TECHNICAL MANUAL

EZIPEX CRIMP™

WATER & GAS SOLUTIONS

Contents

Overview

The Ezi Pex Crimp ™ system was developed to satisfy the requirements of customers who were seeking an alternative to our existing Ezi Pex Slide™ 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 our Ezi Pex ™ pipe. It was also clear that customers had a definite preference to continue using our existing and already proven Ezi Pex™ pipe.

Ezi Pex Crimp ™ joins the other family (Ezi Pex Slide™, Ezi Pex Push™ and Ezi Pex Gas™) providing a total solution for all your water and gas applications.

The Ezi Pex ™ product range is based on a premium quality cross-linked polyethylene pipe which is used in conjunction with either of our 3 available ranges of DZR brass fittings, Crimp, Push and Slide.

All installations should be carried out by an appropriately licensed tradesperson and in full accordance with the Ezi Pex Crimp ™ installation guidelines, the relevant Australian standards and any additional local authority requirements. When installed subject to the above conditions the Ezi Pex Crimp ™ system will provide years of trouble free service.

Application

The Ezi Pex Crimp™ system uses a crimping tool to produce a secure joint in a minimal amount of time. The crimping method guarantees a perfect seal every time, and eliminates the need for call backs to repair partially welded joints etc.

Ezi Pex Crimp™ Water fittings may be used in accordance with AS/NZS 3500 for water applications including:

- Hot and Cold Potable Water
- Rainwater
- Recycled Water (non-potable)
- Hydronic Heating

For optimum performance results please take the time to become familiar with the installation considerations outlined from page 9 in this booklet.

Pipe

Ezi Pex ™ 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.

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

Ezi Pex ™ also offers a pipe specifically for use in hydronic heating. This pipe is identified by its bright pink colour. Ezi Pex ™ pink pipe is a similar construction to the standard Ezi Pex ™ 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.

Ezi Pex ™ pipe is available in the following sizes DN16, DN20, DN25, DN32, in either coil form or straight lengths.

Ezi Pex ™ pipe - standard supply units

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

The Ezi Pex ™ 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
	RED	Hot Water
	CONDUIT	In/under slab hot & cold water

Ezi Pex ™ pipe dimensions

Nom. Size	Mean OD (mm)	Wall Thickness (mm)
16mm	16.15	2.20
20mm	20.15	2.80
25mm	25.15	3.50
32mm	32.15	4.40

Performance

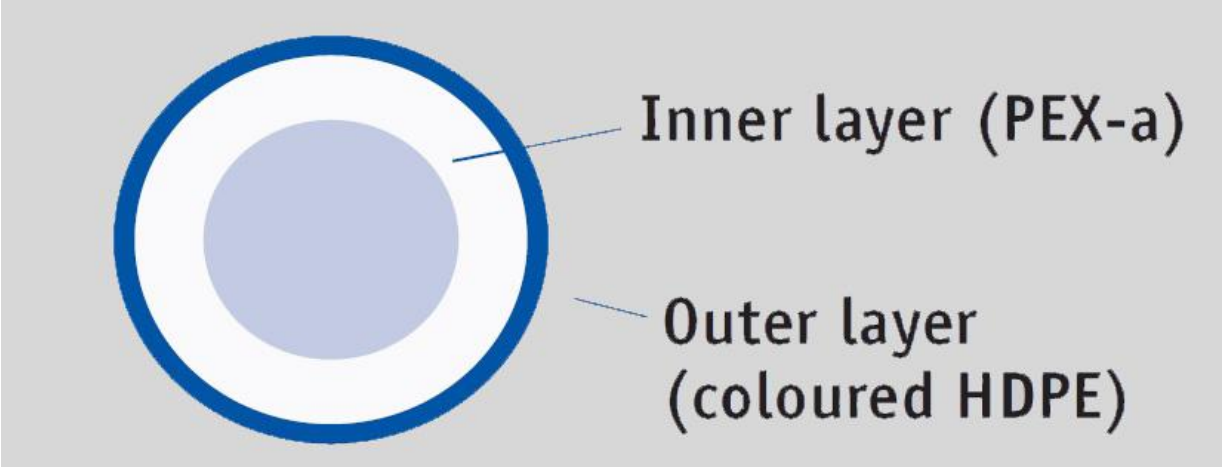
The use of Ezi Pex ™ pipe provides users with many advantages over traditional piping materials. It has excellent flexibility, is not adversely affected by freezing, offers excellent pressure and temperature resistance, is lightweight and also has low noise and heat transmission qualities. The Ezi Pex ™ 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.

