

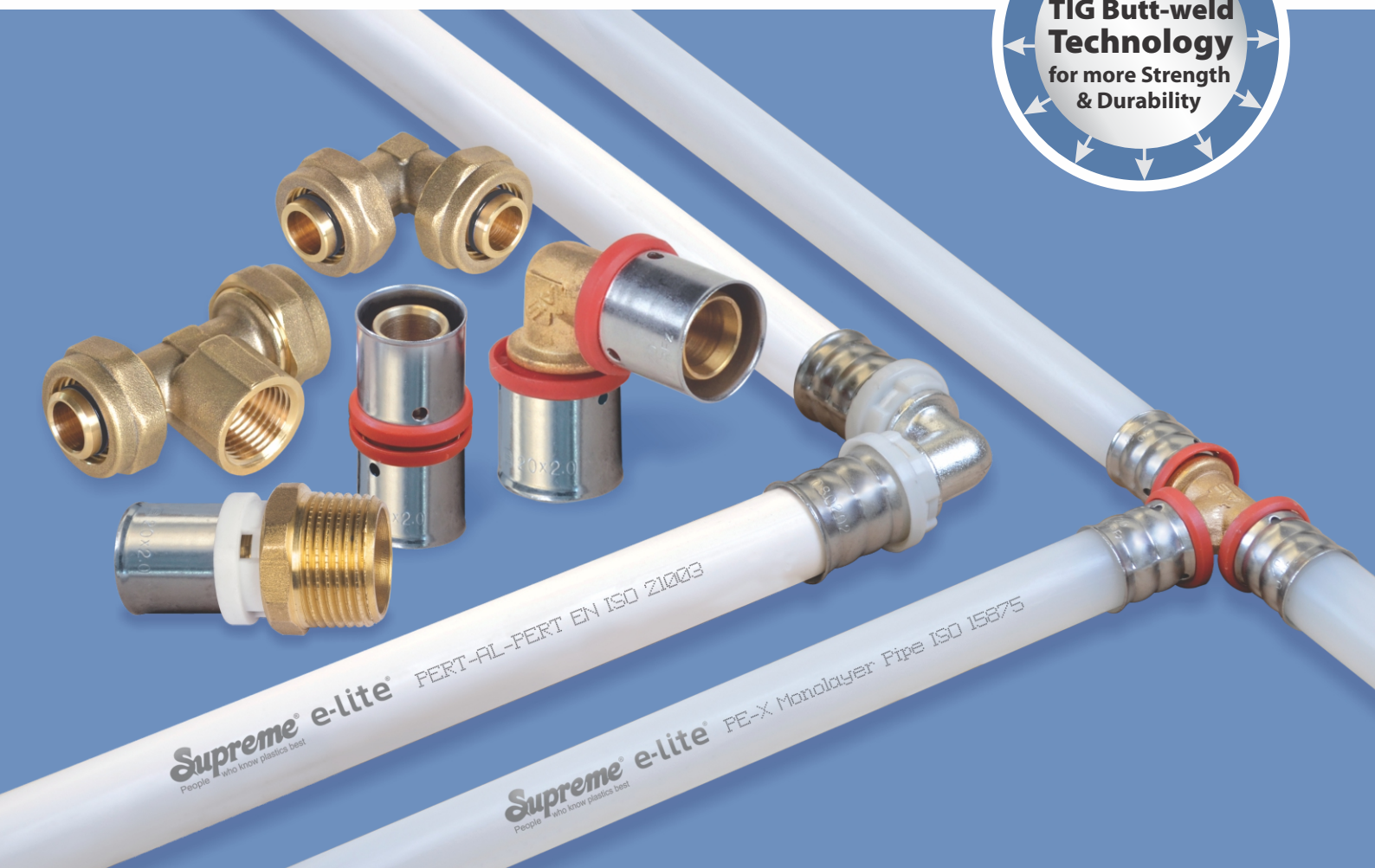
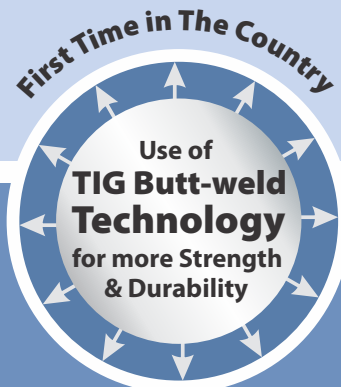
Supreme[®]
People who know plastics best

Since 1942

e-lite[®]
Advance Plumbing System

**PERT-AL-PERT, PEX-AL-PEX,
PE-AL-PE Multilayer &
PEX Monolayer
Piping Systems**

...The next generation plumbing systems



Long Term
Reliable
Performance



Safe and
Most Ideal for
Potable Water



Easy and
Quick
Installation



Flexibility in
Design and
Installation



Maximum
Installation
Safety

Jeevan bhar ka saath...

