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Agrément Certificate
16/5337
Product Sheet 1

PURUS DRAINAGE PRODUCTS

PURUS FLOOR GULLIES

This Agrément Certificate Product Sheet⁽¹⁾ relates to Purus Floor Gullies, a range of plastic, stainless steel and epoxy-coated cast iron gullies for use inside buildings to receive wastewater from floors in wet rooms and walk-in showers.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.



KEY FACTORS ASSESSED

Mechanical resistance and stability — the products will have adequate strength to resist the loads experienced under normal service conditions (see section 6).

Hygiene, health and the environment — the products will allow disposal of wastewater without clogging (see section 7).

Safety in use — the products are safe in use (see section 8).

Durability — the products will have adequate durability (see section 10).

The BBA has awarded this Certificate to the company named above for the products described herein. These products have been assessed by the BBA as being fit for their intended use provided they are installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

A handwritten signature in black ink that reads 'B Chamberlain'.

Brian Chamberlain
Head of Technical Excellence

A handwritten signature in black ink that reads 'Claire'.

Claire Curtis-Thomas
Chief Executive

Date of First issue: 28 July 2016

The BBA is a UKAS accredited certification body — Number 113. The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

Readers are advised to check the validity and latest issue number of this Agrément Certificate by either referring to the BBA website or contacting the BBA direct.

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Regulations

In the opinion of the BBA, Purus Floor Gullies, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations (the presence of a UK map indicates that the subject is related to the Building Regulations in the region or regions of the UK depicted):



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	H1(1)	Foul water drainage
Comment:		The products will contribute to satisfying the regulatory requirements. See sections 7.1 to 7.5 of this Certificate.
Regulation:	7	Materials and workmanship
Comment:		The products are acceptable. See section 10 and the <i>Installation</i> part of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Durability, workmanship and fitness of materials
Comment:		The products satisfy the requirements of this Regulation. See sections 9 and 10 and the <i>Installation</i> part of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	3.7(b)	Wastewater drainage
Comment:		The products will contribute to satisfying the requirements of this Standard, with reference to clause 3.7.1 ⁽¹⁾ . See sections 7.1 to 7.5 of this Certificate. (1) Technical Handbook (Domestic).



The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation:	23	Fitness of materials and workmanship
Comment:		The products are acceptable. See section 10 and the <i>Installation</i> part of this Certificate.
Regulation:	81	Underground foul drainage
Comment:		The products will contribute to satisfying the stated requirements. See sections 7.1 to 7.5 of this Certificate.

Construction (Design and Management) Regulations 2015

Construction (Design and Management) Regulations (Northern Ireland) 2007

Information in this Certificate may assist the client, Principal Designer/CDM co-ordinator, designer and contractors to address their obligations under these Regulations.

See section: 8 *Safety in use* (8.1 and 8.2) of this Certificate.

Additional Information

NHBC Standards 2016

NHBC accepts the use of Purus Floor Gullies, provided they are installed, used and maintained in accordance with this Certificate, in relation to *NHBC Standards*, Chapter 8.1 *Internal Services*, 8.1.6 *Soil and Waste Systems*.

Technical Specification

1 Description

1.1 Purus Floor Gullies are manufactured from plastic (polypropylene [PP], polyethylene [PE] or acrylonitrile butadiene styrene [ABS]), stainless steel or epoxy-coated cast iron, in various types and sizes as detailed in Table 1. The outlets have standard diameters appropriate to be connected to pipes complying with the relevant codes of practice for each material (as listed in Table 4 of Approved Document H).

Table 1 Gully specifications (dimensions in mm)


