

# The biggest roof drain range in Europe



Clamp collar drain



Universal drain



Pipe system made of stainless steel



Eco drain



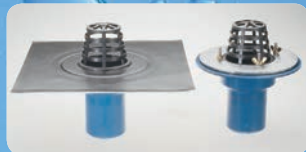
Combi-drain



Collar drain



Compact collar drain



Garage/Balcony drain



Attika Jumbo drain

## Flat roof programme 2013/14

Drain programme with lots of additions, improvements and innovations



Fire protection



Redevelopment drain



Stainless steel drain



Redevelopment ventilator



Green roof security drain



Continuous balcony drain, sinkable



Accessories



Balcony drain



Bushing



Attika balcony drain



Collar drain DN 200



Attika Plus drain



Siphonic drainage



Attika Super drain



Heating



Attika flat drain



Attika Super 2 drain

Development  
and production  
made in  
Germany

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## ■ Innovation, competence and experience

**Grumbach** – this name stands for competence and experience in the flat roof branch.

Our family-run business has developed, produced and sold successful solutions for the problems faced in practice since 1974.

**Grumbach** offers the widest range of flat roof, balcony, terrace, green roof, parking lots etc. products in Europe.

Over and above this, we are able to take ideas and requests, to tailor make new and exclusive products at short notice by way of our own workshop for plastic forms and moulds.

From the legendary combi-drain through to the "big mouth" Attika Jumbo drain – with "the blues from Grumbach", any drainage or ventilation problem for flat roofs can be solved optimally.

**Improve your success with our innovative products.**

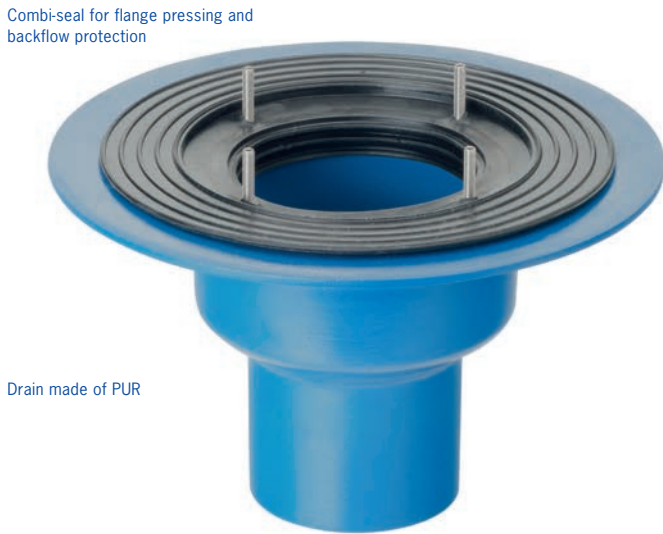
# ■ Universal drain

Ideal for keeping in stock!

Improved version!



**NEW!**



## Universal drain made of PUR

Heat insulated, CFC-free. With pebble trap, clamp flange (new: made of stainless steel) and combination seal. **Also available as a heatable drain.** Available as either in a (self-regulating) 230 V heater or with a safety low voltage 24 Volt format.universal drains.



## Universal drain with security clamp flange

**The Universal drain DN 70/DN 100/DN 125 is the ideal drain to keep in stock:**

A few parts are enough to fulfil 90% of all requirements.

## The Universal drain

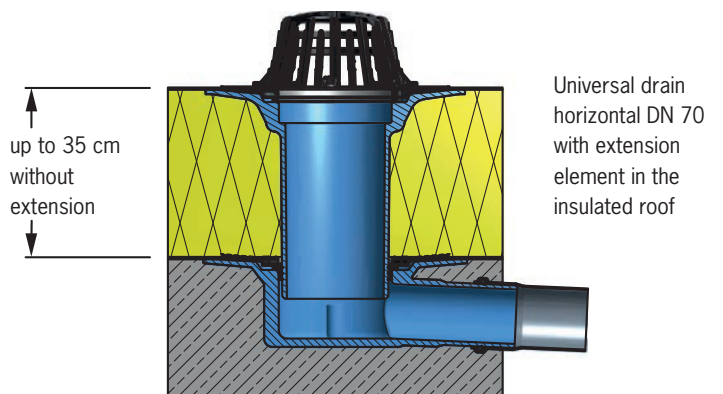
is suitable for any roof covering, with accessories for pebbled roofs, balconies, park decks, green roofs etc.

## The perfect combination of quality and technology!

- Fitting a flange keeps it leak-free with every roof surface
- Simply unravel the roof sheeting, cut the hole, fit the flange - finished
- Quality controlled in acc. with DIN 1253
- made of CFC-free, heat insulated PUR-integral-hardfoam



## Installation example Universal Gully horizontal



**The Universal drain is heated** by either a self-regulating 230 V heater or with a safety low voltage 24 Volt. This remains ice-free even at extremely low temperatures. There is a suitable Grumbach Drain Defroster with self-regulating temperature suitable for the 24 V version (see page 41)..

# Universal drain Improved version!

Dimension | Article No.



**Universal drain made of PUR**  
vertical:  
DN 70 **2102**  
DN 100 **2104**  
DN 125 **2106**



horizontal:  
DN 70 **2111**  
DN 100 **2114**  
DN 125 **2116**



**Universal drain made of PUR, heatable**  
vertical:  
**heatable** (24V):  
DN 70 **2122**  
DN 100 **2124**  
DN 125 **2126**

**heatable** (230V):  
DN 70 **2122.2**  
DN 100 **2124.2**  
DN 125 **2126.2**



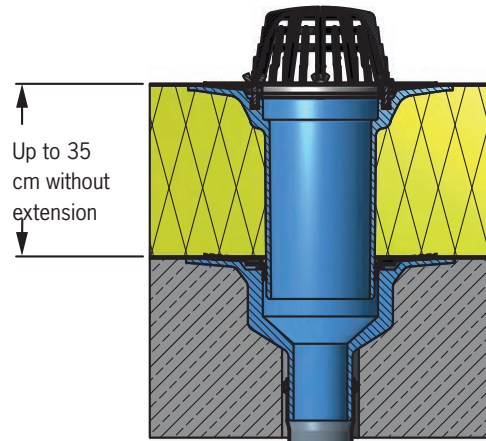
horizontal:  
**heatable** (24V):  
DN 70 **2132**  
DN 100 **2134**  
DN 125 **2136**

**heatable** (230V):  
DN 70 **2132.2**  
DN 100 **2134.2**  
DN 125 **2136.2**

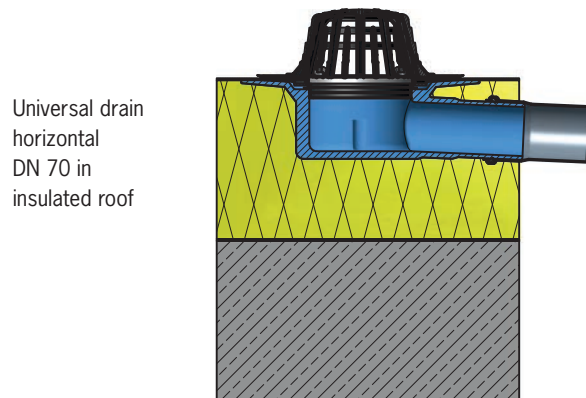


**Extension element**  
up to 16 cm **2181**  
up to 23 cm **2183**  
up to 35 cm **2185**

## Installation example Universal drain

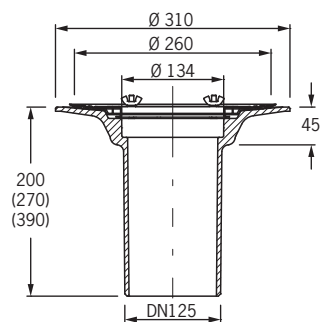
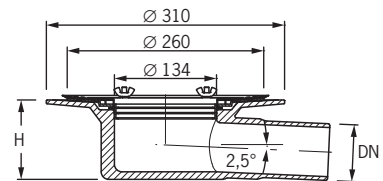
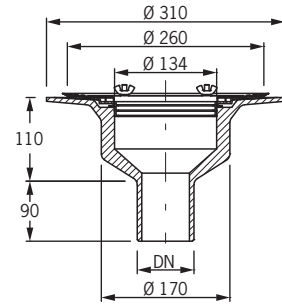


Universal drain vertical DN 70 with extension element in insulated roof



Universal drain horizontal DN 70 in insulated roof

## Technical data Universal drain



Art.-No.	Nominal-Ø	Actual -Ø	H	Drainage capacity*
<b>Universal-drains, vertical</b>				
2102, 2122, 2122.2	DN 70	75		6,3 l/s (35 mm)
2104, 2124, 2124.2	DN 100	110		6,8 l/s (35 mm)
2106, 2126, 2126.2	DN 125	125		8,7 l/s (45 mm)
<b>Universal-drains, horizontal</b>				
2112, 2132, 2132.2	DN 70	75	105	5,8 l/s (35 mm)
2114, 2134, 2134.2	DN 100	110	145	6,1 l/s (35 mm)
2116, 2136, 2136.2	DN 125	125	160	8,5 l/s (45 mm)

Drainage capacity at down pipe in litres per second (at accumulation height in millimetres)

# ■ Clamp flange drain DN 150 The Original!

Very large pebble trap reduces the risk of blockages to a minimum



Larger better fitting clamp flange made of aluminium with clamp 45 mm wide – the screws are not in the clamping area



Storm proof pebble trap attachment with threaded bolt, nuts and pebble trap securing plate, all in stainless steel

Absolutely secure combination seal with double function for flange pressing and anti-flowback seal



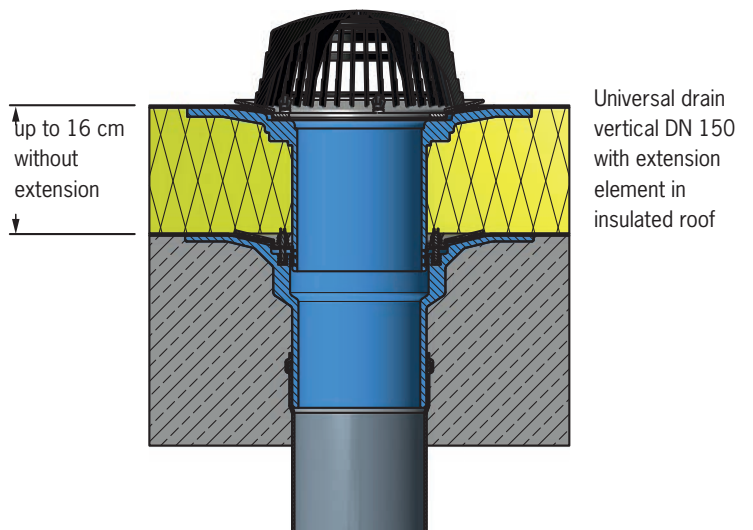
Drain made of PUR

## Clamp flange drain of PUR

heat insulated, CFC-free. With pebble trap, clamp flange and combination seal. Also available as a heatable drain. Available as either in a (self-regulating) 230 V heater or with a safety low voltage 24 Volt format.

**Extension element** with clamp flange and anti-flowback seal, to fit all clamp flange drains.

## Installation example



Universal drain vertical DN 150 with extension element in insulated roof

## The perfect combination of quality and technology!

- Simply unravel the roof sheeting, cut the hole, fit the flange - finished
- The new clamp flange-technology with the new rubber seals (see below) **ensures an absolutely secure connection with any roof covering!**
- Grumbach clamp flange drains fit into nearly any type of roof and roof covering. There are extra parts for insulated roofs, inverted roofs, porch roofs and green roofs, etc.

Dimension | Art.-No.



**Clamp flange drain**  
vertical  
DN 150 **2008**

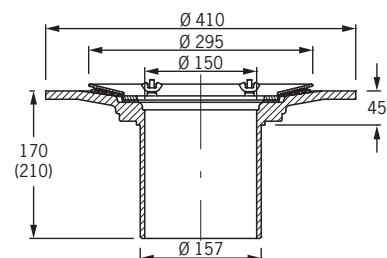
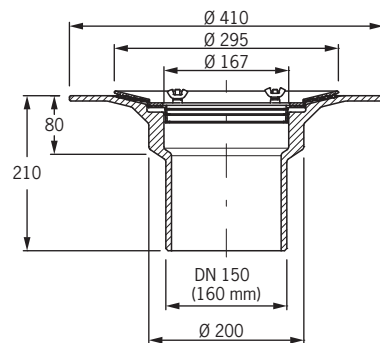


**Klemmflansch-Gully aus PUR**  
vertical, **heatable** (24V):  
DN 150 **2028**  
**heatable** (230V):  
DN 150 **2028.2**



**Extension element**  
up to 12 cm **2080**  
up to 16 cm **2081**

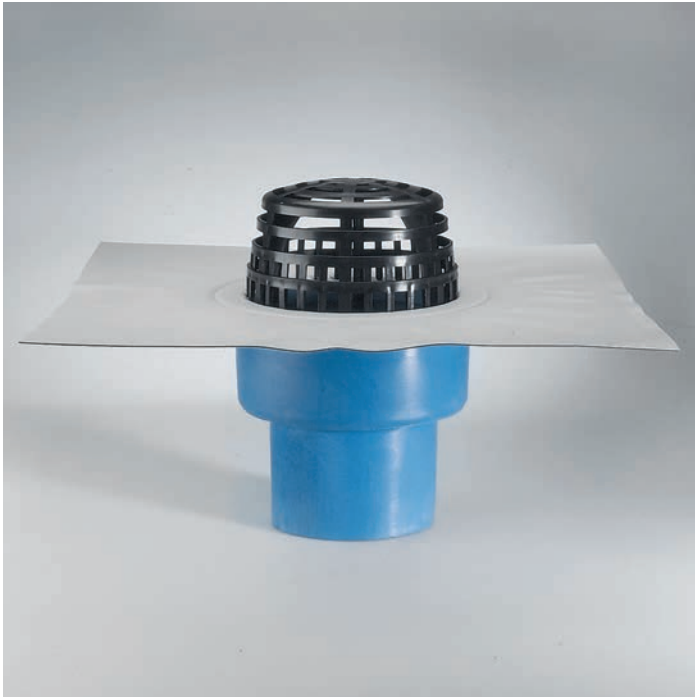
## Technical data



Art.-No.	Drainage capacity*
2008, 2028, 2028.2	10,0 l/s (45 mm)

Drainage capacity at down pipe in litres per second (at accumulation height in millimetres)

## ■ Collar drain DN 150 with adhesive collar



### Collar drain made of PUR

heat insulated, CFC-free, with pebble trap and foam-filled feeder line (Bitumen, ECB, PVC or special foil).

**Also available as a heatable drain**, with self-regulating 230 V heater or in a 24 Volt safety low voltage format.

Extension element with feeder line and anti-backflow seal, suitable for all compact collar drains.

### Securing groove + pebble trap = secure pebble collection

The securing groove ensures that the connection between the body of the drain and the pebble trap is permanently secure

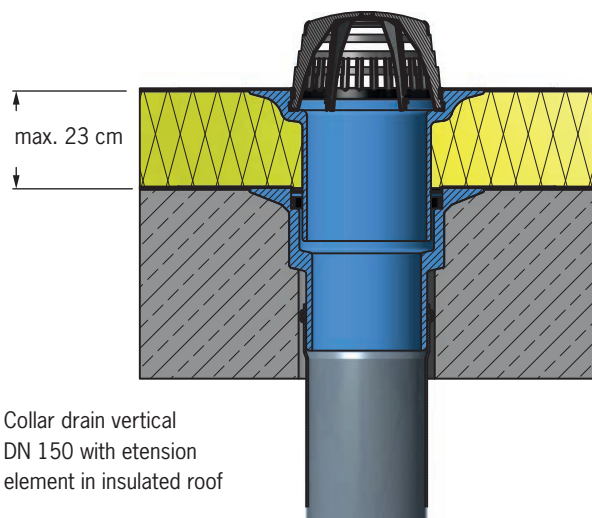
### Securing groove + Anti-backflow seal = Secure backflow prevention

If base elements and extensions are used, as in e.g. insulated roofs, then the securing groove of the base element would be connected with the anti-backflow seal. The anti-backflow seal, which was specially developed for the collar drain, can be securely fastened to the securing groove.

If the extension element is fitted into the base element, then backflow prevention is provided.

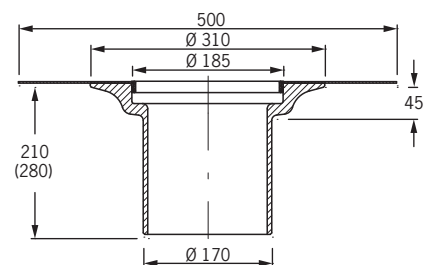
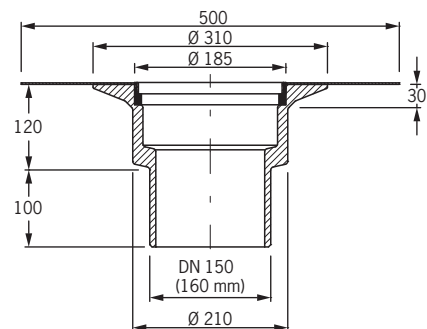
The seal cannot slip during this process as the seal always sits correctly.

### Installation example collar drain DN 150



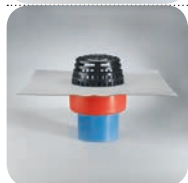
Collar drain vertical DN 150 with extension element in insulated roof

### Technical data collar drain DN 150



Dimension | Article No.

**Collar drain made of PUR**  
vertical:  
DN 150 **3008**



**Collar drain made of PUR**  
vertical,  
**heatable** (24V):  
DN 150 **3028**  
**heatable** (230V):  
DN 150 **3028.2**



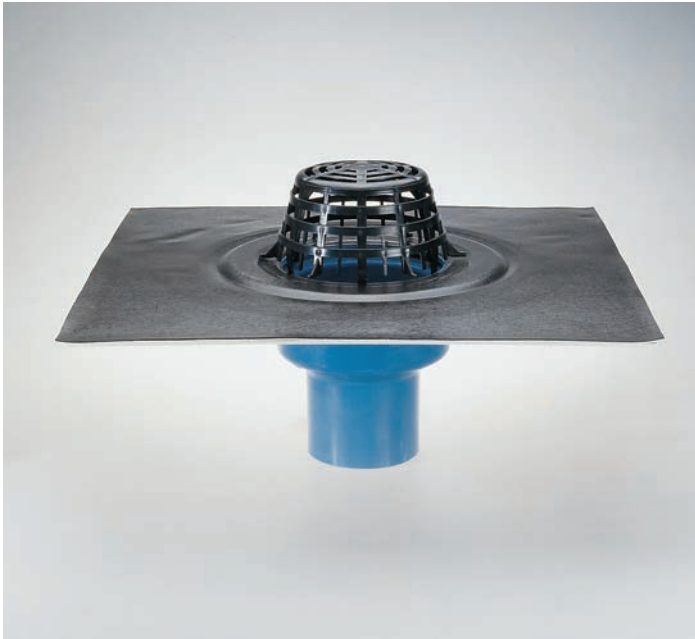
**Extension element made of PUR**  
up to 16 cm **3081**  
bis 23 cm **3083**

Art.-No.	Drainage capacity*
3008, 3028, 3028.2	9,5 l/s (45 mm)

Drainage capacity at down pipe in litres per second (at accumulation height in millimetres)

## ■ Compact collar drain

### The value for money solution



Compact-Collar drain, horizontal, shown here with Wolfin collar

#### Compact-Collar drain made of PUR

heat insulated, CFC-free, with pebble trap and foam-filled feeder line (Bitumen, PVC or special foil).

**Also available as a heatable drain**, with self-regulating 230 V heater or in a 24 Volt safety low voltage format.

Extension element with feeder line and anti-backflow seal, suitable for all compact collar drains and Universal drains.

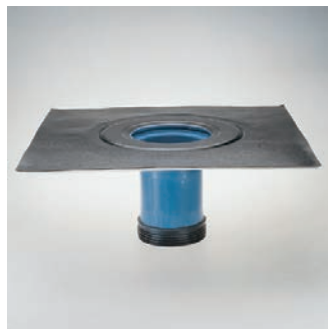
#### The compact collar drain:

- with large adhesive collar
- adhesive collar made of bitumen, PVC- or special foil
- fully heat insulated
- extensive accessory range, e.g. terrace construction sets, pebble ring with lid etc.
- made of CFC-free PUR-Integral hard foam
- quality controlled production process in acc. with DIN 1253

#### Installation example compact collar drain



Compact collar drain, vertical, with particularly low construction height!



The extension element is for insulating material up to a thickness of 35 cm.



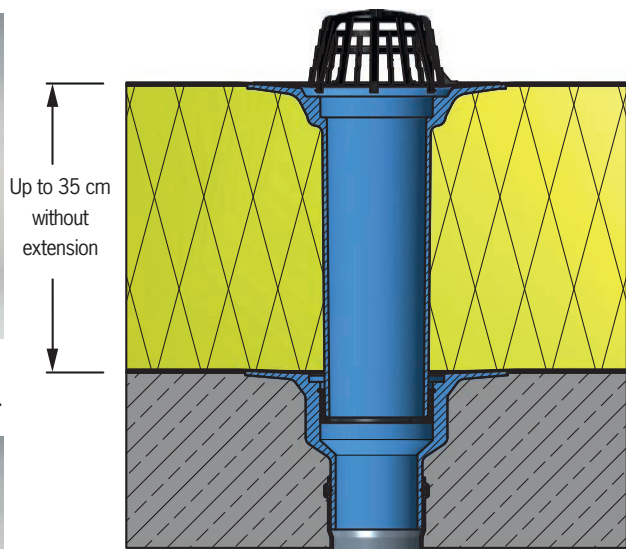
The compact-collar drain DN 70/DN 100/DN 125 is available in both vertical and horizontal variations as a heatable drain.

