

elson
EPS PEX

EPS LEAD FREE* PUSH-FIT



99.9% Lead Free

< 0.1% Pb

EPS PUSH-FIT PEX PLUMBING SYSTEM MANUAL



* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

Version 2.1

ABOUT ELSON

Elson is an Australian owned and operated company since 1993 with our head office and national distribution centre based in Minchinbury NSW. Elson plumbing products are designed specifically for the Australian market. We have been manufacturing quality plumbing and brassware products since 1999 in our own ISO 9001 certified factory. Elson set a higher quality benchmark by introducing 99.9% Lead Free DR Brass plumbing products in 2016 with the launch of elson LEAD FREE PRESS fittings and we have continued to expand our Lead Free range to include Water Meter Ball Valves, PRV Boundary Valves, Hot Water Valves – PRVs, PLVs & Non-Return Isolating Valves, Press Ball Valves, Dual Check Valves, BUSHPEX Ball Valves, elson innovative Union Ball Valves, and Elson EPS LEAD FREE* CRIMP WATER & GAS DUAL PEX Plumbing System, EPS LEAD FREE* PUSH-FIT PEX Plumbing System. Elson has established a reputation for quality without compromise. We continue to develop our product ranges with innovative quality plumbing products.



Elson is the leading manufacturer providing LEAD FREE Plumbing Solutions.

Our journey as being the leading manufacturer of 99.9% lead free plumbing products began in 2016 well before the initiative by ABCB to implement the reduction of lead in Australian plumbing copper alloy products for drinking water to 0.25% by weight. Our Lead free copper alloy products contain a maximum of 0.1% lead by weight setting a higher benchmark than the new standard requirements to be mandatory on the 1st September 2025.

Elson use the term lead free for products that we manufacture with less than 0.1% lead. We have adopted the United States of America plumbing industry recognized term for copper alloys containing less than 0.25% lead as being lead free. Our 99.9% Lead free copper alloy products meet the More Stringent European Lead Free Guideline of containing less than 0.1% by weight. The Australian Building Codes Board in July 2021 released an advisory notice in regards to upcoming changes to the National Construction Code NCC2022 and future amendments to Australian standards & AS/ NZS 4020.

ABCB also sent out an advisory notice in November 2021. “Watermark Certification Scheme Advisory Notice Lead free requirements for certain plumbing products”

“The Australian Building Codes Board (ABCB) decided to limit the allowable lead content in plumbing products, which contain copper alloys and are intended for use in contact with drinking water, to a weighted average lead content of not more than 0.25%. Drinking water is defined in the NCC as “water intended primarily for human consumption but which has other domestic uses”.

The lead free requirements were set out in clause A5G4 (2) of the NCC 2022, Volume Three Public Comment”

Elson have been manufacturing 99.9% Lead Free products since 2016.

Elson lead Free* copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.



EPS LEAD FREE PUSH-FIT Pex Plumbing System



EPS Crimp fittings are manufactured from Lead Free DR Brass.

Benefits to You: CLEAN HEALTHY DRINKING WATER

- Contribute to provide clean healthy drinking water in contact with lead free brass products.
- AS 4020 Materials in contact with drinking water compliance.
- Compliance to lead free brass guideline limit under 0.1% lead.



Caring for our ENVIRONMENT

- Elson lead free brass products offer an environmentally friendly advantage while still maintaining the proven product quality you expect from Elson Australasia.

Our specially formulated lead-free brass alloy keeps the other properties you expect from brass the same.

- Lead free brass can be recycled maintaining the environmental benefits.



Elson EPS LEAD FREE PUSH-FIT Pex plumbing system has been designed with high strength pex pipe for hot and cold water applications.

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

Contents

EPS LEAD FREE PUSH-FIT SYSTEM	5
EPS Fittings	6
EPS Pipe	7
Installation Requirements	7
Technical Information	11
Frequently Asked Questions	13
Jointing Instructions	15
PRODUCT LISTING	
- Fittings & Tools	16
- Pipe & Accessories	21
Warranty	24



The EPS **LEAD FREE*** PUSH-FIT Pex System.

Suitable for both hot and cold water applications. The system combines 99.9% **Lead Free** fittings and high flow pex pipes. EPS **LF** Push – Fit makes connections quick and easy, saving time & money.

Benefits of EPS 99.9% Lead Free plumbing system

- Quick and easy to install
- save money and time
- Proven reliability
- 25 Year Warranty

The EPS **Lead Free** Push - Fit system uses larger bore pex pipes with 99.9% Lead Free DR Brass fittings. The system is secure with a quality Push - Fit connection. EPS Push – Fit is manufactured and tested to comply with AS/NZS 2537.2 & 2492.



* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

EPS LEAD FREE* PUSH- FIT Fittings

EPS LF Push-Fit fittings are manufactured to high standard manufacturing processes. EPS LF Push-Fit fittings are made of Lead Free* DR BRASS which is batch tested and conforms to AS3688. Fitting design includes a high tensile stainless steel grab ring and "O"-ring seal which seats on the outside of the EPS pipe. * All fittings have stamped detail clearly showing Brand, Size, Pressure Rating, Standard and watermark certificate number. EPS LF Push-Fit fittings have been tested and approved in accordance with the Australian and New Zealand Standard AS/NZS2537.2 with watermark certificate WMKA21276.

EPS Push-Fit pex fittings are available in DN16, DN20 & DN25. Refer to the full product listing in this manual.

EPS PIPES

EPS pipes are manufactured from virgin material to exceed the performance requirements of AS 2492. EPS pipe is the preferred choice for hot and cold potable water and recycled water applications.

EPS crosslinked polyethylene is manufactured by changing the polymer which chemically links the molecular structure to form a three dimensional, cross-linked structure. This process increases the durability, temperature and pressure capacity. EPS pipe provides flexibility with improved mechanical, thermal and chemical properties.

EPS pipe benefits

- EPS PEX pipe has a larger internal bore for better flow
- Low water flow noise.
- Reduced water hammer compared to metal pipes.
- Higher resistance to surge pressures.
- Resistant to freezing and has high impact strength.
- Chemical resistance to glycols, latex paints, silicone and most acids and bases.
- Proven long life and durability.
- Light weight and easy to install.
- Sizes 16,20,25mm.
- Colours black, red, lilac & green.
- Coils and Straight lengths available.
- Coils provide faster installation, less joints and cost saving.
- **EPS pipe is compatible with both - EPS Crimp & EPS Push-Fit fittings.**

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

Black – Suitable for potable hot and cold water in domestic and commercial applications.

Red – Specifically for hot water lines.

Lilac – Specifically for recycled, non-potable water.

Green – Specifically for Rainwater.

Maximum Working Pressure

EPS Pipe is manufactured to AS 2492 and designed to a maximum working pressure of 1600 kPa @20°C

Temperature °C	Maximum Working Pressure (KPa)
20° C	1600 kPa
60° C	1190 kPa
70° C	1090 kPa

Exposure to heat

Exposure to excessive heat can damage the integrity of the pipe and joint and will significantly reduce the service life of the EPS plumbing system. Be mindful of exposure to radiant heat sources i.e. high wattage lighting and other radiant heat sources. While welding or soldering during construction and maintenance in close proximity to the EPS Plumbing system. Eps Plumbing system exposed to heat emissions must be permanently protected. Never expose EPS plumbing system to a naked flame. Replace all pipe and fittings that have been compromised due to direct or radiant heat. Always follow required installation procedure as per AS/NZS 3500.

Installation Requirements

CARE & HANDLING

EPS pipe and Push-Fit pex fittings must be protected from damage through all stages of the process from transport to storage and installation in accordance with AS/NZS 3500. 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, sand and any foreign matter.
- Pipe must be protected from physical damage. Including cuts, abrasions, dents, kinks, tears, holes, etc.
- Pipes, either black, red, green or lilac, must not be installed in direct sunlight.
- Pipe must be protected from long term or permanent U.V. exposure, by way of lagging, or encasing 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. 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, sealed, protected this includes all underground installations for all fittings.

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

Exposure to UV Rays.

Pipe must be protected from long term or permanent U.V. exposure, by way of lagging, or encasing in a conduit. AS/NZS 3500 outlines installation practices and considerations the installer must abide by.

EPS PEX pipe is specifically designed for the EPS Push-Fit jointing system in conformance with AS 2492 with watermark certificate WMKA21274. EPS PEX pipe is compatible with all two EPS jointing systems for water including:

- EPS LF Crimp
- EPS LF Push-Fit

*** To ensure a leak proof installation the external surface of the EPS pex pipe must be completely free of scratches, indentations and any other surface damage or deformation.**

Pipe support and clipping

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.
- EPS 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. EPS Push-Fit elbows are recommended for tight bends.

Refer to the Pipe Specification Chart for minimum bending radius and tools for bending.

- 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. Hot water lines require insulation / lagging – Refer to AS/NZS 3500.

