

Wade Linear Drainage Technical Brochure





Rain to drain solutions that set the standard for urban water management



Alumasc is a UK-based supplier of premium building products. The majority of the group's business is in the area of sustainable building products which enable customers to manage energy and water use in the built environment.

Alumasc Water Management Solutions provide 'Rain to Drain' solutions, that set the standard for urban water management. They include: **Skyline** Fascias, Soffit & Copings; **Alumasc Rainwater** Gutters & Downpipes; **Harmer** Building Drainage; **Wade** Building Drainage and **Gatic Drainage & Engineered Access Covers**.

Under the AWMS banner, customers benefit from rainwater and drainage products that capture, retain and control the flow of rainwater in the most effective way inside and outside buildings.

www.alumascwms.co.uk

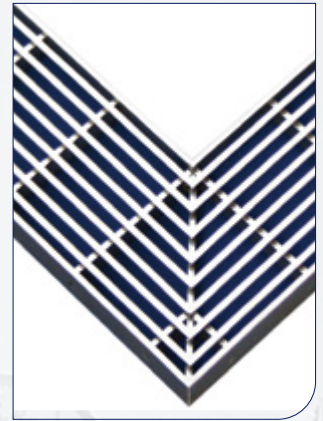
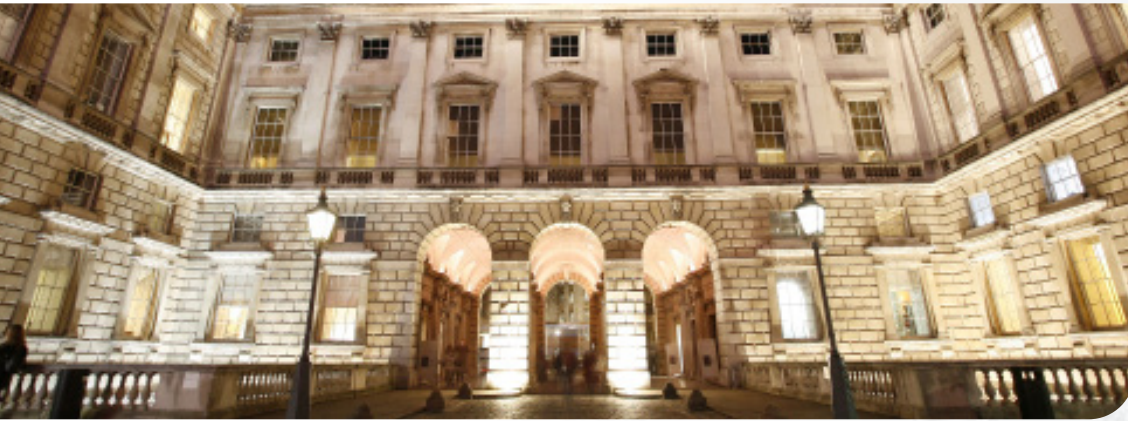
Typical applications	4 - 7
Typical installations	8
Channel gratings	9 - 15
Aluminium	12
Cast iron and ductile iron	15
Nickel bronze	14
Stainless steel	10 - 11
Bespoke Linear - Laserline Channels & Gratings	12 - 13
Custom-made channel, stainless steel	16 - 21
Curved channel	25
Access covers with linear drainage	17, 22 - 23
Dropped sump	20
Dual-level drainage	21
Gullies with linear drainage	18 - 19
Outlets	18 - 20
Threshold drainage	17, 22 - 23
Custom-made slotted channel, stainless steel	22 - 24
Hidden channel	22
Hidden for threshold drainage	23
Supaslot channel	24
Specialised applications	25
Installation guidelines	26 - 27
Accessories	28
Load rating classes	29
Materials/care and maintenance	29
Spec. Code index	29

BS EN 1433 and CE marking

Products of the types and sizes stated in this catalogue have third party certification of conformance to BS EN 1433 and are supplied with marking to indicate this, plus a CE mark.

Wade can also supply products of different types and sizes to suit customer requirements, which when subjected to the same tests, may be found also to conform to BS EN 1433, but these will bear the CE mark. Such products must be tested before being placed on the market.

Typical Applications



Custom made gratings
Cast iron grating and show edge coupled with stainless steel channel provided a complete drainage solution to blend with the period architecture at Somerset House, City of Westminster.

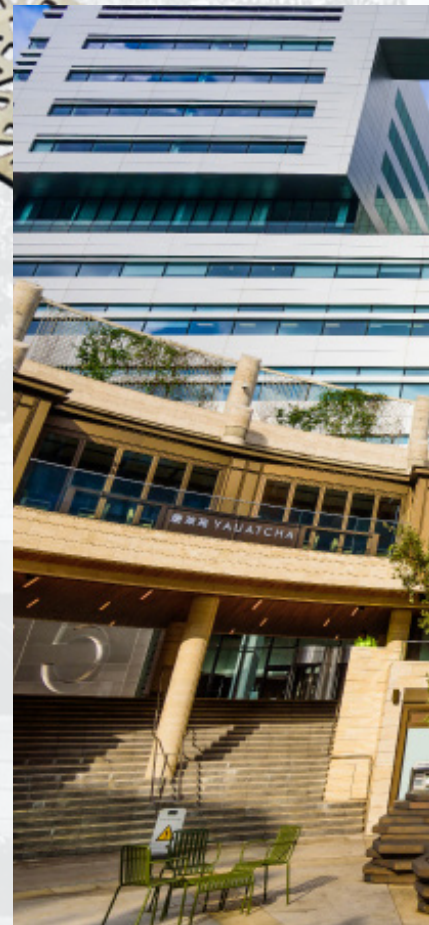
SS3080AC Mitred 'Streamline' grating (Patent No. GB 2496199).



Floral style gratings of nickel bronze.



Stainless steel channel with Streamline stainless steel grating
All England Lawn Tennis and Croquet Club, Wimbledon.



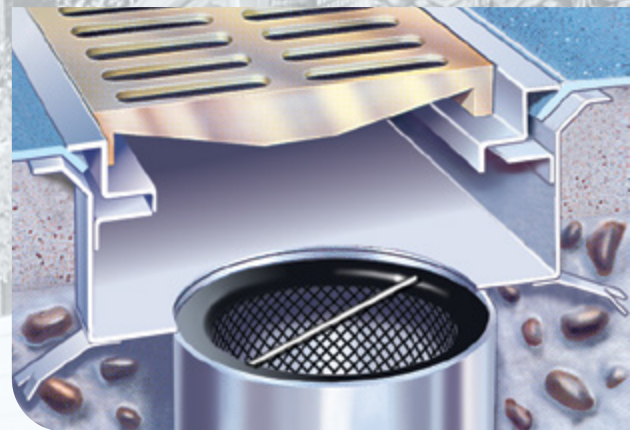
In addition to offering a wide range of standard products, Wade designs and manufactures custom made products to suit particular applications.

Recent projects include banks, hospitals, hotels, laboratories, leisure centres, municipal buildings, museums, private residences and sports arenas.

Availability of faceted and curved channel systems extends choice for specifiers.

Stainless steel channel with nickel bronze grating, Broadgate, City of London

Nickel bronze is equally suitable for inside or outside applications. Aesthetic yet practical nickel bronze complements a wide variety of floor finishes including terrazzo, York stone paviors, marble and sheet floor covering.



Typical installation in a vinyl covered floor
SN12230 grating with SVFB channel. Channel profile SVF ensures watertight connection when used with flexible sheet material such as vinyl flooring. Suffix 'B' on channel Spec. Code denotes filter bucket.

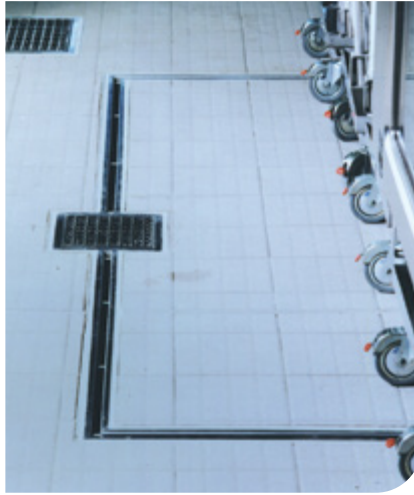
Curved NE profile stainless steel channel with curved perforated stainless steel gratings combine function with design.



Typical Applications

Supaslot channel with integral central gully

The facility to incorporate gullies into linear channel increases options for drainage layout.



Anti-slip mesh grating in a trolley wash-down area

Manufacturing versatility for gratings and channel enable custom designed drainage areas to be readily produced.



Heavy duty bar grating designed for trolley wheel-loading

Stainless steel channel and grating meet the high standards of hygiene demanded in today's working environments.



Wash-down area gratings combined with Supaslot channel and integral stainless steel side inlet gully

Attention to detail is a hallmark of Wade design and manufacture.

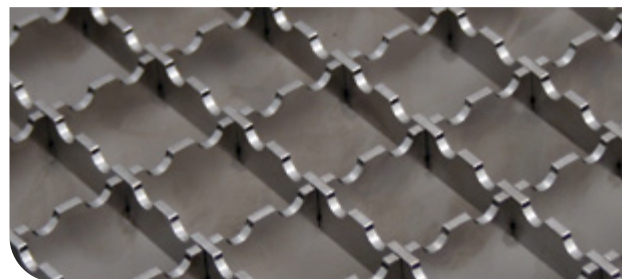
Double notched anti-slip mesh gratings of stainless steel in a tiled floor

Channel profiles and gratings are available to suit all kinds of floor construction and flooring materials.



Process area tray with grating and integral channel

Custom designed channel and grating provide cost effective drainage and a safer working environment.



Double notched anti-slip grating

In areas where high volumes of water may be discharged, anti-slip gratings with generous free area provide extra safety for personnel.



Wash-down channel tray and Supaslot channel with integral stainless steel gully

Stainless steel gullies with side inlets when used with channel drainage eliminate the need for separate drain runs.



Heavy duty plain mesh grating for high volume areas

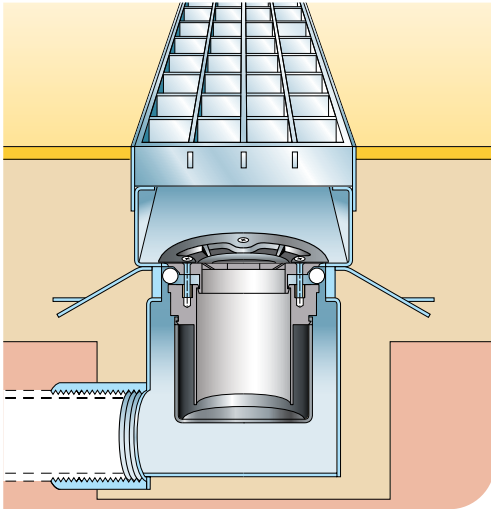
Standard and custom made grating and channel are available to withstand the arduous conditions often experienced in industrial processing.



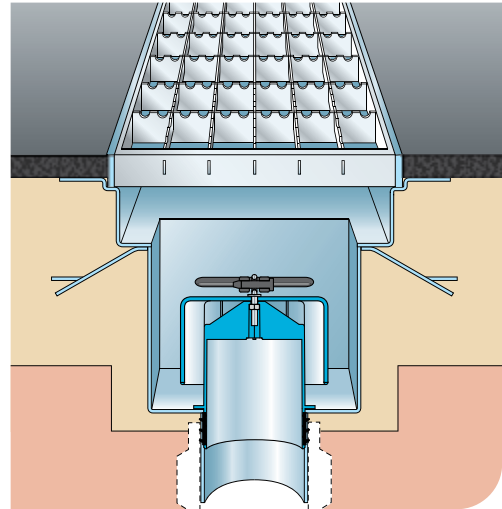
Reverse wedge profile of Streamline stainless steel grating reduces incidence of blockages.

Typical Installations of Custom Made Channel With Grating

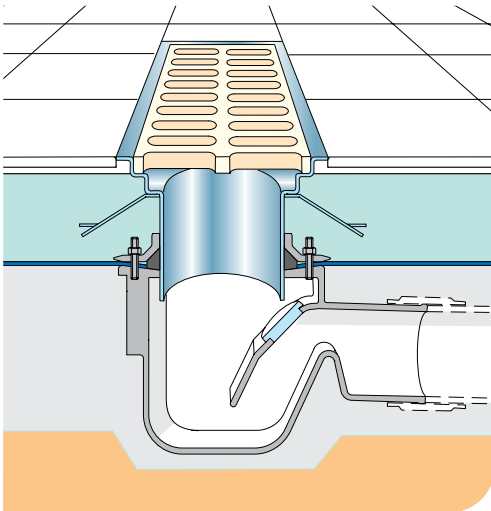
Shown below are some typical installations; there are many other permutations. Please refer to the following pages to select the grating, channel profile and options.



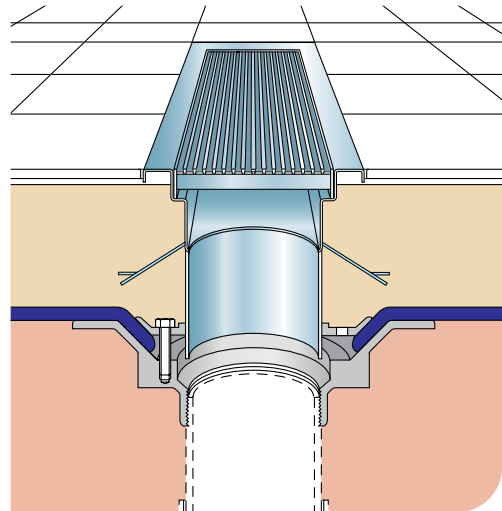
NE channel and SS5135B5 grating, shown with Q21 style 2" BSP horizontal side outlet and U1404 removable bottle trap.



