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frost
by **drainfast**



02

**INSTALLATION &
PRODUCT GUIDE**

SIMPLIFYING DRAINAGE SELECTION AND INSTALLATION

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About Frost

For over 40 years our roof and floor drains have been successfully installed in a wide range of commercial and public buildings.

Drainfast Ltd acquired Frost Drainage in 2018 and continues to manufacture the quality products to the same manufacturing standards and level of quality as before. All products are now available to order directly through Drainfast who hold good stocks in the UK.

Manufactured in cast iron, nickel bronze and stainless steel, our drainage products are designed to perform reliably in all environmental conditions for many years. Used as an integral part of the building's drainage system, Frost drainage products can be adapted to fit with a variety of pipe materials, floor finishes and roof structures.

Specifiers can select with confidence and contractors can be assured of maintenance free, durable drainage products.



About Drainfast

Visit
frostdrainage.com

Call Drainfast
01730 774000

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Drainfast Ltd is one of the UK's leading providers of specialist drainage supplies and related products. Since 2003, Drainfast has become well established in the groundworks marketplace with a reputation for rapid delivery and unbeatable service. Operating from strategic locations in the South, London and the Midlands, our vision is that Drainfast will be the first choice in the mind of every buyer.

Our professional team is passionate about the groundworks industry, delivering personal service and attention to all our customers every day. We hold large stocks of core products and are happy to negotiate on prices, offering you the flexibility you need. Our understanding of the Civils & Groundworks environment is from a unique standpoint; we've experienced it ourselves. We've transitioned from our roots in providing Groundworks & Installations, through Plant Hire to the Civils Contractors, to where we are today; the cutting edge Groundworkers supply partner of choice. This is why you'll find us understanding and informed about your industry.

vision 

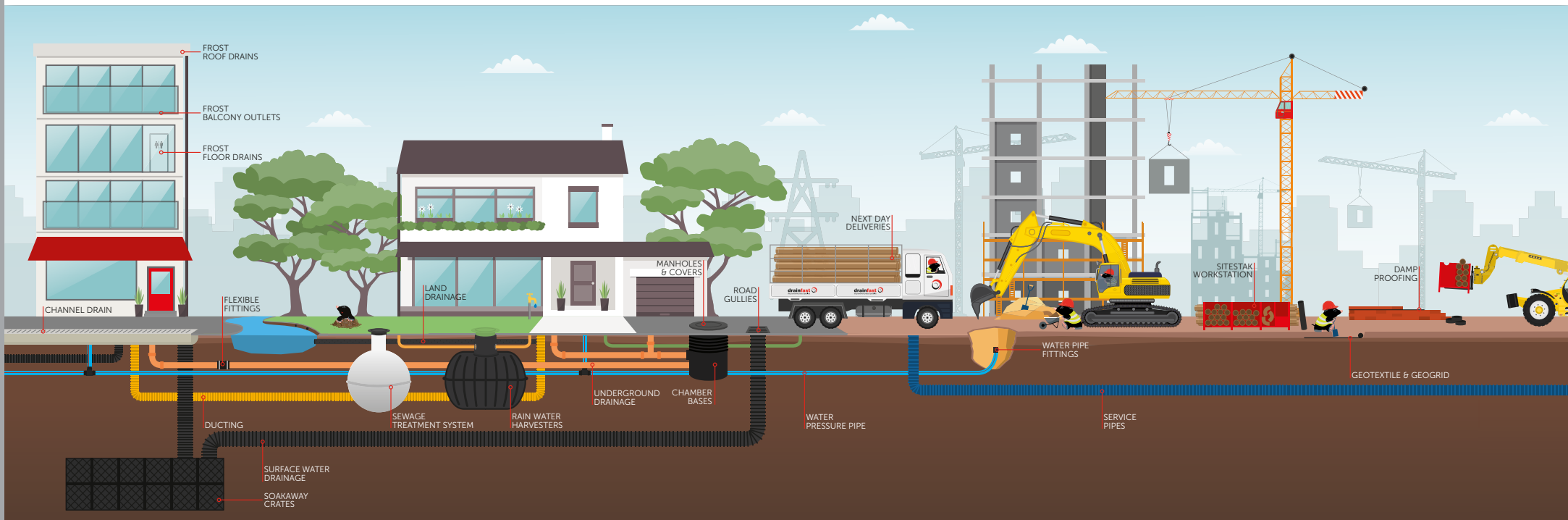
Our core range of products, carefully developed and chosen for cost-saving and quality. The range is built on our industry knowledge and hands-on experience of customers' needs. Vision products deliver the value and quality that customers have come to expect from Drainfast.

 **SITE STAK**

Mess on site doesn't just look untidy. It leads to wasted time, wasted materials and wasted money! SiteStak enables Groundworks Contractors to organise their materials saving time, reducing waste and improving safety.

frost

For over 40 years our roof drains, balcony outlets and floor drains have been successfully installed in a wide range of commercial and public buildings. You can choose Frost products with confidence, assured of maintenance free, durable drainage products.



Technical Advice & Support

WARRANTY

Subject to Drainfast Ltd's Terms and Conditions, our products are supported by a 12 month warranty.

INTERNATIONAL STANDARDS COMPLIANCE

Frost design and products accredited to:

Stainless Steel BS EN 10088-1:2005
Grade 1.4301 (304) or (316) if specified
Average recyclable content 75%-85%

Nickel Bronze BS 1400
Greater than 80% recycled material
100% recyclable

Cast iron Grade EN-GJL-150 to
BS EN 1561:1997
80%-97% recycled materials
100% recyclable

Ductile iron BS EN 1563 and
BS EN 1564
Greater than 80% recycled material
100% recyclable

Aluminium Grade LM6 to
BS EN 1559-4:1999
Greater than 90% recycled material
100% recyclable

Leadership in Energy and
Environmental Design LEED
compliant products

Space saving and economy can be achieved where no drainage body is required by using our direct connection gratings and rodding eyes.



Advantages of the Frost System

MODULAR DESIGN

Our concept is simple and our final products are assembled from a largely common pool of component parts.

Each complete assembly consists of a top, drainage body and where applicable membrane clamps, deck clamps and extensions as required.

Our entire range of roof drains, floor drains and rodding eyes feature only 10 basic bodies to ensure product economy and flexibility.

MULTI - ADJUSTABLE INSTALLATION LEVELS

Each installation on site requires speed, accuracy and adjustability.

Our threaded products are designed to allow adjustment of the drain body and drain top to achieve correct finished floor height for all common varieties of floor finish. Further, increased degrees of adjustment to suit thicker floor and roof structures can be achieved with extension pieces and spigot adaptors. This ensures ease of installation and accuracy to match individual site requirements.

Case Studies

Wembley Stadium –
London



Stansted Airport –
London

1 Canada Square,
Canary Wharf –
London



British Library –
London

Gatwick Airport –
London



Royal Infirmary –
Manchester

Bank of America –
London



Royal Lancaster Hotel –
London

Case Studies

Chep Lap Kok International
Airport – Hong Kong



Muscat International
Airport – Oman



Hamad Medical City –
Doha, Qatar



Villas at Mirdif –
Dubai, UAE



Gazprom HQ –
Moscow



Majlis Building –
Oman



Arab Museum of Modern Art
– Doha, Qatar



Ruwais Housing Complex –
Abu Dhabi, UAE

FLOOR DRAINS

Visit
frostdrainage.com

Call Drainfast
01730 774000

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Nickel bronze circular grating in an in situ floor



Ductile iron circular grating in a concrete floor



Stainless steel grating in a tiled floor



Polished nickel bronze circular grating in a vinyl floor

SUITABLE FOR ALL FLOOR FINISHES AND APPEARANCES

Frost gratings and covers are designed to suit the wide variety of modern floor finishes such as ceramic tiles, resin floors, sheet vinyl and concrete. We offer Nickel Bronze, Stainless Steel etc to allow aesthetic choice.

MAINTENANCE FREE AND DURABLE

Frost drainage products are designed to be maintenance free and to last for the life of the building. Original visual appearance can be maintained by appropriate normal cleaning.

EASY TO USE

Our products are quick and easy to install and have the flexibility in fitting, function and appearance to meet varying individual site requirements.

Our service includes full technical advice and support which is always available from our skilled engineers. We understand the realities of product selection, product procurement and the practicalities of installation.

Our **product comparator** on our website at frostdrainage.com allows the rapid conversion of others products into our own products. It also has a **unique drainage assembly configurator** that allows a specifier to determine which Frost drain will be the most suitable using a series of simple step by step questions.

COMPETITIVELY PRICED

Our products are efficient, cost effective and competitively priced. Please ask us for a quotation.

Floor Drains - Design Considerations

Factors including size, shape, appearance and anticipated drainage requirements need to be taken into account in planning effective drainage solutions. Design is usually the responsibility of consulting engineers familiar with the floor construction, floor finish, piping systems, operations and function intended for particular building areas.

BUILDING REGULATIONS / STANDARDS

International regulations and local building codes must be observed for all sanitary and other drainage installations so it is recommended these are considered as the first step.

As a matter of good practice drains should be considered for any location where water is supplied or where surface drainage must be accommodated.

To prevent foul air from entering a building a trapped gully may be used and various types are available Bell, Bottle, P and S. In other cases a non-trapped gully may be used with a trap installed in the drain line.

WEIGHT BEARING AND LOAD RATING

As an integral part of the floor it is vital gratings and assemblies withstand all anticipated loads.

This catalogue shows the load rating class for each grating, cover or gully assembly based on BS EN 1253, as follows:

Loading K3 (Pedestrian Only)

Areas for foot traffic only, such as washrooms, shower areas, hotels, schools, museums, retail centres, swimming baths, leisure centres, balconies, terraces and roof gardens.

