

Salamander Pumps 

Installation and warranty guide for AccuBoost range



This document should be given to the end user and retained for future reference. Should you need to contact Salamander Pumps you will need the below information.



**MADE IN
BRITAIN** 

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Safety, installation & warranty guide



Important – read this first!

Safety in Operation

These appliances are not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance in a safe way by a person responsible for their safety and understand the hazards involved.

Children should be supervised to ensure that they do not play with the appliance.

Cleaning and user maintenance shall not be made by children without supervision.

If the supply cord is damaged, it must be replaced by the manufacturer, it's service agent, or similarly qualified person in order to avoid a hazard.

The installation must be carried out to comply with the latest Water Supply Regulations, Wiring/Electrical Regulations, Building Regulations and local byelaws.

Correct installation is the guarantee of safety and a trouble free system. It is therefore important to read these instructions thoroughly and ensure you comply with them. Incorrect fitting could cause serious injury, death, property damage and invalidate the warranty.

If your installation is complicated or you have any questions please consult PUMPWISE TECHNICAL HELPLINE on 0191 516 2002 (01844-3212 ROI)

We encourage installers to consult the PumpWise helpline, where our technical team can give you first-rate advice regarding installation.

The warranty for these products can be registered by calling PumpWise on the number above or by visiting : www.salamanderpumps.co.uk

Do not unpack until ready to use. Store product upright and in a dry, frost free location.

This product must be installed by a qualified/competent person. Please leave this installation guide with the customer for reference to maintenance and safety information.

*Thank you for choosing
Salamander Pumps*

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Please read instruction details carefully as they are intended to ensure this product provides long trouble free service. Failure to install the unit in accordance with the installation instructions will lead to invalidation of the warranty.

1. Product Description

The AccuBoost unpumped range consists of a pressure vessel and integral base. The AccuBoost pumped range consists of a pressure vessel and an electrically operated pump attached to the integral base (note: 450 pumped versions do not have the pump attached to the integral base). The pump control reacts to the mains water pressure and draws water from the mains. In both cases, the amount of available water in the property is increased as well as helping to stabilise the pressure.

2. Application

AccuBoost products are designed to assist the flow and pressure of the mains water supply within domestic or small commercial applications. The pressure vessel stores mains cold water at pressure, which is then released into the system to assist the incoming mains water when an outlet is opened. AccuBoost is ideal for enhancing the performance of combination boilers, unvented hot water cylinders, electric showers and mixer showers where there is poor pressure and/or flow.

Unpumped Units

Unpumped units require an incoming mains water static pressure of 2 Bar/200 kPa or above. The unpumped models will increase the available flow rate by delivering additional flow from the pressure vessel. Once the water within the vessel has been depleted, the flow will continue at the natural mains unassisted flow rate.

Pumped Units

For applications where the flow rate and/or the pressure of the incoming mains water is low (below 12 L/min and/or less than 2 Bar/200 kPa static pressure), the pumped models will increase the incoming flow rate up to 12 L/min as well as delivering additional flow from the pressure vessel. Once the water within the vessel has been depleted, the pump will continue to deliver 12 L/min at a higher pressure than the incoming mains.

Should the natural flow of the incoming mains exceed 12 L/min, the pump is equipped with a bypass to enable the mains to fulfill more of the demand or refill the vessel.

The pumped units require a minimum unassisted supply of 2 L/min to operate. The pump is capable of producing a maximum pressure of 4.0 bar (400 kPa) at closed head.

For more information about the AccuBoost range of products: -

visit our website

www.salamanderpumps.co.uk

call PumpWise on

0191 516 2002

or visit our e-learning website

<http://salamandereschool.co.uk>

3. Pre-installation Checklist

Our pre-installation guidelines are detailed on the following pages, but some of the key “do’s and don’ts” are highlighted below:

Do’s

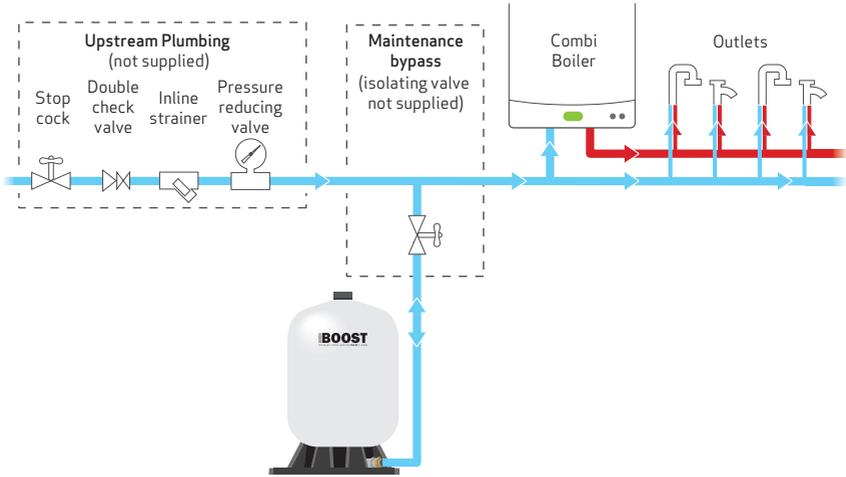
- Read this installation manual in full before commencing installation
- Allow adequate ventilation of the pump (100mm recommended)
- Ensure the pump, pressure vessel and associated pipework are protected from frost
- Anti-vibration couplers must only be finger tight plus one quarter turn
- On pumped models, we recommend the pump is activated at least 5 minutes every 4 weeks
- Ensure that the installation complies with all relevant regulations
- Pump inlet and outlet anti-vibration hoses should be fitted straight with no twists or bends.
- Ensure suitable means of isolation for maintenance (both water and electrical)
- Ensure the surface where the unit is installed is capable of supporting the maximum weight of the unit
- Fit a double check valve and pressure regulator
- Check the static pressure and flow rate of the incoming mains water prior to installation
- With the AccuBoost removed from its packaging check for any damage prior to installation. If any damage is found notify Salamander Pumps within 24 hours of receipt

Don’ts

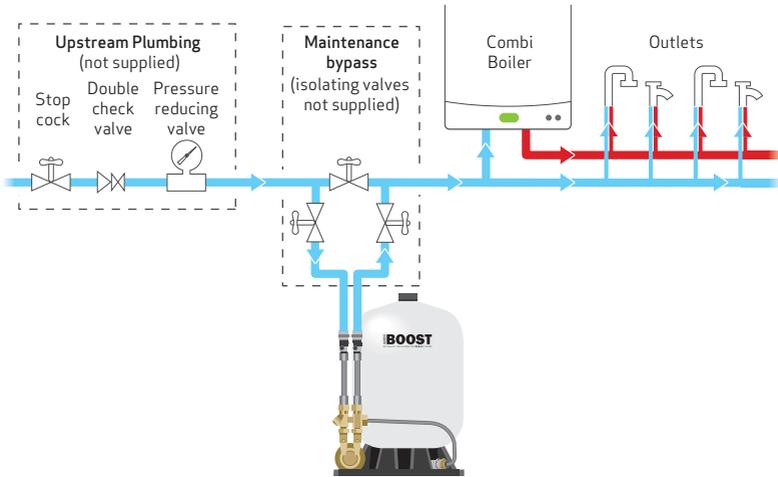
- Do not place any materials over the pump
- Never use jointing compound, Boss White, Hemp or steel wool
- Solder flux must not come into contact with the pump, pressure vessel, base, anti-vibration couplers or any part of the AccuBoost unit
- Never allow the system pressure to exceed the maximum operating pressure rating of the AccuBoost units (8.6 Bar/860 kPa)
- Never install more than one pump per system
- Never fit to hot water piping
- Never fit to restrictive or collapsed mains supply (eg lead main)

4. Typical Combi Boiler Installations

Unpumped Figure 1



Pumped Figure 2

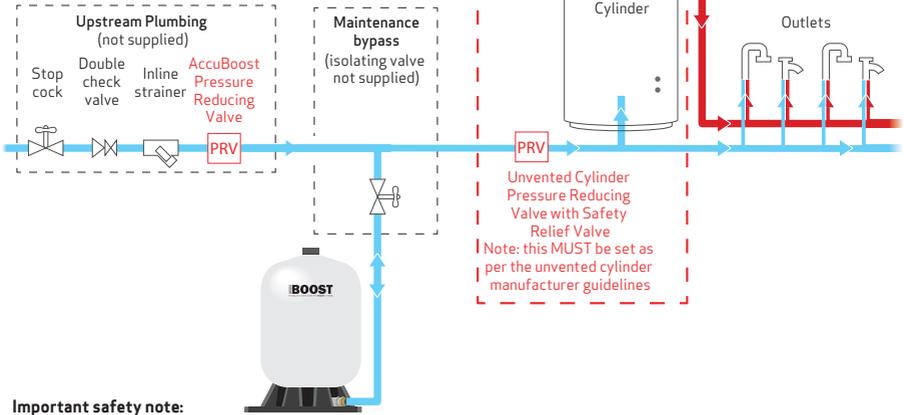


Note: In all instances, the installation must comply with the latest water, electrical and building regulations

