Speedfit®

THE PUSH-FIT SOLUTION FOR PLUMBING AND HEATING SYSTEMS

Speedfit Fittings are suitable for use with copper pipe.

Includes this NEW addition:

Layflat Pipe

Installing pipe just got a lot easier.

UK PRODUCT INSTALLATION & TRADE GUIDE

APRIL 2014

John Guest®

Worldwide Connections

The John Guest Group has a long established reputation as a world leading manufacturer of push-fit fittings, tube and other fluid control products. A reputation built on producing consistently high quality products with an ongoing commitment to value engineering and product development.

Quality Manufacture

A commitment to quality is at the heart of the John Guest Philosophy.

The strictest control is maintained by virtue of the fact that design and manufacture is carried out in modern purpose built manufacturing centres in west London and at Maidenhead in Berkshire.

Maintaining control over the whole process from initial tool design and tool making through to final assembly and testing ensuring that only products of the highest quality are produced.

The company believe it is this commitment to quality that has led to it receiving prestigious awards from many of the world's leading testing and approvals organisations.

John Guest is a preferred supplier to many international companies.

BS 7291 Parts 1, 2 and 3
KM39767

PEX Fittings and Barrier Pipe
K24076, K24077, K24078

STANDARDS AND AFFILIATIONS

Extensive tests have shown that Speedfit products will withstand temperatures and pressures well in excess of normal working conditions.

JG Speedfit should be installed to conform with good plumbing practice.

British Gas Service has accepted the John Guest Speedfit System as being suitable for open vented and sealed central heating systems and as eligible for acceptance onto its service contracts.




Contents

JG Speedfit®

THE PUSH-FIT SOLUTION FOR PLUMBING AND HEATING SYSTEMS

JG Speedfit is a Push-fit system suitable for the plumbing of normal domestic hot and cold water services and central heating applications, including pressurised and combi systems.

Speedfit Fittings have been designed for use with both Speedfit and copper pipe, in diameters of 10mm to 28mm.

They are approved by the British Board of Agrément and Water Regulations Advisory Scheme. Speedfit 'PEM' fittings and PEX and Polybutylene Barrier Pipe are Kitemarked to BS7291:2010 Parts 1, 2 and 3 Class S Licence No KM39767.

Speedfit fittings and barrier pipe offer a complete system of plastic plumbing. They are manufactured to comply with BS7291:2010 Parts 1, 2 and 3 Class S.

Performance specifications are well within those required for most normal domestic central heating and water supply systems including:

- Mains fed and indirect cold water systems.
- Vented and unvented hot water systems.
- Vented central heating systems.
- Sealed central heating systems provided temperatures and pressures comply with BS7291:2010 Parts 1, 2 and 3 Class S.
- Underfloor heating.

Extensive tests have shown that Speedfit products will withstand temperatures and pressures well in excess of normal working conditions.

JG Speedfit should be installed to conform with good plumbing practice.

British Gas Service has accepted the John Guest Speedfit System as being suitable for open vented and sealed central heating systems and as eligible for acceptance onto its service contracts.

25 YEAR GUARANTEE

As a result of long term test programmes and rigorous quality standards John Guest Speedfit Limited offer a 25 year guarantee against the defects in materials or manufacturing of 'PEM', 'PSE' and 'SFM' Range Plumbing Fittings and Speedfit Barrier Pipe manufactured by John Guest.

John Guest Underfloor Heating Products, Brass Manifolds and Radiator Valves, which should be installed and maintained in accordance with our recommendations, carry a 2 year guarantee from date of delivery against defects in materials and manufacture.

John Guest Plumbing and Heating Products are for use with normal UK domestic plumbing and heating systems and supplied in accordance with our Conditions of Sale.

TECHNICAL CHECKLIST

The Technical Checklist for Plumbing and Heating Products is on pages 73 to 75.

SPEEDFIT SUPPORT

Speedfit Support's national team of technical engineers is available to help you get the best from your Speedfit System, be it assistance or advice.

Their service includes a free underfloor heating estimate, onsite installation advice, a technical helpline and a free CAD design service.

Technical Help Desk: 01895 425333
8am to 5pm Monday through Friday

Onsite Installation Advice

Free Design Service

Online Estimator

Technical Helpline

Online Info

SPECIAL APPLICATIONS

Boats. The flexibility of the Speedfit System ensures it can be cabled easily around the interior and hidden from view.

Caravans. Speedfit is ideal for caravan installations due to its flexibility and its resistance to corrosion and freezing.

Exhibitions. The unique ability of the Speedfit System to be easily demounted and reused, together with its flexibility, makes Speedfit ideal for this application.

Agricultural and Horticultural. Speedfit has many applications in agricultural and horticultural environments.

Portable Buildings (site cabins, toilets). As with caravans, Speedfit is well suited to this application.

WORKING TEMPERATURES AND PRESSURES

Application	Usual working temperature, ºC	Maximum working temperature, ºC	Maximum working pressure, bar
Cold Water (indirect and direct mains)	20	20	12
Central Heating	82	105, short term malfunction at 114	3
Hot Water (including unvented cylinders)	65	95	6

Speedfit fittings suitable for central heating systems can withstand temperatures up to 114°C intermittently for short periods.

Speedfit fittings shown as not suitable for central heating systems are used primarily on the domestic hot and cold water system accepting temperatures of up to 65°C.

HANDLING FITTINGS AND PIPE

Ensure fittings and pipe are kept clean at all times by keeping them in bags and boxes provided.

Do not empty Speedfit Products onto the floor area.

Ensure internal 'O' Ring seals are kept free from dirt and debris.

PRODUCT SELECTION AND INSTALLATION

John Guest fittings and related products are specifically designed and manufactured by John Guest to the Technical Specifications set out in the John Guest Product Catalogues. All John Guest fittings and related products should be selected, installed, used and maintained in accordance with these Technical Specifications. It is the customer's / user's responsibility to ensure that John Guest fittings and related products are suitable for their intended applications, are properly installed and maintained and are used in accordance with the Technical Specifications. It is also the customer's / user's responsibility to provide it's own customers with any relevant technical information about John Guest products it supplies them.

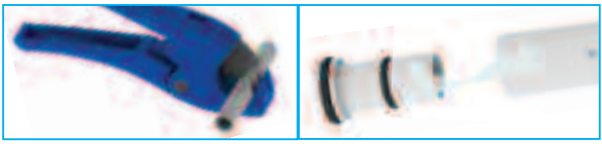
Speedfit should not be used for gas, fuel oil or compressed air applications.

John Guest produce a Push-fit system of pipe and fittings for compressed air situations. See separate literature for details.

MAKING A GOOD CONNECTION

Fittings and pipe should be kept clean, bagged and undamaged before use.

PREPARE THE PIPE

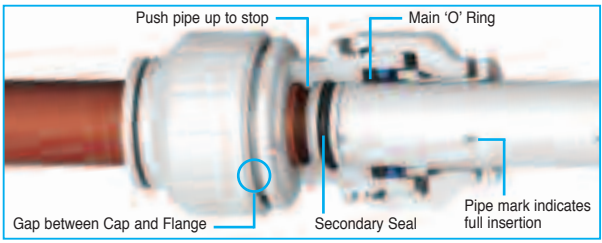


Ensure the pipe is free of score marks. Cut the pipe square. When using Speedfit Barrier Pipe cut along an insertion mark. We recommend the use of JG Pipe Cutters.

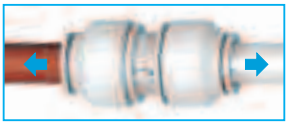
To prevent damage to the 'O' ring remove all burrs and sharp edges. When using Speedfit Pipe use a Superseal Pipe Insert or a standard Speedfit Pipe Insert. A twisting motion will aid insertion. The insert should only be used with Speedfit Pipe.

TWIST AND LOCK FITTINGS

The fitting should be in the 'unlocked' position, this is shown by a small gap between the screw cap and the body flange.



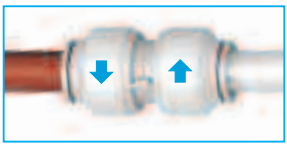
Push the pipe into the fitting, up to the pipe stop. If the Speedfit Pipe has been cut correctly the insertion mark on the pipe will be level with the collet head. The 'O' ring on the Superseal Pipe Insert provides a secondary seal against the bore of the fitting. **A good connection has been made.**



If you are not using collet clips, (see page 26) ensure that the screwcaps are in the locked position.

Pull to check it is secure. It is good practice to test the system prior to leaving the site or before use. Our recommended test procedure is shown in our Technical Checklist.

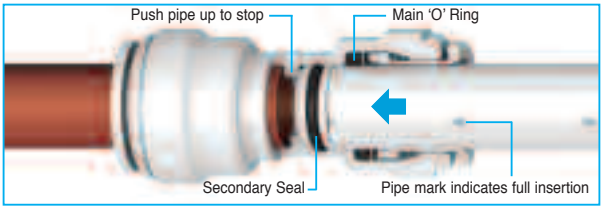
ADDED BENEFIT OF TWIST AND LOCK



Twist the screwcap until it touches the body flange. This locks the pipe into position and increases the 'O' ring seal around the pipe for greater security.

STANDARD FITTINGS

Standard Speedfit connections are made in the same way as Twist and Lock.



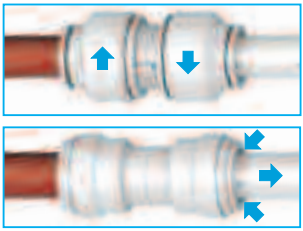
Pull to check the connection is secure. It is good practice to test the system prior to leaving the site or before use.

Our recommended test procedure is shown in our Technical Checklist.

TO DISCONNECT

Ensure the system is depressurised.

The screw cap on Twist and Lock Fittings will need to be turned back to the unlocked position.

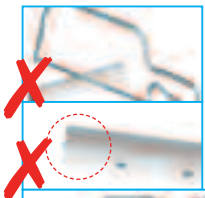


For both Twist and Lock and Standard fittings, push the collet square against the face of the fitting by using fingers or with the help of our collet release tool.

With the collet held in position the pipe can be removed.

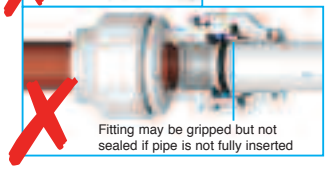
The fitting can be used again without the need for replacement parts.

WHAT NOT TO DO



Don't use hacksaws to cut the pipe or leave burrs on the end of the pipe. Score marks can cause leaks passed the 'O' Ring.

Don't use damaged or scored pipe.



Don't forget to push the pipe fully into the fitting, passed both the collet (gripper) and the 'O' ring.

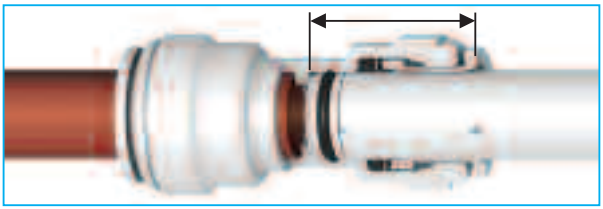
Do not insert fingers into the fitting as the stainless steel teeth may cause injury.

Remember to pressure test the completed installation according to the recommendations in our Technical Checklist.

PIPE STOP DISTANCES

Stops are located at the following distances from the end of the fitting:

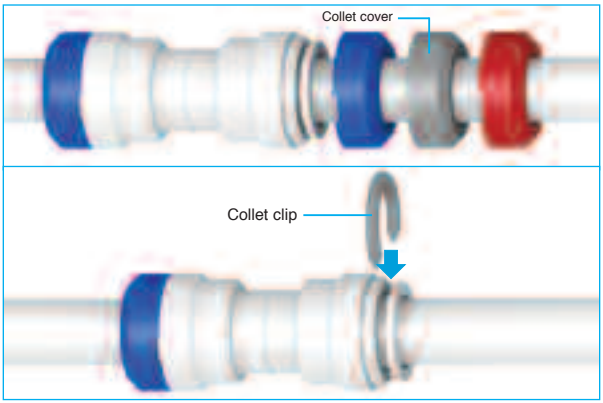
Size	10mm	15mm	22mm	28mm
Stop Distance	20mm	30mm	35mm	44mm



COLLET COVERS AND COLLET CLIPS

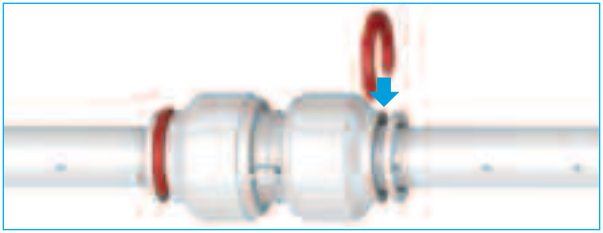
Use a collet cover or collet clip to provide added security against pipe disconnection, e.g. the fitting coming into contact with rigid surfaces and behind dry-lining walls.

Collet covers for use with standard Speedfit fittings, are available in white or in red or blue to allow colour coding of pipes.



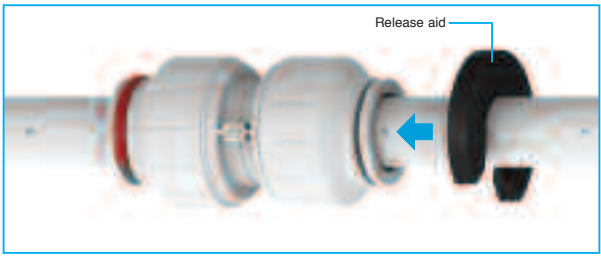
White or grey collet clips are used with standard fittings to prevent accidental pipe disconnection.

Red or Blue collet clips provide colour coding of pipe on Twist and Lock fittings. They are not designed to prevent accidental release and should be fitted when the fitting is in the locked position.



RELEASE AID

The action of pressure in a system could increase the grip of the collet. The release aid allows a firmer grip on the collet whilst removing the pipe.



STOP END

The unique feature of the Speedfit Concept, the ability to disconnect the fitting should you want to, means the Speedfit Stop End not only provides a permanent leakproof seal, but can be readily removed to allow work to restart or to allow an extension to a system. Thus, the fitting is especially useful to allow water to be turned back on, overnight for instance, or if a job has to be interrupted for another reason. Stop ends are also useful when pressure testing a system before appliances are connected.

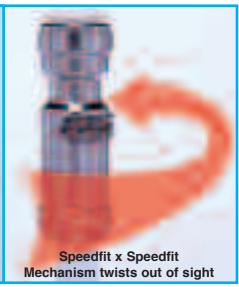
STEM ELBOW

Designed to simplify pipe connection in restricted spaces. The Speedfit Stem Elbow provides an instant swivel fitting so pipe can be orientated in any direction.

A special 10mm version gives a neat connection from concealed plumbing to a radiator.

SERVICE VALVES

The Speedfit range of brass chromium plated service valves can be used on both hot and cold water services and central heating. Push-fit connections mean much reduced installation time, especially in confined spaces.



Speedfit x Speedfit
Mechanism twists out of sight

The valves, in 10 to 22mm, have a 1/4 turn open/close mechanism operated by a screwdriver slot or a lever.
The ability of Speedfit products to twist whilst in situ allows the screwdriver slot operating valve to be turned out of sight, helping to avoid unauthorised tampering.

FLEXI HOSES

Manufactured to a quality you would expect from Speedfit, our range of Flexi Hoses has nearly 50 different patterns.
A special pattern has been designed to help the installation of monoblocs, each hose in a pair having a different spanner location to ease connection of the threaded end into the monoblocs inlets.
Flexi Hoses are listed on pages 29 to 32.

TAP CONNECTORS

Speedfit manufacturer a wide range of connectors including conventional straight and bent tap connectors.

The range also offers a special and unique Tap Connector that only requires a simple hand tightening to connect up a terminal tap, mixer or a float valve. An integral seal within the fitting avoids the need for further sealant. The connectors are useful when replacing existing brassware or in other confined spaces.

Coupling up to a supply is easy. The pipe is simply pushed home into the Speedfit connection and is instantly secured, without the need for specialist tools.

SPEEDFIT MANIFOLD

Speedfit have introduced an innovative 22mm x 10mm 4 way manifold. Departing from the usual manifold design, this new product has 4 in-line 10mm outlets, offering a neater envelope size and therefore a much smaller installation space.

