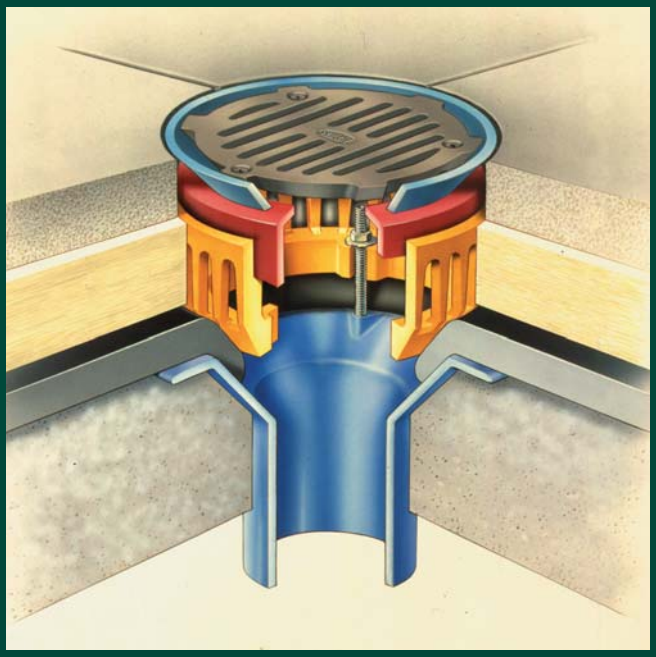
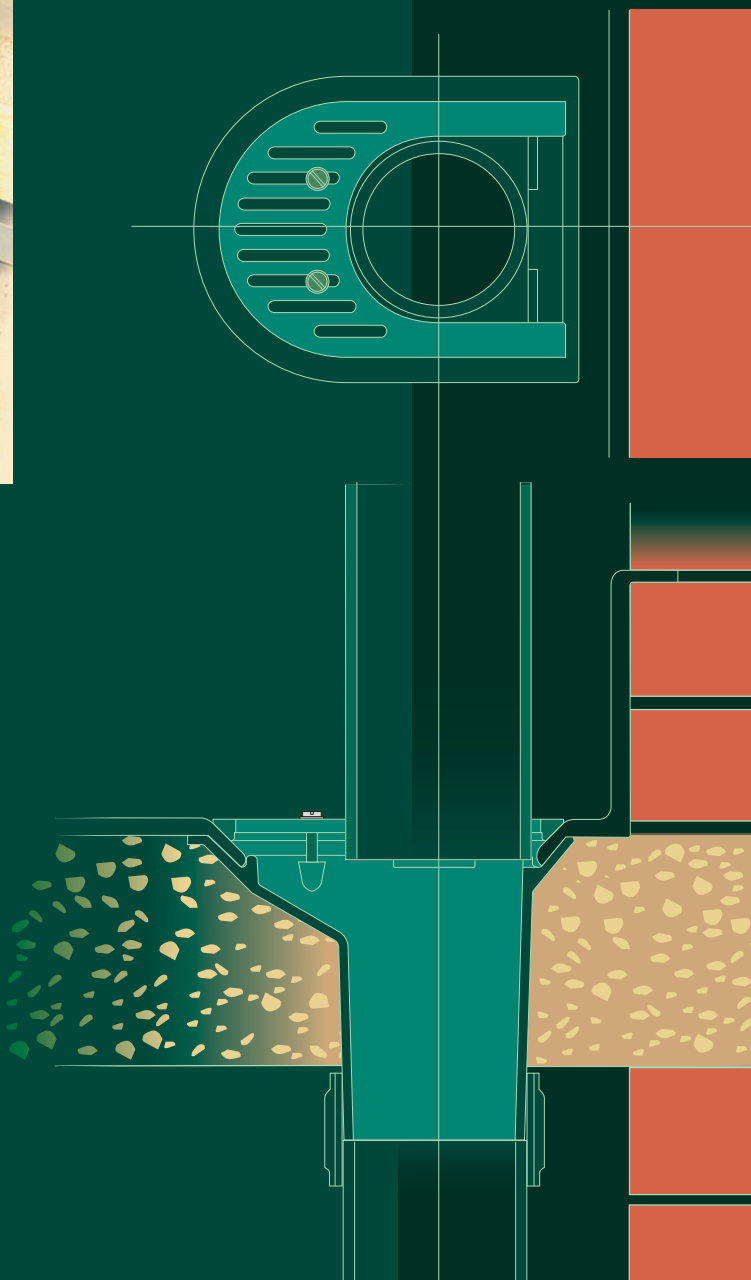
WADE

Roof Outlets



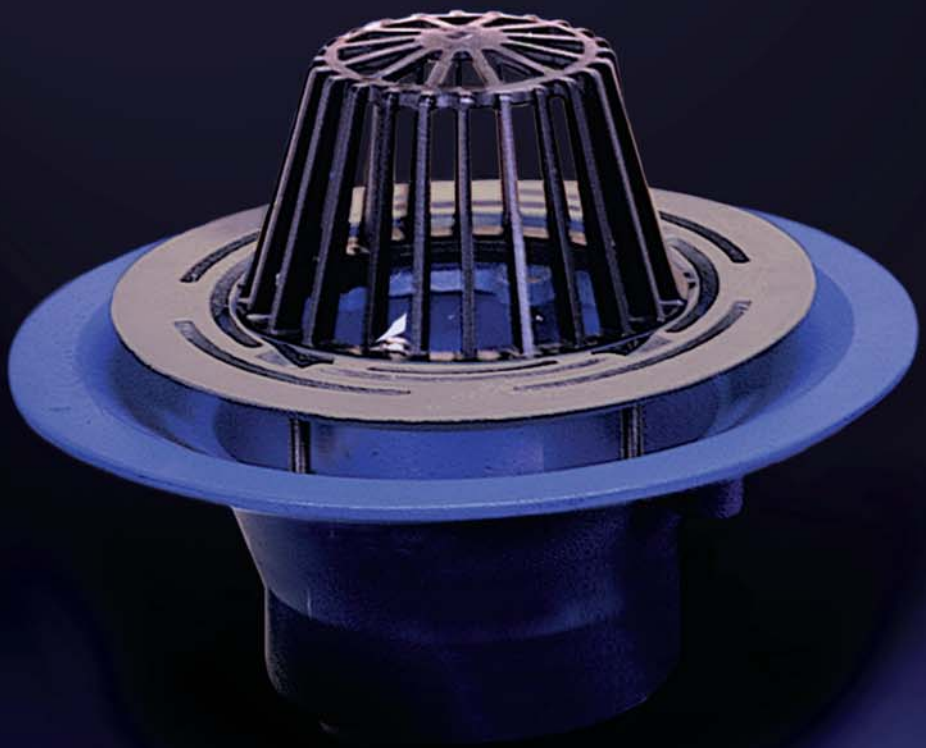


WADE

A privately owned UK company with more than fifty years' experience in the industry, Wade is established as a leading manufacturer of quality drainage products.

Much of the success of the business is attributable to an on-going commitment to put technology to practical use, to generate fresh ideas, and to guarantee quality assured production.

This Technical Handbook presents illustrations and data from a comprehensive range of products which provide choices to enable specifier and users to select roof outlets that will meet their requirements.



Certification of compliance with BS EN ISO 9001: 2015 underlines our commitment to quality and service.

LLOYD'S REGISTER · LRQA
ISO 9001

Contents

The purpose of roof outlets is to provide effective drainage of rainwater. Selection of roof outlets is usually the responsibility of the specifying engineer conversant with the roof construction, roofing finish, drainage system and designated function such as a garden or parking. Some of the factors that should be considered when selecting roof outlets are given below.

Building regulations/standards

Design of flat roof drainage should be in accordance with BS EN 12056-3, or other national/local regulations.

Roof construction

Roof outlets are not multi-purpose, versions are designed for use with specific types of roof construction. The depth of the structural slab, thickness and position of insulation, and the type and position of waterproofing membrane are factors to be considered.

Flow rate

BS EN 12056-3 uses localised rainfall data in l/s per m^2 and takes into account the usage and design life of the building.

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

Flow rate is the amount of water (litres/sec) a roof outlet will drain at a given head; it is influenced by several factors: grating free area, sump capacity, design of the roof outlet, outlet size, and accessories such as gravel guards and filter baskets.

Flow rates of Wade roof outlets have been established by full scale tests, at various heads of water. Results are shown on Page 31 to 33. Our online *Roof outlet* catalogue includes a *Flow rates and roof outlet calculator* – enter the Spec. Code for a selected roof outlet, and project data, to arrive at the quantity of roof outlets required.

Load rating

It is essential that roof outlets withstand expected loads. This Technical Handbook shows the load rating class for each grating or roof outlet assembly, based on BS EN 1253, as follows:

H1.5 Unused flat roofs such as felt-and-gravel roofs, gravel fill roofs and similar.

K3 Areas without vehicular traffic, such as balconies, terraces and roof gardens.

L15 Areas with light vehicular traffic.

M125 Areas with vehicular traffic, such as car parks, factories and workshops – not including light commercial vehicles or heavy wheel loads.

Pipework

The type and size of pipework in a given installation is fundamental to the selection of roof outlets. Wade roof outlets are not trapped and can be connected to all pipework in general use; certain bodies are for direct connection to pipework, others require the use of threaded pipework adaptors or proprietary couplings.

Thermal insulation

To prevent condensation in roofs of heated buildings where the relative humidity may be expected to rise above 40%, it may be necessary to install additional insulation around roof outlet bodies.

Appearance

Whilst of pleasing appearance, gratings are designed to be relatively inconspicuous when installed. For areas where a better class of finish is required, some products are available in nickel bronze made to order.

Accessories and variations

Standard optional items are readily available, such as filter baskets to intercept debris, gravel guards, bearing pans to spread the load over a large area, and underdeck clamps to secure bodies.

Custom made products can be manufactured for non-standard applications.

Materials and finishes

Strength, corrosion resistance and appearance are important considerations when selecting roof outlets.

Materials and finish of Wade roof outlets, described below, are selected to provide lasting performance and to blend with surroundings. The products require the minimum of maintenance, but periodic inspection should be carried out to ensure that roof outlets are free from gravel, leaves and other debris which could impair the performance of the system. Cast iron parts should be repainted every five years. For complete list of materials, please refer to our website.

ABS

Used for threaded pipework adaptors

Cast aluminium – BS EN 1706

Used for parapet gratings

An alloy chosen for its chemical resistance and durability.

Cast iron – BS EN 1561

Used for bodies, membrane clamping collars,extensions and threaded pipework adaptors

A widely used metal in the drainage industry, its resistance to corrosion permits extended use under extreme conditions.

Castings are coated with a high grade lacquer paint, applied by full immersion dip, to provide internal and external surface coverage. Paint will gradually wear off and is replaceable; oxidisation (surface rusting) is a natural process which does not weaken the material.

Ductile iron – BS EN 1563 and BS EN 1564

Used only for gratings

A casting with the ductility of steel, yet with more than twice the tensile strength of cast iron. A zinc anti-corrosion coating is applied by sherardizing.

Galvanised mild steel

Used for adjustable bearing pans and raising tubes

A cost effective, corrosion resistant material.

Gunmetal – BS EN 1982

Used for downspout nozzles

A cast alloy of a rich, bronze colour.

Nickel bronze – BS EN 1982 Satin finish

Used for gratings

A cast alloy which will maintain its lustre when subjected to the abrasive polishing action of traffic.

The satin finish produces a fine grain effect which blends well with walls and floors. ***Note:*** Avoid covering nickel bronze items with plastic sheeting after installation, as blackening may occur.

Polycarbonate

Used for domes (supplied as standard)

A polycarbonate/ABS blend which offers durability, high impact strength and long term resistance to ultraviolet light.

PVC

Used for body versions for use with PVC single ply membranes

This material enables a waterproof joint to be produced on site.

Stainless steel – austenitic grade 304

Used for gratings, domes, gravel guards, filter baskets and all fastenings

A corrosion-resistant metal containing significant amounts of nickel and chromium; AISI grade 304 stainless steel is used as standard, which is suitable for general use in and around buildings including most coastal locations. In applications such as swimming pools or having an aggressive atmosphere, grade 316 is recommended and is available on request. An even higher grade may be required for applications in highly corrosive environments including where exposure to seawater may be anticipated.

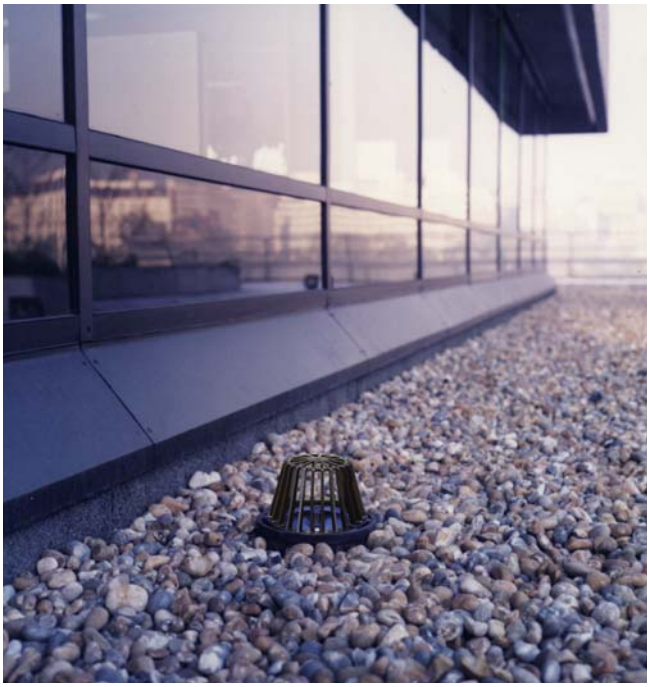
Clean with soap and warm water rinse and wipe dry. Gratings may also be cleaned in certain dishwashers.

Under no circumstances treat with metal scouring pads, metal scrapers or wire wool as these will contaminate surfaces leaving rust spots.

Wade designs and manufactures roof outlets for use with specific types of roof construction, worldwide.

Various Wade roof outlets are installed in the terminal buildings at Manchester Airport

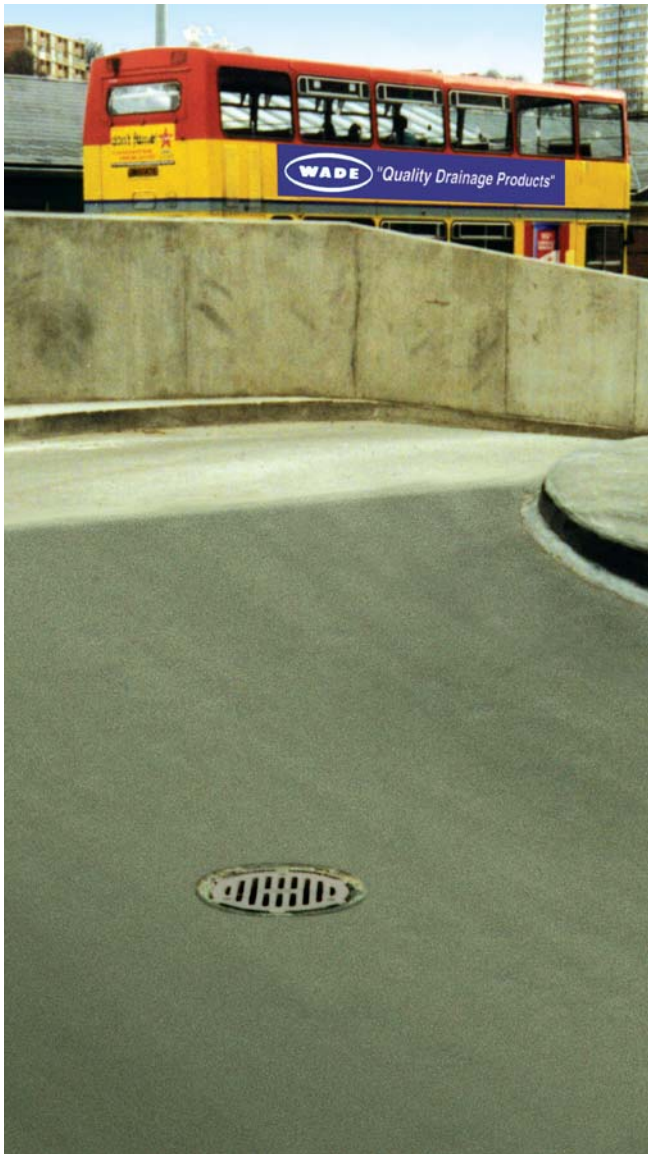
WB2 Series roof outlet for use in a cold roof



Variation of a WD Series roof outlet in an inverted roof

Flat gratings of ductile iron, with sherardized protective coating, are available in different styles and sizes.

