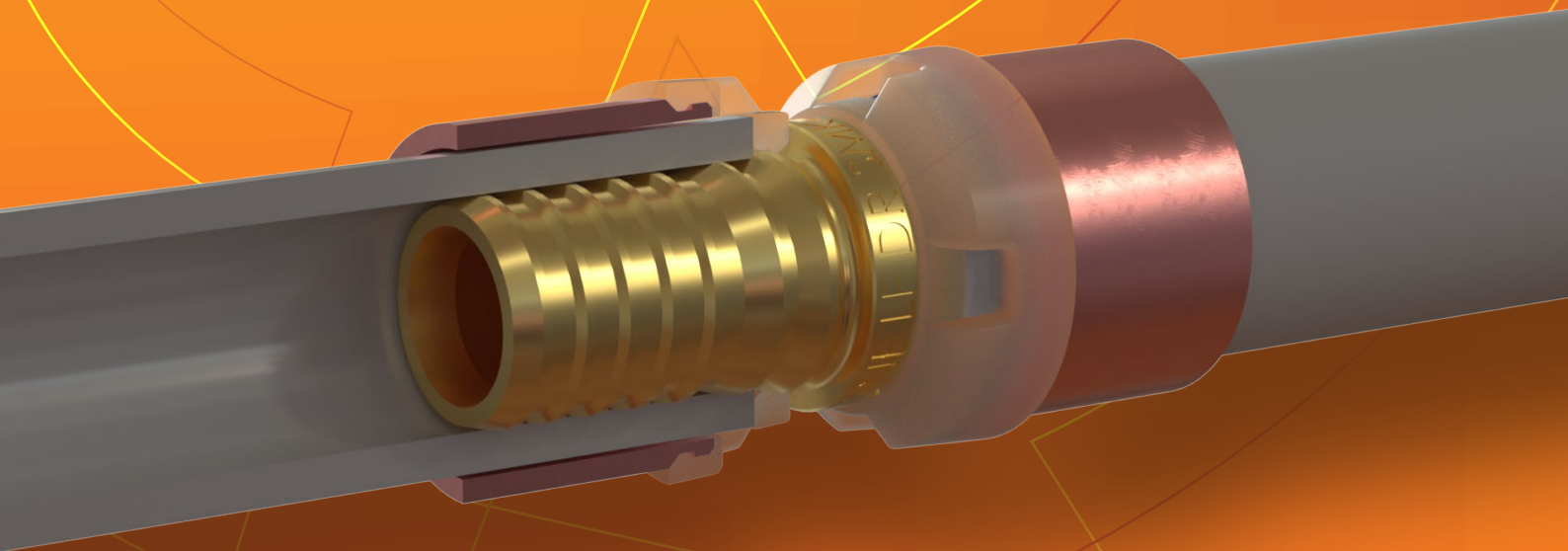


# Secura One<sup>®</sup>

HOT & COLD SYSTEM EVOLUTION

## Installation Manual



 **MARLEY**<sup>®</sup>

by aliaxis

# SecuraOne®

HOT & COLD SYSTEM EVOLUTION

# One fitting, your choice of pipe.



ONE FITTING  
FOR PB OR PEX



STANDARDISED  
PB & PEX PIPE



EXTENDED RANGE  
NOW AVAILABLE IN 32MM



ONE SET OF TOOLS



LEAD-FREE  
BRASS FITTINGS



PN20 PRESSURE  
RATING



ENHANCED  
FITTING DESIGN



INDEPENDENT  
CERTIFICATION



25 YEAR  
WARRANTY

# Contents

## Installation Manual

<b>Installation Instructions</b>	<b>2</b>
Fitting to either PB or PEX pipes	2
Crimp Tools & Adjustments	3
Expansion and contraction	4
Pipe Clips	4
Prevention of pipe stress	5
Bending and change of direction	5
Male Threaded connectors	5
Female Threaded connectors	5
Timber Frames	6
Steel Frames	6
Chases, ducts & conduits	6
Under concrete slabs	6
Burial Underground	6
Hot Water Installations	6
Solar Installations	7
Pressure testing the system	7
Storage and handling	7
<b>Product List</b>	<b>7</b>

