

COPPER PRESS SYSTEM (WATER)

TECHNICAL AND INSTALLATION GUIDE





WE ARE HERE FOR THE LONG RUN AND SO ARE OUR PRODUCTS!

At the Plumbers' Supplies Co-operative we are very proud to have had over 60 successful years in business servicing the ever changing needs of our Members. Almost 10 years ago we decided to launch our own products, allowing us to be in full control of the quality, supply and marketing functions associated with the PSC Products brand. We place a large emphasis on quality, so you can be assured that if any products carry the PSC logo, you are buying a high quality, well supported product backed by PSC. PSC Products are produced and audited to the requirements of Australian Standards under the Watermark Scheme by SAI Global, offering an additional layer of independent quality assurance and compliance verification to Standards.

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PSC Press Water is a comprehensive copper press fitting system for use with conformant copper tube to AS1432 Type A and B Only: providing a durable and secure leak-proof joint for many water and Fire Service Applications. (Other Applications are possible based on requirements by consultation with PSC).

PSC Press Water fittings are Watermark Certified (License Number WMK 26126) and manufactured in accordance to AS3688.



WHEN THINKING OF USING A COPPER PRESS SYSTEM





Leak Detection

Design features on the O-ring allows for missed press leak detection when tested correctly using the defined procedure in this manual.

Long Lasting Performance

When installed correctly as per the requirements of this document and other regulatory requirements.



Secure and durable permanent joint ensures the fitting cannot be tampered with.

Fully Certified and Tested

Extensive third party certification and testing offers peace of mind, in addition warranty and insurance is covered by PSC.



Flame Free

Flame free installation means no need for hot works permits and no need to lug around heavy bottles used for brazing.

Reduced Installation Time

Simple, quick and reliable installation translates to reduced labour time.



PSC Press Copper Crimp Fitting Information

Applications

PSC Press Water Fittings are suitable for:

- Potable Water Installations
- Hot Water Installations
- Solar Water installations (refer to table on page 6)
- Other media also possible (with consultation on application) to PSC for approval)

Leak Before Press

The precise design of PSC Press fittings allows water or air to pass the sealing element of unpressed fittings, thereby providing a leakage point during the commissioning of the system, when tested using the defined processes below.

When the fitting is pressed, the 0-ring material compresses, filling the gaps, creating a leak free joint.

Final testing of the system should be conducted in accordance with AS/NZS3500 and any other additional local regulations and/or requirements.

Testing with Water

IMPORTANT: Unpressed fittings are identified by pressurising the system slowly, ensuring that all air is removed from the pipework, with a pressure range of 100 kPa to 350 kPa. Inspect each joint for visual signs of leaking. After conformance, conduct presure testing as per AS/NZS3500.

Testing with Air

IMPORTANT: Unpressed fittings are identified by pressurising the system slowly with air, increase the pressure to be between 50 kPa and 200 kPa. Inspect each joint with a leak check liquid material/spray for any visual signs of leakage. After conformance, conduct presure testing as per AS/NZS3500.





Warranty on PSC Press Fittings

We place a large emphasis on quality, so you can be assured that if any products carry the PSC logo, you are buying a high quality, well supported product backed by PSC. To back this up, when using PSC Press with Type A and B copper tube compliant with AS1432 other than PSC copper tube, PSC will provide warranty for the same period of the copper tube used, to a maximum of 25 Years. If the copper tube warranty on the tube used is 10 years, then the PSC warranty for the PSC Press fitting is also 10 Years. This is a maximum 25 year guarantee against faults caused by defective manufacturing of PSC Press fittings.

For Warranty to Apply

IMPORTANT:

- 1- TOOLING: approved tools within manufacturer's service requirements, that are well maintained and used as per manufacturer's detailed requirements.
- 2- TUBE: tube must be Type A or B conformant to AS1432.
- 3- ENVIRONMENT: PSC Press must be installed in a suitable external environment and be used for the correct application.
- 4- INSTALLATION: all PSC Press fittings must be installed by a licenced Plumber in accordance with the PSC Press installation guidelines, AS/NZS3500 and any other additional local regulations and/or requirements.

Tooling Repair and Servicing

PSC recommends, supplies, repairs and services all Novopress copper battery tools; this is carried out in our Tooling Service Department located in our Head Office. Please contact your local branch for any repairs, testing, inspection or service of Novopress tools.



Technical Data/Uses (Water)

PSC Press is suitable for use with Type A and B copper tube complying with AS1432.

Note: AS3688 has limitation for coverage on products to 95° Celsius at 1400Kpa. AS4020 Testing is limited to 105° Celsius. The table below is a recommendation.

