# 

DR BRASS

STAINLESS STEEL SLEEVE

WITNESS

double 'O' ring

# BUSH PEX CRIMP-ON

### PEX PLUMBING SYSTEM

Product information and installation Manual



Version 2.0





**Elson Australasia Pty Ltd** proudly presents the BUSHPEX range of PEX Plumbing Systems including, Pull-On, Crimp-On and Push-On for water and BUSHPEX Crimp Gas.

This brochure provides specification and installation information relevant to the BUSHPEX Crimp-On PEX Plumbing System for water reticulation, 16 to 25mm.

BUSHPEX Crimp-On PEX for Water and BUSHPEX Crimp Gas PEX-AL Systems use the same BUSHPEX Crimp tools, Jaws and crimp gauges. Calibrating tools are specific to the BUSHPEX Crimp-On Water Plumbing System.

The BUSHPEX Crimp-On PEX Plumbing System comprises two main components, a flexible cross-linked high density polyethylene pipe and solid DR Brass crimp fittings with double "O" ring seals and stainless steel crimp sleeves.

BUSHPEX Crimp-On Plumbing Systems are a cost effective alternative to other plumbing systems. The BUSHPEX Crimp-On PEX system is fast and easy to install, usually with fewer fittings. The flexible pipe is light weight and resists corrosion and scale affect. Water flow noise is low in PE-X pipe and water hammer is significantly reduced.

**BUSHPEX Pipe** is a genuine PN20 PE-Xa pipe manufactured by Elson under strict quality controls at our ISO9001 accredited manufacturing facility to **Australian and New Zealand Standards AS/NZS 2492 with watermark certificate WKMA 21274.** 

BUSHPEX pipe is suitable for use in hot and cold water services for both domestic and commercial applications. BUSHPEX Pipe options include black pipe for either hot or cold water, red for hot water, green for rainwater harvesting and lilac for recycled water.

**BUSHPEX Crimp-On fittings** are a solid brass double crimp fitting with double "O" ring secondary seal and stainless steel crimp sleeves. The fittings are manufactured by Elson under strict quality controls at our ISO9001 accredited manufacturing facility to Australian and New Zealand Standards AS/NZS 2537 with watermark certificate WKMA 21276.

**BUSHPEX Crimp-On specific tooling** comprises of both manual and battery hydraulic options to make installation fast and easy. All tooling used must be verified before use to ensure suitability to the BUSHPEX Crimp-On systems. BUSHPEX Crimp-On calibrating tools and crimp gauges are essential requirements for the installation procedures as detailed in this Manual.

All products are fully warranted for a period of **25 years** against manufacturing defects when installed in accordance with **AS/NZS 3500** and the **BUSHPEX Crimp-On PEX Plumbing System Manual** by a licenced Plumber using all BUSHPEX pipe and fittings only and the approved BUSHPEX tooling.

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# features and Benefits

### **BUSHPEX Crimp-On PEX Plumbing System:**

- Manufactured, distributed and supported by Elson.
- 25 year product warranty against product defect when installed according to detailed requirements.
- Product manufactured by Elson to relevant Australian Standards by our ISO9001 approved manufacturing facility with all Watermark Certification by SAI Global.
- Cost effective alternative to other systems.
- Fast and easy to install.
- BUSHPEX Crimp-On tools & jaws can be used for both BUSHPEX Crimp-On water and BUSHPEX Crimp Gas PEX-AL systems.
- BUSHPEX pipe properties:
  - Low water flow noise.
  - Strong impact resistance.
  - Heat and corrosion resistant.
  - Light weight and easy to install.
  - Significantly reduces water hammer.
  - High Pressure rating 2000kPa @ 20C.
  - Smooth inner core to reduce pressure loss.
  - Low levels of thermal conductivity and expansion.
  - Coils provide fast installation, less joints, save time, save costs.

- Available in Black for hot and cold water, Red specifically for hot water, Green for rainwater harvesting and Lilac for recycled water in sizes 16mm, 20mm and 25mm.
- Same pipe is compatible with three BUSHPEX jointing systems Crimp-On, Pull-On, Push-On.
- BUSHPEX Crimp-On Fitting properties:
  - Double "O" ring, double indentation Crimp jointing system is the most secure Crimp jointing system on the market that is preferred internationally.
  - Long entry stainless steel crimp sleeves that don't fall off the fitting.
  - Four easy to inspect witness holes to confirm complete insertion of pipe into fitting.
  - Blue retaining ring signifies "water" and also locates the Battery Tool Jaw.
  - German manufactured Battery Tools and Jaws developped, tested and approved for BUSHPEX.
  - DR Brass quality fittings strictly controlled according to ISO9001 systems.
- National support network for training, technical information and tool service.

# Technical Information

BUSHPEX Crimp-On is a complete plumbing system comprising of PE-Xa pipe in sizes 16, 20 and 25mm plus a comprehensive range of DR Brass Crimp fittings with Stainless Steel sleeves. Manual and battery tooling options for calibrating and crimping the pipe and fittings completes the system, whilst the crimp gauge confirms each joint has been crimped properly.