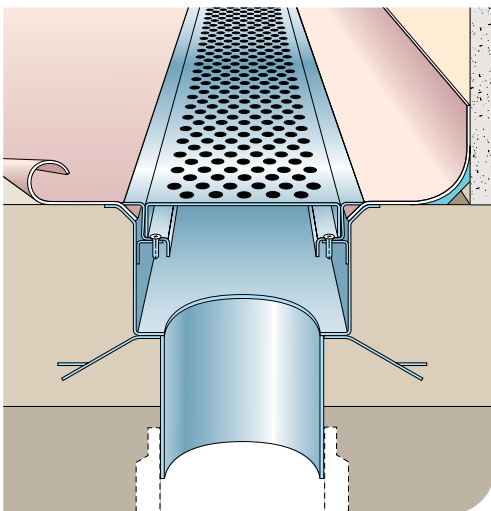
NEF channel and SS7300A5 grating with Q14 style dropped sump and U1704 removable bell trap.



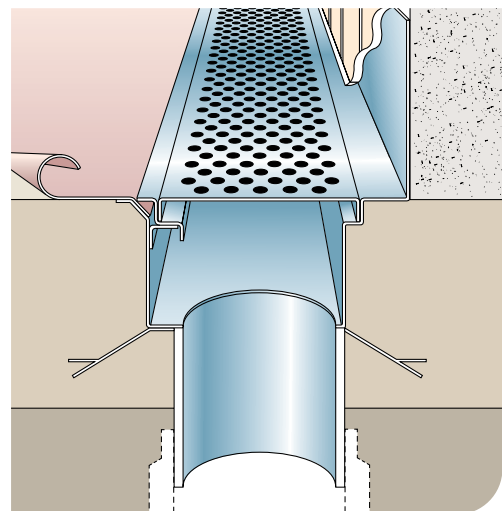
RP channel and SN12230 grating, with G304LD 'P' trapped body (supplied with channel sealing kit).



RE channel and SS3135A5 grating with D1004 non-trapped body and C.D10LW membrane clamping collar.



SVF channel and SS40135A1 grating, spaced away from wall, vinyl dressed both sides.
Technical Support +44 (0)1787 273 998



SVFT channel (SVF with optional tile upstand) and SS40135A1 grating.
wadetech@alumascwms.co.uk



CE regulations/product standards/BS EN 1433

Standard channel and gratings shown in the following pages have been type-tested under the supervision of BSI (British Standards Institution) and conform to BS EN 1433.

Given the enormous quantity of possible grating sizes combined with different load bars that deliver different load classes, it is not practicable or economic to have third party certification for every custom-made grating. Accordingly, Wade has its own testing facilities at Halstead to enable testing, as laid down in BS EN 1433, and the application of CE status to the items that conform.

In response to customer demand, Wade manufactures some gratings that do not conform to BS EN 1433. These are not defective in any way, but, for example, some customers require gratings for pedestrian areas with a slot width of 4mm, whereas BS EN 1433 sets a minimum slot width of 5mm in such places. In these cases the gratings are tested by Wade and the CE mark is applied to denote the essential requirements are met. Only one such grating is illustrated in this catalogue - SN23130.

Grating sizes

Sizes stated are nominal, not precise measurements, as gratings are manufactured to fit the ordered channel or angle frame with allowance to enable removal of gratings. Stainless steel gratings are made to length; where multiple cast gratings do not fit the channel one or more gratings are cut to length.

Grating load class per BS EN 1433

Load class is when installed in channel of the same or higher load class in accordance with Wade installation instructions; see pages 24 and 27.

Grating availability/delivery

Standard versions, shown in the following pages, are generally available ex stock; other sizes can be made to order. Gratings are fitted into the ordered channel or angle frame at our factory and are so delivered. Gratings may not always be interchangeable, so it is good practice to return to original position in the length of channel/angle frame.

Secured gratings

As standard, gratings are lain loose in channel or angle frame. As an option, gratings may be secured (locked) to the channel or angle frame - add suffix 'L' to the grating Spec. Code. Pin-Torx or Pin-Hex screws are fitted on all locked gratings, making them suitable for security applications.

Channel Gratings - BS EN 1433 Compliant

For use with channel shown on pages 16 - 17 , 21 and angle frame on page 25.

Stainless steel - grade 304

Streamline Reverse wedge profile reduces incidence of blocked gratings. Suited for pedestrian areas, including barefoot zones, while providing an effective barrier at thresholds. Streamline is available up to 400mm wide at an A15 load class (POA)

Spec. Code	Illust. no	Width	Length	Depth	Aperture width	Free area cm ² /m	Load class
SS3080B5	1	82	500	20	5	375	B125
SS3135A5	1	135	500	20	5	740	A15
SS3135B5	1	135	500	30	5	740	B125
SS3150A5	1	152	500	20	5	810	A15
SS3150B5	1	152	500	30	5	810	B125
SS3080B1	1	82	1000	20	5	375	B125
SS3135A1	1	135	1000	20	5	740	A15
SS3135B1	1	135	1000	30	5	740	B125
SS3150A1	1	152	1000	20	5	810	A15
SS3150B1	1	152	1000	30	5	810	B125
SS3080BC	2	82	250x250	20	5	375	B125
SS3135AC	2	135	250x250	20	5	740	A15
SS3150AC	2	152	250x250	20	5	825	A15

Plain mesh Established design with good loading characteristics and generous free area. Plain mesh is available up to 750mm wide at an A15 load class (POA)

Spec. Code	Illust. no	Width	Length	Depth	Aperture width	Free area cm ² /m	Load class
*SS5135A5	3	134	500	20	23 sq.	1080	A15
*SS5135B5	3	134	500	30	23 sq.	1080	B125
SS5150A5	3	149	500	20	23 sq.	1205	A15
SS5150B5	3	149	500	30	23 sq.	1205	B125
SS5200A5	3	199	500	20	23 sq.	1620	A15
SS5200B5	3	199	500	30	23 sq.	1620	B125
SS5300A5	3	299	500	30	23 sq.	2440	A15
SS5300B5	3	299	500	40	23 sq.	2440	B125

*Aperture width reduced to 13mm on long edges.

Anti-slip mesh Double notched bars make this grating suited for wet or greasy floors such as at abattoirs and in catering, food processing and pharmaceutical industries. Anti-slip mesh is available up to 750mm wide at an A15 load class (POA)

Spec. Code	Illust. no	Width	Length	Depth	Aperture width	Free area cm ² /m	Load class
*SS7135A5	4	134	500	20	23 sq.	1080	A15
*SS7135B5	4	134	500	30	23 sq.	1080	B125
SS7150A5	4	149	500	20	23 sq.	1205	A15
SS7150B5	4	149	500	30	23 sq.	1205	B125
SS7200A5	4	199	500	20	23 sq.	1620	A15
SS7200B5	4	199	500	30	23 sq.	1620	B125
SS7300A5	4	299	500	30	23 sq.	2440	A15
SS7300B5	4	299	500	40	23 sq.	2440	B125

*Aperture width reduced to 13mm on long edges.

Perforated For use in shower areas, balconies etc. For use in shower areas against perimeters

Spec. Code	Illust. no	Width	Length	Depth	Aperture width	Free area cm ² /m	Load class
SS40135A1	5	134	1000	20	8 dia.	305	A15
SS41135A1	6	134	1000	20	8 sq.	280	A15
SS40150A1	5	149	1000	20	8 dia.	335	A15
SS41150A1	6	149	1000	20	8 sq.	315	A15

Bar Custom-made versions can be manufactured to order. For use in shower areas against perimeters

Spec. Code	Illust. no	Width	Length	Depth	Aperture width	Free area cm ² /m	Load class
SS6150B5	7	149	500	20	10	450	B125
SS6150C5	7	149	500	30	10	450	C250
SS6150D5	7	149	500	50	10	450	D400

Laserline (not illustrated) Custom-made gratings with laser-cut apertures to clients' own design (will require type testing).

Options

Accessories - see page 28.

Gratings of other styles and sizes - contact our Technical Services Department with details of your requirement.

Secured - add suffix 'L' to the grating Spec. Code - see note on page 9.

Stainless steel grade 316 - add suffix 'M' to the grating Spec. Code (not generally available ex stock).

Streamline

1

Streamline
(mitred corner)

2

Plain mesh

3[†]

Anti-slip mesh

4

Perforated

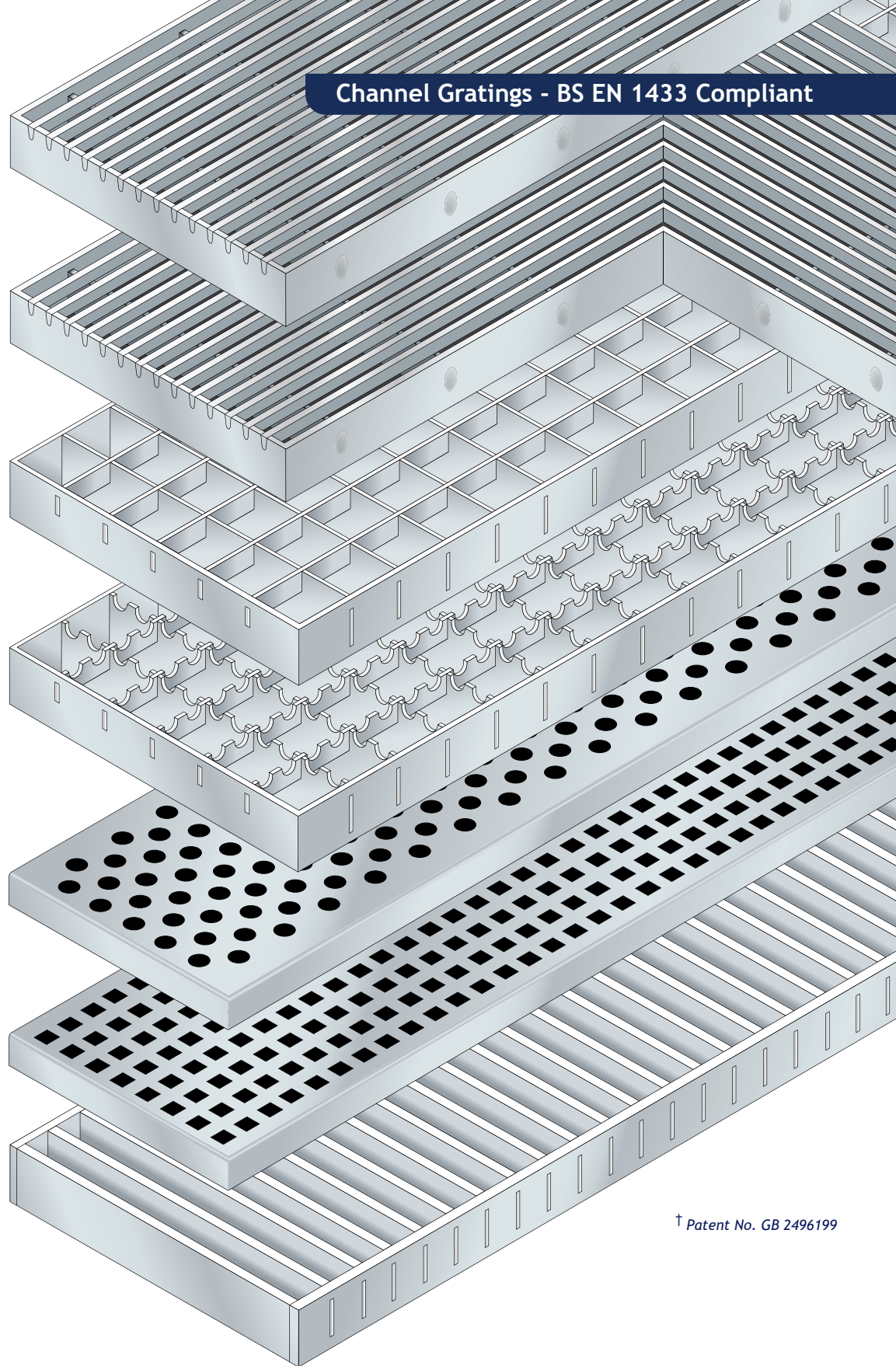
5

Perforated

6

Bar

7



[†] Patent No. GB 2496199

Did You Know?

Wade linear gratings come in width sizes other than those shown in our catalogue/website.

- Streamline - Can be manufactured up to 399mm wide (A15 Load Class).
- Mesh - Can be manufactured up to 900mm wide (B125 Load Class).
- Perforated - Can be manufactured up to 192mm wide (A15 Load Class).
- Bar - Can be manufactured up to 450mm wide (D400 Load Class).

Laserline Gratings & Channels



Custom made gratings & channels can also be supplied to clients' own designs

Laser etching of customer designed logo can also be added (CAD file required).