WATER O-RING SCOPE OF APPLICATION

Application	Comment	MOP [kPa]	TEMP [°C]	Water (EPDM)	HT (FKM)
Water Supply				Recomi	nended
Hot and cold potable water		1600	Up to 95	✓	Х
Solar systems (flat- panel collectors)	System capable of handling 200°C as a peak temperature but not sustained temperature over a period of time	1600	Over 95	X	✓
	System operates at a sustained temperature of 200 °C (eg. At the solar collector)	1600	Over 95	X	✓
Fire Services – Fire Sprinkler & Hose Reel	Capable of handling the required test pressure of 1700kPa or 1.5 times the design pressure as specified by AS2419.1	1600	Up to 95	✓	X
Steam	Low pressure steam equipment	≤100	Over 95	X	✓
Spring water	Must contact PSC	1600	Up to 95	✓	Х
Pump circulated HW systems	Compliant with EN 12828	1600	Over 95	✓	✓

Other media can be used subject to request on application with PSC.

Acetylene, Ammoniac gases, Coolant Inhibitor, Glycerine Triacetate, Medical Gas Applications, Methanol, Refrigeration and Air Conditioning Applications, Sodium Hydroxide, Urea Solution.

MOP[kPa] Maximum safe working pressure (continuous operating pressure), greater short duration peaks possible

TEMP(°C) Maximum continuous operating temperature (Celsius), greater short duration peaks possible Fluorocarbon Rubber

EPDM Ethylene Propylene Diene Monomer

Warning: The installer needs to verify that PSC PRESS Solar fittings will not be subjected to temperatures and/or pressures that exceed the recommended operating Temperature and Pressure limits.

Solar System manufacturer's operating parameters need to be verified and checked to ensure conformance for PSC Press fitting application into their respective systems. This needs to be assessed for all aspects of the installation, commissioning and operation, this includes, but is not limited to Solar Panel Installation including pipework and PSC Press Fittings that are installed and NOT commissioned/operational with water for a period of time.

APPROVED TOOLS (with compliant copper press jaws)

(
Manufacturer	Model/s	Approved
Novopress	ACO 152, ACO 203	✓
Milwaukee	M12HPT-0, M128HPT-0	✓
Viega	Picco, PT3-AH, 4B	✓
Rothenberger	Romax Compact, Romax 3000	✓
Ridgid	RP340 & RP210-B	✓
Kempress	KPS, KPL & KPL2	✓

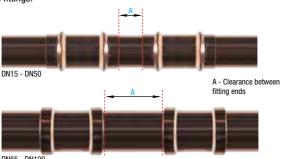
Other tooling with compatible jaws may be approved on application to PSC. Written approval is required from PSC before use on PSC Press Product.



Design Considerations

Distance between PSC Press fittings

A minimum separation between fitting installation needs to occur to ensure the press forming does not possibly compromise either joint during installation. The concentricity of Copper Tube Wall Thickness in the pipework can also affect the fittings integrity to seal when they are installed too close together. The following table indicates the minimum separation distance required for PSC PRESS Fittings by size of fitting. This distance must be applied between any fittings as a minimum from fitting edge to fitting edge. This Design requirement needs to be conformant to have warranty coverage on all PSC Press fittings.



DN65 - DN100

Tube Size	Minimum Clearance A (mm)
15mm	10
20mm	10
25mm	10
32mm	20
40mm	30
50mm	40
65mm	40
80mm	40
100mm	40

Brazing near PSC Press fittings

No Hot Works, (Soldering, Welding or Annealing) can be performed within a minimum defined distance of any installed PSC Press Fittings.

The minimum separation distance by size is stated in the table below.

Considerations should be made prior to any installation that may require any Soldering, Welding or Annealing to ensure it is done prior to installation with PSC Press Fittings. If the defined minimum separation distances cannot be achieved and any Hot Work detailed needs to be performed, preventive measures need to be applied to ensure the installed fitting 0-ring maximum operating temperature, defined in this document by O-ring Type, is not exceeded at any time by heat transfer or thermal conductivity. It should also be noted that considerations also need to be taken to ensure installation location will not affect PSC Press fittings maximum operating temperature with radiant heat and/or heat transfer during installation, commissioning and operation.

Tube Size	Minimum Clearance (mm)
15mm	400
20mm	600
25mm	800
32mm	1000
40mm	1200
50mm	1500
65mm	1800
80mm	2000
100mm	2500



Installation Instructions

Note: Check pipe and fitting compatibility; both the piping material (must be Type A or B copper tube conformant to AS1432) and the O-Ring must be checked if suitable for purpose (see page 6) and the exterior environment must also be considered.

1. Cut the Tube

An appropriate copper tube cutter must be used to ensure a clean square cut.

Note: It is important that the copper tube is cut completely square, the end of the tube (outside) should be clean and free from any scratches or damage such as dints or deformity.