### **BUSHPEX Crimp-On Pipe**

BUSHPEX PE-Xa PN20 pipe is specifically designed for the BUSHPEX Crimp-On jointing system in conformance with AS/NZS 2492 with watermark certificate WMKA 21274. BUSHPEX PE-Xa PN20 is compatible with all three BUSHPEX jointing systems for water including:

- BUSHPEX Pull-On
- BUSHPEX Crimp-On
- BUSHPEX Push-On

BUSHPEX Pipe is available in four colours to identify the specific pipe application.

- **Black** Suitable for potable hot and cold water plumbing in domestic and commercial applications.
- Red Specifically for hot water lines in domestic and commercial applications.
- Lilac Specifically for recycled, non-potable water.

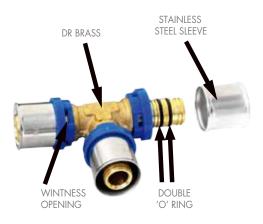
Green – Specifically for Rainwater.

NOTE: PE-X pipe exposed to sunlight must be protected.

### **BUSHPEX Crimp-On fittings**

BUSHPEX Crimp-On fittings are manufactured to high standard production processes. BUSHPEX Crimp-On fittings use only D.R.BRASS (Dezincification Resistant) which is batch tested and conforms to AS 2345 . Fittings have long engagement, dual "O" ring barbs with a Stainless Steel Crimp ring and blue retainer with 4 engagement witness holes. All fittings have stamped detail into their Stainless Steel Crimp Rings clearly showing Brand, Size, Pressure Rating, Standard and watermark certificate Number. Identification stamping also appears on the brass fitting where possible or it will display the letters "EL". BUSHPEX Crimp-On fittings have been tested and approved in accordance with the Australian and New Zealand Standard AS/NZS 2537 with watermark certificate WMKA 21276.

BUSHPEX Crimp-On fittings are aviliable in DN16, DN20 & DN25. Refer to the full product listing in this manual.



# **Technical Information**

	25mm Nom O.D.	3.5 - 4.0	PE-Xa / 2000kPa @ 20C	AS/NZS 2492 / AS2539	21276 / 21276	750mm / 1500mm	250mm	Black, Red, Lilac, Green	25m Black & Red / 50m All	5m lengths available in all colours	0.3mm/metre/10C	70C @ 1330kPa	1500kPa @ 60C
	20mm Nom O.D.	2.8 - 3.2	PE-Xa / 2000kPa @ 20C	AS/NZS 2492 / AS2538	21275 / 21276	700mm / 1400mm	200mm	Black, Red, Lilac, Green	25m Black / 50m All / 100m Blac	5m lengths available in all colours	0.3mm/metre/10C	70C @ 1330kPa	1500kPa @ 60C
TECHNICAL INFORMATION	16mm Nom O.D.	2.2 - 2.6	PE-Xa / 2000kPa @ 20C	AS/NZS 2492 / AS2537	21274 / 21276	600mm / 1200mm	160mm	Black, Red, Lilac, Green	25m Black / 50m All / 100m Black 25m Black / 50m All / 100m Blac	5m lengths available in all colours	0.3mm/metre/10C	70C @ 1330kPa	1500kPa @ 60C
F	BUSHPEX Crimp-On Outside Diameter (O.D.)	Wall thickness Min / Max mm	PE-X Type / Nominal Pressure @ ambient temp'	Standard Pipe/Fittings	Licence Number for Pipe/Fittings	Max Clip Distance Horiz/Vertical mm	Min Bend Radius mm	Colours available	Coil Sizes metres(Black, Red, Lilac, Green)	Straight Lengths metres(Black, Red, Lilac, Green)	Coefficient of Linear Expansion / Thermal Expansion	Max Operating Temp/Press	Hot Water Temp / Pressure
	Timber Frame Plates & Studs 75mm wide timber - maximum cut-out, notch, drill diameter of 19mm. 100mm wide timber - maximum cut-out, notch, drill diameter of 25mm.												
	Timber Joists - Refer AS/NZS 3500												

# Pipe & Fitting Protection and Care during Handling and Installation

BUSHPEX pipe and Crimp-On fittings must be protected from damage through all stages of the process from transport to storage and installation in accordance with AS/NZS3500. Provision for pipe and fitting protection therefore includes but is not limited to the following:

- Care must be taken to keep the pipe and fittings free of grit, dirt, dust and any foreign matter. All blue retaining rings must be securely seated onto the fitting along with the stainless steel crimp sleeve and dual "O" rings.
- Pipe must be protected from physical damage. including cuts, abrasions, dents, kinks, tears, holes, etc.
- Pipes, either black, red, green or lilac, are not to be installed in direct sunlight.
- Pipe must be protected from long term or permanent U.V. exposure, by way of lagging, enclosing in a conduit etc.
- Pipe and fittings must be protected from excessive heat or burning, chemical / solvent attack, animal or rodent attack, machinery damage, other external threats, etc.
- Pipe must never be installed where it could be exposed to a naked flame. PE-X Pipe has the potential to ignite and continue to burn after the source of the flame is extinguished. In accordance with AS/NZS 3500, all plastic pipe for water supply must be protected from excessive ambient heat.
- Chemical or corrosive environments.
  - Pipe must be protected.
  - Fittings must be wrapped and protected. This includes all underground installations for all fittings.

