

Noise solutions for wet room pump systems

There are three potential sources of noise that can arise when putting in a Whale waste water pump these are:

- Suction noise at the gulley.
- Vibration noise caused by surface pump is mounted on.
- Pipe work vibration.

The tips below deal with each area giving the reason for the noise and suggestions on how to remedy the noise

Suction noise

This is due to an air water mix being drawn through the gulley.

To eliminate this noise completely the gulley needs to be full of water. This is not always a practical solution as the potential is for a flood if the pump is under pumping i.e. not taking the water away as fast as it is being delivered by the shower.

Whale offer three kit which address this issue using different levels of sophistication:

Switch Connect kit (flow switch in water supply to shower turns on and off the pump:

Electric showers: The pump flow rate may be adjusted with 6 settings available.

Mixer Shower: Purchase a mixer conversion kit this contains a 10lpm flow regulator which is fitted to the outlet of the shower mixer. On the transformer 6 settings are available to adjust the pump flow rate.

Instant Match Kit (flow sensors in shower or using external flow sensor)

Electric showers: The Pump flow rate tracks the flow rate of the shower. This minimises the noise with the added advantage of no set up.

Gulley design: To further minimise noise Whale have developed the Whisper Gulley for wet floors which is designed to reduce noise coming from the gulley.

Smoothflow /Dry-Deck kits:

These kits give Ultimate control. Parameters include, how much water is put in the tray before the pump starts and the pump rate over the flow rate of the shower is configurable. Smoothflow is for flow rates up to 12 LPM and the Dry-Deck up to 20LPM.

Setting up the units takes patience but once set up the settings remain fixed and are not affected by power cuts.

Tip: Once flow setup is complete set the amount of water that goes into the try before the pump starts. This is to prevent any suction noise at the start of the client showering.

Vibration noise (pump mounting surface)

On dry walls or in older buildings lath and plaster walls it is possible for the wall to act as a sounding board. The small vibration caused by the pump operating is amplified into an audible noise through the building.

Diagnoses: If it is suspected that the noise is due to vibration of the pump remove the pump temporarily from the wall and hold this while it is in operation. If noise stops this is the cause.

Solutions:

- Mount pump on a solid wall
- Mount pump on a bracket off the floor.

Note: No form of rubber support or insulation material around the pump will solve this issue. These options have been tried and do not work.

Vibration noise (pipework)

The pump has an aggressive pumping action in that slugs of water are pumped through the valves. This ensures debris i.e. hair etc. is passed through the valves without causing blockages. Dependent on the pipe run this can sometimes due to the water velocity cause the pipework to vibrate.

Tip: Use radi bends the slower the bend the better. Get into the gravity waste pipe as soon as possible after the outlet of the pump. Bends close to the pump will cause a pressure pulse at higher flow rates resulting in water hammer.

Where due to the constraints of the bathroom close bends on the pump outlet cannot be avoided then reduce the flow rate from the shower using a flow regulator to a level where the water hammer does not occur.