Loading L15 (Light Industrial)

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

Loading M125 (Heavy Industrial)

Areas with vehicular traffic, such as car parks, factories, warehouses and workshops.

FLOW RATE

Flow rate is the maximum amount of water (litres/second) which a gully will drain and is influenced by several factors such as grating free area (i.e. gaps in the grating), sump capacity, body free area, design of the gully, outlet size, and additional features and accessories such as filter buckets and traps.

At low heads of water the flow rate of a gully is mainly governed by the size of grating free area. At heads of water above 50mm flow rate is governed by the body free area, or the grating free area, whichever is the smaller.

Selected top size (i.e. grate free area), gully outlet size and piping system size all relate to each other and should be within recognised parameters.

PIPEWORK

The type and size of pipework in an installation is fundamental to the correct selection of gullies. Frost drainage gullies can be connected to all pipework in general use.

FLOOR AND FLOORING

Floor construction type has a direct influence upon appropriate drainage selection and so should be established at the outset.

The depth of the structural slab and available space will influence the selection of gullies, while selection of an extension may be necessary to bring the grating or cover to finished floor level.

Installations with a drainage membrane will normally require the use of gullies with a membrane clamping collar.

Drains located in pedestrian surfaces or access routes must be disabled compliant.

Different kinds of floor finishes, such as concrete, epoxy resin, ceramic tiles or sheet vinyl will influence the type of grating or cover to be selected.

MATERIALS AND APPEARANCE

Strength, corrosion resistance and appearance are important considerations when making drainage selections

Finished floor areas

Gullies with attractive gratings or covers made of satin nickel bronze, polished nickel bronze or stainless steel are for use in areas where they contribute to the aesthetic appeal of an area.

Unfinished floor areas

Ductile iron gratings, whilst extremely durable and visually acceptable are best suited in unfinished and/or industrial settings such as service areas or for restoration projects to match period architecture.

INTERNATIONAL STANDARDS

Satin Nickel Bronze and Polished Nickel Bronze to BS1400.

Stainless Steel to BS EN 10088-1:2005 Grade 1.4301 (304) or Grade 1.4401 (316) if specified.

Ductile Iron to BS EN 1563 & 1564 Cast with the ductility of steel and more than doubling the tensile strength of cast iron.

Floor Drains - Installation Guide



1. PREPARATION

We recommend that components are trial-assembled before installation to double check compatibility. If used, screw the spigot adaptor into the body outlet using a suitable sealant to ensure a watertight joint.

2. MEASURE DISTANCE TO FINISHED FLOOR LEVEL

Ensure the distance between the finished floor level and the top of pipework is sufficient to fit the completed floor assembly.

This distance should enable the complete assembly (with extensions, if applicable) to be installed so that the top face of the grating or cover finishes at the finished floor level.

If using side inlets ensure their position allows a fall to the gully. The body must be installed with the top of the flange at or below membrane level.



3. INSTALL BODY

Connect body (with spigot adaptor if applicable) to the pipework. All our bodies can be used in solid floors.

Use a wide flanged body for timber decks. The flange can be drilled for fixings or use an underdeck clamp (33.9610 or 33.9620) to fix assembly. If the deck is recessed for the flange, consider the need to reinforce the cut timber edge.

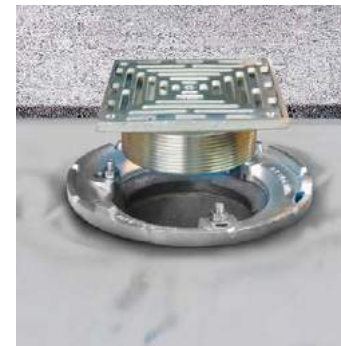


4. DRESS MEMBRANE AND FIT CLAMP

If used, dress the membrane over the flange to the edge of the body sump in accordance with membrane manufacturer's instructions ensuring the membrane does not restrict the outlet or threads for the grating.

Bolt the membrane clamping collar to the body. Thin membranes may require the screw length to be reduced.

Note: some clamps are reversible to increase height adjustability to the finished floor level. In some cases, e.g. large sump bodies (31.1024 etc), the membrane clamp must be used as it connects the grating to the body.



5. INSTALL GRATING

Fit grating or rodding eye to the body ensuring the surface is at finished floor level using the height adjustability of the top. With square gratings ensure body is rotated so any height adjustment of the grating allows it to align with tiles or paving.

Use screws provided with cam type height adjustment to lock the grate at the required level.



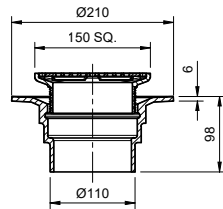
6. FINISH FLOOR

Lay floor screed and apply the floor finish around the grating or cover. Fit removable accessories, e.g. funnels, sediment buckets etc. If sheet vinyl flooring or similar is used dress the finish over the grating bezel and clamp using the in-built clamp ring.

Common Floor Drain Assemblies - Height Adjustable

An extensive range of height adjustable gratings and BSP and spigot outlet bodies allow for a vast range of drainage solutions. The assemblies below are configured as the most frequently used. Many more assemblies can be configured.

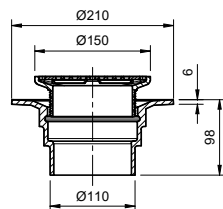
Pages 19-41 assemblies can be trapped by the addition of a bottle trap 31.9510.
Note 1 - smaller outlet sizes 2" & 3" available for threaded outlets.
Note 2 - membrane clamp & collar optional extra. 31.2030.



Frost floor drain 150mm square grating with small sump body and spigot outlet

See Note 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0320 £68.10	31.0325 £128.50	100mm	L15

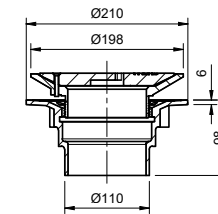


Frost floor drain 150mm circular grating with small sump body and spigot outlet

See Note 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0350 £68.10	31.0355 £128.50	100mm	L15

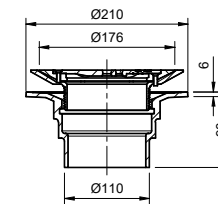
Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 200mm circular ductile iron grating with small sump body and spigot outlet

See Note 2

Ductile Iron	Outlet Size	Grate Load Rating
31.0367 £35.40	100mm	L15

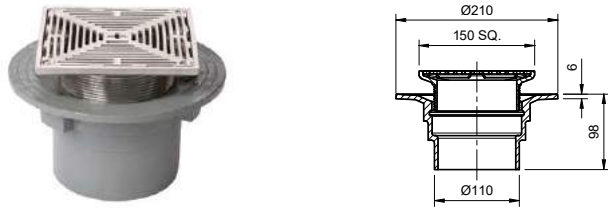


Frost floor drain 178mm circular grating for vinyl floors with small sump body and spigot outlet

See Note 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0370 £88.00	31.0375 £148.40	100mm	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm Slimline Heel Proof slotted grating with small sump body and spigot outlet

See Note 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
-	31.0385 £146.30	100mm	L15



Frost floor drain 150mm square grating with hinged cover plate with small sump body and spigot outlet

See Note 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0391 £74.45	31.0395 £135.50	100mm	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm square grating with small sump body and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0621 £80.90	31.0625 £141.30	BSP 4	L15

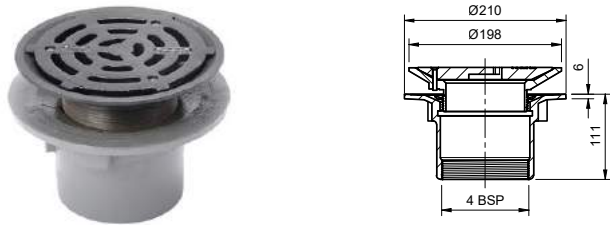


Frost floor drain 150mm circular grating with small sump body and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0651 £80.90	31.0655 £141.30	BSP 4	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 200mm circular ductile iron grating with small sump body and threaded outlet

See Note 1 & 2

Ductile Iron	Outlet Size	Grate Load Rating
31.0667 £48.20	BSP 4	L15



Frost floor drain 178mm circular grating for vinyl floors with small sump body and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0671 £100.80	31.0675 £161.20	BSP 4	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm Slimline Heel Proof slotted grating with small sump body and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
-	31.0685 £159.10	BSP 4	L15



Frost floor drain 150mm square grating with hinged cover plate with small sump body and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0691 £87.25	31.0695 £148.30	BSP 4	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm square grating with medium sump body and spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0121 £87.80	31.0125 £148.20	100mm	L15



Frost floor drain 150mm circular grating with medium sump body and spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0151 £87.80	31.0155 £148.20	100mm	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 200mm circular ductile iron grating with medium sump body and spigot outlet

Ductile Iron	Outlet Size	Grate Load Rating
31.0167 £55.10	100mm	L15



Frost floor drain 178mm circular grating for vinyl floors with medium sump body and spigot outlet

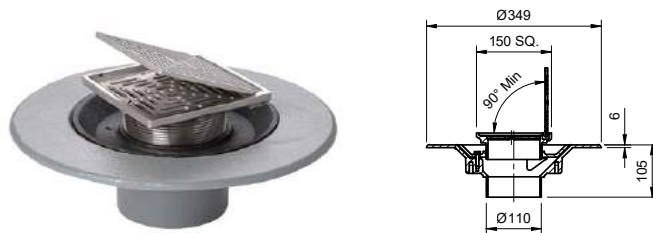
Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0170 £107.70	31.0175 £168.10	100mm	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm Slimline Heel Proof slotted grating with medium sump body and spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
-	31.0185 £166.00	100mm	L15