- Pipe support and clipping, both vertically and horizontally is required to ensure conformance for vibration, excessive tension, torsion or compressive stresses on fittings and pipe. Refer to Pipe Specification Chart for spacing.
- Pipe penetrations through timber and steel frames and concrete sections must conform and may require protection using grommets, fire collars, sleeving or wrapping. Holes, notches and cut-outs must be accurately drilled "in-line" to allow movement for expansion and contraction of the pipe and fittings so joints are not exposed to excessive stress. Refer to Pipe Specification Chart for timber frame cut-out limitations.
- Pipe expansion and contraction needs to be accommodated during installation to allow for movement due to thermal Linear Expansion. Failure to do so may exceed the torsional pull-out allowances on fittings resulting in leakage. Refer to the Pipe Specification Chart for the Thermal Expansion Co-efficient.
- BUSHPEX pipe is flexible but requires care when bending to avoid kinks or other permanent deformation that may restrict flow or put undue pressure on joints. If the pipe is kinked or damaged in any way it must be cut-out and replaced. BUSHPEX Crimp-On elbows are recommended for tight bends. Refer to the Pipe Specification Chart for minimum bending radius and tools for bending.

- Connecting Barb soldered connection require special attention. Prior to crimping and soldering, remove/dismantle the blue retaining ring, stainless steel crimp ring and two "O" rings. Solder the brass connection barb and allow to cool before re-assembly. When assembling the fittings ensure the blue plastic retainer ring, the two "O" rings and stainless sleeve are installed correctly. Refer to the picture on page 7 of this brochure for assembly detail.
- In accordance with AS/NZS 3500 regions with extreme hot or cold temperatures require appropriate product selection and/or insulation for protection and compliance. Consideration should also be given to insulating the pipe for energy efficiency as well as the prevention of condensation which can occur in hot and cold lines.

### **Underground Installation**

**NOTE**: It is a requirement to pressure test the pipe and fittings in accordance with AS/NZS3500 prior to burying or concealing the BUSHPEX Plumbing System.

Underground installation of BUSHPEX Crimp-On pipe and fittings must be in accordance with AS/NZS3500 including but not limited to the following :

- Minimum buried depth required by standards.
- Minimum pipe separation distance.
- Wrapping and protection.
- Conduit sleeving through slab penetration.
- Underground Piping installation recommended with no joints.
- Concrete slab piping must be continuous with no joints.

### **BUSHPEX Crimp-On Tools**

BUSHPEX Crimp-On Tools are specifically designed to be used with the BUSHPEX Crimp-On PEX Pipe and fitting System and must not be used with other systems. BUSHPEX Crimp-On Tools are manufactured to precise specifications and require care and regular maintenance to ensure accurate and consistent operation. The cleaning of tools and jaws is recommended after each use. Always keep your tools and jaws free of dirt, dust, moisture and corrosion. Lubricate jaws regularly to provide smooth operation.

It is essential for all installers to read and recognise the operational requirements of the tools along with the Jointing Procedures and safety recommendations included in this manual and the Tool Instruction Manual.

Rounding the pipe with the BUSHPEX approved Manual or battery drill calibrating tool adaptor is an installation requirement which saves time and effort with a smooth insertion over the "O" ring.

It is recommended to incorporate a checking procedure to ensure that each joint has been correctly crimped by testing every joint with a crimp gauge and marking as complete.

**IMPORTANT** – Please consult the Jointing Procedure included in this manual. This Guide procedure is a product installation requirement.

### **ELECTROCUTION WARNING!**

The potential threat of electrocution and death must be recognised if an earth line is disconnected by cutting metal pipes. ALWAYS check with a licenced electrician prior to proceeding.

# System Testing

Pipe and joint system testing must be carried out in accordance with AS/NZS 3500 and any other applicable local authority requirements prior to burying or concealing the BUSHPEX Crimp-On Plumbing System.

It is the responsibility of the Licenced Installer to ensure that all joints and fittings are inspected, tested and checked for leaks to ensure safety and compliance.

It is recommended to incorporate a checking procedure to ensure that each joint has been correctly crimped by testing every joint with a crimp gauge and marking as complete.

# Warranty

The BUSHPEX Crimp-On Plumbing System carries a 25 year product warranty which covers product manufacturing faults and defects. This warranty only applies under the following requirements

- The system must have been installed by a licenced Plumber.
- Proof of installation by a licenced Plumber is required.
- Proof of purchase is required.
- Installation must be in accordance with AS/NZS 3500.
- Installation must be in accordance with any other relevant and applicable local authority codes which may take precedence.
- Installation must be in accordance with established installation practices.
- Installation must be in accordance with the jointing procedures included in this manual.
- Installation must only ever involve the use of the same approved BUSHPEX Pipe (watermark certificate WMKA21274), BUSHPEX Crimp-On fittings (watermark certificate WMKA21276) and BUSHPEX approved tooling.

