

February 2020



Technical Manual

RWC

**CUT.
PUSH.
DONE.**



☎ 0800 800 523

☎ +64 9 634 2893

🖨 +64 9 634 8029

✉ sales.nz@rwc.com

✉ orders.nz@rwc.com

🌐 relianceworldwide.co.nz

AN RWC BRAND



Reliance Worldwide Corporation (NZ) Ltd.
PO BOX 13-349, Onehunga, Auckland 6.
305 Neilson Street, Onehunga, Auckland 1061,
New Zealand | NZBN 9429000011358

About SharkBite®

RWC: Solutions to Shape the World™	7
System Description	8
System Benefits	8
Plumbing System Comparison	8
The SharkBite® Design	9
Materials	9
Cross-Linked Polyethylene	9
PEX Dimensions	9
The Benefits of SharkBite®	10

SharkBite® System Data

Approved Applications	11
Potable Water Approved AS/NZS 4020	11
Environment	11
Water Quality and Chlorine	11
Acoustic Properties	11
SharkBite® Burial	12
SharkBite® Silicone Burial Wrap	12
Recirculating Hot Water Systems	12
Thermal Properties	13
Thermal Expansion	13
Thermal Insulation	14
Operating Parameters - Pressure	14
Fitting Pressure Loss	14
Pressure or Head Loss Through PEX Pipe	15
Maximum Flow Rates	16
Pipe Flow Characteristics	16

SharkBite® How it works

SharkBite® Push-To-Connect Plumbing System	17
Connection of PEX Fittings	18
Connection of Copper Fittings	19
Disconnecting Fittings	20
Installation Trouble Shooting	21
Installation Best Practice	21
Ineffective Joints	22

SharkBite® Fittings

Conversion Fittings Technical Information

SharkBite® Conversion Fittings	24
Conversion Coupling	25
Conversion Elbow	25
Conversion Tee	25

PEX Fittings Technical Information

Typical End Details (PEX Fittings)	26
F1 Straight Coupling	26
F1 Reducing Coupling	26
F2 Straight Female Connector	26
F3 Straight Male Connector	26
F12 Elbow	27
F13 Male Elbow	27
F14 Female Elbow	27
F15BP Backplate Female Elbow	27
F19BP Backplate Male Elbow	28
Top-Plated Male Elbow	28
F24 Equal Tee	28
F25, F26, F27 Unequal Tee	28
F61 Stop End	29
F62 Straight Tap Connector	29
F63 Bent Tap Connector	29
PEX Tail Reducer	29
PEX Tail / Capillary Tail	29
PEX Tail / Copper Adaptor	30
PEX / Flare Adaptor	30
Ball Valves	30
Manifolds	30
Recessed - Right Angled Breech	31
Recessed - Straight Breech	31
Shower - Right Angled Breech	31
Shower - Right Angled Breech (Inverted)	31
Shower / Bath - Right Angled Breech	31

Copper Fittings Technical Information

Typical End Details (Copper Fittings)	32
No1 Straight Coupling	32
No1R Reducing Coupling	32
No2 Female Connector	32
No3 Male Connector	32
Hot Water Elbow	32
No12 Elbow	33
No15BP Female Lugged Elbow	33
No19BP Male Lugged Elbow	33
No24 Equal Tee	33
No25 Unequal Tee	33
No61 Stop End	34
Slip Coupling	34
Flared Compression Adaptor	34
SharkBite Tail x OD Reducer	34
Ball Valves	34

Tempering Valves Technical Information

Insulated Tempering Valves (TV) with SharkBite® PEX Fittings	35
Tempering Valves (TV) with SharkBite® PEX Fittings	35
Insulated Tempering Valves (TV) with SharkBite® Copper Fittings	35
4 in 1 Tempering Valves – UP and DOWN	35

New Zealand Exclusive Fittings Technical Information

Straight Swivel	36
Swivel Elbow	36
Copper Adaptor	36

SharkBite® PEX

Potable Water (Mustard)	38
Hot Water (Red)	38
Recycled Water (Lilac)	38
Rain Water (Green)	38
Pipe in Conduit (Mustard Only)	39
Foam Pipe Insulation (Red Only)	39
Corrugated Sleeve (Conduit Only)	39

SharkBite® Accessories & Tools

Tube Clips	41
Tube Cutter	41
Tube Bend Support	41
Starter Kit	41
Disassembly Tongs	42
Disassembly Clips	42
Chasing Sleeve & Silicone Wrap	42
Copper Pipe Deburrer & Depth Gauge	42
Pipe De-Coiler	42



Solutions to Shape the World™

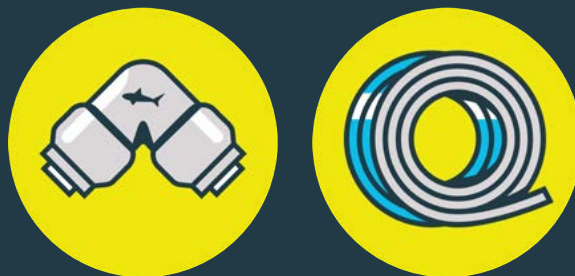
SharkBite® plumbing fittings and pipe are manufactured in Australia at RWC's state of the art facilities. Stringent quality control and advanced manufacturing procedures guarantee product satisfaction.

RWC manufactures, develops, assembles and delivers trusted plumbing solutions to businesses and households across Australia through these product lines and more.

Established in 1949, RWC has grown to become a world leader in water control, measurement, infrastructure, products and services, supplying hot water systems to manufacturers, plumbing distributors, government bodies, and other major industries. Our Australian-based NATA-accredited laboratory certifies final products prior to production and conducts ongoing performance and destructive testing. Accredited by Standards Australia to AS/NZS ISO 9001 – 2008, all manufactured products are subject to a comprehensive quality assurance system, encompassing design, manufacturing and testing to ensure that every RWC product is a trusted plumbing solution for years to come.

SharkBite® push-to-connect fittings for PEX were introduced in Australia in 1999, with SharkBite® Copper fittings introduced in 2004. This innovative system was introduced to the North American market in 2004 and the UK in 2014.

With standards approvals granted on three continents, the design of SharkBite® has proven itself many times, and has made RWC and SharkBite® world-leaders in push-to-connect plumbing solutions.



System Description

SharkBite® is an advanced design push-to-connect plumbing system for potable water distribution and hydronic heating water distribution. SharkBite® is available in an assortment of over 200 fittings and PEX pipe ranging from 16-25mm size. SharkBite® has been engineered with ease of use and disconnection in mind and while being the most dependable way to join copper and PEX Pipe in any combination—with no soldering, clamps, unions or glue.

System Benefits

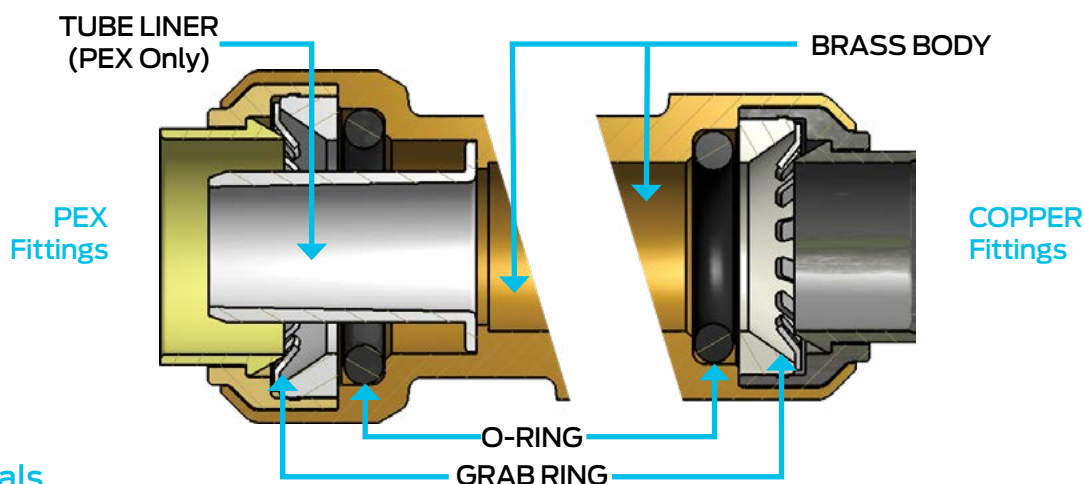
- Instant push-to-connect connection. Cut. Push. Done.
- No soldering, clamps, unions or glue required
- No expensive joining tools or ongoing tool maintenance
- Reduces installation time with no tightening of nuts, clamps and unions
- Integral tube liner for PEX installations means no loose components and ensures a secure, reliable connection
- The position of the O-Ring and grab ring allow for the immediate detection of leaks
- Can be installed wet or dry
- Rotatable during installation
- Approved for behind the wall and underground application
- Removable after installation
- Clean, professional installation
- Quality engineered and manufactured in Australia
- Compact, robust DZR brass body is strong, corrosion resistant and durable
- SharkBite® PEX Pipe is pre-gauged with 'Self-Seal Indicator Markings' to aid correct installation
- Fittings supplied ready for installation
- Transition fittings to Cu, SDR7.4 PEX, other SDR9 PEX & PB
- No product waste; simply disconnect and reuse

Plumbing System Comparison

Feature	Push-To-Connect SharkBite®	Crimp	Expansion
No tools required	✓	✗	✗
No calibration/maintenance required for proper function of the tool	✓	✗	✗
No grooves in the tubing caused by the expansion tool that can create potential leak paths	✓	✓	✗
No potential for leaks caused by nicks on the fitting exterior	✓	✗	✗
Fitting manufactured in Australia	✓	✗	✗
Easy install with minimal learning curve for new labourers	✓	✗	✗
Reusable during installation - no wasted products	✓	✗	✗
Fitting factory assembled, ready to install from the bag	✓	✓	✗

The SharkBite® Design

The SharkBite® Fitting incorporates a number of unique and patented features.



