

VortX the new range of  
floor drainage products

**Ashworth**



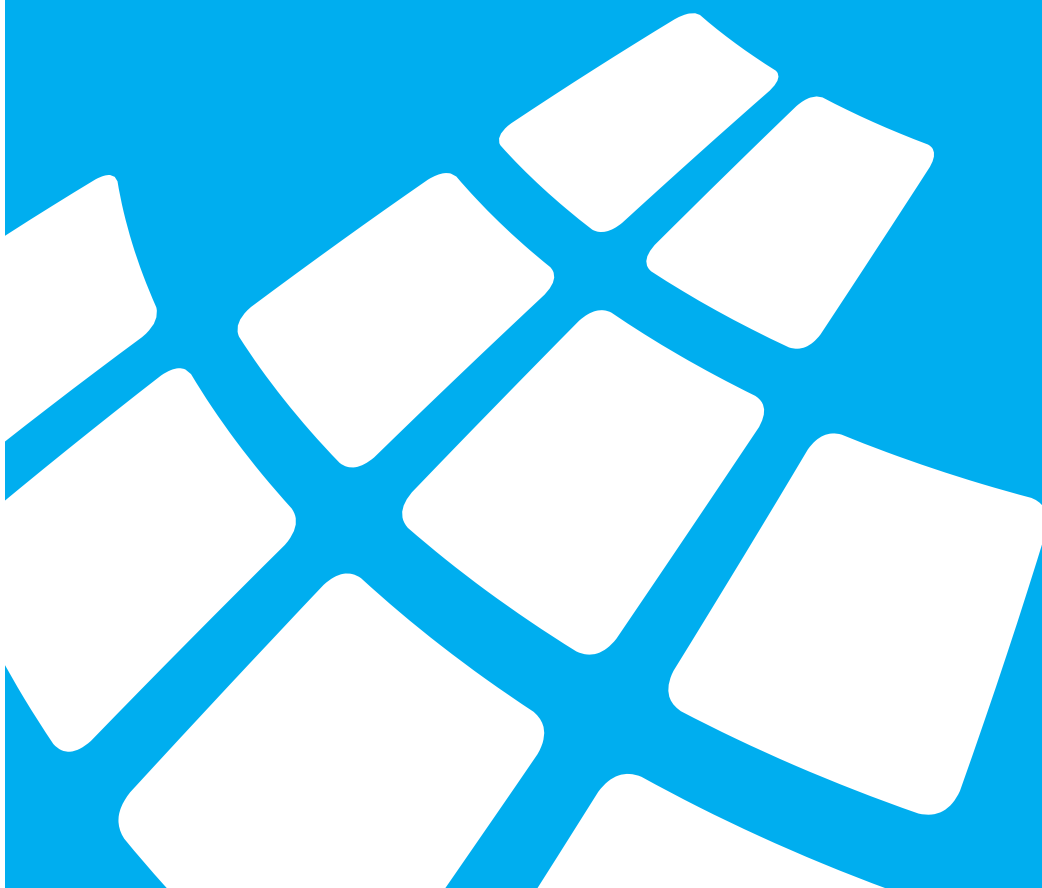
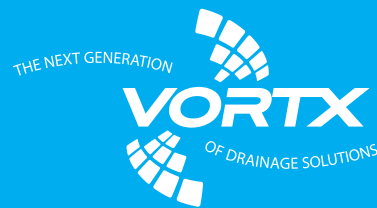
# Saint-Gobain PAM UK is the primary supplier of ductile iron and cast iron products to the UK's key utilities, telecoms, highways, civil engineering, construction and housing sectors. Leading the market in manufacture and supply of:

- Cast iron soil & drain and rainwater systems
- Ductile iron water & sewer pipes, fittings, valves and couplings & adaptors
- Ductile iron access covers and gratings





With access to worldwide technical excellence and a large portfolio of products, Saint-Gobain PAM UK are able to combine the benefits of a global presence with the ability to tailor to local specification, to ensure they provide the highest standard of drainage solutions in the UK market today. With Saint-Gobain PAM UK and the PAM brand of products you are assured of quality, innovation and technical expertise at all times.

To enhance the product portfolio of the soil & drain business – Saint-Gobain PAM UK would like to introduce VortX a new range of floor drainage products to supplement leading cast iron drainage systems Ensign and Timesaver. The range consists of cast iron floor and shower gullies, gratings and rodding eyes in nickel bronze and stainless steel, and associated components such as adaptors, extension pieces and removable bottle traps (patent pending) to suit a variety of floor finishes i.e. tile & sheet and shower applications.

This brochure introduces the first phase of products which will be extended over the next 2 years – and will include a new range of roof outlets during 2013. The VortX floor drainage range has been designed to comply with BS EN 1253 criteria and backed by the quality commitment of the PAM brand and 50 years experience in drainage.



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# Quality Assurance



BS EN ISO 9001:2008 – Registered No: FM12908

Products included in this manual are manufactured under the BS EN ISO 9001 Quality Assurance Scheme.

BS EN ISO 9001 legislates for Quality Assurance and may be chosen as an alternative 'third party guarantee'. It also provides a means of underwriting the quality of products which lie outside the scope of product standards such as BS EN 1253.

On occasions, owing to pressure on normal production units, it may be necessary to manufacture certain components outside the confines of the BS EN ISO 9001 Quality Assurance Licence. Such items will be produced, however, to a quality in keeping with that of accredited manufacturing units.

Components so produced will be identified on the order acknowledgement.

## Commitment to quality

Saint-Gobain PAM UK is committed to satisfying its customers' needs in both quality products and services.

It recognises the necessity for continual improvement in all disciplines throughout the organisation, and clearly states this objective to its employees at all levels.

As a basis for this objective, the company is committed to operating strict quality management systems in accordance with BS EN ISO 9001. It also recognises the responsibility of the company's employees in meeting the quality objectives and is conscious of their training and development needs.



## Environment Standard BS EN ISO 14001:2004

Saint-Gobain PAM UK manufacturing sites, including Sinclair at Telford, have been awarded the 'Manufacturing to Environmental Standards' accreditation BS EN ISO 14001:2004 which was developed to help manufacturers maintain and improve their management of environmental responsibilities and assist them in ensuring compliance with environmental laws and regulations.

Saint-Gobain PAM UK operates Integrated Pollution and Preventative Control (IPPC) regulations, and have implemented comprehensive environmental management systems throughout its manufacturing sites.

## CEMARS certification

(Certified Emissions Measurement And Reduction Scheme)

Saint-Gobain PAM UK Ltd has been awarded certification to the world class, ISO accredited CEMARS (Certified Emissions Measurement And Reduction Scheme) standard by the Achilles carbonReduction programme.

CEMARS certification demonstrates the company's commitment to measuring, managing and reducing greenhouse gas emissions in a robust and credible way. It confirms the company has measured its greenhouse gas emissions in compliance with ISO 14064-1:2006 and has committed to managing and reducing its emissions in respect of all operational activities across its Water & Sewer, Municipals and Soil & Drain business units.

Saint-Gobain PAM UK Ltd has achieved CEMARS for its operational carbon footprint for the period 2011–2014.

# Design Considerations

## Building regulations / standards

Local regulations take priority in relation to all sanitary and drainage pipework i.e. BS EN 12056 parts 1 – 3 for the UK market.

Drains should be considered in areas where water is supplied and any surface drainage required.

A trapped gully may be used to prevent foul air entering the building. The VortX range offer innovative new P and S trap designs that are lighter in weight and require less installation space than more traditional designs on the market.

Non-trapped gullies can be used with a P trap installed in the drainage systems.