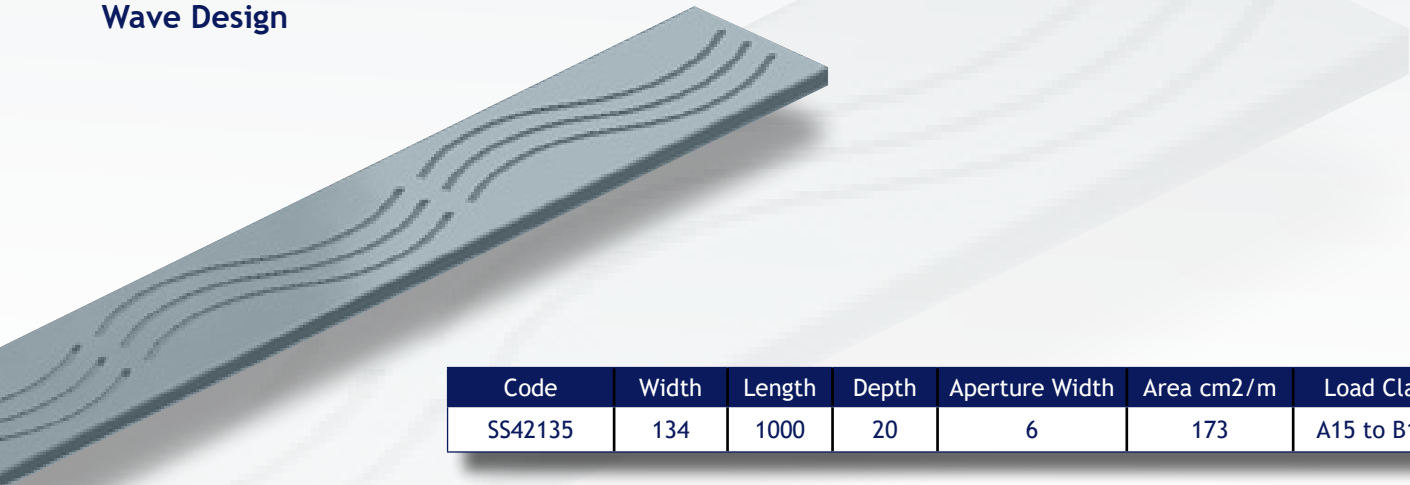
Contact the Technical Services Department to discuss details of your requirements:

wadetech@alumascwms.co.uk

- For use in shower areas, balconies & low usage foot traffic areas
- To be used in conjunction with Linear Drainage Channel

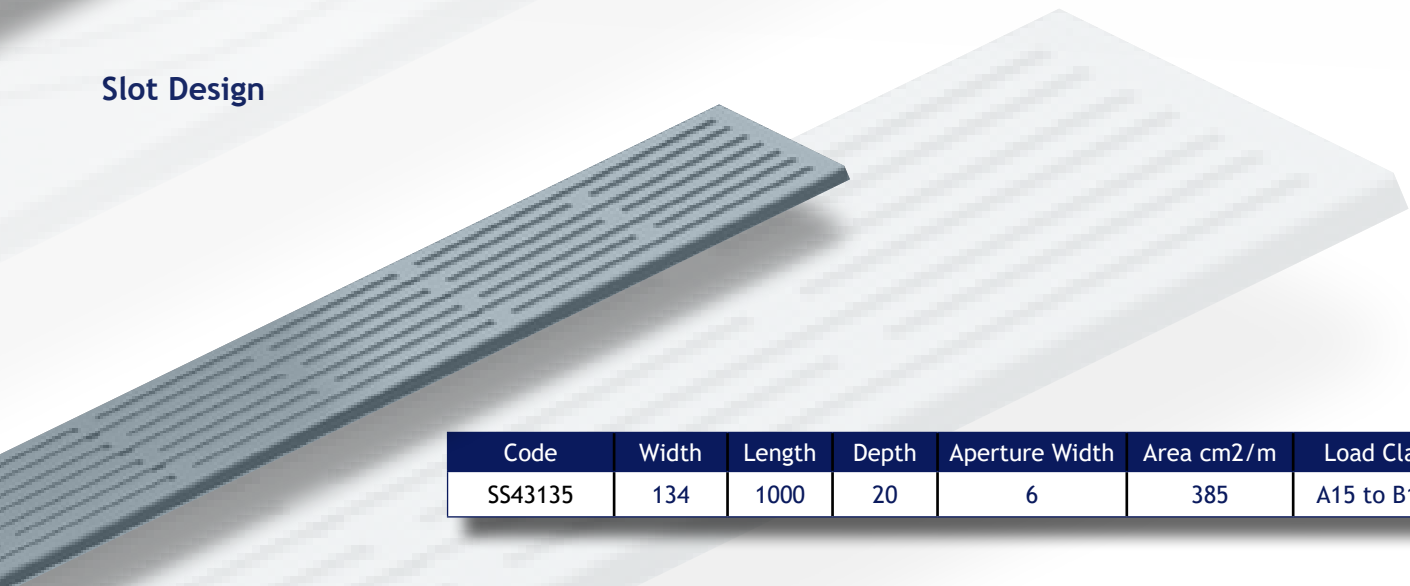
Design Options

Wave Design



Code	Width	Length	Depth	Aperture Width	Area cm ² /m	Load Class
SS42135	134	1000	20	6	173	A15 to B125

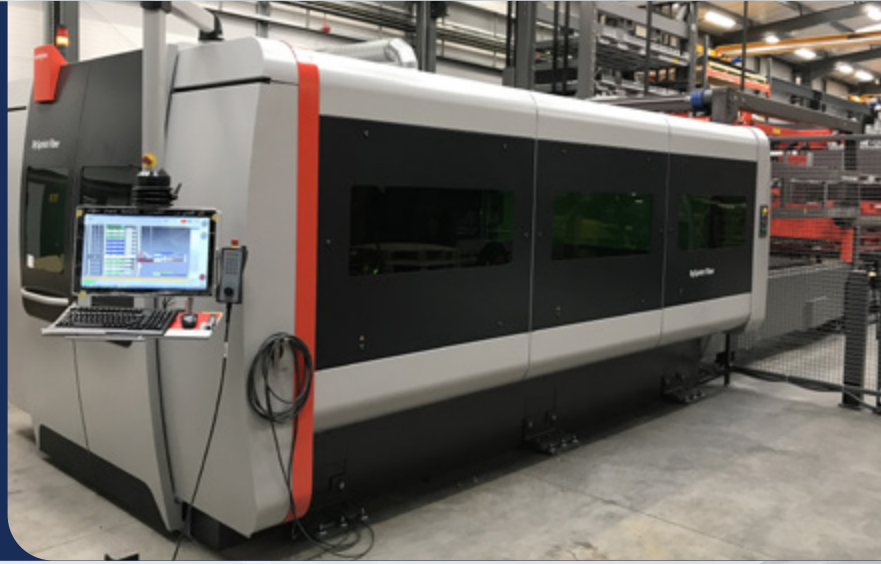
Slot Design



Code	Width	Length	Depth	Aperture Width	Area cm ² /m	Load Class
SS43135	134	1000	20	6	385	A15 to B125

State of the art Laser

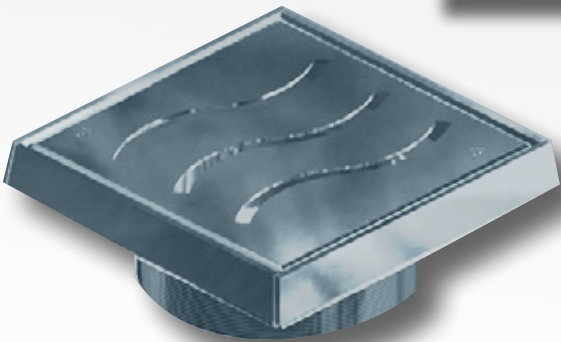
- Inhouse UK manufacture
- A choice of design options
- A choice of materials and finishes
- Comprehensive internal and external Technical support



Matching Gullys

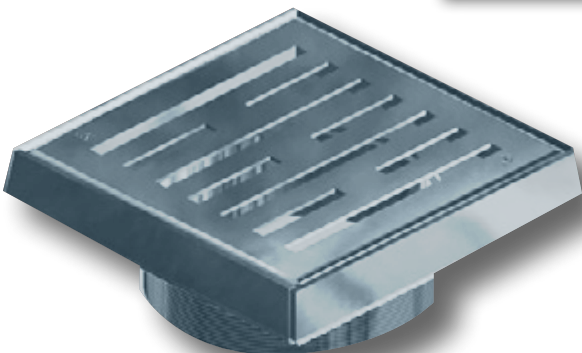
Wave Vari Level Grating

Code	Width	Length	Height	Aperture Width	Area cm ² /m	Load Class
L4201	150	150	75	6	21	K3



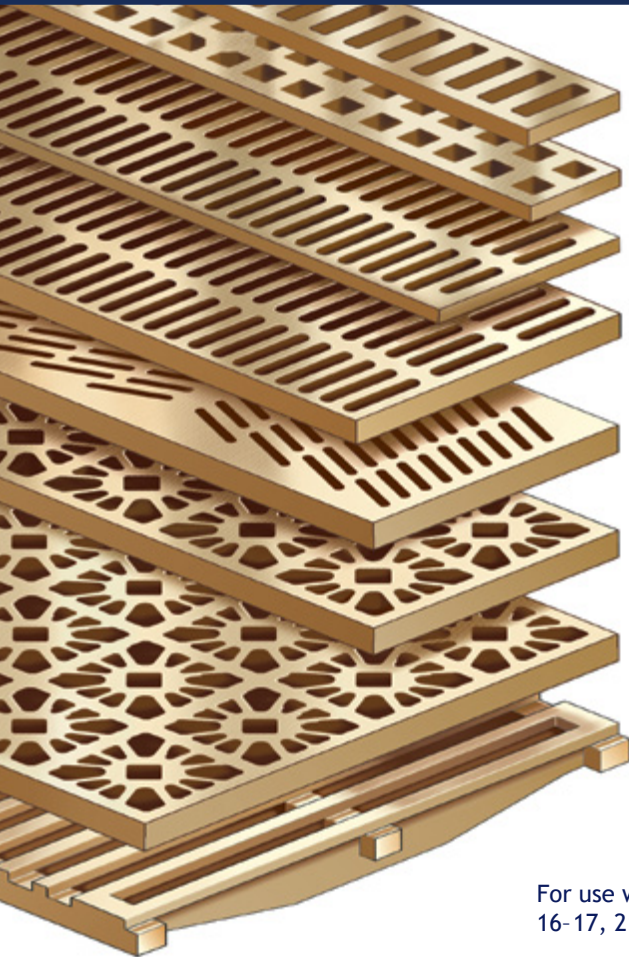
Slot Vari Level Grating

Code	Width	Length	Height	Aperture Width	Area cm ² /m	Load Class
L4301	150	150	75	6	40	K3



Note: These products conform to BSEN1253

Channel Gratings - BS EN 1433 Compliant



1

2

3

4

5

6

7

8

For use with channel shown on pages 16-17, 21 and angle frame on page 25.

Nickel bronze BS EN 1982 - satin finish

Durable high quality gratings particularly suited to areas subject to a high volume of pedestrian traffic.

Standard aperture

Spec. Code	Illust. no	Width	Length	Depth	Aperture width	Free area cm ² /m	Load class
SN11230	1	60	495	15	10	172	B125
SN11430	2	60	496	15	16 sq.	184	B125
SN12220	3	115	544	10	8	365	B125
SN12230	3	134	662	15	8	425	A15
SN13240	4	186	485	20	10	725	A15
SN16330	8	300	483	15	12	1440	A15

Decorative

Spec. Code	Illust. no	Width	Length	Depth	Aperture width	Free area cm ² /m	Load class
SN23130	5	150	499	15	4	280	A15

SN23130 does not conform with BS EN 1433 because the slot size of 4mm is below the minimum of 5mm set in the standard. The grating conforms with CE regulations and bears the CE mark.

Floral

Spec. Code	Illust. no	Width	Length	Depth	Aperture width	Free area cm ² /m	Load class
SN23930	6	149	499	15	15 max	475	A15
SN25930	7	293	499	15	15 max	950	A15

Aluminium BS EN 1706

Gratings for use in low priority pedestrian areas.

Standard aperture

Spec. Code	Illust. no	Width	Length	Depth	Aperture width	Free area cm ² /m	Load class
SA12220	3	115	544	10	8	365	A15
SA12230	3	134	662	15	8	425	A15
SA16330	8	300	483	15	12	1440	A15

Options

Gratings of other styles and sizes - contact our Technical Services Department with details of your requirement.

Secured - add suffix 'L' to the grating Spec. Code. Not available with SN11230, SN16330, SA16330 - see note on page 9.

For use with channel shown on pages 16 - 17, 21 and angle frame on page 25.

Cast iron

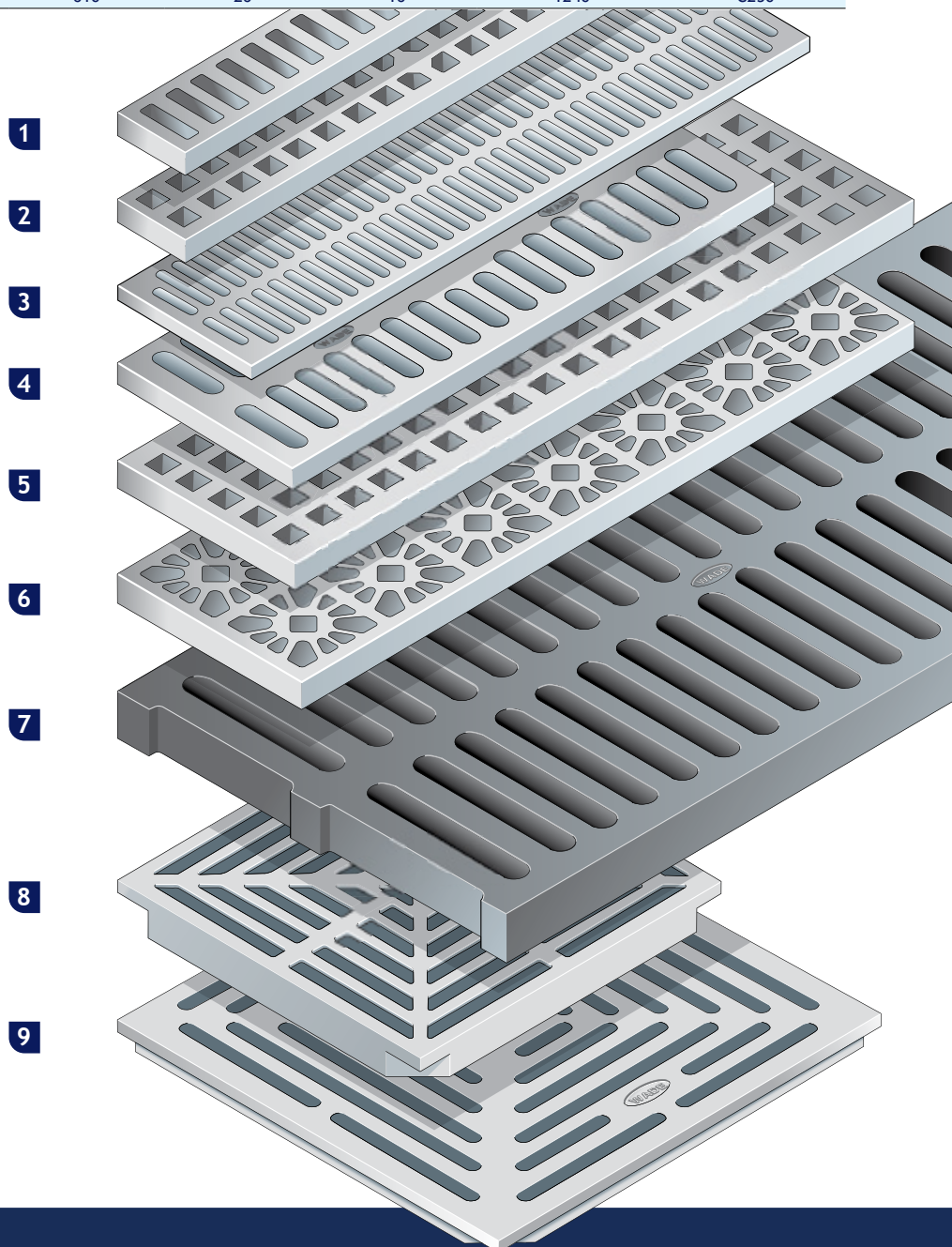
Robust durable gratings for use in service areas, plant areas and for restoration or refurbishment projects to match period architecture.