2. Remove Burrs

Make sure that the internal and external tube end is completely free from burrs or sharp edges by using a file or deburring tool. Note: ensure over use does not affect the tube end outside diameter

3. Inspect the Fitting

Before inserting the tube, check O-Rings (15-50mm) and also spacers/grab rings (65-100mm) for correct placement, they are free of damage or any dust, dirt or debris. We recommend the fittings are retained in packaging up to the point of use where ever possible.





4. Marking Insertion Depth on Tube

All cut and deburred Copper tube ends for insertion into the fitting require an insertion depth mark to be applied to the tube prior to insertion into the fitting. The mark will be applied by measuring from the end of the tube with a ruler or tape measure and using a marker pen to the required length. The mark will ensure the tube is inserted correctly into the fitting prior to press.

Table Insertion Marking Length by Size

Tube Size	Marking Insertion Depth
DN15	19mm
DN20	24mm
DN25	25mm
DN32	27mm
DN40	34mm
DN50	42mm
DN65	45mm
DN80	52mm
DN100	62mm



5. Tube Insertion

The Tube should be inserted Parallel into the fitting Coupling ensuring no damage is caused to the O'ring or grab ring and spacer (DN65-100mm), ensuring the insertion mark is visible at the end of the fitting next to the fitting coupling end.



6. Press Tool Selection

The tool to be used should be conformant, well maintained and within its Manufacturers service requirement. The correct jaw type and size should be inspected to ensure it is clean and free from defects and contamination.

Note: only approved tooling may be used on PSC Press fittings. Refer to Approved Tooling Table on page 6.

7. Press the Joint

The jaw should be placed over the fitting. correctly aligned and positioned. When all requirements are correct, the tool should be activated to press the joint. The tool should complete the correct cycle and the jaw ends should fully close on completion. If the tool does not complete the required cycle during operation the fitting should be cut out, replaced then repressed. No fitting should be pressed more than once. Tooling should be used as per its respective manufacturers' documented requirements.





8. Joint Completion

The fitting should be inspected after pressing to ensure the correct press has been performed and no cracking or over deforming has occurred. The pipe insertion mark should be checked and be to the fitting edge, to ensure it has not moved. (DN65/DN80/DN100 has a sticker on each fitting that can be removed after press and inspection to ensure conformance).

IMPORTANT: Refer to page 4 section 'Leak Before Press', Testing with Water' and 'Testing with Air' BEFORE conducting pressure testing as per AS/NZS3500.



PSC Press Fittings FAQ

PSC Press Fittings Frequently Asked Questions

- Q. Do I need to lubricate the 0-ring?
- A. No. the 0-ring is pre-lubricated. Using additional lubricants could reduce the longevity of the 0-ring and void the warranty. Care should be taken during copper tube insertion to ensure the O-ring does not roll or dislodge.
- Q. What grades/types of copper tube do the fittings suit?
- A. Annealed (ANN). Bendable Quality (BQ) and Hard Drawn (HD) Type A and B copper tube compliant to AS1432.
- Q. What pipe preparation is required?
- A. Please see 'Installation Instructions' on pages 8 & 9.
- Q. When using PSC Press with older pipes, what surface preparation is required?
- A. The surface should be prepared in the same way as you normally would with brand new pipe.
- Q. Can the fittings be used for solar hot water installations?
- A. Standard PSC Press Water fittings should not be used for solar installations between the solar panel and the tank. PSC Press HT (solar) fittings are recommended for applications above 95 Degrees Celsius.
- Q. Can PSC Press Fittings be placed in the ground?
- A. Yes, but the tube and fittings must be protected when installed in any corrosive and/or acidic environments, this includes possible ground water exposure, as per regulatory requirements.
- Q. Can PSC Press Fittings be exposed to direct UV sunlight and heat?
- A. Yes. Please refer to the Table on page 6.



PSC Press Fittings Frequently Asked Questions

- Q. Can PSC Press fittings be used on oil lines or compressed air installations?
- A. PSC Press Water fittings can be used for compressed air (oil free) installations, PSC Press Water fittings can be used for compressed air (with a small oil content) and on some oil lines. Consultation with PSC on specific installation requirements is highly recommended.
- Q. Can PSC Press Fittings be used with medical gases?
- A. No. the fittings are not recommended for use with most medical gases. Consultation with PSC on specific installation requirements is recommended.
- Q. Am I able to use other tools to crimp a PSC Press fitting?
- A. Yes, PSC Press fittings use a V profile and are therefore compatible with the following tools and jaws that use the same profile: Novopress ACO 152/203, Milwaukee (M12HPT-0, M128HPT-0), Kempress tools (KPS, KPL & KPL2), Viega (Picco), Viega (PT3-AH & 4B), Rothenberger (Romax compact), Rothenberger (Romax 3000), Ridgid (RP340, RP210-B), hydraulic press tools.
- Q. Does the clipping of fittings/tube differ from a welded copper application?
- A. No, the same type of clips can be used when installed in accordance with Australian standards and any other local regulatory requirements.
- Q. What is the recommended space between pressed fittings?
- A. Please see the 'distance between PSC Press fittings' section on page 7.



