

franklins
european bathrooms

**JCT COMPLETE
PIPE SYSTEMS**

JCT TRADE

JCT Trade represents a manufacturing company which specialises in supplying plumbing products.

We provide a complete range of cost effective solutions to the plumbing and building industries to help get the job done quicker, easier and at a lower cost.



WM74650
WM74651
WM74750
AMI74689

Australian
Standard
AS/NZS 2492
AS/NZS 2537
AS4176

Disclaimer: All care has taken to ensure the information provided in this brochure is accurate and reliable but it must be treated as being of a general nature only. Products in this brochure may change as JCT Trade is committed to continuous product improvement. JCT Trade provide no guarantee nor accept responsibility for information contained in this brochure.

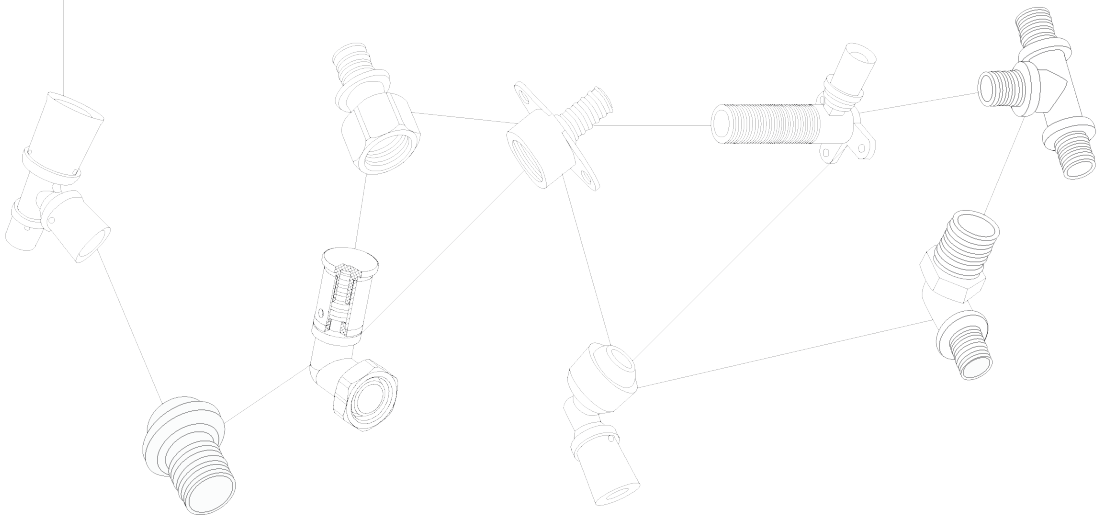
CONTENTS

02	JCT Pipe Systems Overview
05	Test Procedures for Watermark Compliance
06	PN20 PEX-a Water Pipe System
13	JCT Slide System
19	JCT Copper Crimp System
26	PN16 PEX-b Water Pipe System
31	PEX-AL-PEX Gas MLP Pipe System
38	JCT Stainless Steel Crimp System
46	JCT Tools
47	Notes



To avoid providing the readily available, poor quality behind-the-wall plumbing products, Franklins invested in our own manufacturing company – JCT Trade. Quality is the main criteria for the products we produce and to convey the confidence we have in these products, we have literally put our family name on the line. JCT is named after the Smith sons, James, Connor and Trent and the products all carry genuine 25 year warranties.

The brass used has been independently tested in New Zealand and is the best in the country. All JCT products carry the Watermark and meet ASNZ Standards.



The **J** in JCT covers: PEX-b, Water MLP and Gas MLP Stainless Steel Pipe Systems

The **C** covers: Crimp PEX-a Copper Pipe Systems

The **T** covers Sliding Sleeve PEX-a Pipe Systems

JCT also manufactures high quality valves, flanges, brass and plug and wastes. The one product under the JCT name that is outsourced are the flexi-hoses which are made by the respected Italian company, MRG.

As we now manufacture, we also have the capacity to create non standard moulds if required.

JCT PIPE SYSTEMS

JCT Copper Crimp for water, 16mm to 25mm.

JCT Slide for water 16mm to 32mm

JCT Stainless Steel Crimp for water 16mm to 25mm.

JCT Stainless Steel Crimp PEX-AL-PEX System for gas 16mm to 32mm.

JCT Stainless Steel Crimp PEX-AL-PEX System for gas and **JCT Stainless Steel Crimp** for water use the same JCT Crimp tools.

JCT Water System is licensed by ApprovalMark International to Australian Standards and complies with Australian and New Zealand Standards AS/NZ 2492:2007 for Pipe (License WM 74650) and AS/NZS 2537:2011 for Fittings (License WM 74651).

JCT Gas System is licensed by ApprovalMark International to Australian Standards and complies with Australian Standards AS 4176.8-2010 for Pipe (License AMI74689) and Fittings (License AMI74689).

JCT Pipe Systems (excluding tooling) carries a 25 year manufacturers warranty when the system is installed by a licensed plumber or gas fitter in accordance with AS/NZS3500 and Local Authority Requirements. This is backed by Franklins Comprehensive Insurance Cover.

TEST PROCEDURES FOR WATERMARK COMPLIANCE

Listed below are the characteristics that are being tested for as well as the code from which the method for testing is followed:

- Carbon Black or Pigment Dispersion – ISO 18553
- Diameter and Wall Thickness – AS/NZS 1462.1
- Degree of Cross Linking – ISO 10147
- Effect on Water – AS4020
- Elongation at Break – ISO 6259-1, ISO 6259-3
- Hydrostatic Strength – ISO 1167 or AS 1462.6
- Long Term Stability – ISO 1167 or AS 1462.6
- Longitudinal Reversion – ISO 2505
- Opacity – ISO 7866
- Resistance to Weathering – ISO 1453-1
- Slow Crack Growth – ISO 13479
- Thermal Stability – ISO-TR 10837

PN20 PEX-a WATER PIPE

JCT PN20 PEX-a Pipe is made from Peroxide – cross linked polyethylene and manufactured under strict quality controls to Australian Standards AS/NZS 2492:2007 for hot and cold water applications under License WM 74650.

