

# 3. Heating System

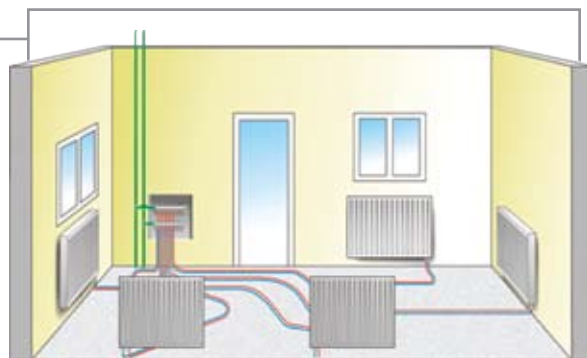
## COMBINATION OF POLYPROPYLENE AND CROSS-LINKED POLYETHYLENE PIPES

In this method of installation the Polypropylene Random is used for the central supply from the boiler to the manifold.

To better accommodate expansions and contractions (similar to those of brass pipes) Polypropylene pipe reinforced with aluminium can be used.

Subsequently, water is distributed via regulating manifolds to the different radiators through cross-linked polyethylene pipes.

The pipes can be used in either mono-tube (manifold – radiator 1, 2 or 3 – return) or bi-tube system (manifold – radiator – return).



### Advantages of the system

- Isolation of circuits in the event of damage.
- Easy replacement of damaged pipes.  
The old pipe is removed and a new pipe inserted with the aid of a special pipe extractor (the only system offering this possibility).
- Increased protection against damage. The outer conduit gives early warning in the event of damage to the pipe.
- Easy access connections.
- Easy installation, saving time and money.

Certifications: SKZ Germany, WRAS Great Britain, AENOR Spain.

Tests: ELOT, General Chemical State Laboratory.

Guarantee: 30 years for the pipes and 10 years for the metal fittings as regards watertightness of connections covered by ALLIANZ insurance company to a sum of up to € 3,000,000.

### Characteristics of Como-pex pipes

The exceptional performance of cross-linked polyethylene pipes at high temperatures reaching 110 °C and high pressure up to 24 bar, a lifespan of at least 50 years and their widespread use over the past 35 years, have made them the most popular pipes for heating systems all over the world.

Como-pex pipes are produced in dimensions ranging from 12 mm to 32 mm, in white or black. For the technician's convenience Interplast produces Como-pex pipe already passed through the corrugated sheath (pipe in pipe).



## CONNECTION FITTINGS

### Rotated tee

Revolves around its own axis enabling the plumber to deaerate, fill or drain the installation. Made watertight by means of two elastic EPDM rings.





### Regulating brass bar manifolds

The manifolds are manufactured of brass profiles compliant to European standard EN 12167. The product has low hardness so that it may be more resilient to mechanical stressing. Manufactured in 1" and 1 1/4" with 2 to 12 outlets and no interconnections.

#### Advantages

- Regulation of the circuits.
- Isolation of circuits in the event of damage.
- Risk of leakage from the connections between 2, 3 and 4 outlets manifolds is eliminated.
- Red and blue markings and circuit identification markings (living room, bedroom etc.) to assist the homeowner.



### Supply and return nipples with thermometer

In order to achieve optimum balance of the heating system we propose special supply and return nipples with attached thermometers. The success of an underfloor heating installation is based on the smallest possible difference between water supply temperature and water return temperature.



### Plastic pipe adaptor

This connects the pipes with the male threading of the manifold.

It comprises 3 components:

- Conic tail, which fits into the inner surface of the pipe. It is made watertight by an elastic EPDM ring and metal at the base of the valve.
- Taper ring, which has two cones for providing a watertight connection between the brass insert and the plastic pipe.
- Nut.



### Manifold nipples with o-ring

These fittings are quick and easy to install, due to the EPDM elastic rings. When fitted, the coupling nipples are perfectly watertight and the free couplings aid the installer in making the connections to the manifold.