Materials

Body	DZR Brass
Grab Ring	316 Stainless Steel
O-Ring	EPDM
Tube Liner	Polysulfone(PEX fittings only)

SharkBite® push-to-connect (PTC) fittings are made from Dezincification Resistant Brass (DZR) and are available in 200+ configurations including Couplings, Elbows, Tees, Reducers, Threaded Adaptors, Caps, Breeches, Ball Valves, Tempering Valves and Copper Slip Repair Couplings plus Conversion Couplings and Tees to Cu, SDR7.4 PEX, other SDR9 PEX and PB.

All SharkBite® PEX fittings come with a pre-installed tube liner. It is an AS/NZS 3500 requirement when using Push-To-Connect fittings on PEX pipe. Tube liners are not required on copper fittings.

Cross-Linked Polyethylene

SharkBite® pipe is an SDR9 PEXb pipe, and is available in coils and straights in over 30 designations from 5m lengths to 100m coils in a variety of color codes for all standards requirements.

SharkBite® PEX pipe is manufactured using the silane or “moisture cure” method and is produced in a simple two stage process.

- Silane grafted polyethylene is combined with a catalyst and extruded into pipe.
- The cross-linking process is then performed by exposing the pipe to steam. The process of cross-linking polyethylene ties the molecular chains of the material together into a three dimensional structure.

Cross-linking improves:

- Performance at high temperature
- Chemical resistance
- Resistance to cracking, creep and abrasion

The resulting strong, irreversible cross-linked structure gives SharkBite® pipe the properties that make it well suited for use in both hot and cold water plumbing systems.

PEX Dimensions

NOMINAL OUTSIDE DIAMETER	16.0	20.0	25.0
Average wall thickness	2.15	2.45	3.00
Average internal diameter	11.7	15.2	19.1

The Benefits of SharkBite®



Australian Made and Owned

SharkBite® fittings and pipe are manufactured in Australia in Reliance Worldwide Corporation (Aust.) Pty. Ltd. state of the art facilities. Stringent quality control and advanced manufacturing procedures guarantee product satisfaction.



25 Year Warranty*

The SharkBite® range of fittings and PEX pipe can be relied upon to perform year after year. SharkBite® is backed by Reliance Worldwide Corporation (Aust.) Pty. Ltd. 25 year warranty.



Versatile and Reusable

Can be easily disconnected using SharkBite® disassembly clips or tongs. Fittings can be rotated once installed allowing for a more versatile install, especially in confined spaces. This feature is particularly useful where repairs and or maintenance are required.



Quick and Easy

SharkBite® is quick and easy to install, making it the most time effective plumbing system available, allowing the installer to move onto the next job faster than ever before.

Utilising state of the art push-to-connect design, the SharkBite® system is easily assembled by hand.



Standards Approved

SharkBite® fittings and PEX Pipe comply with and are approved to Australian Standards AS/NZS 2537 and AS 2492 respectively.

Visit sharkbite.com.au for further information on SharkBite® warranty.



Approved Applications

The SharkBite® system has WaterMark certification to AS/NZS 2537 & AS 2492 product standard for use in potable water.

SharkBite® plumbing systems are approved for hot and cold potable water installations above and below ground and for hydronic heating water distribution.

Please consult with local codes for final approval. Failure to comply with the above types of pipe applications could result in connection failures.

REFERENCES

- A. AS/NZS 4020 - Testing of products for use in contact with drinking water.
- B. AS 2492 - Cross-linked polyethylene (PEX) pipes for pressure applications.
- C. AS/NZS 2537 - Mechanical jointing fittings for use with cross-linked polyethylene (PEX) pipe for hot and cold water applications.
- D. AS 3688 - Water supply - metallic fittings and connectors.
- E. AS 1432 - Copper tubes for plumbing, gas fittings and drainage applications.
- F. AS 2345 - Dezincification resistance of copper alloys.
- G. AS/NZS 3500 - National plumbing and drainage.

Potable Water Approved AS/NZS 4020

AS/NZS 4020 prescribes tests for analysing the suitability of products for use in contact with drinking water, with regard to their effect on the quality of the water. It is a requirement of Watermark Certification.

Environment

The SharkBite® PEX system has obtained a rating of 5 in the Eco-Selector database maintained by Vicurban.

For further information contact Vicurban or visit www.vicurban.com.au.

Water Quality and Chlorine

Potable water is sourced in a variety of methods. The Australian Drinking Water Guidelines provides a framework to govern potable water. To achieve this, chlorine and other agents are sometimes used as constituents of the water, or for commissioning purposes. In these situations, the manufacturer must be consulted to ensure that the water composition will not affect the pipe or fittings. Due to the variance of water quality and treating, the installer must ensure that the pipe and fittings suit the application.

Acoustic Properties

Comparative tests between DN16 PEX pipe and 15mm copper pipe indicate an average noise reduction of up to 17dB (A) can be obtained when using PEX pipe.

SharkBite® Burial

SharkBite® fittings are suitable for burial in most applications; however care is required when using fittings in applications that require burial to ensure the correct installation practices are used and due care is given to any environmental factors that may have a detrimental effect on the life expectancy of the fittings and pipe.

The installation of SharkBite® fittings that require burial or chasing into concrete or brickwork, must comply with all local plumbing code requirements. SharkBite® fittings are not suitable for use in areas where the soil is or may become contaminated* including the soil used for back filling. It is recommended that all SharkBite® fittings have an impervious barrier between the fitting and the surrounding soil (*SharkBite® Silicone Burial Wrap*).

The soil used for back filling must be free of rocks, debris or any sharp objects that may cause damage to the fitting or pipe through impact or abrasion.

** Examples of contamination include, but are not limited to: petrochemicals (reclaimed service station sites), high levels of nitrogen compounds (this could be caused by animal waste or fertilizer that may be found in some agricultural applications), low pH levels (below pH 6), high pH levels (above pH 8), run off from land fill, formaldehyde compounds, and solvents. It should be noted that such contaminants have been known to migrate through plastic piping systems and contaminate the Potable water supplied through these pipes.*

SharkBite® Silicone Burial Wrap

When using SharkBite® Silicone Burial Wrap, make a SharkBite® connection ensuring pipe is inserted correctly in the fitting (see Installation Instructions in this manual for details). While leaving the protective film in place, measure the amount of tape needed to completely wrap the fitting. To ensure a proper seal, overlap tape by 25mm past the end of the fitting on every end and 6mm – 12mm between/across the fitting.

Completely cover the fitting by wrapping (overlapping each edge of the tape) the fitting, pulling the tape tight and removing the protective film. The tape will bond to itself within minutes and form an impervious barrier within a few hours.

Recirculating Hot Water Systems

Recirculating hot water systems or ring mains are a good way to minimise the time it takes to get hot water to an outlet on larger installations and can reduce water consumption. It is also known that the continual flow of water and exposure to high temperatures make this a very demanding application, whether copper, PEX or other piping materials. If not configured correctly the entire plumbing system may have a significantly reduced service life.

To ensure the expected system service life and to cater for performance tolerances of boilers and other heat sources the following installation and water quality parameters must be followed on any recirculating hot water systems using the SharkBite® plumbing system in order to maintain the product warranty.

- The maximum water temperature in the system is to be limited to 60°C.
- The water pressure within the ring main must be limited to 500kPa (as per AS/NZS 3500)
- The pipe work and recirculating pumps must be sized to limit the maximum water velocity to the requirement of AS/NZS 3500 for non-metallic piping. Where copper tube is part of the installation, the velocity restrictions for this material must be adhered to.
- A timer operated recirculation pump must be used with a maximum circulation time of 12 hours per 24-hour period. It is recommended that the pipe work be insulated and that the recirculating pump also have a thermostat control, to further reduce stress on the system and minimise energy consumption.
- The pipe layout should be designed to use wide sweeping bends in the pipe with minimal fittings.
- Water quality conditions are typical of major Australian city potable water reticulation systems as defined in the Australian Drinking Water Guidelines.

Thermal Properties

PEX pipe will not melt. This is due to the irreversible cross-linking process which has changed the chemical structure of the base polyethylene.

PROPERTY	VALUE
Ignition Temperature °C	380
Specific Heat (J/kg/K)	2300
Density (g/cm ³)	0.94
Thermal Expansion Coefficient (x10 ⁻⁶ /K)	14.22

Thermal Expansion

The table below represents expansion and contraction of PEX pipe in millimeters, resulting from a given change in temperature. The graph and table are calculated using the following equation:

$$\text{Change in pipe length} = 0.1422 \times \text{Pipe length} \times \text{Change in temperature}$$

		CHANGE IN TEMPERATURE (°C)															
		10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
LENGTH OF PIPE IN METRES	1	1.4	1.7	2.0	2.3	2.6	2.8	3.1	3.4	3.7	4.0	4.3	4.6	4.8	5.1	5.4	5.7
	2	2.8	3.4	4.0	4.6	5.1	5.7	6.3	6.8	7.4	8.0	8.5	9.1	9.7	10.2	10.8	11.4
	4	5.7	6.8	8.0	9.1	10.2	11.4	12.5	13.7	14.8	15.9	17.1	18.2	19.3	20.5	21.6	22.8
	6	8.5	10.2	11.9	13.7	15.4	17.1	18.8	20.5	22.2	23.9	25.6	27.3	29.0	30.7	32.4	34.1
	8	11.4	13.7	15.9	18.2	20.5	22.8	25.0	27.3	29.6	31.9	34.1	36.4	38.7	41.0	43.2	45.5
	10	14.2	17.1	19.9	22.8	25.6	28.4	31.3	34.1	37.0	39.8	42.7	45.5	48.3	51.2	54.0	56.9
	12	17.1	20.5	23.9	27.3	30.7	34.1	37.5	41.0	44.4	47.8	51.2	54.6	58.0	61.4	64.8	68.3
	14	19.9	23.9	27.9	31.9	35.8	39.8	43.8	47.8	51.8	55.7	59.7	63.7	67.7	71.7	75.7	79.6
	16	22.8	27.3	31.9	36.4	41.0	45.5	50.1	54.6	59.2	63.7	68.3	72.8	77.4	81.9	86.5	91.0
	18	25.6	30.7	35.8	41.0	46.1	51.2	56.3	61.4	66.5	71.7	76.8	81.9	87.0	92.1	97.3	102.4
	20	28.4	34.1	39.8	45.5	51.2	56.9	62.6	68.3	73.9	79.6	85.3	91.0	96.7	102.4	108.1	113.8
	22	31.3	37.5	43.8	50.1	56.3	62.6	68.8	75.1	81.3	87.6	93.9	100.1	106.4	112.6	118.9	125.1
	24	34.1	41.0	47.8	54.6	61.4	68.3	75.1	81.9	88.7	95.6	102.4	109.2	116.0	122.9	129.7	136.5
	26	37.0	44.4	51.8	59.2	66.5	73.9	81.3	88.7	96.1	103.5	110.9	118.3	125.7	133.1	140.5	147.9
	28	39.8	47.8	55.7	63.7	71.7	79.6	87.6	95.6	103.5	111.5	119.4	127.4	135.4	143.3	151.3	159.3
	30	42.7	51.2	59.7	68.3	76.8	85.3	93.9	102.4	110.9	119.4	128.0	136.5	145.0	153.6	162.1	170.6
	32	45.5	54.6	63.7	72.8	81.9	91.0	100.1	109.2	118.3	127.4	136.5	145.6	154.7	163.8	172.9	182.0
	34	48.3	58.0	67.7	77.4	87.0	96.7	106.4	116.0	125.7	135.4	145.0	154.7	164.4	174.1	183.7	193.4
	36	51.2	61.4	71.7	81.9	92.1	102.4	112.6	122.9	133.1	143.3	153.6	163.8	174.1	184.3	194.5	204.8
	38	54.0	64.8	75.7	86.5	97.3	108.1	118.9	129.7	140.5	151.3	162.1	172.9	183.7	194.5	205.3	216.1
40	56.9	68.3	79.6	91.0	102.4	113.8	125.1	136.5	147.9	159.3	170.6	182.0	193.4	204.8	216.1	227.5	

