



Multi-layer Piping Systems

A special Healthy plumbing system for South Africa



www.ptpiping.com

ISO 9001



AENOR



DVGW

WRAS

» Company Introduction

Vision : PT Piping Systems CC aims to become an excellent supplier throughout Africa of good quality, affordable Pex-Al-Pex systems, empowering and improving the lives of all our fellow human beings.

Mission : Taking Plumbing in Africa to the people, through solid, honest and transparent relationship with all our customers. Always putting our customers first.

Target : Our target market is the Plumbing, Refrigeration, heat-pump, Air-conditioning , Gas and Underfloor heating sectors ...

Advantages : Quality product at affordable price. Company of experienced and dedicated people, who have a passion for the industry.

Our focus is always

right product at the place at the right time, we have the team and we deliver

» International Approvals

- The ISO9001 quality system certificate
- The DVGW certificate in Germany
- The WRAS certificate in UK
- The AENOR certificate in Spain



Product Performance

| P.T. Piping System's pipe | Product Code | meters/box | ctn/size |
|---|--------------|------------|-------------|
|  | B-1014 | 200 | 650x230x650 |
| | B-1216 | 200 | 730x730x185 |
| | B-1620 | 200 | 820x820x230 |
| | B-2025 | 100 | 820x820x230 |
| | B-2632 | 50 | 890x890x190 |
| | B-3240 | 6m | |
| | B-4150 | 6m | |
| | B-5163 | 6m | |
| | B-6075 | 6m | |

Technical Structure

P.T. Piping Systems Multilayer pipe, is an advanced product than unites the advantages of metal and plastic pipes, but eliminates the disadvantages of both materials at the same time. This offers product advantages second to none. The Aluminum core is absolutely diffusion tight, which forms a 100% oxygen barrier. It compensates and reduces water hammer and heat expansion with changes in temperature.

Other advantages at a glance are, absolutely diffusion tight, high form stability, high bending flexibility, low heat expansion, easy jointing, corrosion resistance, excellent long-time rupture strength, and wide range of sizes. Therefore the system is designed for easy, safe and fast pipe installation;

Simply bend, cut to length, bevel, join and press---That's All.

Thermal & Pressure Resistance

Note: 1Mpa=145psi=10bar Table 1

| Specification | | Minimum burst pressure (MPa) | Min pipe ring strength (N) | long-term hydrostatic strength (MPa) | working temperature (°C) | | | working pressure (MPa) | |
|---------------|-------|------------------------------|----------------------------|--------------------------------------|--------------------------|--------|--------|------------------------|--------|
| mm | inch | | | | pipe A,T | pipe B | pipe C | pipe A,B,T | pipe C |
| 1014 | 3/8 | 7.0 | 2300 | 2.7 | -40~60 | -40~95 | -20~40 | 1.0 | 0.4 |
| 1216 | 1/2 | 6.0 | 2300 | 2.7 | | | | | |
| 1418 | 1/2 | 6.0 | 2300 | 2.7 | | | | | |
| 1620 | 1/2 | 5.0 | 2500 | 2.7 | | | | | |
| 2025 | 3/4 | 4.0 | 2500 | 2.3 | | | | | |
| 2632 | 1 | 4.0 | 2500 | 2.1 | | | | | |
| 3240 | 1 1/4 | 4.0 | 2800 | 2.1 | | | | | |

» Main Characteristics

Absolutely diffusion tight

The Aluminum core is continuously overlapped welded and prevents oxygen/gases from permeating into the pipe. Therefore the corrosion of metallic insulation components is avoided.

Burning Resistance

The PEX-AL-PEX composite structure makes **P.T. Piping Systems** pipe a much better burning resistance than polyethylene pipe. Tested by the State Quality Supervision Test Center for Fireproofing Building Materials, the burning resistance of **P.T. Piping Systems** pipe measures up to Grade B1 of GB8624, specification for wire&calble conduit plastic materials.

Corrosion Resistance

The smooth inner and outer PEX layers hold water at bay, preventing deposit accumulation and corrosion. At normal temperature, it can withstand all kinds of acid, alkali and salt solutions.