5. Typical Unvented Cylinder Installations

Unpumped

Figure 3



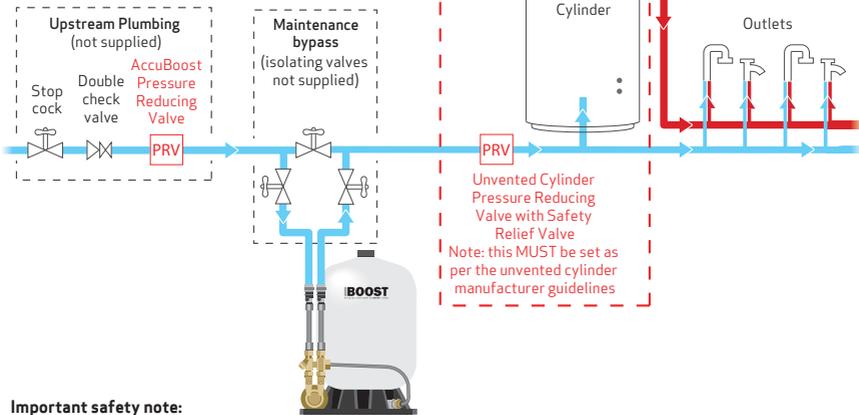
Important safety note:

The setting of the AccuBoost pressure reducing valve must be set lower than the setting of the unvented cylinder pressure reducing valve/safety valve and so that the maximum system pressure of the AccuBoost unit is not exceeded. The setting of the AccuBoost pressure reducing valve may need to be adjusted down to suit.

In all instances, the installation must comply with the latest water, electrical and building regulations

Pumped

Figure 4



Important safety note:

The maximum theoretical pressure after the AccuBoost is the setting of the AccuBoost pressure reducing valve plus the output of the pump (4 bar). The total of these must not exceed the setting of the unvented cylinder pressure reducing valve/safety valve. The setting of the AccuBoost pressure reducing valve may need to be adjusted down to suit.

In all instances, the installation must comply with the latest water, electrical and building regulations

6. Installation Instructions

6.1 Location

All AccuBoost models are designed to be connected directly to the cold mains water supply within the property. Pumped models should ideally be connected directly after the stopcock. Unpumped AccuBoost units can be located within the building, loft areas, outbuildings, garages or basements - but the location must be dry and frost free. When locating AccuBoost the following points should be considered:-

Access & maintenance:

- For maintenance purposes and emergency situations, the AccuBoost unit (and pump if applicable) and any isolation valves must be easily accessible.
- A clearance of 100mm above the pressure vessel is advised to allow access to the valve for air precharge pressure checking and adjustment.
- It is advised to fit a water maintenance bypass when installing an AccuBoost unit. This allows the property to have a water supply available whilst any maintenance is carried out. See Figures 1-4 on pages 4 & 5 for further details.

Pipework:

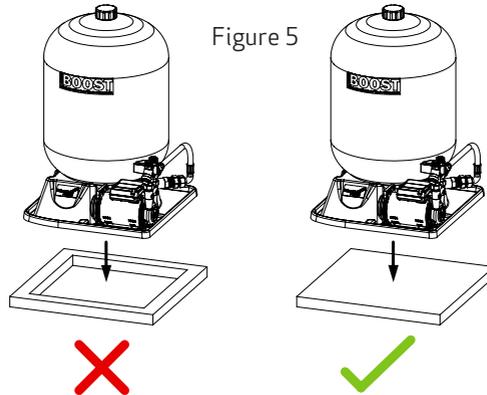
- AccuBoost pumped units should be installed directly after the mains stopcock. Any outlets before the AccuBoost pumped unit will not benefit from the AccuBoost unit. Any outlets connected between the stopcock and AccuBoost must have non-return valves fitted.
- The length of pipework from the incoming main to the AccuBoost unit should be kept as short as possible. The maximum length of pipework between the stopcock and pump should be no more than 2m in 15mm pipe. If this is not possible, the pump can be located separate to the vessel - contact PumpWise for more information.
- The isolating valves on the supplied anti-vibration hoses should be accessible once the unit is installed.
- All pipework must have adequate insulation to protect against frost and freezing.
- On pumped versions the flow direction is clearly marked on the brass end of the pump. Please refer to Figure 6b on page 10.

Safety:

- During normal operation the casing of the pump can become very hot and may take some time to cool down. Measures should be taken to ensure it cannot be touched.
- The pump should never be covered so as to stop airflow for ventilation.
- Care should be taken to ensure nothing can fall on or puncture the pressure vessel and pump.
- The AccuBoost unit is stable in normal operation, however should there be a risk of the unit being pulled over, additional retaining methods such as a retaining strap should be installed (not supplied).
- The AccuBoost unit must be installed in a dry location.
- In the unlikely event of a water leak, the AccuBoost unit should be positioned so that water can be contained or directed away from any electrics or other sensitive areas.
- A pressure reducing valve should be fitted on the installation to ensure that the pressure does not exceed the safe working limit of the AccuBoost system (8.6 Bar/860 kPa) and to provide optimised performance.

Loading/support:

- The AccuBoost unit should be installed on a smooth, flat, level surface so that the pressure vessel is vertical.
- The base of the unit should be fully supported across the entire base to ensure maximum stability and safe loading. Refer to Figure 5
- The floor/mounting surface must be able to withstand the maximum full weight of the AccuBoost unit (please refer to the technical specification for the weights of each unit). Additional supports should be added to the support surface if required.



Ventilation:

- Ensure adequate airflow to cool the motor. Ideally, leave 100mm air gap around the pump.
- The AccuBoost unit and pump should be positioned away from other appliances that generate heat.

6.2 Water temperature & thermal protection

- The AccuBoost range of products are designed for use with cold mains water only.
- The AccuBoost units are capable of a maximum water temperature of 35°C and a minimum of 4°C. The cold water should be stored and distributed below 20°C to prevent Legionella growth. If there is a possibility of the water reaching outside of these limits, thermal protection must be provided.
- If installed in a loft area, garage, outbuilding or any position where temperatures may fall below 4°C thermal protection must be provided to prevent freezing.
- There is a possibility that the sun or other appliances that generate heat could warm the water within the pressure vessel. This should be considered when choosing a location for the AccuBoost unit.

6.3 Pipework

General plumbing:

- Ensure pipework runs are as short as possible and minimise potential for airlocks.
- The maximum length of pipework from the stopcock to the pump is 6m. The pump may be positioned separate from the vessel to achieve this.
- To meet the requirements of the water supply (water fittings) regulations, a type EC-verifiable double check valve should be fitted. Refer to Figures 1-4 on pages 4 & 5.
- **Ensure the combined mains pressure and pump pressure does not exceed the maximum system pressure of 8.6 Bar/860 kPa. If this pressure is exceeded, irreparable damage to the unit, serious injury, death or property damage could occur. This will also invalidate the warranty of the product. Please consider pressure spikes that can occur and the fact that the mains pressure may vary at different times of the day/night.** A pressure reducing valve (not supplied) should be used on the incoming mains before the AccuBoost unit. For pumped units this should be set to a maximum of 4.5 Bar. For unpumped versions refer to table 1 in section 6.5
- All outlets connected between the mains stopcock and AccuBoost unit must be protected by non-return valves to prevent backflow of water and air into the AccuBoost unit.
- All pipework must be cross-bonded in accordance with IET Regulations.
- All pipework to and from the AccuBoost unit should be supported with pipeclips.

Flux:

- Solder joints must be completed and flux residues removed prior to the AccuBoost unit installation. Solder flux must not come into contact with the pressure vessel, pump, base, anti-vibration hoses or any part of the AccuBoost unit. Flux damage will invalidate any warranty.
- All associated pipework must be thoroughly flushed before making final connections to the AccuBoost unit.

Natural water flow:

- A minimum mains water static pressure of 2 Bar/200 kPa is required for unpumped units. Performance and refill times will be improved when the flow rate is higher.
- Pumped versions are usually recommended when the natural flow rate is below 12 L/min or the mains static pressure is below 2.0 Bar/200 kPa. For pumped units there must be at least 2 L/min of natural water flow. Pumped versions must not be used on restrictive or collapsed mains eg lead mains.