For use in show areas, certain gratings can be manufactured of nickel bronze

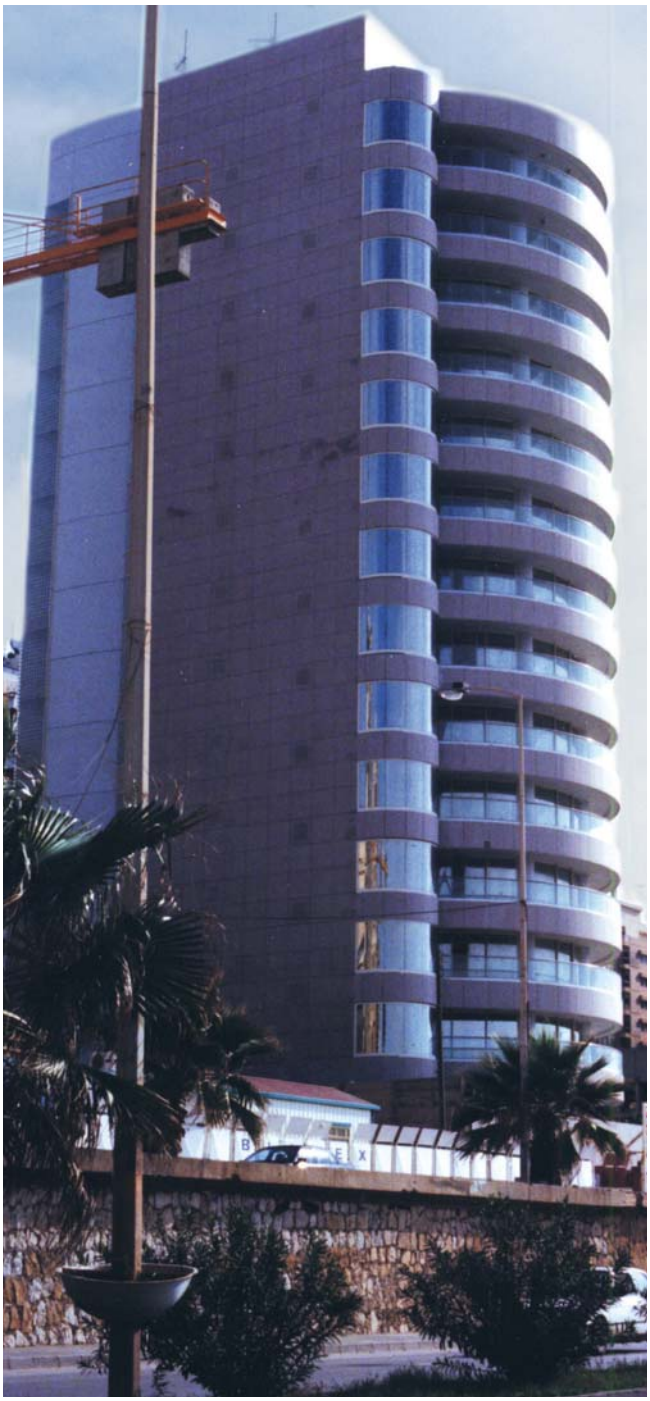


WD304

WB324

WB616

WB516



WB Series are installed in the Inma Building, Beirut

WF Series parapet outlets are available with choice of grating – cast iron, aluminium, stainless steel and nickel bronze; a version is available for use with PVC single ply membranes

Balcony outlets are available with full grating or with cut-out version to accept a downpipe

This Technical Handbook includes ranges of standard products which are generally available ex stock. Custom-made products and accessories can be designed to suit particular applications.

To enable our Technical Services Department to advise on product selection please provide the following:

- section drawing through the roof build up
- size, material and direction of pipework being connected to
- any other relevant design considerations.

Email to: tech@wadeint.co.uk or call us on 01787 273998.

WB414 and WB224

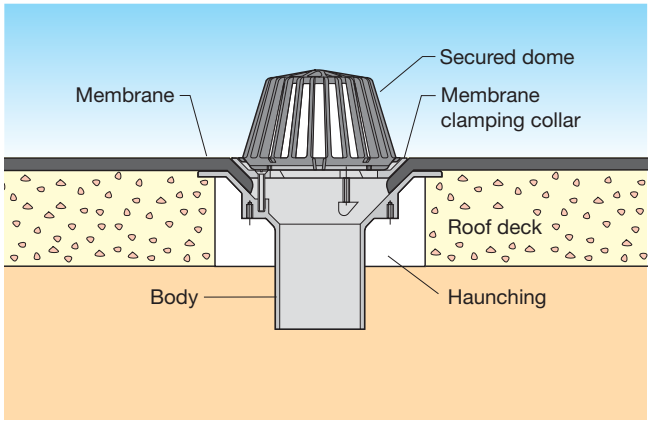
A cold roof is constructed such that the waterproofing membrane is at finished level and insulation (if any) is placed below the roof deck.

Connections

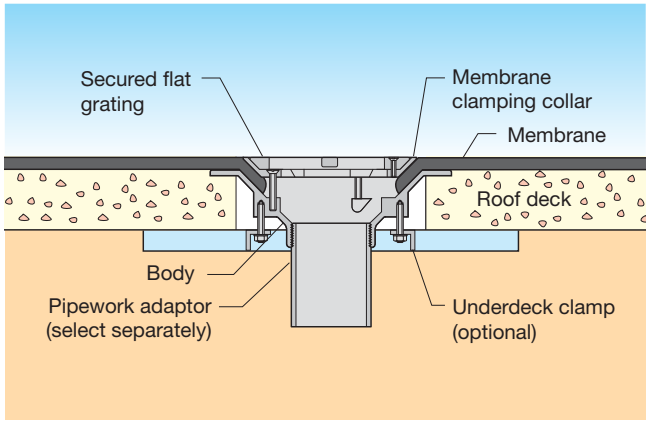
Bodies with spigot outlet are for direct connection to BS 416 pipework, or to other sizes/materials by means of proprietary coupling; versions with threaded outlet are for connection to pipework by means of a threaded pipework adaptor, a range of which is shown on page 28.

Typical installations – medium sump

WB2 Series

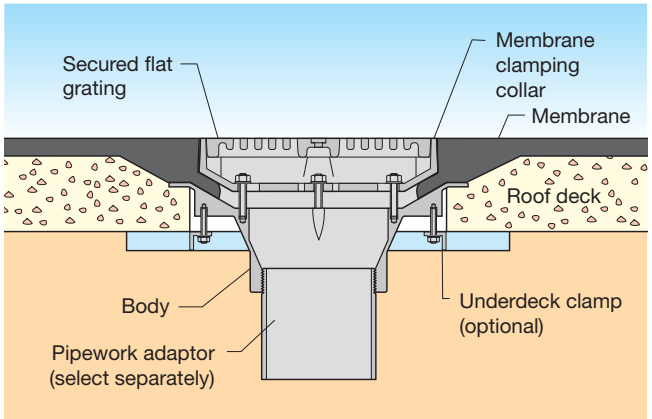


WB3 Series



Typical installations – deep sump

WB5 Series



Features

All bodies have a generous flange, essential for bonding asphalt or other membrane. All fixings are of stainless steel.

Load rating

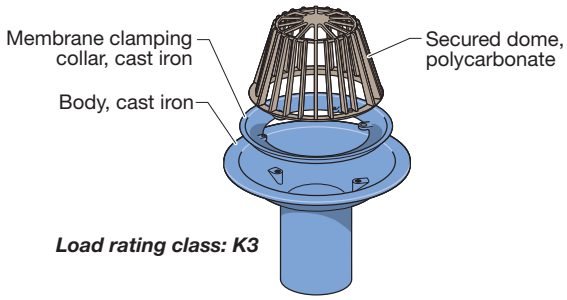
The load rating class is shown for each roof outlet; explanation of classes is given on page 4.

Flow rate

See explanation on page 4 and data on pages 30 – 33.

Accessories

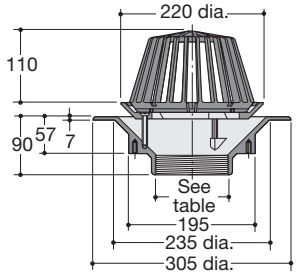
A range of accessories is shown on page 28.



Load rating class: K3

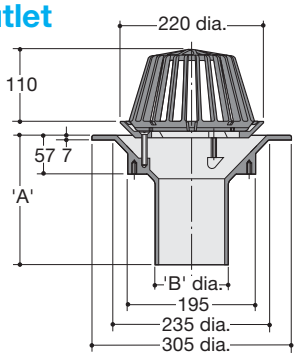
For optional stainless steel dome, add suffix "SS" to Spec. Code.

Vertical threaded outlet



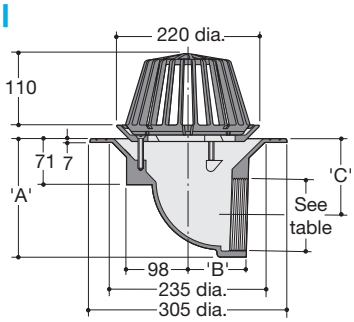
Spec. Code	Outlet size	Weight kg
WB222	2" BSP	6.2
WB223	3" BSP	5.2
WB224	4" BSP	4.6

Spigot outlet

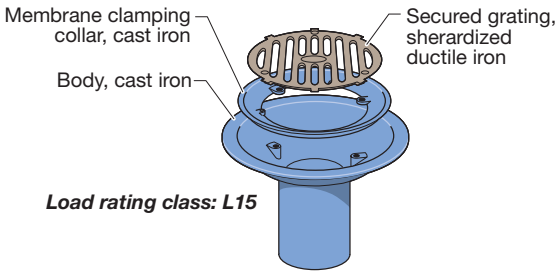


Spec. Code	Outlet size	A	B dia.	Weight kg
WB202	50	238	60	7.2
WB203	75	165	87	4.9
WB204	100	190	111	5.8

Horizontal threaded outlet

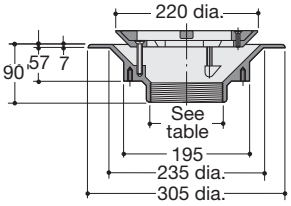


Spec. Code	Outlet size	A	B	C	Weight kg
WB232	2" BSP	119	145	80.5	7.3
WB233	3" BSP	119	145	67.5	6.7
WB234	4" BSP	183	90	117	8.5



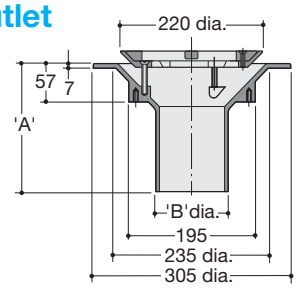
Load rating class: L15

Vertical threaded outlet



Spec. Code	Outlet size	Weight kg
WB322	2" BSP	7.5
WB323	3" BSP	6.5
WB324	4" BSP	5.9

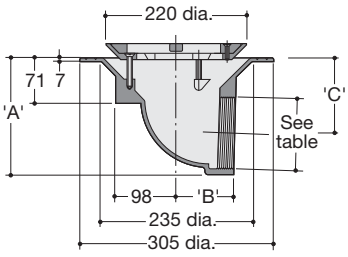
Spigot outlet



Outlet spigot conforms to BS 416

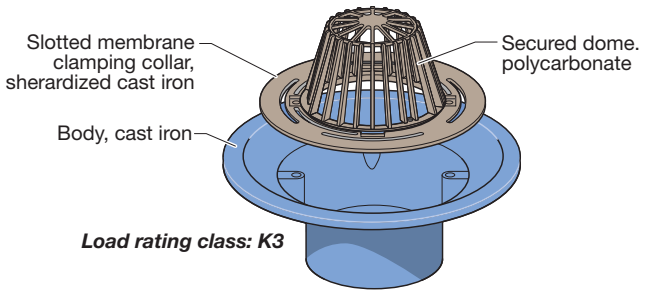
Spec. Code	Outlet size	A	B dia.	Weight kg
WB302	50	238	60	8.5
WB303	75	165	87	6.3
WB304	100	190	111	7.1

Horizontal threaded outlet



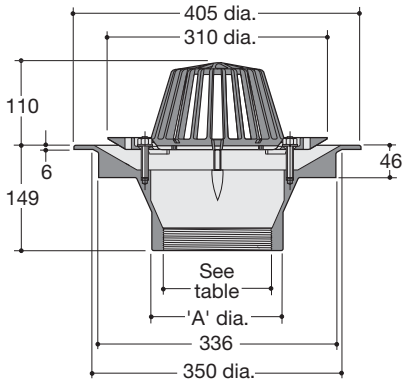
Spec. Code	Outlet size	A	B	C	Weight kg
WB332	2" BSP	119	145	80.5	8.6
WB333	3" BSP	119	145	67.5	8.0
WB334	4" BSP	183	90	117	9.8

Vertical threaded outlet

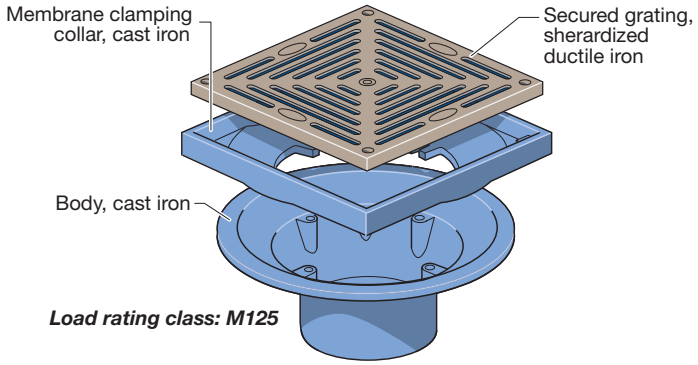


Load rating class: K3

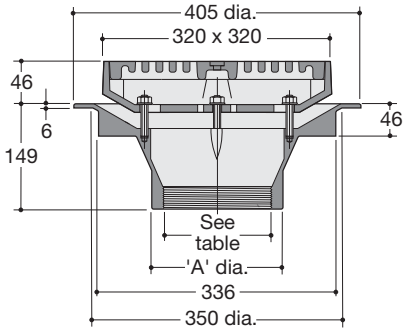
For optional stainless steel dome, add suffix “SS” to Spec. Code.



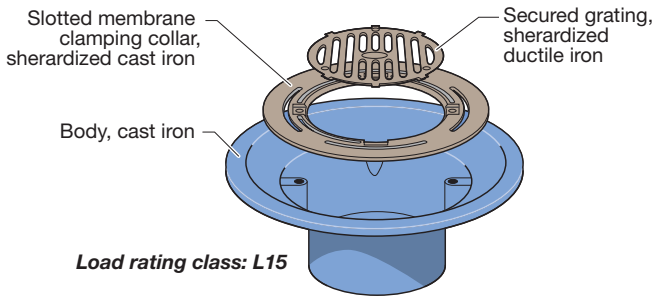
Spec. Code	Outlet size	A	Weight kg
WB414	4" BSP	186	16.0
WB416	6" BSP	186	13.5
WB418	200mm*	210	14.1



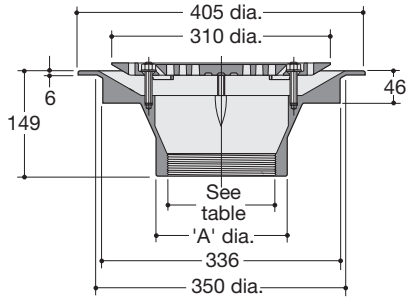
Load rating class: M125



Spec. Code	Outlet size	A	Weight kg
WB514	4" BSP	186	26.4
WB516	6" BSP	186	23.9
WB518	200mm*	210	24.5



Load rating class: L15



Spec. Code	Outlet size	A	Weight kg
WB614	4" BSP	186	17.3
WB616	6" BSP	186	14.8
WB618	200mm*	210	15.4

**** Note:** 200mm outlet is available only as spigot outlet.*

WC404

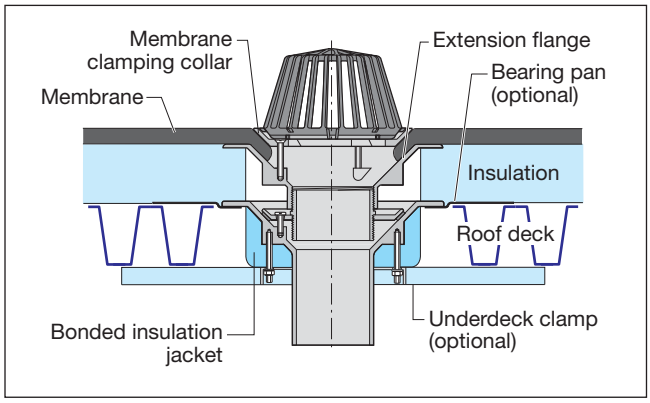
A warm roof is constructed such that the waterproofing membrane is above insulation which is laid on the roof deck.

Connections

Bodies with spigot outlet are for direct connection to BS 416 pipework, or to other sizes/materials by means of proprietary coupling; versions with threaded outlet are for connection to pipework by means of a threaded pipework adaptor, a range of which is shown on page 28.

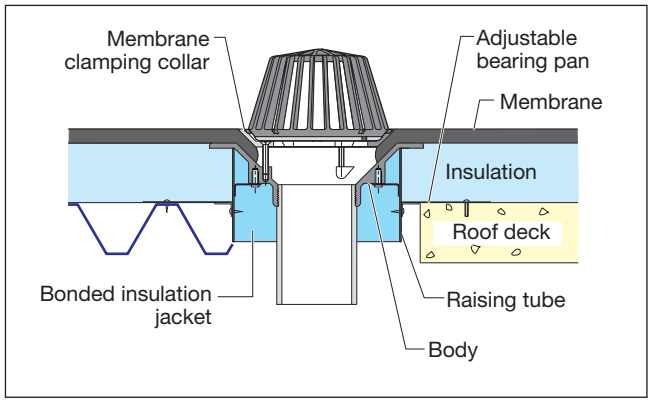
Typical installations

Load-bearing applications



Note:
Details of bonded insulation jackets is shown on page 29.

Non load-bearing applications



On site the raising tube can be easily slide-positioned through the bearing pan to suit the insulation thickness. When the required height is achieved, the tube is secured to the bearing pan using the self-tapping screws provided. The bearing pan is designed to be fixed to the deck/slab, so an underdeck clamp is not necessary.

Features

All bodies have a generous flange, essential for bonding asphalt or other membrane. All fixings are of stainless steel.

Load rating

The load rating class is shown for each roof outlet; explanation of classes is shown on page 4.

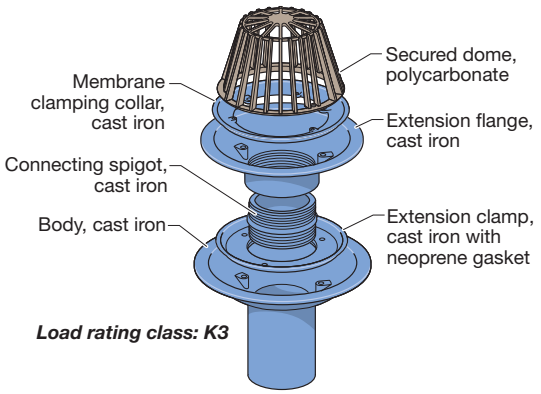
Flow rate

See explanation on page 4 and data on pages 30 – 33.