Ezi Pex ™ pipe heat & pressure performance

Recommended working pressure relative to pipe material temperature				
Temp (ºC)	20	40	60	80
Pressure (Kpa)	2000	1800	1500	1330

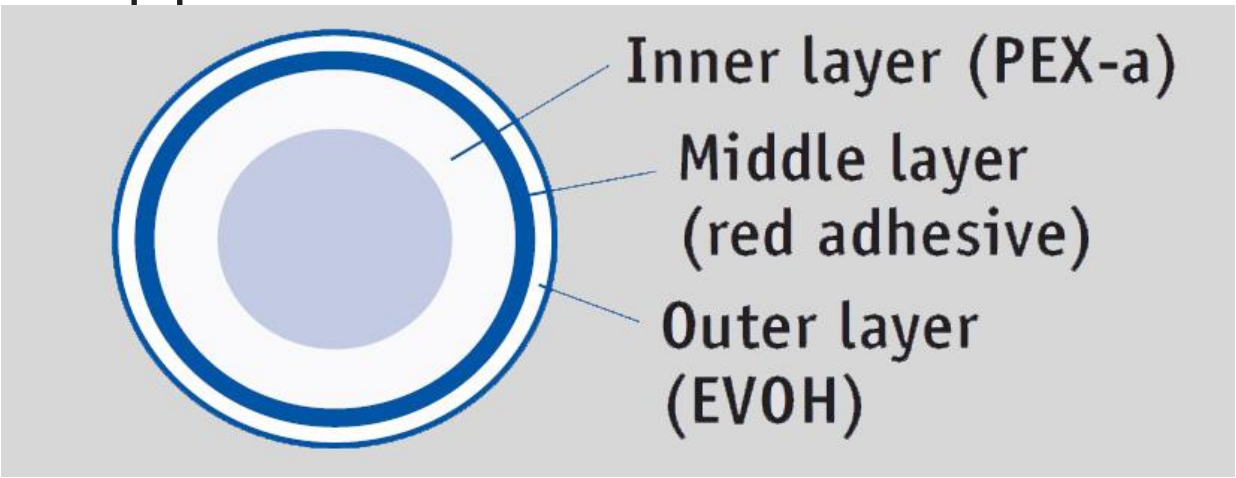
Cross-section

Black, Red, Green, Lilac pipe



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

Pink pipe



1. Inner layer: the same Pex layer as standard Ezi Pex ™ 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 Ezi Pex Crimp ™ fittings are manufactured from DZR brass whilst the crimp rings are of a high quality copper construction to provide exceptional resistance to corrosion.

All Ezi Pex Crimp ™ 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.

Ezi Pex Crimp ™ fittings are manufactured with longer barbs and crimp rings than many similar products– also adding to the integrity of each joint.

All Ezi Pex Crimp ™ fittings are manufactured to comply with AS/NZS 2537 – mechanical joint fittings for use with Pex pipe for hot & cold water applications

Ezi Pex Crimp ™ fitting dimensions

Nom Size	Mean Bore (mm)
16mm	8.5
20mm	11.2
25mm	14.2
32mm	19.0

Features and Benefits

Crimp Jointing Method	• Fast • Secure • Simple to use • Less time on the job • Less capital outlay on tooling • Internal sealing method reduces leaks due to scratched pipe
Stock Consolidation	• Same pipe for Ezi Pex Push™, Ezi Pex Slide™ & Ezi Pex Crimp™ • One pipe 3 systems
Flame-free Assembly	• Increased safety • No need for gas cylinders or Hot Works permits • Reduced costs on welding consumables
Size Range DN15 – DN32	• Fittings available for most tasks
Acoustics	• Low noise transmissions in pex pipe • Quieter, reduce water hammer

Installation Considerations

Ezi Pex Crimp ™ should always be installed in compliance with AS/NZS 3500. Most installation requirements can be sourced from this document.

