Pliable system

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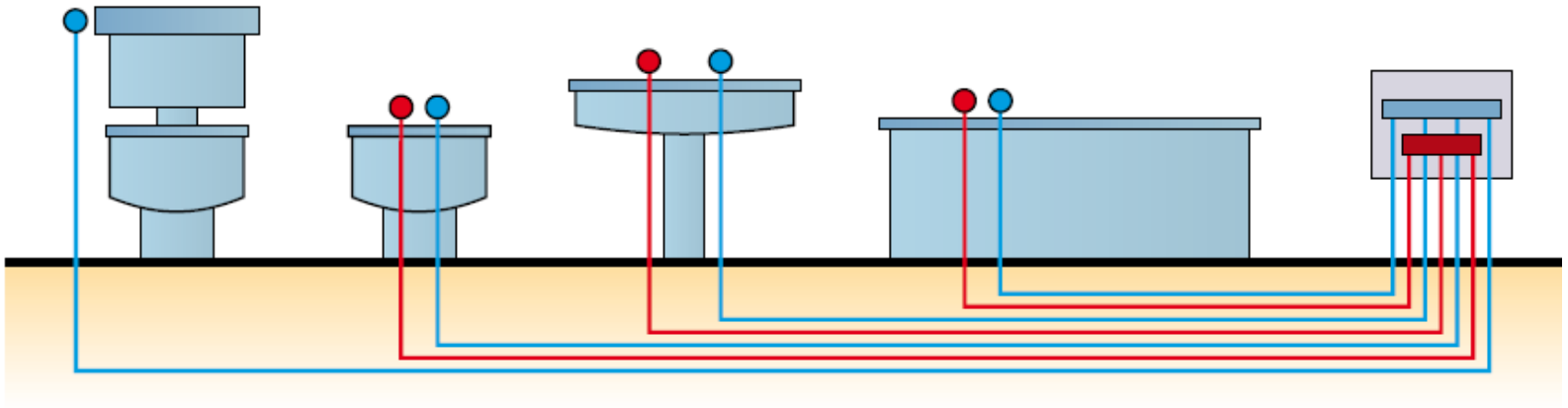

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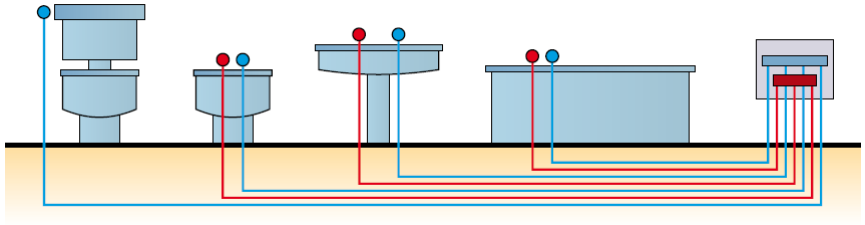
Advantages

- ✓ Lack of incrustation – Pipe remain Clean for longer period ,even when it's not in use
- ✓ Controlling the flow - Avoid useless waste, optimizing the functioning of the tap.
  - At time of repair, it is possible to intercept the flow at the single connection without altering the functions of the remaining taps
- ✓ Pressure stability - Since we have manifolds, there is constant pressure to the connections, even when more taps are opened
- ✓ Low noise - Systems have a high level of acoustic protection ,no turbulences in the flow.
- ✓Maintenance possibility - Possible to replace pipe without breaking walls and ceramics
- ✓ Saving time & money - Time needed is less than one required for an other system.
- ✓ System with total guarantee - To have perfect consistency and maximum sealing.