## Load rating

It is important that the grating assemblies selected are able to withstand the anticipated load requirements for the application. All VortX gratings and rodding eyes have been tested in accordance with BS EN 1253.

### Loading Class K3 –

Pedestrian areas and wet room applications such as shower areas, bathrooms, swimming baths, leisure centres, balconies, retail areas, hotels, offices, schools, public buildings, hospitals, prisons, terraces and roof gardens.

### Loading Class L15 –

Areas with light vehicular traffic such as cycle ways and domestic drives.

## Flow Rate

Flow rate is the maximum amount of water (litres/second) which a gully will drain. This is dependent on a number of factors:

- Grating free area
- Sump capacity
- Body free area
- Gully design
- Outlet size

Also – if the gully is to be trapped or include a filter bucket.

## General principles

At low heads of water the flow rate of a gully is mainly determined by the grating free area.

Above 50mm heads of water is generally governed by the body free area, or the grating free area whichever is the smaller.

The catalogue tables highlight free area (cm<sup>2</sup>) for all the gratings and bodies.

## Pipework

The VortX range of gullies being made of cast iron and coated consistent to BS EN 877 – are the perfect solution to connect to the Ensign above & below ground system kitemark approved to BS EN 877 by standard couplings.

However, the VortX range can be connected to all pipework materials through a range of spigot adaptors and stepped couplings.

## Floor and Flooring

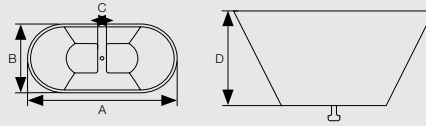
The type of gratings chosen will depend on the floor finishes such as ceramic tiles, concrete or sheet covering such as vinyl. Also those fitted in a finished floor area tend to be made of the attractive material nickel bronze or stainless steel and can be supplied polished for that extra aesthetic appeal.

The depth of structural slab and available space will dictate the selection of gullies, and the necessity for raising pieces and extension products. Installations with a damp proof membrane will require additional clamping collars.

# Accessories

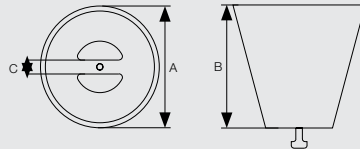


Funnels are available in both nickel bronze and stainless steel. These connect to circular and square gratings to receive discharge from sinks, refrigeration units, condensate and waste pipes etc.



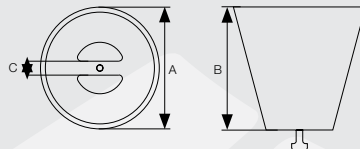
## Oval Funnel / VX-F305

SAP code	Material	A	B	C	D	WTKG
227116	Nickel Bronze	225	100	12	95	0.7



## Circular Funnel / VX-F300

SAP code	Material	A	B	C	WTKG
227117	Nickel Bronze	100	94	12	0.3



## Circular Funnel / VX-F310

SAP code	Material	A	B	C	WTKG
227115	Stainless Steel	100	94	12	0.2

## Security Screws / VX-F420

SAP code	Material	A	B	C	WTKG
233455	Stainless Steel	-	-	-	0.1

For securing gratings / rodding eyes



# Gratings & Rodding Eyes



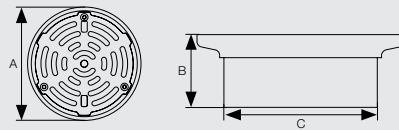
## Height Adjustable

Grating bodies are threaded NPSM supplied in both nickel bronze and stainless steel for typical use with tiles, marble, terrazzo, vinyl and resin floor finishes. Supplied with standard screw fixings – security screws are available which can be ordered separately.

All gratings and rodding eyes are L15 loading class and may be supplied in a polished finish (to order) and can be installed with a removable bottle trap (patent pending) where required.

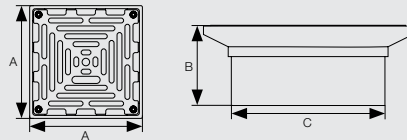
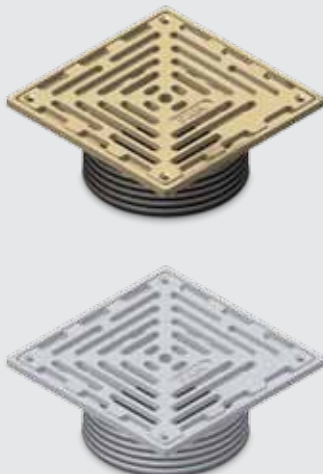
## Direct Fit

All VortX gratings and rodding eyes in both nickel bronze and stainless steel are available for direct fit connection to pipework when a gully body is not required. Ideal for connection to Ensign cast iron pipework to BS EN 877, however, the direct fit VortX gratings will connect to all pipe materials with the appropriate connectors. See page 22.



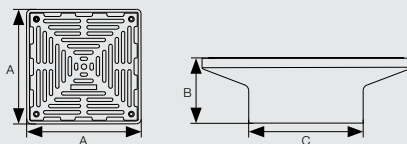
## 150mm Circular Grating (NPSM threaded or Direct Fit)

GEN code	Material	FIT	Finish		A	B	C	WTKG	Grating free area (cm <sup>2</sup> )	Load class
VX-F010	Nickel Bronze	NPSM	Standard 227049	Polished 234170	150	53	110	1.7	72	L15
VX-F010	Nickel Bronze	Direct Fit	Standard 233415	Polished 234171	150	53	110	1.5	72	L15
VX-F020	Stainless Steel	NPSM	Standard 227050	Polished 234172	150	53	110	1.5	72	L15
VX-F020	Stainless Steel	Direct Fit	Standard 233407	Polished 234173	150	53	110	1.5	72	L15

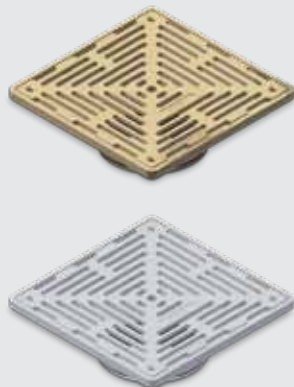


## 150x150mm Square Grating (NPSM threaded or Direct Fit)

GEN code	Material	FIT	Finish		A	B	C	WTKG	Grating free area (cm <sup>2</sup> )	Load class
VX-F030	Nickel Bronze	NPSM	Standard 227101	Polished 234174	150	57	110	1.3	119	L15
VX-F030	Nickel Bronze	Direct Fit	Standard 233408	Polished 234175	150	57	110	1.3	119	L15
VX-F040	Stainless Steel	NPSM	Standard 227102	Polished 234176	150	57	110	1.2	119	L15
VX-F040	Stainless Steel	Direct Fit	Standard 233421	Polished 234177	150	57	110	1.2	119	L15

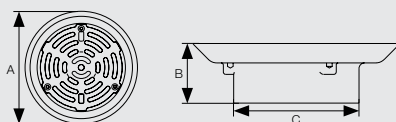


### 200x200mm Square Grating (NPSM threaded or Direct Fit)



GEN code	Material	FIT	Finish		A	B	C	WTKG	Grating free area (cm <sup>2</sup> )	Load class
VX-F050	Nickel Bronze	NPSM	Standard 227103	Polished 234178	200	62	110	3.1	148	L15
VX-F050	Nickel Bronze	Direct Fit	Standard 233423	Polished 234179	200	62	110	3.1	148	L15
VX-F060	Stainless Steel	NPSM	Standard 227104	Polished 234180	200	62	110	2.8	148	L15
VX-F060	Stainless Steel	Direct Fit	Standard 233424	Polished 234181	200	62	110	2.8	148	L15

