SEWERAGE SECTOR GUIDANCE

CHANGE PROPOSAL FORM

Please complete the form below to submit a change proposal to the Sewerage Adoption Panel.

Name of Proposed Change:

Changes to wording of C.7.12

Section 1 - Proposed Change

A. Please outline the details (including any relevant supporting documentation) of the proposed change.

Use of flow controls in manholes and inspection chambers needing to comply with the "no man entry" requirements of the Confined Spaces Regulations 2010 and the Declaration of Performance in the Construction Products Regulations 2021.

B. Has the proposed change been considered previously (including during any prior consultation process)? If so, please provide details.

No

C. Does the proposed change need to be considered by a specific date? If so, please explain why?

No

D. Does the proposed change raise any health and safety issues? If so, please provide details.

Yes. Sewage companies are approving control devices that introduce forseeable risks to installation contractors and their own maintenance personnel contrary to the Health and Safety at Work Act 1974

E. Please provide any further information relevant to the change proposal.

Designers and Sewage companies are failing to fully risk assess their control chamber designs as required under CDM regulations and hybrid chamber designs are being accepted for adoption which do not meet the chamber designs shown on the Construction Desiign Guide

Section 2 - Scope of the Proposed Change

Section C7.12 Should be reworded to ensure compliance with statutory regulations.

Which section(s) of the Sewerage Sector Guidance and Model Adoption Agreement does the proposed change concern? Please provide specific references to the relevant documentation.

Sec C7.12 1 should be reworded
Sec c7.12. 2 should be reworded

B. What consequential amendments to the Sewerage Sector Guidance and Model Adoption Agreement would be required as a result of the proposed change? Please provide specific references.

Sec C7.12.1 Reworded as attached
Sec C7.12.2 Reworded as attached

Section 3 - Rationale for the proposed change

A. What is the nature and effect of the current position/existing arrangements?

Contractors are being forced, against their own risk assessments, to build control structures and install control devices that do not meet health and safety and regulations because of the need to obtain adoption approval. This places them in an impossible situation in meeting their duties under the Health and Safety at work Act 1974

B. What is the nature and effect of the proposed change?

The proposed changes will reinforce the duties of designers and sewage companies to comply with their statutory health and safety requirements and make control manufacturers comply with their statutory duties under sec 6 of the Health and Safety at Work Act 1974 and Construction Product Regulations 2021

C. Why is the proposed change necessary?

The Judges in the Tangerine Case Case No: 201002020 D2 201004882 B2 made it clear that failing to eliminate foreseeable risks or to properly assess risk constitute criminal offences. All the parties to an adoption agreement must carry out proper safety due diligence.

D. What is the desired outcome of the proposed change?

Full compliance of all the parties with their duties under health and safety statutes.
Control manufacturers comply with their duties and improve their designs to eliminate foreseeable risks to installers and maintainers of their equipment in compliance with their duties under health and safety statutes.

Section 4 – Impact on the Principles and Objectives of the Code

A. Outline, how and why the proposed change maintains consistency with the principles and objectives of the Code for Adoption Agreements, and any relevant statutory or regulatory requirements?

The authors of the Design Guide are effective designers as defined under CDM regulations and as such have a duty to fully support the statutory regulations that apply to confined spaces and sewage systems by ensuring compliance in the wording of the guidance

Section 5 – Impact on Customers and Sewerage Companies

A. What is the impact of the proposed change (be it positive and/or negative) on Customers?

Ensuring proper compliance with health and safety can only be positive and has no commercial costs involved. The cost of an HSE prosecution would be severe

B. Is there any evidence of customer concern relating to the proposed change? If so, please provide details.

We are supporting one of our clients at present who is having problems with getting our controls adopted because they are not from the dominant manufacturer and despite the health and safety failings of the existing design

C. What is the impact of the proposed change (be it positive and/or negative) on Sewerage Companies?

As a Statutory undertaker it is clearly in all sewage companies interests and also their duty, to ensure full compliance with health and safety legislation both as an approving body and as employers.

D. Estimate how much notice Customers and Sewerage Companies may reasonably require to be able to meet any new requirements arising from the proposed change.

As they should already be complying with their duties they should not need notice to meet requirements that already exist.

E. What is the suggested implementation date of the proposed change?

Immediate

Section 6 – Stakeholder Engagement
A. Please outline any informal/formal consultation undertaken with relevant stakeholders likely to be affected by the proposed change, including details of any responses provided by stakeholders.