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

Clipping Distance

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 Size	Horizontal	Vertical
16mm	600mm	1200mm
20mm	700mm	1400mm
25mm	750mm	1500mm

Minimum Bend Radius

10 x the outside diameter of pipe

Pipe Size	Horizontal
16mm	160mm
20mm	200mm
25mm	250mm

Underground Installation/Concrete slabs

NOTE: It is a requirement to pressure test the pipe and fittings in accordance with AS/NZS 3500 prior to burying or concealing the EPS Plumbing System. Underground installation of EPS pipe and fittings must be in accordance with AS/NZS 3500 including but not limited to the following:

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

Important

The design of the EPS Push-Fit pex fitting requires a positive "O-Ring" seal on the external diameter pipe surface. The installation requirements must therefore include the following key points:

- The external pipe seating surface **MUST** be completely free of any scratches, cuts, indentations, defect or deformity.
- The pipe and fitting **MUST** be free of dirt, grit, sand or other foreign material.
- The fitting must be complete with no damage to the "O-Ring" and grab ring. Never attempt to dismantle a fitting as they are factory sealed and tested.
- The fitting must be pushed on completely in one continuous action - check the insertion marks on the pipe for correct depth insertion!
- **DO NOT** pull back the fitting unless the fitting has been pushed on completely - check the "insertion depth" marks labelled on pipe. Pull-back prior to complete insertion causes grab-ring bite indentations on the pipe. If this occurs you **MUST** cut the pipe and start gain.

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

Ring Mains/Recirculating Hot Water Systems.

Recirculating Hot Water Systems or Ring Mains minimise the time it takes to get hot water to reach an appliance or outlet. It is also known that the continuous flow of water with exposure to high temperatures and high velocity makes this a very extreme and demanding application, whether using copper, Pex, or other piping materials.

To ensure system service life is maximised and to cater for the performance tolerances of heat sources, the following installation and water quality guidelines must be followed on any circulating hot water systems using EPS plumbing system in order to maintain the product warranty.

Maximum pressure within the ring mains / recirculating hot water systems must be limited 500kPa (as per AS/ NZS 3500).

Maximum water temperature must not exceed 60°C.

The pipe work design and recirculating pumps must be sized to limit the water velocity to the requirement of AS/ NZS 3500 for non-metallic piping. Where copper pipe is part of the installation, the velocity restrictions for this material is extremely critical and must not be exceeded.

A timer controlled recirculation pump must be used with a maximum circulation time of 12 hours per 24-hour period. All pipe work should be insulated and the recirculating pump must be thermostatically controlled, to further reduce stress on the system and minimise energy consumption.

The system layout of pipework and fittings should be designed with long wide sweeping pipe bends with limited use of fittings.

Water quality - Australian city potable water reticulation systems as defined in the Australian Drinking Water Guidelines.

EPS Push-Fit Tools

Key benefits of the EPS Push-Fit system are the minimal tooling requirements. Jointing tools include:

- Pipe cutter
- Deburring Tool / depth gauge
- Disassembly clip tool

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.

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

elson EPS PUSH-FIT PEX Technical Information			
Outside Diameter For SDR9 PEX (mm)	16.0 - 16.3	20.0 - 20.3	25.0 - 25.3
Internal Diameter For SDR9 PEX (mm)	11.4 - 12.3	14.6 - 15.7	18.6 - 19.7
Wall Thickness For SDR9 PEX (mm)	2.0 - 2.3	2.3 - 2.7	2.8 - 3.2
Nominal Pressure / Ambient Temp	1600kPa @ 20 °C	1600kPa @ 20 °C	1600kPa @ 20 °C
Standard Pipe / Fittings	AS 2492 / AS/NZS 2537.2	AS 2492 / AS/NZS 2537.2	AS 2492 / AS/NZS 2537.2
Licence Number For Pipe / Fittings	WMKA 21274 / WMKA 21276	WMKA 21274 / WMKA 21276	WMKA 21274 / WMKA 21276
Max Clip Distance Horiz / Vertical (mm)	600 / 1200	700 / 1400	750 / 1500
Min Bend Radius (mm)	160	200	250
Colours Available	Black, Red, Lilac, Green	Black, Red, Lilac, Green	Black, Red, Lilac, Green
Coil Sizes Metres (Black, Red, Lilac, Green)	25m Black / 50m All / 100m Black	25m Black / 50m All / 100m Black	25m Black & Red / 50m All
Straight Lengths Metres (Black, Red, Lilac, Green)	5m lengths available in all colours	5m lengths available in all colours	5m lengths available in all colours
Coefficient Of Linear Expansion / Thermal Expansion	1.53mm / metre / 10 °C	1.53mm / metre / 10 °C	1.53mm / metre / 10 °C
Temp / Operating Pressure	70 °C @ 1090kPa	70 °C @ 1090kPa	70 °C @ 1090kPa
Temp / Operating Pressure	60 °C @ 1190kPa	60 °C @ 1190kPa	60 °C @ 1190kPa

March 2023

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 EPS Push-Fit Pex 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 and completely jointed.