Thermal Insulation

R-Values of Common Plumbing Piping and Insulation. In certain areas, AS/NZS 3500 requires a minimum insulation of R=0.3. No current piping material will meet this requirement without suitable thermal insulation.

"R-value = Thickness / Conductivity. See AS/NZS 3500.4 Section 8.6"

	CONDUCTIVITY (K)W/M/K	OD mm	ID mm	WALL THICKNESS mm	R-VALUE K.M²/W
Air	0.02			6	0.300
Copper DN15	401	12.7	10.88	.91	0.0000023
Lagged Copper (Approx.)	Cu + Air + Plastic			~2	0.034
Sharkbite® PEX 16mm	0.35	16	11.6	2.2	0.006
Sharkbite® PEX 20mm	0.35	20	15.1	2.45	0.007
Sharkbite® PEX 25mm	0.35	25	18.6	3.2	0.009
E-Therm™	0.034			8	0.235
Requirement Of AS/NZS 3500.1 5.19 DN15	0.03			9	0.300
Requirement Of AS/NZS 3500.4 2003 Amendment 1 2005 (Table 8.1 & 8.2)	0.0433			13	0.300

Operating Parameters - Pressure

PEX pipe is manufactured to AS 2492 and designed to operate with a working pressure of 1600kPa at 20°C and can be operated at 70°C with a maximum working pressure of 1000kPa (*see special conditions relating to Recirculating Systems*). Temperatures above 70°C for any period will affect the life of the pipe.

The table below represents the working pressures of cross-linked polyethylene Class 16 pipe at various pipe material temperatures (PMT) as per AS 2492.

PMT	20°C	60°C	70°C
kPa	1600	1190	1000

In compliance with AS/NZS 2537, a SharkBite® fitting will withstand an internal pressure: 1600kPa at 20°C or 1000kPa at 70°C.

SharkBite® Copper fittings are designed for use only with copper pipe that conforms with and is approved to AS 1432.

Fitting Pressure Loss

To calculate the pressure loss through a particular fitting, the type and diameter of the fitting and the flow rate must be established. The pressure loss may then be read from the vertical axis. To calculate the pressure loss through a number of fittings in a circuit, the number and type of fittings, along with the direction of flow must be known. The pressure loss through each fitting can then be added together to calculate a total pressure loss.

Elbows - Head Loss In kPa Per Fitting

FITTING SIZE	FLOW RATES PER SECOND								
16mm	1.0	3.5	11.9	21.2	33.1	47.6	64.8	84.7	107.1
20mm	0.3	1.0	4.3	7.6	11.9	17.2	23.4	30.5	38.6
25mm	0.1	0.4	1.8	3.2	5.1	7.3	9.9	13.0	16.4

Straight Connectors - Head Loss In kPa Per Fitting

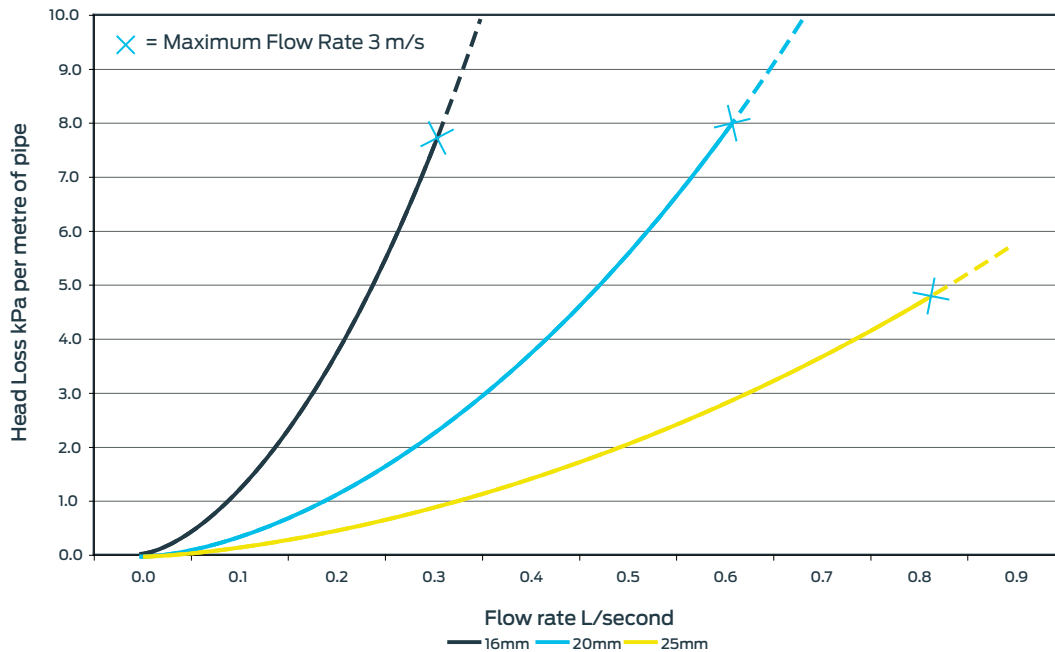
Due to the design of the SharkBite® copper fitting, there is no significant pressure loss through a straight connection. Pressure loss is to be calculated as a straight length of tube.

FITTING SIZE	FLOW RATES PER SECOND								
16mm	0.4	1.6	3.6	6.3	9.9	14.3	19.4	25.4	32.1
20mm	0.1	0.6	1.3	2.3	3.6	5.1	7.0	9.2	11.6
25mm	0.1	0.2	0.5	1.0	1.5	2.2	3.0	3.9	4.9

Pressure or Head Loss Through PEX Pipe

This graph shows pressure loss through SharkBite® PEX Pipe at various flow rates in 16mm and 20mm.

In order to calculate the pressure loss through the pipe, the given flow rate for a particular portion of tube must be established (this may be done using the table provided in AS/NZS 3500), along with the required pipe length and diameter. The pressure loss can then be read off the vertical axis.



Information provided here is theoretical and based on new clean pipe. No allowance has been made for age or any abnormal conditions of the interior surface of the pipe.

Maximum Flow Rates

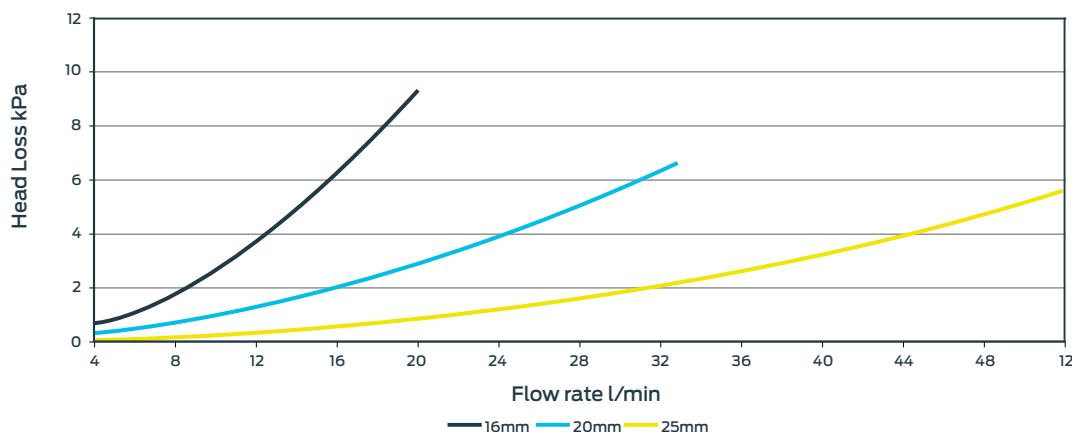
	SHARKBITE PEX PIPE SDR9			COPPER TUBE		
	16mm	20mm	25mm	DN15	DN20	DN25
MIN ID (MM)	11.5	15.0#	18.7	10.7	17.0	23
MAX FLOW (L/MIN)*	18.7	31.8	49.4	16.2	40.9	74.8
MAX FLOW (L/SEC)*	0.31	0.53	0.82	0.27	0.68	1.25

* Based on AS/NZS 3500 maximum allowable velocity in pipe of 3m/s.

Based on its minimum ID of 15mm, 20mm SharkBite® may be used where AS/NZS 3500 requires a nominal pipe size of DN20 (eg. Section 3.5.1). This is a feature of SharkBite® pipe only, and not generally applicable to PEX pipe.