Introduction

The Supreme Industries Limited is an acknowledged leader of India's Plastic Industry. It is credited with pioneering several path breaking products and has been a torchbearer in the transition from conventional to advanced plastic piping products in the country. Its customer-centric approach fuels its research for designing unmatched quality products to meet the aspirations of its quality conscious customers. The innovative product portfolio offered by Supreme is extensive in range and application and comprises variety of pipes and vast spectrum of fittings totalling over 14,000 diverse products.

In line with our tradition of introducing new and innovative products on regular basis, we are pleased to offer yet other advanced plumbing systems i.e. "**Supreme e-lite**" PEX-b monolayer, PERT-AL-PERT, PEX-AL-PEX and PE-AL-PE multilayer for hot and cold water applications.

e-lite advanced plumbing systems are designed to meet premium project requirements like speedy execution, reliable joints and long-term system performance. Besides plumbing these systems are also suitable for applications like compressed air, solar water heater, radiant floor heating, fire sprinkler system, etc.

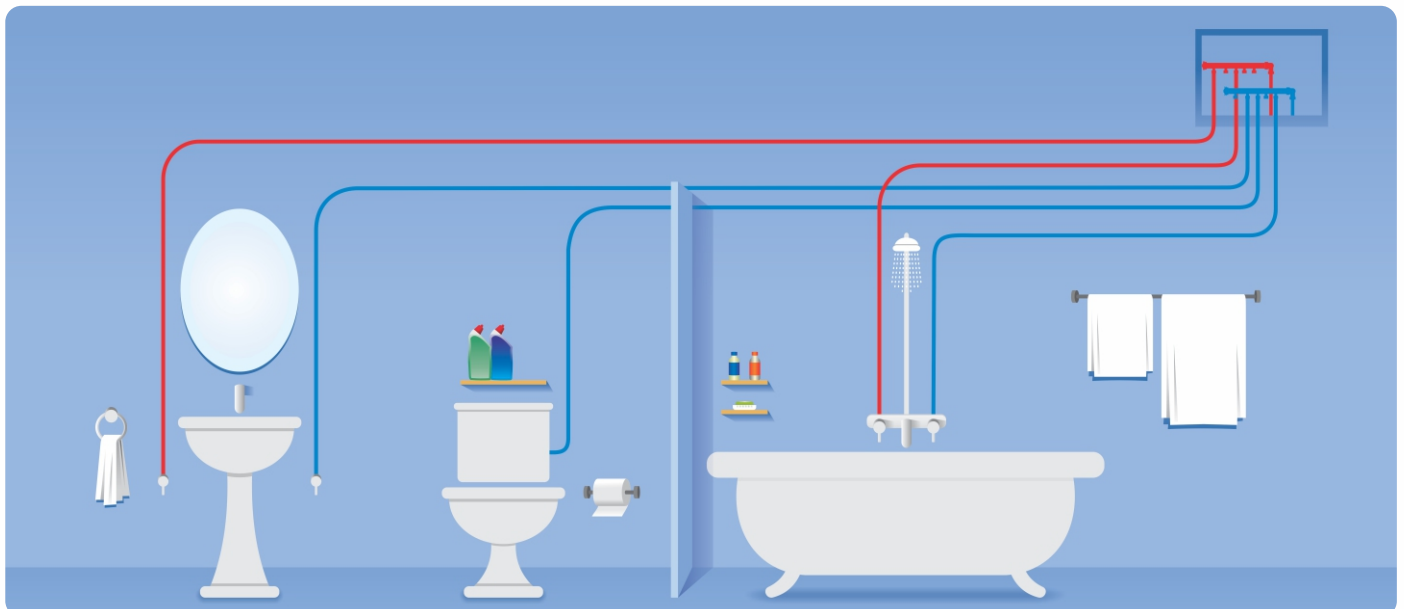
Manufactured using advanced material and technology these premium systems have excellent resistance to elevated temperature and pressure. These are endowed with many unique features that makes them one of the most trustworthy systems. Our commitment to efficient production process, quality of raw materials and rigorous quality control, makes **e-lite** systems the most reliable in the market. **e-lite** plumbing systems comply with the highest national and international quality standards like IS-15450, EN-ISO-15875 and EN-ISO-21003.

What is PEX?