Proximity to flame / external heat sources

The Ezi Pex Crimp ™ 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

Ezi Pex ™ 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, corrosive agents.

Framework Penetrations

Where Ezi Pex ™ pipe penetrates timber or metal framework appropriate precautions should be taken to protect it from damage. Holes should be sized to allow for longitudinal movement, expansion and contraction of pipe whilst still securing the pipe adequately. Suitable grommets or sleeves should be used in metal frames to protect the pipe from abrasion.

Pipe Bending

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

Due care should be taken during bending to ensure that the pipe is not damaged or kinked. If you do encounter a kinked or damaged section of pipe it should be cut out and replaced as a precaution.

Ezi Pex ™ pipe can be easily bent by hand, the radius of the bend should be not less than 8 times the diameter of the pipe.

Minimum Bending Radius

Nom Size	Min Bending Radius (mm)
16mm	130
20mm	162
25mm	202
32mm	258

Clipping

In accordance with AS/NZS 3500 fixing spacing should be observed for both horizontal and vertical pipe runs as outlined on the table below. Clipping should be by way of a recognized fixing which complies with the requirements of AS/NZS 3500. This excludes things such as bent over nails, tie wire, pierced metal strapping etc.

Clip Spacing Table

Nom Size	Vertical Run Spacing (m)	Horizontal Run Spacing (m)
16mm	1.2m	.6m
20mm	1.4m	.7m
25mm	1.5m	.75m
32mm	1.7m	.85m

Underground

Pipe should be buried with a minimum cover of 450mm. Marker tape should be installed approx 150mm above the pipe. Fittings being DZR brass should be able to be installed directly in the trench without any form of coating. Additional precautions should obviously be taken in areas where aggressive soil conditions are known to exist or where it may be a requirement of the local certifying authority.

When being buried beneath a building the pipe should be free of joints.

Chases, In-Slab, Under-floor

Where Ezi Pex ™ pipe is installed in chases or cast in slabs the installation must be in accordance with both AS/NZS 3500 and any other relevant building regulations or standards.

UV Exposure

Both Ezi Pex ™ Black and Ezi Pex ™ Green pipes are able to be installed in direct sunlight with no degradation likely to occur. Ezi Pex ™ Lilac and Ezi Pex ™ Red pipes 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

All testing should be undertaken in accordance with AS/NZS 3500 for water installations and in addition to any other local regulations or requirements.

During testing all joints should be checked for leaks, prior to burying or concealing the Ezi Pex Crimp ™ system.

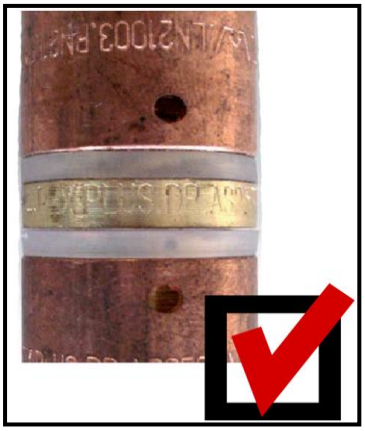
Jointing instructions

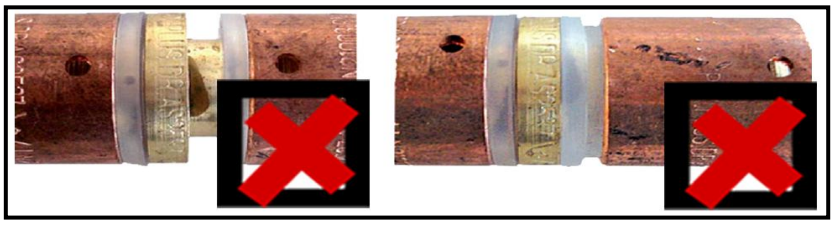
1. Cut pipe

Cut pipe to desired length. Cut should be square and free from any swarf or burrs. Use REMS pipe cutter or similar blade type cutter. Do not use a hacksaw as this creates excessive swarf.