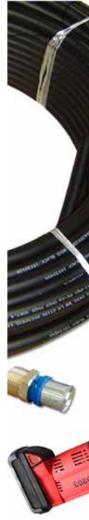
Elson Australasia Pty Ltd undertakes to repair or replace product which is found to be faulty or defective in workmanship or manufacture according to the warranty conditions. The benefits provided to the consumer by this warranty are in addition to other rights and remedies available to the consumer under the law.

To make a warranty claim please contact Elson Australasia Pty Ltd with your contact details, proof of purchase and Licenced Installers documentation details. If the product has not been installed please contact the place of purchase and return. If there is a problem returning the product please contact Elson Australasia Pty Ltd. To make a claim under warranty you must abide by the warranty conditions.

Elson Australasia Pty Ltd ABN: 45 059 613 991 38 Eddie Road, Minchinbury, 2770. Phone: 02 9625 7899 Fax: 02 9625 7855 Email accounts@elson.net.au

Our products come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

To the extent of the Law, Elson shall not be liable for any consequential loss or damage of any kind caused by any product faulty or defective in workmanship or manufacture.









# FAQ

### Can BUSHPEX pipe be installed under a slab?

YES - with the following requirements

- Installation in accordance with AS/NZS 3500.
- Installed within BUSHPEX corrugated sleeve conduit.
- Must be sleeved when penetrating through a slab.
- Installed in a single continuous length without fittings.

### Can BUSHPEX pipe be used for underground cold water service applications?

YES – when installed in accordance with AS/NZS3500 requirements.

### Can BUSHPEX pipe and fittings be used to connect solar panels to the storage tank?

**NO** – Australian Standards do NOT allow PE-X Pipe to be used on the flow or return lines between solar panels and solar storage vessels.

### Can braze-on adaptors be installed after crimping BUSHPEX Pipe?

NO – Brazing must only ever be done prior to the crimping of the BUSHPEX pipe to the fittings with "O" rings, blue plastic retaining ring and Stainless Steel Sleeve removed. Other option? Use elson PRESS Crimp-On fittings from copper to BUSHPEX Crimp-On.

### Is there anything I need to do before using a Manual Crimp Tool?

YES – follow all of these important steps below:

- Ensure that the tool is compatible with BUSHPEX PEX Pipe and BUSHPEX Crimp-On Fittings.
- Ensure the tool is in good working order
- Ensure that the jaws align and have no gap when closed
- Ensure that the jaws are clean, free of defects and debris
- Refer to Jointing Procedure in this manual for correct method

# If the jaws of the Manual Crimp Tool do not align when closed what must I do?

 Adjust the jaws and test until the jaws align and have no gap. Follow the process described in the section, "jointing procedures - Tool adjustment"

# Is there anything I need to do before using the approved battery Crimp-On Tool?

YES – follow all of these important steps below:

- Ensure that the tool is compatible with BUSHPEX Pex Pipe and BUSHPEX Crimp-On fittings.
- Read and recognise the instructions contained in the manual
- Ensure the correct jaws match the tool, the pipe and the fittings
- Inspect the tool to ensure if functions properly
- Inspect the jaws to ensure they're clean, dry, free of dirt

# If the battery Crimp-On Tool does not fully compress what must I do?

- Release the trigger and jaws by actuating the retract slide
- Recharge the battery or replace with charged battery
- Crimp the joint a second time and check with the crimp gauge

### Do I need to inspect the pipe end prior to crimping?

**YES**, always inspect the pipe and ensure it is cut square, has been "rounded & deburred", has no rough edges and the internal and external pipe is undamaged prior to crimping.

### Do I need to "calibrate" the pipe prior to every crimp joint?

**YES** – this is a requirement for every joint - ensure that the reaming / calibrating tool suits BUSHPEX Crimp-ON Pex Pipe

### Do I need to inspect the crimp fitting prior to every crimp joint?

**YES** – you should visually inspect each fitting to ensure it is free of any dirt and grit, has both "0" rings intact, the stainless crimp sleeve is properly located and all parts are undamaged - clean / replace / discard as required.

# How can I tell if the pipe has been pushed into the fitting properly?

 Inspect the fitting to ensure the pipe is visible through all 4 witness openings

### Do I need to check every crimp joint has been compressed properly?

**YES** – you should check every crimp joint has been compressed properly by testing with the crimp gauge

# Jointing Procedure

# Jointing Procedure

### Tool inspection Manual Tools:

Inspect the tool and jaw to ensure it is in good working order, operates properly and approved for use with BUSHPEX Crimp-On fittings and pipe. Visually inspect and ensure the jaws align and have no gap when the crimp tool is fully compressed and closed. The jaws must be clean and undamaged – free of defects, debris and corrosion. Always keep clean and dry and lubricate after use. If a gap is visible between the jaws then the tool must be adjusted, (see Tool Adjustment section and follow the instruction).



