



## RADIATOR MANIFOLD SYSTEMS

### Overview

Typically, radiators are controlled by Thermostatic Radiator Valves (TRV's), which are often less efficient and ultimately less reliable than electronic room thermostats and programmable thermostats. TRV's create a microclimate around the radiator.

Using manifold radiator connection, the radiator is 'called' on or off by the thermostat which electronically opens or closes the manifold actuators. Manifold connection allows every room to have its own preset thermostat, delivering the comfort required. It also means that in rooms where you might want it warmer or colder at different times of the day you can use a programmable thermostat.

The manifold system is equally effective used with radiators or with a combination of radiators and underfloor heating. Further information can be found in the Underfloor Heating section.

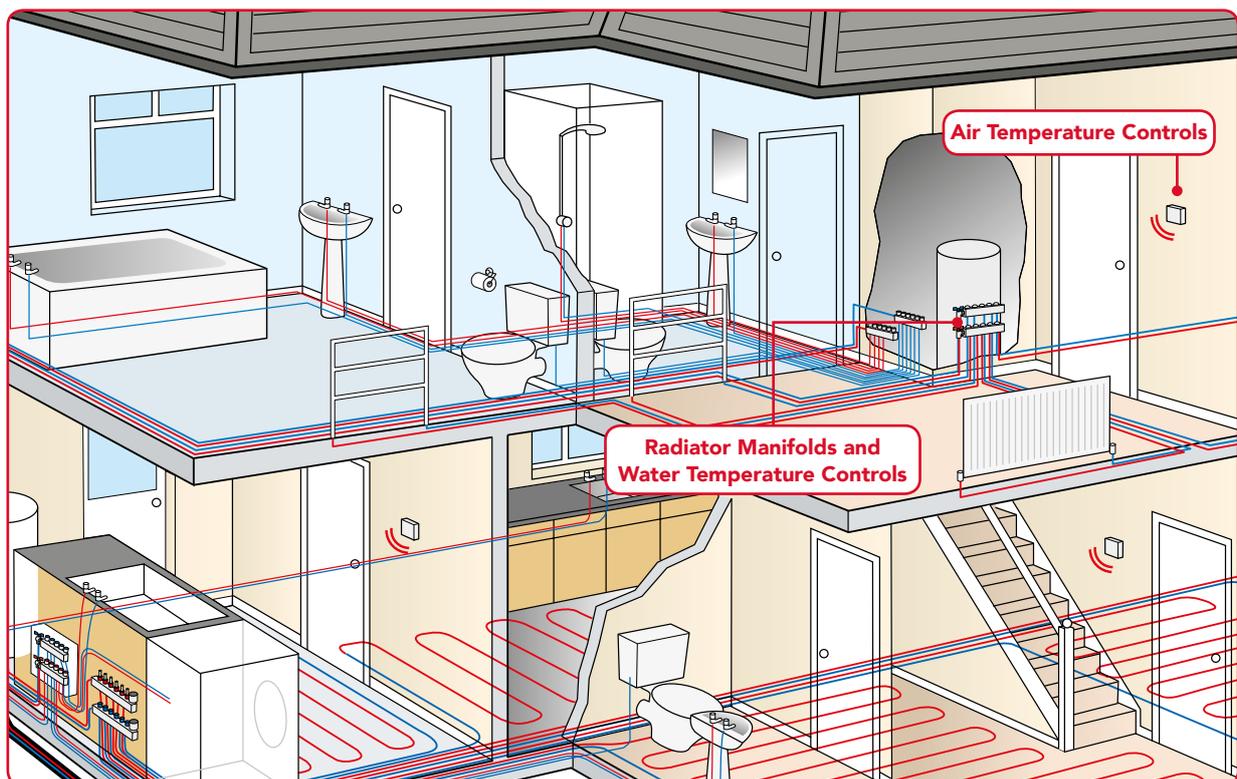
When using a radiator manifold system with multiple thermostats, there is the option of using either radio or wired thermostats, in conjunction with thermal actuators and a wiring centre to offer accurate temperature control over the heating system. Further information can be found in the Air Temperature Controls section.

Maincor's smart Neo air temperature control system also means that with a manifold system you can communicate remotely with the building and alter the climate, room by room if required.