2. Check assembly

Ensure that the copper crimp ring and plastic ring retainer are assembled correctly onto the fitting. Both can be pushed on by hand if they have moved away from the fitting shoulder. Witness hole should be located toward the rear of each barb



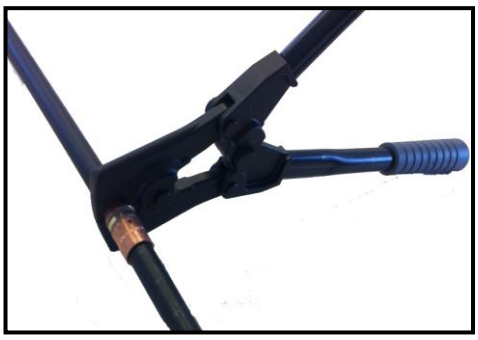


3. Insert pipe

Slide pipe onto fitting until it reaches the depth stop. Pipe should be fully visible through the witness holes on the crimp ring.

4. Crimp tool positioning

Position crimping tool evenly over the copper crimp ring. You should leave a similar distance between the outside of the jaw and the end of the crimp ring at both ends. Crimp tool should be placed at 90° to the pipework.

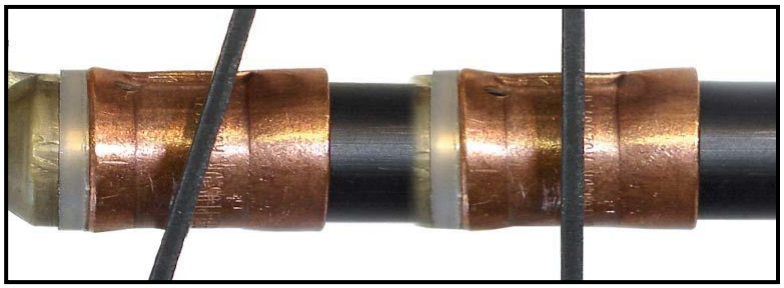


5. Crimp

Fully close jaws of the crimping tool to compress the copper crimp ring. Do not compress the plastic ring retainer.

6. Check crimp ring

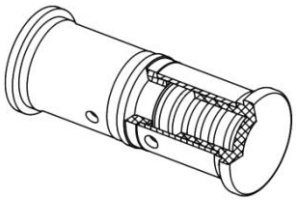
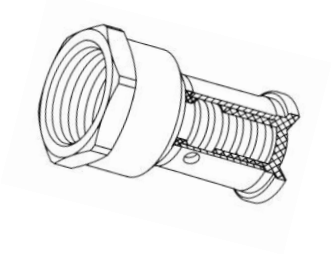
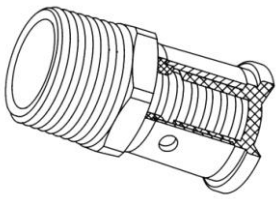
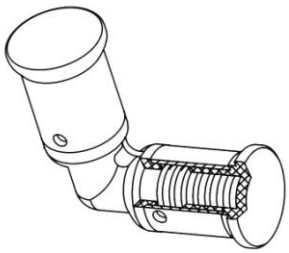
Finally and most importantly, check the crimp ring dimension by placing the crimp gauge over the centre of the indented ring on the crimp sleeve. On a correctly crimped fitting the crimp gauge should pass freely over the crimp ring at this point.



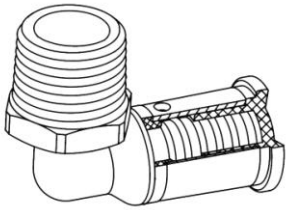
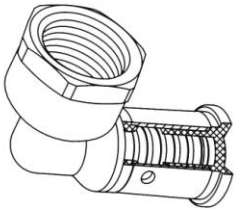
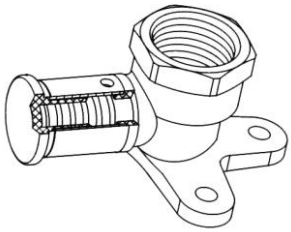
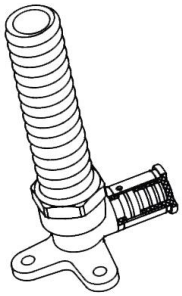
7. Pressure test

At completion, carry out pressure testing. All testing should be undertaken in accordance with AS/NZS 3500 (for water installations) and or in addition to any other local regulations or requirements.