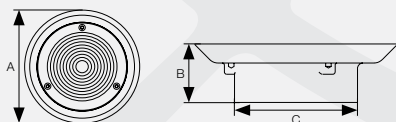
## Gratings for Vinyl Floors



### 150mm Circular Grating (NPSM threaded or Direct Fit)



GEN code	Material	FIT	Finish		A	B	C	WTKG	Grating free area (cm <sup>2</sup> )	Load class
VX-F070	Nickel Bronze	NPSM	Standard 227111	Polished 234195	150	53	110	2.3	72	L15
VX-F070	Nickel Bronze	Direct Fit	Standard 233434	Polished 234196	150	53	110	2.3	72	L15
VX-F080	Stainless Steel	NPSM	Standard 227112	Polished 234197	150	53	110	2.1	72	L15
VX-F080	Stainless Steel	Direct Fit	Standard 233435	Polished 234198	150	53	110	2.1	72	L15



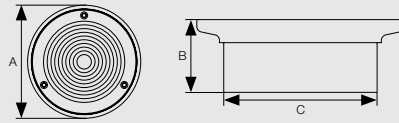
### 150mm Rodding Eye (NPSM threaded or Direct Fit)



GEN code	Material	FIT	Finish		A	B	C	WTKG	Grating free area (cm <sup>2</sup> )	Load class
VX-F075	Nickel Bronze	NPSM	Standard 227113	Polished 234199	150	53	110	2.4	N/A	L15
VX-F075	Nickel Bronze	Direct Fit	Standard 233438	Polished 234200	150	53	110	2.4	N/A	L15
VX-F085	Stainless Steel	NPSM	Standard 227114	Polished 234201	150	53	110	2.2	N/A	L15
VX-F085	Stainless Steel	Direct Fit	Standard 233439	Polished 234202	150	53	110	2.2	N/A	L15

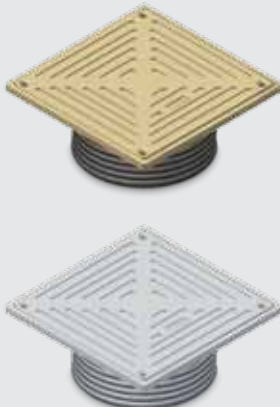
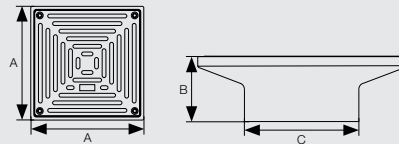


# Rodding Eyes



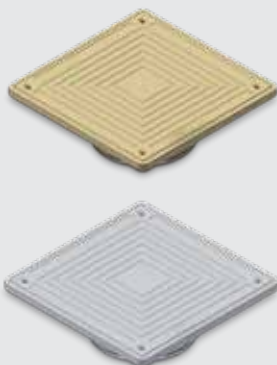
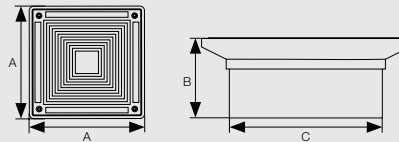
## 150mm Circular Rodding Eyes (NPSM threaded or Direct Fit)

GEN code	Material	FIT	Finish		A	B	C	WTKG	Load class
VX-F015	Nickel Bronze	NPSM	Standard 227105	Polished 234182	150	53	110	1.8	L15
VX-F015	Nickel Bronze	Direct Fit	Standard 233426	Polished 234183	150	53	110	1.8	L15
VX-F025	Stainless Steel	NPSM	Standard 227106	Polished 234184	150	53	110	1.6	L15
VX-F025	Stainless Steel	Direct Fit	Standard 233427	Polished 234185	150	53	110	1.6	L15



## 150x150mm Square Rodding Eyes (NPSM threaded or Direct Fit)

GEN code	Material	FIT	Finish		A	B	C	WTKG	Load class
VX-F035	Nickel Bronze	NPSM	Standard 227107	Polished 234187	150	57	110	1.4	L15
VX-F035	Nickel Bronze	Direct Fit	Standard 233428	Polished 234188	150	57	110	1.4	L15
VX-F045	Stainless Steel	NPSM	Standard 227108	Polished 234189	150	57	110	1.3	L15
VX-F045	Stainless Steel	Direct Fit	Standard 233430	Polished 234190	150	57	110	1.3	L15



## 200x200mm Square Rodding Eyes (NPSM threaded or Direct Fit)

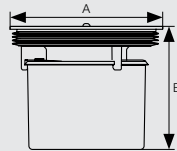
GEN code	Material	FIT	Finish		A	B	C	WTKG	Load class
VX-F055	Nickel Bronze	NPSM	Standard 227109	Polished 234191	200	62	110	3.4	L15
VX-F055	Nickel Bronze	Direct Fit	Standard 233431	Polished 234192	200	62	110	3.4	L15
VX-F065	Stainless Steel	NPSM	Standard 227110	Polished 234193	200	62	110	3.1	L15
VX-F065	Stainless Steel	Direct Fit	Standard 233433	Polished 234194	200	62	110	3.1	L15

# Inserts



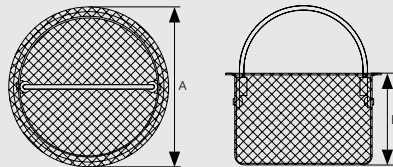
Within the VortX range we have developed a removable bottle trap (patent pending) which incorporates a twist lock fitting of dip tube and cup. The fastening operation is simplified and robust. Manufactured in ABS the bottle trap offers excellent chemical resistance.

The stainless steel filter basket offers a further solution to prevent debris blocking up the floor gully.



## 50mm Removable Bottle Trap (patent pending)

GEN code	SAP code	Material	A	B	WTKG
VX-F400	227128	ABS	111	92	0.1



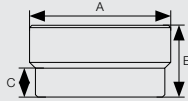
## Filter Basket

GEN code	SAP code	Material	A	B	WTKG
VX-F410	227138	Stainless Steel	102	60	0.2

# Raising Pieces

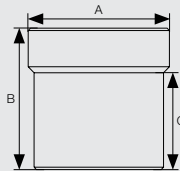


Supplied in grey epoxy coated cast iron, NPSM threaded and in three standard height sizes to provide additional adjustment for the gratings and rodding eyes.



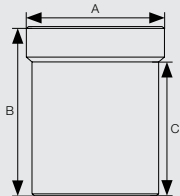
## Cast Iron Raising Pieces (NPSM threaded)

GEN code	SAP code	Size	A	B	C	WTKG
VX-F350	227121	20-40	120	62	25	0.8



## Cast Iron Raising Pieces (NPSM threaded)

GEN code	SAP code	Size	A	B	C	WTKG
VX-F350	227122	40-95	120	117	80	1.5



## Cast Iron Raising Pieces (NPSM threaded)

GEN code	SAP code	Size	A	B	C	WTKG
VX-F350	227123	95-140	120	155	120	2.0

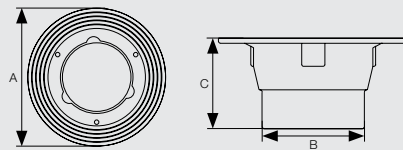
# Gully Bodies (Non-Trapped)



The VortX gully bodies are manufactured in cast iron, trapped or non-trapped, NPSM threaded to accept raising pieces and gratings.