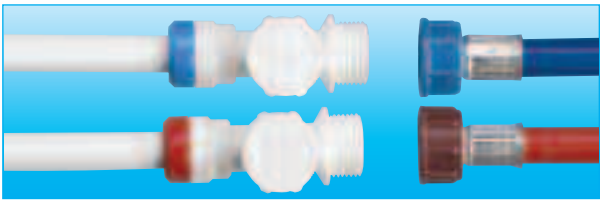
Other benefits include better flow characteristics and a more even distribution of hot water.

The 22mm and 10mm Speedfit Push-fit connections make for a fast and easy installation, even in confined spaces.

Whilst designed as heating product, the manifold can also be used in a mains pressure hot or cold domestic plumbing system, to feed bathroom or kitchen taps and mixers. This allows for a more efficient installation as every terminal fitting has its own dedicated supply.

APPLIANCE TAPS

The Speedfit Range includes an Appliance Tap for the permanent connection of washing machines and dishwashers, thus enabling complete water isolation to the appliances.



A simple push-fit connection of the supply pipe and a plastic thread on the outlet to marry well with the plastic thread on the hose means the Speedfit Appliance Tap is very easy to install. The large round handle is easy to grip and turn.

SUPERSEAL PIPE INSERT

The Superseal Pipe Insert has been developed to be used with Speedfit Barrier Pipe and Speedfit Fittings to provide an extra line of defence when installing a Speedfit Push-fit System.

The insert has its own 'O' ring which, together with a stem sliding within the inside diameter of the pipe gives a secondary seal against the inside of the fitting.

The Speedfit Connection, when made with the insert, has a number of design features.

Sliding the stem of the insert into the pipe gives greater compression of the main 'O' ring on the pipe and greater rigidity of the length of pipe within the fitting, reducing the chance of leaks if a side load is applied.

A connection is easier to make because the head of the insert has been designed for ease of insertion.

Superseal Inserts are listed on page 25.

HOW SPEEDFIT WORKS

The JG Speedfit system uses a simple push-fit action meaning that there is no flux, flames or mess. All fittings have a grip then seal construction, made up of a collet with stainless steel teeth to grip an 'O' ring to provide a permanent leak proof seal.

The additional benefit of 'Twist and Lock' is that a twist of a screwcap locks the pipe in position and provides increased compression on the 'O' ring for even greater security. With plastic pipe available in straight lengths or coils, the flexible system will ensure a fast, simple and reliable installation.

Features

- *Truly demountable without damage to pipe or fitting.*
- *Grip and seal connection.*
- *Superseal Insert gives secondary seal.*
- *Reduced pipe insertion force.*
- *Lightweight and easy to handle on site.*

Why Speedfit?

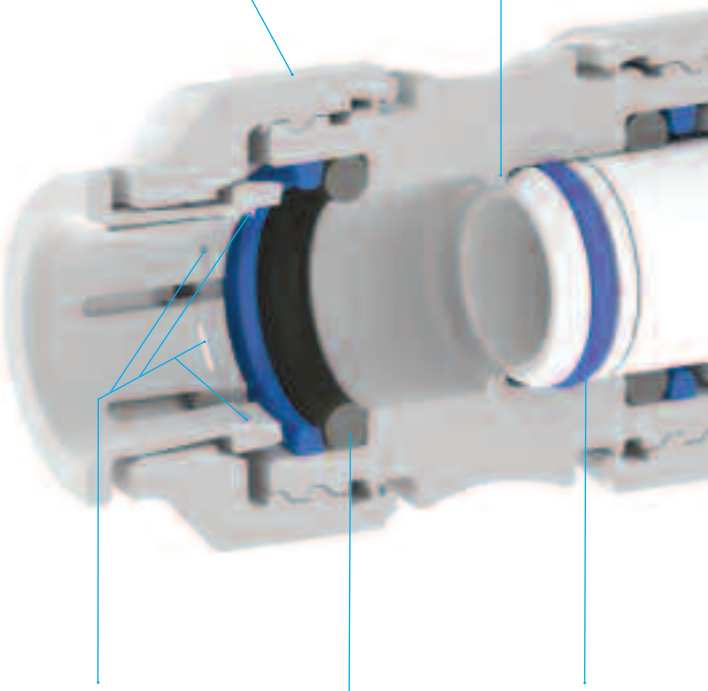
- *Installation time reduced by up to 40%.*
- *Pipe flexibility permits the cabling of pipe through less accessible areas.*
- *No risk of fire or flames from a blowtorch.*
- *Easier to work in confined places.*
- *A permanent leak-proof connection.*
- *Corrosion free.*
- *No scale build up.*
- *Lower thermal diffusivity maintains safer surface temperature.*
- *Pipe elasticity can reduce the possibility of bursting under freezing conditions.*
- *Lead free and non toxic.*
- *Less noise from water flow and expansion/contraction.*
- *Long pipe lengths reduce the number of fittings required.*

Twist and Lock Cap.

Increases compression on the 'O' ring seal around the pipe and locks the pipe into position.

Pipe Stop.

Push the pipe all the way onto the fitting to ensure full insertion.



Stainless Steel Teeth.

Provides a firm grip on plastic or copper pipe.

Superseal 'O' Ring.

Pipe insert gives a secondary seal.

Main 'O' Ring Seal.

Ensures a permanent leak-proof connection.

WHITE PLUMBING FITTINGS

Kitemarked to BS 7291:2010
and with WRAS Approval.

BS7291:2010
KM39767

WRAS APPROVED PRODUCT

EQUAL STRAIGHT CONNECTOR

Part No.	Size mm	Bag Qty	Box Qty
PEM0410W	**10**	**10**	**150**
PEM0415W	**15**	**10**	**60**
PEM0422W	**22**	**5**	**30**
PEM0428W	**28**	**2**	**10**

Suitable for central heating systems.

REDUCING STRAIGHT COUPLER

Part No.	Size mm	Bag Qty	Box Qty
PEM201510W	**15 x 10**	**10**	**80**
PEM202215W	**22 x 15**	**5**	**40**

Suitable for central heating systems.

PE-COPPER COUPLER*

Used to connect PE Pipe to Speedfit or to BS EN1057 Copper. Must not be buried directly into ground, soil, concrete or other substrates.

Part No.	Size mm	Bag Qty	Box Qty
UG601B	**20 x 15**	**1**	**150**
UG603B	**25 x 15**	**1**	**100**
UG602B	**25 x 22**	**1**	**80**
UG604B	**32 x 28**	**1**	**60**

Cold water only.

* Taken from the range of Speedfit Fittings for Cold Water Services. See separate section for details and Technical Specification.

EQUAL ELBOW

Part No.	Size mm	Bag Qty	Box Qty
PEM0310W	**10**	**10**	**150**
PEM0315W	**15**	**10**	**50**
PEM0322W	**22**	**5**	**25**
PEM0328W	**28**	**2**	**10**

Suitable for central heating systems.

REDUCING ELBOW

Part No.	Size mm	Bag Qty	Box Qty
PEM211510W	**15 x 10**	**10**	**50**
PEM212215W	**22 x 15**	**5**	**40**

Suitable for central heating systems.

STEM ELBOW

Provides a swivel type connection.

Part No.	Pipe mm		Stem mm	Bag Qty	Box Qty
PEM221010W	10	x	10	10	200
PEM221015W	10	x	15	10	150
PEM221515W	15	x	15	10	80
PEM222222W	22	x	22	5	30

Suitable for central heating systems.
Please note a Collet Cover cannot be used on a Speedfit end assembled with the stem of a 22mm Stem Elbow.

135° STEM ELBOW

Part No.	Size mm	Bag Qty	Box Qty
PEM571515W	15 x 15	10	80
PEM572222W	22 x 22	5	30

Suitable for central heating systems.

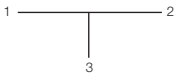
EQUAL TEE

Part No.	Size mm	Bag Qty	Box Qty
PEM0210W	10	10	100
PEM0215W	15	5	40
PEM0222W	22	5	15
PEM0228W	28	2	8

Suitable for central heating systems.

REDUCING TEE

Sizes are listed in the following order.



Part No.	Size mm	Bag Qty	Box Qty
PEM3015BW	15 x 10 x 10	10	60
PEM3015AW	15 x 15 x 10	5	40
PEM3022CW	15 x 15 x 22	5	25
PEM3022BW	22 x 15 x 15	5	25
PEM3022DW	22 x 15 x 22	5	15
PEM302210AW	22 x 22 x 10	5	20
PEM3022AW	22 x 22 x 15	5	15
PEM3028BW	28 x 22 x 22	2	10
PEM3028DW	28 x 22 x 28	2	10
PEM302810AW	28 x 28 x 10	2	10
PEM302815AW	28 x 28 x 15	2	10
PEM3028AW	28 x 28 x 22	2	10

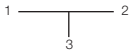
Suitable for central heating systems.

STEM TEE

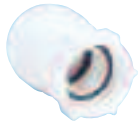
Part No.	Size mm	Bag Qty	Box Qty
PEM532210W	22 x 22 x 10	5	30
PEM532215W	22 x 22 x 15	5	25

Suitable for central heating systems.

Sizes are listed in the following order.



FEMALE COUPLER - TAP CONNECTOR

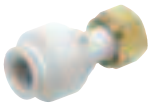


Requires hand tightening only.

Part No.	Size mm x BSP	Bag Qty	Box Qty
PSE3210W	10 x 1/2"	10	150
PSE3201W	15 x 1/2"	10	100
PSE3203W	15 x 3/4"	5	70
PSE3202W	22 x 3/4"	5	50

Suitable for central heating systems.
Note: Plastic threads are not as strong as metal threads.
For torque figures see Technical Checklist.

STRAIGHT TAP CONNECTOR



With brass swivel nut and sealing washer.

Part No.	Size mm x BSP	Bag Qty	Box Qty
PEMSTC1014	10 x 1/2"	10	150
PEMSTC1514	15 x 1/2"	5	50
PEMSTC1516	15 x 3/4"	5	50
PEMSTC2216	22 x 3/4"	5	40

Suitable for central heating systems.
For torque figures see Technical Checklist.

BENT TAP CONNECTOR

With brass swivel nut and sealing washer.

Part No.	Size mm x BSP	Bag Qty	Box Qty
PEMBTC1014	10 x 1/2"	10	150
PEMBTC1514	15 x 1/2"	5	50

Suitable for central heating systems.
For torque figures see Technical Checklist.

STOP END

Part No.	Size mm	Bag Qty	Box Qty
PSE4610W	10	10	300
PSE4615W	15	10	200
PSE4622W	22	5	80
PSE4628W	28	5	50

Suitable for central heating systems.

PLASTIC BACK PLATE ELBOW

Part No.	Size mm x BSP	Bag Qty	Box Qty
15PWB	15 x 1/2"	1	25

Hot and cold water only, 65°C maximum.

Protect from sunlight and frost.

TANK CONNECTOR

Requires hand tightening only.
Maximum wall thickness of tank 4mm.

Part No.	Size mm	Bag Qty	Box Qty
CM0715S	15	10	60
CM0722S	22	5	20
CM0728S	28	1	10

Suitable for cold water tanks only.

REDUCER

Part No.	Size mm	Bag Qty	Box Qty
PEM061510W	15 x 10	10	150
PEM062215W	22 x 15	10	70
PEM062815W	28 x 15	5	40
PEM062822W	28 x 22	5	30

Suitable for central heating systems.

PLUG

Part No.	Size mm	Bag Qty	Box Qty
PL10	10	10	500
PL15	15	10	250
PL22	22	10	100
PL28	28	10	50

Suitable for central heating systems.

BULKHEAD ELBOW

Part No.	Size mm x BSP	Pack Qty	Box Qty
CM551516W	15 x 3/4"	5	25

Not suitable for central heating systems.
Hot and cold water only, 65°C maximum.

WING BACK ELBOW

Part No.	Size mm x BSPT	Bag Qty	Box Qty
UGPWB1514	15 x 1/2"	1	150

Cold Water only.

2 WAY DIVIDER

Part No.	Size mm	Bag Qty	Box Qty
CM2315W	15	5	50

Not suitable for central heating systems.

4 WAY MANIFOLD

Part No.	Size mm	Bag Qty	Box Qty
SFM512210E	22 x 10	5	30

Suitable for central heating systems.

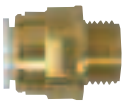
4 PORT RAIL MANIFOLD

Part No.	Size mm	Box Qty
SFM522210E	22 x 10	10
SFM522215E	22 x 15	10

Suitable for central heating systems.

BRASS FITTINGS

BRASS MALE COUPLER



Part No.	Size mm x BSPT	Bag Qty	Box Qty
MW011504N	15 x 1/2"	5	100
MW012206N	22 x 3/4"	5	50
MW012808N	28 x 1"	5	20

Part No.	Size mm x BSP	Bag Qty	Box Qty
10MC(1/2)	10 x 1/2"	5	100
15MC(1/2)	15 x 1/2"	5	100
22MC(3/4)	22 x 3/4"	5	50
MW012818N	28 x 1"	5	20

Suitable for central heating systems.
Manufactured in DZR Brass.

BRASS FEMALE COUPLER

Part No.	Size mm x BSP	Bag Qty	Box Qty
MW451514N	15 x 1/2”	5	50
MW452216N	22 x 3/4”	5	50

Suitable for central heating systems.
Manufactured in DZR Brass.

BRASS BACK PLATE ELBOW

Part No.	Size mm x BSPT	Bag Qty	Box Qty
15WB	15 x 1/2"	1	20
22WB	22 x 3/4"	1	10

Suitable for central heating systems.
Manufactured in DZR Brass.

Short Version

15WB2	15 x 1/2"	1	25

Suitable for central heating systems.
Manufactured in Brass.

BRASS MALE STEM ADAPTOR

Converts Speedfit to male thread.

Part No.	Size mm x BSPT	Bag Qty	Box Qty
MW051504N	15 x 1/2"	5	100
MW052206N	22 x 3/4"	5	50
MW052818N	28 x 1" BSP	10	20

Suitable for central heating systems.
Manufactured in DZR Brass.

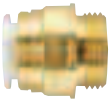
BRASS FEMALE STEM ADAPTOR

Converts Speedfit to female thread.

Part No.	Size mm x BSP	Bag Qty	Box Qty
MW501514N	**15 x 1/2"**	**5**	**50**
MW502216N	**22 x 3/4"**	**5**	**50**

Suitable for central heating systems.
Manufactured in DZR Brass.

BRASS MALE CYLINDER ADAPTOR



Part No.	Size mm x BSP	Bag Qty	Box Qty
22CMA	**22 x 1”**	**5**	**50**

Suitable for central heating systems.
Manufactured in DZR Brass.

BRASS FEMALE CYLINDER ADAPTOR

Part No.	Size mm x BSP	Bag Qty	Box Qty
22CFA	**22 x 1"**	**5**	**50**

Suitable for central heating systems.
Manufactured in DZR Brass.

VALVES

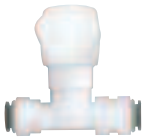
1/4 Turn Valves. These valves have been designed to allow temporary servicing of downstream equipment and must only be used in the fully open or fully closed position.

DO NOT USE THESE VALVES:

- In a partially open position to control flow.
- To provide a permanent termination.
- Without tubing assembled or plugged (or threaded connections sealed).
- As a tap or "faucet".

1/4 Turn Valves are indicated by this marker '•'

STOP VALVE



Part No.	Size mm	Bag Qty	Box Qty
15STV	**15**	**1**	**15**
22STV	**22**	**1**	**5**

Not suitable for central heating systems.
Hot and Cold water only, 65°C maximum.

APPLIANCE TAP •

Part No.	Size mm x bsp	Bag Qty	Box Qty
15APT	**15 x 3/4"**	**5**	**40**

Not suitable for central heating systems.
Hot and Cold water only, 65°C maximum.
For torque figures on plastic threads see Technical Checklist.

APPLIANCE TEE •

Part No.	Size mm x bsp	Bag Qty	Box Qty
15APT2	**15 x 3/4"**	**5**	**30**

Not suitable for central heating systems.
Hot and Cold water only, 65°C maximum.