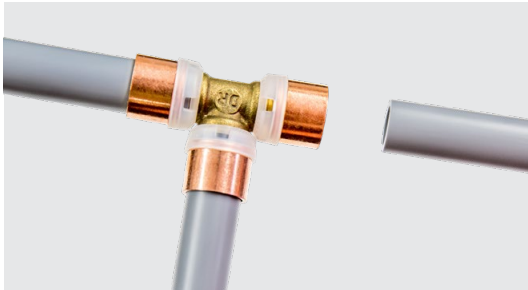
# Installation Instructions

## Fitting to either PB or PEX pipes



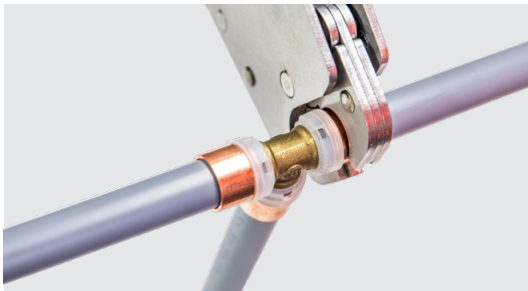
### STEP 1: Prepare and cut the pipe

- › Cut the pipe to the required length using a pipe cutter  
**Do not use a hacksaw.**
- › Ensure the pipe is cut smooth, square and is free from any damage or burrs.
- › When cutting the pipe to length ensure you allow for thermal expansion and contraction.



### STEP 2: Insert the pipe

- › Insert the pipe onto the fitting between the barb and the crimp ring.
- › Push the pipe fully onto the barb until it clicks over the pipe grip ring.
- › Ensure the pipe is fully inserted and visible in the four pipe inspection windows.



### STEP 3: Crimp the fitting

- › Ensure your SecuraOne® crimp tool is in good working condition.
- › Place the crimp tool over the fitting crimp ring centrally ensuring there is equal length of crimp ring protruding from each side of the tool.
- › Crimp the fitting by closing the handles on the crimp tool firmly ensuring they are fully closed, hold for a second before releasing.



### STEP 4: Gauge the crimp

- › After crimping slide the crimp gauge over the fitting to ensure it is crimped sufficiently.
- › The gauge should slide over the crimped section of the crimp ring without interference and be able to rotate around the circumference of the crimp ring.
- › If the gauge does not slide over the fitting your crimp tool needs calibrating.
- › Fittings that do not gauge correctly need to be removed and replaced.

## Crimp Tools and Adjustments

The SecuraOne® system has a range of specially engineered crimp tools to ensure a precise crimp is achieved every time with ease and minimal force.



SecuraGold™ 12mm and 15mm crimp tools are compatible with SecuraOne® 12mm and 16mm fittings.

### SecuraOne® Compact crimp tool adjustment 12mm, 16mm & 20mm



#### STEP 1:

- › Identify the position of the adjustment pin nut.



#### STEP 2:

- › Turn over the tool and remove the E clip from the adjustment pin.



#### STEP 3:

- › Push out the adjustment pin until the nut is clear of the body.
- › Rotate the pin to the next position then push back into place.



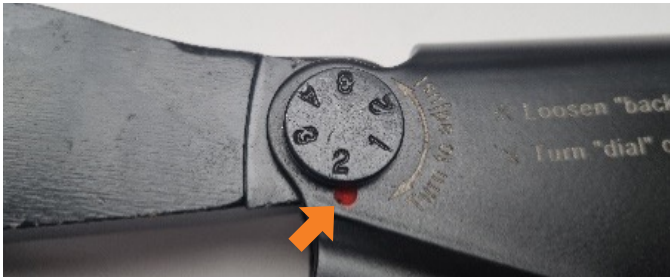
#### STEP 4:

- › Re-install the E clip onto the adjustment pin.

Once you have adjusted the tool, check that tool is functioning correctly. Crimp one fitting and ensure the crimp gauges correctly.

If the crimp still does not gauge correctly repeat Steps 1–4 or contact your Marley representative for assistance.

## SecuraOne® Crimp tool adjustment 25mm & 32mm



### STEP 1:

- › Identify the position of both adjustment pins and their setting.