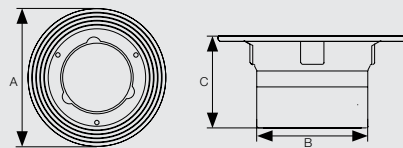
The VortX bodies have been designed to reduce the chance of build up of debris and provide improved flow. The unique flange design has 4 identification rings that give an excellent key to the waterproofing membrane or final floor finish and has dimples to assist drill location for fixing to the structural floor removing the requirement for a deck clamp.

All gully bodies are supplied in a grey epoxy coating consistent with BS EN 877 fittings. See page 21 for coating specification.



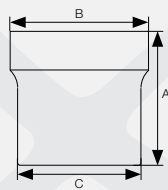
## Medium Sump Body (110mm Outlet)

GEN code	SAP code	A	B	C	WTKG
VX-F200	227119	205	110	100	2.4



## Medium Sump Body (Threaded 4" BSP)

GEN code	SAP code	A	B	C	WTKG
VX-F200	227118	205	121	100	2.6

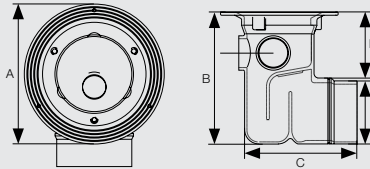


## Sumpless Body (110mm outlet)

GEN code	SAP code	Material	A	B	C	WTKG
VX-F210	227120	Cast Iron	124	120	110	1.6

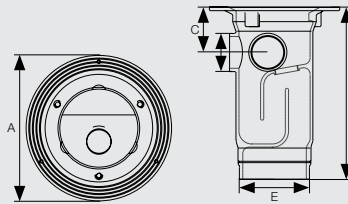
# Gully Bodies (Trapped)

New innovative "P" and "S" trap designs are lighter in weight and minimise the space required that is needed by the more traditional products on the market. Supplied with 110mm spigot outlets, three plugged 2" BSP inlets incorporating the same flange design features and can be installed with the standard clamp ring if required.



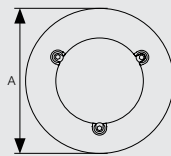
## P Trap (110mm outlet)

GEN code	SAP code	A	B	C	D	E	WTKG
VX-F220	227129	205	230	196	115	110	5.6



## S Trap (110mm outlet)

GEN code	SAP code	A	B	C	D	E	WTKG
VX-F230	227130	205	295	72	60	110	5.6



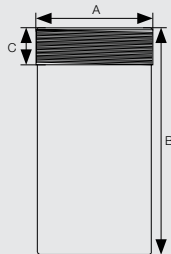
## Clamping Ring (to suit all gullies)

GEN code	SAP code	Material	A	B	WTKG
VX-F205	233440	Cast Iron	205	12	0.9

# Adaptors

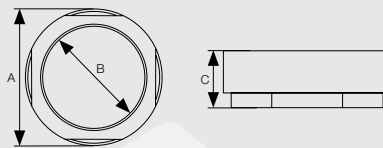


Manufactured in cast iron – BSP threaded which are available in a number of diameters to connect to the 4" BSP floor drain body utilising reducing bushes. The adaptors allow connection to cast iron, pvc and other materials.



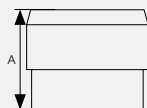
## Spigot Adaptor (BSP)

GEN code	SAP code	Size	A	B	C	WTKG
VX-F500	227131	110 to 4" (BSP)	110	215	35	2.7
VX-F500	234204	80 to 3" (BSP)	80	215	27	2.1
VX-F500	234205	60 to 2" (BSP)	60	215	27	1.3
VX-F500	234206	56 to 2" (BSP)	56	215	27	1.1



## Reducing Bushes (BSP)

GEN code	SAP code	Size	A	B	C	WTKG
VX-F510	227136	4" x 3" (BSP)	103	75	39	1.1
VX-F510	227137	4" x 2" (BSP)	103	50	40	1.9



## Transitional Connector / ED076

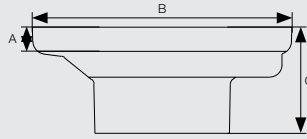
SAP code	CAD Ref	Dia	A	WTKG	Colour
191813	764	100mm	100	1.8	Grey

Adaptor from Ensign to Supersleve. See page 22.



# Plant Room Drainage

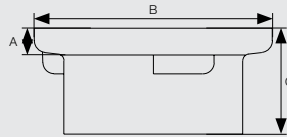
Floor gullies and traps from the Ensign range are suitable for plant room applications installed in a concrete screed/floor finish.



## Gully Inlet / ED060

SAP code	CAD Ref	Dia	A	B	C	WTKG
191825	604	100mm	20	215	87	2.4

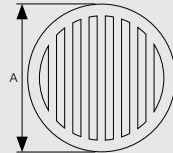
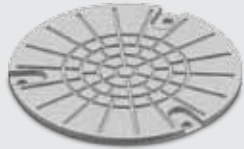
Can be supplied fitted with solid cover order ED066 (product code: 191852).



## Bellmouth / ED060

SAP code	CAD Ref	Dia	A	B	C	WTKG
191826	606	150mm	20	215	95	2.9

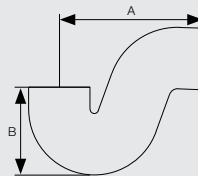
Can be supplied fitted with solid cover order ED066 (product code: 191853).



## Grating Plain / ED065

SAP code	CAD Ref	A	WTKG
191828	65	200mm	1.8

Loose grating for ED060. Maximum load 2.0 tonnes.



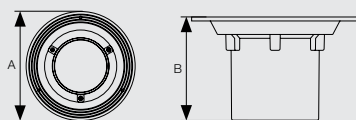
## Traps / Plain / ED034 / EF034

SAP code	CAD Ref	Dia	A	B	WTKG	Colour
191815	344	100mm	255	160	4.5	Grey
15666	344	100mm	255	160	4.5	Red

For access traps refer to Ensign catalogue.

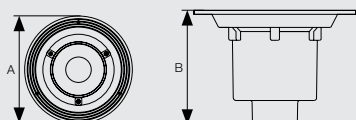
# Shower Drain Bodies

Manufactured in cast iron with grey epoxy coating incorporating the VortX styling flange design. The shower gullies are available in 110mm O.D. and 60mm O.D. horizontal spigots and 60mm O.D. vertical spigots. The shower gullies should be fitted with the VortX removable bottle trap (patent pending).



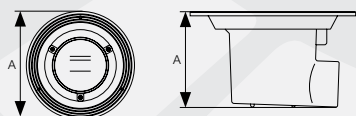
## Cast Iron Vertical Shower Drain

GEN code	SAP code	Size	A	B	WTKG
VX-S260	227125	110mm	210	130	2.4



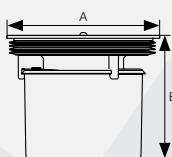
## Cast Iron Vertical Shower Drain

GEN code	SAP code	Size	A	B	WTKG
VX-S260	227126	60mm	210	149	2.4



## Cast Iron Horizontal Shower Drain

GEN code	SAP code	Size	A	B	WTKG
VX-S261	227127	60mm	210	121	2.5

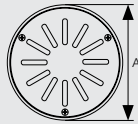


## 50mm Removable Bottle Trap (patent pending)

GEN code	SAP code	Material	A	B	WTKG
VX-F400	227128	ABS	111	92	0.1

# Gratings to suit Shower Drain Bodies

Decorative designs in stainless steel to suit tile and vinyl floor finishes. Can also be supplied with a polished finish to order.