Frost floor drain 150mm square grating with hinged cover plate with medium sump body and spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0191 £94.15	31.0195 £155.20	100mm	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm square grating with medium sump body and threaded outlet

See Note 1

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0421 £100.70	31.0425 £161.10	BSP 4	L15



Frost floor drain 150mm circular grating with medium sump body and threaded outlet

See Note 1

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0451 £100.70	31.0455 £161.10	BSP 4	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 200mm circular ductile iron grating with medium sump body and threaded outlet

See Note 1

Ductile Iron	Outlet Size	Grate Load Rating
31.0467 £68.00	BSP 4	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm Slimline Heel Proof slotted grating with medium sump body and threaded outlet

See Note 1

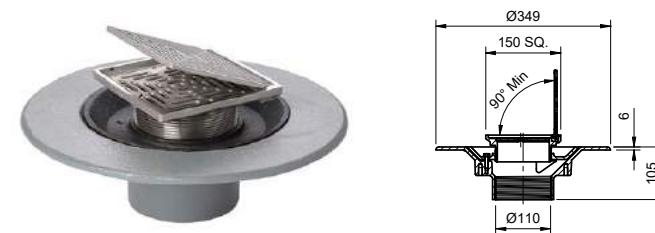
Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
-	31.0485 £178.90	BSP 4	L15



Frost floor drain 178mm circular grating for vinyl floors with medium sump body and threaded outlet

See Note 1

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0471 £120.60	31.0475 £181.00	BSP 4	L15

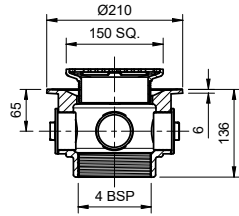


Frost floor drain 150mm square grating with hinged cover plate with medium sump body and threaded outlet

See Note 1

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0491 £107.05	31.0495 £168.10	BSP 4	L15

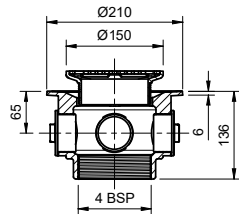
Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm square grating and medium sump body with side inlets and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0721 £83.10	31.0725 £143.50	BSP 4	L15

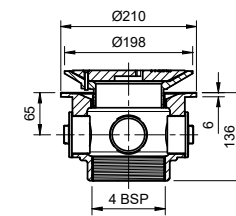


Frost floor drain 150mm circular grating and medium sump body with side inlets and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0751 £83.10	31.0755 £143.50	BSP 4	L15

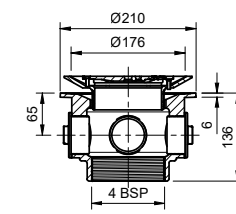
Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 200mm circular ductile iron grating and medium sump body with side inlets and threaded outlet

See Note 1 & 2

Ductile Iron	Outlet Size	Grate Load Rating
31.0767 £50.40	BSP 4	L15

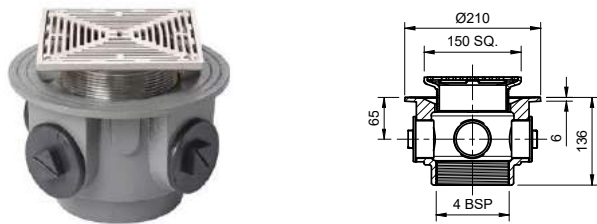


Frost floor drain 178mm circular grating for vinyl floors and medium sump body with side inlets and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0771 £103.00	31.0775 £163.40	BSP 4	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm Slimline Heel Proof slotted grating and medium sump body with side inlets and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
-	31.0785 £161.30	BSP 4	L15



Frost floor drain 150mm square grating with hinged cover plate and medium sump body with side inlets and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0791 £89.45	31.0795 £150.50	BSP 4	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm square grating with large sump body and spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0220 £142.80	31.0225 £203.20	100mm	L15



Frost floor drain 150mm circular grating with large sump body and spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0250 £142.80	31.0255 £203.20	100mm	L15

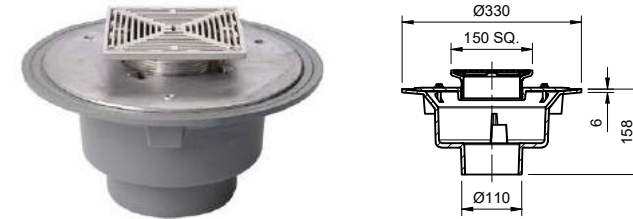
Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 200mm circular ductile iron grating with large sump body and spigot outlet

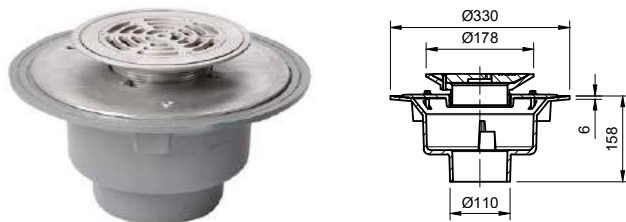
Ductile Iron	Outlet Size	Grate Load Rating
31.0267 £110.10	100mm	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm Slimline Heel Proof slotted grating with large sump body and spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
-	31.0285 £221.00	100mm	L15



Frost floor drain 178mm circular grating for vinyl floors with large sump body and spigot outlet

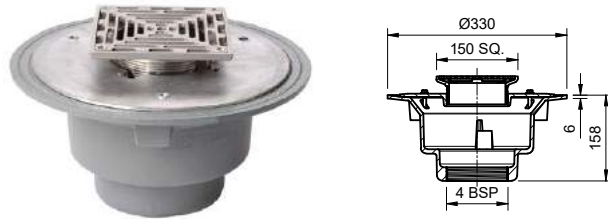
Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0270 £162.70	31.0275 £223.10	100mm	L15



Frost floor drain 150mm square grating with hinged cover plate with large sump body and spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0290 £149.15	31.0295 £210.20	100mm	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm square grating with large sump body and threaded outlet

See Note 1

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0521 £155.97	31.0525 £216.37	BSP 4	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 200mm circular ductile iron grating with large sump body and threaded outlet

See Note 1

Ductile Iron	Outlet Size	Grate Load Rating
31.0567 £123.27	BSP 4	L15



Frost floor drain 150mm circular grating with large sump body and threaded outlet

See Note 1

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0551 £155.97	31.0555 £216.37	BSP 4	L15

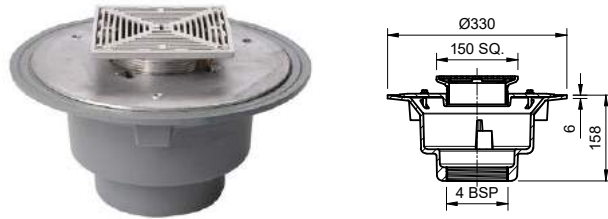


Frost floor drain 178mm circular grating for vinyl floors with large sump body and threaded outlet

See Note 1

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0571 £175.87	31.0575 £236.27	BSP 4	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm Slimline Heel Proof slotted grating with large sump body and threaded outlet

See Note 1

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
-	31.0585 £234.17	BSP 4	L15

Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm square grating with large deep sump body and threaded outlet

See Note 1

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0821 £163.80	31.0825 £224.20	BSP 4	L15



Frost floor drain 150mm square grating with hinged cover plate with large sump body and threaded outlet

See Note 1

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0591 £162.32	31.0595 £223.37	BSP 4	L15

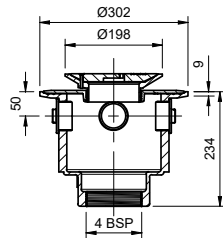


Frost floor drain 150mm circular grating with large deep sump body and threaded outlet

See Note 1

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0851 £163.80	31.0855 £224.20	BSP 4	L15

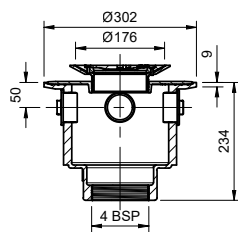
Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 200mm circular ductile iron grating with large deep sump body and threaded outlet

See Note 1

Ductile Iron	Outlet Size	Grate Load Rating
31.0867 £131.10	BSP 4	L15

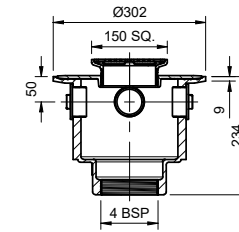


Frost floor drain 178mm circular grating for vinyl floors with large deep sump body and threaded outlet

See Note 1

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0871 £183.70	31.0875 £244.10	BSP 4	L15

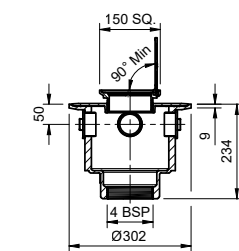
Common Floor Drain Assemblies - Height Adjustable



Frost floor drain 150mm Slimline Heel Proof slotted grating with large deep sump body and threaded outlet

See Note 1

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
-	31.0885 £242.00	BSP 4	L15



Frost floor drain 150mm square grating with hinged cover plate with large deep sump body and threaded outlet

See Note 1

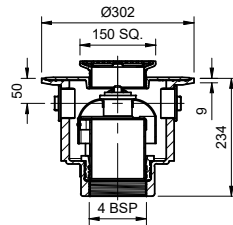
Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0891 £170.15	31.0895 £231.20	BSP 4	L15

Common Floor Drain Assemblies - Trapped Bodies - Height Adjustable

A range of trapped cast iron bodies for use with height adjustable gratings and rodding eyes. Connect bodies to pipework using adaptors. Bodies with a 2" BSP side inlet are supplied with blanking plugs.

Note 1 - smaller outlet sizes 2" & 3" available for threaded outlets.