Accessories

A range of accessories is shown on page 28.

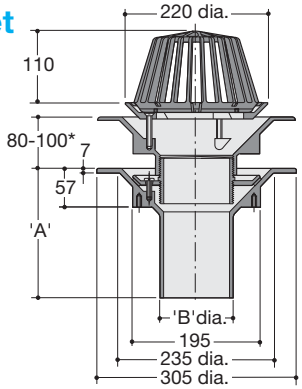
*The items listed below are for use with insulation thicknesses between 80 and 100mm. Greater thicknesses can be accommodated by use of a longer connecting spigot. To specify, state the Spec. Code and insulation thickness.



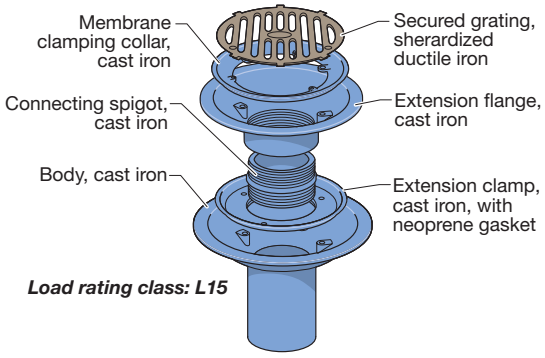
Load rating class: K3

For optional stainless steel dome, add suffix "SS" to Spec. Code.

Spigot outlet

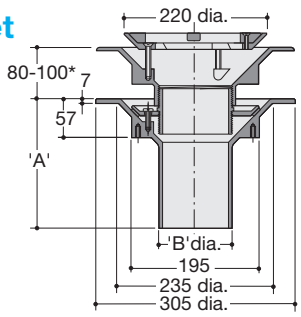


Spec. Code	Outlet size	A	B dia.	Weight kg
WC202	50	238	60	11.1
WC203	75	165	87	9.7
WC204	100	190	111	10.5



Load rating class: L15

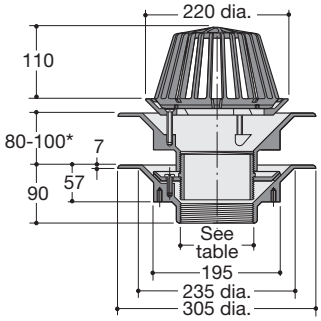
Spigot outlet



Outlet spigot conforms to BS 416

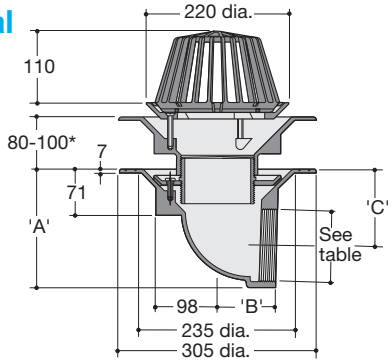
Spec. Code	Outlet size	A	B dia.	Weight kg
WC302	50	238	60	13.2
WC303	75	165	87	11.0
WC304	100	190	111	11.8

Vertical threaded outlet



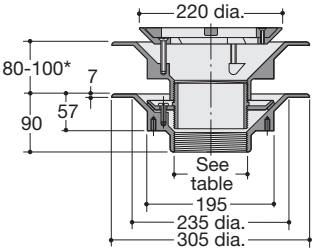
Spec. Code	Outlet size	Weight kg
WC222	2" BSP	10.9
WC223	3" BSP	9.9
WC224	4" BSP	9.3

Horizontal threaded outlet



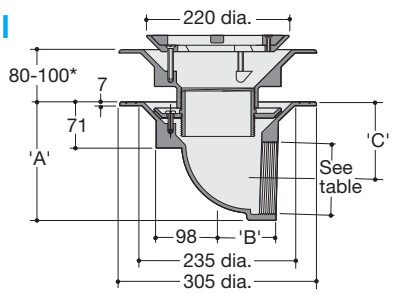
Spec. Code	Outlet size	A	B	C	Weight kg
WC232	2" BSP	119	145	80.5	12.0
WC233	3" BSP	119	145	67.5	11.4
WC234	4" BSP	183	90	117	13.2

Vertical threaded outlet



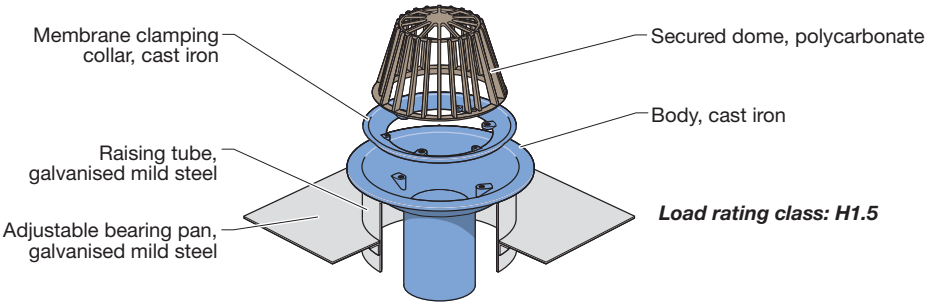
Spec. Code	Outlet size	Weight kg
WC322	2" BSP	12.2
WC323	3" BSP	11.2
WC324	4" BSP	10.6

Horizontal threaded outlet



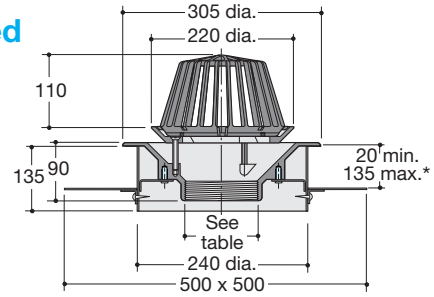
Spec. Code	Outlet size	A	B	C	Weight kg
WC332	2" BSP	119	145	80.5	13.3
WC333	3" BSP	119	145	67.5	12.7
WC334	4" BSP	183	90	117	14.5

*The items listed below are for use with insulation thicknesses between 20 and 135mm. Greater thicknesses can be accommodated by use of a longer raising tube. To specify, state the Spec. Code and insulation thickness.



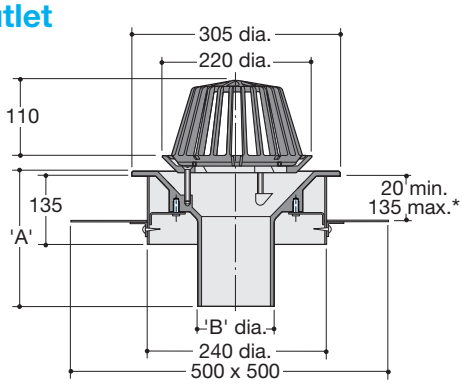
For optional stainless steel dome, add suffix “SS” to Spec. Code.

Vertical threaded outlet

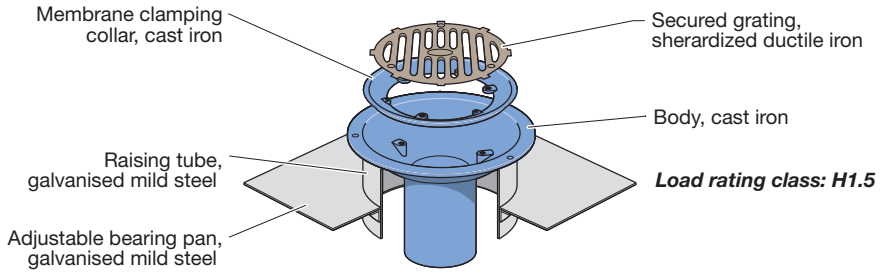


Spec. Code	Outlet size	Weight kg
WC422	2" BSP	9.7
WC423	3" BSP	8.7
WC424	4" BSP	8.1

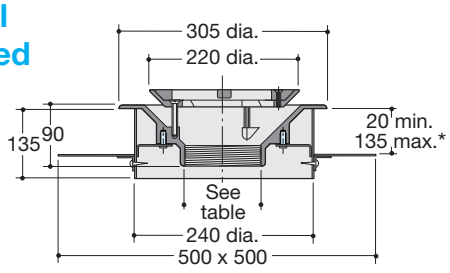
Spigot outlet



Spec. Code	Outlet size	A	B dia.	Weight kg
WC402	50	238	60	10.7
WC403	75	165	87	8.5
WC404	100	190	111	9.3

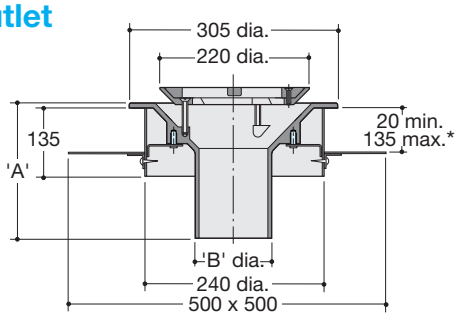


Vertical threaded outlet



Spec. Code	Outlet size	Weight kg
WC522	2" BSP	11.0
WC523	3" BSP	10.1
WC524	4" BSP	9.1

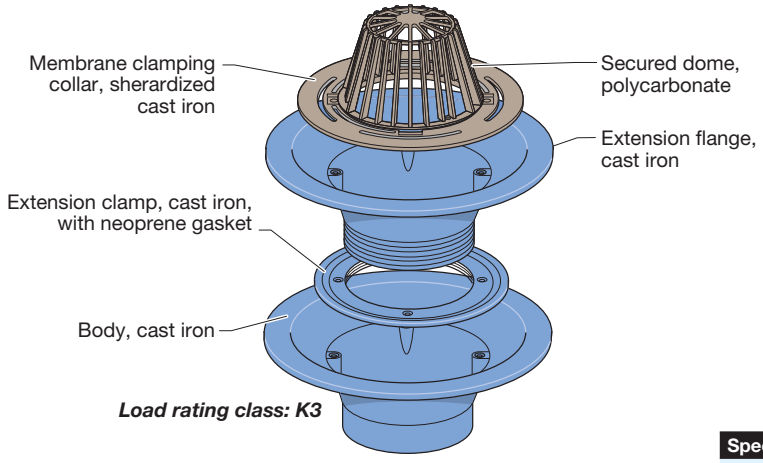
Spigot outlet



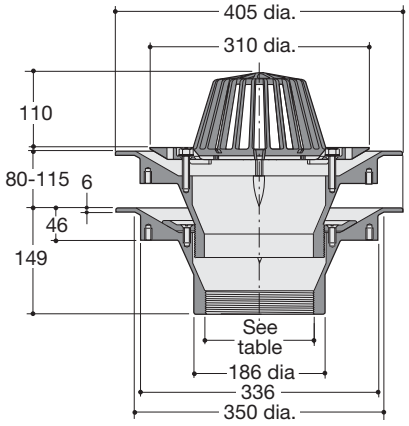
Spec. Code	Outlet size	A	B dia.	Weight kg
WC502	50	238	60	12.1
WC503	75	165	87	9.8
WC504	100	190	111	10.7

The items listed below are for use with insulation thicknesses between 80 and 115mm.

Vertical threaded outlet

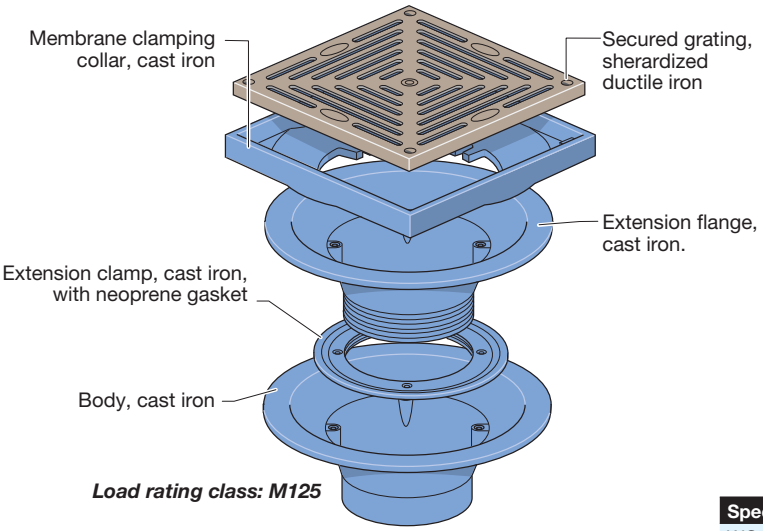


Load rating class: K3

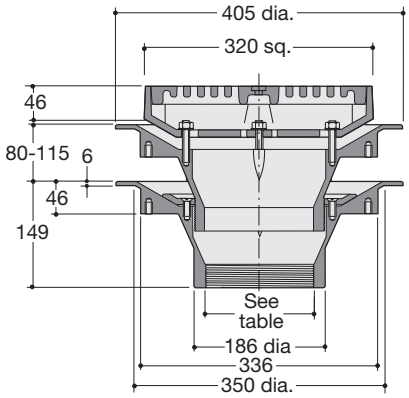


Spec. Code	Outlet size	Weight kg
WC644	4" BSP	24.1
WC646	6" BSP	21.6

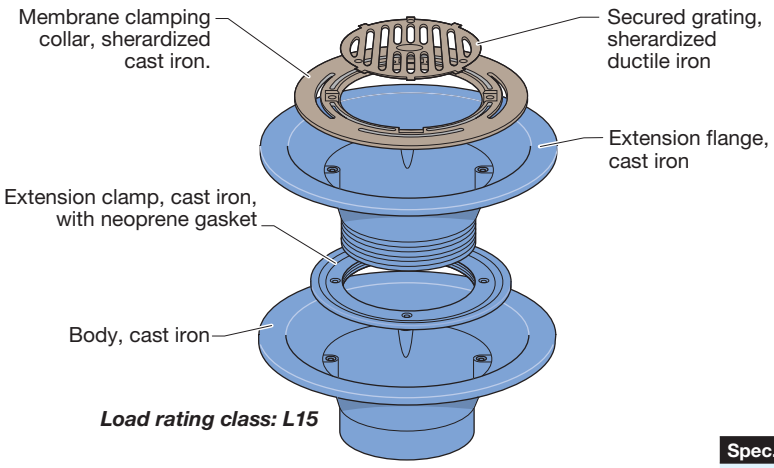
For optional stainless steel dome, add suffix “SS” to Spec. Code.



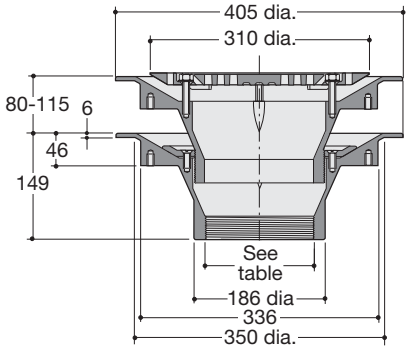
Load rating class: M125



Spec. Code	Outlet size	Weight kg
WC744	4" BSP	34.5
WC746	6" BSP	32.0



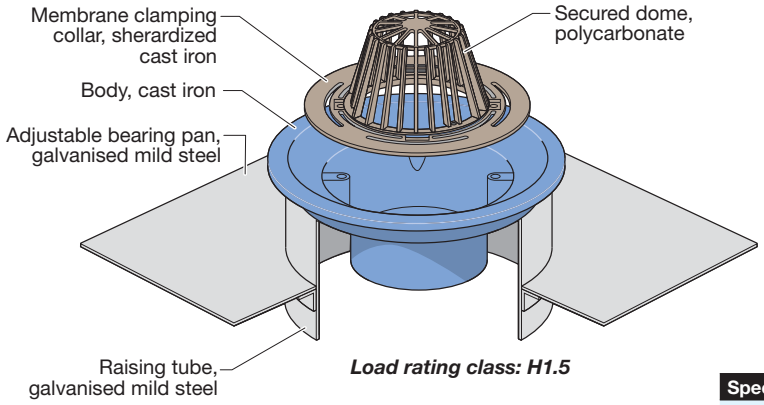
Load rating class: L15



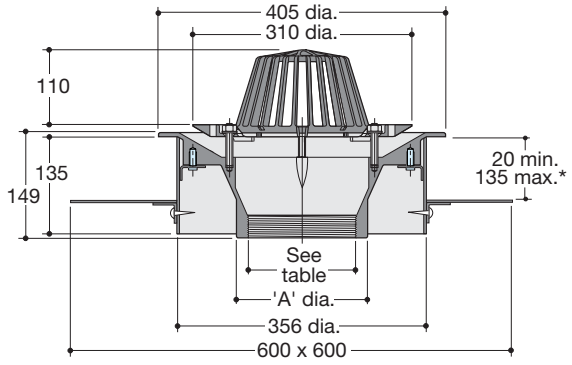
Spec. Code	Outlet size	Weight kg
WC1044	4" BSP	25.4
WC1046	6" BSP	22.9

*The items listed below are for use with insulation thicknesses between 20 and 135mm. Greater thicknesses can be accommodated by use of a longer raising tube. To specify, state the Spec. Code and insulation thickness.