Pipe Flow Characteristics

FLOWRATE (l/min) VS HEAD LOSS (kPa)													
PIPE SIZE	4l/min	8l/min	12l/min	16l/min	20l/min	24l/min	28l/min	32l/min	36l/min	40l/min	44l/min	48l/min	52l/min
16mm	0.59	1.75	3.71	6.33	9.57	-	-	-	-	-	-	-	-
20mm	0.14	0.52	1.09	1.86	2.82	3.95	5.25	6.72	-	-	-	-	-
25mm	0.05	0.17	0.36	0.61	0.92	1.29	1.71	2.19	2.73	3.32	3.96	4.65	5.49



Information provided here is theoretical and based on new clean pipe. No allowance has been made for age or any abnormal conditions of the interior surface of the pipe.

16mm PEX	
Velocity	Flow Rate
1.0m/s	6.6l/min
2.0m/s	16.4l/min
3.0m/s	20.0l/min

20mm PEX	
Velocity	Flow Rate
1.0m/s	11.0l/min
2.0m/s	22.1l/min
3.0m/s	33.1l/min

25mm PEX	
Velocity	Flow Rate
1.0m/s	17.5l/min
2.0m/s	35.0l/min
3.0m/s	52.0l/min

SharkBite® Push-To-Connect Plumbing System

The SharkBite® fitting works via a two-stage process that ensures a quick, easy connection. In one easy push, the SharkBite® fitting's advanced design seals and locks the pipe securely.

Stage ONE As the pipe is inserted into the fitting, it passes through the release collar and then through the 316-stainless steel grab ring. The grab ring opens out and grabs the pipe, preventing it from being withdrawn.

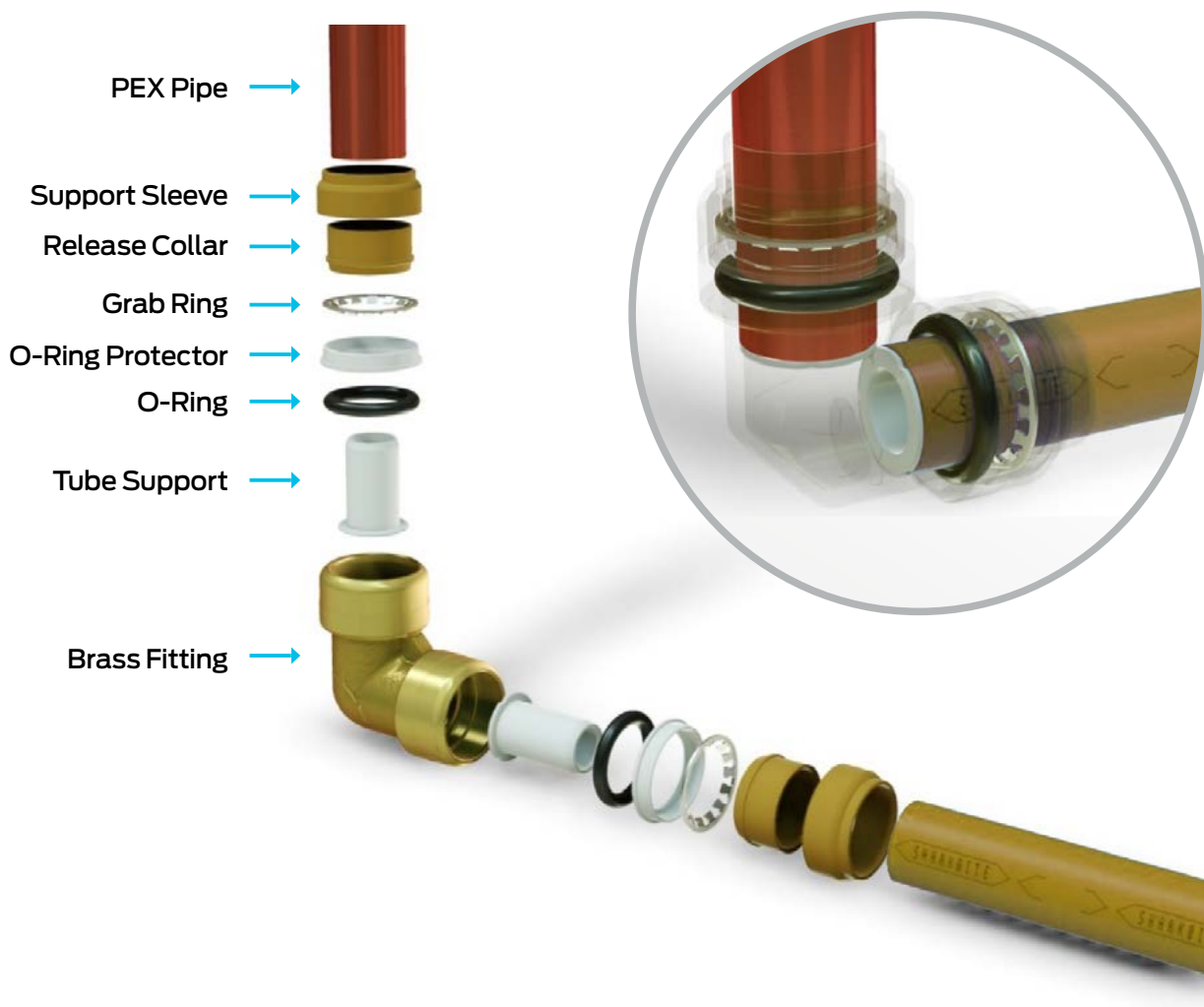
Stage TWO The pipe then passes through the O-Ring protector. This aligns the pipe before it passes through the specially formulated EDPM O-Ring which compresses between the pipe OD and the wall of the fitting, creating a seal. When the pipe reaches the tube support stop, a secure joint has been made.

If required, the pipe and fitting can be easily disconnected using SharkBite® Disassembly Clips or Disassembly Tongs. Simply apply pressure to the release collar. This releases the grab ring teeth, allowing the pipe to be withdrawn from the fitting.

Refer to this manual for detailed connection and disconnection instructions.

SharkBite® PEX fittings are designed for use only on SharkBite® PEX pipe.

SharkBite® copper fittings are designed for use only with copper pipe that conforms with and is approved to AS 1432.



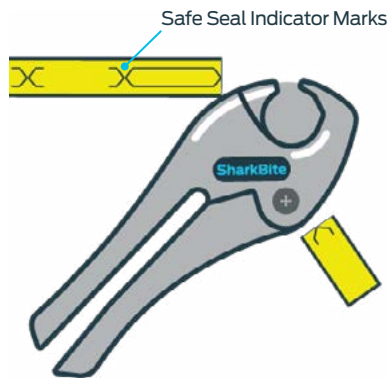
Connection of PEX Fittings

- Used to connect only SharkBite® PEX pipe
- PEX fittings have mustard coloured ends
- Fittings are rotatable after connection
- Fittings can be installed on wet pipe even with water flowing
- Fittings can be disconnected and reconnected as required



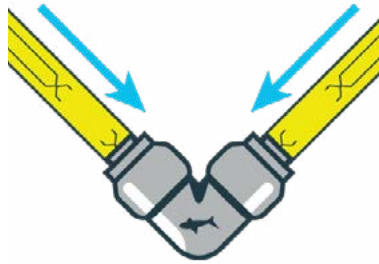
Installation

1. All pipe should be free of damage or debris. Cut PEX pipe with quality PEX cutters. Cutters with blunt or damaged blades may damage the pipe, causing failure.
2. SharkBite® PEX pipe is supplied with pre-gauged “Safe Seal Indicator Marks” (SSIM) for faster installation. Cut between the SSIM.
3. Simply push to the next SSIM.



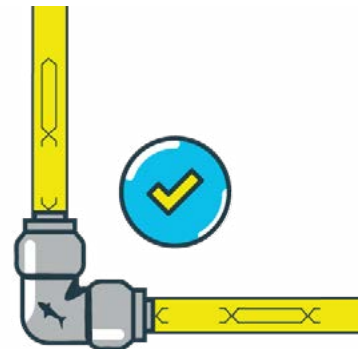
Cut

Using SharkBite® PEX Pipe Cutters, cut the pipe squarely between two of the SharkBite® safe seal indicator marks as shown in the picture. Ensure pipe is round, clean and free of debris.



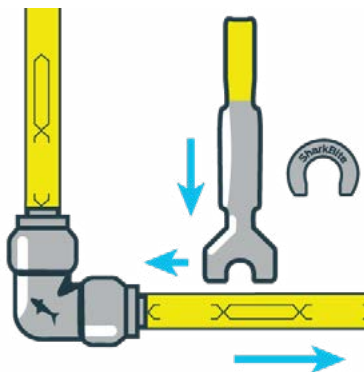
Push

Insert the pipe through the release collar to rest against the grab ring. Push the pipe firmly with a twisting action and push to the SharkBite® safe seal indicator mark.



Done

Ensure the SharkBite® Safe Seal Indicator Mark aligns with the release collar as shown.



Disassembly

Using the Disassembly Tongs or Clip, fittings can be easily changed, removed and the fittings reused.

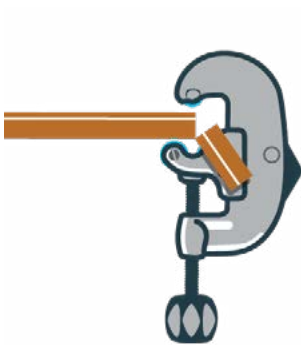
Connection of Copper Fittings

- Used to connect copper systems
- Copper fittings have black coloured ends
- A range of fittings and adapters are available



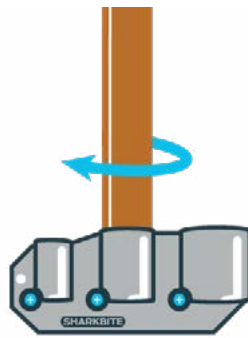
Installation

1. All pipe should be free of damage or debris. Cut copper pipe with a tube cutter. Do not use a hacksaw, as this will cause damage to the pipe ends.
2. Deburr the end of the pipe using the SharkBite® F702 Deburring tool. Be sure to remove any sharp edges that may damage the O-Ring, as this will cause failure.
3. Mark the pipe with a marker, using the SharkBite® F702 Gauge to determine the correct insertion depth.
4. Push the pipe into the fitting to the mark made in step 3. The mark should rest against the collar of the fitting, indicating correct insertion depth.



