

**SHARKBITE**® **METAL PUSH-FIT** PLUMBING SOLUTION TECHNICAL INFORMATION



# THE ULTIMATE RANGE OF PUSH-FIT PLUMBING FITTINGS

SharkBite®, the world's most versatile, easy to fit, secure and watertight brand of push-fit plumbing fittings is now available in the UK from Reliance Water Controls.

Originally launched in 1998 in Australia by Reliance Worldwide Corporation and then in North America in 2002, SharkBite has rapidly increased in popularity to become the world's most popular brand of push-fit fittings.

SharkBite fittings are engineered to provide an extremely fast, secure and reliable method of joining Copper, PEX, Polybutylene and Carbon Steel pipework. All fittings are demountable and can be reused when required. The easy installation method greatly reduces installation time and a secure, sealed joint is always achieved.

The bodies are manufactured from ultra low lead DZR brass and pressure rated to 10 bar at 120°C. Fittings are available in 7 popular sizes from 10mm up to 54mm, are WRAS approved and certified by many other international approval bodies.



SharkBite fittings are installed in many high profile buildings, including Q1 in Melbourne, the Bellagio in Las Vegas and in Hampton Inn hotels throughout the world.

## **SHARKBITE®**

# THE PLUMBING SOLUTION FOR ANY INSTALLATION

Contractors, specifiers, architects and installers alike can all experience the benefits SharkBite offers when specifying and using the SharkBite range of highly innovative and technologically advanced fittings, designed to meet the demands of both modern day residential and commercial hot and cold water systems.

Connect Copper to PEX pipe, Copper to Carbon Steel pipe, PEX to Polybutylene, basically any combination of these four pipe materials can be connected together using SharkBite fittings. Now there is no need to purchase, store or carry a different array of fittings.

The sharp stainless steel teeth of the internal grab ring bite into the pipe once pushed into the fitting, gripping it tightly. The watertight seal is created by the specially formulated material of the o-ring which compresses to create a perfect seal. A SharkBite demount tool can be used to remove a fitting and it is immediately reusable.



# NO FUSS SOLUTION

- Quick and easy to install in both wet or dry conditions (repairs can be made in seconds)
- Heat/flux free installation ideal for use where flame jointing is not permitted
- No expensive tools required
- Quick and easy to demount
- Instantly reusable time and time again
- Incorporates in-built pipe guidance for superior o-ring protection
- Pre-lubricated o-ring



ELECTRICALLY CONTINUOUS



**INSTANTLY REUSABLE** 



**DEMOUNTABLE** 



ULTRA LOW LEAD DZR



# **VERSATILE** RANGE

- Connects Copper, Carbon Steel, PEX and Polybutylene pipe in any combination
- Comprehensive choice of pipe, fittings, valves and accessories
- Sizes from 10mm up to 54mm
- Slip Couplings and Slip Tees ideal for repairs and retrospective additions
- End stops are ideal for prefabrication and part system testing (demountable & instantly reusable)
- Single and multi-pack pack sizes (colour coded for easier selection)
- Slim, compact design fully rotatable and ideal for use in confined spaces or where pipework is exposed
- Easy to insulate

# HIGH PERFORMING & RELIABLE

- Electrically continuous (when used with Copper or Carbon Steel pipe)
- Ultra low lead DZR body
- No UV degradiation
- Stainless Steel cartridge rings provide resistance to acetal degredation
- Easily detectable behind walls
- Pressure rated to 10 bar at 120°C
- WRAS approved and certified by many international approval bodies
- Fittings guaranteed for 25 years

# CUT. PUSH. DONE.

### 3 SIMPLE STEPS







#### **STEP 1: CUT & DEBURR**

Cut the pipe square and deburr.

#### **STEP 2: MARK**

Mark insertion depth using the depth marker on the demount clip or using a tape measure, following insertion depth information provided on page 31.

#### **STEP 3: PUSH & TWIST**

Push pipe into fitting up to the depth mark with a slight twist - DONE.

# EASY REMOVAL







#### **DISCONNECTING CLIP**

Demount (10 to 28mm), by using the disconnecting clip (snap clip against release collar and pull pipe at the same time).

#### **DISCONNECTING TONGS**

Demount (10 to 28mm), by using disconnecting tongs (push tongs over pipe, squeeze tongs together and pull pipe at the same time).

#### **SHARKSHIFTER®**

Demount (35 to 54mm), using the SharkShifter over pipe, rotate clockwise and remove the pipe).

# **SPECIFICATION**

# INFORMATION

SharkBite® pipe, fittings, valves and accessories are ideal for both domestic and commercial applications including:

- Potable water applications
- Vented and unvented hot water systems
- Pressurised, vented and sealed central heating systems
- Hot and cold water services
- Heating and chilled water applications



# MULTIPLE PIPES ONE SOLUTION

The SharkBite fitting range has been designed to provide a single solution for all commonly available pipes for domestic and commercial applications. It has been rigorously tested and approved with the following pipes:









#### **COPPER**

SharkBite fittings and valves will connect compatibly sized Copper pipes that are manufactured in accordance with BS EN 1057 in sizes from 10mm to 54mm. If 10mm annealed Copper pipe is being used, it must be re-calibrated in accordance with table 4 R250 tolerances in the above standard and a Copper liner installed into the pipe prior to assembly.

### SHARKBITE PEX PIPE

SharkBite cross linked Polyethylene (PEX) is manufactured to BS 7291 part 3 and can be joined with SharkBite fittings and pipe liners for every connection. Available in 3 sizes, 15mm, 22mm and 28mm, in 3m straight lengths or 25m/50m coils. Alternatively, SharkBite fittings, valves and accessories can be used with other brands of PEX pipe and liners, provided they comply with BS7291 part 3.

#### **CARBON STEEL PIPE**

SharkBite fittings will join Carbon Steel pipe manufactured to EN 10305–2, in sizes, 15mm up to 54mm.

#### **POLYBUTYLENE**

SharkBite fittings will join Polybutylene (PB) pipe manufactured to BS 7291: Part 2 when utilising the specific manufacturers' liner for every size and connection.

# THE MARQUE OF QUALITY

All SharkBite® fittings are thoroughly tested to ensure quality and durability over time. So, make sure you have the shark!



# **SHARKBITE** DESIGN

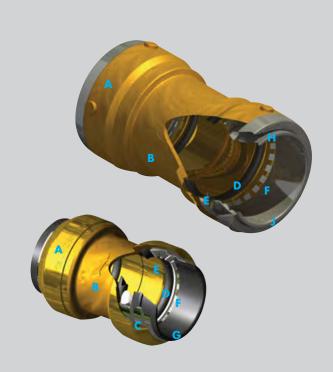
The SharkBite logo represents genuine, high quality plumbing fittings that redefine the meaning of high performance and efficiency in the plumbing industry.