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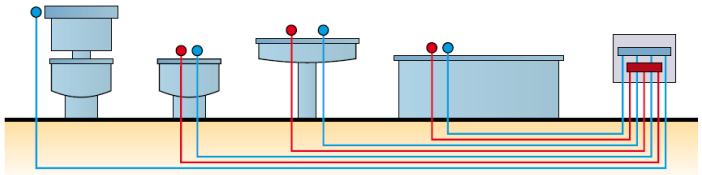
✓Technical Advantage of Pex

- ✓ Polyethylene cross linked – Joint Less System
- ✓ Flexible piping –No Joint behind the wall ,Conventional system will have 20 joints
- ✓ 100 meter coil - No pressure drop ,hence Will get uniform pressure
- ✓ Light Weight - 7 kgs for 100mts approx. Separate Pipe for each joint
- ✓ Easy transportable anywhere at sight
- ✓ Thickness: 1.78mm – 3.18 mm
- ✓ Joints: Crimping/Compression/Push Fit
- ✓ Life of Pipe is appropriate for 50 years
- ✓ Maximum working temperature 100 °C
- ✓ Elasticity 300 – 500 % at 23° C
- ✓ Sizes – 3/8 ,1/2 ,3/4 & 1 inch



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Specification

- **Pe-x stands for “cross-linked polyethylene”. Subject pipe is produced starting from high density granular polyethylene (HDPE), and submitted to cross linking process according to sylano method, with following technical specifications.**

▪ Range	-10°C +100°C
▪ Max Working temperature	95°C
▪ Softening temperature	130°C
▪ Density	0,946 g/cm^3
▪ Cross link degree	>65%
▪ Tracting resistance at 23°C	20-25 N/mm^2
▪ Break lenghthening at 23°C	300-500%
▪ Elasticity at 23°C	1070 N/mm^2
▪ Resilience	No break
▪ Coefficient of linear expansion at 20 °C	1.4E-4 1/K
▪ Coefficient of linear expansion at 100 °C	2.0E-4 1/K
▪ Thermal conductivity of pipe	0,35 w/Mk
▪ Linear dispersion with sleeve in air (sleeve 25mm)	0,23 w/Mk
▪ Linear dispersion with sleeve in air (sleeve 30mm)	0,21 w/Mk

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Technical Details of PEX

1. PIPE IN GIACOQEST cross linked polyethylene (Pe-X) The PE-X pipe should be metric size high density - 0.939 g/cm3 suitable for pressurized distribution of hot and cold water for sanitary use as per EN 15875. The pipe should be having DVGW / NSF certification for Potable water also complying with ASTM 876 standard. The pipe should be non carcinogenic .

- **Pe-x pipe supplied is to manufactured in accordance with the norm EN ISO 15875.**

- **Pipe is appropriate for 50 years of utilise, considering also hypothetical periods of abnormal water temperature, due to wrong working of the system/boiler.**

Max Working Temperature and Max working pressure	Durability in continuous working conditions
Up to 60°C @ 16 bars	50 years
from 60°C to 80 °C @ 10 bars	50 years
from 80°C to 95 °C @ 10 bars	10 years

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Giacomini Jointing experts :

3 types of fittings :

- ✓PUSH FIT
- ✓COMPRESSION
- ✓CRIMPING

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Distribution manifolds

Manifolds cabinets

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Fitting OPTIONS for Push fit

RC127

RC139

RC573

RC585M

RC585T

RC900

R996

R985B

R985R

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Fitting OPTIONS for compression fit

R562R

R572R

R573D

Technical communication 4420

R585M

Technical communication 4-068GB

R585T

Technical communication 4-068GB

GZ179

Technical communication 0164GB

GZ996

Technical communication 0164GB

R985B

R985R

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Fitting OPTIONS for crimping fit

GZ107

Technical communication 0164GB

GZ139

GZ573

R585M

Technical communication 4-068GB

R585T

Technical communication 4-068GB

GZ61

Technical communication 0164EN-0164RF

GZ996

Technical communication 0164GB

R985B

R985R

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General accessories :

R584

R595

R598C

R583

R577D

R544

R578Z

R592D

R998

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Valves & accessories :

R603

R60

R99

R74A

R156

Ball valve , NRV , Air vent , Strainer, Thermostatic Mixer

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Instructions for installation :

Step 1 : Position the cabinet or Bracket.

