



DRAINAGE PRODUCTS

SPRING 2017

Concerning roof drainage, membranes for tanking & foundation drainage and ground-level drainage. Products suitable for a variety of applications, completely safe for use in water courses and contaminant free.



Wallbarn supplies a number of pre-formed and sheet membrane drainage materials to help provide strong, reinforced water tight seals for structural surfaces – on both the horizontal and vertical plane – for surface drainage and in waterways and for roof drainage systems.



These products are designed to be lightweight, flexible and easy to install whilst providing superior waterproof integrity.



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PROTECTO-DRAIN



Protecto-drain is a preformed high density polyethylene (HDPE) membrane designed to protect surfaces and act as a drainage layer. It is manufactured with a series of cups and ridges to help channel water effectively.

Made from HDPE, this hard wearing flexible membrane is designed to direct water away from the surface of the structure, towards the appropriate drainage system.

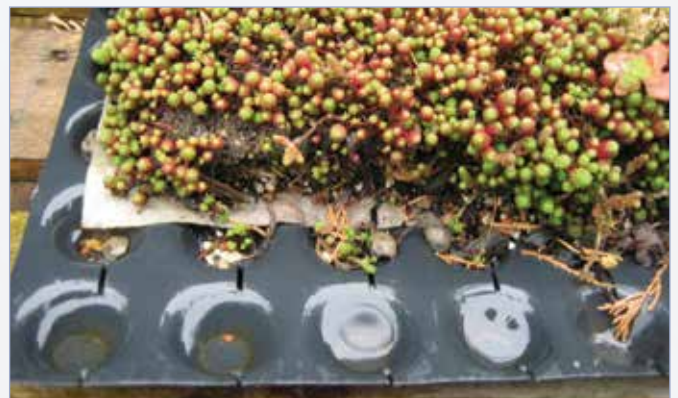
It is very tough but lightweight and easy to handle, making it very adaptable and suitable for a large number of applications.

It is available in a range of sizes and thickness for different strength requirements and flow rates. It is also completely safe and contaminant free, and can be used safely with water courses.

It is ideal for vertical surfaces and protects the waterproof membrane from abrasion and puncture damage caused by backfilling. Its cupped structure creates a permanent air gap between the wall and the backfill which helps to reduce pressure points and helps in the ventilation of the building and alleviate problems with damp.



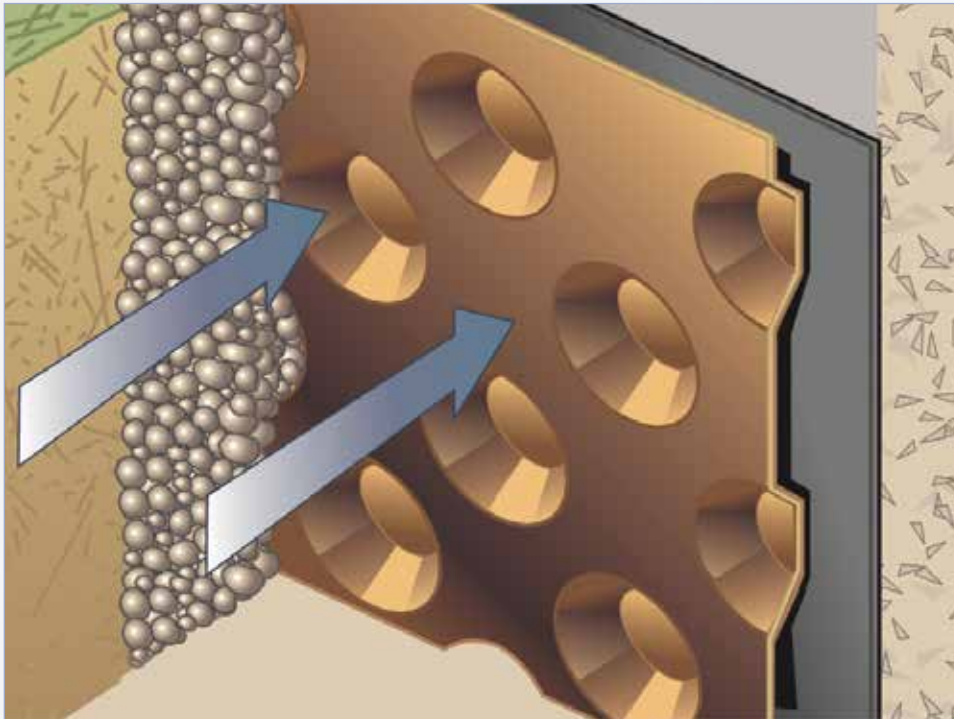
It is also an effective damp-proof layer on horizontal surfaces. It is fungus and rot-proof and completely safe with drinking water.



By designing an "egg-box" profile, blockages are prevented and a greater amount of water can pass along the membrane. This profile also allows very easy sealing of the membrane, as multiple sheets can be "clipped into place" by overlapping the cups and sealing the joints with adhesive tape.

PROTECTO-DRAIN 8

Protecto-drain 8 is a single membrane fixed to the wall with its cups facing towards the backfill. It spreads the weight of the soil and prevents point loading onto the structure.



The 8mm high cups create an air gap between the structure and the earth backfill, helping to ventilate it effectively.

Providing that the membrane is properly sealed at the edges, Protecto-drain 8 can create a viable waterproofing membrane in itself. It is best suited, however, as an extra protection and ventilation layer, covering an existing waterproofing seal.

Protecto-drain 8 is very flexible, and can be folded and shaped around awkward areas and details without compromising the seal.

Because it is so lightweight, it is ideal for fixing to the vertical plane. It is easy to cut around details and edges and multiple sheets can be fitted together. It should be fitted so that it emerges above the surface ground level to ensure the air gap does not become blocked or flooded.



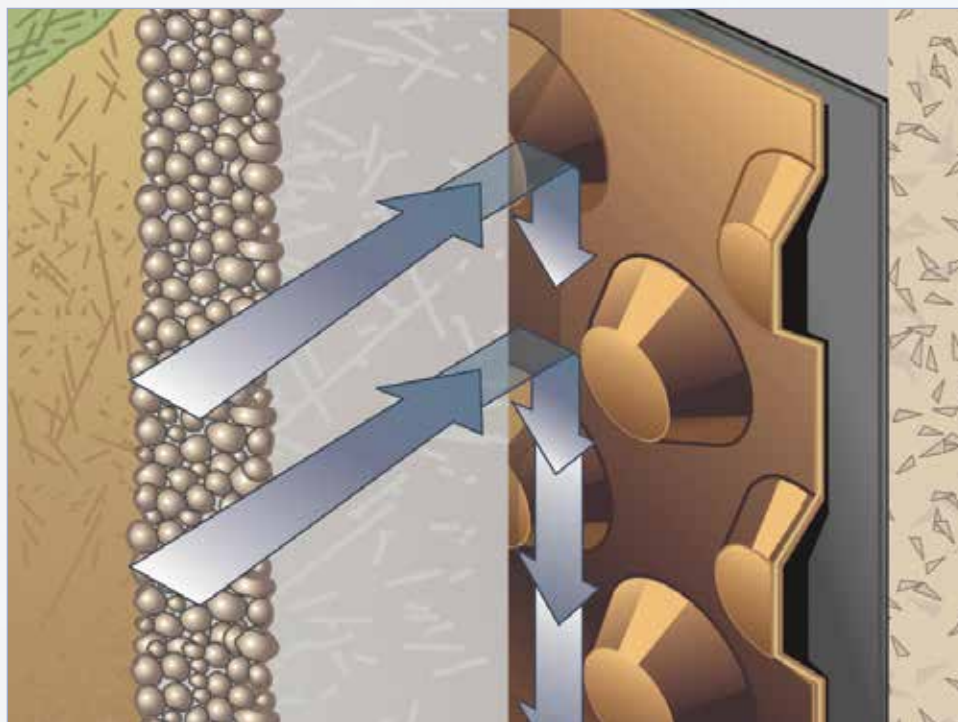
Protecto-drain 8 is available as a standard 550gsm membrane. Special lightweight or heavy duty versions are also available.

The sheets are fixed to the structure either by passing nails through special sealing plugs onto battens or by using a double-sided bitumen tape at the edges of the sheets and across the joints.

Each sheet should be overlapped by 20cm, with the egg box shaped cups slotting neatly into one another, producing a good fit. Using tape across the joints is advised to ensure a proper seal throughout the whole area.

PROTECTO-DRAIN G8

Protecto-drain G8 is suitable for areas with a much greater amount of water passage and pressure through the ground. It has a 100gsm geotextile fabric bonded to one side.



This gives additional protection to the membrane and also helps to filter out particles whilst allowing the water to pass through the fabric and into the air gap drainage chamber.

With moisture passing through the geotextile but no soil moving, the area around the structure is effectively drained but the ground remains stable and firm, greatly reducing the risks of subsidence or hydrostatic pressure building up.

Protecto-drain G8 as a material is completely safe with drinking water.

Protecto-drain G8 is ideal for planters and tanking. It is essential to avoid vegetation becoming waterlogged in planters but at the same time ensuring an even flow of moisture through the soil so that flood channels are not created in the planter, which can also damage the roots of the plants.

Basements and subterranean structures will come into contact with significant moisture, so a way to channel this moisture away from the concrete is required. A suitable exit for the water should always be designed into the waterproofing system.



As the water drains vertically down the membrane, it is channelled through the geotextile fabric and into a perforated pipe.

The pipe should be fitted to either a natural drain or a pump to ensure the water moves away from the structure effectively.

Protecto-drain G8 has also been used successfully on a horizontal plane as a drainage membrane beneath blockwork and paving slabs.

The rainwater runs through the slabs and insulation, then through the geotextile fabric and runs along the HDPE membrane into the roof outlet. This prevents standing water puddling on top of the slabs and gives effective drainage.

PROTECTO-DRAIN 20

Protecto-drain 20 is a more heavy duty 1mm thick HDPE membrane which is useful for larger scale areas of tanking and sealing. It has a larger cup size of 20mm which allows a greater amount of ground water to pass along the membrane.



It is ideal as a lining membrane, as a waterproofing and protection layer between layers of concrete, on foundations, bridges and tunnels, and a whole manner of civil engineering works.

The flexible and easy-to-bond nature of the material makes it easy to install, and it can cope with larger quantities of ground water and drainage easily and hydrostatic pressure points are prevented.



The HDPE material will not pollute the water running off in any way, which means it can be managed and recycled.

It is tough enough to tolerate a wet concrete pour without risk of damage. When installed between two layers of concrete the cupped profile ensures a constant air gap between the two concrete layers, meaning the fabric of the building is sealed at the sides, so there is no risk of damp creeping into the concrete even if the building is subterranean in part.



It is used extensively in horizontal installations beneath the initial concrete slab layers, where it is effective in preventing seepage water from below entering the foundations. Each individual sheet can be bonded together by overlapping the cups and sealing with tape, meaning the layer is completely waterproof. Since it is flexible, any undulations and imperfections in the ground below can be accommodated without risk to the seal. Rebar can be laid directly onto the membrane without damage and concrete can be poured.

PROTECTO-DRAIN 20P

Protecto-drain 20P was developed for use as a reservoir and drainage layer in green roof construction. It is placed on top of the waterproofed, protected concrete deck and sits beneath a filter layer, the soil substrate and vegetation layers, on extensive green roof systems.



The HDPE membrane is manufactured with the same 20mm cups, but the area between the cups is perforated.

Wallbarn Protecto-drain 20P is lightweight and easy to transport and install, making it ideal for rooftop applications.

On a horizontal plane, this allows water to fill up in the cups helping to sustain the roots with any excess water escaping through the holes and able to run away beneath the membrane into the drainage outlet.

The egg-box creates a constant air gap, allowing the excess water to pass easily without clogging.

The water held in the cups can then be drawn back up through the filter layer to nourish the vegetation above. This means that a constant level of water can be held in the reservoir cups, but rainwater is efficiently removed effectively and quickly from the roof, which will not become overloaded (never underestimate the weight of standing water).



This is a simple but effective way of holding a modest amount of water beneath the root systems.

It is important to remember, however, that these materials alone do not provide a drought resistant system. Regular watering and maintenance is required for all roof gardens and green roofs.

Protecto-drain 20P is suitable for EXTENSIVE green roof systems with substrates up to a depth of 200mm. Protecto-tape double sided bitumen tape is also available for securing sheets together or bonding the membrane to a dry structure.

PROTECTO-DRAIN ACCESSORIES



A variety of accessory products are available to finish off and help fix the HDPE membranes to structures.

An edging profile can be fitted above the Protecto-drain membrane to give a permanent air gap, allowing the structure to breathe. Particles and surface water will be prevented from passing down behind the plastic membrane but the air gap will ventilate the structure effectively.

Protecto-drain flexible HDPE membranes can be fitted to the structure using special fixing buttons, which fit into the dimples of the membrane. A nail is passed through the centre, and the buttons seal the hole made by the nail, helping to keep the membrane watertight.



For longer fixings specialised anchors made from metal or plastic can be used to pass through the membrane. The plastic anchor has a ridged shaft to maintain a strong bond into the structure.



Being bitumen based, the tape has very strong adhesion and is waterproof, not becoming affected by damp. It can help maintain the waterproofing integrity of the plastic membrane.



It can be used to bond individual sheets together, providing a continuous, seamless waterproof seal.

Protecto-tape double sided bitumen tape is also available for securing sheets together or bonding the membrane to a dry structure.