Sherardized cast iron - BS EN 1561

Spec. Code	Illust. no	Width	Length	Depth	Aperture width	Free area cm ² /m	Load class
SC11230	1	60	497	16	10	172	B125
SC11430	2	60	500	15	16 sq.	184	B125
SC12220	3	115	544	10	8	365	A15
SC12330	4	143	387	12	11	425	B125
SC12431	5	149	497	15	16 sq.	470	B125
SC23930	6	149	499	16	15 max.	475	A15

Sherardized ductile iron - BS EN 1563 and 1564

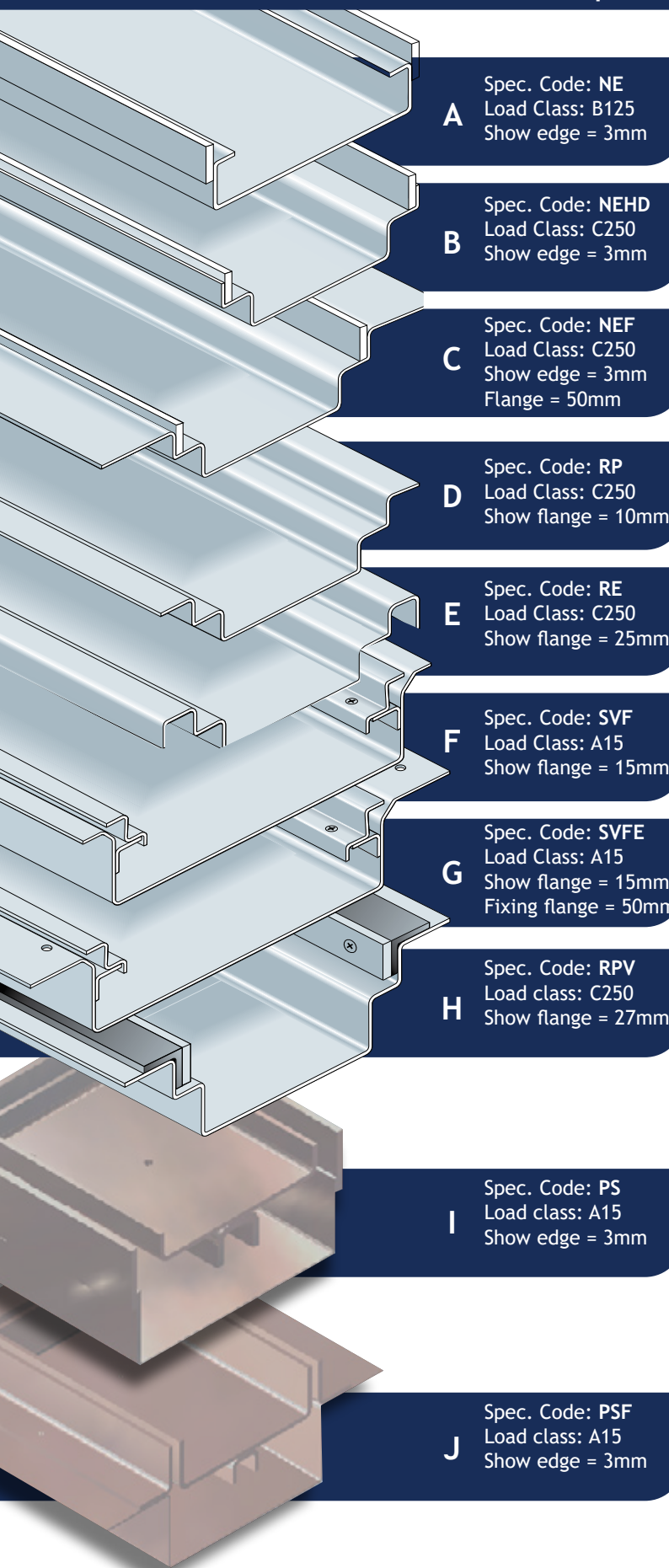
Spec. Code	Illust. no	Width	Length	Depth	Aperture width	Free area cm ² /m	Load class
SG15350	8	251	251	23	12	1180	B125
SG16250	9	305	305	26	9	970	A15
SG16460	7	305	610	26	16	1240	C250



Options

Gratings of other styles and sizes - contact our Technical Services Department with details of your requirement. Secured - add suffix 'L' to the grating Spec. Code. Not available with SC11230 - see note on page 9.

Custom Made Channel - BS EN 1433 Compliant



A

Spec. Code: NE
Load Class: B125
Show edge = 3mm

B

Spec. Code: NEHD
Load Class: C250
Show edge = 3mm

C

Spec. Code: NEF
Load Class: C250
Show edge = 3mm
Flange = 50mm

D

Spec. Code: RP
Load Class: C250
Show flange = 10mm

E

Spec. Code: RE
Load Class: C250
Show flange = 25mm

F

Spec. Code: SVF
Load Class: A15
Show flange = 15mm

G

Spec. Code: SVFE
Load Class: A15
Show flange = 15mm
Fixing flange = 50mm

H

Spec. Code: RPV
Load class: C250
Show flange = 27mm

I

Spec. Code: PS
Load class: A15
Show edge = 3mm

J

Spec. Code: PSF
Load class: A15
Show edge = 3mm

Stainless steel -

grade 304, (min.) 1.5mm thickness

Channel is available in a range of profiles, shown and described below, generally with in-built fall towards the outlets. Side bars and folds are made so that the selected grating fits flush with the show edges. Load class is when installed with grating of same or higher class in accordance with Wade installation guidelines, see pages 26 and 27.

A - Narrow edge

Narrow show edge, suitable for most standard applications, provides a floor finish abutment face; can be produced as a curved channel with any of the perforated gratings listed on page 10, (see example on page 5).

B - Narrow edge, heavy duty

Not suitable for hygiene environments. Load class D400 is also available, with 5mm wide show edge - add suffix D400 to Spec. Code.

C - Narrow edge, flanged

Not suitable for hygiene environments. Load class A15 in timber deck. Narrow show edge provides a floor finish abutment face. Extended flange enables dressing a membrane and/or fixing to a timber deck (Fixing holes are available on request). When specifying/ordering please advise the required flange depth.

D - Regular profile

Suitable for most standard applications. Load class D400 also available (2mm channel thickness) - add suffix D400 to Spec. Code.

E - Return edge

Additional fold provides extra stability to channel edge and a floor finish abutment face. Load class D400 also available (2mm channel thickness) - add suffix D400 to Spec. Code.

A support bar is recommended in C250 and D400 applications.

F - For use with vinyl and other flexible sheet material

Stainless steel clamp ensures watertight connection, access to channel and outlet is easily achieved without disturbing the floor covering. Minimum grating width required = 80mm.

G - For use with vinyl and other flexible sheet material

Has an extended flange with fixing holes, for use in timber deck.

H - For use with flexible sheet floor covering in heavy duty environments profile RP is available with a factory fitted, PVC angle edging strip to which sheet floor covering can be butt-welded at the time of installation; such channels are particularly suited to heavy duty applications.

Note: Suitable only for channels with grating of minimum 30mm depth.

Note: For optional tile upstand, add suffix 'T', see page 10.

I - Peripheral Slot

Continuous perimeter slot drainage, suitable for shower areas.

Internal tray can be removed for easy cleaning (not suitable for vinyl floors). Option: Specify depth of recessed tray to suit specified floor finish.

J - Peripheral Flange Slot

Extended flange enables dressing a membrane and/or fixing to timber deck (Fixing holes are available on request).

Options:

Specify depth of recessed tray to suit specified floor finish.

Specify depth of membrane/support flange.

Just need a square gully?

K - Top of Gully 200mm Square

Options: With (shown) or Without membrane/support flange

Trapped or Non-trapped

Horizontal (shown) or Vertical outlet

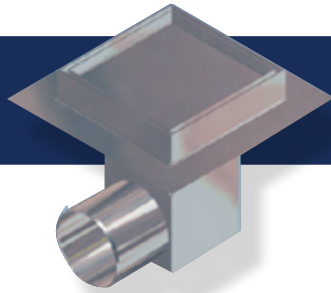
Outlet size to suit specified pipework

Note: These products conform to BSEN1253

Custom Made Channel - BS EN 1433 Compliant

Spec. Code: PSG
Load class: L15
Show edge = 3mm

K

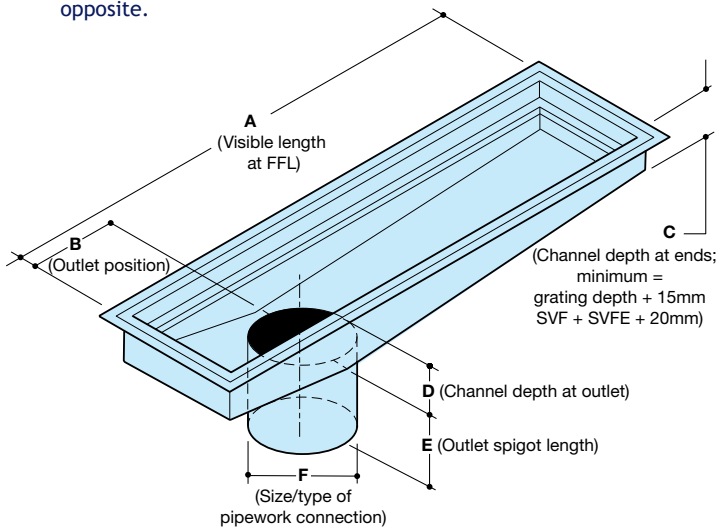


For use with gratings shown on pages 12 - 14.

Stainless steel - grade 304, (min.) 1.5mm thickness

Typical straight channel - key dimensions

SVF profile shown, also applicable to all profiles illustrated opposite.



To suit particular applications channel can be custom made in grade 304 or 316, with or without fall, with a combination of different profiles, on the same or opposite side, with non standard profiles including deep invert, 'V' bottom and heavy duty versions. Please contact our Technical Services Department for details.

Design considerations

When positioning channel adjacent to wall, ensure adequate allowance is made between channel and wall to cater for flooring manufacturer's edging detail.

Access covers with linear drainage

Solid access covers may be fitted in channels where required, e.g. areas where a channel runs beneath equipment or walls. Covers may be secured or non-secured and may be recessed to accept flooring material where depth is sufficient.

Threshold drainage

Linear drainage channels provide an ideal solution to the problem of protecting building thresholds from the ingress of surface water. All of the channel profiles shown within this catalogue can be manufactured to suit specific requirements, with slots or gratings at surface level; Wade 'Streamline' gratings are particularly suited to this application. Also see pages 22 and 23.

Note: If a channel has more than one outlet and gullies are to be pre-installed, then accurate dimensions must be established. Where possible, gullies should be cast-in using the channel assembly to determine positions.

Options

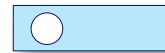
Accessories

Push-in removable bottle trap, filter bucket and other accessories detailed on page 28.

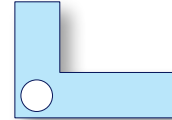
Dropped sump - to help improve drainage or allow an optional large stainless steel filter bucket/removable trap. See page 20 for details.

Dual-level drainage - enables secondary drainage at membrane

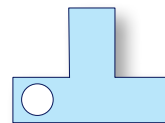
Some typical layouts



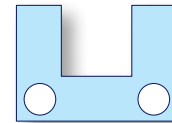
Straight section



'L' section



'T' section



'U' section

level. See page 19 for details. Add suffix **SSD, DSD** (single or double). channel depth below **ssd/dsd** flange to be minimum 40mm deep.

Grade 316 stainless steel - for increased corrosion resistance - add suffix 'M' to channel Spec. Code.

Gully body - see Outlets page 18-19.

As well as connecting directly to pipework, stainless steel drainage channel may also be used with Wade Floor Gullies, trapped or untrapped as illustrated on page 10 and 18.

Support bar - a solid stainless steel support bar helps prevent deformation or movement of channel show flange in heavy load bearing areas. To specify/order - add suffix 'S' to the channel Spec. Code. (May be used with channel profiles: RP, RE or RPV).

Tile upstand - for tiling over, or for use with other finishes and/or membrane where channel is being installed close to a tiled wall, (see illustration on page 8) 70mm high unless otherwise specified. Add suffix 'T'.

To obtain a quotation, please provide the following:

Grating Spec. Code

Channel profile Spec. Code, followed by any required option suffix(es) (see below)

General dimensions in mm (A to E above) and layout of channel.

Outlet connection details (F above - size/type of pipework system)

Thickness of floor finish (where applicable)

Gully body Spec. Code or Dropped sump style (if required)

Options/Accessories Spec. Code (if required)

Note: Adjustable feet available on request - for further information, contact the Wade technical department - wadetech@alumascwms.co.uk

Channel Outlets

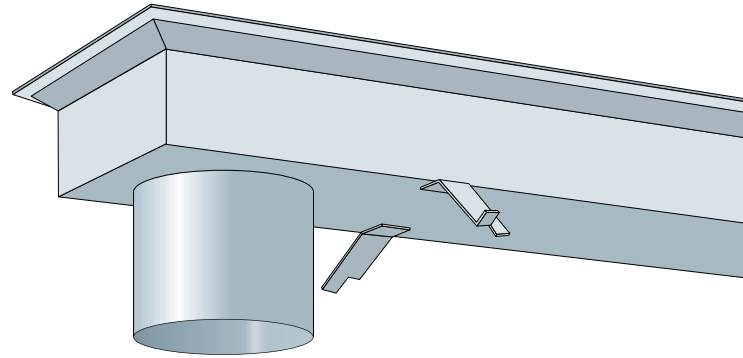
These can take different forms as described below.

