

PT/499/0322 (March 2022)

**Assessment Schedule for NORHAM
Camstopper® CAM and CAMV® range
(100 to 150mm n.d.) and associated
Remote Installation Device pole as
manufactured by NORHAM and NORHAM
Plastics Ltd**



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1. SCOPE

This schedule specifies the requirements for the Camstopper® CAM range and the lockable CAMV® range of drain stoppers, as manufactured by NORHAM (France) and assembled by NORHAM Plastics Ltd (UK). The devices are designed for the temporary stopping of flows from domestic drains and small adoptable sewers made of clay and or plastic in sizes between 90mm to 160mm.

2. PRODUCT DESCRIPTION

2.1 Introduction

The Camstopper® range comprises a baseplate, top plate, and lever, manufactured from Fibreglass and Nylon, surrounded in an EDPM rubber seal.

The Camstopper® range is designed to resist a hydraulic pressure between 0.3 and 0.5 bar.

The Camstopper® is positioned in the host pipe with the 'heel' of the stopper on the invert of the pipe which prevents the stopper from moving out of vertical alignment. The profile of the rubber seal is expanded by manually engaging the lever mechanism, thereby expanding the EDPM seal against the inner wall of the host pipe.

The Remote Installation Device (RID) is an extendable pole with a socket to fit the lever of the Camstopper® and a mechanism to facilitate the operation of the Camstopper® lever from outside the chamber.

The CAMV® lockable stopper has an alternative lever that is only installable and removable using a RID pole with a clip that engages with the locking lever.

2.2 Applicable standards

The following standards are applicable to this product:

- BS EN 1610:2015⁽¹⁾
- BS EN 752:2017⁽²⁾
- BS EN 681:1996⁽³⁾
- BS EN ISO 23856:2021⁽⁴⁾

2.3 Approval History

The Camstopper® CAM range was originally awarded WRc Approved™ certification in 2003. The first approval was registered to Advanced Sewer Products Ltd and recertified in 2012 when the production business was acquired by the current manufacturer, NORHAM.

- PT/266/0903
- PT/326/0312
- PT/406/0317

3. REQUIREMENTS AND TESTING

3.1 General

There are no product standards for temporary drain stoppers. BS EN 1610:2015 and BS EN 752:2017 are the primary standards for the design and construction of gravity sewerage and drainage pipes. This assessment schedule has taken into account the requirements of these standards, together with those of the BS EN 295:2013⁽⁵⁾, BS EN 1401:2019⁽⁶⁾ and the performance claims of the product.

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The Camstopper® CAM and CAMV® ranges will be assessed on their diameters specified below, which are considered representative of the product diameter range:

- CAM100 (96mm to 103mm)
- CAM150 (147mm to 153mm)

3.2 Materials and components

The EPDM seal shall satisfy the requirements of BS EN 681:1996.

The fibreglass baseplate, top plate and lever shall comply with the relevant provisions of BS EN ISO 23856:2021.

3.3 Type Testing

The Camstopper® CAM and CAMV® shall resist structural damage if dropped from a maximum height of 5 metres to a concrete surface.

The leaktightness of the Camstopper® CAM and CAMV® shall maintain a pressure of 0.5 bar for a period of 30 minutes when installed in rigid and flexible pipes and tested in accordance with BS EN 1610:2015.

Tests shall be carried out on the new condition surfaces of each pipe material for which the product is designed.

3.4 Manufacture

To ensure the quality and performance of the Camstopper® CAM and CAMV® range, the manufacturing process shall include appropriate systems for the:

- Specification of component materials;

- Verification component materials received are to specification;
- Handling and storage of all component materials and finished units;
- Detailed drawing / schedule for manufacture
- Manufacture / assembly of Camstopper® CAM and CAMV® range and
- Fabrication and quality control of workmanship.

The production of the Camstopper® CAM and CAMV® range and related quality control procedures⁽⁷⁾ shall comply with requirements to ensure the stated performance of the product is reliably achieved.

3.5 Installation

When installed in accordance with the installation documentation⁽⁸⁾, the Camstopper® CAM and CAMV® shall be reasonably expected to perform as described.

4. APPROVAL

The Camstopper® and CAMV® have been audited and have successfully met all requirements stated in this assessment schedule

Signed:

A handwritten signature in black ink, appearing to read 'E. McArthur'.

Valid until: 2nd March 2027

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5. REFERENCES

1. BS EN 1610 Construction and testing of drains and sewers: 2015
2. BS EN 752 Drain and sewer systems outside buildings – Sewer system management: 2017.
3. BS EN 681-2 Elastomeric seals. Material requirements for pipe joint seals used in water and drainage applications. Thermoplastic elastomers: 2000.
4. BS EN ISO 23856 Plastic piping systems for pressure and non-pressure water supply, drainage or sewerage – Glass-reinforced thermosetting plastics (GRP) systems based on unsaturated polyester (UP) resin: 2021.
5. BS EN 295-1 Vitrified clay pipe systems for drains and sewers – Requirements for pipes, fittings and joints: 2013.
6. BS EN 1401-1 Plastic piping systems for non-pressure underground drainage and sewerage. Unplasticized poly(vinyl chloride) (PVC – U). Specifications for pipes, fittings and the system.
7. NORHAM – NORHAM Plastics Quality Control Manual.
8. NORHAM – NORHAM Plastics Installation instructions.