

Technical Data Sheet AV Vertical Roof Outlet

Product Description / Use:

The Aluminium AV Roof Outlets are a range of high-performance rainwater drainage components suitable for all types of flat roof application, providing advanced flow characteristics for optimum rainwater disposal.

Outlets for specific applications, such as two-way, car park and balcony outlets, are also available.

AV Vertical Roof Outlets are designed for use on flat roofs with either insitu cast concrete, timber or lightweight metal deck construction. AV rainwater outlets are ideal for connection to continuous waterproofing systems using single ply membranes, high performance built-up felt and liquid applied systems.

Benefits:

Compliance

- Cast in aluminium silicon alloy LM6 to BS EN 1676, BS EN 1559 and BS EN 1706, and suitable for most types of flat roof drainage applications.
- Drainage flow performance to BS EN 12056.

High Flow Performance

- An outlet body with a deep integral sump for controlled flow of water into pipe.
- Domical grates for incorporate a patented baffle to prevent water swirl and air entrapment enabling the outlet to drain at optimum pipe capacity. The AV system provides complete reassurance which is critical to building drainage design.

Robust and Secure

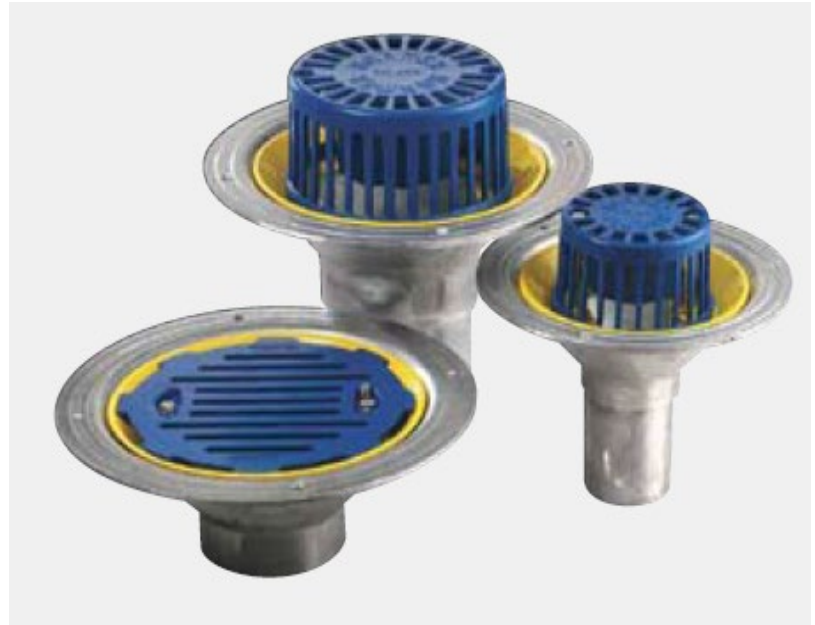
- Aluminium has a light weight-to-strength ratio, which means it is strong yet economical. The reduced weight provides benefits in material transportation and application.
- Application of the waterproof membrane by a clamping ring ensures total integrity of seal.
- Optional flat grates are available for trafficked and terraced areas.

Choice of Body and Grates

- A wide choice of standard drain body variations with spigot and threaded outlet connection, for vertical, horizontal or 45° discharge.
- The shallow sump balcony outlets incorporate Stainless Steel and Nickel Bronze grate options for enhanced appearance with alternative deck finishes.

Low Maintenance

- Domical grates for AV outlets permit a free flow of rainwater while preventing loose chippings or debris from entering the outlet.
- The offset fixings of the clamping ring and domical grate to the outlet body, for both Detail and AV grates, ensures that the throat is completely unobstructed for optimised flow and to facilitate rodding.





Technical Data Sheet AV Vertical Roof Outlet

Easy and Quick to Install

- The aluminium alloy is light in weight and therefore easy to handle on site and during installation. This lightness also makes aluminium outlets suitable for a wide range of lightweight roof decks.
- A wide range of standard accessories such as extension pieces, pipe adaptors and grates are available to ensure successful installation of the roof outlets in most types of roof construction.

Value for Money

- Diecast in LM6 aluminium alloy which has excellent resistance to corrosion under both atmospheric and marine conditions.
- Clamps and grates are polyester powder coated to BBA-approved standard to further increase protection and extend product life.

Sustainable

- Aluminium is 100% recyclable making it a cost effective, sustainable material.
- End of life AV Aluminium Roof Outlets can be recast into new aluminium products.
- Life expectancy of aluminium: 40 years for rural/suburban areas, up to 25 years for industrial/marine areas.

Technical Data Sheet AV Vertical Roof Outlet

Characteristics:

Enhanced Performance

The AV rainwater outlets provide, anti-vortex performance from an economic, general purpose range of outlets. They incorporate a patented baffle within the grating, to prevent water swirl and air entrapment, enabling the outlet to drain at optimum pipe capacity.

The performance of AV outlets accelerates as the depth of water at the outlet or rainfall intensity increases.