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#### Fill-drain valve

Fitted on the manifold tee piece and made watertight by means of an elastic EPDM ring. By fitting a 3/4 rubber hose with a tightening ring on its nozzle we can fill or drain the installation. Operates by unscrewing the nut 2 turns, thus releasing the built-in valve. It can also be placed on the boiler.



#### Automatic airvent

Used for the automatic deaeration of closed loop heating installations. Maximum working temperature is 110°C with pressures up to 12 bar. It is installed at the highest point of the heating installation. Before placement, the installation should be rinsed well to prevent the accumulation of particles and impurities at the watertighting section of the automatic airvent, which could hinder its operation.

It is recommended that the airvent be installed with the non-return valve, as in the event of leakage of the automatic airvent due to the accumulation of impurities it would assist cleaning without having to drain part of the installation.



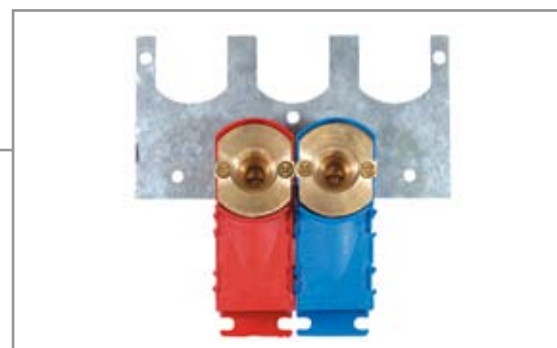
#### Wall plate elbows

Segmented wall plate elbows with secure and watertight closing.

By use of the multi-position metal bracket, they can be used in heating installations as a water connection for valves of the external and internal branch (38 mm distance), and for Ventil units (50 mm distance).

Installed from the wall where, by use of the nickel-plated pipes and the white caps, an excellent aesthetic effect is achieved.

By using the wall plate elbows, for connection of radiators we can proceed with trouble-free replacement of a corroded unit.



#### Room thermostat

A discreet and elegant wired thermostat to achieve the area's desired temperature, which can be adjusted gradually to 1/4 degree Celsius accuracy.





### Radiator valves

Full bore radiator valves for greater heat load transfer compared to conventional valves.

#### Characteristics-Advantages

- Mechanism with 2 teflon-coated EPDM O-rings and packing gland to intervene in the event of slight leakage.
- The mechanism rotates without moving up and down thus preventing wear and tear of the axis, of the watertighting O-ring and the teflon.
- The base is made watertight by an EPDM rubber ring together with a metal-to-metal watertight connection.
- The handwheel is made of ABS for high strength and aesthetic appeal. The upper part has a cap to hide the adjustment screw that fastens the wheel to the spindle.

### Four-way radiator valves (bi-tube)

These valves produced by Interplast are heavy duty and can be rotated 360° for supply from the wall or floor.



#### Characteristics-Advantages

- Provision of water supply or return by using the flow divider on the branch.
- The small pipe that closes the opening is in nickel-plated brass with a height of 95 cm.
- The spindle is made watertight by 2 teflon-coated EPDM O-rings and packing gland to intervene in the event of slight leakage.
- The piston is made watertight by two EPDM O-rings.
- The water distributor from the body of the valve to the branch is made of metal.
- The inner piston of the valve is at a 30° angle for better filling and circulation of the water enabling greater heat load transfer.
- The handwheel is made of ABS for high strength and aesthetic appeal. The upper part has a cap to hide the adjustment screw that fastens the handwheel to the spindle.

### Four-way radiator valves (mono-tube)

These valves produced by Interplast are heavy duty and can be rotated 360° for supply from the wall or floor. They have a 40-cm brass inlet pipe to the radiator body.



#### Characteristics-Advantages

- The spindle is made watertight by 2 teflon-coated EPDM O-rings and packing gland to intervene in the event of slight leakage.
- The piston is made watertight by two EPDM O-rings.
- The inner piston of the valve is at a 30° angle for better filling and circulation of the water enabling greater heat load transfer.
- The water distributor from the body of the valve to the branch is made of metal.
- The handwheel is made of ABS for high strength and aesthetic appeal.