Pressure Loss

Pressure loss calculations using the Hazen-Williams equation. The pressure loss was calculated for both the internal mean inside diameter of SDR 9 of AS 2492:2007. To generate the theoretical calculations, the following assumptions were applied:

- Friction coefficient of plastic pipe at 15.5°C was taken as 140.
- The internal diameter used for calculation was taken at the theoretical mean diameter as per the manufacturing tolerances featured in Table 3.1 of AS 2492:2007 for SDR 9.

The following is a list of limitations of the Hazen-Williams equations but not limited to:

- Published literature suggests that the Hazen-Williams equation is reliable for water at 15.5°C with velocity flow less than 10 feet/s or 3.048 m/s.

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

- Changes in water temperature, density and media will alter the pressure loss.
- Installation where pipework which is curved or bent could alter the internal diameter.
- Installation of fitting and valves within pipeline network.
- Variations in manufacturing tolerances of wall thickness and internal diameter of the PEX pipe in each SDR class.
- Variations in the actual internal surface friction coefficient.

When used to calculate the head loss with the International System of Units, the equation becomes:

$$S = \frac{h_f}{L} = \frac{10.67 Q^{1.852}}{C^{1.852} d^{4.8704}}$$

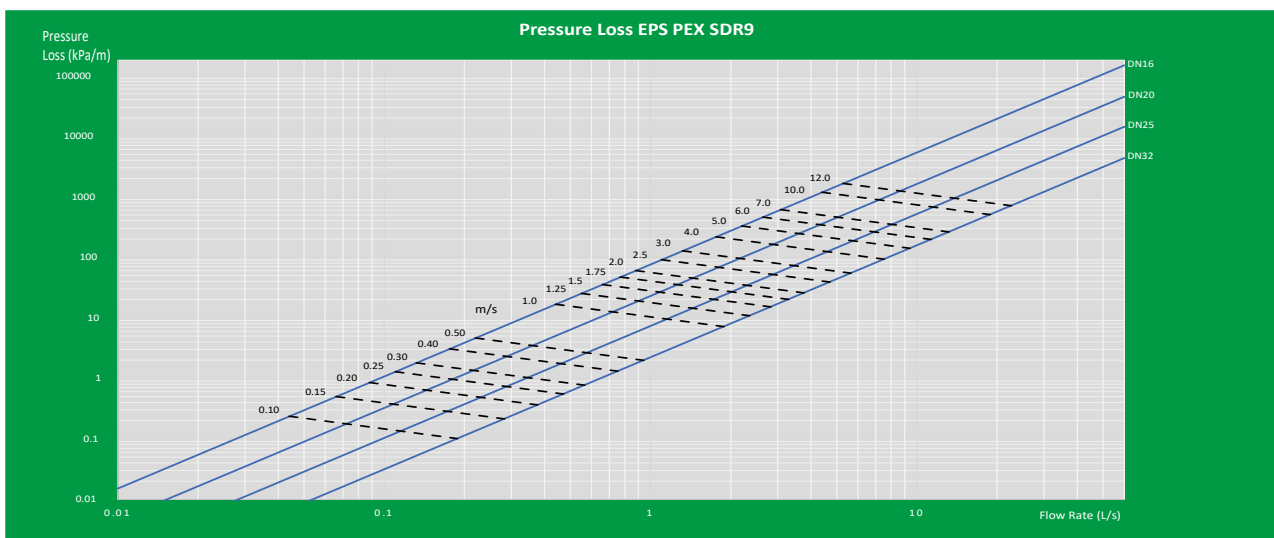
Where:

- S = Hydraulic slope
- h_f = head loss in meters (water) over the length of pipe
- L = length of pipe in meters
- Q = volumetric flow rate, m³/s (cubic meters per second)
- C = pipe roughness coefficient
- d = inside pipe diameter, m (meters)

Note: pressure drop can be computed from head loss as $h_f \times$ the unit weight of water (e.g., 9810 N/m³ at 4 deg C)

Source: Wikipedia

Hazen Williams equation



Only reliable for water at 15.5 degrees celcius with velocity flow less than 10 feet/s or 3.048 m/s

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

Frequently Asked Questions

Can elson EPS pipe be installed under a slab?

YES – with the following requirements.

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

Can elson EPS pipe be used for underground cold water service applications?

YES – when installed in accordance with AS/NZS 3500.

Can elson EPS 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 and return lines between solar panels and solar storage vessels.

Elsion EPS Push-Fit looks so easy to use. Surely all you do is cut and push it in?

YES – but you MUST follow the Jointing and Installation Procedure Instructions in this Handbook. Attention to detail and strict adherence to these instructions will ensure trouble free installations.

How important is it to have the pipe clean with no scratches, scars, scrapes or indents?

It is absolutely essential and a requirement of the Jointing and Installation Procedure to ensure the pipe jointing section is completely free of scratches, scars, scrapes, indents and any dirt, mud, sand or any other foreign matter.

