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GENERAL SAFETY

BWI Ltd. Products are always designed to our highest standards. Our staff can advise you at any time during installation and operation if any questions arise regarding how to safely use our products.

What the law says:-

You must carry out a suitable and sufficient assessment of the risks for all work activities for the purpose of deciding what measures are necessary for safety (The Management of Health and Safety at Work Regulations 1999).

PRESSURE JETS

The Screenmaster is designed to be used as a washing device that sprays four jets of potable water, final effluent or storm water at a pressure of 6 to 10 Bar. Therefore operator training is required to appreciate the function of the equipment. The Screenmaster should not be used when an operator is within the wash radius of the jets (see performance table below). The Screenmaster will not spray jets above the horizontal line of the nozzles if installed correctly.

GAS HAZARDS

Where a Screenmaster is to be installed in a confined space, there may be hazardous gases. Please contact your Health and Safety department for guidance and <http://www.hse.gov.uk> . We will not be liable for any damage caused if the Screenmaster is used in a dangerous or explosive environment.

CONTACT WITH SEWAGE

Should a Screenmaster need to be removed from it's installation then it is highly likely to be contaminated with sewerage. Make sure you understand the risks to health and the ways you can pick up infections. Please contact your Health and Safety department for guidance and <http://www.hse.gov.uk> .

DESCRIPTION

The Screenmaster is a hydraulically operated device used to direct pressurised jets of potable water or final effluent onto CSO screens in order to clean debris off the screen following a storm event. It can be mounted on a support frame or to the soffit with a roof mounting bracket. Water is pumped to the Screenmaster by a jetting tanker or booster pump set at pressures up to 10 Bar. During operation the jets will sweep in an arc from the horizontal downwards and index around at stepped intervals to give a 360 degree coverage. The Screenmaster will not spray above the horizontal plane unless installed incorrectly.

INSTALLATION

NOTE: Never install the Screenmaster without first thoroughly flushing all connecting pipework of swarf and debris.

If the site is a retrofit installation then the chamber and screen should be cleaned thoroughly by a high pressure hose before installation.

All Screenmaster wash heads are provided with a quick release coupling and should be used as an interface between the fixed positioning and the Screenmaster.

1. Secure the roof mounting bracket to the concrete.
2. Connect one half of the quick release coupling to the roof mounting bracket.
3. Connect the other half of the quick release coupling to the Screenmaster. NEVER turn the body of the Screenmaster to tighten the coupling. Hold the Screenmaster by the flats provided on the neck.
4. Couple the two halves of the quick release coupling together.

EARTHING.

Always ensure that the Screenmaster and pipework are earthed. Some sealing compounds and tapes can isolate the passage of static electricity. If in doubt consult your qualified electrician.

OPERATION – jetter truck supply.

The Screenmaster will operate at a minimum pressure of 4 Bar (though the unit should be run at 6Bar or more). This is the pressure at the Screenmaster and NOT at the jetting truck supply. Always remember to take into account losses through pipework when operating a Screenmaster. Example – 25mm ID pipe of 100m length will have losses of 40Bar at 100lpm. Therefore we would need the jetting truck to operate at a minimum of 44Bar (ideally 46–50Bar).

The typical wash time is 5 to 10 minutes. Experience in cleaning the screens with our Screenmaster wash head will allow the operator to determine how long a screen should be cleaned for.

The length of clean time depends on the following:

Flow rate and pressure of water to the wash head.

Type of screen being cleaned.

Size of screen.

Number of wash heads employed.

Type of screenings on the screen.

The interval between cleans.

The length of time that the screen is being cleaned after a storm event.

Whether it is just the screen or the whole chamber being cleaned.