TECHNICAL DATA

PRODUCT	PROTECTO-DRAIN 8	PROTECTO-DRAIN 8 LIGHTWEIGHT	PROTECTO-DRAIN G8	PROTECTO-DRAIN 20	PROTECTO-DRAIN 20P	TEST METHOD
MATERIAL	HIGH DENSITY POLYETHYLENE (HDPE)					
FILTER MATERIAL			POLYPROPYLENE GEOTEXTILE (100GSM)			
COLOUR	BLACK					
MEMBRANE THICKNESS	0.6MM	0.50MM	0.6MM	0.9MM	0.9MM	CALIBRATED MEASURING TAPE
ROLL WIDTH	2 METRES	2 METRES	2 METRES	2 METRES	2 METRES	CALIBRATED MEASURING TAPE
ROLL LENGTH	20 METRES	20 METRES	20 METRES	20 METRES	20 METRES	CALIBRATED MEASURING TAPE
DENSITY	550 GSM (±10%)	450 GSM (±10%)	650 GSM (±10%)	1000 GSM (±10%)	1000 GSM (±10%)	CALIBRATED MEASURING TAPE
ROLLS PER PALLET	12	12	6	5	5	
COMPRESSION STRENGTH	180 KN PER M2	170 KN PER M2	250 KN PER M2	150 KN PER M ²	150 KN PER M ²	MDV
ELASTICITY	1595 KPA		2300 KPA	1100 KPA	1100 KPA	EN 25619-2
HEIGHT OF CUPS	8MM	8MM	8MM	20MM	20MM	MDV
NUMBER OF CUPS	1860 PIECES PER M2	1500 PIECES PER M2	1860 PIECES PER M2	400 DB/M ²	400 DB/M ²	MDV
WATER PERMEATIVITY			FILTER 100 LTR PER M2			
TENSILE STRENGTH MD			≥ 330 N / 50MM			EN 12311-2
TENSILE STRENGTH CMD			≥ 335 N / 50MM			EN 12311-2
ELONGATION MD			≥ 28.7 N			EN 12311-2
ELONGATION CMD			≥ 26.2 N			EN 12311-2
RESISTANCE TO IMPACT			≥ 410MM			EN 12691 & EN 13984
RESISTANCE TO TEARING MD			≥ 332 N			EN 12310
RESISTANCE TO TEARING CMD			≥ 349 N			EN 12310
RESISTANCE TO STATIC LOADING	NO PERFORATION AT 200 N IN 24 HRS					EN 12730
DURABILITY	MEMBRANE WATERPROOF / PASSED					EN 12691 & EN 13984
EXPOSURE TO LIQUID CHEMICALS	MEMBRANE WATERPROOF					EN 1847
AIR VOLUME BETWEEN THE CUPS	5.5 LITRES PER M2	5.5 LITRES PER M2	5.5 LITRES PER M2	14 LITRES PER M2	14 LITRES PER M2	MDV
WATER DRAINAGE CAPACITY	4.6 LITRES PER M2	4.6 LITRES PER M2	4.6 LITRES PER M2	10 LITRES PER M2	10 LITRES PER M2	MDV
TEMP TOLERANCE	- 40°C TO + 80°C					MDV
WARRANTY	ROT-PROOF FOR 20 YEARS					
REACTION TO FIRE	B2 (B1 AVAILABLE BY SPECIAL REQUEST)					DIN 4102
PHYSICAL CHARACTERISTICS	ROT-PROOF, RESISTANT TO FUNGUS AND BACTERIA. WILL NOT LEACH CHEMICALS. NOT HARMFUL TO DRINKING WATER. NO HEALTH HAZARDS UNDER NORMAL USE					
APPLICATION	<p>USED AS A MECHANICAL PROTECTION AGAINST SOIL AND ROOT MOVEMENT ALONG FOUNDATION WALLS. IT CAN BE INSTALLED WITH A 20CM OVERLAP AND FIXED WITH NAILS AND SEALING BUTTONS 5 CM FROM THE TOP EDGES OF THE ROLL AND 20CM FROM EACH ROLL. EDGING PROFILE IS INSTALLED TO PREVENT SOIL INGRESS INTO THE CAVITY. MAXIMUM BUILD-UP 8 METRES HIGH.</p> <p>LAI D HORIZONTALLY AND FIXED USING SEALING TAPE IN THE OVERLAPPING AREAS THE SHEETS PROTECT CONCRETE FLOORING FORM RISING DAMP AND KEEP REINFORCEMENT MESH IN PLACE FIRMLY DURING THE CONCRETE WORKS.</p>					
STORAGE & HANDLING	PROTECT AGAINST PROLONGED EXPOSURE TO DIRECT SUNLIGHT AND TEMPERATURES OVER 25 °C					
GUARANTEE / WARRANTY	WHEN USED IN THE CORRECT MANNER AND APPLICATION, THE MATERIAL WILL BE ROT PROOF FOR 20 YEARS. WALLBARN APPLICATION RULES AND PROPER SITE STORAGE, HANDLING AND INSTALLATION PRACTICES MUST BE CARRIED OUT AS A PREREQUISITE FOR ANY POSSIBLE FUTURE WARRANTY CLAIMS.					
HEALTH & SAFETY	NO KNOWN DANGEROUS SUBSTANCES. NO HEALTH HAZARDS UNDER NORMAL USE. NO LABELLING REQUIRED IN ACCORDANCE WITH THE RELEVANT REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH). SPECIFICATION UNDER EN 13967.					

This datasheet represents the current knowledge of the product, but may be revised by Wallbarn in the future. It is the duty of the customer and installer to be clear that this product is suitable for the purposes it is used for.

This technical datasheet may be revised or changed at any time without prior notice. It is the duty of the customer and installer to be sure they possess the latest version of the datasheet.



PROTECTO-DRAIN DRAINAGE CHANNEL

Wallbarn's HDPE A15 drainage channel suitable for pedestrian and lightly trafficked areas.



It is designed to collect surface water off paved or asphalted areas and move that water away towards an underground drainpipe or escape route. The anti-slip, hardwearing galvanised steel grate maintains structural integrity across the area, so foot traffic and very light vehicles can pass over the drain without issue. Protecto-drain Drainage Channel is designed to be installed quickly and easily.

It has many applications including:

- domestic areas; such as driveways, gardens & patios
- public areas; such as pedestrian walkways, door thresholds, squares, recreational areas, schools, parks and playing fields

It simply slots in front of the building entrance or within the paved / asphalt area and provides an un-obstructed channel cross-section. Each individual channel clips together for fast and simple on-site fabrication. It is very easy to cut on areas where a part-metre length is required. All slots and measurement grooves run the whole way through the channel so side bars can also be installed into cut channels successfully.

MEASUREMENT

Outer dimensions: 120mm high x 135mm wide

Inner dimensions: 90mm high x 100mm wide

MATERIAL

Channel – High Density Polyethylene (HDPE)

Grate – galvanised steel

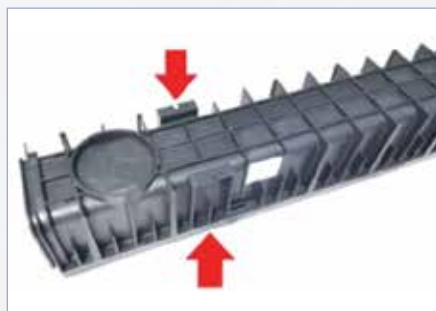
Classification - CE marked and fully certified to

Load Class - A15 BS EN 1433

Sustainability criteria - 100% recyclable



This 1 metre long fully assembled drainage channel has an integrated steel grid and the ingenious locking clip system, meaning it can be easily opened for inspection or cleaning.



Multiple channels can be fitted together to create a much longer drainage channel. It is easy to cut when coming to the end of the stretch or where installing on angled lines.



An accessory pack for Protecto-drain Drainage Channel is also available. This includes the side bars to close the channel and a connecting bracket to fit to the underside of it, linking the channel to a drainpipe.

Complex plumbing is not required. If the channel needs to be linked to a plumbed-in option, the Ø110mm vertical outlet connector allows the unit to link directly to underground drainage pipework.



Simply knock the centre out of the moulded connecting bracket on the underside with a hammer and place the connector over the exposed circular hole with the screw holes in the connecting bracket aligned to the holes in the channel.

TECHNICAL DATA

GENERAL PROPERTIES	TECHNICAL DATA	TEST METHOD
WIDTH OF CHANNEL (INSIDE/OUTSIDE)	100MM / 135MM	MANUFACTURER'S DECLARED VALUE
HEIGHT OF CHANNEL (INSIDE/OUTSIDE)	90MM / 120MM	MANUFACTURER'S DECLARED VALUE
FREE CROSS-SECTION OF THE CHANNEL	100 x 90 MM	MANUFACTURER'S DECLARED VALUE
LENGTH OF CHANNEL	1000 MM	MANUFACTURER'S DECLARED VALUE
UNIT WEIGHT OF CHANNEL	1,250 KG	MANUFACTURER'S DECLARED VALUE
WIDTH OF GRID	124 MM	MANUFACTURER'S DECLARED VALUE
HEIGHT OF GRID	20 MM	MANUFACTURER'S DECLARED VALUE
UNIT WEIGHT OF GRID	1.3 KG	MANUFACTURER'S DECLARED VALUE
CROSS SECTION OF OUTLET	Ø110 MM	MANUFACTURER'S DECLARED VALUE
LOAD CLASS	A 15 (15kN = 1500KG TESTLOAD)	EN 1433
STORAGE:	ON PALLETS UNDER DRY CONDITIONS, PROTECTED AGAINST ATMOSPHERIC EXPOSURE AND HEAT SOURCES.	
HEALTH & SAFETY:	NO LABELLING REQUIRED IN ACCORDANCE WITH THE RELEVANT REGULATION (EC) NO. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH).	
SPECIFICATION:	EN 1433	
GUARANTEE:	IN ACCORDANCE WITH THE CURRENT LEGISLATION AND THE CONDITIONS OF THE DISTRIBUTOR. THE OBSERVATION OF THE APPLICATION RULES OF THE PRODUCT AND PRESENTATION OF THE INVOICE CONSTITUTE A PREREQUISITE FOR POSSIBLE FUTURE WARRANTY CLAIMS.	

This datasheet corresponds to our current knowledge, experiences and general information on the subject, but may be revised as new knowledge and / experience becomes available. It does not imply any legally binding assurance or obligation. The product possesses the given characteristics. Please refer to the LIMITED WARRANTY TERMS offered by Wallbarn Ltd. Since all variations of end usage of the product cannot be anticipated, it is the designer and end users' responsibility to ensure the suitability of this product for the particular purposes / installations.



DRAINAGE OUTLETS, LEAF GUARDS, COLLARS & VENTS

WALLBARN PROVIDES A NUMBER OF PRODUCTS TO SEAL AND PROTECT DRAINAGE OUTLETS IN ROOFS, PARAPETS AND STRUCTURAL DECKS AND ENSURE WATERPROOF INTEGRITY, PREVENTING BLOCKAGES & DAMAGE TO THE DRAINAGE SYSTEM.

All flat roofs and podium decks require sufficient drainage outlets to prevent flooding. The areas immediately around these outlets are the most vulnerable parts of the waterproofing system and require strong, flexible and fully bonded membranes to prevent water getting beneath the waterproofing system.

Wallbarn has a number of products in a variety of materials to ensure that the deck structure is fully sealed:

- DOWN PIPE (circular) roof outlet drainage connectors seal and protect the area immediately around the down pipe drainage holes cast into the concrete



- THROUGH-WALL (parapet or corner) outlets are also bonded to the concrete deck or within the waterproofing membrane for horizontal drainage outlets



- LEAF GUARDS & GRAVEL EXCLUDERS are available for both down pipe and through-wall outlets to prevent blockages in the drainpipes



- COUPLINGS (drainpipe connectors) are available to fit the outlet to the HDPE drainpipe



- JUBILEE CLIPS for securing outlets and vents to pipework



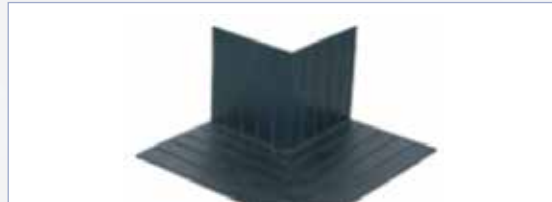
- COLLARS will seal pipework emerging from the deck through the waterproofing



- VENTS & AERATORS to draw vapour from the concrete structure beneath



- REINFORCEMENT PATCHES for corners and edges



MATERIAL COMPONENTS & COMPATIBILITY

Wallbarn supplies drainage outlets and connectors in a large range of shapes and sizes. These injection moulded units are manufactured in different materials meaning they are compatible with a variety of different waterproofing systems:

- TPE is a polypropylene / EPDM compound which is tough, flexible and durable and offers a cost effective solution. TPE outlets, collars and vents are compatible with bituminous membranes and can withstand contact with temperatures of 120°C, so they are ideal for use with membranes such as hot melt, torch-on felt or mastic asphalt. They are UV stable and will not become brittle in cold temperatures. TPE outlets and collars are available with a perforated flange / border surround designed to sandwich between two layers of liquid membrane, giving a very secure “over-and-under” bond. Solid flanges are also available for mechanical fixing or overlaying.
- EPDM drain connectors are extremely tough and very flexible and provide enhanced protection around the drainage hole. They are manufactured for both downpipes and through-wall outlets and are available with both a plain or perforated flange / border surround. They can also tolerate contact with very high temperatures so can also be used with hot melt, torch-on felts and mastic asphalt. They tolerate ultra-low temperatures also and have extremely good elasticity properties so will cope with structural movement very well.
- PVC outlets, vents and collars are manufactured in a soft and flexible type of PVC and are designed for use with PVC single ply membranes. They have a smooth flange / border surround and are designed to be welded to the waterproofing membrane so they cope very well with hot temperatures

MEASURING DRAINAGE OUTLETS / CONNECTORS

It is essential that the correct size of drainage connector is chosen as obviously the spigot will need to fit into the drainage hole but it should not be so loose that it potentially causes movement over time, which could make the seal unstable. The spigot is tapered to make it easier to press into the drainage hole.

DOWNPIPE

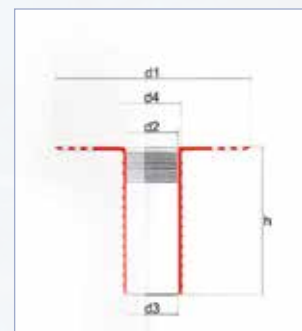
H height of the spigot or shank

D1 outer diameter of the flange / border surround

D2 inner diameter of the pipe at the top

D3 inner diameter of the pipe at the bottom

D4 outer diameter of the pipe at the top **which needs to be smaller than the inner diameter of the HDPE drainpipe**



THROUGH-WALL (CIRCULAR SPIGOT)

D1 diameter of the outlet drainage hole

D2 height of the (recessed) outlet drainage hole

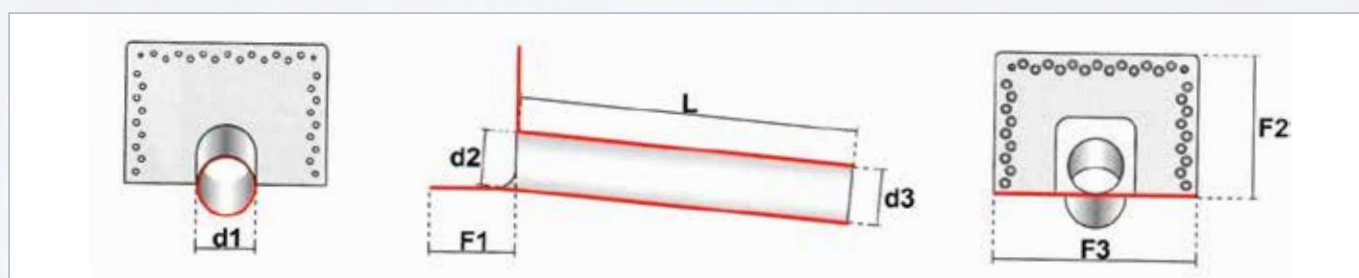
D3 inner diameter of the spigot at the bottom

L inner length of spigot

F1 width of the flange around the underside of the outlet hole

F2 height of the flange to the left and right, and above the outlet hole

F3 width of the flange across the face



THROUGH-WALL (RECTANGULAR SPIGOT)

A height of the outlet drainage hole

B width of the outlet drainage hole

L inner length of the shank or outlet pipe

F1 width of the flange in front of the outlet hole

F2 height of the border flap or flange above the outlet hole

F3 width of the flange across the face



TPE DOWNPIPE CONNECTORS

DOWNPIPE CONNECTORS WITH PERFORATED FLANGE

The downpipe drain connector is used on flat roofs and podiums to reinforce the circular drainage holes cast at intervals in a concrete deck. These drainage holes are typically cast every 25m² apart.