R584

R583

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Instructions for installation :
Step 2 : Position the utilities.

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Instructions for installation :

Step 3 : Set accurate levels .

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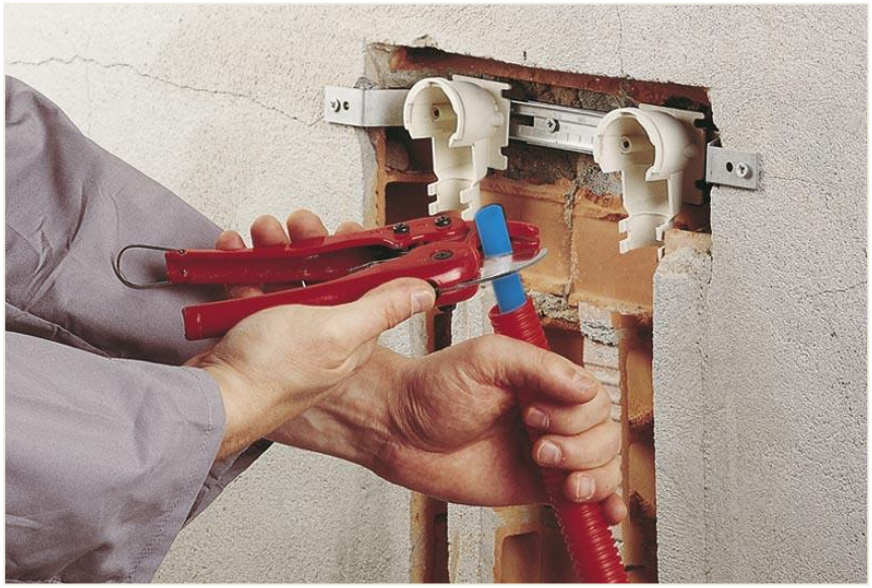
Instructions for installation :

Step 4 : Connect pipes.



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Instructions for installation :
Step 5 : Tighten the fittings.

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Instructions for installation :
Step 6 : Block the fittings with R 577 D, pipes with R 985, and manifolds with R 592

R577D

R998

R592D

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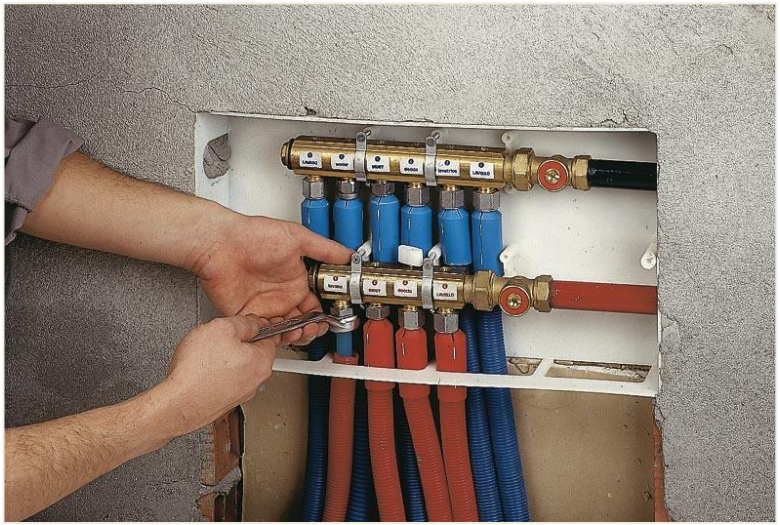
Instructions for installation :
Step 7 : Pressure test the system after venting air.