Low thermal conductivity

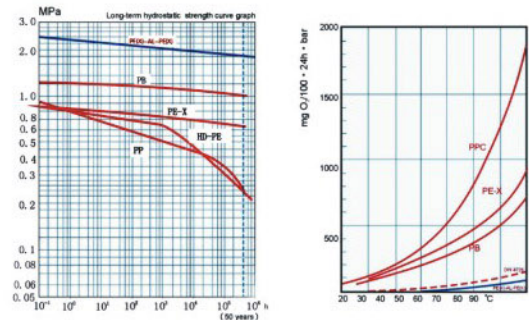
0.45W/m.k, about 1/100 of steel pipes, which makes **P.T. Piping Systems** multilayer pipe more suitable for hot water supply than metal pipes.

Hydraulic Function

The inner roughness of **P.T. Piping Systems** pipe is 0.007mm. The smoothness of the inner layer makes **P.T. Piping Systems** pipe ideal for liquid like water supply.

Pressure resistance and long-time Service life

The diagram shows that **P.T. Piping Systems** pipe will last you 50 years of operation the set conditions and pressures. The forced aging test by the Synthetic Materials research Institute of Ministry of Chemical Industry has approved it as well.



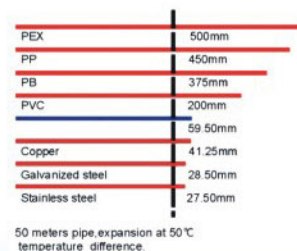
Installation

Free bent by hand without tools, reducing the amount of fittings necessary. Because of the AL/PEX composition. **P.T. Piping Systems** pipe remains in position after bending.

Oxygen-permeability of various kinds of plastics

Low heat expansion

25*10.6m/m.k only 1/8 of polyethylene pipes. The permanent bond of PE layers to the aluminum considerably reduces heat expansion.



» Applications

Distribution of Gases and Air

The continuously overlapped welded middle layer of Aluminum makes **PT Piping Systems** pipe able to withstand Hi-working pressure and assures no gas (Oxygen) permeability, and because it is bendable it decreases the amount of fittings used, making **PT Piping System** pipe very applicable for compressed air, gas and oxygen suppliers.

Cold and Hot Water Distribution

Because of the smoothness of the inside PEX layer, no rust and scaling, giving you 30% more flow in comparison to other metal pipes. The ease of bending the pipe allows you to install directly on girders, chased into walls and cemented into concrete. **PT Piping Systems** pipe can be found with a simple metal detector therefore making it very suitable for cold and hot water distribution systems for domestic, civil and industrial applications.

Medical, Foodstuff & Chemical industrie

PT Piping Systems pipes both inside and outside layers do not react chemically and have no leakages, making it hygienic and safe. As oxygen supply lines in the medical field it can be assured safe and pure. Likewise for the distribution of liquids in the food and beverage industry.

Solar energy, Air-conditioning & Refrigeration Systems

The high thermal conductivity of **PT Piping Systems** pipes allows the pipes to be frost free, thus allowing the system to be highly efficient.

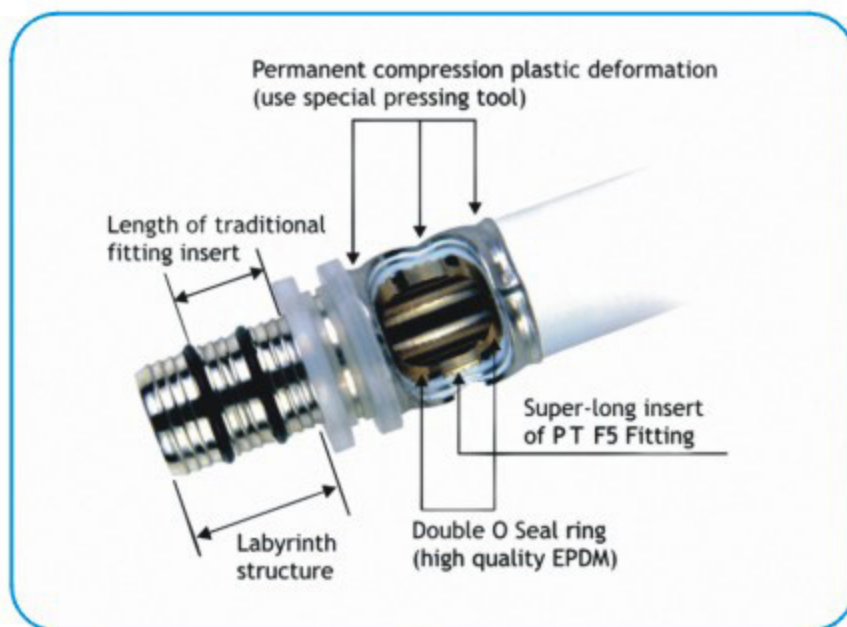
Underfloor Heating Systems

Because of its length in packing (up to 200m coils), strength and bendability, **PT Piping Systems** pipes are extremely suitable for underfloor heating systems.

