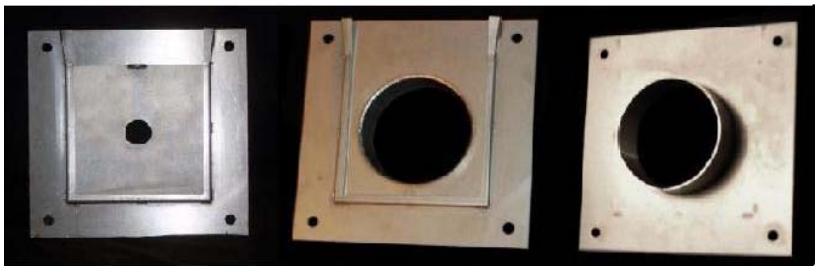
Chris Faulkner Flow Controls

Declaration of Performance

Removable Orifice Controls Type VREM and OP-REM.

VREM Orifice Control

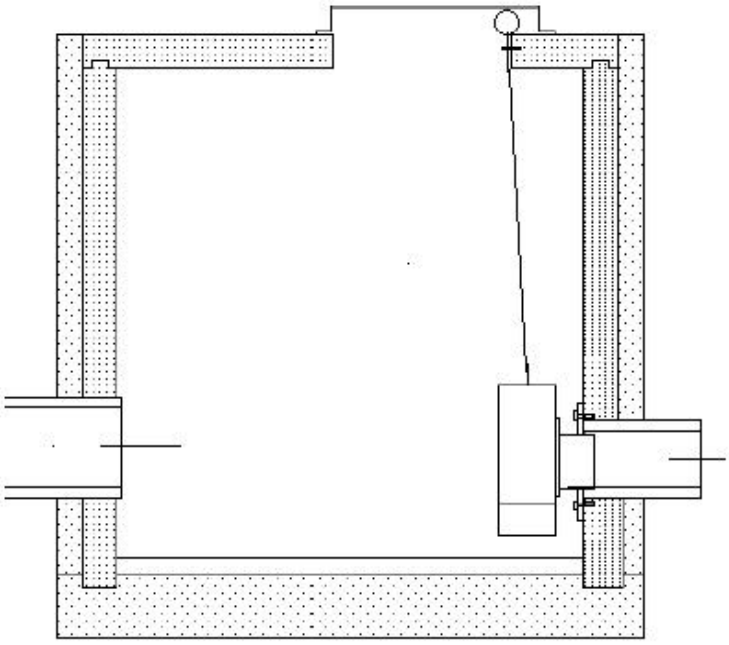


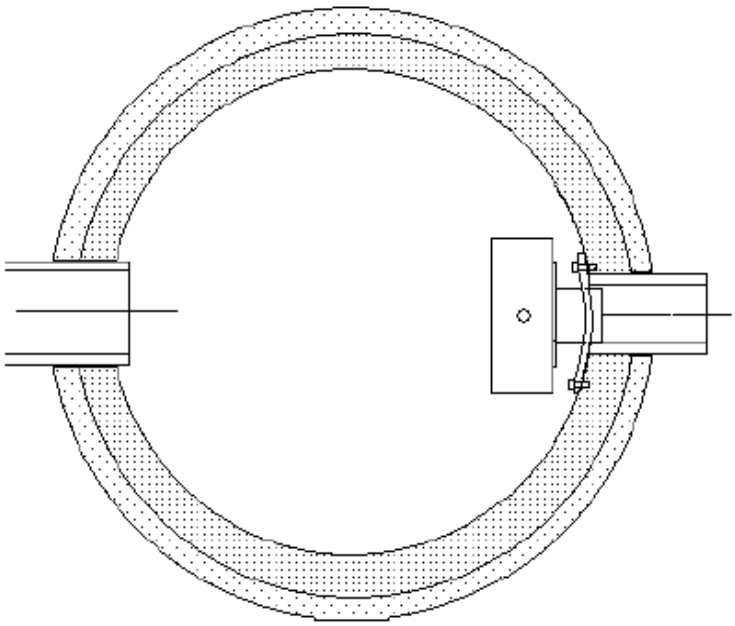
OP-REM Orifice Control

Manufactured in AISI 304 Stainless Steel for long maintenance free life their performance is determined by application of the standard flow formula.

$$Q = Cd \times Ao \times \sqrt{2 \times g \times h}$$

Fixed orifice controls cannot be cleaned, cleared, tested or inspected without the need to enter the installation manhole and therefore do not comply with Confined Spaces Regulations 1997. To ensure compliance our removable orifice controls are mounted using a sliding plate mechanism which allows remote removal of the control from ground level and provides drain down bypass and access to the downstream pipe system.





