

Frequently Asked Questions about JetFlush Junior and Powerflushing

Does My Central Heating System Have a Problem?

Any of the symptoms listed below could indicate that your system has circulation and flow problems resulting from internal corrosion and the formation of rust, sludge and lime-scale deposits.

- Is the system slow to warm up?
- Are some radiators cold or have cold spots?
- Do radiators need frequent bleeding?
- Is the system water dirty or discoloured?
- Are there radiators with pin holes and leaks?
- Are there 'kettling' noises from the boiler?
- Do you have repeated valve and pump failures?

A powerflush can restore circulation and efficiency to the heating system by removing undesirable sludge and deposits. It purges them from the system, and replaces the dirty water with clean water, which is then ready for chemical treatment to prevent future problems.

What Is Powerflushing?

Powerflushing is an efficient and effective method of cleaning a central heating system. The principle is to create a powerful clean water flow under controlled conditions to remove debris from the system. By connecting the JetFlush Junior to the heating circuit, it can be thoroughly cleaned and the deposits of lime-scale and corrosion debris removed.

When used in conjunction with Sentinel X800 Jetflo, a heavy duty cleaning formulation designed to remove corrosion deposits and scale from boiler heat exchangers, radiators and pipe work, a typical power flush can be completed in approximately 3-4 hours.

How Does Powerflushing Work?

The **JetFlush Junior** is simply connected into the heating system, either across the circulation pump couplings, across one of the radiators, or wherever is most practicable within the system.

The powerful flow, combined with **Sentinel X800 Jetflo** cleaner and a flow reverse capability, will dislodge and mobilise deposits and corrosion products which usually resist traditional system cleaning methods. Powerflushing is a highly effective cleaning operation which works by pumping water through the heating system at a much higher velocity than normally experienced with ordinary circulation cleaning. This process loosens and mobilises harmful sludge and deposits, which are then suspended in the rapidly moving water and removed from the system.

Powerflushing is not a high pressure operation, and is suitable for most domestic systems. At the end of the flushing process, the system contains clean water and the system can be restored to normal operation within a few minutes.

What Types of System Can I Powerflush?

All common types of heating system can be power flushed; the only exceptions are as follows: Primatic, Micro Bore, Single Pipe and those with Twin Entry radiator valves

Why Use JetFlush Junior?

The Sentinel JetFlush Junior unit is designed to be used, in conjunction with Sentinel X800 Jetflo, for the safe and easy removal of sludge, scale and other types of debris from central heating systems and heat exchangers. It provides fast and effective cleaning of problematic, dirty and scaled up systems, quickly helping restore optimum system operation and efficiency. The unit utilises a compact version of the submersible Grundfos pump.

The unit also features the following benefits:

- **Water Level Indicator** – provides visibility of both the water level within the unit at all times and also the clarity of the water during the cleaning and flushing process
- **Drain Point** - allows removal of any residual water left in the unit prior to transportation or storage
- **In line On / Off control** – provides an effective means of operation without the need to be present next to the unit

For rapid removal of system scale and debris from a compact & lightweight design unit, which is simple to operate and is easy to transport and store then JetFlush Junior is the unit of choice.

Is JetFlush Junior Built to an Industry Standard?

Sentinel JetFlush Junior has been designed and manufactured in conjunction with Grundfos, renowned for high quality and performance within the heating industry. It incorporates many key features required from a flushing unit whilst the compact and lightweight design making it easier to use and handle. The unit offers the same level of build quality and reliability as that provided by the JetFlush 4, a unit that is now well respected by the industry.

What are the Dimensions of JetFlush Junior?

Material of Construction

Tank: Medium density polyethylene / Pump: Stainless Steel

Tank Capacity

Max: 20 Litres / Min: 5 Litres

Dimensions

Height: 420mm / Width 420mm / Length 570mm

Weight

Empty: 15kg / Working 44kg:

Hose

15 x metres of 12.5mm (½") braided clear tubing

What are the Operation Requirements for JetFlush Junior?

Power requirements

Power supply: 230v 50Hz

Full load current: 3.2 Amperes / 700 watts

Supplied cable length: 10 metres incorporating an On/Off switch

Power connection: 13A plug

What is the Performance of JetFlush Junior?

Flow rates

Typical working flow rate: 30 litres /min @ 1 bar

Physical Limitations

Maximum working temperature: 50°C

Cleaning time

Typically 3-4 hours

How Do I Know How Much Water is in JetFlush Junior?