JCT PN20 PEX-a Pipes are completely Non Toxic and are approved to AS4020.

The great advantage of JCT PN20 PEX-a Pipe is that it can be used with **JCT Copper Crimp** and **JCT Slide** Fittings to complete two systems using the same pipe but utilising two different jointing methods.

JCT PN20 PEX-a Pipe is colour coded to assist the installer in avoiding cross connections. The piping is available in four colours. It is recommended that unprotected pipe not be exposed to direct sunlight on a permanent basis.

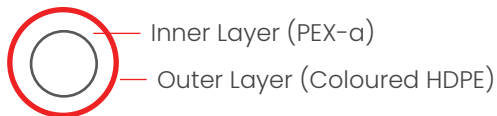
JCT PN20 PEX-a Pipes carries a 25 year manufacturers warranty when the system is installed by a licensed plumber in accordance with AS/NZS3500 and Local Authority Requirements. This is backed up by Franklins Comprehensive Insurance Cover.

Black – Water

Red – Hot potable water

Blue – Cold potable water

Purple – Non-potable recycled water



Inner Layer: Combination of HDPE & cross-linking agent
Outer Layer: HDPE compound



AS/NZS 2492



WaterMark

WM74650

PERFORMANCE

The use of JCT PN20 PEX-a 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 slow noise and heat transmission qualities. JCT PN20 PEX-a Pipe provides very low levels of friction loss and therefore can often save users needing to up-size 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.

PIPES & TOLERANCES

Nom.O.D. (DN)	Mean Outside Diameter (mm)	Maximum Out-of-Roundness (mm)	Wall thickness (mm)
SDR 7.4 PN20			
16	16.0	1.2	2.2
20	20.0	1.2	2.8
25	25.0	1.2	3.5
32	32.0	1.3	4.4

PRESSURE RATINGS

Pipes for water applications are classified in terms of the nominal pressure rating (PN) at water service temperature of 20°C. JCT 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	General Working
PN20	2000	1500	1300	1000

- Maximum Working Temperature: 95°C
- Maximum Continuous Working Pressure: 1000kPa
- Maximum Continuous Working Temperature: 70°C
- Short Term Extension Limit: 100°C
- Linear Thermal Expansion Co-Efficient: 0.15
- Thermal Conductivity: 0.35W/(m.K)
- Pipe Internal Roughness: 0.007mm
- Maximum Bending Radius with Preformed Bend: 4x ø
- Maximum Bending Radius without Preformed Bend: 8x ø

PN20 PEX-a Water Pipe can be used with **JCT Copper Crimp** and **JCT Slide** Fittings to complete two systems.

PEX-a WATER PIPE

Water Quality

JCT fittings are made from high quality DZR brass which provides good resistance to corrosive water conditions. However, if water conditions are outside the NZ drinking water guidelines of pH 6.5-8.5, JCT Pex DZR fittings should not be used.

Flush pipes so they are clean and ready for use.

Handling & Storage

UV radiation can damage PEX-a pipes, so always protect JCT pipe from direct sunlight.

Avoid Damage to the pipe surface from dragging pipes across rough surfaces.

Protect uninstalled pipes from entry of harmful liquids.

Protect DZR fittings from corrosion.

PRESSURE LOSS TABLES FOR PN20 PEX-α PIPE

COLD WATER AT 25°C				
Peak Flow Rate Qs (l/s) 0.01 to 0.50	16mm x 2.2mm Head Loss (kPa/m)	20mm x 2.8mm Head Loss (kPa/m)	25mm x 3.5mm Head Loss (kPa/m)	32mm x 4.4mm Head Loss (kPa/m)
0.05	0.3465	0.1242	-	-
0.10	1.1650	0.4141	0.1430	0.0430
0.15	2.3930	0.8455	0.2905	0.0866
0.20	4.0077	1.4090	0.4822	0.1430
0.25	5.9950	2.1001	0.7160	0.2122
0.30	8.3490	2.9143	0.9908	0.2927
0.35	11.0620	3.8498	1.3053	0.3846
0.40	14.1295	4.9036	1.6589	0.4879
0.45	-	6.0756	2.0510	0.6018
0.50	-	7.3633	2.4808	0.7266

HOT WATER AT 60°C				
Peak Flow Rate Qs (l/s) 0.01 to 0.50	16mm x 2.2mm Head Loss (kPa/m)	20mm x 2.8mm Head Loss (kPa/m)	25mm x 3.5mm Head Loss (kPa/m)	32mm x 4.4mm Head Loss (kPa/m)
0.05	0.2913	0.0135	0.0358	0.0106
0.10	1.0002	0.3520	0.1205	0.0357
0.15	2.0803	0.7270	0.2475	0.0731
0.20	3.5175	1.2222	0.4140	0.1218
0.25	5.3030	1.8343	0.6185	0.1814
0.30	7.4321	2.5605	0.8685	0.2515
0.35	9.9026	3.3998	1.1392	0.3318
0.40	12.7115	4.3509	1.4535	0.4223
0.45	-	5.4121	1.8038	0.5228
0.50	-	6.5836	2.1891	0.6329

PIPE SUPPORTS

- Fixing of JCT PEX-a must comply with AS/NZS3500.
- Hot water lines must be fixed as to allow for thermal linear Expansion
- Never fix a clip directly onto DZR brass fittings.

