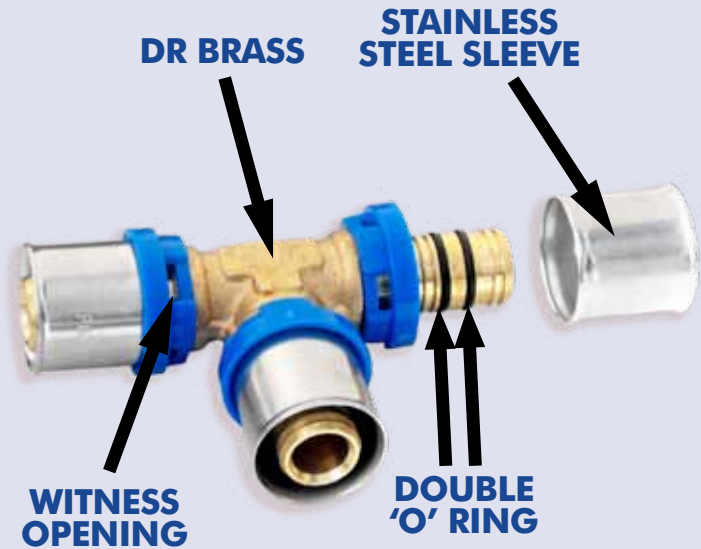


**Plumbers
Supplies**



All Profits to Members!

PSC PEX PLUMBING SYSTEM



**PSC PEX
CRIMP
PLUMBING
SYSTEM**

October 2010

THIS BROCHURE PROVIDES SPECIFICATION AND INSTALLATION INFORMATION ON THE PSC PEX CRIMP PEX PLUMBING SYSTEM.

The PSC PEX Crimp Plumbing System comprises two main components; a flexible cross linked high density polyethylene pipe and solid DR brass crimp fittings with double 'O' ring barb and stainless steel crimp sleeves.

Both the pipe and fittings are manufactured for Plumbers' Supplies Co-operative Ltd under strict quality controls and are fully compliant to Australian Standards and are fully warranted.

The PSC PEX Crimp Plumbing System uses black coloured PE-X pipe, which is suitable for use in hot and cold water services in both domestic and commercial applications. In addition the same pipe can be used for rainwater harvesting (coloured green) and water recycling (coloured purple).

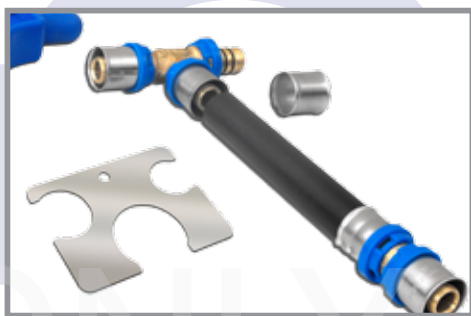
The PSC PEX Crimp Plumbing System is a cost effective alternative to other plumbing systems. The PSC PEX Crimp system is easy and fast to install, usually with fewer fittings. The flexible pipe is light, as well as being corrosion, scale and chlorine resistant. As water flows more quietly through the PE-X pipe, water hammer is greatly reduced.

With the PSC PEX Crimp system the pipe is first 'rounded' using the PSC PEX rounding tool and then pushed into the fitting. The stainless steel sleeve is then crimped onto the pipe.

PROOF

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Technical Information

The PSC PEX Crimp product range is a complete PEX Plumbing System comprising PE-X pipe and a full range of DR brass crimp fittings with stainless steel sleeves as well as a set of crimping tools. A rounding tool is available to round out the pipe and a crimp gauge to check the joint is sufficiently crimped.

1. PIPING

PE-X piping is manufactured from high density crossed linked polyethylene material. To conform to Australian Standard AS/NZS 2492, under licence No.21274 issued by SAI-Global, the pipe is manufactured to SDR7.4 tolerance to achieve a pressure rating of PN20 by means of the PE-Xa Cross Linking Process.

The great advantage of PSC PEX pipe is that it can be used with PSC PEX SLEEVE TYPE, PSC PEX CRIMP and PSC PEX PUSH systems.

The piping is available in three colours. The colours help to identify the pipe application. It is recommended that unprotected pipe not be exposed to direct sunlight on a permanent basis.