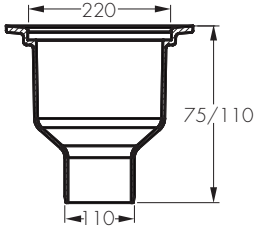

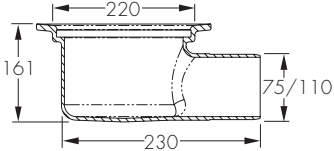

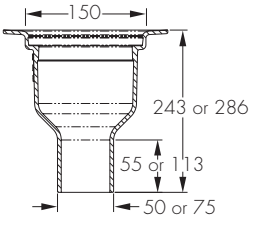

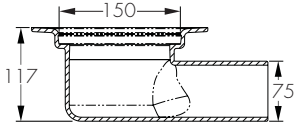

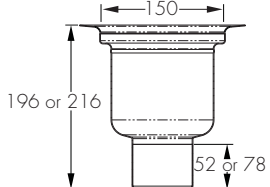

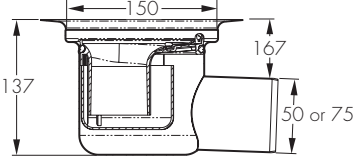

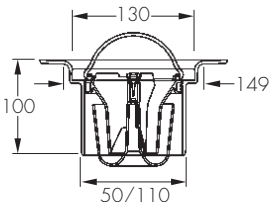
Product code	Description	Material	Outlet diameter (mm)	Capacity (l·s ⁻¹)		
HEAVY						
710 28 36	HEAVY 75 R	stainless steel	75	3.0		
710 28 30	HEAVY 75 P	stainless steel/plastic ⁽¹⁾	75	3.0		
710 28 37	HEAVY 110 R	stainless steel	110	6.0		
710 28 29	HEAVY 110 P	stainless steel	110	6.0		
BIGG						
710 28 34	BIGG 75 R	stainless steel	75	3.0		
710 28 22	BIGG 75 P	stainless steel/plastic ⁽¹⁾	75	3.0		
710 28 35	BIGG 110 R	stainless steel	110	6.0		
710 28 21	BIGG 110 P	stainless steel/plastic ⁽¹⁾	110	6.0		
LOD						
710 21 74	LOD 50 E, bottom outlet ⁽²⁾	cast iron/plastic ⁽³⁾	50	2.0		
710 21 72	LOD MA 75 E, bottom outlet ⁽²⁾	cast iron/plastic ⁽³⁾	75	3.0		
S/50 L MA 75 E						
710 26 51	side outlet ⁽²⁾	cast iron/plastic ⁽³⁾	75	3.0		
BALDER						
711 80 89	BALDER 50 R ⁽²⁾	stainless steel	50	2.0		
711 80 90	BALDER 50 P ⁽²⁾	stainless steel/plastic ⁽¹⁾	50	2.0		
711 80 81	BALDER 75 R ⁽²⁾	stainless steel	75	3.0		
711 80 70	BALDER 75 P ⁽²⁾	stainless steel/plastic ⁽¹⁾	75	3.0		
SIGYN						
711 80 91	SIGYN 50 R ⁽²⁾	stainless steel	50	2.0		
711 80 92	SIGYN 50 P ⁽²⁾	stainless steel/plastic ⁽¹⁾	50	2.0		
711 80 85	SIGYN 75 R ⁽²⁾	stainless steel	75	3.0		
711 80 71	SIGYN 75 P ⁽²⁾	stainless steel/plastic ⁽¹⁾	75	3.0		
BRAGE MINI/ODEN MINI						
711 35 38	BRAGE MINI 110	PP plastic	110	6.0		
711 35 39	BRAGE MINI 50	PP plastic	50	2.0		
711 35 35	ODEN MINI 50	PP plastic	50	2.0		

Table 1 Gully specifications (dimensions in mm) (continued)

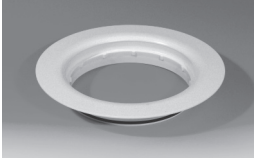
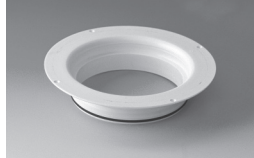


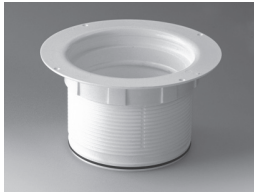
Product code	Description	Material	Outlet diameter (mm)	Capacity (l·s ⁻¹)	
VAKE					
711 35 80	VAKE ⁽¹⁾	PP plastic	75	3.0	
VAGE					
711 35 98	VAGE ⁽²⁾	PP plastic	75	3.0	
FLEX					
711 35 91	FLEX ⁽²⁾	PP plastic	75	3.0	
LOKE					
711 35 88	LOKE ⁽²⁾	PP plastic	75/110	3.0	
DUSCHBRUNN					
711 35 27	shower gully ⁽²⁾	ABS plastic	50	2.0	
BRAGE					
711 39 27	BRAGE 50	ABS plastic	50	2.0	
711 39 29	BRAGE 75 KM ⁽²⁾	PE plastic	75	3.0	
711 39 25	BRAGE 75 ⁽²⁾	ABS plastic	75	3.0	
711 39 30	BRAGE 75 PP ⁽²⁾	PP plastic	75	3.0	
711 39 28	BRAGE 110 ⁽²⁾	PE plastic	110	6.0	