WARNING: An incompatible tool, incorrectly adjusted tool or damaged jaws may result in a joint failure, tool damage or both. It will also void the warranty!

Manual Tool Adjustment: The tool will require adjustment if the jaws do not fully close when compressed OR if the crimp gauge does not pass easily over both indentations in the stainless steel sleeve after the crimping process. If this occurs, follow the procedure below and re-test the tool to ensure adjustment is correct.

- 1. Loosen LH and / or RH "Back Nuts" with spanner.
- 2. Turn LH and / or RH "Adjustment Dials" one increment at a time.
- 3. Tighten LH and / or RH "Back Nuts" with spanner.
- 4. Confirm if the jaws now fully close? If NO repeat process (1) to (4). If YES go to step 5.
- 5. Crimp a joint then check with the crimp gauge until the crimp gauge passes easily over both indentations in the stainless steel crimped sleeve.

### Battery Tools: Tested and

approved tools include:

- 1. Klauke MAP1, Klauke UAP-1.
- 2. Novopress ACO-152, Novopress ACO-203.
- 3. KPS & KPL.

Above battery tools all require specific BUSHPEX Jaws to suit the BUSHPEX Crimp-On plumbing system.



- Before using the battery tool it is essential that the user reads and recognises the instructions contained in the manual included with every tool. Make sure you are aware of the operating features and functions.
- Ensure that only BUSHPEX compatible jaws are used to match the tool. Check the jaw matches the diameter of the BUSHPEX pipe and BUSHPEX Crimp-On fittings.
- Inspect and test all tools prior to use to ensure they are functioning properly.
- Visually inspect all tools and jaws to ensure they are clean, dry, free of dust, dirt, grit and corrosion.
- It is a requirment to check every crimped joint with the crimp gauge by passing the crimp gauge over both indentations in the stainless steel sleeve to ensure proper crimping function.
- If the battery warning light comes on or any detection of incomplete crimping occurs you must change the battery immediately, check the joint with a crimp gauge and re-crimp as necessary.

• If the crimping tool does not fully compress or the jaws do not flully close, release the trigger, actuate the retract slide, check the tool then re-crimp the joint and check with the crimp gauge to ensure conformance.

### **Jointing Procedure:**

• Cut the pipe straight and square using BUSHPEX pipe cutters. Check for any damage to the pipe including any surface damage, cuts, scores, abrasion, kinks, splits, heat damage. Re-cut or replace and remove any physically damaged pipe.







 Round and debur the end of the pipe using either the specific sized BUSHPEX manual calibrating tool or the BUSHPEX Battery drill Calibrating tool. Match the size of the calibrating tool to the pipe. Insert the calibrating tool completely into the end of the pipe with a twisting action and rotate 2-3 full turns. Remove all swarf from outside and inside the pipe. • Visually inspect the inside of the fitting to ensure it is free of dust, dirt and grit and confirm the 2 "O" rings are intact and undamaged.





 Insert the BUSHPEX pipe into the BUSHPEX Crimp-On fitting. Ensure that the pipe is fully inserted into the fitting by viewing the pipe through the 4 inspection holes in the blue plastic retaining ring.

• For BUSHPEX Manual Crimping Tools: Centralise the BUSHPEX Manual tool – sized to suit the pipe and fitting with jaws over the stainless steel crimp ring and butted up against the blue



retaining ring. Slowly bring the lever handles together closing the jaws completely compressing the joint.

**NOTE:** DO NOT position the manual tool crimp jaws over the blue retaining ring. This will damage the fitting, destroy the integrity of the fitting and void warranty. If this occurs you must cut-out the fittings and replace immediately.



• For BUSHPEX approved Battery Crimping Tool: Align the Battery tool jaw to seat over the plastic retaining ring at one end and cover the stainless crimp ring. This position locates the jaw onto the

fitting. Activate the battery tool and compress the stainless crimp ring completely until the jaw is closed.

• Check each joint has been compressed correctly by using the BUSHPEX Crimp Gauge. If the BUSHPEX crimp gauge does not pass over the crimp indentations



check tooling, inspect and adjust the tool according to instructions, then re-crimp and test.

### **BUSHPEX Crimp-On Calibration Tool Battery Drill Calibration Tool**

Specific tooling for BUSHPEX Crimp-On water.

### IMPORTANT NOTES:

- Always set the drill speed no greater than 500rpm.
- Water & Gas calibrating tools are NOT interchangeable.

### Calibration Procedure BUSHPEX Crimp-On Water:

• Confirm you have all tooling to complete the job – DO NOT start without these:

BUSHPEX Crimp-On Water Calibration tool – sized to suit the pipe, Battery Drill – charged, BUSHPEX Crimp Gauge, BUSHPEX pipe & fittings.





• Cut the BUSHPEX pipe to length, using BUSHPEX pipe cutter.

Calibrate the end of the BUSHPEX pipe using the specific sized calibrating tool to round and deburr the end of the pipe. Ensure the calibrating tool has been completely inserted into the BUSHPEX pipe with at least 2-3 full turns. Remove all swarf from outside and inside of pipe.