EMERGENCY SHUT OFF TAP •

Part No.	Size mm	Bag Qty	Box Qty
15ESOT	**15**	**5**	**40**

Not suitable for central heating systems.
Hot and Cold water only, 65°C maximum.

ANGLE STOP VALVE •

Part No.	Size mm x inch	Box Qty
ASV3	**15 x 1/4"**	**30**
ASV4	**15 x 3/8"**	**25**

Not suitable for central heating systems.
Hot and Cold water only, 65°C maximum.

Provides an inline connection with shut off and check valve protection.
For the easy installation of water coolers filtration equipment and vending machines.

PLASTIC SERVICE VALVE •

Part No.	Size mm	Bag Qty	Box Qty
15SV	**15**	**5**	**50**
22SV	**22**	**5**	**25**

Not suitable for central heating systems.
Hot and Cold water only, 65°C maximum.

PLASTIC SERVICE VALVE WITH TAP CONNECTOR •

Grey

White

Part No.	Size mm x bsp	Bag Qty	Box Qty
15SVSTC	15 x 1/2"	5	50
15SVSTC-W	15 x 1/2"	5	50

Not suitable for central heating systems.
Hot and Cold water only, 65°C maximum.

PLASTIC ANGLE SERVICE VALVE WITH TAP CONNECTOR •

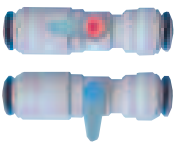
Grey

White

Part No.	Size mm x bsp	Bag Qty	Box Qty
15SVBTC	15 x 1/2"	5	50
15SVBTC-W	15 x 1/2"	5	50

Not suitable for central heating systems.
Hot and Cold water only, 65°C maximum.

PLASTIC BALL VALVE •



Part No.	Size mm	Pack Qty	Box Qty
15SV-H	15	1	40
22SV-H	22	1	20

Not suitable for central heating systems.
Each valve has a red and a blue indice.

DOUBLE CHECK VALVE

Part No.	Size mm	Bag Qty	Box Qty
15DCV	15	5	50

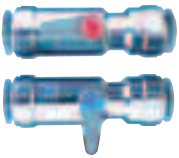
Not suitable for central heating systems.
Hot and Cold water only, 65°C maximum.

DOUBLE CHECK SERVICE VALVE

Part No.	Size mm	Bag Qty	Box Qty
15DCSV	15	1	20

Not suitable for central heating systems.
Hot and Cold water only, 65°C maximum.

BRASS CHROME PLATED BALL VALVE •



Part No.	Size mm	Pack Qty	Box Qty
10BV	10	1	30
15BV	15	1	20
22BV	22	1	15

Suitable for central heating systems.
Each Valve has a red and a blue indice.

BRASS SERVICE VALVE •

Part No.	Size mm	Bag Qty	Box Qty
15HSV-BRASS	15	2	20

Suitable for central heating systems.

BRASS CHROME PLATED SERVICE VALVE •

Mechanism twists out of sight, to discourage tampering.

Part No.	Size mm	Pack Qty	Box Qty
10HSV	10	1	30
15HSV	15	2	20
22HSV	22	1	8

Suitable for central heating systems.

BRASS CHROME PLATED SERVICE VALVE WITH TAP CONNECTOR •

Part No.	Size mm x BSP	Pack Qty	Box Qty
15PTSV	15 x 1/2"	2	20
22PTSV	22 x 3/4"	1	8

Suitable for central heating systems.

BRASS STOP VALVE

Part No.	Size mm	Box Qty
15BSC	15	10

Suitable for central heating only.
Body and Head DZR Brass.

BRASS MANIFOLD

Blanking plug supplied with each manifold. Each Manifold supplied with reversible red and blue discs.

Part No.	Description	Size	Pack Qty	Box Qty
JGMAN2	2 Port	3/4" x 15	1	30
JGMAN3	3 Port	3/4" x 15	1	25
JGMAN4	4 Port	3/4" x 15	1	20

Not suitable for central heating systems.

BRASS DRAIN COCK

Part No.	Size mm	Pack Qty	Box Qty
15BDC	15	5	50

Suitable for central heating systems.
Manufactured in DZR Brass.

Please note a collet cover cannot be used on a Speedfit end assembled with a draincock. Draincocks can be fitted with a standard fitting fitted with a collet clip. When using with Twist and Lock Fittings the fitting must be locked.

THERMOSTATIC RADIATOR VALVE

Part No.	Size mm	Pack Qty	Box Qty
JGTHRAD15	15	1	10

LOCKSHIELD RADIATOR VALVE

Part No.	Size mm	Pack Qty	Box Qty
JGRAD15	15	1	20

WRAS APPROVED PRODUCT

Layflat Pipe

Lays Flat - Stays Flat - Ultra Flexible

JG LAYFLAT® POLYBUTYLENE BARRIER PIPE

Coils. The pipe is made from a soft material with little memory ensuring a flexible system. It has an inner barrier to stop the ingress of atmosphere. British Gas accepted for water pipe in vented and sealed central heating systems.

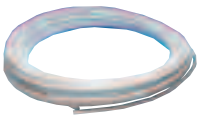
Part No.	Size mm x m	Bag Qty	Box Qty
10BPB-50C	10 x 50	1	
10BPB-100C	10 x 100	1	
15BPB-25C	15 x 25	1	8
15BPB-50C	15 x 50	1	6
15BPB-100C	15 x 100	1	4
15BPB-120C	15 x 120	1	4
15BPB-150C	15 x 150	1	3
15BPB-300C	15 x 300	1	
22BPB-25C	22 x 25	1	6
22BPB-50C	22 x 50	1	4

Suitable for central heating systems.

Easy to Handle

Ultra Flexible

SPEEDFIT PEX BARRIER PIPE



Coils

The pipe has an inner barrier to stop the ingress of atmosphere. British Gas accepted for water pipe in vented and sealed central heating systems.

Part No.	Size mm x m	Bag Qty	Box Qty
10BPEX-25C	10 x 25	1	20
10BPEX-50C	10 x 50	1	10
10BPEX-100C	10 x 100	1	6
15BPEX-25C	15 x 25	1	8
15BPEX-50C	15 x 50	1	5
15BPEX-100C	15 x 100	1	5
15BPEX-120C	15 x 120	1	5
15BPEX-150C	15 x 150	1	4
22BPEX-25C	22 x 25	1	8
22BPEX-50C	22 x 50	1	5

Suitable for central heating systems.

SPEEDFIT PEX BARRIER PIPE

Straight lengths

The pipe has an inner barrier to stop the ingress of atmosphere.

Minimum order quantity for 6 metre lengths is 10 packs

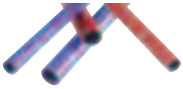
Part No.	Size mm x m	Pack Qty
15BPEX-20X2L	15 x 2	20
15BPEX-20X3L	15 x 3	20
15BPEX-20X6L	15 x 6	20
22BPEX-20X2L	22 x 2	20
22BPEX-20X3L	22 x 3	20
22BPEX-20X6L	22 x 6	20
28BPEX-10X3L	28 x 3	10
28BPEX-10X6L	28 x 6	10

Suitable for central heating systems.

PIPE IN PIPE

Part No.	Size mm x m	Pack Qty
15PIP-50C-E	15 x 50	1
22PIP-50C-E	22 x 50	1

RED AND BLUE SPEEDFIT PEX BARRIER PIPE



Straight Lengths. The pipe has an inner barriers to stop the ingress of air.

	Part No.	Size mm x m	Pack Qty
Red	15BPEX-20X6L-R	15 x 6	20
	22BPEX-20X6L-R	22 x 6	20
Blue	15BPEX-20X6L-B	15 x 6	20
	22BPEX-20X6L-B	22 x 6	20

Minimum order quantity. 20 packs of 15mm or 10 packs of 22mm.

SUPERSEAL PIPE INSERT

To be used only with Speedfit Pipe and Speedfit Fittings to enhance the sealing security of the connections, see page 12.

Part No.	Size mm	Bag Qty	Box Qty
STS10	10	50	1000
STS15	15	50	500
STS22	22	25	250
STS28	28	10	150

Suitable for central heating systems.

PIPE INSERT

To be used when connecting Speedfit Pipe to a compression fitting. See Page 43.

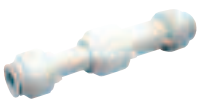
Part No.	Size mm	Bag Qty	Box Qty
TSM10N	10	50	1000
TSM15N	15	50	500
TSM22N	22	25	250
TSM28N	28	10	150

Suitable for central heating systems.

CONDUIT ELBOW

Part No.	Size mm	Bag Qty	Box Qty
	Fits		
CONELB	10, 15 & 22	10	70

PIPE REPAIR KIT



Part No.	Size mm	Bag Qty	Box Qty
15RKP	15	1	80
22RKP	22	1	50

Suitable for central heating systems.

Provides a simple way of repair on a rigid pipe run.
Remove a damaged section of pipe and replace with a repair kit.

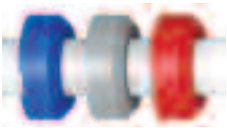
SLIP TEE CONNECTOR

Part No.	Size mm	Bag Qty	Box Qty
15TKP	15	1	80
22TKP	22	1	40

Suitable for central heating systems.
Provides a simple way to break into an existing pipe run.

COLLET COVER

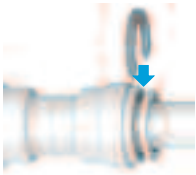
Available in white, red or blue



Part No.	Size mm	Bag Qty
PKM1910W	10	100
PKM1910R	10	100
PKM1910B	10	100
AM1915W	15	100
PM1915R	15	100
PM1915B	15	100
AM1922W	22	50
PM1922R	22	50
PM1922B	22	50

Suitable for central heating systems

COLLET LOCKING CLIP



Part No.	Size mm	Bag Qty
CM1810S	10	100
CM1815S	15	100
CM1822S	22	100
CM1810W	10	100
CM1815W	15	100
CM1822W	22	100
CM1810R	10	100
CM1815R	15	100
CM1822R	22	100
CM1810B	10	100
CM1815B	15	100
CM1822B	22	100

Suitable for central heating systems.
White and grey collet clips prevent accidental release of pipe from standard fittings.
Red and blue clips provide colour coding of pipe, they should not be used to prevent accidental release of pipe.

CONDUIT PIPE

To be used when Speedfit Pipe is laid in Concrete and Masonry, see section on page 54.

	Part No.	Size mm x m	Pack Qty
Black	15BLKCON-25C	15 x 25	1
	15BLKCON-50C	5 x 50	1
	22BLKCON-25C	22 x 25	1
	22BLKCON-50C	22 x 50	1
Red	15REDCON-50C	15 x 50	1
	22REDCON-50C	22 x 50	1
Blue	15BLUCON-50C	15 x 50	1
	22BLUCON-50C	22 x 50	1

RELEASE AID

Part No.	Size mm	Bag Qty	Box Qty
10RA	10	10	500
15RA	15	10	500
22RA	22	10	400
28RA	28	10	300

COLD FORMING BEND

10mm

15mm and 22mm

Part No.	Size mm	Bag Qty	Box Qty
10CFB	10	10	200
15CFB	15	10	30
22CFB	22	10	10

To help create a tighter bend than the minimum with unsupported pipe.

BENDING SPRINGS

Part No.	Size mm	Pack Qty
JG-BS10	10	5
JG-BS15	15	5
JG-BS22	22	5

RADIATOR PLATE

Part No.	Bag Qty	Box Qty
JG- ROP	1	25

Creates a neat outlet for 10mm supply pipes to a radiator. To be used with single gang 25mm steel K0 boxes to BS 4662, fitted with rubber grommet. See page 47.

PIPE CUTTER

Part No.	Pack Qty
JG-TS	1

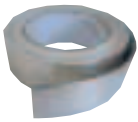
For up to 22mm size pipe.

HEAVY DUTY PIPE CUTTER

Part No.	Pack Qty
JGHDC	1

For up to 28mm size pipe.

FOIL TAPE



Part No.	Size mm x m	Pack Qty
JGTAPE	50 x 45	8

Metallic tape to meet NHBC requirements for plastic pipe to be detected inside walls.

PIPE CLIPS AND SPACERS

	Part No.	Size mm	Bag Qty	Box Qty
White	**PC15W**	**15**	**50**	**200**
	PC22W	**22**	**50**	**100**
	PC28W	**28**	**20**	**80**
	PCSW		**50**	**400**
Red	**PC15R**	**15**	**50**	**200**
	PC22R	**22**	**50**	**100**
	PC28R	**28**	**20**	**80**
Blue	**PC15B**	**15**	**50**	**200**
	PC22B	**22**	**50**	**100**
	PC28B	**28**	**20**	**80**

NAIL CLIP

Part No.	Size mm	Bag Qty	Box Qty
NPC10	**10**	**50**	**1000**
NPC15	**15**	**50**	**400**
NPC22	**22**	**50**	**250**
NPC28	**28**	**20**	**200**

PLUMBING SPARE PARTS

COLLETS

	Part No.	Size mm	Pack Qty
For PKM Fittings	**PXC 10**	**10**	**20**
	PXC 15	**15**	**20**
	SPF 22	**22**	**20**
	PXC 28	**28**	**20**
For Twist and Lock Fittings	**PXC 10**	**10**	**20**
	PXC 15	**15**	**20**
	PXC 22	**22**	**20**
	PXC 28	**28**	**20**

EPDM ‘O’ RING

Part No.	Size mm	Pack Qty
10 EPR	**10**	**20**
15 EPR	**15**	**20**
22 EPR	**22**	**20**
28 EPR	**28**	**20**

THREAD WASHER

Part No.	Size	Pack Qty
1/2 EPW	**1/2**	**20**
3/4 EPW	**3/4**	**20**

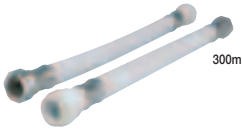
For use with Female Coupler/Tap Connector.

WHITE FLEXI HOSES

Not suitable for central heating systems.
Hot and Cold water only, 6 Bar @ 65°C

WRAS APPROVED PRODUCT

SPEEDFIT X UNION NUT



	Part No.	Size mm x bsp	Bag Qty	Box Qty
300mm	WFLX15	15 x 1/2"	2	100
	WFLX16	15 x 3/4"	2	100
	WFLX22	22 x 3/4"	2	100
500mm	WFLX18	15 x 1/2"	2	100
	WFLX20	15 x 3/4"	2	100
	WFLX19	22 x 3/4"	2	50
1000mm	WFLX40	15 x 1/2”	1	20

SPEEDFIT X SPEEDFIT

	Part No.	Size mm x mm	Bag Qty	Box Qty
300mm	WFLX33	15 x 10	2	100
	WFLX17	15 x 15	2	100
500mm	WFLX21	15 x 15	2	100

SPEEDFIT X PLAIN STEM

	Part No.	Pipe mm	Stem mm	Bag Qty	Box Qty
200mm	WFLX51	15	15	2	200

ELBOW PATTERN

	Part No.	Size mm x bsp	Bag Qty	Box Qty
300mm	WFLX36	15 x 1/2”	2	100

SPEEDFIT X UNION NUT WITH SERVICE VALVE •

	Part No.	Size mm x bsp	Bag Qty	Box Qty
	Plastic Valve with Handle			
300mm	WFLX37-H	15 x 1/2"	2	100
	WFLX39-H	22 x 3/4"	2	50

FOR MONOBLOC MIXERS

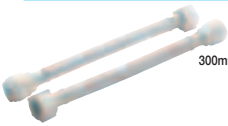
	Part No.	Size mm x male	Pack Qty	Box Qty
300mm	WFLX28	15 x M10	2	100
	WFLX29	15 x M12	2	100

WHITE FLEXI HOSES With Plastic Wingnut

Hand tightening only, no spanner required

Not suitable for central heating systems.
Hot and Cold water only, 6 Bar @ 65ºC

SPEEDFIT X HAND TIGHTEN

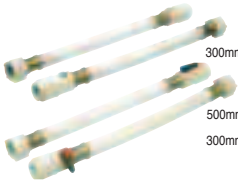


	Part No.	Size mm x BSP	Bag Qty	Box Qty
300mm	**PFLX15**	**15 x 1/2"**	**2**	**100**
	PFLX16	**15 x 3/4"**	**2**	**100**
	PFLX22	**22 x 3/4"**	**2**	**80**
500mm	**PFLX18**	**15 x 1/2"**	**2**	**100**
	PFLX19	**22 x 3/4"**	**2**	**50**

SPEEDFIT X HAND TIGHTEN (WITH EXTRA HOSE FLEXIBILITY)

	Part No.	Size mm x BSP	Bag Qty	Box Qty
300mm	**PFLX88**	**15 x 1/2"**	**1**	**100**

SPEEDFIT X UNION NUT WITH SERVICE VALVE •



	Part No.	Size mm x BSP	Bag Qty	Box Qty
300mm	**Plastic Valves**			
	PFLX37	**15 x 1/2”**	**2**	**100**
500mm	**PFLX78**	**15 x 1/2”**	**2**	**80**
300mm	**Plastic Valve with Handle**			
	PFLX37-H	**15 x 1/2”**	**2**	**100**

IDENTITY DISCS

For handles on service valves.