Heated by a self-regulating 230 V heater or in a safety low voltage (24 Volt) format. Keeps the drain ice-free, even at extremely low temperatures.

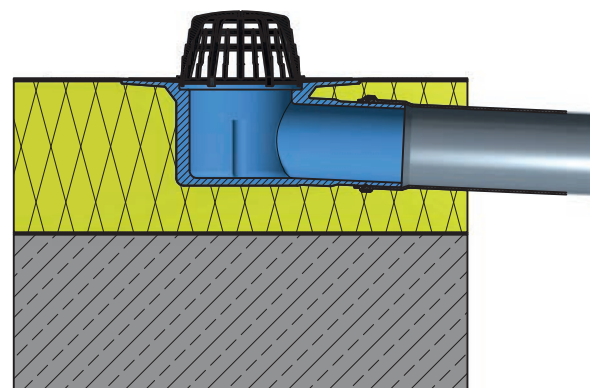
There is a suitable Grumbach Drain Defroster with self-regulating temperature suitable for the 24 V version (see page 41/42).



Drain with pebble trap in a flat roof

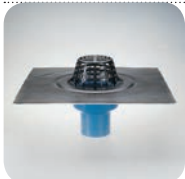


Compact collar drain vertical DN100 with extension element in insulated roof



Compact collar drain horizontal DN100 with extension element in insulated roof

Dimension | Article No.



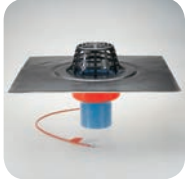
**Compact-Collar drain made of PUR vertical**

DN 70 **3102**  
 DN 100 **3104**  
 DN 125 **3106**



horizontal:

DN 70 **3112**  
 DN 100 **3114**  
 DN 125 **3115**



**Compact-Collar drain made of PUR vertical**

**heatable** (24V):

DN 70 **3122**  
 DN 100 **3124**  
 DN 125 **3126**

**heatable** (230V):

DN 70 **3122.2**  
 DN 100 **3124.2**  
 DN 125 **3126.2**



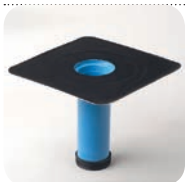
Horizontal

**heatable** (24V):

DN 70 **3132**  
 DN 100 **3134**  
 DN 125 **3136**

**heatable** (230V):

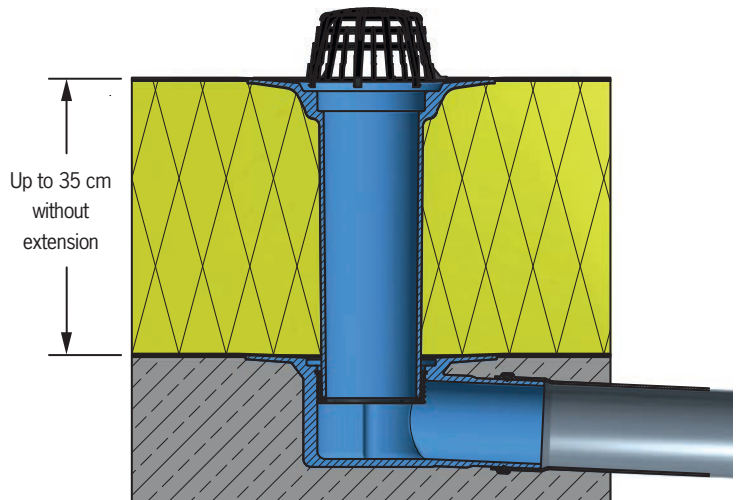
DN 70 **3132.2**  
 DN 100 **3134.2**  
 DN 125 **3136.2**



**Extension element made of PUR**

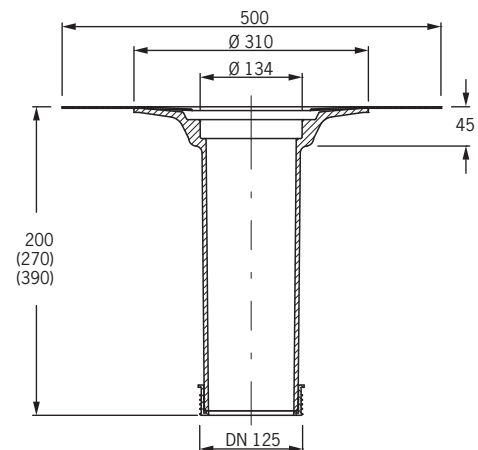
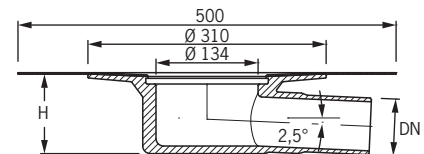
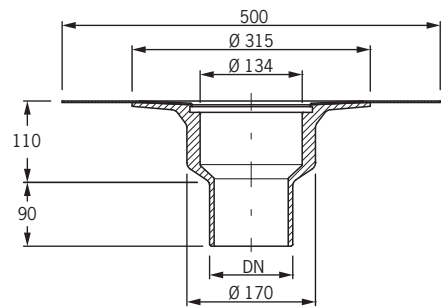
bis 16 cm **3181**  
 bis 23 cm **3183**  
 bis 35 cm **3185**

## Installation example compact collar drains



Compact collar drain horizontal DN100 with extension element in insulated roof

## Technical data compact collar drains



Art.-No.	Nominsl-Ø	Actual-Ø	H	Drainage capacity*
<b>compact collar drains, vertical</b>				
<b>3102, 3122, 3122.2</b>	DN 70	75		6,3 l/s (35 mm)
<b>3104, 3124, 3124.2</b>	DN 100	110		6,8 l/s (35 mm)
<b>3106, 3126, 3126.2</b>	DN 125	125		8,7 l/s (45 mm)
<b>Compact collar drains, horizontal</b>				
<b>3112, 3132, 3132.2</b>	DN 70	75	105	5,8 l/s (35 mm)
<b>3114, 3134, 3134.2</b>	DN 100	110	145	6,1 l/s (35 mm)
<b>3116, 3136, 3136.2</b>	DN 125	125	160	8,5 l/s (45 mm)

Drainage capacity at down pipe in litres per second (at accumulation height in millimetres)



## ■ Balcony drain DN 50 with Clamp flange/with adhesive collar

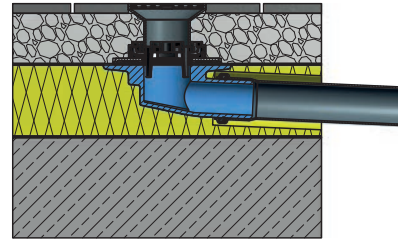


**Balcony drain DN 50 with Clamp flange /with adhesive collar**  
Balcony drains horizontal DN 50 with clamp flange and small pebble trap  
Balcony drains are universally deployable, fit any type of balcony and small roof. With the security clamp, any feeder line can be fitted with a flange.

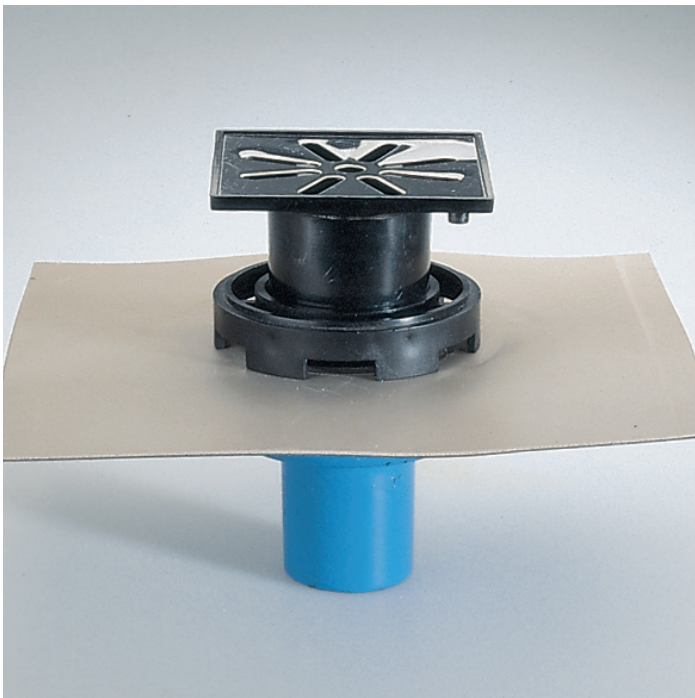
### Balcony drain DN 50 made of PUR

heat insulated, CFC-free, with pebble trap and clamp flange or adhesive collar (bitumen, PVC, or special purpose foil - see pricelist). The models with a clamp flange are fitted with a combination seal for flange pressing or anti-backflow seal.

#### Installation example balcony drain DN 50



Balcony drain horizontal DN 50 in the heat insulation with pebble trap and inlet piece in slabbed covering on the terrace.



**Balcony drain, vertical DN 50, with adhesive collar** pebble trap and inlet piece, which is able to be walked upon for use on balconies, for example.



**Balcony drain, horizontal DN 50, with Extension element with adhesive collar**, pebble trap and inlet piece, which is able to be walked upon for use on balconies, for example.

# Balcony drain DN 50 with accessories

Type | Article No.



**Balcony drain DN 50 made of PUR**  
vertical:  
Clamp flange **2500**  
Adhesive collar **3500**



horizontal:  
Clamp flange **2511**  
Adhesive collar **3511**



**Extension element made of PUR for balcony drains:**  
Clamp flange **2580**  
Adhesive collar **3580**



**Inlet piece**  
with stainless steel grate, can be walked upon, 4.5 cm high  
**2590**

**Step inlet piece**  
with stainless steel grate, can be walked upon, 10 cm high  
**2591**

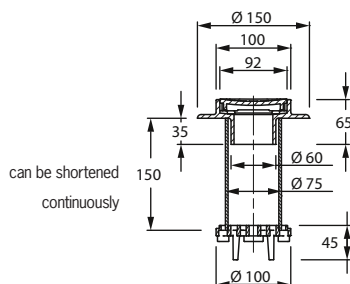


**Super inlet made of aluminium**  
**2592**

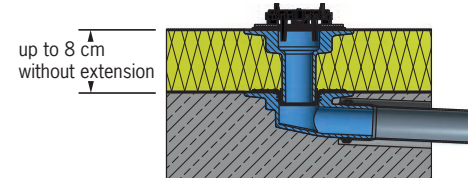
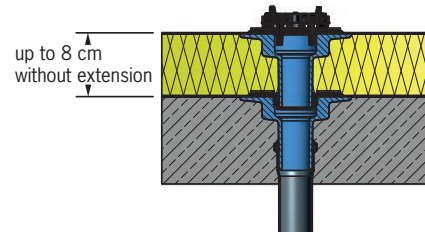
**Pebble trap made of PP**  
**2593**

Art.-No.	Drainage capacity*
<b>Balcony drains, vertical</b>	
<b>2500</b>	1,5 l/s (35 mm)
<b>3500</b>	1,7 l/s (35 mm)
<b>Balcony drains, horizontal</b>	
<b>2511</b>	1,5 l/s (35 mm)
<b>3511</b>	1,7 l/s (35 mm)

## Technical data super inlet made of aluminium

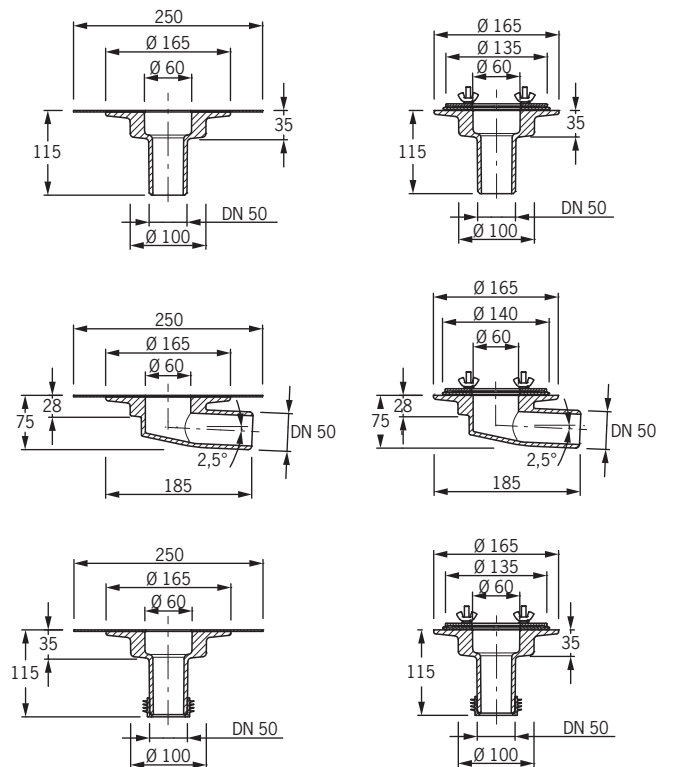


## Installation example balcony drains

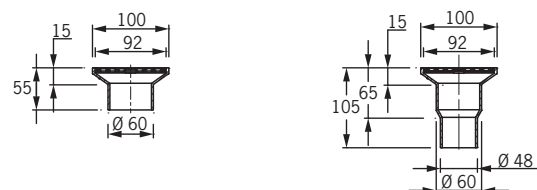


Balcony drain vertical or horizontal DN 50 with extension element insulated roof

## Technical data balcony drains

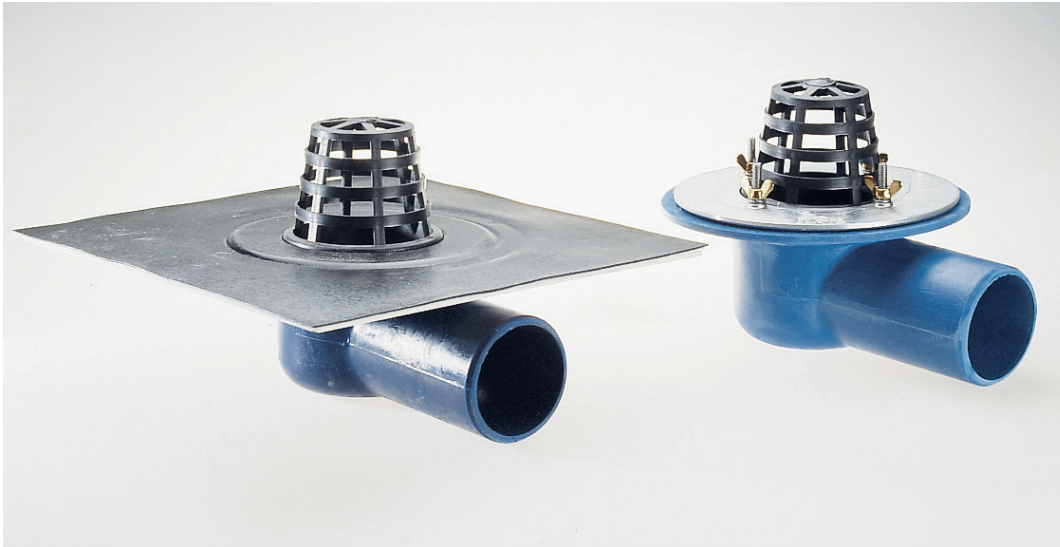


## Technical data inlet pieces



Drainage capacity at down pipe in litres per second (at accumulation height in millimetres)

## ■ Garage-/Balcony drain with accessories

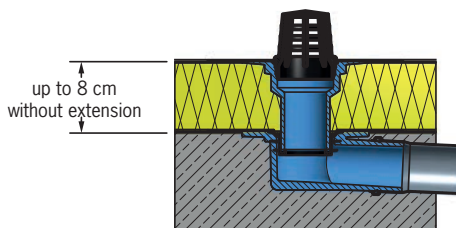


### Garage-/Balcony drain DN 70 made of PUR

- secure fixed/loose flange system with quadruple screwing or particularly securely fitted adhesive collar
- **very low construction height**
- A lot of practical accessories for the garage, balcony and terrace

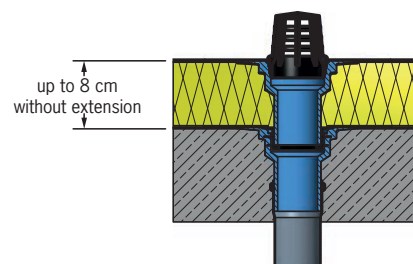
The **Garage-/Balcony drains** distinguish themselves through their particularly small and compact appearance with a support diameter of DN 70; this is the case with the clamp flange and the adhesive collar version. The horizontal drain is especially suitable for many problematic situations on balconies, loggias and small roofs, due to its particularly low construction height.

#### Installation example 1

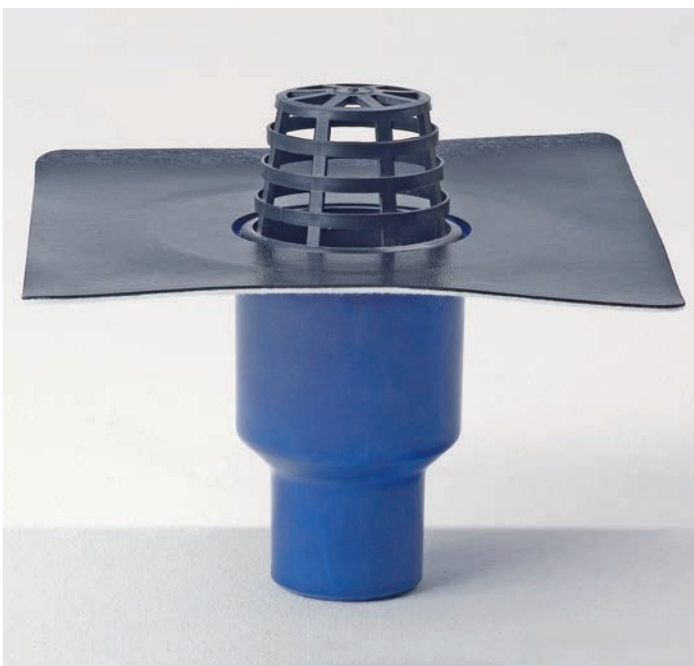


Garage/Balcony drain horizontal DN 70 with extension element in a insulated roof

#### Installation example 2



Garage/Balcony drain vertical DN 70 with extension element in a insulated roof



### Garage-/Balcony drain DN 50/70 and DN 70/100 made of PUR

- with Double function DN 50/70 and DN 70/100
- to obtain DN 70, simply saw off the DN50 supports
- to obtain DN 100, simply saw off the DN70 supports

# Garage/Balcony drain with accessories

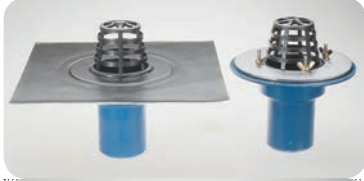
Dimension | Article No.



**Garage/Balcony drain DN 50/70 made of PUR vertical:**  
Adhesive collar **3740**



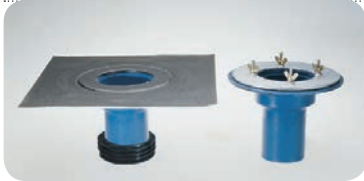
**Garage/Balcony drain DN 70/100 made of PUR vertical:**  
Adhesive collar **3741**



**Garage/Balcony drain DN 70 made of PUR vertical:**  
Adhesive collar **3702**  
Clamp flange **2702**



**horizontal:**  
Adhesive collar **3712**  
Clamp flange **2711**



**Extension element DN 70 made of PUR**  
Adhesive collar **3780**  
Clamp flange **2780**



**Inlay sieve round made of stainless steel**  
**2794**  
suitable for Art.-No. 3740, 3741



**Inlay sieve round made of PP**  
**2794.P**  
suitable for Art.-No. 3702, 3712 and 3780



**Terrace construction set small, can be walked upon (black)**  
**2795**  
suitable for Art.-No. 3740, 3741



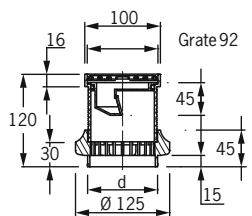
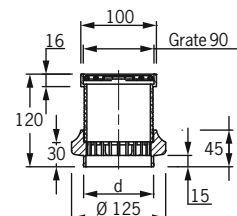
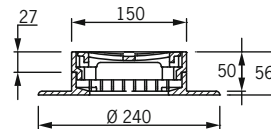
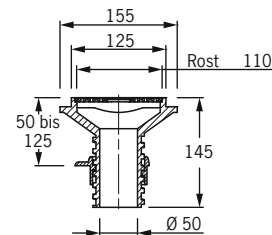
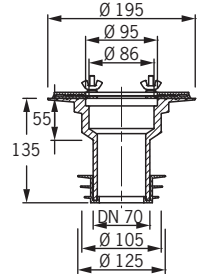
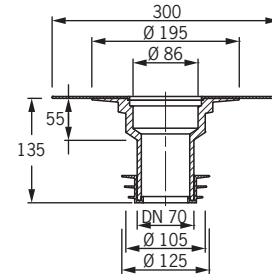
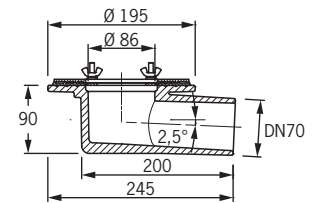
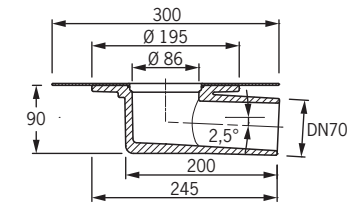
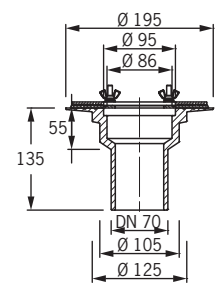
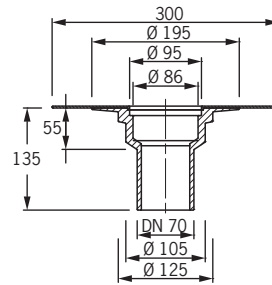
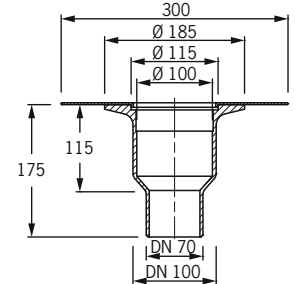
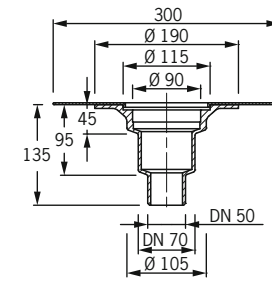
**Terrace construction set, can be driven upon**  
**2797**



**Balcony extension made of PP**  
suitable for all garage balcony drains, except Art.-3741  
without odour trap **2790**  
with odour trap **2791**

**Balcony extension made of PP**  
Suitable for Art.-No. 3741  
without odour trap **2798**  
with odour trap **2799**

## Technical data garage/balcony drains



Art.-No.	Drainage capacity*
<b>3740</b>	2,2/2,3 l/s (35 mm)
<b>3741</b>	4,1/4,7 l/s (35 mm)
<b>3702</b>	2,3 l/s (35 mm)
<b>2702</b>	2,5 l/s (35 mm)
<b>3712</b>	2,1 l/s (35 mm)
<b>2711</b>	2,5 l/s (35 mm)

Art.-No.	d
<b>2790, 2791</b>	92
<b>2798, 2799</b>	110

Drainage capacity at down pipe in litres per second (at accumulation height in millimetres)

## ■ Redevelopment drain For the redevelopment of the pot

### Redevelopment drain PUR DN 150 For the redevelopment of the pot

heat insulated, CFC-free, with pebble trap and lip seal; with clamp flange (with new flange pressing seal) or feeder line (bitumen, ECB, PVC, special foil).