Vertical threaded outlet

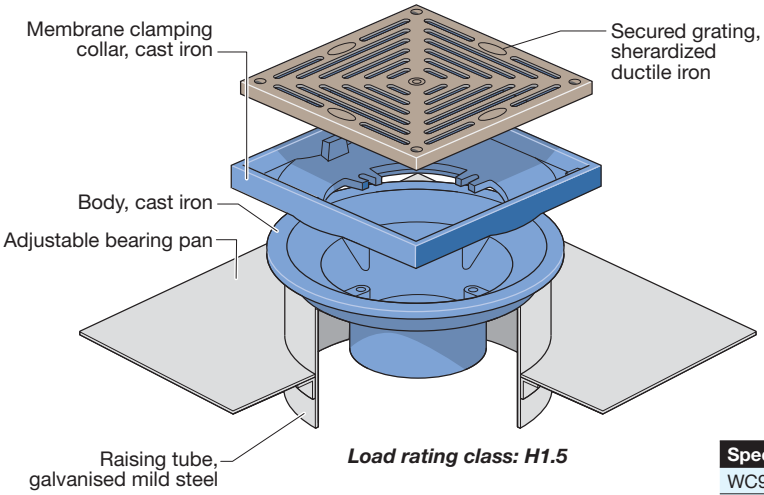


Load rating class: H1.5

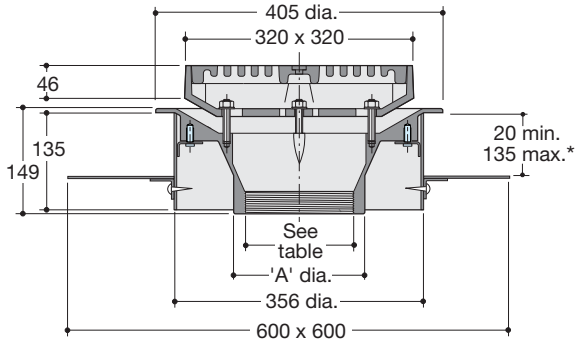


Spec. Code	Outlet size	A	Weight kg
WC814	4" BSP	186	20.7
WC816	6" BSP	186	19.2
WC818	200mm†	210	19.8

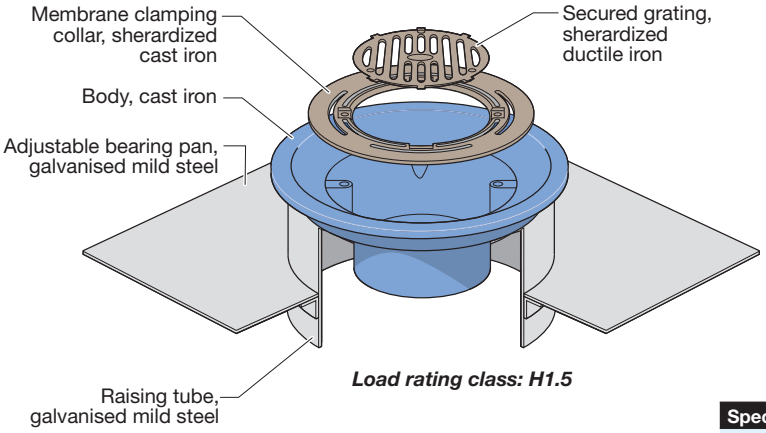
For optional stainless steel dome, add suffix “SS” to Spec. Code.



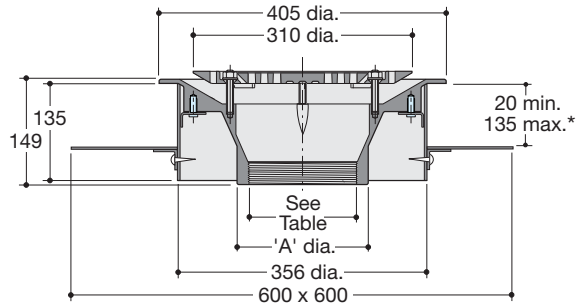
Load rating class: H1.5



Spec. Code	Outlet size	A	Weight kg
WC914	4" BSP	186	31.2
WC916	6" BSP	186	28.7
WC918	200mm†	210	29.3



Load rating class: H1.5



Spec. Code	Outlet size	A	Weight kg
WC1114	4" BSP	186	22.0
WC1116	6" BSP	186	19.5
WC1118	200mm†	210	20.1

† ***Note:*** *200mm outlet is available only as spigot outlet.*

WD304

An inverted roof is constructed such that the waterproofing membrane is above the roof deck and beneath the insulation.

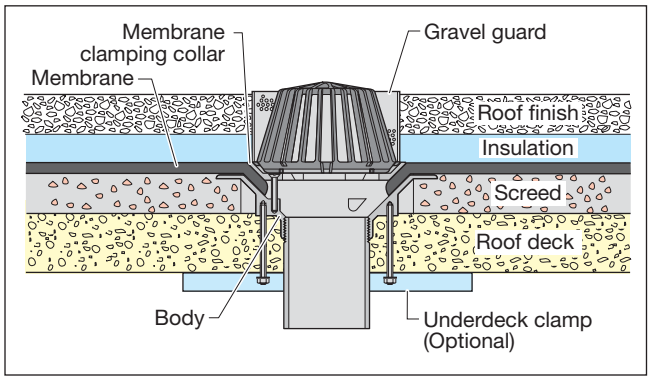
Generally, rainwater flows between any paving slabs, through any porous ballast and insulation, onto and along the membrane, to drain away through a roof outlet.

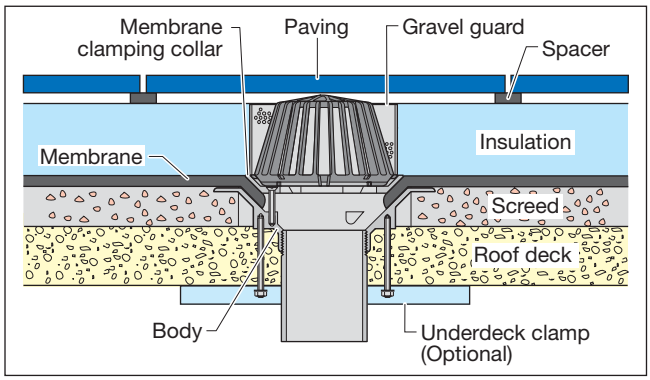
Connections

Bodies with spigot outlet are for direct connection to BS 416 pipework, or to other sizes/materials by means of proprietary coupling; versions with threaded outlet are for connection to pipework by means of a threaded pipework adaptor, a range of which is shown on page 28.

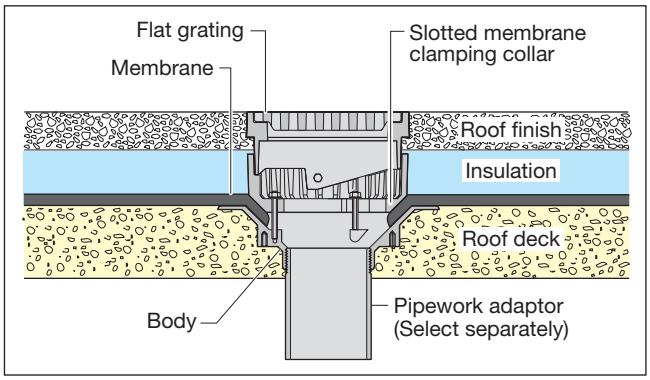
Typical installations

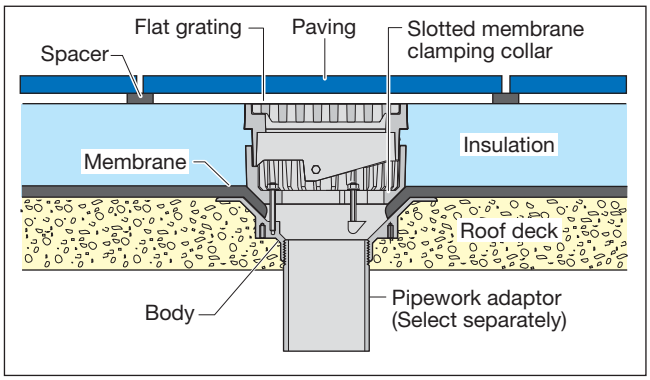
WB 2 series



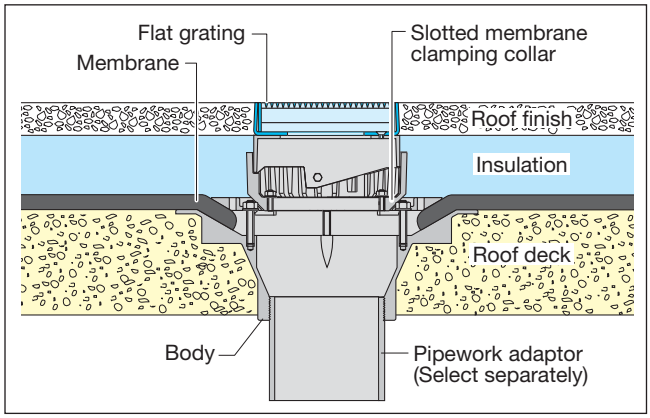


WD 2, 3 and 7 series





WD 5 and 6 series



Features

All bodies have a generous flange, essential for bonding asphalt or other membrane. All fixings are of stainless steel.

Load rating

The load rating class is shown for each roof outlet; explanation of classes is given on page 4.

Flow rate

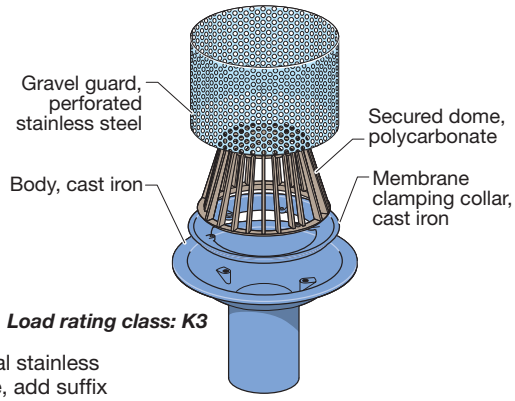
See explanation on page 4 and data on pages 30 – 33.

Slotted collar

In some versions this is used as a raising piece and as a membrane clamping collar, in others it fits into a separate membrane clamp and is, therefore, used only as a raising piece. May be wrapped with a geotextile membrane to prevent ingress.

Accessories

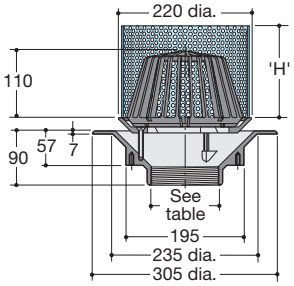
A range of accessories is shown on page 28.



Load rating class: K3

For optional stainless steel dome, add suffix "SS" to Spec. Code.

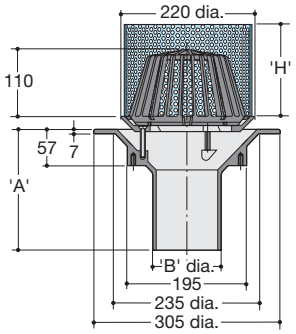
Vertical threaded outlet



Spec. Code	Outlet size	H	Weight kg
WB222G1	2" BSP	150	6.7
WB223G1	3" BSP	150	5.7
WB224G1	4" BSP	150	5.1
WB222G2	2" BSP	200	6.8
WB223G2	3" BSP	200	5.8
WB224G2	4" BSP	200	5.2

Note: The domed assemblies on this page include a gravel guard (height of 150 or 200). Other heights can be made to special order – advise height.

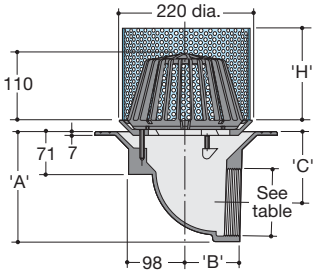
Spigot outlet



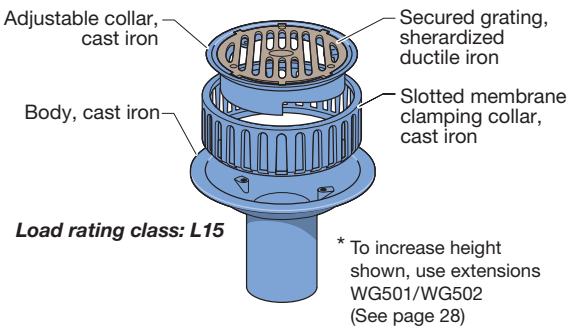
Outlet spigot conforms to BS 416

Spec. Code	Outlet size	A	B dia.	H	Weight kg
WB202G1	50	238	60	150	7.7
WB203G1	75	165	87	150	5.4
WB204G1	100	190	111	150	6.3
WB202G2	50	238	60	200	7.8
WB203G2	75	165	87	200	5.5
WB204G2	100	190	111	200	6.4

Horizontal threaded outlet



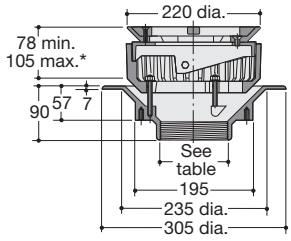
Spec. Code	Outlet size	A	B	C	H	Weight kg
WB232G1	2" BSP	119	145	80.5	150	7.8
WB233G1	3" BSP	119	145	67.5	150	7.2
WB234G1	4" BSP	183	90	117	150	9.0
WB232G2	2" BSP	119	145	80.5	200	7.9
WB233G2	3" BSP	119	145	67.5	200	7.3
WB234G2	4" BSP	183	90	117	200	9.1



Load rating class: L15

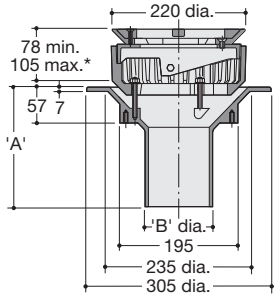
* To increase height shown, use extensions WG501/WG502 (See page 28)

Vertical threaded outlet



Spec. Code	Outlet size	Weight kg
WD222	2" BSP	12.7
WD223	3" BSP	11.7
WD224	4" BSP	11.1

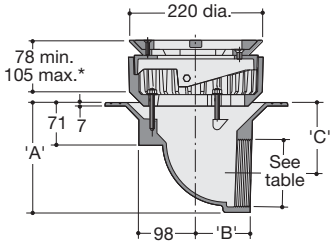
Spigot outlet



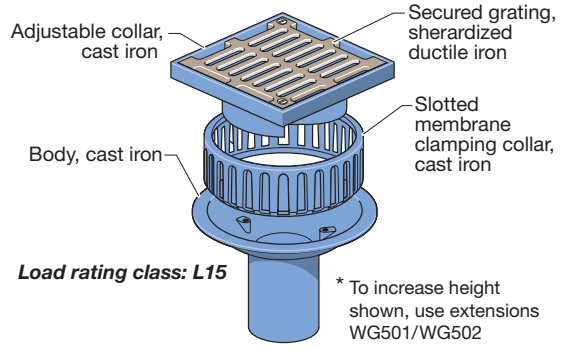
Outlet spigot conforms to BS 416

Spec. Code	Outlet size	A	B dia.	Weight kg
WD202	50	238	60	13.7
WD203	75	165	87	12.5
WD204	100	190	111	12.3

Horizontal threaded outlet



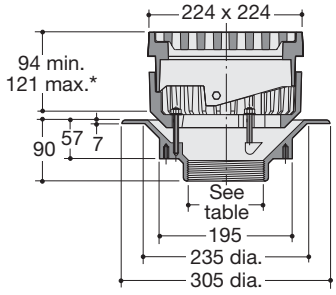
Spec. Code	Outlet size	A	B	C	Weight kg
WD232	2" BSP	119	145	80.5	13.8
WD233	3" BSP	119	145	67.5	13.2
WD234	4" BSP	183	90	117	15.0



Load rating class: L15

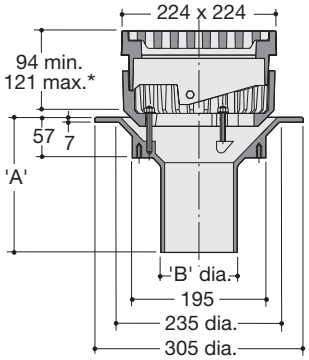
* To increase height shown, use extensions WG501/WG502 (See page 28)

Vertical threaded outlet



Spec. Code	Outlet size	Weight kg
WD322	2" BSP	13.9
WD323	3" BSP	12.9
WD324	4" BSP	12.3

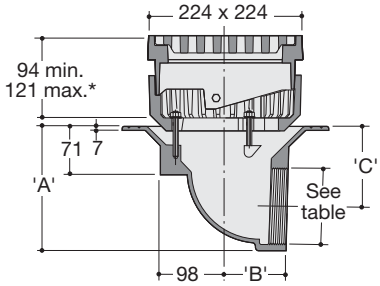
Spigot outlet



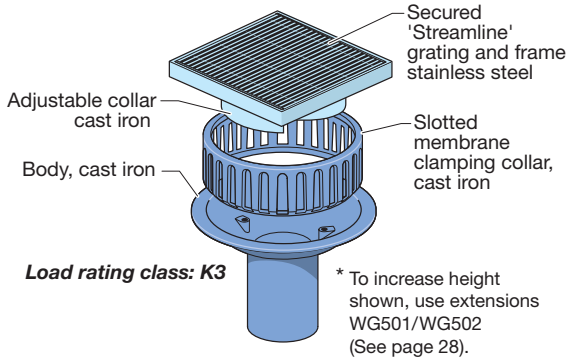
Outlet spigot conforms to BS 416

Spec. Code	Outlet size	A	B dia.	Weight kg
WD302	50	238	60	14.9
WD303	75	165	87	12.6
WD304	100	190	111	13.5

Horizontal threaded outlet



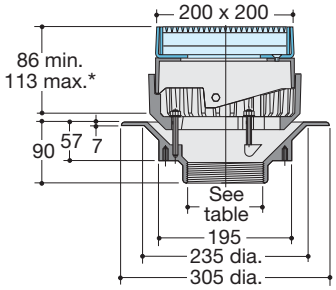
Spec. Code	Outlet size	A	B	C	Weight kg
WD332	2" BSP	119	145	80.5	15.0
WD333	3" BSP	119	145	67.5	14.4
WD334	4" BSP	183	90	117	16.2



Load rating class: K3

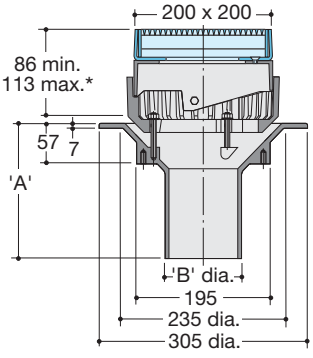
* To increase height shown, use extensions WG501/WG502 (See page 28).
For grade 316 grating and frame add suffix 'M' to the Spec. Code.