- Black** – Suitable for potable hot & cold water plumbing in domestic and commercial applications.
- Purple** – Suitable for recycled, non potable water.
- Green** – Suitable for rainwater.

Packaging

Pipe size	Black
16mm	5m length & 100m coil
20mm	5m length & 100m coil
25mm	5m length & 50m coil

Pipe size	Purple	Green
16mm	50m coil	50m coil
20mm	50m coil	50m coil
25mm	50m coil	50m coil

Pipe size	Black in Conduit
16mm	50m coil
20mm	50m coil

Conduit Black for PSC PEX Pipe	
25mm	50m coil (Conduit only)

Pipe sizes and tolerances

Nom. O.D	Mean outside diameter (mm)		Wall thickness (mm)	
	Min	Max	Min	Max
SDR 7.4				
DN 16 - 16mm	16.0	16.3	2.2	2.6
DN 20 - 20mm	20.0	20.3	2.8	3.2
DN 25 - 25mm	25.0	25.3	3.5	4.0

Pressure ratings

Pipes for water applications are classified in terms of the nominal pressure rating (PN) at water service temperature of 20°C. PSC PEX Pipe has a pressure rating of PN20 and a nominal working pressure of 2,000kpa at 20°C. The following table shows the relationship of the pipe working pressure and pipe material temperature (PMT).

Working pressure, KPa

PMT	20°C	60°C	70°C
PN20	2000	1500	1330

Temperature ratings

PE-X pipe is suitable for use at temperatures up to 100°C however; continuous long term operation should be between -50°C and +70°C under working pressure as detailed above.

2. INSTALLATION CONSIDERATIONS

Proximity to flame/external heat sources

The PSC Pex Push Plumbing System should not be installed in positions where it is likely to be exposed to a naked flame. If it is, there is a danger the pipe could ignite and continue to burn even after the source of the flame is extinguished. In accordance with AS/NZS 3500 all plastic pipes for water supply must be protected from excessive ambient heat.

Thermal expansion

The PSC Pex pipe has an expansion rate of approx. 0.3mm per meter for every 10°C change in temperature. Care should be taken not to pull the pipe tightly between fixed points during installation as this may later contract and apply excessive tensile force to any joints. This could cause a possible joint failure.

Heat & Pressure performance

As with all plastic pipe systems the ability of the pipe to withstand pressure decreases as the pipe temperature increases.

Protection from physical damage

Due care should be taken to protect pipe and fittings from any physical damage both prior to, during and after installation. Possible causes

of physical damage may include (but are not limited to) sharp edges/implements, machinery, rodents, excessive heat, long term UV exposure, radiation and/or mechanical forces.

Pipe Bending

PSC Pex Pipe is very flexible and as such can save the need to use additional fittings. Due care should be taken during bending to ensure that pipe is not kinked or damaged. If you do encounter a kinked section of pipe it should be cut out and replaced as a precaution.

PSC Pex pipe may be subjected to a minimum bending radius of approx. 10 times the OD of the pipe.

Clipping

Clipping requirements are outlined in the relevant Australian standards. The recommended clip spacings for PSC Pex Pipe are:

	Horizontal	Vertical
Size	Pipe Work	Pipe Work
16mm	0.6m	1.2m
20mm	0.7m	1.4m
25mm	0.75m	1.5m

Framework penetrations

Where pipe is required to pass through timber or steel studs/frames, holes should be sized to allow for adequate pipe movement due to thermal expansion or contraction. In all cases, steps should be taken to protect the pipe from any possible physical damage (particularly due to abrasion) where it passes through studs or frames. This can be achieved by installing grommets, sleeves or stud clips as applicable.

UV exposure

Both PSC Pex black and PSC Pex green pipes are not to be installed in direct sunlight. PSC Pex lilac should be protected from long term exposure to UV by way of either lagging or enclosing in a conduit.

Note: The above does not completely exclude the need for lagging to protect any of the pipes from temperature extremes.

It is essential that appropriate pressure testing (in accordance with AS/NZS 3500 or relevant local requirements) is carried out prior to burying or concealing the PSC Pex system.

Can PSC Pex be used under the slab?