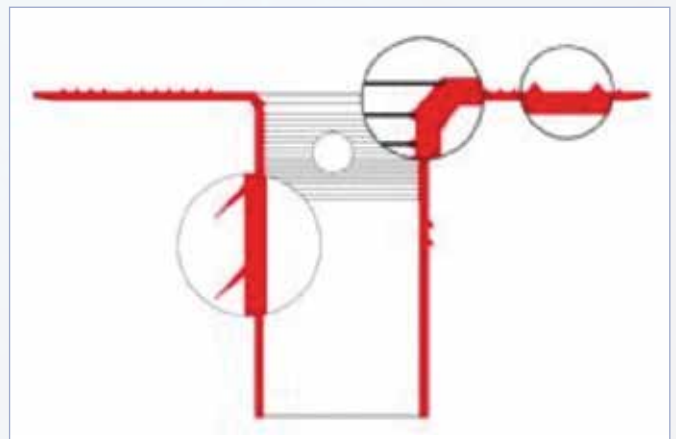
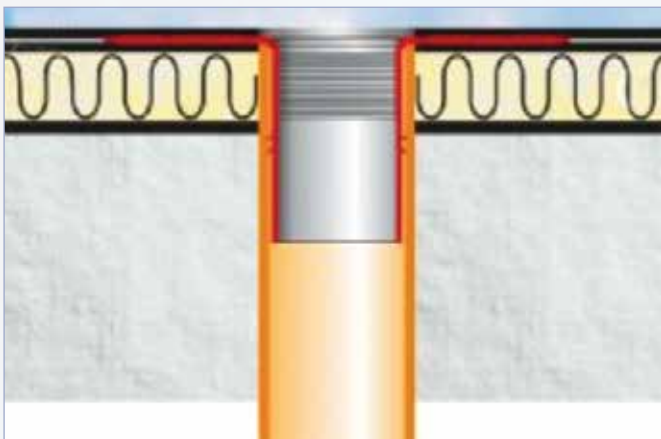
They are designed to be sandwiched between two layers of waterproofing. The first layer of waterproofing is installed then while it is still tacky the outlet is inserted into the hole. The perforated flange allows the membrane to ooze through to bond to itself, ensuring a very secure bond.



The outlet / connector should not come into direct contact with the bare concrete, as this risks the chance of water passing beneath.



A second coat / layer of liquid membrane, or a patch of membrane in the case of torch-on-felt is installed on top of the flange to create an "over-and-under" bond so the outlet is bonded securely within the waterproofing membrane.



At the mouth of the spigot there are a series of ribs and serrations along the inside, which ensure a leaf guard or gravel-excluder can be fitted into the connector securely.

NON-PERFORATED CIRCULAR OUTLETS IN TPE

Wallbarn also offers a range of non-perforated circular outlets in TPE, but these will not offer the "over-and-under" bond provided for by the perforated range.

The flange is ribbed to help adhere to the membrane and can offer a slightly more cost effective alternative.



TPE DOWNPIPE OUTLETS - CODES

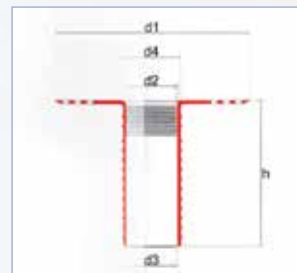
DOWNPIPE

H height of the spigot or shank • D1 outer diameter of the flange / border surround

D2 inner diameter of the pipe at the top • D3 inner diameter of the pipe at the bottom

D4 outer diameter of the pipe at the top

The size marked on the actual units denotes the measurement these units will fit into, so they are actually slightly smaller than the number marked.



PERFORATED FLANGE

CODE	DESCRIPTION	D1 (MM)	D2 (MM)	D3 (MM)	D4 (MM)	H (MM)
RD-TPE-030-050-240-040	TPE CIRCULAR ROOF OUTLET (PERFORATED FLANGE) H240MM - D40MM	235	26	24	31	240
RD-TPE-030-050-240-060	TPE CIRCULAR ROOF OUTLET (PERFORATED FLANGE) H240MM - D60MM	235	48	43	53	240
RD-TPE-030-050-240-075	TPE CIRCULAR ROOF OUTLET (PERFORATED FLANGE) H240MM - D75MM	320	65	61	70	240
RD-TPE-030-050-240-080	TPE CIRCULAR ROOF OUTLET (PERFORATED FLANGE) H240MM - D80MM	320	69	64	74	240
RD-TPE-030-050-240-090	TPE CIRCULAR ROOF OUTLET (PERFORATED FLANGE) H240MM - D90MM	320	77	73	82	240
RD-TPE-030-050-240-100	TPE CIRCULAR ROOF OUTLET (PERFORATED FLANGE) H240MM - D100MM	320	89	84	94	240
RD-TPE-030-050-240-110	TPE CIRCULAR ROOF OUTLET (PERFORATED FLANGE) H240MM - D110MM	320	91	87	96	240
RD-TPE-030-050-240-125	TPE CIRCULAR ROOF OUTLET (PERFORATED FLANGE) H240MM - D125MM	320	114	109	119	240
RD-TPE-030-050-240-140	TPE CIRCULAR ROOF OUTLET (PERFORATED FLANGE) H240MM - D140MM	380	127	122	132	240
RD-TPE-030-050-240-150	TPE CIRCULAR ROOF OUTLET (PERFORATED FLANGE) H240MM - D150MM	380	136	131	141	240
RD-TPE-030-050-240-160	TPE CIRCULAR ROOF OUTLET (PERFORATED FLANGE) H240MM - D160MM	380	146	141	151	240
RD-TPE-030-050-240-200	TPE CIRCULAR ROOF OUTLET (PERFORATED FLANGE) H240MM-D200MM	440	185	180	190	240



PERFORATED FLANGE WITH EXTRA LONG SPIGOT

RD-TPE-030-160-600-080	TPE EXTRA LONG CIRC.OUTLET (PERFORATED FLANGE) H600MM-D80MM	370	65	63	72	600
RD-TPE-030-160-600-090	TPE EXTRA LONG CIRC.OUTLET (PERFORATED FLANGE) H600MM-D90MM	370	74	72	81	600
RD-TPE-030-160-600-100	TPE EXTRA LONG CIRC.OUTLET (PERFORATED FLANGE) H600MM-D100MM	370	85	83	92	600
RD-TPE-030-160-600-110	TPE EXTRA LONG CIRC.OUTLET (PERFORATED FLANGE) H600MM-D110MM	390	93	91	100	600
RD-TPE-030-160-600-125	TPE EXTRA LONG CIRC.OUTLET (PERFORATED FLANGE) H600MM-D125MM	390	107	105	114	600
RD-TPE-030-160-600-140	TPE EXTRA LONG CIRC.OUTLET (PERFORATED FLANGE) H600MM-D140MM	420	125	123	132	600
RD-TPE-030-160-600-150	TPE EXTRA LONG CIRC.OUTLET (PERFORATED FLANGE) H600MM-D150MM	420	135	133	142	600
RD-TPE-030-160-600-160	TPE EXTRA LONG CIRC.OUTLET (PERFORATED FLANGE) H600MM-D160MM	420	138	136	145	600
RD-TPE-030-160-600-200	TPE EXTRA LONG CIRC.OUTLET (PERFORATED FLANGE) H600MM-D200MM	460	178	176	185	600

NON PERFORATED FLANGE

RD-TPE-030-040-240-040	TPE CIRCULAR ROOF OUTLET (RIBBED FLANGE) H240MM - D40MM	235	26	24	31	240
RD-TPE-030-040-240-060	TPE CIRCULAR ROOF OUTLET (RIBBED FLANGE) H240MM - D60MM	235	48	43	53	240
RD-TPE-030-040-240-075	TPE CIRCULAR ROOF OUTLET (RIBBED FLANGE) H240MM - D75MM	320	65	61	70	240
RD-TPE-030-040-240-080	TPE CIRCULAR ROOF OUTLET (RIBBED FLANGE) H240MM - D80MM	320	69	64	74	240
RD-TPE-030-040-240-090	TPE CIRCULAR ROOF OUTLET (RIBBED FLANGE) H240MM - D90MM	320	77	73	82	240
RD-TPE-030-040-240-100	TPE CIRCULAR ROOF OUTLET (RIBBED FLANGE) H240MM - D100MM	320	89	84	94	240
RD-TPE-030-040-240-110	TPE CIRCULAR ROOF OUTLET (RIBBED FLANGE) H240MM - D110MM	320	91	87	96	240
RD-TPE-030-040-240-125	TPE CIRCULAR ROOF OUTLET (RIBBED FLANGE) H240MM - D125MM	320	114	109	119	240

N.B. SPIGOT LENGTH CAN BE INCREASED USING THE EXTENSION SHANKS. COUPLINGS ARE SUPPLIED TO CONNECT TO DRAINPIPES AND JUBILEE CLIPS ARE ALSO AVAILABLE. PLEASE SEE PAGES 33 & 35 FOR MORE DETAILS.

TPE THROUGH-WALL OUTLETS / FITTINGS

THROUGH WALL WITH PERFORATED FLANGE

It is essential that the area around the drainage holes has a dedicated reinforced detail guarding the drainage hole.

In the same way that the downpipe outlet is connected, the TPE through-wall connector is installed in a sandwich manner, bonded between two layers of bituminous waterproofing membrane.

The TPE material can tolerate the application of hot liquid or even a torch-gun coming into contact with it.

INSTALLATION IS AS FOLLOWS:

The outlet is installed between two layers of bituminous felt. A patch of felt is bonded to the deck and the upper side of the patch is also torch-heated so that the bitumen becomes tacky on the upper side.



The outlet is then placed on top of the patch when the bitumen is still tacky and pressed into it firmly. Some of the bitumen oozes through the perforations.



A second layer of felt is installed immediately on top of the flange (and the patch beneath it) whilst the bitumen is still tacky and is torch-heated so that the bitumen on this upper layer melts slightly. The two layers of felt adhere to each other, encapsulating the outlet.

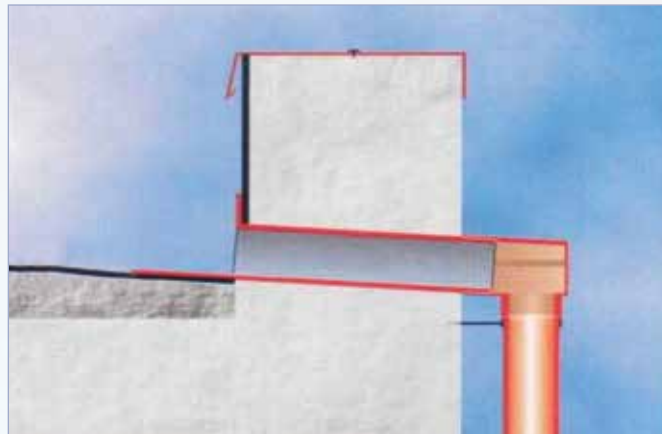
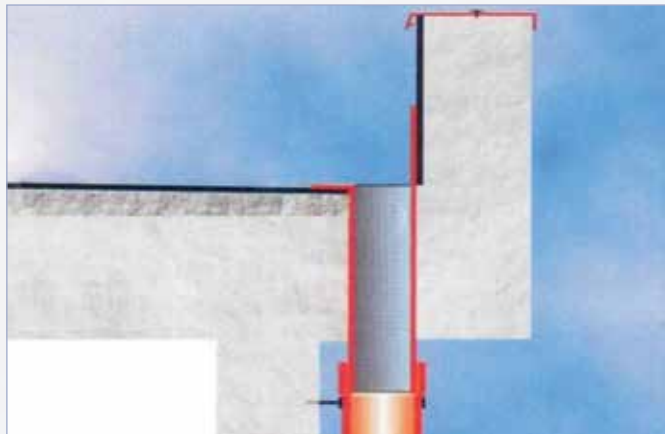


N.B. SPIGOT LENGTH CAN BE INCREASED USING THE EXTENSION SHANKS. COUPLINGS ARE SUPPLIED TO CONNECT TO DRAINPIPES AND JUBILEE CLIPS ARE ALSO AVAILABLE. PLEASE SEE PAGES 33 & 35 FOR MORE DETAILS.

The spigot connects to the HDPE drain pipe by slotting inside it. It is slightly tapered so that it can fit easily into the pipe. By being inside the drainage hole there is no risk of water creeping behind it and causing a leak.

It is rounded in shape and slightly recessed to encourage the water to flow into the pipe immediately and not pond around the mouth.

The spigot is slightly angled to help create a fall from the deck into the hole, encouraging faster flow of the water down the pipe. The spigot itself is 500mm long, so it can cross through a large section of wall. Extension shanks are available to create a longer spigot if required for very thick walls.



These through-wall units can be fitted to both vertical downpipes at the edge of the retaining wall, or on a horizontal plane through the upstand or wall to connect to the external downpipe.

THEY ARE MEASURED AS FOLLOWS:

D1 diameter of the outlet drainage hole

D2 height of the (recessed) outlet drainage hole

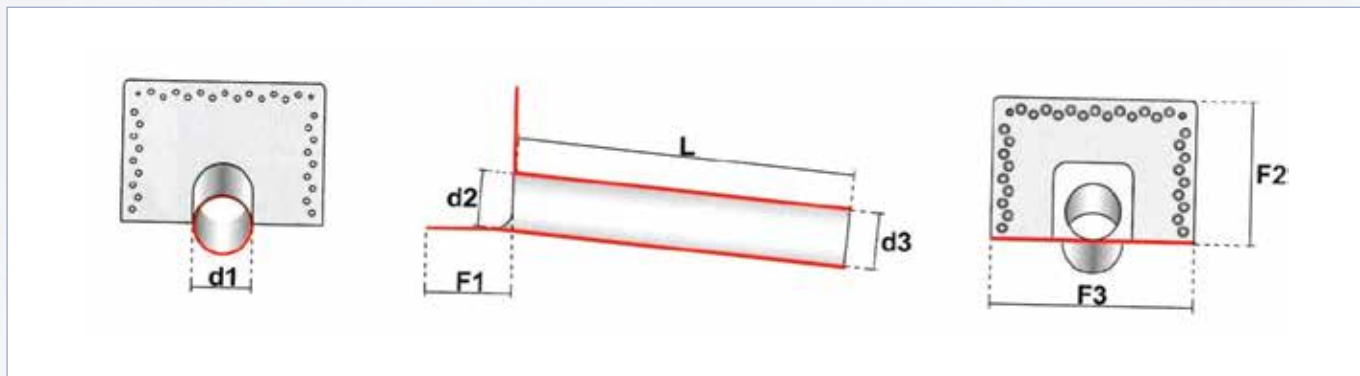
D3 inner diameter of the spigot at the bottom

L inner length of spigot

F1 width of the flange around the underside of the outlet hole

F2 height of the flange to the left and right, and above the outlet hole

F3 width of the flange across the face



CODE	DESCRIPTION	D1 (MM)	D2 (MM)	D3 (MM)	L (MM)	F1 (MM)	F2 (MM)	F3 (MM)
RD-TPE-030-360-500-050	TPE CORNER ROOF OUTLET (PERFORATED FLANGE) - L500MM-D50MM	50	43	44	500	110	140	260
RD-TPE-030-360-500-063	TPE CORNER ROOF OUTLET (PERFORATED FLANGE) - L500MM-D63MM	63	56	57	500	110	175	304
RD-TPE-030-360-500-075	TPE CORNER ROOF OUTLET (PERFORATED FLANGE) - L500MM-D75MM	75	68	69	500	110	175	304
RD-TPE-030-360-500-080	TPE CORNER ROOF OUTLET (PERFORATED FLANGE) - L500MM-D80MM	80	74	76	500	110	175	304
RD-TPE-030-360-500-090	TPE CORNER ROOF OUTLET (PERFORATED FLANGE) - L500MM-D90MM	90	83	84	500	110	215	304
RD-TPE-030-360-500-100	TPE CORNER ROOF OUTLET (PERFORATED FLANGE) - L500MM-D100MM	100	94	96	500	110	215	304
RD-TPE-030-360-500-110	TPE CORNER ROOF OUTLET (PERFORATED FLANGE) - L500MM-D110MM	110	103	104	500	110	215	304
RD-TPE-030-360-500-125	TPE CORNER ROOF OUTLET (PERFORATED FLANGE) - L500MM-D125MM	125	118	119	500	110	260	360

N.B. SPIGOT LENGTH CAN BE INCREASED USING THE EXTENSION SHANKS. COUPLINGS ARE SUPPLIED TO CONNECT TO DRAINPIPES AND JUBILEE CLIPS ARE ALSO AVAILABLE. PLEASE SEE PAGES 33 & 35 FOR MORE DETAILS.