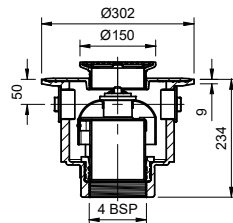
Note 2 - these bodies have permanent sub-surface drainage facility.



Frost floor drain 150mm square grating with large trapped sump body and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0921 £249.60	31.0925 £310.00	BSP 4	L15

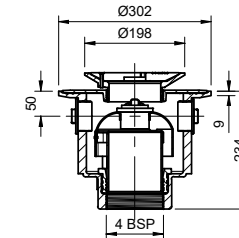


Frost floor drain 150mm circular grating with large trapped sump body and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0951 £249.60	31.0955 £310.00	BSP 4	L15

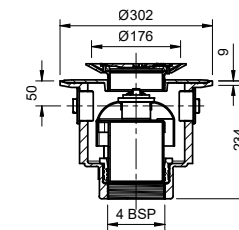
Common Floor Drain Assemblies - Trapped Bodies - Height Adjustable



Frost floor drain 200mm circular ductile iron grating with large trapped sump body and threaded outlet

See Note 1 & 2

Ductile Iron	Outlet Size	Grate Load Rating
31.0967 £216.90	BSP 4	L15



Frost floor drain 178mm circular grating for vinyl floors with large trapped sump body and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0971 £269.50	31.0975 £329.90	BSP 4	L15

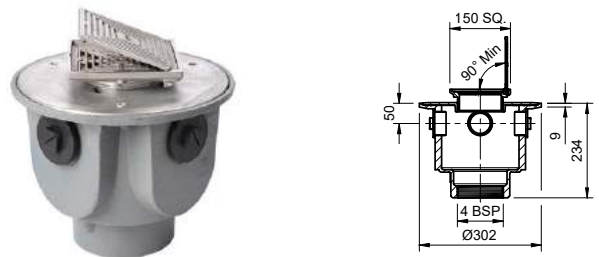
Common Floor Drain Assemblies - Trapped Bodies - Height Adjustable



Frost floor drain 150mm Slimline Heel Proof slotted grating with large trapped sump body and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
-	31.0985 £327.80	BSP 4	L15



Frost floor drain 150mm square grating with hinged cover plate with large trapped sump body and threaded outlet

See Note 1 & 2

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0991 £255.95	31.0995 £317.00	BSP 4	L15

Common Floor Drain Assemblies - Trapped Bodies - Height Adjustable



Frost floor drain 150mm square grating with medium sump – 'P' trap – spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0220.P £95.30	31.0225.P £155.70	100mm	L15



Frost floor drain 150mm circular grating with medium sump – 'P' trap – spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0250.P £95.30	31.0255.P £155.70	100mm	L15

Common Floor Drain Assemblies - Trapped Bodies - Height Adjustable



Frost floor drain 200mm circular ductile iron grating with medium sump – 'P' trap – spigot outlet

Ductile Iron	Outlet Size	Grate Load Rating
31.0221.P £62.60	100mm	L15



Frost floor drain 178mm circular grating for vinyl floors with medium sump – 'P' trap – spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0270.P £115.20	31.0275.P £175.60	100mm	L15

Common Floor Drain Assemblies - Trapped Bodies - Height Adjustable



Frost floor drain 150mm Slimline Heel Proof slotted grating with medium sump – 'P' trap – spigot outlet

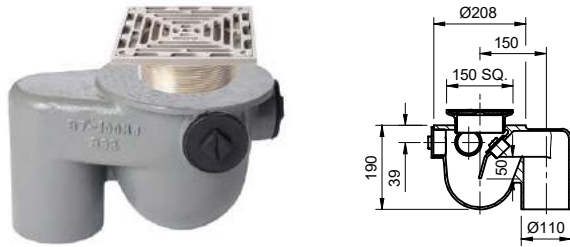
Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
–	31.0285.P £173.50	100mm	L15



Frost floor drain 150mm square grating with hinged cover plate with medium sump – 'P' trap – spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0290.P £101.65	31.0295.P £162.70	100mm	L15

Common Floor Drain Assemblies - Trapped Bodies - Height Adjustable



Frost floor drain 150mm square grating with medium sump – 'S' trap – spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0220.S £99.90	31.0225.S £160.30	100mm	L15



Frost floor drain 150mm circular grating with medium sump – 'S' trap – spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0250.S £99.90	31.0255.S £160.30	100mm	L15

Common Floor Drain Assemblies - Trapped Bodies - Height Adjustable



Frost floor drain 200mm circular ductile iron grating with medium sump – 'S' trap – spigot outlet

Ductile Iron	Outlet Size	Grate Load Rating
31.0221.S £67.20	100mm	L15



Frost floor drain 178mm circular grating for vinyl floors with medium sump – 'S' trap – spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0270.S £119.80	31.0275.S £180.20	100mm	L15

Common Floor Drain Assemblies - Trapped Bodies - Height Adjustable



Frost floor drain 150mm Slimline Heel Proof slotted grating with medium sump – 'S' trap – spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
–	31.0285.S £178.10	100mm	L15



Frost floor drain 150mm square grating with hinged cover plate with medium sump – 'S' trap – spigot outlet

Nickel Bronze	Stainless Steel	Outlet Size	Grate Load Rating
31.0290.S £106.25	31.0295.S £167.30	100mm	L15

Common Floor Drain Assemblies - Untrapped Bodies - Height Adjustable

Untrapped assemblies for use in unfinished, screeded or paved concrete floors such as parking areas, warehouses and plant rooms. Available with either a spigot outlet for connecting directly to pipework or BSP threaded outlet for connection using

an adaptor. Medium duty assemblies are supplied with a membrane clamp. Please note that the overall height of assemblies will vary according to membrane thickness.

Note 1 - smaller outlet sizes 2" & 3" available for threaded outlets.



Frost floor drain 200mm square grating with small sump body and threaded outlet

See Note 1

Part Number with clamp	Outlet Size	Loading	Slab Opening (mm)
31.0044 £78.50	BSP 4	L15	170



Frost floor drain 200mm square grating with small sump body and spigot outlet

Part Number with clamp	Outlet Size	Loading	Slab Opening (mm)
31.0041 £72.60	100	L15	170

Common Floor Drain Assemblies - Untrapped Bodies - Height Adjustable



Frost floor drain 320mm square grating with large sump body and threaded outlet

See Note 1

Part Number - No clamp	Part Number with clamp	Outlet Size	Loading	Slab Opening (mm)
31.0084 £141.00	31.0214 £144.70	BSP 4	M125	290



Frost floor drain 320mm square grating with large sump body and spigot outlet

Part Number - No clamp	Part Number with clamp	Outlet Size	Loading	Slab Opening (mm)
31.0081 £145.70	31.0211 £149.70	100	M125	290
31.0089 £152.40	31.0219 £156.40	150	M125	290

Common Floor Drain Assemblies - Untrapped Bodies - Fixed Height

Untrapped medium duty assemblies with membrane clamp for use in floors with an asphalt or composition surface membrane and subject to light vehicular traffic. Available with either

a spigot outlet for connecting directly to pipework or BSP threaded outlet for connection using an adaptor.

Note 1 - smaller outlet sizes 2" & 3" available for threaded outlets.



Frost floor drain 200mm circular flat grating with medium sump body and threaded outlet

See Note 1

Part Number	Outlet Size	Grating (mm)	Slab Opening (mm)
31.0094 £81.40	BSP 4	Ø220	240



Frost floor drain 200mm circular flat grating with medium sump body and spigot outlet

Part Number	Outlet Size	Grating (mm)	Slab Opening (mm)
31.0091 £71.70	100	Ø220	240

Common Floor Drain Assemblies - Untrapped Bodies - Fixed Height



Frost floor drain 240mm circular flat grating with large sump body and threaded outlet

See Note 1

Part Number	Outlet Size	Grating (mm)	Slab Opening (mm)
31.0144 £111.90	BSP 4	Ø240	290
31.0146 £118.40	BSP 6	Ø240	290



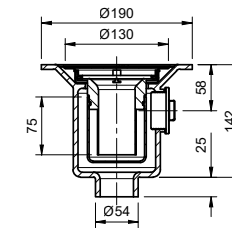
Frost floor drain 240mm circular flat grating with large sump body and spigot outlet

Part Number	Outlet Size	Grating (mm)	Slab Opening (mm)
31.0141 £114.90	100	Ø240	290
31.0149 £121.40	150	Ø240	290

Shower Drain Assemblies

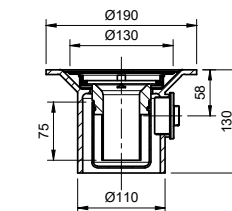
Designed for use in wet rooms with sheet vinyl floor finish.
1½" BSP side inlet supplied with blanking plug.

For details of accessories see pages 59-63. Grating: Polished Stainless Steel
Body: Cast iron
Flow rate: 1 litre/second



Frost shower drain 130mm circular grating with small trapped sump body and spigot outlet

Part Number	Outlet Size	Grating (mm)	Slab Opening (mm)	Loading
31.0165 £95.30	50	Ø130	160	K3



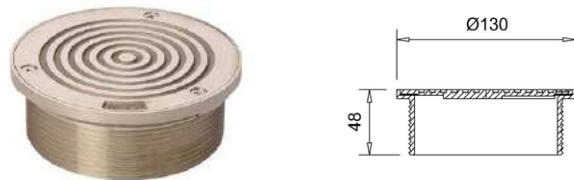
Frost shower drain 130mm circular grating with small trapped sump body and spigot outlet

Part Number	Outlet Size	Grating (mm)	Slab Opening (mm)	Loading
31.0171 £95.30	100	Ø130	160	K3

Rodding Eyes - Height Adjustable

An extensive range of height adjustable rodding eyes designed to suit almost any floor finish. Rodding eyes with a single seal gasket are suitable for external use or for surface water drains. The threaded outlet allows the rodding eye to be set precisely with the finished

floor level. Each rodding eye will typically give a height adjustment range of 25mm. Extra adjustment is available with extension collars. See page 60. For details of accessories see pages 59-63. **Note 1** - smaller outlet sizes 2" & 3" available for threaded outlets.