Horizontal Pipes Clip Spacing ø		Vertical Pipes Clip Spacing ø	
Pipe	(Meters)	Pipe	Meters
16mm	0.60	16mm	1.20
20mm	0.70	20mm	1.40
25mm	0.75	25mm	1.50
32mm	0.85	32mm	1.70

Note: Horizontal hot water lines may require closer clip spacing to maintain straight lines and avoid sagging.

EXPANSION & CONTRACTION

Expansion

JCT PEX-a will expand with heat so allowance must be made for expansion in the system. The use of the anchor points can ensure the expansion occurs in the desired direction. By securely clipping to one side of a fitting, expansion will occur in the opposite direction. All other clips and holes through which JCT PEX-a passes should allow the pipe to slide longitudinally. For long runs on the hot water service an offset bend (Fig. 1.) or U bend (Fig. 2.) may be required.

Fig. 1. Expansion absorption through bends.

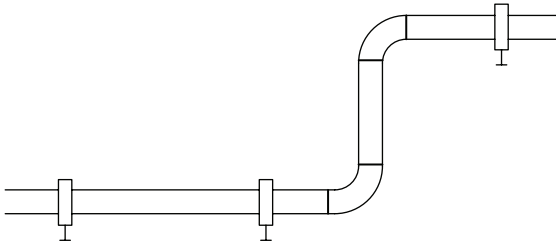
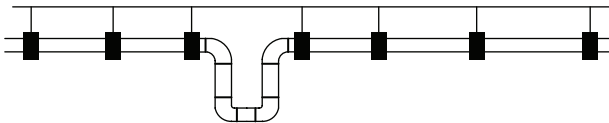


Fig. 2. Expansion absorption through U bend.



THERMAL INSULATION

Although JCT PEX-a has excellent insulating properties local authorities may require further insulation to reduce heat loss. JCT PEX-a should be insulated against freezing conditions to reduce the chances of damage to the pipe work. In extreme conditions it is not possible to prevent static water freezing, so the complete system should be drained.

WATER HEATERS & CONTROLLED HEATING SOURCES

JCT PEX-a for potable water systems are designed to operate within a tempering valve controlled hot water system limited to max 70°C. Although JCT PEX-a has a maximum operating temperature of 95°C and will survive a short period of 100°C, this situation is not recommended and would only occur in the event of a tempering valve failing.

Connection of JCT PEX-a to a water heater must comply with AS3500 and connect via a minimum 1 meter of copper pipe. JCT PEX-a is not suitable for flow and return lines of solar panels as temperatures can reach 140°C.

	CODE	SIZE	PACKING
	Black Pipe – Water		
	CTPEX1650	16mm	50m/coil
	CTPEX16L5	16mm	5m/len
	CTPEX16100	16mm	100m/coil
	CTPEX20100	20mm	100m/coil
	CTPEX20L5	20mm	5m/len
	CTPEX2550	25mm	50m/coil
	CTPEX25L5	25mm	5m/len
	CTPEX3250	32mm	50m/coil
	CTPEX32L5	32mm	5m/len
	Red Pipe – Hot Water		
	CTPEX16L5RED	16mm	5m/len
	CTPEX16100RED	16mm	100m/coil
	CTPEX20L5RED	20mm	5m/len
	CTPEX20100RED	20mm	100m/coil
	Lilac Pipe – Recycled Water		
	CTPEX1650LILAC	16mm	50m/coil
	Blue Pipe – PEX-a Cold Water		
	CTPEX16L5BLUE	16mm	5m/len
	CTPEX16100BLUE	16mm	50m/coil
	CTPEX20L5BLUE	20mm	5m/len
	CTPEX20100BLUE	20mm	50m/coil
	Pipe Clips – Black		
	JCT16B	16mm	100/bag
	JCT20B	20mm	100/bag
	JCT25B	25mm	100/bag
	JCT32B	32mm	100/bag

JCT SLIDE SYSTEM

JCT Slide product range is a complete PEX Plumbing System comprising JCT PN20 PEX-a Water Pipe, a full range of DR brass fittings and a set of easy to use tooling.

JCT Slide system is a simple and secure sliding sleeve jointing system which means total peace of mind and a simple visual inspection confirms water tightness.

JCT Slide fittings are especially designed and engineered to compliment the JCT PEX-a pipe.

JCT Slide all JCT Fittings are made from high quality Dezincification Resistant (DR) brass, heated treated and chemically enhanced for increased strength, durability and reliability.

JCT Slide system complies with Australian Standards AS2537 and AS2492 and is certified by ApprovalMark (Licenses WM74651 and WM74650 respectively) for use with cross-linked polyethylene (PEX-a) for hot and cold water installations.

JCT Slide system carries a 25 year manufacturers warranty when the system is installed by a licensed plumber in accordance with AS/NZS3500 and Local Authority Requirements. This is backed by Franklins Comprehensive Insurance Cover.



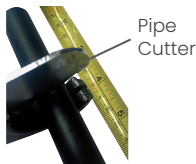
AS/NZS 2537
AS/NZS 2492



WaterMark

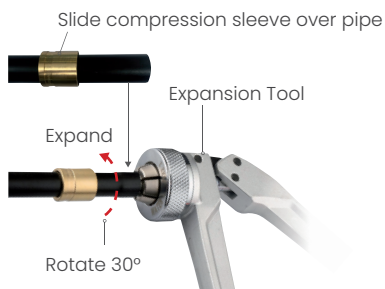
WM74651
WM74650

INSTALLATION INSTRUCTIONS



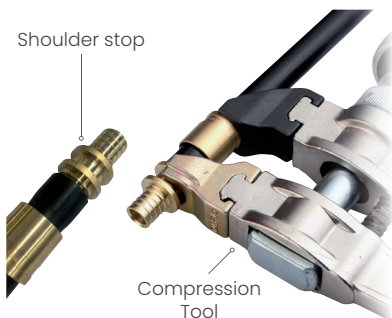
Step 1:

Measure the pipe and cut to correct angle, ensuring it is straight and burr free. Always use a PEX pipe cutter.