THROUGH-WALL OUTLET FITTINGS WITH RECTANGULAR MOUTH

These TPE through-wall fittings are an alternative design and manufactured with a ribbed rather than perforated profile across the whole flange / border. They have a square or rectangular opening at the mouth of the pipe rather than the rounded hole as with the perforated range.



There are two types available, the right angled mouth and an outlet with a 45° angle at the mouth.



Acting in the same way as a fillet in the junction between wall and floor, this angle pulls the water coming down the wall away from the corner and directs it into the mouth of the spigot more effectively.

These outlets can also be installed using the sandwich method; so that one coat of waterproofing membrane (or one layer of felt / adhesive) is laid onto the bare concrete. The outlet is positioned and the second coat of adhesive / membrane is laid on top. The liquid will spread into the grooves and grip the outlet surround, also bonding to the other coat of membrane around the edges of the unit. This ensures a proper, secure fit.

To improve adhesion, the connector and the surrounding concrete should be prepared with a coat of primer.

These through-wall fittings are suitable for both horizontal and vertical drains.

THEY ARE MEASURED AS FOLLOWS:

A height of the outlet drainage hole

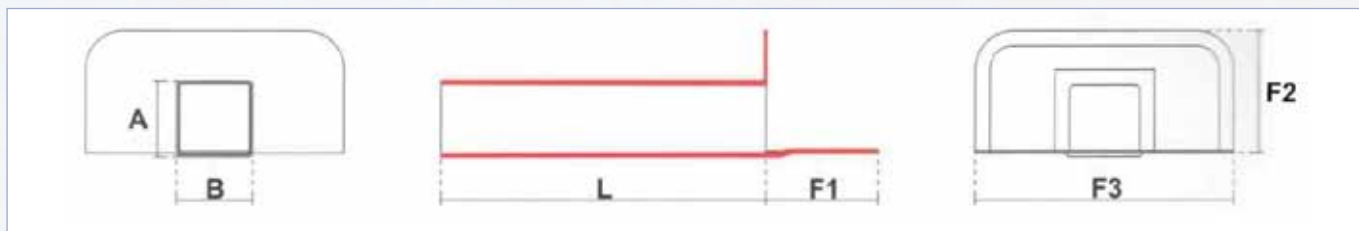
B width of the outlet drainage hole

L inner length of the shank or outlet pipe

F1 width of the flange in front of the outlet hole

F2 height of the border flap or flange above the outlet hole

F3 width of the flange across the face



CODE	DESCRIPTION	A (MM)	B (MM)	L (MM)	F1 (MM)	F2 (MM)	F3 (MM)
RD-TPE-030-300-065-100	TPE SQUARE CORNER OUTLET RIGHT ANGLE RIBBED FLANGE 65X100MM	65	100	425	150	160	340
RD-TPE-030-300-100-100	TPE SQUARE CORNER OUTLET RIGHT ANGLE RIBBED FLANGE 100X100MM	100	100	425	150	160	340
RD-TPE-030-301-065-100	TPE SQUARE CORNER OUTLET 45 DEGREE RIBBED FLANGE 65MMX100MM	65	100	425	150	160	340
RD-TPE-030-301-100-100	TPE SQUARE CORNER OUTLET 45 DEGREE RIBBED FLANGE 100MMX100MM	100	100	425	150	160	340

PIPE COLLARS IN TPE

These collars are designed to surround pipe work such as bad odour vents and stand pipes.

It is critical that these pipes are completely waterproofed as they emerge from the deck since water ingress will flow directly into an interior section of the building, such as a bathroom.

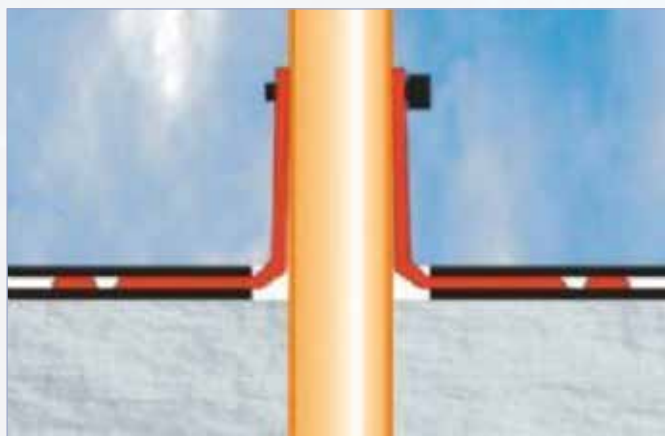
Collars will fit around the outside of an HDPE pipe (as opposed to the connectors and outlets which slot into the inside of a standard drain pipe) and completely seal the junction between the hole and the pipe.

They are manufactured in a slightly conical shape, so they are easy to fit.



It is essential that the correct size of collar is chosen, as it needs to fit snugly around the pipe and without too much of a gap which might become loose over time.

The TPE collars are manufactured with a perforated flange so that they can be installed in the same sandwich method as the drainage outlet connectors.



The collars can be secured using a Jubilee clip – please see page XXXX in our accessories section for more details.

THEY ARE MEASURED AS FOLLOWS:

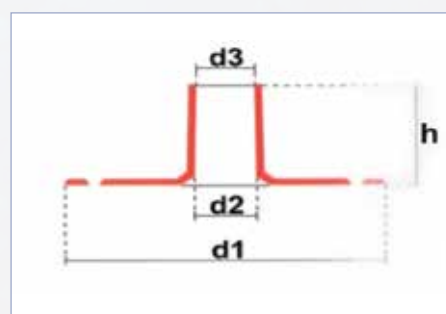
H is the height of the collar

D1 is the outer diameter of the flange

D2 is the inner diameter of the collar at the bottom

D3 is the inner diameter of the pipe at the top

which needs to be smaller than the inner diameter of the HDPE drainpipe



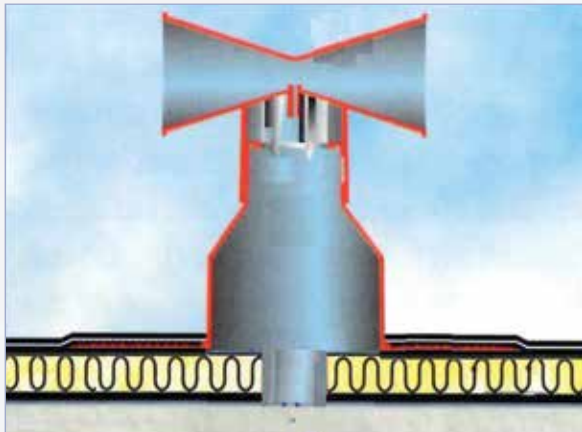
CODE	DESCRIPTION	D1 (MM)	D2 (MM)	D3 (MM)	H (MM)
RO-TPE-030-380-060-030	TPE COLLAR (PERFORATED FLANGE) - H60MM - D30MM	154	32	30	60
RO-TPE-030-380-060-040	TPE COLLAR (PERFORATED FLANGE) - H60MM - D40MM	154	42	40	60
RO-TPE-030-380-060-060	TPE COLLAR (PERFORATED FLANGE) - H60MM - D60MM	194	62	60	60
RO-TPE-030-380-060-080	TPE COLLAR (PERFORATED FLANGE) - H60MM - D80MM	194	82	80	60
RO-TPE-030-380-090-100	TPE COLLAR (PERFORATED FLANGE) - H90MM - D100MM	234	102	100	60
RO-TPE-030-380-090-120	TPE COLLAR (PERFORATED FLANGE) - H90MM - D120MM	234	122	120	60
RO-TPE-030-380-090-140	TPE COLLAR (PERFORATED FLANGE) - H90MM - D140MM	274	142	140	60
RO-TPE-030-380-090-160	TPE COLLAR (PERFORATED FLANGE) - H90MM - D160MM	274	162	160	60

VENTS & AERATORS IN TPE

Concrete will retain an element of moisture after the construction process and vents are required on the roof once it is waterproofed. If not, retained moisture can build up pressure points beneath the waterproofing membrane causing it to bulge and blister. Wallbarn recommends a vent is placed at least every 25m².

The vent is placed directly onto the bare concrete beneath the waterproofing membrane and insulation. The underside of the flange will be in direct contact with the concrete. There are a series of ribs along the underside of the round base plate (or flange) which helps to draw vapour into the tube (or flue) in the centre of the vent.

The waterproofing membrane will then be applied over the base of the vent.



The top of the tube or flue has three holes to allow the vapour to escape into the atmosphere. It is covered by a hood or cap which overlaps the internal holes, preventing rainwater entering the system but still allowing the passage of vapour.

Being TPE, the vent can be bonded to liquid bituminous membranes or suitable adhesives. The membrane will be installed across the top of the flange, and the grooved upper surface of the base plate / flange helps give a secure bond.

Wallbarn can supply three types of vent. The standard vent has a flue of 240mm high and 75mm in diameter.



A shorter, broader vent can also be produced for decks where a shorter pipe is required. An extra-long vent pipe, at 400mm high, is also available.

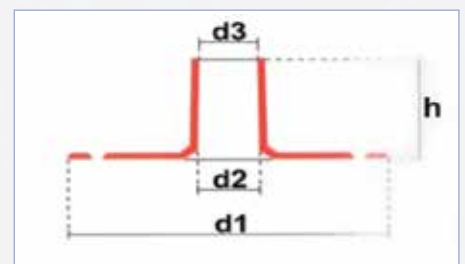
THEY ARE MEASURED AS FOLLOWS:

H is the height of the pipe

D1 is the diameter of the base plate / flange

D2 is the diameter of the flue or pipe at the bottom of the vent

D3 is the diameter of the flue or pipe at the top (where it meets the cap / hood)

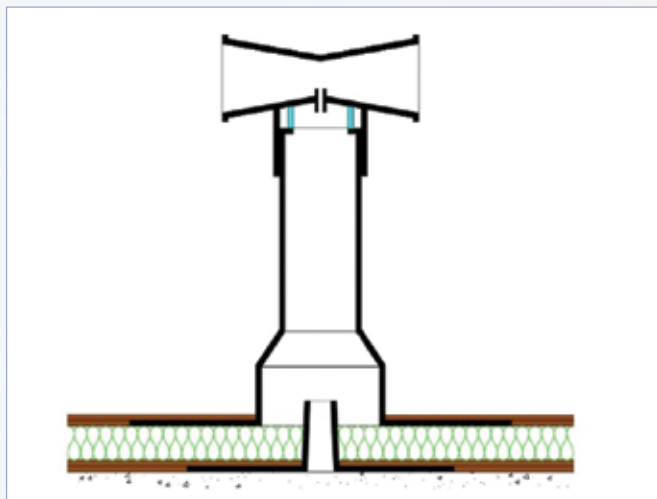


CODE	DESCRIPTION	D1 (MM)	D2 (MM)	D3 (MM)	H (MM)
RO-TPE-030-420-240-075	TPE VENT/ AERATOR (RIBBED FLANGE) - H240MM - D75MM	320	76	73	240
RO-TPE-030-460-160-125	TPE VENT/ AERATOR (RIBBED FLANGE) - H160MM - D125MM	390	125	73	160
RO-TPE-030-460-400-125	TPE VENT/ AERATOR (RIBBED FLANGE) - H400MM - D125MM	390	125	73	400
RO-TPE-030-500-100-065	TPE DOUBLE AERATOR (RIBBED FLANGE) - BOTTOM - H100MM - D320MM	320	67	64	100
RO-TPE-030-500-220-065	TPE DOUBLE AERATOR (RIBBED FLANGE) - TOP - H220MM - D320MM	320	67	64	220

SPECIAL DOUBLE AERATOR – FOR INSULATED ROOFS

The double aerator comprises of two vents, for areas where both the concrete deck and the insulation need to be ventilated. Here a “special” 100mm high vent is placed onto the bare concrete beneath the waterproofing, and beneath the insulation; and another standard aerator is placed on top of the insulation.

They will be bonded beneath the waterproofing membrane so that the underside of the flange is in direct contact with the concrete or the insulation board. This maximises the amount of draw from the structure. It is important to order both of these products together and also order an appropriate hood or cap for the top vent.



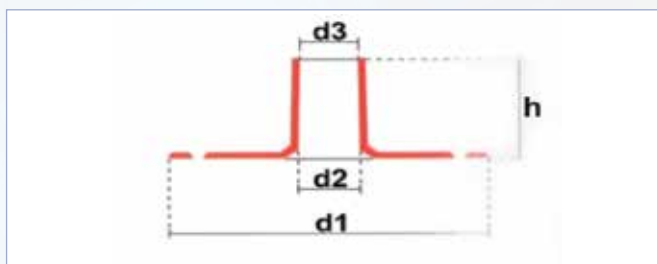
THEY ARE MEASURED AS FOLLOWS:

H is the height of the pipe

D1 is the diameter of the base plate / flange

D2 is the diameter of the flue or pipe at the bottom of the vent

D3 is the diameter of the flue or pipe at the top (where it meets the cap / hood)



CODE	DESCRIPTION	D1 (MM)	D2 (MM)	D3 (MM)	H (MM)
RO-TPE-030-500-100-065	TPE DOUBLE AERATOR (RIBBED FLANGE) - BOTTOM - H100MM -D320MM	320	67	64	100
RO-TPE-030-500-220-065	TPE DOUBLE AERATOR (RIBBED FLANGE) - TOP - H220MM - D320MM	320	67	64	220

All these vents are UV stable and resistant to the elements. They are designed to be extremely tough and durable, and are guaranteed to last for at least 15 years.

CAPS FOR VENTS

There are two designs of hood / flue – a standard round cap; and a special ESTRAER® funnel shaped hood.

The ESTRAER® aerator hood is cone-shaped and designed to increase the amount of moisture sucked out of the concrete. It is tough and durable, but very easy to fit.