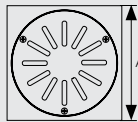
## 150 Circular Grating for Vinyl Floor

GEN code	Material	Finish		A	WTKG	Grating free area (cm <sup>2</sup> )	Load class
VX-S270	Stainless Steel	Standard 227132	Polished 234208	150	0.8	21	L15



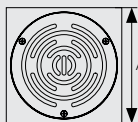
## 150 Circular Decorative Grating for Vinyl Floor

GEN code	Material	Finish		A	WTKG	Grating free area (cm <sup>2</sup> )	Load class
VX-S270	Stainless Steel	Standard 227133	Polished 234209	150	0.7	41	L15



## 150 Square Grating for Tiled Floor

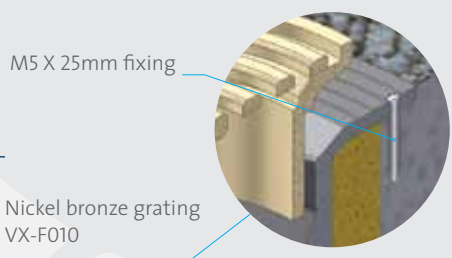
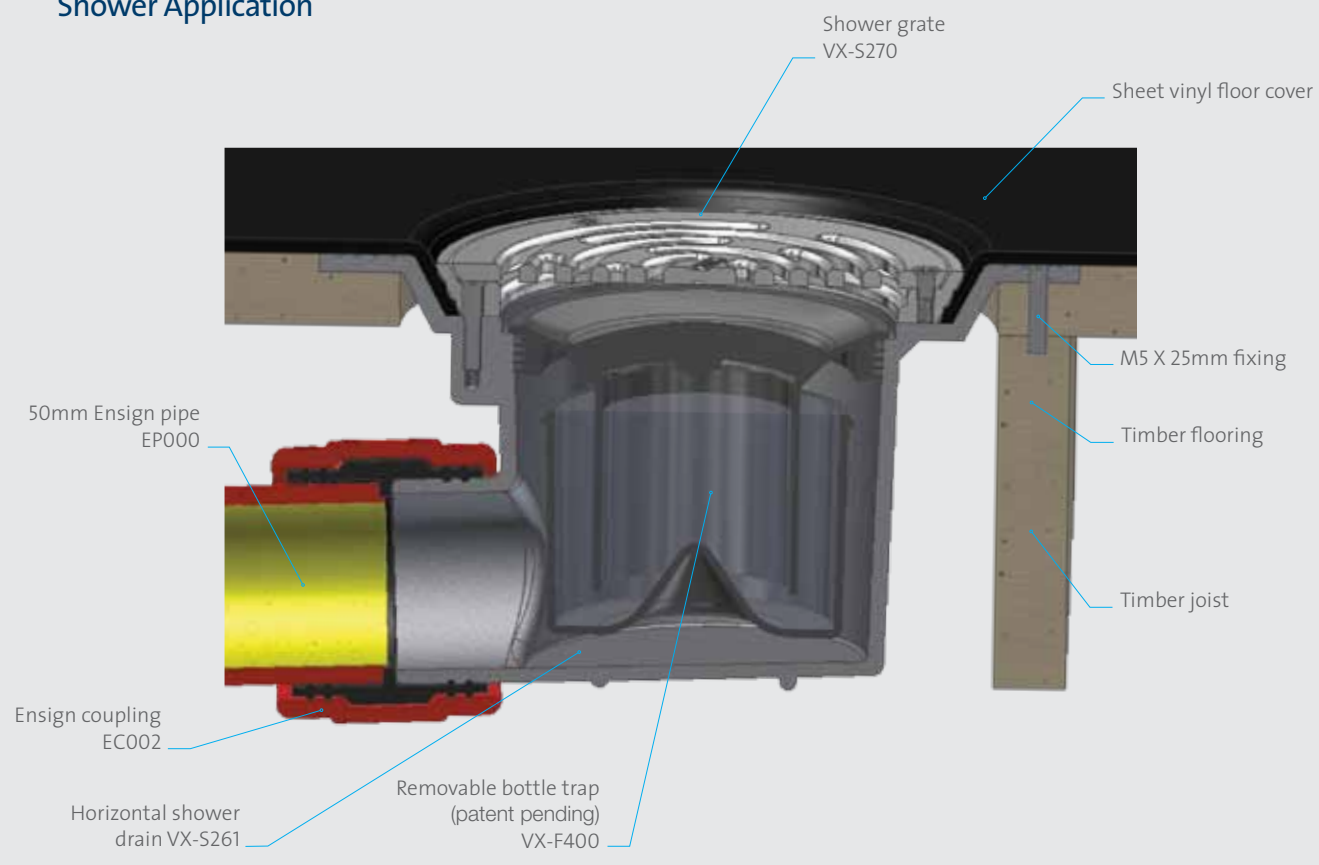
GEN code	Material	Finish		A	WTKG	Grating free area (cm <sup>2</sup> )	Load class
VX-S271	Stainless Steel	Standard 227134	Polished 234210	150	1.0	21	L15



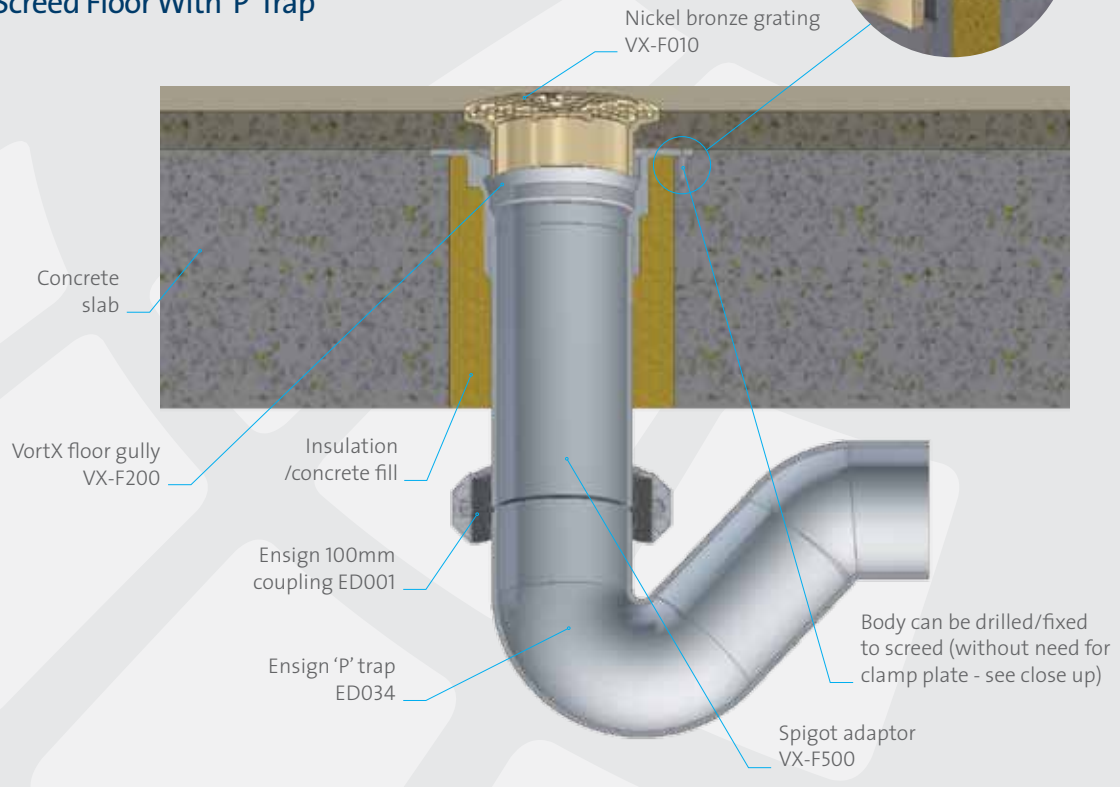
## 150 Square Decorative Grating for Tiled Floor