Direct connection outlets

Channel is available with welded-on outlet(s) for connecting directly to pipework. Outlets are generally vertical from the base but can be horizontal from the side or end. Spigot outlets (plain pipe 110mm o.d.) have standard length of 90mm.

Longer spigots are available, max. 950mm, are supplied with standard outside diameter of 114 mm for connection to pipework with a coupling.

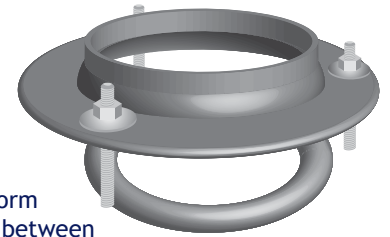
Outlets smaller than 75mm/3" are generally supplied as a female BSP threaded socket for connection to pipework having a male threaded pipework adaptor.



Gully body with channel sealing kit

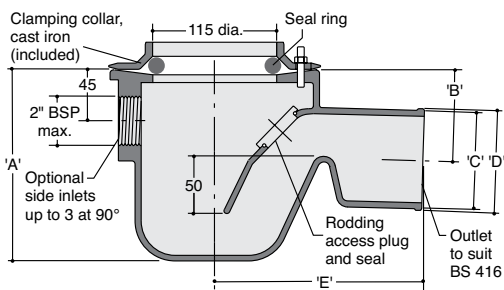
Channel is made with a welded-on outlet, as above, that is push fitted into the body on site when the channel sealing kit is in position. Approximately 10mm of height adjustability is available. The collar can also be used to clamp a membrane if used. Illustrated is a selection of bodies regularly used with linear drainage.

The channel sealing kit comprises a neoprene seal ring and a clamp collar with studs, nuts and washers.

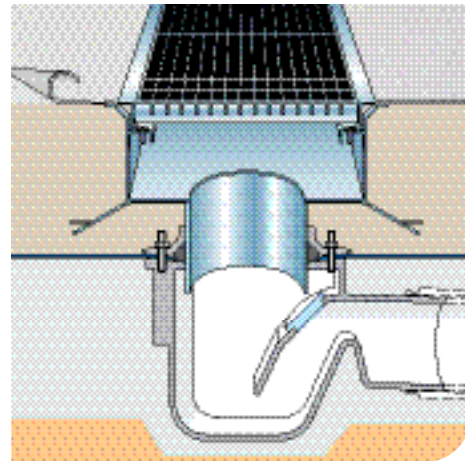


Tightening the nuts compresses the ring to form a watertight connection between channel outlet and body.

G3LD series 'P' trapped - 50mm seal

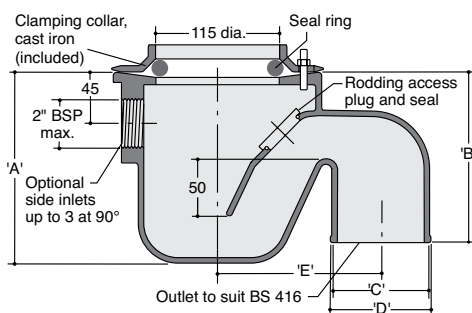


Typical installation

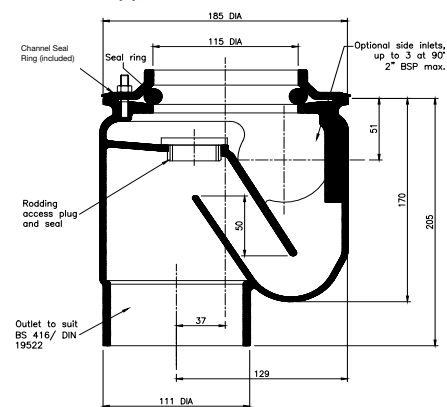


SVF channel and SS7300A5 grating, vinyl dressed both sides, with G304LD 'P' trapped body (supplied with channel sealing kit).

G6LD series 'S' trapped - 50mm seal



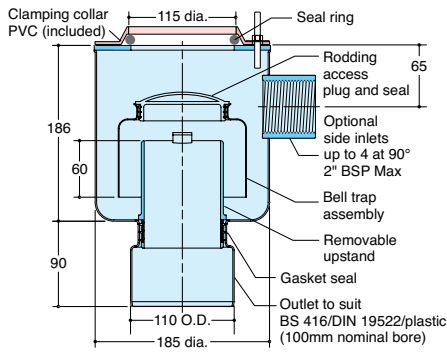
G1014LD 'S' trapped - 50mm seal



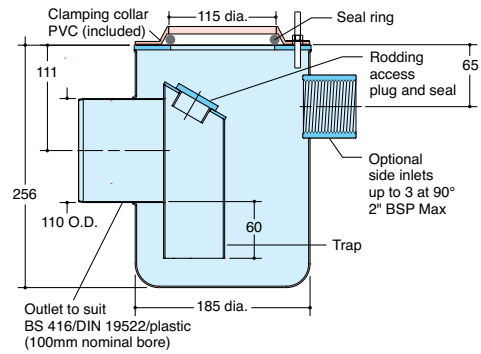
Spec. Code	Outlet size	A	B	C	D	E	Free area cm ²	kg
G303LD	75mm	170	80	87	89	185	44	7.8
G304LD	100mm	205	92	112	no bead	190	78	9.6
G603LD	75mm	170	150	87	89	145	44	8.5
G604LD	100mm	205	165	112	no bead	155	78	11.0
G1004LD	100mm	205	170	111	-	129	72	15.8

Trapped - Stainless steel grade 304 (for grade 316 add suffix 'M' to Spec. Code)

QG114LD Vertical outlet (BS 416) - bell trapped



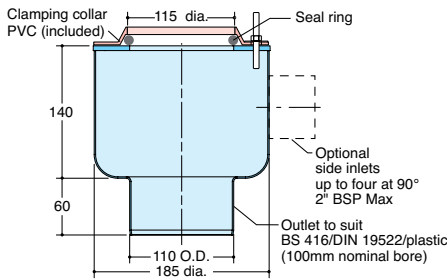
QG214LD Horizontal outlet (BS 416) - 'P' trapped



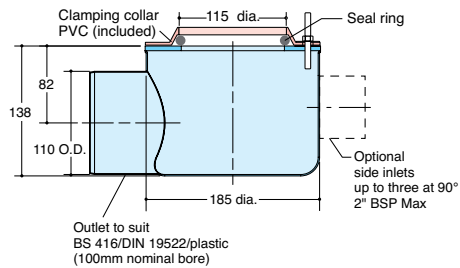
Spec. Code	Outlet size mm	Free area cm ²	Trap type	kg
QG114LD	100	51	Bell	2.8
QG214LD	100	60	P	3.5

Non-trapped - Stainless steel grade 304 (for grade 316 add suffix 'M' to Spec. Code)

QB114LD Vertical outlet (BS 416) - deep sump



QB214LD Horizontal outlet (BS 416) - deep sump



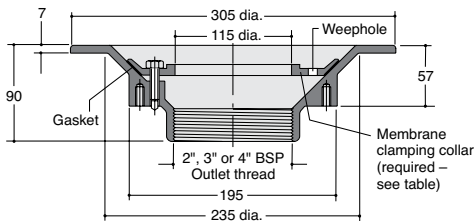
Spec. Code	Outlet size mm	Free area cm ²	kg
QB114LD	100	78	2.3
QB214LD	100	78	2.1

Gully body for use with bituminous membrane

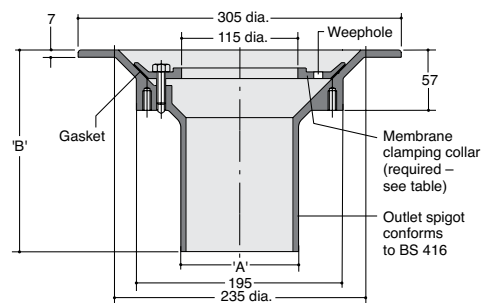
Non-trapped - Cast iron

Membrane clamping collar is required, C.D10LW with weepholes. Channel sealing kit is not applicable to D10-D12 series gully bodies.

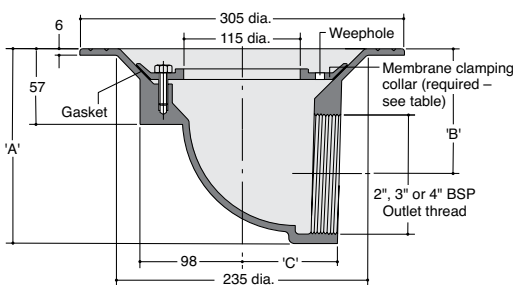
D10 series Vertical threaded outlet



D11 series BS 416 spigot outlet



D12 series Horizontal threaded outlet



Spec. Code	Outlet size	A	B	C	Free area cm ²	kg
D1002 C.D10LW	2" BSP	-	-	-	19	5.0
D1003 C.D10LW	3" BSP	-	-	-	44	4.3
D1004 C.D10LW	4" BSP	-	-	-	78	3.3
D1108 C.D10LW	75mm	87	165	-	44	3.7
D1109 C.D10LW	100mm	112	190	-	78	8.7
D1207 C.D10LW	2" BSP	119	80.5	143	19	6.5
D1208 C.D10LW	3" BSP	119	67.5	143	44	6.7
D1209 C.D10LW	4" BSP	183	117	91	78	6.5

To specify/order

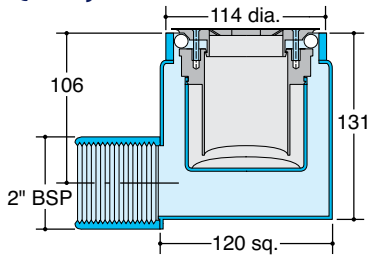
Specify *Body* and *Collar* Spec. Code from the table above.

Dropped Sump Channel Outlets

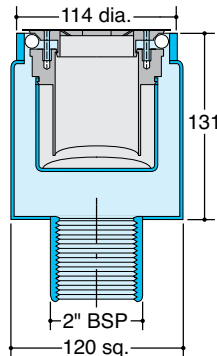
Stainless steel grade 304

Channel for the profiles illustrated on page 14 is available with a dropped sump welded to the channel to help improve drainage and to allow an optional large stainless steel filter bucket and/or fitting of a removable trap. **Note:** Minimum channel base width to be equal or greater than the trapped sump top dimension.

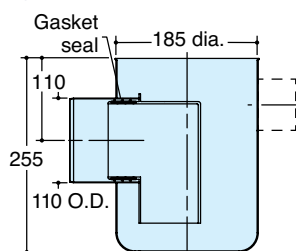
Q21 style



Q22 style

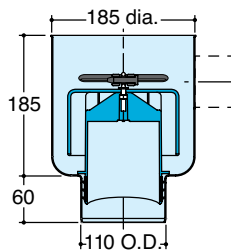


Q27DS



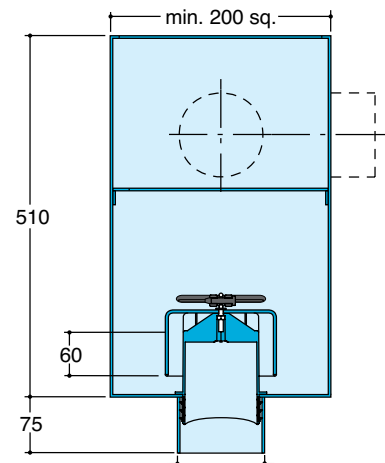
Optional side inlets – maximum 2" BSP
Option 'N' not available

Q28DS



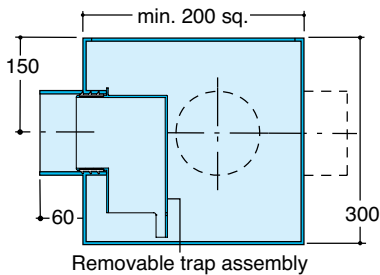
Optional side inlets – maximum 2" BSP

Q10 style



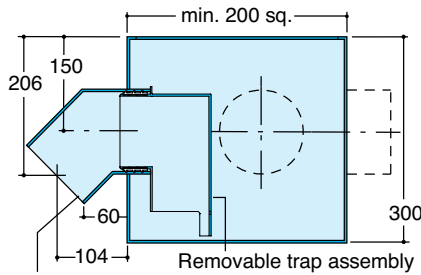
Outlet to suit 100mm or 150mm BS 416
Optional side inlets – maximum 100mm

Q12 style



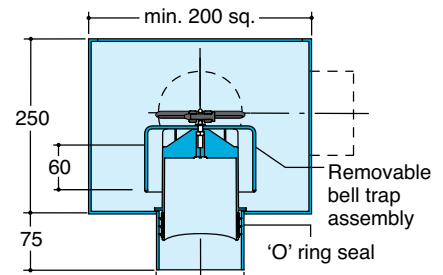
Optional side inlets – maximum 100mm
Option 'N' not available

Q13 style



Outlet to suit 100mm BS 416
Optional side inlets – maximum 100mm
Option 'N' not available

Q14 style



Outlet to suit 100mm or 150mm BS 416
Optional side inlets – maximum 100mm

Options

Filter basket - made of stainless steel - add suffix 'B' to Spec. Code (not Q21 or Q22 style).

Grade 316 stainless steel - for increased corrosion resistance - add suffix 'M' to Spec. Code.

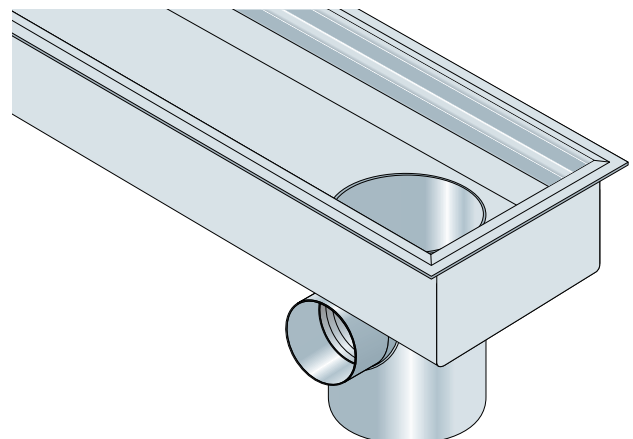
Size

Q27DS and Q28DS are as dimensioned on this page.

