

# BALMORAL TANKS

## BUNDED FUEL OIL TANK INSTALLATION INSTRUCTIONS

### What are bunded tanks?

A bund is a structure which surrounds a tank. It is designed to contain any accidental leakage or spillage of the contents, thus preventing pollution of the environment. A traditional bund (sometimes known as a catchpit) is usually constructed of rendered brick or blockwork and is separate from the tank.

A Balmoral Bunded Tank is an integral combination of a fuel oil tank and a bund (tank within a tank). Both the inner and outer tanks are manufactured from rotationally moulded polyethylene. The product avoids the need to construct a traditional brick built bund, provides a compact installation and, being enclosed, eliminates the need to dispose of accumulated rainwater and debris and minimises the risk of a 'jetting' type of leakage from a punctured tank raised above the walls of a traditional style of bund.

All bunds must fulfil the following requirements:

- must not have a drain outlet.
- must be completely impermeable to liquids.
- must contain all fuel supply/filling accessories within the catchment area.
- must contain at least 110% of the capacity of a single tank installation.

### Before installation

#### Do you need third party approval?

There may be a need to check the legal or regulation requirements of the bunded fuel oil tank to suit your application, particularly agricultural fuel oil installations. Owners may be liable to prosecution if a tank has been identified as causing environmental pollution.

Most authorities now consider the 'tank within a tank' concept as an enhanced form of bunding. If in doubt we recommend obtaining advice and information from a local representative of either the Environment Agency, Scottish Environment Protection Agency or the Building Control department of a Local Authority.

If for any reason a Balmoral bunded tank is not thought to be suitable, a standard Balmoral fuel oil tank can be installed surrounded by a conventional brick bund or catchpit to suit the regulations (refer to Balmoral Fuel Oil Tank Installation Instructions 2-008-DOC).

### Regulations and guidelines

The following regulations and guidelines are applicable to installation of fuel oil tanks and should be available from the relevant authorities.

- British Standards : BS 5410
- Environment Agency (EA-England and Wales) Guidelines (PPG 2)
- Scottish Environment Protection Agency (SEPA - Scotland) Guidelines (PCG 6)
- Local Building Regulations may also cover the site preparation and installation of integrally bunded fuel oil tanks.

Agricultural fuel oil applications **MUST** comply with:

- The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations 1991. (similar regulations exist in Scotland)

Reference should also be made, where applicable, to the following Balmoral Leaflet and additional information guidelines:

- Fuel Oil Tank Outlet Accessories Assembly Instructions (2-009-DOC)
- BSRIA/CIRA report
- DETR report

### Balmoral bunded tank details

Balmoral bunded tanks are suitable for the static storage (not for transport purposes) of the following fuel oils:

- Diesel (depending on application of regulations and outlet accessories)
- Kerosene
- Paraffin (burning oil)

Any alternative use should be assessed for suitability with the tank and it's standard fittings (contact the Balmoral sales office for advice).

The tanks are designed for static applications (not for transport purposes) and are heavy when full. They should only be moved, with care, when completely empty.

We advise all Balmoral bund installations to be inspected regularly (eg. once a year or before filling). Any liquid overspill contained within the outer bund ('catchpit' area) must be removed to prevent reaching the overflow level and to minimise the buoyancy of the inner tank.

- Balmoral bunded fuel oil tanks **MUST NOT** be installed underground.

- **DO NOT CLIMB OR STAND ON THE TANK** (for example during filling). The outer surface of the tank can be a slip hazard.