Part No.	Pack Qty
FLX-RED	**10**
FLX-BLU	**10**

1/4 Turn Valves. These valves have been designed to allow temporary servicing of downstream equipment and must only be used in the fully open or fully closed position.

DO NOT USE THESE VALVES:

- In a partially open position to control flow.
- To provide a permanent termination.
- Without tubing assembled or plugged (or threaded connections sealed).
- As a tap or “faucet”.

1/4 Turn Valves are indicated by this marker ‘•’

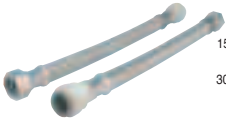
BRAIDED FLEXI HOSES

Not suitable for central heating systems.
Hot and Cold water only, 6 Bar @ 65°C.

WRAS APPROVED PRODUCT

1/4 Turn Valves are indicated by this marker ‹●›. See page 30

SPEEDFIT X UNION NUT



	Part No.	Size mm x bsp	Bag Qty	Box Qty
150mm	**FLX43P**	**15 x 1/2"**	**2**	**150**
300mm	**FLX34P**	**10 x 1/2"**	**2**	**150**
	FLX35P	**15 x 3/8"**	**2**	**150**
	FLX15P	**15 x 1/2"**	**2**	**100**
	FLX16P	**15 x 3/4"**	**2**	**100**
	FLX22P	**22 x 3/4"**	**2**	**100**
500mm	**FLX18P**	**15 x 1/2"**	**2**	**100**
	FLX20P	**15 x 3/4"**	**2**	**80**
	FLX19P	**22 x 3/4"**	**2**	**50**
	FLX23P Full Bore	**22 x 3/4"**	**2**	**40**
1000mm	**FLX40P**	**15 x 1/2"**	**1**	**20**
	FLX42	**15 x 3/4"**	**5**	**25**
	FLX41P	**22 x 3/4"**	**1**	**20**

SPEEDFIT X SPEEDFIT

	Part No.	Size mm x mm	Bag Qty	Box Qty
300mm	**FLX33P**	**15 x 10**	**2**	**150**
	FLX17P	**15 x 15**	**2**	**100**
	FLX26P	**22 x 22**	**2**	**60**
500mm	**FLX21P**	**15 x 15**	**2**	**100**
	FLX27P	**22 x 22**	**2**	**60**
1000mm	**FLX47**	**15 x 15**	**5**	**25**

SPEEDFIT X MALE

	Part No.	Size mm x bsp	Bag Qty	Box Qty
300mm	**FLX49**	**15 x 3/8"**	**25**	**100**

ELBOW PATTERN

	Part No.	Size mm x bsp	Bag Qty	Box Qty
300mm	**FLX36P**	**15 x 1/2"**	**2**	**100**

SPEEDFIT X PLAIN STEM

	Part No.	Pipe mm	Stem mm	Bag Qty	Box Qty
300mm	FLX53	15	15	25	100

SPEEDFIT X UNION NUT WITH SERVICE VALVE •

	Part No.	Size mm x BSP	Bag Qty	Box Qty
	Plastic Valves			
300mm	FLX37P	15 x 1/2"	2	100
	FLX39P	22 x 3/4"	2	50
	Plastic Valve with Handle			
	FLX37-H	15 x 1/2"	2	100
	FLX39-H	22 x 3/4"	2	50

SPEEDFIT X SPEEDFIT WITH SERVICE VALVE •

	Part No.	Size mm x mm	Bag Qty	Box Qty
	Brass Valve			
300mm	FLX44P	15 x 15	2	80
500mm	FLX45P	15 x 15	2	60

FOR MONOBLOC MIXERS

	Part No.	Size mm x male	Pack Qty	Box Qty
300mm	FLX48	12 x M10	2	100
	FLX28	15 x M10	2	100
	FLX29	15 x M12	2	100

BRAIDED FLEXI HOSES With Metal Connections

Not suitable for central heating systems.
Hot and Cold water only, 10 Bar @ 85ºC, 12.5 Bar @ 20ºC.

SPEEDFIT X UNION NUT WITH SERVICE VALVE •

	Part No.	Size mm x BSP	Bag Qty	Box Qty
	Brass Valve			
300mm	FLX24P	15 x 1/2"	2	80
	FLX25P	22 x 3/4"	2	30
500mm	FLX31P	15 x 1/2"	2	50
	FLX38P	15 x 3/4"	2	50
	FLX32P	22 x 3/4"	2	30

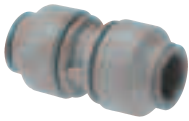
Speedfit® Grey

Kitemarked to BS 7291:2010
and with WRAS Approval.

BS7291:2010
KM39767

WRAS APPROVED PRODUCT

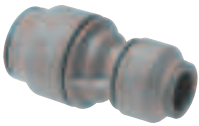
EQUAL STRAIGHT CONNECTOR



Part No.	Size mm	Bag Qty	Box Qty
PEM0410DG	**10**	**10**	**150**
PEM0415DG	**15**	**10**	**60**
PEM0422DG	**22**	**5**	**30**

Suitable for central heating systems.

REDUCING STRAIGHT COUPLER



Part No.	Size mm	Bag Qty	Box Qty
PEM201510DG	**15 x 10**	**10**	**80**
PEM202215DG	**22 x 15**	**5**	**40**

Suitable for central heating systems.

EQUAL ELBOW

Part No.	Size mm	Bag Qty	Box Qty
PEM0310DG	**10**	**10**	**150**
PEM0315DG	**15**	**10**	**50**
PEM0322DG	**22**	**5**	**25**

Suitable for central heating systems.

STEM ELBOW

Part No.	Pipe mm	Stem mm	Bag Qty	Box Qty
PEM221010DG	**10 x 10**		**10**	**200**
PEM221515DG	**15 x 15**		**10**	**80**

Suitable for central heating systems.

Provides a swivel type connection.

REDUCER

Part No.	Size mm	Bag Qty	Box Qty
PEM061510DG	**15 x 10**	**10**	**150**
PEM062215DG	**22 x 15**	**10**	**70**

Suitable for central heating systems.

EQUAL TEE

Part No.	Size mm	Bag Qty	Box Qty
PEM0210DG	**10**	**10**	**100**
PEM0215DG	**15**	**5**	**40**
PEM0222DG	**22**	**5**	**15**

Suitable for central heating systems.

REDUCING TEE

Part No.	Size mm	Bag Qty	Box Qty
PEM3022BDG	**22 x 15 x 15**	**5**	**25**
PEM3022DDG	**22 x 15 x 22**	**5**	**15**
PEM302210ADG	**22 x 22 x 10**	**5**	**20**
PEM3022ADG	**22 x 22 x 15**	**5**	**15**

Suitable for central heating systems.

Sizes are listed in the following order.

FEMALE COUPLER - TAP CONNECTOR

Part No.	Size mm x BSP	Bag Qty	Box Qty
PSE3201DG	**15mm x 1/2”**	**10**	**100**
PSE3203DG	**15mm x 3/4”**	**5**	**70**
PSE3202DG	**22mm x 3/4”**	**5**	**50**

Requires hand tightening only.

Suitable for central heating systems.
Note: Plastic threads are not as strong as metal threads.
For torque figures see Technical Checklist.

STOP END

Part No.	Size mm	Bag Qty	Box Qty
PSE4610DG	**10**	**10**	**300**
PSE4615DG	**15**	**10**	**200**
PSE4622DG	**22**	**5**	**80**
PSE4628DG	**28**	**5**	**50**

Suitable for central heating systems.

STRAIGHT TAP CONNECTOR

Part No.	Size mm x BSP	Bag Qty	Box Qty
PEMSTC1514-DG	**15mm x 1/2”**	**5**	**50**
PEMSTC1516-DG	**15mm x 3/4”**	**5**	**50**
PEMSTC2216-DG	**22mm x 3/4”**	**5**	**40**

With brass swivel nut and sealing washer.

Suitable for central heating systems.
For torque figures see Technical Checklist.

GREY RANGE CONTINUED

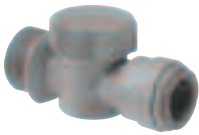
BENT TAP CONNECTOR

With brass swivel nut and sealing washer.

Part No.	Size mm x BSP	Bag Qty	Box Qty
PEMBTC1514-DG	**15mm x 1/2"**	**5**	**50**

Suitable for central heating systems.
For torque figures see Technical Checklist.

APPLIANCE TAP •



Part No.	Size mm x BSP	Bag Qty	Box Qty
15APT-DG	**15mm x 3/4"**	**5**	**40**

Not suitable for central heating systems.
Hot and Cold water only, 65°C maximum.
For torque figures on plastic threads please see Technical Checklist.

EMERGENCY SHUT OFF TAP •

Part No.	Size mm	Bag Qty	Box Qty
15ESOT-DG	**15**	**5**	**40**

Not suitable for central heating systems.
Hot and Cold water only, 65°C maximum.

1/4 Turn Valves. These valves have been designed to allow temporary servicing of downstream equipment and must only be used in the fully open or fully closed position.

DO NOT USE THESE VALVES:

- In a partially open position to control flow.
- To provide a permanent termination.
- Without tubing assembled or plugged (or threaded connections sealed).
- As a tap or "faucet".

1/4 Turn Valves are indicated by this marker '●'

SPEEDFIT PEX BARRIER PIPE

Straight lengths

The pipe has an inner barrier to stop the ingress of atmosphere.

Part No.	Size mm x m	Pack Qty
15BPEX-20x2L-DG	**15 x 2**	**20**
15BPEX-20x3L-DG	**15 x 3**	**20**
22BPEX-20x2L-DG	**22 x 2**	**20**
22BPEX-20x3L-DG	**22 x 3**	**20**

Suitable for central heating systems.

POLYBUTYLENE BARRIER PIPE

Coils: The pipe has an inner barrier to stop the ingress of atmosphere.

Part No.	Size mm x m	Pack Qty
10BPB-50C-DG	10 x 50	1
15BPB-25C-DG	15 x 25	1
15BPB-50C-DG	15 x 50	1
22BPB-25C-DG	22 x 25	1

Suitable for central heating systems.

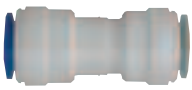
PIPE INSERT

Part No.	Size mm	Bag Qty	Box Qty
TSM10DG	10	50	1000
TSM15DG	15	50	500
TSM22DG	22	25	250

Suitable for central heating systems.

OTHER PLUMBING FITTINGS

CONVERSION CONNECTOR



Part No.	Size	Bag Qty	Box Qty
NC471	1/2 id x 15mm	5	500
NC2324	3/4 id x 22mm	5	30

Suitable for central heating systems.

Connects imperial to metric pipe.

SLIP CONNECTOR

Part No.	Size mm	Bag Qty	Box Qty
CM-SC-15S	15	10	60

Not suitable for central heating systems.
Hot and Cold water only, 65°C maximum.

HOSE CONNECTOR

Part No.	Size mm x inch	Box Qty
NC448	15mm x 1/2"	1000
NC473	22mm x 3/4"	400
NC737	22mm x 1/2"	500

Not suitable for central heating systems.
Hot and Cold water only, 65°C maximum.

UNEQUAL STRAIGHT CONNECTOR

Part No.	Size mm x inch	Bag Qty	Box Qty
NC2511	15mm x 3/8"	10	150

Not suitable for central heating systems.
Hot and cold water only, 65°C maximum.

Speedfit® Blue

FITTINGS FOR COLD WATER SERVICES

WRAS APPROVED PRODUCT

ABOVE AND BELOW GROUND

This new range of fittings for MDPE Pipe has an improved collet with stainless steel teeth to provide extra grip on the pipe and has WRAS Approval.

APPLICATIONS

Speedfit underground fittings for MRS PE80 metric size polyethylene cold water service pipe have been designed for connection of:

1. **Blue MDPE pipes to BS 6752** - used for underground service pipes for potable water.
2. **Black MDPE pipes to BS 6730** - used for conveyance of potable water above ground or for industrial services above or below ground.
3. **Blue pipe to BS EN 12201-2, 20mm PN16, 25mm and 32mm PN12.5.**

Making the connection could not be easier. All you need is the pipe, the fitting and a pair of hands. The range is designed to provide a long service life and includes adaptors for screwed pipe, copper and imperial sized LDPE.

INSTALLATION BENEFITS

- Easy to use in confined spaces, no tools required.
- Fast installation with resulting cost savings.
- Lightweight and slimline.
- Ready for immediate installation, no dismantling.
- No adjustments required after fitting.
- Adaptors for screwed pipe, copper and imperial LDPE.

PERFORMANCE BENEFITS

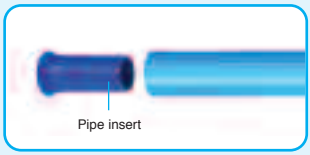
- Maintenance free.
- Durable with high resistance to impact.
- Patented collet ensures high resistance to pull out.
- Lead free and non toxic.
- Will not support biological growth.
- A reliable and trouble free leakproof connection.

TECHNICAL CHECKLIST

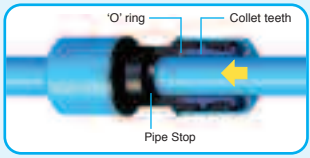
The Technical Checklist for Cold Water Services Fittings is on page 76.

MAKING A GOOD CONNECTION

Cut pipe square using pipe cutters remove burrs and sharp edges.



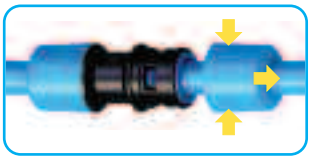
Always use a Speedfit Pipe Insert, which must be fully inserted.



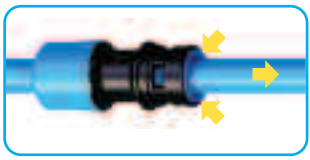
Push the pipe into the fitting, up to the pipe stop. The Stainless Steel teeth grip the pipe, the "O" ring provides a permanent leakproof seal.

Pull to check the system is secure then test the system to ensure it is water tight.

TO DISCONNECT



Ensure the system is depressurised. Remove the Collet Cover by sliding it along the pipe. Squeezing the raised portions will aid removal.



Push the Collet square against the fitting. With the Collet held in this position, the pipe can be withdrawn.

PRODUCT RANGE

WRAS APPROVED PRODUCT

EQUAL STRAIGHT CONNECTOR

Part No.	Size mm	Bag Qty	Box Qty
UG401B	**20**	**1**	**100**
UG402B	**25**	**1**	**60**
UG403B	**32**	**1**	**40**

Cold water only.

REDUCING STRAIGHT CONNECTOR

Part No.	Size mm	Bag Qty	Box Qty
UG501B	**25 x 20**	**1**	**80**
UG502B	**32 x 25**	**1**	**50**

Cold water only.

PE-COPPER COUPLER

Used to connect PE Pipe to copper or Speedfit Plumbing Pipe. Must not be buried directly into ground, soil, concrete or other substrates.

Part No.	Size mm	Bag Qty	Box Qty
UG601B	**20 x 15**	**1**	**150**
UG603B	**25 x 15**	**1**	**100**
UG602B	**25 x 22**	**1**	**80**
UG604B	**32 x 28**	**1**	**60**

Cold water only.

MALE ADAPTOR

Part No.	Size mm x thread	Qty Bag	Box Qty
UG101B	**20 x 1/2" BSP**	**1**	**150**
UG102B	**25 x 3/4" BSP**	**1**	**100**
UG103B	**32 x 1" BSPT**	**1**	**60**
UG104B	**32 x 1.1/2" BSPT**	**1**	**80**

Cold water only.