Trapezoidal drain DN 100



Redevelopment Drain DN 90 made of aluminium

**Grumbach offers a whole range of redevelopment drains suitable for every application:**

#### Redevelopment drain made of PUR DN 150

With this drain (with adhesive collar or clamp flange) it is possible to redevelop any kind of old drain with an internal diameter of 172 to 185 mm with anti-backflow protection. That covers most redevelopment applications.

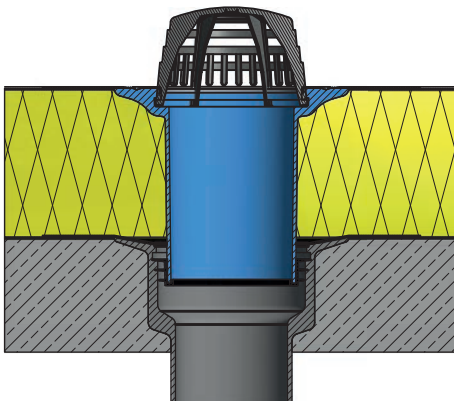
Analogue statements are valid for the redevelopment drains made of PUR DN 125, 140, 170 u. 200 (S.14).

#### Trapezoidal drain made of PUR

With the trapezoidal drain size DN 70/DN 100 it is possible to redevelop any kind of old drain with an internal diameter of 88 to 105 mm or from 123 to 135 mm with anti-backflow protection – not just trapezoidal sheet roofs.



#### Installation example



Redevelopment drain with feeder line and backflow seal in the drain top supplied.

#### Pot redevelopment

The tried and tested basic range of redevelopment drains made of PUR in DN 200, 170, 150, 140 and 125. The range also includes the trapezoidal drains made of PUR in DN 100 and 70 as well as the Garage-Drains made of PUR in DN 70 and 50. The connection between the redevelopment drain and the old drain takes place here (via a special made lip seal) in the pot of the old drains. The measuring of the internal diameter of the pot of the old drain is an important prerequisite to finding the suitable redevelopment drain.

# Redevelopment drain for the redevelopment of the pot

Dimension | Article No.

NEW!



**Redevelopment drain made of PUR DN 125 vertical, clamp flange:**  
DN 125 **2306**

Pot internal diameter: 140-150 mm

NEW!



**Redevelopment drain made of PUR DN 125 vertical, adhesive flange:**  
DN 125 **3306**

Pot internal diameter: 140-150 mm

NEW!



**Redevelopment drain made of PUR DN 140 vertical, clamp flange:**  
140 **2307**

Pot internal diameter: 155-165 mm

NEW!



**Redevelopment drain made of PUR DN 140 vertical, adhesive flange:**  
140 **3307**

Pot internal diameter: 155-165 mm

NEW!



**Redevelopment drain made of PUR DN 150 vertical, clamp flange:**  
157 **2308**

Pot internal diameter: 172-185 mm

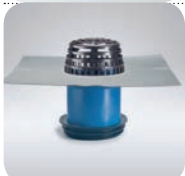
NEW!



**Redevelopment drain made of PUR DN 150 vertical, adhesive flange:**  
157 **3308**

Pot internal diameter: 172-185 mm

NEW!



**Redevelopment drain made of PUR DN 170 vertical, adhesive flange:**  
170 **3329**

Pot internal diameter: 185-198 mm



**Redevelopment drain made of PUR DN 200 vertical, adhesive flange:**  
200 **3309**

Pot internal diameter: 215-230 mm



**Trapezoidal drain made of PUR vertical:**  
DN 70 **2302**

Pot internal diameter: 88-105 mm

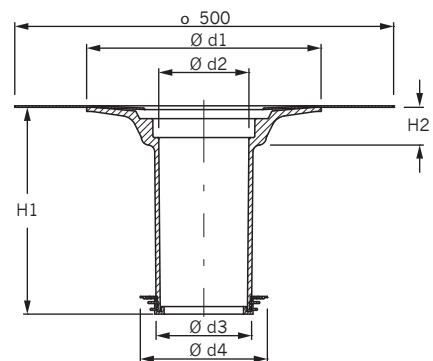
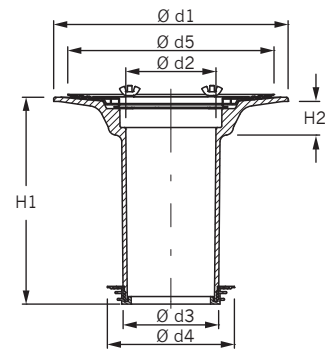
DN 100 **2304**  
Pot internal diameter: 123-135 mm



**Redevelopment drain made of aluminium vertical:**  
DN 90 **2303**

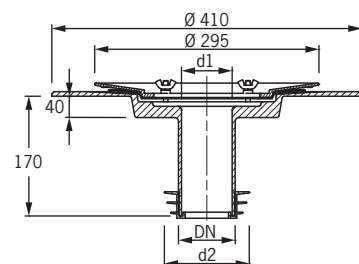
Pot internal diameter: 100-105 mm and pipes DN 100

## Technical data redevelopment drain made of PUR



Art.	d1	d2	d3	d4	d5	H1	H2
2306	310	-	125	167	273	280	45
3306	310	118	125	167	-	280	45
2307	310	136	140	179	273	280	70
3307	310	130	140	179	-	280	70
2308	285	125	157	212	275	200	30
3308	250	146	157	212	-	190	30
3329	310	160	170	210	-	260	40
3309	340	190	200	241	-	260	70

## Technical data Trapezoidal drain made of PUR

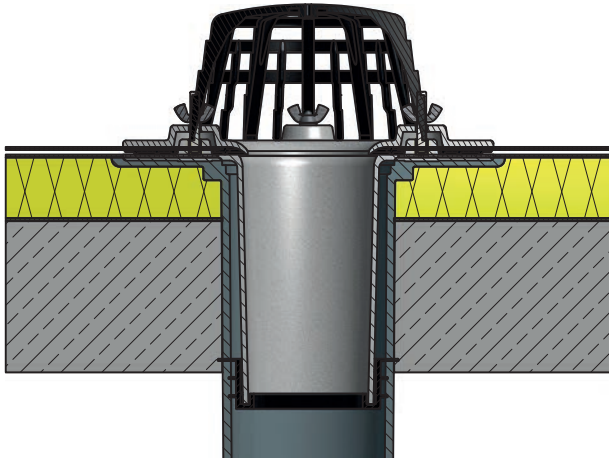


Art.	DN	d1	d2	Drainage capacity*
2302	70	68	116	6,7 l/s (35 mm)
2304	100	104	150	5,9 l/s (35 mm)

Drainage capacity at down pipe in litres per second (at accumulation height in millimetres)

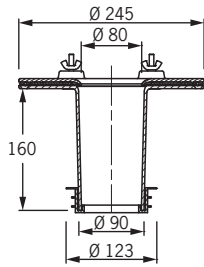
## Redevelopment drain for the redevelopment of old pipes

### Installation example redevelopment drain made of aluminium DN 90



Redevelopment drain made of aluminium DN 90 for the redevelopment of sleeveless pipes and roof drains DN 100 without applying extra insulation.

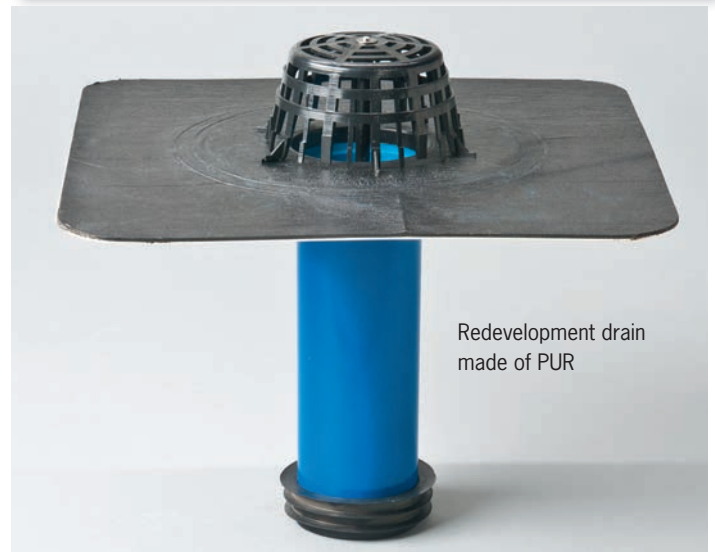
### Installation example redevelopment drain made of aluminium DN 90



Art.	DN	Ist-Ø	Drainage capacity*
2303	90	90	3,9 l/s (35 mm)

### »Pipe redevelopment« is the new redevelopment method

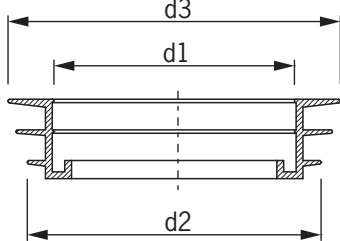
The redevelopment drains made of PUR 36/56/88/103/110 can be simply inserted into the old drains or pipes DN 50, 70, 100 or 125. The extra long supports reach through the pot of the old drain into the downpipe or the support of the old drain. They are therefore a real alternative to the »traditional« redevelopment drains (S. 13 u. 14), because the internal diameter of the pot of the existing drain is irrelevant. That is the deciding advantage of these PUR drains! The minimum requirements of DIN regarding drainage are fulfilled even although it has such a small nominal width!



Redevelopment drain made of PUR

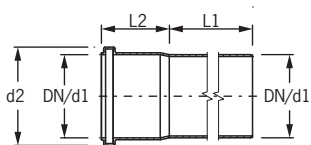
## Accessories for all redevelopment drains

### Lip seals for redevelopment



for drain Art.-No.	d1 (DN)	d2	d3	Field of application	Dimension   Article-No.
3311	36	45	52	42–45 mm	DN 36 <b>3311.D</b>
3313	56	76	85	65–80 mm	DN 56 <b>3313.D</b>
Gully DN 70	70	83,5	95	84–90 mm	DN 70 <b>2380</b>
2302	70	95,5	116	88–105 mm	DN 70 <b>2382</b>
3315/2303	88/90	105	122	100–105 mm	DN 88/90 <b>3315.D</b>
Gully DN 90	90	110	121	95–105 mm	DN 90 <b>2381</b>
3317	103	127	134	117–126 mm	DN 103 <b>3317.D</b>
2304	100	130	150	123–135 mm	DN 100 <b>2384</b>
2306, 3306	125	142	167	140–150 mm	DN 125 <b>2386</b>
2307, 3307	140	158	179	155–165 mm	DN 140 <b>2307.D</b>
2308, 3308	150	175	212	172–185 mm	DN 150 <b>2388</b>
3329	170	190	210	185–198 mm	DN 170 <b>3329.D</b>
3309	200	217	241	215–230 mm	DN 200 <b>2389</b>

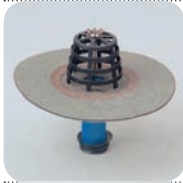
### HT-pipe with sleeve (length 0.5 m)



DN	d1	d2	L1	L2	Dimension   Article-No.
50	50	62	500	63	DN 50 <b>2390</b>
70	75	88	500	67	DN 70 <b>2391</b>
90	90	105	500	70	DN 90 <b>2393</b>
100	110	125	500	80	DN 100 <b>2392</b>
125	125	144	500	90	DN 125 <b>2394</b>
150	160	183	500	100	DN 150 <b>2395</b>

## Redevelopment drain for the redevelopment of the pipe

Dimension | Article No.



**Redevelopment drain made of PUR 36**  
vertical:  
36      **3311**  
redevelopment of old drains DN 50



**Redevelopment drain made of PUR 56**  
vertical:  
56      **3313**  
redevelopment of old drains DN 70



**Redevelopment drain made of PUR 88**  
vertical:  
88      **3315**  
redevelopment of old drains DN 100



**Redevelopment drain made of PUR 103**  
vertical:  
103      **3317**  
redevelopment of old drains DN 125



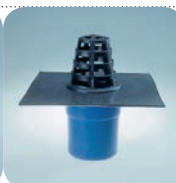
**Redevelopment drain made of PUR 110 (DN 100)**  
vertical:  
110      **3314**  
pipes DN 100 with sleeve



**Super pebble trap made of aluminium**  
Height 30 mm  
Diameter 250 mm

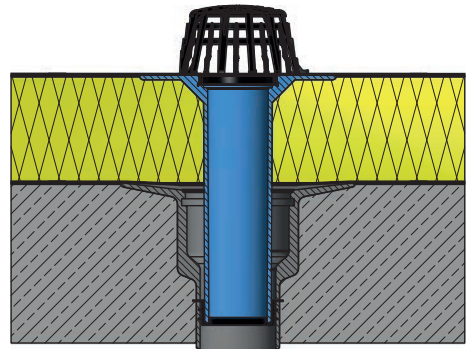
Typ I      **3380**  
Suitable for Art.-No. 3313

Typ II      **3380.1**  
Suitable for  
Art.-No. 3315, 3317, 3314



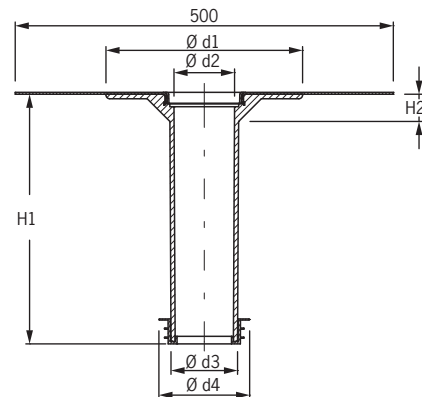
**Garage drain made of PUR**  
vertical:  
DN 50      **3300**  
DN 70      **3302**

### Installation example pipe redevelopment



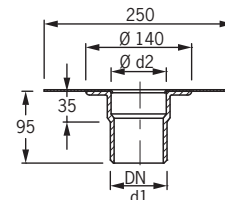
Redevelopment drain with feeder and backflow seal in supports supplied.

### Technical data redevelopment drains made of PUR



Art.	d1	d2	d3	d4	H1	H2	Drainage capacity*
<b>3311</b>	105	42	36	52	110	6	3,0 l/s (35 mm)
<b>3313</b>	260	51	56	85	325	25	3,2 l/s (35 mm)
<b>3315</b>	260	86	88	122	325	35	4,5 l/s (35 mm)
<b>3317</b>	260	97	103	134	325	40	4,9 l/s (35 mm)
<b>3314</b>	260	103	110	-	300	35	4,6 l/s (35 mm)

### Technical data garage drain made of PUR



Art.	DN	d1	d2	Drainage capacity*
<b>3300</b>	50	50	48	1,9 l/s (35 mm)
<b>3302</b>	70	75	73	1,7 l/s (35 mm)

Drainage capacity at down pipe in litres per second (at accumulation height in millimetres)



## ■ Ventilation for warm and cold roofs

Rain cap made of PE

Water deflector made of PE, already included in the scope of delivery of the ventilation pipe

Adhesive collar made of PUR with optional feeder line (two pieces are required for insulated roofs)

Ventilation pipe made of PVC



**Grumbach Adhesive flanges and adhesive collars** with lip seal, fit onto all plastic pipes and sometimes onto SML pipes. They are pressure tested up to a 2 metre water column.



**The adhesive flange** is only suitable for bitumen sealing and for sealing with liquid plastic.



**Adhesive collar** Now also with feeder line made of bitumen, is recommended by us as being the better solution as opposed to the adhesive flange!

**Ventilation pipes** Simply install the ventilation pipe up to the required height above the roof and dependent on the roof construction add an adhesive flange or adhesive collar.

**Water deflector** serves to protect the lip seal on the adhesive collar/flange from effects of the environment.

**The cap** is suitable for ventilation pipes. It is not required for down pie ventilation.

### Installation example

#### Power supply insert made of PE

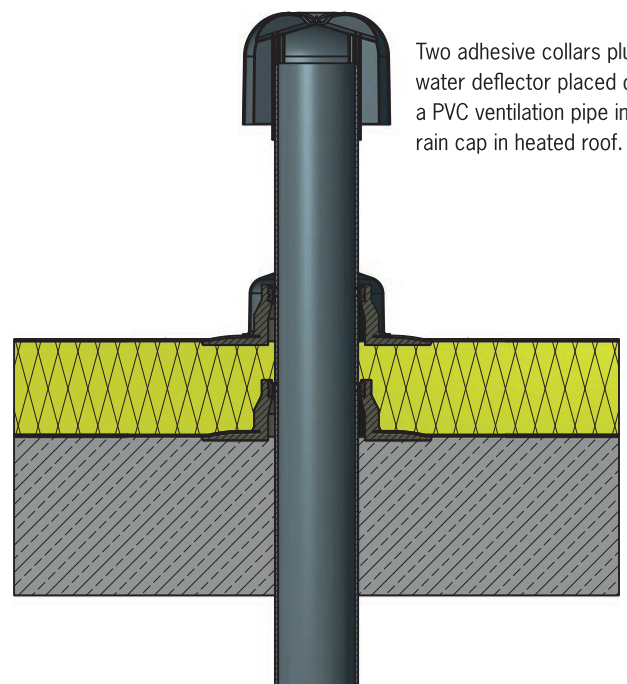
For the insertion of power supply cables of all kinds through the flat roof seal. Also suitable for ventilation for the whole pipe diameter. Suitable for the ventilation pipes made of PVC.



Energy lead-in



Heated roof ventilator made of PUR

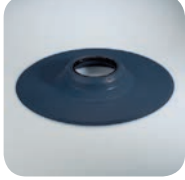


Two adhesive collars plus water deflector placed on a PVC ventilation pipe incl. rain cap in heated roof.

Dimension | Article No.