Step 2:

Slide the compression sleeve over the pipe with the beveled end facing towards the fitting. Expand the pipe using the expansion tool, rotate the pipe 30° and repeat the process, ensuring the pipe is evenly expanded.



Step 3:

Insert the fitting into the expanded pipe; use the compression tool to slide the sleeve towards the fitting, making sure the two surface areas (shoulder stop and PEX pipe) meet completely flat and evenly all around in order to achieve a super seal.

IMPORTANT

This system must be installed by a licensed plumber in accordance otherwise warranty will be void.

Step 4:

At completion, carry out pressure testing as required per AS/NZS3500 and or any requirements specified by local authorities prior to burying or concealing the JCT Slide System.

	CODE	SIZE
	Sliding Sleeve	
	TSS16	16mm
	TSS20	20mm
	TSS25	25mm
	TSS32	32mm
	Straight Connection	
	TSC16	16mm
	TSC20	20mm
	TSC25	25mm
	TSC32	32mm
	Reducing Connection	
	TRC2016	20mm x 16mm
	TSC2520	25mm x 20mm
	TSC3225	32mm x 25mm
	Female Connection	
	TFC16	16mm
	TFC20	20mm
	TFC32	32mm
	Male Connection	
	TMC16	16mm
	TMC20	20mm
	TMC25	25mm
	TMC32	32mm

	CODE	SIZE
	Equal Elbow	
	TEE16	16mm
	TEE20	20mm
	TEE25	25mm
	TEE32	32mm
	Male Elbow	
	TME16	16mm
	TME20	20mm
	Female Elbow	
	TFE16	16mm
	TFE20	20mm
	Female Wingback	
	TFWB16	16mm
	TFWB20	20mm
	Male Wingback	
	TMWB161565	16mm x 15mm BSP x 65mm
	TMWB161590	16mm x 15mm BSP x 90mm

	CODE	SIZE
	Equal Tee	
	TET16	16mm
	TET20	20mm
	TET25	25mm
	TET32	32mm
	Reducing Tee	
	TRT201616	20mm x 16mm x 16mm
	TRT202016	20mm x 20mm x 16mm
	TRT2016	20mm x 16mm
	TRT251616	25mm x 16mm x 16mm
	TRT2516	25mm x 16mm
	TRT252516	25mm x 25mm x 16mm
	TRT252020	25mm x 20mm x 20mm
	TRT2520	25mm x 20mm
	TRT252520	25mm x 25mm x 20mm
	TRT322525	32mm x 25mm x 25mm
	TRT3225	32mm x 25mm
	Swivel Connector	
	TSWC16	16mm
	TSWC20	20mm
	TSWC25	25mm
	Swivel Elbow	
	TSE16	16mm
	TSE20	20mm

	CODE	SIZE
	Connecting Barb	
	TCB16	16mm
	TCB20	20mm
	Plug	
	TP16	16mm
	TP20	20mm
	Hose Plate	
	THP16	16mm

JCT COPPER CRIMP SYSTEM

JCT Copper Crimp product range is a complete PEX Plumbing System comprising JCT PN20 PEX-a Water Pipe, a full range of DR brass fittings and a set of easy to use tooling.

JCT Copper Crimp is a solid DZR brass fitting using robust copper rings with inspection windows and equally the longest joining barb on the market ensuring a water tight joint every time.

JCT Copper Crimp has no O'rings which results in increased bore size and better flow and removes the risk of installer error because of dirty, damaged or dislodged O'rings. Simple Crimp jointing system results in quick and simple installation.

JCT Copper Crimp all JCT Fittings are made from high quality Dezincification Resistant (DR) brass, heated treated and chemically enhanced for increased strength, durability and reliability.

JCT Copper Crimp system complies with Australian Standards AS2537 and AS2492 and is certified by ApprovalMark (Licenses WM74651 and WM74650 respectively) for use with cross-linked polyethylene (PEX-a) for hot and cold water installations.

JCT Copper Crimp system carries a 25 year manufacturers warranty when the system is installed by a licensed plumber in accordance with AS/NZS3500 and Local Authority Requirements. This is backed by Franklins Comprehensive Insurance Cover.



AS/NZS 2537
AS/NZS 2492

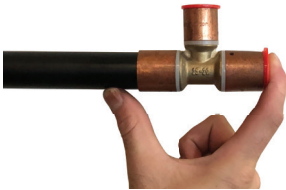


WaterMark
WM74651
WM74650

INSTALLATION INSTRUCTIONS



Step 1:
Cut pipe at right angle.



Step 2:
Insert fitting



Step 3:
Observe window for correct position of fitting.



Step 4:
Position crimping tool.



Step 5:
Crimp fitting.



Step 6:
Test with pressure guage.




IMPORTANT

This system must be installed by a licensed plumber in accordance otherwise warranty will be void.

	CODE	SIZE
	Straight Connection	
	CSC16	16mm
	CSC20	20mm
	CSC25	25mm
	CSC16PB	16mm
	Reducing Connection	
	CRC2016	20mm x 16mm
	CRC2516	25mm x 16mm
	CRC2520	25mm x 20mm
	Female Connection	
	CFC16	16mm
	CFC2015	20mm x 15mm BSP
	CFC20	20mm
	Male Connection	
	CMC16	16mm
	CMC2015	20mm x 15mm BSP
	CMC20	20mm
	CMC2520	25mm x 20mm BSP
	CMC25	25mm
	Equal Elbow	
	CEE16	16mm
	CEE20	20mm
	CEE25	25mm