Using a manifold system has the added benefit of allowing for individual isolation of radiators in the event of a problem. Every single radiator in the building has its own circuit of pipework, only connected at the manifold and the radiator. In the event of a leak or if maintenance is required, that radiator can be turned off at the manifold and the rest of the building heating system left operational.

### Why use Radiator Manifold systems?

- **Improved Comfort Levels** - Better temperature control.
- **More Efficient Use of Energy** - Reduces cost.
- **No Joints Within the Building Fabric** - Without joints in the pipework, the chance of leaks is greatly reduced.
- **Less Joints also means Quicker Installation** - More efficient on time and costs.
- **Easy Radiator Isolation** - Manifolds are to plumbing what the consumer box is to electrics.



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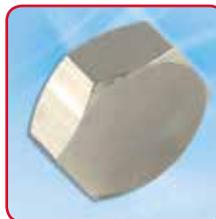
### Key Components

#### Maincor MLCP, PE-RT/AL/PE-RT Coils



Maincor MLCP, PE-RT/AL/PE-RT, overlap welded aluminium Multi-Layer 100% barrier Composite Pipe. Available in 12, 16, and 20mm coils.

#### Blanking Plug - Outlets



Maincor Blanking Plugs are used to blank-off outlets on the Radiator Manifolds.

#### Radiator Manifold



The Maincor range of 2 - 12 Port Radiator Manifolds offer complete safety and control. Electronically controlled by either wired or radio thermostats, the manifold removes the need for TRVs, offering accurate individual room control when used in conjunction with programmable or non-programmable thermostats. Requires pipe connectors and ball valves, both are sold separately (see below).

#### Straight Ball Valve



Maincor Straight Ball Valves are used to provide isolation of the flow and return pipework connected onto the Radiator Manifolds. This allows manifolds to be isolated both for filling the system, or draining down, without the risk of air ingress.

#### Manifold Pipe Connector



Maincor Manifold Pipe Connectors join 12, 16 and 20mm pipework to the manifold. For use with the Radiator Manifolds. (Other sizes available upon request).

#### Manifold Spanner



Maincor Manifold Spanner 27mm. Used for tightening Pipe Connectors onto the Radiator Manifold outlets.

#### Electro-Thermic Head



The manifolds are supplied with blue caps on the return manifold (bottom header) which isolate the return water. The blue caps can be removed to allow for either 24 or 240V electro-thermic heads to be fitted which open and close to control the flow of water around the heating circuits.