GEN code	Material	Finish		A	WTKG	Grating free area (cm <sup>2</sup> )	Load class
VX-S271	Stainless Steel	Standard 227135	Polished 234211	150	0.9	41	L15

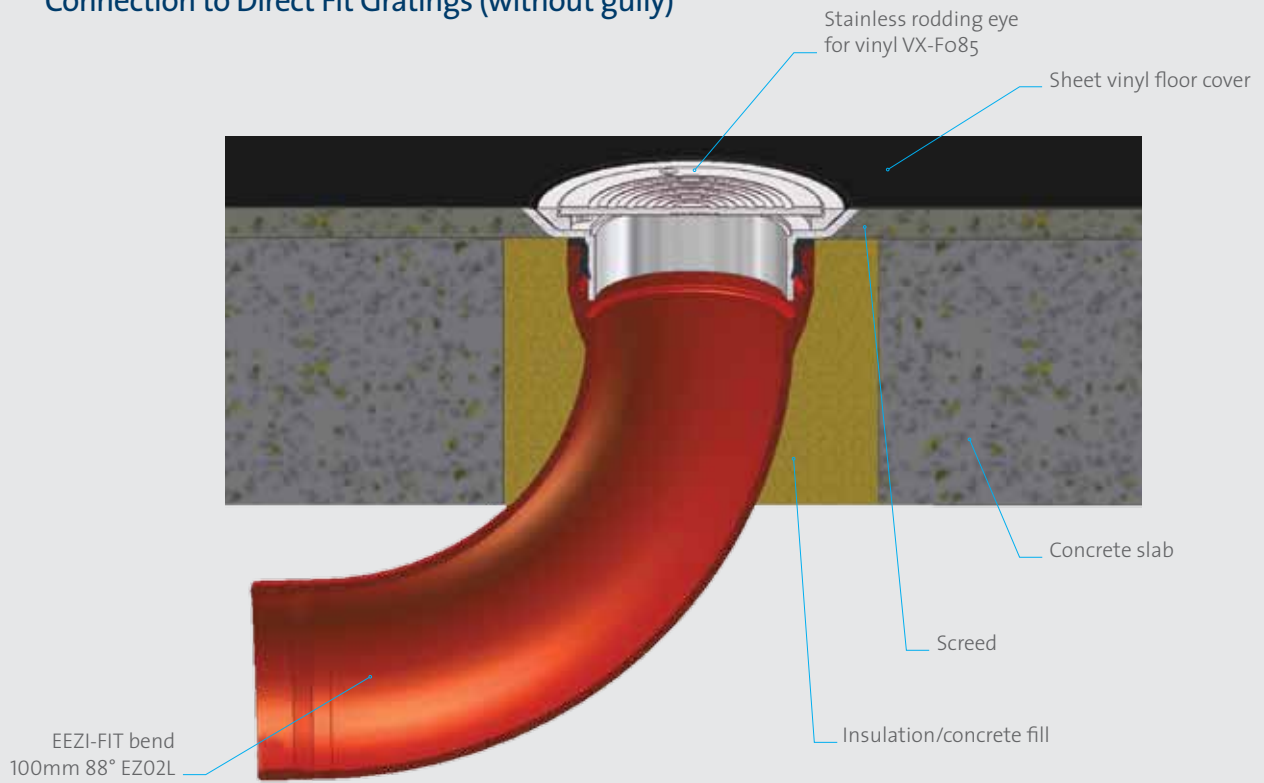
### Shower Application



### Screed Floor With 'P' Trap

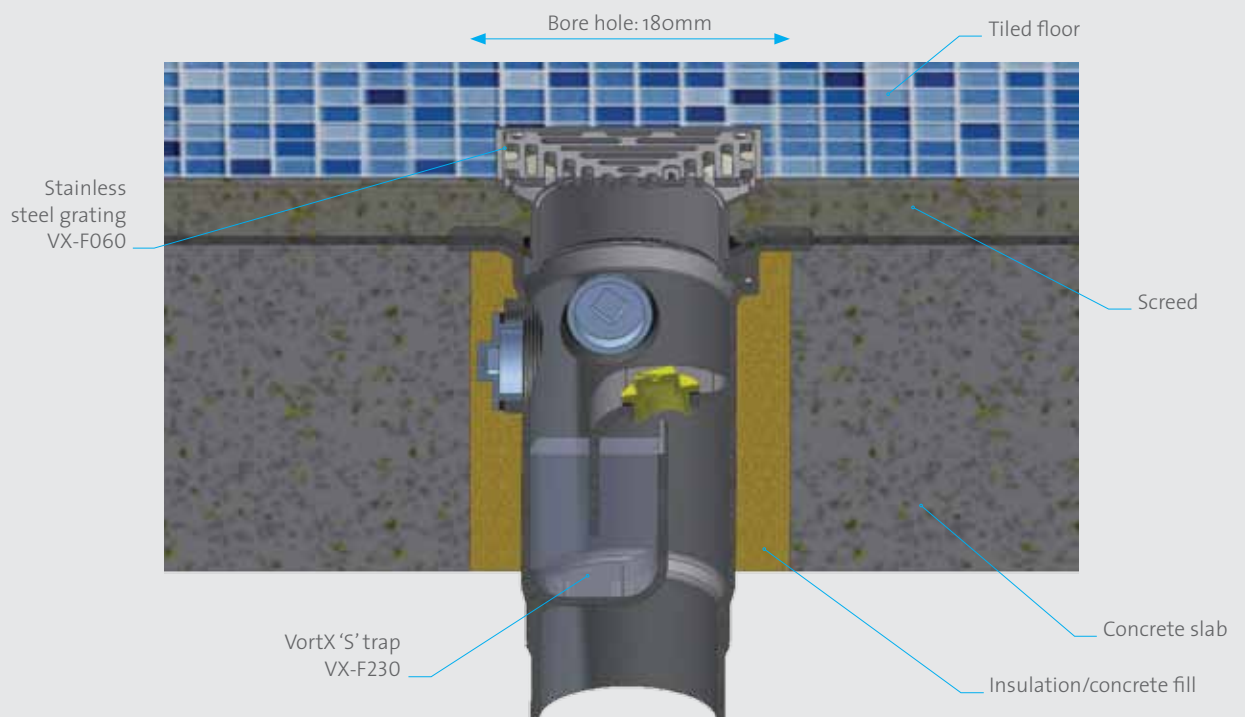