### STEP 2:

- › Select one adjustment pin, turn over the tool and loosen the nut.



### STEP 3:

- › Rotate the adjustment pin to the next setting.



### STEP 4:

- › Tighten the nut and check tool function.

Once you have adjusted the tool, check that tool is functioning correctly. Crimp one fitting and ensure the crimp gauges correctly.

If the crimp still does not gauge correctly repeat steps 1–4 on the other adjuster pin. Contact your Marley representative for assistance if required.

## Expansion and Contraction

During installation it is important to allow for thermal expansion and contraction of pipes which can impose stress on joints. It is recommended to allow 15mm of slack per meter for expansion and contraction and that clips allow free movement of the pipe.

## Pipe Clips

A complete range of correctly sized SecuraOne® pipe clips are available and should be installed as recommended by AS/NZS 3500.

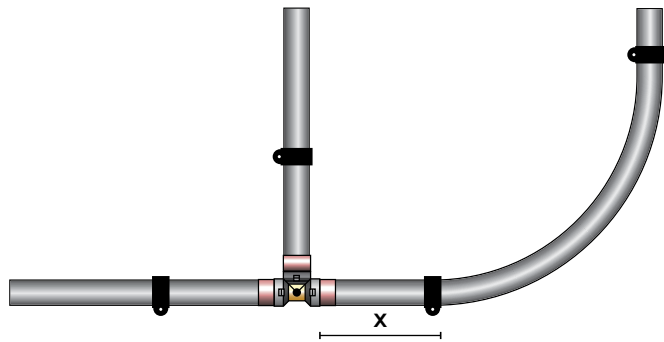
As a guide only, the maximum spacing of clips is shown below:

Pipe Diameter	Horizontal pipes	Vertical pipes
12mm	600mm	1200mm
16mm	600mm	1200mm
20mm	700mm	1400mm
25mm	750mm	1500mm
32mm	850mm	1700mm

## Prevention of Pipe Stress

When a pipe is bent directly before or after a fitting it can create stress at the joint.

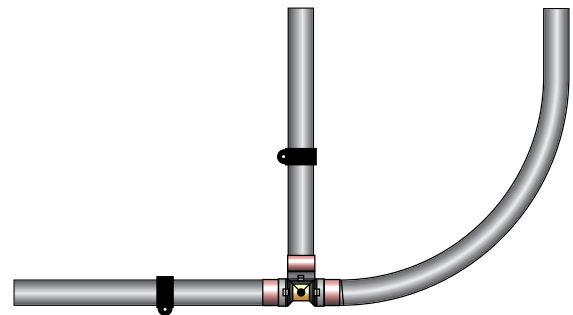
To minimise the stress, it is recommended to enter or exit a fitting with a straight length of pipe for a minimum distance prior to bending. Support in the form of a pipe clip after the straight length will help to prevent future damage.



✓ Correctly supported pipe set out.

Distance Prior Bending	
Pipe Diameter	Straight Pipe Length <sup>x</sup>
12mm	50mm
16mm	50mm
20mm	50mm
25mm	70mm
32mm	70mm

\*Refer X on correctly supported pipe set out diagram below.



✗ Unsupported pipe after Tee will develop stress micro-fractures over time.

## Bending and Change of Direction

SecuraOne® pipes are flexible and can be bent to a minimum radius of 10 x their diameter. Bending pipes past this could result in damage to the pipe, kinking and failure. Sharp bends should be made with the appropriate fittings. If a pipe (PB or PEX b) is kinked or damaged it must be removed from the system.

Pipe Diameter	Minimum Bend Radius
12mm	120mm
16mm	160mm
20mm	200mm
25mm	250mm
32mm	320mm

## Male Threaded Connectors

The SecuraOne® system includes a full range of BSP male threaded connectors. It is essential to use either PTFE pipe tape wrapped correctly to the fitting or liquid thread sealant to form a watertight connection.

## Female Threaded Connectors

The SecuraOne® system includes a full range of BSP female swivel connectors. Special care must be taken when installing swivel connectors to ensure a watertight connection.