Can elson EPS Push-Fit pex fittings be re-used?

NO – It is not recommended to use previously installed EPS Push-Fit pex fittings as the integrity of the “O-Ring” seal and grab ring cannot be guaranteed. In the case of a new installation where a fitting has just been installed, you may be able to Re-Use the fitting under the following requirements:

- The fitting must be completely intact including all components.
- The “O-Ring” must have no damage.
- The Grab Ring must have no damage.
- The fitting and all parts must be completely clean and free of any dirt, sand, grit, foreign matter.
- The pipe MUST be Re-Cut above the Grab Ring indentations and at a point where there is no sign of any scratches, scars, scrapes or indents that will align with the depth of the EPS Push-Fit pex fitting.
- Installation in accordance with the instructions in the EPS Push-Fit pex handbook.

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

NOTE: If you are unsure about any of the above listed points then you must dispose of the fitting in a responsible manner to ensure it is never Re-Used.

How can I tell if I have pushed the fitting in properly?

Following the jointing procedure in this handbook allows for checks to confirm complete insertion. These include the following key points:

- Cut the pipe at one of the pipe graduation marks and the fitting must then Push-Fit to the next mark.
- The EPS Push-Fit Depth Gauge and Deburring Tool makes a feint mark on the tube as an indicator to where the fitting must be inserted.

Can I pull the fitting back out if I only partly inserted it?

NO – NEVER DO THIS! Attempting to pull out the fitting after it has only been partially inserted causes the Grab Ring to “Dig-In” to the pipe leaving a permanent scar which will destroy the integrity of the joint and leak.

IF THIS OCCURS you MUST use the Disassembly Tong to release the fitting, then Re-Cut the pipe above the Grab Ring indentations and at a point where there is no sign of any scratches, scars, scrapes or indents that will align with the depth of the EPS Push-Fit pex fitting. Always use the EPS Push-Fit Depth Gauge / Deburring Tool.

Can I use EPS Push-Fit pex fittings with an existing PEX Pipe installation?

With every installation you **MUST** always inspect the pipe first to ensure it is EPS pipe with Licence number WMKA21274. Other PEX pipe is not manufactured to the same stringent quality controls and fine tolerances as elson EPS pipe, making other brands incompatible with EPS Push-Fit pex fittings.

Do I really need to use the Depth Gauge / Deburring Tool?

YES – failure to use the Depth Gauge / Deburring Tool will void your warranty. Use of this tool is a requirement in accordance with the Installation Instructions and Jointing Procedures. The Depth Gauge / Deburring Tool has two main roles, 1. It marks the pipe with a feint line to confirm a “Safe Bury” insertion depth and 2. It deburs the pipe end to prevent damage to the “O-Ring” allowing easy insertion.

Do I need to check every joint has been completed?

YES – It is recommended to incorporate a check system to confirm that every joint has been pushed in and inserted completely up to the pipe graduation mark and/or the Pipe Depth Gauge / Deburring Tool mark.

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

EPS Push-Fit Jointing Instructions

NOTE: It is recommended that all new users of the EPS Push-Fit pex system contact Elson through their EPS Stockist to arrange training for trouble free installation.

1. Inspect the pipe:

Confirm the pipe is elson EPS Licence number 21274. Ensure the pipe joint section has no sign of any scratches, scars, scrapes or indents. You must cut off and discard any joint section that has any deformity.

2. Cut the pipe:

Cut the pipe straight and square, in-line with the pipe graduation marks. If this is not possible then you **MUST** follow step 3 and use the Depth Gauge / Deburring Tool. **NOTE:** It is essential to cut the pipe to the right length, allowing for expansion and contraction and no excessive tension or compressive pressures on the joint.

3. Prepare the Pipe:

Use the EPS Push-Fit Depth Gauge / De-burring tool to mark the insert depth on pipe and deburr the pipe to avoid any damage to the "O-Ring". Insert the pipe completely into the Depth Gauge / De-burring Tool and rotate at least 2 complete turns. Remove all swarf and off-cuts from the pipe. Repeat this process if the pipe is not properly bevelled.

4. Final Inspection of the pipe:

Inspect the pipe once again to confirm it has no scratches, scars, scrapes or indents at the pipe joint end. If it does you **MUST** repeat the process from step 1.

5. Identify the Insertion depth mark:

Confirm that you can identify the position of the "insertion depth mark on the pipe as indicated by using the Depth Gauge / De-burring Tool. If you cut the pipe on the pipe graduation mark this will also be the first pipe graduation mark from the pipe end.

6. Inspect the fitting:

Confirm the fitting is a EPS Push-Fit pex fitting sized to match the EPS pipe. Confirm that the fitting is complete with no damaged or worn components. Confirm that the fitting is free of any dirt, sand, grit and foreign matter.