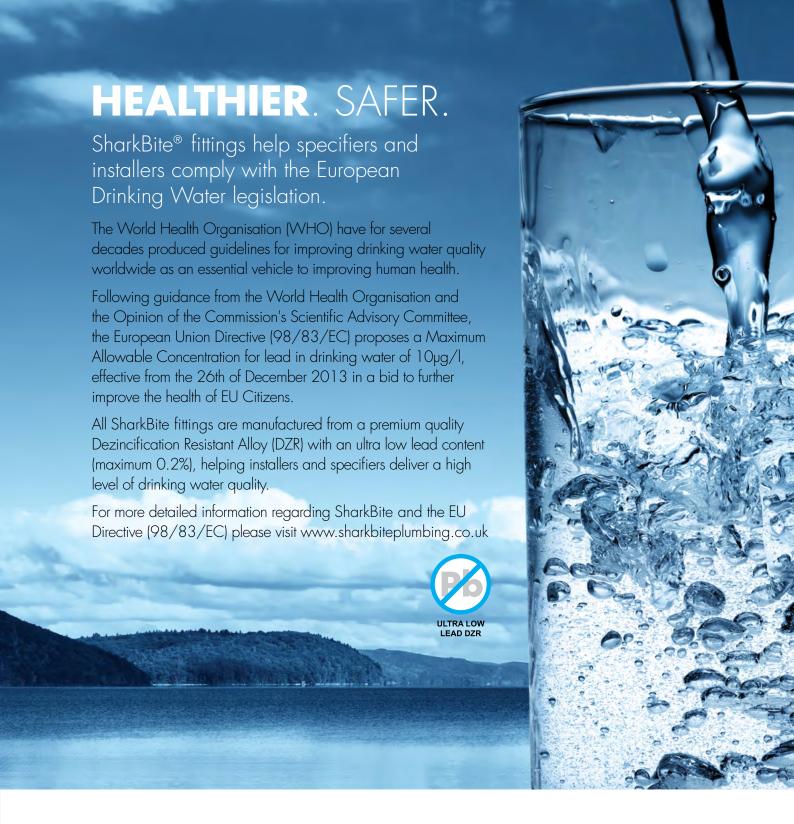
SharkBite fittings provide a fast, secure and heat-free pipework connection solution that will reduce installation times and the requirement to return to an installation in the future. Their slim-line design provides an aesthetically pleasing appearance when surface mounted. It also makes the fittings ideal for installation in tight spaces and easy to insulate, when required.

The fitting bodies are manufactured from robust ultra low lead DZR brass. The toothed grab ring is manufactured from 316 Stainless Steel which provides the firm bite that ensures the strongest of joints is made. The EPDM rubber o-ring (Ethylene Propylene Diene Monomer), provides a long lasting and secure seal. The cartridge ring is manufactured from 304 stainless steel to provide guaranteed electrical continuity.

All fittings are rated to 10 bar at 120°C, WRAS approved and certified by many other international approval bodies.

- A Ultra Low Lead DZR Brass Body B SharkBite Logo
- C 304 Stainless Steel Cartridge Ring EPDM O-Ring
- E Nylon 6 Alignment Ring F 316 Stainless Steel Grab Ring
- G Acetal Disconnecting Ring H PPSU Locking Ring
- J Nylon Disconnecting Ring





## **APPROVALS**

The SharkBite® range has been designed to exceed all approval requirements and has been certified by the following approval bodies:











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**90° STREET ELBOWS** 

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90° FEMALE ELBOW

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90° FEMALE ELBOW WITH BACKPLATE











**EQUAL TEES** 

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**SINGLE BRANCH MANIFOLD TEE** 

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**PUSH-FIT TO FEMALE BSP FLEXIBLE CONNECTORS** 



**PUSH-FIT TO PUSH-FIT FLEXIBLE CONNECTOR** 

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**PEX PIPE** Page 18





**PEX LINER** Page 18



**APPLIANCE VALVE** Page 19





All SharkBite® fittings are packaged in colour coded bags to aid size identification.

15mm

**22mm** 

**Plumbing Solutions** 



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**DOUBLE CHECK VALVE** Page 19



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**AUSIMIX 4 IN 1 TMV'S** 

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PRESSURE REDUCING VALVES



**THERMAL** BALANCING VALVES
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FLOREG STRAINER/ ISOLATOR VALVES Page 21



**PROTECTO** YC STRAINER/
ISOLATOR VALVES

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**ACCESSORIES** 

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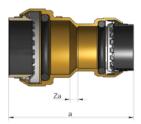
# **28mm** 35mm





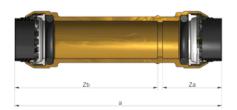
#### **COUPLINGS**

Size	Code	Qty.	α	Za
10mm	SB0110	5	46mm	1mm
15mm	SB0115	10	51mm	1mm
22mm	SB0122	5	61mm	1mm
28mm	SB0128	5	65mm	1mm
35mm	SB0135E	1	112mm	2mm
42mm	SB0142E	1	124mm	2mm
54mm	SB0154E	1	134mm	2mm



#### **REDUCING COUPLINGS**

Size	Code	Qty.	α	Za
15mm x 10mm	SB011510	5	52mm	4mm
22mm x 15mm	SB012215	5	60mm	5mm
28mm x 22mm	SB012822	1	67mm	5mm
35mm x 28mm	SB013528E	1	94mm	8mm
42mm x 35mm	SB014235E	1	118mm	2mm
54mm x 42mm	SB015442E	1	129mm	2mm



#### **SLIP COUPLINGS**

Size	Code	Qty.	α	Za	Zb
15mm	SB0115S	10	85mm	25mm	60mm
22mm	SB0122S	5	102mm	30mm	70mm
28mm	SB0128S	5	115mm	32mm	81mm
35mm	SB0135SE	1	177mm	51mm	116mm
42mm	SB0142SE	1	196mm	57mm	128mm
54mm	SB0154SE	1	210mm	64mm	140mm

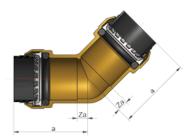
Supplied with 1 x demount clip

Great for repairs. For information see page 33.



#### 90° ELBOWS

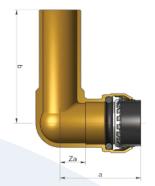
Size	Code	Qty.	α	Za
10mm	SB0210	5	31mm	8mm
15mm	SB0215	10	34mm	9mm
22mm	SB0222	5	43mm	13mm
28mm	SB0228	5	46mm	14mm
35mm	SB0235E	1	70mm	19mm
42mm	SB0242E	1	80mm	23mm
54mm	SB0254E	1	93mm	29mm



#### 45° ELBOWS

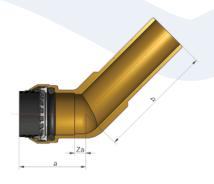
Size	Code	Qty.	α	Za
15mm	SB0515	10	28mm	5mm
22mm	SB0522	5	43mm	10mm
28mm	SB0528	5	40mm	8mm
35mm	SB0535E	1	64mm	9mm
42mm	SB0542E	1	71mm	10mm
54mm	SB0554E	1	78mm	13mm





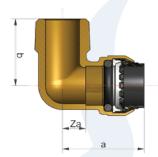
#### **90° STREET ELBOWS**

Size	Code	Qty.	α	Za	b
15mm	SB0215ST	5	35mm	9mm	50mm
22mm	SB0222ST	5	43mm	14mm	60mm



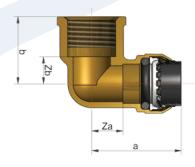
#### **45° STREET ELBOWS**

Size	Code	Qty.	a	Za	b
15mm	SB0515ST	5	35mm	9mm	50mm
22mm	SB0522ST	5	43mm	13mm	60mm
28mm	SB0528ST	5	40mm	8mm	54mm



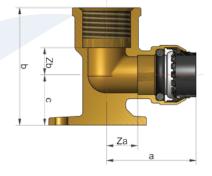
#### 90° MALE ELBOWS

Size	Code	Qty.	α	Za	b
15mm x ½" BSP	SB121515M	5	33mm	9mm	26mm
22mm x 3/4" BSP	SB122220M	5	30mm	11mm	32mm



#### **90° FEMALE ELBOW**

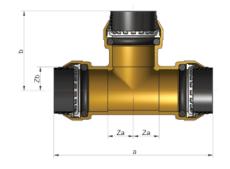
Size	Code	Qty.	α	Za	b	Zb
15mm x ½" BSP	SB121515F	5	36mm	12mm	26mm	10mm