The ESTRAER® cap is clicked onto the shaft of the vent and the two cone shaped trunks are positioned so that they face the prevailing wind direction.

There is a small cylinder on the inside of the head which acts as a suction chamber and helps to draw vapour into the funnels.

The cones can be fitted onto all the different sizes and types of vent shaft available, and are suitable for both TPE and PVC vents. They should be ordered at the same time as the vent shaft.



ESTRAER® CAP MEASUREMENTS:

H overall height of the cap including funnels

D1 diameter of cap at the bottom (where it slots onto pipe)

D2 diameter of the funnels at each side

STANDARD CAP MEASUREMENTS:

H is the overall height of the cap

D1 diameter of cap at the bottom (where it slots onto pipe)

D2 diameter at the top

CODE	DESCRIPTION	D1 (MM)	D2 (MM)	H (MM)
RO-TPE-030-500-900-010	TPE SPECIAL ESTRAER CAP FOR VENT	75	82	140
RO-TPE-030-500-900-080	TPE STANDARD CAP FOR VENT	108	110	82

DRAINAGE CONNECTORS AND OUTLETS IN EPDM

EPDM drain connectors provide a very tough and durable seal around outlet drainage holes. The material is suitable for bituminous and EPDM waterproofing membranes and can be mechanically fitted or bonded in the sandwich technique.

The EPDM material remains extremely flexible even at low temperatures, and will tolerate 120°C, so it is ideal for being applied in hot melt membranes. The material is UV stable, and resistant to ozone and other atmospheric chemicals. It can tolerate movement in the structure without risk of splitting.

EPDM DOWNPIPE CONNECTORS

DOWNPIPE CONNECTORS WITH PERFORATED FLANGE

The EPDM perforated flange downpipe outlet is designed to be sandwiched between two layers of waterproofing membrane. Again, the outer ring or flange is perforated, so that the liquid membrane can ooze through the holes and provide an over-and-under bond. This ensures it is fully watertight.

The inside of the mouth of the spigot has ridges so a gravel guard or leaf excluder can be fitted. The spigot is tapered and has a series of ribs going the whole way down to improve the fit inside the drainpipe.

The spigot is 250mm long and is inserted down inside of the HDPE drainpipe. This gives ample assurance that no water can back up behind the rubber and onto the deck.

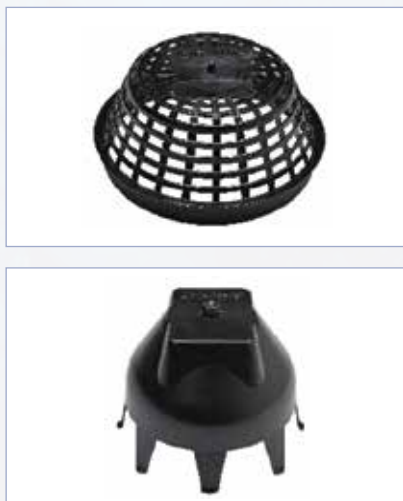
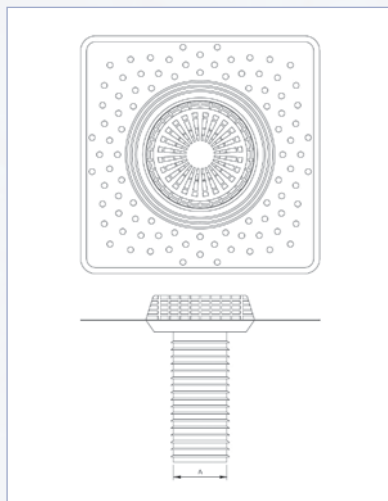


EPDM DRAIN CONNECTOR WITH ANTI-SMELL SIPHON

When constructing high end roof terraces, leisure areas or public walkways, designers and users do not want to have to contend with bad odours coming up from hidden drain pipes.

Wallbarn can supply a variation on the design of the standard drain connector in EPDM which incorporates the perforated flange and spigot, but also contains a siphon mechanism to help eliminate bad smells and odours emitting from the drainpipe up to the roof or deck.

As water drains off the roof it will fall into a well-type holding basin, effectively sealing the drainpipe. Only when a larger amount of water flows in will the water level rise above the internal lips and run down into the shaft and into the HDPE drainpipe. It works in a similar way to a U bend.



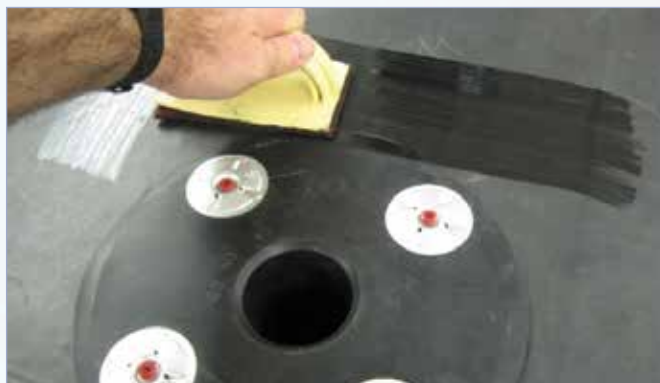
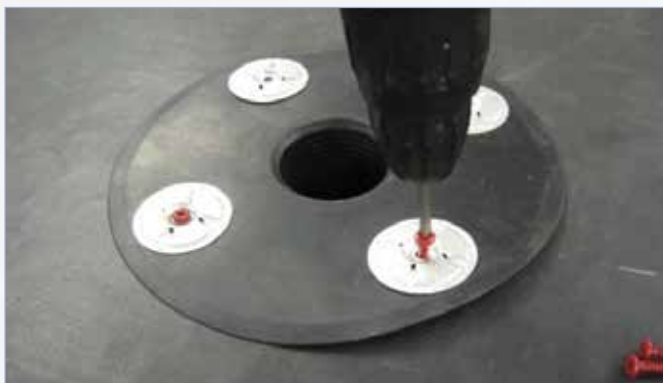
N.B. SPIGOT LENGTH CAN BE INCREASED USING THE EXTENSION SHANKS. COUPLINGS ARE SUPPLIED TO CONNECT TO DRAINPIPES AND JUBILEE CLIPS ARE ALSO AVAILABLE. PLEASE SEE PAGES 33 & 35 FOR MORE DETAILS.

DOWNPIPE CONNECTORS WITH SMOOTH FLANGE FOR MECHANICAL FIXING

The EPDM downpipe connector is also manufactured with a smooth flange and is ideal for mechanical fixing.



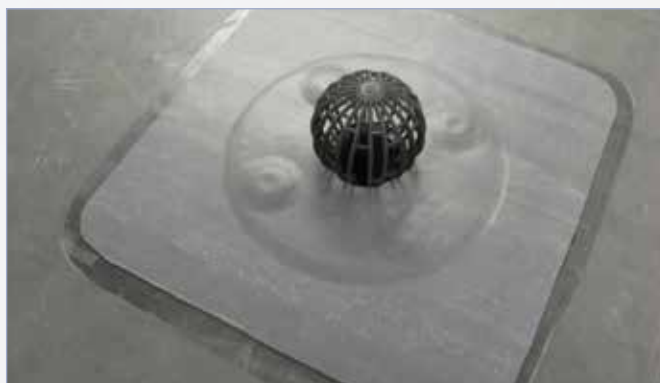
Waterproof the area around the drainage hole. Insert the correct size of outlet connector into the hole so that it is covering the waterproof membrane. Secure the connector either by using fixings or adhesive.



Prime the area and install another layer of waterproofing membrane, laid across the face of the outlet connector so that it is encapsulated in a "sandwich".



Once the membrane / adhesive is cured a hole may need to be cut to reveal the drain pipe, and a leaf guard or gravel excluder is inserted into the hole. The outlet is then finished.



N.B. SPIGOT LENGTH CAN BE INCREASED USING THE EXTENSION SHANKS. COUPLINGS ARE SUPPLIED TO CONNECT TO DRAINPIPES AND JUBILEE CLIPS ARE ALSO AVAILABLE. PLEASE SEE PAGES 33 & 35 FOR MORE DETAILS.

EDPM DOWNPIPE OUTLETS - CODES

DOWNPIPE

H height of the spigot or shank

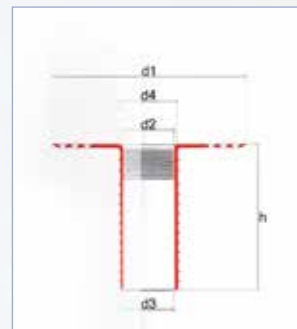
D1 outer diameter of the flange / border surround

D2 inner diameter of the pipe at the top

D3 inner diameter of the pipe at the bottom

D4 outer diameter of the pipe at the top

The size marked on the actual units denotes the measurement these units will fit into, so they are actually slightly smaller than the number marked.



EPDM DOWNPIPE WITH PERFORATED FLANGE

CODE	DESCRIPTION	D1 (MM)	D2 (MM)	D3 (MM)	D4 (MM)	H (MM)
RO-EPDM-095-050-250-040	EPDM CIRCULAR ROOF OUTLET (PERFORATED FLANGE) - H250MM-D40MM	248	28	25	34	250
RO-EPDM-095-050-250-050	EPDM CIRCULAR ROOF OUTLET (PERFORATED FLANGE) - H250MM-D50MM	258	38	35	44	250
RO-EPDM-095-050-250-060	EPDM CIRCULAR ROOF OUTLET (PERFORATED FLANGE) - H250MM-D60MM	271	51	48	57	250
RO-EPDM-095-050-250-075	EPDM CIRCULAR ROOF OUTLET (PERFORATED FLANGE) - H250MM-D75MM	283	63	60	69	250
RO-EPDM-095-050-250-080	EPDM CIRCULAR ROOF OUTLET (PERFORATED FLANGE) - H250MM-D80MM	332	68	65	74	250
RO-EPDM-095-050-250-090	EPDM CIRCULAR ROOF OUTLET (PERFORATED FLANGE) - H250MM-D90MM	332	77	74	83	250
RO-EPDM-095-050-250-100	EPDM CIRCULAR ROOF OUTLET (PERFORATED FLANGE)- H250MM-D100MM	332	88	85	94	250
RO-EPDM-095-050-250-110	EPDM CIRCULAR ROOF OUTLET (PERFORATED FLANGE)-H250MM-D110MM	332	98	95	104	250
RO-EPDM-095-050-250-125	EPDM CIRCULAR ROOF OUTLET (PERFORATED FLANGE)-H250MM-D125MM	332	113	110	119	250
RO-EPDM-095-050-250-140	EPDM CIRCULAR ROOF OUTLET (PERFORATED FLANGE)-H250MM-D140MM	347	128	125	134	250
RO-EPDM-095-050-250-160	EPDM CIRCULAR ROOF OUTLET (PERFORATED FLANGE)-H250MM-D160MM	367	148	145	154	250
RO-EPDM-095-050-250-200	EPDM CIRCULAR ROOF OUTLET (PERFORATED FLANGE)-H250MM-D200MM	406	186	183	192	250

EPDM DOWNPIPE NON PERFORATED FLANGE

RO-EPDM-090-040-240-040	EPDM CIRCULAR ROOF OUTLET (SMOOTH FLANGE) - H240MM - D40MM	235	26	24	31	240
RO-EPDM-090-040-240-060	EPDM CIRCULAR ROOF OUTLET (SMOOTH FLANGE) - H240MM - D60MM	235	48	43	53	240
RO-EPDM-090-040-240-075	EPDM CIRCULAR ROOF OUTLET (SMOOTH FLANGE) - H240MM - D75MM	320	65	61	70	240
RO-EPDM-090-040-240-080	EPDM CIRCULAR ROOF OUTLET (SMOOTH FLANGE) - H240MM - H80MM	320	69	64	74	240
RO-EPDM-090-040-240-090	EPDM CIRCULAR ROOF OUTLET (SMOOTH FLANGE) - H240MM - D90MM	320	77	73	82	240
RO-EPDM-090-040-240-100	EPDM CIRCULAR ROOF OUTLET (SMOOTH FLANGE) - H240MM - D100MM	320	85	80	90	240
RO-EPDM-090-040-240-110	EPDM CIRCULAR ROOF OUTLET (SMOOTH FLANGE) - H240MM - D110MM	320	91	87	96	240
RO-EPDM-090-040-240-125	EPDM CIRCULAR ROOF OUTLET (SMOOTH FLANGE) - H240MM - D125MM	320	111	106	116	240
RO-EPDM-090-040-240-140	EPDM CIRCULAR ROOF OUTLET (SMOOTH FLANGE) - H240MM - D140MM	380	127	122	132	240
RO-EPDM-090-040-240-150	EPDM CIRCULAR ROOF OUTLET (SMOOTH FLANGE) - H240MM - D150MM	380	136	131	141	240
RO-EPDM-090-040-240-160	EPDM CIRCULAR ROOF OUTLET (SMOOTH FLANGE) - H240MM - D160MM	380	146	141	151	240
RO-EPDM-090-040-240-200	EPDM CIRCULAR ROOF OUTLET (SMOOTH FLANGE) - H240MM - D200MM	380	185	180	190	240

EPDM SIPHON DOWNPIPE - PERFORATED FLANGE

THEY ARE MEASURED AS FOLLOWS:

H height of the spigot or pipe

H1 height of the well – where the water will collect to and the excess flow into the pipe

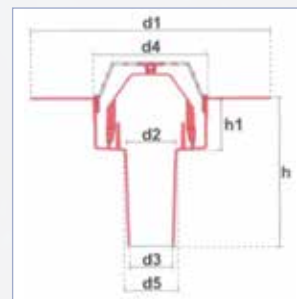
D1 outer diameter of the flange or surrounding ring

D2 inner diameter of the pipe at the top

D3 inner diameter of the pipe at the bottom

D4 outer diameter of the well at the top and also the outer diameter of the leaf guard

D5 outer diameter pipe at the top



CODE	DESCRIPTION	D1 (MM)	D2 (MM)	D3 (MM)	D4 (MM)	D5 (MM)	H (MM)	H1 (MM)
RO-EPDM-095-150-250-080	EPDM "SIPHON" ROOF OUTLET (PERFORATED FLANGE) - H250MM - D80MM	360	73	64	172	78	250	76
RO-EPDM-095-150-250-100	EPDM "SIPHON" ROOF OUTLET (PERFORATED FLANGE) H250MM - D100MM	360	92	83	172	97	250	76
RO-EPDM-095-150-250-110	EPDM "SIPHON" ROOF OUTLET (PERFORATED FLANGE) H250MM - D110MM	360	101	92	172	106	250	76

N.B. SPIGOT LENGTH CAN BE INCREASED USING THE EXTENSION SHANKS. COUPLINGS ARE SUPPLIED TO CONNECT TO DRAINPIPES AND JUBILEE CLIPS ARE ALSO AVAILABLE. PLEASE SEE PAGES 33 & 35 FOR MORE DETAILS.

EDPM THROUGH-WALL OUTLETS / CONNECTORS

Connectors in EPDM material are also available for drainage holes in the junction between the horizontal and vertical plane. The mouth of these drainage outlets is rectangular rather than round. They can be used in both vertical downpipes or on a horizontal plane.