Table 1 Gully specifications (dimensions in mm) (continued)

Product code	Description	Material	Outlet diameter (mm)	Capacity (l·s ⁻¹)	
ODEN 711 35 22	ODEN ⁽²⁾	PP plastic	75	3.0	
LINE/CORNER 711 37 09	<p>LINE: in lengths of 300, 600, 700, 800, 900 or 1000</p> <p>CORNER: triangle dimensions of 300 x 300 x 420</p>	<p>stainless steel</p> <p>stainless steel</p>	<p>75</p> <p>75</p>	<p>3.0</p> <p>3.0</p>	
MINIMAX 711 37 64 711 37 65	<p>MINIMAX 50</p> <p>MINIMAX TRAP</p>	<p>PP plastic</p> <p>PP plastic</p>	<p>50/75</p> <p>50/75</p>	<p>2.0</p> <p>2.0</p>	
MINIMAX TWO PART 52719	MINIMAX 50 TWO PART	PP plastic	50 (side outlet)	2.0	
PURUSLINE LIVING 52737-52748	600, 800	PP plastic	50 (side outlet, side side outlet, low side outlet)	2.0	
52772-52777	600, 800	PP plastic	50 (side outlet, side side outlet, low side outlet)	2.0	

(1) The body is made of stainless steel and the trap and grating are made of plastic.
 (2) Including damping ring and grating.
 (3) The body is made of cast iron and the trap and grating are made of plastic.

1.2 Extension rings allow the gully height to be varied to suit the application (see Table 2).

<i>Table 2 Extension ring specifications</i>				
Product code	Description	Material	Diameter x height (mm)	
FHP				
713 36 25	FHP/13	ABS plastic	150 x 13	
713 36 14	FHP/25	ABS plastic	150 x 25	
713 36 22	FHP/50	ABS plastic	150 x 50	
713 36 48	FHP/100	ABS plastic	150 x 100	
FHP/FLEX				
713 36 49	FHP/FLEX	ABS plastic	150 x 35 to 107	

2 Manufacture

2.1 Continuous quality control is exercised during manufacture including regular checks on appearance, dimensions, marking and loading classification.

2.2 As part of the assessment and ongoing surveillance of product quality, the BBA has:

- agreed with the manufacturer the quality control procedures and product testing to be undertaken
- assessed and agreed the quality control operated over batches of incoming materials
- monitored the production process and verified that it is in accordance with the documented process
- evaluated the process for management of nonconformities
- checked that equipment has been properly tested and calibrated
- undertaken to carry out the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

2.3 The management systems of Purus Limited have been assessed and registered as meeting the requirements of EN ISO 9001 : 2008 by SP Certification (accredited by the Swedish Board for Accreditation and Conformity Assessment) (Certificate 1590).

3 Delivery and site handling

3.1 The gullies and accessories are marked with the Certificate holder's name, product type, code, date of manufacture and approval number, and are supplied in cardboard boxes.

3.2 The products are robust but rough handling (eg dropping on hard floors) may cause distortion of such features as seals, grating and extension rings. Damaged items should be discarded.

Assessment and Technical Investigations

The following is a summary of the assessment and technical investigations carried out on Purus Floor Gullies.

Design Considerations

4 General

4.1 Purus Floor Gullies are satisfactory for use inside buildings to dispose of wastewater from floors in wet rooms and walk-in showers.

4.2 The products are for use in domestic, commercial and public buildings with gravity drainage systems installed in accordance with BS EN 12056-1 : 2000, BS EN 12056-2 : 2000, BS EN 12056-3 : 2000 and BS EN 12056-5 : 2000 for the conveyance of surface water and domestic sewage as is permitted to be discharged into public sewers by the Water Industry Act 1991, and surface water and sewage as is permitted and defined by the Sewerage (Scotland) Act 1968 and the Water and Sewerage Services (Northern Ireland) Order 1973.

