
Suitable for: All ends for copper



### 61GHD Stop end

Size	a	b	Order code
15mm	12	19	56470

Suitable for: Use on copper tube



### 64GHD Bent union adaptor

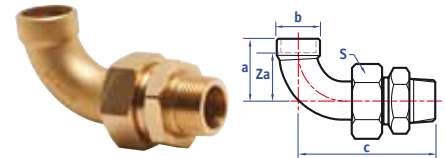
Size	a	b	c	Za	Zc	S	Order code
8mm x 3/8"	26	12	32	19	23	22	56485
12mm x 1/2"	34	16	40	26	30	27	56487
15mm x 3/4"	33	20	48	26	41	31	56488
22mm x 1"	40	27	53	30	40	41	56490
28mm x 1 1/4"	48	35	66	38	54	48	56491

Suitable for: Copper x BSP union nut

### 65GHD Bent male union connector

Size	a	b	c	Za	S	Order code
15mm x 1/2"	34	20	74	27	32	56510
22mm x 3/4"	41	28	82	31	41	56512
28mm x 1"	48	35	102	38	48	56513

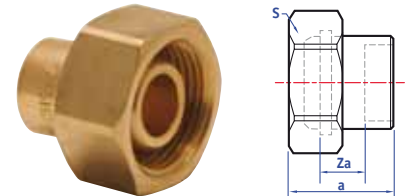
Suitable for: Copper x BSP taper male thread



### 68GHD Straight union adaptor

Size	a	Za	S	Order code
6mm x 1/4"	19	11	19	56535
8mm x 3/8"	23	15	22	56536
12mm x 1/2"	30	22	27	56538
15mm x 3/4"	31	24	32	56539
22mm x 1"	36	26	41	56541
28mm x 1 1/4"	39	28	48	56542
35mm x 1 1/2"	43	29	55	56543

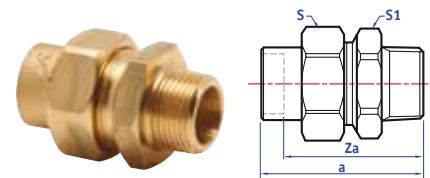
Suitable for: Copper x BSP taper male thread



### 69GHD Straight male union connector

Size	a	Za	S	S1	Order code
8mm x 1/4"	44	37	22	19	56558
12mm x 3/8"	54	46	27	22	56560
15mm x 1/2"	59	52	32	27	56561
22mm x 3/4"	69	60	41	36	56563
28mm x 1"	76	65	48	46	56564
35mm x 1 1/4"	87	74	55	50	56565
42mm x 1 1/2"	93	78	66	60	56566

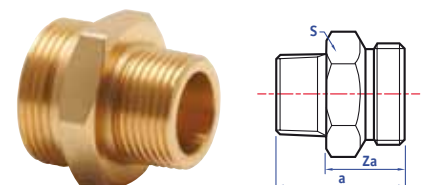
Suitable for: Copper x BSP taper male thread



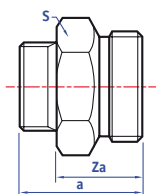
### 70GHD Male hexagon nipple

Size	a	Za	S	Order code
3/8" x 1/4"	27	16	19	56597
1/2" x 3/8"	31	19	22	56598
3/4" x 1/2"	35	20	27	56599
1" x 3/4"	42	27	37	56600
1 1/4" x 1"	46	27	46	56601

Suitable for: BSP union thread x BSP taper male thread 60° cone



## General high duty



### 70PGHD Male hexagon nipple

Size	a	Za	S	Order code
3/8" x 1/4"	23	15	19	56611
1/2" x 3/8"	29	19	22	56612
3/4" x 1/2"	30	20	27	56613
1" x 3/4"	37	26	36	56614
1 1/4" x 1"	40	27	46	56615

Suitable for: BSP union thread x BSP parallel male thread 60° cone

## Accessories



### 130GHD High duty flux

Size	Order code
500g tub	21068



### N165 Silver-flo brazing alloy

Size	Order code
250g reel	71157



### N166 Silver alloy brazing rods

Size	Order code
3mm x 600mm	71175

Yorkshire integral solder ring capillary fittings are suitable for jointing copper tube, which must meet the requirements of BS EN 1057.

