



crimp*Plus*[™]

manual

crimp*Plus*TM

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Overview

The Crimp Plus system was developed to satisfy the requirements of customers who were seeking an alternative to the existing Pex Plus compression system.

One of the key requirements was the need for a quick and effective jointing method combined with the peace of mind provided by the performance benefits of pex pipe. It was also clear that customers had a definite preference to continue using our existing and already proven Pex Plus pipe.

Pipe

Pex Plus pipe is a high quality Pex-a cross linked pipe. Pex is an industry accepted name for cross linked polyethylene pipe. In general terms polyethylene in its normal state is not capable of handling high pressure or temperature loads. However once subjected to the cross-linking process, its ability to handle these conditions is increased substantially.



Pex Plus pipe consists of an inner section of Pex-a material encased in an outer layer of tough HDPE.

Pex Plus also offers a pipe specifically for use in hydronic heating. This pipe is identified by its bright pink colour. Pex Plus pink is a similar construction to the standard Pex Plus pipes. However it also incorporates a layer of EVOH material which acts as an oxygen barrier, thus preventing the entry of additional oxygen into the sealed heating system.



Pex Plus pipe is available in sizes 16, 20, 25 & 32mm, in either coils or straight lengths.






Pex Plus pipe dimensions

Nom size	Mean OD (mm)	Mean ID (mm)
16mm	16.15	11.45
20mm	20.15	14.15
25mm	25.15	17.75
32mm	32.15	22.85

Pex Plus pipe - standard supply units

Nom pipe size	Straight lengths (all)	Coil length (black)	Coil length (green, lilac)	Coil length (pink)
16mm	5m	100m	50m	200m
20mm	5m	100m	50m	100m
25mm	5m	50m	50m	
32mm	5m	25m		
16mm black + conduit		50m		
20mm black + conduit		50m		

The Pex Plus pipe is colour coded to assist the installer in avoiding cross connections.

	BLACK	Hot & cold potable water
	GREEN	Rainwater
	LILAC	Recycled water (non-potable)
	PINK	Hydronic heating
	CONDUIT	In/under slab hot & cold water

Performance

The use of Pex Plus pipe provides users with many advantages over traditional piping materials. It has excellent flexibility, is not adversely affected by freezing, offers excellent pressure and temperature resistance, is lightweight and also has low noise and heat transmission qualities. The Pex Plus pipe provides very low levels of friction loss and therefore can often save users needing to upsize piping when installing long runs. As jointing methods are mechanical it does not require the use of solvents. Nor does it require soldering, welding or brazing.

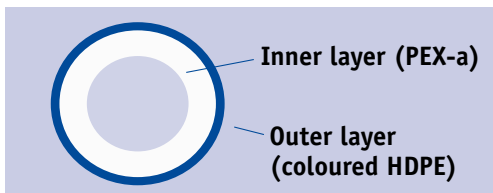
Pex Plus pipe heat & pressure performance

Recommended working pressure relative to pipe material temperature

Temp (°C)	20	40	60	80
Pressure (Kpa)	2000	1800	1500	1330

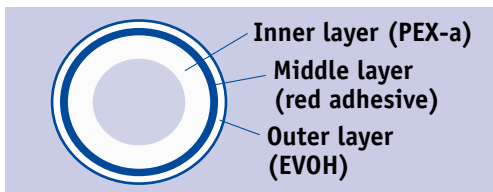
Cross-section

Black, green, lilac pipe



1. Inner layer: combination of HDPE & crosslinking agent.
2. Outer layer: HDPE compound.

Pink pipe



1. Inner layer: the same Pex layer as standard Pex Plus™ pipe.
2. Middle layer: adhesive to bind internal PEX-a layer to the external EVOH layer (<0.01mm)
3. Oxygen barrier (<0.01mm). Clear outer layer which prevents oxygen from entering the pipe system from the outside atmosphere.

Fittings

The bodies of Crimp Plus fittings are manufactured from DZR brass whilst the crimp rings are of a high quality copper construction to provide exceptional resistance to corrosion.

All Crimp Plus fittings come with sleeve protection plugs to protect the integrity of the crimp ring during shipping and storage. Other systems without these plugs are often prone to problems caused by out-of-shape crimp rings. These sorts of problems can slow down the installation process considerably.

Crimp Plus fittings are manufactured with longer barbs and crimp rings than many similar products—also adding to the integrity of each joint.

All Crimp Plus fittings are manufactured to comply with AS/NZS 2537—mechanical joint fittings for use with Pex pipe for hot & cold water applications.

Crimp Plus fitting dimensions

Nom size	Mean bore (mm)
16mm	8.5
20mm	11.2
25mm	14.2
32mm	19.0

Features & benefits

- ✓ Quick & easy jointing system—**less time on the job.**
- ✓ Same pipe for Crimp Plus or Pex Plus system—**carry less stock.**
- ✓ Simple hand tool crimp method—**less capital outlay on tooling.**
- ✓ Minimal need for brazing—**less outlay on gas and consumables.**
- ✓ Low noise transmission in pex pipe—**quieter, reduced water hammer.**
- ✓ Internal sealing method—**reduced chance of leaks due to scratched/scuffed pipe.**

Installation considerations

Proximity to flame/external heat sources

The Crimp Plus system should not be installed in positions where it is likely to be exposed to a naked flame. If it is, there's 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 Crimp Plus pipe has an expansion rate of approx. 0.3mm per metre for every 10°C change in temperature. Care should be taken not to pull the pipe tightly between fixed points during installation as the pipe may later contract causing excessive tensile force to any joints. This could cause a 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. (*Refer to table on page 5*)

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 or implements, machinery, rodents, excessive heat, long term UV exposure, radiation, mechanical forces.

Pipe Bending

Do not apply bending forces to joints which have already been completed. Finish all bending operations prior to crimping the fitting.

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.

Pex Plus pipe may be subjected to a minimum bending radius of approx. 8 times the OD of the pipe.

Clipping

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

Pipe size	Horizontal pipe work	Vertical pipe work
16mm	0.6m	1.2m
20mm	0.7m	1.4m
25mm	0.75m	1.5m
32mm	0.85m	1.7m

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 Pex Plus Black and Pex Plus Green pipes are able to be installed in direct sunlight with no degradation likely to occur. Pex Plus 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.

TESTING

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 Crimp Plus system.

25 year warranty

The Crimp Plus hot & cold water plumbing system carries a 25 year warranty against defects in materials or manufacturing of pipe and fittings produced under the Crimp Plus name.

This warranty is restricted by the following clauses:

- i. Installation must have been carried out by a licenced plumber.
- ii. Installation must be carried out in accordance with the Crimp Plus installation instructions.
- iii. Installation must be in full accordance with the relevant local and national plumbing codes and standards.

The Plumbing Plus merchant from whom you purchase Crimp Plus product supports the warranty on this product and as such may request suitable information or evidence from the installer to support any warranty claim. The Plumbing Plus merchant concerned also reserves the right to engage a nominated outside agent of its own choice to assess any faulty product before honouring any warranty claim.



**Quicker...
Easier...
More
versatile...**



**Australian
Standard**