They can be bonded to EPDM and bituminous membranes in the same way as the downpipes. They are bonded in the sandwich method and can also be mechanically fixed.



Although the flange is not perforated, the surface has a textured surface so the waterproofing or adhesive will still grip onto the material, ensuring a good bond.



The spigot pipe is slightly angled to encourage the flow of water away from the mouth and down. Being made from EPDM the connector is extremely tough, flexible and resistant to UV deterioration and chemical salts.



THEY ARE MEASURED AS FOLLOWS:

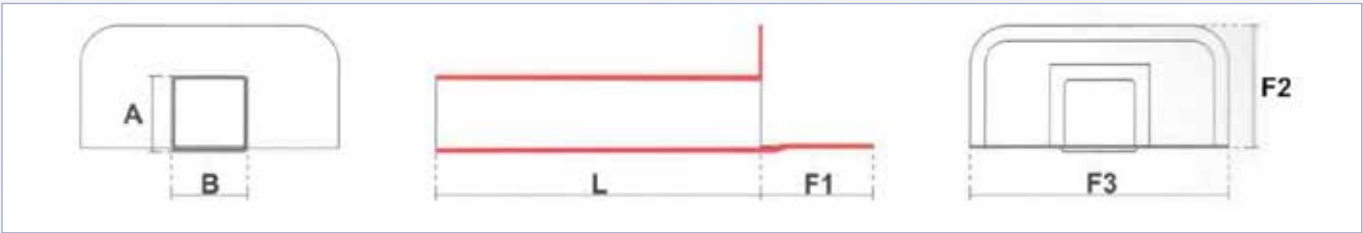
- A height of the outlet drainage hole

B width of the outlet drainage hole

L inner length of the shank or outlet pipe
- F1 width of the flange in front of the outlet hole

F2 height of the border flap or flange above the outlet hole

F3 width of the flange across the face



A EPDM THROUGH-WALL NON PERFORATED FLANGE – RECTANGULAR SPIGOT

CODE	DESCRIPTION	A (MM)	B (MM)	L (MM)	F1 (MM)	F2 (MM)	F3 (MM)
RD-EPDM-090-300-065-100	EPDM SQUARE CORNER ROOF OUTLET (SMOOTH FLANGE) -H65MM-W100MM	65	100	425	150	160	340
RD-EPDM-090-300-100-100	EPDM SQUARE CORNER ROOF OUTLET (SMOOTH FLANGE) H100MM -100MM	100	100	425	150	160	340

PVC MATERIALS: DOWNPIPE OUTLETS IN PVC

WALLBARN CAN SUPPLY A FULL RANGE OF OUTLETS MANUFACTURED FROM PVC, ENSURING FULL COMPATIBILITY WITH SYNTHETIC MEMBRANES.

The PVC range of outlets follow the same format as those made from TPE and EPDM, but they are not manufactured with perforated flanges, rather smooth borders.

This is because PVC outlets are either welded or adhered to the waterproofing membrane, forming a seamless bond.

However, they should only be used with compatible waterproofing membranes, **so installers and specifiers should be sure to check with the waterproofing manufacturer before purchasing.**

The shaft is similar in design to the TPE outlet and inserted into an HDPE drainpipe. There are ribs on the outer side to help grip the HDPE drainpipe, and on the inner edge at the top there are a series of serrations to hold a leaf guard or gravel excluder.

The PVC downpipe outlets are measured in the same way as the other materials, but please ensure the code numbers are correct when ordering:



THEY ARE MEASURED AS FOLLOWS:

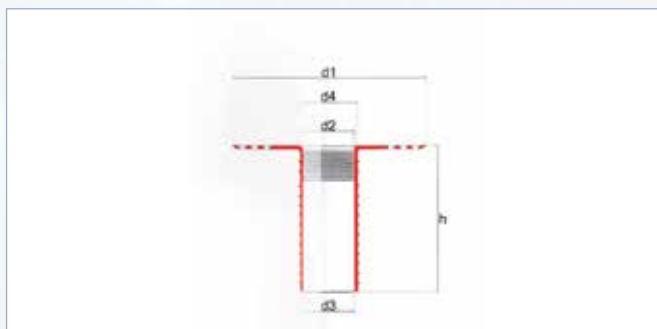
H is the height of the spigot or pipe

D1 is the outer diameter of the flange or surrounding ring

D2 is the inner diameter of the pipe at the top

D3 is the inner diameter of the pipe at the bottom

D4 is the outer diameter of the pipe at the top



CODE	CATEGORY	D1 (MM)	D2 (MM)	D3 (MM)	D4 (MM)	H (MM)
RO-PVC-120-040-240-040	40MM	235	26	24	31	240
RO-PVC-120-040-240-060	60MM	235	48	43	53	240
RO-PVC-120-040-240-075	75MM	320	65	61	70	240
RO-PVC-120-040-240-080	80MM	280	69	64	74	240
RO-PVC-120-040-240-090	90MM	320	77	73	82	240
RO-PVC-120-040-240-100	100MM	300	89	84	94	240
RO-PVC-120-040-240-110	110MM	320	91	87	96	240
RO-PVC-120-040-240-125	125MM	320	114	109	119	240
RO-PVC-120-041-240-125 SPECIAL FOR HDPE PIPE	125MM	320	111	106	116	240
RO-PVC-120-040-240-140	140MM	380	127	122	132	240
RO-PVC-120-040-240-150	150MM	380	136	131	141	240
RO-PVC-120-040-240-160	160MM	380	146	141	151	240
RO-PVC-120-040-240-200	200MM	440	185	180	190	240

EXTRA-LONG CONNECTORS

EXTRA-LONG CONNECTORS ARE AVAILABLE FOR INDUSTRIAL ROOFS.

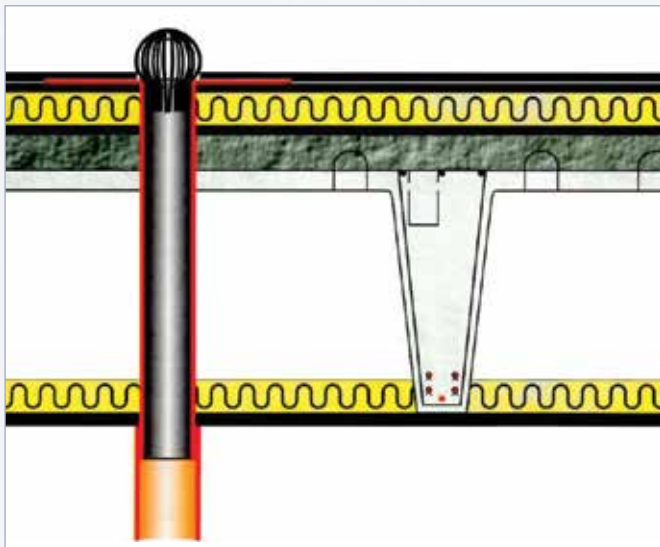
Again, these extra-long units are very similar to the TPE outlet connectors, and are manufactured from PVC. The flange is smooth rather than perforated, but will be fully heat bonded or stuck to the waterproofing membrane using approved adhesive.

The code numbers will differ due to the different material so care must be taken when ordering.

LEAF GUARDS & GRAVEL EXCLUDERS

Leaf guards or gravel excluders should be fitted into the mouths of the drainage outlets to prevent the drainpipes clogging up over time.

Further details on both these products can be found in the ACCESSORIES SECTION.

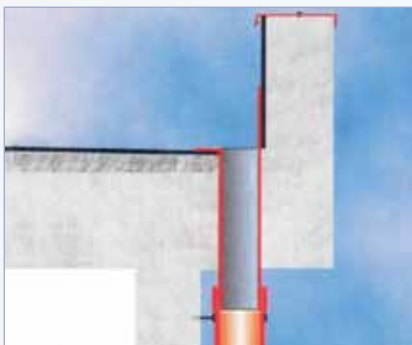
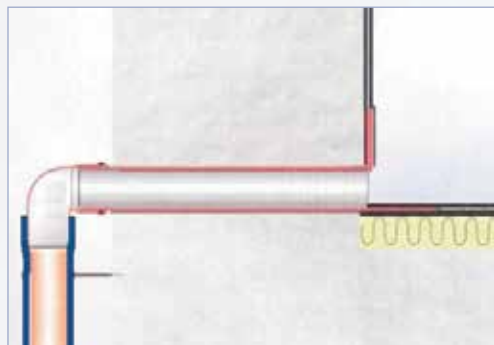
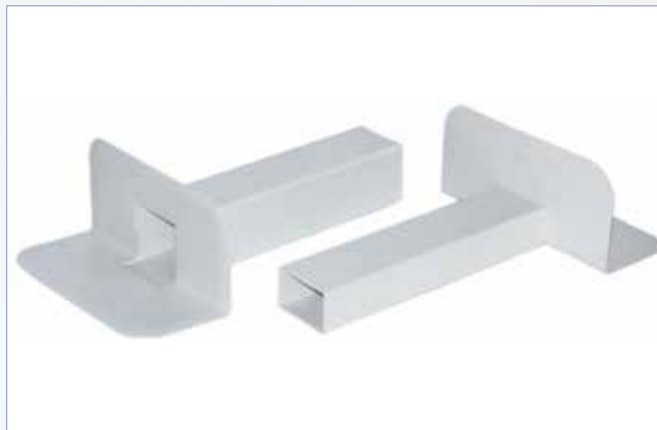


CODE	CATEGORY	D1 (MM)	D2 (MM)	D3 (MM)	D4 (MM)	H (MM)
RD-PVC-120-150-600-080	80MM	370	65	63	72	600
RD-PVC-120-150-600-090	90MM	370	74	72	81	600
RD-PVC-120-150-600-100	100MM	370	85	83	92	600
RD-PVC-120-150-600-110	110MM	390	93	91	100	600
RD-PVC-120-150-600-125	125MM	390	107	105	114	600
RD-PVC-120-150-600-140	140MM	420	125	123	132	600
RD-PVC-120-150-600-150	150MM	420	135	133	142	600
RD-PVC-120-150-600-160	160MM	420	138	136	145	600
RD-PVC-120-150-600-200	200MM	460	178	176	185	600

THROUGH-WALL OUTLETS IN PVC

A FULL RANGE OF THROUGH-WALL OUTLETS ARE ALSO AVAILABLE IN PVC. THESE ARE MANUFACTURED WITH RECTANGULAR SHAFTS AND ARE SUITABLE FOR OUTLETS THROUGH PARAPET WALLS.

Wallbarn supplies downpipe outlets in PVC with a rectangular mouth. Again, the flange is not perforated in the same way as the TPE outlets, but as with all PVC outlets will be fully bonded to the PVC waterproofing membrane. This design tends to be favoured for pre-cast corner fitting situated between the horizontal deck and the parapet wall or upstand. The corner unit is versatile and adaptable, as it can be used for vertical downpipes as well as horizontal outlets.



These outlets are available in two versions, with the mouth of the outflow pipe being either 65 x 100mm, or 100 x 100mm for a greater amount of water flow.

THEY ARE MEASURED AS FOLLOWS:

A height of the outlet drainage hole

B width of the outlet drainage hole

L inner length of the shank or outlet pipe

F1 width of the flange in front of the outlet hole

F2 height of the border flap or flange above the outlet hole

F3 width of the flange across the face



The rectangular corner fittings are available in the following sizes:

CODE	CATEGORY / NAME	D1 (MM)	D2 (MM)	L (MM)	F1 (MM)	F2 (MM)	F3 (MM)
RD-PVC-120-300-065-100	65 X 100MM	65	100	425	150	160	340
RD-PVC-120-300-100-100	100 X 100MM	100	100	425	150	160	340

The shank is 425mm long. Connections can be made easily to HDPE pipework for seamless, waterproof drainage systems.

THROUGH-WALL OUTLETS WITH A CIRCULAR SHAFT

WALLBARN ALSO OFFERS THROUGH-WALL OUTLETS WITH A ROUND SHANK - FOR FITTING THROUGH WALLS AND PARAPETS AND INTO HDPE DRAINPIPES.



Both the rectangular mouth and the circular mouth outlets can be used on the horizontal or vertical plane. Installers need to ensure that the fall of the roof directs water effectively into the drain pipe without ponding and that the outlet connector is fixed to the drainpipe properly once inside / through the wall.

THEY ARE MEASURED AS FOLLOWS:

D1 diameter of the outlet drainage hole

F1 width of the flange around the underside of the outlet hole

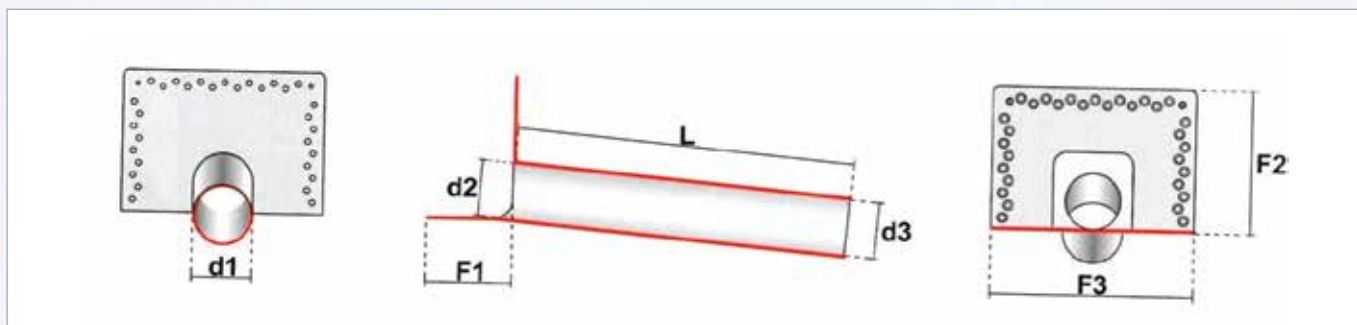
D2 height of the (recessed) outlet drainage hole

F2 height of the flange to the left and right, and above the outlet hole

D3 inner diameter of the spigot at the bottom

F3 width of the flange across the face

L inner length of spigot



Please note that the length of the shank is 500mm, slightly longer than the shank of the rectangular mouth outlets.

CODE	CATEGORY	D1 (MM)	D2 (MM)	D3 (MM)	L (MM)	F1 (MM)	F2 (MM)	F3 (MM)
RD-PVC-120-350-500-050	50MM	50	43	44	500	110	120	260
RD-PVC-120-350-500-063	63MM	63	56	57	500	130	175	304
RD-PVC-120-350-500-075	75MM	75	68	69	500	130	175	304
RD-PVC-120-350-500-090	90MM	90	83	84	500	130	215	304
RD-PVC-120-350-500-110	110MM	110	103	104	500	130	215	304
RD-PVC-120-350-500-125	125MM	125	118	119	500	130	260	304

PVC COLLARS



Collars manufactured from PVC are also available for installation as part of a full PVC waterproofing membrane system.

They are fitted around the outside of the pipework which emerges from the top of the concrete deck, things such as foul air vents and stand pipes. Obviously it is important that the small cavity between the cast concrete and the HDPE pipe emitting from the hole is fully sealed, which is why collars are fitted over the whole area and bonded to the waterproofing membrane.