OPERATION – booster pump set

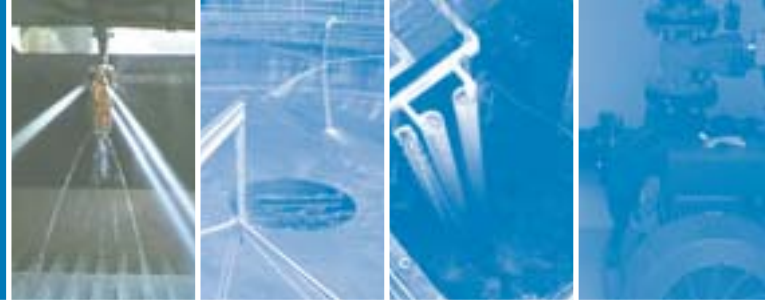
The booster pump will have been selected to provide the correct pressure and flow at the Screenmaster. Depending on the system the pump will be engaged automatically or by hand. See the relevant section in this manual if this system is being used.

TRAINING

Operators should have access to this manual and be trained in the operation of the Screenmaster. Each CSO is different and so an appreciation of how our Screenmaster operates in the field is important. There is a Environment Agency requirement that all static CSO screens must be cleaned to at least 50% open area. BWI staff can be commissioned to carry out training.

MAINTENANCE

Should the Screenmaster require maintenance it should be removed from the chamber, cleaned thoroughly and returned to BWI Ltd, Lower Road Trading Estate, Ledbury, HR8 2DH. There are no operator serviceable parts.



TROUBLE SHOOTING

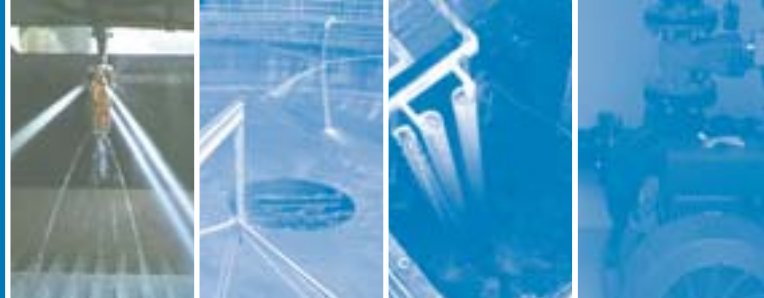
Check inlet pressure. The Screenmaster should operate mechanically i.e. jet water and index around, at 4 Bar minimum.

Tap out the inlet of the Screenmaster to see if debris has entered the inlet.

Unscrew the nozzles and check for blockage.

Hold the unit body and rotate the nozzles fully back and forth. The neck should index around after each return stroke. Do not force the nozzles they should move freely.

Alternatively, contact BWI Ltd for advice on 01531 632476.



TECHNICAL DATA

CONSTRUCTION:

| | |
|---------------------------|---------------------------------------|
| Materials of construction | 316 Stainless steel, Nitrile O' rings |
| Max operating temp | 120°C |
| Weight | 5.0 Kg |
| Inlet thread | 1" BSPP |
| Max operating pressure | 10 Bar |

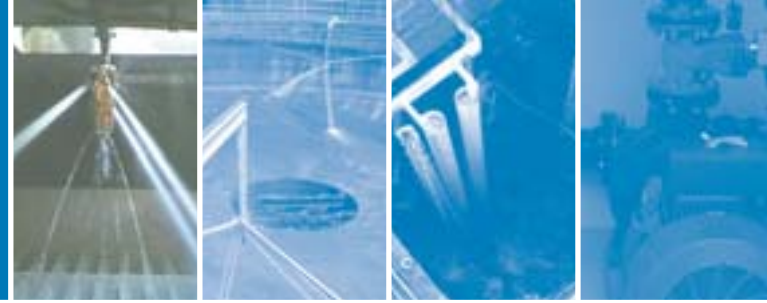
PERFORMANCE:

Below are tables indicating the flow requirement PER HEAD at typical operating pressures.

SCREENMASTER - 4 x 3.5mm Nozzles

| Pressure (Bar) | Flow (lpm) | Cleaning Radius (m) |
|----------------|------------|---------------------|
| 6 | 82 | 3 |
| 8 | 92 | 3 |
| 10 | 103 | 4 |
| 12 | 112 | 4 |

O&M Manual



SCREENMASTER

TYPICAL GENERAL ARRANGEMENT