6.4 System connections

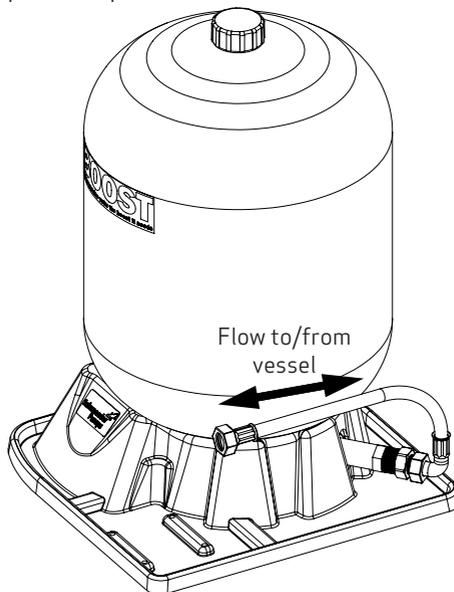
General:

- Once a suitable location has been identified, the unit should be removed from the packaging and inspected for any damage
- Carefully move the unit into position
- A maintenance bypass containing full bore isolation valves (not supplied) should be installed in pipework to allow any maintenance to the AccuBoost to be carried out without disrupting the mains water supply to the property. See Figures 1-4 on pages 4 & 5.
- A double check valve and pressure reducing valve (not supplied) must be installed after the stopcock on both pumped and unpumped installations. See Figures 1-4 on page 4-5.

Unpumped:

- Unpumped units use the same pipework to the pressure vessel for both filling and emptying the vessel. This should be connected to the mains as shown in Figures 1 & 3 on pages 4-5.
- For unpumped versions it is advised to install an inline strainer before the AccuBoost unit. Pumped versions have an inline strainer incorporated into the design of the pump.

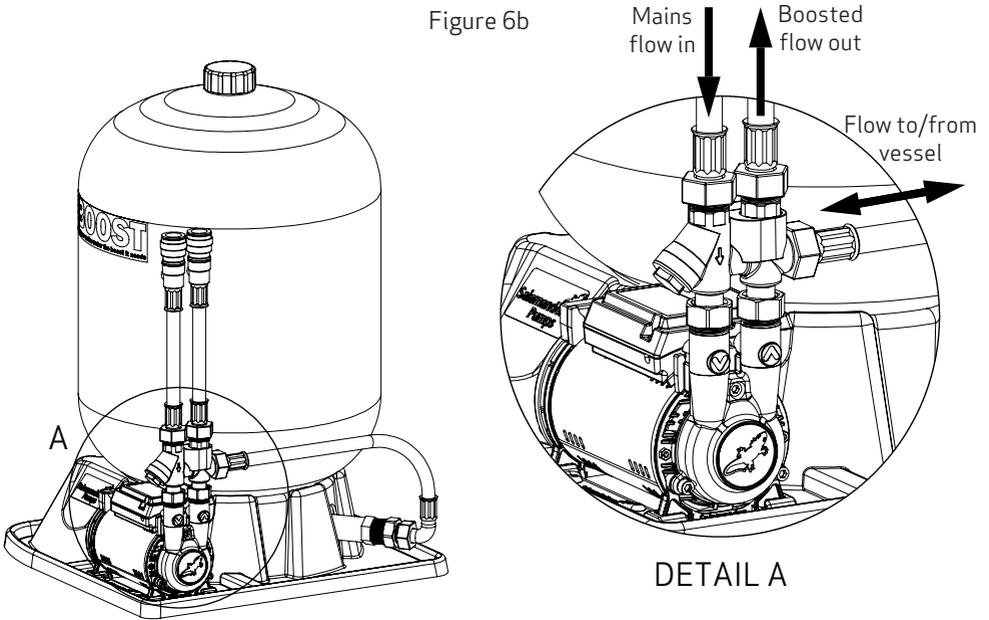
Figure 6a: unpumped example



Pumped:

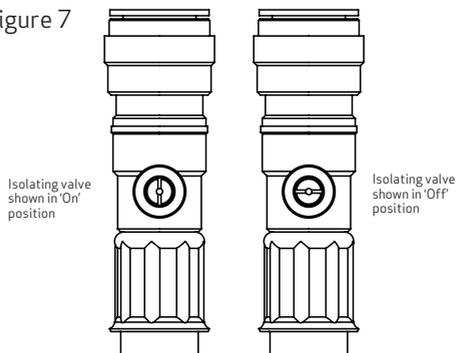
- Pumped units have a separate inlet and outlet. Arrows on the brass end of the pump clearly show the inlet and outlet, refer to Figure 6b. The included anti vibration hoses should be used to make the connections between the pipework and AccuBoost unit. The supplied flat washers should be used when attaching the hoses. The hoses should be finger tight plus one quarter turn. Do not twist or bend the hoses so that they kink as this will restrict the flow and also invalidate the warranty.

Figure 6b



Isolators on anti-vibration hoses (pumped units only)

Figure 7



450 pumped:

The 450 pumped AccuBoost models are supplied in two boxes - vessel in one box & pump in the other. The pump does not need to be connected to the integral base of the vessel, but should ideally be sited close to the vessel on a smooth, flat, level surface capable of supporting the weight. The pump should be connected to the pressure vessel via the supplied long anti-vibration hose. The long anti-vibration connection hose has a straight connection at one end and a right angle connection at the other. Either end can be connected to the vessel/pump depending on which best suits the space available for the installation. The long anti-vibration hose contains captive washers on the connections. Please ensure these are present before connecting the hose. The maximum length of pipework from the stopcock to the pump is 6m. The pump may be positioned separate from the vessel to achieve this.

Figure 7a

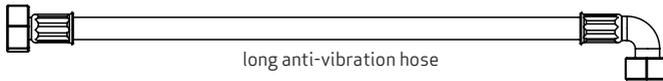
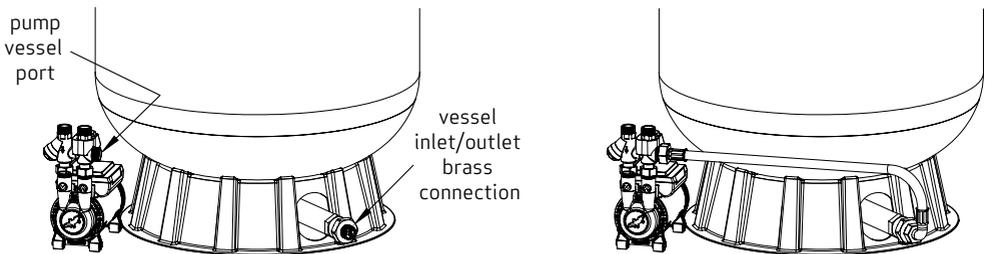


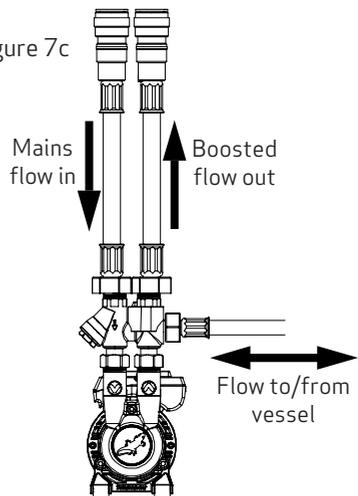
Figure 7b



The two short anti-vibration hoses should be connected to the top inlet/outlet ports on the pump and then be connected to the pipework in the property. The short anti-vibration hoses do not have captive washers. Please use the supplied washers when making these connections to the pump. The pump must not be supported by the hoses.

Note: All hose connections should be finger tight plus one quarter turn. The mains flow in and boosted flow out hoses must be installed straight, do not twist or bend these hoses as this will restrict the flow and also invalidate the warranty. Ensure no solder flux comes in contact with hoses, pump or vessel.