Yes. The flexibility of PSC Pex allows it to be supplied in coils meaning installations under the slab can be made in a single, continuous length without the need for fittings. PSC Pex is not affected by concrete, (it is commonly encased in concrete for radiant floor heating). PSC Pex, however, must be sleeved when penetrating a slab.

When PSC Pex is used under a slab, PSC Corrugated Sleeve conduit must be used.

Can PSC Pex be used for underground cold-water service applications?

Yes. Although the high temperature resistance of PSC Pex makes it particularly suitable for hot and cold interior plumbing applications, it also makes an excellent underground water service piping.

Can I braze adaptors after the PSC Pex pipe has been fitted?

No, all brazing or soldering must be performed on the fittings prior to the PSC Pex pipe being connected. Sufficient time should

be allowed for the fitting to cool prior to attaching the PSC Pex pipe.

Is the PSC Pex system approved?

Yes, the PSC Pex system is approved under the following AS/NZS standards. Fittings–AS/NZS 2537 and Pipe–AS/NZS 2492

Can I use PSC Pex to connect solar panels to the storage tank?

No, the Australian Standards do not allow pex pipe to be used on the flow or return lines between solar panels and solar storage vessels.

Pressure test

At completion, carry out pressure testing as required per AS/NZS 3500 and or any requirements specified by local authorities.

3. FITTINGS

PSC PEX Crimp fittings are especially designed and engineered to complement the PSC PEX Pipe and comply to AS 2537. All PSC PEX fittings are made from solid DR brass (i.e Dezincification Resistant quality in accordance with AS 2345) and require no heat, flame or solvents when jointing to PSC PEX pipe.

Available sizes

Nom. O.D
DN 16 - 16mm
DN 20 - 20mm
DN 25 - 25mm

Refer to a full product listing later in this brochure.

4. PSC PEX CRIMP TOOLS

PSC PEX Crimp tools are specifically designed to be used with PSC PE-X pipe to ensure a simple and effective joint. The tools are made from the highest quality materials and are designed to give years of trouble free service.

Important:- Crimp tool should be adequately maintained and adjusted regularly to achieve optimum results.

5. WARRANTY

PSC PEX Crimp Plumbing System carries a 25 year warranty when the system is installed by a **licenced plumber** in accordance with AS 3500 of the National Plumbing code parts 1, 4 and 5 and established installation practices.

6. COMPLIANCE WITH AUSTRALIAN STANDARDS

PSC PEX Crimp PEX Plumbing System is licenced by SAI Global to Australian Standards and complies with Australia and New Zealand Standards AS/NZS 2492 for pipe (Lic. No. 21274) and AS 2537 for fittings (Lic. No 21276).





Jointing Procedure

1



TOOL INSPECTION:

Make sure all tooling is in good operational condition and is approved for use on PSC PEX Crimp fittings. Ensure that when the tool is closed, the jaws are aligned and there is no gap between them. The jaws must be clean and free of any defects or

debris. If a gap is visible between the jaws proceed to tool adjustment section and follow the instructions to ensure the tool is adjusted correctly. Warning: An incorrectly adjusted tool or damaged jaws may result in joint failure or tool damage.

TOOL ADJUSTMENT: The tooling will need to be adjusted if the jaws are not fully closed at the end of the crimping process or if the crimp gauge will not pass easily over both the indentations in the stainless steel sleeve after crimping. To adjust the tool follow the procedure below and then 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. Crimp up joint and check with Crimp Gauge, until the Gauge passes easily over both the indentations in the stainless steel sleeve.

2



Cut the pipe to be joined using PSC PEX Pipe Cutters. Make sure the pipe is cut squarely. Ensure after cut there are no rough edges and the internal surface of the pipe is clean and free of any defects.

3

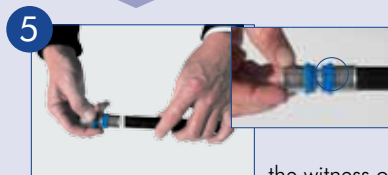


Round the end of the pipe to be joined by inserting the plastic rounding tool into the pipe, using the corresponding size. The rounding tool should be fully inserted into the pipe using a twisting action and repeated if necessary until it moves freely within the pipe.