The unique high flow performance of AV Roof Outlets demands that each outlet is connected to a dedicated or individual rainwater stack. AV Roof Outlets should be used for securing optimum performance when connected to downpipes on a gravity system.

Key Benefits of the AV Roof Outlets

- Drains more roof area than conventional gravity outlet.
- AV outlets can be used with any connecting pipework material, and all popular pipework sizes.
- Easy installation into roofs and gutters using bituminous, single ply and liquid applied waterproofing systems.
- High flow performance with increasing head of water at the outlet.
- Ensures optimum efficiency of outlet capacity.
- Special retro-gulley for flat roof refurbishment is also available.



1 Bolts and Washers
Stainless steel

2 AV Grate
Tamper proof, secured to clamping ring by two pocketed stainless steel bolts

3 Clamping Ring
Designed to secure the waterproof membrane to the outlet body, the clamping ring is fixed to the outlet body with two stainless steel fixing studs

4 Outlet Body
Deep sump body is secured through flange to supporting structure

Technical Data Sheet AV Vertical Roof Outlet

AV Vertical Spigot or Threaded Outlets

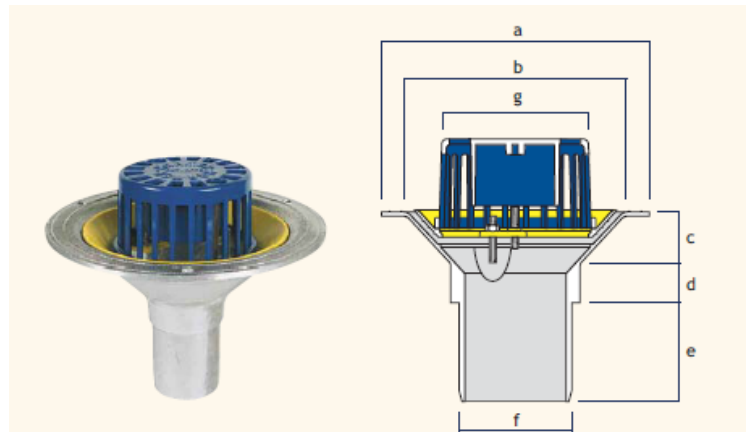
AV Vertical Spigot and Threaded outlets provide anti-vortex performance within an economic range of general-purpose outlets. Designed for connection to downpipes on a gravity system.

1) Vertical Spigot Outlet - Domical Grate

Vertical Spigot outlets are suitable for direct connection to cast iron pipework to BS EN 877 and BS 416, HDPE pipework and PVC O-ring socketed pipe to BS 4514 and BS EN 1329-1 (AV300, AV400 and AV600 outlets only).

Use appropriate couplings.

Flow Rate Note 1 (applies to all tables)
Flow rates are in litres per second based on flow rate test data. Where tested flow rates are greater than pipe capacity limits of BS EN 12056, the pipe capacity limit has been shown. Contact Technical Services for variable outlet performance to specific depth of water and rainfall intensity.



Outlet Size (mm)	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)	g (mm)	Flow Rate ¹ (l/s)	Weight (kg)	Product Code
50	292	239	74	47.5	50	73	137	1.69	2.5	AV200
75	292	239	74	47.5	75	83	137	4.97	2.7	AV300
100	380	305	94.5	39	114	110	210	10.71	4.9	AV400
150	380	305	65.5	53	129	160	210	14.07	5.0	AV600

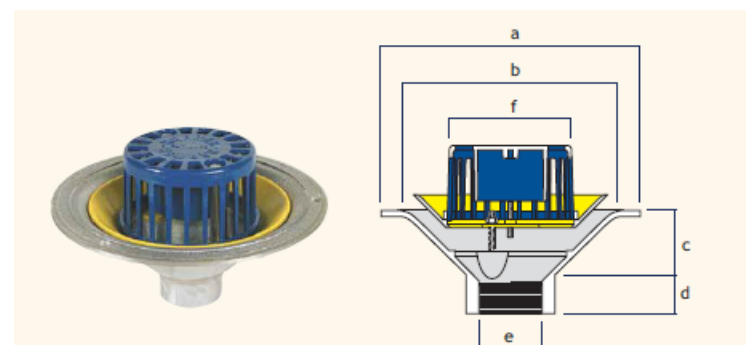
For flat grate versions add suffix /F to the product code (See page 4)

A range of accessories is available for use with special detail requirements

2) Vertical Threaded Outlet - Domical Grate

Vertical Threaded Outlets have a female socket with parallel thread to BS EN 10226-1 for direct connection to threaded tube conforming with BS EN 10226-1. This tube is supplied with BS EN 10255 taper male thread which ensures a completely watertight joint when screwed home into the socket outlet. Threaded outlets are particularly recommended where a connection to the outlet occurs within the thickness of a concrete slab. In such cases, a threaded connection will create a completely gastight seal within the slab.

Roof AV threaded outlets can be connected to socketed and socket less cast-iron pipework, HDPE pipework and PVC pipework by means of the Roof Threaded Spigot Adaptor with an appropriate coupling.