Parts supplied as standard:

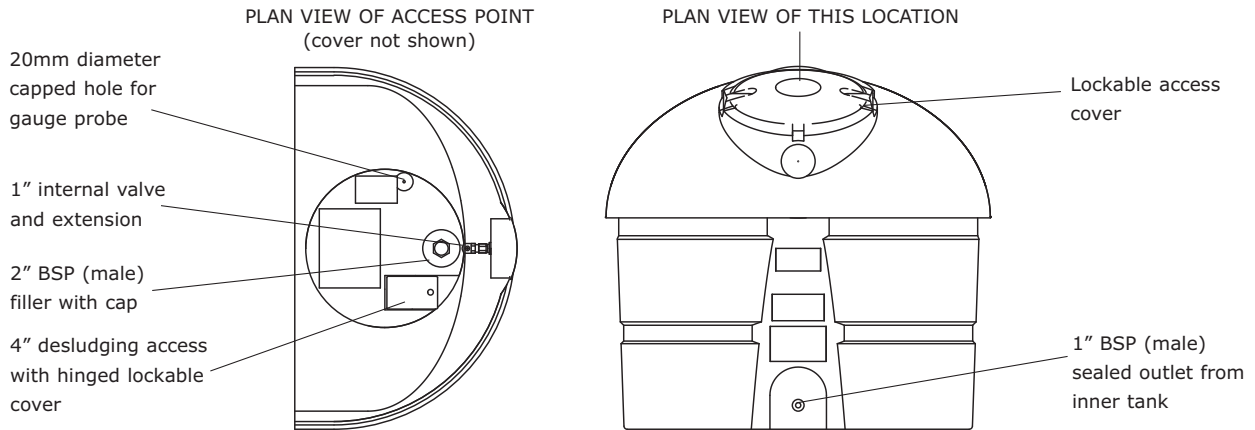
- A factory fitted 1" BSP (male) offtake connection.
- This fitting provides an offtake suitable for gravity feed situations whilst maintaining an essential seal of

the inner and outer tanks.

- A valve with extension handle is fitted between the inner and outer skins.
- 2" BSP (male) fill point with cap.
- 105mm diameter (4") aperture with flush fitting cover for desludging.
- Lockable hinged manhole cover on outer tank.

**Figure 1**

*Top fill/bottom offtake bunded tank features*



**Option one: Top fill/bottom offtake**

**Agricultural applications**

A Balmoral bottom offtake bunded tank with an external (outside the bund) flexible fuel supply hose and fittings may not be approved by the EA or SEPA. A possible exception to this may be a permanently attached rigid pipe outlet to an appliance like a grain dryer. We recommend customers obtain advice from a representative of the relevant authorities before installation.

Recommended combination of outlet accessories on bottom offtake bunded tank.

Tankmaster, sight gauge and support bracket sold separately (see figure 2). Please refer to the Balmoral

Tanks Specialist Fuel Oil Containment brochure (2-072-DOC) for the full range of available fittings, gauges and accessories or contact your local distributor. Accessories include a range of electronic gauges  
 \*\*VB1300 does not require 9" extension

**Option two: Top fill/top offtake**

This option has been primarily designed for domestic heating applications where bottom offtake bunded tanks, in some cases, may not be permitted.

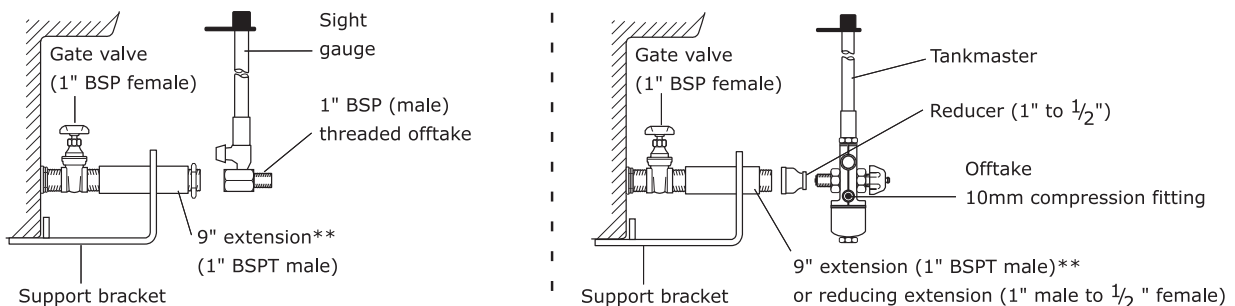
Supplied as standard with the following:

- A factory fitted 10mm brass compression fitting with internal copper extractor tube.

