Can I fit a shower pump above the crown of a vented hot water cylinder?
Assuming that the pump is being installed to just boost the shower and not the whole house.When sited in the on-preferred location we would recommend the connection from the hot water cylinder is made by either:

- Use of a top entry cylinder flange
- Use of a side entry flange which should have an inverted loop of 350mm drop minimum before rising to the pump, located as close as possible to the cylinder wall

If the flow from the shower (either hot or cold) due to gravity alone (un-pumped) is more than 1 litre per minute, a 'Standard' type pump can be used. If the flow from the shower (either hot or cold) due to gravity alone (un-pumped) is less than 1 litre per minute, a 'Universal' type pump must be used.

Can I fit a shower pump under a bath?
A Monsoon or Showermate pump can be fitted under a bath given the following conditions:

- The pump is within 4 meters of the hot water cylinder
- Both the hot and cold feeds from the hot water cylinder and cold water tank are on a dedicated 22mm air free supply (you can reduce to 15mm at the pump and use 15mm on the outlet if required)
- The anti-vibration hoses are not deflected by more than 30 degrees
- You have a minimum flow of at least 1 litre per minute on both hot and cold separately at the shower*

* If the flow rate due to gravity alone is less than 1 litre per minute from the shower then a 'Universal' pump type should be used rather than the 'Standard' type.

Can I make a shower pump quieter?

Stuart Turner Monsoon and Showermate shower pumps are amongst the quietest available. However, regardless of you pump choice there are things that you can do to minimise the noise that your shower pump makes!

- Fit a shower pump anti-vibration mounting pad - a useful option which is really simple to fit and is available directly from Stuart Turner - click here to purchase
- Pump pressure rating - don't 'over-specify' the pump
- Pump location - location may not affect the noise the pump makes but will certainly affect how loud it seems
- Hot water supply - making the connection
- Anti-Vibration connecting hoses - use them properly
- Surrounding pipework - things to remember

See our detailed guide on https://www.stuart-turner.co.uk/support/how-to/how-to-make-a-shower-pump-quieter

Or for further assistance you can contact us (https://www.stuart-turner.co.uk/contact-us)

How can I tell which sort of plumbing system I have in my property?

There are generally two types of system installed within domestic properties across the UK - knowing the type you have is an essential first step in selecting the right type of pump or boosting system to improve water pressure and flow.

Gravity Fed System
(Also called a 'Vented System')

Typical features:

- A cold water tank (usually located in the roof space)
- A ventedhot water cylinder (usually located in an 'airing cupboard' or 'hot-press').
- The water pressure available is largely due to gravity and is dependant upon the height of the cold water tank above the appliance being used.
- The water pressure and flow available from the cold water rising main supply will affect the rate at which the cold water tank refills, but it will have no effect on the water pressure and flow available from any water using appliance (other than for any cold water taps connected directly to the rising main).
- Water pressure is greatest on the ground floor and reduced on the upper floors.
- For a shower on the top floor, the water pressure (static head) may be as little as 0.08 bar!
- It is therefore no surprise that this type of system is often referred to as a low pressure system'.

For a Gravity (Vented) 'Low Pressure System' a pump can be installed to increase pressure and flow to an individual shower, the entire bathroom or even the whole house.

If you have poor water pressure or flow from a Gravity (Vented) system, you should consider one of the following Stuart Turner pumps:

- Monsoon
- Showermate
- Showermate ECO
- Showermate TP

Mains Pressure System
Also called an 'Unvented System'

Typical features:

- A combination boiler, or
- A pressurised (unvented) hot water cylinder.
- The water pressure available is largely dependant upon the mains cold water pressure in the supply pipe to the property.
- The water pressure will be the best on the ground floor, but the pressure will be reduced on upper floors of the property.
- On the third or fourth floor of a multi-storey town house the water pressure may be non existent!
- This type of system is often referred to as a 'High Pressure System' - even though the pressure available in many cases may be anything but!