• Continue as per page 21.

### IMPORTANT:

- Pressure test the complete installation in accordance with AS/NZS 3500.
- This system must be installed by a licenced Plumber in accordance with this procedure otherwise warranty will be void.
- It is requirment to incorporate a visual checking system to confirm every joint has been crimped prior to concealing joints. This should be done with a crimp gauge test on every joint.

### NO.1 STRAIGHT COUPLING



Code	Description
39000	No.1 Straight Coupling 16mm
39002	No.1 Straight Coupling 20mm
39004	No.1 Straight Coupling 25mm

### NO.1R REDUCING COUPLING



Code	Description
39020	No.1R Reducing Coupling 20 x 16mm
39022	No.1R Reducing Coupling 25 x 16mm
39024	No.1R Reducing Coupling 25 x 20mm

### NO.2 STRAIGHT FEMALE CONNECTOR



Code	Description
39060	No.2 Straight Connector 16mm x 15mm FI
39062	No.2 Straight Connector 20mm x 15mm FI
39064	No.2 Straight Connector 20mm x 20mm FI
39070	No.2 Straight Connector 25mm x 25mm FI

### NO.3 STRAIGHT MALE CONNECTOR



Code	Description
39040	No.3 Straight Connector 16mm x 15mm MI
39042	No.3 Straight Connector 20mm x 15mm MI
39044	No.3 Straight Connector 20mm x 20mm MI
39046	No.3 Straight Connector 25mm x 20mm MI
39050	No.3 Straight Connector 25mm x 25mm MI
39058	No.3 Straight Connector 16mm x 20mm MI

### NO.12 ELBOW



Code	Description
39080	No.12 Elbow 16mm
39082	No.12 Elbow 20mm
39084	No.12 Elbow 25mm

### NO.12R ELBOW

-	
1	A.

Code	Description
39088	No.12R Elbow 20mm x 16mm
39090	No.12R Elbow 25mm x 16mm
39092	No.12R Elbow 25mm x 20mm

### NO.13 MALE ELBOW



Code	Description
39400	No.13 Elbow 16mm x 15mm MI
39402	No.13 Elbow 20mm x 15mm MI
39404	No.13 Elbow 20mm x 20mm MI
39406	No.13 Elbow 25mm x 20mm MI
39408	No.13 Elbow 25mm x 25mm MI

### NO.14 FEMALE ELBOW



Code	Description
39420	No.14 Elbow 16mm x 15mm Fl
39422	No.14 Elbow 20mm x 15mm Fl
39424	No.14 Elbow 20mm x 20mm Fl
39425	No.14 Elbow 25mm x 20mm Fl
39426	No.14 Elbow 25mm x 25mm Fl

### NO.15 LUGGED FEMALE ELBOW



Code	Description
39120	No.15BP Elbow 16mm x 15mm Fl
39122	No.15BP Elbow 20mm x 20mm Fl

### NO.19 LUGGED MALE ELBOW



Code	Description
39140	No.19BP Elbow 16mm x 15mm MI 65mm Long
39142	No.19BP Elbow 16mm x 15mm MI 90mm Long
39144	No.19BP Elbow 16mm x 15mm MI 200mm Long
39146	No.19BP Elbow 16mm x 15mm MI 150mm Long
39148	No.19BP Elbow 20mm x 15mm MI 95mm Long
39152	No.19BP Elbow 20mm x 15mm MI 200mm Long
39158	No.19BP Elbow 20mm x 20mm MI 200mm Long

### NO.24 TEE



Code	Description
39160	No.24 Tee 16mm
39162	No.24 Tee 20mm
39164	No.24 Tee 25mm

### NO.25 REDUCED CENTRE TEE



Code	Description
39180	No.25 Tee Reduced Centre 20x20x16mm (16mm Centre)
39182	No.25 Tee Reduced Centre 25x25x20mm (20mm Centre)
39188	No.25 Tee Reduced Centre 25x25x16mm (16mm Centre)

### NO.26 REDUCED END TEE



Code	Description
39186	No.26 Tee Reduced End 20x16x20mm (20mm Centre)
39194	No.26 Tee Reduced End 25x20x25mm (25mm Centre)

### NO.27 REDUCED CENTRE & END TEE

-	-	-	2
Real	1		1
	1	1	0

Code	Description
39184	No.27 Tee Reduced Centre+End 20x16x16mm (16mm Centre)
39384	No.27 Tee Reduced Centre+End 25x20x20mm (20mm Centre)

### NO.61 STOPPER



Code	Description
39260	No.61 Stopper 16mm
39262	No.61 Stopper 20mm
39264	No.61 Stopper 25mm

### NO.62 STRAIGHT TAP CONNECTOR



Code	Description
39360	No.62 Straight Tap Connector Flat 16mm x 15mm Fl Nut
39362	No.62 Straight Tap Connector Flat 20mm x 20mm Fl Nut
39364	No.62 Straight Tap Connector Cone16mm x 15mm FI Nut
39366	No.62 Straight Tap Connector Cone 20mm x 20mm Fl Nut