**Adhesive collar made of PUR**  
 DN 70 **5102**  
 DN 100 **5104**  
 DN 125 **5106**  
 DN 150 **5108**



**Adhesive collar made of PUR (black)**  
 DN 70 **5112**  
 DN 100 **5114**  
 DN 125 **5116**  
 DN 150 **5118**



**Ventilation pipe made of PVC**  
 DN 70 **5122**  
 DN 100 **5124**  
 DN 125 **5126**  
 DN 150 **5128**



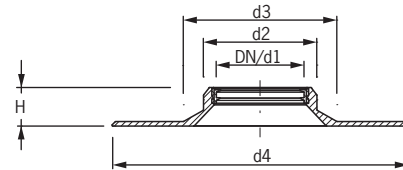
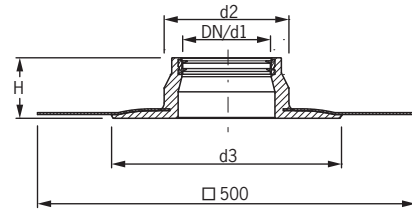
**Rain cover made of PE**  
 DN 70 **5131**  
 DN 100 **5133**  
 DN 125 **5135**  
 DN 150 **5137**



**Power supply insert made of PE**  
 DN 70 **5142**  
 DN 100 **5144**  
 DN 125 **5146**  
 DN 150 **5148**

## Ventilation for insulated and not insulated roof

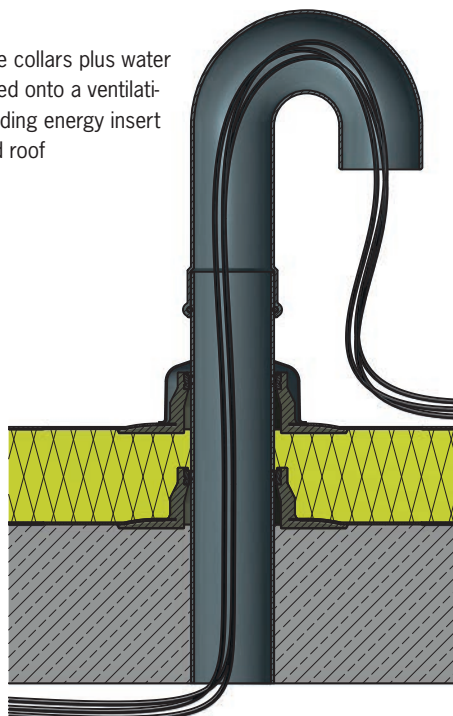
### Technical data Adhesive collar / Adhesive flange



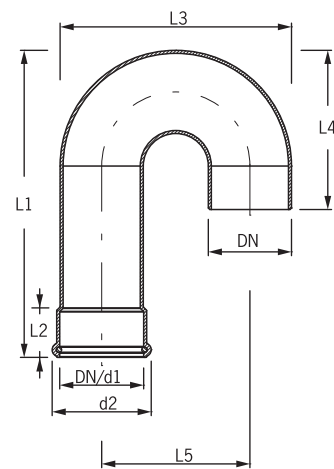
Art.	DN	d1	d2	d3	d4	H
5102	70	75	160	310	-	80
5104	100	110	165	300	-	85
5106	125	125	200	355	-	85
5108	150	160	215	395	-	85
5112	70	75	110	160	355	50
5114	100	110	150	200	400	50
5116	125	125	185	215	408	50
5118	150	160	200	250	444	50

### Installation example power supply insert

Two adhesive collars plus water deflector fitted onto a ventilation pipe including energy insert in the heated roof



### Technical data energy insert



Art.	DN	d1	d2	L1	L2	L3	L4	L5
5102	70	75	95	340	65	215	165	140
5104	100	110	130	420	65	310	215	196
5106	125	125	150	360	65	345	200	220
5108	150	160	190	410	65	450	260	290

## ■ Vents for redevelopment, roofs and cold roofs



**Redevelopment vent made of PUR, consisting of:**

Water deflector made of PE

Ventilation pipe made of PVC

adhesive collar made of PUR with optional feeder line

Lip seal

### **Grumbach redevelopment vent made of PUR**

heat insulated, CFC-free, with lip seal; adhesive flange with foam-filled feeder line (bitumen, PVC or special foil), backflow seal, PVC pipe and water deflector.

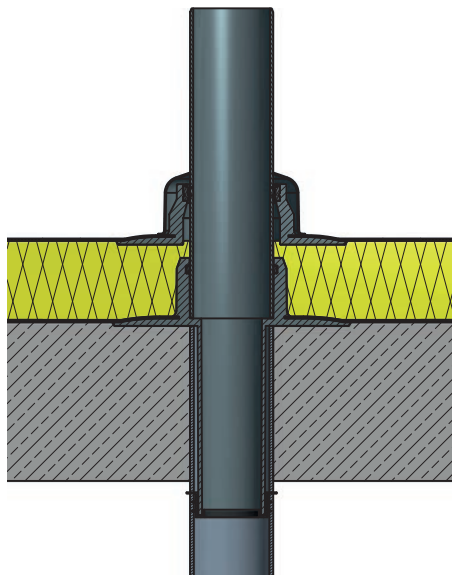


### **Installation example redevelopment ventilator**

Ventilator in event of redevelopment: heated roof construction

Top part:  
New ventilation pipe with adhesive collar and water deflector inserted in redevelopment vent.

Bottom part:  
Redevelopment ventilator inserted into old sleeveless ventilation pipe.



### **The Grumbach redevelopment vent**

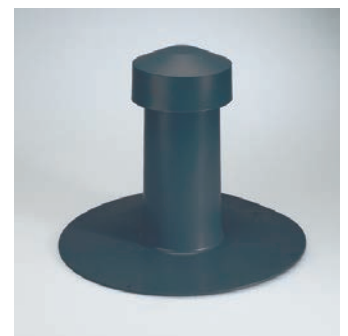
is suitable for backflow-free connection of drain connections onto sleeveless pipes and into the sealing surface.

### **Grumbach roof vent made of PUR**

with broad adhesive collar and heavy rainproof cover. This ensures that the gap in the unheated roof is well ventilated.



Roof ventilator DN 200



Cold roof ventilator with adhesive collar, also available with feeder line of your choice.

Dimension | Article No.



**Redevelopment vent  
56/88/103 made of PUR**  
56 für DN 70     **5161**  
88 für DN 100    **5163**  
103 für DN 125   **5165**

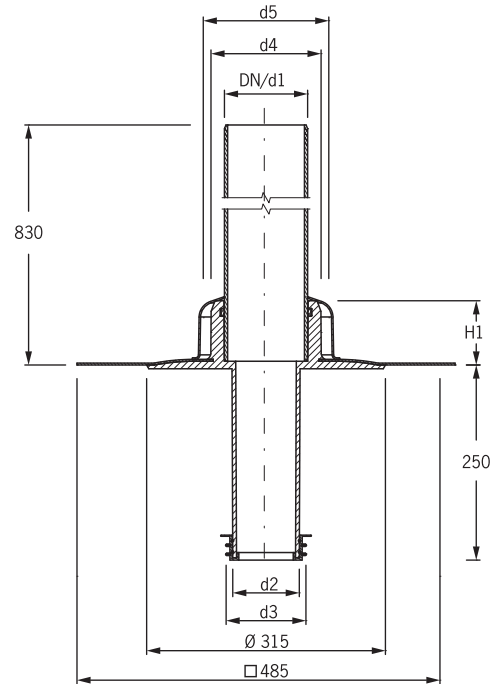


**Vent DN 200 made of PUR**  
mit Regenhut     **5157**  
ohne Regenhut   **5159**



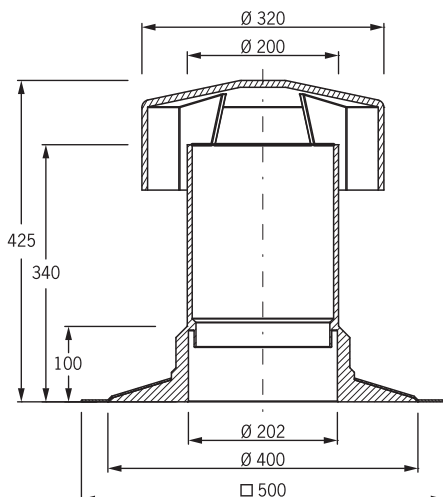
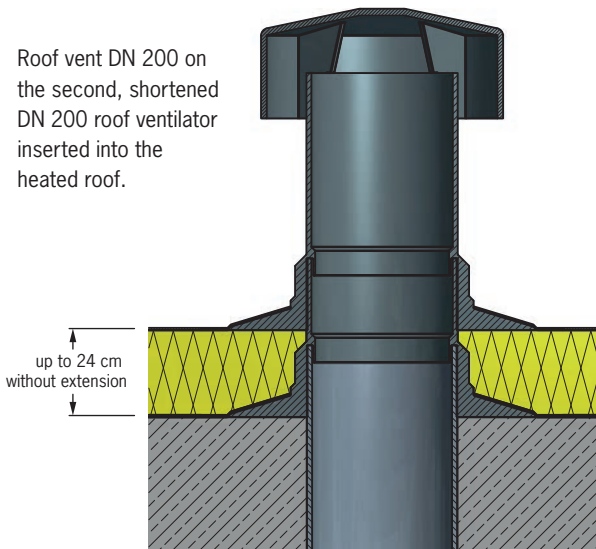
**Cold roof vent made of PUR  
with adhesive flange  
with feeder line**  
Ø 100    5154  
Ø 100     **5155**

## Technical data redevelopment ventilator



## Installation example and technical data roof ventilator DN 200

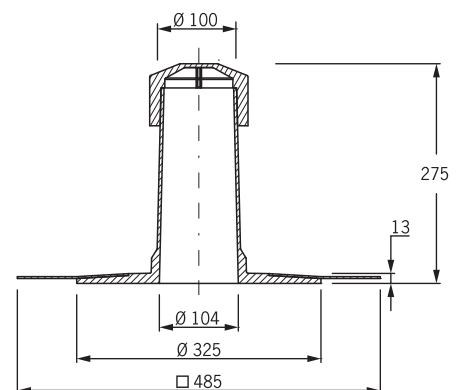
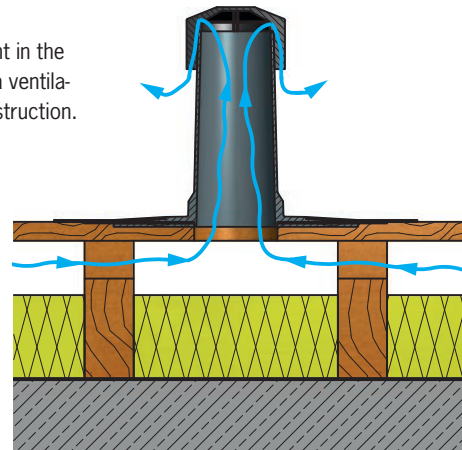
Roof vent DN 200 on the second, shortened DN 200 roof ventilator inserted into the heated roof.



Art.	DN	d1	d2	d3	d4	d5	H1
5161	70	75	56	84	112	131	75
5163	100	110	88	120	140	166	85
5165	125	125	103	133	140	166	90

## Installation example and technical data cold roof ventilator

Cold roof vent in the roof seal of a ventilated roof construction.



## ■ Combi drain for ventilation and drainage



### One hole for drainage and ventilation

The fewer the holes the better the roof.

This is why the combination drain has been used in many roofs for over 30 years.

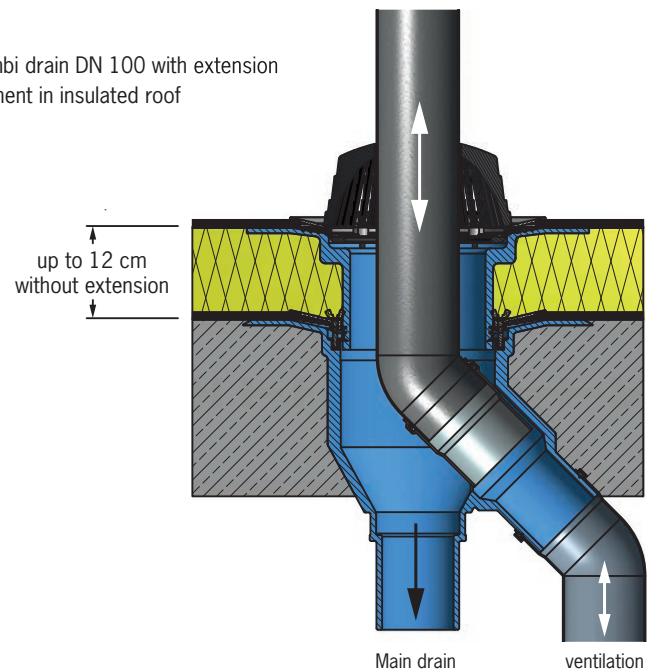
### Combi drain made of PUR

allows down pipe ventilation and drainage through one roof lead-in; heat insulated, CFC-free, with pebble trap, combi lead-in for flange pressing/backflow prevention, clamp flange and ventilation pipe DN 100.

**Extension element** heat insulated, CFC-free, with clamp flange and flange press seal. Suitable for combi drain.

### Installation example: Ventilation and drainage

Combi drain DN 100 with extension element in insulated roof



### Combi-drain: two become one

Especially in apartment buildings, rain and drain pipes are placed side by side in the same duct or installation block

up to the roof. The rain pipe is connected to the roof drain and the drain pipe is ventilated alongside it via the roof.

To be able to save boring through the roof a second time, Grumbach offers the so-called combi-drain as the ideal combination between roof drain and downpipe ventilation. The seal is made secure by the clamp flange with **combi-seal for flange pressing and backflow prevention**. The rainwater flows through the drain as normal. The second pipe which is fed through the drain pot ventilates the sanitary drain pipe. The combi-drain is kept ice free in winter by rising gases.

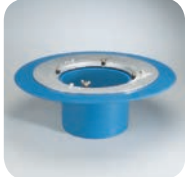
Result: there is no need to make and seal a second hole in the roof and no supplementary heating is required.

# ■ Combi-drain for ventilation and drainage

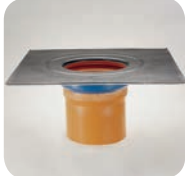
Dimension | Article No.



**Combi drain made of PUR  
vertical:**  
DN 100/100 **2204**



**Extension element made of  
PUR**  
DN 200 up to 12 cm  
**2280**



**Extension element made of  
PUR**  
DN 200 up to 23 cm  
**3084.K**



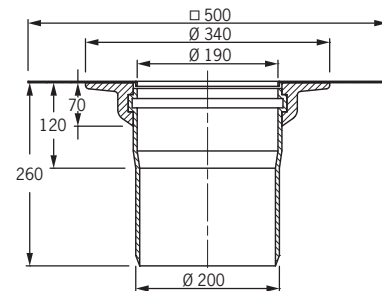
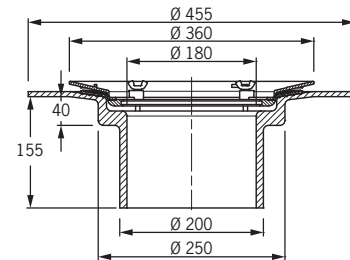
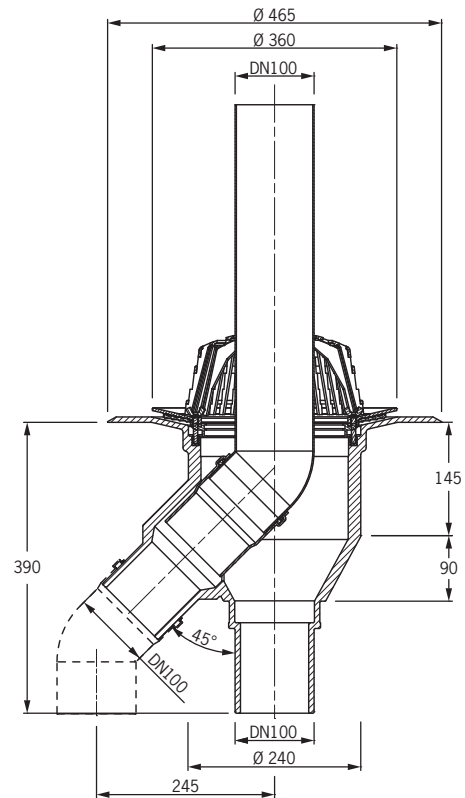
**Attachment made of  
PUR (black) for emergency  
drainage**  
**2290**



### Attachment for emergency drainage

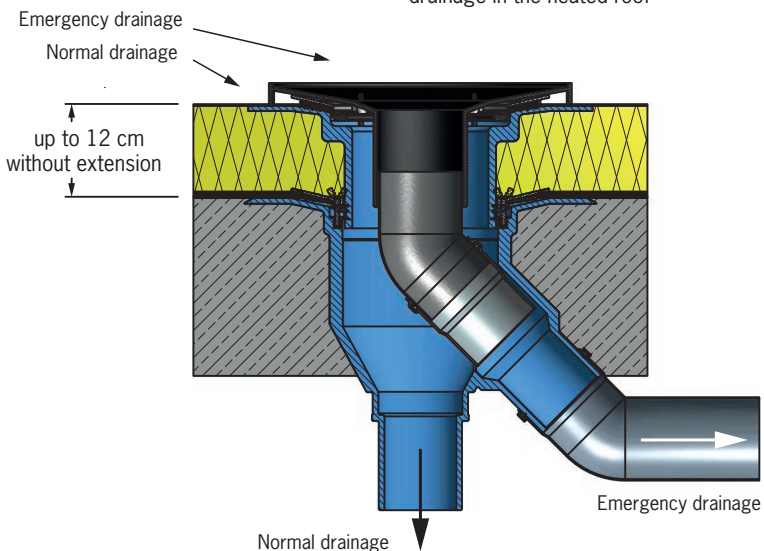
The combi drain is suitable for both normal and emergency drainage. If the rainwater becomes deeper than 35 mm it is automatically drained off. Suitable for all combi-drains with/without extension element.

### Technical data



### Installation example: Normal and emergency drainage

Combi drain with extension element and attachment for emergency drainage in the heated roof



Art.-Nr	Drainage capacity*
<b>Combi drain</b>	
<b>2204</b>	9,5 l/s (35 mm)
<b>with attachment for emergency drainage</b>	
<b>2290</b>	9,5 l/s (35 mm) normal drainage, super drainage capacity in acc. with DIN 1986-100
	11,4 l/s (35 mm) DN 100 emergency drainage (in-house test)

Drainage capacity at down pipe in litres per second (at accumulation height in millimetres)

# ■ Collar drain DN 200

## You won't find bigger than this!



### Collar drain DN 200 made of PUR

heat insulated, CFC-free, with pebble trap incl. Fastening material

Foam-filled feeder line (bitumen, PVC or special foil).

Extension element with feeder line and anti-backflow seal, suitable for the collar drain DN 200.

#### Securing groove + pebble trap = secure pebble collection

The securing groove ensures that the connection between the body of the drain and the pebble trap is permanently secure

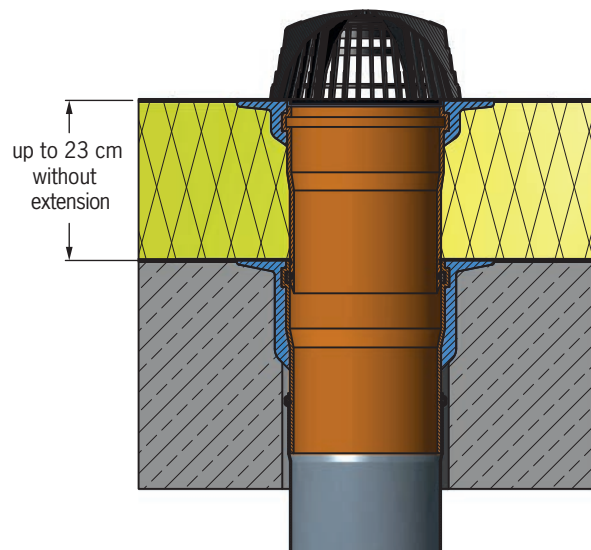
#### Securing groove + Anti-backflow seal = Secure backflow prevention

If base elements and extensions are used, as in e.g. insulated roofs, then the securing groove of the base element would be connected with the anti-backflow seal. The anti-backflow seal, which was specially developed for the collar drain, can be securely fastened to the securing groove.

If the extension element is fitted into the base element, then the required backflow prevention is provided.

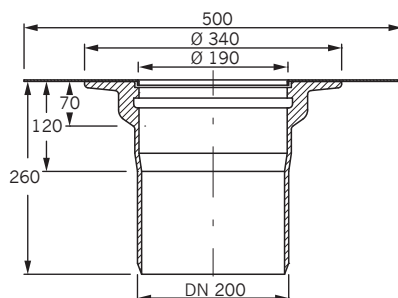
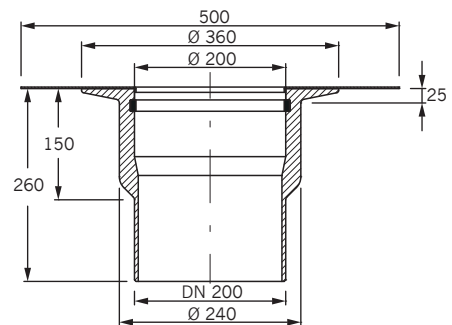
The seal cannot slip during this process as the seal always sits correctly.

### Installation example collar drain DN 200



Collar drain vertical DN 200 with extension element in insulated roof

### Technical data collar drain DN 200



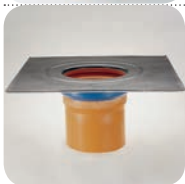
#### Dimension | Article No.

#### Collar drain made of PUR

vertical:  
DN 200 **3009**

#### Extension element made of PUR

DN 200  
bis 23 cm **3084**



## ■ Continuous balcony drain, sunken



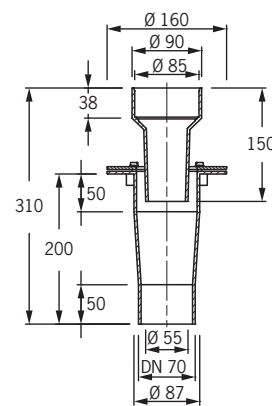
### Continuous balcony drain, sinkable

Made of aluminium, with clamp flange DN 70, 40 mm flange width. The special solution prefabricated construction.

### Continuous balcony drain with clamp flange made of aluminium

is particularly suited to balconies in blocks of flats of panel or prefabricated construction. The down pipes can be subsequently installed or removed. The special solution: Flange with  $\varnothing$  160 mm with clamp flange or simple for sealing with liquid plastic.

#### Technical data



## ■ Continuous balcony drain, sinkable



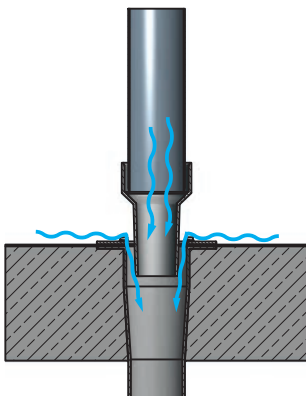
Dimension | Article-No.