The collars will fit around the outside of an HDPE pipe (as opposed to the connectors and outlets which slot into the inside of a standard water pipe) and are secured using a jubilee clip supplied by Wallbarn. They are manufactured in a slightly conical shape, so that they are easier to fit, and also help direct water outwards away from the pipe and onto the horizontal plane.

As this is a PVC system the collar will be fully bonded to the PVC waterproofing membrane with heat.

The flange of the collar and the membrane beneath are torch-heated until soft, then the two elements are pressed together so that they adhere to one another. It is essential that the correct size of collar is chosen, as it needs to fit around the outer diameter of the HDPE pipe snugly as gaps may cause the system to move.

The jubilee clip is fixed around the collar at the top end to secure the whole area at the end of the process.

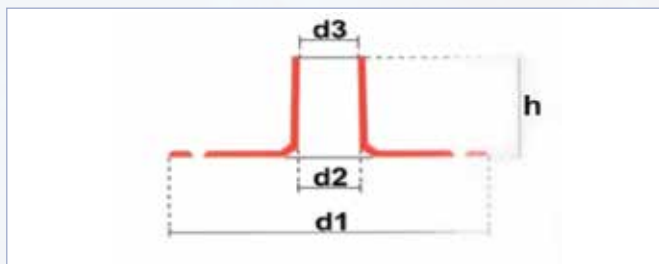
THEY ARE MEASURED AS FOLLOWS:

H is the height of the collar

D1 is the outer diameter of the flange or surrounding ring

D2 is the inner diameter of the collar at the bottom

D3 is the inner diameter of the pipe at the top **which needs to be larger than the outer diameter of the HDPE drainpipe**

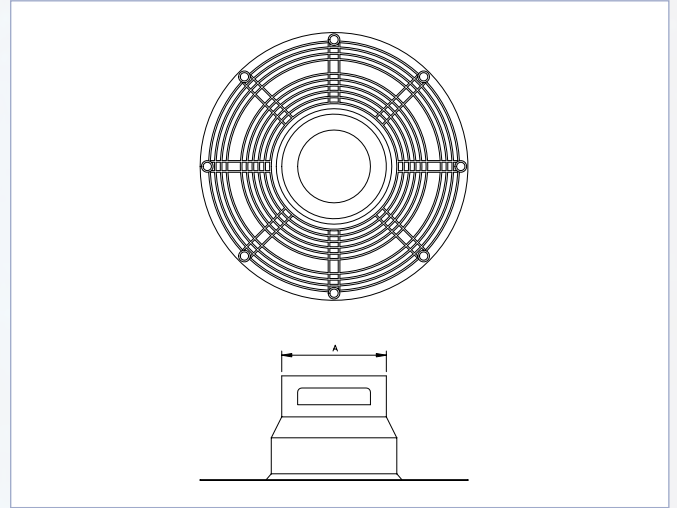


CODE	CATEGORY	D1 (MM)	D2 (MM)	D3 (MM)	H (MM)
RD-PVC-120-370-060-010	10MM	154	11	10	60
RD-PVC-120-370-060-030	30MM	154	32	30	60
RD-PVC-120-370-060-040	40MM	154	42	40	60
RD-PVC-120-370-060-060	60MM	194	62	60	60
RD-PVC-120-370-060-080	80MM	194	82	80	60
RD-PVC-120-370-090-100	100MM	234	102	100	90
RD-PVC-120-370-090-120	120MM	234	122	120	90
RD-PVC-120-370-090-140	140MM	274	142	140	90
RD-PVC-120-370-090-160	160MM	274	162	160	90

JUBILEE CLIP / STAINLESS STEEL FIXING BAND

Please see our [ACCESSORIES SECTION](#).

VENTS & AERATORS IN PVC



Wallbarn also supplies vents in PVC, for use with compatible synthetic waterproofing membranes. They are designed to aerate the concrete and help the structure to breathe.

As with the TPE Vents for bituminous membranes, PVC decks will also require sufficient aeration to avoid vapour build-up and potential blistering of the waterproofing membrane. The vent is designed to draw this moisture away from the concrete slab. It is placed onto the bare concrete beneath the waterproofing membrane and insulation.

These vents are installed in a different manner to the TPE varieties in that they will be heatbonded to the PVC waterproofing membrane, or be bonded with a suitable adhesive, beneath the main membrane. Applicators should get advice from the waterproofing manufacturer for the best installation technique.

The membrane is applied over the base of the vent. This creates a “flue” which helps to draw the vapour out of the concrete.

There are a series of ribs along the underside of the round base plate (or flange) to encourage the vapour movement. The ribs on the underside stop about 5 cm from the edge of the base or flange in order to help with the bond between the PVC membrane and the unit.

The top of the pipe or flue has three lateral holes to allow the vapour to escape into the atmosphere. It is covered by a hood or cap which overlaps the internal holes, preventing rainwater entering the system but still allowing the passage of vapour.

Wallbarn recommends a vent is placed at least every 25m².

As with the other material, Wallbarn can supply the PVC vent in three different sizes. The standard vent (on the left hand side) has a flue of 240mm high and approximately 75mm in diameter. This is the most common type of vent produced.

A shorter, broader vent can also be produced if a shorter pipe is required or the extra-long vent pipe, at 400mm is also available.



Please see our **CAD Images section on our website** for more help in detailing these areas.

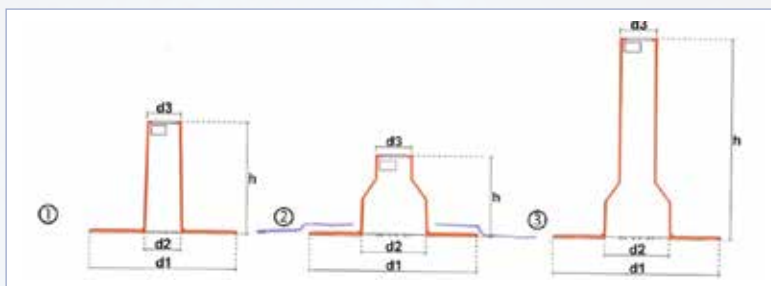
The PVC vents are UV stable and resistant to the elements. They are designed to be extremely tough and durable, and are designed for long-term durability.

THEY ARE MEASURED AS FOLLOWS:

D1 is the diameter of the base plate / flange

D2 is the diameter of the flue or pipe at the bottom of the vent

D3 is the diameter of the flue or pipe at the top (where it meets the cap / hood)



CODE	DESCRIPTION	D1 (MM)	D2 (MM)	D3 (MM)	H (MM)
RO-PVC-120-420-240-075	STANDARD VENT 240MM HIGH	320	76	73	240
RO-PVC-120-460-160-125	SHORT VENT 160MM HIGH	390	125	73	160
RO-PVC-120-460-400-125	EXTRA-LONG VENT 400MM HIGH	390	125	73	400

CAPS FOR VENTS

Installers will also need to ensure they purchase a cap or hood for all of these vents. The black plastic caps will fit onto the PVC vent shafts easily and are fully compatible. There are two designs of hood / flue – a standard round cap; and a special ESTRAER® funnel shaped hood. This comprises of two conical funnels which join up at a central hole at the top of pipe, and create an extra suction on the pipe, helping to draw out a greater amount of vapour and air from the concrete.



The standard cap is measured so that D1 is the diameter of the cap at the top; D2 is the diameter at the bottom (where it slots onto the pipe) and H is the height of the cap.

The special ESTRAER® cap is measured so that D1 is the diameter of the cap at the bottom (where it slots onto the pipe); D2 is the diameter of the funnels at each side; and H is the overall height of the cap including the funnels.



CODE	DESCRIPTION	D1 (MM)	D2 (MM)	D3 (MM)	H (MM)
RO-TPE-030-500-900-080	STANDARD CAP (BLACK)	106	110	-	80
RO-TPE-030-500-900-010	ESTRAER® CAP (BLACK)	75	82	-	140

ACCESSORIES:

A NUMBER OF DIFFERENT PRODUCTS ARE AVAILABLE TO WORK BOTH IN CONJUNCTION WITH THE OUTLETS AND VENTS AND ALSO FOR USE WITH WATERPROOFING MEMBRANES GENERALLY.

LEAF GUARDS

LEAF GUARDS AND GRAVEL EXCLUDERS ARE REQUIRED FOR CIRCULAR ROOF OUTLETS TO PREVENT THE HDPE DRAINPIPE BECOMING BLOCKED OVER TIME, LEADING TO FLOODING.

Wallbarn offers leaf guards in a number of different materials which ensure that water can drain efficiently.

Wallbarn leaf excluders are made from zinc plated iron, copper or plastic.

These leaf guards can fit into all the different designs of circular outlets and connectors. They are compatible with all the different materials manufactured.

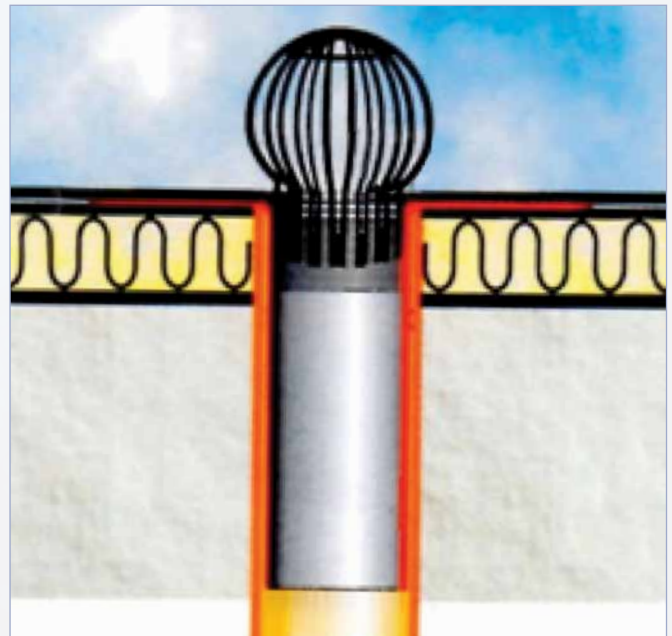
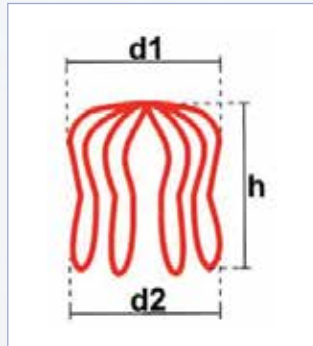
They are manufactured with 12 rods at the bottom. They are flexible and spring loaded, and have a slightly serrated edge.

The leaf guard is inserted into the top of the hole.

The serrated edges will grip onto the inside of the drain connector or outlet, which has a series of small ridges around the inside rim of the shaft. This helps lock the guard into place.

They do not need to be stuck into the hole. As the water flows into the pipe the pressure will be downwards, so the guard will remain in place without issue.

They can be removed, however, by squeezing the sides of the cage frame to narrow the bottom edges.



CODE	DESCRIPTION	D1 (MM)	D2 (MM)	H (MM)
RO-LEAFGUARD-210-015-125-010	ZINC IRON LEAF GUARD	120	115	110
RO-LEAFGUARD-210-015-125-020	COPPER IRON LEAF GUARD	120	115	110
RO-LEAFGUARD-210-020-080-125	PLASTIC LEAF GUARD	140	50	160
RO-LEAFGUARD-210-015-125-030	STAINLESS STEEL LEAF GUARD	120	115	110

SQUARE LEAF GUARDS FOR CORNER OUTLETS

Wallbarn supplies leaf guards manufactured in a square shape, specially designed for the through-wall / parapet outlets.

Made from a durable and hardwearing plastic compound, they provide a secure fit into the mouth of the corner outlets to prevent drains becoming blocked.

They are simply inserted into the mouth of the hole and will remain in place without fixings or adhesive.

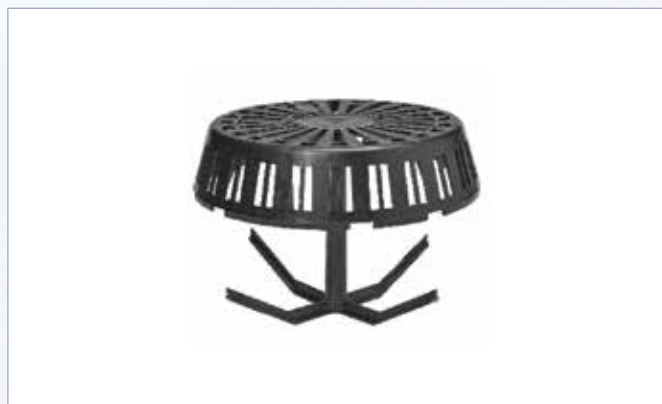


CODE	NAME	WIDTH (MM)	INNER WIDTH* (MM)	HEIGHT (MM)
RO-LEAFGUARD-210-030-090-010	CORNER ROOF OUTLET - SQUARE SHAPED PLASTIC LEAF GUARD	170	90	115

*Distance from mouth of drainage pipe and edge of cage

GRAVEL EXCLUDERS

Gravel excluders work in the same way as the leaf guards, but they are more heavy duty, and can withstand the higher pressure and impact of gravel and stones. They are manufactured from plastic, which is UV resistant and resistant to ambient atmospheric elements.



The shaft fits into the outlet hole for a tight, secure fit. The HELIX excluder can have its spokes trimmed to fit the diameter of the pipe before being inserted. The SPIDER excluder is manufactured with its spokes turning upwards, to aid insertion and help grip the inside of the pipe, preventing it rising out.

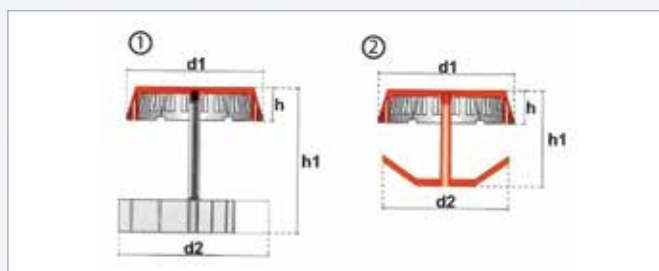
THEY ARE MEASURED AS FOLLOWS:

D1 diameter of cap at the top

D2 diameter of fins / prongs at the bottom

H height from top of cap to bottom of fins / prongs

H1 height / thickness of cap



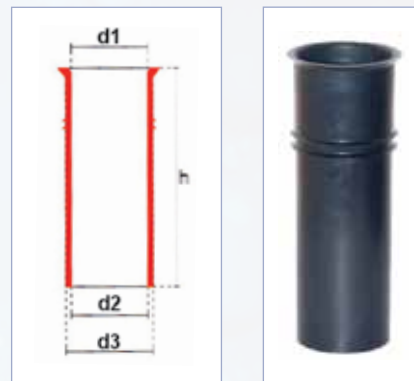
CODE	NAME	D1 (MM)	D2 (MM)	H (MM)	H1 (MM)
RO-LEAFGUARD-210-030-075-200	CIRCULAR ROOF OUTLET - HELIX GRAVEL EXCLUDER	208	230	50	220
RO-LEAFGUARD-210-030-080-200	CIRCULAR ROOF OUTLET - SPIDER GRAVEL EXCLUDER	208	192	50	140

EXTENSION SHANKS IN TPE

Wallbarn supplies extension shanks designed to fix up with the drainage outlets to increase the reach into the parapet wall or drainage channel.