Vertical threaded outlet



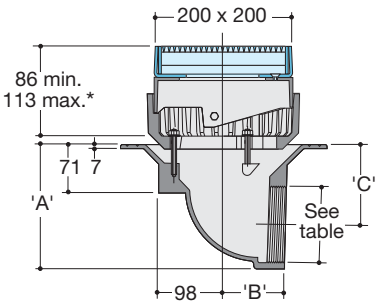
Spec. Code	Outlet size	Weight kg
WD722	2" BSP	12.7
WD723	3" BSP	12.9
WD724	4" BSP	12.3

Spigot outlet



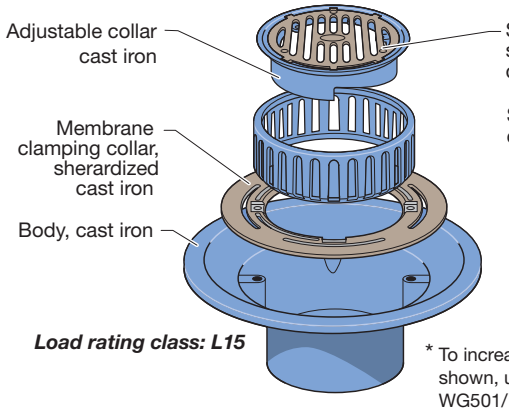
Spec. Code	Outlet size	A	B dia.	Weight kg
WD702	50	238	60	14.9
WD703	75	165	87	12.6
WD704	100	190	111	13.5

Horizontal threaded outlet



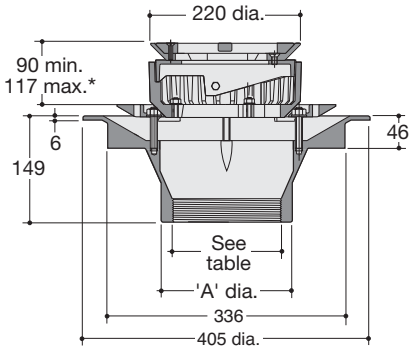
Spec. Code	Outlet size	A	B	C	Weight kg
WD732	2" BSP	119	145	80.5	15.0
WD733	3" BSP	119	145	67.5	14.4
WD734	4" BSP	183	90	117	16.2

Vertical threaded outlet

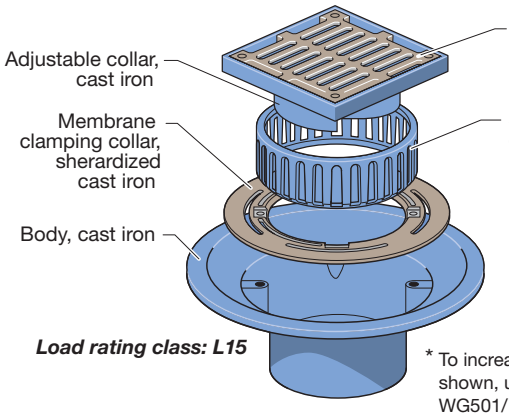


Load rating class: L15

* To increase height shown, use extensions WG501/WG502 (See page 28)

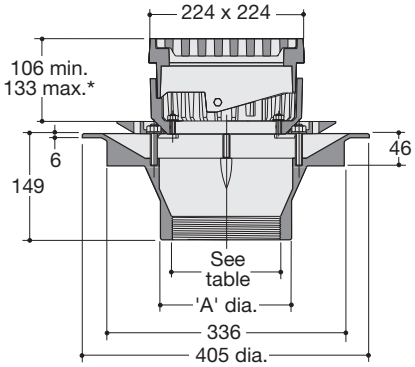


Spec. Code	Outlet size	A	Weight kg
WD514	4" BSP	186	20.1
WD516	6" BSP	186	17.6
WD518	200mm†	210	18.2

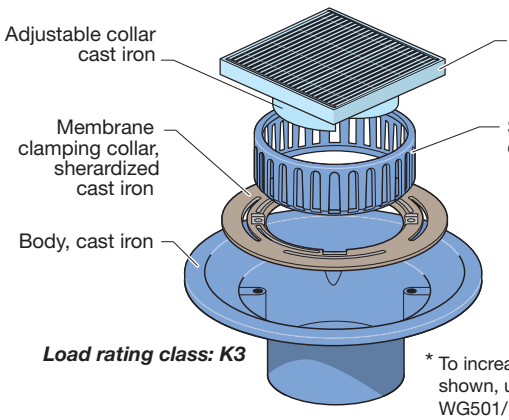


Load rating class: L15

* To increase height shown, use extensions WG501/WG502 (See page 28)

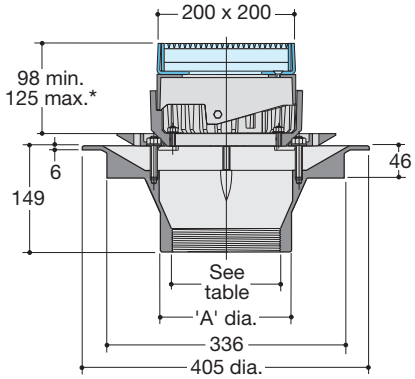


Spec. Code	Outlet size	A	Weight kg
WD614	4" BSP	186	21.3
WD616	6" BSP	186	18.8
WD618	200mm†	210	19.4



Load rating class: K3

* To increase height shown, use extensions WG501/WG502 (See page 28). For grade 316 grating and frame add suffix 'M' to the Spec. Code.

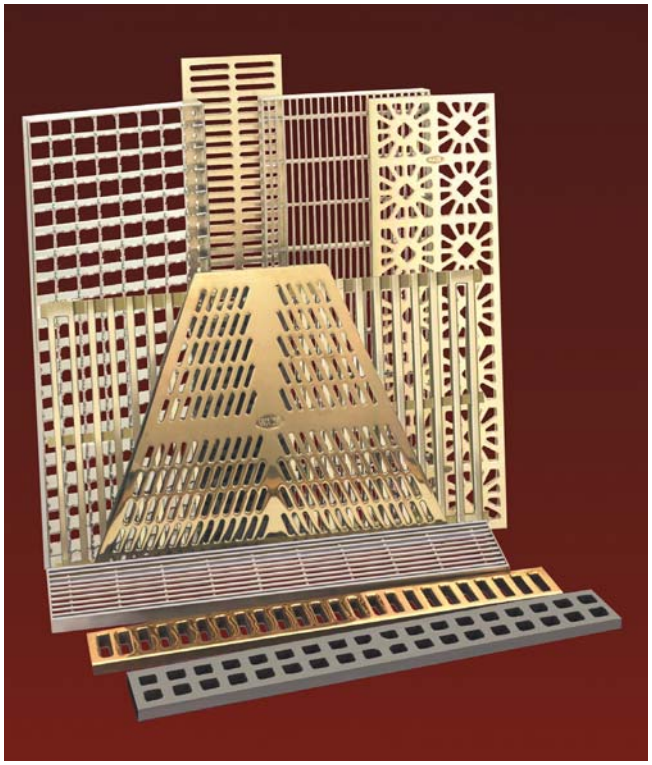


Spec. Code	Outlet size	A	Weight kg
WD644	4" BSP	186	19.7
WD646	6" BSP	186	17.6
WD648	200mm†	210	18.2

† ***Note:*** *200mm outlet is available only as spigot outlet.*

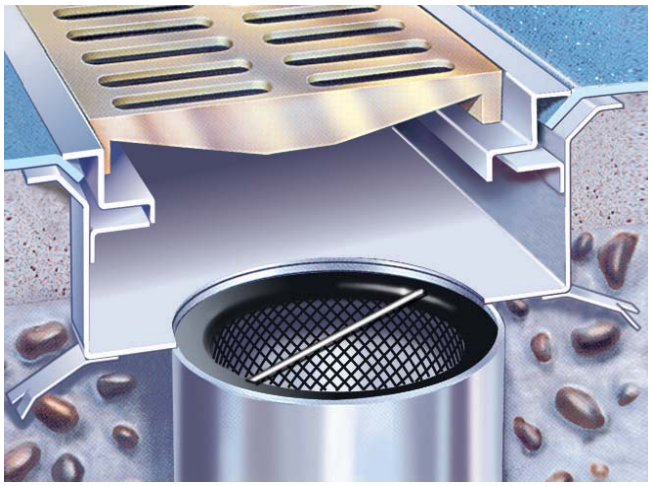
For use in roofs and floors, Wade offers a range of stainless steel channel with a choice of gratings of stainless steel, nickel bronze and cast iron. Details are included in our Technical Handbook *Linear Drainage* and on our website.

Heavy duty bar grating designed for trolley wheel-loading. Austenitic stainless steel channel and grating meet the high standards of hygiene demanded in today's working environments.



A selection of gratings.

Stainless steel channel with 'Streamline' stainless steel grating.



Channel profile SVF ensures watertight connection when used with flexible sheet floor covering such as vinyl.

SS3080AC Mitred 'Streamline' grating (patent no. GB 2496199).

Technical Handbook
Linear Drainage

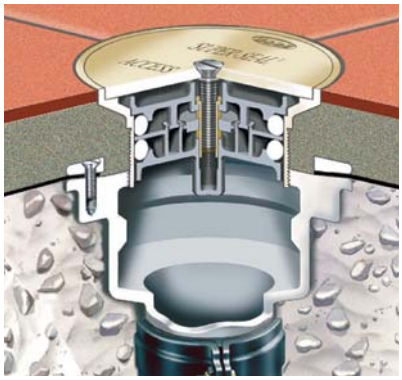
Wade manufactures a comprehensive range of floor gullies for use with various floor finishes including ceramic tiles, marble, terrazzo, epoxy resin and sheet floor covering such as vinyl.

Gratings are available made of stainless steel, nickel bronze and polished bronze, with choices of size, style and connection type; bodies are available made of stainless steel, cast iron and gunmetal.

Details are included in our Technical Handbook *Floor gullies and access covers* and on our website.

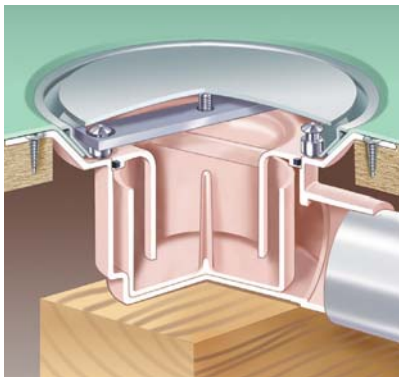
A selection of floor gullies, access covers and accessories.

A Vari-Level floor gully assembly showing optional grating extension and bolt-on funnel.

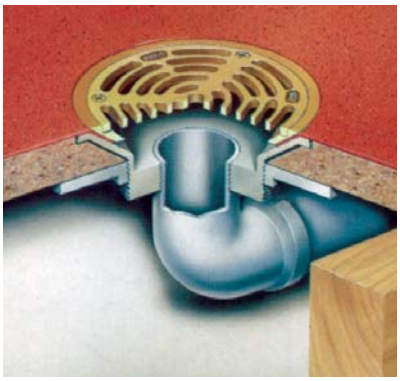


Super Seal access cover in a tiled floor.

Stainless steel gully with side inlets in a tiled floor.

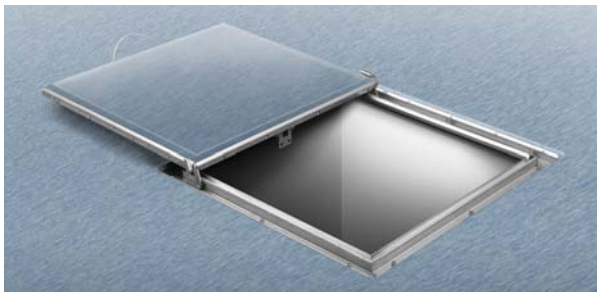


Watertight trapped drainage in a vinyl covered timber floor.



Watertight drainage in a vinyl covered timber floor.

Technical Handbook *Floor gullies and access covers*



Sliding access cover on a vinyl covered floor (Patent pending).

Wade drainage products are installed in and near all kinds of buildings, some examples of which are shown below.

A.E.L.T.C.C. Wimbledon.

Chep Lap Kok Airport, Hong Kong.

Drainage and access in a vinyl floor.

A McDonalds Restaurant.

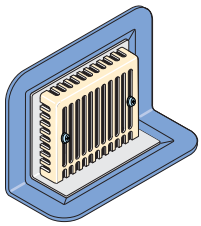
The British Library.

Asda Store, Runcorn.

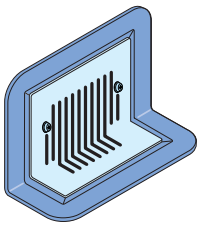
Drainage beside the Thames.

Wade offers a range of parapet outlets often used with downspout nozzles as shown on page opposite.
A membrane clamping collar, of sheradized ductile iron is supplied with cast iron body versions up to 4" outlet (of stainless steel with PVC body versions). This allows the grating to be removed, for maintenance purposes, without disturbing the membrane.

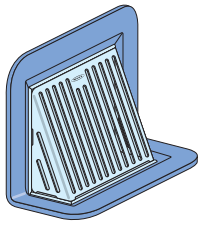
WF002 to WF034



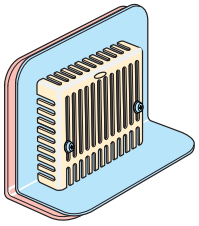
WF042 to WF044



WF072 to WF074



WF105 to WF135



Spec. Code	Outlet size	A	B	kg	Material Grating	Body
WF002	2" BSP	39	164	5.8	Nickel bronze	Cast iron
WF003	3" BSP	52	151	5.1	Nickel bronze	Cast iron
WF004	4" BSP	65	137	4.7	Nickel bronze	Cast iron
WF012	2" BSP	39	164	5.3	Aluminium	Cast iron
WF013	3" BSP	52	151	4.6	Aluminium	Cast iron
WF014	4" BSP	65	137	4.2	Aluminium	Cast iron
WF022	2" BSP	39	164	5.9	Cast iron	Cast iron
WF023	3" BSP	52	151	5.2	Cast iron	Cast iron
WF024	4" BSP	65	137	4.8	Cast iron	Cast iron
WF032	2" BSP	39	164	5.5	Stainless steel	Cast iron
WF033	3" BSP	52	151	4.8	Stainless steel	Cast iron
WF034	4" BSP	65	137	4.4	Stainless steel	Cast iron
WF042	2" BSP	39	164	5.4	Stainless steel 'L'	Cast iron
WF043	3" BSP	32	151	4.8	Stainless steel 'L'	Cast iron
WF044	4" BSP	65	137	4.4	Stainless steel 'L'	Cast iron
WF072	2" BSP	39	164	5.3	Stainless steel	Cast iron
WF073	3" BSP	52	151	4.7	Stainless steel	Cast iron
WF074	4" BSP	65	137	4.3	Stainless steel	Cast iron
WF105	4" BSP	65	120	1.8	Nickel bronze	PVC*
WF115	4" BSP	65	120	1.5	Aluminium	PVC*
WF125	4" BSP	65	120	1.9	Cast iron	PVC*
WF135	4" BSP	65	120	1.5	Stainless steel	PVC*

* With PVC body for use with single ply membranes, see page 26 for illustration.
'L' denotes shape of stainless steel grating.

Connections

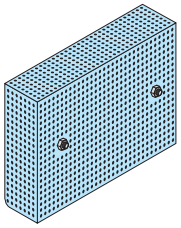
Bodies are reversible to provide horizontal or vertical outlet for connection to pipework by means of a threaded pipework adaptor, a range of which is shown on page 28.

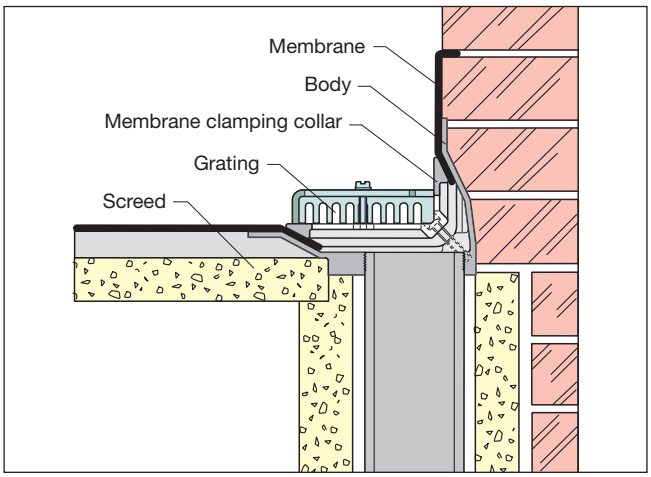
Flow rate

See explanation on page 4 and data on pages 30 – 33.

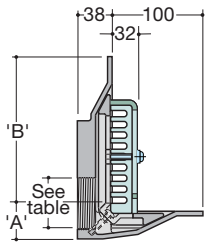
Options

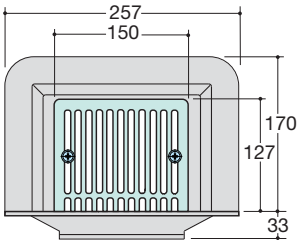
Gravel guard – stainless steel
To prevent ingress of gravel.
Flow rate may be reduced.
To specify/order and suffix "G"
(cannot be used with WF072-WF074).
Grade 316 (stainless steel grating versions) add suffix 'M'.



