

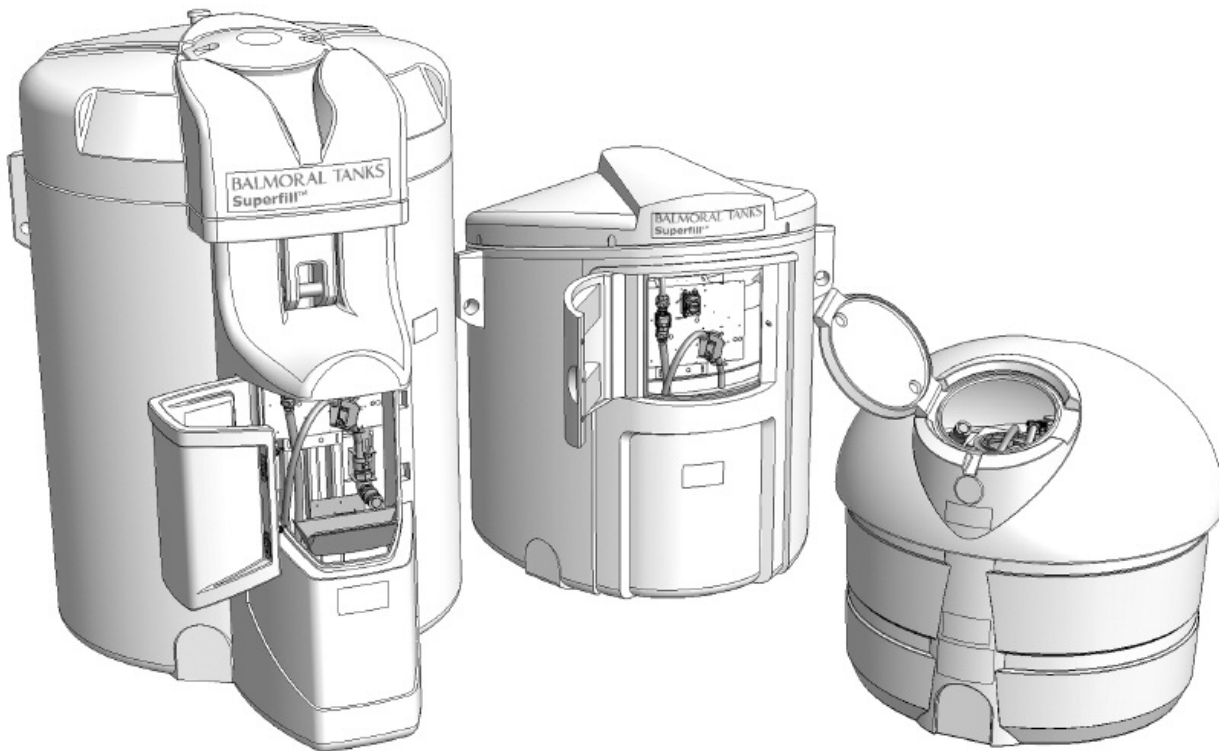
BALMORAL TANKS

Installation and operating instructions

Balmoral SuperBlue™

AdBlue™ storage and dispensing

500, 1300, 2500, 5000, 7500 and 10,000 litre models



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SuperBlue™ dispensing model (Figures 1-5)

- Ground-level tank filling
- Lockable cabinet
- Battery powered electronic contents measuring and bund alarm
- 70L/min fuel delivery and digital flowmeter
- Range of capacities and tank styles

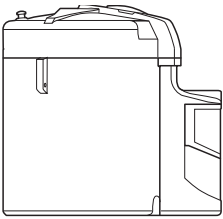


Figure 1
5000, 7500 & 10,000L models

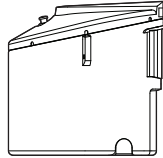


Figure 2
2500L vertical model

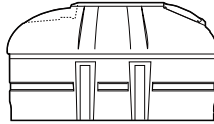


Figure 3
2500L horizontal model

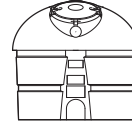


Figure 4
1300L model



Figure 5
500L model

SuperBlue™ forecourt model (Figures 6-7)