Ezi Pex Crimp™ Fittings

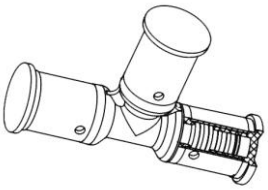
PRODUCT DESCRIPTION	SIZE	PART #
#1 STRAIGHT & REDUCING COUPLING	DN16	335096
	DN20	335097
	DN25	335098
	DN32	335099
		
	DN20-16	335102
	DN25-16	335103
	DN25-20	335104
	DN32-25	335105
#2 CONNECTOR	DN16X1/2''F	335149
	DN16X3/4''F	335144
	DN20X1/2''F	335150
	DN20X3/4''F	335151
	DN25X3/4''F	335301
	DN25X1''F	335305
	DN32X1''F	335306
		
#3 CONNECTOR	DN16X1/2''M	335154
	DN16X3/4''M	335152
	DN20X1/2''M	335155
	DN20X3/4''M	335156
	DN25X3/4''M	335158
	DN25X1''M	335159
	DN32X1''M	335161
	DN32X1 1/4''M	335162
		
#12 ELBOW	DN16	335108
	DN20	335109
	DN25	335110
	DN32	335111
		

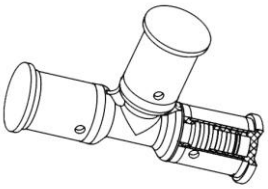
Ezi Pex Crimp™ Fittings

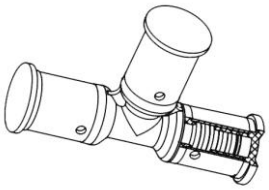
PRODUCT DESCRIPTION	SIZE	PART #
#13 ELBOW		
	DN16X1/2''M	335163
	DN20X1/2''M	335164
	DN20X3/4''M	335165
	DN25X1''M	335166
#14 ELBOW		
	DN16X1/2''F	335169
	DN20X1/2''F	335170
	DN20X3/4''F	335171
#15BP ELBOW		
	DN16X1/2''F	335178
	DN20X1/2''F	3351770
	DN20X3/4''F	335177
	(Low Inlet)	
	DN16X1/2''F	335178L
	DN20X1/2''F	3351770L
	DN20X3/4''F	335177L
#19BP ELBOW		
	DN16X1/2''M - 75mm Long	335179H
	DN16X1/2''M - 90mm Long	335176
	DN16X1/2''M - 150mm Long	335175
	DN16X1/2''M - 200mm Long	335174
	DN20X1/2''M - 95mm Long	335173
	DN20x3/4"M - 200mm Long	335181
	(Low Inlet)	
	DN16X1/2''M - 65mm Long	335179L
	DN16X1/2''M - 90mm Long	335176L
	DN16X1/2''M - 150mm Long	335175L
	DN16X1/2''M - 200mm Long	335174L
	DN20X1/2''M - 95mm Long	335173L
	DN20x3/4"M - 200mm Long	335181L

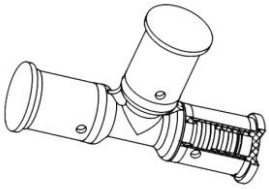
Ezi Pex Crimp™ Fittings

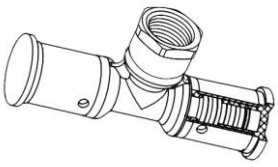
PRODUCT DESCRIPTION	SIZE	PART #
#24 TEE EQUAL	DN16	335114
	DN20	335115
	DN25	335116
	DN32	335117
#25 TEE RED. BRANCH	DN20X20X16	335120
	DN25X25X20	335122
	DN25X25X16	335121
	DN32X32X25	335123
#26 TEE RED. END	DN20X16X20	335126
	DN25X16X25	335127
	DN25X20X25	335128
	DN25X16X16	335233
#27 TEE RED. END & BRANCH	DN20X16X16	335132
	DN25X20X20	335136
#30 TEE FI CENTRE	DN16X16X1/2''F	335230
	DN20X20X1/2''F	335231
	DN20X20X3/4''F	335232