Orifice controls should be installed in catchpit chambers and to simplify installation and reduce construction time spent in a confined space the slider mounting plate is radiused to fit the chamber diameter.

Confined Spaces Regulations 1997

What the law says

You must carry out a suitable and sufficient assessment of the risks for all work activities to decide what measures are necessary for safety (under the Management of Health and Safety at Work Regulations 1999, regulation 3). For work in confined spaces this means identifying the hazards present, assessing the risks and determining what precautions to take. In most cases the assessment will include consideration of:

- the task;
- the working environment;
- working materials and tools;
- the suitability of those carrying out the task;
- arrangements for emergency rescue.

HSE's risk management website will help you further (see Further guidance). You may need to appoint competent people to help manage the risks and make sure that employees are adequately trained and instructed (under the Management of Health and Safety at Work Regulations 1999, regulation 7). Of course, you may be the best person to do this, however, you may need to train someone else or engage the services of a competent person for additional help.

If your assessment identifies risks of serious injury from work in confined spaces, such as the dangers highlighted above, the Confined Spaces Regulations 1997 apply. These regulations contain the following key duties:

- avoid entry to confined spaces, eg by doing the work from outside;
- if entry to a confined space is unavoidable, follow a safe system of work; and
- put in place adequate emergency arrangements before the work starts.

These duties, and how to carry them out are described in the sections below.

Avoid entering confined spaces

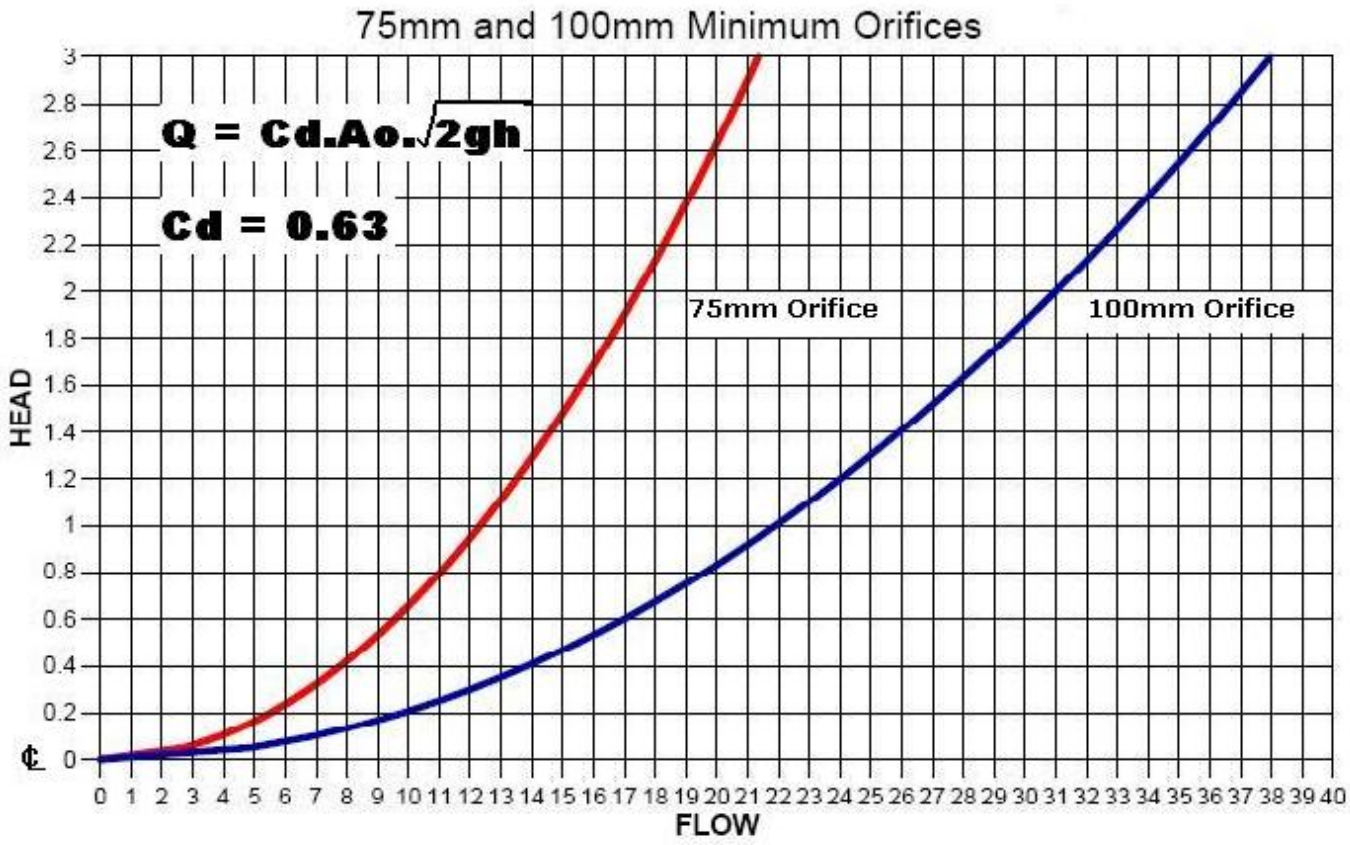
You need to check if the work can be done another way to avoid entry or work in confined spaces. Better work-planning or a different approach can reduce the need for confined space working.