7. Check access:

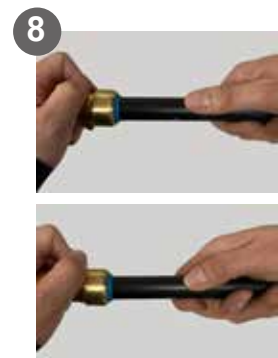
You need to ensure you have access to Push-On the pipe to the fitting completely with one smooth and continuous motion.

8. Push-Fit the fitting:

Align the pipe with the fitting. Push-Fit the pipe and fitting completely in one smooth and continuous motion. Confirm the pipe has reached the insertion depth position as marked on the pipe with the Depth Gauge / De-burring Tool. The process feels like a two-step motion that must be completed with one continuous action to the insertion depth position.

NOTE: If the pipe has not yet reached the Insertion depth position you **MUST NOT attempt to pull the pipe out. Attempts to do this will permanently mark the pipe and compromise the integrity of the joint. If this occurs you must cut off the pipe end and start from step 1 above. Use the Disassembly Tong to separate pipe from fitting.**

9. Pressure Test in accordance with AS/NZS3500.



* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

Product Listing

NO.1 STRAIGHT COUPLING LEAD FREE BRASS

Code	Description
LF25000	No.1 Straight Coupling 16mm
LF25002	No.1 Straight Coupling 20mm
LF25004	No.1 Straight Coupling 25mm
LF25010	No.1 Straight Coupling 16mm x DN15 Cu
LF25012	No.1 Straight Coupling 20mm x DN20 Cu



NO.1R REDUCING COUPLING LEAD FREE BRASS

Code	Description
LF25020	No.1R Reducing Coupling 20 x 16mm
LF25024	No.1R Reducing Coupling 25 x 20mm



NO.2 STRAIGHT FEMALE CONNECTOR LEAD FREE BRASS

Code	Description
LF25060	No.2 Straight Connector 16mm x 15mm FI
LF25061	No.2 Straight Connector 16mm x 20mm FI
LF25064	No.2 Straight Connector 20mm x 20mm FI
LF25070	No.2 Straight Connector 25mm x 25mm FI



NO.3 STRAIGHT MALE CONNECTOR LEAD FREE BRASS

Code	Description
LF25040	No.3 Straight Connector 16mm x 15mm MI
LF25042	No.3 Straight Connector 20mm x 15mm MI
LF25044	No.3 Straight Connector 20mm x 20mm MI
LF25058	No.3 Straight Connector 16mm x 20mm MI
LF25046	No.3 Straight Connector 25mm x 20mm MI
LF25050	No.3 Straight Connector 25mm x 25mm MI



NO.12 ELBOW LEAD FREE BRASS

Code	Description
LF25080	No.12 Elbow 16mm
LF25082	No.12 Elbow 20mm
LF25084	No.12 Elbow 25mm



* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

NO.12R REDUCING ELBOW LEAD FREE BRASS

Code	Description
LF25100	No.12R Reducing Elbow 20 x 16mm



NO.13 MALE ELBOW LEAD FREE BRASS

Code	Description
LF25400	No.13 Elbow 16mm x 15mm MI



NO.14 FEMALE ELBOW LEAD FREE BRASS

Code	Description
LF25420	No.14 Elbow 16mm x 15mm FI



NO.15BP LUGGED FEMALE ELBOW LEAD FREE BRASS

Code	Description
LF25120	No.15BP Elbow 16mm x 15mm FI
LF25122	No.15BP Elbow 20mm x 20mm FI



NO.19BP LUGGED MALE ELBOW LEAD FREE BRASS

Code	Description
LF25141	No.19BP Elbow 16mm x 15mm MI 75mm Long
LF25142	No.19BP Elbow 16mm x 15mm MI 90mm Long
LF25143	No.19BP Elbow 16mm x 15mm MI 100mm Long
LF25144	No.19BP Elbow 16mm x 15mm MI 200mm Long
LF25145	No.19BP Elbow 16mm x 15mm MI 185mm Long
LF25148	No.19BP Elbow 20mm x 15mm MI 100mm Long
LF25152	No.19BP Elbow 20mm x 15mm MI 200mm Long
LF25158	No.19BP Elbow 20mm x 20mm MI 200mm Long



NO.24 TEE LEAD FREE BRASS

Code	Description
LF25160	No.24 Tee 16mm
LF25162	No.24 Tee 20mm
LF25164	No.24 Tee 25mm



* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

NO.15BP LUGGED FEMALE ELBOW LEAD FREE BRASS

Code	Description
LF25180	No.25 Tee Reduced Centre 20 x 20 x 16mm
LF25182	No.25 Tee Reduced Centre 25 x 25 x 20mm