4.3 It is important for designers, planners, contractors and/or installers to ensure that the installation of the gullies is in accordance with the Certificate holder's instructions and the information given in this Certificate.

5 Practicability of installation

The gullies are designed to be installed by a competent general builder, or a contractor, experienced with this type of product.


6 Mechanical resistance and stability

6.1 The gullies will have adequate resistance to the loadings likely to be experienced under normal service conditions in the areas of use as defined in this Certificate.

6.2 The gratings, extension rings and clamping rings will have adequate strength and stability.

6.3 The products may be regarded as having a Class K3 rating in accordance with BS EN 1253-1 : 2015.

7 Hygiene, health and the environment

 7.1 The floor gullies have adequate flow characteristics and will allow disposal of wastewater without clogging.

7.2 The products, with the exception of the mechanical trap, will provide water seal depths in excess of 50 mm.

7.3 Trapped gullies and gully bodies have adequate odour protection and are watertight.

7.4 Products for use with sheet floor covering will have adequate watertightness.

7.5 If an extension ring is used, the joint between the ring and the gully body will provide a watertight seal.


7.6 In a fire, gullies made of polypropylene will burn to form carbon dioxide and water.

8 Safety in use

8.1 The products are free from sharp edges that can impair performance or cause injury.

8.2 The gratings have apertures suitable for adequate performance and safety.

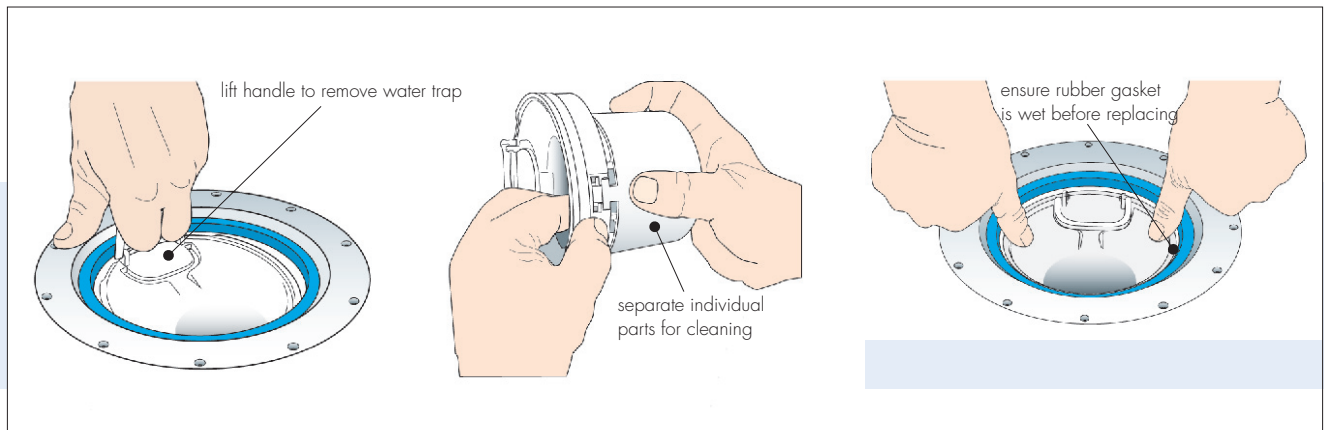
9 Maintenance

 9.1 Adequate access for cleaning is provided on gullies so equipped. In the case where trapped gullies cannot be cleaned through a cleaning port or by removal of the trap, performance will continue to be satisfactory.

9.2 With traps removed, the pipework can be rodded using either cane or polypropylene rods with a cleaning coil head.

9.3 The removable traps are cleaned using a soft brush (see Figure 1).

Figure 1 Maintenance



10 Durability



10.1 When used as per the conditions and recommendations given in this Certificate, the products will have adequate durability for disposing of wastewater from floors in wet rooms and walk-in showers.

10.2 The products will resist all thermal cycling conditions likely to occur in effluents from the areas of use defined in this Certificate. In particular, gullies for use with sheet floor covering can adequately resist such conditions.

10.3 The products are resistant to corrosion and will be unaffected by the types and quantities of chemicals likely to be found in wastewater from wet floors or effluents from domestic appliances.