### Connection to Direct Fit Gratings (without gully)

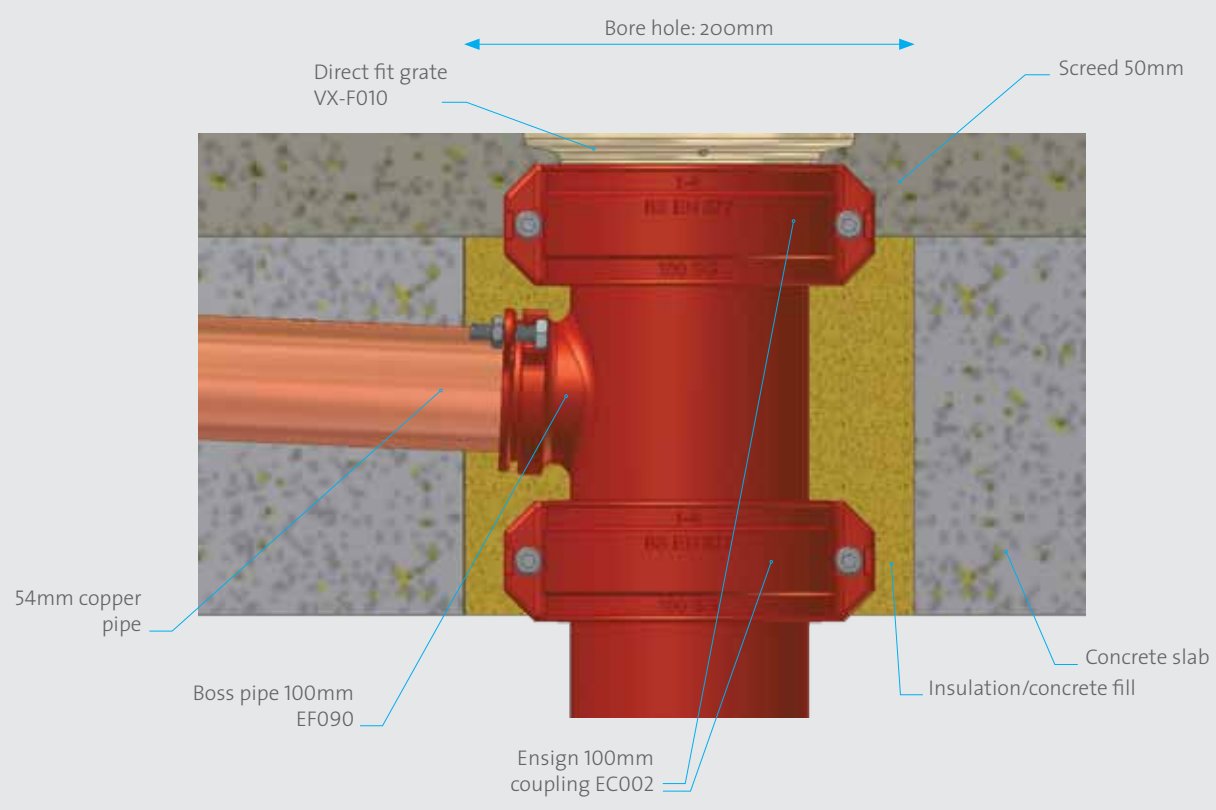


### New 'S' Trap (for tiled floor)

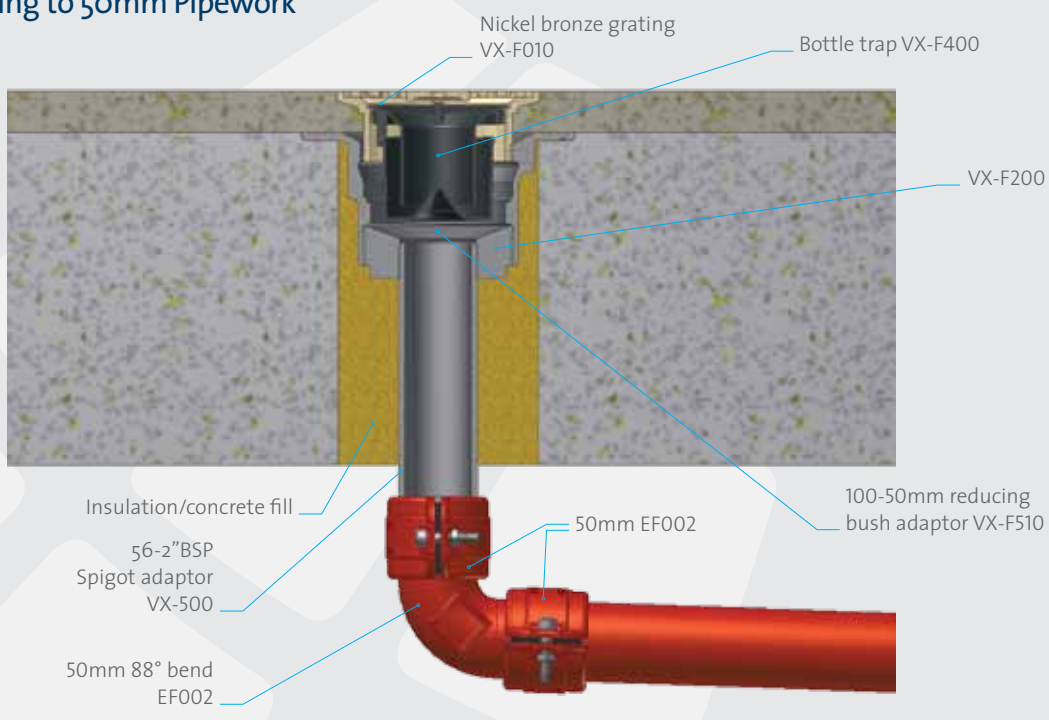
Highlighting space saving opportunities for diameter of bore hole.