FEMALE ADAPTOR

Part No.	Size mm x bsp	Bag Qty	Box Qty
UG4501B	20 x 1/2"	1	100
UG4502B	25 x 3/4"	1	100

Cold water only.

EQUAL ELBOW

Part No.	Size mm	Bag Qty	Box Qty
UG301B	20	1	100
UG302B	25	1	50
UG303B	32	1	30

Cold water only.

BACK PLATE ELBOW

Part No.	Size mm x bsp	Bag Qty	Box Qty
UGPWB2014	20 x 1/2"	1	100
UGPWB2514	25 x 1/2"	1	70
UGPWB2516	25 x 3/4"	1	70

Cold water only.

WING BACK ELBOW

Part No.	Size mm x bspt	Bag Qty	Box Qty
UGPWB1514	15 x 1/2"	1	150

Cold water only.

STEM ELBOW

Stem cannot be disconnected from mating connector with collet cover fitted.

Part No.	Pipe OD mm	Stem OD mm	Bag Qty	Box Qty
UG222025B	20	25	1	100
UG222525B	25	25	1	80
UG223232B	32	32	1	50

Cold water only.

EQUAL TEE

Part No.	Size mm	Bag Qty	Box Qty
UG201B	**20**	**1**	**50**
UG202B	**25**	**1**	**40**
UG203B	**32**	**1**	**15**

Cold water only.

REDUCING TEE

Part No.	Size Ends mm	Size Branch mm	Bag Qty	Box Qty
UG232AB	**32**	**25**	**1**	**15**

Cold water only.

REDUCER

Part No.	Size mm	Bag Qty	Box Qty
UG063228B	**32 x 28**	**1**	**75**

Cold water only.

STOP END

Part No.	Size mm	Bag Qty	Box Qty
UG4620B	**20**	**1**	**150**
UG4625B	**25**	**1**	**100**

Cold water only.

Easy to connect

Easy to disconnect

STOP TAP - MDPE x MDPE

Part No.	Size mm	Bag Qty	Box Qty
UGSTV2020	**20**	**1**	**40**
UGSTV2525	**25**	**1**	**30**
UGSTV3232	**32**	**1**	**15**

Cold water only.

The two Stoptaps for 15 or 22mm copper or PEX Pipe must not be buried directly into ground, soil, concrete or other substrates.

STOP TAP - MDPE x COPPER OR PEX

Part No.	Size mm	Bag Qty	Box Qty
UGSTV2515	**25 x 15**	**1**	**40**
UGSTV2522	**25 x 22**	**1**	**40**

Cold water only.

The two Stoptaps for 15 or 22mm copper or PEX Pipe must not be buried directly into ground, soil, concrete or other substrates.

PLUGS

Part No.	Size mm	Bag Box	Box Qty
UG801E	**20**	**1**	**50**
UG802E	**25**	**1**	**40**
UG803E	**32**	**1**	**30**

Cold water only.

PIPE INSERT

Part No.	Size mm	Bag Qty	Box Qty
UTS147-DB	**20**	**10**	**200**
UTS197-DB	**25**	**10**	**150**
UTS251-DB	**32**	**2**	**300**

IMPERIAL CONVERTER

Supplied with inch size Pipe Insert.

Part No.	Stem mm	Imperial Pipe Size	Bag Qty	Box Qty
UGICO1	**20**	**1/2”**	**1**	**100**
UGICO2	**25**	**3/4”**	**1**	**80**

To convert metric size fitting for use with imperial size LDPE to BS1972 Class C.
Stem cannot be disconnected from mating connector with collet cover fitted.

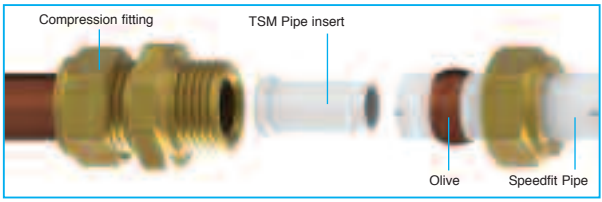
SYSTEM CONNECTIONS

CONNECTION TO COMPRESSION FITTING

Many but not all compression fittings are suitable for use with plastic fittings and pipe. Users should therefore check for compatibility. Compression fittings with short tube stop depth or brass olives should not be used with plastic fittings or pipe.

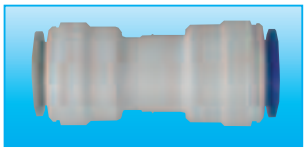
When using compression fittings with Speedfit pipe, a Standard Pipe Insert (prefix TSM) must be used to withstand the compressive pressure of the olive. The olive must be located within the length of the pipe insert and the pipe fully inserted into the fitting. The connection should not need more than 2 full turns after the olive has gripped the pipe. JG Speedfit recommend the use of soft copper olives.

Ensure nut and olive are in place before inserting pipe insert.



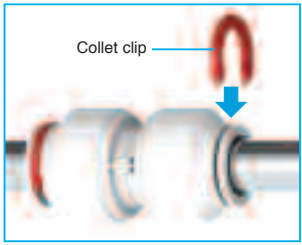
CONNECTION TO IMPERIAL PIPE AND FITTINGS

The Speedfit Range includes couplers to connect Speedfit Pipe to 1/2" to 1" BSP and BSPT. See page 19.



Fittings to connect imperial pipe to metric are shown on page 36.

CONNECTION TO CHROME-PLATED COPPER PIPE



Speedfit fittings can be connected onto chromium plated copper pipe if the chromium plating is completely removed to the full depth of the fitting. To ensure maximum grip, the fitting of a collet clip is recommended.

It is not possible to connect Speedfit fittings to Stainless Steel Pipe.

CONNECTION TO MAINS SUPPLY

In modern properties, water enters a building usually in blue MDPE (medium density polyethylene) pipe. In order to comply with Water Regulation Schedule 2.10, the internal plumbing system should be connected via a Speedfit Stop Tap from our Cold Water Services Range, Part No.'s UGSTV2515, 25mm x 15mm or UGSTV2522, 25mm x 22mm.

Connection of Speedfit Pipe to supply pipe of other materials should be via a stop tap with a 15mm or 22mm compression outlet.

CONNECTION TO BOILERS

Speedfit pipe should never be connected directly to a boiler.

Although most modern boilers have a high limit thermostat, residual heat can be conducted by the heat exchanger. Therefore, Speedfit recommend a minimum of 1 metre from the boiler casing should be run in copper pipe unless otherwise stated in the boiler manufacturer's installation literature.

A gravity primary circuit operating on an uncontrolled cooking range or solid fuel boiler should be run entirely in copper and the heating circuit run in copper for the first metre.

Refer to BS 5955: Part 8 for further clarification.

All appliances should have safety devices to make sure they cannot operate above the working temperature and pressure range set out in our Technical Checklist on page 74. If safety devices are not incorporated within the appliance then external controls will be needed.

Water meters (and other devices) can contain check valves that prevent the expansion of heated water back down the main supply from a combi boiler. If plastic pipe is to be used, a suitable expansion vessel must be fitted. This is especially important to consider if a water meter is fitted retrospectively. Speedfit do not recommend the use of plastic pipe on the main supply between a water meter and a combi boiler if an expansion vessel is not fitted.

Speedfit Products should not be fitted to a sealed system oil boiler, a back fired boiler or other uncontrolled heat source.

Please also see **Drop-Pipe Systems** on page 46 and **System Commissioning and Flushing** on page 55 and 56.

CONTINUOUSLY OPERATED RE-CIRCULATING SYSTEMS (SECONDARY HOT WATER CIRCULATION/RING MAIN INSTALLATIONS):

A continuously operated re-circulating system is a water-replenished circulating system which is maintained at a constant high temperature to provide a constant source of hot water. Continuously operated re-circulating systems are used to distribute constant hot water to draw off points that may be distant from the source or hot water storage vessel. Continuously operated re-circulating systems are very different from conventional hot water supply and central heating systems found in domestic properties, for which our products have been tested to, under either BS7291:2010 Class S or WRAS approval standards, and for this reason Speedfit products must not be used on any continuously operated re-circulating systems as they are not approved under the current version of these standards.

UNVENTED PRESSURISED CYLINDERS

Unvented Pressurised Cylinders can be installed using Speedfit pipe and fittings. However if the safety parameters of the cylinder exceed those of the pipe and fittings it is possible to fit a pressure reduction valve on the out going hot supply pipe. This will not interfere with any other cylinder safety devices demanded by regulations as they are all fitted in the incoming side of the cylinder. Run a short length of copper pipe from the cylinder connection (about 150mm - 300mm) then fit a Honeywell DO5F pressure reduction valve. This will protect the pipe and fittings from excessive pressure in the event of boiler / cylinder malfunction. The factory fitted temperature / pressure relief valve on the cylinder will discharge below 100˚C therefore protecting the pipe from excessive temperature.

CONNECTION TO CYLINDERS & WATER HEATERS

Speedfit can be used on sealed and open vented heating systems, where boilers are either heating a hot water storage cylinder or instantaneous hot water such as a combination boiler. The temperature and pressure limits of the system must not exceed the maximum values stated under the heading 'Working Temperatures and Pressures'.

When using a traditional copper vented cylinder Speedfit Pipe and Fittings can be installed with direct connections to the cylinder.

Unvented pressurised cylinders can be installed using Speedfit Pipe and Fittings. However, insertion depths on compression joints that form part of the cylinder must be checked prior to installation and the use of standard pipe inserts (Prefix TSM) is recommended.

In accordance with current U.K. Building Regulations (Part G), discharge pipes from temperature and/or pressure relief valves must be run in metal pipework.

Speedfit connections to combined Cylinder/Boiler units and Thermal Storage Units must be made outside the casing unless otherwise stated in manufacturers installation literature.

DROP-PIPE SYSTEMS

Care should be taken when designing and installing a central heating system where radiators are supplied by pipe work which drops from an upper floor.

With this kind of system it is possible to trap air in the upper floor pipe work. When the boiler is fired the increase in pressure within the pipe caused by expanding air could cause the pipe to burst.

It is therefore essential that the system be designed so that any air can be removed from the system either automatically or manually by installing automatic or manual air vents at the highest points of the system.

CONNECTION TO PUMPS AND VALVES

Speedfit Pipe should be connected to circulating pumps and motorised valves in accordance with the section in this book headed, “Connecting Plastic Pipe To Compression Fittings”. If Speedfit Pipe is not mounted on a supporting structure, the pipe must be clipped close to the component’s connections to ensure adequate support and to assist in the reduction of vibration.

For heavier equipment, ensure that appropriate metal brackets provide full and independent support of the components and that it does not rely solely on the pipework for support.

CONNECTION TO COPPER PIPE

The minimum distance to make a solder connection on copper pipe inserted into a Speedfit Fitting is 450mm (18 inches). Ensure that any residual flux solder is not allowed to come in contact with the fitting. That same measurement is the safe distance to use a freezer kit to Speedfit Pipe.

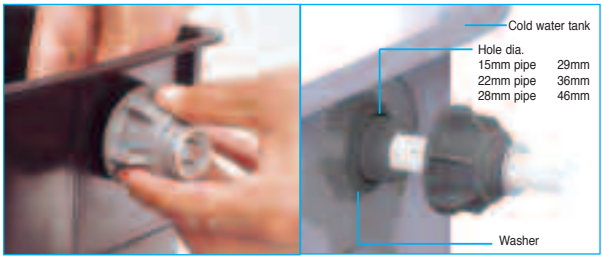
CONNECTING TO COLD WATER STORAGE TANK

To install the Speedfit Tank Connector, unscrew the nut and push the body of the fitting through the tank hole with the washer on the inside of the tank.

Hand tighten the nut onto the body. Push the pipe into the connector.

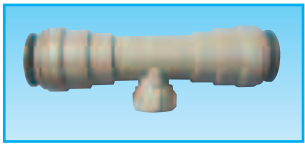
Note: Hand tightening the nut onto the body is all that is required. Further mechanical tightening will damage the fitting.

Maximum wall thickness of tank 4mm



PREVENTING BACK FLOW

The Speedfit Range includes a Double Check Valve (Part No 15DCV) to enable installers to comply with Water Regulation



Schedule 2.15, thus preventing contamination of water arising from back siphonage, backflow or cross connection. Suitable for use with fluid categories 1, 2 and 3 only.

RADIATOR CONNECTIONS

The most common way of running pipework to a radiator is to run both flow and return pipes central to the radiator position.

The pipes exit a single gang box (fitted with rubber grommets) located at the mid height of the finished radiator position. This also provides a fixed point for other trades to work to and reduces the risk of damage to the pipework.

Once the plasterboard is installed the pipes are passed through the Speedfit Radiator Outlet Plate to exit plasterboard without the need of unsightly holes.

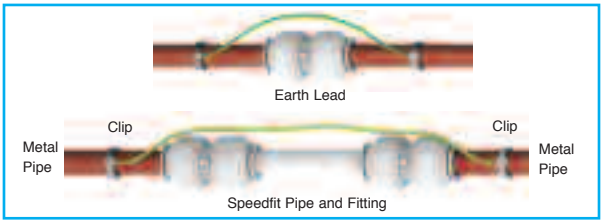
Metal reducing sets which convert radiator valves from 15mm to 10mm are not suitable for use with Speedfit Fittings or Pipe as they can cause damage to the plastic.

ELECTRICAL CONTINUITY

The plumbing or heating system installer should have these aspects checked to ensure compliance with current IEE Regulations. If in doubt please contact the Speedfit Technical Advisory Service or consult your local Electricity Authority.

IEE Guidance Note 7 provides useful guidance on the design of electrical installations where there is increased risk of electric shock. It recognises that the requirement for supplementary bonding may be relaxed where metal taps and plastic pipes supply other bathroom fittings.

Similarly a metal bath or radiator not connected to an extraneous-conductive-part is not required to be connected to the local supplementary conductors.



Speedfit Pipe and Fitting

SUPPLEMENTARY BONDING TO BATHROOMS

Pipe Material			Supplementary Bond Required Between	Comments
Cold Water	Hot Water	Central Heating		
P	**P**	**P**	Earth terminals of protective conductors of class I and of class II equipment and accessible exposed conductive parts of the building structure.	Bonding of metal taps metal radiators or metal baths is not required unless the bath is connected to the metallic building structure.
P	**M**	**M**	Hot water pipe, central heating pipes, earth terminals of protective conductors of class I and class II equipment and accessible exposed conductive parts of the building structure.	A bond is not required to the taps either hot nor cold, or to metal baths unless connected to the metallic building structure.
P	**P**	**M**	Central heating pipes, the earth terminals of protective conductors of class I and class II equipment and access to exposed conductive parts of the building structure.	Bonding of metal water taps is not required, nor metal baths unless connected to the metallic building structure.
M	**M**	**M**	All metal pipes, earth terminals of protective conductors class I and class II equipment, and accessible exposed conductive parts of the building structure.	Metal pipes themselves can be used as bonding conductors if joints are metal to metal and electrically continuous.
M	**M**	**P**	All metal pipes, earth terminals of protective conductors of class I and class II equipment, and accessible exposed conductive parts of the building structure.	Metal central heating radiator does not require bonding.

P = Plastic **M** = Metal **NB: All Waste Pipes are plastic.**

1. Supplementary bonding is carried out to the earth terminal of protective conductors of class I and class II equipment within the bathroom. A supplementary bond is not run back to the main earth.
2. Metal window frames are not required to be supplementary bonded unless they are electrically connected to the metallic structure of the bonding.
3. Metal baths supplied by metal pipes do not require supplementary bonding if all the pipes are bonded and there is no other connection of the bath to earth.
4. All bonding connections must be accessible and labelled “Safety Electrical Connection - Do Not Remove”.

CONNECTING TO OTHER PLUMBING FIXTURES

As shown in the Product Range List, the Speedfit Range of fittings includes valves, taps, adaptors and connectors for the plumbing of all typical domestic appliances and fittings.

DISCHARGE PIPES

Speedfit Pipe should not be used to provide the discharge from unvented cylinders, unvented water heaters and sealed systems via the temperature relief and pressure relief valves.