Installation

11 General

11.1 Installation of Purus Floor Gullies must be carried out in accordance with the Certificate holder's instructions and BS EN 12056-1 : 2000, BS EN 12056-2 : 2000, BS EN 12056-3 : 2000 and BS EN 12056-5 : 2000.

11.2 Floors fitted with Purus Floor Gullies must be designed to allow the water to flow freely to the gratings and incorporate an effective damp-proof membrane in accordance with CP 102 : 1973, BS 8102 : 2009 and BS 8215 : 1991.

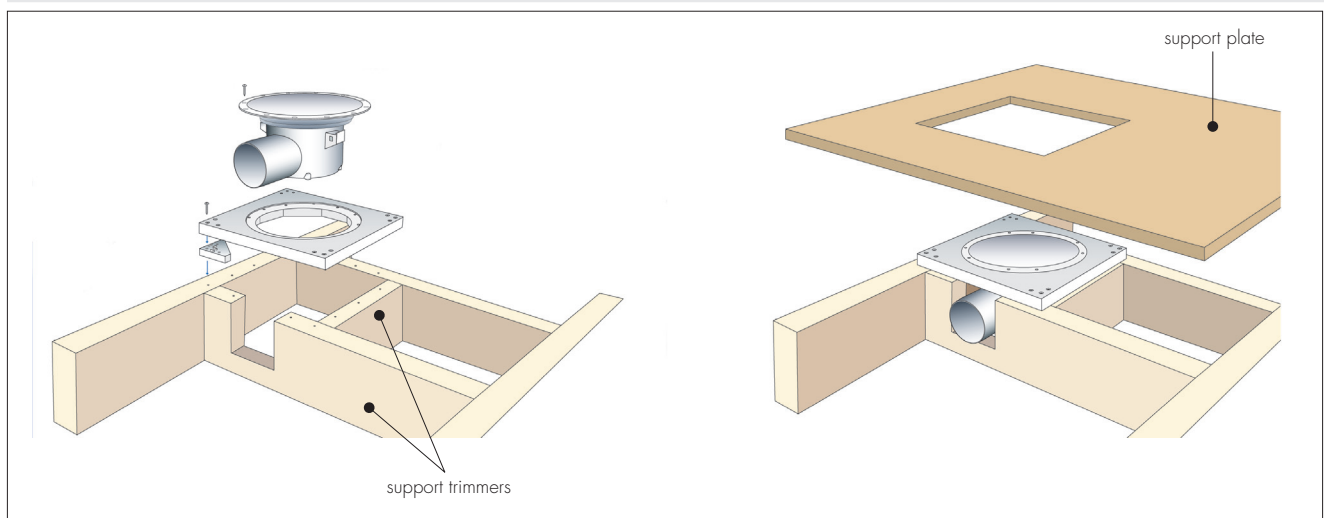
11.3 The products can be installed in either timber or concrete floors using purpose-made accessories.

12 Procedure

Timber floors

12.1 Support trimmers are fixed to the main floor joists to suit gully dimensions (see Figure 2).

Figure 2 Installation in timber floor



12.2 A purpose-made support plate is fixed to the trimmers/joists with galvanized or stainless steel screws.

12.3 The gully body is positioned under the support plate and, after adjustment, secured to it using the screws provided.