Outlet Size (mm)	a (mm)	b (mm)	c (mm)	d (mm)	e (BSP)	f (mm)	Flow Rate ¹ (l/s)	Weight (kg)	Product Code
50	292	239	74	47.5	2"	137	1.69	2.3	AV200T
75	292	239	74	47.5	3"	137	4.97	2.3	AV300T
100	380	305	94.5	39	4"	210	10.71	4.5	AV400T
150	380	305	65.5	53	6"	210	14.07	4.5	AV600T

For flat grate versions add suffix /F to the product code (See page 4)

A range of accessories is available for use with special detail requirements

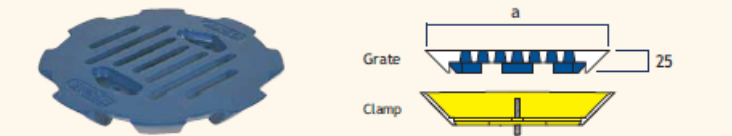
Technical Data Sheet AV Vertical Roof Outlet

a) Flat Grate

Flat grates should be used if the outlet occurs in an area which is subject to pedestrian traffic. These grates are also designed for use with Modulock drainage system where concealed rainwater outlets are used.

To specify or order, add suffix /F to the product codes on page 3, e.g. 100mm Vertical Spigot outlet with Flat Grate: AV400/F.

a)




The diagram shows a blue flat grate with a grid pattern and a yellow clamp. Dimension 'a' is indicated as the width of the grate. A detail shows the grate being secured to a base with a clamp, with a 25mm gap between the grate and the base.

Outlet Size (kg)	a	Flow Rate (l/s) ¹	Load Rating (tonne)	Weight (kg)	Suffix
50	200	1.69	1.5	0.8	/F
75	200	4.97	1.5	0.8	/F
100	270	10.71	1.5	1.2	/F
150	270	15.55	1.5	1.2	/F

b) Terrace Grates

Terrace Grates are designed for installation in terrace tiles or brick paviors. They should be used in connection with Grate Extension Pieces which raise the Terrace Grate to the level of the paved surface. The radius slots in the grate allow for movement through 90° permitting adjustment to suit surrounding paving prior to final tightening.

b)



The diagram shows two types of terrace grates: 2/3TG and 4/6TG. Each is shown with its corresponding extension piece. Dimension 'a' is the width and 'b' is the depth of the extension piece. The 2/3TG grate has three slots, and the 4/6TG grate has six slots.


Outlet Size (mm)	a (mm)	b (mm)	Flow Rate ¹ (l/s)	Load Rating (tonne)	Weight (kg)	Product Code
50	150	25	1.69	1.5	0.7	2/3TG
75	150	25	4.97	1.5	0.7	2/3TG
100	232	25	10.71	1.5	1.6	4/6TG
150	232	25	15.55	1.5	1.6	4/6TG

c) Grate Extension Pieces

Grate Extension Pieces are for applications where it is necessary to raise the level of the grate above the body of the outlet such as in inverted roof construction.

The Grate Extension Pieces will accept domical grates and terrace grates but not standard flat grates. Terrace Grates can be used only in connection with grate extension pieces. The extension pieces can be cut down if necessary to suit the thickness of paving or tiles. This can be done easily on site with a hacksaw, or, if required, extension pieces can be trimmed prior to delivery.

c)



The diagram shows two types of grate extension pieces: 2/3EP and 4/6EP. Each is shown with its corresponding grate. Dimension 'a' is the height, 'b' is the width, and 'c' is the depth of the extension piece.

Outlet Size (mm)	a (mm)	b (mm)	c (mm)	Weight (kg)	Product Code
50	161	150	128	0.7	2/3 EP
75	161	150	128	0.7	2/3 EP
100	233	222	128	1.3	4/6 EP
150	233	222	128	1.3	4/6 EP

Grate Extension Pieces are supplied with one set of stainless steel extension studs per outlet

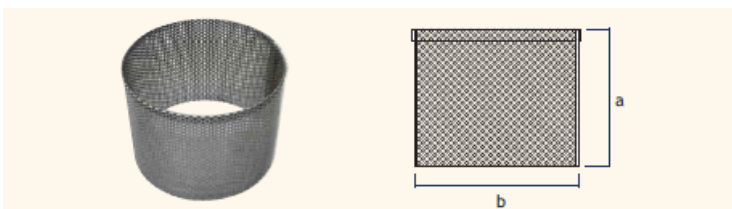
d) Gravel Guard

Made of stainless steel, the Gravel Guard is used with Domical Grates on roofs with gravel finish to prevent ingress of insulation and gravel into the outlet. Other heights are available to order.

Installation:

Installation and application must be conducted in accordance with MOY installation guidelines, current industry standards and suitability with the roof drainage system must be ensured.

d)



The diagram shows a cylindrical gravel guard and its top view. Dimension 'a' is the height and 'b' is the diameter.

Outlet Size (nominal)	a (mm)	b (mm)	Weight (kg)	Product Code
Medium Sump	150	200	0.5	C4/GG/15
Medium Sump	200	200	0.6	C4/GG/20
Large Sump	150	305	0.8	C6/GG/15
Large Sump	200	305	0.9	C6/GG/20