Figure 7c



6.5 Air precharge pressure of the vessel

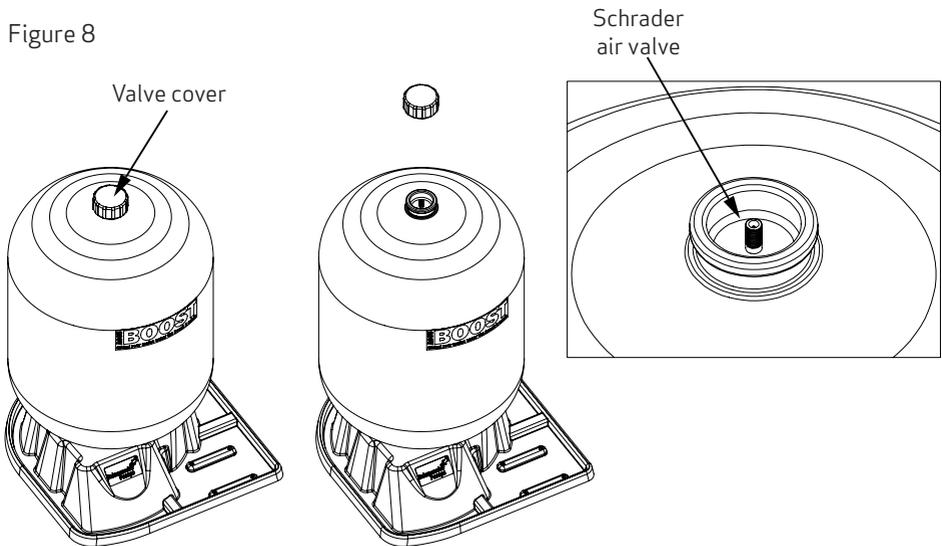
To maintain optimum performance of the system, a pressure differential of approx. 1.5 Bar between the mains water static pressure and air precharge pressure within the vessel should be maintained. The air precharge of the vessel should never be less than 0.5 Bar.

- **Pumped units** have a factory set air precharge pressure of 1.5 Bar/21.75PSI. This will deliver optimum performance for the pumped units. The actual air precharge pressure may vary due to storage conditions and the length of time in storage. The air precharge pressure should be checked and adjusted if necessary.
- **Unpumped units** require the incoming mains water static pressure (when no outlets are drawing water) to be measured and the air precharge in the vessel adjusted accordingly. Refer to the following steps and Table 1.

Checking air precharge pressure:

- Before checking the air precharge pressure of the vessel make sure that the electrical supply to the pump has been isolated (for pumped versions), the mains water supply to the unit has been switched off via the stopcock, all water has been emptied from the vessel and that an outlet such as a tap is left open to allow any residual water to escape.
- Fully unscrew and remove the valve cover located on the top of the pressure vessel to expose the Schrader air valve.
- Using a tyre pressure gauge, check the air pressure within the vessel.

Figure 8



Adjusting the air precharge pressure:

- To reduce the air precharge pressure in the vessel, depress the centre of the Schrader valve to release air pressure. Only release a small amount of pressure at a time and then the remaining pressure should be checked again. Continue to do this until the correct air precharge pressure is achieved. If too much pressure is removed, the air pressure must be increased as per below.
- To increase the air precharge pressure in the vessel, attach a suitable car or bicycle pump and insert air into the vessel. The pressure should be checked during the process to ensure the required air pressure is not exceeded.

Table 1

| Mains Static Pressure | Correct Air Precharge Pressure of Vessel | Pressure Differential | Pressure Reducing Valve Maximum Setting |
|------------------------------|--|------------------------------|--|
| less than 2.0 Bar/200 kPa | Consider a pumped version. Call <i>PumpWise</i> for more information | | |
| 2.0 Bar/200 kPa | 0.5 Bar/7.25 PSI | 1.5 Bar | 2.5 Bar/250 kPa |
| 2.5 Bar/250 kPa | 1.0 Bar/14.5 PSI | 1.5 Bar | 3.0 Bar/300 kPa |
| 3.0 Bar/300 kPa | 1.5 Bar/21.75 PSI | 1.5 Bar | 3.5 Bar/350 kPa |
| 3.5 Bar/350 kPa | 2.0 Bar/29.0 PSI | 1.5 Bar | 4.0 Bar/400 kPa |
| 4.0 Bar/400 kPa | 2.5 Bar/36.25 PSI | 1.5 Bar | 4.5 Bar/450 kPa |

note: all pumped versions should have air precharge set to 1.5 Bar/21.75 PSI and the pressure reducing valve set to maximum of 4.5 Bar/450kPa

Mains Static Pressure Recorded:

Air Precharge Pressure Adjusted to:

Pressure Reducing Valve Set to:

6.6 Electrical installation (pumped versions only)

Your pump must be connected to the electrical supply using the supplied mains cable with the attached plug. This plug must be connected to an accessible socket that has been installed in compliance with IET Wiring Regulations.

- The plug must be accessible at all times
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified person in order to avoid a hazard.
- All pipework must be cross bonded in accordance with IET Regulations
- The pump is supplied with a 3A fuse fitted. A higher rate fuse must not be fitted.
- If installed by a Part P qualified installer, the pump may be fitted via a fused main spur containing a 3A fuse without invalidating the warranty.
- The pump must be connected to earth via the plug/supply cord.
- The mains lead wires are coloured as follows:
 Brown = Live Blue = Neutral Green & Yellow = Earth
- The electrical circuit must contain a suitable R.C.D.
- Water should not be allowed to come into contact with the pump or the supply cable.
- If the unit is to be installed in a loft, garage, outbuilding or other location where there is a risk of water ingress or condensation to the socket, an appropriately IP rated socket must be used.
- Bathroom Zones: Salamander products covered in these notes cannot be installed in Zone 0 or Zone 1. See Figure 9
- The unit should be installed in accordance with BS7671:2018
- In BS7671:2018 rooms containing baths or showers should be broken down into zones
- These zones are summarised as:
 ZONE 0 - This is the bath or shower tray
 ZONE 1 - Is considered to be the area where the individual is bathing or showering or the area where shower water is likely to be directly sprayed.
 ZONE 2 - Is the area beyond ZONE 1, extending by a further 600mm

Please refer to BS7671:2018 for further guidance

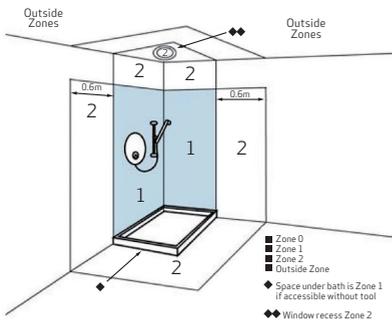
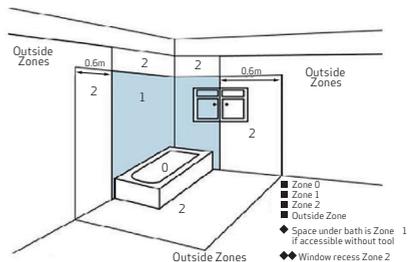


Figure 9



7. Final Commissioning

Priming (pumped versions only)

It is critical to discharge water through the pump using natural flow before connecting the outlet of the pump to the pipework. This ensures the air has been discharged from the inlet pipe work and pump chambers. The best method is :-

- Connect the inlet pipework to the inlet anti-vibration hose
- Check that all isolating valves on anti-vibration hoses are open
- Turn on stopcock and allow water to flow through the pump to ensure there is no air in the pump or system pipework
- Turn off the stopcock and connect the pump outlet anti-vibration hose to the pipework
DO NOT RUN PUMP DRY - to do so will cause irreparable damage to your pump and will invalidate your warranty

For all units

- Flush all air from pipework before connecting AccuBoost unit
- Connect AccuBoost unit to pipework
- Close all outlets and ensure isolation valve(s) are open to and from the AccuBoost
- Turn on stopcock to begin filling the vessel
- Turn on the electrical supply to the pump (if applicable). The pump will begin to run to help fill the vessel
- Open each outlet that is supplied by the AccuBoost system until all air has been expelled
- Close all outlets and allow the vessel to fully fill. The fill time of the vessel depends on the mains water flow and also the size of the vessel
- The pump (if applicable) will continue to run even when all outlets are closed, until the vessel is full and the correct system pressure has been reached
- The AccuBoost (including pump if applicable) and all system pipework should be checked for leaks whilst the vessel is filling, when the vessel is full and while water is being drawn from an outlet. Any leaks should be rectified and then the checks performed until no leaks are present.

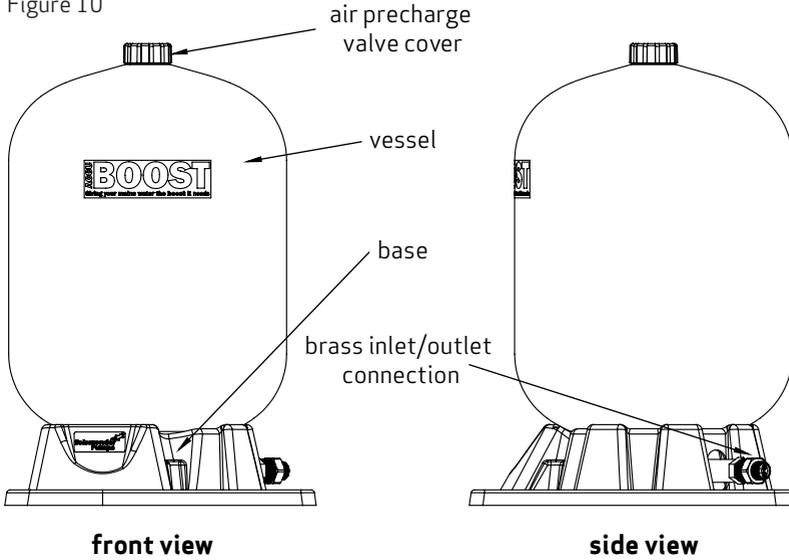
Note: The pump responds to the pressure within the system. When the system pressure drops below the pre-programmed level due to an open outlet, it will automatically turn on. If a small amount of water is drawn from the system that does not allow the pressure to drop below the pre-programmed level, the pump will not turn on. When outlets are closed the pump will continue to run until the vessel has filled to the correct pressure.