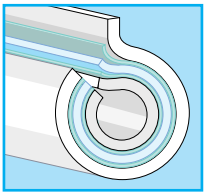
WATER HEATERS

Speedfit recommend that mains supply pipework to unvented water heaters (up to 15ltr capacity), be run in metal pipes.

INSTALLING PIPEWORK

SPEEDFIT BARRIER PIPE

Speedfit Barrier Pipe is manufactured to BS 7291 Parts 1, 2 and 3 Class S and is Kitemarked.



It is made up of 5 layers, the centre of which is a blue coloured oxygen barrier which prevents the ingress of air into the system, thereby reducing the effect of corrosion on metal components.

Because of its low thermal conductivity, when carrying hot water, Speedfit Pipe is cooler and therefore safer to touch. Relatively low heat loss through radiation means that a system retains its heat longer and delivers hot water more quickly and with less wastage than a metal system.

The pipe is available in coils and straight lengths. See page 19. Pipe markings are spaced to aid the making of a good connection when using a Superseal Pipe Insert.

PIPEWORK SIZING

For general guidance on pipework sizing, please refer to BS EN 806 and complimentarty guidance document BS 8558, or the Institute of Plumbing Engineering Services Design Guide. Speedfit Fittings are suitable for pipes within ±0.1mm of nominal size. They can be used with copper pipe to BS EN 1057 or Speedfit Plastic Pipe.

The Product Range List shows the fittings available for reducing pipe diameters within the system.
Speedfit Pipe is available in straight lengths and coils.

PIPE BENDING

Gentle bends can be made with pipe clips on either side of the curve, positioned to maintain the bend radius.

Tighter bends can be achieved by using the cold forming bends shown on page 27.

Internal Bending Springs are available in 10mm to 22mm sizes. See page 27.

It is also possible to bend Speedfit Pipe using a standard pipe bender. The pipe should not be heated with a blowlamp or hot air gun.

Minimum bend radii for Speedfit Pipe are as follows:

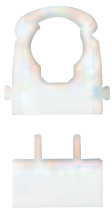
Min Radius	***Pipe Diameter***			
	10mm	15mm	22mm	28mm
with Cold Forming Bends	30mm	75mm	110mm	-
with Clips	100mm	175mm	225mm	300mm

For bends of radii smaller than those shown, standard elbow fittings are recommended.

PIPE SUPPORT AND CLIPPING

There are two types of pipe clip in the Speedfit Range.

Firstly, a nail clip is used for fixing to timber when running concealed pipe work i.e. underfloor or in a roof space . This clip takes less time to fit and is compact which allows pipework to be fixed close together when space is at a premium.



The second type uses a screw and therefore takes a little longer to fix. When pipes are required to cross over, it is possible to add a spacer to the clip. This will give room between the pipe and the wall to allow the pipes to cross over. If pipework needs to be insulated, using the spacer will give room for the lagging to be applied.

Pipe clips should not be fitted any closer than 60mm from the end of the fitting to allow for expansion. Pipes should always be adequately supported to prevent undue stress or side load on the fittings.

RECOMMENDED CLIP SPACING

For surface mounted pipes.

Pipe Diameter	*Clip Spacing*	
	Horizontal Run	*Vertical Run*
10 - 15mm	300mm	500mm
22mm	500mm	800mm
28mm	800mm	1,000mm

PIPE SIZING

For general guidance on pipework sizing, please refer to BS EN 806 and complimentary guidance form BS 8558, and BS EN 12828 or the Institute of Plumbing Engineering Services Design Guide. Speedfit Fittings are suitable for connection to pipe sizes within ± 0.1mm of nominal size.

The maximum heat carrying capacity and flow of Speedfit Pipe, based on 1.2m/s velocity and an 11ºC temperature drop is shown in the table below.

Pipe size	*Max Capacity KW*	*Max Flow litres/sec*	*Headloss m/m pipe*
10mm	1.948	0.042	0.283
15mm	5.941	0.129	0.139
22mm	13.604	0.295	0.084
28mm	21.991	0.478	0.062

PIPEWORK INSULATION

The insulation requirements for Speedfit Pipe are the same as those for copper and should comply with BS EN 806 and complimentary guidance form BS 8558, and BS5422.

CONCEALED PIPEWORK

The flexibility of Speedfit Pipe gives it the ability to be threaded through concealed or inaccessible spaces without disruption to surrounding structures, making major savings in installation time.

Pipework can be “cabled” through drilled holes in joists and rafters. Therefore, pipework can be installed after floorboards have been laid, working below the floor before the ceiling is installed.

This makes site work far safer as the installer does not have to balance on open joists with the risk of dropping tools or equipment on other people below.

This will also eliminate the risk of damage by floorboard nails. There is no need for dry runs since pipe can be cut and connections made in-situ.

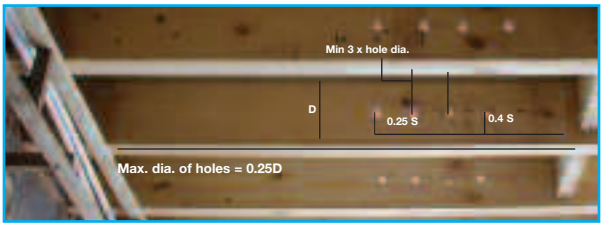
Rigid pipe, such as copper, can only be fed under floor in short lengths. However, Speedfit Pipe, being flexible, can run from one fitting to another without having to install a connector in between.

Speedfit needs no jointing materials, eliminating the risk of fire from the use of a blowlamp, solder and flux.

TRADITIONAL JOISTS

Instructions on the drilling of joists is given in the Building Regulations Approved Document A, and summarised as follows:

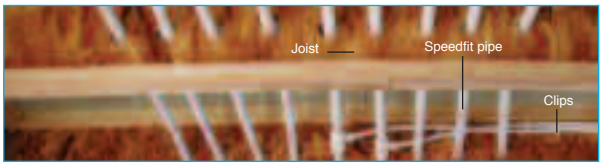
1. Holes should be no greater than 0.25 of the depth of the joist.
2. Holes should be drilled at the neutral axis.
3. Holes should not be less than 3 diameters (centre to centre) apart.
4. Holes should be located between 0.25 and 0.4 times the span from the support.



TIMBER I BEAM JOISTS

Several types of joists are available and Speedfit recommends that specific manufacturers details are consulted. However, the following can be used for general guidance.

- Holes may be located vertically anywhere in the web, but leave 3mm web at the top and/or bottom of hole. Do not cut into joist flanges when cutting the web.
- If more than one hole is to be cut in the web, the distance between the edges of the holes must be at least 2x diameter of the largest hole.
- Generally joists are manufactured with 38mm perforated knockouts in the web at approximately 300mm centres along the length of the joist.



CROSS WEB JOISTS

Unlike I beam joists, pipe can be cabled anywhere within the open Web as no drilling is required. However, the top and bottom flanges must not be notched. Avoid damaging the outside diameter of the pipe as you cable through the metal cross web members.

TIMBER FRAMED CONSTRUCTION

Speedfit is well suited for timber frame construction. Ensure that the structural integrity is not compromised when installing the pipework.

If the pipe passes through an external wall, care must be taken not to damage the vapour barrier and should be installed on the inside of the thermal insulation layer.

If this is not possible, the use of conduit should be specified at the design stage.

STEEL FRAMED CONSTRUCTION

Speedfit is well suited for steel frame construction and care should be taken when installing the pipework.

All runs should be installed through preformed holes in the structure and protected by a rubber or plastic grommet.

Where clipping of pipework is restricted, cable ties may be used to secure the pipe.

As with all installations, make sure that any pipework passing through walls and floors does not affect the fire resistant properties of the structure.

DRY LINED WALLS

Speedfit Pipework can be easily cabled through studwork and within wall systems as well as behind “dot and dab” plasterboard installations. Speedfit 10mm Barrier Pipe is most commonly used to feed radiators.

If incorporating fittings in this way, collet covers or collet clips must be used with the **Standard** Range of Fittings.

WET PLASTER

To prevent surface damage to the plaster caused by expansion and contraction of Speedfit Pipes, it is important to ensure that all Speedfit Pipework is channelled into the wall and protected with appropriate sleeving. Alternatively, the pipework can be surface mounted and boxed in if required for aesthetic appearance.

LAYING OF PIPE IN CONCRETE AND MASONRY

Speedfit Pipe and Fittings can be laid in concrete and masonry providing they are installed in conduit pipe with access boxes for the fittings. As stated in Water Regulation Schedule 2.7 and BS 8000 : Part 15, fittings and pipe should be removable for possible replacement. Insulation is also recommended to protect against heat loss and the effects of frost.

Speedfit Conduit Pipe is supplied in either 15mm or 22mm in coil lengths of 25m or 50m. The flexible convoluted pipe has an outside diameter of 24mm and 30mm.

EXPOSED PIPEWORK

On long exposed runs of pipework, the expansion of Speedfit Pipe when warm (1% on length between 20 to 82°C) can cause it to sag between clip fixings. When this is undesirable, pipework can be boxed in or replaced with rigid copper pipe.

Speedfit Pipe and Fittings are stabilised to withstand limited exposure to ultra-violet radiation in sunlight but are not designed for permanent direct exposure. Under such conditions painting or lagging is required. Pipe and fittings should also be lagged to prevent frost damage.

CHEMICAL EFFECTS

Only water or oil based paints should be used. Do not allow Speedfit fittings to come into contact with jointing compounds, cellulose based paints, paint thinners or strippers, solder flux, acid based descalents or aggressive cleaning products including those below pH4, high in hypochlorite (e.g. bleach) or containing hydrogen peroxide. (See the DISINFECTION OF HOT AND COLD WATER SYSTEMS section of the installation advice for specifically permitted disinfection procedures). If there is a risk of any chemical treatments coming into contact with Speedfit, please contact the Technical Advisory Service first to check compatibility.

FLUXES AND SPEEDFIT

JG Speedfit does not recommend that fluxes of any type come into contact with our pipe and fittings. However, if fluxes are to be used in an environment where Speedfit is installed then we recommend installers use non-acidic and zinc chloride free fluxes such as Fernox Flux.

ACOUSTIC

Properly installed, Speedfit Pipes are virtually silent in operation and do not resonate; they absorb the acoustic vibrations and pressure waves created by cavitations, water hammer, float operated valve oscillation and other hydraulic effects. The inherent flexibility of Speedfit Pipe effectively eliminates these troublesome problems, including those that occur when, due to thermal expansion, metal pipes rub against structural members and where long, straight runs of rigid pipe amplify water borne noise.

PROTECTION AGAINST RODENTS

When used in locations vulnerable to rodent attack, all plastic pipes and fittings should be adequately protected within sealed ducts.

Speedfit Products along with other materials such as electrical cables may be damaged if rodents are present. If vermin infestation is suspected then a rodent exterminator should take appropriate action.

BIOLOGICAL

No taste, colour, odour or toxicity is imparted to water by Speedfit Components, nor do they promote microbiological growth.

In accordance with BS7291 Part 1 requirements, the opacity of both pipes and fittings allows insufficient light to pass for the growth of algae.

Tests within the Water Regulations Advisory Scheme, have approved Speedfit Pipe and Fittings to BS 6920 for water quality.

SYSTEM TESTING

On completion of the plumbing and heating system it is essential that system checking and a hydraulic wet test takes place. Connections to boilers, radiators and sanitary ware should first be capped or plugged.

Testing Should be carried out at 2 bar for 10 minutes followed by 10 bar for 10 minutes.

This testing combined with other relevant checks, should reveal most system problems. Any components within the system not designed to take these pressures should be disconnected.

Before carrying out a pressure test ensure all Speedfit Pipe and fittings are installed correctly. Speedfit Barrier Pipe is printed with insertion marks to help ensure full insertion has been achieved.

Remember pressure testing is NOT a substitute for making sure fittings are clean and free of any grit, dirt or swarf and the pipe is correctly inserted (see Making a Good Connection).

SYSTEM COMMISSIONING AND FLUSHING

With existing systems, flushing prior to the use of Speedfit is essential to remove any harmful contamination or chemical residues from elsewhere in the system.

For the installation of central heating systems flushing procedures must be in line with BS7593 code of practice for treatment of water in domestic hot water heating systems.

Flux residues used in the soldering of capillary fittings are very corrosive. Dirt and grit, which can enter the system when Speedfit Pipe is being pushed through underfloor or across a roof space, must be removed.

During the commissioning of a heating system, all air must be removed from the system before the boiler is allowed to fire. This will ensure pockets of air do not cause localized overheating within the system as this could have a detrimental affect on the pipework and boiler.

For further advice on chemical flushing agents and inhibitor treatments, the following manufacturers should be contacted: Fernox Manufacturing Ltd., 01799 550811 or Sentinel Betz Dearborn Ltd., 0151 420 9595.

DISINFECTION OF HOT AND COLD WATER SYSTEMS

Speedfit can be disinfected with chlorine (sodium hypochlorite) after installation. Domestic systems are disinfected with a solution of chlorine with a concentration of 50ppm (mg/l) for one hour. The concentration should not be less that 30ppm at all draw off points after this time.

Other disinfection methods and chemicals (e.g. ozone and hydrogen peroxide) are now in common use. Only those specifically recommended as suitable for contact with plastic plumbing systems and, where necessary, employing specialist contractors may be used with Speedfit.

Disinfection solutions must only come into contact with the internal (wet) surfaces of the system. If any normally dry surfaces of a Speedfit fitting come into contact with disinfection solution the whole fitting must be replaced immediately. The disinfection solution must be immediately flushed out at all draw off points with fresh, wholesome water at the end of the disinfection period. **The solution must not be left in the system.**

TECHNICAL ADVISORY SERVICE

The JG Speedfit Technical Advisory Service is available to assist and advise on all aspects of using the Speedfit system. The service is available between 8.00am and 5.00pm, Monday to Friday on Telephone No. 01895 425333 and Fax No. 01895 425350. Products within this Product Guide are designed for use within UK plumbing and heating installations or in other countries where similar installation requirements apply. For information on products suitable for use in other countries please consult our Technical Advisory Service.

We take pride in the quality of our products and all complaints are investigated thoroughly. If you have a problem with a Speedfit Product please return both fitting and pipe to us for investigation. We will need at least 50mm of pipe to ensure an accurate analysis. If there is a suspicion that the pipe is faulty, please provide marking details from the pipe.

METAL FOIL TAPE

JG Speedfit aluminium Foil Tape can be used to fulfil the NHBC requirements for the identification of location of plastic pipes in or behind a wall surface by a metal detector. It features a bright aluminium finish, rubber/resin high-tack adhesive and quality siliconised backing paper to allow the easy handling of short, cut lengths.

DO NOT stick the tape to the Speedfit pipe or fittings or those of any other manufacturer.

COMMON PROBLEMS AND IDENTIFICATION

Problem : Burst or melted pipe.

Pipe will be distorted showing either a 'Parrot beak' look or a long opening with the edges of the pipe melted in a wave shape.

Identification : A 'Parrot beak' will have been formed by the pipe bursting due to the water freezing. If the Pipe has a melted appearance it will have been subject to a temperature in excess of 128˚C. This will have been caused by direct contact with a heat source such as a blowtorch or flue pipe or by water or steam within the system rising above safety levels.

Problem : A fitting or part of a fitting dissolved - the fitting may have blown off the pipe and may have missing component parts.

Identification : The fitting will have failed because of a chemical attack. The most common attack is from acid based solder flux running down into the fitting during soldering of a nearby copper fitting or flux coming into contact with the fitting in some other way.

Problem : Weep from fitting.

Identification : The pipe has not been fully inserted up to the pipe stop or one or both of the 'O' rings have been damaged by burrs or sharp edges on the end of pipe. See 'What Not to Do' on page 09.

Problem : The fitting has blown off the pipe. Fitting is missing the collet, the pipe insert is still inside the fitting after the pipe has come out.

Identification : If this happens on first fix, the most likely reason is that the pipe has not been fully inserted into the fitting, up to the pipe stop, and the system has not been pressure tested.

If the collet (gripping device) is missing everything will blow out. If the collet is there and the pipe support is still inside the connector but the pipe has still blown out, this means that full insertion had not been accomplished.