#### 90° FEMALE ELBOW WITH BACKPLATE

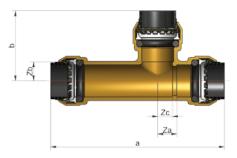
Size	Code	Qty.	α	Za	b	Zb	Zc
15mm x ½" BSP	SB121515FBP	5	36mm	12mm	46mm	10mm	20mm

## FITTINGS



#### **EQUAL TEES**

Size	Code	Qty.	α	Za	b	Zb	Zc
10mm x 10mm x 10mm	SB0310	5	62mm	8mm	30mm	7mm	n/a
15mm x 15mm x 15mm	SB0315	10	68mm	9mm	34mm	9mm	n/a
22mm x 22mm x 22mm	SB0322	5	86mm	13mm	43mm	13mm	n/a
28mm x 28mm x 28mm	SB0328	1	94mm	15mm	47mm	15mm	n/a
35mm x 35mm x 35mm	SB0335E	1	177mm	34mm	74mm	24mm	32mm
42mm x 42mm x 42mm	SB0342E	1	194mm	37mm	84mm	23mm	34mm
54mm x 54mm x 54mm	SB0354E	1	210mm	39mm	95mm	29mm	37mm

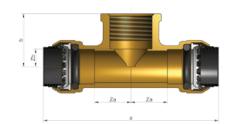


Supplied with 1 x demount clip

#### **SLIP TEES**

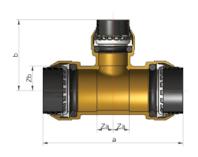
Size	Code	Qty.	a	Za	b	Zb	Zc
15mm x 15mm x 15mm	SB0315S	1	82mm	9mm	33mm	9mm	7mm
22mm x 22mm x 22mm	SB0322S	1	99mm	13mm	42mm	12mm	11mm
28mm x 28mm x 28mm	SB0328S	1	114mm	15mm	46mm	15mm	13mm
35mm x 35mm x 35mm	SB0335SE	1	177mm	34mm	74mm	24mm	32mm
42mm x 42mm x 42mm	SB0342SE	1	194mm	37mm	84mm	23mm	34mm
54mm x 54mm x 54mm	SB0354SE	1	210mm	39mm	95mm	29mm	37mm

Great for repairs and retrospective additions. For information see page 33.



#### **FEMALE BRANCH TEE**

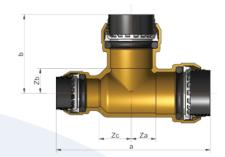
Size	Code	Qty.	α	Za	b	Zb
15mm x 15mm x ½" BSP	SB03151515F	10	77mm	16mm	23mm	8mm



#### **REDUCED BRANCH TEES**

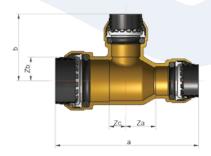
Size	Code	Qty.	a	Za	b	Zb	Zc
22mm x 22mm x 10mm	SB03222210	1	71mm	6mm	36mm	13mm	n/a
22mm x 22mm x 15mm	SB03222215	5	75mm	8mm	37mm	13mm	n/a
28mm x 28mm x 15mm	SB03282815	5	80mm	8mm	40mm	17mm	n/a
28mm x 28mm x 22mm	SB03282822	5	86mm	10mm	46mm	17mm	n/a
35mm x 35mm x 15mm	SB03353515E	1	177mm	34mm	51mm	29mm	31mm
35mm x 35mm x 22mm	SB03353522E	1	177mm	34mm	52mm	23mm	31mm
35mm x 35mm x 28mm	SB03353528E	1	177mm	34mm	57mm	25mm	31mm
42mm x 42mm x 22mm	SB0342422E	1	195mm	36mm	55mm	27mm	34mm
42mm x 42mm x 28mm	SB03424228E	1	195mm	36mm	61mm	29mm	34mm
42mm x 42mm x 35mm	SB03424235E	1	195mm	36mm	78mm	23mm	34mm
54mm x 54mm x 28mm	SB03545428E	1	210mm	39mm	67mm	35mm	37mm
54mm x 54mm x 35mm	SB03545435E	1	210mm	39mm	85mm	31mm	37mm
54mm x 54mm x 42mm	SB03545442E	1	210mm	39mm	90mm	29mm	37mm





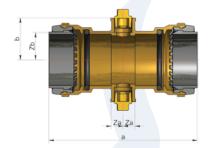
#### **REDUCED RUN TEE**

Size	Code	Qty.	a	Za	b	Zb	Zc
22mm x 15mm x 22mm	SB03221522	5	83mm	13mm	42mm	13mm	17mm



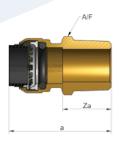
#### **REDUCED BRANCH AND RUN TEE**

Size	Code	Qty.	α	Za	b	Zb	Zc
22mm x 15mm x 15mm	SB03221515	5	78mm	16mm	37mm	13mm	9mm



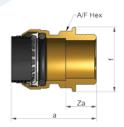
#### **MULTI-PORT TEES**

Size	Code	Qty.	α	Za	b	Zb
42mm	SB0342MPE	1	147mm	13mm	47mm	23mm
54mm	SB0354MPE	1	157mm	13mm	53mm	29mm



#### MALE CONNECTORS (TAPERED THREAD)

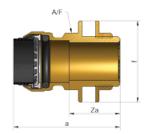
Size	Code	Qty.	α	Za	A/F
15mm x ½" BSP	SB111515MT	5	45mm	21mm	22mm
22mm x 3/4" BSP	SB112220MT	5	48mm	18mm	27mm
28mm x 1" BSP	SB112825MT	1	55mm	22mm	34mm
35mm x 1 1/4" BSP	SB113532ME	1	81mm	26mm	42.5mm
42mm x 1 ½"BSP	SB114240ME	1	85mm	24mm	49mm
54mm x 2" BSP	SB115450ME	1	90mm	25mm	61.5mm



#### MALE CONNECTORS (PARALLEL THREAD)

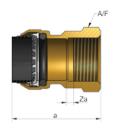
Size	Code	Qty.	α	Za	A/F	f
15mm x ½" BSP	SB111515MP	5	42mm	18mm	22mm	27mm
22mm x 3/4" BSP	SB112220MP	5	48mm	16mm	27mm	34mm





#### **MALE TANK CONNECTORS**

Size	Code	Qty.	α	Za	A/F	f
15mm x ½" BSP	SB111515MTC	1	52mm	28mm	22mm	35mm
22mm x 3/4" BSP	SB112220MTC	1	56mm	27mm	27mm	43mm



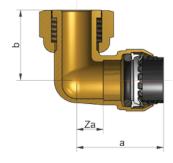
#### FEMALE CONNECTORS (PARALLEL THREAD)

Size	Code	Qty.	а	Za	A/F
15mm x ½" BSP	SB111515F	5	41mm	4mm	25mm
22mm x 3/4" BSP	SB112220F	5	46mm	4mm	30mm
28mm x 1" BSP	SB112825F	1	54mm	4mm	37mm
35mm x 1 1/4" BSP	SB113532FE	1	79mm	6mm	48mm
42mm x 1 ½"BSP	SB114240FE	1	85mm	6mm	54mm
54mm x 2" BSP	SB115450FE	1	94mm	7mm	65mm



#### **TAP CONNECTORS**

Size	Code	Qty.	α	Za
15mm x ½" Loose Nut	SB141515	5	41mm	17mm
22mm x ¾" Loose Nut	SB142220	5	45mm	17mm