PSC Press Fittings FAQ

PSC Press Fittings Frequently Asked Questions

- Q. Can PSC Press be installed where the mains water line won't shut off?
- A. Yes, PSC Press Water fittings can be used where the mains water line cannot be turned off. After pressing the PSC Press fitting it will provide a watertight joint. As long as the 0-ring has not been dislodged during installation under pressure or movement there will be no problems; precautions to protect the pressing tool are also highly recommended.
- Q. Can PSC Press fittings be dismantled and reused?
- A. No. once pressed it is a permanent installation.
- Q. Will I be able to rotate a PSC Press fitting once installed?
- A. No, once pressed, a PSC Press fitting cannot be rotated
- Q. Can you braze (silver solder) near a PSC Press fitting?
- A. See section on 'Brazing near PSC Press fittings' on page 7. It is not recommended unless distance and precautionary measures are taken to prevent damage to the sealing O-ring.
- Q. What procedure should I follow to show any leaks at the end of my installation?
- A. Refer to 'Testing with Water' and 'Testing with Air' on page 4 of this Technical and Installation Guide.
- Q. What are some of the benefits of PSC Press fittings?
- A. Fast, easy and ergonomical installation. The built in PSC Press Leak indicator design gives an indication of an unpressed joint (refer to instructions on page 4), which will help uncover possible problems with installation.





PRODUCT LISTING



NO I Couping	
Code	Size (D1)
161001	DN15
161002	DN20
161003	DN25
161004	DN32
161005	DN40
161006	DN50
161007	DN65
161008	DN80
161009	DN100





No 1S Slip Coupling

ob oonb		
Code	Size (D1)	
161020	DN15	
161021	DN20	
161022	DN25	
161023	DN32	
161024	DN40	
161025	DN50	
161026	DN65	
161027	DN80	
161028	DN100	





No 1R Red Coupling

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Code	Size (D1)
161160	DN 20 X 15 No 1R
161161	DN 25 X 15 No 1R
161162	DN 25 X 20 No 1R
161163	DN 32 X 25 No 1R
161164	DN 40 X 25 No 1R
161165	DN 40 X 32 No 1R
161166	DN 50 X 25 No 1R
161167	DN 50 X 32 No 1R
161168	DN 50 X 40 No 1R
161169	DN 65 X 32 No 1R
161170	DN 65 X 40 No 1R
161171	DN 65 X 50 No 1R
161172	DN 80 X 40 No 1R
161173	DN 80 X 50 No 1R
161174	DN 80 X 65 No 1R
161175	DN 100 X 50 No
161176	DN 100 X 65 No
161177	DN 100 X 80 No









M&F Reducer	
Code	Size (D1)
161190	DN 20 X 15
161191	DN 25 X 15
161192	DN 25 X 20
161193	DN 32 X 20
161194	DN 32 X 25
161195	DN 40 X 25
161196	DN 40 X 32
161197	DN 50 X 25
161198	DN 50 X 32
161199	DN 50 X 40
161200	DN 65 X 40
161201	DN 65 X 50
161202	DN 80 X 50
161203	DN 80 X 65
161204	DN 100 X 50
161205	DN 100 X 65
161206	DN 100 X 80





No 2 Female Coupling

Code	Size (D1)
161235	DN15 X 1/2" BSP
161236	DN20 X 3/4" BSP
161237	DN25 X 1" BSP
161238	DN32 X 1 1/4" BSP
161239	DN40 X 1 1/2" BSP
161240	DN50 X 2" BSP



No 3 Male Coupling

no o maio ocupinig		
Code	Size (D1)	
161245	DN15 X 1/2" BSP	
161246	DN15 X 3/4" BSP	
161247	DN20 X 1/2" BSP	
161248	DN20 X 3/4" BSP	
161249	DN25 X 3/4" BSP	
161250	DN25 X 1" BSP	
161251	DN32 X 1 1/4" BSP	
161252	DN40 X 1 1/2" BSP	
161253	DN50 X 2" BSP	





No 12 90D Elbow F&F Code Size (D1) 161030 DN15 161031 DN20 161032 DN25 161033 DN32 161034 DN40 161035 DN50 161036 DN65 161037 **DN80**





No 12 900 Flhow M&F

DN100

161038

NO 12 90D EIDOW M&F	
Code	Size (D1)
161050	DN15
161051	DN20
161052	DN25
161053	DN32
161054	DN40
161055	DN50
161056	DN65
161057	DN80
161058	DN100