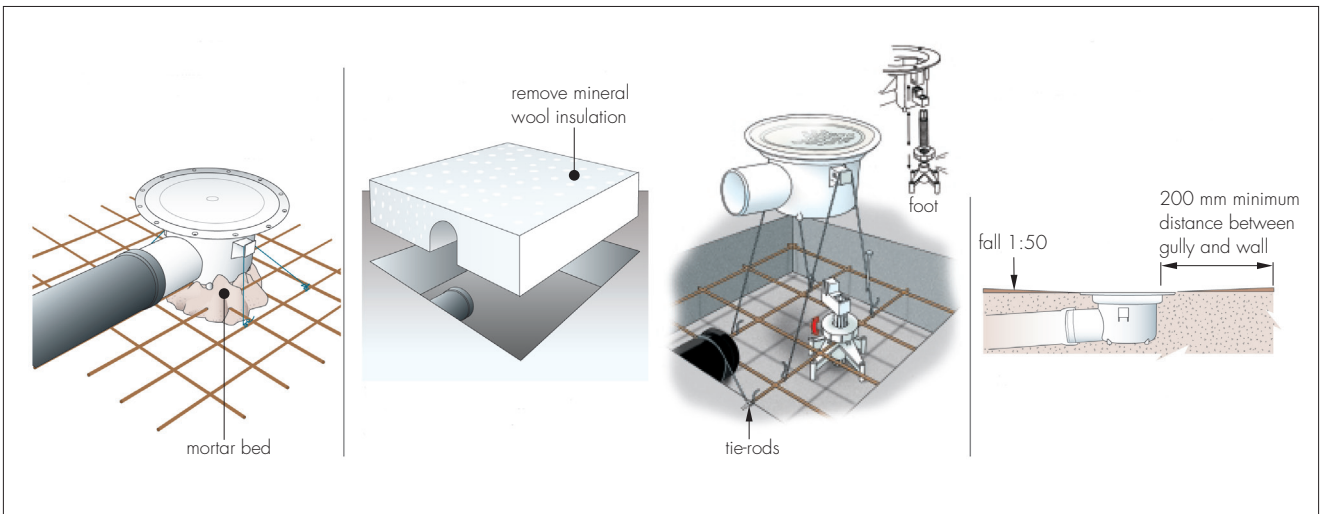
12.4 Floor boards are cut to suit the support plate up-stand and fixed to the trimmers/joists using screws.

Concrete floors

12.5 The gully is placed on a bed of mortar and its level/position adjusted as necessary.

12.6 To help keep it in place during concrete pour, the gully is tied to the reinforcement using the lugs provided on its body (see Figure 3).

Figure 3 Installation in concrete floors



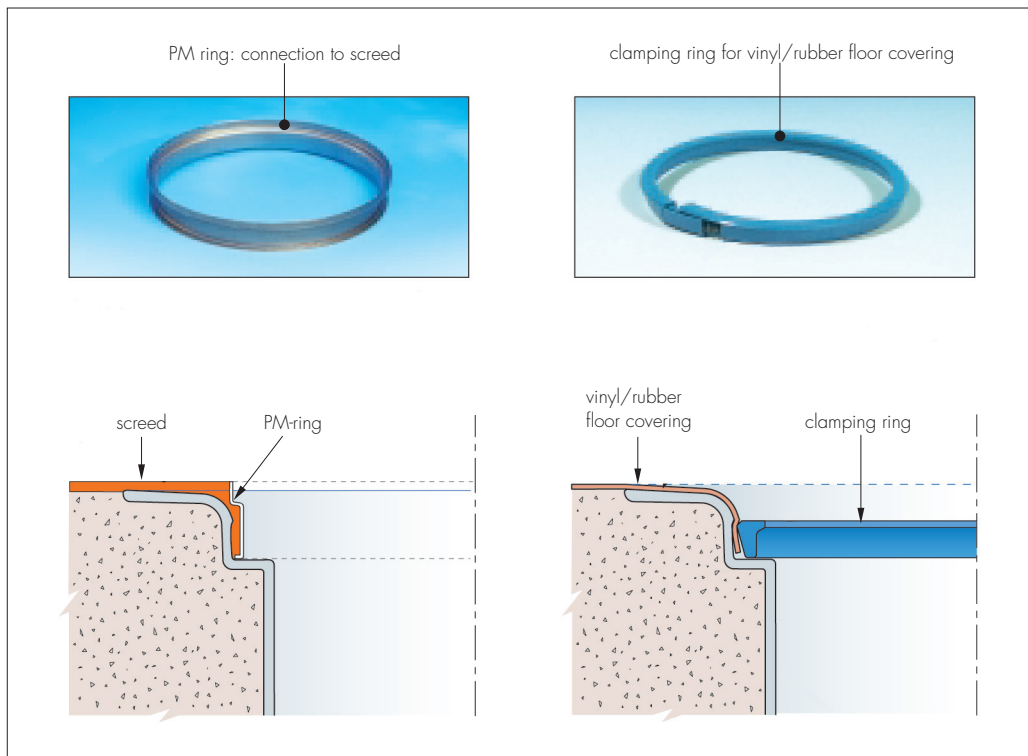
12.7 If the outlet pipe is installed first, a recess in the floor slab is made. The gully is then connected to the pipe end and concrete poured in the recess as normal (see Figure 3).

