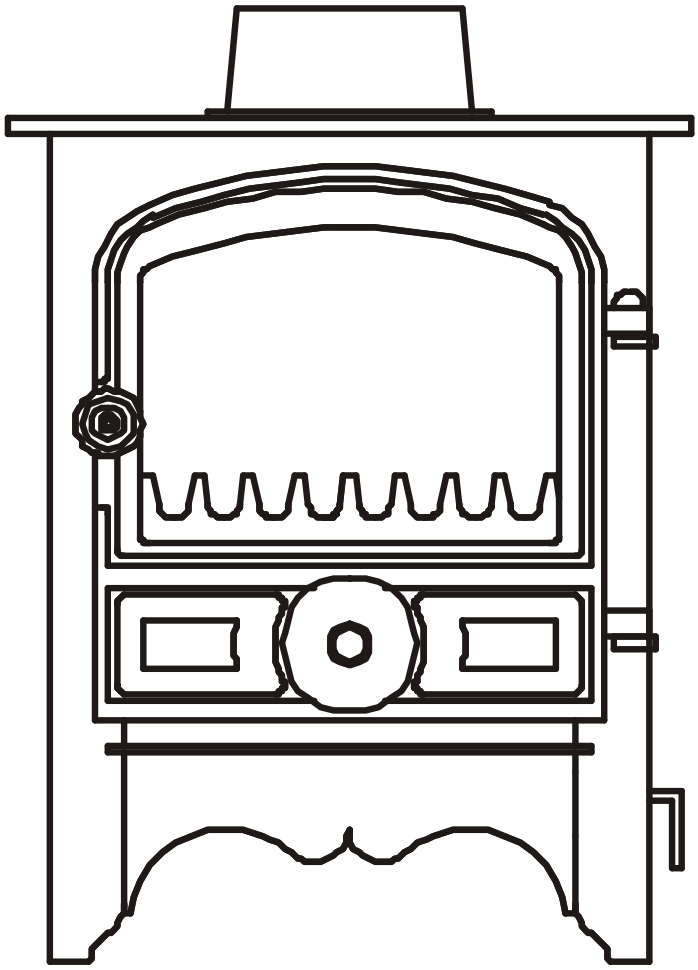
BUBBLE 1 MARINE OIL STOVE ©

INSTALLER INSTRUCTIONS



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PUBLISHED

5. BEFORE STARTING

Read this instruction in Conjunction with-:

1. The Marine stove preamble booklet.
2. The Marine stove commissioning, faultfinding and servicing booklet.

6. FITTING DRY STOVES.

SELECT LOCATION.

FIT OIL TANK.

RUN OIL LINE.

TRIAL FIREPLACE ASSEMBLY.

TRY STOVE IN POSTION.

ESTABLISH FLUE POSITION.

MARK AND CUT ROOF PLATE.

FIT DECK FLANGE.

FIT FIRESTOP SPACER.

FIT CEILING PLATE.

TRIAL FIT FIRE.

TRIAL FIT EVERYTHING ELSE.

IF IT ALL FITS, REFIT PERMANENTLY.

SELECT LOCATION.

The stove and the flue system must be securely fastened, so as to withstand the normal day-to-day situations, which will be encountered in a narrow boat.

These could be-:

- Impact by other vessel.
- Impact into lock gate.
- The pitching and rolling effects of inland water sailing.
- Etc.

For fastening down purposes there are two angle brackets provided with the stove.

The brackets can be fastened to the rear legs of the stove via the two holes provided.

The location must have adequate protection from the effects of radiated and conducted heat as detailed in *distance from combustibles*.

BUBBLESTOVES

FIT OIL TANK.

The oil tank must comply with the requirements of the boat safety scheme.

RUN OIL LINE.

Run the oil line and fit all the required components as detailed.

The oil line must comply with the requirements of the boat safety scheme.

TRIAL FIREPLACE ASSEMBLY.

The oil line and the fire valve sensor will have to pass through the fireplace, make sure that you make adequate provision for this and the remote sensing fire valve.

TRY STOVE IN POSTION.

Try the stove in position and make sure that the oil feed and remote sensing fire valve fit as required.

Level the stove midway between max and min trim. **(Max forward and aft trim angle that the vessel may be exposed to is 0.75 degree's. Athwartships the vessel must be ballasted level.)**

ESTABLISH FLUE POSITION.

The flue pipe will normally run at a slight angle to allow it to terminate through the ceiling, in a suitable position.

It is important to make sure that the flue fits concentrically at both the stove end and as it passes through the fire stop spacer and deck flange.

To achieve this the pipe will have to be marked out, notched and re-welded. Make a template to work from.

MARK OUT AND CUT THE ROOF PLATE.

FIT DECK FLANGE.

If you are going to use a standard deck flange for 6-inch extensions you will have to cut off the lower extension with a grinder to allow fitting of the fire stop spacer.

The deck flange will be fitted as illustrated.

It will be bolted to the roof plate with a seal of silicone rubber applied between the joint.