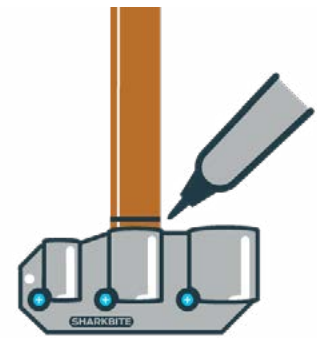
Cut

Using a pipe cutter, cut the copper tube to length, making sure the pipe is cut squarely. Ensure pipe is round, clean and free of debris.



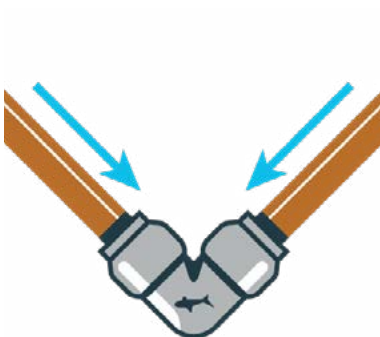
Deburr

Remove burrs from the pipe using the SharkBite® Deburrer and Depth Gauge.



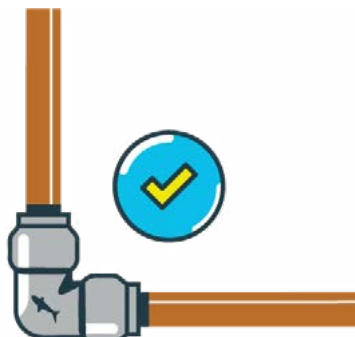
Mark

Mark the pipe with a marker using the Depth Gauge.



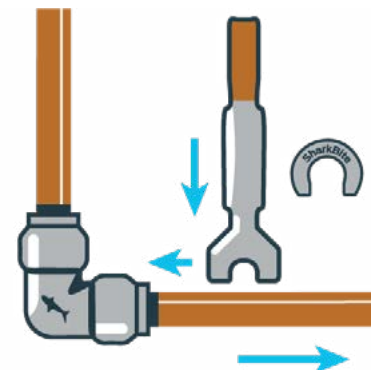
Push

Insert the pipe by pushing firmly until a positive click is heard.



Done

Ensure the mark made with Depth Gauge aligns with the release collar.



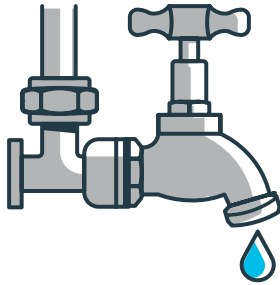
Disassembly

Using the Disassembly Tongs or Clip, fittings can be easily changed, removed and the fittings reused.

Disconnecting Fittings

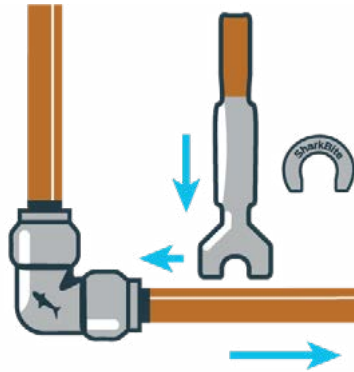
SharkBite® fittings are designed to accommodate simple changes during installation.

When reusing fittings, ensure the fitting and pipe connection have not been compromised before reinstalling. Visit the Installation Trouble Shooting section for more details.



Relieve Pressure

Ensure all system pressure has been relieved and drained where possible, although draining is not mandatory. SharkBite® can be installed wet or dry.

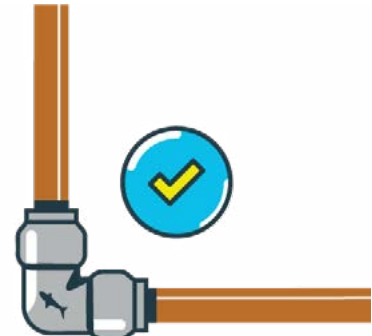


Disconnect

Place the Disconnection Clip over the pipe with the flat face towards the fitting release collar. Apply pressure to the clip against the collar, and with your free hand, remove the pipe.

Alternatively

Place the Disconnection Tongs around the fitting assembly and apply pressure to the release collar. With your free hand remove the pipe.



Re-use

Refer to the SharkBite® Installation procedure when remaking a joint.

Note: Always recut pipe as damage may have been done during disconnection.

Use approved SharkBite Disconnection tools

DISCONNECTION CLIPS



DISCONNECTION TONGS



Installation Requirements

Installation is subject to the requirements of the applicable regulatory authority, the National Construction Code Volume Three – Plumbing Code of Australia, associated reference standards as applicable at the time and AS/NZS 3500.

The SharkBite® Push-to-Connect Plumbing System is simple and effective when executed in accordance with the jointing procedures in this manual. However, if sufficient care is not taken, this can result in an ineffective joint.

SharkBite® fittings are not suitable for use on stainless steel pipe.

Installation Best Practice

- ALL SharkBite® O-Rings are pre-lubricated during manufacture, do not apply additional lubrication
- Cut the pipe square - use SharkBite® cutting tools with sharp, undamaged cutting blades to ensure a clean, square cut. Do not use a hacksaw when cutting copper pipe and use the SharkBite Deburring & Guage Tool to ensure the ends are free from burrs
- Keep it clean - ensure your SharkBite® PEX and fittings are free from building-site contamination such as dirt, sand, sawdust, concrete dust etc.
- To ensure fittings stay clean and the O-Ring is protected from damage, fittings must be kept in their original packaging until immediately prior to installation
- Push the pipe all the way in - use the Safe Seal Indicator Marks on PEX or the SharkBite Deburring & Guage Tool as a depth indicator on copper to ensure the pipe has achieved full insertion
- If the pipe is difficult to insert or will not engage into the fitting do not force the pipe. Remove and check for obstructions inside the fitting and check for damage to the end of the pipe
- If SharkBite® pipe is to be refitted to a SharkBite® fitting, it is important to trim the pipe before remaking the joint
- SharkBite® fittings are not to be installed back to back. A minimum distance of 1 Safe Seal Indicator Mark for PEX and 25mm for copper, is required
- If you are soldering/sweating copper pipe solder/sweat all connections first then make the SharkBite® connections - Do NOT solder next to SharkBite® connection
- SharkBite® copper fittings may be used on annealed copper tube, however, achieving a watertight connection may be difficult. Using an alternate connection method may be more suitable
- Always pressure test with water on completion and before covering the pipe
- Always look for the shark - beware of imitators, you can tell genuine SharkBite® fittings from the embossed shark icon on the body of the fitting.



Ineffective Joints Most Often Occur When:

- There is debris or foreign matter inside the fitting
- The PEX or copper pipe has not been cut square
- The PEX or copper pipe has rough edges, cuts, abrasions or other damage
- The PEX pipe has been cut with blunt or damaged tools
- The copper pipe has been cut with a hack-saw
- Correct pipe insertion depth has not been achieved



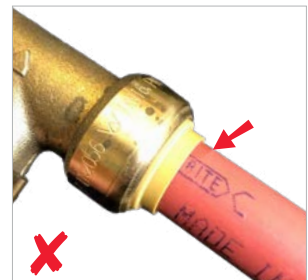
Cutting tool
damaged



Dirt/debris inside
fitting



Pipe has not been
cut square



Short engagement
- pipe not inserted
correctly

If an ineffective joint is detected

- Disconnect the defective joint and recut the pipe to ensure it is square and free from damage
- Check the fitting is clean and there has been no damage to the grab ring or O-Ring
- Re-install the fitting as per instructions in this manual
- If the joint fails a pressure test, discard fitting and repeat these steps with a new fitting



SharkBite® Fittings

Copper Fittings

SharkBite® SDR9 PEX to Copper 15-20mm For use on SharkBite® with Copper Take-off

Push-To-Connect plumbing solution from SharkBite® to Copper. Copper must comply to AS 1432.

F009 Coupling DN15 Cu to 16mm OD



F363 16mm SharkBite® to 15mm Copper Center Tee



F017 Coupling DN20 Cu to 20mm OD

F371 20mm SharkBite® to 20mm Copper Center Tee

SharkBite® SDR9 PEX to Copper 15-20mm For use on Copper with SharkBite® Take-off

Push-To-Connect plumbing solution from Copper to SharkBite®. Copper must comply to AS 1432.

F250 Elbow 16mm SharkBite® to 15mm Copper



F364 15mm Copper to 16mm SharkBite Center Tee



F258 Elbow 20mm SharkBite® to 20mm Copper

F372 20mm Copper to 20mm SharkBite® Center Tee

PEX Fittings

PEX Conversion Fittings are NOT suitable for connection on aluminium multi-layer PEX systems.

SharkBite® SDR9 PEX to SDR7.4 PEX For use on SDR7.4 with SharkBite® Take-off

Push-To-Connect plumbing solution from SDR7.4 to SharkBite®. Eg. Rehau, EZIPEX, Iplex K2, Forzapex, Tradeplex & others.

F009PX Coupling 16mm



F364PX Tee 16mm



F017PX Coupling 20mm

F372PX Tee 20mm

SharkBite® SDR9 PEX to Polybutylene For use on Polybutylene with SharkBite® Take-off

Push-To-Connect plumbing solution from Polybutylene to SharkBite®. Eg. Iplex ProFit, Buteline, Hep 20, & others.