- Ground-level tank filling
- 2" Bottom empty polyethylene BS4504 Pn16 raised face flange
- Battery powered electronic contents measuring and bund alarm
- Lockable cabinet
- Range of capacities and tank styles

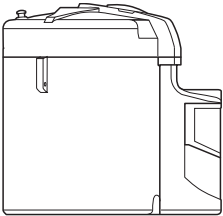


Figure 6
5000, 7500 & 10,000L models

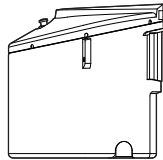


Figure 7
2500L vertical model

All tanks are non-pressurised and vent to air.

General information

Handling

Balmoral tanks are delivered on pallets which allow them to be handled efficiently by forklift. SuperBlue tanks must be handled with care and stored upright at all times. Figure 8.

Vertical 2500, 5000, 7500 and 10,000 litre models incorporate moulded-in lifting points to allow crane handling on and off vehicles and into position when on-site.

Remember, integrally bunded tanks are effectively a 'tank-within-a-tank' and care must be taken not to disturb the inner tank in relation to the outer tank.

Tanks must be fully drained of contents before being lifted or moved

Installation

Tanks must be installed on a flat, level concrete base (extending 300mm beyond the perimeter of the tank) that is capable of withstanding the weight of a full tank throughout the life of the product.

Uneven bases, bases with gaps or tanks overhanging their base will cause stresses outside the tanks' design parameters and may cause premature failure.

For inspection and maintenance purposes, ensure there is appropriate clearance from any obstructions surrounding the tank.

Consistent with similar fuel tank installations, Balmoral Tanks recommends the following:

- 6m from tank to wall or boundary
- 1.8m from tank to 'TypeC screen/wall (of building)
- 1.8m from tank to doorway or window with appropriate heat resistance

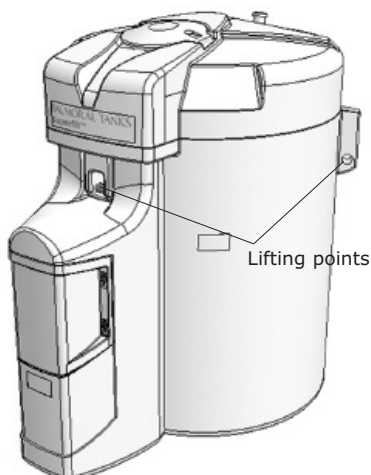


Figure 8
Lifting points

Tanks are designed with the expectation that they will be installed at ground-level. We recommend a full site inspection and risk assessment be completed prior to installation.

Materials containment

SuperBlue dispensing and forecourt models are designed to store and deliver AdBlue. AdBlue is the registered trademark for 32.5% aqueous urea solution (AUS32) produced to DIN70070.

Before filling the tank for the first time, reference should be made to DIN70070 and the AUS32 Quality Assurance Guidance document.

Overfilling

If the tank is overfilled with AdBlue then the excess will spill into the bund. This will cause no damage to the SuperBlue unit. Any AdBlue in the bund must be removed as a matter of urgency. Failure to remove AdBlue from the bund may cause the inner tank to float when there is a low level of AdBlue in the inner tank, and may cause damage to gravity fed base-empty tank connectors.

Regulations and guidelines

There are no specific regulations relating to AdBlue storage, however the Environment Agency has published information on storing and using AdBlue and have powers under the Anti-Pollution Works Regulations to enforce their good practice guidance if they believe there is a significant environmental risk from user activities.