- › The male ended fitting of the swivel connector is to be attached and must have a square, clean machined flat face with internal chamfer. Roughly cut male ends that are not square will cause the fitting to pull up out of square causing leaks or potential cross threading.
- › All swivel connectors come fully assembled with a polymer olive (seal). No additional thread tape, hemp or sealant is required.
- › The swivel connector should be presented to the mating fitting squarely and hand tightened ensuring the seal has pulled up squarely to the fitting.
- › The swivel connector nut should then be tightened at least one-half turn using two appropriate spanners.
- › It is best practice to fully tighten all threaded fittings prior to crimping the pipe as the twisting can put external stresses on the pipe, fitting and joint.

## Timber Frames

When installing SecuraOne® in timber frames, holes should be drilled in studs and noggins large enough to ensure pipes can move freely to allow for expansion and contraction.

Installation of SecuraOne® in timber frames shall be done as per the requirements of AS/NZS 3500.

To avoid noise and prevent long term damage to the pipe the annular space between hole and pipe should be filled using a collar of lagging material or a neutral cure silicon sealant.

## Steel frames

When installing SecuraOne® in holes drilled or formed in metal studs or plates they must be sized to enable rubber grommets, insulation, or a short sleeve of oversize pipe to be firmly secured in the framework.

When installing SecuraOne® brass fittings directly to steel frames they shall be insulated from the frame to avoid galvanic corrosion.

## Chases, ducts and conduits

When installing SecuraOne® in chases, ducts or conduits within walls or floors of masonry or concrete pipes, it shall be installed in accordance with the following:

- › Pipes in chases shall be continuously wrapped with an impermeable flexible material.
- › Ducts shall be fitted with removable covers.
- › Conduits embedded in walls or floors shall comply with the requirements of the New Zealand Building Code as applicable.
- › Service pipes shall not be embedded or cast into concrete structures.

## Under Concrete Slabs

When installing SecuraOne® beneath concrete slabs on the ground it shall comply with the following:

- › Pipes should be laid in a narrow trench on a bed of sand or fine-grained soil, placed and compacted in a manner that will not damage the piping. There should be a minimum distance of 75mm between the top of the pipe and the underside of the slab or slab stiffening beam
- › The ends of the pipe shall be crimped or capped prior to pouring the concrete and all measures shall be taken to protect the exposed pipe from damage
- › Any pipework that penetrates the slab shall be at right angles to the surface of the slab and shall be lagged for the full depth of the slab penetration with:
  - i. An impermeable flexible material of not less than 6mm thickness; or
  - ii. Impermeable plastic sleeve or conduit providing an equivalent protection

## Burial Underground

SecuraOne® can be installed below ground in trenches at depths in accordance with AS/NZS3500 but must also be in accordance with the New Zealand Building Code Clause G12/AS1.

The SecuraOne® system is suitable for burial in most applications, but care must be taken to avoid harsh environmental conditions which can have a detrimental effect on the fittings. In these conditions it is important to wrap the fittings with an impervious barrier.

## Hot Water Installations

When connecting SecuraOne® to a hot water cylinder outlet a minimum of 1 metre of copper tube shall be used before connecting to SecuraOne®.

Hot water appliances supplying water utilised for personal hygiene require a tempering valve to be fitted in accordance with AS/NZS 3500 in which case SecuraOne® can be connected directly to the tempering valve outlet.

SecuraOne® cannot be used for wetback to cylinder plumbing as wetback temperatures often exceed maximum working temperatures.



## Solar Installations

Solar hot water heaters are an uncontrolled heat source that can often produce water in excess of maximum working temperatures. SecuraOne® should not be used to connect solar hot water heaters to cylinders. SecuraOne® can be used from the hot water cylinder after the mandatory length of copper pipe and ensuring adequate tempering valves have been installed.

## Pressure testing the system

Once installation of the SecuraOne® system is complete whether it be a new installation or an extension of an existing installation it must be pressure tested as per the requirements of AS/NZS3500 and local building codes.

*Water services shall not show any leakage when subjected to a hydrostatic pressure of 1500 kPa (218 psi) for a period of not less than 30 minutes.*

## Storage and Handling

Pipes and fittings should be protected from physical damage; sharp objects such as saws, open blades etc. which can have a detrimental effect on the pipe; similarly heavy weights will crush and damage the pipe. Pipes showing any external damage should not be used.