No 12 45D Elbow F&F

Code	Size (D1)
161070	DN15
161071	DN20
161072	DN25
161073	DN32
161074	DN40
161075	DN50
161076	DN65
161077	DN80
161078	DN100



No 12 45D Elbow M&F

Size (D1)
DN15
DN20
DN25
DN32
DN40
DN50
DN65
DN80
DN100





No 13 Male Elbow

Code Size (D1) 161258 DN20 X 3/4"



No 14 Female Elbow

Code Size (D1) 161262 DN20 X 3/4"



No 15 Female Back Plate Elbow

Code Size (D1) 161268 DN15 X 1/2" 161273 DN20 X 3/4"



No 19 Male Back Plate Elbow

Code Size (D1) 161278 DN15 X 1/2" x 75MM long DN15 X 1/2" x 95MM long 161279





No 24 Tee Equal	
Code	Size
161110	DN15
161111	DN20
161112	DN25
161113	DN32
161114	DN40
161115	DN50
161116	DN65
161117	DN80
161119	DN100



No 25 Tee Red

NO ZO ICC IICU	
Code	Size
161130	DN 20 X 20 X 15
161133	DN 25 X 25 X 15
161134	DN 25 X 25 X 20
161135	DN 32 X 32 X 15
161136	DN 32 X 32 X 20
161137	DN 32 X 32 X 25
161138	DN 40 X 40 X 20
161139	DN 40 X 40 X 25
161140	DN 40 X 40 X 32
161141	DN 50 X 50 X 25
161142	DN 50 X 50 X 40
161143	DN 65 X 65 X 50
161144	DN 80 X 80 X 50
161145	DN 80 X 80 X 65
161146	DN 100 X 100 X 50
161147	DN 100 X 100 X 65
161148	DN 100 X 100 X 80





No 26 Tee Red

Code	Size
161131	DN 20 X 15 X 20



No 27 Tee Red

Code	Size
161132	DN 20 X 15 X 15





No 61 End Cap

Code	Size
161220	DN15
161221	DN20
161222	DN25
161223	DN32
161224	DN40
161225	DN50



No 61 End Cap W/port

Code	Size
161226	DN65
161227	DN80
161228	DN100



No 62 Straight Loose Nut Connector

Code	Size
161285	DN15 X 1/2" BSP FI
161286	DN20 X 3/4" BSP FI



No 63 Loose Nut Connector

Code	Size
161290	DN15 X 1/2" BSP FI
161291	DN20 X 3/4" BSP FI



No 69 Male Union

Code	Size
161295	DN15 X 1/2" R BSP
161296	DN20 X 3/4" R BSP
161297	DN25 X 1" R BSP
161298	DN32 X 1 1/4" R BSP
161299	DN40 X 1 1/2" R BSP
161300	DN50 X 2" R BSP





PSC PEX Crimp Water Adaptor

Code	Size
161306	DN15 CU X PEX DN16
161307	DN20 CU X PEX DN20
161308	DN20 CILX PEX DN25



PSC PEX Sleeve Type Water Adaptor

Size
DN15 CU X PEX DN16
DN20 CU X PEX DN20
DN20 CU X PEX DN25





PSC Press HT (Solar)

No 1 Coupling

Code Size (D1) 162101 DN15 162102 DN20



No 1S Slip Coupling

Code Size (D1) 162105 DN15 162106 DN20



No 1R Red Coupling

Code Size (D1) 162110 DN 20 X 15 No 1R



No 2 Female Coupling

Code Size (D1) 162132 DN15 X 1/2" BSP 162133 DN20 X 3/4" BSP



No 3 Male Coupling

Code Size (D1) 162134 DN15 X 1/2" BSP 162135 DN20 X 3/4" BSP





No 12 90D Elbow F&F

Code	Size (D1)
162115	DN15
162116	DN20



No 24 Tee Equal

Code	Size
162120	DN15
162121	DN20



No 61 End Cap

Code	Size
162125	DN15
162126	DN20







PRODUCT **DIMENSIONS**



No 1 Cou	pling			
Code	Size (D1)	L	Z	
161001	DN15	41.5	4.5	
161002	DN20	50.5	4.5	
161003	DN25	53.5	5.5	₫1
161004	DN32	57.5	5.5	'
161005	DN40	71.5	5.5	
161006	DN50	87.5	5.5	D1
161007	DN65	95.0	7.0	<u>' </u>
161008	DN80	109.0	7.0	z
161009	DN100	129.0	7.0	

No 1S Slip Coupling Size (D1) Code 161020 DN15 41.5 161021 DN20 50.5 161022 DN25 53.5 161023 DN32 57.5 161024 DN40 71.5 161025 DN50 87.5 161026 DN65 95.0 161027 DN80 109.0