If you have any queries regarding the installation of AccuBoost please call PumpWise on 0191 516 2002

8. AccuBoost Components

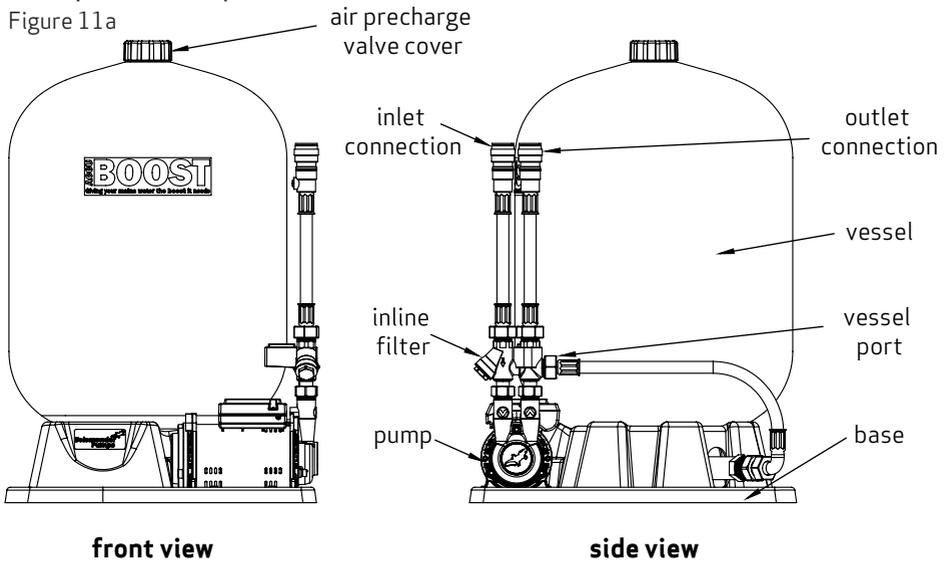
Unpumped example

Figure 10



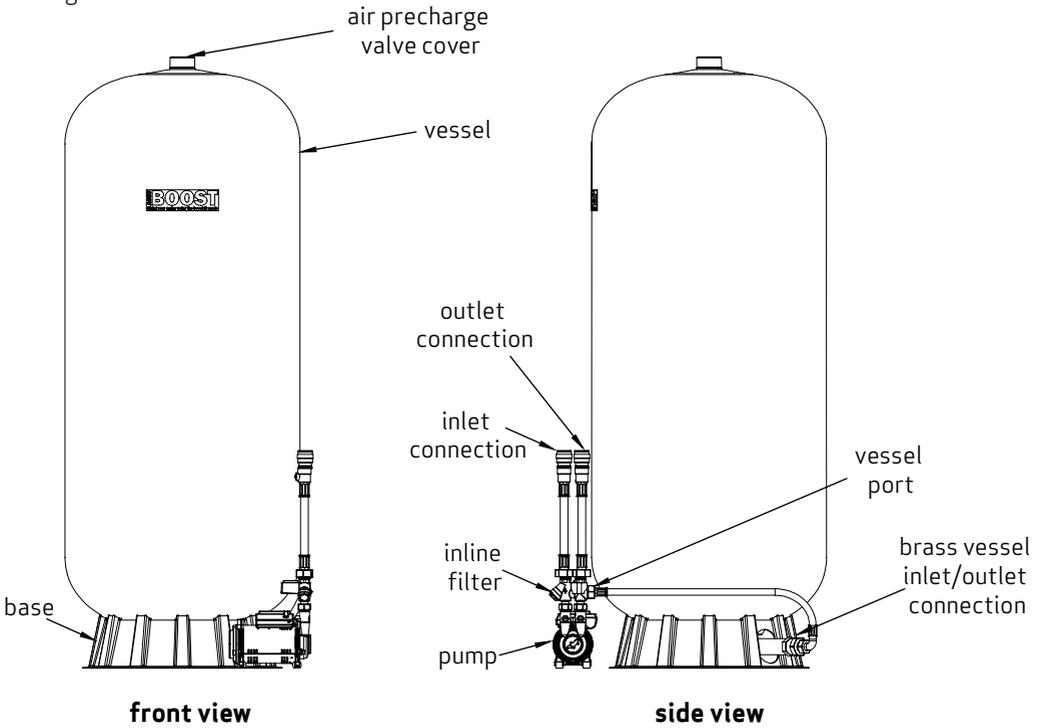
Pumped example

Figure 11a



450 Pumped example

Figure 11b



Note: on 450 pumped versions the pump is not attached to the vessel integral base

9. Retro Fitting a Pump to an Unpumped Unit

If an unpumped unit has been installed and there is a requirement for a pumped version, a pump can be retrofitted (Salamander Pumps part code ACC-UPG-KIT), as long as all of the criteria within this manual are adhered to. **IMPORTANT NOTE: ONLY A SALAMANDER PUMPS ACCUBOOST PUMP (ACC-UPG-KIT) CAN BE RETROFITTED - DO NOT ATTEMPT TO FIT ANY OTHER PUMP INCLUDING THOSE FROM THE OTHER SALAMANDER PUMPS RANGES.** For more information, please consult PumpWise on 0191 516 2002.

To fit the pump: -

1. Isolate the mains water supply via the stopcock and release system water pressure by opening a system outlet (tap) and allow the vessel to empty.

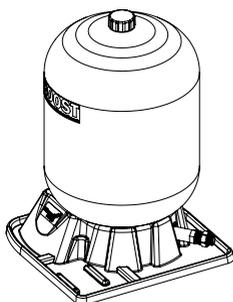
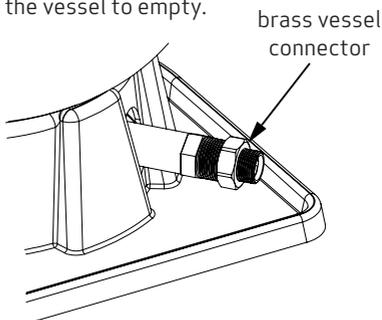


Figure 13



2. The brass vessel connector should be checked to ensure that it contains 1x washer, 1x flow regulator and 2x non-return valves. If the vessel connector does not contain these, it should be removed and they should be inserted as shown. Correct orientation of the non-return valves and flow restrictor is crucial for correct operation, refer to Figure 14 below for correct orientation. The correct flow restrictor for the size of the vessel should be used, please refer to Table 2 for the correct flow restrictor for the vessel size. A flow restrictor kit is available from Salamander Pumps, part code FLO-RES-KIT. Reconnect the brass vessel connector to the vessel.