Ezi Pex Crimp™ Fittings

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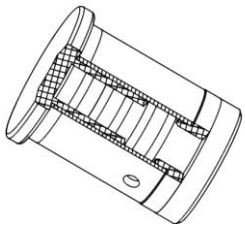
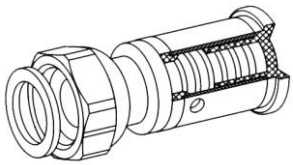
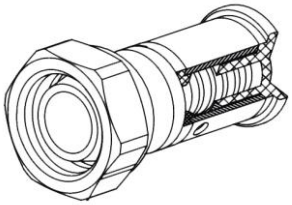
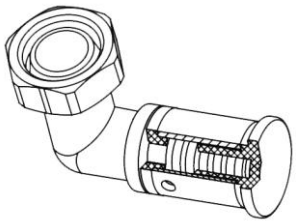
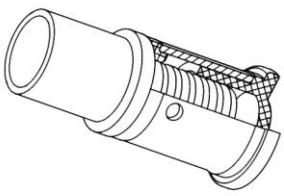
#61 STOPPER	DN16	335204
	DN20	335205
	DN25	335206
	DN32	335207
#62 STRAIGHT TAP CONNECTOR - FLAT SEAT + WASHER	DN16X1/2''F	335183
	DN20X3/4''F	335184
#62 STRAIGHT TAP CONNECTOR - CONE SEAL	DN16X1/2''F	3351831
	DN20X3/4''F	3351841
#63 BENT TAP CONNECTOR	DN16X1/2''F	335185
	DN20X3/4''F	335186
CONNECTING BARB x CU SPIGOT	DN16	335145
	DN20	335146
	DN25	335147
	DN32	335148

Ezi Pex Crimp™ Fittings

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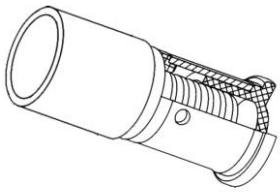
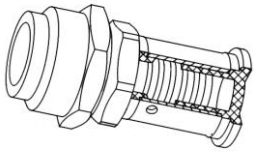
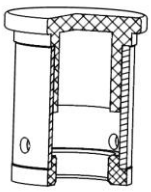
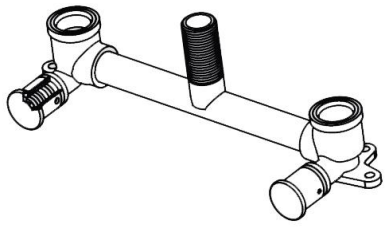
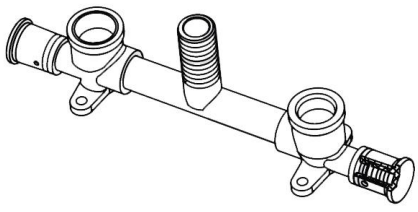
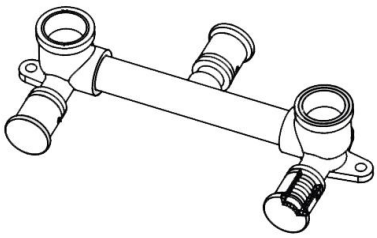
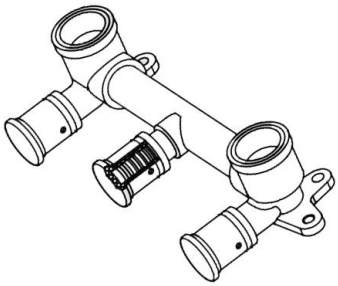
CONNECTING BARB x CU SOCKET		
	DN16	335215
	DN20	335216
	DN25	335217
	DN32	335218
FLARED COPPER COMPRESSION UNION		
	DN16X1/2''	335094
	DN20X3/4''	335095
CRIMP RING ASSY ONLY		
	DN16	335090
	DN20	335091
	DN25	335092
	DN32	335093
BATH/LAUNDRY ASSEMBLY RIGHT ANGLE		
	200mm CENTRES	335194
	300mm CENTRES	335193
	(Low Inlet)	
	200mm CENTRES	335194L
	300mm CENTRES	335193L
BATH/LAUNDRY ASSEMBLY STRAIGHT		
	300mm CENTRES	335192
	(Low Inlet)	
	300mm CENTRES	335192L