Fittings can be damaged by improper storage, in particular copper crimp rings can be damaged or deformed if heavy items are dropped or stored on top of them.

# Product List

## Fittings



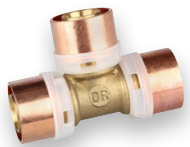
### Couplings

S1C12	SecuraOne Coupling 12mm
S1C16	SecuraOne Coupling 16mm
S1C20	SecuraOne Coupling 20mm
S1C25	SecuraOne Coupling 25mm
S1C32	SecuraOne Coupling 32mm
S1C1612	SecuraOne Reducing Coupling 16mm x 12mm
S1C2016	SecuraOne Reducing Coupling 20mm x 16mm
S1C2520	SecuraOne Reducing Coupling 25mm x 20mm
S1C3220	SecuraOne Reducing Coupling 32mm x 20mm
S1C3225	SecuraOne Reducing Coupling 32mm x 25mm



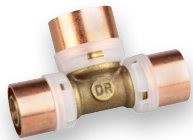
### Elbows

S1E12	SecuraOne Elbow 12mm
S1E16	SecuraOne Elbow 16mm
S1E20	SecuraOne Elbow 20mm
S1E25	SecuraOne Elbow 25mm
S1E32	SecuraOne Elbow 32mm
S1E2016	SecuraOne Reducing Elbow 20mm x 16mm
S1E1645	SecuraOne Elbow 16mm x 45 deg
S1E2045	SecuraOne Elbow 20mm x 45 deg
S1E2545	SecuraOne Elbow 25mm x 45 deg
S1E3245	SecuraOne Elbow 32mm x 45 deg



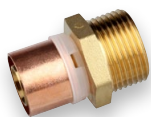
### Tees

S1T12	SecuraOne Tee 12mm
S1T16	SecuraOne Tee 16mm
S1T20	SecuraOne Tee 20mm
S1T25	SecuraOne Tee 25mm
S1T32	SecuraOne Tee 32mm



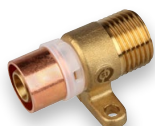
### Reducing Tees

S1T121216	SecuraOne Reducing Tee 12mm x 12mm x 16mm
S1T161612	SecuraOne Reducing Tee 16mm x 16mm x 12mm
S1T161620	SecuraOne Reducing Tee 16mm x 16mm x 20mm
S1T201616	SecuraOne Reducing Tee 20mm x 16mm x 16mm
S1T201620	SecuraOne Reducing Tee 20mm x 16mm x 20mm
S1T202012	SecuraOne Reducing Tee 20mm x 20mm x 12mm
S1T202016	SecuraOne Reducing Tee 20mm x 20mm x 16mm
S1T252516	SecuraOne Reducing Tee 25mm x 25mm x 16mm
S1T252520	SecuraOne Reducing Tee 25mm x 25mm x 20mm
S1T323220	SecuraOne Reducing Tee 32mm x 32mm x 20mm
S1T323225	SecuraOne Reducing Tee 32mm x 32mm x 25mm



### Male Adaptors

S1MA1215	SecuraOne Male Adaptor 12mm x 1/2" BSP
S1MA1615	SecuraOne Male Adaptor 16mm x 1/2" BSP
S1MA1620	SecuraOne Male Adaptor 16mm x 3/4" BSP
S1MA2020	SecuraOne Male Adaptor 20mm x 3/4" BSP
S1MA2525	SecuraOne Male Adaptor 25mm x 1" BSP
S1MA3225	SecuraOne Male Adaptor 32mm x 1" BSP
S1MA3232	SecuraOne Male Adaptor 32mm x 1.1/4" BSP



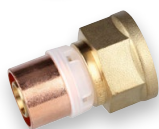
### Lugged Male Adaptor

S1LMA1615	SecuraOne Lugged Male Adaptor 16mm x 1/2" BSP
-----------	---



### Male Elbows

S1ME1615	SecuraOne Male Elbow 16mm x 1/2" BSP
S1ME2020	SecuraOne Male Elbow 20mm x 3/4" BSP