**BS EN 1057** Specification for copper and copper alloy – seamless round copper tubes for water (and gas) in sanitary and heating applications. 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.

**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.

**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.

**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. The specifications of copper tube compatible with Yorkshire integral solder ring fittings are detailed in Table 1. 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**

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**

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

**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	
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		
64mm									
67mm				R250/R290					R250

# Solder ring solutions Working temperatures and pressures

## Yorkshire general range fittings

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 General High Duty fittings

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

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. Engineering Practice (S.E.P.) under the Pressure Equipment Directive (P.E.D.) 1999.

## Achieving low temperatures

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.

**Table 1**

<i>Yorkshire general range performance when correctly assembled with copper tube to BS EN 1057</i>				
Size	Service temperature			
	Min -40°C	30°C	65°C	Max 110°C
6mm to 54mm	16bar	16bar	10bar	6bar
67mm	10bar	10bar	6bar	4bar

**Table 2**

<i>Yorkshire General High Duty performance when correctly assembled with high duty tube to the appropriate specification</i>				
Size	Service temperature			
	Min -196°C	150°C	175°C	Max 200°C
6mm	242bar	242bar	151bar	61bar
8mm	202bar	202bar	128bar	51bar
10mm to 12mm	158bar	158bar	99bar	40bar
15mm to 54mm	69bar	69bar	43bar	17bar

## Pressure Equipment Directive (PED)

Since 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.

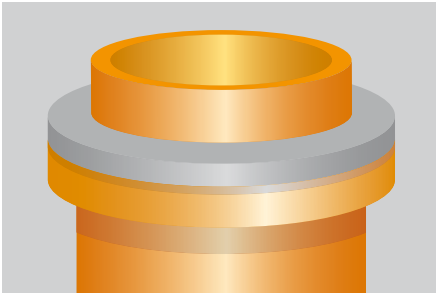
For a detailed explanation please visit [www.pegleyorkshire.co.uk/technical.cfm](http://www.pegleyorkshire.co.uk/technical.cfm)

## Gas families

<i>There are three gas families</i>	
1st Family	Manufactured gas
2nd Family	Natural gas
3rd Family	LPG, compressed propane and butane

### Washers

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.



### Equipotential Bonding

It is the installers duty to ensure all metallic pipework systems comply with the equipotential bonding requirements of the current edition of the IEE electrical wiring regulations (BS 7671:2001).

All Yorkshire fittings provide electrical continuity when the joint has been completed with copper tube.

After all plumbing work has been completed, always ensure continuity checks are conducted by a qualified electrician in accordance with regulations.





# Solder ring solutions System design considerations and tube expansion

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.

### Thermal movement

Thermal movement is major consideration when designing and installing plumbing and heating systems and should be taken into account. 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 wherever possible.

### Correct anchoring

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.

### Expansion of copper tube

Copper has a coefficient of linear expansion of  $17 \times 10^{-6}/^{\circ}\text{C}$ . For example, a 10 metre length of copper tube carrying hot 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 (below).

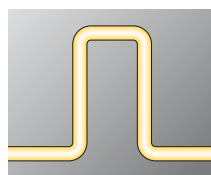
### Pipeline supports

Pipelines should always be assembled 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. Pegler Yorkshire offers a wide range of

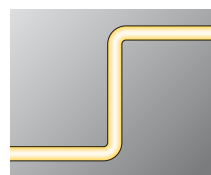
pipe clips and brackets to ensure safe and secure installations. Pipe joist clips are also available and are designed to protect pipework against accidental piercing when nailing or screwing down floorboards. For the maximum spacing of supporting brackets refer to the table (below).