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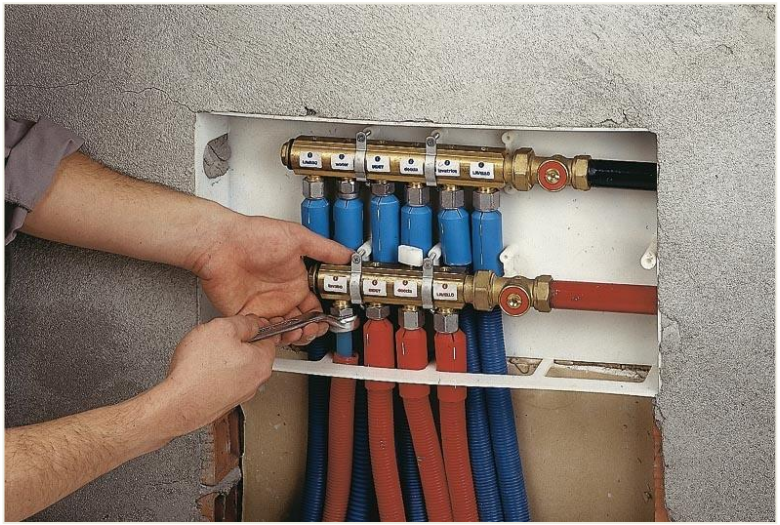
Instructions for installation :
Step 8 : Put labels on each utility for identification.



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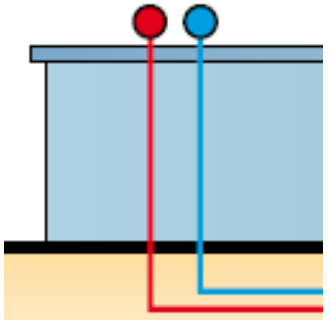
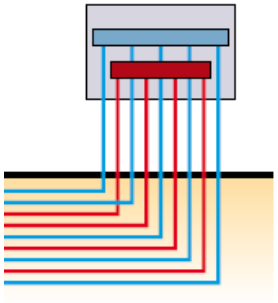
General Instructions :

1 > Chasing : 25 mm max.

2 > Position the pipe in below the floor from elbow to the manifold, avoid sharp bends.

3 > Keep pipes straight on the manifolds.





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Clarifications against FAQ's:

Q1 > Whether used for hot water & insulation for hot water required ?

A1 > YES !! The pipe can withstand 93 C @ 11.3 bars pressure & insulation Not required !! As sleeve acts as a insulation medium.

Q2 > What shall happen if pipe is drilled by mistake ?

A2 > The pipe can be replaced with our traction fitting or GZ 102.

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Traction

An important advantage of the pliable Giacomini sanitary system is to replace the pipe any time without damaging walls and furniture / fixture

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Close the lock shield, untighten the nut of the adaptator and disconnect the pipe to be replaced.

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Replacement of a damaged pipe

Connect the new pipe to the damaged
One with the R576 traction fitting.

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Replacement of a damaged pipe

While the pipe is pulled out from the wall fitting side, insert the new pipe on the other side.

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Replacement of a damaged pipe

When replacement is over, re-open the Lock shield and re-fit the cover of the cabinet

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Live Installation
Movie-1
Movie-2

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FREQUENTLY ASKED QUESTIONS ON "P E X"

1) What is PEX?

PEX is cross-linked Polyethylene. Through one of several processes, links between polyethylene macromolecules are formed to create bridges between PE molecules (thus the term "cross-linked). This resulting molecule is more durable under temperature extremes, chemical attack, and resists creep deformation, making PEX an excellent material for hot water applications (up to 200° F).

2) What are recommended uses for PEX?

PEX 's flexibility and strength at temperatures ranging from below freezing up to 200 degrees Fahrenheit makes it an ideal piping material for hot and cold water plumbing systems, hydronic radiant heating systems, snow melting applications, and, even ice rinks and refrigeration warehouses.

3) Why is PEX an excellent piping material for plumbing?

PEX is ideally suited for potable water plumbing applications. It is flexible, making it easy to install and service. PEX is able to withstand the high and low temperatures found in plumbing and heating applications, and is highly resistant to chemicals found in the plumbing environment. Although not freeze proof, PEX also provides the homeowner with many useful benefits. Flexible systems are quieter than rigid piping. The smooth interior resists scale buildup and corrosion that can affect long term pipe flow characteristics. PEX is also very freeze- break resistant. Finally, PEX systems have attractive installation costs when compared with rigid materials. PEX is the best piping material for many plumbing applications, but not for outdoor or UV exposed applications.