#### 90° TAP CONNECTOR ELBOW

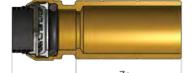
Size	Code	Qty.	α	Za	b
15mm x ½"Loose Nut	SB141515E	5	34mm	10mm	26mm



#### **END STOPS**

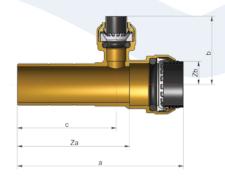
Size	Code	Qty.	a
10mm	SB0410	5	25mm
15mm	SB0415	10	26mm
22mm	SB0422	5	31mm
28mm	SB0428	5	33mm
35mm	SB0435E	1	63mm
42mm	SB0442E	1	70mm
54mm	SB0454E	1	77mm





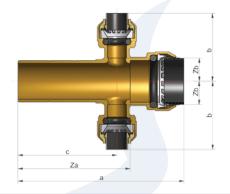
#### **STRAIGHT REDUCING TAILS**

Size	Code	Qty.	α	Za
15mm x 10mm	SB211510	5	58mm	34mm
22mm x 15mm	SB212215	5	64mm	40mm
28mm x 15mm	SB212815	5	65mm	42mm
28mm x 22mm	SB212822	5	68mm	42mm



#### **SINGLE BRANCH MANIFOLD TEE**

Size	Code	Qty.	α	Za	b	Zb	C
22mm x 22mm x 10mm	SB01221022ST	1	88mm	59mm	36mm	12mm	52mm



#### **DOUBLE BRANCH MANIFOLD TEE**

Size		Code	Qty.	a	Za	b	Zb	C
22mm x 2	22mm x							
10mm x	10mm	SB0122101022ST	1	88mm	59mm	36mm	12mm	52mm



# PUSH-FIT TO FEMALE BSP FLEXIBLE CONNECTORS

Size	Code	Qty.	α
15mm x ½" BSP	SB231530015F	1	300mm
15mm x ½" BSP	SB231550015F	1	500mm
15mm x ¾" BSP	SB231530020F	1	300mm
15mm x ¾" BSP	SB231550020F	1	500mm
22mm x 3/4" BSP	SB232230020F	1	300mm
22mm x ¾" BSP	SB232250020F	1	500mm



# PUSH-FIT TO PUSH-FIT FLEXIBLE CONNECTOR

Size	Code	Qty.	α
15mm x 15mm	SB231530015	1	300mm

# PIPE AND PIPE LINERS





#### **PEX PIPE**

#### **3m Straight Lengths**

Size	Code	Qty.	Wall Thickness
15mm	SBPXT153	20	1.7mm (± 0.1mm)
22mm	SBPXT223	20	2.15mm (± 0.1mm)
28mm	SBPXT283	10	2.7mm (± 0.1mm)

#### 25m Coil

Size	Code	Qty.	<b>Wall Thickness</b>
15mm	SBPXT1525	1	1.7mm (± 0.1mm)
22mm	SBPXT2225	1	2.15mm (± 0.1mm)
28mm	SBPXT2825	1	2.7mm (± 0.1mm)

#### 50m Coil

Size	Code	Qty.	Wall Thickness
15mm	SBPXT1550	1	1.7mm (± $0.1$ mm)
22mm	SBPXT2250	1	2.15mm (± 0.1mm)
28mm	SBPXT2850	1	2.7mm (± 0.1mm)

PEX Pipe Bend Former also available. See page 23





#### **PIPE LINERS**

Size	Code	Qty.
10mm (Copper)	SBCL10	20
15mm (PEX)	SBPXL15	100
22mm (PEX)	SBPXL22	100
28mm (PEX)	SBPXL28	100

PEX liners are glass fibre reinforced for extra rigidity.

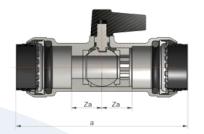
#### **CHECK OUT HOW EASY SHARKBITE IS AT...**



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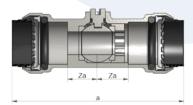




#### **APPLIANCE VALVE**

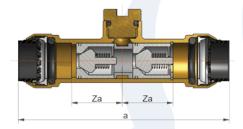
Size	Code	Qty.	α	Za
15mm	SB2415	1	67mm	10mm





Size	Code	Qty.	α	Za
15mm	SB1915	5	67mm	10mm
22mm	SB1922	5	82mm	13mm

#### **DOUBLE CHECK VALVE**

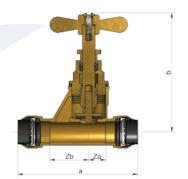


Size	Code	Qty.	a	Za
15mm	SB2615	1	88mm	20mm

# Za Zb a

#### **QUARTER TURN BALL VALVES**

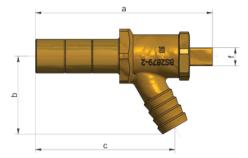
Size	Code	Qty.	α	Za	b	Zb
15mm	SB2715	1	76mm	13mm	43mm	13mm
22mm	SB2722	1	92mm	17mm	48mm	17mm
28mm	SB2728	1	116mm	23mm	58mm	29mm
35mm	SB2735E	1	160mm	24mm	65mm	27mm
42mm	SB2742E	1	180mm	29mm	76mm	30mm
54mm	SB2754E	1	198mm	34mm	85mm	35mm



#### **STOP COCKS**

Size	Code	Qty.	a	Za	b	Zb
15mm	SB1715	1	85mm	13mm	88mm	26mm
22mm	SB1722	1	106mm	20mm	94mm	28mm





#### **DRAIN COCK WITH STREET END**

Size	Code	Qty.	a	Za	b	Zb
15mm	SB1315	5	77mm	26mm	60mm	8mm



#### **AUSIMIX THERMOSTATIC MIXING VALVES**

Size	Code	Qty.	a	b
15mm 2 in 1	SBHEAT110750	1	138mm	107mm
22mm 2 in 1	SBHEAT110755	1	156mm	108mm



#### **AUSIMIX THERMOSTATIC MIXING VALVES**

Size	Code	Qty.	α	b
15mm 4 in 1	SBHEAT110780	1	192mm	109mm
22mm 4 in 1	SBHEAT110785	1	210mm	110mm



# EASISET 320 SERIES PRESSURE REDUCING VALVES (UP TO 16 BAR/45°)

Size	Code	Qty.	a	Ь
15mm	SBPRED320001	1	78mm	97mm
22mm	SBPRED320005	1	80mm	97mm



# EASISET 320 SERIES PRESSURE REDUCING VALVES (UP TO 16 BAR/80°)

Size	Code	Qty.	α	b
15mm	SBPRED320050	1	78mm	97mm
22mm	SBPRED320055	1	80mm	97mm



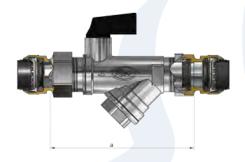
# COMMERCIAL 315i SERIES PRESSURE REDUCING VALVES (UP TO 25 BAR/70°)

Size	Code	Qty.	α	b
15mm	SBPRED315010	1	136mm	103mm
22mm	SBPRED315020	1	142mm	103mm



#### THERMAL BALANCING VALVES

Size	Code	Qty.	α
15mm	SBTREG100060	1	93mm
22mm	SBTREG100065	1	98mm



#### **FLOREG STRAINER/ISOLATOR VALVES**

Size	Code	Qty.	α
15mm — 4 lpm	SBSERV97000	1	85mm
15mm — 6 lpm	SBSERV97001	1	85mm
15mm — 8 lpm	SBSERV97002	1	85mm
15mm - 10 lpm	SBSERV97003	1	85mm
15mm − 12 lpm	SBSERV97004	1	85mm
15mm - 15 lpm	SRSFRV97005	1	85mm



#### PROTECTO YC STRAINER/ISOLATOR VALVES

Size	Code	Qty.	α
15mm (Nickel Plated)	SBLINS400101	1	73mm
22mm	SBLINS400002	1	95mm



#### **DEPTH MARKER/DISCONNECTING CLIPS**

Size	Code	Qty
10mm	SB2910	1
15mm	SB2915	1
22mm	SB2922	1
28mm	SB2928	1



#### SHARKSHIFTER® DISCONNECTING CLIPS

Size	Code	Qty
35mm	SB2935	1
42mm	SB2942	1
54mm	SB2954	1

Sharkshifter® are size colour coded. Image shown is for reference only.



