Unit 113: Plumbing, heating and ventilation

# Worksheet 13: Hydronic heating part 3 (tutor)

Complete the tasks in this worksheet as directed by your tutor:

1. Identify the component and typical sizes in the image below:

Component name: Plastic push-fit microbore manifold

A close up of a device

Description automatically generated

Typical pipe size from boiler: 22mm–28mm

Typical pipe size to heat emitters: 8mm–10mm

1. In the space below, list advantages and disadvantages of the microbore heating system:

**Advantages:**

* Contains only a small amount of water, so is quickly heated.
* Microbore tubing comes in fully annealed coils and is easily bent by hand and easily hidden.
* It can sometimes be a cheaper form of installation.
* Long lengths of tubing means fewer joints.
* Can be used with sealed and open-vented systems, Y-Plan or S-Plan.
* The system is compliant with Building Regulations Document L.

**Disadvantages:**

* Microbore piping is easily damaged and not very resistant to knocks.
* Microbore tubes can get easily blocked with sludge if the system is installed poorly.
* The system can suffer from scale build-up in areas where temporary hard water exists.
* Because of smaller pipework, frictional resistance is greater, which can put increased strain on the circulator.

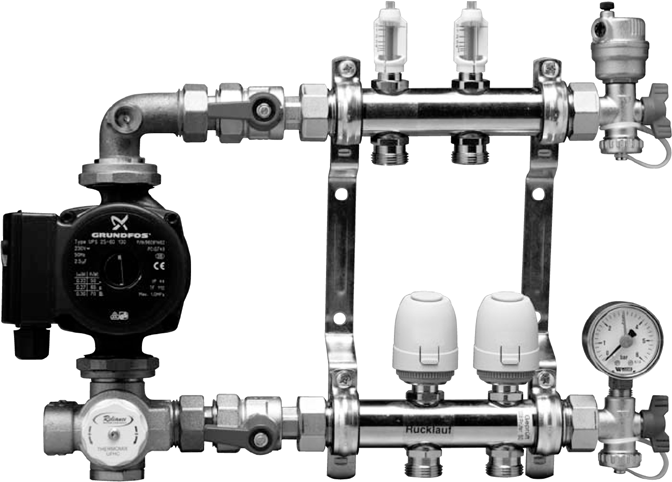
1. Can you complete the connections to the radiators below to represent a microbore system? Connect the pipework from the components on the left through to the radiators.

Manifolds connected to 8mm or 10mm microbore tubing

Diagram

Description automatically generated

1. Identify the component in the image below:



What is this component called? Underfloor heating manifold

1. In the space below, list as many advantages of underfloor heating as possible. Try to get at least three.

* Energy efficient when installed and designed correctly
* No maintenance of heat emitters
* Good heat distribution throughout room
* Hygienic – radiators can trap dust and bacteria
* Aesthetic – no heat emitters on view
* Good for open space areas where radiators are difficult to position