DN100

129.0

161028





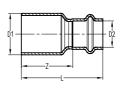
No 1R R	ed Coupling	g			
Code	Size (D1)	Size (D2)	L	Z	
161160	DN20	DN15	50.5	9.0	
161161	DN25	DN15	55.5	13.0	
161162	DN25	DN20	56.5	9.5	
161163	DN32	DN25	59.5	9.5	
161164	DN40	DN25	72.5	15.5	
161165	DN40	DN32	69.0	10.0	
161166	DN50	DN25	90.0	25.0	
161167	DN50	DN32	87.0	20.0	
161168	DN50	DN40	88.0	14.0	
161169	DN65	DN32	101.0	31.0	
161170	DN65	DN40	103.5	26.5	
161171	DN65	DN50	102.0	17.0	
161172	DN80	DN40	121.0	37.0	
161173	DN80	DN50	119.0	27.0	
161174	DN80	DN65	108.0	13.0	
161175	DN100	DN50	147.5	45.5	
161176	DN100	DN65	134.0	29.0	
161177	DN100	DN80	136.5	24.5	







M&F Reducer							
Code	Size (D1)	Size (D2)	L	Z			
161190	DN20	DN15	48.5	30.0			
161191	DN25	DN15	56.0	37.5			
161192	DN25	DN20	55.5	32.5			
161193	DN32	DN20	61.0	38.0			
161194	DN32	DN25	60.5	36.5			
161195	DN40	DN25	70.0	46.0			
161196	DN40	DN32	69.5	43.5			
161197	DN50	DN25	86.5	60.5			
161198	DN50	DN32	89.0	56.0			
161199	DN50	DN40	89.0	56.0			
161200	DN65	DN40	103.5	70.5			
161201	DN65	DN50	107.0	66.0			
161202	DN80	DN50	118.5	77.5			
161203	DN80	DN65	113.5	69.5			
161204	DN100	DN50	149.0	108.0			
161205	DN100	DN65	132.5	88.5			
161206	DN100	DN80	132.5	81.5			





No 2 Female Coupling							
Code	Size (D1)	Thread	L	Z	S		
161235	DN15	1/2" RP	40.5	5.0	26.0		
161236	DN20	3/4" RP	45.5	5.0	31.0		
161237	DN25	1" RP	48.5	6.0	37.5		
161238	DN32	1 1/4"RP	57	7.0	47.0		
161239	DN40	1 1/2"RP	62.5	7.0	53.0		
161240	DN50	2"RP	75.5	9.5	70.0		

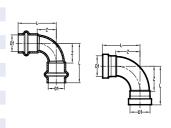


No 3 Ma	le Couplinç	J			
Code	Size (D1)	Thread	L	Z	S
161245	DN15	1/2" R	39.0	21.0	22.0
161246	DN15	3/4" R	41.0	23.0	28.0
161247	DN20	1/2" R	43.6	20.6	28.0
161248	DN20	3/4" R	46.0	23.0	28.0
161249	DN25	3/4" R	47.7	24.7	36.0
161250	DN25	1" R	50.0	27.0	36.0
161251	DN32	1 1/4" R	57.7	32.7	43.0
161252	DN40	1 1/2" R	63.3	32.3	50.0
161253	DN50	2" R	78.1	39.1	64.0

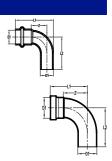




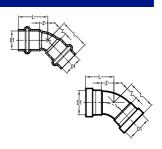
No 12 90D Elbow F&F					
Code	Size (D1)	L	Z		
161030	DN15	32.5	14.0		
161031	DN20	44.5	21.5		
161032	DN25	54.5	30.5		
161033	DN32	62.0	36.0		
161034	DN40	77.5	44.5		
161035	DN50	100.5	59.5		
161036	DN65	124.5	80.5		
161037	DN80	147.0	96.0		
161038	DN100	183.5	122.5		



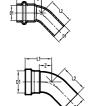
No 12 90D Elbow M&F						
Code	Size (D1)	L1	Z	L2		
161050	DN15	32.5	14.0	35.5		
161051	DN20	44.5	21.5	45.0		
161052	DN25	54.5	30.5	54.5		
161053	DN32	62.0	36.0	62.0		
161054	DN40	77.5	44.5	77.5		
161055	DN50	100.5	59.5	102.0		
161056	DN65	124.5	80.5	125.5		
161057	DN80	147.0	96.0	152.5		
161058	DN100	183.5	122.5	185.5		



No 12 45D Elbow F&F Code Size (D1) z 161070 DN15 24.5 6.0 161071 DN20 32.0 9.0 161072 DN25 36.5 12.5 161073 DN32 41.0 15.0 161074 DN40 51.5 18.5 161075 DN50 64.5 23.5 161076 DN65 79.5 35.5 161077 DN80 93.0 42.0 DN100 161078 118.0 57.0