For a Mains (Unvented) 'High Pressure System' a pump, pressure vessels or a combination of both can be installed directly in line with the rising cold water mains supply, boosting water

pressure and flow to the entire property, including the combination boiler or pressurised hot water cylinder system.
To solve problems with poor water pressure and/or poor water flow in a Mains (Unvented) system, you should consider one of the following systems:

- Mainsboost
- Mainsboost Flomate
- Mainsboost iBoost
- Mainsboost iTank (ROI only)
- Aquaboost In Tank

What's the difference between a Standard (Positive) and Universal (Negative) pump?

Knowing whether to buy a Standard or Universal shower pump is really important - the wrong choice could mean that your shower pump simply wont work.
To understand which type of shower pump you need, it helps to understand a little about how these pumps work.

Standard (Positive) Shower Pumps

'Standard' pumps use a simple flow sensor to detect the flow of water through the pump head and shower outlet due to gravity alone, that is, without the pump running.

It is the sensing of this gravity flow that is used to automatically switch on the shower pump.

The actual gravity flow required to operate a given 'Standard' pump varies across our ranges as follows:

- Monsoon - 0.6 litres per minute (approx)
- Showermate - 0.8 litres per minute (approx)
- Showermate ECO - 0.8 litres per minute (approx)
- Showermate TP - 0.8 litres per minute (approx)

These figure are typical, but to provide an adequate margin for reliable operation, we would suggest that a gravity flow of at least 1 litre/min is required to ensure that a 'Standard' pump will switch on and off reliably.
For example, it isn't unusual for a small build up of limescale in the shower head, or a small 'kink' in the shower hose to reduce the gravity flow enough to stop a 'Standard' pump from switching on.

Some manufacturers refer to pumps which simply sense a certain flow due to gravity as 'Positive head' pumps. Stuart Turner uses the alternative description of 'Standard' because even if there is a clear 'positive head' ie the water storage tank is located higher than the shower head, many modern thermostatic shower valves restrict gravity flow to such an extent, that a 'Positive' head or 'Standard' shower pump will not operate.

Universal (Negative) Shower Pumps

Stuart Turner 'Universal' pumps are designed to function under both Positive and Negative head conditions. That is, they will function even if there is no flow through the pump or

shower head due to gravity alone.
This is because they rely on a pressure sensor that detects the drop in pressure between the pump and the shower head when the shower is switched on.

New and replacement shower installations

If you are planning a new or replacement shower installation and are unsure if there will be a gravity flow from the shower head of at least 1 litre/minute, always opt for a 'Universal' shower pump!

How to measure the gravity flow

Measuring the gravity flow from a shower head in an open vented/gravity plumbing system is easy - simply place a bucket under the shower head and using a kitchen measuring jug, measure the amount of water collected in 1 minute!

Are shower pumps noisy?

Shower pumps are typically used to boost the performance of a shower in a property with an open-vented, gravity fed cold and cold water system.
Being electro-mechanical devices they will all make a certain amount of noise.

The level of noise can be subjective and depends on a wide range of factors including:

The shower pump type and design

- Stuart Turner Monsoon and Showermate pumps are designed to be as quiet as they can be without impairing their performance and ability to provide a powerful shower experience.

How the shower pump has been installed

- There are a number of measures that can be taken to minimise the noise that a shower pump makes.
- Check out how you might be able to make a shower pump quieter.

Where the shower pump has been installed

- Refer to the product installation guide in the downloads section for installation location best practise.

Do I have to use a flange when connecting a Monsoon or Showermate pump to a hot water cylinder?

The use of a hot water cylinder flange is recommended but not essential, so long as:

- The pump is installed below the crown/dome of the hot water cylinder.
- The base of the cold water storage tank is at least 1 metre above the connection/take off of the hot water storage cylinder feeding the pump.

Connection without using a flange can be made to the hot water cylinder expansion pipe using an inverted 'T-piece'.

If the pump is to be installed above the hot water cylinder then a flange must always be used - a side entry or top flange type with an 'inverted U' is the preferred method.