4) How can I be sure that PEX is a safe product for plumbing?

PEX is manufactured and tested according to stringent national consensus standards: ASTM F 876 and F 877. Both the product manufacturer and independent third party testing agencies conduct routine quality control and quality assurance evaluations to insure the product meets ASTM and NSF Standards. Compliance with the standards ensures the end user of safety and quality. Additionally, PEX is included in all of the major model plumbing codes used in the United States and Canada, CSA, IAPMO, SBCCI, BOCA, ICBO, IPC and NSPC, and approved by HUD for hot and cold potable water plumbing use.

5) Can PEX save me money?

Yes. PEX saves money in many ways. For the installer, PEX tubing is competitively priced. Installation of flexible systems is fast because of the easy handling nature of the tubing and because a PEX installation requires fewer directional fittings. Since most plumbing problems occur at joints, fewer fittings also reduce the chances for callbacks, saving the installer even more time. The homeowner saves in the cost of the installed system, fewer callbacks, and reduced utility costs when home-run manifold systems are utilized in conjunction with PEX.

6) Will PEX systems help save on utility bills?

Yes. Home run or manifold plumbing systems utilizing PEX tubing can substantially reduce water and energy consumption in a home. The home-run concept provides dedicated direct lines from the manifold to the fixtures, reducing the amount of water that must be purged from the lines to get hot water at the fixture. Direct lines can be sized to the fixture requirements, further reducing the amount of time to wait for hot water. Faster hot water delivery reduces water waste and the amount of times the water heater must cycle to supply hot water.

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7) How long can PEX be exposed to sunlight?
PEX tubing is not intended for outdoor applications and must be stored in a covered environment not exposed to direct sunlight. Maximum UV exposure is no more than 60 days.

8) What are temperature limitations for PEX?
PEX tubing can be used up to 200° Fahrenheit for heating applications. For plumbing, PEX is limited to 180° F. Temperature limitations are always noted on the print line of the PEX tubing. Recommended 140° max for safety and conservation

9) How soon after installation can you pressure test a PEX tubing installation?
PEX plumbing systems can generally be tested immediately after the installation is complete, using either water or air to check for leaks. There is no wait time for glue to dry or joint to cool off.

10) Is flexible PEX plumbed differently than rigid material plumbing systems?
Yes. The flexibility of PEX allows many directional changes to be made without fittings, but, PEX systems are sized in the same fashion as copper or CPVC plumbing systems. PEX piping is also used in high performance manifold plumbing systems that takes advantage of the flexibility and economical cost of PEX tubing.

11) What are manifold plumbing systems?
Manifold or home run plumbing systems are much like a breaker box for the electrical system in the home. The manifold provides a common location from which all the plumbing fixtures are supplied. Some high-end manifolds also feature fixture shut-off valves allowing the user to shut off the water to individual fixtures from one location. Others are semi-home run manifolds or termination manifolds, which may feed the plumbing requirements for a room or set of rooms and reduce the number of fittings required in the plumbing system.

12) How are PEX systems sized?
PEX systems are be sized just like other plumbing materials such as copper or CPVC when used in a branch-and-main installation. To take advantage of utility savings and system performance issues of branch-and-main systems, PEX can be sized in manifold systems to meet the specific demands of each fixture, reducing water and energy waste in the home.

13) Is the thermal expansion/contraction of PEX a problem?
No. While PEX expands more than other plumbing materials, directional changes made with the tubing and some slack in the tubing during installation accommodate the expansion and contraction of the system if properly installed.

14) Can PEX be joined with solvent cement?
No. PEX cannot be joined with solvent cement, or heat fusion. PEX is installed using only mechanical fittings either inserted in or around the tubing or by compression fittings.

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Thanks for your Kind

ATTENTION

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