#### **DEPTH MARKER/DISCONNECTING CLIP SET**

Size	Code	Qty.
10mm — 28mm	SB2910-28	1

Set also includes mini marker (not shown).



#### **DEPTH MARKER**

Size	Code	Qty.
35mm — 54mm	SB2935-54	1



#### **DISCONNECTING TONGS**

Size	Code	Qty
10mm	SB3010	1
15mm	SB3015	1
22mm	SB3022	1
28mm	SB3028	1
	000022	1



#### **PEX PIPE BEND FORMER**



15mm

SBPXFB15

Qty.

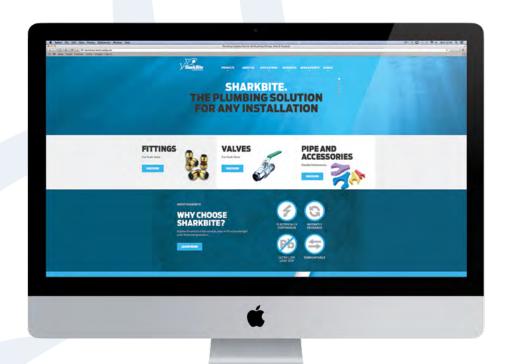


#### SILICONE LUBRICANT GREASE

Size 100g Code SBSG

Qty.

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# TECHNICAL INFORMATION

#### SYSTEM DESIGN

Minimum distances
Loading units
Pressure loss & flow rates

# WORKING PRESSURES/TEMPERATURES THERMAL EXPANSION TABLES

#### SYSTEM INSTALLATION

Pipe guidance

Socket depths

Fitting materials

Electrical continuity

Manufacturing standards

# JOINTING AND DISCONNECTING SLIP FEATURE FUNCTION COVERED PIPEWORK PIPE RESTRAINTS INSULATION

Phenolic foam lagging

# GLYCOL COMPATIBILITY CHLORINATION

SYSTEM TESTING
SUPPORT SERVICES

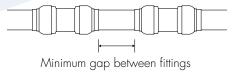


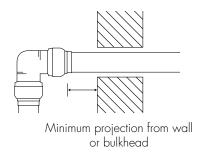
#### **SYSTEM DESIGN**

#### MINIMUM DISTANCES

To facilitate the disconnection of SharkBite® fittings, it is essential that sufficient space is allowed between the fitting and wall or bulkhead to allow demounting.

Minimum Gap	Minimum Projection
15mm	40mm
15mm	45mm
15mm	50mm
15mm	55mm
40mm	100mm
40mm	100mm
40mm	110mm
	15mm 15mm 15mm 15mm 40mm 40mm



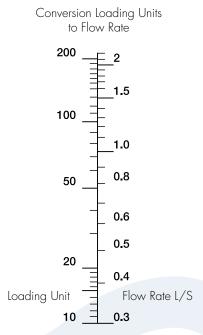


#### **LOADING UNITS**

When designing an installation, system demand, pipe sizes and flow rates need to be considered and calculated.

Demand is calculated by considering the flow rate of the appliance, the frequency and length of time used. Examples of loading units are shown in the table below. The total loading units can then be converted into demand in litres per second.

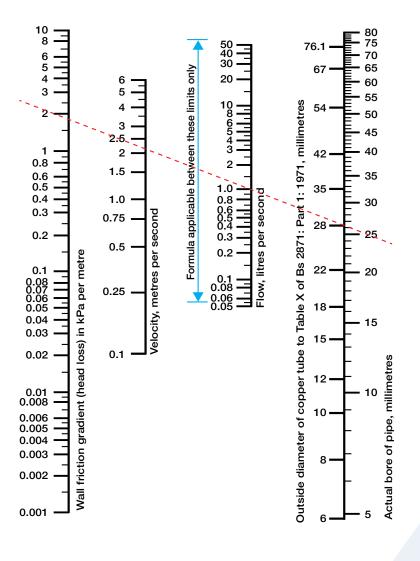
Appliance	<b>Loading Unit</b>
Toilet Cistern	2
Wash Basin ½" — DN15	1.5-3
Bath Taps ¾" — DN20	10
Bath Tap 1" — DN25	20
Shower	3
Sink Tap ½" − DN15	3
Sink Tap ¾" — DN20	5
Washing Machine ½" — DN15	3



## TECHNICAL INFORMATION

#### PRESSURE LOSS AND FLOW RATES

Pressure or head loss at 10°C due to selected pipe diameter and the resistance of the fittings can be calculated in metres per 100 metres from the table below:



Lamont's smooth pipe formula S3  $v = 0.5545 \ d0.6935 \ i0.5645$  where: v is the velocity (m/s);

d is the diameter (mm);
is the hydraulic gradient;

and 
$$R = 10 \left[ \frac{v}{0.5545 \ d0.6935} \right] 1.7715$$

where: R is the wall friction gradient (kPa)

#### **EXAMPLE:**

- Assuming a loading rate of 75 gives a flow rate of 1 litre/second
- Draw a straight line through the selected pipe OD and the flow rate
- Therefore a 28mm OD pipe would provide a water velocity of 2.1m/s and a head loss of 1.8Kpa per metre.



#### **WORKING PRESSURES AND TEMPERATURES**

#### **FITTINGS**

Size	Pipe		Pressure/Tempe	erature	
10mm	PEX or PB	12 bar/- 20°C	12 bar/20°C	6 bar/65°C	6 bar/95°
	Copper	16 bar/- 24°C	16 bar/30°C	10 bar/65°C	6 bar/95°
15mm	PEX or PB	12 bar/- 20°C	12 bar/20°C	6 bar/65℃	6 bar/95°
	Copper/Carbon Steel	20 bar/- 24°C	20 bar/30°C	16 bar/65℃	10 bar/120°
22mm	PEX or PB	12 bar/- 20°C	12 bar/20°C	6 bar/65°C	6 bar/95°
	Copper/Carbon Steel	20 bar/- 24°C	20 bar/30°C	16 bar/65°C	10 bar/120°
28mm	PEX or PB	12 bar/- 20°C	12 bar/20°C	6 bar/65°C	6 bar/95°
	Copper/Carbon Steel	20 bar/- 24°C	20 bar/30°C	16 bar/65°C	10 bar/120°
35mm	Copper/PEX/Carbon Steel	16 bar/- 24°C	16 bar/30°C	10 bar/65°C	6 bar/95°
42mm	Copper/PEX/Carbon Steel	16 bar/- 24°C	16 bar/30°C	10 bar/65°C	6 bar/95°
54mm	Copper/PEX/Carbon Steel	16 bar/- 24°C	16 bar/30°C	10 bar/65°C	6 bar/95°



Size		Pressure/Temperatu	re	
15mm	16 bar/-20°C	16 bar/30°C	10 bar/65°C	10 bar/90°C
22mm	16 bar/-10°C	16 bar/30°C	10 bar/65°C	10 bar/90°C