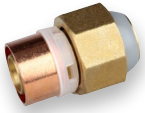
### Female Adaptors

S1FA1615	SecuraOne Female Adaptor 16mm x 1/2" BSP
S1FA2020	SecuraOne Female Adaptor 20mm x 3/4" BSP



### Brazing Tails

S1BT16	SecuraOne Brazing Tail 16mm x 1/2" Cu
S1BT20	SecuraOne Brazing Tail 20mm x 3/4" Cu



### Swivel Connectors

S1SC1215	SecuraOne Swivel Connector 12mm x 1/2" BSP
S1SC1615	SecuraOne Swivel Connector 16mm x 1/2" BSP
S1SC1620	SecuraOne Swivel Connector 16mm x 3/4" BSP
S1SC2015	SecuraOne Swivel Connector 20mm x 1/2" BSP
S1SC2020	SecuraOne Swivel Connector 20mm x 3/4" BSP
S1SC2520	SecuraOne Swivel Connector 25mm x 3/4" BSP
S1SC2525	SecuraOne Swivel Connector 25mm x 1" BSP
S1SC3232	SecuraOne Swivel Connector 32mm x 1.1/4" BSP



### Swivel Elbows

S1SE1215	SecuraOne Swivel Elbow 12mm x 1/2" BSP
S1SE1615	SecuraOne Swivel Elbow 16mm x 1/2" BSP
S1SE1620	SecuraOne Swivel Elbow 16mm x 3/4" BSP
S1SE2015	SecuraOne Swivel Elbow 20mm x 1/2" BSP
S1SE2020	SecuraOne Swivel Elbow 20mm x 3/4" BSP
S1SE2525	SecuraOne Swivel Elbow 25mm x 1" BSP



### Female Wingbacks

S1W1215	SecuraOne Female Wingback 12mm x 1/2" BSP
S1W1615	SecuraOne Female Wingback 16mm x 1/2" BSP
S1W1620	SecuraOne Female Wingback 16mm x 3/4" BSP
S1W2015	SecuraOne Female Wingback 20mm x 1/2" BSP
S1W2020	SecuraOne Female Wingback 20mm x 3/4" BSP
S1W2525	SecuraOne Female Wingback 25mm x 1" BSP
S1DW1615	SecuraOne Double Fix Female Wingback 16mm x 1/2" BSP
S1DW2020	SecuraOne Double Fix Female Wingback 20mm x 3/4" BSP



### Male Wingbacks

S1MW1215-100	SecuraOne Male Wingback 12mm x 1/2" BSP - 100mm
S1MW1615-65	SecuraOne Male Wingback 16mm x 1/2" BSP - 65mm
S1MW1615-100	SecuraOne Male Wingback 16mm x 1/2" BSP - 100mm
S1MW2020-100	SecuraOne Male Wingback 20mm x 3/4" BSP - 100mm
S1DMW1615-100	SecuraOne Double Fix Male Wingback 16mm x 1/2" BSP - 100mm
S1DMW1615-200	SecuraOne Double Fix Male Wingback 16mm x 1/2" BSP - 200mm
S1DMW2020-100	SecuraOne Double Fix Male Wingback 20mm x 3/4" BSP - 100mm
S1DMW2020-200	SecuraOne Double Fix Male Wingback 20mm x 3/4" BSP - 200mm



### Hose Plates

S1HP1615	SecuraOne Hose Plate 16mm x 1/2" BSP
S1HP2020	SecuraOne Hose Plate 20mm x 3/4" BSP



### Lugged Tee

S1LT16	SecuraOne Lugged Tee 16mm x 16mm x 1/2" BSP
--------	---



### Crox Tee Adaptor

S1XTA16	SecuraOne Crox Tee Adaptor 15mm Copper x 16mm
---------	---



### End Plugs

S1EP12	SecuraOne End Plug 12mm
S1EP16	SecuraOne End Plug 16mm
S1EP20	SecuraOne End Plug 20mm
S1EP25	SecuraOne End Plug 25mm
S1EP32	SecuraOne End Plug 32mm