Section 7 – Applicant's Details	
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Proposed changes to wording of the Code for Sewer Adoption Design Guidance

C7.12

New 1. The design of flow control devices to be placed in manholes or inspection chambers should comply with the Confined Spaces Regulations 2010 and be fully roddable from upstream or down and allow clearing, cleaning testing and inspection from outside the control structure

Control devices should be supported by a statutory Declaration of Performance as required under the Construction Products Regulations 2021 which should include evidence of independent testing.

New 2. The flow control should be able to be installed in all Manhole and inspection chamber designs with all channels and benching required and as shown in the Design and Construction Guidance.

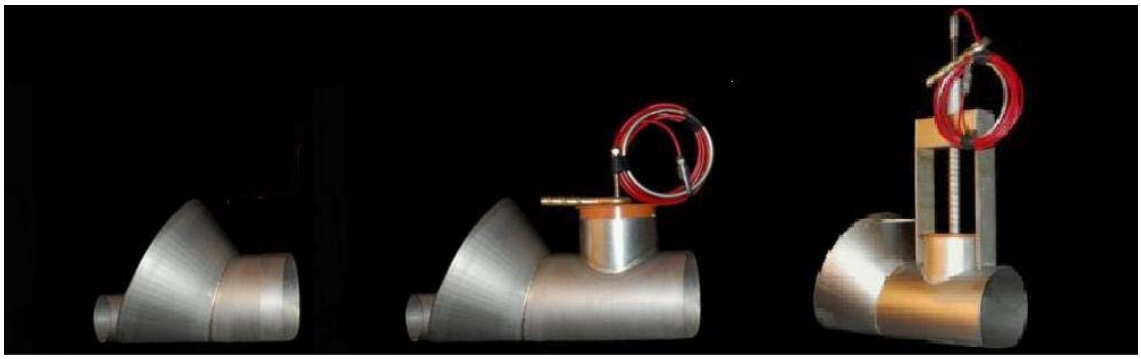
06-03-23

Chris Faulkner Flow Controls

Declaration of Performance

This document demonstrates the compliance of our Turbillion Flow Controls in design, installation, maintenance and demolition with UK construction standards as required under the Construction Products Regulations 2021.

Turbillion Flow Controls



Type CY **Type CY-BP** **Type CY-BP AR**

Essential Charcteristics

Genuine vortex operation and independently tested.

Larger orifice area for lower flows on higher heads compared to other controls.

Chance of blockages reduced.

Simple push fit installation. No plinths, plates or bolting required. Safer and quicker to install.

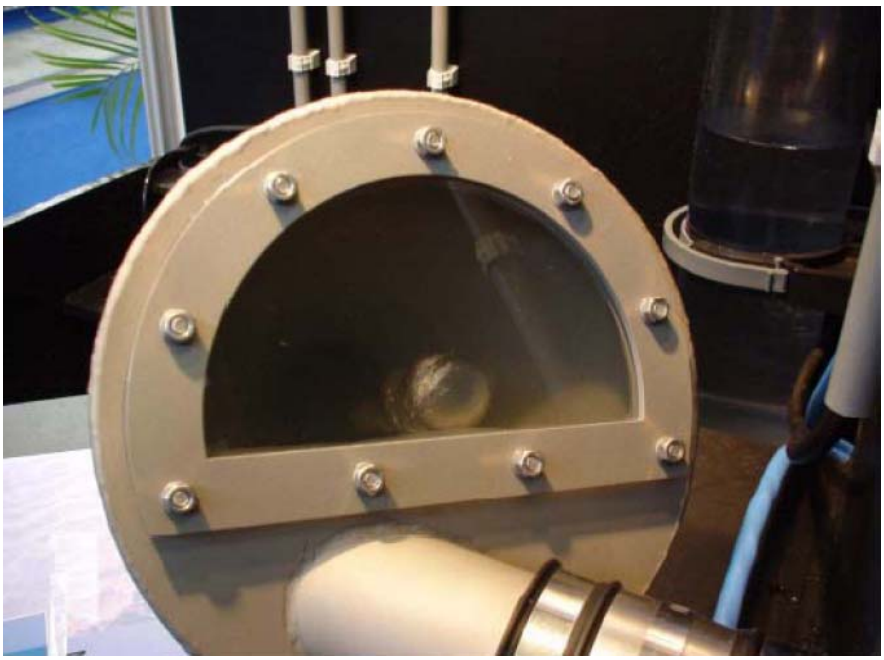
Can be installed in any MH design in SfA8 Code for Sewer Adoption with standard channels and benching.