» Press Fittings

PT press fitting is an innovative fitting, which is developed according to the international advanced technology, and has been the mainstream fitting in worldwide.

DR or CR DVGW W534
EN 12164
DIN 50930-6



Unique structure:

1. Two O-rings placed on the fitting insert.
2. Three annular grooves on the three-step-labyrinth structure insert.
3. Perfect sealing performance.

High quality sealing material:


The material of PT fitting O-rings is EPDM, which has excellent specialty of anti-aging, well-rebound and long lifetime performance. It ensures no leaking in the piping system for long-term use.


Secure Connecting way:


The safe and stable connecting lies on the permanent compression plastic deformation of the stainless steel sleeve by using the special pressing tool to complete the connecting correctly.

» Press Fittings (U Profile)


| Straight Multilayer Conex Copper | Product Code | pcs/box | pcs/ctn |
|---|--|---------|---------|
|  | F5-S1216x15Cu2 F5-S1620x22Cu2 F5-S2025x22Cu2 | | |

| Equal Straight Union | Product Code | pcs/box | pcs/ctn |
|---|---|--|--|
|  | F5-S1014x1014 F5-S1216x1216 F5-S1620x1620 F5-S2025x2025 F5-S2632x2362 F5-S3240x3240 F5-S4150x4150 F5-S5163x5163 F5-S6075x6075 | 54 45 30 15 10 45 35 15 10 | 432 360 240 120 80 45 35 15 10 |

| Unequal Straight Union | Product Code | pcs/box | pcs/ctn |
|---|---|--|---|
|  | F5-S1216x1014 F5-S1620x1216 F5-S2025x1216 F5-S2025x1620 F5-S2632x1216 F5-S2632x1620 F5-S2632x2025 F5-S4150x3240 F5-S5163x3240 F5-S5163x4150 F5-S6075x3240 F5-S6075x4150 F5-S6075x5163 | 40 37 20 20 15 12 12 30 15 15 16 14 12 | 320 296 160 160 120 96 96 30 15 15 16 14 12 |

| Male Union | Product Code | pcs/box | pcs/ctn |
|---|--|--|---|
|  | F5-S1014x1/2 F5-S1216x1/2 F5-S1216x3/4 F5-S1620x1/2 F5-S1620x3/4 F5-S2025x1/2 F5-S2025x3/4 F5-S2632x3/4 F5-S2632x1 F5-S3240x1 F5-S3240x11/2 F5-S3240x11/4 F5-S4150x11/2 F5-S5163x2 F5-S5163x11/4 F5-S5163x2 F5-S6075x11/2 F5-S6075x2 F5-S6075x21/2 | 50 50 40 40 35 20 18 12 12 72 60 60 60 20 20 22 16 | 400 400 320 320 280 160 144 96 96 72 60 60 60 20 20 22 16 |

| Straight Multilayer Solder Copper | Product Code | pcs/box | pcs/ctn |
|--|---|---------|---------|
|  | F5-S1216x1/2CuF F5-S1216x3/4CuF F5-S2025x1/2CuF F5-S2025x3/4CuF F5-S2632x3/4CuF | | |

| Female Union | Product Code | pcs/box | pcs/ctn |
|--|--|--|---|
|  | F5-S1014x1/2F F5-S1014x3/8F F5-S1216x1/2F F5-S1620x3/4F F5-S1620x1/2F F5-S1620x3/4F F5-S2025x1/2F F5-S2025x3/4F F5-S2632x3/4F F5-S2632x1F F5-S3240x1F F5-S4150x1F F5-S5163x1F F5-S5163x2F F5-S6075x21/2F | 48 56 40 30 35 35 20 20 16 12 80 37 25 20 16 | 384 448 320 240 280 280 160 160 128 96 80 37 25 20 16 |

| Equal Elbow | Product Code | pcs/box | pcs/ctn |
|--|---|---|---|
|  | F5-L1014x1014 F5-L1216x1216 F5-L1620x1620 F5-L2025x2025 F5-L2632x2632 F5-L3240x3240 F5-L4150x4150 F5-L5163x5163 F5-L6075x6075 | 40 32 22 11 6 28 16 8 6 | 320 256 176 88 48 28 16 8 6 |