The flue pipe provided with the stove will be marked and trimmed off 10mm below the top of the deck flange to allow the flexible fire-cement to be flaunched into a suitable taper.

The glass fibre rope will be wrapped around the flue pipe and gently pressed down on to the fire stop spacer, allow 10mm at the top of the joint and pack the gap with the flexible fire cement which will form a seal.

The deck flange will form the base for the traditional chimney extension to be fitted.

FIT FIRESTOP SPACER.

The fire stop space will be fitted in between the deck flange and the ceiling plate concentric to the flue access hole cut in the roof plate of the boat.

It will provide heat protection for any combustible materials located near to the through roof location.

The centre hole is cut deliberately undersize to accommodate differing flue sizes and angles.

It will be necessary to open up the centre hole to fit the flue pipe; this can be done by using the flue pipe as a template and carefully marking round it.

BOBLES

File the excess material away with a rough rasp. (Do this a little at a time to make sure that a good fit is achieved.)

The top surface of the spacer may also need trimming to provide a snug fit up to the inner surface of the roof steelwork.

FIT CEILING PLATE.

The ceiling plate will be fitted inside the boat to finish off the through roof fitting of the flue pipe.

It will be screwed up to the trimming timber via 4 countersunk wood screws.

ABOVE DECK EXTENSION.

A traditional above deck extension can be fitted in line with normal practice.

We recommend that a short extension is used for cruising and a min 28" extension is used when mooring.

In each case we recommend the use of a rotating cowl to minimise the effects of down draught.

6. FITTING WET STOVES

Installation of the wet stoves will be the same as the dry except that when dealing with the location an extra element comes in to the equation and that is connecting the stove up to the heating circuit.

When connecting stoves to pressurised systems make sure that the Toby oil control valve and matching aqua stat are fitted.

To facilitate removal of the stove, make sure that there is

EASY ACCESS TO THE BOILER UNIONS.

EASY ACCESS TO THE DRAIN DOWN VALVE.

EASY ACCESS TO THE OIL CONNECTION.

EASY ACCESS TO THE ISOLATION VALVE.

Water can be connected to the stove via 2 x 1 inch BSP female sockets, welded into the boiler at the rear top and bottom diagonally.

When installing water heating Bubble stoves, the space heating output will be reduced.

The boilers are high water content and suitable for pumped or gravity systems both open vented or pressurised.

If you are not suitably qualified, arrange for a heating engineer to do the design and fitting work for you.

CALORIFIERS.

Indirect calorifiers must be used on gravity or pumped systems.

If you are going to install a gravity system you must make sure that you purchase a **special** calorifier with a 28 mm internal diameter coil, **don't be put off by suppliers who say that they have 28mm connections which are adequate, they are not as effective.**

On gravity systems the calorifiers must be located higher than the stove and as close as possible to it, obviously keeping horizontal runs as short as possible.

VENTING OF AIR.

Gravity or Pumped systems can be fitted with open vented or pressurised systems.

BUBBLE STOVES

If open vented systems are used the feed and expansion tank must be as close as possible to the boiler and be fitted at the highest part of the circuit.

Consult an experienced boat-heating engineer for advice on feed and expansion tanks.

To vent the system of air use automatic air vents on all possible air lock locations.

PIPE WORK.

All gravity pipe work must rise on flow and fall on return and be a minimum of 28mm dia. (35mm dia preferred)

To reduce resistance to flow-:

- Use swept bends, do not use elbows.
- Use copper pipe work.
- Use high water content radiators.

The primary circuit must have a total length of not more than 6 meters otherwise the recovery time of the calorifyer will be increased beyond an acceptable period of time.

Primary circuit pipe work must not have valves or other devices that can be used to interfere with the free flow of water.

PUMPED SYSTEMS

Always come off the stove with 28mm copper for a minimum run of 600 mm before dropping on to 22mm hep 2o

To ensure suitable flow of water through the primaries a suitable injector tee should be used.

Great care should be taken with the positioning of the circulating pump and the feed and expansion tank to make sure that the water flows where it should and that over pumping does not occur.

The heating circuit must be piped in 22mm copper or Hep 2o with 15mm stabs to radiators.

Where additional radiators are fitted as heat leaks, the pipe work must be kept as short as possible, rise on feed and fall on return.

SAFETY VALVE.

A 1" safety valve must be fitted as close to the boiler as possible (within 300mm) and the outlet from it must be directed to a safe location so as not to present any danger should the valve blow-off and emit steam or boiling water.

Note

Safe location could be through the side of the boat, with a deflector to stop any horizontal emission.

WATER TREATMENT.

To reduce the build up of lime scale in the primary circuit pipe work the temperature of the water should not be allowed to exceed 65 Deg C and a suitable water treatment should be added.

If the boat is to be left unattended the water, in the heating system should also have suitable antifreeze added or be drained down.

DRAIN DOWN.

A drain down valve should be fitted at the lowest point of the circuit.

OBSOLETE

CIRCULATING PUMP.

On pumped systems make sure that the circulating pump is fitted in such a way as to make it easily replaceable, this means lock shielded valves at either side and easy access.

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BUBBLESTONES