PEX or Cross-linked Polyethylene is a polyethylene material which has undergone a change in molecular structure using a chemical or a physical process whereby the polymer chains are chemically linked. A cross linking of polyethylene into PEX pipes results in improved properties such as elevated temperature resistance, increased strength and performance, chemical resistance, and resistance to slow crack growth. These properties makes the PEX piping an ideal choice for water distribution at high pressure and temperature up to 95°C. Depending on the method of cross-linking the PEX is classified into three types i.e. PEX-a (Peroxide), PEX-b (Silane) and PEX-c (Electron beam).

What is PERT?

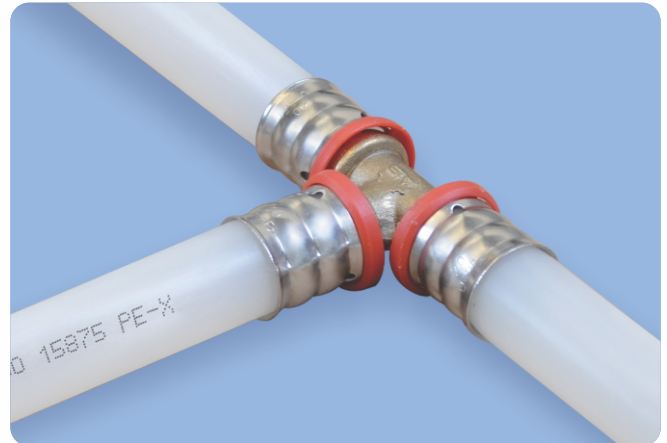
PERT stands for Polyethylene Raised Temperature. PERT materials have a unique molecular structure and crystalline microstructure, which provides excellent long term hydrostatic strength at high temperatures. Because of its enhanced mechanical properties at elevated temperature, PERT can be used in all hot water & heat distribution applications. Additionally, the easy processing and outstanding material properties like high impact strength, excellent organoleptic properties, and easy installation in terms of flexibility and weldability make it the ideal choice for various applications.



Supreme e-lite PEX-b Pipes

e-lite PEX-b pipes are manufactured using Silane (moisture cure) method of cross-linking. In this method, the molecules of PE polymers are cross-linked after extrusion process using a catalyst and then by exposing the pipes in steam bath. This manufacturing process makes **e-lite** PEX-b pipes more superior compared to other types of PEX in terms of higher burst pressure, higher impact resistance, excellent temperature and pressure resistance, excellent chlorine and oxidative resistance, long life besides economy.

We offer PEX-b monolayer and PEX-AL-PEX multilayer pipes.



Supreme e-lite PERT-AL-PERT, PEX-AL-PEX and PE-AL-PE Multilayer Pipes

Supreme **e-lite** multilayer pipe comprises five layers i.e. inner and outer layer in PERT, PEX or PE and middle layer in aluminium with inner and outer adhesive tie layer that combines the advantages of both plastic and metal. The aluminium layer is made of an alloy that complies with EN-ISO-8006 requirements which is specially produced for this application and sourced from globally reputed companies. The unique patented TIG butt-weld technology used for welding aluminium layer in **e-lite** multilayer pipes guarantees more strength than overlapping method. It also provides uniform characteristics across the entire cross section of the pipe along with maintaining circular shape and flexibility. It offers maximum reliability during bending operation or installation as the problem of pipe cracking is eliminated. The linear expansion is also substantially reduced. The aluminium layer acts as an oxygen barrier and prevents its penetration through the pipe wall, thus offers effective protection against corrosion of metal components. In PE-AL-PE multilayer pipes, the outer PE layer in black colour makes it UV stabilized and suitable for the outdoor application. **e-lite** PERT-AL-PERT and PEX-AL-PEX multilayer pipes are recommended for 95°C at 10 bar whereas PE-AL-PE multilayer pipes are recommended for 82°C at 6.9 bar.

PERT-AL-PERT/PEX-AL-PEX

- 1) PERT / PEX layer
- 2) Adhesive layer
- 3) Aluminium layer
- 4) Adhesive layer
- 5) PERT / PEX layer



PE-AL-PE

- 1) PE layer
- 2) Adhesive layer
- 3) Aluminium layer
- 4) Adhesive layer
- 5) PE layer



The integral pipe and fitting joint

Technical Details

Thermal Properties

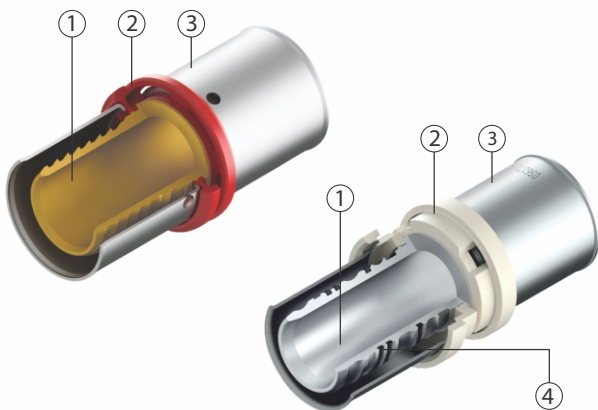
Maximum operating temperature (°C)	95
Linear expansion coefficient (mm/m·K)- monolayer	0.14
Linear expansion coefficient (mm/m·K)- multilayer	0.025
Thermal conductivity (W/m·K)	0.4