JetFlush Junior incorporates a water level gauge to allow both visibility of water level and colour during flushing.

How Do I Get any Residual Water Out of JetFlush Junior Before Transporting?

JetFlush Junior has a drain plug built in, simply loosening the plug and tipping the unit will allow any remaining water to drain out.

Does JetFlush Junior Require any Servicing or Maintenance?

JetFlush Junior has been designed to be virtually maintenance free. Visual inspection before use and periodic flushing through with clean water will ensure the unit remains in optimum condition.

What Warranty is Offered with JetFlush Junior?

Sentinel offer a full 1 year warranty including Parts and Labour

When is the Best Time to Carry Out Powerflushing?

It is advisable to powerflush a heating system immediately before fitting a new boiler to an existing system to prevent possible future problems.

Alterations to the system piping during the installation of a new boiler can often disturb existing debris. This suspended matter can accumulate in the heat exchanger of the new boiler, causing noisy operation, reduced efficiency and in extreme circumstances, failure of the boiler.

What is the Difference between a De-scaling Pump and a Powerflushing Pump?

Smaller de-scaling pumps are not powerful enough to effectively flush a central heating system. They don't have the vital flow rate or the pressure needed to maintain flow against the resistance of the heating system. The pump in JetFlush Junior has been constructed to purge the system with clean water whilst discarding the contaminated water. It is supplied with all the necessary hoses, valves, and adapters to perform the powerflushing process and has a significantly higher performance rating.

Are There Other Terms for Powerflushing?

'Powerflushing', 'JetFlushing' & 'Hard Flushing' are all expressions used (in the heating trade over many years) to denote the process where heating systems are forcibly cleaned using water at high velocity, but at low pressure so that no physical damage is caused to the system. The process can be made even more effective with the addition of a powerful cleaner such as Sentinel X800 Jetflo.

Is it Necessary to Use a Chemical Cleaning Agent with Powerflushing?

To achieve the full benefits from powerflushing it is recommended that a chemical cleaning agent is used. Sentinel X800 Jetflo is a powerful, highly active cleaning agent for use in central heating systems. It is specifically designed for use in conjunction with powerflushing equipment and will remove objectionable iron oxide and calcium based deposits from heat exchangers, radiators and pipe work. Its unique composition allows Sentinel X800 Jetflo to act as a penetrating dispersant under neutral pH conditions, eliminating the need to clean with conventional acids and the problems associated with them. The formulation also contains agents to help protect metal from corrosion.

Sentinel X800 Jetflo is suitable for use with all commonly encountered metals and alloys.

Is the JetFlush Junior Compatible With All Types of Chemicals?

The unit has been designed to be suitable for use with all common types of flushing chemicals including those containing citric acid

Does a New System Need Powerflushing?

All new systems should be pre-commission cleaned in accordance with BS7593:2006. This ensures flux residue, excess jointing compounds, mineral oil and other contaminants that can be found in the system following installation are removed.

It is important when installing new boilers into old systems that all sludge and deposits are removed from the system because material disturbed during installation could accumulate in the heat exchanger of the new boiler and lead to premature failure.

Do I Always have to Flush the Whole System?

If an area of the system has been identified as been troublesome like a particular radiator or the boiler heat exchanger the simple-to-operate JetFlush Junior coupled with its compact & lightweight design make it ideal to rapidly removal system scale and debris from these individual areas.

Do Heating Systems Still Need Protecting After Powerflushing?

The original need to powerflush the system is a direct consequence of poor treatment. As soon as a heating system is cleaned and filled with water, deterioration of the system will begin again unless the system is effectively treated. The combination of water, air, and a mixture of metals can result in these problems of corrosion and deposition returning even in a cleaned system.

In a cleaned system these problems can be eliminated with the appropriate maintenance of the system, and the addition of the correct product from the Sentinel range.

What are the Benefits of Powerflushing and Effective Treatment?

The benefits of powerflushing and effectively treating a central heating system can be summarised as follows:

- Provides long term protection against corrosion of all system metals
- Prevents build-up of black sludge
- Improves efficiency and provides savings on fuel bills
- Prevents wear on pumps and valves
- Reduces lime-scale deposits
- Reduces boiler noise
- Stops corrosion and the need for frequent bleeding of radiators