	CODE	SIZE
	Male Elbow	
	CME16	16mm
	CME2015	20mm x 15mm
	CME20	20mm
	CME25	25mm
	Female Elbow	
	CFE16	16mm
	CFE20	20mm
	Female Wingback	
	CFWB16	16mm
	CFWB1620	16mm x 20mm BSP
	CFWB2015	20mm x 15mm BSP
	CFWB20	20mm
	Female Double Fix Wingback	
	CFWB16DF	16mm
	Male Wingback	
	CMWB161565	16mm x 65mm
	CMWB161590	16mm x 90mm
	CMWB1615150	16mm x 150mm
	CMWB1615200DF	16mm x 200mm

	CODE	SIZE
	Equal Tee	
	CET16	16mm
	CET20	20mm
	CET25	25mm
	Reducing Tee	
	CRT201616	20mm x 16mm x 16mm
	CRT2016	20mm x 16mm
	CRT202016	20mm x 20mm x 16mm
	CRT2516	25mm x 16mm
	CRT2520	25mm x 20mm
	CRT252020	25mm x 20mm x 20mm
	CRT252516	25mm x 25mm x 16mm
	CRT252520	25mm x 25mm x 20mm
	Swivel Connector	
	CSWC16	16mm
	CSWC1620	16mm x 20mm BSP
	CSWC20	20mm
	CSWC2015	20mm x 15mm BSP
	CSWC25	25mm
	Swivel Elbow	
	CSE16	16mm
	CSE20	20mm
	CSE2015	20mm x 15mm BSP

	CODE	SIZE
	Connecting Barb	
	CCB16	16mm
	CCB20	20mm
	Plug	
	CP16	16mm
	CP20	20mm
	Hose Plate	
	CHP16	16mm

PN16 PEX-b WATER PIPE SYSTEM

JCT PN16 PEX-b Water Pipe is made from Silane - Cross Linked Polyethylene and manufactured under strict quality controls to New Zealand Standards AS/NZS2492:2007 for hot and cold water applications under license WM74650.

JCT PN16 PEX-b Water Pipes are completely non toxic and are approved to AS4020.

JCT PN16 PEX-b Water Pipes carries a 25 year manufacturers warranty when the system is installed by a licensed plumber in accordance with AS/NZS3500 and Local Authority Requirements. This is backed up by Franklins Comprehensive Insurance Cover.

The great advantage of **JCT PN16 PEX-b Pipe** is that it can be used with **JCT Stainless Steel Crimp** fittings.

JCT PN16 PEX-b Pipe is recommended that unprotected pipe not be exposed to direct sunlight on a permanent basis.

Black - Water

Red - Hot Potable Water

Blue - Cold potable water

Lilac - Non-Potable Recycled Water



AS/NZS 2492



WM74650

PERFORMANCE

The use of **JCT PN16 PEX-b Pipe** provides users with many advantages over traditional piping materials. **JCT PEX-b Pipe** has great flexibility making installation quick and easy. **JCT PEX-b Pipe** have good thermal and acoustic insulation properties. **JCT PEX-b Pipe** uses a Universal DZR Water and Gas Stainless Steel Crimp Fitting.

PIPE SIZES & TOLERANCES

Nom.O.D. (DN)	Mean Outside Diameter (mm)	Maximum Out-of-Roundness (mm)	Wall thickness (mm)
SDR 9 PN16			
16	16.0	1.2	2.0
20	20.0	1.2	2.3

PRESSURE RATINGS

Pipe for water applications are classified in terms of the nominal pressure rating (PN) at water service temperature of 20°C. JCT PEX-b Pipe has a pressure of PN16 and a nominal working pressure of 1600kPa at 20°C. The following table shows the relationship of the pipe working pressure and pipe material temperature (PMT).

PMT	20°C	60°C	70°C	General Working
PN16	1600	1200	1100	1000

PN16 PEX-b PIPE					
Working Pressure Water	Temp. °C	20	40	60	80
	Pressure kPa, PN16	1600	1200	950	760
Continuous Operation Temperature	PN16	72°C at 810kPa			
Maximum Operation Temperature	90°C				
Minimum Wall Thickness	Nom.O.D (DN)	Thickness			
	16mm PN16	2.0mm			
	20mm PN16	2.3mm			
Linear Thermal Expansion Coefficient	(m/m°C) 11.4*10-4				
Thermal Conductivity	0.35				
Minimum Bending Radius without Aid	8 x Diameter				

PEX-b PIPE TECHNICAL DATA

Pipe for water applications are classified in terms of the nominal pressure rating (PN) at water service temperature of 20°C. JCT PEX-b Pipe has a pressure of PN16 and a nominal working pressure of 1600kPa at 20°C. The following table shows the relationship of the pipe working pressure and pipe material temperature (PMT).

WATER QUALITY

JCT Stainless Steel Crimp fittings are made from high quality DZR brass which provides good resistance to corrosive water conditions. However, if water conditions are outside the NZ drinking water guidelines of pH 6.5–8.5, JCT Pex DZR fittings should not be used.

HANDLING & STORAGE

UV radiation can damage PEX-a pipes, so always protect JCT pipe from direct sunlight. Avoid damage to the pipe surface from dragging pipes across rough surfaces. Protect uninstalled pipes from entry of harmful liquids. Protect DZR fittings from corrosion. Protect pipes from freezing by insulation or draining the system when not in use. JCT PEX-b water pipes may be installed underground or under-slab so long as all the fittings are kept to a minimum and are wrapped in a "Denso" type protective coating.

No fittings should be installed within a concrete slab.
All JCT PEX-b pipes should be sleeved as they penetrate the slab using JCT Conduit.

INSTALLATION





Do not use PEX-b on installations with uncontrolled heat sources such as Solar or Wetbacks before a Tempering Valve.

Test JCT PEX-b Water Systems at 1500kPa for 30 minutes, check crimps visually and after testing ensure crimps are complete and no leaks have occurred. Check Crimps using JCT Crimp Gauge for PEX-b.

Flush Pipes so they are clean and ready for use.