Mechanical Properties

Maximum operating pressure (bar)	10
Roughness (mm)	0.0004
Minimum bending radius (mm)	5 x DN

Fittings

- **e-lite** fittings are manufactured in copper alloy, which is compliant with the requirements for the materials that comes in contact with water for human consumption.
- Fittings are resistant to stress corrosion test according to the ISO-6957 standard.
- O' ring design is such that it will not get damaged while pipe insertion.
- Leak before Press - If installer forgets to crimp the fitting then automatically leakage will appear while testing which helps to avoid such installation errors.
- No need of bevelling tool if the quality of the cutter is good.

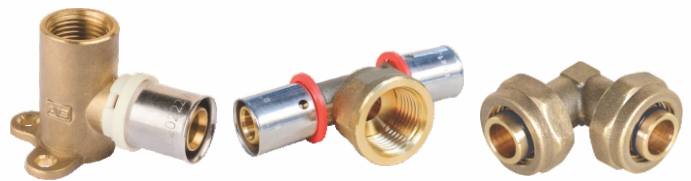


No.	Components	Material
1	Body	Copper Alloy
2	Plastic Ring	Engineering Thermoplastic
3	Sleeve	Stainless Steel
4	Sealing Ring	EPDM

Applicable Standards

Item Description

Monolayer crimping type fittings	EN-ISO-15875
Multilayer crimping type fittings	EN-ISO-21003
Brass compression fittings	IAPMO-IGC-306
Crimping type female fittings	EN-ISO-228
Threaded fittings	EN-ISO-10226



Tools and Accessories

Item Description

Manual Crimping tool with Jaws	16 - 32mm
Power Crimping tool with Jaws	16 - 32mm
Pipe Cutter	16 - 32mm
Blade for pipe cutter	16 - 32mm
Deburring and Chamfering tool	16 - 32mm
External spring (pipe bending tool)	16 - 32mm



Unique Features

Excellent temperature and pressure resistance : e-lite advanced plumbing systems are suitable for operating temperature up to 95°C in wide spectrum of applications. With their excellent performance in high temperature and pressure conditions, these systems have proved their superiority over the other pipes or materials.

Ideal for potable water application : Due to mechanical joints there remains no need of solvent, chemical, or solder jointing which nullifies the possibility of water contamination. The pipe material does not have any negative biological effects on the water. Moreover due to chemical inertness and its resistance to all sorts of corrosion, **e-lite** plumbing system is considered as absolutely safe for potable water applications.

Long term reliable performance: The system offers long term reliable performance due to the excellent material properties and unique crimping and compression type joints which are 100% watertight. Due to the remarkable chlorine and oxygen resistance, the pipes provides long term performance without causing trouble to the metallic parts in the system.

Easy and fast Installation : The pipes are made available in the form of long coils that helps to reduce the no. of joints. Due to great flexibility, bendability at the point of change of direction and press fit crimping/compression joints, the installation of **e-lite** pipes becomes fast and easier than any rigid pipes. With the well-equipped handy tools and availability of manifolds, the installation becomes error free.

Different installation methodologies : e-lite plumbing systems can be installed according to the different installation methodologies. These methodologies serve the different design advantages according to the customized application and are very useful in case of any maintenance requirements.

Easy to repair and maintain : Due to pipe in pipe method, in case of any repair, the concealed pipes can be easily pulled out and replaced without disturbing the expensive tiling work and interior architectural aesthetics.

Low on noise : These piping systems are significantly quieter than rigid piping systems. It is inherently less noisy due to its flexibility and ability to absorb pressure surges.

Fields of Applications

e-lite plumbing systems can be used in a wide variety of applications in residential, commercial and industrial constructions.