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

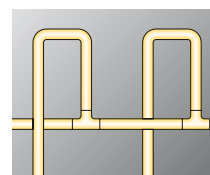
### Techniques for expansion stress relief



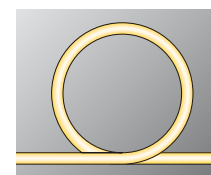
Horseshoe expansion link



Offset



Crossover tee arrangement



Expansion loop suitable for 10mm tube only

Temperature change	COPPER TUBE EXPANSION																			
	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	13.0mm										
40°C	2.0mm	2.7mm	3.4mm	4.1mm	4.8mm	5.4mm	6.1mm	6.8mm	8.2mm	17.0mm										
50°C	2.6mm	3.4mm	4.3mm	5.1mm	6.0mm	6.8mm	7.7mm	8.5mm	10.2mm	21.0mm										
60°C	3.1mm	4.1mm	5.1mm	6.1mm	7.1mm	8.2mm	9.2mm	10.2mm	12.2mm	26.0mm										
70°C	3.6mm	4.8mm	6.0mm	7.1mm	8.3mm	9.5mm	10.7mm	11.9mm	14.3mm	30.0mm										
80°C	4.1mm	5.4mm	6.8mm	8.2mm	9.5mm	10.9mm	12.2mm	13.6mm	16.3mm	34.0mm										
90°C	4.6mm	6.1mm	7.7mm	9.2mm	10.7mm	12.2mm	13.8mm	15.3mm	18.4mm	38.0mm										
100°C	5.1mm	6.8mm	8.5mm	10.2mm	11.9mm	13.6mm	15.3mm	17.0mm	20.4mm	43.0mm										

### Insulation

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

When using rigid phenolic foam (or other thermal insulation) to lag pipework, always remember to refer to the lagging manufacturer's fixing instructions. To avoid the risk of external corrosion of 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.

### Covered pipework

Making provision for thermal movement is vital where pipe-work is installed under screed or plaster, or passes through brick or blockwork. 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.

### Pipework accessibility

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

### Chemicals

Some contracts may require the use of proprietary chemicals to cleanse and flush pipework before full commissioning. Yorkshire fittings are compatible with a selection of products – contact us for a list.

### Fluxes

Yorkshire Flux, Traditional Craftsman's Flux and Degussa H high duty flux are subject to the requirements of the Control of Substances Hazardous to Health (COSHH) regulations. COSHH sheets are available to download from our website, [www.pegler.yorkshire.co.uk](http://www.pegler.yorkshire.co.uk)  
Soldering fluxes do not support microbiological growth in potable water

supplies and their residues are non-corrosive. Fluxes prevent oxidation at 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 adding the distribution of the solder over the whole jointing surface.

Traditional Craftsman's Flux maintains its consistency over a long period of time and 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.

Yorkshire Flux, like Traditional Craftsman's, Yorkshire Flux 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.

Degussa H ready-mixed paste is for brazing copper and copper alloys, such as Pegler Yorkshire General High Duty fittings.

### Connectors



#### Male connectors

Yorkshire male connectors have threads to ISO 7/EN 10226-1. Inert jointing compounds or PTFE tape should be applied to taper threads and good quality jointing washers should be used with parallel threaded fittings. All Yorkshire male ended fittings should only be used with soldered joints.

#### Female connectors

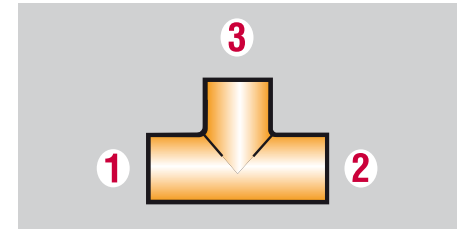


Yorkshire female threaded connectors have internal parallel threads to ISO 7/EN 10226-1.

### Tee Specification

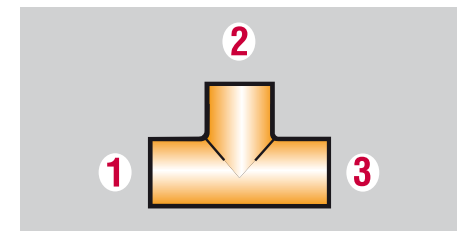
#### UK SPECIFICATION

First quote the ends on the run (larger end first) and then the branch.



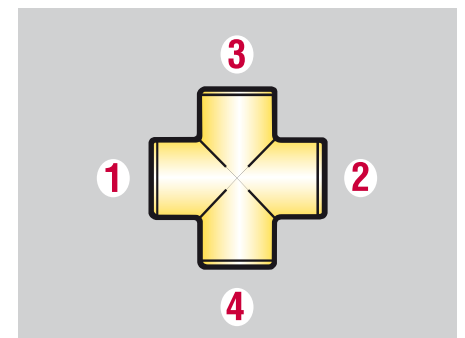
#### EUROPEAN SPECIFICATION

Quote the larger end first, then the branch, followed by the remaining end.