**Continuous balcony drain, sinkable**

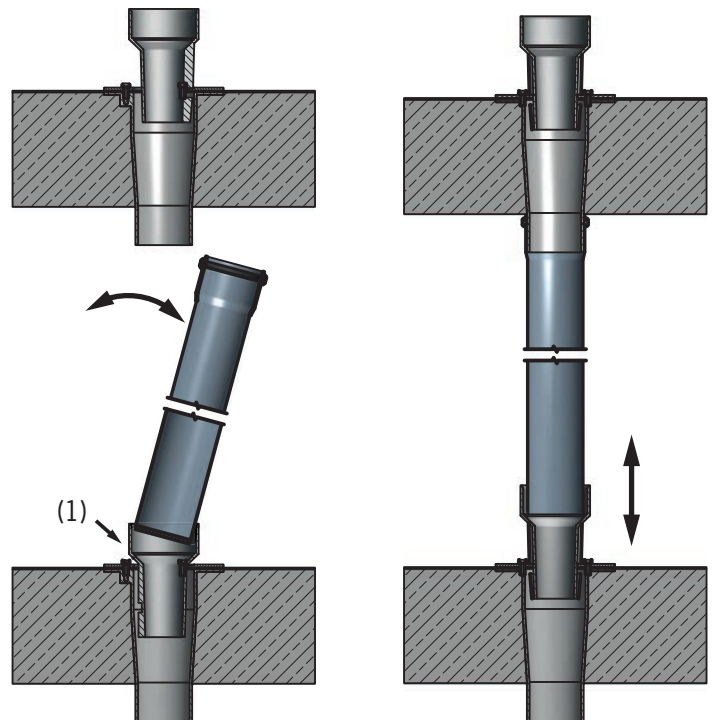
DN 70     2701

#### Installation example

The continuous balcony drain can be installed in a stacked manner and not only drains the water from the installation area but also from the water coming from the down pipe.



#### Installation example

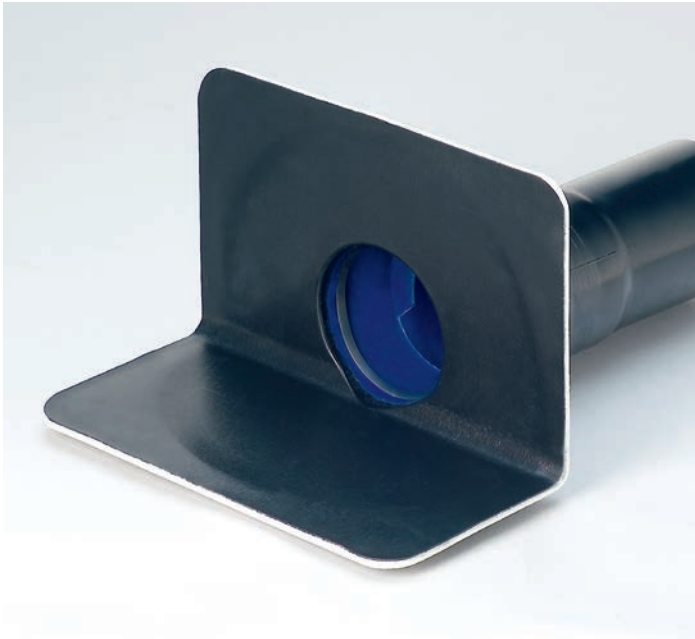


The sunken pipe inlet (1) allows the down pipe to be inserted or removed.

By lifting and locking the lower pipe inlet, the pipe sleeve is inserted onto the supports of the upper drain.



## ■ Attika balcony drain made of PUR in DN 50, 70, 100



Attika balcony drain made of PUR with insertion sleeve

### Attika balcony drain made of PUR

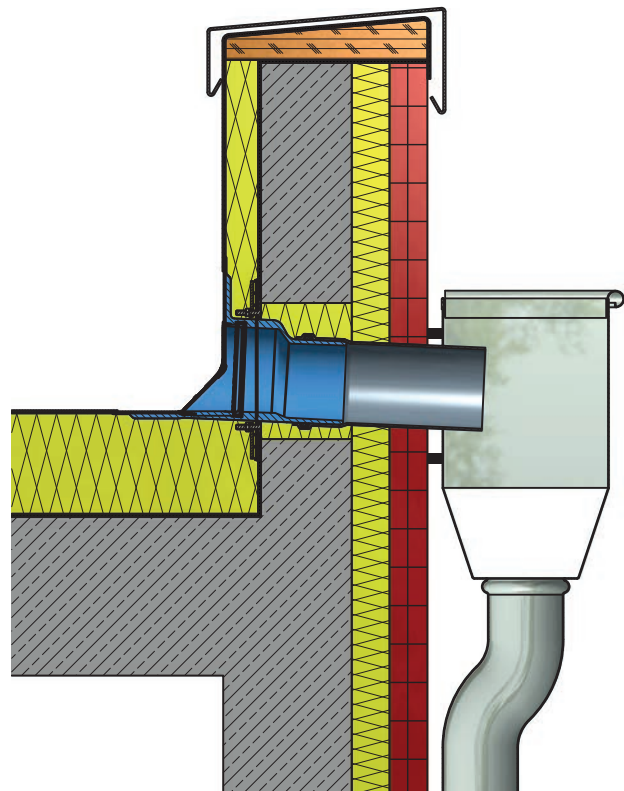
heat insulated, CFC-free, with PVC sleeve pipe (black) 50 cm long and poured bitumen, PVC or special cuff.

### Attika balcony drains

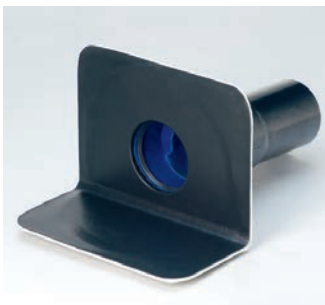
With the Attika balcony drains it is possible to solve drainage problems on roofs, terraces, balconies leafy pathways etc. in a way that was not previously possible.

One has the possibility to drain water above heated rooms, without weakening the heat insulation and by doing so creating thermal bridges (see installation example)

### Installation example



Attika balcony drain with vapour barrier connection piece in the vapour barrier and water collector. **To prevent frost damage, we recommend using our trace heating systems (see pages 41/42).**



Attika balcony drain made of PUR as emergency drain



Attika balcony drain made of PUR with wedge 6 x 6 cm and emergency element



Attika balcony drain made of PUR with integrated emergency drain

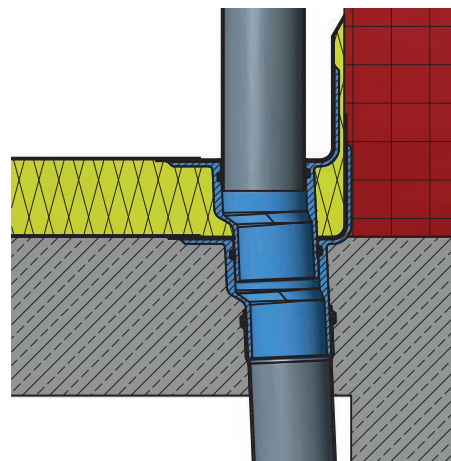


Attika balcony drain made of PUR

### Attika-Balcony drain with integrated emergency overflow

This drain is the consequent further development of the successful Attika balcony drains.

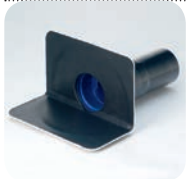
It offers every advantage of having an integrated emergency overflow for every type of balcony, terrace or flat roof. The overflow pipe can be fitted at two different overflow heights, to have a Universal way of using them in roofs and terraces of different heights.



2 x Attika drains as emergency overflow, installed vertically here as rain flowthrough directly against the wall.

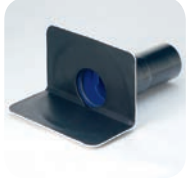
# Attika balcony drain in DN 50, 70, 100

Dimension | Article-No.



**Attika balcony drain made of PUR**

DN 50 **3410**  
DN 70 **3411**  
DN 100 **3412**



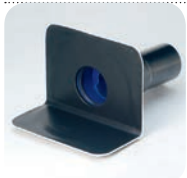
**Attika balcony drain made of PUR with insertion sleeve**

DN 50 **3413**  
DN 70 **3414**  
DN 100 **3415**



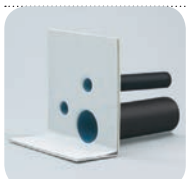
**Attika balcony drain made of PUR with insertion sleeve and wedge 6 x 6 cm**

DN 50 **3440**  
DN 70 **3442**  
DN 100 **3444**



**Attika balcony drain made of PUR with insertion sleeve as emergency overflow**

DN 50 **3403**  
DN 70 **3404**  
DN 100 **3405**



**Attika balcony overflow made of PUR with emergency drain equipped for two overflow heights!**

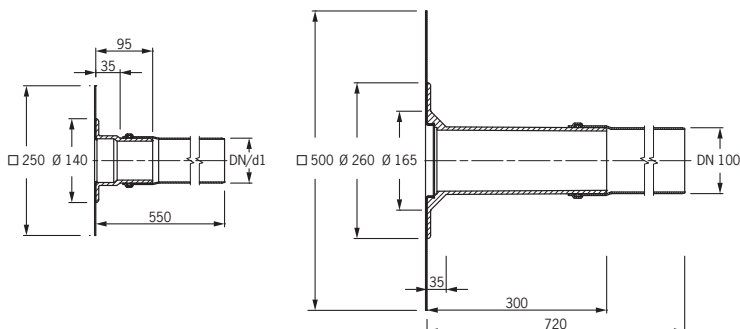
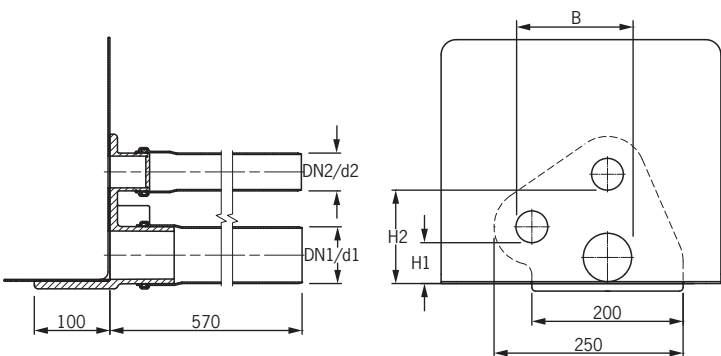
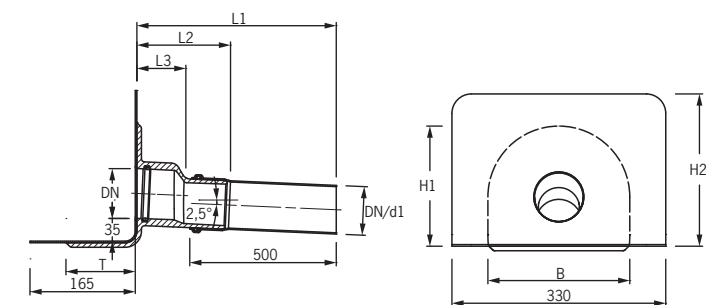
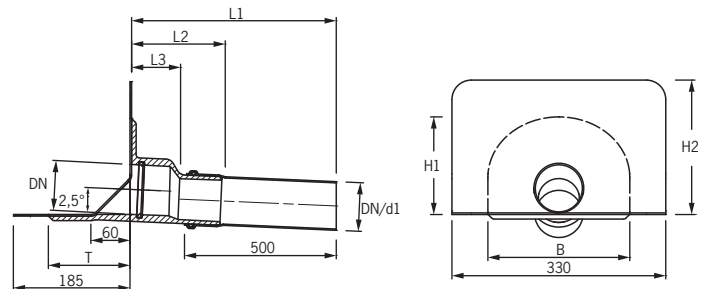
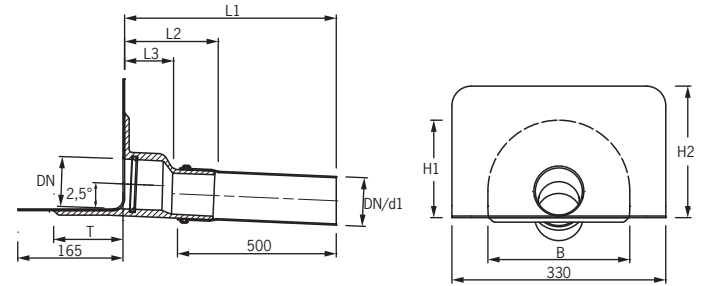
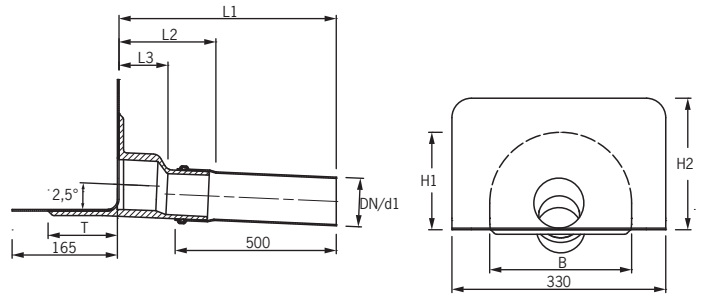
DN 70/50 **3421**  
DN 100/50 **3422**



**Attika emergency drain**

DN 50 **3400**  
DN 70 **3401**  
DN 100 **3402**

## Technical data Attika balcony drains



Art.	DN	d1	L1	L2	L3	T	B	H1	H2	Drainage capacity*
3410, 3413, 3440	50	50	630	130	65	95	190	95	200	0,6 l/s (35 mm)
3411, 3414, 3442	70	75	635	130	70	110	220	150	200	0,7 l/s (35 mm)
3412, 3415, 3444	100	110	640	160	80	125	255	185	200	1,0 l/s (35 mm)
3403	50	50	630	130	65	95	190	160	235	0,6 l/s (35 mm)
3404	70	75	635	130	70	110	220	185	235	0,7 l/s (35 mm)
3405	100	110	640	160	80	125	255	220	235	1,0 l/s (35 mm)

Art.	DN	DN1	DN2	B	d1	d2	H1	H2	Drainage capacity
3421		70	50	160	75	50	60	125	0,7 l/s (35 mm)
3422		100	50	190	110	50	75	125	1,0 l/s (35 mm)
3400	50	-	-	-	50	-	-	-	
3401	70	-	-	-	75	-	-	-	

Drainage capacity at down pipe in litres per second (at accumulation height in millimetres)

# Attika balcony drain with accessories

Dimension | Article-No.



**Attika emergency overflow element made of PUR 170**

DN 50 **2450**  
 DN 70 **2452**  
 DN 100 **2454**



**Attika emergency overflow element made of PUR 450**

DN 50 **2450.45**  
 DN 70 **2452.45**  
 DN 100 **2454.45**



**Attika drain element made of PUR 170**

with slit for wedge  
 DN 50 **2450.1**  
 DN 70 **2452.1**  
 DN 100 **2454.1**



**Attika drain element made of PUR 450**

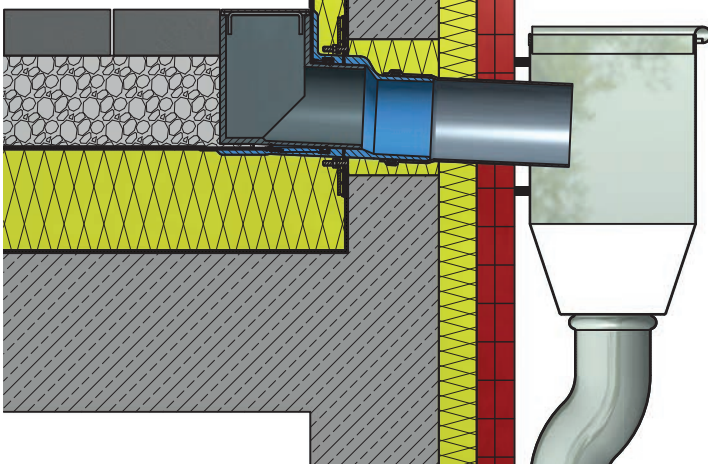
with slit for wedge and optional lateral inlet opening  
 DN 50 **2450.1.45**  
 DN 70 **2452.1.45**  
 DN 100 **2454.1.45**

The emergency overflow elements fit into all of the Attika balcony drains with insertion sleeve

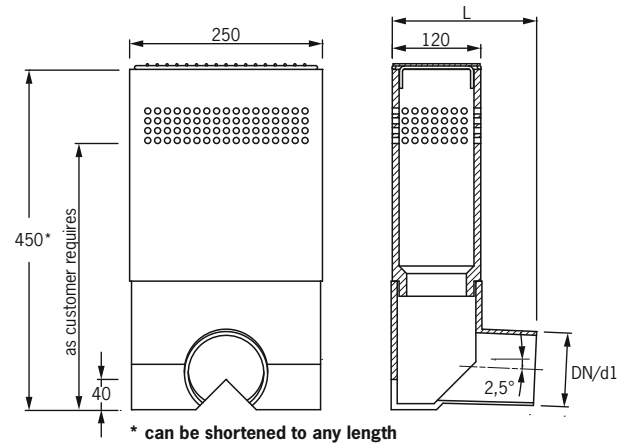
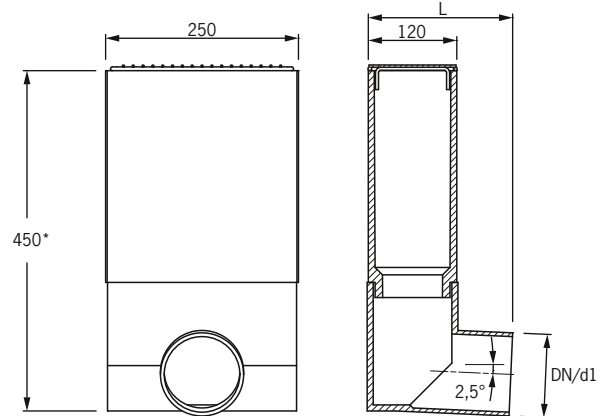
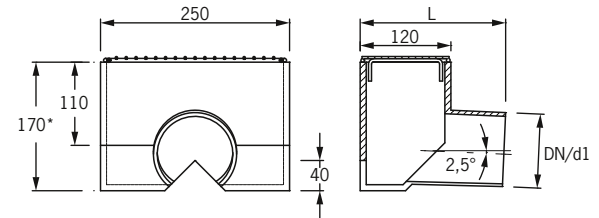
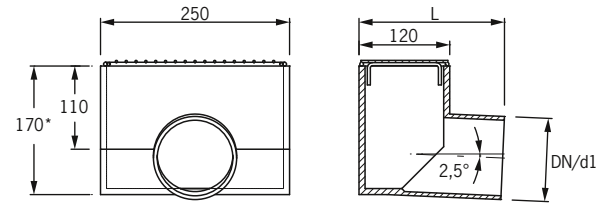
The drainage performance of the Attika balcony drains are increased by the emergency overflow or drainage elements (values on request)!

## Installation example Attika balcony with drain element

Attika balcony drain with a concealed drain element in the heated roof with panel covering in the crushed stone base. To prevent frost damage, we recommend using our trace heating systems (see pages 41/42).



## Technical data



Art.-No.	DN	d1	L
2450, 2450.1, 2450.45, 2450.1.45	50	75	140
2452, 2452.1, 2452.45, 2452.1.45	70	110	196
2454, 2454.1, 2454.45, 2454.1.45	100	125	220

# Attika balcony drain with accessories

Dimension | Article-No.



### Attika emergency overflow made of stainless steel

with 30 cm long support:  
 DN 50 **2680**  
 DN 70 **2682**  
 DN 100 **2684**

with 55 cm long support:  
 DN 50 **2680.55**  
 DN 70 **2682.55**  
 DN 100 **2684.55**



### Pebble trap made of PE

with secure pebble trap holder made of stainless steel  
 Suitable for Art.-No. 3410-3415  
 DN 50 **3491.1**  
 DN 70/100 **3492.1**



### Pebble trap made of PP

Suitable for Art.-No. 3403-3415 and 3440-3444  
 DN 50 **3491**  
 DN 70 **3492**  
 DN 100 **3493**



### Pebble trap made of PP

Suitable for Art.-No. 3421-3422.  
 DN 50 **3491.3L**  
 DN 70 **3492.3L**  
 DN 100 **3493.3L**



### Stainless steel pipe with sleeve

Suitable for all Attika balcony drains and Attika Super drains.