Hot and cold water supply systems in all types of buildings



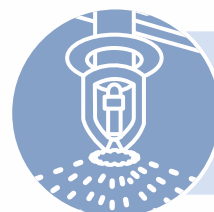
Radiant floor heating systems for suspended floor systems or in slab construction



Municipal water service pipe in underground applications



Turf conditioning for greenhouses, golf courses, and sports field surfaces



Fire suppression systems (residential fire sprinklers)

Product Range - Monolayer

Pipes

PEX (EN-ISO-15875)



Size (mm)	Overall pipe dia. (mm)		Average wall thickness (mm)	Coil length (m)
	min	max		
16	16.00	16.30	1.95	100
20	20.00	20.30	2.05	100
25	25.00	25.30	2.50	50
32	32.00	32.30	3.10	50

Crimping Fittings

(EN-ISO-15875/EN-ISO-228/EN-ISO-10226)

Coupler



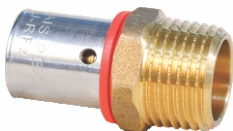
Size (mm)	Std. Packing
16	168
20	128
25	60
32	32

Reducing Coupler



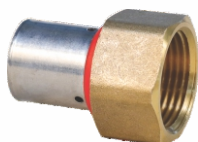
Size (mm)	Std. Packing
20 x 16	140
25 x 20	72
32 x 25	44

Male Threaded Adapter



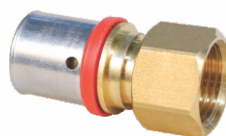
Size (mm)	Std. Packing
16 x 15 (1/2")	160
20 x 15 (1/2")	152
20 x 20 (3/4")	96
25 x 20 (3/4")	72
25 x 25 (1")	56
32 x 25 (1")	36

Female Threaded Adapter



Size (mm)	Std. Packing
16 x 15 (1/2")	152
20 x 15 (1/2")	132
20 x 20 (3/4")	88
25 x 20 (3/4")	72
25 x 25 (1")	40
32 x 25 (1")	36

Female Threaded Adapter with Screw Connection



Size (mm)	Std. Packing
16 x 15 (1/2")	160
20 x 15 (1/2")	112
20 x 20 (3/4")	104
25 x 20 (3/4")	72
32 x 25 (1")	48

Elbow 90°



Size (mm)	Std. Packing
16	136
20	84
25	40
32	24

Male Threaded Elbow 90°



Size (mm)	Std. Packing
16 x 15 (1/2")	88
20 x 15 (1/2")	88
25 x 20 (3/4")	40

Female Threaded Elbow 90°



Size (mm)	Std. Packing
16 x 15 (1/2")	104
20 x 15 (1/2")	96
20 x 20 (3/4")	72
25 x 20 (3/4")	48
32 x 25 (1")	20

Female Threaded Elbow 90° with Base Plate (38mm ht.)



Size (mm)	Std. Packing
16 x 15 (1/2")	56
20 x 15 (1/2")	52

Female Threaded Elbow 90° with Base Plate (46mm ht.)



Size (mm)	Std. Packing
16 x 15 (1/2")	44
20 x 15 (1/2")	48

Female Threaded Elbow 90° with Screw Connection



Size (mm)	Std. Packing
25 x 20 (¾")	40

Ball Valve



Size (mm)	Std. Packing
20	14
25	10
32	8

Equal Tee



Size (mm)	Std. Packing
16	80
20	56
25	24
32	12

Embedded Valve



Size (mm)	Std. Packing
16	28
20	26
25	18

Reducing Tee



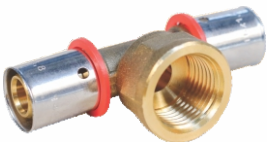
Size (mm)	Std. Packing
16 x 20 x 16	72
20 x 16 x 20	64
25 x 16 x 16	44
25 x 16 x 25	36
25 x 20 x 20	40
25 x 20 x 25	32
32 x 20 x 32	20
32 x 25 x 32	16

Sleeve (For Monolayer Fittings)



Size (mm)	Std. Packing
16	10
20	10
25	5
32	5

Female Threaded Tee



Size (mm)	Std. Packing
16 x 15 (½") x 16	72
20 x 15 (½") x 20	56
25 x 15 (½") x 25	32
25 x 20 (¾") x 25	24

Cross



Size (mm)	Std. Packing
20 x 20 x 16 x 16	40
25 x 20 x 16 x 16	32
25 x 20 x 20 x 20	28

Distributor



Size (mm)	Std. Packing
20 x 20 x 16 x 16 x 16	24
25 x 20 x 16 x 16 x 16	20

Product Range - Multilayer

Pipes

PEX-AL-PEX (EN-ISO-21003)



Size (mm)	Overall pipe dia. (mm)		Average wall thickness (mm)	AL layer thickness (mm)	Coil length (m)
	min	max			
16	16.00	16.20	2.10	0.20	100
20	20.00	20.20	2.15	0.25	100
25	25.00	25.20	2.65	0.30	50
32	32.00	32.20	3.15	0.40	50

PE-AL-PE (IS-15450)