#### **VALVES**

#### **SERVICE VALVES**

Size		Pressure/Tempe	erature	
15mm - 22mm	16 har/-15℃	16 har /30°C	10 har /65°C	10 har /90°C

#### **QUARTER TURN BALL VALVES**

Size		Pressure/Tempe	rature	
15mm - 54mm	16 har/-15°C	1.6 har /30°C	10 har /65°C	25 har /85°C

#### **STOP COCK**

Size	Pressure
15mm - 22mm	10 bar

#### **CHECK VALVE**

Size	Pressure
15mm	10 bar







#### THERMAL EXPANSION TABLES

#### **COPPER PIPE**

The design of the system must consider thermal expansion. Copper pipes will expand with temperature and long runs may buckle or bend unless compensation is incorporated into the system. This can be prevented by installing Copper bellows or a telescopic expansion device, which will absorb the expansion and contraction. The amount of expansion in a Copper system can be calculated using the formula below:

$$L = \frac{1}{2} \left( \frac{3E}{P} \right)^{1/2} (d_0 e)^{1/2}$$

Where L - Length of expansion loop or offset

E - Modulus of electricity of Copper, in psi

P - Design fibre stress of material in flexure, in psi

 $d_0$  – Outside diameter of pipe, in inches

e – Amount of expansion to be absorbed, in inches

For annealed copper pipe E = 17,000,000psi P = 6,000psi

 $\therefore L = 7.68 (d_0 e)^{1/2}$ 

#### **COPPER PIPE EXPANSION**

Temperature	3 Mtrs	4 Mtrs	5 Mtrs	6 Mtrs	7 Mtrs	8 Mtrs	9 Mtrs	10 Mtrs	12 Mtrs	25 Mtrs
10°	0.5mm	0.7mm	0.9mm	1.0mm	1.2mm	1.4mm	1.5mm	1.7mm	2.0mm	4.3mm
20°	1.0mm	1.4mm	1.7mm	2.0mm	2.4mm	2.7mm	3.0mm	3.4mm	4.0mm	8.5mm
30°	1.5mm	2.0mm	2.6mm	3.1mm	3.6mm	4.1mm	4.6mm	5.1mm	6.1mm	13.0mm
40°	2.0mm	2.7mm	3.4mm	4.1mm	4.8mm	5.4mm	6.1mm	6.8mm	8.2mm	17.0mm
50°	2.6mm	3.4mm	4.3mm	5.1mm	6.0mm	6.8mm	7.7mm	8.5mm	10.2mm	21.0mm
60°	3.1mm	4.1mm	5.1mm	6.1mm	7.1mm	8.2mm	9.2mm	10.2mm	12.2mm	26.0mm
70°	3.6mm	4.8mm	6.0mm	7.1mm	8.3mm	9.5mm	10.7mm	11.9mm	14.3mm	30.0mm
80°	4.1mm	5.4mm	6.8mm	8.2mm	9.5mm	10.9mm	12.2mm	13.6mm	16.3mm	34.0mm
90°	4.6mm	6.1mm	7.7mm	9.2mm	10.7mm	12.2mm	13.8mm	15.3mm	18.4mm	38.0mm
100°	5.1mm	6.8mm	8.5mm	10.2mm	11.9mm	13.6mm	15.3mm	17.0mm	20.4mm	43.0mm



#### **PEX PIPE EXPANSION**

Temperature	3 Mtrs	4 Mtrs	5 Mtrs	6 Mtrs	7 Mtrs	8 Mtrs	9 Mtrs	10 Mtrs	12 Mtrs	25 Mtrs
10°	2.4mm	3.2mm	4.0mm	4.8mm	5.6mm	6.4mm	7.2mm	8.0mm	9.6mm	20.0mm
20°	4.8mm	6.4mm	8.0mm	9.6mm	11.2mm	12.8mm	14.4mm	16.0mm	19.2mm	40.0mm
30°	7.2mm	9.6mm	12.0mm	14.4mm	16.8mm	19.2mm	21.6mm	24.0mm	28.8mm	60.0mm
40°	9.6mm	12.8mm	16.0mm	19.2mm	22.4mm	25.6mm	28.8mm	32.0mm	38.4mm	80.0mm
50°	12.0mm	16.0mm	20.0mm	24.0mm	28.0mm	32.0mm	36.0mm	40.0mm	48.0mm	100.0mm
60°	14.4mm	19.2mm	24.0mm	28.8mm	33.6mm	38.4mm	43.2mm	48.0mm	57.6mm	120.0mm
70°	16.8mm	22.4mm	28.0mm	33.6mm	39.2mm	44.8mm	50.4mm	56.0mm	67.2mm	140.0mm
80°	19.2mm	25.6mm	32.0mm	38.4mm	44.8mm	51.2mm	57.6mm	64.0mm	76.8mm	160.0mm
90°	21.6mm	28.8mm	36.0mm	43.2mm	50.4mm	57.6mm	64.8mm	72.0mm	86.4mm	180.0mm
100°	24.0mm	32.0mm	40.0mm	48.0mm	56.0mm	64.0mm	72.0mm	80.0mm	96.0mm	200.0mm

#### **CARBON STEEL PIPE EXPANSION**

Temperature	3 Mtrs	4 Mtrs	5 Mtrs	6 Mtrs	7 Mtrs	8 Mtrs	9 Mtrs	10 Mtrs	12 Mtrs	25 Mtrs
10°	0.4mm	0.5mm	0.6mm	0.7mm	0.8mm	1.0mm	1.1mm	1.2mm	1.4mm	3.0mm
20°	0.7mm	1.0mm	1.2mm	1.4mm	1.7mm	1.9mm	2.2mm	2.4mm	2.9mm	6.0mm
30°	1.1mm	1.4mm	1.8mm	2.2mm	2.5mm	2.9mm	3.2mm	3.6mm	4.3mm	9.0mm
40°	1.4mm	1.9mm	2.4mm	2.9mm	3.4mm	3.8mm	4.3mm	4.8mm	5.8mm	12.0mm
50°	1.8mm	2.4mm	3.0mm	3.6mm	4.2mm	4.8mm	5.4mm	6.0mm	7.2mm	15.0mm
60°	2.2mm	2.9mm	3.6mm	4.3mm	5.0mm	5.8mm	6.5mm	7.2mm	8.6mm	18.0mm
70°	2.5mm	3.4mm	4.2mm	5.0mm	5.9mm	6.7mm	7.6mm	8.4mm	10.1mm	21.0mm
80°	2.9mm	3.8mm	4.8mm	5.8mm	6.7mm	7.7mm	8.6mm	9.6mm	11.5mm	24.0mm
90°	3.2mm	4.3mm	5.4mm	6.5mm	7.6mm	8.6mm	9.7mm	10.8mm	13.0mm	27.0mm
100°	3.6mm	4.8mm	6.0mm	7.2mm	8.4mm	9.6mm	10.8mm	12.0mm	14.4mm	30.0mm