More details are provided in the product Installation Guides available in the Download Section

I have a pump that appears to be running but not pumping water? This type of condition could happen for a number of reasons. Check to ensure the pump is connected the right way round. Then ensure the pump has a flooded suction and that the water supply valves are turned on.

My Standard (positive) twin pump is not starting? Check the simple things first, make sure the fuse is sized correctly and functional, check the power is turned on and the circuit breaker is set, then check the wiring, it is easy to screw down on the insulation rather than the copper tails when connecting the wires.
A minimum flow under gravity is required for these pumps to operate, specifically:

- Monsoon - 0.6 litres per minute (approx)
- Showermate - 0.8 litres per minute (approx)
- Showermate ECO - 0.8 litres per minute (approx)
- Showermate TP - 0.8 litres per minute (approx)

These figure are typical.
If when opening the outlet to be pumped, the flow is less than this it will not be sufficient to start the pump.

I have a Standard (Positive) twin pump and it pulses when the shower is running? This will probably be due to a blockage.
This can be a scaled up shower head or as a result of the shower hose collapsing, resulting in back-pressure which causes the pump to switch off and then on again once the pressure has reduced.
Try running the shower with the head and then the hose removed if it's that type of shower to see if the pump will run constantly.
If the pump still pulses then the filters on the shower should be checked.

I have a Standard (positive) twin pump and it keeps running on? If this pump has just been installed, close both isolating valves on the outlet side of the pump (or the service valves integral to the flexible hoses, if fitted) and see if the pump stops. If it does, then this indicates there must be a tap or outlet being pumped that is open to atmosphere. Check the system and find where the pump is pumping the water to.

If the pump does not stop when closing the valves, check to see if the reed switch on either end have become dislodged. Alternatively unclip each reed switch, one at a time from the brass outlet and see if this stops the pump, indicating the float is stuck up inside and needs removal and cleaning or replacement.

I need to pump the blended water from a shower valve to a shower head. Which type of shower pump can I use? You can only use a positive single shower pump for this type of application. If the gravity flow is below the volumes specified below then you would need to use an air switch connected to the shower pump (if possible).

Monsoon - 0.6 litres per minute (approx)
Showermate - 0.8 litres per minute (approx)
Showermate ECO - 0.8 litres per minute (approx)
Showermate TP - 0.8 litres per minute (approx)

The only other option is a Universal twin shower pump pumping into the valve. You can not use a Universal single shower pump as Universal pumps need to build up pressure against a closed valve to shut down.

We have a Universal (negative) head twin pump and the flow rate is too great. Is there any way to reduce the pressure or limit the flow? The pressure the pump delivers the water at is directly proportional to the amount of water being used.
Therefore if your problem is that the pressure is too great at the shower head, fitting a larger shower head would increase the water flow and the pressure will be lower, but remember you will be using the water faster so your stored hot water will not last as long.
The simplest way of reducing the performance is to close the outlet isolating valves down no more than 30% on both hot and cold flows thus restricting the water flow. Never restrict the water flow on the pump supply side.

My shower is fed through a mixer tap with the cold water coming from the mains and the hot water from a gravity-fed tank - I need a pump to boost the hot side of the system? The best way forward here is to use a Monsoon Universal single pump, of a size to suit the shower you have.
Where cold water is being supplied to the mixer valve and hot has to be delivered to the same unit, the pump has to be able to provide and maintain water pressure on the hot side so that when the valve is opened the pump senses the pressure drop and starts.
For a standard medium pressure valve we would recommend the Monsoon Universal 2.0 bar single.

My Universal pump keeps turning on and off on its own. How can I fix this? Check for any visible leaks in the system. Check the tap washers and pipe joints etc.
If there are no visible signs of leaks in the system, you will have to shut both hot and cold isolation valves on the outlet side of the pump.
You will have isolation valves on the flexible outlet hoses or local to the pump on the system.
If the pump continues to cycle when both valves are shut, then the NRV's (non return valves) are leaking.

I need to get my pump serviced can you suggest a local engineer? Search for an approved service engineer in your area using the service engineer finder (https://www.stuart-turner.co.uk/support/find-a-service-engineer) on our web site or call our TechAssist helpline.