Q10, Q12, Q13, Q14, Q21 and Q22 style dropped sumps are made to order, though the width of the grating (min. 200mm wide for Q10-Q14, min. 135mm wide for Q21 and Q22) in the channel above is a defining factor. Generally, it is more cost effective to increase the width of the entire channel and grating to match the sump as opposed to boxing out.

Trap - provided as standard; add suffix 'N' for non-trapped version (vertical outlet versions only).

Typical assembly



Custom Made Channel - Dual Level - BS EN 1433 Compliant

Stainless steel - grade 304, (min.) 1.5mm thickness

Provides primary drainage at finished floor level plus secondary drainage at membrane level. Suitable for installation in pedestrian and light vehicular areas only.

Secondary drainage is available with the channel profiles shown on pages 16 and 22, for use with gratings shown on pages 10 - 13.

Load class: A15

To specify/order:

Grating Spec. Code

Channel profile Spec. Code

Secondary drainage Spec. Code (SSD or DSD)

General dimensions in mm and layout of channel

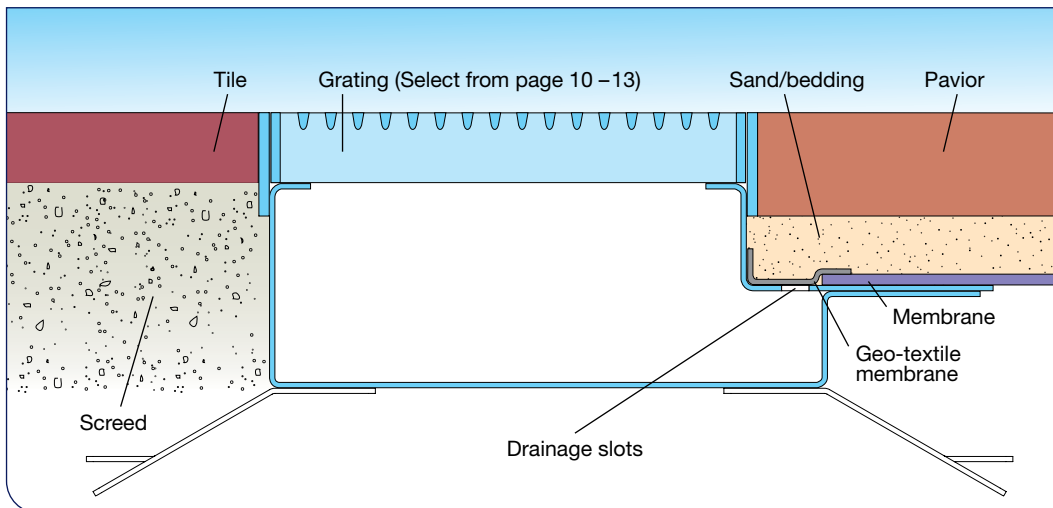
Outlet connection details

Membrane depth from finished floor level

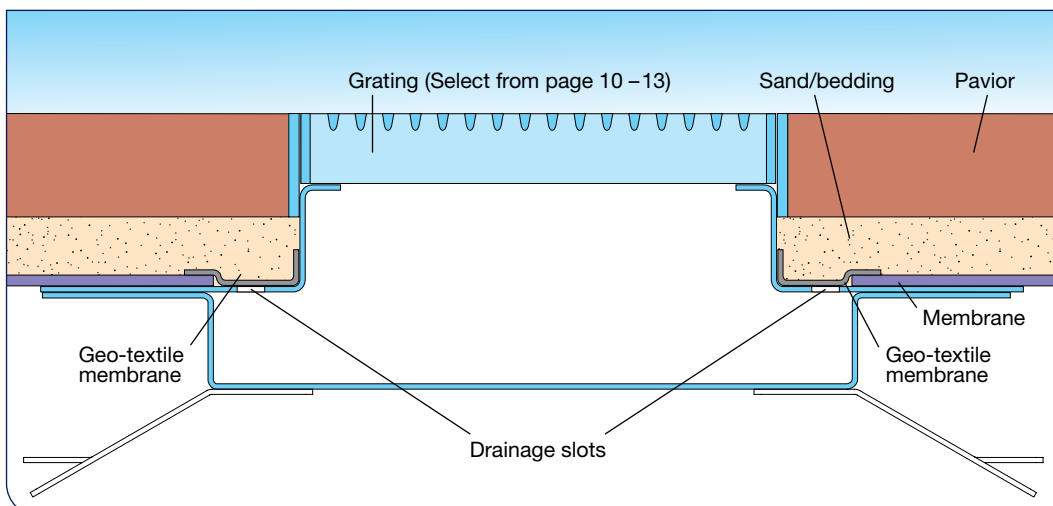
Gully body Spec. Code or dropped sump style (if required)

Accessories Spec. Code (if required)

Typical installations



Single secondary drainage (SSD) with channel profile NE

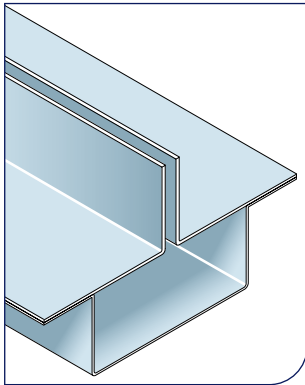


Double secondary drainage (DSD) with channel profile NE

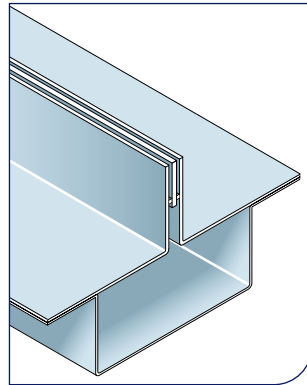
Custom Made Slotted Channel - Hidden - BS EN 1433 Compliant

Stainless steel - grade 304, (min.) 1.5mm thickness

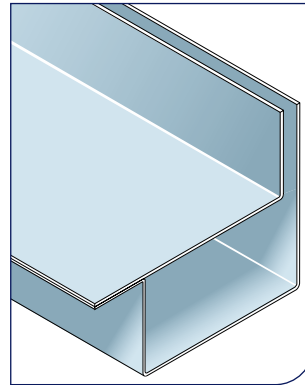
Suited for draining large areas of screed, resin and other floor finishes, as well as block paving, hidden channel can be designed to accommodate a range of paving thicknesses and flow rate requirements. Available in a range of profiles, shown and described below, generally with in-built fall towards the outlets; can also be produced as curved channel.



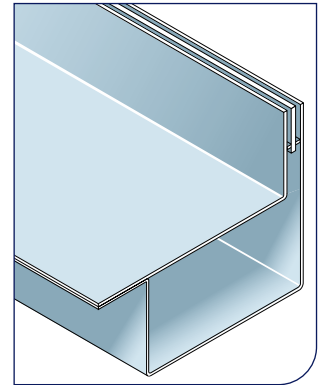
Spec. Code: HC



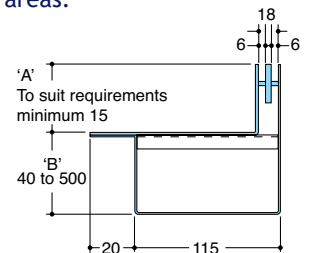
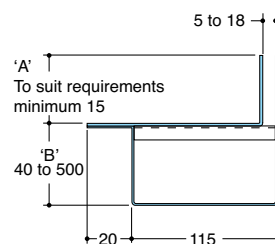
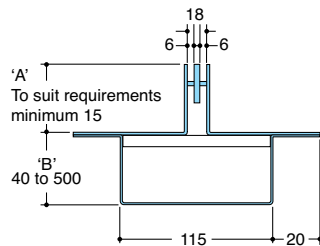
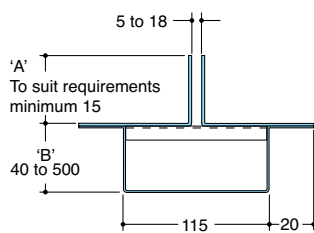
Spec. Code: HSC
With non-removable toe bar. 6mm slot width suitable for use in barefoot areas.



Spec. Code: HCE
Designed for use against a wall.



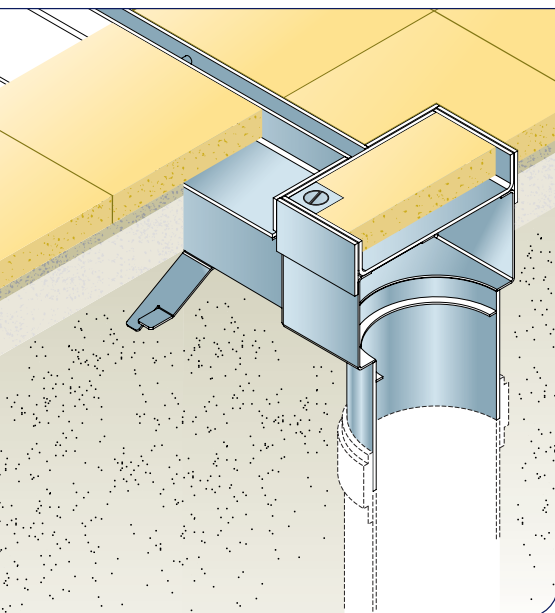
Spec. Code: HSCE
Designed for use against a wall. With non-removable toe bar. 6mm slot width suitable for use in barefoot areas.



Features

Depth - channels are available with level invert or in-built fall to outlet, from a minimum of 40mm deep. The base of the channel is flat for depth up to 110mm, deeper versions have a "V" shaped base.

Typical installation



HC channel with integral stainless steel gully. (Recessed cover shown; can also be supplied with a grating if required).

Covers are also available with spigot upstand for connection to rainwater pipework.

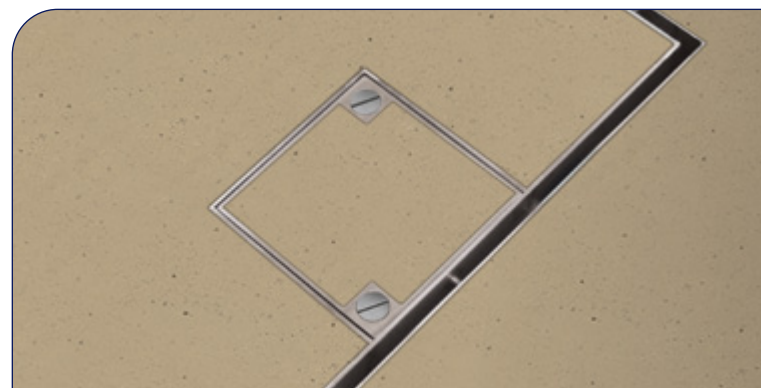
Rodding access - 140mm square access covers are fitted over the outlets, as standard; these may be recessed to accept flooring material.

Load class: A15 (depth 'A' < 75mm)
B125 (depth 'A' > 75mm)

Options - see pages 17 and 21.

To specify/order:

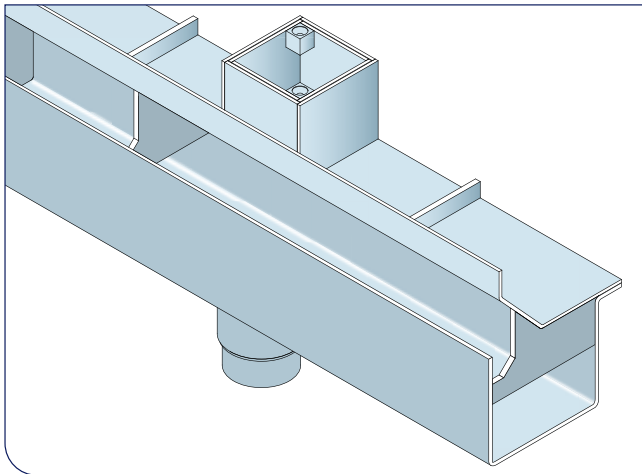
Channel Spec. Code: HC, HSC, HCE or HSCE
Length, depth and layout of channel
Slot width, slot depth
Position and type of outlet(s)
Options



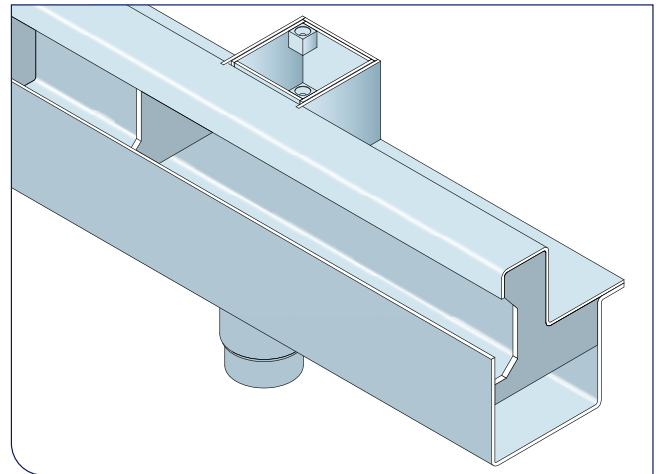
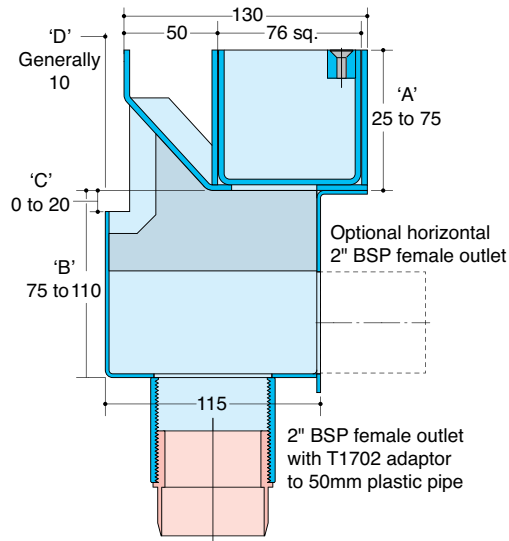
HCE channel with 140mm square access cover.