F009PB Coupling 16mm OD to 18mm PB



F364PB Tee 16mm OD to 18mm PB



F017PB Coupling 20mm OD to 22mm PB

F372PB Tee 20mm OD to 22mm PB

SharkBite® SDR9 PEX to SDR9, Auspex & others

F009AP Coupling SDR9 16mm



F017AP Coupling SDR9 20mm

Transition Ball Valves *

*NEW product coming mid-2020

SharkBite® SDR9 PEX to Copper

BVFRA009 Ball Valve 16mm OD to DN15Cu



BVFRA017 Ball Valve 20mm OD to DN20Cu

Conversion Fittings

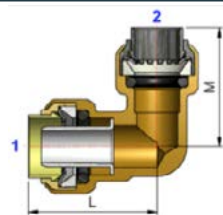
Technical Information



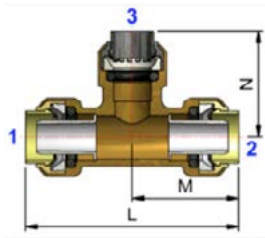
Conversion Coupling

Code	End Size		Bag Qty	Weight Each	L	Section View
	1	2				
F009	16mm OD	DN15cu	10	58g	49	
F017	20mm OD	DN20cu	10	103g	59	
F009PX	16mm OD SDR9	16mm OD SDR7.4	10	45g	49	
F017PX	20mm OD SDR9	20mm OD SDR7.4	10	103g	59	
F009PB	16mm OD	18mm Poly/Bute	10	45g	49	
F017PB	20mm OD	20mm Poly/Bute	10	103g	59	
F009AP	16mm OD	16mm SDR9 PEX	10	54g	49	
F017AP	20mm OD	20mm SDR9 PEX	10	99g	59	
F061	25mm OD (DN25Cu)	DN20Cu	1	122 g	59	

Conversion Elbow

Code	End Size		Bag Qty	Weight Each	L	M	Section View
	1	2					
F250	16mm OD	DN15Cu	5	75g	37	34	
F258	20mm OD	DN20Cu	5	120g	40	40	

Conversion Tee

Code	End Size			Bag Qty	Weight Each	L	M	N	Section View
	1	2	3						
F363	16mm OD	16mm OD	DN15Cu	5	111g	73	37	36	
F364	DN15Cu	DN15Cu	16mm OD	5	121g	73	36	37	
F371	20mm OD	20mm OD	DN20Cu	5	184g	81	40	40	
F372	DN20Cu	DN20Cu	20mm OD	5	101g	81	40	40	
F364PX	16mm SDR7.4	16mm SDR7.4	16mm OD	5	121g	73	37	37	
F372PX	20mm SDR7.4	20mm SDR7.4	20mm OD	5	101g	81	40	40	
F364PB	16mm Polybutylene	16mm Polybutylene	16mm OD	5	111g	73	37	37	
F372PB	20mm Polybutylene	20mm Polybutylene	20mm OD	5	186g	79	40	40	
F417	DN25Cu (25mm OD)	DN25Cu (25mm OD)	DN20Cu	1	244 g	81	40	44	

PEX Fittings



Technical Information

- Use SharkBite® 25mm PEX Connections for DN25Cu
- All dimensions in mm unless otherwise stated and are for reference only.

Typical End Details (PEX Fittings)

End Size	D1	L1	Section View
16mm OD	27	24	
20mm OD	32	29	
25mm OD	38	29	

F1 Straight Coupling

Code	End Size		Bag Qty	Weight Each	L	Section View
	1	2				
F008	16mm OD	16mm OD	10	53 g	49	
F016	20mm OD	20mm OD	10	100 g	59	
F020	25mm OD (DN25Cu)	25mm OD (DN25Cu)	1	170 g	64	

F1 Reducing Coupling

Code	End Size		Bag Qty	Weight Each	L	Section View
	1	2				
F058	20mm OD	16mm OD	10	83 g	55	
F060	25mm OD (DN25Cu)	20mm OD	1	151g	61	

F2 Straight Female Connector

Code	End Size		Bag Qty	Weight Each	L	S1	Section View
	1	2					
F068	16mm OD	RP3/4"-20	5	95 g	47	31.2	
F072	16mm OD	G1/2"	10	62 g	43	25.6	
F088	20mm OD	G3/4"	5	99 g	48	31.2	
F094	25mm OD (DN25Cu)	RP1"-25	1	168 g	55	38.1	

F3 Straight Male Connector

Code	End Size		Bag Qty	Weight Each	L	S1	Section View
	1	2					
F116	16mm OD	R3/4"-20	5	93 g	48	31.2	
F120	16mm OD	R1/2"-15	10	73 g	43	25.5	
F134	20mm OD	R3/4"-20	5	96 g	45	31.2	
F138	25mm OD (DN25Cu)	R1/2"-15	5	85 g	44	31.2	
F140	25mm OD (DN25Cu)	R1"-25	1	170 g	54	38.1	
F142	25mm OD (DN25Cu)	R3/4"-20	1	130 g	47	32.4	

PEX Fittings

Technical Information



F12 Elbow

Code	End Size		Bag Qty	Weight Each	L	Section View
	1	2				
F248	16mm OD	16mm OD	10	65 g	37	
F256	20mm OD	20mm OD	10	117 g	40	
F260	25mm OD (DN25Cu)	25mm OD (DN25Cu)	1	263 g	47	

F13 Male Elbow

Code	End Size		Bag Qty	Weight Each	L	M	Section View
	1	2					
F280	16mm OD	R1/2"-15	5	97 g	36	31	

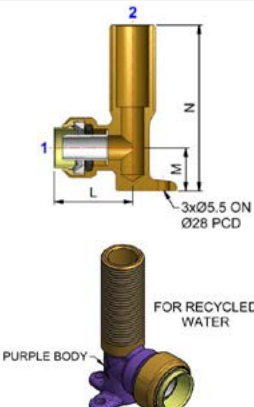
F14 Female Elbow

Code	End Size		Bag Qty	Weight Each	L	M	S1	Section View
	1	2						
F308	16mm OD	RP1/2"-15	5	88 g	36	27	25.6	

F15BP Backplate Female Elbow

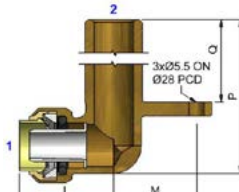
Code	End Size		Bag Qty	Weight Each	L	M	N	Section View
	1	2						
F334	16mm OD	G1/2"	5	116 g	35	19	44	
F340	20mm OD	G3/4"	5	180 g	42	22	54	

F19BP Backplate Male Elbow

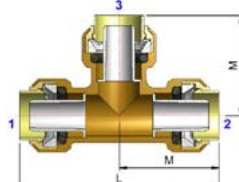
Code	End Size		Bag Qty	Weight Each	L	M	N	Section View
	1	2						
F350	16mm OD	G1/2"	10	139 g	35	19	75	
F351	16mm OD	G1/2"	5	277 g	35	19	185	
F352	16mm OD	G1/2"	5	170 g	35	19	100	
F354	20mm OD	*G3/4"	5	420 g	42	22	185	
F356	20mm OD	G1/2"	5	174 g	36	22	100	
F358	20mm OD	G1/2"	5	274 g	36	22	200	
F339-90	20mm OD	*G5/8"	5	208 g	41	22	90	
F339-200	20mm OD	*G5/8"	5	309 g	41	22	200	

*Mounting holes 3xØ5.5 ON Ø33 PCD

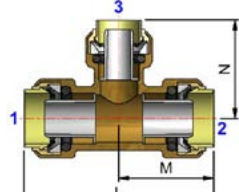
Top-Plated Male Elbow

Code	End Size		Bag Qty	Weight Each	L	M	P	Q	Section View
	1	2							
F336	16mm OD	G1/2"	5	184 g	34	30	100	75	
F336-230	16mm OD	G1/2"	5	390 g	34	30	255	230	

F24 Equal Tee

Code	End Size			Bag Qty	Weight Each	L	M	Section View
	1	2	3					
F362	16mm OD	16mm OD	16mm OD	10	111 g	73	37	
F370	20mm OD	20mm OD	20mm OD	10	190 g	81	40	
F374	25mm OD (DN25Cu)	25mm OD (DN25Cu)	25mm OD (DN25Cu)	1	320 g	93	47	

F25, F26, F27 Unequal Tee

Code	End Size			Bag Qty	Weight Each	L	M	N	Section View
	1	2	3						
F412	20mm OD	20mm OD	16mm OD	10	165 g	77	38	40	
F416	25mm OD (DN25Cu)	25mm OD (DN25Cu)	20mm OD	1	290 g	86	43	44	
F444	20mm OD	16mm OD	20mm OD	10	176 g	79	38	40	
F454	20mm OD	16mm OD	16mm OD	10	147 g	75	36	37	

PEX Fittings

Technical Information



F61 Stop End

Code	End Size		Bag Qty	Weight Each	L	Section View
	1					
F514	16mm OD		10	32 g	26	
F518	20mm OD		5	48 g	31	
F520	25mm OD (DN25Cu)		1	144 g	35	

F62 Straight Tap Connector

Code	End Size		Bag Qty	Weight Each	L	S1	Section View
	1	2					
F526	16mm OD	1/2" F NUT	10	75 g	48	27	
F530	20mm OD	3/4" F NUT	5	119 g	55	30	

F63 Bent Tap Connector

Code	End Size		Bag Qty	Weight Each	L	M	S1	Section View
	1	2						
F532	16mm OD	1/2" F NUT	10	113 g	40	43	27	
F536	20mm OD	3/4" F NUT	5	214 g	34	34	30	

PEX Tail Reducer

Code	End Size		Bag Qty	Weight Each	L	M	Section View
	1	2					
F720	16mm OD	20mm OD TAIL	5	70 g	60	41	
F722	16mm OD	25mm OD TAIL	1	94 g	58	39	
F724	20mm OD	25mm OD TAIL	1	90 g	57	37	

PEX Tail / Capillary Tail

Code	End Size		Bag Qty	Weight Each	L	M	Section View
	1	2					
F608	16mm OD TAIL	1/2" CAP TAIL	5	33 g	44	34	
F609	20mm OD TAIL	3/4" CAP TAIL	5	55 g	56	39	

PEX Fittings

Technical Information



PEX Tail / Copper Adaptor

Code	End Size		Bag Qty	Weight Each	L	M	Section View
	1	2					
F600	16mm OD TAIL	1/2" Cu	10	32 g	45	34	
F602	16mm OD TAIL	3/4" Cu	5	40 g	51	34	
F604	20mm OD TAIL	1/2" Cu	5	50 g	50	39	
F606	20mm OD TAIL	3/4" Cu	10	54 g	55	39	

PEX / Flare Adaptor

Code	End Size		Bag Qty	Weight Each	L	S1	Section View
	1	2					
F610	16mm OD	1/2" M FLARE	10	70 g	48	25.5	
F612	20mm OD	3/4" M FLARE	5	112 g	52	31.2	