12.8 To facilitate level adjustment, a specially-designed adjustable foot can be used (see Figure 3).

Vinyl/rubber floor coverings

12.9 Special clamping rings allow the floor covering to be attached around the gully (see Figure 4).

Figure 4 Installation with vinyl/rubber floor coverings



13 Investigations

13.1 Independent test data was assessed in accordance with the requirements of BS EN 1253-1 : 2015, BS EN 1253-2 : 2015 and BS EN 274-1 : 2002, to determine:

- mechanical strength
- depth of water seal
- resistance of water seal to pressure
- blockage prevention
- position of side inlets
- odour and watertightness
- flow characteristics
- safety in use
- practicability of installation
- ease of maintenance
- resistance to thermal actions
- resistance to corrosion and chemicals.

13.2 The manufacturing process was evaluated, including the methods adopted for quality control, and details were obtained of the quality and composition of the materials used.

13.3 The manufacturer's literature was examined for any inconsistencies and general content.

Bibliography

BS 8102 : 2009 *Code of practice for protection of structures against water from the ground*

BS 8215 : 1991 *Code of practice for design and installation of damp-proof courses in masonry construction*

CP 102 : 1973 *Code of practice for protection of buildings against water from the ground*

BS EN 274-1 : 2002 *Waste fitting for sanitary appliances — Requirements*

BS EN 1253-1 : 2015 *Gullies for buildings — Requirements*

BS EN 1253-2 : 2015 *Gullies for buildings — Test methods*

BS EN 12056-1 : 2000 *Gravity Drainage Systems inside Buildings — General and performance requirements*

BS EN 12056-2 : 2000 *Gravity Drainage Systems inside Buildings — Sanitary pipework, layout and calculation*

BS EN 12056-3 : 2000 *Gravity Drainage Systems inside Buildings — Roof drainage, layout and calculation*

BS EN 12056-5 : 2000 *Gravity Drainage Systems inside Buildings — Installation and testing, instructions for operation, maintenance and use*

EN ISO 9001 : 2008 *Quality management systems — Requirements*

14 Conditions

14.1 This Certificate:

- relates only to the product/system that is named and described on the front page
- is issued only to the company, firm, organisation or person named on the front page — no other company, firm, organisation or person may hold or claim that this Certificate has been issued to them
- is valid only within the UK
- has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective
- is copyright of the BBA
- is subject to English Law.

14.2 Publications, documents, specifications, legislation, regulations, standards and the like referenced in this Certificate are those that were current and/or deemed relevant by the BBA at the date of issue or reissue of this Certificate.

14.3 This Certificate will remain valid for an unlimited period provided that the product/system and its manufacture and/or fabrication, including all related and relevant parts and processes thereof:

- are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA
- continue to be checked as and when deemed appropriate by the BBA under arrangements that it will determine
- are reviewed by the BBA as and when it considers appropriate.

14.4 The BBA has used due skill, care and diligence in preparing this Certificate, but no warranty is provided.

14.5 In issuing this Certificate, the BBA is not responsible and is excluded from any liability to any company, firm, organisation or person, for any matters arising directly or indirectly from:

- the presence or absence of any patent, intellectual property or similar rights subsisting in the product/system or any other product/system
- the right of the Certificate holder to manufacture, supply, install, maintain or market the product/system
- actual installations of the product/system, including their nature, design, methods, performance, workmanship and maintenance
- any works and constructions in which the product/system is installed, including their nature, design, methods, performance, workmanship and maintenance
- any loss or damage, including personal injury, howsoever caused by the product/system, including its manufacture, supply, installation, use, maintenance and removal
- any claims by the manufacturer relating to CE marking.

14.6 Any information relating to the manufacture, supply, installation, use, maintenance and removal of this product/system which is contained or referred to in this Certificate is the minimum required to be met when the product/system is manufactured, supplied, installed, used, maintained and removed. It does not purport in any way to restate the requirements of the Health and Safety at Work etc. Act 1974, or of any other statutory, common law or other duty which may exist at the date of issue or reissue of this Certificate; nor is conformity with such information to be taken as satisfying the requirements of the 1974 Act or of any statutory, common law or other duty of care.