Stainless steel - grade 304, (min.) 2mm thickness

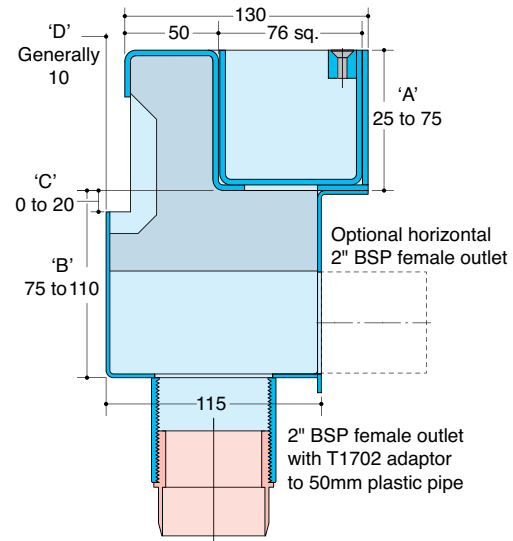
To help protect a building threshold from ingress/ponding of rainwater landing on an external door, the specially formed channel is installed, generally, 10mm away from the door cill, this gap being the path for rainwater to flow into the hidden channel below. The channel also has facility to receive run-off from a sub-cill and/or from the damp proof course/membrane that must be dressed into the channel.



Spec. Code: **TDN**



Spec. Code: **TDR with 50mm show face**



Options

Grade 316 stainless steel - add suffix 'M' to the channel Spec. Code

Outlet - 2" BSP with T1702 ABS adaptor to 50mm plastic pipe supplied as standard. Larger outlets may be specified.

Recessed access cover - 76mm square c/w lifting bosses over outlet.

To specify - quote Spec. Code: **TDN** or **TDR**.

To obtain a quotation, please provide the following:

Spec. Code: **TDN** or **TDR**

Overall length - in mm, and layout of channel

Outlet - quantity on each run

Access cover - quantity (generally one over each outlet).

The following additional information will be required to process an order:

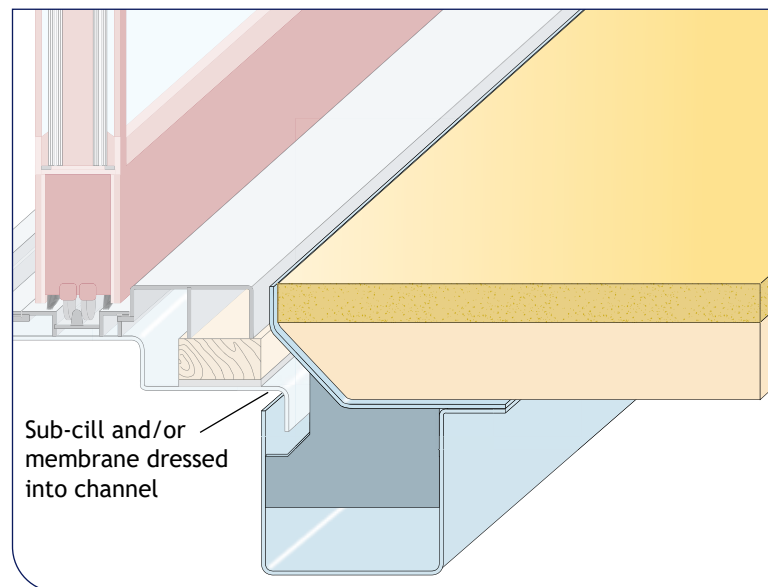
Dimensions A-D in mm

Outlet/recessed access cover positions along each run

Outlet type (horizontal or vertical)

Level or in-built falls to base of channel.

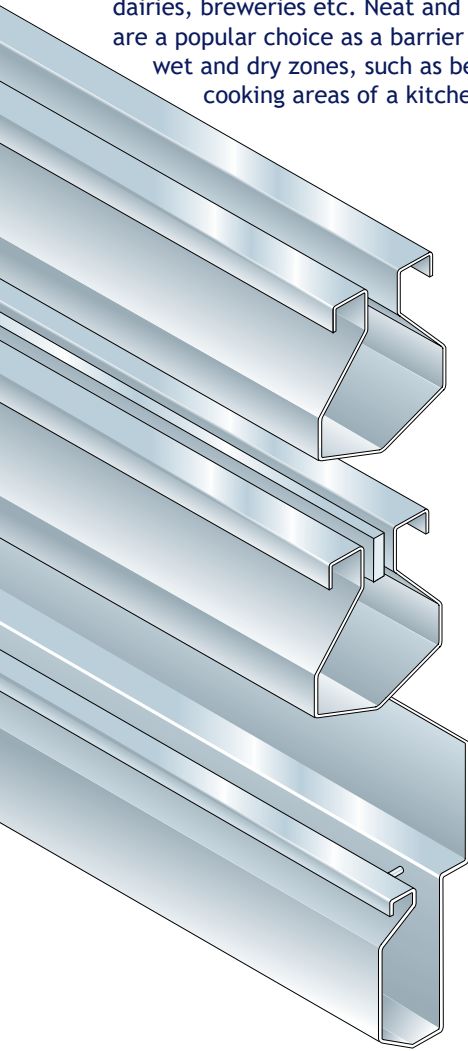
Typical installation



Custom Made Slotted Channel - Supaslot - BS EN 1433 Compliant

Stainless steel - grade 304, (min.) 1.5mm thickness

Supaslot channels are suited for large areas with only low volumes of waste water such as in abattoirs, butcheries, dairies, breweries etc. Neat and unobtrusive, the channels are a popular choice as a barrier between designated wet and dry zones, such as between dishwashing and cooking areas of a kitchen.

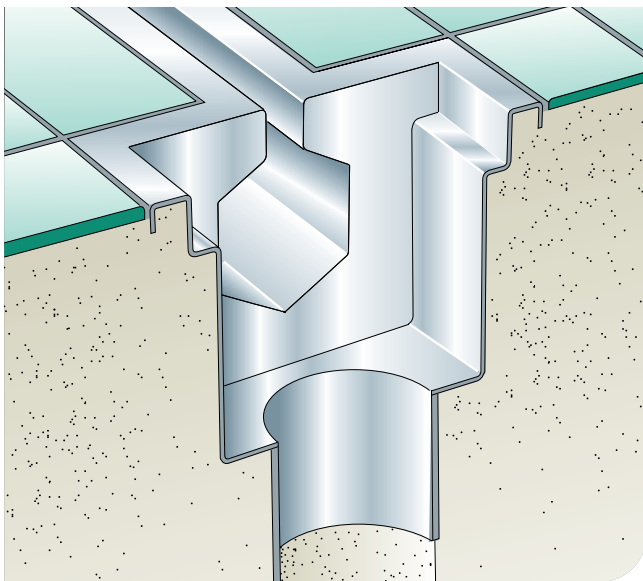


Spec. Code: SL

Spec. Code: SSL
With non-removable toe bar. 6mm slot width suitable for use in barefoot areas

Spec. Code: HL
Designed for use against a wall

Typical installation

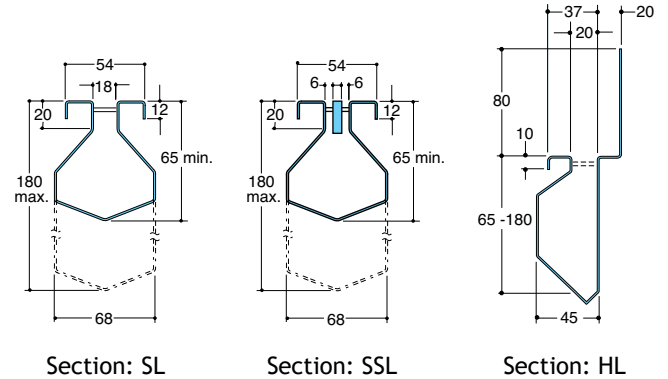


SL Channel with integral stainless steel gully.
(Gully grating omitted for clarity, can also be supplied with a recessed cover if required).

Features

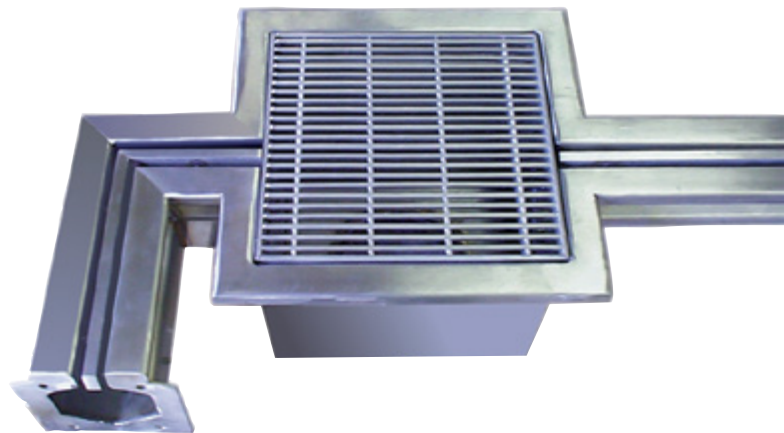
- depth from 65mm to 180mm with or without fall
- suitable for tiled and resin floors
- easily cleaned by directing jet of water along the channel towards the outlet
- can be combined with Wade gullies and channel gratings

Load class: B125



To specify/order:

Spec. Code SL, SSL or HL, length, depth and layout of channel, position and diameter of outlet.



Options

Grade 316 stainless steel - for increased corrosion resistance - add suffix 'M' to channel Spec. Code.

To special order, stainless steel gullies can be welded anywhere along the channel. Gullies may be trapped ('P' or bell) if required.

Support bar - a solid stainless steel support bar helps prevent deformation or movement of channel show flange in heavy load bearing areas. To specify/order - add suffix 'S' to the channel Spec. Code.

Please contact our Technical Services Department for details.

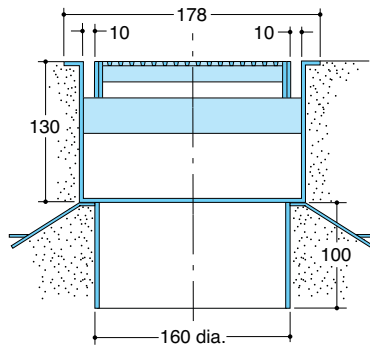
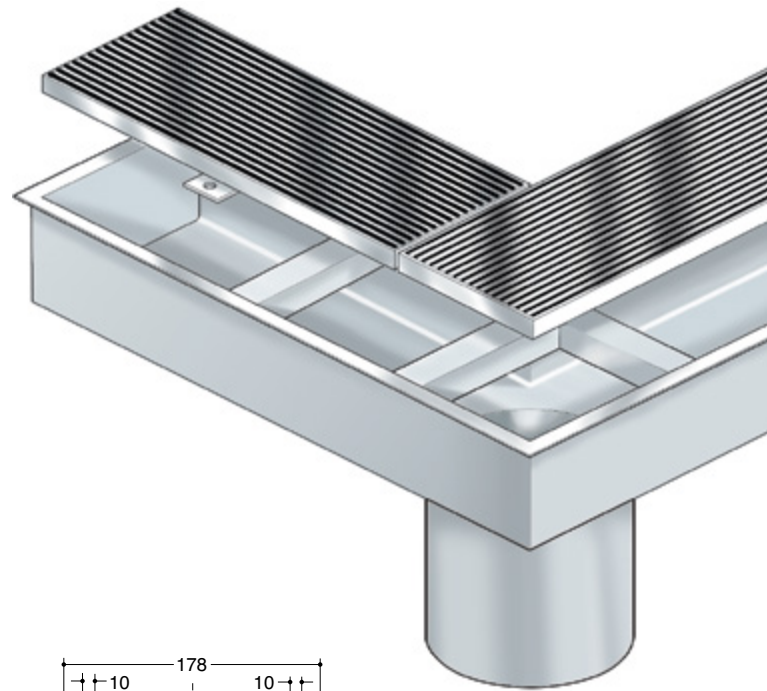
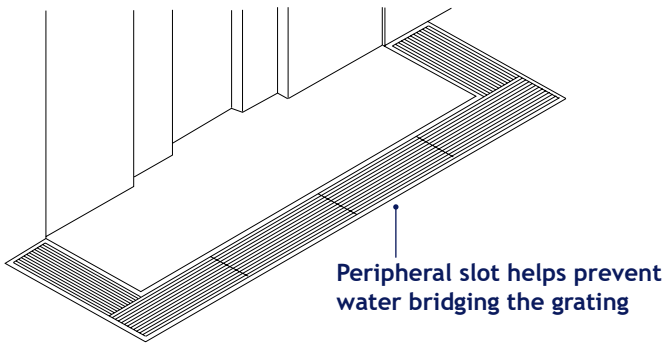
Channel and grating for fire-fighting lift - stainless steel grade 304, (min.) 1.5mm thickness channel

To prevent water, such as from a sprinkler, entering a lift well.

Features

- channel has two 150mm outlets in corner locations, to deal with flow of 25 l/s in accordance with BS 9999
- 'streamline' gratings are secured in the channel leaving a peripheral slot 10mm wide

Load class: A15



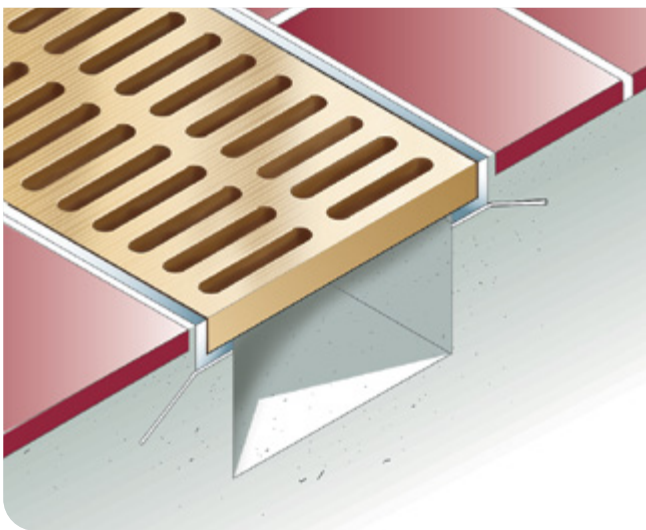
To specify/order:

Spec. Code S4800 and lengths and layout of channel (include details of outlet positions)

Angle frame stainless steel grade 304, 3mm thickness

For use over pre-formed channels, with gratings shown on pages 10 to 13.