Ball Valves

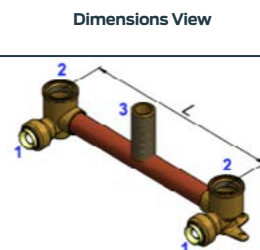
Code	End Size		Bag Qty	Weight Each	L	M	N	Section View
	1	2						
BVF670	16mm OD	16mm OD	1	306 g	77	92	30	
BVF672	20mm OD	20mm OD	1	500 g	92	105	44	
BVF674	25mm OD (DN25Cu)	25mm OD (DN25Cu)	1	800 g	103	105	48	
BVF680	16mm OD	RP1/2"-15	1	306 g	69	92	38	
BVF682	20mm OD	RP3/4"-20	1	417 g	79	105	48	
BVF684	25mm OD (DN25Cu)	RP1"-25	1	700 g	92	105	48	

Manifolds

Code	End Size			Bag Qty	Weight Each	L	Dimensions View
	1	2	3				
F690-3T	20mm OD	20mm OD	16mm OD	1	251 g	40	
F690-4T	20mm OD	20mm OD	16mm OD	1	327 g	40	

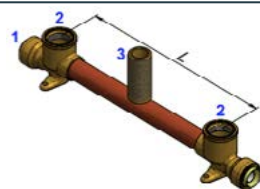
Recessed - Right Angled Breech

Code	End Size			Bag Qty	Weight Each	L
	1	2	3			
F630	16mm OD	G5/8"	G1/2"	1	515 g	300
F632	16mm OD	G5/8"	G1/2"	1	480 g	200



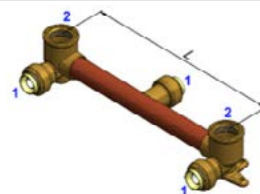
Recessed - Straight Breech

Code	End Size			Bag Qty	Weight Each	L
	1	2	3			
F642	16mm OD	G5/8"	G1/2"	1	445 g	200



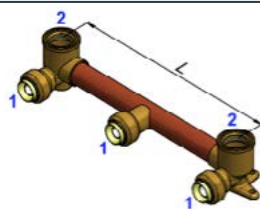
Shower - Right Angled Breech

Code	End Size		Bag Qty	Weight Each	L
	1	2			
F650	16mm OD	G5/8"	1	461 g	200
F652	16mm OD	G5/8"	1	436 g	150



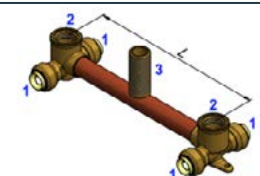
Shower - Right Angled Breech (Inverted)

Code	End Size		Bag Qty	Weight Each	L
	1	2			
F655	16mm OD	G5/8"	1	443 g	200
F657	16mm OD	G5/8"	1	419 g	150



Shower / Bath - Right Angled Breech

Code	End Size			Bag Qty	Weight Each	L
	1	2	3			
F662	16mm OD	G5/8"	G1/2"	1	530 g	300



Copper Fittings



Technical Information

Typical End Details (Copper Fittings)

End Size	D1	L1	Section View
DN15Cu	23	24	
DN20Cu	31	29	
DN25Cu	38	29	

No1 Straight Coupling

Code	End Size		Bag Qty	Weight Each	L	Section View
	1	2				
RA008	DN15Cu	DN15Cu	10	45 g	50	
RA016	DN20Cu	DN20Cu	10	85 g	60	

No1R Reducing Coupling

Code	End Size		Bag Qty	Weight Each	L	Section View
	1	2				
RA058	DN20Cu	DN15Cu	10	71 g	56	
F061	DN25Cu (25mm OD)	DN20Cu	1	122 g	59	

No2 Female Connector

Code	End Size		Bag Qty	Weight Each	L	S1	Section View
	1	2					
RA072	DN15Cu	R1/2"-15	10	60 g	45	25.6	
RA088	DN20Cu	R3/4"-20	5	98 g	51	31.2	

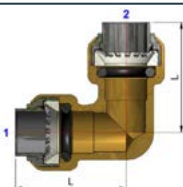
No3 Male Connector

Code	End Size		Bag Qty	Weight Each	L	S1	Section View
	1	2					
RA120	DN15Cu	R1/2"-15	10	62 g	45	25.6	
RA134	DN20Cu	R3/4"-20	10	98 g	51	31.2	

Hot Water Elbow

Code	End Size		Bag Qty	Weight Each	L	M	S1	Section View
	1	2						
RA380	DN15Cu	R3/4"-20	10	115 g	37	39	28	

No12 Elbow

Code	End Size		Bag Qty	Weight Each	L	Section View
	1	2				
RA248	DN15Cu	DN15Cu	10	63 g	34	
RA256	DN20Cu	DN20Cu	10	127 g	41	

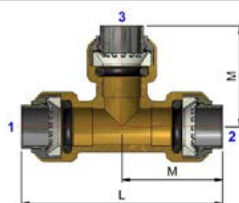
No15BP Female Lugged Elbow

Code	End Size		Bag Qty	Weight Each	L	M	N	Section View
	1	2						
RA334	DN15Cu	G1/2"	5	109 g	36	19	46	
RA340	DN20Cu	R3/4"	5	165 g	41	22	53	

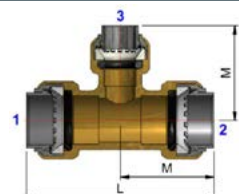
No19BP Male Lugged Elbow

Code	End Size		Bag Qty	Weight Each	L	M	N	Section View
	1	2						
RA350	DN15Cu	G1/2"	10	130 g	35	19	75	
RA351	DN15Cu	G1/2"	5	284 g	35	19	185	
RA352	DN15Cu	G1/2"	5	155 g	35	19	100	

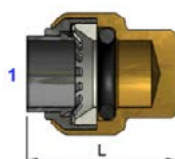
No24 Equal Tee

Code	End Size			Bag Qty	Weight Each	L	M	Section View
	1	2	3					
RA362	DN15Cu	DN15Cu	DN15Cu	10	87g	68	34	
RA370	DN20Cu	DN20Cu	DN20Cu	10	166 g	83	41	

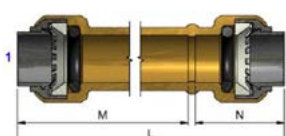
No25 Unequal Tee

Code	End Size			Bag Qty	Weight Each	L	M	M	Section View
	1	2	3						
RA412	DN20Cu	DN20Cu	DN15Cu	10	134 g	74	37	37	
RA454	DN20Cu	DN15Cu	DN15Cu	10	116 g	71	34	37	
F417	DN25Cu (25mm OD)	DN25Cu (25mm OD)	DN20Cu	1	244 g	81	40	44	

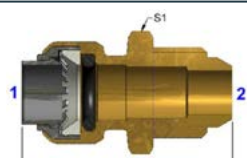
No61 Stop End

Code	End Size		Bag Qty	Weight Each	L	Section View
	1					
RA514	DN15Cu		10	30 g	29	
RA518	DN20Cu		5	58 g	34	

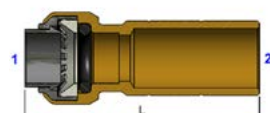
Slip Coupling

Code	End Size		Bag Qty	Weight Each	L	M	N	Section View
	1							
RA3008	DN15Cu		5	109 g	113	87	24	
RA3016	DN20Cu		5	152 g	113	82	29	
RA3020	DN25Cu		1	281 g	113	82	29	

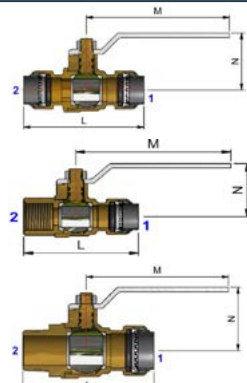
Flared Compression Adaptor

Code	End Size		Bag Qty	Weight Each	L	S1	Section View
	1	2					
RA610	DN15Cu	1/2" M FLARE	5	71 g	49	25.6	
RA612	DN20Cu	3/4" M FLARE	5	111 g	53	31.2	

SharkBite Tail x OD Reducer

Code	End Size		Bag Qty	Weight Each	L	Section View
	1	2				
RA720	DN15Cu	DN20 TAIL	5	53 g	60	
RA722	DN15Cu	DN25 TAIL	1	77 g	55	
RA724	DN20Cu	DN25 TAIL	1	89 g	59	

Ball Valves

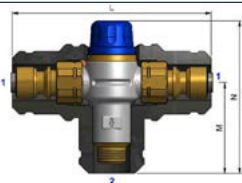
Code	End Size		Bag Qty	Weight Each	L	M	N	Section View
	1	2						
BVRA670	DN15Cu	DN15Cu	1	320 g	76	92	38	
BVRA672	DN20Cu	DN20Cu	1	476 g	90	105	44	
BVRA680	DN15Cu	RP1/2"-15	1	260 g	68	92	38	
BVRA682	DN20Cu	RP3/4"-20	1	385 g	77	103	44	
BVRA682M	DN20Cu	R3/4"-20	1	304 g	80	105	44	

Tempering Valves

Technical Information



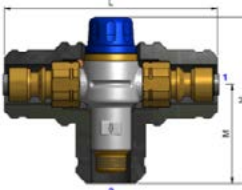
Insulated Tempering Valves (TV) with SharkBite® PEX Fittings

Code	End Size		Bag Qty	Weight Each	L	M	N	Dimensions View
	1	2						
MIXF11012I	20mm OD	G1/2"	1	1010 g	157	75	121	
MIXF11116I	16mm OD	G1/2"	1	760 g	148	71	117	
MIXF11117I	20mm OD	G1/2"	1	1010 g	157	72	121	

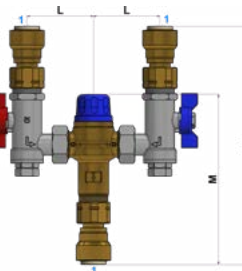
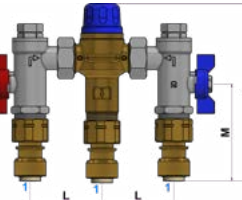
Tempering Valves (TV) with SharkBite® PEX Fittings

Code	End Size		Bag Qty	Weight Each	L	M	N	Dimensions View
	1	2						
MIXSB16	16mm OD		1	750 g	140	100	146	
MIXSB20	20mm OD		1	850 g	148	106	152	

Insulated Tempering Valves (TV) with SharkBite® Copper Fittings

Code	End Size		Bag Qty	Weight Each	L	M	N	Dimensions View
	1	2						
MIXRA11009I	DN15Cu	G1/2"	1	900 g	148	68	114	
MIXRA11116I	DN15Cu	G1/2"	1	900 g	148	68	114	

4 in 1 Tempering Valves – UP and DOWN

Code	End Size		Bag Qty	Weight Each	L	M	N	Dimensions View
	1	2						
MIX11014U	16mm OD		1	1.4 kg	61	152	210	 
MIX11013U	20mm OD		1	1.5 kg	61	156	219	
MIX11014D	16mm OD		1	1.4 kg	61	82	152	
MIX11013D	20mm OD		1	1.5 kg	61	87	156	

SharkBite® New Zealand Exclusive Fittings are designed for use with New Zealand plumbing standards and are not available in other countries.