Ezi Pex Crimp™ Fittings

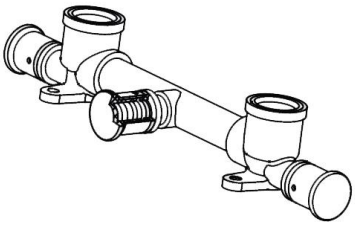
PRODUCT DESCRIPTION	SIZE	PART #
SHOWER ASSEMBLY RIGHT ANGLE	150mm CENTRES	335195
	200mm CENTRES	335199
	(Low Inlet)	
	150mm CENTRES	335195L
	200mm CENTRES	335199L



PRODUCT DESCRIPTION	SIZE	PART #
SHOWER ASSEMBLY RIGHT ANGLE BARBS UP	150mm CENTRES	335197
	200mm CENTRES	335198
	(Low Inlet)	
	150mm CENTRES	335197L
	200mm CENTRES	335198L



PRODUCT DESCRIPTION	SIZE	PART #
SHOWER ASSEMBLY STRAIGHT	150mm CENTRES	335196
	(Low Inlet)	
	150mm CENTRES	335196L



Ezi Pex Crimp™ Tools

EZI PEX CRIMP ™ WATER & EZI PEX GAS™
Tooling Approval Certificate

Please be advised that the below tools are tested and approved to be used on EZI PEX CRIMP™ WATER & EZI PEX GAS™ systems. All installations must be carried out by a licensed plumber / gas fitter and in full accordance with the EZI PEX CRIMP™ & EZI PEX GAS™ technical manuals, relevant local and national plumbing codes and standards.

Pipe Type	System Type	DN SIZE	Approved Tools
EZI PEX	Crimp	16mm	Rems Mini Press K tong 16mm Alba Crimp Tool (16mm Model 816)
EZI PEX	Crimp	20mm	Rems Mini Press K tong 20mm Alba Crimp Tool (20mm Model 816)

Pipe Type	System Type	DN SIZE	Approved Tools
EZI PEX GAS	Crimp	16mm	Rems Mini Press K tong 16mm Alba Crimp Tool (16mm Model 816)
EZI PEX GAS	Crimp	20mm	Rems Mini Press K tong 20mm Alba Crimp Tool (20mm Model 816)

PLUMBING PLUS BATHROOM KITCHEN LAUNDRY PTY LTD
Suite 208, 757 Bourke St Docklands, VIC 3008 Ph: 03 9600 1899
www.plumbingplus.com.au

EZI PEX CRIMP ™ WATER CERTIFICATION

Ezi Pex ™ Hot and cold water pipe has been manufactured to AS2492 for all water applications and carries the watermark certificate number WMK20377.

The product is manufactured to the tolerances to satisfy clause 3.5 in AS3500.1:2003 with amendment's 1 and 2.

Disclaimer

Information provided in this publication is intended to be of a general nature only and is provided as a guide. Installation requirements may vary across different product applications or in different jurisdictions. Information provided does not in any way override that contained in the relevant Australian Standards for either product or installation practices

25 YEAR WARRANTY

The **Ezi Pex Crimp™** system carries a 25 year warranty against defects in materials or manufacturing of fittings produced under the **Ezi Pex Crimp™** name. This warranty is restricted by the following clauses:

i. Installation must have been carried out by a licensed plumber / gas fitter.
ii. Installation must be carried out in full accordance with the **Ezi Pex Crimp™** 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 your purchase **Ezi Pex Crimp™** 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 manufacturer 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**.**

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

WaterMark®

Making life EZI... for Plumbers

EZIPEX CRIMP™
WATER & GAS SOLUTIONS