Horizontal Pipes Clip Spacing ø		Vertical Pipes Clip Spacing ø	
Pipe	(Meters)	Pipe	Meters
16mm	0.60	16mm	1.20
20mm	0.70	20mm	1.40
25mm	0.75	25mm	1.50
32mm	0.85	32mm	1.70

NOTE: Horizontal hot water lines may require closer clip spacing to maintain straight lines and avoid sagging.

	CODE	SIZE	PACKING
	Black Pipe – Water		
	JPEX1650	16mm	50m/coil
	JPEX16L5	16mm	5m/len
	JPEX16100	16mm	100m/coil
	JPEX2050	20mm	100m/coil
	JPEX20L5	20mm	5m/len
	Red Pipe – Hot Water		
	JPEX16L5RED	16mm	5m/len
	JPEX16100RED	16mm	100m/coil
	JPEX20L5RED	20mm	5m/len
	JPEX20100RED	20mm	100m/coil
	Lilac Pipe – Recycled Water		
	JPEX1650LILAC	16mm	50m/coil
	Blue Pipe – PEX-a Cold Water		
	JPEX16L5BLUE	16mm	5m/len
	JPEX16100BLUE	16mm	50m/coil
	JPEX20L5BLUE	20mm	5m/len
	JPEX20100BLUE	20mm	50m/coil
	Pipe Clips – Black		
	JCT16B	16mm	100/bag
	JCT20B	20mm	100/bag
	JCT25B	25mm	100/bag
	JCT32B	32mm	100/bag

PEX-AL-PEX GAS MLP PIPE SYSTEM

JCT Stainless Steel Crimp Gas system is a plumbing system comprising of a multi-layer composite PEX-AL-PEX pipe using the full range of stainless steel dual purpose crimp fittings and a set of tooling complete with beveling tools to ensure tool performance.

JCT PEX-AL-PEX Gas Pipe is manufactured as a composite pipe consisting of an inner and outer layer of cross-linked polyethylene which is permanently adhered to the core of aluminum. The pipe is manufactured under strict quality controls to Australian Standard AS4176.8-2010 under License AMI74689.

JCT MLP Gas Pipe carries a 25 year manufacturers warranty when the system is installed by or under the supervision of a craftsman gas-fitter in accordance with AS/NZS3500 and Local Authority Requirements. This is backed up by Franklins Comprehensive Insurance Cover.

Yellow – MLP Gas
White – MLP Water



AS 4176

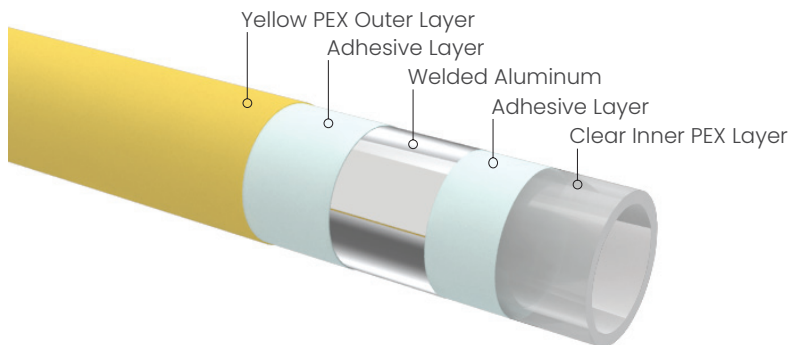


WaterMark

AMI74689

FEATURES & BENEFITS OF JCT GAS SYSTEM

- Pipe made from five layers, the PEX and Aluminum layers provide Strength and flexibility
- Light weight during transport and installation
- Non-toxic
- Non-corrosive
- Resistant to oxygen and gases
- Smooth inner layer reduces pressure losses
- Low levels of thermal conductivity and expansion
- Leak proof fitting connections
- No open flame during installation
- Manual crimping tools can be used for both JCT Crimp Water PEX and JCT Crimp Gas PEX-AL-PEX system applications
- Double "O" ring seal
- Long entry stainless steel crimp sleeve
- Easy to see witness holes to confirm full engagement of fitting onto pipe.



(Natural Gas Only) Natural Gas flow through PEX/AL/PEX Composite Pipe Crimped Fittings (ML/h) Pressure Drop of 0.75kPa (Meter Pressure 1.1kPa) Fitting Allowance (M)

Pipe Size		Length of Run (Meters)																								
		2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95
16	84	57	45	38	37	36	34	30	27	24	19	16	14	12	11	10	9	8	/	/	/	/	/	/	/	/
	158	106	84	72	63	57	52	48	45	43	41	40	35	30	27	24	22	20	18	17	/	/	/	/	/	/
	3/4	211	167	142	125	113	103	96	89	84	79	75	71	68	64	62	60	58	54	50	48	46	45	45	45	44
32	602	405	322	273	240	216	198	184	172	162	142	128	117	109	102	98	95	89	85	83	80	78	76	74	73	73
	985	663	526	446	393	354	324	300	281	264	233	210	192	178	16	157	150	141	136	131	126	121	117	113	110	110
	1900	1278	1014	860	757	682	625	579	541	510	449	404	370	343	321	302	285	272	256	248	238	229	221	214	207	207
63	3691	2505	1994	1696	1496	1495	1349	1236	1146	1072	1010	889	802	734	680	636	589	567	539	515	494	474	457	452	452	414