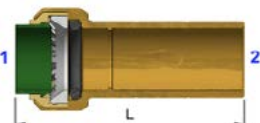
Straight Swivel

Code	End Size		Bag Qty	Weight Each	L	S1	Section View
	1	2					
F526NZ	16mmOD	G1/2"F NUT	5	67g	55	27	
F530NZ	20mm OD	G3/4"F NUT	5	111 g	61	32	

Swivel Elbow

Code	End Size		Bag Qty	Weight Each	L	M	S1	Section View
	1	2						
F532NZ	16mm OD	G1/2"F NUT	5	84 g	31	43	27	
F536NZ	20mm OD	G3/4"F NUT	5	152 g	38	47	32	

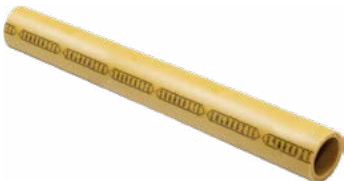
Copper Adaptor

Code	End Size		Bag Qty	Weight Each	L	Section View
	1	2				
F719NZ	1/2"NZ Cu PushFit	16mm OD TAIL	5	60 g	60	
F723NZ	3/4"NZ Cu PushFit	20mm OD TAIL	5	95 g	70	

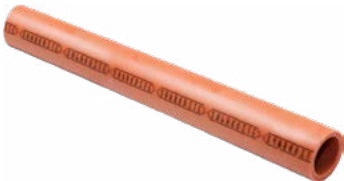


SharkBite® PEX

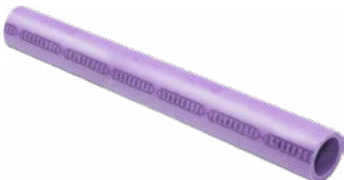
Potable Water (Mustard)

Code	Size	Length	Weight Pex Tube Per Metre	Weight Pex Tube With Water Per Metre	Image
F860	16mm OD	5m Straight	0.09 kg	0.20kg	
F864	16mm OD	50m Coil	0.09 kg	0.20 kg	
F864100	16mm OD	100m Coil	0.09 kg	0.20kg	
F870	20mm OD	5m Straight	0.13 kg	0.31kg	
F874	20mm OD	50m Coil	0.13 kg	0.31kg	
F874100	20mm OD	100m Coil	0.20 kg	0.48kg	
F880	25mm OD	5m Straight	0.20 kg	0.48kg	
F882	25mm OD	25m Coil	0.20 kg	0.48kg	

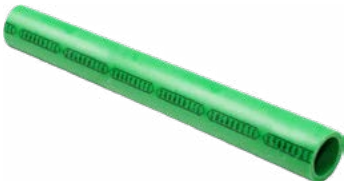
Hot Water (Red)

Code	Size	Length	Weight Pex Tube Per Metre	Weight Pex Tube With Water Per Metre	Image
F860R	16mm OD	5m Straight	0.09 kg	0.20kg	
F864R	16mm OD	50m Coil	0.09 kg	0.20kg	
F870R	20mm OD	5m Straight	0.13 kg	0.31kg	
F874R	20mm OD	50m Coil	0.13 kg	0.31kg	
F880R	25mm OD	5m Straight	0.20 kg	0.48kg	
F882R	25mm OD	25m Coil	0.20 kg	0.48kg	


Recycled Water (Lilac)

Code	Size	Length	Weight Pex Tube Per Metre	Weight Pex Tube With Water Per Metre	Image
F862L	16mm OD	25m Coil	0.09 kg	0.20kg	
F870L	20mm OD	5m Straight	0.13 kg	0.31kg	
F872L	20mm OD	25m Coil	0.13 kg	0.31kg	
F882L	25mm OD	25m Coil	0.20 kg	0.48kg	


Rain Water (Green)

Code	Size	Length	Weight Pex Tube Per Metre	Weight Pex Tube With Water Per Metre	Image
F860G	16mm OD	5m Straight	0.09 kg	0.20kg	
F862G	16mm OD	50m Coil	0.09 kg	0.20kg	
F870G	20mm OD	5m Straight	0.13 kg	0.31kg	
F872G	20mm OD	50m Coil	0.13 kg	0.31kg	
F880G	25mm OD	5m Straight	0.20 kg	0.48kg	
F882G	25mm OD	25m Coil	0.20 kg	0.48kg	


Pipe in Conduit (Mustard Only)

Code	Size	Length	Weight Pex Tube Per M	Weight Pex Tube With Water Per M	Image
F863	16mm OD	25m Coil	0.16 kg	0.27kg	
F873	20mm OD	25m Coil	0.19 kg	0.37kg	

Foam Pipe Insulation (Red Only)

Code	Size	Length	Weight Pex Tube Per M	Weight Pex Tube With Water Per M	Image
F862RR3	16mm Preinsulated PEX R0.3	25m	0.14 kg	0.25kg	
F872RR3	20mm Preinsulated PEX R0.3	25m	0.19 kg	0.37kg	
F882RR3	25mm Preinsulated PEX R0.3	25m	0.29 kg	0.57kg	
F862RR8	16mm Preinsulated PEX R0.8	25m	0.14 kg	0.25kg	
F872RR8	20mm Preinsulated PEX R0.8	25m	0.19 kg	0.37kg	
F882RR8	25mm Preinsulated PEX R0.8	25m	0.29 kg	0.57kg	

Corrugated Sleeve (Conduit Only)

Code	Size	Length	Suits Pipe Size	Weight Each	Image
F706	23mm	25m	16mm OD, 20mm OD	1730 g	
F707	29mm	25m	25mm OD	2080 g	


SharkBite® Accessories & Tools




Tube Clips

Code	Size (D)	Fastener Type	Bag Qty	Weight Each	W	H	Image
F820	16mm OD	TIMBER NAIL	100	7 g	14	20	
F830	20mm OD	TIMBER NAIL	100	9 g	15	25	
F850	25mm OD	TIMBER NAIL	50	45 g	16	35	
F822	16mm OD	MASONRY NAIL	100	7 g	14	20	
F832	20mm OD	MASONRY NAIL	100	9 g	15	25	
F852	25mm OD	MASONRY NAIL	50	40 g	16	35	
F824	16mm OD	TEK SCREW	100	6 g	14	20	
F834	20mm OD	TEK SCREW	100	7 g	15	25	
F854	25mm OD	TEK SCREW	50	11 g	16	35	
F826	16mm OD	CONCRETE ANCHOR	50	7 g	14	20	
F836	20mm OD	CONCRETE ANCHOR	50	8 g	15	20	
F828	16mm OD	METAL STUD	50	6 g	12	20	
F838	20mm OD	METAL STUD	50	7 g	12	30	

Tube Cutter

Code	Size	Order Qty	Weight Each	Image
F700	16mm OD to 25mm OD (Ratchet)	1	300 g	
F701	16mm OD to 25mm OD	1	165 g	

Tube Bend Support

Code	Pipe Size	Bend Radius	Bag Qty	Weight Each	Image
F840	16mm OD	R90	10	39 g	
F842	20mm OD	R100	5	78 g	
F844	25mm OD	R200	1	150g	

Starter Kit

Code	Description	Parts included *	Weight Total	Image **
F4001	Starter Kit	F701 - Tube Cutter F702 - Copper Depth Gauge and Deburrer RA711 - Disconnection Tongs F711 - Disconnection Tongs RA713 - Disconnection Tongs F713 - Disconnection Tongs RA710 - Dissassembly Clip F710 - Dissassembly Clip F712 - Dissassembly Clip	4.7 kg	 ** Fittings sold separately

* See individual tables for details

** Fittings sold separately

Disassembly Tongs

Code	Pipe Size	Colour	Bag Qty	Weight Each
F711	16mm OD	YELLOW	1	112 g
F713	20mm OD	GREEN	1	170 g
F715	25mm OD	CHROME	1	170 g
RA711	DN15Cu	RED	1	160 g
RA713	DN20Cu	WHITE	1	160 g



Disassembly Clips

Code	Pipe Size	Bag Qty	Weight Each
F710	16mm OD	5	7 g
F712	20mm OD, DN20Cu	5	12 g
RA710	DN15Cu	10	3 g



Chasing Sleeve & Silicone Wrap

Code	Suites Pipe Size	Coil Length	Bag Qty	Weight Each
F704	16mm OD, 20mm OD	200m	1	2050 g
25406	16mm OD, 20mm OD, 25mm OD	50mm x 3m	1	115 g



Copper Pipe Deburrer & Depth Gauge

Code	Pipe Size	Bag Qty	Weight Each
F702	DN15, DN20, DN25	1	36 g



Pipe De-Coiler

Code	Pipe Size	Bag Qty	Weight Each
UFH034	50m & 100m COILS	1	17 kg





☎ 0800 800 523

☎ +64 9 634 2893

🖨 +64 9 634 8029

✉ sales.nz@rwc.com

✉ orders.nz@rwc.com

🌐 relianceworldwide.co.nz



Reliance Worldwide Corporation (NZ) Ltd.
PO BOX 13-349, Onehunga, Auckland 6.
305 Neilson Street, Onehunga, Auckland 1061,
New Zealand | NZBN 9429000011358