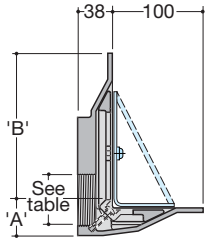


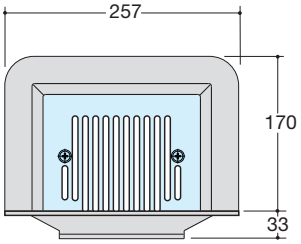
WF002 – WF034



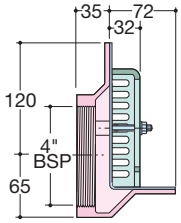


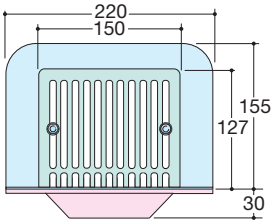
WF042 – WF044, WF072 – WF074





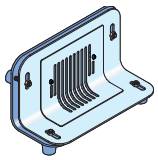
WF105 – WF135



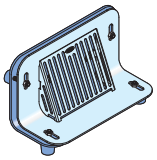


Wade offers a range of parapet outlets often used with downspout nozzles as shown below. A membrane clamping collar, of stainless steel is supplied with stainless steel grating versions. This allows the grating to be removed, for maintenance purposes, without disturbing the membrane. Versions with aluminum grating use the grating as a membrane clamp.

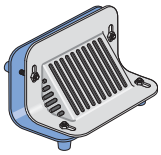
WF046



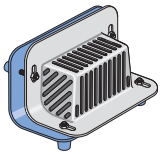
WF076



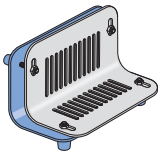
WF156



WF166



WF176



Spec. Code	Outlet size	A	B	kg	Material Grating	Material Body
WF046	6" BSP	91	132	9.8	Stainless steel 'L'	Cast iron
WF076	6" BSP	91	132	9.7	Stainless steel	Cast iron
WF156	6" BSP	91	132	9.4	Aluminium	Cast iron
WF166	6" BSP	91	132	9.2	Aluminium	Cast iron
WF176	6" BSP	91	132	11.3	Aluminium	Cast iron

'L' denotes shape of stainless steel grating.

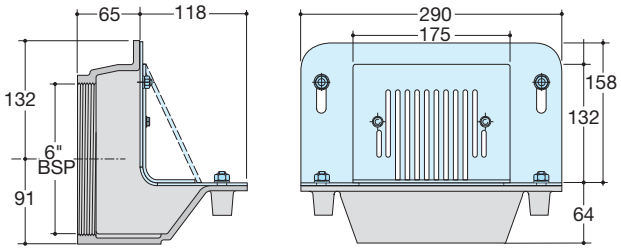
Connections

Bodies are reversible to provide horizontal or vertical outlet for connection to pipework by means of a threaded pipework adaptor, a range of which is shown on page 28.

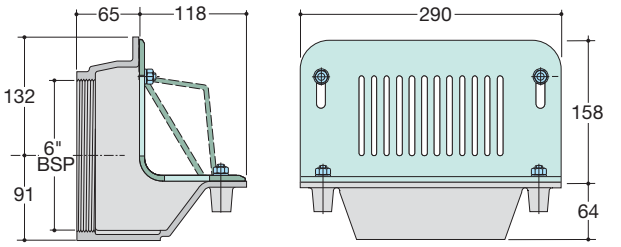
Flow rate

See explanation on page 4 and data on pages 30 – 33.

WF046, WF076

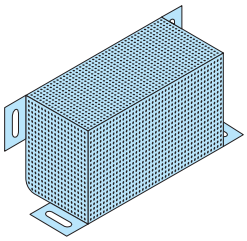


WF156, WF166, WF176



Options

Gravel guard – stainless steel
To prevent ingress of gravel.
Flow rate may be reduced.
To specify/order and suffix "G".
Grade 316 (stainless steel grating versions) add suffix 'M'.



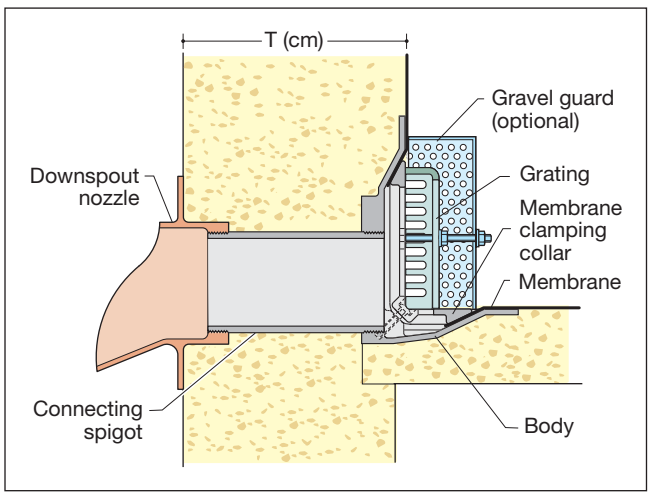
DOWNSPOUT NOZZLES – CAST GUNMETAL

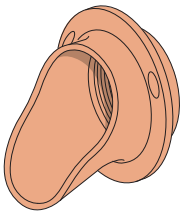
Wade offers a range of downspout outlets with threaded inlet, designed for installation on the outside face of a parapet wall to discharge water to lower levels.

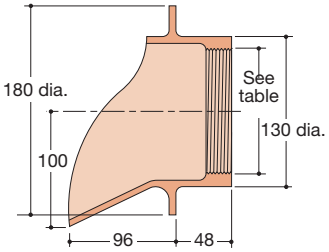
Typical installation

The illustration shows a downspout nozzle connected to a parapet outlet.

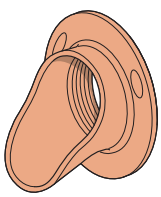
Connecting spigots are shown on page 29. To calculate required length in cm, use formula L = (T – A), and round up to the nearest cm.

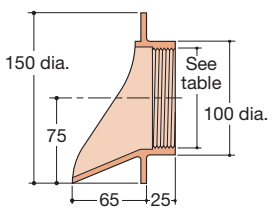






Spec. Code	Outlet size	A	Weight kg
WJ102	2" BSP	4.5	6.3
WJ103	3" BSP	4.5	4.4
WJ104	4" BSP	4.5	3.9





Spec. Code	Outlet size	A	Weight kg
WJ202	2" BSP	2	2.1
WJ203	3" BSP	2	1.5

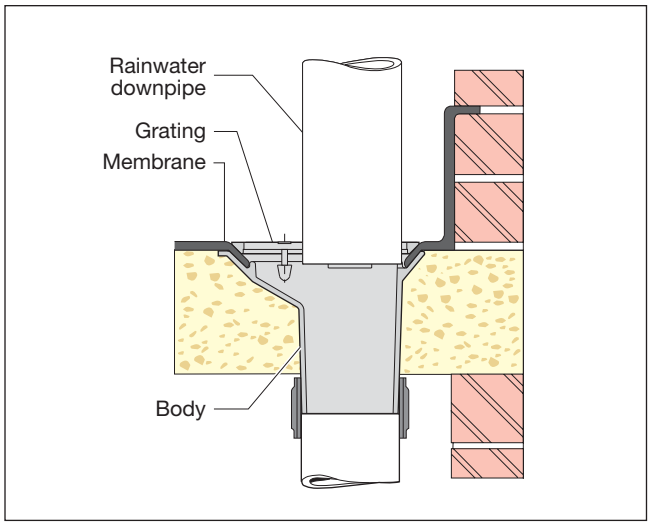
For use on balconies with an asphalt finish, Wade offers balcony outlets with option of a full grating or with cut-out for a downpipe.

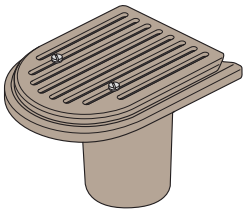
Flow rate

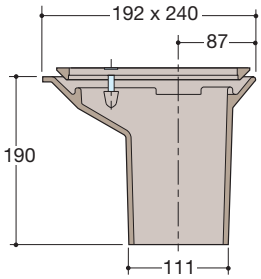
See explanation on page 4 and data on pages 30 – 33.

Typical installation

The illustration shows a balcony outlet installed with an asphalt finish. The grating is designed to allow a rainwater downpipe from the balcony above to be fitted into the body eliminating spillage onto the walkway.





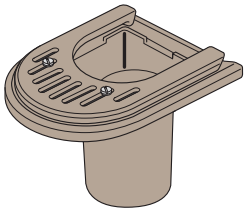


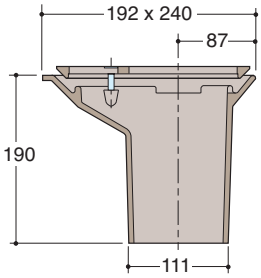
Outlet spigot conforms to BS416 / DIN19522

Spec. Code	Outlet size	Weight kg
WF604	100mm	6.2

Load rating class: K3

Cut out accepts downpipe of 116mm dia. max.



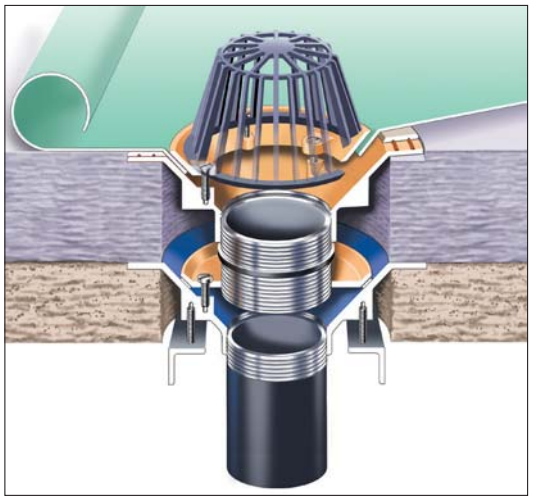


Outlet spigot conforms to BS416 / DIN19522

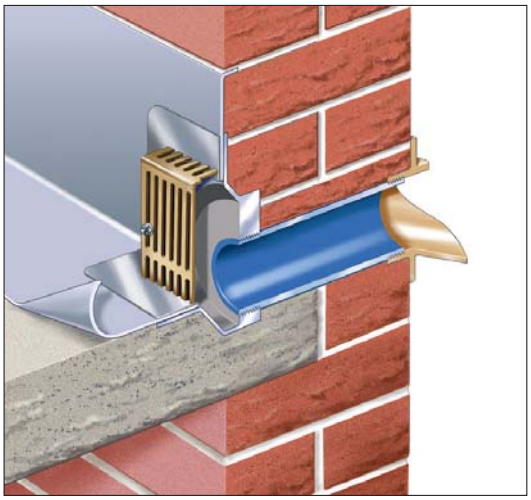
Spec. Code	Outlet size	Weight kg
WF704	100mm	5.7

Load rating class: K3

ROOF OUTLETS FOR USE WITH PVC SINGLE PLY MEMBRANES



WC224Z roof outlet with WG102 underdeck clamp and WT103 threaded pipework adaptor, in a warm roof with single ply membrane.



WF105 parapet outlet with connecting spigot and WJ104 downspout nozzle.

Warm and cold roofs

By application of a rigid PVC flange at our works, all versions of roof outlets, with the range of accessories, may be used with PVC single ply membranes. PVC based membranes may be solvent or heat welded directly to the PVC flange on site to produce a watertight seal.

To specify/order add suffix “Z” to the Spec. Code.

Parapet outlets

Wade offers a range of parapet outlets with reversible, PVC body, to provide horizontal or vertical threaded outlet, with grating options.

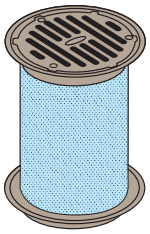
For dimensions and drawings see page 24.

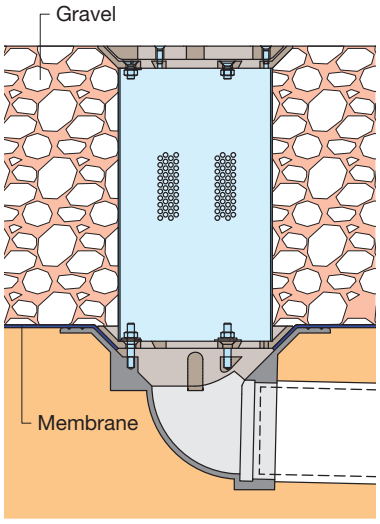
Parapet outlets can be used with downspout nozzles as illustrated on page 25.

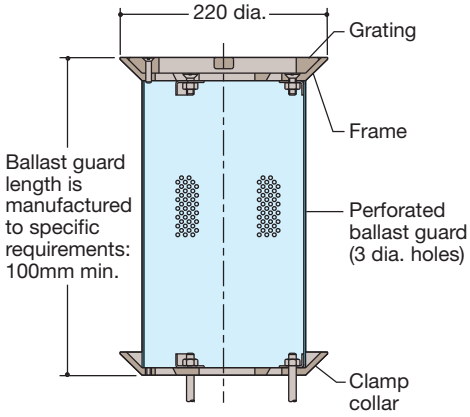
Wade offers a range of products providing drainage of moisture in planting areas and flower boxes, without loss of soil.

P801

For applications where a grating is required at the surface, in a paved area, or where access is required; for use with D10-D12 series bodies, shown on page 5B ntcibm of our *Floor Gullies and Access Covers* Technical Handbook and on our website.







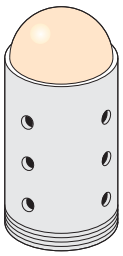
Spec. Code	Weight (min.) kg
P801 + length (mm)	4.0

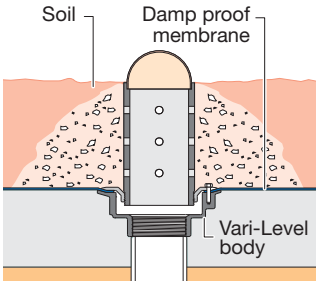
Load rating class: K3

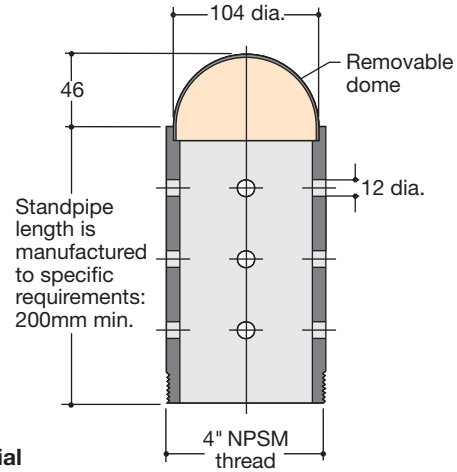
Material
Grating – ductile iron, sherardized
Ballast guard – stainless steel
Frame/clamp collar – cast iron, lacquered

P901

For applications where the standpipe is concealed by soil; for use with Vari-Level bodies shown in Section 5B of our *Floor Gullies and Access Covers* Technical Handbook and on our website. Dome is removable for access purposes.







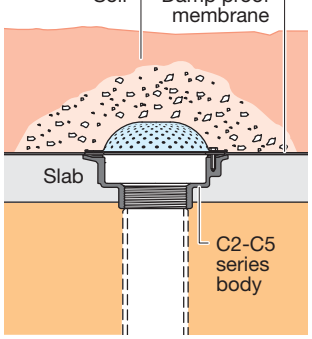
Spec. Code	Weight (min.) kg
P901 + Standpipe length (mm)	0.7

Material
Dome – copper
Standpipe – PVC

P10 series

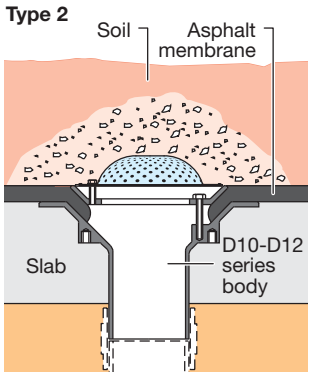
For applications where all drainage is concealed by soil; versions available to suit asphalt or sheet/brush on membranes.

Type 1

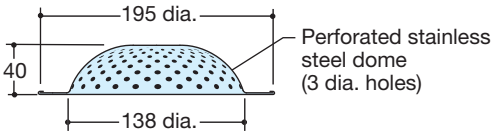


Body shown on pages 5Bntci1/5Bntci2 of our *Floor Gullies and Access Covers* Technical Handbook and on our website.

Type 2



Body shown on pages 5Bntcibm of our *Floor Gullies and Access Covers* Technical Handbook and on our website.

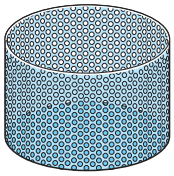


Material: Stainless steel
May be wrapped with a geotextile membrane to prevent ingress.

Spec. Code	Installation type	Membrane	Dome free area cm²	kg
P1001	1	Sheet or brush on	115	0.3
P1002	2	All types (inc. asphalt)	115	1.3

Gravel guard – Stainless steel

For use with domes on all roofs having a deep gravel finish; designed to retain insulation and/or to prevent the ingress of gravel, both in service and when the dome is removed for cleaning. Versions of different height may be made to special order – advise required height. Flow rate may be reduced.



For medium sump outlets

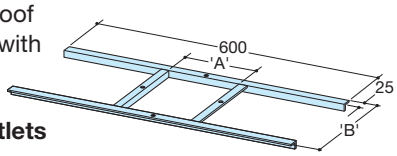
Spec. Code	Height	Dia.	Weight kg
WG406	150	200	0.5
WG408	200	200	0.6

For deep sump outlets

Spec. Code	Height	Dia.	Weight kg
WH506	150	312	0.8
WH508	200	312	0.8

Underdeck clamp - Stainless steel

To secure a body to a roof deck (Cannot be used with horizontal outlet).