Often the ducts and channels will have to pass through a long run of concrete before reaching a suitable area to install the HDPE drainpipe, so an extension of a fully waterproof sealed connector will be required.

These extension shanks are specially designed to fit in with the full range of Wallbarn circular outlets. They are made from TPE but can still be used with EPDM and PVC outlets. They are manufactured to a slight cone shape, so the end of the circular outlet slots inside the top of the extension shank. The two membranes are bonded together using silicone adhesive.



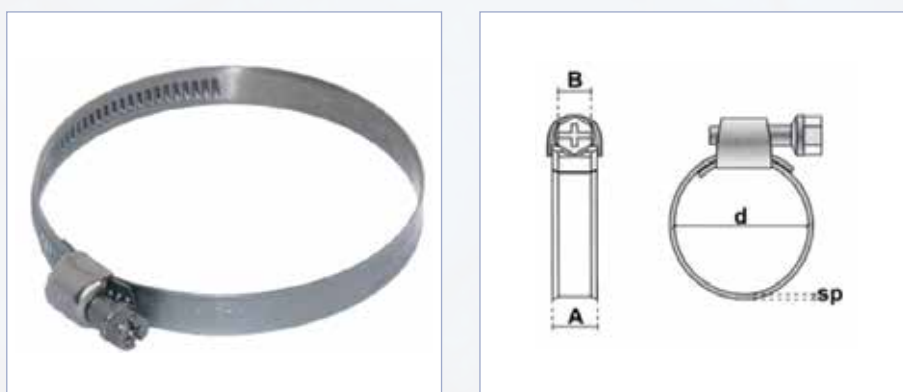
Installers of PVC waterproofing systems should always inform their waterproofing manufacturer before using these two materials together in order to check the status of the warranty.

CODE	CATEGORY	D1 (MM)	D2 (MM)	D3 (MM)	H (MM)
RD-TPE 210-040-240-040	40MM EXTENSION PIPE	26	24	31	240
RD-TPE 210-040-240-060	60MM EXTENSION PIPE	48	43	53	240
RD-TPE 210-040-240-075	75MM EXTENSION PIPE	65	61	70	240
RD-TPE 210-040-240-080	80MM EXTENSION PIPE	69	64	74	240
RD-TPE 210-040-240-090	90MM EXTENSION PIPE	77	73	82	240
RD-TPE 210-040-240-100	100MM EXTENSION PIPE	89	84	94	240
RD-TPE 210-040-240-110	120MM EXTENSION PIPE	91	87	96	240
RD-TPE 210-040-240-125	125MM EXTENSION PIPE	114	109	119	240
RD-TPE 210-040-240-125	125MM EXTENSION PIPE SPECIAL FOR HDPE PIPE	111	106	116	240

JUBILEE CLIP / STAINLESS STEEL FIXING BAND

Jubilee clips will be required when fitting pipe collars, which are available in both TPE and PVC. These clips or bands are manufactured in stainless steel AISI 304 and secure the collars onto the foul air pipes emitting from the roof or deck.

They are a regular, simple design with the size of the band and the force of the clamp easily adjusted by turning the mechanism with a screwdriver.



SIZES ARE AS FOLLOWS:

CODE	NAME	DIAMETER RANGE (MM)	A	SP THICKNESS	B	TORQUE
RD-CLIP 210-370-009-008	INOX 9/8-16	8-16	9	0.6	7	8
RD-CLIP 210-370-009-025	INOX 9/25-45	25-45	9	0.6	7	8
RD-CLIP 210-370-009-050	INOX 9/50-70	50-70	9	0.6	7	8
RD-CLIP 210-370-009-070	INOX 9/70-90	70-90	9	0.6	7	8
RD-CLIP 210-370-009-090	INOX 9/90-110	90-110	9	0.6	7	8
RD-CLIP 210-370-009-110	INOX 9/110-130	110-130	9	0.6	7	8
RD-CLIP 210-370-009-140	INOX 9/140-160	140-160	9	0.6	7	8
RD-CLIP 210-370-012-135	INOX 12/135-165	135-165	12	0.6	7	8

PATCHES IN TPE MATERIAL

Wallbarn supplies a range of acute and obtuse angles manufactured from TPE. They are fitted into difficult areas as an additional protection.

Often a liquid waterproofing membrane can either struggle to bond to a very sharp corner, or on an outer corner can be “scalped” as it is applied, leading to a much thinner layer than the rest of the area.

These areas of the concrete deck can be the most vulnerable to leakage, so extra protection and strength across such details is achieved by a flexible, durable “patch”, which will adhere to the liquid waterproofing membrane and can improve the integrity of the waterproof seal. **They are available in the following sizes:**

CODE	NAME	HEIGHT (MM)	ANGLE°
RO-TPE-030-540-050-095	ACUTE CORNER JOINT (SMALL) IN TPE	95	95
RO-TPE-030-540-050-130	ACUTE CORNER JOINT (LARGE) IN TPE	130	130
RO-TPE-030-540-550-095	OBTUSE CORNER JOINT (SMALL) IN TPE	95	95
RO-TPE-030-540-550-130	OBTUSE CORNER JOINT (LARGE) IN TPE	130	138
RO-TPE-030-540-550-100	SQUARE OBTUSE CORNER JOINT IN TPE	106	110
RO-TPE-030-540-900-013	TAPERED CONE COVERING 13MM AT TOP	75	82



PATCHES IN PVC

THE SAME TYPES OF JUNCTIONS AND SHAPES FOR BITUMINOUS MEMBRANES MANUFACTURED IN PVC FOR SYNTHETIC MEMBRANES.

Wallbarn supplies the same type of reinforcement patches in PVC, for use with compatible synthetic sheet membranes.

Although most PVC membranes are manufactured in standard sheet form to a uniform shape, they may also require an additional layer around awkward details and areas which are likely to get scuffed or stretched.

These areas of the concrete deck can be the most vulnerable to leakage, so extra protection and strength across such details by a flexible, durable “patch”, which will adhere to the liquid waterproofing membrane, can improve the integrity of the waterproof seal.

In addition to the acute and obtuse angles, we also have on offer a “star-shaped” piece which can be manipulated in a large number of different shapes, ideal for very tricky corners and angles. **The patches are available in the following sizes:**

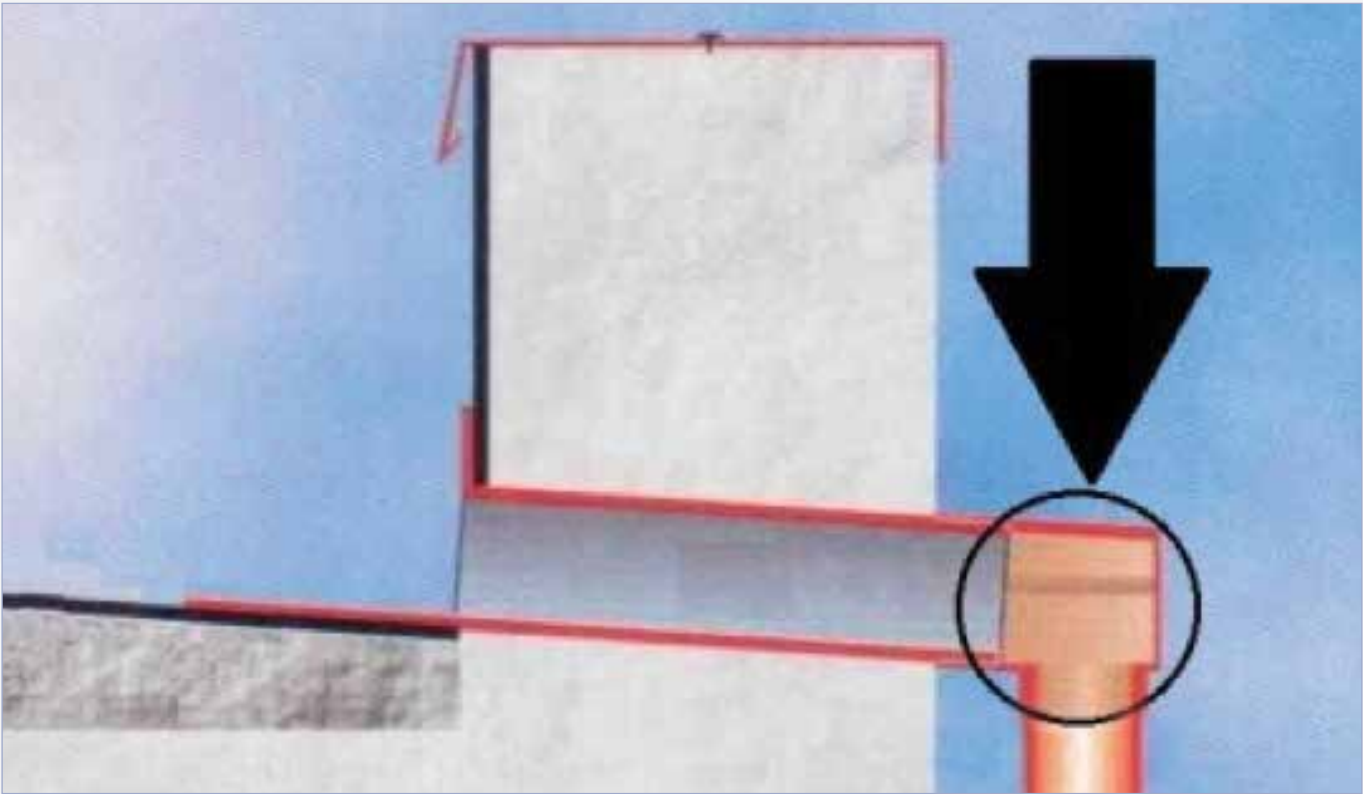
CODE	NAME	HEIGHT (MM)	ANGLE°
RO-PVC- 120-540-050-095	ACUTE CORNER JOINT (SMALL) IN PVC	95	95
RO-PVC- 120-540-050-110	CONICAL CORNER JOINT IN PVC	110	110
RO-PVC- 120-540-050-130	ACUTE CORNER JOINT (LARGE) IN PVC	130	130
RO-PVC- 120-540-550-095	OBTUSE CORNER JOINT (SMALL) IN PVC	95	95
RO-PVC- 120-540-550-130	OBTUSE CORNER JOINT (LARGE) IN PVC	130	138
RO-PVC- 120-540-900-013	TAPERED CONE COVERING 13MM AT TOP	75	82
RO-PVC- 120-540-550-110	FULLY FLEXIBLE STAR-SHAPED JOINT	110	110

COUPLINGS
SQUARE SHAPED SPIGOT

Wallbarn supplies a range of couplings for use in securing the drainage outlet to the HDPE drainpipe.

Couplings manufactured with a square mouth one side are designed for use where the through-wall outlet is connected via a right angle to a rounded drainpipe. The square shaped spigot is placed inside the square mouth of the coupling and the rounded downpipe section is fitted inside the HDPE pipe. A jubilee clip can be used around the drainpipe to give a secure fit.

These units are available in a number of different sizes.



65mm high x 80mm wide



210-300-065-080

65mm high x 100mm wide



210-300-065-100

100mm high x 80mm wide



210-300-100-080

100mm high x 100mm wide

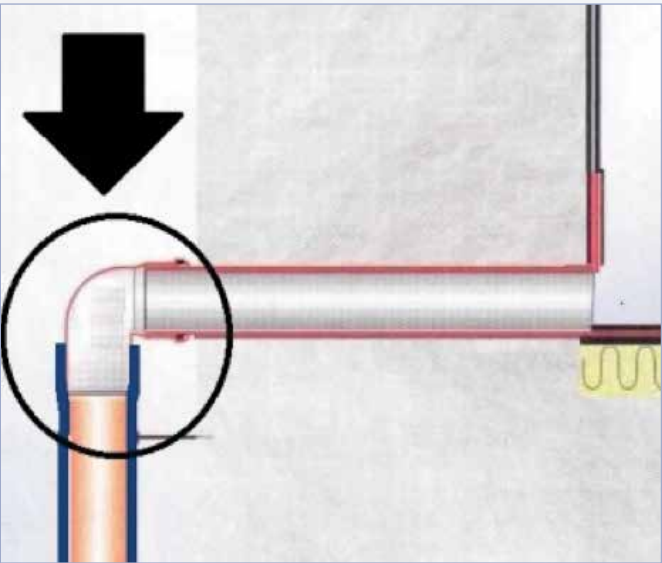


210-300-100-100

DIAMETER	CODE
65 X 80MM	210-300-065-080
65 X 100MM	210-300-065-100
100 X 80MM	210-300-100-080
100 X 100MM	210-300-100-100

RIGHT ANGLE COUPLING FOR USE WITH ROUND SPIGOTS

Wallbarn also supplies couplings for use with rounded spigots. Through-wall roof outlets installed either vertically or horizontally can be fitted to the HDPE drainpipe using the right angled “elbow” coupling connector.



They are available in a variety of sizes:

DIAMETER	CODE
50MM	210-350-050-050
75MM	210-350-075-075
90MM	210-350-090-090
110MM	210-350-110-110
125MM	210-350-125-125

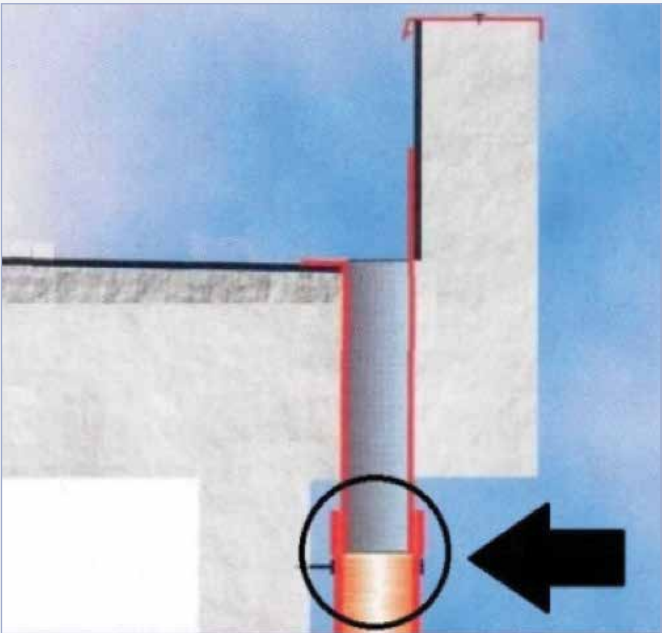


ROUND SPIGOT STRAIGHT COUPLING

A straight coupling is available for fixing a Wallbarn outlet with a round spigot to a round HDPE drainage pipe when the drainpipe is going in the same direction.

These can be used for through-wall outlets which have a round spigot and also downpipe and circular drainage outlets.

The spigot again fits inside the coupling and additional secure fit can be achieved by tightening a jubilee clip around the outside.



DIAMETER	CODE
50MM	210-360-050-050
75MM	210-360-075-075
90MM	210-360-090-090
110MM	210-360-110-110
125MM	210-360-125-125

FOR MORE INFORMATION PLEASE CONTACT:

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