#### **POLYBUTYLENE PIPE EXPANSION**

Temperature	3 Mtrs	4 Mtrs	5 Mtrs	6 Mtrs	7 Mtrs	8 Mtrs	9 Mtrs	10 Mtrs	12 Mtrs	25 Mtrs
10°	3.9mm	5.2mm	6.5mm	7.8mm	9.1mm	10.4mm	12.6mm	13.0mm	15.6mm	32.5mm
20°	7.8mm	10.4mm	13.0mm	15.6mm	18.2mm	20.8mm	25.2mm	26.0mm	31.2mm	65.0mm
30°	9.0mm	15.6mm	19.5mm	23.4mm	27.3mm	31.2mm	35.1mm	39.0mm	46.8mm	97.5mm
40°	15.6mm	20.8mm	26.0mm	31.2mm	36.4mm	41.6mm	46.8mm	52.0mm	62.4mm	130.0mm
50°	19.5mm	26.0mm	32.5mm	39.0mm	45.5mm	52.0mm	58.5mm	65.0mm	78.0mm	162.5mm
60°	23.4mm	31.2mm	39.0mm	46.8mm	54.6mm	62.4mm	70.2mm	78.0mm	93.6mm	195.0mm
70°	27.3mm	36.4mm	45.5mm	54.6mm	63.7mm	72.8mm	81.9mm	91.0mm	109.2mm	227.5mm
80°	31.2mm	41.6mm	52.0mm	62.4mm	72.8mm	83.2mm	93.6mm	104.0mm	124.8mm	260.0mm
90°	35.1mm	46.8mm	58.5mm	70.2mm	81.9mm	93.6mm	105.3mm	117.0mm	140.4mm	292.5mm
100°	39.0mm	52.0mm	65.0mm	78.0mm	91.0mm	104.0mm	117.0mm	130.0mm	156.0mm	325.0mm

## TECHNICAL INFORMATION

#### **BENDING COPPER PIPE**

Copper pipe up to 28mm should be bent using a portable bending machine. Bending copper pipe correctly will avoid the pipe wrinkling or flattening which can affect flow conditions.

To eliminate the risk of the pipe wall collapsing, most bending machines bend the tube between the formers and guides to support the outside diameter (OD) of the tube. The point at which the bending pressure is applied must remain consistent at the correct distance in front of the former's point of support. It's is important to ensure bending equipment is well maintained and kept lubricated.

#### BENDING SHARKBITE PEX PIPE

The SharkBite PEX pipe is a cross-linked 5 layer, high density Polyethylene pipe that is lightweight, easy to cut and frost resistant. It is manufactured to BS 7291 part 3 and is rigid enough to minimise sag on long pipe runs but flexible enough to be bent by hand making it easy to install in awkward and tight places such as through joists and behind partition walls to comply with building regulations.

For sharp bends, SharkBite elbow fittings should be used. Shallow bends may be made by use of pipe clips on either slide of the bend, positioned to maintain the bend radius.

The use of bending springs and skilled manipulation is not required. The pipe should not be heated with a blow lamp or hot-air gun.

#### BENDING CARBON STEEL PIPE

Carbon Steel pipe manufactured to EN 10305–2 is an easy to handle, cost effective, lightweight pipe. The thermally bonding galvanisation process provides the pipe with a minimum thickness of 7µm depth of coating.

Carbon Steel pipe can be bent in sizes up to and including 22mm using a standard portable bending machine with the correct sized formers. When bending Carbon Steel pipe ensure that there is a sufficient length of 'straight' pipe after the bend to accept a SharkBite fitting if required. The minimum radii that the pipe can be bent and also the minimum projection to permit assembly with a SharkBite fitting are shown in the table below:

#### BENDING POLYBUTYLENE PIPE

For sharp bends (<80mm in radius), SharkBite elbow fittings should be used. Where bends of >80mm radius are required in 15mm PB, it is quicker and neater to use a SharkBite PEX pipe bend former (SBPXBF15). A bending radius of 8 X the pipe diameter is the minimum allowed and may be made by the use of pipe clips on either side of the bend, positioned to maintain the bend radius.

The use of pipe bending spring and skilled manipulation is not required. The pipe should not be heated with a blow lamp, hot air-gun or similar.

# SHARKBITE PEX PIPE BENDING RADII

Minimum Bending Radii
90mm using angle brackets or 100mm using pipe clips
175mm using pipe clips 300mm using pipe clips

# CARBON STEEL PIPE BENDING RADII AND PROJECTION

Size	Minimum Bending Radii	Minimum Pipe Projection
15mm	30mm	36mm
18mm	36mm	39mm
22mm	44mm	41mm
28mm	N/A	42mm
35mm	N/A	85mm
42mm	N/A	90mm
54mm	N/A	96mm

#### POLYBUTYLENE PIPE BENDING RADII

Size	Minimum Bending Radii
15mm	120mm using pipe clips
22mm	176mm using pipe clips
28mm	227mm using pipe clips



#### **SYSTEM INSTALLATION**

#### **PIPE GUIDANCE**

SharkBite® includes a special component which provides pipe guidance and reduces the risk of misalignment or damaging the o-ring during installation, thus offering 'superior o-ring protection'.

The table below shows the pipe insertion depths for SharkBite fittings, if marking the pipe with a tape measure.

#### **INSERTION DEPTHS**

Fitting Size	Insertion Depth
10mm	24mm
15mm	22mm
22mm	28mm
28mm	32mm
35mm	51mm
42mm	57mm
54mm	64mm

#### FITTING MATERIALS

Component	Material
Body	Ultra Low Lead DZR Brass
0-ring	Ethylene Polypropylene Diene Monomer (EPDM)
15, 22 & 28mm Cartridge Ring	304 Stainless Steel
35, 42 & 54mm Cartridge Ring	Polyphenylsulfone (PPSU)
Grab Ring	316 Stainless Steel
Disconnecting Ring	Acetal Copolymer
Alignment Ring	Nylon 6

#### **ELECTRICAL CONTINUITY**

SharkBite fittings are TRaC certified to provide electrical continuity when used with Copper or Carbon Steel pipe with the exception of 10mm fittings.





#### **MANUFACTURING STANDARDS**

SharkBite male BSP threaded connectors are available with either taper or parallel (ISO 7) threads. Female BSP parallel threaded connectors are manufactured to ISO 228.

## technical information

#### JOINTING AND DISCONNECTING

SharkBite® fittings have been engineered to provide an extremely fast, secure and reliable method of joining the most commonly available metal and plastic pipes. The assembly method is similar irrespective of fitting size and pipe material and if followed correctly will provide a secure joint every time.

#### **JOINTING**

#### **CUT**

Ensure that the pipe is not damaged or scored and remove any adhesive labels or residue. Cut the pipe squarely using a rotary pipe cutter. For Carbon Steel above 28mm, we recommend the use of a pipe cutting machine. Deburr - there should be no burrs or sharp edges on the pipe end, as this could damage the o-ring during pipe insertion. If installing PEX or PB, cut the pipe squarely with pipe cutters and insert the manufacturers pipe liner.

#### **MARK**

Using the appropriate size disconnecting clip/depth marker or tape measure, mark the insertion depth onto the pipe (following insertion depth information provided on page 31).

#### **PUSH**

Keep the fitting in the bag until it is required for installation, ensure that the fitting and pipe are free from dirt and debris. Locate the end of the pipe squarely in the mouth of the fitting and push the pipe into the fitting with a slight twisting action until the pipe touches the pipe stop. SharkBite fittings utilise a pre-lubricated o-ring so no additional lubricants are required. If the pipe is difficult to insert, ensure the pipe is not damaged and has been prepared as described above.

#### DONE

Check the depth mark on the pipe corresponds with the disconnecting ring on the SharkBite fitting. Pull the pipe to ensure that the joint is secure.

#### DISCONNECTING

#### 10mm - 28mm DISCONNECTION

For sizes 10mm – 28mm, the SharkBite range provides two methods of disconnecting the pipe from the fitting – either the patented disconnecting/depth marking clip or metal disconnecting tongs.

If disconnecting using the clip, 'snap' the clip over the pipe, with the SharkBite logo positioned facing away from the fitting. Slide the clip up to the disconnecting ring and press firmly on the two finger pads whilst at the same time pulling the pipe to remove.