### Transition Fittings

Fittings designed to join SecuraOne® to existing SecuraGold™ PB systems

S1C1615PB	SecuraOne Transition Coupling 16mm x 15mm PB
S1C2020PB	SecuraOne Transition Coupling 20mm x 20mm PB
S1C2528PB	SecuraOne Transition Coupling 25mm x 28mm PB
S1TT15PB16	SecuraOne Transition Tee 15mm PB x 16mm
S1TT20PB20	SecuraOne Transition Tee 20mm PB x 20mm

## Pipes



### PB Pipes

S1PB125S	SecuraOne PB 12mm - 5m Straight
S1PB1225C	SecuraOne PB 12mm - 25m Coil (lay straight)
S1PB1250C	SecuraOne PB 12mm - 50m Coil
S1PB12100C	SecuraOne PB 12mm - 100m Coil
S1PB165S	SecuraOne PB 16mm - 5m Straight
S1PB1625C	SecuraOne PB 16mm - 25m Coil (lay straight)
S1PB1650C	SecuraOne PB 16mm - 50m Coil
S1PB205S	SecuraOne PB 20mm - 5m Straight
S1PB2025C	SecuraOne PB 20mm - 25m Coil (lay straight)
S1PB2050C	SecuraOne PB 20mm - 50m Coil
S1PB255S	SecuraOne PB 25mm - 5m Straight
S1PB2550C	SecuraOne PB 25mm - 50m Coil
S1PB325S	SecuraOne PB 32mm - 5m Straight



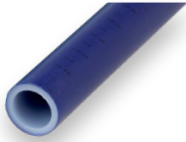
### PEX Pipes – Black

S1PEX165S	SecuraOne PEX 16mm - 5m Straight
S1PEX1650C	SecuraOne PEX 16mm - 50m Coil
S1PEX205S	SecuraOne PEX 20mm - 5m Straight
S1PEX2050C	SecuraOne PEX 20mm - 50m Coil
S1PEX255S	SecuraOne PEX 25mm - 5m Straight
S1PEX2550C	SecuraOne PEX 25mm - 50m Coil
S1PEX325S	SecuraOne PEX 32mm - 5m Straight



### PEX Pipes – Red (for hot water lines)

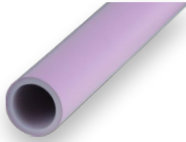
S1PEX16R5S	SecuraOne PEX 16mm Red - 5m Straight
S1PEX16R50C	SecuraOne PEX 16mm Red - 50m Coil
S1PEX20R5S	SecuraOne PEX 20mm Red - 5m Straight
S1PEX20R50C	SecuraOne PEX 20mm Red - 50m Coil



### PEX Pipes – Blue

(for cold water lines)

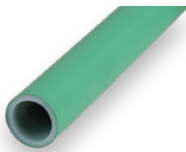
S1PEX16B5S	SecuraOne PEX 16mm Blue - 5m Straight
S1PEX16B50C	SecuraOne PEX 16mm Blue - 50m Coil
S1PEX20B5S	SecuraOne PEX 20mm Blue - 5m Straight
S1PEX20B50C	SecuraOne PEX 20mm Blue - 50m Coil



### PEX Pipes – Lilac

(for recycled water lines)

S1PEX16L5S	SecuraOne PEX 16mm Lilac - 5m Straight
S1PEX16L50C	SecuraOne PEX 16mm Lilac - 50m Coil
S1PEX20L5S	SecuraOne PEX 20mm Lilac - 5m Straight
S1PEX20L50C	SecuraOne PEX 20mm Lilac - 50m Coil



### PEX Pipes – Green

(for rainwater lines)

S1PEX16G5S	SecuraOne PEX 16mm Green - 5m Straight
S1PEX16G50C	SecuraOne PEX 16mm Green - 50m Coil
S1PEX20G5S	SecuraOne PEX 20mm Green - 5m Straight
S1PEX20G50C	SecuraOne PEX 20mm Green - 50m Coil

## Tools & Accessories



### Pipe Clips

S1PC12	SecuraOne Pipe Clip 12mm
S1PC16	SecuraOne Pipe Clip 16mm
S1PC20	SecuraOne Pipe Clip 20mm
S1PC25	SecuraOne Pipe Clip 25mm
S1PC32	SecuraOne Pipe Clip 32mm