Speedfit®

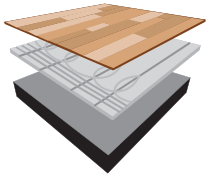
UNDERFLOOR

UNDERFLOOR HEATING

The Speedfit Underfloor Heating System has been designed to be quick and easy to install with components designed and manufactured to ISO9001 and DIN4726.

The Speedfit System has hot water pumped from a boiler to a pump pack, where it is mixed to approximately 50°C then distributed via a manifold to heating circuits made using Speedfit Barrier Pipe.

In concrete floors, the pipe is laid on insulation and then covered with a screed on which can be laid almost any type of floor covering.



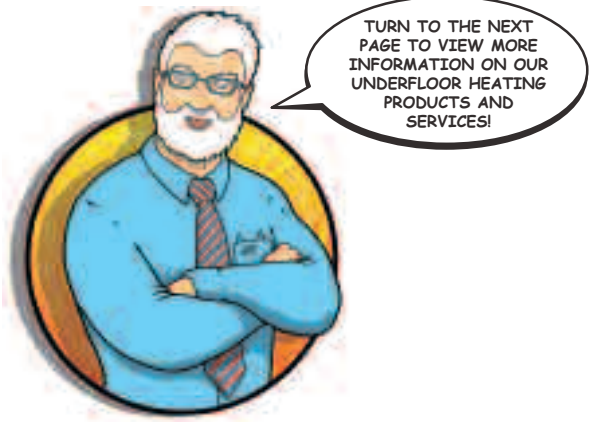
For timber floor, spreader plates are laid between the joists and the floor decking or on the underside of the floor. Speedfit Pipe is pushed into the grooves on the plates.

The floor area is typically warmed to between 25°C and 28°C, providing an even distribution of heat at only slightly higher than room temperature.

A wide range of electrical components means The System can have as much or as little control as required.

TECHNICAL CHECKLIST

The Technical Checklist for Underfloor Heating Products is on page 75.



JG Speedfit®

UNDERFLOOR

SPEEDFIT SUPPORT

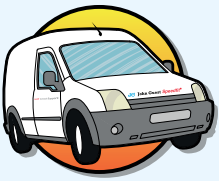
The JG Speedfit Underfloor Heating system offers a range of products to ensure that a wide variety of project types and sizes can be catered for. All pipe connections are made with a Speedfit push-in connection and the new JG Layflat pipe system has made fixing plastic pipe a far easier experience.

Speedfit Support's national team of technical engineers is available to help you get the best from your Speedfit System, be it assistance or advice.

Their service includes a free underfloor heating estimate, onsite installation advice, a technical helpline and a free CAD design service.

Technical Help Desk: 01895 425333
8am to 5pm Monday through Friday

SPEEDFIT SUPPORT



Onsite Installation Advice

Free Design Service

Online Project Estimator

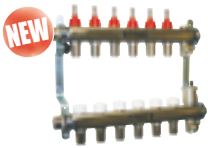
Technical Helpline

Online Info

Speedfit® UNDERFLOOR

MANIFOLDS AND FIXING SYSTEMS

MANIFOLDS - STAINLESS STEEL



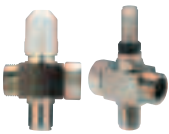
The manifolds are complete with adjustable flow gauge, drain valve and air bleed valve. They are pre-assembled on wall brackets and supplied with screws and plugs. Also supplied with 'STS' Pipe Inserts and Collet Clips.

Part No.	Description	Pack Qty
JGUFHMAN2/2	2 Zone	1
JGUFHMAN3/2	3 Zone	1
JGUFHMAN4/3	4 Zone	1
JGUFHMAN6/3	6 Zone	1
JGUFHMAN8/3	8 Zone	1
JGUFHMAN10/3	10 Zone	1
JGUFHMAN12/3	12 Zone	1

THERMOMIX CONTROL PACK - NICKEL PLATED

Part No.	Description	Pack Qty
JGCONTROL/4	CONTROL PACK	1

MANIFOLD EXTENSION KIT - NICKEL PLATED



Part No.	Description	Pack Qty
JGUFHMANEXT/2	Manifold Extension Kit	1

Enables a manifold to be extended by one or more zones.

MANIFOLD ELBOW CONNECTOR - NICKEL PLATED

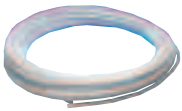
Part No.	Description	Pack Qty
JGUFHMANELB/2	Manifold Elbow Connector	1

Enables a pump pack and manifold to be installed at 90° to each other.

CONDUIT ELBOW

Part No.	Description	Pack Qty
JGUFHCONELB	Conduit Elbow	50

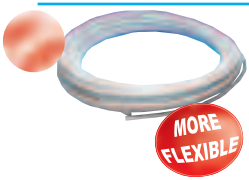
SPEEDFIT PEX BARRIER PIPE



Part No.	Size mm x m	Pack Qty	Box Qty
15BPEX-50C	15 x 50	1	5
15BPEX-100C	15 x 100	1	5
15BPEX-120C	15 x 120	1	5
15BPEX-150C	15 x 150	1	4

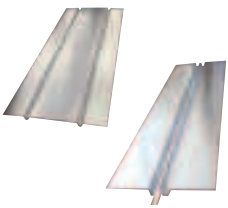
Layflat Pipe *Lays Flat - Stays Flat - Ultra Flexible*

JG LAYFLAT® POLYBUTYLENE BARRIER PIPE



Part No.	Size mm x m	Pack Qty	Box Qty
15BPB-50C	15 x 50	1	6
15BPB-100C	15 x 100	1	4
15BPB-120C	15 x 120	1	4
15BPB-150C	15 x 150	1	3
15BPB-300C	15 x 300	1	

SPREADER PLATES

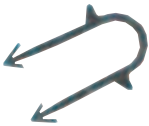


Part No.	Size mm x mm	Pack Qty
JGUFHSP400	390 x 1000	10
JGUFHSP250	390 x 250	10
JGUFHSP165	165 x 1000	20

Spreader Plates 390 x 1000mm and 390 x 250mm are laid across traditional joists.
Spreader Plates 165 x 1000mm are fixed to the underside of flooring between traditional or TJI Joists.
Available in Pack Multiples only.

PIPE STAPLES

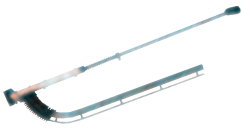
Speedfit offer several ways of securing pipe to the insulation layer in a screeded floor.



Part No.	Description	Pack Qty
JGUFHSTAPLE40	40mm Pipe Staples	300
JGUFHSTAPLE	60mm Pipe Staples	300

Black Staples are barbed to ensure a secure fixing to the insulation. Easy fixing is carried out by using a Staple Gun, securing pipe to the insulation with an easy repeatable action.

STAPLE GUN



Part No.	Description	Pack Qty
JGUFHGUN	Staple Gun	1

MOUNTING RAIL

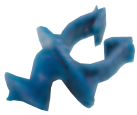
Part No.	Description	Pack Qty
JGUFHRAIL	2 Metre Long	16
JGUFHPIN	Rail Pins For Above	100

Mounting Rails offer a quick installation of 15mm pipe. Supplied 2 metres long, the rails are pre scored every 100mm for easy cutting. The rail can be secured to the insulation using red Rail Pins.
Available in Pack Multiples

FIXING TOOL

Part No.	Description	Pack Qty
JGUFHTOOL	For Easy Fixing Of Floor Clips	1

FLOOR CLIPS



Part No.	Description	Pack Qty
JGUFHCLIP	Floor Clip	100

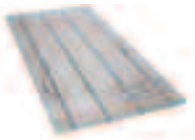
Floor Clips screw easily into insulation, they are best installed using a Fixing Tool.
Available in Pack Multiples only.

EDGE STRIP

Part No.	Description	Pack Qty
JGUFHEDGE	**25 Metre Roll**	**1**

Supplied in 25 metre rolls, the edge strip is placed round the edge of each room to provide insulation of the heated floor.

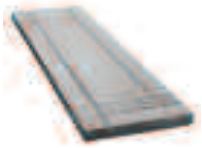
OVERFIT® BOARD



Part No.	Description mm x mm	Pack Qty
JGUFHBOARD1	**Overfit Board 1250 x 600**	**10**

Used to install underfloor heating pipe over an existing floor structure

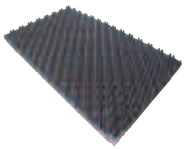
UNDERFIT® BOARD



Part No.	Description mm x mm	Pack Qty
JGUFHBOARD2	**Underfit Board 1200 x 350**	**10**

Used to install underfloor heating pipe between existing joists

FLOOR PANELS



Part No.	Description	Pack Qty
JGUFHTILE	**Floor Tile 1400mm x 800mm**	**12**

Supplied in packs of 12, Speedfit Floor Tiles have an 11mm layer of insulation for support and additional thermal insulation.

MAINS VOLTAGE CONTROLS

ACTUATOR VALVES

Part No.	Description	Pack Qty
JGUFHA(240V)/2	240 v Circuit Actuator Valve	1

TOUCHSCREEN TIME CLOCK - 4 CHANNEL

Part No.	Description	Pack Qty
JGTM4	Touchscreen Time Clock 4 Channel	1

WIRING CENTRE - 8 ZONE

Part No.	Description	Pack Qty
JGUH3	Wiring Centre 8 Zone	1

PROGRAMMABLE ROOM THERMOSTATS

Part No.	Description	Pack Qty
JGPRTE	Programmable Room Thermostat	1
JGPRTHW	Programmable Room Thermostat Plus Hot Water Control	1

DIAL SET BACK ROOM THERMOSTAT

Part No.	Description	Pack Qty
JGDSSB	Dial Setback Room Thermostat	1

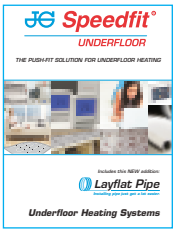
LOW VOLTAGE UNDERFLOOR HEATING NETWORK CONTROL SYSTEM

The new Underfloor Heating Network Control System from JG Speedfit differs from a normal underfloor heating system in that low voltage electrical components are 'networked' together using computer network cable. The system is based around a wiring centre that has connection for boiler, pump and thermostats.

This gives the user a number of options:-

- Direct control from a Touchpad Controller

For further information see our Underfloor Heating brochure.



Scan here with a smartphone to obtain a pdf version of our UFH brochure.

PROGRAMMABLE ROOM THERMOSTATS

Part No.	Description	Pack Qty
JGSTAT/V3	Programmable Room Thermostat	1
JGSTATPLUS/V3	Programmable Room Thermostat Plus Hot Water Control	1

TEMPERATURE SENSOR PROBE

Part No.	Description	Pack Qty
JGPROBE	Non Electrical Probe	1
JGSENSOR	Sensor Box For Above	1

WIRING CENTRE

Part No.	Description	Pack Qty
JGUH1	8 Zone Wiring Centre	1

TOUCHPAD NETWORK CONTROLLER

Part No.	Description	Pack Qty
JGTOUCHPAD/TFT	Touchpad Controller	1

TOUCHSCREEN PROGRAMMABLE ROOM THERMOSTATS

Part No.	Description	Pack Qty
JGSTAT/TS/V3	Touchscreen Programmable Room Thermostat	1
JGSTATPLUS/TS/V3	Touchscreen Programmable Room Thermostat Plus Hot Water Control	1

TOUCHSCREEN TWIN CHANNEL PROGRAMMABLE ROOM THERMOSTAT

Part No.	Description	Pack Qty
JGSTAT2/TS/V3	Touchscreen Twin Channel Programmable Room Thermostat	1

Allows one thermostat to control two zones.

NET MONITOR

Part No.	Description	Pack Qty
JGNETMON1	Net Monitor	1
JGNETMON2	Net Monitor With GSM	1

WIRELESS CONTROLS

- Easy to use
- Easy to install
- Wireless Range up to 100m

The new Wireless Control System permits flexible location of thermostats in domestic heating installations.

The programmable thermostats work in conjunction with the Wireless 8 Zone Wiring Centre, which is mains powered and is ideally suited to warm water underfloor heating as well as radiator installations. To extend the Wireless range, wireless repeaters are available to 'boost' the signal.

WIRELESS MULTI MODE THERMOSTAT

Part No.	Description	Pack Qty
JGWPRT	Programmable Room Thermostat	1
JGWPRTHW	Programmable Room Thermostat Plus Hot Water Control	1

WIRELESS RECEIVER

Part No.	Description	Pack Qty
JGWRC	Wireless Receiver 2 Zone	1

WIRELESS REPEATER

Part No.	Description	Pack Qty
JGBOOSTER	Wireless Repeater	1

WIRELESS WIRING CENTRE

Part No.	Description	Pack Qty
JGWWC	Wireless Wiring Centre 8 Zone	1

EXTERNAL AERIAL

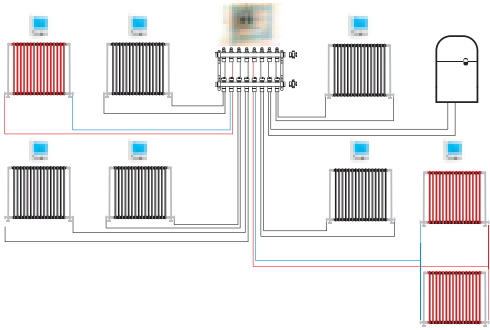
Part No.	Description	Pack Qty
JGAERIAL	External Aerial For Use With 8 Zone Wireless Centre JGWWC	1

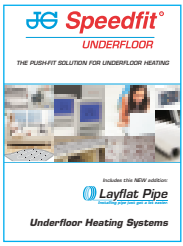
ENERGY SAVER PLUS

The Economic Way to Heat Your Home

Unlike a conventional system, where radiators are connected to a common flow and return, this manifold system enables each radiator to have its own hot water supply. For ease of plumbing, the hot water can also be coupled to the manifold. Energy saving electrical controls are used to set time and temperature for each room.

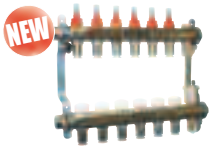
For futher information see our Underfloor Heating brochure.





Scan here with a smartphone to obtain a pdf version of our UFH brochure.

MANIFOLDS - STAINLESS STEEL



Part No.	Description	Pack Qty
JGUFHMAN2/2	2 Zone	1
JGUFHMAN3/2	3 Zone	1
JGUFHMAN4/3	4 Zone	1
JGUFHMAN6/3	6 Zone	1
JGUFHMAN8/3	8 Zone	1
JGUFHMAN10/3	10 Zone	1
JGUFHMAN12/3	12 Zone	1

ACTUATOR VALVE

Part No.	Description	Pack Qty
JGUFHA(240V)/2 Actuator Valve	240 v Circuit	1

TOUCHSCREEN TIME CLOCK - 4 CHANNEL

Part No.	Description	Pack Qty
JGTM4	Touchscreen Time Clock 4 Channel	1

WIRING CENTRE - 8 ZONE

Part No.	Description	Pack Qty
JGUH3	Wiring Centre 8 Zone	1

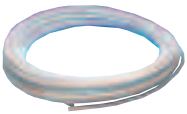
PROGRAMMABLE ROOM THERMOSTATS

Part No.	Description	Pack Qty
JGPRTE	Programmable Room Thermostat	1
JGPRTHW	Programmable Room Thermostat Plus Hot Water Control	1

DIAL SET BACK ROOM THERMOSTAT

Part No.	Description	Pack Qty
JGDSSB	Dial Setback Room Thermostat	1

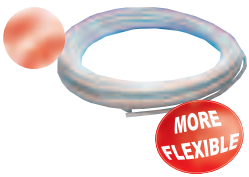
SPEEDFIT PEX BARRIER PIPE



Part No.	Size mm x m	Pack Qty	Box Qty
10BPEX-50C	10 x 50	1	10
10BPEX-100C	10 x 100	1	6
15BPEX-50C	15 x 50	1	5
15BPEX-100C	15 x 100	1	5
15BPEX-120C	15 x 120	1	5
15BPEX-150C	15 x 150	1	4

Layflat Pipe *Lays Flat - Stays Flat - Ultra Flexible*

JG LAYFLAT® POLYBUTYLENE BARRIER PIPE



Part No.	Size mm x m	Pack Qty	Box Qty
15BPB-50C	15 x 50	1	6
15BPB-100C	15 x 100	1	4
15BPB-120C	15 x 120	1	4
15BPB-150C	15 x 150	1	3
15BPB-300C	15 x 300	1	

UNDERFLOOR HEATING FOR CONSERVATORIES AND EXTENSIONS

CONTROL UNIT

Part No.	Description	Pack Qty
JGROOMPACK/2	**Single Room Control Unit**	**1**

For conservatories or room extensions up to 30m².