If using the disconnecting tongs, position the tongs over the end of the fitting and the pipe with the SharkBite logo positioned facing away from the fitting. Squeeze the tongs together to depress the disconnecting ring, whilst at the same time pulling the pipe to remove (using your thumb to assist against the tongs if necessary).

#### 35mm - 54mm DISCONNECTION

For sizes 35mm – 54mm, the Sharkshifter® tool is easy to use. Simply clip the Sharkshifter on to the lugs of the fitting and twist the Sharkshifter clock-wise to 'lock open' the grab ring. Then using both hands pull the pipe to remove.

The purpose of the twist/lock mechanism is to ensure accidental disconnection is prevented and that the installer can use both hands to remove the pipe. This patented innovation can also be used to ease installation in confined spaces by eliminating the force required to push the pipe through the grab ring.

If the pipe is to be re-used, it must be inspected for damage prior to re-assembly, if re-using PEX the end of the

pipe, where the grab ring has previously gripped must be removed.



#### **SLIP FEATURE FUNCTION**

The 'Slip feature' function is unique to SharkBite® and includes slip couplings and slip tees that are manufactured with one end of the fitting with the 'slip feature' as standard.

The 35mm – 54mm slip fittings are supplied with an instruction band on the slip end of the fitting detailing the pipe size, removal section and maximum pipe insert length as well as fitting movement direction.

#### **IDENTIFY THE AREA FOR REPAIR OR ADDITIONAL PIPEWORK**

Identify the section to be removed for repair using a slip coupling or if you are adding additional pipework to an existing pipe, use a slip tee.

Mark the section to be removed, dependent upon the pipe size as shown below:

15mm pipe – repairable section 34mm 22mm pipe – repairable section 40mm 28mm pipe – repairable section 48mm 35mm pipe – repairable section 64mm 42mm pipe – repairable section 70mm 54mm pipe – repairable section 76mm

Diagram shows the repairable section to a 35mm pipe.



**NOTE:** It is important the correct size section is removed as detailed above. Any smaller section will not provide sufficient space to engage the second pipe and may partially block the flow of the branch on a tee. Larger removed sections would create short pipe engagement.

#### **CUT**

Cut out the section using a proprietary pipe cutter and de-burr the pipe. Ensure that the pipe is free from burrs, scratches and debris. Mark the pipe insertion depths (see insertion depths section) on both pipes.

#### **PUSH**

Align pipe 1 with the bore of the slip end of the fitting and insert fully until the stop end of the fitting is clear of pipe 2.

NOTE: At this point the bore of the branch is completely blocked.

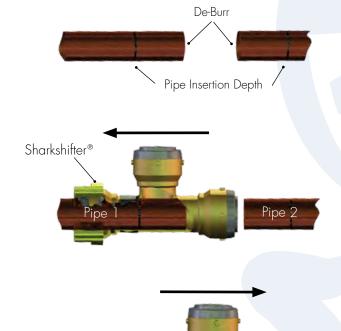
Withdraw pipe 1 allowing pipe 2 to engage up to the insertion mark. Do not withdraw pipe 1 further than the depth insertion mark.

NOTE: The pipe is now clear of the branch.

#### **DONE**

You have now completed a repair or added additional pipework into an existing system in minutes.

NOTE: For 35mm - 54mm fittings only, a Sharkshifter tool will be required to open and close the grab ring during installation (see diagrams opposite).



Pipe

# TECHNICAL INFORMATION

#### **COVERED PIPE WORK**

If the system pipework and fittings are to be installed in a concealed position, under plaster or screed or are to be cabled through block or brick work, adequate provision for movement of the pipe relative to the floor or wall must be made by the use of a sleeve bonded into the wall or other similar means.

#### PIPE RESTRAINTS

All installations should utilise pipe clips to support the system and reduce the stress that the system can be subjected to. The maximum spacing of fixings for internal piping systems as detailed in BS 6700 is shown in the table below:

Fittings Size	Сор	per	PEX a	nd PB	Carbon Steel		
	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Vertical	
10mm	1.2m	1.8m	0.3m	0.5m	n/a	n/a	
15mm	1.8m	2.0m	0.3m	0.5m	1.8m	2.0m	
22mm	2.4m	3.0m	0.5m	0.8m	2.4m	3.0m	
28mm	2.4m	3.0m	0.8m	1.0m	2.4m	3.0m	
35mm	2.7m	3.0m	0.9m	1.2m	2.7m	3.0m	
42mm	3.0m	3.6m	0.9m	1.2m	3.0m	3.6m	
54mm	3.0m	3.6m	0.9m	1.2m	3.0m	3.6m	

#### **INSULATION**

All systems should be insulated as per the recommendations listed in BS 5970:2012

#### PHENOLIC FOAM LAGGING

When lagging SharkBite® fittings with thermal insulation (unless the lagging is an internal polyethylene or sodium silicate barrier), wrap the fitting with a moisture barrier to protect the fitting. System pressure testing should be conducted prior to the lagging of the system.

#### **GLYCOL COMPATIBILITY**

SharkBite products can be used with a 25% Glycol: 75% Water solution.

#### **CHLORINATION**

Chlorination of the system as per the recommendations of BS 6700 will not have any detrimental effect on SharkBite fittings.



#### **SYSTEM TESTING**

#### **COPPER SYSTEMS**

To ensure that all the pipe and fittings have been installed correctly, we recommend to test the system following the guidelines as given in BS 6700. Fill the installation slowly to ensure that the air has been expelled from the system. Then pressurise the system to 1.5 times the normal working pressure, for a minimum of 15 minutes. Reduce the pressure by bleeding the system to one third of the previous test pressure for a period of 45 minutes. There should be no visible leakage of water and no pressure decay.

#### **PEX SYSTEMS**

Pressure test the system for at least 1 hour using the conditions for pressure testing listed in Appendix C of BS 5955: Part 8: 1990:

- A) For sections of the system, which can be subjected to full mains pressure, apply a minimum pressure of the available mains water pressure.
- B) For sections of the system downstream of a pressure control valve, apply a pressure equal to the pressure control valve setting.

#### **CARBON STEEL SYSTEMS**

Carbon Steel pipe corrodes if the system is filled and not used for extensive periods of time, after the hydraulic system testing has been conducted. Therefore it is recommended that the system should be dry tested with air or nitrogen to a maximum pressure of 0.5 bar. The air should be clean and free from oil.

If the system is to be tested hydraulically, the test water should contain anti-corrosion chemicals and the system should not be drained after testing (suitable provision against freezing should be installed if required). If the system cannot be left full and has to be drained, purge the system with dry air after draining.

#### **POLYBUTYLENE SYSTEMS**

The system should be filled completely using water not more than 20°C at 1.5 times working pressure, to a maximum of 18 bar which should be applied for not less than 15 minutes and no longer than 1 hour. Any appliances or fittings that are not rated at 18 bar, should be disconnected prior to the test being conducted.

#### SUPPORT SERVICES

At Reliance Water Controls we are extremely proud of our heritage and reputation for providing excellent products and customer service levels.

Our highly trained Customer Service Team and Technical Support Team is available and keen to help with product advice, technical enquiries and installation issues; and our Sales Managers are available throughout the UK to discuss product and installation specifications.

Email Orders: sharkbite@rwc.co.uk Web: www.sharkbiteplumbing.co.uk



www.sharkbiteplumbing.co.uk



Reliance Water Controls Ltd. A Reliance Worldwide Company Worcester Road, Evesham Worcestershire WR11 4RA United Kingdom T: +44 (0)1386 712400 F: +44 (0)1386 712401 E: sharkbite@rwc.co.uk W: www.rwc.co.uk