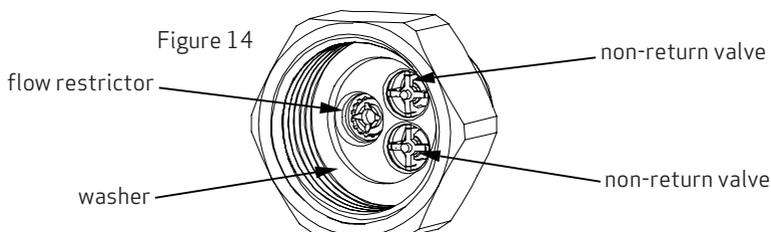


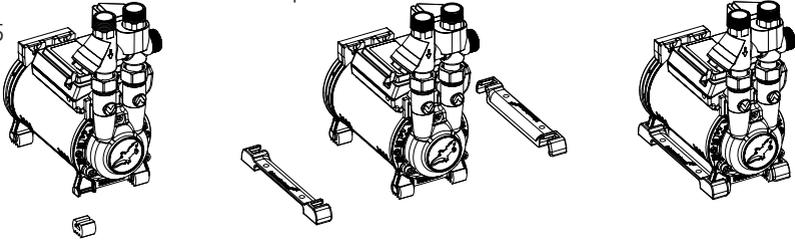
Figure 14

Table 2

| Vessel Size | Flow Restrictor Value | Flow Restrictor Colour | Total Output Flow |
|-------------|-----------------------|------------------------|-------------------|
| 60 litre | 2 L/min | green | 14 L/min |
| 120 litre | 4 L/min | pink | 16 L/min |
| 180 litre | 6 L/min | grey | 18 L/min |
| 300 litre | 18 L/min | pink | 30 L/min |
| 450 litre | not restricted | n/a | 36 L/min |

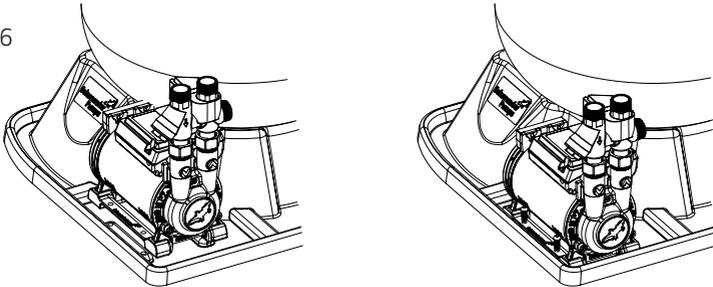
3. Attach the 4 anti vibration feet to the pump (one per corner). Place a pump retainer over 2 of the anti vibration feet. Repeat for the other side.

Figure 15



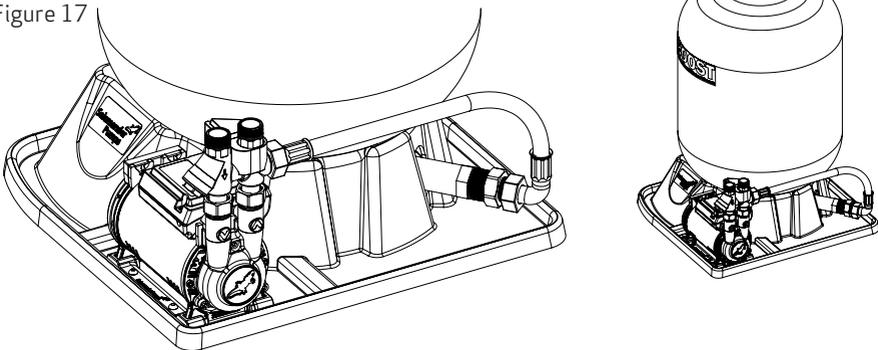
4. Position the pump so that the retainer fixing holes line up with the holes on the vessel base. Insert the 4x fixings and tighten so that the pump is secure.

Figure 16



5. Connect the straight end of the vessel hose to the vessel port on the pump and connect the angled end of the vessel hose to the brass vessel connector.

Figure 17



6. Continue to follow the *Installation instructions* on page 6.
Note: a pumped unit should be installed after the stopcock and before any outlets (maximum distance of 2m in 15mm pipe). Any outlets between the stopcock and the AccuBoost pump will not benefit from the AccuBoost unit. If there is not space to install the pump and vessel by the stopcock, the pump can be installed by the stopcock and the vessel installed elsewhere within the property. Please note, in this scenario the vessel outlet on the pump must be capped off and the vessel connected to the existing property pipework. In this scenario, the overall performance of the system may be reduced.

10. Multiple Vessels

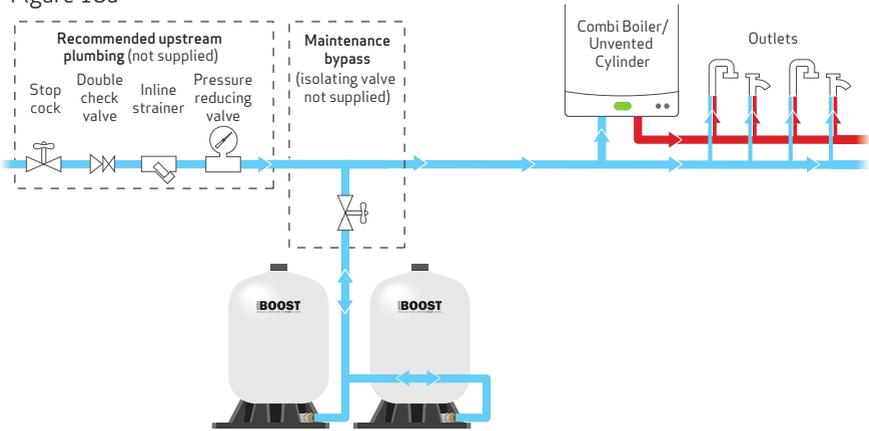
If additional water storage capacity is required, multiple vessels can be installed in a system.

NOTE: ONLY ONE PUMP CAN BE FITTED PER INSTALLATION. Additional vessels should be connected via a “T” on the vessel port of the pump (for pumped versions). A Salamander Pumps vessel connector kit (part code TNK-CON-KIT) can be purchased separately to allow multiple vessels to be connected. The precharge air pressure within all vessels in the system should be set to the same value. When multiple vessels are connected to gain flow rates over 36 L/min, it is recommended to utilise the method of connecting the second (or more) vessel direct to the property pipework rather than utilising the Salamander connector kit.

Please see typical installation examples below: -

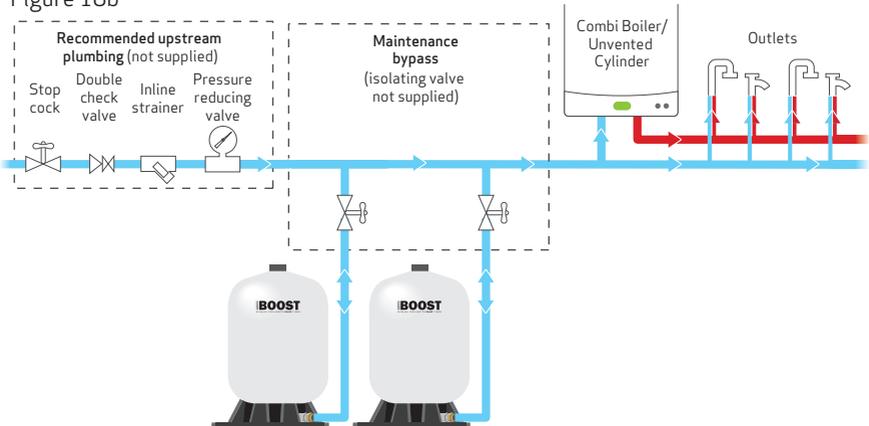
Unpumped - using Salamander connector kit

Figure 18a



Unpumped - connecting both to pipework

Figure 18b



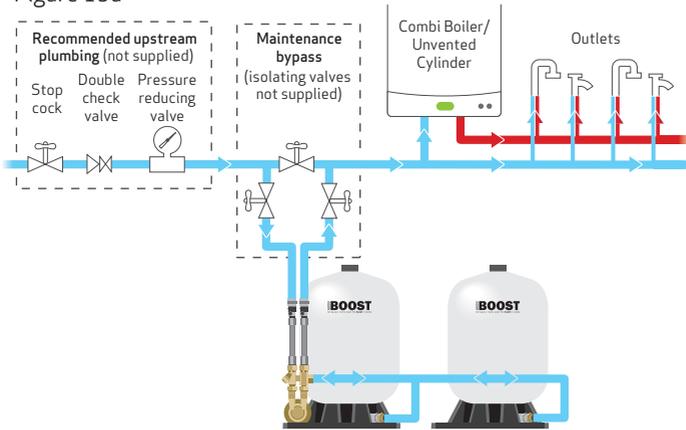
Note: In all instances, the installation must comply with the latest water, electrical and building regulations

Pumped:

- Only one pump should be installed per system. Any addition vessels must be unpumped
- For pumped versions, a maximum of 2x 450 litre vessels can be connected (one pumped and one unpumped). For smaller vessel sizes, the maximum number of vessels that can be connected should not exceed a combined total of 900 litres (equivalent to 2x 450 litre vessels).