This fitting provides an offtake suitable for most

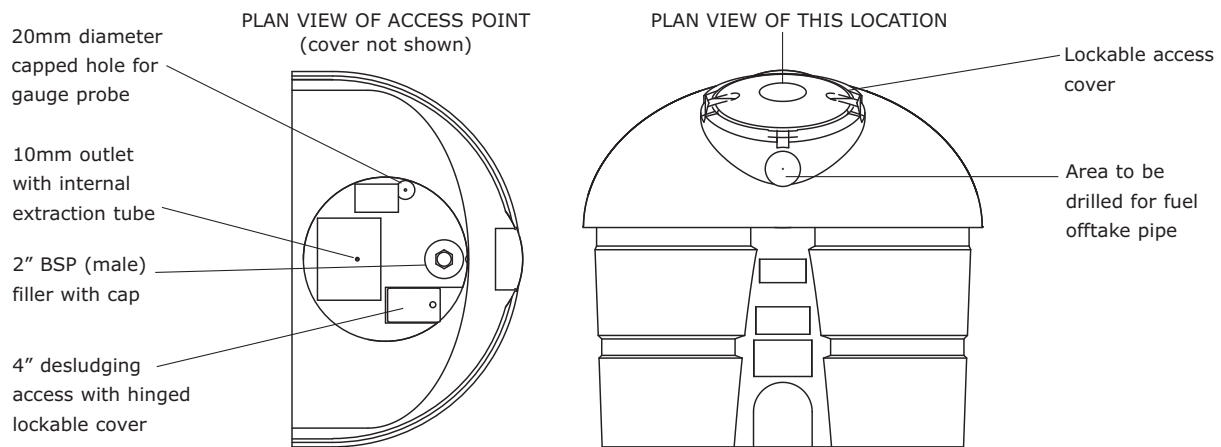
**Figure 2**

*Outlet accessories on a bottom offtake bunded tank*



**Figure 3**

*Top fill/top offtake bunded tank features*



domestic fuel oil installations and provides enhanced environmental protection by being contained within the bund. A suitable pump to extract the tank contents and a non return valve on the pipeline may be required (not included but can be supplied by Balmoral. Please contact the sales office for advice). A hole should be drilled in the top of the tank (see figure 3) for the fuel supply pipe. Check that there are no air leaks in the pipeline once assembled.

- 2" BSP (male) fill point with cap.
- 105mm diameter (4") aperture with flush fitting cover.
- Lockable hinged manhole cover on outer tank.

### **Agricultural applications**

A Balmoral top offtake bunded tank may be approved providing all fittings and accessories are contained within the bund. We cannot advise if this is practical to individual site installations - however the standard 10mm compression fitting and internal extraction tube provided for top empty will be unsuitable for connecting to a standard type of flexible fuel delivery hose and nozzle for dispensing diesel (the tank components are removable for conversion purposes). A suitable pump will be required to extract the tank contents as this tank option does not provide the assistance of gravity feed supply. Contact the Balmoral Tanks sales office for information on the range and suitability of pumps.

### **Installation**

#### **Ground level installation**

It is recommended that a full risk assessment be completed on the site, installation process and all parts prior to installation. (Available from OFTEC)

- Store in an upright position, support the entire base

of the tank on a firm, flat, level surface ensuring that the area is free from any sharp stones or other debris. (See figure 4)

- The tank must be adequately separated from any surrounding structures (HSE guidelines suggest 4m). The separation between other tanks should be the minimum needed for safe construction and operation. We recommend a minimum of 300mm (12") all round. Also allow space above the tank for the hinged access cover to fully open.
- Position the tank ensuring best access for filling, maintenance and safety.
- Ensure the tank is protected from strong wind (especially when empty). If necessary strap it down.
- Connect all pipework, fittings, accessories and support structures.
- The tank and the integrity of seals could be affected if pipework and fittings are not suitably supported.
- Use PTFE tape or Stag compound for jointing.
- Do not allow factory fitted outlets to become loose or turn during fitting of accessories or fuel supply pipes. The 1" BSP bottom outlet fitting (where applicable) is set at an optimum torque (45 lb/ft, 61Nm) for O' ring seals on the outer tank wall.
- If gravity feed is not suitable for your application see your authorised distributor for information on pumps.
- Clearly label the tank to identify the contents and any relevant safety information.