### NO.63 BENT TAP CONNECTOR



Code	Description
39340	No.63 Bent Tap Connector Cone 16mm x 15mm FI Nut
39342	No.63 Bent Tap Connector Cone 20mm x 20mm FI Nut

### FLARED COMPRESSION UNION



Code	Description
39220	Flared Compression Union 16mm x 15mm FL
39222	Flared Compression Union 20mm x 20mm FL

### BATH/LAUNDRY ASSEMBLY

	Code	Description
-	39280	Bath/Laundry Assembly Right Angled 200mm (Floor Entry)
	39282	Bath/Laundry Assembly Right Angled 300mm (Floor Entry)
	39286	Bath/Laundry Assembly Straight 300mm (Side Entry)

### SHOWER ASSEMBLY



Code	Description
39300	Shower Assembly Right Angled 150mm (Floor Entry)
39302	Shower Assembly Right Angled 200mm (Floor Entry)
39304	Shower Assembly Right Angled Barbs Up 150mm (Top Entry)
39306	Shower Assembly Right Angled Barbs Up 200mm (Top Entry)
39320	Shower Assembly Straight 150mm (Side Entry)

### CONNECTING BARB FEMALE



1			
	Code	Description	
	39440	Connecting Barb Female 16mm	
	39442	Connecting Barb Female 20mm	
	39443	Connecting Barb Female 25mm x 20mm OD	
	39444	Connecting Barb Female 25mm	

### CONNECTING BARB MALE



Code	Description
39450	Connecting Barb Male 16mm
39452	Connecting Barb Male 20mm
39454	Connecting Barb Male 25mm

### HOT WATER ENTRY



Code	Description
39600	Hot Water Entry 16mm x 900mm Copper Tail
39602	Hot Water Entry 20mm x 900mm Copper Tail

### ELSON PRESS ADAPTORS



Code	Description
39880	ELSON PRESS to BUSHPEX Crimp-on Adaptor DN15 CU x PEX DN16
39882	ELSON PRESS to BUSHPEX Crimp-on Adaptor DN 20 CU x PEX DN20
39884	ELSON PRESS to BUSHPEX Crimp-on Adaptor DN25 CU x PEX DN25

### BUSHPEX BATTERY TOOL KIT - KLAUKE



Code	Description
20030	Tool Crimp Kit F

930 Tool Crimp Kit Batt. H/D BUSH with Jaw 16-25mm MAP1ELS Fittings & Tools

JAWS



Code	Description
29904	Jaw Battery Crimp Tool H/D BUSH 16mm MAP1 SBM16ELS
29905	Jaw Battery Crimp Tool H/D BUSH 20mm MAP1 SBM20ELS
29906	Jaw Battery Crimp Tool H/D BUSH 25mm MAP1 SBM25ELS

### BUSHPEX HAND CRIMPING TOOL



Code	Description
39911	Hand Crimping Tool 16mm
39913	Hand Crimping Tool 20mm
39915	Hand Crimping Tool 25mm

### JAW INSERT FOR HAND CRIMPING TOOL



Code	Description
39921	Jaw Insert 16mm
39923	Jaw Insert 20mm
39925	Jaw Insert 25mm

### BUSHPEX PE-X PIPE CALIBRATING TOOL



Code	Description
39971	PE-X Pipe Calibrating Tool for BUSH Crimp-On 16, 20, 25mm

### BUSHPEX CRIMP GAUGE



Code	Description
39981	BUSH Crimp-On Gauge 16, 20, 25mm

### **BUSHPEX BATTERY TOOL - NOVOPRESS**





Code	Description
36801	Novopress ACO-152 Press Tool Only In Case With 2 Batteries & Charger
36803	Novopress ACO-203 Press Tool Only In Case With 2 Batteries & Charger

### BUSHPEX CRIMP JAWS TO SUIT NOVOPRESS ACO-152 BATTERY TOOL

Code	Description
29934	BUSHPEX Crimp Jaw 16mm Suit Novopress ACO-152 Tool
29935	BUSHPEX Crimp Jaw 20mm Suit Novopress ACO-152 Tool
29936	BUSHPEX Crimp Jaw 25mm Suit Novopress ACO-152 Tool

### BUSHPEX CRIMP JAWS TO SUIT NOVOPRESS ACO-203 & KLAUKE UAP2 BATTERY TOOLS

Code	Description
29940	BUSHPEX Crimp Jaw 16mm Suit Novopress ACO-203 & Klauke UAP2 Tool
29941	BUSHPEX Crimp Jaw 20mm Suit Novopress ACO-203 & Klauke UAP2 Tool
29942	BUSHPEX Crimp Jaw 25mm Suit Novopress ACO-203 & Klauke UAP2 Tool

## BUSHPEX CRIMP-ON CALIBRATING HEADS TO SUIT BATTERY DRILL TOOL





Code	Description
39810	DN16mm
39812	DN20mm
39814	DN25mm
39816	DN16mm, 20mm, 25mm

Important: Below listed BUSHPEX PE-X Pipes and Accessories can be used with all three BUSHPEX Plumbing Systems - Pull-On, Crimp-On and Push-On.