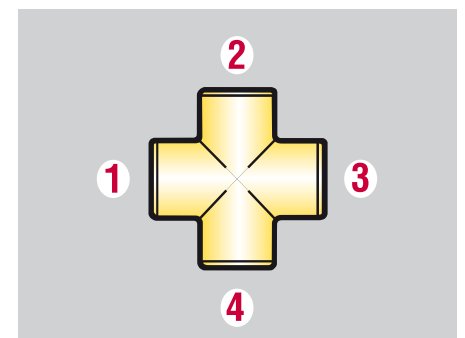


### Cross Specification

#### UK SPECIFICATION



#### EUROPEAN SPECIFICATION



# Solder ring solutions

## Yorkshire general range installation instructions

The following instructions illustrate just how easy it is to make a Yorkshire integral solder ring joint. The fittings use the principle of capillary action 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 General High Duty fittings can be found on page 54.

### Installation tips

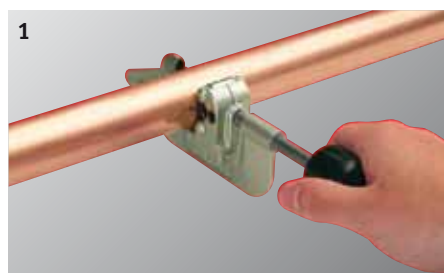
Best results are obtained when joints are heated as soon as possible after assembly. After heating and subsequent cooling, flush the system – preferably with hot water. Ensure adequate ventilation during heating. Any joints not heated during the working day should be dismantled, cleaned and refluxed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

### Preliminaries

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 de-burring 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.



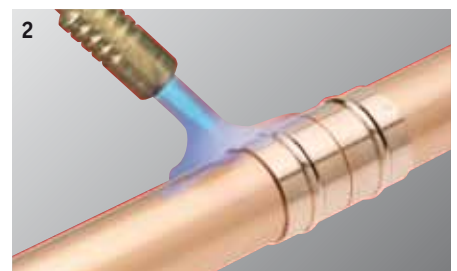
### Joining

**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.

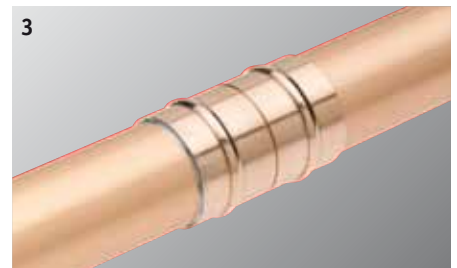
The reliability of soldered joints is greatly influenced by the type of flux used. Yorkshire flux and Traditional Craftsman's flux are specially formulated for jointing copper tubes with Yorkshire integral solder ring fittings. All fluxes are, to some extent, corrosive, but special care should be taken 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.



### Threaded connectors

A good quality jointing washer should be used when installing fittings with parallel connector threads. 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.

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.

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**

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.

**Slip couplings and tees**

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**

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**

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**

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**

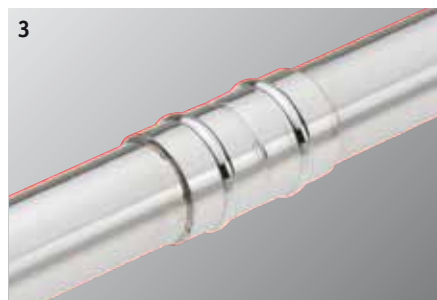
Solder will not bond to chrome plate, meaning the plating needs to be removed from copper tube before a joint is made. The same preliminaries and preparation guidelines apply.

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.



**System testing**

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 48 for data). If higher test pressures are required advice should be sought from Pegler Yorkshire.

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.

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.

N.B. The maximum temperature and pressure range in any system is dictated by the component with the lowest performance rating.

**Local water authority**

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

**Union fittings**

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.



# Solder ring solutions

## General High Duty installation instructions

### Making a Yorkshire General High Duty joint

The same preliminaries apply as for Yorkshire general range fittings.