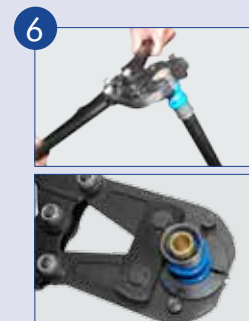




4 Inspect the inside of the fitting to ensure that it is free of dirt and grit etc.



5 Push the pipe slowly over the barbed fitting and within the stainless steel sleeve until the pipe is visible through the witness openings in the blue plastic stop ring. The pipe should be visible through all the witness openings.



6 Centralise the PSC Crimping Tool so the Jaws are aligned over the stainless steel sleeve. The jaws should be against the plastic stop ring and not over it. Slowly compress the tool until the jaws are fully closed.



7 To check the joint has been compressed correctly, use the crimp gauge supplied with the tool. If the gauge's corresponding size easily passes over both the crimp indentations made in the stainless steel sleeve the joint is crimped correctly. If the crimp gauge will

not pass easily over both the indentations in the stainless steel sleeve the crimping tool needs to be adjusted. Refer to the tool adjustment section. When the tool has been adjusted, re-crimp the joint and re-check with the crimp gauge. Repeat process until correct.

8 When soldering the connecting barbs (male or female) solder the brass connecting barbs first and allow to cool sufficiently before assembly. When assembling the fitting, ensure the plastic stop ring, both the O'rings and the stainless steel sleeve are installed correctly. (Refer to picture on the front page of this brochure for assembly detail)

9 Pressure test the complete installation in accordance with AS3500 parts 1, 4 and 5.

Important: This system must be installed by a licensed plumber in accordance with this procedure otherwise warranty will be void.

Product Listing

NO.1 STRAIGHT COUPLING



Code	Description
656600	No.1 Straight Coupling 16mm
656601	No.1 Straight Coupling 20mm
656602	No.1 Straight Coupling 25mm

NO.1R REDUCING COUPLING



Code	Description
656606	No.1R Reducing Coupling 20 x 16mm
656607	No.1R Reducing Coupling 25 x 16mm
656608	No.1R Reducing Coupling 25 x 20mm

NO.2 STRAIGHT FEMALE CONNECTOR



Code	Description
656614	No.2 Straight Connector 16mm x 15mm FI
656615	No.2 Straight Connector 20mm x 15mm FI
656616	No.2 Straight Connector 20mm x 20mm FI
656619	No.2 Straight Connector 25mm x 25mm FI

PROOF

NO.3 STRAIGHT MALE CONNECTOR



Code	Description
656624	No.3 Straight Connector 16mm x 15mm MI
656626	No.3 Straight Connector 20mm x 15mm MI
656627	No.3 Straight Connector 20mm x 20mm MI
656628	No.3 Straight Connector 25mm x 20mm MI
656629	No.3 Straight Connector 25mm x 25mm MI
656625	No.3 Straight Connector 16mm x 20mm MI

NO.12 ELBOW



Code	Description
656634	No.12 Elbow 16mm
656635	No.12 Elbow 20mm
656636	No.12 Elbow 25mm

NO.12R ELBOW



Code	Description
656640	No.12R Elbow 20mm x 16mm
656641	No.12R Elbow 25mm x 16mm
656642	No.12R Elbow 25mm x 20mm

NO.13 MALE ELBOW



Code	Description
656647	No.13 Elbow 16mm x 15mm MI
656649	No.13 Elbow 20mm x 15mm MI
656650	No.13 Elbow 20mm x 20mm MI
656652	No.13 Elbow 25mm x 20mm MI
656653	No.13 Elbow 25mm x 25mm MI

NO.14 FEMALE ELBOW



Code	Description
656658	No.14 Elbow 16mm x 15mm FI
656660	No.14 Elbow 20mm x 15mm FI
656661	No.14 Elbow 20mm x 20mm FI
656663	No.14 Elbow 25mm x 20mm FI
656664	No.14 Elbow 25mm x 25mm FI

NO.15 LUGGED FEMALE ELBOW



Code	Description
656670	No.15BP Elbow 16mm x 15mm FI
656672	No.15BP Elbow 20mm x 20mm FI