Pipe Size	Length of Run (Meters)																								
	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95
16	448	303	241	204	180	162	148	137	128	116	106	95	88	81	76	71	67	64	61	58	56	54	52	50	48
20	847	574	457	388	342	308	282	262	245	229	203	182	167	155	144	136	129	123	117	112	107	104	100	96	94
25	1721	1169	931	792	699	631	578	536	501	473	416	375	343	318	298	280	265	252	241	231	222	214	206	200	192
32	3463	2358	1881	1602	1414	1276	1171	1086	1016	963	844	762	698	647	606	570	540	514	491	471	453	436	421	408	396
40	4921	3354	2677	2281	2014	1819	1669	1548	1449	1366	1205	1087	997	924	865	815	772	735	702	673	647	624	603	583	566
50	9076	6197	4952	4222	3730	3370	3093	2871	1688	2534	2237	2020	1852	1719	1608	1516	1436	1368	1307	1254	1206	1162	1124	1088	1055
63	17719	12118	9694	8271	7311	6609	6088	5634	5277	4977	4396	3971	3645	3381	3166	2985	2830	2694	2586	2472	2378	2293	2216	2146	2084

(LPGas only) NATURAL GAS flow through PEX/AL/PEX Composite Pipe Crimped Fittings(MJ/h) Pressure Drop of 10.0kPa(Meter Pressure 40.0kPa-70.0kPa)

Pipe Size	Length of Run (Meters)																								
	2	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95
16	2805	1968	1597	1377	1226	1115	1029	959	903	854	759	689	635	592	556	525	499	477	457	439	423	408	395	383	372
20	6188	4347	3531	3045	2714	2470	2248	2127	2001	1894	1685	1533	1413	1316	1237	1171	1112	1063	1018	979	943	911	882	855	830
25	11467	8060	6552	5654	5042	4590	4329	3955	3721	3523	3137	2853	2632	2454	2306	2182	2075	1983	1900	1827	1762	1702	1649	1599	1552
32	24003	16887	13737	11860	10579	9635	8901	8309	7820	7406	6598	6003	5541	5168	4860	4599	4375	4181	4008	3855	3718	3593	3481	3377	3280
40	35937	25294	20582	17774	15885	14445	13447	12463	11730	11110	9903	9010	8319	7761	7299	6910	6574	6283	6024	5795	5589	5403	5233	5078	4936
50	66663	46949	38219	33016	29467	26847	24813	23174	21816	20667	18427	16775	15491	14457	13601	12878	12256	11713	11235	10809	10427	10081	9766	9478	9252
63	131992	92961	75706	65422	58407	53229	49206	45963	43279	41008	36578	33309	30771	28726	27032	25600	24369	23295	22348	21505	20748	20063	19440	18871	18364

	CODE	SIZE	Wall	PACKING
	Yellow Pipe – MLP Gas			
	JG1650	16mm	2.0mm	50m/coil
	JG16-5M	16mm	2.0mm	5m/len
	JG2050	20mm	2.0mm	50m/coil
	JG20-5M	20mm	2.0mm	5m/len
	JG2550	25mm	2.5mm	50m/coil
	JG25-5M	25mm	2.5mm	5m/len
	JG3250	32mm	3.0mm	50m/coil
	JG32-5M	32mm	3.0mm	5m/len
	White Pipe – MLP Water			
	JW1650	16mm	2.0mm	50m/coil
	JW16-5M	16mm	2.0mm	5m/len
	JW2050	20mm	2.0mm	50m/coil
	JW20-5M	20mm	2.0mm	5m/len
	JW2550	25mm	2.5mm	50m/coil
	JW25-5M	25mm	2.5mm	5m/len
	JW3250	32mm	3.0mm	50m/coil
	JW32-5M	32mm	3.0mm	5m/len
	Pipe Clips – Yellow			
	JCT16Y	16mm	-	100/bag
	JCT20Y	20mm	-	100/bag
	JCT25Y	25mm	-	100/bag
	JCT32Y	32mm	-	100/bag

JCT STAINLESS STEEL CRIMP SYSTEM

JCT Stainless Steel Crimp product range is a complete PEX plumbing system comprising of JCT PN16 PEX-b water pipe, PEX-AL-PEX gas multiplier pipe and a full range of DZR brass fittings with a set of tolling complete with beveling tools to ensure tool performance.

JCT Stainless Steel Crimp and DZR fittings are dual purpose for water and gas with a double "O" ring and stainless steel crimp ring. The outlay advantage is a cost saver to the installer carrying one fitting for two applications.

JCT Stainless Steel Crimp complies with AS2537, AS2492 and AS4176 and is certified by ApprovalMark (License AMI74689, WM74650 and WM74651).

JCT Stainless Steel Crimp system carries a 25 year manufacturers warranty when the system is installed by a licensed plumber for water and by or under supervision of a craftsman gas-fitter for gas in accordance with AS/NZS3500 and Local Authority Requirements. This is backed up by Franklins Comprehensive Insurance Cover.



AS/NZS 2537



WaterMark

AMI74689
WM74650
WM74651

INSTALLATION INSTRUCTIONS



Step 1:

Measure and cut the pipe using a pipe cutter. Make sure that the pipe is cut cleanly and squarely and there are no scores, cuts or scratches on the surface of the pipe.



Step 2:

Round and deburr the end of the pipe by inserting the beveling tool – ensure it is size matched to suit the pipe diameter. Insert the beveling tool fully into the pipe using a twisting action then rotate 2-3 full turns or until it moves freely within the pipe. Visually check and remove any excess materials or burrs for a clean end.



Step 3:

Insert the pipe firmly into the crimp sleeve of the fitting body.

Cont. On Next Page...



Step 4:

Insert until the pipe end reaches the plastic sight sleeve and make sure the pipe can be seen through all the witness holes.

Note - If an incorrect joint is made, the defective joint be removed and replaced with a new fitting.



Step 5:

Place the crimp sleeve in the pressing tongs and press until the jaws are completely closed.



Step 6:

Open tongs and remove fitting, ensure the fitting body has not been damaged and that there are 3 clear crimp lines around the sleeve.

Important:

This system must be installed by a licensed gas-fitter in accordance with AS5601.1:2010 and this procedure otherwise warranty will be void.