**25 cm**  
 DN 50 **2631**  
 DN 70 **2632**  
 DN 100 **2634**

**50 cm**  
 DN 50 **2631.55**  
 DN 70 **2632.55**  
 DN 100 **2634.55**



### Stainless steel bend

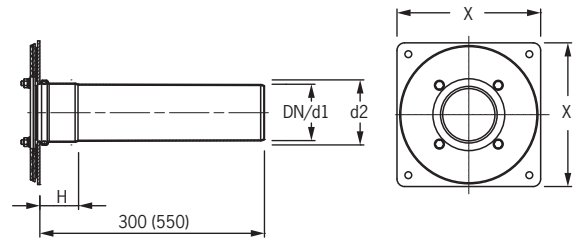
87.5° and with sleeve  
 DN 50 **2650**  
 DN 70 **2652**  
 DN 100 **2654**



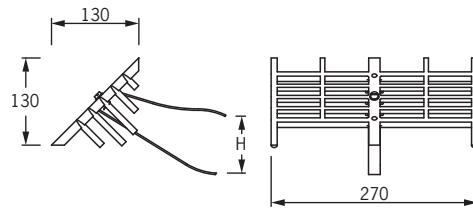
### PVC pipe with sleeve (black)

**50 cm**  
 DN 50 **3460**  
 DN 70 **3462**  
 DN 100 **3464**

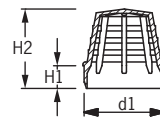
### Technical data



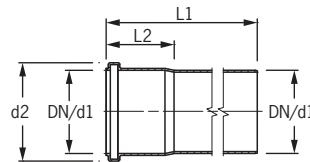
Art.	DN	d1	d2	H	X
2680, 2680.55	50	50	61	45	150
2682, 2682.55	70	75	87	55	190
2684, 2684.55	100	110	125	60	240



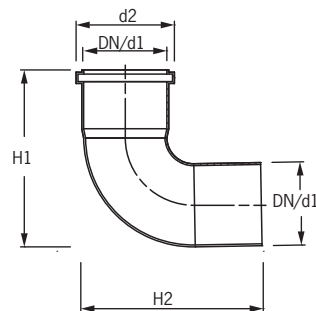
Art.	for	H
3491.1	DN 50	40·80
3492.1	DN 70/100	60·150



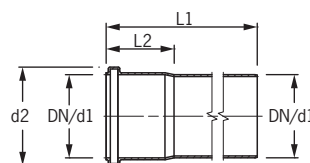
Art.	d1	H1	H2
3491	50	250	48
3492	75	250	55
3493	110	250	60
3491.3L	40	500	48
3492.3L	60	500	55
3493.3L	90	500	60



Art.	DN	d1	d2	L1	L2
2631	50	50	62	250	48
2632	70	75	88	250	55
2634	100	110	125	250	60
2631.55	50	50	62	500	48
2632.55	70	75	88	500	55
2634.55	100	110	125	500	60

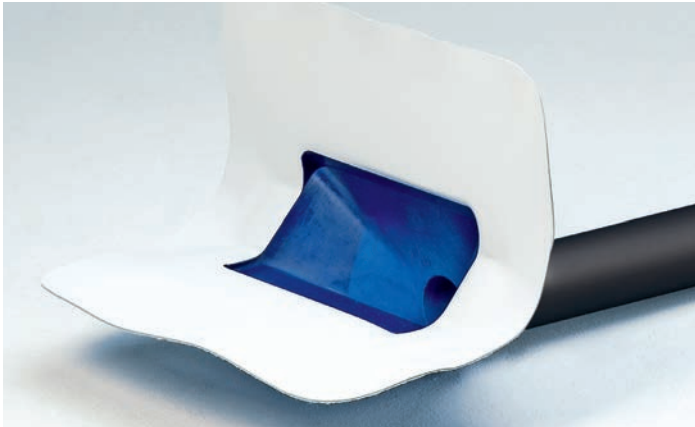


Art.	DN	d1	d2	H1	H2
2650	50	50	62	108	108
2652	70	75	88	138	138
2654	100	110	125	185	185



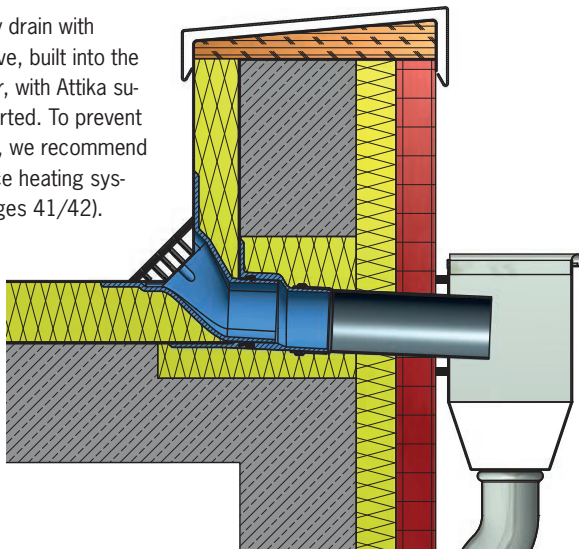
Art.	DN	d1	d2	L1	L2
3460	50	50	62	500	48
3462	70	75	88	500	55
3464	100	110	125	500	60

## ■ Attika super drain for high drainage capacities



### Installation example Attika super drain made of PUR

Attika balcony drain with insertion sleeve, built into the vapour barrier, with Attika super drain inserted. To prevent frost damage, we recommend using our trace heating systems (see pages 41/42).



### Attika super 2 drain made of PUR DN 100

allows main and emergency drainage through Attika opening!

The **scope** of delivery of the **Attika super 2 drain** is:

1. **Attika super drain DN 100** (without PVC pipe)
2. **Stainless steel pipe** with sleeve DN 100, 54 cm long
3. **Stainless steel pipe** with sleeve DN 100, 30 cm long, with cut for the main drain and cover
4. **Water guiding sheet** (back and front) for the emergency drainage

#### Optional extras:

5. **Leaf trap grate** made of stainless steel (Art.-No. 3494.S)
6. **Water collecting container** made of zinc sheeting (Drain supports 100 mm/6 piece, Art.-No. 3450)

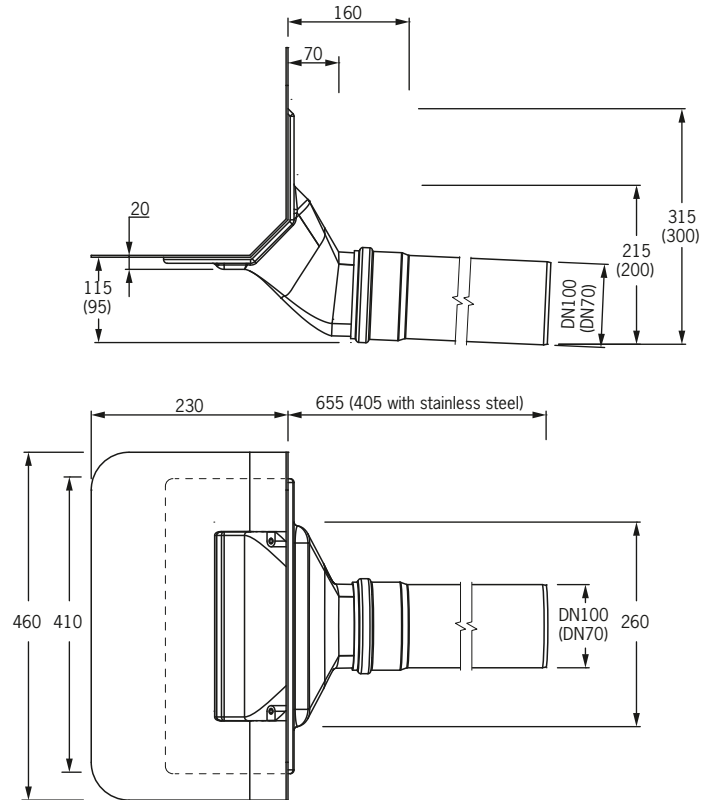
### Attika-Super-drain DN 70/100 of PUR or stainless steel

If it needs to be more effective: the drainage capacity needs to be higher, Grumbach developed the Attika super drain.

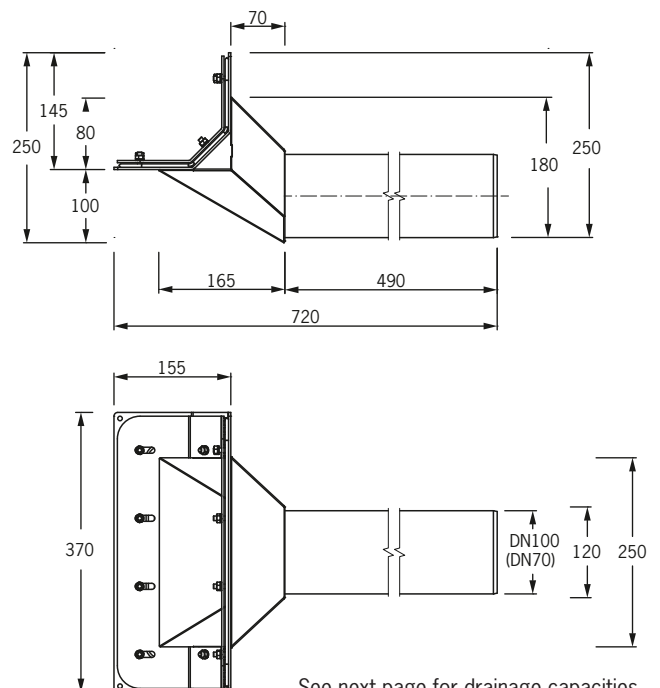
The Attika super drain DN 70 has a capacity of 3.8l/sec at 35 mm accumulation height (in the down pipe)

The Attika super drain DN 100 has a capacity of 4.9l/sec in the downpipe

#### Technical data Attika super drain made of PUR



#### Technical data Attika super drain made of stainless steel



See next page for drainage capacities.

# Attika Super drain with accessories

Dimension | Article-No.



**Article Super drain made of PUR**  
with PVC pipe (55 cm long)  
DN 70 **3431**  
DN 100 **3433**



**Attika Super drain made of stainless steel**  
with welded stainless steel pipe  
DN 70 **2432**  
DN 100 **2434**



**Attika Super 2 drain made of PUR**  
for Attika strength 60 cm  
DN 100 **3433.S2**

**NEW!**



**Attika Super drain 2 made of PUR (long Version)**  
for Attika strength up to 110 cm  
DN 100 **3433.S2.L**



**Cistern**  
**3450**



**Attika leaf trap grid**  
Suitable to the Attika Super drain  
made of PUR **3494.S**  
made of stainless steel **3494.SE**



**Pebble trap made of PE**  
**3495.S**



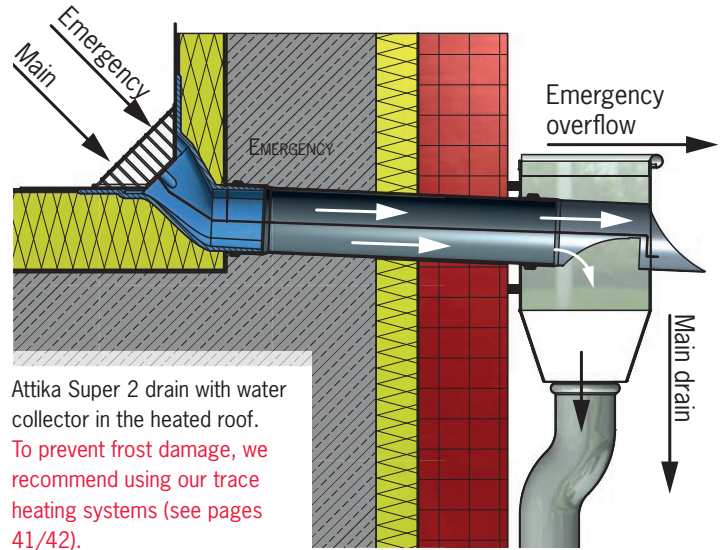
**Connection piece for vapour traps made of stainless steel**  
DN 50 **2490**  
DN 70 **2492**  
DN 100 **2494**

**NEW!**



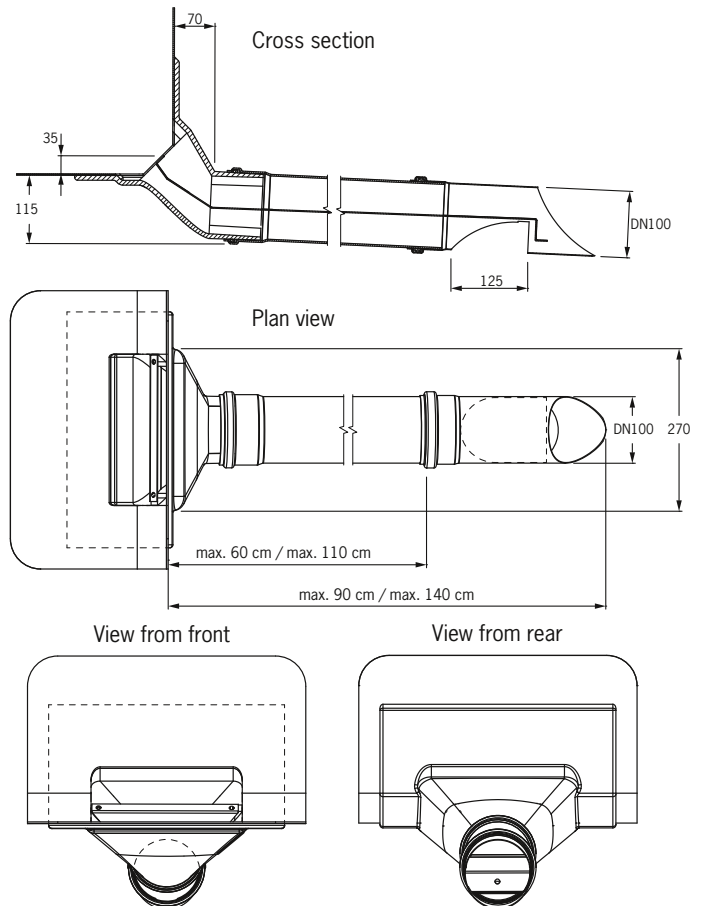
**Fastening cuffs**  
DN 50 **2691**  
DN 70 **2693**  
DN 100 **2695**

## Installation example Attika Super 2 Drain

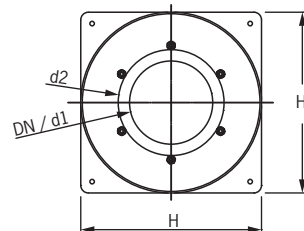


Attika Super 2 drain with water collector in the heated roof.  
To prevent frost damage, we recommend using our trace heating systems (see pages 41/42).

## Technical data Attika Super 2 drain



## Technical data vapour barrier connection piece.



Art.	DN	d1	d2	H
2490	50	45	64	150
2492	70	65	97	190
2494	100	95	130	240

Art.	Drainage capacity*
3431, 2432	3,8 l/s (35 mm) on the down pipe
3433, 2434	4,9 l/s (35 mm) on the down pipe
3433.S2	Main drain: 3,6 l/s, emergency overflow: 3,0 l/s (35 mm)

The use of the leaf trap grid made of stainless steel does not reduce the drainage capacity.

\*Drainage capacity at the down pipe in litres per second (at an accumulation height in mm)

## ■ Attika Jumbo drain 260 The »big mouth«



### Attika Jumbo drain 260 made of PUR (The »big mouth«)

The Attika Jumbo drain is available for larger roofs with higher drainage capacities. Its oval pipe swallows 12l/sec at a height of 55mm. A really "big mouth"!

There is a suitable adapter to DN 150 and it has a compatible cistern made of zinc sheeting to be able to redirect the water sensibly.

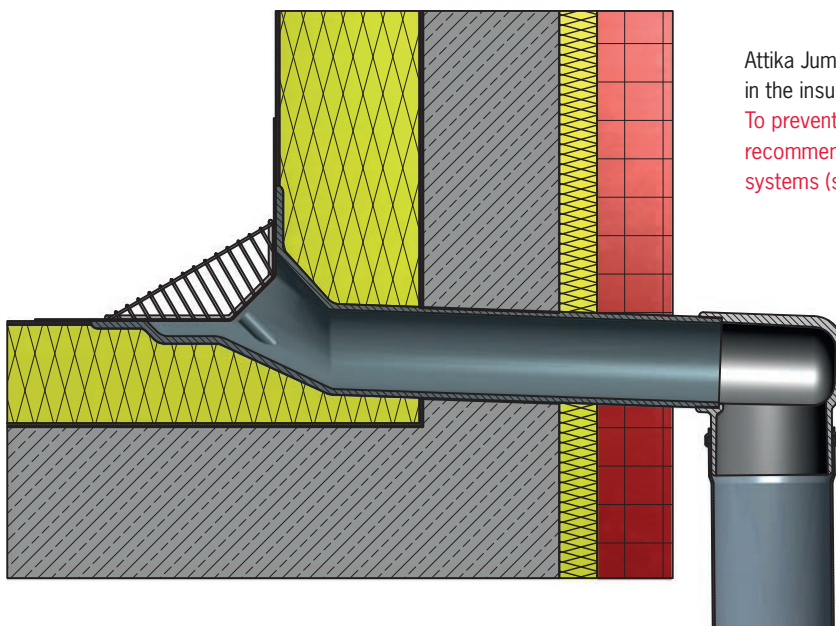


Cistern made of zinc sheeting, 0.80 mm thick, suitable for the Attika Jumbodrain and the Attika plus drain made of PUR

Reducing piece made of PUR internal rubber seal (like sleeve), suitable for the Attika Jumbo drain 260 with adapter for the reduction of the nominal width from DN 150 to DN 125 or 100.

Attika leaf trap with fastening material, suitable for the Attika Jumbo drain. **When using the leaf trap, the drainage capacity is not reduced!**

### Installation example Attika Jumbo drain 260 made of PUR



Attika Jumbo drain 260 with adaptor in the insulated roof.

To prevent frost damage, we recommend using our trace heating systems (see pages 41/42).



Adaptor for Attika Jumbo drain 260 made of PUR with connection supports for a sleeve pipe DN 150. For on-site connection to an Attika Jumbo drain 260. Sandpaper and adhesive are included in the scope of delivery.

# Attika Jumbo drain with accessories

Dimension | Article-No.



**Attika Jumbo drain 260 made of PUR ( the«Big mouth») without adaptor**  
**3436**



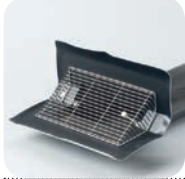
**Adaptor for Attika Jumbo Gully 260 made of PUR**  
**3439**



**Reducing element made of PUR DN 150-125/100**  
**3437**



**Cistern**  
Drain supports approx. 120 mm  
5-piece **3438**  
Drain supports approx. 140 mm  
4-piece **2438**



**Attika leaf trap grid made of stainless steel**  
**3494.J**  
The drainage capacity is not reduced!

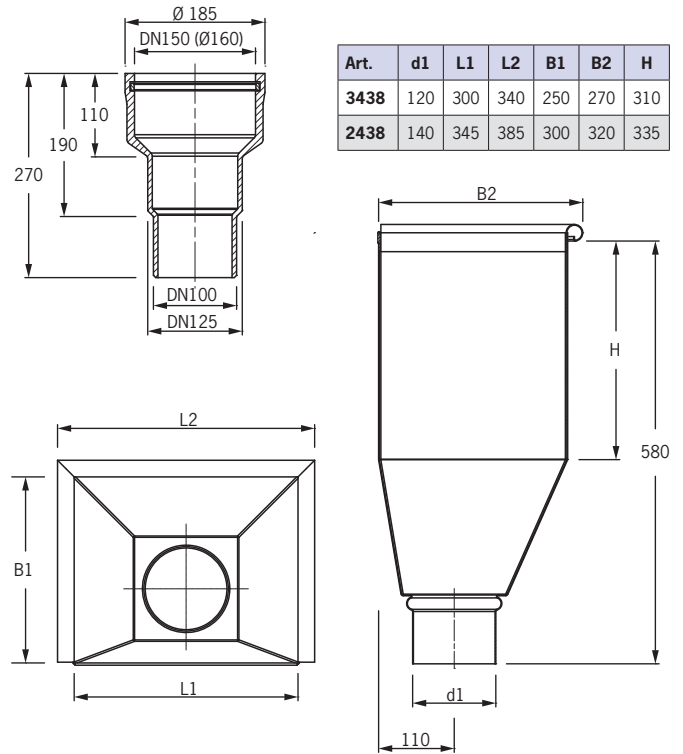


**Connection piece for vapour traps made of stainless steel**  
**2495**  
See page 33 for technical data

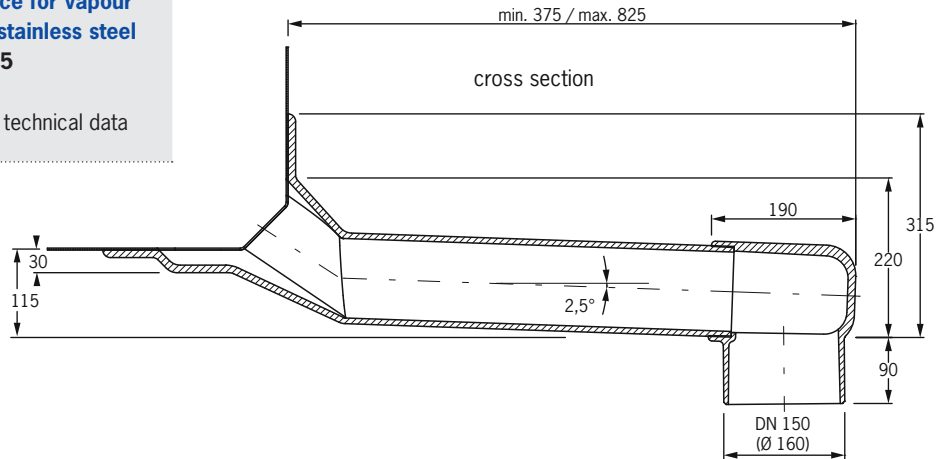
Art.-No.	Drainage capacity*
3436	9,2 l/s (45 mm)
	12,0 l/s (55 mm)
	15,7 l/s (65 mm)

\*Drainage capacity at the down pipe DN 150 in litres per second (at an accumulation height in mm)

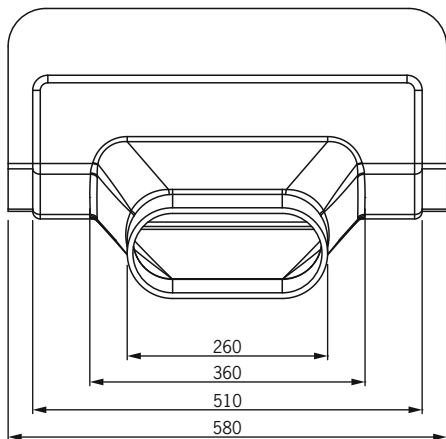
## Technical data reducing element and cistern