Can be rodded from upstream and down.

No man entry required for clearing, cleaning, testing and inspecting.

Fitted with auto return by pass independent of the control. Allows full drain down even if the control is blocked.

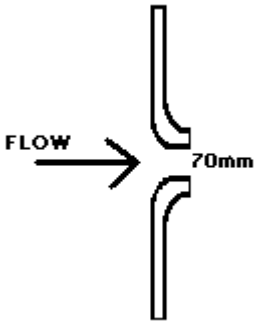
Bespoke design and manufactured in AISI 304 Stainless Steel for long maintenance free life and can be recycled at end of life.

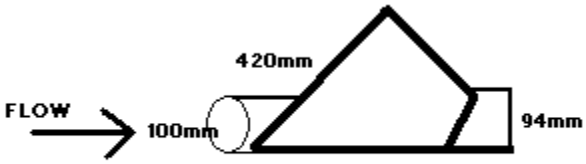


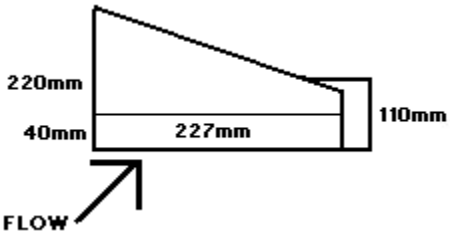
Genuine vortex operation

Independent Test 1

Dr Mike Green of WrC carried out flow to head to orifice tests on different types of flow control including our Turbillion Type CY control.







Nozzle **Turbillion TYPE CY** **Hydrobreak TYPE C**

Results Table

By re-arranging the General Flow Formula

$$Q = Cd \,.\, Ao \sqrt{2gh} \quad \text{to} \quad Cd = \frac{Q}{Ao \sqrt{2gh}}$$

the efficiencies of the three different controls are revealed.

FLOW CONTROL TYPE	CY VORTEX	HYDROBRAKE TYPE C	NOZZLE
AREA OF ORIFICE sqmm	7855	9080	3848
FLOW AT 1.00m HEAD l/s	6.5	11	15
FLOW AT 2.00m HEAD l/s	9	16	20
COEFFICIENT OF DISCHARGE Cd	**0.18**	0.28	0.88

Our Turbillion Type CY control proved to be the most efficient showing the lowest flow for the highest head to the largest orifice area.

Based on the above coefficients of the three controls, using the minimum pipe sizes or their equivalent, specified in Doc H of the Building Regulations 2010, the predicted flows would be as shown in the table below.

FLOW CONTROL TYPE	CY VORTEX	HYDROBRAKE TYPE C	NOZZLE
COEFFICIENT OF DISCHARGE Cd	0.18	0.28	0.88
FLOW AT 1.00m HEAD 75mm dia l/s	3.52	5.48	17.22
FLOW AT 2.00m HEAD 75mm dia l/s	4.99	7.75	24.35
FLOW AT 1.00m HEAD 100mm dia l/s	6.50	9.74	30.61
FLOW AT 2.00m HEAD 100mm dia l/s	9.00	13.78	43.3

Independent Test 2

Testing carried out by Professor David Balmforth at Sheffied Hallam University.

The tests showed that our Turbillion control had an orifice area at least three times larger than an equivalent orifice plate control.

Standards Compliance

Characteristic	Compliance
Declaration of Performance	Construction Products Regulations 2021
Independetly Tested	Cira SuDS Manual 753C Sec 28.5.7
Maximum openings for lower flows	Building Regs 2010 Doc H Sec 3.14, SfA8 Code for Sewer Adoption
Straight through low flow channel. Reduced blockage risk	Doc H Buiding Regs 2010. Confined Spaces Regs 1997, SfA8 Code for Sewer Adoption
Simple Push fit installation	Confined Spaces Regulations 1997
Can be cleaned, cleared, tested and inspected from upstream or down from cover level	Doc H Building Regs 2010 Confined Spaces Regs 1997
Auto return bypass operated from cover level.	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

Controls and Installations

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