No 12 45	5D Elbow M	l&F		
Code	Size (D1)	L1	Z	L2
161090	DN15	24.5	6.0	27.0
161091	DN20	32.0	9.0	34.0
161092	DN25	36.5	12.5	38.5
161093	DN32	41.0	15.0	43.0
161094	DN40	51.5	18.5	53.5
161095	DN50	64.5	23.5	67.5
161096	DN65	79.5	35.5	84.5
161097	DN80	93.0	42.0	99.0
161098	DN100	118.0	57.0	126.0





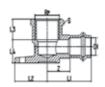
No 13 Ma	No 13 Male Elbow						
Code	Size (D1)	Thread	L1	L2	Z	S	
161258	DN20	3/4" R	44.0	32.5	21.0	29.0	



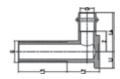
No 14 Fe	No 14 Female Elbow							
Code	Size (D1)	Thread	L1	L2	Z	S		
161262	DN20	3/4" RP	44.0	29.8	21.0	31.0		



No 15 F	emale B	ack Plate I	Elbow					
Code	Size (D1)	Thread	L1	L2	L3	L4	Z	S
161268	DN15	1/2" RP	37.5	27.5	15.0	17.0	19.5	26.0
161273	DN20	3/4" RP	41.0	27.5	16.3	24 1	24 0	32.0

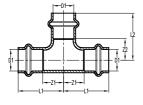


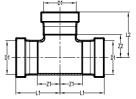
No 19 M	ale Back Pl	late Elbow	ı					
Code	Size (D1)	Thread	L1	L2	L3	L4	Z	
161278	DN15	1/2" G	16.0	30.0	45.0	38.0	20.0	
161279	DN15	1/2" G	16.0	30.0	65.0	38.0	20.0	



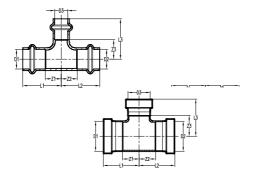


No 24 Te	e Equal				
Code	Size (D1)	L1	Z 1	L2	Z2
161110	DN15	34.0	15.5	29.0	10.5
161111	DN20	44.0	21.0	37.5	14.5
161112	DN25	49.0	25.0	41.5	17.5
161113	DN32	51.0	25.0	48.0	22.0
161114	DN40	60.0	27.0	60.0	27.0
161115	DN50	74.5	33.5	74.5	33.5
161116	DN65	88.0	44.0	88.0	44.0
161117	DN80	100.0	49.0	100.0	49.0
161118	DN100	126.0	65.0	119.5	58.5



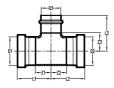


No 25	Tee Red								
Code	Size (D1)	Size (D2)	Size (D3)	L1	Z1	L2	Z2	L3	Z 3
161130	DN20	DN20	DN15	44.0	21.0	40.5	22.0	37.5	14.5
161133	DN25	DN25	DN15	41.0	17.0	41.0	17.0	36.0	17.5
161134	DN25	DN25	DN20	44.0	20.0	44.0	20.0	41.0	18.0
161135	DN32	DN32	DN15	40.5	14.5	40.5	14.5	40.0	21.5
161136	DN32	DN32	DN20	45.0	19.0	45.0	19.0	46.0	23.0
161137	DN32	DN32	DN25	48.0	22.0	48.0	22.0	46.0	22.0
161138	DN40	DN40	DN20	51.0	18.0	51.0	18.0	49.5	26.5
161139	DN40	DN40	DN25	52.0	19.0	52.0	19.0	50.5	26.5
161140	DN40	DN40	DN32	54.5	21.5	54.5	21.5	54.5	28.5
161141	DN50	DN50	DN25	60.0	19.0	60.0	19.0	58.5	34.5
161142	DN50	DN50	DN40	67.0	26.0	67.0	26.0	66.5	33.5
161143	DN65	DN65	DN50	83.5	39.5	83.5	39.5	84.5	43.5
161144	DN80	DN80	DN50	89.5	38.5	89.5	38.5	90.0	49.0
161145	DN80	DN80	DN65	92.5	41.5	92.5	41.5	96.0	52.0
161146	DN100	DN100	DN50	103.0	42.0	103.0	42.0	103.5	62.5
161147	DN100	DN100	DN65	103.5	42.5	103.5	42.5	107.5	63.5
161148	DN100	DN100	DN80	112.0	51.0	112.0	51.0	114.0	63.0

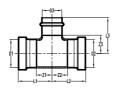




No 26	Tee Red								
Code	Size (D1)	Size (D2)	Size (D3)	L1	Z1	L2	Z 2	L3	Z 3
161131	DN20	DN15	DN20	40.5	17.5	40.5	17.5	32.5	14.0