| Unequal Elbow | Product Code | pcs/box | pcs/ctn |
|--|---|--|---|
|  | F5-L1620x1216 F5-L2025x1216 F5-L2025x1620 F5-L2632x1620 F5-L4150x3240 F5-L5163x3240 F5-L5163x4150 F5-L6075x3240 F5-L6075x4150 | 25 16 14 10 24 12 12 8 8 | 200 128 112 80 24 12 12 8 8 |


| Wall-plate d Female Elbow | Product Code | pcs/box | pcs/ctn |
|--|--------------------------------------|----------|-----------|
|  | F5-L1216x1/2F(Z) F5-L1620x1/2F(Z) | 14 12 | 112 96 |

» Press Fittings (U Profile)


| Male Elbow | Product Code | pcs/box | pcs/ctn |
|---|--------------|---------|---------|
|  | F5-L1014x1/2 | 30 | 240 |
| | F5-L1216x1/2 | 25 | 200 |
| | F5-L1216x3/4 | 20 | 160 |
| | F5-L1620x1/2 | 20 | 160 |
| | F5-L1620x3/4 | 18 | 144 |
| | F5-L2025x1/2 | 12 | 96 |
| | F5-L2025x3/4 | 12 | 96 |
| | F5-L2632x1 | 8 | 64 |
| | F5-L3240x1 | | |

| Equal Tee | Product Code | pcs/box | pcs/ctn |
|--|--------------------|---------|---------|
|  | F5-T1014X1014x1014 | 24 | 192 |
| | F5-T1216x1216x1216 | 20 | 160 |
| | F5-T1620x1620x1620 | 14 | 112 |
| | F5-T2025x2025x2025 | 8 | 64 |
| | F5-T2632x2632x2632 | 4 | 32 |
| | F5-T3240x3240x3240 | | 18 |
| | F5-T4150x4150x4150 | | 10 |
| | F5-T5163x5163x5163 | | 4 |
| | F5-T8075x8075x8075 | | 3 |

| Female Elbow | Product Code | pcs/box | pcs/ctn |
|---|-----------------|---------|---------|
|  | F5-L1014x1/2F | 30 | 240 |
| | F5-L1216x1/2F | 30 | 240 |
| | F5-L1216x3/4F | 18 | 144 |
| | F5-L1620x1/2F | 22 | 176 |
| | F5-L1620x3/4F | 15 | 120 |
| | F5-L2025x1/2F | 12 | 96 |
| | F5-L2025x3/4F | 10 | 80 |
| | F5-L2632x1F | 8 | 64 |
| | F5-L3240x1F | | 25 |
| | F5-L3240x1 1/2F | | 96 |
| | F5-L4150x1F | | 25 |
| | F5-L4150x1 1/2F | | 20 |
| | F5-L5163x1F | | 15 |

| Unequal Tee | Product Code | pcs/box | pcs/ctn |
|--|--------------------|---------|---------|
|  | F5-T1216x2025x1216 | 10 | 80 |
| | F5-T1620x1014x1620 | 16 | 128 |
| | F5-T1620x1216x1620 | 14 | 112 |
| | F5-T1620x2025x1620 | 8 | 64 |
| | F5-T1620x1216x1216 | 20 | 160 |
| | F5-T1620x1620x1216 | 18 | 144 |
| | F5-T2025x1216x2025 | 9 | 72 |
| | F5-T2025x1620x2025 | 8 | 64 |
| | F5-T2025x2632x2025 | 4 | 32 |
| | F5-T2025x1620x1620 | 10 | 80 |
| | F5-T2025x2025x1620 | 7 | 56 |
| | F5-T2632x1216x2632 | 5 | 40 |
| | F5-T2632x1620x2632 | 5 | 40 |
| | F5-T2632x2025x2632 | 5 | 40 |
| | F5-T4150x3240x4150 | | 10 |
| | F5-T5163x3240x5163 | | 5 |
| | F5-T5163x4150x5163 | | 5 |
| | F5-T8075x3240x8075 | | 4 |
| | F5-T8075x4150x8075 | | 4 |
| | F5-T8075x5163x8075 | | 4 |


| Male Tee | Product Code | pcs/box | pcs/ctn |
|---|-------------------|---------|---------|
|  | F5-T1216x1/2x1216 | 18 | 144 |
| | F5-T1620x1/2x1620 | 14 | 112 |