My pump has 'run-dry protection' which has cut in, how do I restart it? To reset the dry run protection, switch off the electricity supply for 10 seconds and then switch it on again. This process will reset the control circuit, returning it to normal operation once again.
Now open and close the taps, purging the system of air and allowing the pump to switch off normally.

My Monsoon pump is leaking, how can I solve the problem? Turn off the isolating valves on both the suction and delivery side of the pump.
Then contact TechAssist to arrange a service visit if the pump is within guarantee, or for further help and advice.

My pump keeps "humming", what is wrong? This is a sign of the pump being jammed or stuck, stopping the free rotation when required or alternatively this could be as a result of an electrical issue.

This could be as a result of infrequent use in a hard water area for instance where the seals or other moving parts can become stuck.
You will probably need a qualified service engineer to sort this problem, call our TechAssist helpline for further assistance.

Do the Mainsboost MBF12 pump comply with water authority standards? Yes, it is WRAS approved and fully compliant!
However in accordance with WRAS regulations a double check valve must be fitted before any appliance to avoid any backward contamination.

Does the Mainsboost MBF 12 pump need a minimum flow rate before the pump will start? Yes. The pump activates when an unassisted flow of at least 0.6 litre per minute exists.

How much extra pressure and flow can I expect from a Mainsboost Flomate MBF 12 or MBF 60/80/100/200/300? The Mainsboost Flomate MBF 12 pump will deliver up to a maximum of 12 litres per minute (in accordance with current UK water regulations) and will provide a minimum of 1.5 bar on top of the existing incoming mains water pressure.

Mainsboost Flomate MBF 60/80/100/200/300 systems will boost incoming water pressure to 3 bar and 16 litres/min for up to 40 minutes at a time (depending on model selected - see product specifications for guidance).

Can the Mainsboost Flomate be used with an unvented system?

Yes, Mainsboost Flomate systems are suitable for use with unvented cylinders and can provide a compact and effective solution if the mains water supply to the cylinder is inadequate. Most manufactures of unvented cylinders recommend a minimum water supply input of 1.5 bar and 20 litres per min to give an adequate supply when more than one outlet is used. In such circumstances and to meet these specific requirements, the MBF 200 & 300

units would be most suitable. The smaller MBF 60/80/100 units do not meet the recommended minimum flow but if there is a poor mains supply, they may provide a sufficiently improved performance where space is limited.

My pump is not starting. What could be the reason? This could be for a number of reasons.

- Check that all stop valves and/or isolation valves are fully open.
- Check that the flow of water available to the pump is at least 1 litre per minute Mains fed and Standard gravity fed pumps).
- Check that the power supply cord has been secured via the exposed conductor and not via the insulation.

Please refer to the installation manual supplied with the pump for more information.

My pump starts intermittently or continues to run when all pumped outlets are closed? This could be either a pump or system issue. To diagnose where the problem lies shut down the outlet isolation valve.If the pump stops then there is a problem with the system, this could be a leaking tap or a leak in the pipe joints for example.If the pump continues to run or start intermittently then there is a problem with the pump. Contact TechAssist.

Are there any building regulations to consider before installing an additional bathroom or utility room? Yes. Building regs allow a macerator to be installed where there is already access to a WC, so if your property has a toilet then you will be O.K.
However you will need to comply with Electrical regulations if running new appliance cable within a kitchen or bathroom.

Can I use a Wasteflo Macerator to pump water from a bath? No. When a bath is emptying there is a large volume of water to be disposed of and there is a danger of cross contamination with the macerator water going back to the bath. There is a non-return valve in the inlets of the macerator to stop this but the large volume of water from a bath can force them to open. With the lower flows of the shower and basin this doesn't happen. Unfortunately if you have to pump a bath waste you have to use an LS5 lifting station which may mean two separate waste devices.

Can I put anything in the WC, will anything block a Wasteflo Macerator unit? It is designed to work just like a WC, so it will remove WC waste and water. But as is the case with a standard WC, items such as sanitary towels and condoms could block or jam the unit.