No 27	Tee Red								
Code	Size (D1)	Size (D2)	Size (D3)	L1	Z1	L2	Z2	L3	Z 3
161132	DN20	DN15	DN15	40.5	17.5	40.5	22.0	32.5	14.0



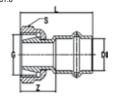
No 61 End Cap Code Size (D1) L z 161220 DN15 22.0 3.5 161221 DN20 4.5 27.5 161222 DN25 28.0 4.0 161223 DN32 30.0 4.0 161224 DN40 37.5 4.5 161225 DN50 48.0 7.0



No 61 E	nd Cap W/pc	ort		
Code	Size (D1)	L	Z	Rp
161226	DN65	79.5	19.5	Rp 3/4"
161227	DN80	94.5	27.5	Rp 3/4"
161228	DN100	113.5	36.0	Rp 3/4"



No 62 St	traight Loc	se Nut Conr	ector		
Code	Size	Thread	L	Z	S
161285	DN15	1/2" G	40.0	22.0	26.0
161296	DNO	2/4" C	45.0	22.0	21.0





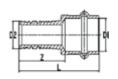
No 63 Loose Nut Connector								
Code	Size	Thread	L1	L2	Z	S		
161290	DN15	1/2" G	34.6	35.5	17.5	26.0		
161291	DN20	3/4" G	35.5	41.0	18.0	31.0		



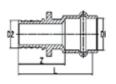
No 69 Male Union						
Code	Size	Thread	L	Z	S1	S2
161295	DN15	1/2" R	56.0	38.0	30.0	27.0
161296	DN20	3/4" R	65.0	42.0	38.0	34.0
161297	DN25	1" R	72.0	49.0	47.0	43.5
161298	DN32	1 1/4" R	80.0	55.0	54.0	49.5
161299	DN40	1 1/2"	90.0	59.0	67.0	61.0
161300	DN50	2" R	105.0	66.0	77.5	70.0



WATER (CONNECTOR	R PRESS TO	PSC PE	(CRIMP
CODE	Size (D1)	Size (D2)	L	Z
161306	DN15	DN16	49.5	31.5
161307	DN20	DN20	54.0	31.0
161308	DN20	DN25	54.0	31.0



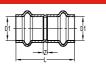
WATER CONNECTOR PRESS TO PSC PEX ST						
CODE	Size (D1)	Size (D2)	L	Z		
161312	DN15	DN16	45.0	27.0		
161313	DN20	DN20	56.0	33.0		
161314	DN20	DN25	60.5	37.5		





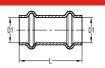
PSC Press HT (Solar)

No 1 Coupling					
Code	Size (D1)	L	Z		
162101	DN15	41.5	4.5		
162102	DN20	50.5	4.5		



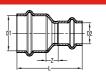
No 1S Slip Coupling

Code	Size (D1)	L	
162105	DN15	41.5	
162106	DN20	50.5	



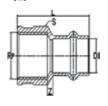
No 1R Red Coupling

Code	Size (D1)	Size D2	L	Z
162110	DN20	DN15	50.5	9.0



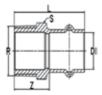
No 2 Female Coupling

Code	Size (D1)	Thread	L	Z	S
162132	DN15	1/2" RP	40.5	5.0	26.0
162133	DN20	3/4" RP	45.5	5.0	31.0



No 3 Male Coupling

Code	Size (D1)	Thread	L	Z	S
162134	DN15	1/2" R	39.0	21.0	22.0
162135	DN20	3/4" R	46.0	23.0	28.0



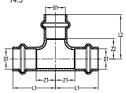


PSC Press HT (Solar)

No 12 90D Elbow F&F					
Code	Size (D1)	L	Z		
162115	DN15	32.5	14.0		
162116	DN20	44.5	21.5		



No 24 Te	No 24 Tee Equal				
Code	Size (D1)	L1	Z1	L2	Z2
162120	DN15	34.0	15.5	29.0	10.5
162121	DN20	44.0	21.0	37.5	14.5



No 61 End Cap					
Code	Size (D1)	L	Z		
162125	DN15	22.0	3.5		
162126	DNO	27.5	4.5		







SAI Global hereby grants:

Plumbers Supplies Co-operative Ltd

Unit 91A, 79-99 St Hilliers Road, Auburn, NSW 2144, Australia

Watermark Certificate of Conformity - Level 1

Evaluated to:

AS 3688-2005 - Water supply - Metallic fittings and end connectors

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Certificate No:WMK26126

Issued: 20 July 2016 Expires: 19 July 2021 Originally Certified: 20 July 2016 Current Certification: 20 July 2016

Heather Mahon

Acting Head of Policy, Risk and Certification



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Notes:



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