### Crimp Tools

S1CCT12	SecuraOne Compact Crimp Tool 12mm
S1CCT16	SecuraOne Compact Crimp Tool 16mm
S1CCT20	SecuraOne Compact Crimp Tool 20mm
S1DCT25	SecuraOne Crimp Tool 25mm
S1DCT32	SecuraOne Crimp Tool 32mm
S1CT16	SecuraOne Alba Crimp Tool 16mm
S1CT20	SecuraOne Alba Crimp Tool 20mm
P-1N026	SecuraOne Crimp Gauge Tool 12, 16 & 20mm



### Battery Crimp Tool

S1PT01	SecuraOne Battery Crimp Tool: 3 JAWS-CHARGER-BATTERY
S1PTJ16	SecuraOne Battery Crimp Tool: Jaw 16mm
S1PTJ20	SecuraOne Battery Crimp Tool: Jaw 20mm
S1PTJ25	SecuraOne Battery Crimp Tool: Jaw 25mm
S1PTJ32	SecuraOne Battery Crimp Tool: Jaw 32mm
S1REMJ16	SecuraOne REM Power Tool Jaw 16mm
S1REMJ20	SecuraOne REM Power Tool Jaw 20mm
S1REMJ25	SecuraOne REM Power Tool Jaw 25mm
S1REMJ32	SecuraOne REM Power Tool Jaw 32mm





## ONLINE PRESSURE LOSS CALCULATOR

This free calculator is ideal for calculating the pressure loss for water flowing through SecuraOne PB and PEX piping system.

[www.marley.co.nz/securaone-pressure-loss](http://www.marley.co.nz/securaone-pressure-loss)

## Independent Certification

### Fittings

- › AS 5082.2 – Polybutene Fittings (Metric)
- › AS/NZS 2642.3 Polybutene Fittings
- › AS/NZS 2537 – PEX Fittings

### PB Pipes

- › AS 5082.1 – Polybutene Pipe (Metric)
- › AS/NZS 2642.2 – Polybutene Pipe

### PEX Pipes

- › AS 2492 – PEX pipes

## Sustainable Manufacturing

Marley is committed to creating environmentally sustainable processes and products and was the first plastics manufacturer in New Zealand to achieve ISO14001 registration. We are also Best Environmental Practice certified for our entire range of manufactured uPVC systems. This means we get our raw materials from sustainable and responsible sources, continuously work on our manufacturing processes to reduce our environmental footprint and accept our products back at the end of their useful life for recycling.

### BEST ENVIRONMENTAL PRACTICE



AS/NZS 5395:2024  
LICENSE No 2969



### Disclaimer

This technical catalogue has been compiled by Marley New Zealand Limited ("The Company") to promote better understanding of the technical aspects of the Company's products to assist users in obtaining from them the best possible performance. The technical catalogue is supplied subject to acknowledgment of the following conditions:

The technical catalogue is protected by Copyright and may not be copied or reproduced in any form or by any means in whole or in part without prior consent in writing by the Company. Product specifications, usage data and advisory information may change from time to time with advances in research and field experience. The Company reserves the right to make such changes at any time without notice. Correct usage of the Company's products involve engineering judgements which cannot be properly made without full knowledge of all the conditions pertaining to each specific installation. The Company expressly disclaims all and any liability to any person whether supplied with this publication or not in respect of anything and of the consequences of anything done or omitted to be done by any such person in reliance whether whole or partial upon the whole or any part of the contents of this publication. No offer to trade, nor any conditions of trading, are expressed or implied by the issue or content of this manual. Nothing herein shall override the Company's Conditions of Sale, which may be obtained from the Registered Office or any Sales Office of the Company. This technical catalogue is and shall remain the property of the Company, and shall be surrendered on demand to the Company. Actual colours may vary slightly from those shown. For a more accurate colour comparison, please request a product sample.

## Our Partners



For more information: 0800 MARLEY (0800 627539) | [www.marley.co.nz](http://www.marley.co.nz)