Circular (double seal) – in situ floors

Nickel Bronze	Stainless Steel	Size (mm)	Height (mm)	Load Rating
31.4304 £51.50	-	Ø130	48	L15



Circular (double seal) – vinyl floors

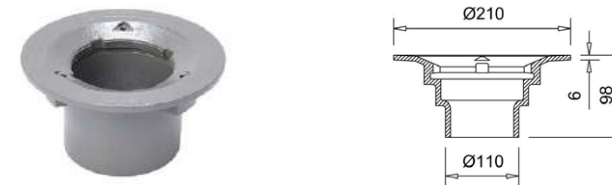
Nickel Bronze	Stainless Steel	Size (mm)	Height (mm)	Load Rating
31.4307 £92.40	-	Ø178	52	L15

Rodding Eyes - Height Adjustable



Square (double seal)

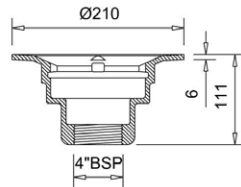
Nickel Bronze	Stainless Steel	Size (mm)	Height (mm)	Load Rating
31.4302 £88.00	31.4602 £122.00	150 x 150	53	L15
31.4303 £51.00	-	200 x 200	62	L15



Frost small body with spigot outlet

Part Number	Outlet Size
31.1031 £17.10	100

Rodding Eyes - Height Adjustable



Frost small body with threaded outlet

See Note 1

Part Number	Outlet Size
31.1034 £29.90	BSP 4

Floor Drain Accessories

Bolt on funnels

Oval version for multiple waste pipes

Nickel Bronze	Stainless Steel	Description
31.4114 £36.00	31.4514 £108.40	Circular
31.4115 £25.00	-	Oval



Sediment bucket

Perforated stainless steel filter

Part Number	Fits
31.3320 £25.40	Medium duty assemblies p18-41
31.3340 £33.20	Heavy duty assemblies p51-54
31.3100 £19.80	Gratings - Threaded & Direct Connection



Back water valve

Part Number	Size
31.9204 £33.80	4"



Floor Drain Accessories

Removable bottle trap

Provides a 75mm seal trap in most gratings and shower drains.
Can be retro-fitted on site

Part Number	Seal (mm)
31.9510 £39.00	75



Extension collars

For use with threaded gratings and rodding eyes. Extensions can be stacked for further adjustability

Part Number	Min (mm)	Max (mm)
31.6000 £18.10	20	40
31.6001 £21.10	40	95
31.6002 £30.00	95	140



For use with cast iron floor drain assemblies with 320mm square gratings on page 52

Part Number	Min (mm)	Max (mm)
31.6010 £40.70	100	140



Floor Drain Accessories

Spigot adaptors

BSP(T) to BS4514 PVC-U pipework

Part Number	Pipe Size (mm) N/B	Tapered Thread BSP(T)	Length (mm)
31.6517 £11.80	75	3"	145
31.6517.2 £55.49	75	3"	220
31.6517.4 £58.77	75	3"	400
31.6517.xx POA	75	3"	xx
31.6537 £11.80	75	3"	145
31.6537.2 £29.72	75	3"	220
31.6537.4 £32.01	75	3"	400
31.6537.xx POA	75	3"	xx
31.6511 £21.30	100	4"	145
31.6511.2 £58.38	100	4"	220
31.6511.4 £60.98	100	4"	400
31.6511.xx POA	100	4"	xx
31.6531 £21.30	100	4"	145
31.6531.2 £39.20	100	4"	220
31.6531.4 £41.81	100	4"	400
31.6531.xx POA	100	4"	xx
31.6519 £28.20	150	6"	160



Floor Drain Accessories

BSP(T) to BS416/BS EN 877 cast iron soil pipework

Part Number	Pipe Size (mm) O/D	BSP(T)	Length (mm)
31.6525 £10.30	60	2"	110
31.6527 £13.80	87.5	3"	110
31.6521 £13.10	112	4"	110
31.6521.2 £63.97	112	4"	220
31.6521.4 £111.90	112	4"	400
31.6521.xx POA	112	4"	xx
31.6561 £75.00	117	4"	500
31.6529 £24.30	150	6"	130



Plain ended spigots (including coupler)

Part Number	Material	Pipe Size (mm)	Length (mm)
31.6737.xx POA	PVC-U	75 N/B	xx
31.6731.xx POA	PVC-U	100 N/B	xx
31.6721.xx POA	Cast iron	112 O/D	xx

Floor Drain Accessories

Reducing bushes

For connections to bodies & spigots

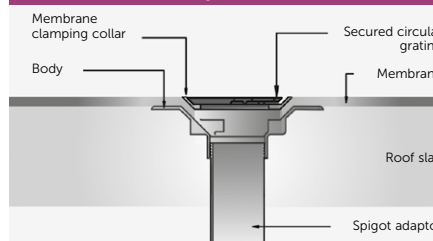
Code	Material	Male BSP(T)	Female (BSP)
31.9352.5 £5.66	PVC	2"	1.5"
31.9352.2 £5.66	PVC	2"	1.25"
31.9352 £5.66	PVC	2"	1"
31.9317 £38.73	Cast iron	4"	3"
31.9315 £38.73	Cast iron	4"	2"
31.9115 £10.55	PVC	4"	2"
31.9117 £24.69	PVC	4"	3"



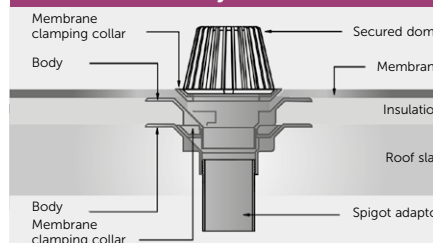
ROOF DRAINS

Roof Drains - Design Considerations

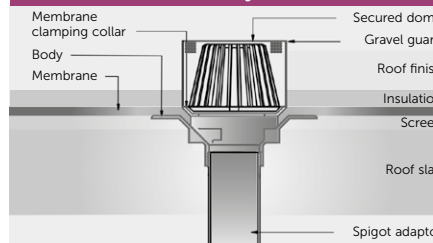
Cold Roof Assembly



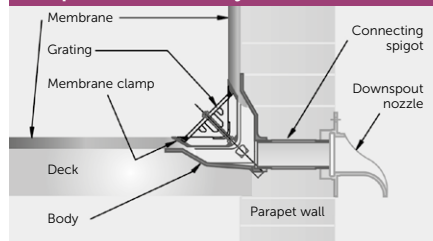
Warm Roof Assembly



Inverted Roof Assembly



Parapet Roof Assembly



The primary purpose of any roof drainage system is to remove water from roofs as quickly as possible in a controlled and predictable way.

Factors including roof outlet size, shape, appearance and anticipated drainage requirements need to be taken into account. Design is usually the responsibility of consulting engineers familiar with the roof construction, piping systems and additional functions intended for particular roofs.

BUILDING REGULATIONS / STANDARDS

International regulations and local building codes must be observed for all drainage installations. Local rainfall rates should be taken into account.

ROOF CONSTRUCTION

Roof outlets are not multi-purpose and products are designed for use with specific types of roof construction (e.g. cold roof, warm roof, inverted roof parapet roof and balconies). The depth of structural slab, thickness and location of insulation and the type and location of waterproof membrane are factors to consider at the outset of any drainage selection.

Roof Drains - Design Considerations

FLOW RATE

The quantity and types of roof outlet to be used in a given application must be related to the roof area and anticipated volume of rainwater to be drained.

Flow rate is the maximum amount of water (litres/second) which a roof outlet will drain and is influenced by several factors: grating free area (i.e. gaps in the grating), sump size, body free area, design of the outlet, outlet size and additional accessories such as gravel guards and filter buckets. Flow rates of Frost roof outlets are shown as the square metre area drained per outlet based on a head of water of 35mm and a rainfall intensity of 75mm per hour (0.021 litres / second/sq.m).

The roof outlet size and piping system size relate to each other and should be within recognised parameters.

PIPEWORK

The type and size of pipework in an installation is fundamental to the correct selection of roof outlets.

Frost roof outlets can be connected to all pipework in general use

THERMAL INSULATION

Local climatic conditions and regulations should be considered in connection with local insulation requirements.

MATERIALS AND APPEARANCE

Strength, corrosion resistance and discreet appearance are important considerations when making roof outlet selections.

For areas such as balconies or roof terraces products are available in nickel bronze, ductile iron, stainless steel or aluminium materials. Drains located in pedestrian surfaces or access routes must be disabled compliant.

WEIGHT BEARING AND LOAD RATING

As an integral part of the roof it is vital gratings and assemblies withstand all anticipated loads. This catalogue shows the load rating class for each grating, cover or gully assembly based on BS EN 1253, as follows:

Loading K3 (Pedestrian Only)

Areas for foot traffic only, such as washrooms, shower areas, hotels, schools, museums, retail centres, swimming baths, leisure centres, balconies, terraces and roof gardens.

Loading L15 (Light Industrial)

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

Loading M125 (Heavy Industrial)

Areas with vehicular traffic, such as car parks, factories, warehouses and workshops.