The Balmoral SuperBlue range meets the requirements of the Environment Agency good practice guidance, but users should ensure that they satisfy the following requirements:

- Ensure the dispensing area drainage is isolated from surface water drains
- Keep and maintain an appropriate spill kit in case of spillage
- Make an emergency plan and carry out suitable training for dealing with spillages or other accidents

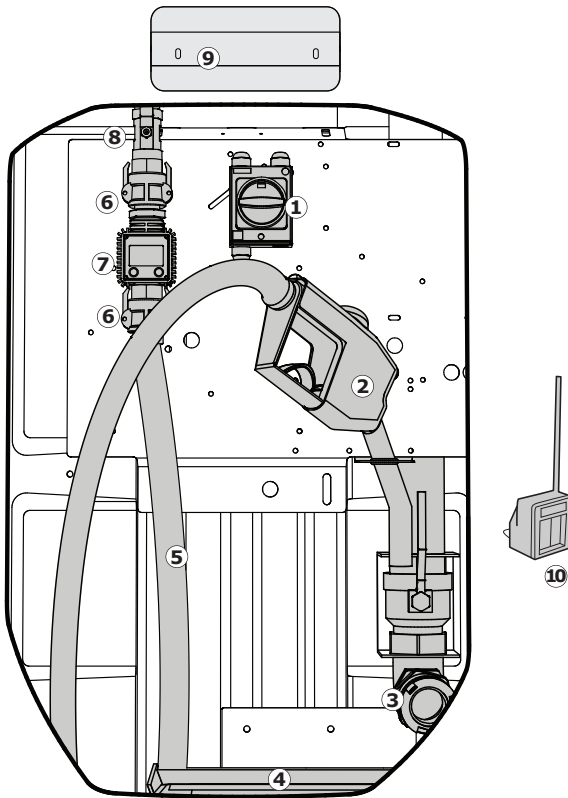


Figure 9
5000, 7500, 10,000L models

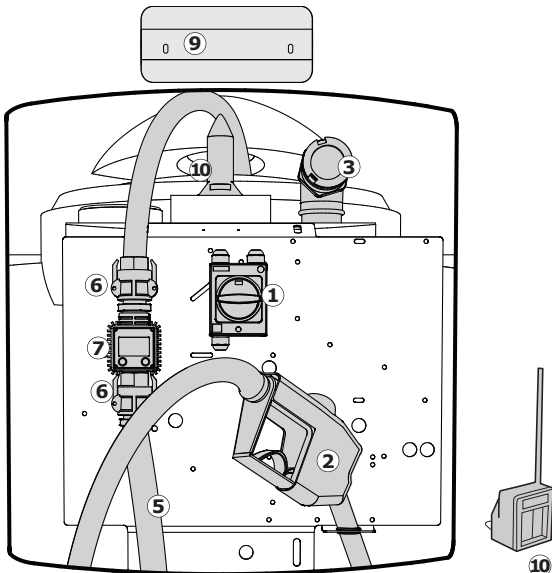


Figure 10
2500L vertical model

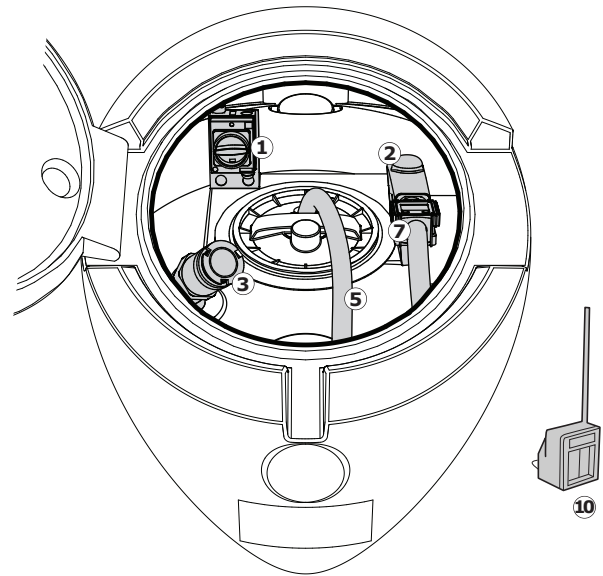


Figure 11
500, 1300 & 2500L horizontal models

Figures 9-11

- 1 Double pole isolator switch
- 2 Nozzle
- 3 2" tank filling port with dry break coupling
- 4 Drip tray
- 5 3/4" delivery line
- 6 Quick release couplings
- 7 Digital flow meter
- 8 Valve (Available on 5000, 7500 and 10,000L models)
- 9 Cabinet lamp (Available on 2500, 5000, 7500 and 10,000L models)
- 10 Remote contents gauge (Available with all models)

SuperBlue™ dispensing models (Figures 1-5)

Electrics

There is a double pole isolator switch (1) mounted on the pump plate or inner tank which should be connected to a mains power source.