#### 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.

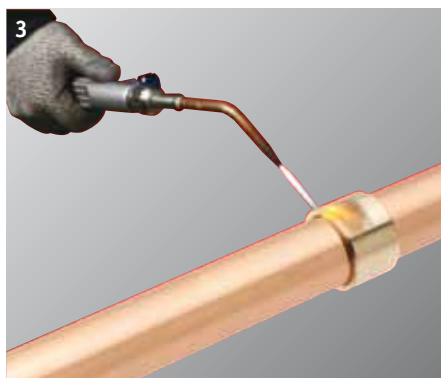
#### Jointing

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.



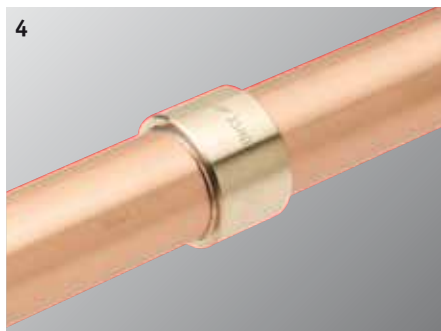
2. Insert the tube into the fitting until it reaches the tube stop, using a twisting action to ensure the spread of flux. Ensure the tubes are correctly lined up and adequately supported – otherwise distortion or cracking may occur when at brazing temperature.

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 (Copper coloured) or N166 (Brass coloured) 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

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

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

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

### Imperial to metric

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

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.

## Stopvalves

Stopvalves are designed for use wherever the flow of hot or cold water services needs to be controlled or regulated. 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.

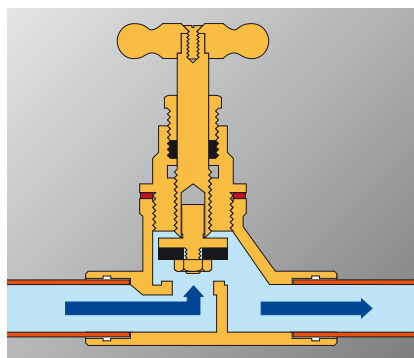
The Pegler Yorkshire stopvalve range is available with union ends allowing easy removal of the valve without the need to disturb fixed pipework. All stopvalves have bonded and sealed headworks to provide maximum reliability.

BS 1010 Part 2 Draw off taps, above ground stopvalves and union ends. BS 1010 stopvalves 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.

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



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

## Gatevalves

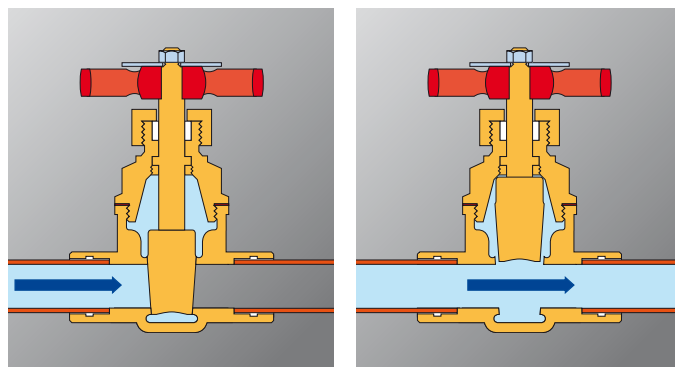
Gate valves are available in wheelhead and lockshield varieties and are manufactured from corrosion resistant materials including gunmetal. Available in sizes from 15mm to 54mm, the gatevalves incorporate high quality PTFE packing, which has hardwearing properties to withstand the effects of harsh service 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.

Pegler 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.

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.

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



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

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



# Solder ring solutions Stopvalves, gate valves and plugcocks

## Plugcocks

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.

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.

Pegler Yorkshire plugcocks perform to the service temperatures and pressures indicated in the table.

*Pegler 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	
	Minimum -10°C	Maximum 30°C
15mm to 22mm	0.35 bar	0.35 bar











# Pegler Yorkshire

## Our brands:



## UK sales

Free Phone: 0800 156 0010  
Free Fax: 0808 156 1011  
Email: [uk.sales@pegleryorkshire.co.uk](mailto:uk.sales@pegleryorkshire.co.uk)

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Fax: +44 (0) 1302 730 513  
Email: [export@pegleryorkshire.co.uk](mailto:export@pegleryorkshire.co.uk)

## Technical Help

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## Brochure Hotline

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Free Fax: 0808 156 1011  
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