ACCESSORIES AND VARIATIONS

Standard optional items are available such as filter buckets to intercept debris, gravel guards, bearing pans to spread roof loadings and underdeck clamps to secure outlet bodies.

INTERNATIONAL STANDARDS

Satin Nickel Bronze and Polished Nickel Bronze to BS1400.

Stainless Steel to BS EN 10088-1:2005 Grade 1.4301 (304) or Grade 1.4401 (316) if specified.

Ductile Iron to BS EN 1563 & 1564 Cast with the ductility of steel and more than doubling the tensile strength of cast iron.

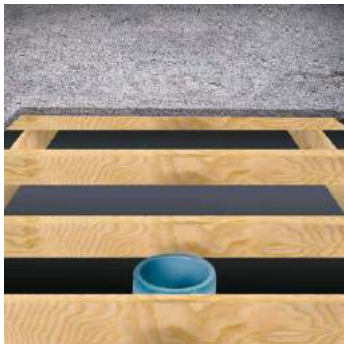
Aluminium LM 6 to BS EN 1559-4:1999.

Roof Drains - Installation Guide



1. CHECK THE DIMENSIONS

Before installing, check the total height of the components to ensure the correct finished level is achieved. Allowance must be made for the thickness of any membranes used and, where applicable, roof insulation.



2. FIT SPIGOT AND CHECK OUTLETS

Screw spigot, where required, into the body, using a suitable sealant to create a watertight joint. Position the body in the roof deck and ensure the outlet is accessible.



3. INSTALL BODY

Install body so that the flange is at or just below roof deck level. If the body is not cast in it should be secured to the deck. Use a wide flanged body for timber decks. The flange can be drilled for fixings or use an underdeck clamp (33.9610 or 33.9620). If the deck is recessed for the flange consider the need to reinforce the cut timber edge.

Note: Membrane flange level is determined by roof build up



4. DRESS MEMBRANE AND CLAMP

Dress the membrane over the flange over the edge of the body sump in accordance with the manufacturer's instructions, ensuring that the membrane does not restrict the outlet. Ensure that the flange is at or below the level of the membrane.

Bolt the membrane clamping collar to the body using the supplied fittings. Thin membranes may require the screw length to be reduced.



5. INSTALL INSULATION

Install any additional roofing materials and build-up (e.g. insulation) around the roof outlets.



6. FIT DOME AND APPLY FINISH

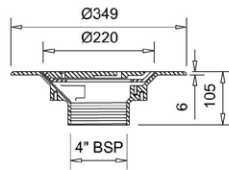
Fit the dome or grating using height adjustment where applicable to ensure grating is flush with the roof finish.

Cold Roof Assemblies - Flat Gratings

Rain water outlets suited to cold roof construction where the waterproof membrane is located on top of the roof deck (diagram page 65). Body and clamp: Cast iron. Grating: Ductile iron. Area drained: Based on a head of

35mm and rainfall intensity of 75mm per hour. For details of accessories please see pages 84-88.

Note 1 - smaller outlet sizes 2" & 3" available for threaded outlets.

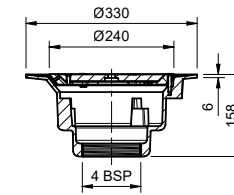


Frost roof drain flat grating with medium sump body and threaded outlet

See Note 1

Part Number	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)
33.0014 £81.40	BSP 4	240	290

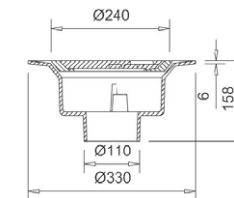
Cold Roof Assemblies - Flat Gratings



Frost roof drain 240mm circular grating with large sump body and threaded outlet

See Note 1

Part Number	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)
33.0054 £114.90	BSP 4	290	390
33.0056 £121.40	BSP 6	290	460



Frost roof drain 240mm circular grating with large sump body and spigot outlet

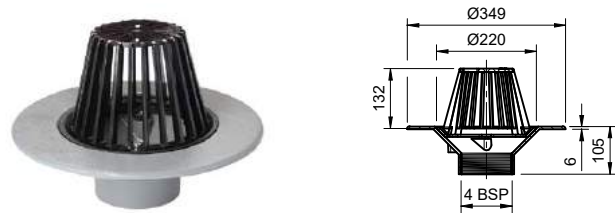
Part Number	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)
33.0051 £111.90	100	290	390
33.0059 £118.40	150	290	460

Cold Roof Assemblies - Domed Gratings

Domed rain water outlets suited to cold roof construction where the waterproof membrane is located on top of the roof deck (diagram page 65). Body and clamp: Cast iron. Dome: Polycarbonate or Aluminium as detailed. Area drained:

Based on a head of 35mm and rainfall intensity of 75mm per hour. For details of accessories please see pages 84-88.

Note 1 - smaller outlet sizes 2" & 3" available for threaded outlets.



Frost roof drain domed grating with medium sump body and threaded outlet

See Note 1

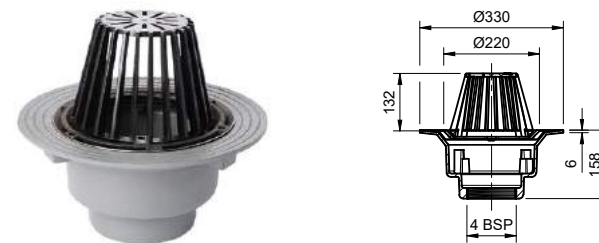
Part Number	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)
33.0034 £72.80	BSP 4	240	290

Cold Roof Assemblies - Domed Gratings



Frost roof drain domed grating with large sump body and spigot outlet

Part Number	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)
33.0061 £114.90	100	290	390
33.0069 £121.40	150	290	495

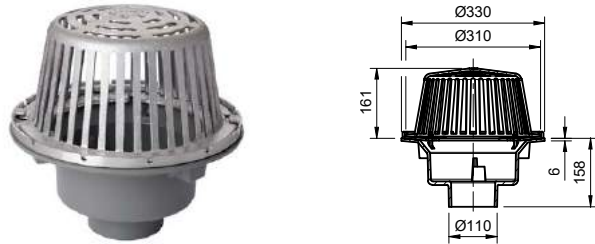


Frost roof drain domed grating with large sump body and threaded outlet

See Note 1

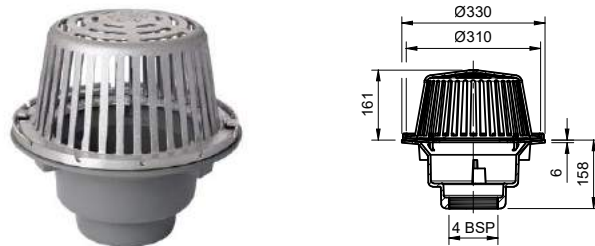
Part Number	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)
33.0064 £114.90	BSP 4	290	390
33.0066 £121.40	BSP 6	290	495

Cold Roof Assemblies - Domed Gratings



Frost roof drain domed grating with large sump body and spigot outlet

Part Number	Outlet Size	Area Drained (sq.m)
33.0461 £114.00	100	319
33.0469 £121.40	150	340



Frost floor drain domed grating with large sump body and threaded outlet

Part Number	Outlet Size	Area Drained (sq.m)
33.0464 £114.00	BSP 4	319
33.0466 £127.50	BSP 6	340

Warm Roof Assemblies - Flat Gratings

Rain water outlets with flat gratings suited to warm roof construction where the waterproof membrane is located above the insulation layer on top of the roof deck (diagram page 65).
Body and clamp: Cast iron. Grating:

Ductile iron. Area drained: Based on a head of 35mm and rainfall intensity of 75mm per hour. For details of accessories please see pages 84-88.
Note 1 - smaller outlet sizes 2" & 3" available for threaded outlets.



Frost roof drain domed grating with medium sump body and threaded outlet

See Note 1

Part Number	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)
33.0104 £164.30	BSP 4	240	290

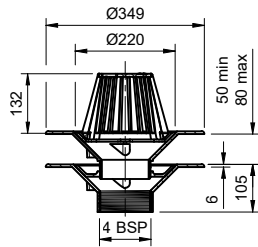
Warm Roof Assemblies - Domed Gratings

Rain water outlets with domed gratings suited to warm roof construction where the waterproof membrane is located above the insulation layer on top of the roof deck (diagram page 65).

Body and clamp: Cast iron. Dome:

Polycarbonate. Area drained: Based on a head of 35mm and rainfall intensity of 75mm per hour. For details of accessories please see pages 84-88.

Note 1 - smaller outlet sizes 2" & 3" available for threaded outlets.



Frost roof drain domed grating with medium sump body and threaded outlet

See Note 1

Part Number	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)
33.0124 £164.30	BSP 4	240	290

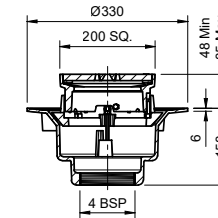
Inverted Roof Assemblies - Flat Gratings

Rain water outlets with flat gratings suited to inverted roof construction where the waterproof membrane is located above the roof deck but below the insulation layer (diagram page 65).

Body and clamp: Cast iron. Grating:

Ductile iron. Area drained: Based on a head of 35mm and rainfall intensity of 75mm per hour. For details of accessories please see pages 84-88.

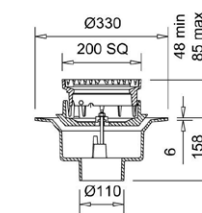
Note 1 - smaller outlet sizes 2" & 3" available for threaded outlets.