### **Alternative Bunded Tank applications**

For different applications, Balmoral can offer advice on alternative tanks and suitability of only the polyethylene material, in which the tanks are moulded, for containing other liquids.

- It is the end users responsibility to ensure that suitable pipework and fittings are used and the tank is correctly/safely installed for an alternative application.
- It is the end users responsibility to ensure the tank application will meet any legislative requirements that may apply to their particular installation.
- Failure to follow these installation guidelines will render any warranty null and void.

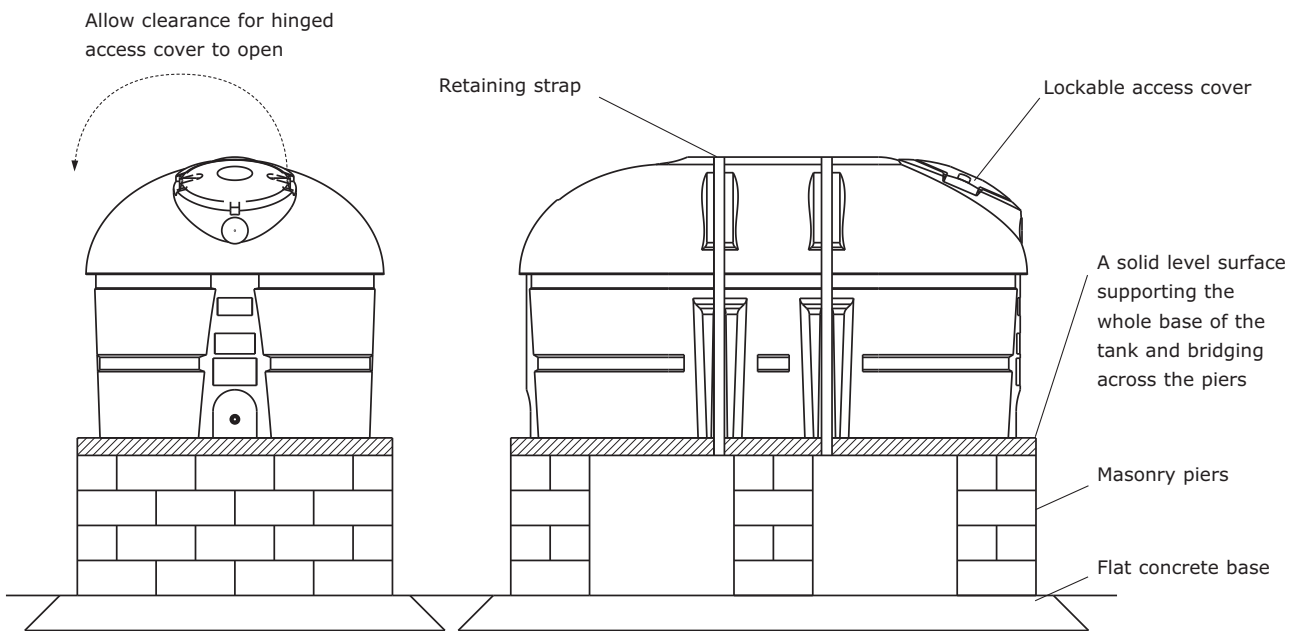
### Free advisory service

For technical advice, or if you require a visit by one of Balmoral's Technical Representatives for on site information, please contact Balmoral Tanks.

For further information on Annual Maintenance Contracts either with Balmoral Tanks or through your nearest Authorised Installer please contact Balmoral Tanks' customer services on 01224 859100.

**Figure 4**

*Typical raised installation*



Authorised distributor

# BALMORAL TANKS

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