Size (mm)	Overall pipe dia. (mm)		Average wall thickness (mm)	AL layer thickness (mm)	Coil length (m)
	min	max			
16	16.00	16.3	1.90	0.18	100
20	20.00	20.3	2.10	0.23	100
25	25.00	25.3	2.55	0.23	50
32	32.00	32.5	3.20	0.28	50

PERT-AL-PERT (EN-ISO-21003)



Size (mm)	Overall pipe dia. (mm)		Average wall thickness (mm)	AL layer thickness (mm)	Coil length (m)
	min	max			
16	16.10	16.30	2.10	0.20	100
20	20.10	20.30	2.15	0.23	100
25	25.10	25.30	2.65	0.23	50
32	32.10	32.30	3.15	0.28	50

Crimping Fittings (EN-ISO-21003/EN-ISO-228/EN-ISO-10226)

Coupler



Size (mm)	Std. Packing
16	120
20	80
25	45
32	20

Reducing Coupler



Size (mm)	Std. Packing
20 x 16	90
25 x 16	60
25 x 20	45
32 x 20	30
32 x 25	30

Male Threaded Adapter



Size (mm)	Std. Packing
16 x 15 (1/2")	80
20 x 15 (1/2")	80
20 x 20 (3/4")	80
25 x 20 (3/4")	40
25 x 25 (1")	40
32 x 20 (3/4")	30
32 x 25 (1")	30

Female Threaded Adapter



Size (mm)	Std. Packing
16 x 15 (1/2")	80
20 x 15 (1/2")	80
20 x 20 (3/4")	80
25 x 20 (3/4")	40
25 x 25 (1")	40
32 x 20 (3/4")	30
32 x 25 (1")	30

Female Threaded Adapter with Screw Connection



Size (mm)	Std. Packing
16 x 15 (1/2")	120
20 x 15 (1/2")	80
20 x 20 (3/4")	80
25 x 20 (3/4")	40
25 x 25 (1")	40
32 x 25 (1")	30
32 x 32 (1 1/4")	20

Elbow 90°



Size (mm)	Std. Packing
16	80
20	60
25	30
32	20

Reducing Elbow 90°



Size (mm)	Std. Packing
25 x 20	30
32 x 20	20
32 x 25	20

Equal Tee



Size (mm)	Std. Packing
16	45
20	30
25	20
32	10

Male Threaded Elbow 90°



Size (mm)	Std. Packing
16 x 15 (1/2")	80
20 x 15 (1/2")	60
25 x 20 (3/4")	40

Reducing Tee



Size (mm)	Std. Packing
20 x 16 x 16	32
20 x 16 x 20	30
25 x 16 x 16	16
25 x 16 x 25	20
25 x 20 x 20	16
25 x 20 x 25	20
32 x 20 x 32	15

Female Threaded Elbow 90°



Size (mm)	Std. Packing
16 x 15 (1/2")	80
20 x 15 (1/2")	60
20 x 20 (3/4")	40
25 x 20 (3/4")	40
32 x 25 (1")	20

Female Threaded Tee



Size (mm)	Std. Packing
16 x 15 (1/2")	40
20 x 15 (1/2")	40
25 x 15 (1/2")	20
25 x 20 (3/4")	20
32 x 20 (3/4")	15

Female Threaded Elbow 90° with Base Plate (38mm ht.)



Size (mm)	Std. Packing
16 x 15 (1/2")	40
20 x 15 (1/2")	40

Ball Valve



Size (mm)	Std. Packing
25	8
32	8

Female Threaded Elbow 90° with Base Plate (46mm ht.)



Size (mm)	Std. Packing
16 x 15 (1/2")	40
20 x 15 (1/2")	40

Embedded Valve



Size (mm)	Std. Packing
16	20
20	20
25	12

Female Threaded Elbow 90° with Screw Connection



Size (mm)	Std. Packing
25 x 20 (3/4")	30

Sleeve (For Multilayer Fittings)



Size (mm)	Std. Packing
16	10
20	10
25	5
32	5

Note : Crimping type multilayer fittings will be supplied either in TIN plated or natural brass color

Compression Fittings (IAPMO-IGC-306)

Coupler



Size (mm)	Std. Packing
16	216
20	144
25	72
32	48

Reducer



Size (mm)	Std. Packing
20 x 16	144
25 x 16	120
25 x 20	120
32 x 20	48
32 x 25	48

Male Threaded Adapter



Size (mm)	Std. Packing
16 x 15 (1/2")	252
20 x 15 (1/2")	168
20 x 20 (3/4")	144
25 x 15 (1/2")	120
25 x 20 (3/4")	120
25 x 25 (1")	96
32 x 20 (3/4")	48
32 x 25 (1")	48
32 x 32 (1 1/4")	48