### Drain with Side Inlet

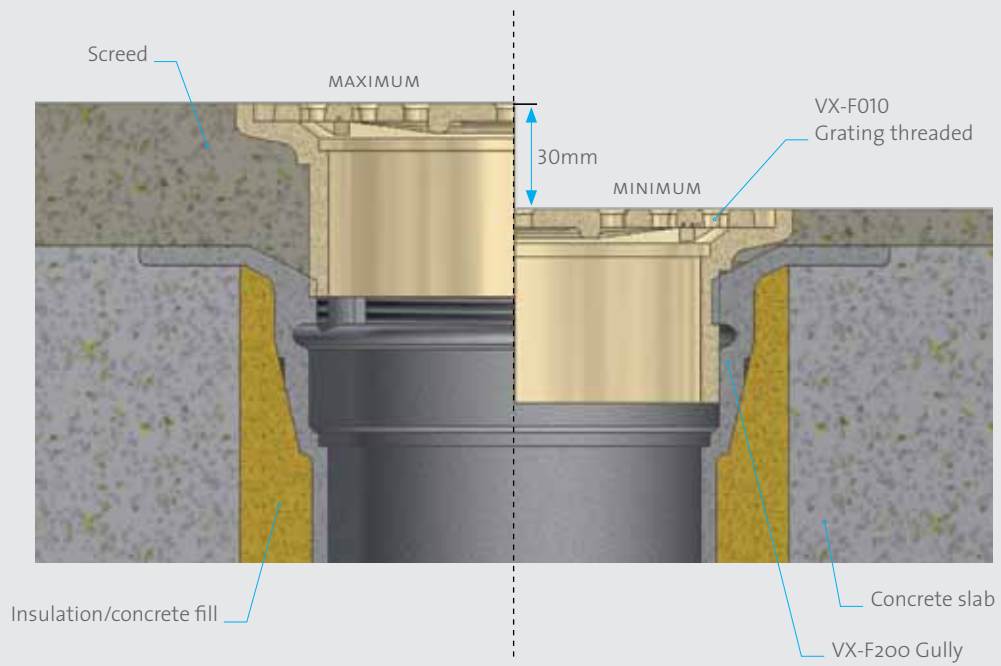


### Drain Connecting to 50mm Pipework

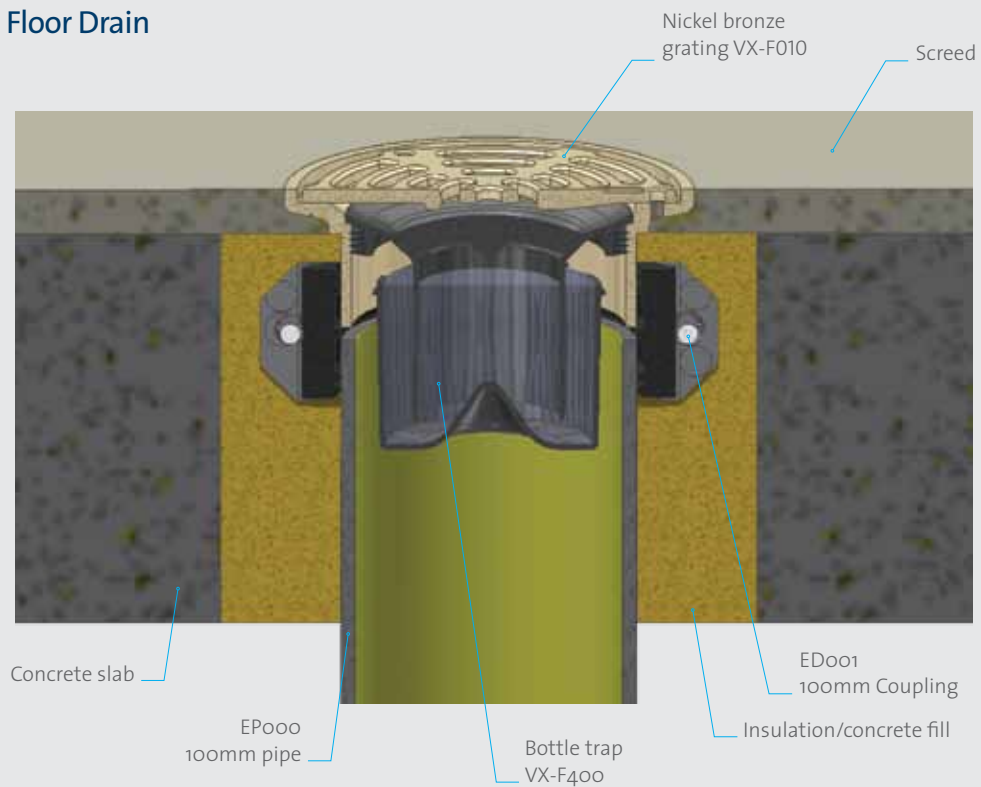




## Adjustable Grating Height



## Direct Fit Floor Drain



# Materials & Specifications

## Stainless Steel 304

Used for gratings, grating bodies, rodding eyes, funnels, filter buckets and fixings, available in a satin or polished finish.

A corrosion-resistant material that can generally be kept clean using soap & warm water and wiping dry.

Do not treat with abrasive cleaners i.e. scouring pads or wire wool as these will potentially damage the surfaces and cause rusting.

## Nickel Bronze – BS 1400

Available in a standard finish for gratings, grating bodies, rodding eyes and funnels. Can also be supplied in a polished finish.

## ABS

Used for the removable bottle trap (patent pending) offering excellent chemical resistance.

## Rubber – EPDM EN681

Used for seals and gaskets

## Cast Iron – BS EN 1561

Used for gullies, clamping rings, spigot adaptors, reducing bushes, and extension pieces. An industry recognised material that offers robust, long lasting floor drainage solutions.

## Cast Iron Coating

Castings are coated internally and externally with a grey epoxy coating consistent with fittings coated to BS EN 877. The coating is applied to comply with clauses 4.6.1, 4.6.2 and 4.6.3 of BS EN 877 performing to high standards of adhesion, chemical resistance Ph1–Ph13, and temperature cycling.

The coating performs to A1 classification to EN 13501-1 and therefore LUL (London Underground) compliant.

## Product Marking

All VortX components carry the Saint-Gobain bridge logo.



Typical information on components depending on items.

<b>EN 1253</b>	{Standard Reference}
<b>1-XX</b>	{Manufacturer Site}
<b>01/09/12</b>	{Period of Manufacture}
<b>DN100</b>	{Nominal Diameter}
<b>L15</b>	{Loading Class}

## NBS Specification

R11 Foul drainage above ground

315 Floor Drains

Typical specification

**Manufacturer:** Saint-Gobain PAM UK

**Product ref:** PAM VortX

**Floor finish:** Vinyl sheet

**Body type:** Cast iron medium sump

**Grating cover:** 150mm circular grating

**Material:** Nickel bronze

**Outlet type:** 4" BSP

**Accessories:** 110 to 4" BSP spigot adaptor

# Other Information

## Maintenance

All trapped and un-trapped floor gullies require periodic inspection and maintenance.

Attention should be given to the integrity of seals and fixings.

The trapped gullies should have the grate and bottle trap removed and built up grime and silt cleaned away. The grate should be removed from the gully body and cleaned using warm soapy water with a sponge or bristle brush removing any grime within the grating slots.

## Air pressure testing

As with any installation the testing of the floor gully is essential for this to be carried out prior to the floor finishes including screed being laid. We would recommend that the following procedure as per BS8005:1987 part 1 section 5.1 is used.

All joints/seal faces should be clean and free from dust and debris.

If using a clamping flange with a DPM, please use a suitable thread sealant such as PTFE tape or silicone mastic (not supplied) around the washers and bolts that retain the clamp into the body.

Use PTFE tape or silicone mastic (not supplied) on the thread from the grating body that connects to the gully body and screw the grating body in a minimum of 2 complete rotations into the main body.

## Side inlet connections

For side inlet connections on the “P” trap VX-F220 & “S” trap VX-F230 bodies, these are provided by a 2”BSP female thread, which comes blanked off when supplied with a 2”BSP plug (with rubber washer). Ensure that these are tightened prior to installation of the body. For connections to alternative materials ie copper, muPVC or ABS etc please use a BSP adaptor and a PTFE tape to seal the thread.

Side inlets can also be achieved on other gully bodies / direct fit gratings by using boss pipes from Ensign EF090 – EF092 and EEZI-FIT EZ090 – EZ093. See page 19.

## Connections to Pipe systems

	Material Type						
	Cast Iron					PVC/HDPE	Clay
	Ensign soil BS EN 877 – 100mm	Ensign drain BS EN 877 – 100mm	EEZI-FIT BS EN 877 – 100mm	Timesaver soil BS416 – 100mm	Timesaver drain BS437 – 100mm	BS46600 / BS EN 1401 – 110mm	BS EN 295-1 100mm
<b>Floor Gully Bodies</b>							
VX-F200 (110 OD)	EC002	ED001	EZ001	GT01	TD02	EC002/GT01	ED001/ED076
VX-F210 (110 OD)	EC002	ED001	EZ001	GT01	TD02	EC002/GT01	ED001/ED076
VX-F220 (110 OD)	EC002	ED001	EZ001	GT01	TD02	EC002/GT01	ED001/ED076
VX-F230 (110 OD)	EC002	ED001	EZ001	GT01	TD02	EC002/GT01	ED001/ED076
VX-F200 (4” BSP)	VXF-500/ EC002	VXF-500 & ED001	VXF-500 & EZ001	VXF-500 & GT01	VXF-500 & TD02	VXF-500/ EC002/GT01	VXF-500/ ED001 & ED076
<b>Shower Gully Bodies</b>							
VX-S260 (110 OD)	EC002	ED001	EZ001	GT01	TD02	EC002/GT01	ED001 & ED076
VX-S261 (60 OD)	EC002	–	–	GT01	–	EF071R	–
<b>Direct Fit Gratings</b>							
NB/S/S	EC002	ED001	EZ001	GT01	TD02	EC002/GT01	ED001 & ED076

# ASHWORTH

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The logo for Ashworth, featuring the word "Ashworth" in a bold, blue, sans-serif font. The text is contained within a light grey rectangular box.

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