SINGLE ROOM UNDERFLOOR HEATING PACK

Part No.	Description	Pack Qty
JGUFHPACK20/2	**Underfloor Heating Pack**	**1**

For conservatories or room extensions up to 20m².

Pack contains:
1 x 15mm x 150m Coil of Pipe
1 x Single Room Control Unit
1 x Programmable Room Thermostat
200 x 15mm Pipe Clips
2 x 15mm Pipe Inserts

Part No.	Description	Pack Qty
JGUFHPACK30/2	**Underfloor Heating Pack**	**1**

For conservatories or room extensions up to 30m².

Pack contains:
2 x 15mm x 100m Coils of Pipe
1 x Single Room Control Unit
1 x Programmable Room Thermostat
300 x 15mm Pipe Clips
8 x 15mm Pipe Inserts
2 x 15mm Speedfit Equal Tees
2 x 15mm Speedfit Stem Elbows

WIRELESS SINGLE ROOM UNDERFLOOR HEATING PACK

Part No.	Description	Pack Qty
JGUFHWPACK30/2	**Wireless Underfloor Heating Pack**	**1**

For conservatories or room extensions up to 30m².

Pack contains:
1 x Control Unit
1 x Wireless Programmable Room Thermostat
2 x 15mm x 100m Coils of Pipe
300 x Pipe Clips
8 x Pipe Inserts
2 x 15mm Speedfit Equal Tees
2 x 15mm Speedfit Stem Elbows
1 x 2 Zone Wireless Receiver


ROOM HEATING PACK

TECHNICAL CHECKLIST - PLUMBING AND HEATING FITTINGS

Fittings and pipe should be kept clean and undamaged before use.

- **Sizes.** 10mm to 28mm diameter.
- **Pipes.** Speedfit fittings can be used with:
  Copper pipe to BS EN 1057

  Speedfit Barrier Pipe to BS7291.

  Speedfit fittings cannot be used on stainless steel pipe.
- **Standards.** Speedfit products are designed and manufactured under a fully integrated system assessed by B.S.I. to BS EN ISO9001. They are approved by the WRAS and BBA. Speedfit PEM, PSE and SFM Fittings and Speedfit Barrier Pipe are Kitemarked to BS7291 Parts 1, 2 and 3, Class S. (Licence No. KM39767)
- **Applications.**
  Mains fed and indirect cold water systems
  Vented and unvented hot water systems
  Vented and sealed central heating systems
- **Do not use for Gas, fuel oil or compressed air applications.**
- **Working Temperatures and Pressures**

Application	*Usual working temperature, °C*	*Maximum working temperature, °C*	*Maximum working pressure, bar*
Cold Water (indirect and direct mains)	20	20	12
Central Heating	82	105, short term malfunction at 114	3
Hot Water (including unvented cylinders)	65	95	6

- **Burst Pressure (fittings).** With copper or plastic pipe at 20°C: Speedfit fittings used with copper or Speedfit barrier pipe will withstand pressures well in excess of normal service conditions.
- **High Temperatures.** Can withstand 114°C intermittently for short periods. The Speedfit system should not be used on an uncontrolled heat source.
- **Insulation.** Should comply with BS EN 806 and complimentary guidance document BS 8558, and BS5422, as for copper.
- **Minimum Bend Radii (PEX)**

Pipe diameter	10mm	15mm	22mm	28mm
Min radius with clips	100mm	175mm	225mm	300mm
Min radius with cold forming bend	30mm	75mm	110mm	-

- **Clip spacing (in mm).** For surface mounted pipes

Pipe Diameter	*Clip Spacing*	
	Horizontal Run	*Vertical Run*
10 - 15mm	300mm	500mm
22mm	500mm	800mm
28mm	800mm	1,000mm

Where pipe is concealed, clipping may only be required where necessary.

- **Expansion (PEX pipe).** 1% on length between 20°C and 82°C.
- **Flow Rates.** Comparable with metal systems.
- **Cleaners, Inhibitors and Descalents.** For advice on the replenishment of additives such as corrosion inhibitors, the following manufacturers should be contacted: Fernox Manufacturing Ltd on 01799 550811 or Sentinel, BetzDearborn Limited on 0800 389 4670.
- **Paint and Chemicals.** Use only water or oil based paint. **DO NOT ALLOW CONTACT WITH** cellulose based paints, paint thinners or strippers, solder flux, acid based descalents or aggressive cleaning products, including those below pH4, high in hypochlorite (e.g. bleach) or containing hydrogen peroxide. (See the DISINFECTION OF HOT AND COLD WATER SYSTEMS section of the installation advice for specifically permitted disinfection procedures).
- **Exposure to Sunlight.** Speedfit products, when used indoors, are not affected by sunlight. When used outdoors protect from ultra violet light by lagging or painting.
- **Side Loads.** John Guest products are not designed to be used whilst under side load as this may adversely affect their ability to function long-term. Always ensure tubes have good alignment with the fitting. They must also not be subjected to any form of impact or other damage, such as being hit or dropped, even accidently. If fittings have damaged or suffered an impact, they should be replaced immediately. John Guest warranty does not cover loss caused by any form of damage.

TECHNICAL CHECKLIST - PLUMBING AND HEATING FITTINGS

- **Solder Flux.** No fluxes of any types should come into contact with JG Speedfit Pipe and Fittings. If fluxes are to be used in an environment where Speedfit is installed, then (1) extreme care should be taken to ensure that no such contact takes place and (2) JG recommend installers only use fluxes tested and approved in writing in advance by JG. At the date of this publication, the only such approved flux is Fernox Flux.
- **Chlorine.** Speedfit is not suitable for use in systems where the water contains high levels of chlorine. e.g. swimming pools, fountains etc.
- **Pipe Clips.** Pipe clips should not be fitted any closer than 60mm from the end of the fitting. Pipe should be adequately supported by pipe clips to prevent undue stress (side load) on fittings.
- **Pipe Inserts.** Must be used on all installations when using plastic pipe and should be fully inserted. Only use Speedfit Inserts with Speedfit Pipe.
- **Metal Joists.** When 'cabling' plastic pipe through metal joists ensure rubber grommets are in place to prevent damage to pipe. Use of collet covers or collet clips on fittings recommended.
- **Connection to Boilers.** A minimum 1000mm run of copper pipe must be installed between the boiler and the Speedfit system, as per BS5955: Part 8.
- **Connection to Copper Pipe.** 450mm is the minimum distance to make a solder connection on copper pipe inserted into a Speedfit Fitting. Ensure that any residual flux solder does not come into contact with the fitting.
- **Concrete and Masonry.** Speedfit pipe and fittings can be laid in concrete and masonry providing they are installed in conduit pipe with access boxes for the fittings. This is to enable the pipe to expand and provide accessibility for both pipe and fittings. As stated in Water Regulation Scheme 2.7 and BS 8000 : Part 15, fittings and pipe should be removable for possible replacement. Insulation is also recommended to protect against heat loss and the effects of frost.
- **Electrical Continuity.** If Speedfit is used in an existing metal system which may have been used for earthing, electrical continuity should be reinstated.
- **Valves and Taps.** Plastic 15mm and 22mm valves and taps available from JG Speedfit Ltd are not suitable for central heating installations.
- **1/4 Turn Valves.** These valves have been designed to allow temporary servicing of downstream equipment and must only be used in the fully open or fully closed position.
  DO NOT USE THESE VALVES:
  - In a partially open position to control flow.
  - To provide a permanent termination.
  - Without tubing assembled or plugged (or threaded connections sealed).
  - As a tap or "faucet".
- **Collet Covers.** Collet covers provide added security for standard fittings against pipe disconnection, e.g. the fittings coming into contact with rigid surfaces and behind dry-lining walls. They are offered in white as standard and in red or blue to provide colour coding of pipe.
- **Collet Clips.** White or grey collet clips are used with standard fittings to prevent accidental pipe disconnection. Red or blue clips provide colour coding of pipe. Red and blue clips should not be used to prevent accidental release of pipe.
- **Continuously Operated Re-circulating Systems (secondary hot watercirculation/ring main installations):** A continuously operated re-circulating system is a water-replenished circulating system which is maintained at a constant high temperature to provide a constant source of hot water. Continuously operated re-circulating systems are used to distribute constant hot water to draw off points that may be distant from the source or hot water storage vessel. Continuously operated re-circulating systems are very different from conventional hot water supply and central heating systems found in domestic properties, for which our products have been tested to, under either BS7291:2010 Class S or WRAS approval standards, and for this reason Speedfit products must not be used on any continuously operated re-circulating systems as they are not approved under the current version of these standards.
- **System Testing.** To ensure the pipework and fittings have been installed correctly, whether it be on a new or extended system, it is essential that the system is checked and hydraulically wet tested. Testing should be at 2 bar for 10 minutes and 10 bar for 10 minutes. This testing, combined with other relevant checks, should reveal installation problems and is regarded as good plumbing practice. Speedfit Stop Ends and Plugs are particularly useful during this operation, enabling all outlets and any fittings to be easily plugged. However, system testing should not be regarded as a substitute for correct installation (see also "Making a Good Connection").

Continued Overleaf

TECHNICAL CHECKLIST - PLUMBING AND HEATING FITTINGS

- **System Flushing.** As is usual practice for any plumbing installation, flushing of the system prior to the use of Speedfit is recommended to remove any contaminants/chemical residue from elsewhere in the system.
- British Gas Service has accepted the John Guest Speedfit fittings as being suitable for open vented and sealed central heating systems and as eligible for acceptance onto its service contracts.
- **Vermin.** Speedfit products will need special protection in vermin infested areas.
- **Maximum Torque Figures.** Plastic threads are not generally as strong as brass threads. Customers and end users should be aware of this when choosing products for their applications. Overtightening of plastic threads will cause undue stress and eventual cracking and leakage. The maximum torque figures for BSP and BSPT threads used on Speedfit plumbing products in mating threads conforming to the relevant British or International thread standards.

Threads	*Size*	*Maximum Torque*
Plastic	1/2"	3.0 Nm
	3/4"	4.0 Nm
Brass	1/2"	4.0 Nm
	3/4"	5.0 Nm

It is recommended that all installations are checked prior to use to determine that seal has been made.

TECHNICAL CHECKLIST - UNDERFLOOR HEATING

- **Applications.** Underfloor Heating Installations in solid or timber floors.
- **Pipes.** 15mm JG Speedfit Barrier Pipe to BS 7291 Parts 1, 2 and 3 Class S.
- **DO NOT USE Speedfit UFH Products for Gas, fuel oil or compressed air applications.**
- **Floor Insulation.** Should be a suitable material and thickness to comply with current regulations.
- **Minimum Bending Radii.** For Speedfit B-PEX Pipe is 175mm.
- **Expansion (PEX - Pipe).** 1% on length between 20˚C and 82˚C.
- **Cleaners, Inhibitors and Descalents.** For advice on the replenishment of additives such as corrosion inhibitors, the following manufacturers should be contacted Fernox Manufacturing Limited on 01799 550811 or Sentinel, BetzDearborn Limited on 0151420 9595.
- **Paint and Chemicals.** Only use water or oil based paint. DO NOT ALLOW CONTACT WITH cellulose based paints, paint thinners or strippers, solder flux or acid based descalents or aggressive household cleaning products.
- **Exposure to Sunlight.** Speedfit products, when used indoors, are not affected by sunlight. When used out doors protect from ultra violet light by lagging or painting.
- **Pipe Inserts.** Must be used on all installations when using plastic pipe and should be fully inserted.
- **Electrical Components.** Electrical products in the Speedfit Underfloor Heating System are designed only to be used in U.K. Electrical Supply situations.
- **Electrical Continuity.** If Speedfit is used in an existing metal system which may have been used for earthing, electrical continuity should be reinstated.
- **Collet Clips.** White and Grey collet clips are used with standard fittings to prevent accidental pipe disconnection. Red or blue clips provide colour coding of pipe. Red and blue clips should not be used to prevent accidental release of pipe.
- **Pre-Screed System Testing.** To ensure the pipework has been installed correctly and prior to the screed being laid, it is essential that the system is checked and hydraulically wet tested.
  Testing should be carried out at 2 bar for 10 minutes and 10 bar for 10 minutes.
  This testing, combined with other relevant checks, should reveal installation problems and is regarded as good plumbing practice.
- **Pressurisation During Screed Laying & Curing.** In accordance with BS1264-4, the system should be left under pressure at a minimum of 6 bar for the duration of the laying and curing of the screed.
  Under NO circumstances should the UFH System be used to quicken the screed drying process.
- **System Flushing.** As is usual practice for any plumbing installation, flushing of the system prior to the use of JG Speedfit is recommended to removeany contaminants/chemical residue from elsewhere in the system.
- **Vermin.** Speedfit products should not be used in vermin infested areas.
- **Frost Protection.** During the installation process it is important that pipe containing water be protected from frost.

TECHNICAL CHECKLIST
- FITTINGS FOR COLD WATER SERVICES

- **Applications.** Speedfit Fittings for Cold Water Services are designed to connect MDPE pipes (MRS-PE80) used above or below ground, to convey potable water from distribution mains to individual properties.
- **Pipes.** The Fittings can be used with:-
  - Blue MDPE pipe to BS 6572.
  - Black MDPE pipe to BS 6730.
  - Blue pipe to BS EN 12201-2, 20mm PN16, 25mm and 32mm PN12.5.
- **Adaptors.** Are available for:-
  - Copper to BS EN1057 and PEX or PB to BS7291.
  - Screwed pipe.
  - LDPE to BS1972 Class C and Class D in 1/2" and 3/4" sizes.
- **Fittings for PEX and Copper Pipe.** Must not be buried into ground, soil, concrete or other substrates.
- **Working Temperatures and Pressures.** Maximum working pressure 16 Bar @ 20˚C.
- **Standards.**The Fittings are approved by the Water Regulations Advisory Scheme.
- **Performance.** The Fittings are manufactured from tough plastic material well able to meet the stringent requirements of the water industry. They have been approved by the WRAS and, as such, have passed the 'pull out test' where a force shown below is applied to a connection between MDPE pipes and a fitting for 5 minutes without the connection failing.

	Size		
Test Force	20mm	25mm	32mm
Newtons	1900	2500	4100
lbs	427	562	921

- **DO NOT USE FOR Gas, fuel oil or compressed air applications or hot water.**
- **Chemical Effects.** For below ground applications the fittings require no additional preparations - coating etc. When used above ground, avoid contact with aggressive chemical compounds. Protect from frost where necessary. In the United Kingdom, potable water does not contain high levels of chemicals (eg chlorine etc) that would adversely affect Speedfit Cold Water Fittings.
- **Paint and Chemicals.** Use only water or oil based paint. ***DO NOT ALLOW CONTACT WITH*** jointing compounds, cellulose based paints, paint thinners or strippers, solder flux, acid based descalents or aggressive cleaning products, including those below pH4, high in hypochlorite (e.g. bleach) or containing hydrogen peroxide. (See the DISINFECTION OF HOT AND COLD WATER SYSTEMS section of the Product Guide installation advice for specifically permitted disinfection procedures).
- **Exposure to Sunlight.** Permanent exposure to direct sunlight will necessitate lagging the fittings.
- **Pipe Inserts.** Pipe inserts must be used and fully inserted on all connections to MDPE, LDPE, PEX or PB pipe.
- **System Testing.** Pressure test to 1.5 times working pressure for 10 minutes before connecting to the mains supply. It is recommended that all pipe and fitting installations are pressure tested after installation before handing over to the final user
- **Maximum Torque Figures.** The maximum torque figures for BSP and BSPT threads used on Speedfit products are as follows:-

Size	***Maximum Torque***
1/2	3.0 Nm
3/4	4.0 Nm

It is recommended that all installations are checked prior to use to determine that a seal has been made.

The maximum torque figures quoted for use with Speedfit fittings are dependent on the mating thread conforming to the relevant British International thread standards.

NOTES

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