When connecting the Superblue to mains power source we recommend a 6A 'Type C' circuit breaker at the consumer unit to protect the supply.

You can choose to run the power supply cable into the cabinet/tank at any point shown in Figure 12. Route the power cable so that it doesn't foul or obstruct access with the fuel delivery hose and fill port. A bulkhead connector should be used to secure the power cable.

All electrical work should be carried out by a qualified electrician.

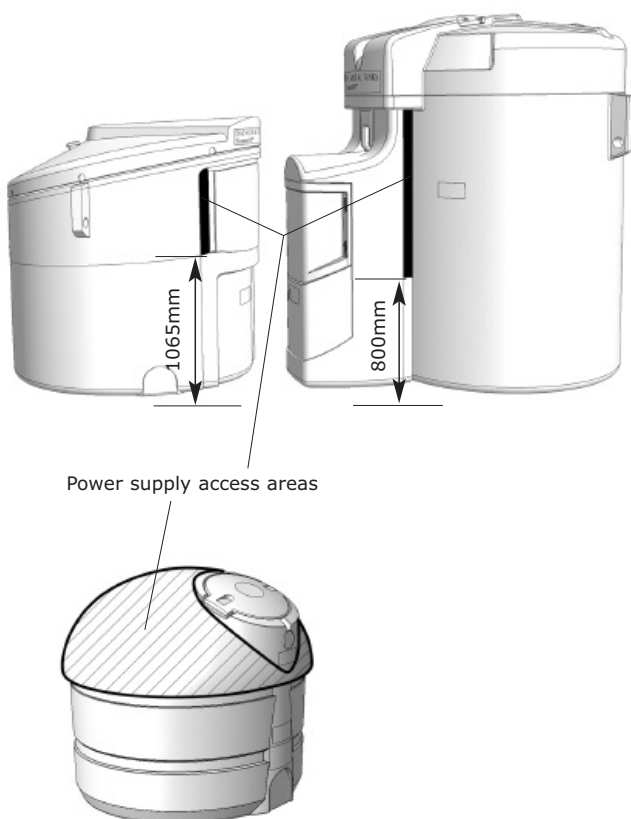


Figure 12
Power supply access areas

Filling the SuperBlue

SuperBlue tanks can be filled from ground level through a 2" dry break filling port (3).

On the 5000, 7500 and 10,000 litre models, a lever-controlled ball valve is included for additional safety: ie, lever in-line (3) with hose = open; lever perpendicular to hose = closed.

Monitoring the SupeBlue contents

Electronic contents gauge

Balmoral SuperBlue tanks are supplied with an electronic level monitoring gauge (10). The measurement reader is situated within the bund, on top of the inner tank, and has a leak detection device within the bund cavity. The display unit should be connected to a standard 3-pin socket, eg, in a nearby building with mains electricity.

This system is pre-set at the factory and, once activated, will display the tank contents in 1/10th's, and will also display a warning in the event of a spill or leak into the bund cavity.

Please refer to the specific product literature supplied in the document pack for further details.

Digital flow meter

The digital flow meter (7) on the delivery system has two readings:

- i 5-digit batch total which can be reset
- ii 6-digit totaliser which can be reset

Please refer to the specific product literature supplied in the document pack for further details.

AdBlue dispensing

Switch on power at the isolator switch (1) ensuring there is an electricity supply already connected to the SuperBlue.

Ensure the system is attended at all times when in use

Please refer to the specific product literature supplied in the document pack for further details.