Angle frame can be custom made to suit various applications; sections can be produced to match channel profiles shown on page 16 and in grade 316.

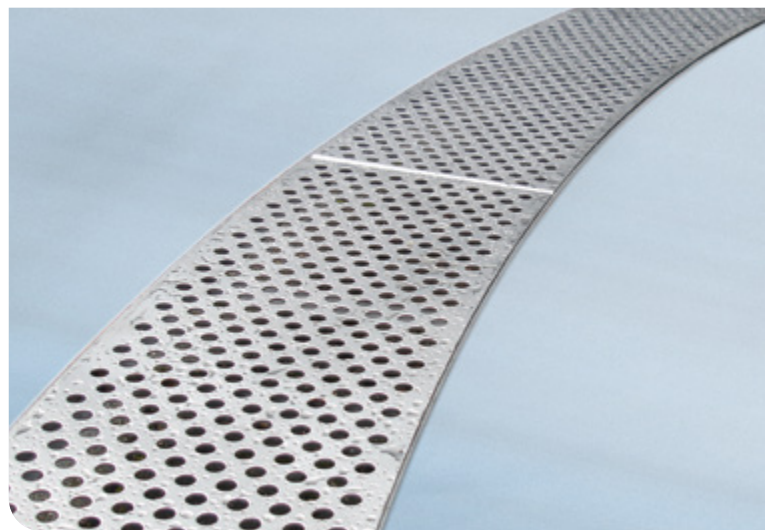


Basic angle frame (matching channel profile NE) can also be produced in curved sections with any of the perforated gratings listed on page 10.

Curved channel

Profile NE, narrow edge, can be produced as a curved channel with any of the perforated gratings listed on page 10.

Profiles HC, HSC, HCE, and HSCE, hidden channel, is also available curved.

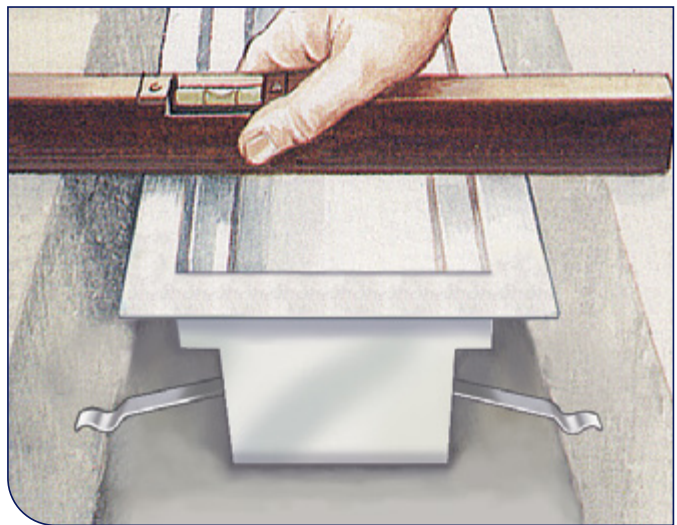
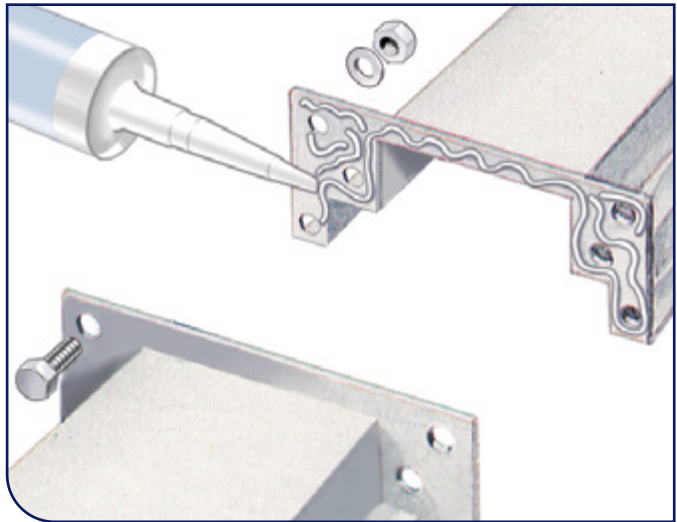


Installation Guide

This is general information only, when installing in concrete. Channel-specific instructions are supplied with the goods for use by the installer and are also available from our Technical Services Department and our website.

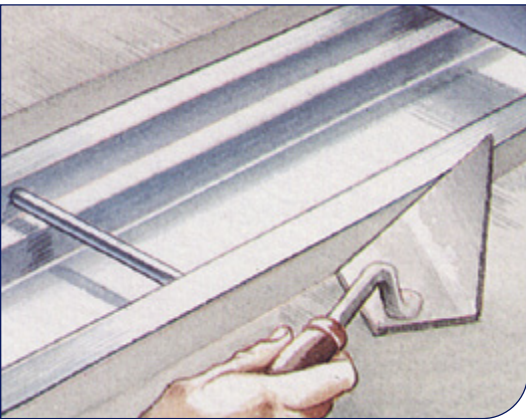
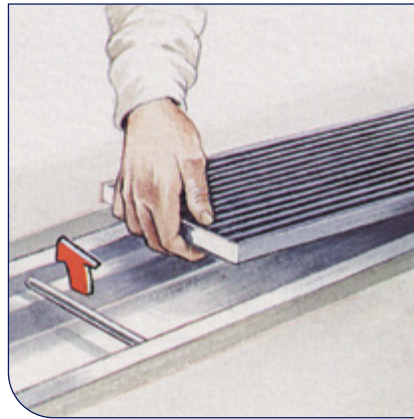
A. Drainage channel

1. Remove any gratings and clamping frames from channel.
2. Taking care not to twist, turn the channel upside down (base uppermost).
3. If there is more than one section to the channel, apply silicone sealant to jointing flange faces and securely bolt sections together. Rubber gaskets can be supplied to order.
4. If connecting to a Wade gully, follow the instructions supplied.
5. Taking care not to twist, turn the channel the correct way up and lower it into the trench and into any installed gullies: ensure top edge of channel is flush with finished floor level, use the adjustment legs when supplied.
6. Bend the build-in ties as necessary.
7. Make the pipework joints below the channel.
8. If not supplied, provide and insert spacer bars across channel at approx. 500mm centres. Spacer bars prevent channel being squeezed while backfill is being compacted and must not be removed until backfill is set.
9. Fix the channel into position by first grouting build-in ties and any adjustment legs firmly in place.



Note

After positioning the channel it is recommended that a water test be undertaken to check that height is correct, that, where applicable, the fall in the channel works effectively, that there are no leakages from the channel system and that there are no signs of deformation or of damage to the channel which may have occurred during installation. At this stage it may still be possible for any necessary rectification work to take place. Please consult our Technical Services Department if this situation arises.



10. Taking care not to damage show surfaces, place heavy weights on top of the channel prior to pouring backfill to prevent any lift or movement.
11. Using concrete class C30/37 backfill around the channel ensuring that the concrete flows evenly under and around the channel such that no voids are formed.

12. Remove immediately any material which falls into the channel.
13. When concrete is set, remove spacer bars.
14. Fit gratings.
15. Clean channels and gratings with water and a suitable cleaning agent where necessary. Under no circumstances use metal scouring pads or wire wool as these will contaminate surfaces.

Note

Load classes given are based on channel being set in concrete class C30/37, to a level that fully supports the grating seat. For a lower load rating, lesser amounts and class of concrete may be suitable - consult a structural engineer if advice is needed.

For additional notes on channel profile SVF and channel with perimeter angle frame, see B and C.

B. Drainage Channel profile SVF - for use with vinyl and other flexible sheet material

The following additional notes/procedures apply:

1. Dress vinyl into channel and fix in accordance with flooring manufacturer's instructions.
2. Fit clamping frames and gratings.

C. Drainage channels with perimeter angle frame

The following additional notes/procedures apply:

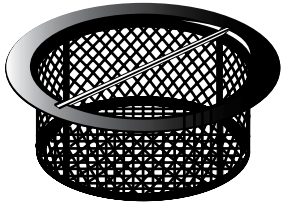
1. When the channel is installed, lay the floor into the perimeter angle frame.
2. Once the floor is set, carefully remove the spacer bars between the angle frame and the channel using an angle grinder or similar.

Note

Do not remove the spacer bars before fitting the channel, as it would then be impossible to maintain the position of the frame relative to the channel.

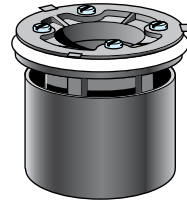
3. Thoroughly clean the gap between the channel and angle frame, degrease and fill with a permanently elastic expansion joint sealant. If corrosive chemicals are likely to be present, consult sealant manufacturer on suitability.





Filter bucket
(Nylon 6)

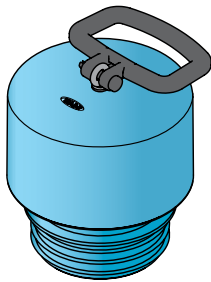
To fit inside 4" channel outlet (typical installation page 5), a nylon filter bucket is a means of collecting solids. The bucket needs to be cleaned out periodically. To specify/order - add suffix 'B' to the channel Spec. Code.



U1404 Removable bottle trap
(Nylon 6, silicone rubber)

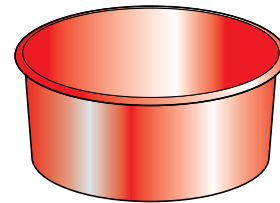
To fit inside 4" channel outlet. Typical installation is shown on page 8. Max flow rate 1 l/s.

Note:
Frequent cleaning will be necessary in applications where very high amounts of hair and other waste material are present.



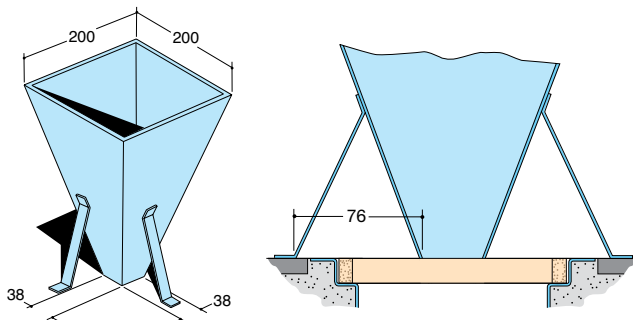
U1704 Removable bell trap (polypropylene)

Channel will be designed with a sump (min. 200x200x200) at the outlet to accommodate this trap - cannot be used with narrow gratings (less than 200mm).



UX9901 plug (LDPE)

Tapered to plug, temporarily, 100mm inlet or outlet during installation.



U1203 Portable funnel

To accept discharge from boiling pans etc; for use with any grating modified to suit. Please specify grating.

Typical section

Materials and finish of Wade gratings and channel, 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 absence of matter which could impede drainage. Measures set out below will sustain appearance and prolong service life.

Cast aluminium - BS EN 1706

Used for gratings

An alloy chosen for its chemical resistance and durability.

Cast iron - BS EN 1561

Used for gratings and gullies

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; oxidation (surface rusting) is a natural process which does not weaken the material. A zinc anti-corrosion coating is applied to certain castings by sherardizing.

Ductile iron - BS EN 1563 and 1564

Used 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.

Neoprene

Used for gaskets and seals. Maximum continuous operating temperature of 100°C.

Nickel bronze - BS EN 1982 satin finish

Used for gratings

A cast alloy with a fine grain effect which blends well with most floor finishes. The satin finish is generally maintained

by the slight abrasive action of passing traffic. In unused areas the material will gradually tarnish. To restore lustre, apply a plain nylon scouring pad (not soap-filled) in the direction of the grain.

Nylon 6

Used for filter bucket and removable bottle trap

Chosen for its toughness and durability. Maximum continuous operating temperature of 180°C.

Polypropylene

Used for the removable trap in stainless steel gullies. Maximum continuous operating temperature of 100°C.

Silicone rubber

Used in O-ring in removable bottle trap. Maximum continuous operating temperature of 180°C.

Stainless steel - grade 304 and 316

Used for bodies, channels, gratings, funnels, access covers, filter buckets and fixings

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.

This catalogue shows the load rating class for each product based on BS EN 1433 as follows:

- A15** Areas which can be used only by pedestrians and pedal cyclists.
- B125** Footways, pedestrian and comparable areas, private car parks and car parking decks.
- C250** Kerbsides - maximum of 0.5 m into the carriage way and a maximum of 0.2m into the footway.
- D400** Carriageways of roads (including pedestrian streets), hard shoulders and parking areas, for all types of road vehicles.

Channel load ratings are as tested when cast in concrete grade C30/37 up to finished floor level. Channels installed in other types of floor construction may not meet the same load class if they are not fully supported.

Where grating and channel within an assembly are different load classes the lower class is applicable to that assembly.

The selection of the appropriate class is the responsibility of the designer; where there is any doubt the stronger class should be used.

Spec. Code index

Spec. Code	Page
Angle Frame	25
D10/D11/D12	19
DSD	21
G	18
HC/HCE	22
HL	24
HSC/HSCE	22
L	13
NE/NEF/NEHD	16
PA	16
PS/PSF/PSG	16
QB	19
QG	19
Q27DS/Q28DS	20
Q Styles	20
RE	16
RP/RPV	16

Spec. Code	Page
S48	25
SA	14
SC	15
SE	16
SG	15
SL	24
SN	14
SS	10-13
SSD	21
SSL	24
SVF/SVFE	16
TDN/TDR	23
U	28



BUILDING DRAINAGE

Technical Support

+44 (0)1787 273 998

wadetech@alumascwms.co.uk

AWMS
Station Road
Burton Latimer
Kettering
Northamptonshire
NN15 5JP

+44 (0)1536 383 810
info@alumascwms.co.uk

ALUMASC



WATER MANAGEMENT SOLUTIONS