For medium sump outlets

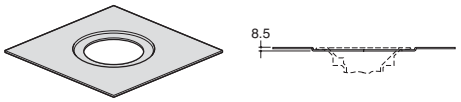
Spec. Code	A	B	Weight kg
WG102	150	200	1.7

For deep sump outlets

Spec. Code	A	B	Weight kg
WH202	287	337	2.1

Bearing pan – Galvanised mild steel

To spread the load over a larger area. (Cannot be used with horizontal outlet)



For medium sump outlets

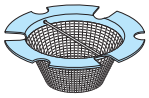
Spec. Code	Height	Weight kg
WG201	500 sq.	2.3

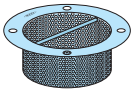
For deep sump outlets

Spec. Code	Height	Weight kg
WH301	610 sq.	2.9

Filter basket – Stainless steel grade 304

Used to intercept debris. **Note:** Filter baskets may require regular maintenance and will reduce flow rate by varying extent depending on body selected.





For medium sump outlets

Spec. Code	Weight kg
WG301	0.2

For deep sump outlets

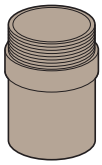
Spec. Code	Compatible with	Weight kg
WH402	WC7, WC9, WB5	0.6

Extension – Cast iron

Used to raise the height of a grating above a body. (Inverted roof only). May be stacked to achieve extra height.

For WD2-WD7 series

Spec. Code	Height	Weight kg
WG501	96	3.0
WG502	35	1.5



Threaded pipework adaptors

A comprehensive range of adaptors, shown in the following table, is available to enable bodies with BSP threaded outlet to be connected speedily and effectively to all pipework in general use.
To complete the connection a coupling may be required as indicated.

†Longer adaptors, such as required to pass through a slab, can be made in 10mm increments up to 900mm (except T1702 and T1704). To specify/order and "–" and length (mm) to Spec. Code.

On request, adaptors may also be threaded both ends. For details, please contact our Technical Services Department.

Body outlet BSP	Pipework system	Nom. dia. mm	Threaded pipework adaptor					Required coupling
			Spec. Code	O.D. mm	Length mm	Material	Weight kg	
2"	Cast iron BS 416	50	**T101**	60	90	Mild steel, sherardized	0.5	Proprietary
2"	Cast iron BS 416	50	**WT101**	60	170	Mild steel, sherardized	1.0	Proprietary
3"	Cast iron BS 416	75	**T102**	87	90	Mild steel, sherardized	0.9	Proprietary
3"	Cast iron BS 416	75	**WT102**	87	170	Mild steel, sherardized	1.7	Proprietary
4"	Cast iron BS 416	100	**T103**	111	90	Cast iron	1.2	Proprietary
4"	Cast iron BS 416	100	**WT103**	111	170	Cast iron	2.5	Proprietary
6"	Cast iron BS 416	150	**T104**	162	90	Cast iron	1.2	Proprietary
6"	Cast iron BS 416	150	**WT104**	162	170	Cast iron	4.0	Proprietary
4"	Cast iron BS 437	100	**WT105**	117	170	Cast iron	2.6	Proprietary
6"	Cast iron BS 437	50	**WT106**	171	170	Cast iron	4.1	Proprietary
2"	Cast iron BS EN 877 (Ensign+SMU)	50	**WT101**	60	170	Mild steel, sherardized	1.0	Proprietary
3"	Cast iron BS EN 877 (SMU)	75	**WT108**	84	170	Mild steel, sherardized	1.2	Proprietary
3"	Cast iron BS EN 877 (Ensign)	75	**WT102**	87	170	Mild steel, sherardized	1.7	Wade T1603
4"	Cast iron BS EN 877 (Ensign+SMU)	100	**WT103**	111	170	Cast iron	2.5	Proprietary
6"	Cast iron BS EN 877 (Ensign+SMU)	150	**WT104**	162	170	Cast iron	4.0	Proprietary
2"	Stainless steel BS EN 1124	50	**T1802**	50	90	Plastic (ABS)	0.2	Proprietary
4"	Stainless steel BS EN 1124	100	**T302**	110	120	Plastic (uPVC)	0.4	Proprietary
6"	Stainless steel BS EN 1124	150	**T303**	160	166	Plastic (ABS)	0.6	Proprietary
2"	Plastic	50	**T1702***	54*	60	Plastic (ABS)	0.1	None
3"	Plastic	82	**T301**	82	140	Plastic (ABS)	0.2	Proprietary
4"	Plastic	110	**T1704***	110*	126	Plastic (ABS)	0.2	None
6"	Plastic	160	**T303**	160	166	Plastic (ABS)	0.6	Proprietary
4"	HDPE	100	**T103**	111	90	Cast iron	1.2	T1501

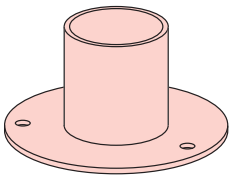
**Solvent weld socket internal diameters shown*

†Longer adaptors – 100mm nominal diameter versions above 600mm length will be made of sheradized mild steel instead of cast iron.

Vertical overflow outlet – Polypropylene and ABS

The roof outlet dome is replaced with a corresponding overflow outlet of a diameter to match the roof outlet. Height of overflow pipe to be adjusted as required on site, either by cutting to length or solvent welding an additional section of pipe.

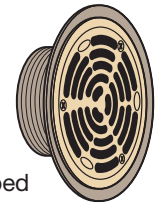
Basic heights or different diameters are as below:



Height mm	Dia.	Overflow upstand	kg
30	2"	Socket	0.8
110	3"	Spigot	2.5
96	4"	Socket	1.0

To specify/order quote Spec. Code of selected medium sump roof outlet plus suffix 'OF' eg. 'WB204OF'

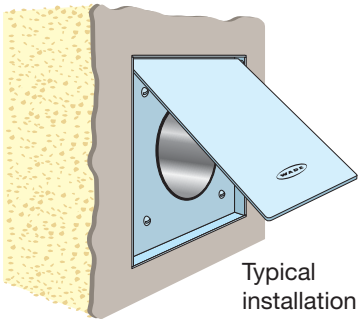
Horizontal overflow outlet – Nickel bronze



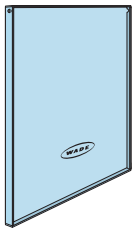
For horizontal installation, to provide an overflow outlet in a parapet wall. A membrane clamping collar (max. clamped membrane thickness is 6mm) enables removal of the grating for maintenance purposes without disturbing the membrane. See also WJ202 downspout nozzle (page 25) and U27 connecting spigot. Frame is sheradized cast iron.

Spec. Code	Grating mm dia.	Outlets	kg
N215	142	2" BSP female	1.2

Outfall outlets – Stainless steel grade 304, satin finish – top hinged



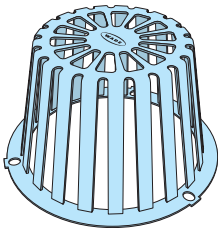
Typical installation



Spec. Code	Size	Max pipework dia.	kg
WJ302	142 sq.	62	0.5
WJ303	142 sq.	88	0.5
WJ304	142 sq.	115	0.4

Dome – Stainless steel grade 304

Alternative to standard polycarbonate version.



To specify/order add "SS" to Spec. Code of roof outlet.

For grade 316 add "SSM" to Spec. Code of roof outlet.

Bonded insulation jacket

A factory fitted bonded insulation jacket is used to prevent condensation forming on the underside of a body.

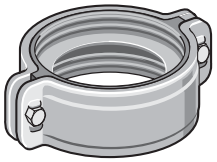
To specify/order add suffix "K" Spec. Code of roof outlet.

Couplings

To connect roof outlets to pipework made by others.

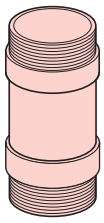
T1501
MJ coupling BS 416 to plastic

T1603
MJ coupling 75mm BS 416 to Ensign



Connections From	To	Coupling Spec. Code	kg
100mm BS 416	110mm plastic	**T1501**	0.3
75mm BS 416	75mm DIN 19522 Ensign	**T1603**	1.2

Connecting spigot



Threaded each end to enable connection between products with BSP threaded inlet/outlet (e.g. parapet outlet and downspout nozzle on pages 24-25).

To specify/order – quote required Spec. Code from table below, changing last two digits (xx) to denote required length in cm (max. length 990mm).

Spec. Code	Size	Material
U27xx*	2" BSP	Plastic (ABS)
U37xx	3" BSP	Plastic (ABS)
U47xx	4" BSP	Plastic (uPVC)

** **Note:** Alternative product, use 2 x T1702 with standard 50mm plastic pipe cut to length on site.*

Flow rate testing a WB224 roof outlet

Flow rates of Wade roof outlets have been established by full-scale tests. The values shown in graphs on pages 31-33 are 75% of such tests.

The graphs show, for given heads of water, flow rate (l/s) and area drained (m^2) at a rainfall rate of 75mm/h** or 0.021 l/s per m^2.*

* **Rainfall rate** – BS EN 12056 -3

0.021 l/s per m^2 equates to 75mm/h, as previously recommended in BS6367 (superseded by BS EN 12056-3:2000).

BS EN 12056-3 uses rainfall charts which provide more localised data given in l/s per m^2.

To calculate the area drained [A] for a specific rainfall rate [R] (l/s per m^2) use the following formula.

$$A\ (m^2) = \frac{0.021}{R\ (l/s\ per\ m^2)} \times a\ \ (m^2 @ 0.021\ l/s\ per\ m^2)$$

(a: area drained, obtained from appropriate graph).

** **Rainfall rate** – BS 6367

75mm/h has been used as previously recommended in BS 6367 (withdrawn September 2000).

Area drained [A] at a different rainfall rate [R] can be calculated by using the following formula.

$$A\ (m^2) = \frac{75}{R\ (mm/h)} \times a\ \ (m^2 @ 75mm/h)$$

(a: area drained, obtained from appropriate graph).

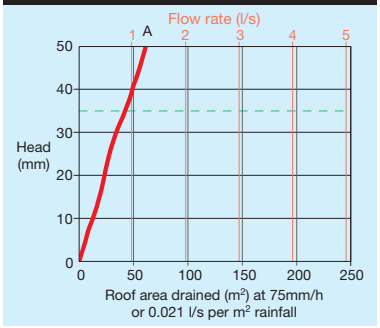
For assistance please contact our Technical Services Department.

Our website electronic catalogue includes area/rainfall calculators based on the above formulas.

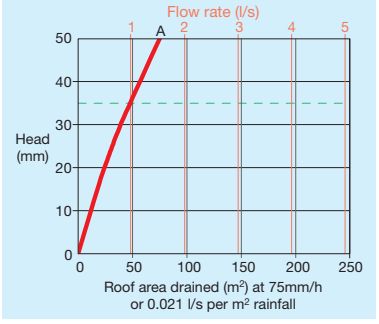
Note:
Flow rates shown in graphs will be reduced if accessories such as filter baskets or gravel guards are used. Please contact our Technical Services Department for further information.