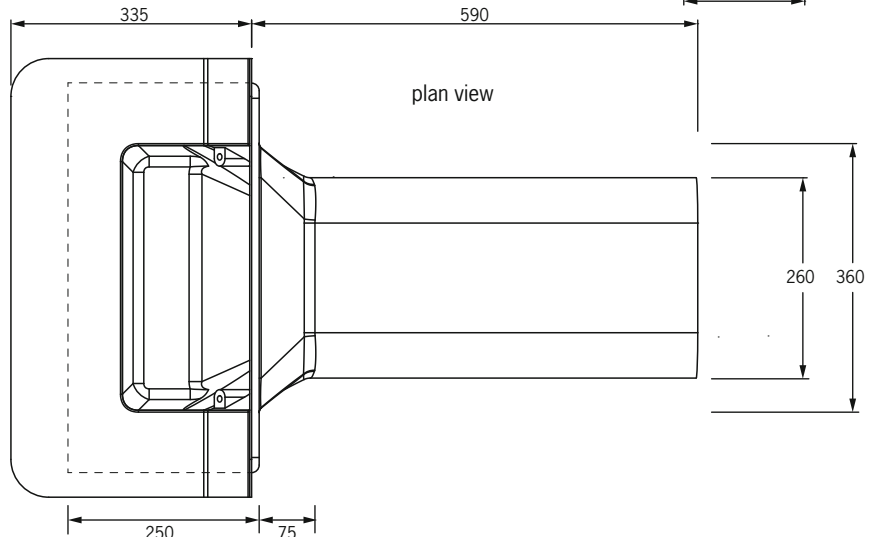
## Technical data Attika Jumbo drain 260



view from rear



plan view





# ■ Attika flat drain made of PUR short or long

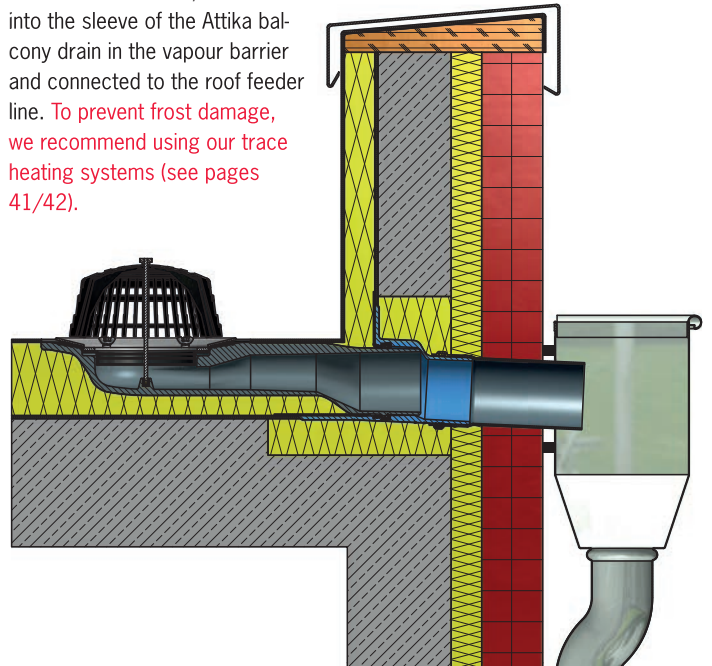


## Attika flat drain made of PUR

The Drain is suitable for normal and emergency drainage and built for high drainage capacities. It also displays a very flat design and is available in two lengths.

### Installation example Attika flat drain

Attika flat drain DN 100, placed in the heat insulation, inserted into the sleeve of the Attika balcony drain in the vapour barrier and connected to the roof feeder line. **To prevent frost damage, we recommend using our trace heating systems (see pages 41/42).**



Dimension | Article-No.

### Attika flat drain made of PUR short version:

610 mm  
 DN 70 **2442**  
 DN 100 **2444**

### Long Version:

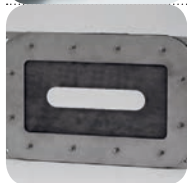
1200 mm  
 DN 70 **2442.L**  
 DN 100 **2444.L**

### Adapter ring/back up element made of PUR

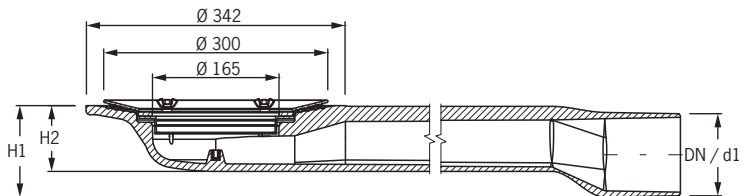
**2449**

### Vapour barrier connection made of stainless steel

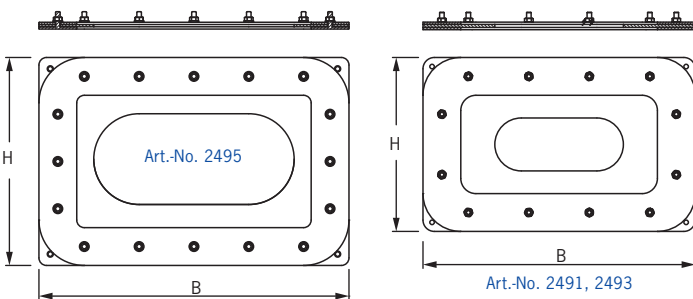
DN 70 **2491**  
 DN 100 **2493**



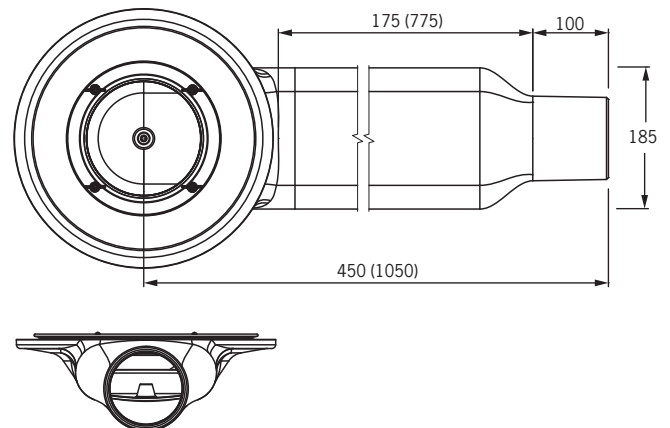
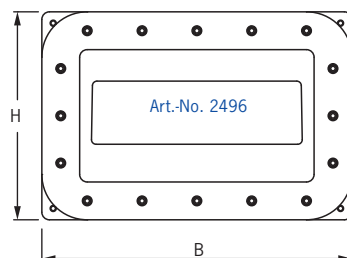
### Technical data Attika flat drain



### Technical data vapour barrier connection pieces



Art.	H	B
2491	230	360
2493	230	360
2495	275	410
2496	275	410



Art.	DN	d1	H1	H2	Drainage capacity*
2442	70	75	90	70	3,8 l/s (35 mm)
2444	100	110	120	90	5,8 l/s (35 mm)
2442.L	70	75	90	70	6,3 l/s (35 mm)
2444.L	100	110	120	90	6,4 l/s (35 mm)

\*Ablaufleistung am Fallrohr in Liter pro Sekunde (bei Anstauhöhe in Millimetern)

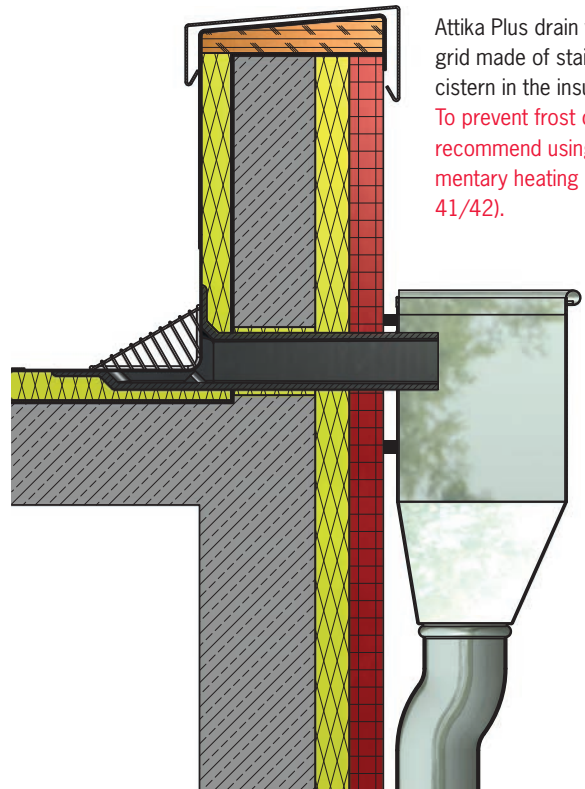
# ■ Attika Plus drain made of PUR With stainless steel flat channel system



## Attika Plus drain made of PUR

heat insulated, CFC-free, with foam filled feeder line (made of bitumen, PVC or special foil). This drain achieves a high drainage capacity (5 l/s at 35 mm accumulation level) with a construction **height of only 84 mm!**

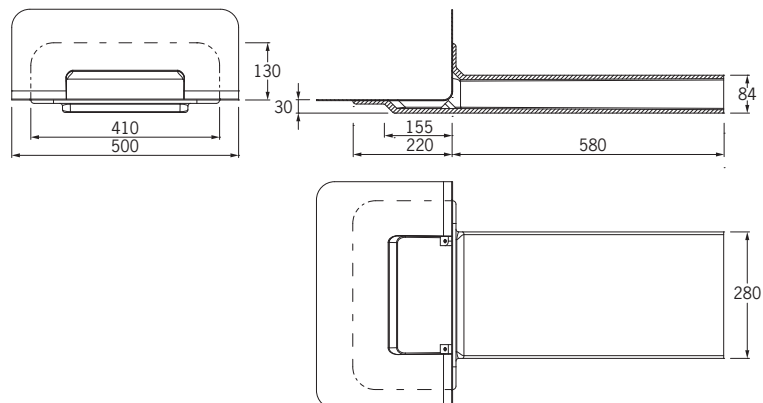
## Installation example Attika Plus drain



Attika Plus drain with leaf trap grid made of stainless steel and cistern in the insulated roof. To prevent frost damage, we recommend using our supplementary heating (see pages 41/42).

Image	Dimension   Article-No.
	<b>Attika Plus drain made of PUR (black)</b> 3435
	<b>Attika leave grate made of stainless steel</b> 3494.P Typ II (without illustration) 3494.P2
	<b>Flat channel system made of stainless steel</b> 1. connection supports 2670
	<b>2. Main part</b> 2672 Length 950 mm Height 40 mm
	<b>3. Connector</b> 2674
	<b>4. Angled connector (45°)</b> 2676
	<b>5. Drain supports</b> 2678
	<b>Steam barrier connection piece made of stainless steel</b> 2496  Technical data see page 33

## Technical data Attika Plus drain



Art.-No.	Drainage capacities of Attika Plus drain and stainless steel flat channel system
3435	5.0 l/s (35 mm accumulation height, free outlet) the drainage capacity is not reduced when leaf trap grids are employed!
	2.0 l/s (35 mm accumulation height, with inserted flat channel system, free outlet)

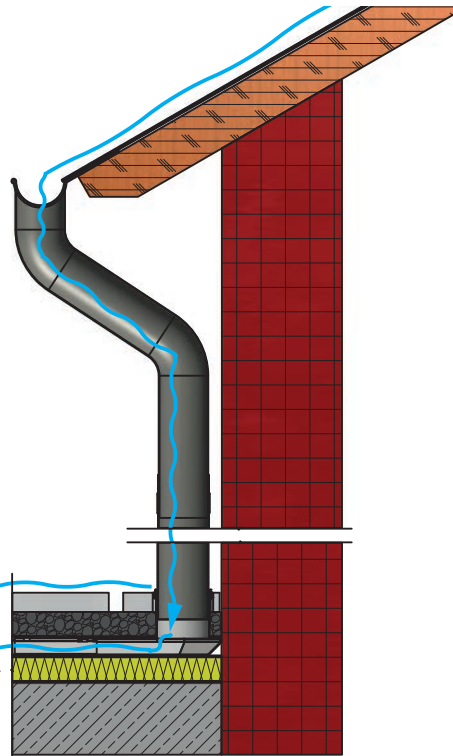
The drainage capacity of the the flat channel system corresponds with the drainage capacity of the drain pipe used at the particular level of the pipe.

**NEW!**

# Attika Plus drain made of PUR With stainless steel flat channel system

The flat channel system consists of a maximum of 5 different pieces

1. Flat channel **connection supports**
2. Flat channel **main part**
3. Flat channel **connector**
4. Flat channel **angled connector 45°**
5. Flat channel **drain supports**



## Attika plus drain made of PUR and stainless steel flat canal system

Especially high quality and durable **stainless steel flat canal system** for the collection and targeted direction of rainwater over e.g. terraces, balconies or flat roofs with especially low construction heights. Preferably simply lay it between the damp proof layer and the surface layer.

The water is then guided over the edge of the building without any straining the surface.

In the case of closed sided Attika, the flat channel can be guided through the new Attika plus drain to the outside.

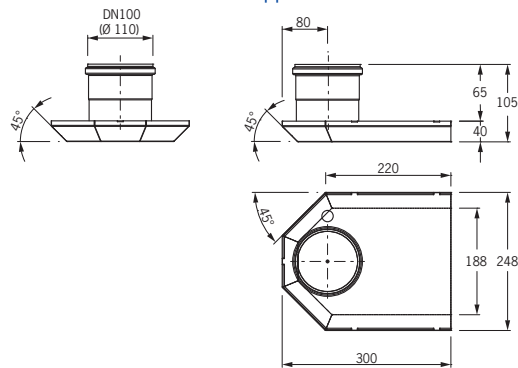
The flat Attika plus drain possesses a particularly high drainage capacity and not only take the water from the flat channel, but also from the sealing layer.

The stainless steel flat channel for the transfer of rainwater from a higher part of the roof surface to the terrace surface.

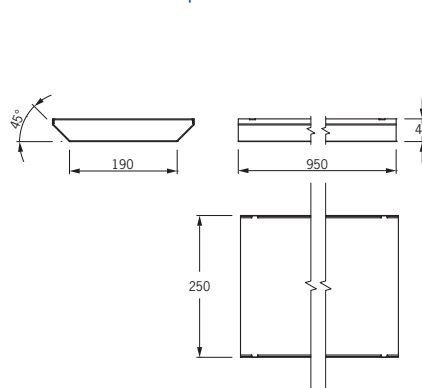
To prevent frost damage, we recommend using our supplementary heating (see pages 41/42).

### Technical data stainless steel flat channel drain

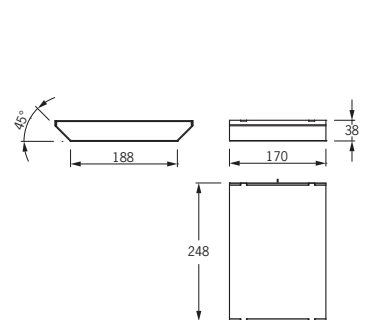
#### 1. Flat channel connection supports



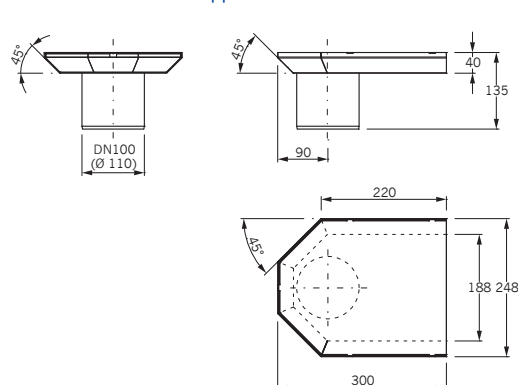
#### 2. Flat channel main part



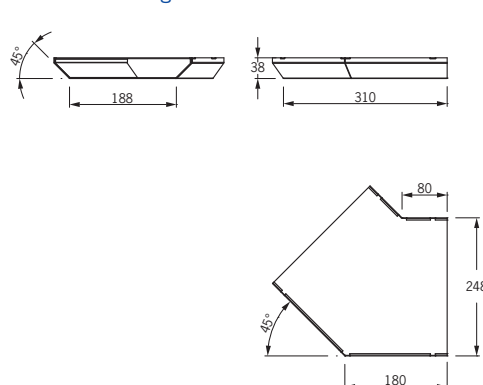
#### 3. Flat channel connector



#### 5. Flat channel drain supports



#### 4. Flat channel angled connector 45°



# Stainless steel drain the indestructible



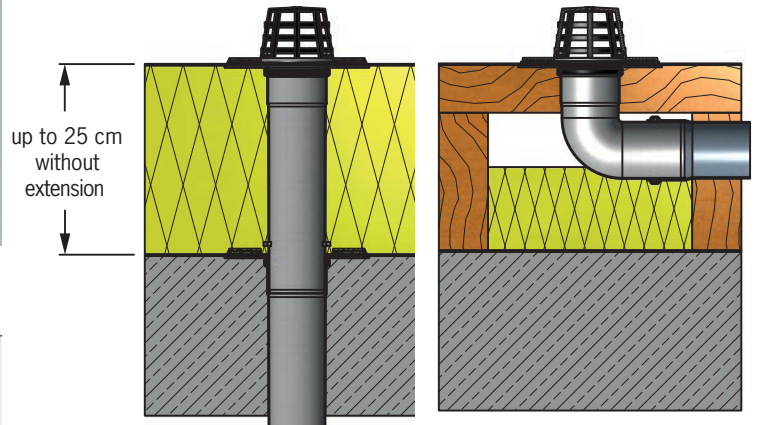
Horizontal stainless steel drain corresponding extension element

## The Grumbach stainless steel drain

the new, robust, non-flammable drain series made of rust free stainless steel

- available in three nominal widths DN 50, 70 or 100
- with fastening holes in the fixed flange for secure fastening to the surface
- absolutely back-flow secure due to a sleeve connection
- due to the flange press seal and clamp, any extendable roof seal can be connected securely
- high stability and drainage capacity
- due to its attractive appearance it can also be used as an Attika emergency overflow connection
- due to its special construction ( without pot, long supports) it is easy to assemble and also a good choice as a redevelopment drain.

## Installation example and technical data drain



Stainless steel drain vertical DN 70 with extension element in the heated roof

Stainless steel drain horizontal DN 70 in the ventilated roof



Dimension | Article-No.

### Stainless steel drain

vertical:  
DN 50 **2600**  
DN 70 **2602**  
DN 100 **2604**



### Stainless steel drain

horizontal:  
DN 50 **2611**  
DN 70 **2612**  
DN 100 **2614**



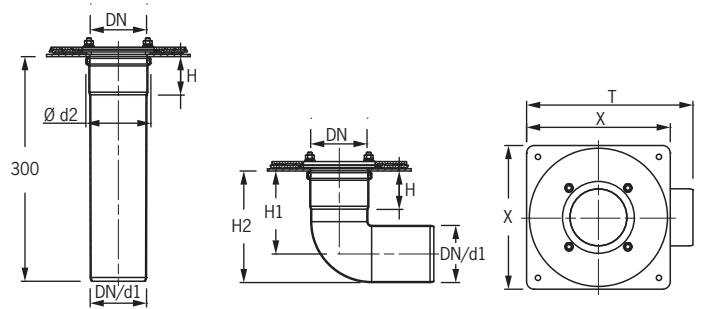
### Stainless steel Top drain

vertical:  
DN 100 **2624**  
DN 125 **2626**

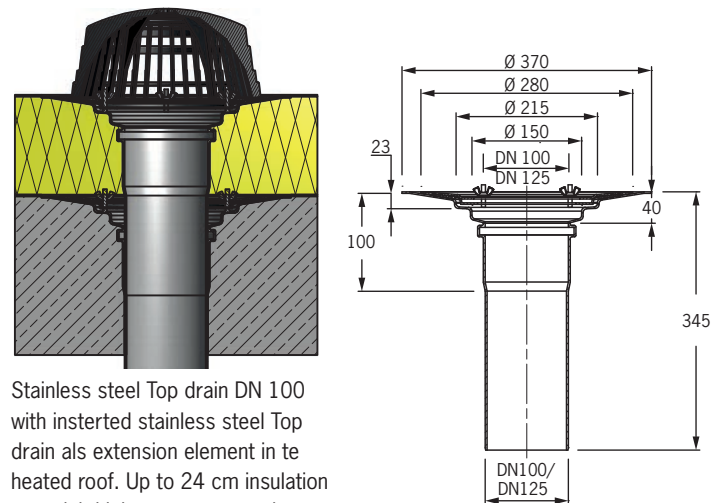


### Extension element made of stainless steel

DN 50 **2680**  
DN 70 **2682**  
DN 100 **2684**



## Installation example and technical data stainless steel Top drain



Stainless steel Top drain DN 100 with insterted stainless steel Top drain als extension element in te heated roof. Up to 24 cm insulation material thickness, no extension required.