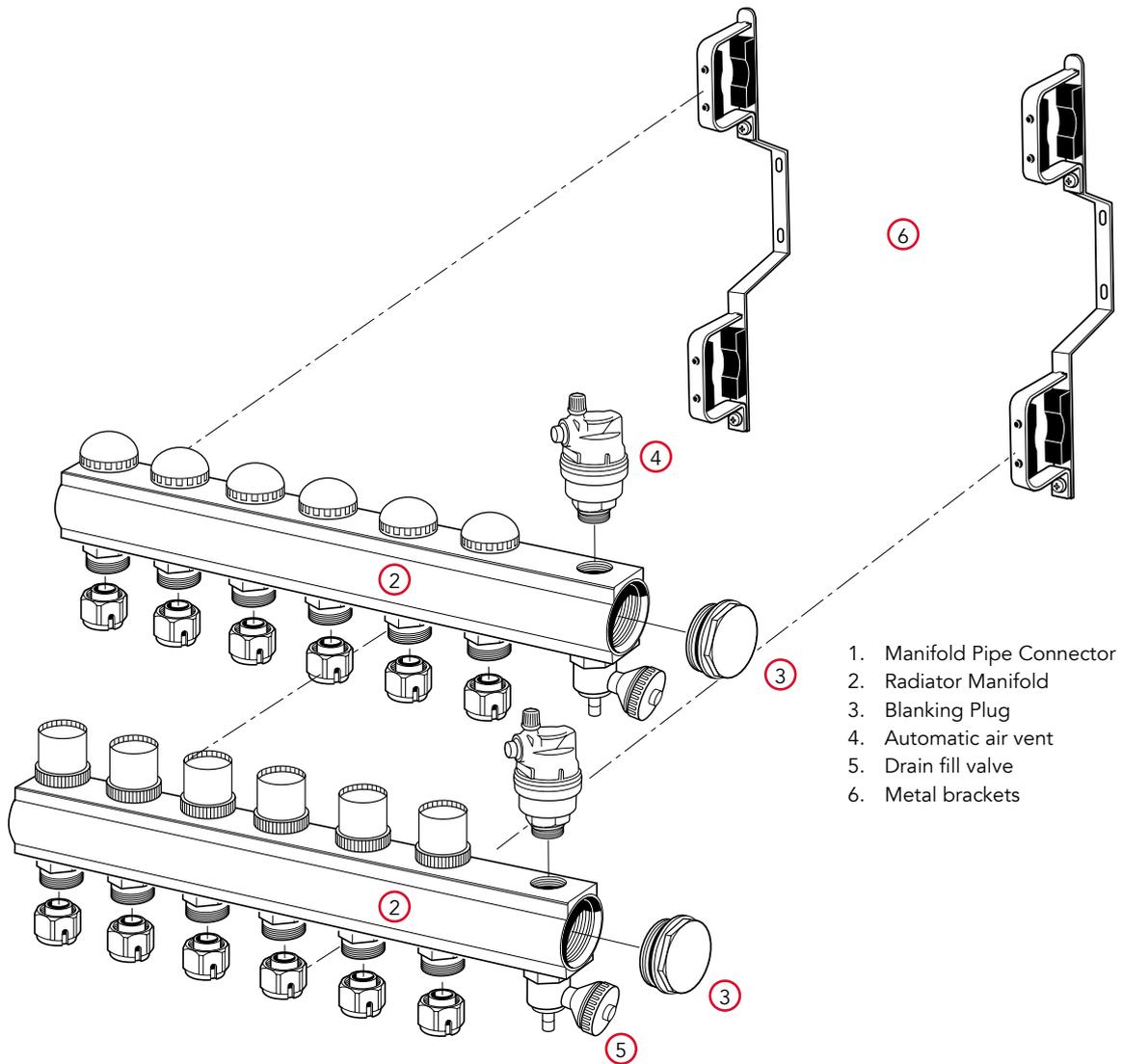




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## Technical Details

Inlet size:	1"
Outlet connectors:	Manifold Pipe Connector (options for 12, 16 & 20mm MLCP)
Outlet centres:	50mm
Ports:	Options for 2 to 12 ports
Isolation:	Each port has an isolation tap
Maximum operating pressure:	10 bar
Maximum operating temperature:	95°C



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## Technical Details

### Locating and Mounting Radiator Manifolds

Manifolds should be located centrally in the building if possible. It is important to ensure that there is good access for maintenance or in the event of a problem. In domestic situations good locations would be underneath stairs, or at the back of a kitchen cupboard, or in an airing cupboard on the first floor. If there is a requirement to hide them away, then Manifolds can be located inside stud walls behind an access hatch, or inside a dedicated cabinet.

Maincor Radiator manifolds are mounted using the pre-assembled metal brackets supplied.

### Locating Thermostats for Radiator Manifold Systems

Thermostats operate by sensing the air temperature therefore it is important to ensure that they are located in a position that is representative of the room overall. Avoid the following:

- Location in room corners
- Behind furniture units
- Behind curtains
- Close to heat generating devices such as TVs, computer equipment, wall lights
- In direct sunlight
- On outside walls
- In the line of draughts

## Installation Overview

### Site Requirements

Before starting to install radiator manifold systems the working area should be prepared:

- The area should ideally be weather tight. Ensure that manifolds and electrical components are sufficiently protected from wet weather.
- Site specific PPE should be available.

For filling and commissioning access will be required to mains water pressure and 230V mains electricity.

### Health and Safety

When installing heating systems ensure that all relevant health and safety legislation and local site regulations are fully adhered to at all times.

### Manifold Connection

Prior to fitting the connectors to the manifold the pipe is to be bevelled by inserting the bevelling tool and rotating the tool three full turns. This will put a 45° chamfer on the pipe and the pipe will be ready to take the fitting.



1. Cut the pipe at a 90° angle.



2. Bevel the cut end of the pipe.



3. Check to ensure there are no burrs.



4. Place the nut and olive onto the pipe.



5. Push the fitting into the bevelled end of the pipe.



6. Tighten the fitting onto the manifold outlet using a manifold spanner.