Step 7:



At completion, carry out pressure testing as required per AS5601.1:2010 and/or any requirements specified by local authorities.

	CODE	SIZE
	Ring Only	
	JSS16	16mm
	JSS20	20mm
	JSS25	25mm
	JSS32	32mm
	Straight Connection	
	JSC16	16mm
	JSC20	20mm
	JSC25	25mm
	JSC32	32mm
	Reducing Connection	
	JRC2016	20mm x 16mm
	JRC2516	25mm x 16mm
	JRC2520	25mm x 20mm
	JRC3220	32mm x 20mm
	JRC3225	32mm x 25mm
	Female Connection	
	JFC16	16mm
	JFC2015	20mm x 15mm BSP
	JFC20	20mm
	JFC2520	25mm x 20mm BSP
	JFC3220	32mm x 20mm BSP
	JFC3225	32mm x 25mm BSP

	CODE	SIZE
	Male Connection	
	JMC16	16mm
	JMC2015	20mm x 15mm BSP
	JMC20	20mm
	JMC2515	25mm x 15mm BSP
	JMC2520	25mm x 20mm BSP
	JMC25	25mm
	JMC3225	32mm x 25mm BSP
	Equal Elbow	
	JEE16	16mm
	JEE20	20mm
	JEE25	25mm
	JEE32	32mm
	Male Elbow	
	JME16	16mm
	JME20	20mm
	JME2520	25mm x 20mm BSP
	Female Elbow	
	JFE16	16mm
	Female Wingback	
	JFWB16	16mm
	JFWB1620	16mm x 20mm BSP
	JFWB20	20mm
	JFWB2015	20mm x 15mm BSP
	JFWB2520	25mm x 20mm BSP

	CODE	SIZE
	Female Double Fix Wingback	
	JFWB16DF	16mm
	Male Wingback	
	JMWB161590	16mm x 15mm BSP x 90mm
	JMWB1615150	16mm x 15mm BSP x 150mm
	JMWB201590	20mm x 15mm BSP x 90mm
	JMWB2020100	20mm x 20mm BSP x 100mm
	Equal Tee	
	JET16	16mm
	JET20	20mm
	JET25	25mm
	JET32	32mm
	Reducing Tee	
	JRT201616	20mm x 16mm x 16mm
	JRT202016	20mm x 20mm x 16mm
	JRT2016	20mm x 16mm
	JRT251616	25mm x 16mm x 16mm
	JRT252020	25mm x 20mm x 20mm
	JRT2516	25mm x 16mm
	JRT2520	25mm x 20mm
	JRT252520	25mm x 25mm x 20mm
	JRT3225	32mm x 25mm

	CODE	SIZE
	Swivel Connector	
	JSWC16	16mm
	JSWC1620	16mm x 20mm BSP
	JSWC2015	20mm x 15mm BSP
	JSWC20	20mm
	JSWC2520	25mm x 20mm BSP
	JSWC25	25mm
	Swivel Elbow	
	JSE16	16mm
	JSE2015	20mm x 15mm BSP
	JSE20	20mm
	Connecting Barb	
	JCB16	16mm
	JCB20	20mm
	Plug	
	JP16	16mm
	JP20	20mm
	JP25	25mm
	JP32	32mm
	Hose Plate	
	JHP16	16mm
	JHP20	20mm
	Straight Connection Polybutylene Adaptor	
	JSC16PB	16mm
	JSC20PB	20mm

	CODE	SIZE
	Swivel Ball Valves – Water	
	JBBV16SV	16mm x 1/2"
	JBBV20SV	20mm x 3/4"
	JBBV2520SV	25mm x 3/4"
	Swivel Ball Valves – Gas	
	JGBV16SV	16mm x 1/2"
	JGBV20SV	20mm x 3/4"
	JGBV2520SV	25mm x 3/4"

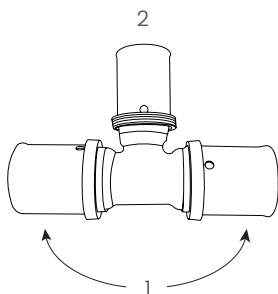
TEE CODING

The end number always represents the branch.

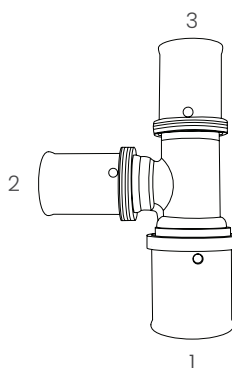
If the tee is equal on both sides and reduces at the branch then we only have two numbers not three. The larger number is always first.

e.g.

JRT2016



JRT201616



JCT TOOLS

	CODE	SIZE	QTY.
	Manual Crimp Tools		
	JCT.MC1620 CC (C System)	16mm-20mm	/
	JCT.C16L CC (C System)	16mm-20mm	/
	JCT.C20L CC (C System)	16mm-20mm	/
	JCT.MC1620 SS (J System)	16mm-20mm	/
	REMS Mini Press Tool Kit		
	REMS K (Copper Crimp)	16mm-32mm	/
	REMS U (Stainless Steel Crimp)	16mm-32mm	/
	REMS S (Sliding Sleeve)	16mm-32mm	/
	Manual Slide Tool		
	JCT.MS1632 Slide	16mm-32mm	/
	Pipe Cutter		
	PC30	16mm-32mm	/
	S/S Plastic Reamer		
	JCT.PRI625	16-20-25mm	/
	JCT.PR2032	20-25-32mm	/
	90° Profile Bend		
	REH16PB (Galv)	16mm	10/bag
	REH16BPVC (Plastic)	16mm	10/bag
	REH20PB (Galv)	20mm	10/bag
	REH20BPVC (Plastic)	25mm	10/bag
	REH25PB (Galv)	25mm	10/bag

[illegible]

NOTES

[illegible]

[illegible]