### HOT & COLD WATER PIPE (BLACK) STRAIGHT LENGTH

3	1		
3		5	
1		0	2
			0
			4

Code	Description
23700	Hot & Cold Water Pipe (Black) 5m Length 16mm
23702	Hot & Cold Water Pipe (Black) 5m Length 20mm
23704	Hot & Cold Water Pipe (Black) 5m Length 25mm

### HOT & COLD WATER PIPE (BLACK) COIL



Code	Description
23707	Hot & Cold Water Pipe (Black) 25m Coil 16mm
23708	Hot & Cold Water Pipe (Black) 25m Coil 20mm
23709	Hot & Cold Water Pipe (Black) 25m Coil 25mm
23717	Hot & Cold Water Pipe (Black) 50m Coil 16mm
23718	Hot & Cold Water Pipe (Black) 50m Coil 20mm
23714	Hot & Cold Water Pipe (Black) 50m Coil 25mm
23710	Hot & Cold Water Pipe (Black) 100m Coil 16mm
23712	Hot & Cold Water Pipe (Black) 100m Coil 20mm

### HOT WATER PIPE (RED) STRAIGHT LENGTH

	Code	Description
	23750	Hot Water Pipe (Red) 5m Length 16mm
	23752	Hot Water Pipe (Red) 5m Length 20mm
	23754	Hot Water Pipe (Red) 5m Length 25mm

### HOT WATER PIPE (RED) COIL



Code	Description
23756	Hot Water Pipe (Red) 50m Coil 16mm
23758	Hot Water Pipe (Red) 50m Coil 20mm
23759	Hot Water Pipe (Red) 25m Coil 25mm
23753	Hot Water Pipe (Red) 25m Coil 50mm

### HOT & COLD WATER PIPE (BLACK) IN CONDUIT COIL



Code	Description
23720	Hot & Cold Water Pipe (Black) in Conduit 50m Coil 16mm
23722	Hot & Cold Water Pipe (Black) in Conduit 50m Coil 20mm

### CONDUIT BLACK FOR BUSH PE-X PIPE



Code	Description
23725	50m Coil for 20mm PE-X Pipe (Conduit only)
23726	50m Coil for 25mm PE-X Pipe (Conduit only)
23727	50m Coil for 16 mm PE-X Pipe (Conduit only)

### RECYCLED WATER PIPE (LILAC) STRAIGHT LENGTH



Code	Description
23737	Recycled Water Pipe (Lilac) 5m Length 16mm
23738	Recycled Water Pipe (Lilac) 5m Length 20mm
23739	Recycled Water Pipe (Lilac) 5m Length 25mm

### RECYCLED WATER PIPE (LILAC) COIL



Code	Description
23730	Recycled Water Pipe (Lilac) 50m Coil 16mm
23732	Recycled Water Pipe (Lilac) 50m Coil 20mm
23734	Recycled Water Pipe (Lilac) 50m Coil 25mm

### RAIN WATER PIPE (GREEN) STRAIGHT LENGTH



Code	Description
23747	Rain Water Pipe (Green) 5m Length 16mm
23748	Rain Water Pipe (Green) 5m Length 20mm
23749	Rain Water Pipe (Green) 5m Length 25mm

### RAIN WATER PIPE (GREEN) COIL



Code	Description
23740	Rain Water Pipe (Green) 50m Coil 16mm
23742	Rain Water Pipe (Green) 50m Coil 20mm
23744	Rain Water Pipe (Green) 50m Coil 25mm

### PE-X PIPE CUTTER



Code	Description
29930	PE-X Pipe Cutter for 16-25mm Pipe

### PE-X PIPE CUTTER



C	D	
Code	Descri	bilon

23932 Pipe Cutter for 16-25mm Pipe

### CLIP MASONRY NAIL



Code	Description
23810	Open Clip 16mm Masonry Nail
23812	Open Clip 20mm Masonry Nail
23814	Open Clip 25mm Masonry Nail

### CLIP TIMBER NAIL



Code	Description
23816	Open Clip 16mm Timber Nail
23817	Open Clip 20mm Timber Nail
23818	Open Clip 25mm Timber Nail

### CLIP METAL SCREW



Code	Description
23820	Open Clip 16mm Metal Screw
23822	Open Clip 20mm Metal Screw
23824	Open Clip 25mm Metal Screw

### PROFILE BEND BRACKET

Code	Description
23830	Profile Bend Bracket 90 Deg x 5D 16mm
23832	Profile Bend Bracket 90 Deg x 5D 20mm
23834	Profile Bend Bracket 90 Deg x 5D 25mm

### PROFILE BEND BRACKET W/ SPRING

Cod
238

Code	Description
23831	Profile Bend Bracket w/ Spring 90 Deg 16mm
23833	Profile Bend Bracket w/ Spring 90 Deg 20mm
23835	Profile Bend Bracket w/ Spring 90 Deg 25mm
	23831 23833

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