| Female Tee | Product Code | pcs/box | pcs/ctn |
|---|--------------------|---------|---------|
|  | F5-T1014X1/2Fx1014 | 18 | 144 |
| | F5-T1216x1/2Fx1216 | 16 | 128 |
| | F5-T1620x1/2Fx1620 | 12 | 96 |
| | F5-T1620x3/4Fx1620 | 10 | 80 |
| | F5-T2025x1/2Fx2025 | 8 | 64 |
| | F5-T2025x3/4Fx2025 | 7 | 56 |
| | F5-T2632x3/4Fx2632 | 4 | 32 |
| | F5-T2632x1Fx2632 | 3 | 24 |
| | F5-T3240x1Fx3240 | | 25 |
| | F5-T4150x1Fx4150 | | 18 |
| | F5-T5163x1Fx5163 | | 8 |
| | F5-T8075x2Fx8075 | | 4 |

| Double Wall-Plated Female Elbow | Product Code | pcs/box | pcs/ctn |
|--|-----------------------|---------|---------|
|  | F5-K1216x1/2Fx1216(Z) | | |
| | F5-K1620x1/2Fx1620(Z) | | |

| Demountable Female Straight Union | Product Code | pcs/box | pcs/ctn |
|--|------------------|---------|---------|
|  | F5-S1014x1/2F(H) | 48 | 384 |
| | F5-S1216x1/2F(H) | 48 | 384 |
| | F5-S1620x3/4F(H) | 24 | 192 |
| | F5-S2025x3/4F(H) | 18 | 144 |
| | F5-S2632x1F(H) | 14 | 112 |

Tools & Accessories

| Closed Aluminium Socket | Product Code | pcs/box | pcs/ctn |
|---|----------------|---------|---------|
|  | KB1014(WHITE) | 150 | 750 |
| | KB1216(WHITE) | 150 | 750 |
| | KB1620(WHITE) | 100 | 500 |
| | KB2025(WHITE) | 80 | 400 |
| | KB2632(WHITE) | 60 | 300 |
| | KB1014(ORANGE) | 150 | 750 |
| | KB1216(ORANGE) | 150 | 750 |
| | KB1620(ORANGE) | 100 | 500 |
| | KB2025(ORANGE) | 80 | 400 |
| | KB2632(ORANGE) | 60 | 300 |

| Open aluminium Socket | Product Code | pcs/box | pcs/ctn |
|---|----------------|---------|---------|
|  | KK1014(WHITE) | 250 | 1250 |
| | KK1216(WHITE) | 230 | 1150 |
| | KK1620(WHITE) | 180 | 900 |
| | KK2025(WHITE) | 150 | 750 |
| | KK2632(WHITE) | 100 | 500 |
| | KK1014(ORANGE) | 250 | 1280 |
| | KK1216(ORANGE) | 230 | 1150 |
| | KK1620(ORANGE) | 180 | 900 |
| | KK2025(ORANGE) | 150 | 750 |
| | KK2632(ORANGE) | 100 | 500 |

| Pipe Cutter | Product Code | pcs/box | pcs/ctn |
|---|--------------|---------|---------|
|  | GJ | 1 | 50 |

| Pipe Cutter | Product Code | pcs/box | pcs/ctn |
|---|--------------|---------|---------|
|  | QQQ-75 | 1 | 32 |


| Pipe Bending Tool | Product Code | pcs/box | pcs/ctn |
|---|--------------|---------|---------|
|  | WGQ (6 IN 1) | 1 | 4 |


| Insert for SYQ14-20A | Product Code | pcs/box | pcs/ctn |
|---|----------------|---------|---------|
|  | SYQ14-20A-1014 | | |
| | SYQ14-20A-1216 | | |
| | SYQ14-20A-1620 | | |
| | | | |


| Insert for 14-32A Manual and Hydraulic Crimping Tools | Product Code | pcs/box | pcs/ctn |
|---|--------------|---------|---------|
|  | YYQB-1014 II | 1 | 100 |
| | YYQB-1216 II | 1 | 100 |
| | YYQB-1620 II | 1 | 100 |
| | YYQB-2025 II | 1 | 100 |
| | YYQB-2632 II | | |
| | YYQB-3240 II | | |
| | YYQB-4150 II | | |
| | YYQB-5163 II | | |
| | YYQB-6075 II | | |