Frost roof drain 200mm square grating with large sump body and threaded outlet

See Note 1

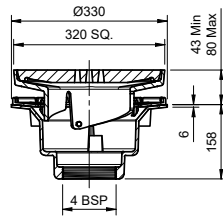
Part Number	Grating Size	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)	Loading
33.0354 £171.60	200 x 200	BSP 4	290	200	L15



Frost roof drain 200mm square grating with large sump body and spigot outlet

Part Number	Grating Size	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)	Loading
33.0351 £171.60	200 x 200	110	290	200	L15
33.0359 £178.30	200 x 200	163	290	215	L15

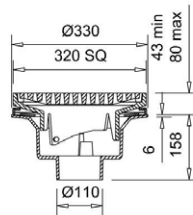
Inverted Roof Assemblies - Flat Gratings



Frost roof drain 320mm square grating with large sump body and threaded outlet

See Note 1

Part Number	Grating Size	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)	Loading
33.0364 £141.00	320 x 320	BSP 4	290	430	M125



Frost roof drain 320mm square grating with large sump body and spigot outlet

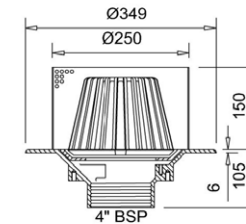
Part Number	Grating Size	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)	Loading
33.0361 £149.70	320 x 320	110	290	430	M125
33.0369 £156.40	320 x 320	163	290	495	M125

Inverted Roof Assemblies - Domed Gratings

Rain water outlets with domed gratings are suited to inverted roof construction where the waterproof membrane is located above the roof deck but below the insulation layer (diagram page 65). The stainless steel gravel guard prevents ballast entering the drainage system during maintenance. Gravel guards

higher than 150mm are available. (see page 84). Body and clamp: Cast iron. Dome: Polycarbonate. Area drained: Based on a head of 35mm and rainfall intensity of 75mm per hour. For details of accessories see pages 84-88.

Note 1 - smaller outlet sizes 2" & 3" available for threaded outlets.

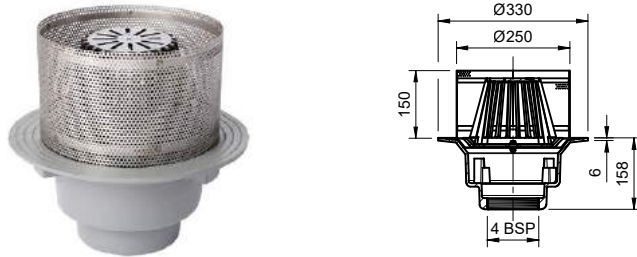


Frost roof drain domed grating with medium sump body and threaded outlet

See Note 1

Part Number	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)
33.0304 £121.20	BSP 4	240	205

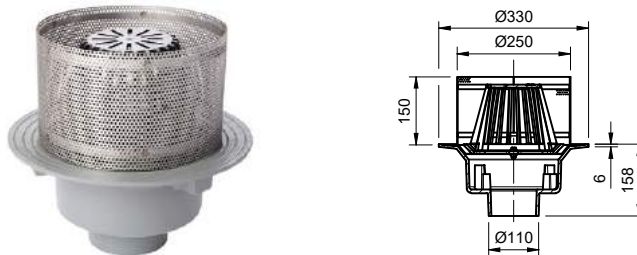
Inverted Roof Assemblies - Domed Gratings



Frost roof drain domed grating with large sump body and threaded outlet

See Note 1

Part Number	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)
33.0324 £164.00	BSP 4	290	310
33.0326 £171.10	BSP 6	290	360



Frost roof drain domed grating with large sump body and spigot outlet

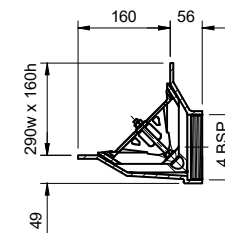
Part Number	Outlet Size	Deck Opening (mm)	Area Drained (sq.m)
33.0321 £168.00	100	290	310
33.0329 £175.10	150	290	360

Parapet and Balcony Outlets

Parapet and balcony outlets are supplied complete with membrane clamp. For details of accessories please see pages 84-88.

Body: Cast iron. Grating: Aluminium. Downspout: Gunmetal.

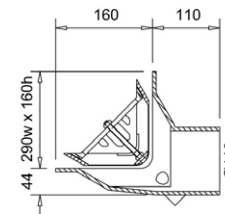
Note 1 - smaller outlet sizes 2" & 3" available for threaded outlets.



Frost parapet assembly 45 degree angle grate with small sump body and 2 way threaded outlet

See Note 1

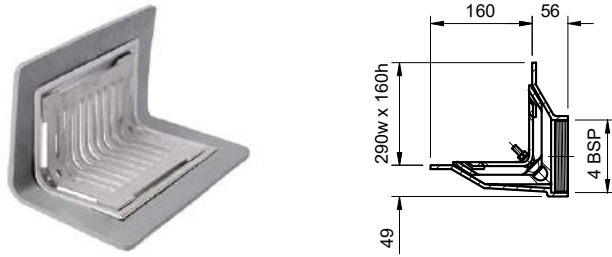
Part Number	Outlet Size	Area Drained Horizontally (sq.m)	Area Drained Vertically (sq.m)
33.0414 £125.00	BSP 4	91	133



Frost parapet assembly 45 degree angle grate with small sump body and spigot outlet

Part Number	Outlet Size	Area Drained Horizontally (sq.m)	Area Drained Vertically (sq.m)
33.0411 £125.00	100	91	133

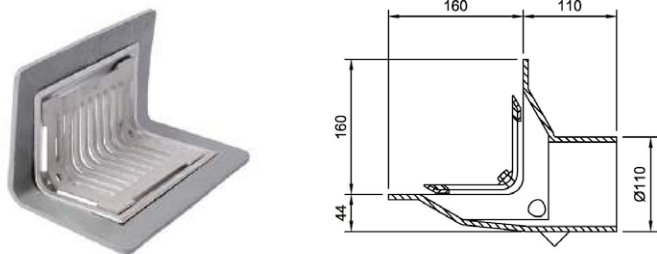
Parapet and Balcony Outlets



Frost parapet assembly 90 degree angle grate with small sump body and 2 way threaded outlet

See Note 1

Part Number	Outlet Size	Area Drained Horizontally (sq.m)	Area Drained Vertically (sq.m)
33.0414.9 £125.00	BSP 4	91	133



Frost parapet assembly 90 degree angle grate with small sump body and 2 way spigot outlet

Part Number	Outlet Size	Area Drained Horizontally (sq.m)	Area Drained Vertically (sq.m)
33.0411.9 £129.00	100	91	133

Parapet and Balcony Outlets



Frost balcony outlet aluminium grating with small sump body and threaded outlet

See Note 1

Part Number	Outlet Size	Area Drained (sq.m)
33.0433 £54.60	BSP 3	120
33.0434 £49.70	BSP 4	196

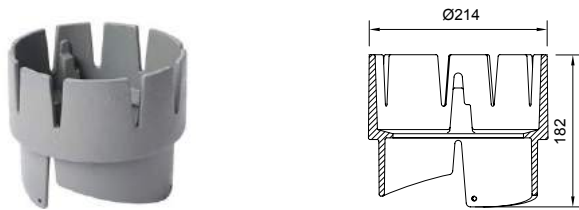


Frost downspout nozzle with horizontal threaded outlet

See Note 1

Part Number	Outlet Size
33.0444 £49.70	BSP 4

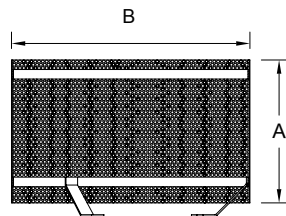
Roof Drain Accessories



Extension

For use with large sump roof drains to raise the height of 320mm sq gratings

Part Number	Min	Max	Suitability (sq.m)	Assemblies
33.6010 £108.10	100	140	Variable	33.036 x range



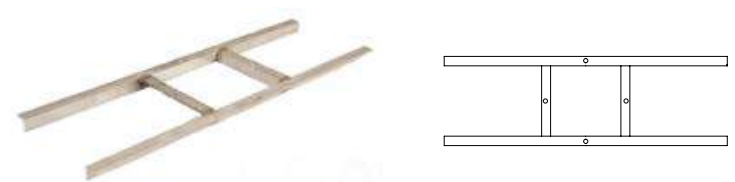
Gravel Guard

For use with inverted installations to stop ballast entering the drain system

Part Number	Size (mm) B	Height (mm) A
33.9310 £56.40	Ø250	150
33.9320 £61.50	Ø250	200
33.9325 £66.60	Ø250	250
33.9415* £65.00	Ø260	150

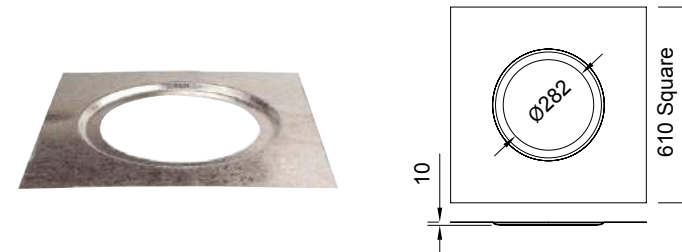
*For use with aluminium domes only

Roof Drain Accessories



Underdeck clamp - stainless steel

Part Number	Sump
33.9610 £52.40	Medium
33.9620 £58.40	Large



Bearing Pan - Galvanised Mild Steel

Part Number	Sump
33.9510 £22.30	Large

Roof Drain Accessories

Spigot adaptors

BSP(T) to BS4514 PVC-U pipework

Part Number	Pipe Size (mm) N/B	Tapered Thread BSP(T)	Length (mm)
31.6517 £11.80	75	3"	145
31.6517.2 £55.49	75	3"	220
31.6517.4 £58.77	75	3"	400
31.6517.xx POA	75	3"	xx
31.6537 £11.80	75	3"	145
31.6537.2 £29.72	75	3"	220
31.6537.4 £32.01	75	3"	400
31.6537.xx POA	75	3"	xx
31.6511 £21.30	100	4"	145
31.6511.2 £58.38	100	4"	220
31.6511.4 £60.98	100	4"	400
31.6511.xx POA	100	4"	xx
31.6531 £21.30	100	4"	145
31.6531.2 £39.20	100	4"	220
31.6531.4 £41.81	100	4"	400
31.6531.xx POA	100	4"	xx
31.6519 £28.20	150	6"	160