NO.19 LUGGED MALE ELBOW



Code	Description
656676	No.19BP Elbow 16mm x 15mm MI 65mm Long
656677	No.19BP Elbow 16mm x 15mm MI 90mm Long
656678	No.19BP Elbow 16mm x 15mm MI 150mm Long
656679	No.19BP Elbow 16mm x 15mm MI 200mm Long
656682	No.19BP Elbow 20mm x 15mm MI 95mm Long

NO.24 TEE



Code	Description
656690	No.24 Tee 16mm
656691	No.24 Tee 20mm
656692	No.24 Tee 25mm

PROOF

NO.25 REDUCED CENTRE TEE



Code	Description
656697	No.25 Tee Reduced Centre 20x20x16mm (16mm Centre)
656699	No.25 Tee Reduced Centre 25x25x20mm (20mm Centre)
656698	No.25 Tee Reduced Centre 25x25x16mm (16mm Centre)

NO.26 REDUCED END TEE



Code	Description
656703	No.26 Tee Reduced End 20x16x20mm (20mm Centre)
656704	No.26 Tee Reduced End 25x20x25mm (25mm Centre)

NO.27 REDUCED CENTRE & END TEE



Code	Description
656709	No.27 Tee Reduced Centre+End 20x16x16mm (16mm Centre)
656710	No.27 Tee Reduced Centre+End 25x20x20mm (20mm Centre)

NO.61 STOPPER



Code	Description
656725	No.61 Stopper 16mm
656726	No.61 Stopper 20mm
656727	No.61 Stopper 25mm

NO.62 STRAIGHT TAP CONNECTOR



Code	Description
656732	No.62 Straight Tap Connector Flat 16mm x 15mm FI Nut
656733	No.62 Straight Tap Connector Flat 20mm x 20mm FI Nut

FLARED COMPRESSION UNION



Code	Description
656738	Flared Compression Union 16mm x 15mm FL
656739	Flared Compression Union 20mm x 20mm FL

BATH/LAUNDRY ASSEMBLY



Code	Description
656744	Bath/Laundry Assembly Right Angled 200mm (Floor Entry)
656746	Bath/Laundry Assembly Right Angled 300mm (Floor Entry)
656748	Bath/Laundry Assembly Straight 300mm (Side Entry)

SHOWER ASSEMBLY



Code	Description
656753	Shower Assembly Right Angled 150mm (Floor Entry)
656754	Shower Assembly Right Angled 200mm (Floor Entry)
656756	Shower Assembly Right Angled Barbs Up 150mm (Top Entry)
656757	Shower Assembly Right Angled Barbs Up 200mm (Top Entry)
656759	Shower Assembly Straight 150mm (Side Entry)

CONNECTING BARB FEMALE



Code	Description
656765	Connecting Barb Female 16mm
656766	Connecting Barb Female 20mm
656767	Connecting Barb Female 25mm

PROOF

CONNECTING BARB MALE



Code	Description
656772	Connecting Barb Male 16mm
656773	Connecting Barb Male 20mm
656774	Connecting Barb Male 25mm

HAND CRIMPING TOOL



Code	Description
656800	Hand Crimping Tool 16mm
656801	Hand Crimping Tool 20mm
656802	Hand Crimping Tool 25mm

JAW INSERT FOR HAND CRIMPING TOOL



Code	Description
656810	Jaw Insert 16mm
656811	Jaw Insert 20mm
656812	Jaw Insert 25mm

PIPE ROUNDING TOOL



Code	Description
656815	Pipe Rounding Tool 16, 20, 25mm

CRIMP GAUGE



Code	Description
656820	O-Ring Crimp Gauge 16, 20, 25mm

PIPE CUTTER



Code	Description
656568	Cutter Pipe PSC PEX Multi 16-32m

Important: Below listed PSC Pex Pipes and Accessories can be used with all three PSC Pex Plumbing Systems – Sleeve Type, Crimp and Push. PSC PEX Pipe is only to be used with all three PSC PEX system fittings.