When the isolator switch (1) is activated a lamp* (9) within the cabinet is automatically switched on. A maximum 40W bulb is recommended to minimise heat build up within the cabinet. If the lamp (9) does not illuminate when the system is switched on the bulb may require replacing. This will not affect the operation of the delivery system. Remove the lamp cover to replace the bulb.

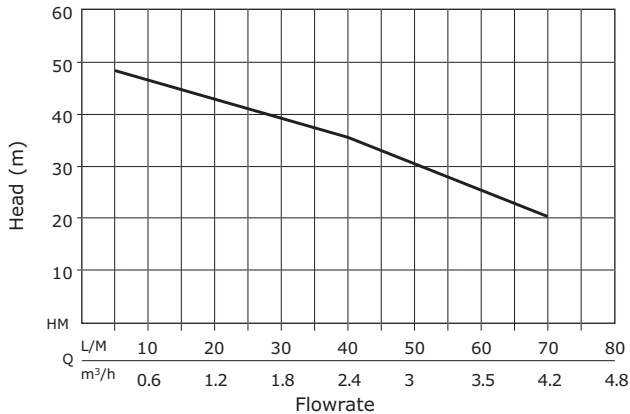
Pump specifications

Rating: 1~230V, 50Hz
Pumped flowrate: Max 4.2m³/h - 70L/m
Max motor power: 1100W

* On 2500, 5000, 7500 and 10,000 models only

Figure 13

Balmoral submersible pump curve



The pump system is a submersible stainless steel pump. It is accessed via 10" manway cover at the top of the inner tank. Never use the power cable, delivery line or float cable to lift or handle the pump unit. Lift using the polypropylene rope.

The delivery hose (5) running from the pump system is secured using a standard cable tie. This can be removed to allow replacement of the delivery hose, due to natural wear and tear, by the operator if required.

The SuperBlue is provided with six† metres of delivery hose (5) as standard with a trigger-activated nozzle (2). With the delivery system switched on, AdBlue delivery is activated by pulling the trigger on the nozzle. Allow a few seconds for AdBlue to charge the delivery line, especially when the tank is filled and operated for the first time, or after maintenance.

To reduce crystallisation of AdBlue on and within the nozzle, as an environmentally considerate precaution and for good 'housekeeping' reasons, the nozzle should be replaced in the holster when not in use.

Switch the system off at the isolator switch (1) when not in use

On the 5000, 7500 and 10,000 litre models, a removable drip tray (4) is provided which catches drips from the 2" fill port (3). Please dispose of contents responsibly.

* On 2500, 5000, 7500 and 10,000 models only

SuperBlue™ forecourt models (Figures 6 & 7)

Electronic contents gauge

An electronic contents gauge (10) is supplied with this product. See page 4.

Filling the tank

The vertical bunded tank with cabinet can be filled from ground level through a 2" dry break filling port (3).

On the 5000, 7500 and 10,000 litre models, a lever-controlled ball valve is also included for additional safety: ie, lever in-line (3) with hose = open; lever perpendicular to hose = closed.

On the 5000, 7500 and 10,000 litre models, a removable drip tray (4) is provided which catches drips from the 2" fill port (3). Please dispose of contents responsibly.

Bottom-empty

The tank uses a 2" bottom empty polyethylene BS4504 Pn16 raised face flange connection.

Maintenance

Balmoral Tanks advises a regular maintenance programme and highly recommends registering your tank with its Customer Service department to secure the initial 12 months' warranty support.

Annual service and maintenance contracts are available direct from Balmoral Tanks. Please contact Customer Services to put this in place.

End user/owner maintenance and inspection

- Mop up drips from inside the cabinet
- Wipe down and keep delivery hose clean
- External visual checks of bund for impact damage and distortion which could be an indication of contents displacement
- Visual check of internal bund cavity, in addition to bund alarm, for any build up of overspilled AdBlue or leaks
- Visual inspection of hoses. Check for cracks, abrasion, etc
- Check all connections for leaks

BALMORAL TANKS

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