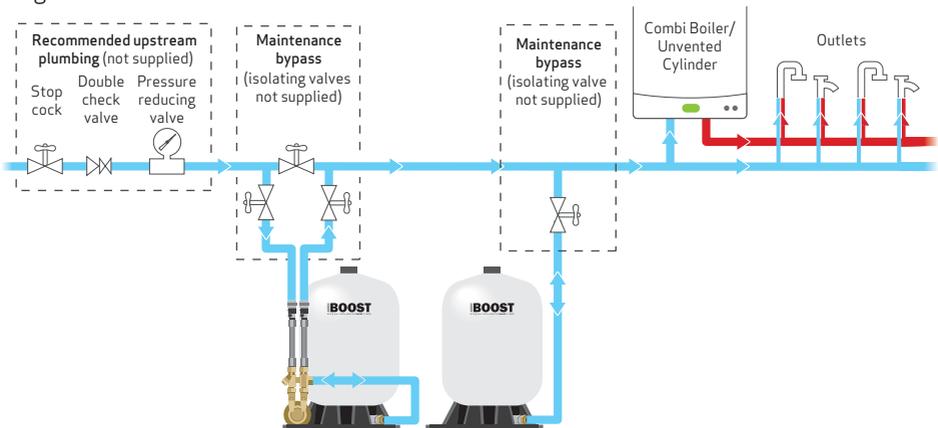
Pumped - using Salamander connector kit

Figure 19a



Pumped - connecting additional tank to pipework

Figure 19b



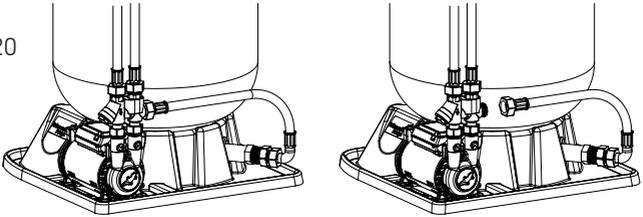
Note: In all instances, the installation must comply with the latest water, electrical and building regulations

If multiple vessels are to be connected to a pumped AccuBoost unit, they should be connected after the outlet from the pump. It is advised to connect the vessels to the vessel port on the pump.

To instal multiple vessels to a pumped unit:

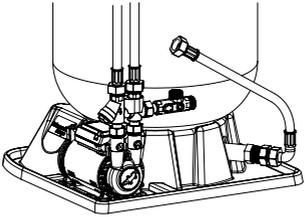
1. Isolate pump electrically and isolate the mains water supply via the stopcock
2. Release system water pressure by opening an outlet (tap) and allow the vessel to fully empty
3. Disconnect the vessel hose from the pump vessel port

Figure 20



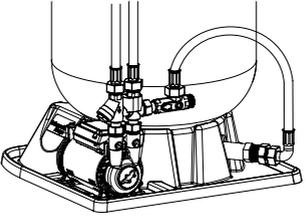
4. Attach the captive nut of the brass connector from the connector kit to the pump vessel port, ensuring the supplied washer is used

Figure 21



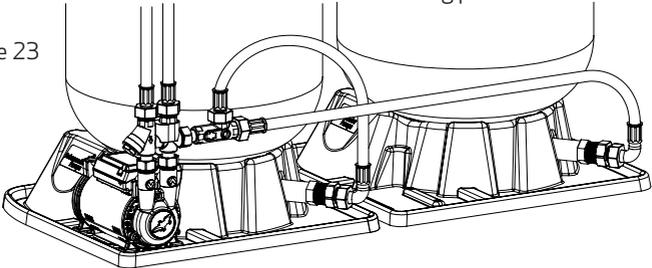
5. Attach the hose from the first vessel to one of the ports on the brass connector

Figure 22



6. Attach the hose from the second vessel to the remaining port on the brass connector

Figure 23



7. Continue to follow the *Installation instructions* on page 6.

11. Maintenance

Disconnect electrical supply before working on pump (on pumped versions). Turn off water supply to the unit, completely empty the vessel of water by opening outlets before attempting any maintenance.

Cleaning the filters

The inline strainer filter and any filter washer should be cleaned at regular intervals to allow the free flow of water into the system. The cleaning of filters is particularly important for pumped units as any restricted flow will reduce the performance of the system and may cause damage to the pump. It is recommended that the filters are cleaned at least once a year or when they are restricting the flow of water. The filter should be cleaned as follows: -

1. Isolate pump electrically (on pumped versions)
2. Isolate the mains water supply via the stopcock
3. Release system water pressure by opening an outlet (tap) and allow the vessel to fully empty
4. Unscrew the inline strainer filter cover (some residual water may be released when cover is unscrewed)
5. Remove the filter and clean out any debris
6. Replace filter and tighten cover, ensuring that the o-ring makes a watertight seal
7. For pumped units, the filter washer on the inlet to the pump should also be cleaned. Loosen the inlet nut as shown below in Figure 12. Remove the filter washer and clean out any debris. Replace the filter washer. Tighten the nut.
8. Open the mains stopcock and any isolators and remove all air from the system. Turn on electrical power (on pumped versions)
9. Check for correct operation and ensure there are no leaks in the system

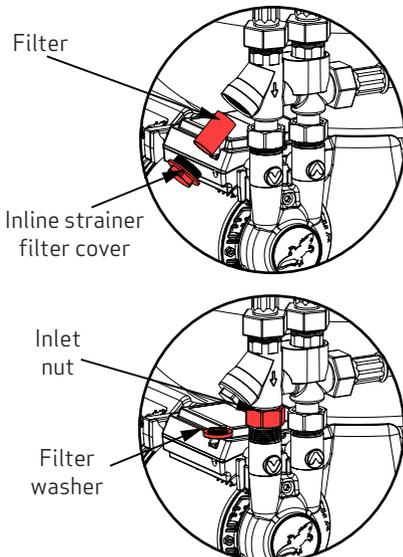
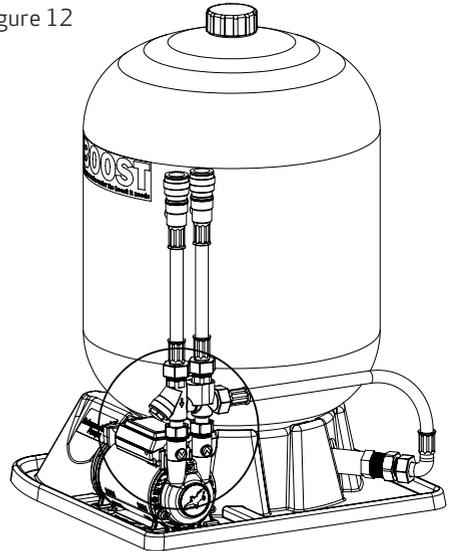


Figure 12



12. Technical Specification

Pumped Table 3

| Part Number | | ACC-060-SYS | ACC-120-SYS | ACC-180-SYS | ACC-300-SYS | ACC-450-SYS |
|---------------|--|---|-------------|-------------|-------------|-------------|
| Guarantee | | 3 years | | | | |
| Specification | Maximum operating pressure | 8.6 Bar/860 kPa | | | | |
| | Vessel size (litres) | 55 | 112 | 178 | 301 | 453 |
| | Maximum vessel water storage capacity (litres) | 27.5 | 56 | 89 | 150.5 | 226.5 |
| Dimensions | Height (mm) | 675 | 1126 | 1081 | 1633 | 1863 |
| | Width (mm) | 457 | 457 | 557 | 557 | 621 |
| | Depth (mm) | 480 | 480 | 557 | 557 | 621 |
| Weights | Empty weight (Kg) | 15.4 | 20 | 27.5 | 42.7 | 54.2 |
| | Filled weight (Kg) | 42.9 | 76 | 116.5 | 193.2 | 280.7 |
| | Maximum weight (Kg) | 70.4 | 132 | 205.5 | 343.7 | 507.2 |
| Pump | Pump type | Regenerative | | | | |
| | Pump model | ASSYACCUFORCE | | | | |
| | Mechanical seal | Nitrile/carbon/ceramic | | | | |
| | Pump body/impeller | Brass | | | | |
| | Enclosure protection | IPX4 | | | | |
| Motor | Type | Capacitor start and run induction motor | | | | |
| | Duty rating | Continuous | | | | |
| Electrical | Power supply/phase/frequency | 230 V/1/50 Hz | | | | |
| | Current (Full load) | 1.4 A | | | | |
| | Power consumption | 300 W | | | | |
| | Fuse Rating | 3 A | | | | |
| | Power cable | Pre-wired with plug | | | | |
| Connections | Pump | 3/4" male BSP | | | | |
| | Anti vibration couplers | 3/4" female BSP - 22mm push-in | | | | |
| Performance | Maximum head | 4 Bar/400 kPa | | | | |
| | Maximum flow rate | 14 L/min | 16 L/min | 18 L/min | 30 L/min | 36 L/min |
| | Time at maximum flow rate | 9 mins | 9 mins | 9 mins | 9 mins | 9 mins |
| | Minimum continuous flow rate | 12 L/min | 12 L/min | 12 L/min | 12 L/min | 12 L/min |
| | Performance values may be higher if mains natural flow is above 12 L/min | | | | | |

Note: quoted values may vary due to tolerances and site conditions.