HOT & COLD WATER PIPE (BLACK) STRAIGHT LENGTH



Code	Description
656300	Hot & Cold Water Pipe (Black) 5m Length 16mm
656301	Hot & Cold Water Pipe (Black) 5m Length 20mm
656302	Hot & Cold Water Pipe (Black) 5m Length 25mm

HOT & COLD WATER PIPE (BLACK) COIL



Code	Description
656316	Hot & Cold Water Pipe (Black) 100m Coil 16mm
656317	Hot & Cold Water Pipe (Black) 100m Coil 20mm
656315	Hot & Cold Water Pipe (Black) 50m Coil 25mm

HOT & COLD WATER PIPE (BLACK) IN CONDUIT COIL



Code	Description
656334	Hot & Cold Water Pipe (Black) in Conduit 50m Coil 16mm
656335	Hot & Cold Water Pipe (Black) in Conduit 50m Coil 20mm

CONDUIT BLACK FOR PSC PEX PIPE



Code	Description
656336	50m Coil for 25mm PEX Pipe (Conduit only)

PROOF

RECYCLED WATER PIPE (PURPLE) COIL



Code	Description
656322	Recycled Water Pipe (Purple) 50m Coil 16mm
656323	Recycled Water Pipe (Purple) 50m Coil 20mm
656324	Recycled Water Pipe (Purple) 50m Coil 25mm

RAIN WATER PIPE (GREEN) COIL



Code	Description
656328	Rain Water Pipe (Green) 50m Coil 16mm
656329	Rain Water Pipe (Green) 50m Coil 20mm
656330	Rain Water Pipe (Green) 50m Coil 25mm

CLIP MASONRY NAIL



Code	Description
656533	Open Clip 16mm Masonry Nail
656534	Open Clip 20mm Masonry Nail
656535	Open Clip 25mm Masonry Nail

CLIP TIMBER NAIL



Code	Description
656530	Open Clip 16mm Timber Nail
656531	Open Clip 20mm Timber Nail
656532	Open Clip 25mm Timber Nail

ONLY

CLIP METAL SCREW



Code	Description
656537	Open Clip 16mm Metal Screw
656538	Open Clip 20mm Metal Screw
656539	Open Clip 25mm Metal Screw

PROFILE BEND BRACKET



Code	Description
656580	Profile Bend Bracket 90 Degree x 5D 16mm
656581	Profile Bend Bracket 90 Degree x 5D 20mm
656582	Profile Bend Bracket 90 Degree x 5D 25mm

PROOF

NEW SOUTH WALES

<i>Branch</i>	<i>Phone</i>	<i>Fax</i>
Artarmon	02 9439 4422	02 9438 1872
Blacktown	02 9671 4244	02 9621 3133
Broadmeadow	02 4962 5377	02 4962 5360
Brookvale	02 9938 6444	02 9905 1386
Campbelltown	02 4628 7289	02 4628 7358
Caringbah	02 9525 3677	02 9525 3194
Carlton	02 9547 2711	02 9547 2733
Eastwood	02 9874 8777	02 9874 5889
Erina	1300 240 803	02 4331 5768
Katoomba	02 4782 9255	02 4782 9055
Leichhardt	02 9566 4122	02 9566 4866
Lidcombe	02 9748 7866	02 9748 1221
Matraville	02 9666 3799	02 9666 5377
Mittagong	02 4871 3585	02 4871 2938
Padstow	02 9793 3377	02 9793 3311
Penrith	02 4721 7855	02 4721 8699
Thornleigh	02 9484 5866	02 9484 5377
Warwick Farm	02 9600 7700	02 9600 7880
Waterloo	02 9699 9477	02 9319 3037
Waverley	02 9369 1455	02 9369 2344

VICTORIA

Albury	02 6021 2655	02 6021 3766
Cheltenham	03 9553 1331	03 9553 1330
Hallam	03 9702 3800	03 9702 3811
Hoppers Crossing	03 9369 3088	03 9369 0238
Mitcham	03 9872 3199	03 9872 4053
Mornington	03 5976 4155	03 5976 4166
Port Melbourne	03 9645 4866	03 9645 2788
Preston	03 9484 9299	03 9484 9070

QUEENSLAND

Burleigh Heads	07 5522 3300	07 5522 3399
Rocklea	1300 107 526	07 3136 0193
Labrador	07 5635 0000	07 5635 0008