| Internal Bending Spring | Product Code | pcs/box | pcs/ctn |
|--|--------------|---------|---------|
|  | WH-1014 | 40 | 240 |
| | WH-1216 | 25 | 150 |
| | WH-1620 | 15 | 60 |
| | WH-2025 | 9 | 54 |
| | WH-2632 | 4 | 24 |

| External Bending Spring | Product Code | pcs/box | pcs/ctn |
|--|--------------|---------|---------|
|  | WH-1014 II | 6 | |
| | WH-1216 II | 6 | |
| | WH-1620 II | 4 | |
| | WH-2025 II | 2 | |
| | WH-2632 II | 1 | |

| Plastic Reamer | Product Code | pcs/box | pcs/ctn |
|---|--------------|---------|---------|
|  | ZYS-14-32 | 1 | |

| T-Reamer | Product Code | pcs/box | pcs/ctn |
|--|--------------|---------|---------|
|  | JD-1014 | 24 | 144 |
| | JD-1216 | 24 | 144 |
| | JD-1620 | 20 | 120 |
| | JD-2025 | 20 | 120 |
| | JD-2632 | 15 | 90 |

| Lengthened T-Reamer | Product Code | pcs/box | pcs/ctn |
|--|--------------|---------|---------|
|  | JD-3240(L) | 10 | 60 |
| | JD-4150(L) | 8 | 48 |
| | JD-5163(L) | 4 | 24 |
| | JD-6075(L) | 3 | 18 |

| Adjustable Manual Crimping Tool | Product Code | pcs/box | pcs/ctn |
|--|--------------|---------|---------|
|  | SYQ-14-20A | 1 | 8 |

| Crimping Head For Compact Hydraulic Tool | Product Code | pcs/box | pcs/ctn |
|--|---------------|---------|---------|
|  | YYQ-14-32 IIA | 1 | 10 |
| | YYQ-25-50 IIA | 1 | 10 |
| | YYQ-63-75 IIA | 1 | 10 |

| Extendable Adjustable Manual Crimping Tool | Product Code | pcs/box | pcs/ctn |
|--|--------------|---------|---------|
|  | SYQ14-32A | 1 | 8 |

| Manifolds | Product Code | Remark |
|--|---------------|---------------------|
|  | FS4-3/4-1/2*2 | Manifold 2 way |
| | FS4-3/4-1/2*3 | Manifold 3 way |
| | FS4-3/4-1/2*4 | Manifold 4 way |
| | F1-C1216-3/4A | Connector core 1216 |

» Installation Guide



Step 1: Pipe Cutting

Cut the pipe vertically and precisely with a pipe cutter.



Step 2: Rounding and beveling

Round and bevel the end holes with the P.T. Piping Systems Reamer.



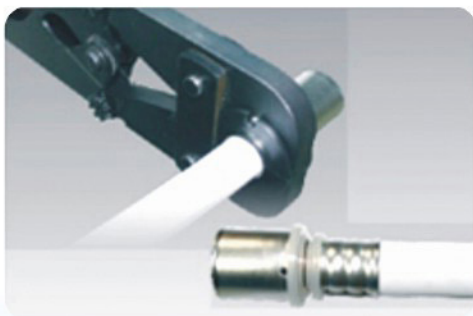
Step 3: Inserting

Choose the right size sleeved fitting for the pipe, then aim the pipe end at the ring shape hole of the fitting integrated with sleeve and check the inserting depth by looking through the inspection holes on the sleeve shoulder to ensure that the pipe is completely inserted.



Step 4: Pressing

1. Selecting jaw
2. Installing jaw on to the Tool.
3. Adjusting the Pressing Tool
4. Open the Pressing Tool and position the tool right onto the sleeve.
5. Close the handles until the two touch points on the handles touch each other.
6. While the jaw is completely closed, the handles will be self-locked. Open the handles and remove the Pressing tool from the fitting and installation is accomplished.



Installation Variants

● Manifold installation



- Easy planning
- Simple determination of pressure loss and rating
- Low pressure losses
- No connection points underfloor
- Less fittings required
- Less fittings required
- Individual valve connection

● Tee installation



- Supplying several tappings with one pipe
- Less pipe required
- For renovation installation in existing slots
- Individual valve connections

● Circle installation



- Easy planning
- Supplying several tappings with one pipe
- Individual valve connection
- Water-saving

P. T. Piping Systems

— Improving your life



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