Ask yourself if the intended work is really necessary, or could you:

- modify the confined space itself so that entry is not necessary;
- have the work done from outside, for example:
  - blockages can be cleared in silos by use of remotely operated rotating flail devices, vibrators or air purgers;
  - inspection, sampling and cleaning operations can often be done from outside the space using appropriate equipment and tools;
  - remote cameras can be used for internal inspection of vessels.

Section 6 of the Health and Safety at Work etc Act 1974 places a duty on designers,manufacturers, importers and suppliers of articles for use at work to ensure, so far as is reasonably practicable, that the article is designed and constructed so that it will be safe and without risk to health.

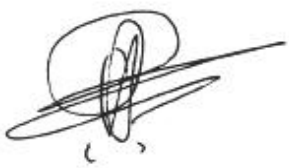
Orifice flow/head graph



Natural attenuation structures, such as swales and rills etc and as shown in SuDS Manual 753C, are ikely to have lower heads than engineered underground systems so it is possible to use orifices to control the dishcharge and still meet the minimum sizes required by Doc H of the Buiding Regulations.
The above graph shows the predicted performance for our orifice controls and aids with selection

Standards Compliance

Characteristic	Compliance
Declaration of Performance	Construction Products Regulations 2021
Designed using academically accepted flow formula	Cira SuDS Manual 753C Sec 28
Minimum openings	Building Regs 2010 Doc H Sec 3.14
Simple installation	Confined Spaces Regulations 1997
Can be cleaned, cleared, tested and inspected from cover level	Doc H Building Regs 2010 Confined Spaces Regs 1997
Removal from chamber allows bypass and access to downstream pipe work.	Confined Spaces Regs 1997 Sec 3.14, 3.15 SfA8 Code for Sewer Adoption
Manufactured in AISI 304 Stainless Steel	Doc 7 Building Regs 2010. End of life recycling



The performance of the products identified above is in conformity with the set of declared performances. This declaration of performance is issued in accordance with Article 4 of Regulation (EU) No 305/2011 as amended by the Construction Products Regulations 2021, and is the sole responsibility of the manufacturer identified above.

C.D. Faulkner Eng Tech MIHE Managing Director. Date 23/01/23