**NO.26 REDUCED END TEE LEAD FREE BRASS**

Code	Description
LF25186	No.26 Tee Reduced End 20 x 16 x 20mm

**NO.27 REDUCED CENTRE & END TEE LEAD FREE BRASS**

Code	Description
LF25184	No.27 Tee Reduced Centre+End 20 x 16 x 16mm

**NO.61 STOPPER LEAD FREE BRASS**

Code	Description
LF25260	No.61 Stopper 16mm
LF25262	No.61 Stopper 20mm
LF25264	No.61 Stopper 25mm

**NO.62 STRAIGHT TAP CONNECTOR LEAD FREE BRASS**

Code	Description
LF25240	No.62 Straight Tap Connector Cone 16mm x 15mm FI Nut
LF25242	No.62 Straight Tap Connector Cone 20mm x 20mm FI Nut

**NO.63 BENT TAP CONNECTOR LEAD FREE BRASS**

Code	Description
LF25340	No.63 Bent Tap Connector 16mm x 15mm FI Nut
LF25342	No.63 Bent Tap Connector 20mm x 20mm FI Nut



* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

ADAPTOR PEX / FLARED COMPRESSION LEAD FREE BRASS

Code	Description
LF25220	Flared Compression Union 16mm x 15mm FI
LF25222	Flared Compression Union 20mm x 20mm FI



ADAPTOR BUSHPEX PUSH-ON / EPS PEX PUSH-FIT LEAD FREE BRASS

Code	Description
LF25886	Adaptor BUSHPEX PUSH-ON DN16mm x EPS PEX PUSH-FIT DN16mm
LF25888	Adaptor BUSHPEX PUSH-ON DN20mm x EPS PEX PUSH-FIT DN20mm
LF25890	Adaptor BUSHPEX PUSH-ON DN25mm x EPS PEX PUSH-FIT DN25mm



ADAPTOR SDR9 PEX x EPS LF PUSH-FIT LF DR BRASS

Code	Description
LF25896	Adaptor SDR9 Pex 16mm x EPS LF Push-Fit 16mm
LF25898	Adaptor SDR9 Pex 16mm x EPS LF Push-Fit 20mm



BATH / LAUNDRY ASSEMBLY

Code	Description
LF25280	Bath/Laundry Assembly Right Angled 200mm (Floor Entry)
LF25282	Bath/Laundry Assembly Right Angled 300mm (Floor Entry)



SHOWER ASSEMBLY

Code	Description
LF25300	Shower Assembly Right Angled 150mm (Floor Entry)
LF25302	Shower Assembly Right Angled 200mm (Floor Entry)



SHOWER / BATH ASSEMBLY

Code	Description
LF25304	Shower Assembly Right Angled Barbs Up 150mm (Top Entry)
LF25306	Shower Assembly Right Angled Barbs Up 200mm (Top Entry)



* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

DISASSEMBLY CLIP

Code	Description
25950	DISASSEMBLY CLIP DN 15 CU
25952	DISASSEMBLY CLIP 16mm PEX
25954	DISASSEMBLY CLIP 20mm PEX & DN 20 CU
25956	DISASSEMBLY CLIP 25mm PEX



DEPTH GAUGE / DEBURRING TOOL FOR EPS PIPE

Code	Description
24975	Depth Gauge / Deburring Tool for EPS pipe 16mm, 20mm, 25mm PEX



DEPTH GAUGE / DEBURRING TOOL FOR EPS PIPE

Code	Description
24970	Depth Gauge / Deburring Tool DN15,20,25 CU



EPS PEX PIPE CUTTER

Code	Description
21932	T135 DAWN Kwikcut Original CUTTER 16mm-32mm PEX PIPE



EPS PEX PIPE CUTTER

Code	Description
21936	PEX PIPE & PEXALPEX PIPE 16mm-32mm



* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

HOT & COLD WATER PIPE (BLACK) STRAIGHT LENGTH

Code	Description
21700	H&C Water Pipe (Black) 5m Length 16mm
21702	H&C Water Pipe (Black) 5m Length 20mm
21704	H&C Water Pipe (Black) 5m Length 25mm



HOT & COLD WATER PIPE (BLACK) COIL

Code	Description
21710	H&C Water Pipe (Black) 100m Coil 16mm
21712	H&C Water Pipe (Black) 100m Coil 20mm
21717	H&C Water Pipe (Black) 50m Coil 16mm
21718	H&C Water Pipe (Black) 50m Coil 20mm
21714	H&C Water Pipe (Black) 50m Coil 25mm



HOT & COLD WATER PIPE (BLACK) IN CONDUIT COIL

Code	Description
21720	H&C Water Pipe (Black) in Conduit 50m Coil 16mm
21722	H&C Water Pipe (Black) in Conduit 50m Coil 20mm