Roof Drain Accessories

BSP(T) to BS416/BS EN 877 cast iron soil pipework

Part Number	Pipe Size (mm) O/D	BSP(T)	Length (mm)
31.6525 £10.30	60	2"	110
31.6527 £13.80	87.5	3"	110
31.6521 £13.10	112	4"	110
31.6521.2 £63.97	112	4"	220
31.6521.4 £111.90	112	4"	400
31.6521.xx POA	112	4"	xx
31.6561 £75.00	117	4"	500
31.6529 £24.30	150	6"	130



Plain ended spigots (including coupler)

Part Number	Material	Pipe Size (mm)	Length (mm)
31.6737.xx POA	PVC-U	75 N/B	xx
31.6731.xx POA	PVC-U	100 N/B	xx
31.6721.xx POA	Cast iron	112 O/D	xx

xx = length is adjustable to suit your requirements. Lead times may vary.

Roof Drain Accessories

Reducing bushes

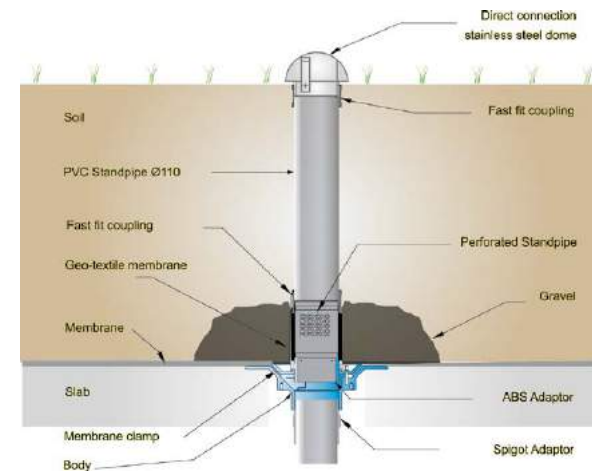
For connections to bodies & spigots

Code	Material	Male BSP(T)	Female (BSP)
31.9352.5 £5.66	PVC	2"	1.5"
31.9352.2 £5.66	PVC	2"	1.25"
31.9352 £5.66	PVC	2"	1"
31.9317 £38.73	Cast iron	4"	3"
31.9315 £38.73	Cast iron	4"	2"
31.9115 £10.55	PVC	4"	2"
31.9117 £24.69	PVC	4"	3"



Planter Drain Assemblies

For applications where the standpipe is concealed by soil. Providing drainage of moisture in planting areas and flower boxes. Dome is removable for access purposes.



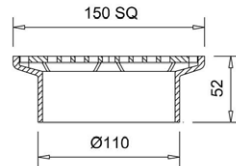
Typical Assembly

Part Number	Outlet	Size
33.0454* £127.80	BSP 4 Vertical	4"
33.0451* £127.80	100mm	110mm

*Standpipe can be cut or extended to suit required installation depth

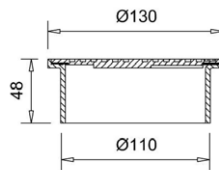
Planter Drain Assemblies

Hard Landscape



Square grating

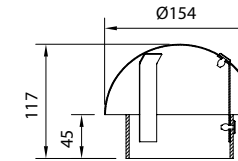
Nickel Bronze	Stainless Steel	Size (mm)	Height (mm)	Load Rating
31.4152 £52.00	31.4552 £90.90	150 x 150	53	L15



Circular solid top double seal grating

Nickel Bronze	Stainless Steel	Size (mm)	Height (mm)	Load Rating
31.4354 £61.50	-	Ø130	48	L15

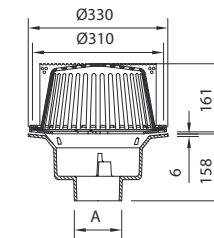
Planter Drain Assemblies



Soft Landscape

Stainless steel dome for use within subsoil installations

Part Number	Material
33.4010 £41.80	Stainless Steel



Part Number	Type	Outlet	A (mm)
33.0471 £164.00	Spigot	100	110
33.0474 £164.00	Threaded	4" BSP	-
33.0479 £164.00	Spigot	150	163

Comparator Cross Reference

Frost Code	Wade Code	Harmer Code	Page
31.0041	M201	CPV100/ECD	51
31.0044	M202	CPV100T/ECD	51
31.0081	WB504 WB514		52
31.0084	WB504 WB515		52
31.0089	WB506 WB516		52
31.0091	WB304	CPV100F	53
31.0094	WB324	CPV100T/F	53
31.0125	D1109		24
31.0141	WB614	CPV100F	54
31.0144	WB614	CPV100T/F	54
31.0146	WB616		54
31.0149	WB616		54
31.0165	GV6007 GV6103 GV6107 GV6817		55
31.0170	D1109		25
31.0175	D1109		25
31.0185	D1109		26
31.0191	D1109		26
31.0195	D1109		26
31.0211	WB504 WB514		52
31.0214	WB504 WB514		52
31.0219	WB506 WB516		52
31.0220.P	G304		45
31.0221.P	G304		46
31.0225.P	G304		45
31.0225.P	G304 G804		45
31.0250.P	G304		45
31.0255.P	G304		45
31.0270.P	G304		46
31.0275.P	G304		46
31.0285.P	G304		47
31.0290.P	G304		47
31.0295.P	G304		47
31.0220.S	G604 G1014C		48
31.0221.S	G604 G1014C		49
31.0225.S	G604 G1014C		48
31.0225.S	G604 G1014C		48
31.0250.S	G604 G1014C		48
31.0255.S	G604 G1014C		48
31.0270.S	G604 G1014C		49
31.0275.S	G604 G1014C		49
31.0285.S	G604 G1014C		50
31.0290.S	G604 G1014C		50
31.0295.S	G604 G1014C		50
31.0320	C364		18
31.0325	C364		18
31.0350	C364		18
31.0355	GV6103		18
31.0355	C364		18
31.0367	C364		19
31.0370	C364		19
31.0375	C364		19

Frost Code	Wade Code	Harmer Code	Page
31.0385	C364		20
31.0391	C364		20
31.0395	C364		20
31.0421	D1004		27
31.0425	D1004		27
31.0451	D1004		27
31.0455	D1004		27
31.0467	D1004		28
31.0471	D1004		28
31.0475	D1004		28
31.0485	D1004		29
31.0491	D1004		29
31.0495	D1004		29
31.0621	D204		21
31.0625	D204		21
31.0651	D204		21
31.0655	D204		21
31.0667	D204		22
31.0671	D204		22
31.0675	D204		22
31.0685	D204		23
31.0691	D204		23
31.0695	D204		23
31.0767	C504 GC144		31
31.0821	C504 GC144		39
31.0825	C504 GC144		39
31.0825	D404		39
31.0851	C504 GC144		39
31.0855	C504 GC144		39
31.0867	C504 GC144		40
31.0871	C504 GC144		40
31.0875	C504 GC144		40
31.0885	C504 GC144		41
31.0891	C504 GC144		41
31.0895	C504 GC144		41
31.0921	GD144		42
31.0925	GD144		42
31.0925	GD164 GD194		42
31.0951	GD144		42
31.0955	GD144		42
31.0967	GD144		43
31.0971	GD144		43
31.0975	GD144		43
31.0985	GD144		44
31.0991	GD144		44
31.0995	GD144		44
31.0225	D404		33
31.0525	D404 SD104		36
31.1026	D406		
31.1029	D406		
31.1031	C393 C394 C364		57

Comparator Cross Reference

Frost Code	Wade Code	Harmer Code	Page
31.1034	C204 D204		58
31.2030	C.C		
31.3100	UP702		59
31.4102	L2301		
31.4103	L2104		
31.4104	K2302 K2101		
31.4105	K2103		
31.4109	L5401		
31.4114	U501		59
31.4115	U502		59
31.4152	L2193		90
31.4155	K2193		
31.4157	K2397		
31.4159	L5391		
31.4302	L5103		57
31.4304	K5202		56
31.4307	K5103		56
31.4502	L3101		
31.4502L	L2106		
31.4503L	L2106		
31.4505	K2107		
31.4507	K2307		
31.4509	L5307		
31.4514	U511		59
31.4552	L2196		90
31.4602	L5701		57
31.4709	L2901		
31.5100	K2501 L2601		
31.6000	U102 L1102		60
31.6001	U103		60
31.6002	U104		60
31.6010	U301		60
31.6331.2	U47		
31.6331.4	U47		
31.6519	T303		61
31.6521	T103 T105		62
31.6521.2	T103 T105		62
31.6521.4	T103 T105		62
31.6525	T101		62
31.6527	T102		62
31.6529	T104		62
31.6531.2	T302	4ADP	61
31.6531.4	T302	4ADP	61
31.6537.2	T302		61
31.6537.4	T302	3ADP	61
31.6561	T105		62
31.9204	U704		59
31.9510	U1404		60
33.0014	WB304	AV400F	70
33.0014	WB324	AV400TF	70
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