Female Threaded Adapter



Size (mm)	Std. Packing
16 x 15 (1/2")	216
20 x 15 (1/2")	216
20 x 20 (3/4")	180
25 x 15 (1/2")	144
25 x 20 (3/4")	120
25 x 25 (1")	66
32 x 20 (3/4")	48
32 x 25 (1")	48
32 x 32 (1 1/4")	36

Elbow 90°



Size (mm)	Std. Packing
16	180
20	96
25	72
32	36

Reducing Elbow 90°



Size (mm)	Std. Packing
20 x 16	120
25 x 20	84
32 x 20	48
32 x 25	42

Female Threaded Elbow 90°



Size (mm)	Std. Packing
16 x 15 (1/2")	144
20 x 15 (1/2")	120
20 x 20 (3/4")	96
25 x 15 (1/2")	96
25 x 20 (3/4")	96
25 x 25 (1")	60
32 x 25 (1")	48
32 x 32 (1 1/4")	36

Male Threaded Elbow 90°



Size (mm)	Std. Packing
20 x 15 (1/2")	96

Equal Tee



Size (mm)	Std. Packing
16	90
20	72
25	48
32	24

Reducing Tee



Size (mm)	Std. Packing
20 x 16 x 20	72
25 x 20 x 25	48
32 x 20 x 32	24
32 x 25 x 32	24

Female Threaded Tee



Size (mm)	Std. Packing
16 x 15 (1/2")	108
20 x 15 (1/2")	84
25 x 15 (1/2")	48
25 x 25 (1")	48

Hex Nut



Size (mm)	Std. Packing
16	100
20	100
25	50
32	25

Clip Ring/Clip Ring



Size (mm)	Std. Packing
16	250
20	250
25	150
32	100

Tools and Accessories

Manual Crimping Tool with Jaws



Size (mm)	Std. Packing
16 - 20	1
16 - 32	1

Deburring and Chamfering Tool



Size (mm)	Std. Packing
16 - 25	1
20 - 32	1

Power (Battery Operated) Crimping Tool with Jaws



Size (mm)	Std. Packing
16 - 32	1

Manifold



Size (mm)	Std. Packing
¾" x ½" (2 male outlets)	1
¾" x ½" (3 male outlets)	1
¾" x ½" (4 male outlets)	1

Pipe Cutter



Size (mm)	Std. Packing
16 - 25	1

Manifold with Valve



Size (mm)	Std. Packing
¾" x ½" (2 male outlets)	1
¾" x ½" (3 male outlets)	1

Pipe Cutter



Size (mm)	Std. Packing
16 - 32	1

PEX Pipe Adapter for Manifold Connection (for monolayer & multilayer pipes)



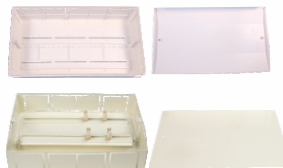
Size (mm)	Std. Packing
16 x 15 (½")	1

Blade for Pipe Cutter



Size (mm)	Std. Packing
16 - 25	1
16 - 32	1

Cabinet for Manifolds



Size (mm)	Std. Packing
300 x 530 x 90	1
300 x 430 x 90	1

Blade for Pipe Cutter



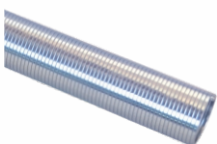
Size (mm)	Std. Packing
16 - 25	1

Sealing Ring (For Multi Layer Brass Crimping & Compression Fittings)



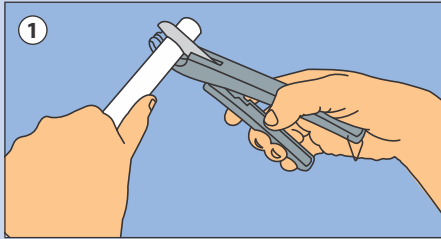
Size (mm)	Std. Packing
16	100
20	100
25	100
32	100

External Spring (pipe bending tool)