Can I fit a WC2 or WC3 macerator below the toilet, under the floorboards perhaps? No. The units must be fitted directly behind the WC. Please refer to the installation guide (https://www.stuart-turner.co.uk/contentfiles/Wasteflo-Macerator-IG.pdf)

Are Wasteflo WC macerator units noisy? Not particularly, the wasteflo range operates at less than 60 dB, which is not much noisier than the noise produced when flushing a toilet. Please refer to the installation guide for installation recommendations (https://www.stuart-turner.co.uk/contentfiles/Wasteflo-Macerator-IG.pdf)

Will I need inlet adaptors to connect pipe work to a Wasteflo WC Macerator? No, each unit comes with inlet adaptors included.

How far from the soil pipe can a macerator or lifting station be located? The WC1, WC2, WC3 and WC4 macerators can pump up to 52 horizontally and 5m vertically. The LS5 lifting station will pump 72m horizontally and 7m vertically.
Remember you must pump vertically and then horizontally.
Please refer to the product installation guides for further details.

What is the macerator or lifting station outlet pipe diameter required to remove waste effectively? The Wasteflo WC1, WC2, WC3 and WC4 macerators feature an outlet adaptor which can easily be configured for use with either 22mm, 28mm or 32mm diameter waste pipe. Note though that the use of 32mm diameter pipe wil maximise the vertical and horizontal distances that these products can pump waste. The Wasteflo LS5 Lifting Station requires the use of 32mm diameter waste pipe and this should not be reduced.

Can I connect a WC Pan to a Lifting Station? No. A lifting station is not suitable for use with a WC.

Can I use the LS5 lifting station with a washing machine or dishwasher? Yes. The LS5 is designed to withstand maximum water temperatures of 70°C through the top inlets. Washing machines and dishwashers MUST be connected to the top inlets. Please refer to the installation guide (https://www.stuart-turner.co.uk/contentfiles/Wasteflo-Lifting-Station-IG.pdf)

Can I use the LS5 lifting station with a sink and waste disposal unit? Yes. It is recommended that no small solid food waste such as fruit pips are introduced into the lifting station as these will cause the unit to jam and may cause damage.

What can I use to clean or disinfect a Wasteflo Macerator or Lifting Station? The Stuart Turner Wasteflo range doesn't require specialised disinfectants or harsh chemicals. Standard cleaning materials such as bleach or household disinfectants can be used.

Are Wasteflo WC Macerators easy to clean and maintain? Yes. These units DO NOT require any special cleaning regime or regular maintenance.

The pump on my Wasteflo unit isn't working, what should I check? In the unlikely event of a pump failure check the following:

- Power Supply - ensure power is supplied to pump.
- Hi Level Safety Switch - ensure hi level safety switch has not operated. If it has, check pump performance is suited to incoming flow rate.
- Inlet Pipe - check pipe is not blocked with debris or kinked.
- Outlet Pipe - check pipe and outlet barb are not blocked with debris or kinked.
- Reservoir - check reservoir is not blocked with debris.

Note: Fault conditions should be checked by a competent person. If these checks do not resolve the problem please contact TechAssist for further assistance.

Do I need to clean or maintain the BC3 pump and how? The pump reservoir can be easily removed for cleaning purposes by undoing the screw located at the front of the pump, depressing the front and allowing the reservoir to be moved downwards (care should be taken as there may be water in the reservoir).
The pump does not need to be removed from its fixings to clean the reservoir.
The quick release outlet barb can be removed very easily by twisting and pulling out.
The pump should be flushed through with anti-bacterial wash every 12 months to avoid sludge build up in the pump reservoir.

Can the BC3 pump be fixed to a wall? Yes, the pump is supplied with a fixing kit and can be wall or floor mounted. It's important to ensure that it is level.
2 screw holes can be found on the back plate of the pump for fixing to a vertical surface.

Can the BC3 pump be located outside? No, do not position this pump externally it is designed for installation indoors only.