RECYCLED WATER PIPE (LILAC) STRAIGHT LENGTH

Code	Description
21737	Recycled Water Pipe (Lilac) 5m Length 16mm
21738	Recycled Water Pipe (Lilac) 5m Length 20mm
21739	Recycled Water Pipe (Lilac) 5m Length 25mm



RECYCLED WATER PIPE (LILAC) COIL

Code	Description
21730	Recycled Water Pipe (Lilac) 50m Coil 16mm
21732	Recycled Water Pipe (Lilac) 50m Coil 20mm
21734	Recycled Water Pipe (Lilac) 50m Coil 25mm



* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

RAIN WATER PIPE (GREEN) STRAIGHT LENGTH

Code	Description
21747	Rain Water Pipe (Green) 5m Length 16mm
21748	Rain Water Pipe (Green) 5m Length 20mm
21749	Rain Water Pipe (Green) 5m Length 25mm

**RAIN WATER PIPE (GREEN) COIL**

Code	Description
21740	Rain Water Pipe (Green) 50m Coil 16mm
21742	Rain Water Pipe (Green) 50m Coil 20mm
21744	Rain Water Pipe (Green) 50m Coil 25mm

**HOT WATER PIPE (RED) STRAIGHT LENGTH**

Code	Description
21750	Hot Water Pipe (Red) 5m Length 16mm
21752	Hot Water Pipe (Red) 5m Length 20mm
21754	Hot Water Pipe (Red) 5m Length 25mm

**HOT WATER PIPE (RED) COIL**

Code	Description
21756	Hot Water Pipe (Red) 50m Coil 16mm
21758	Hot Water Pipe (Red) 50m Coil 20mm
21753	Hot Water Pipe (Red) 50m Coil 25mm

**CLIP MASONRY NAIL**

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



* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

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

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



PROFILE BEND W/SPRING

Code	Description
23831	PEX Profile Bend Bracket W/Spring 90 Degree 16mm
23833	PEX Profile Bend Bracket W/Spring 90 Degree 20mm
23835	PEX Profile Bend Bracket W/Spring 90 Degree 25mm



PROFILE BEND

Code	Description
23838	Profile Bend Bracket 90 Deg x 25mm PA6



* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

Warranty

The elson EPS Push-Fit Pex Plumbing System carries a 25 year product warranty which covers product manufacturing faults and defects only. This warranty does not cover faults arising from either incorrect installation or the installation environment. See Warranty conditions.

In addition the warranty applies under the following requirements:

- System must be installed by a Licenced Plumber.
- Proof of installation by a Licenced Plumber.
- Proof of purchase - official receipt , invoice.
- Installation in accordance with AS/NZS3500.
- Installation in accordance with other relevant and applicable local authority codes which may take precedence.
- Installation in accordance with other established installation practices.
- Installation in accordance with the Jointing Procedure included in this manual.
- Installation with both EPS Pipe WMKA21274 and Elson EPS Push-Fit Pex Fittings WMKA21276 and EPS Push-Fit approved tooling.



Warranty Conditions

To make a claim under warranty you must abide by the warranty conditions. 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 you must contact Elson Australasia Pty Ltd immediately after a product issue has been identified. Elson requires an on-site inspection to assess the problem and determine the extent of the issue. Failure to provide notification, access and/or inspection when the problem was first identified will void this warranty. The product, complete with connections, must be supplied to Elson in order to obtain proper identification and carry out inspection, analysis and testing. Photographic proof and evidence must be provided to make a claim. In addition, you must also provide your contact details, proof of purchase, the licenced installer's details and the job address.

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.

Elson Australasia Pty Ltd ABN: 45 059 613 991

38 Eddie Road, Minchinbury, NSW, 2770.

Ph: 02 9625 7899

Fax: 02 9625 7855

Email: sales@elson.net.au

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

* Elson Lead Free copper alloy products are 99.9% Lead Free and contain less than 0.1% Lead by weight.

**Elson Australasia Pty Ltd**

ABN 45 059 613 991
ACN 059 613 991

P.O. Box 3217
Mount Druitt Village NSW 2770

Tel: (02) 9625 7899
Fax: (02) 9625 7855
Web: www.epspex.com.au
Email: sales@elson.net.au

National Distribution Centre

38 Eddie Road, Minchinbury
New South Wales 2770
AUSTRALIA

Sales and service all over Australia

Distributed by

Disclaimer: The information provided within this Product Information and Installation Manual is designed as a guide only and is believed to be accurate at the time of printing. Elson Australasia Pty Ltd and its employees take no responsibility in regard to any specific installation. Installation must always require supervision and consultation from a licenced Plumber.