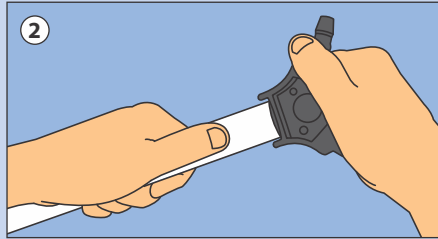


Size (mm)	Std. Packing
16	10
20	10
25	5
32	4

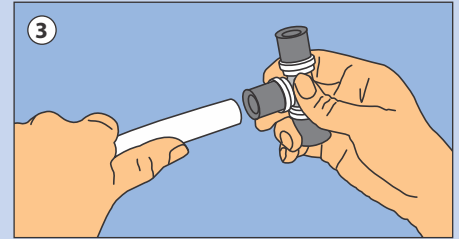
Joining method - crimping type fittings



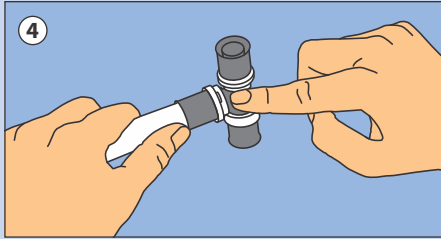
Cut the pipe in right angle using pipe cutter



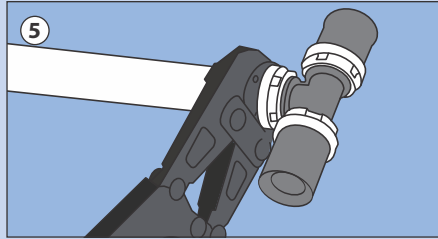
In case of Multilayer pipes, the pipe ends should be calibrated using chamfering tool



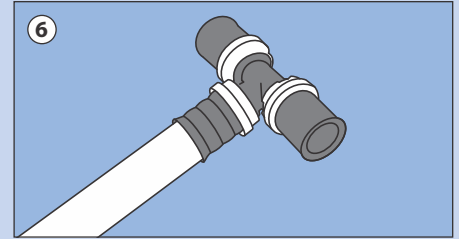
Select the fitting of appropriate size and align it with the pipe end



Push the fitting on to the pipe and ensure the full pipe insertion through the inspection window

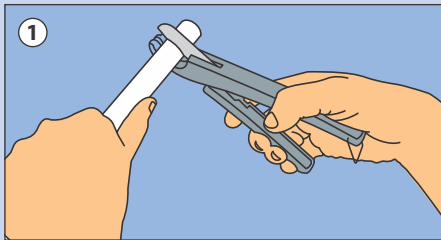


Place the jaw of the crimping tool on the sleeve and press it

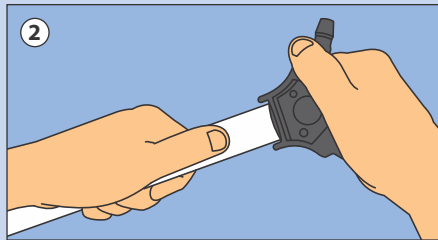


The fitting is pressed and the joint is ready for hydraulic pressure testing

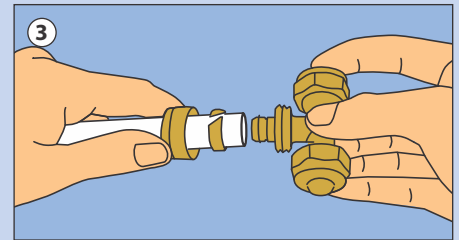
Joining method - compression type fittings



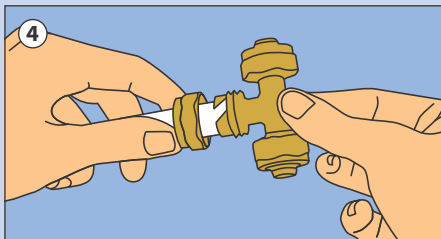
Cut the pipe in right angle using pipe cutter



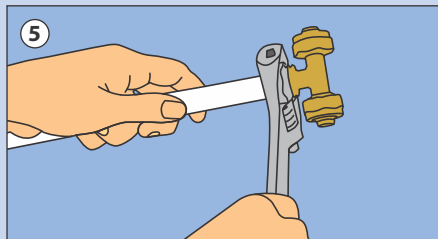
In case of Multilayer pipes, the pipe ends should be calibrated using chamfering tool



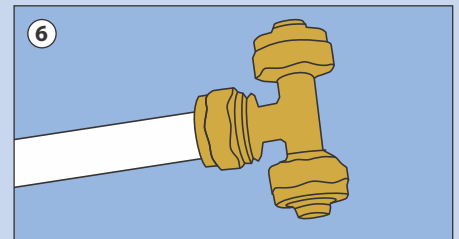
Align the fitting with the pipe end and insert the brass compression nut and ring on the pipe. Ensure that the brass compression ring shall be properly placed on the pipe before tightening



Push the pipe on to the fitting. Ensure the full pipe insertion up to the end of the fitting



Tighten the compression nut by using spanner or pipe wrench and ensure proper air-tightness of the fitting with pipe.



Joint is now ready for hydraulic pressure testing

The Supreme Industries Ltd. (Plastic Piping Division)

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