Parapet outlets

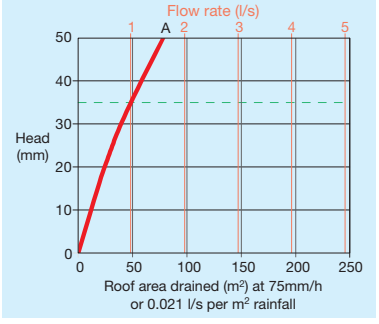
2" outlets: Horizontal



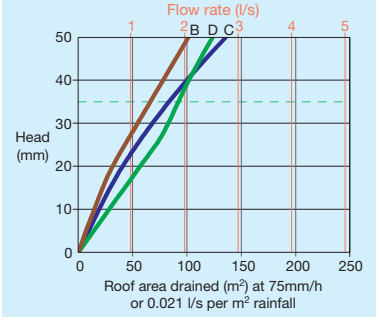
3" outlets: Horizontal



4" outlets: Horizontal

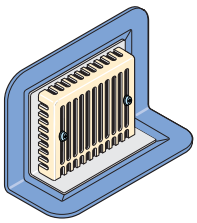


6" outlets: Horizontal

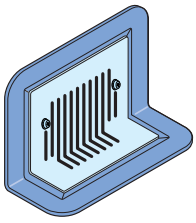


2", 3" and 4" OUTLETS

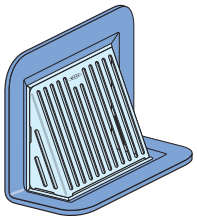
WF002 to WF034



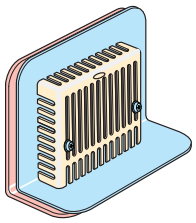
WF042 to WF046



WF072 to WF076



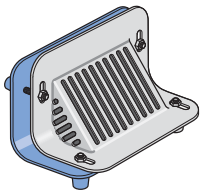
WF105 to WF135



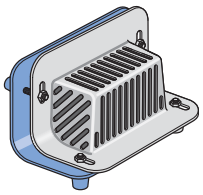
A

6" OUTLETS

WF156

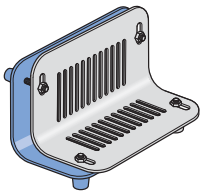


WF166



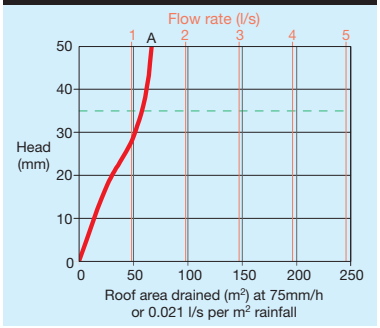
B C

WF176

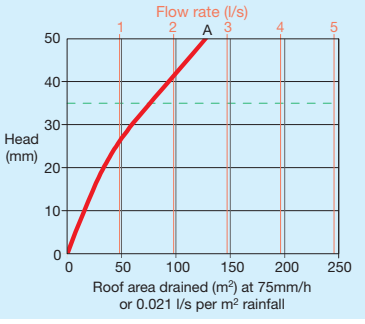


D

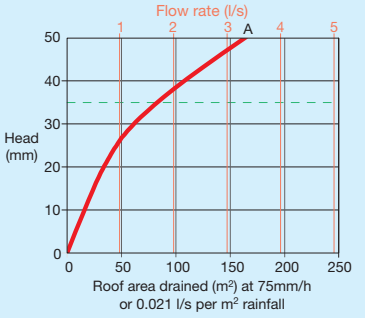
2" outlets: Vertical



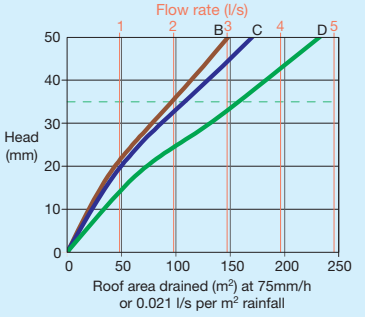
3" outlets: Vertical



4" outlets: Vertical

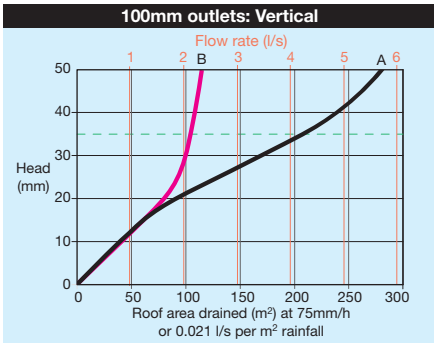


6" outlets: Vertical

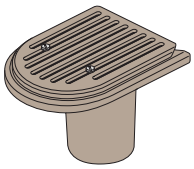


Balcony outlets

100mm outlets: Vertical

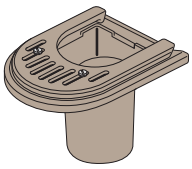


WF6 series



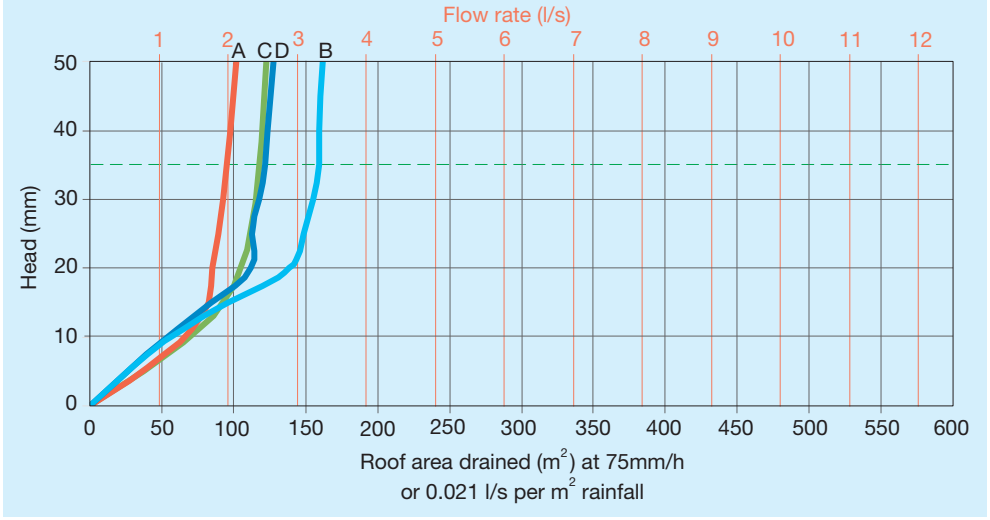
A

WF7 series

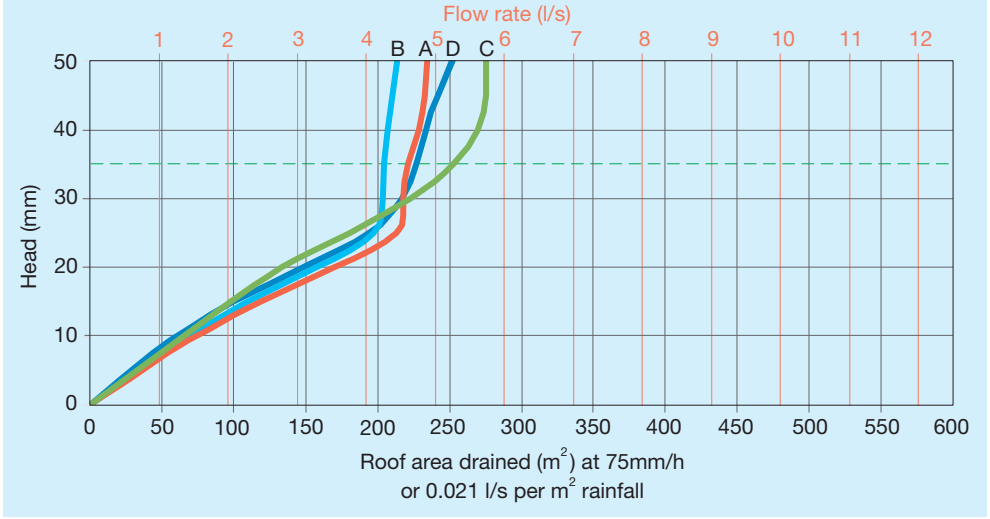


B

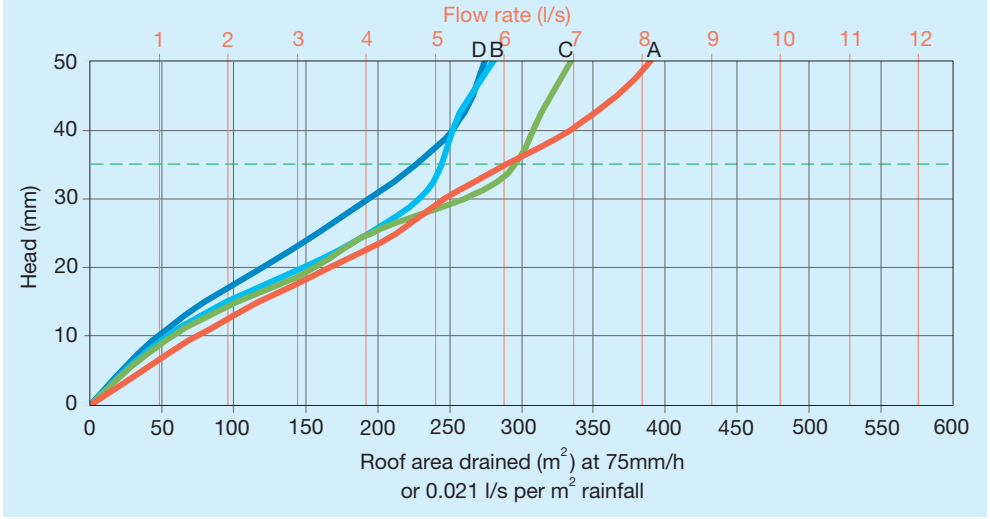
(Medium sump) 2"/ 50mm outlet



(Medium sump) 3"/ 75mm outlet

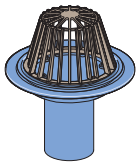


(Medium sump) 4"/ 100mm outlet



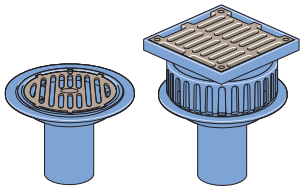
A

WB20/22
WC20/22/40/42



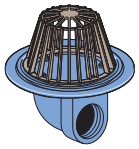
B

WB30/32
WC30/32/50/52
WD20/22/30/32/70/72



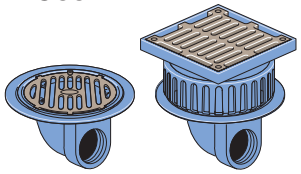
C

WB23
WC23

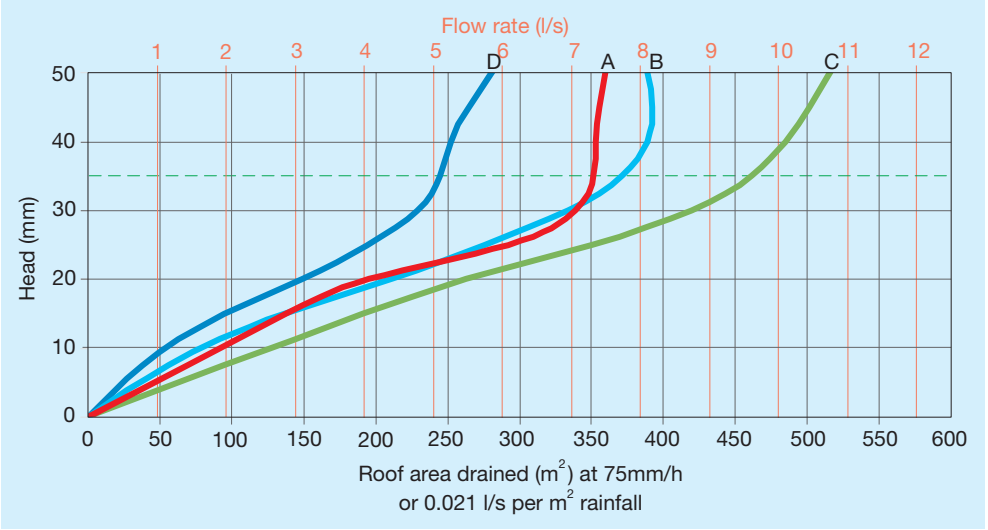


D

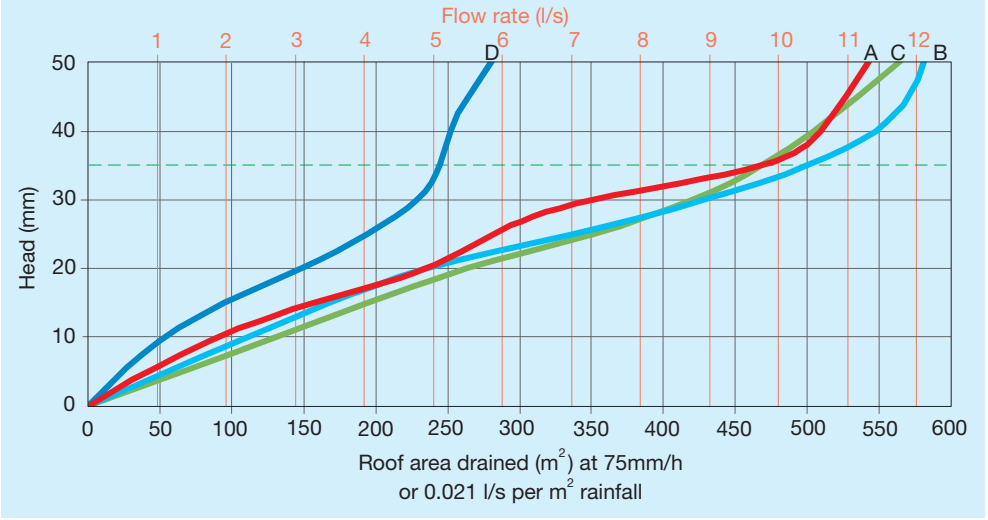
WB33
WC33



(Deep sump) 4"/ 100mm outlet

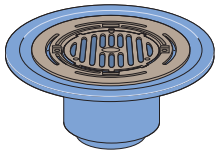


(Deep sump) 6"/ 150mm outlet



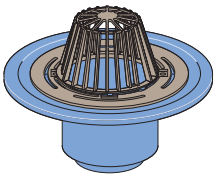
A

WB6
WC10/11



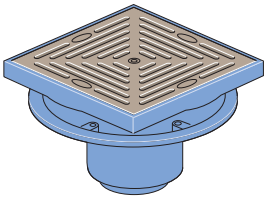
B

WB4
WC6/8



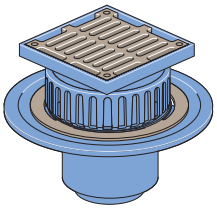
C

WB5
WC7/9



D

WD5
WD6
WD74



General

The design of the layout of roof outlets should be in accordance with the recommendations given in BS EN 12056:3.

Wade roof outlets should be placed at the roof low points to allow efficient flow of water to the outlets.

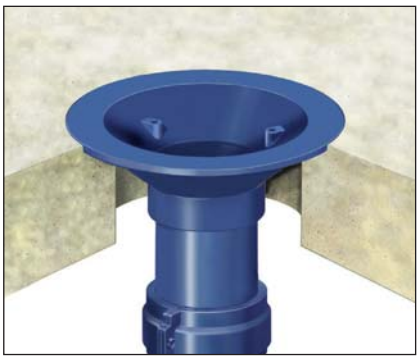
Illustrations of typical installations are given in each section of this handbook.

Installation instructions are supplied with goods and are available on our website.

1. Check dimensions

Prior to installation, check height of components to ensure compatibility with roof build-up, making allowances for the membrane thickness.

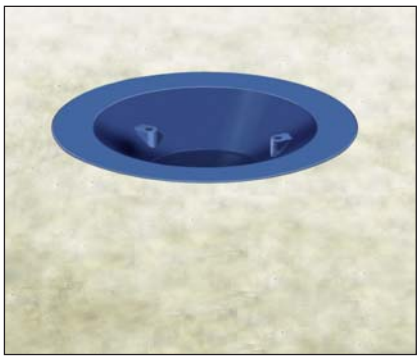
2. Fit adaptor, check outlet



Where applicable, screw threaded pipework adaptor into body, using a suitable sealant to ensure the joint is watertight.

Position body in roof deck and ensure outlet is accessible for pipework connection.

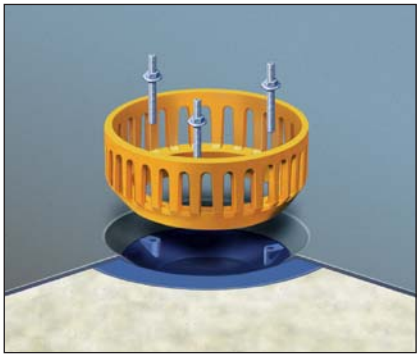
3. Install body



Install body such that flange is flush or sub-flush with roof deck. Ensure body is fixed securely, either bonded or clamped to the deck if not cast-in.

Note:
Membrane flange level is determined by roof build-up.

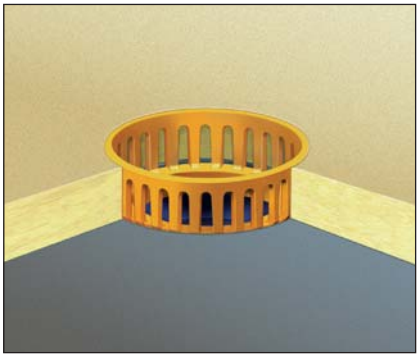
4. Dress membrane and clamp



Refer to membrane manufacturer's instructions.

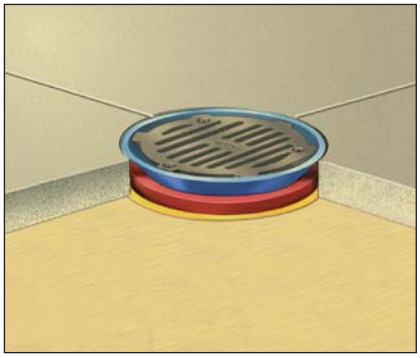
Prepare flange of body with suitable primer and apply membrane, dressing over flange and into sump of body. Position membrane clamping collar and secure to body using fixings supplied.

5. Install insulation



Install any intermediate roof build-up (e.g. insulation) around outlets.

6. Fit grating, apply finish



Fit dome/grating using height adjustment where applicable to ensure grating is flush with roof finish. Apply roof finish around grating.

Adjustable bearing pan
Component used with a raising tube on ROOF OUTLETS for WARM ROOF which enables the installer to set the distance between the FLANGE and roof deck at any point between 20 and 135mm.

Balcony outlet
Design of ROOF OUTLET with a flat GRATING; a version allows a downpipe from the level above, as well as surface water, to pass through.

Bearing pan
Profiled plate into which a BODY can be located to spread the weight of the body over a larger area of roof.

Blue roof
Roof design intended to store water.

Body
Bowl-like part of a ROOF OUTLET, set in the roof, to which the DOME or GRATING is fixed and the pipework connected.

Brown roof
Roof finished with soil/gravel/rubble.

Clamp
See MEMBRANE CLAMPING COLLAR OR UNDERDECK CLAMP.

Cold roof
Construction method where the waterproofing MEMBRANE is at finished level and insulation (if any) is placed below the roof deck.

Dome
Removable, raised GRATING used on ROOF OUTLETS. The vertical slot design resists blockage by debris, leaves etc.

Domical grating
See DOME.

Downspout nozzle
Decorative spout used to discharge rainwater through a wall to a lower level. Normally used with a PARAPET OUTLET.

Extension flange
Raises the height of a GRATING above a BODY.

Filter basket
Removable receptacle fitted within a ROOF OUTLET to intercept debris.

Flange
Part of a BODY leading to its mouth, over which the waterproofing MEMBRANE is laid.

Flow rate
Maximum amount of water (l/sec) that can be drained at a given HEAD OF WATER.

Frame
Support for a GRATING which is connected to a BODY either directly or by means of a MEMBRANE CLAMPING COLLAR.

Gargoyle
See DOWNSPOUT NOZZLE.

Grating
Removable, exposed component of a ROOF OUTLET with apertures to receive rainwater; generally fitted in a frame.

Gravel guard
Mesh screen fitted to prevent gravel falling into the ROOF OUTLET when the DOME or GRATING is removed. Parapet outlet version must be removed first to gain access to grating.

Green roof
Gardens, shrubberies etc. located on a roof.

Gully
Discharge fitting designed to be installed in a floor.
(Please refer to Other Wade Literature on back page).

Head of water
Height of water above the GRATING, used to determine FLOW RATE.

I.D.
Internal diameter.

Inverted roof
Construction method where the waterproofing MEMBRANE is above the roof deck, and below the insulation.

Load rating
Capability to withstand loads, expressed in classes.
(See page 4 for details).

Membrane
Waterproofing material (asphalt, roofing felt, EPDM sheet, PVC etc.) laid on a roof to make it watertight.

Membrane clamping collar
Used to clamp a MEMBRANE to a body.

M.J.
Mechanical joint.

No-fines screed
Construction method normally used for roof-top car parks; the screed is porous and allows surface water to drain over the entire area.

O.D.
Outside diameter.

Outlet
Part of a BODY through which rainwater is discharged into connecting pipework.

Overflow outlet
Roof outlet with an upstand to provide drainage when water reaches a specified depth.

Parapet outlet
A design of ROOF OUTLET allowing drainage horizontally through a parapet wall; can also be used vertically.

Raising piece
See EXTENSION FLANGE.

Raising tube
See ADJUSTABLE BEARING PAN.

Roof outlet
An assembly generally comprising a BODY and DOME or flat GRATING, which allows the efficient drainage of rainwater from a roof.

Single-ply membrane
PVC, waterproof, sheet material laid on a flat roof to make it watertight; requires ROOF OUTLETS with Z FLANGE.

Spigot outlet
BODY with an integral spigot.

Sump
Part of a BODY between the FLANGE and OUTLET.

Threaded outlet
BODY in which the OUTLET connection is a BSP thread into which a SPIGOT ADAPTOR can be fitted to allow connection to pipework.

Threaded pipework adaptor
Converts threaded outlet BODY to a spigot outlet allowing connection to pipework using a proprietary coupling.

Two-way outlet
See PARAPET OUTLET.

Underdeck clamp
Framework fitted to the underside of a BODY under the roof deck, to hold the body firmly in place; normally used on metal deck roofing in conjunction with a BEARING PAN; may also be fitted on a concrete slab where casting-in is not possible.

Warm roof
Construction method where the waterproofing MEMBRANE is above insulation which is laid on the roof deck.

Z flange
PVC collar which is factory fitted to the FLANGE of a BODY to enable jointing on site to a PVC SINGLE PLY MEMBRANE.

Spec. Code index

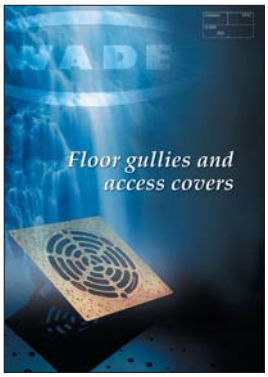
About Wade

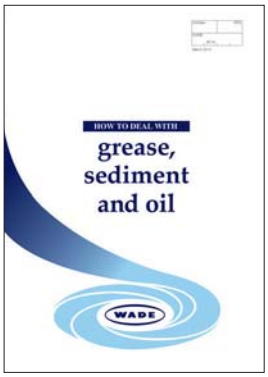
Visit our website for online versions of our product catalogue, price list, conditions of sale, news, job opportunities, Wade-CAD, Wade-BIM and PDF format technical handbooks.

Wade-CAD is for users who require drawings of Wade products; files are in both DXF and AutoCAD DWG format.

Wade-BIM is our library of BIM 3D models available for a range of products in Revit format.

Other Wade literature





Service

Product information and technical advice are available from the Wade Technical Services Department at Halstead, Essex, from Wade Technical Consultants located throughout the UK and from selected distributors throughout the world. A computer-aided design service is available free of charge for layouts and assemblies of Wade products.

Warranty

The Company warrants its products to be free from defects in material and workmanship for a period of 12 months from the date of delivery.

The Company's obligation under this warranty is limited, at its option, to the repair or replacement, free of charge, or refund of the net invoiced price of any part found to be defective, and which, in the Company's opinion, has not been subject to undue wear and tear, accident, alteration, abuse or misuse. Consequential damages are expressly disclaimed.

Technical advice from Wade International Limited, whether verbal, in writing or by way of trials, is given in good faith but without warranty. The application, use and installation of the Company's products are beyond the control of the Company, and the purchaser is solely responsible for ensuring that goods are fit for any particular purpose.

In line with the Company's policy of continual research and development, product specifications and availability are subject to change or withdrawal without prior notice.

Dimensions

In line with general practice all dimensions shown are nominal.

Dimensions are generally given in mm (other units are specified).

QUALITY BY TRADITION WADE PERFORMANCE BY DESIGN

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