Unpumped Table 4

| Part Number | | ACC-060-TNK | ACC-120-TNK | ACC-180-TNK | ACC-300-TNK | ACC-450-TNK |
|---------------|--|-----------------|-------------|-------------|-------------|-------------|
| Guarantee | | 3 years | | | | |
| Specification | Maximum operating pressure | 8.6 Bar/860 kPa | | | | |
| | Vessel size (litres) | 55 | 112 | 178 | 301 | 453 |
| | Maximum vessel water storage capacity (litres) | 27.5 | 56 | 89 | 150.5 | 226.5 |
| | Flow rate (litres per min, not including natural mains flow) | 2 | 4 | 6 | 18 | 24 |
| | Connection type | 3/4" BSP | | | | |
| Dimensions | Height (mm) | 675 | 1126 | 1081 | 1633 | 1863 |
| | Width (mm) | 457 | 457 | 557 | 557 | 621 |
| | Depth (mm) | 480 | 480 | 557 | 557 | 621 |
| Weights | Empty weight (Kg) | 8.2 | 12.8 | 20.3 | 35.5 | 47 |
| | Filled weight (Kg) | 35.7 | 68.8 | 109.3 | 186 | 273.5 |
| | Maximum weight (Kg) | 63.2 | 124.8 | 198.3 | 336.5 | 500 |

Note: quoted values may vary due to tolerances and site conditions.

Please Note:

Salamander Pumps operates a policy of continuous development and reserves the right to change any of the specifications of it's products without prior notice. All information, data and illustrations given in this leaflet may be subject to variation.

13. WEEE Directive

Your appliance contains valuable materials which could be recovered or recycled. At the end of the product's useful life please dispose of it at an appropriate civil waste collection point.



WEEE Directive 2012/19/EU

At the end of the product life dispose of packaging and product in a corresponding recycling centre.

Do not dispose of the unit with the usual domestic refuse.
Do not burn the product.

14. Troubleshooting

| Fault | Probable cause | Recommended solution |
|--|---|---|
| Unpumped | | |
| Reduced/poor flow | Valves not fully open | Check all valves are fully open |
| | Blocked filter | Ensure all filters are free from debris |
| Reduced/poor pressure | Incoming mains pressure dropped | Check pressure of incoming mains. If below 2 Bar/200 kPa consider a pumped version. Contact PumpWise for more information |
| | Pressure reducing valve not set correctly | Check pressure of incoming mains and adjust pressure reducing valve if necessary |
| | Air precharge pressure not set correctly | Check incoming mains pressure and adjust air precharge if necessary |
| System runs out of water | Insufficient capacity in vessel | Check the air precharge pressure of the vessel |
| Pumped | | |
| Pump will not start | Electrical | Check power supply Check fuse Check circuit breaker and RCD |
| | Inlet/outlet connections incorrect | Check that connections are plumbed the correct way round and all valves are open |
| | Insufficient natural mains flow/ no water | Ensure all filters are free from debris Check natural incoming mains flow rate (min of 2 L/min required) Check all pipework valves and anti vibration hose isolators are fully open |
| | System pressure has not dropped sufficiently to activate pump | Fully open an outlet to allow pressure to drop within the system |
| Reduced/intermittent flow | Insufficient natural mains flow/ no water | see above |
| | Blocked filters | Ensure all filters are free from debris |
| | Anti vibration couplers restricting flow | Ensure that anti-vibration couplers are straight and not bent or distorted Ensure isolation valves on anti-vibration hoses are fully open |
| | Air in pipework | Open each outlet in turn until all air has been removed |
| Pump starts/continues to run when all outlets are closed | Vessel not reached full water capacity | Allow sufficient time for vessel to reach full capacity (this can vary between 5-40 mins depending on vessel size) |
| | Leak in system | Check all outlets are closed Check all pipework and outlets for leaks |
| Pump is noisy | Air in pump/pipework | Open each outlet in turn until all air has been removed Check incoming mains pipework for restrictions |
| | Pump vibrating | Check rubber feet are fitted to pump |
| | Anti-vibration couplers/pipework causing vibration | Ensure that the anti-vibration couplers are straight and not bent or distorted Check all pipework is clipped securely |
| Unit is leaking | Connections are not tight | Make sure all connections are tight and washers are fitted |
| | Unit has suffered chemical damage | Ensure that no part of the unit has not come into contact with chemical substances such as solder flux |
| | Unit appears to have leaked but not sure | Check leak is not from pipework above or around the unit |
| Pump does not fill vessel | Insufficient natural mains flow/ no water | See above |

15. Warranty Information

To the installer

Please follow the guidelines for installation provided in this brochure and call the PumpWise helpline for installation advice.

Once the installation has been completed and the system has been tested to your satisfaction, please assist the customer in completing warranty registration.

Please note that Salamander Pumps are able to provide an onsite service visit which may be chargeable.

1 The Scope of the Warranty

SALAMANDER PUMPED SHOWER SYSTEMS LTD ("the Company") Warrants subject to the terms and conditions below for the Warranty period(s) specified in paragraph 3 that the Company shall:

Repair or replace free of charge the product(s) specified on the Online Warranty Registration or Telephone Warranty Registration any component part thereof (together referred as "the equipment") which shall in the opinion of the Company have proved defective by reason only of the Company's materials or workmanship. The Company shall be under no obligation whatsoever under this Warranty to repair or replace equipment which has been misused, tampered with, or modified/altered in any way without the consent in writing from the Company; or if any component or accessory has been replaced by a type not specified by the Company; or if the equipment is incorrectly installed, operated or used other than as described in the instruction manual; or if any servicing or repair of the equipment shall have been carried out by anyone other than an authorised Company dealer appointed by the Company ("dealer").

The Company's liability under this Warranty is limited to the said repairs or replacement and shall under no circumstances extend to any financial loss or damage including consequential losses alleged to have been suffered by the claimant.

Subject as provided in this warranty and except where the equipment is sold to a person dealing as a consumer all warranties, conditions or other terms implied by law are excluded to the fullest extent permitted by law.

Nothing in this warranty shall exclude liability for death or personal injury caused by the Company's negligence.

2 Terms and conditions

This Warranty shall only be enforceable by you if the following terms and conditions have been complied with:

- a. That the equipment has been installed in accordance with the installation instructions, guidance and advice contained within the installation and warranty guide and/or provided by the Salamander help desk.
- b. You are the original purchaser of the equipment from a dealer and not an assignee or subsequent purchaser of the equipment.
- c. You must evidence the date of purchase by retaining the original invoice from the dealer. Without such evidence the Company reserves the right to reject any such claims under the terms of this Warranty.
- d. Within 15 days of purchase of the equipment the Warranty registration is accurately completed online or over the telephone.
- e. Within 30 days of discovery of a defect giving rise to liability under paragraph 1 above you give notice thereof in writing to the Company.
- f. Provided the equipment has not been altered, tampered with, modified or transformed in any way.

3 The Warranty periods

The Warranty periods referred to in paragraph 1 above are as follows:

- a. i. AccuBoost Pumped products manufactured by the Company 3 years from date of purchase provided the warranty registration is completed online or over the phone within 15 days of purchase.
- ii. AccuBoost Unpumped products manufactured by the Company 3 years from date of purchase provided the warranty registration is completed online or over the phone within 15 days of purchase.
- b. Products supplied by the company, but are not of the company's manufacture come with 30 day warranty from date of purchase. Anti-Vibration Couplers (hoses) come with 1 year from date of purchase.
- c. The warranty period in respect of any product repaired or replaced under the warranty shall be part of the above period(s) which remain unexpired.
- d. In the event of a claim for repairs or replacement being made under the terms of this Warranty, a visit from a Salamander service engineer may be necessary. Engineer visits are not covered under/part of the warranty agreement. In circumstances where in the opinion of the Company the defect has not been caused by the Company's materials or workmanship then the Company reserves the right to charge the claimant at its current hourly rates and list prices in respect of any service engineer's time and replacement of any parts. Please speak to our PumpWise for further details and confirmation of costs. Be advised in order for the equipment to be assessed by an onsite engineer the equipment must remain insitu.
- e. This Warranty is given in addition to and does not affect your statutory rights as a consumer.
- f. This Warranty is valid and enforceable for equipment purchased and used exclusively in the UK and The Republic of Ireland only.
- g. Where the Company issues a replacement the equipment replaced shall be returned to the Company forthwith and shall become the property of the Company.
- h. No authority has been given to any person, firm or company to vary the terms of this Warranty.

Get in touch, we're here to help
call us on 0191 516 2002

Unit 2c Colima Avenue
Enterprise Park West
Sunderland, SR5 3XE



Register your warranty

Apply online at:

www.salamanderpumps.co.uk

Apply by phone:

0191 516 2002

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