Art.	DN	d1	d2	H	H1	H2	X	T	Drainage capacity*
2600, 2680	50	50	65	38	-	-	150	-	1,5 l/s (35 mm)
2602, 2682	70	75	90	50	-	-	190	-	3,5 l/s (35 mm)
2604, 2684	100	110	125	55	-	-	240	-	5,1 l/s (35 mm)
2611	50	50	-	38	81	106	150	170	2,0 l/s (35 mm)
2612	70	75	-	50	112	150	190	210	4,1 l/s (35 mm)
2614	100	110	-	55	133	188	240	260	5,2 l/s (35 mm)
2624	100								6,0 l/s (35 mm)
2626	125								9,5 l/s (45 mm)

Drainage capacity at down pipe in litres per second (at accumulation height in millimetres)

## ■ Eco-drain Perfect in detail!



Eco-drain as two-piece,  
consisting of bottom and top  
piece as an extension piece

### Eco drain made of PUR – an ingenious two-partner

- At every available DN nominal width, the bottom part of the drain has only the necessary diameter and therefore requires only a minimal opening in the roof
- On the top surface of the lower part of every drain there is an insertion sleeve of the same DN nominal width as the support diameter.
- This allows the top part of the drain secure and steady support as well as absolute backflow prevention and also allows a number of flexible applications.
- The drain top part not only has a long drain support in DN nominal width for high insulation thicknesses, but also has a flat positioned inlet pallet for low insulation constructions.
- The inlet area, which is the same size for all DN nominal widths, ensures a high drainage capacity.
- With an extra large and stable pebble trap to ensure the down pipes do not become blocked.
- Can be delivered with all common roof surface connection clamps.
- The independent use of drain top or bottom piece allows a variety of applications due to the general construction in DN nominal widths.

#### Dimension | Article-No.



#### Eco drain made of PUR (Top part)

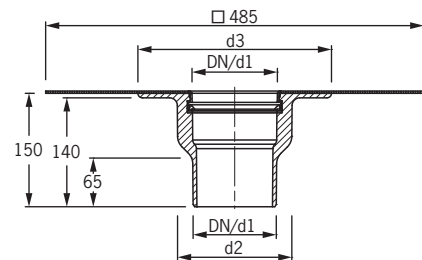
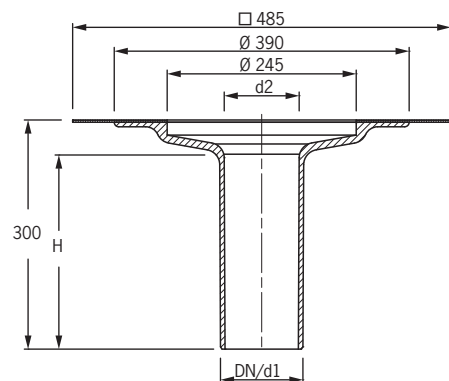
DN 70	<b>3282</b>
DN 100	<b>3284</b>
DN 125	<b>3286</b>



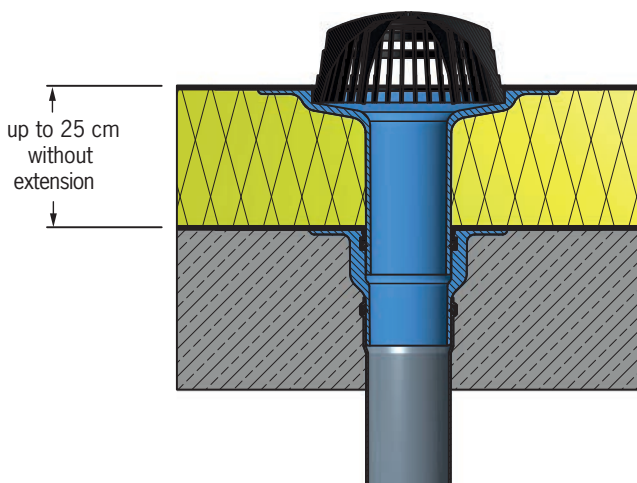
#### Eco drain made of PUR (bottom part)

DN 70	<b>3202</b>
DN 100	<b>3204</b>
DN 125	<b>3206</b>

#### Technical data Eco-drain



#### Installation example Eco-drain

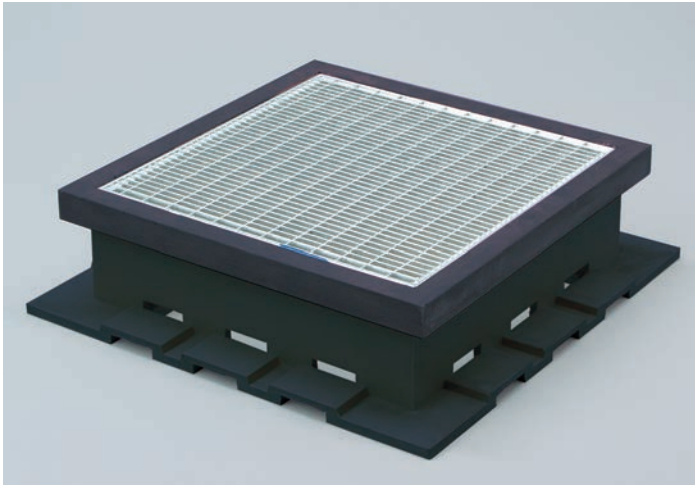


Eco-drain bottom piece DN 100 with inserted Eco drain top piece DN 100  
as extension element in the heated roof.

Art.	DN	d1	d2	d3	H	Drainage capacity
<b>Bottom part</b>						
<b>3202</b>	70	75	115	220	–	3,9 l/s (35 mm)
<b>3204</b>	100	110	150	255	–	5,2 l/s (35 mm)
<b>3206</b>	125	125	165	270	–	5,7 l/s (45 mm)
<b>Top part</b>						
<b>3282</b>	70	75	62	–	260	8,0 l/s (35 mm)
<b>3284</b>	100	110	97	–	260	8,8 l/s (35 mm)
<b>3286</b>	125	125	114	–	265	11,0 l/s (45 mm)

Drainage capacity at down pipe in litres per second (at accumulation height in millimetres)

## ■ The green roof security drain



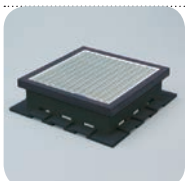
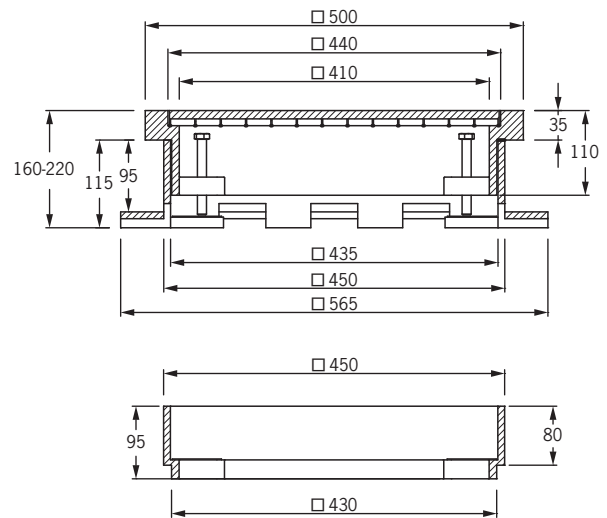
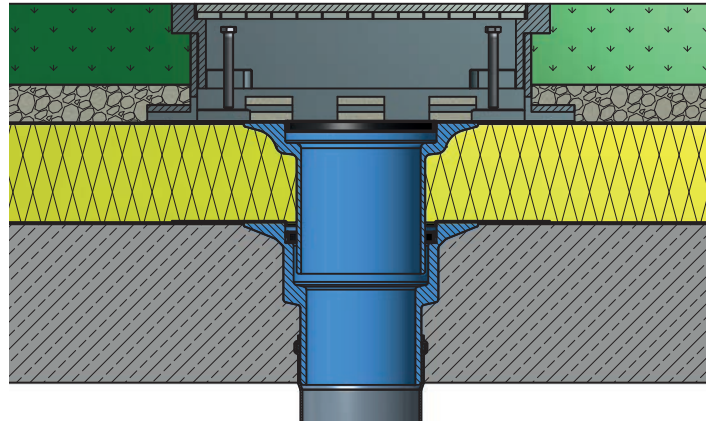
Green roof security drain made of PUR, 500 x 500 mm, consists of foot part, top part and galvanised inlet grate, max. Load 0.5 t, height-adjustable: 160-220 mm

### The green roof security drain

The green roof security drain is the secure, robust drain for green roofs etc.

- made of PUR resilient up to 0.5 t
- with lid made of steel, hot dipped galvanised
- secure drainage on two levels
- accessible drain, even for back-up
- for every construction height from 16 cm

### Installation example and technical data green roof safety drain



Dimension | Article-No.

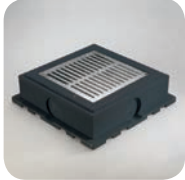
#### Green roof safety drain made of PUR

500 mm **5000**



#### Extension element made of PUR for 80 mm extension

suitable for Art.-No 5000  
**5001**



#### Green roof security drain klein made of PUR

365 mm **5010**  
without sieve panel, as extension element up to 93 mm extension  
**5011**



#### Green roof security drain klein made of PUR PLUS

like Art. 5010, although with cladding from above made of stainless steel  
**5010.E**

### The green roof safety drain klein made of PUR

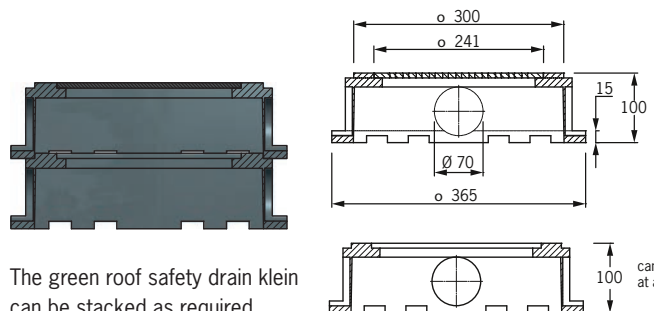
- especially suited for extensively vegetated roofs



Green roof safety drain klein made of PUR, 365 x 365 mm, with pre-formed connections for drainpipe 70 mm diameter and Alu-sieve panel. Height 100 mm

**Especially suited for extensively vegetated roofs**

### Installation example and technical data green roof safety drain



The green roof safety drain klein can be stacked as required.

can be shortened at any height

## ■ Fastening bushing For water tight bushings



Fastening bushing made of PUR (black)  
Heat insulated, CFC-free, with integrated rubber seal and foamed connection surface (Bitumen, ECB, PVC or special foil)

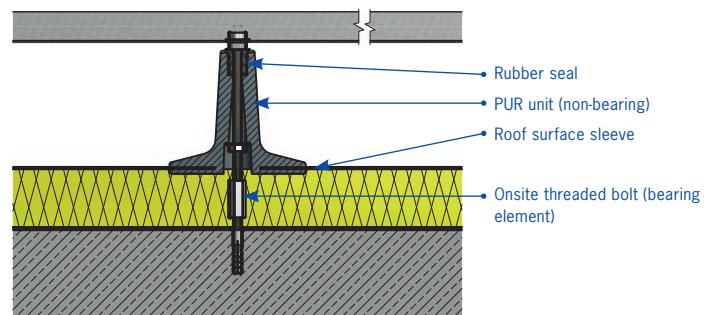


### Fastening bushing made of PUR

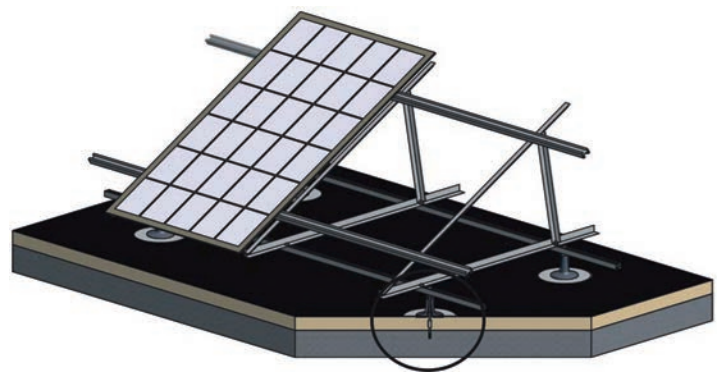
For support rail or point fastenings with threaded bolts on flat roofs

- Optimal for fastening bushing for photovoltaic units, air-conditioning units, ventilation etc.
- made of extra stable PUR integral hardfoam and integrated rubber seal
- Seal level in accordance with flat roof guidelines
- With poured weldable collar for every roof surface
- The water tight bushing of threaded bolts (M10 – M12) or similar through roofs with seal.

### Installation example fastening bushing



Fastening bushing with rawl plug screwed into heated roof. With mounted bearing rail for e.g. PV-unit or other technical roof constructions



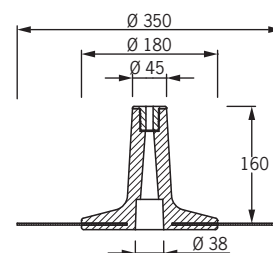
Dimension | Article-No.

Fastening bushing made of  
PUR (black)

5140



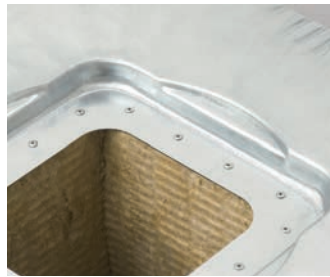
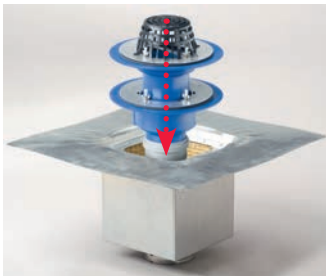
### Technical data fastening bushing



Watertight bushing of round and threaded bolts in 10-12 mm diameter.



Grumbach fire protection element for roof drains - **optimally adapted for the universal and compact collar drain series from Grumbach.** The fire protection cladding is shaped with a **quadruple impression/recess** on top, thus allowing an optimal positioning of the drain, water can then drain completely, without backing-up at the drain flange.



Dimension | **Article-No.**

### Fire protection cladding

DN 70	<b>5943</b>
DN 100	<b>5945</b>
DN 125	<b>5946</b>
DN 150	<b>5948</b>

### Compact fire protection drain made of stainless steel

DN 50	<b>2640</b>
DN 70	<b>2642</b>
DN 100	<b>2644</b>
DN 125	<b>2646</b>

### Fire protection cuff R90

DN 50	<b>2040</b>
DN 70	<b>2042</b>
DN 100	<b>2044</b>
DN 125	<b>2046</b>
DN 150	<b>2048</b>
DN 200	<b>2049</b>

### Fire protection cover for thermoplastic pipes

DN 50	<b>2641</b>
DN 70	<b>2643</b>
DN 100	<b>2645</b>
DN 125	<b>2647</b>
DN 150	<b>2648</b>
DN 200	<b>2649</b>

**The Grumbach fire protection element** prevents, in accordance with DIN 18234 Part 3-4, the spreading of an underside fire onto the roof surface not only through the roof section openings, but also through the rain down pipe opening.

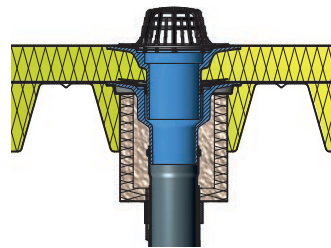
**The Grumbach fire protection drain made of stainless steel** is particularly compact and requires only a minimal break in the roof surface. Alternatively, the drain can be used as a roof ventilator or power supply insert. The solid sleeve plug connection ensures a simple, secure connection in both directions. The fire protection drain is compatible with extension elements made of PUR or stainless steel.

**Fire protection cladding and fire protection drain are suitable for use in trapezoid sheet roofs.**

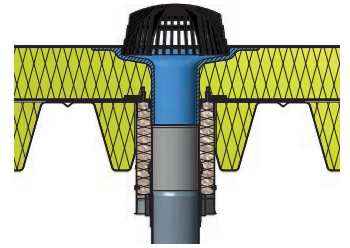
**The fireproof fire protection cuff »SystemGeberit Rohrshott90 Plus«** made of steel sheeting and intumescent swelling material for the bushing through the solid ceiling swells up when heated and, in case of fire, singly seals a thermoplastic DN pipe on a roof drain or vents.

**Approved for use in concrete roofs!**

### Installation example and fire protection drain

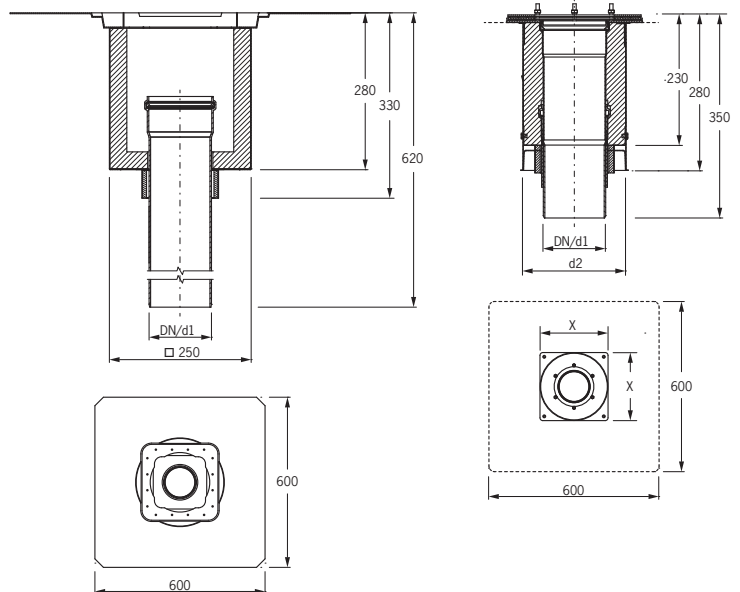


Fire protection cladding with universal drain and extension element in trapezoid sheet roofs with heated construction.



Compact fire protection drain DN 100 with inserted Eco drain top part in the trapezoid sheet roof with heated roof construction.

### Technical data fire protection cladding and fire protection drain

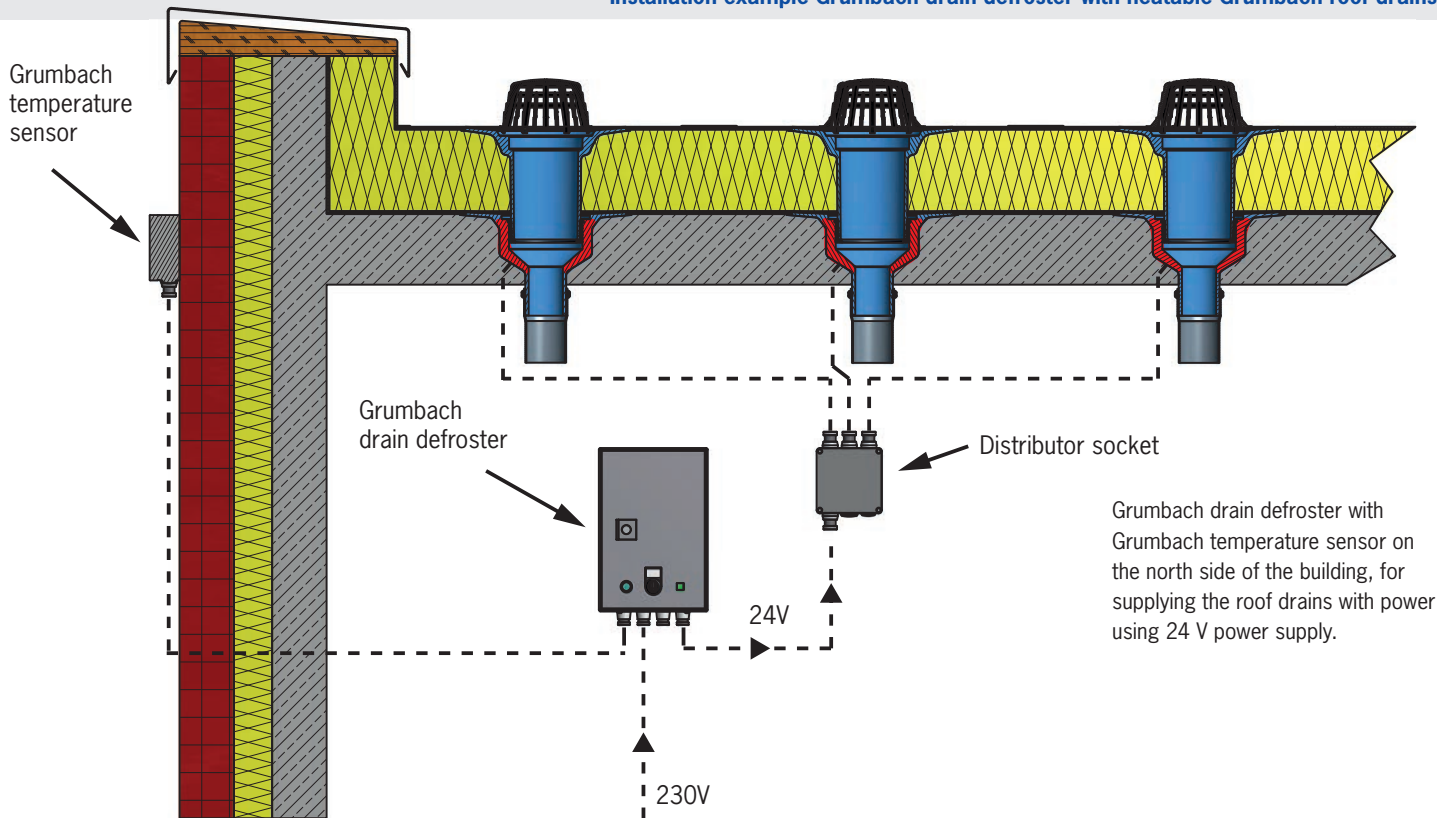


Art.	DN	d1	d2	X
<b>5943</b>	70	75	-	-
<b>5945</b>	100	110	-	-
<b>5946</b>	125	125	-	-
<b>5948</b>	150	160	-	-

Art.	DN	d1	d2	X
<b>2640</b>	50	50	160	180
<b>2642</b>	70	75	160	180
<b>2644</b>	100	110	180	240
<b>2646</b>	125	125	200	240



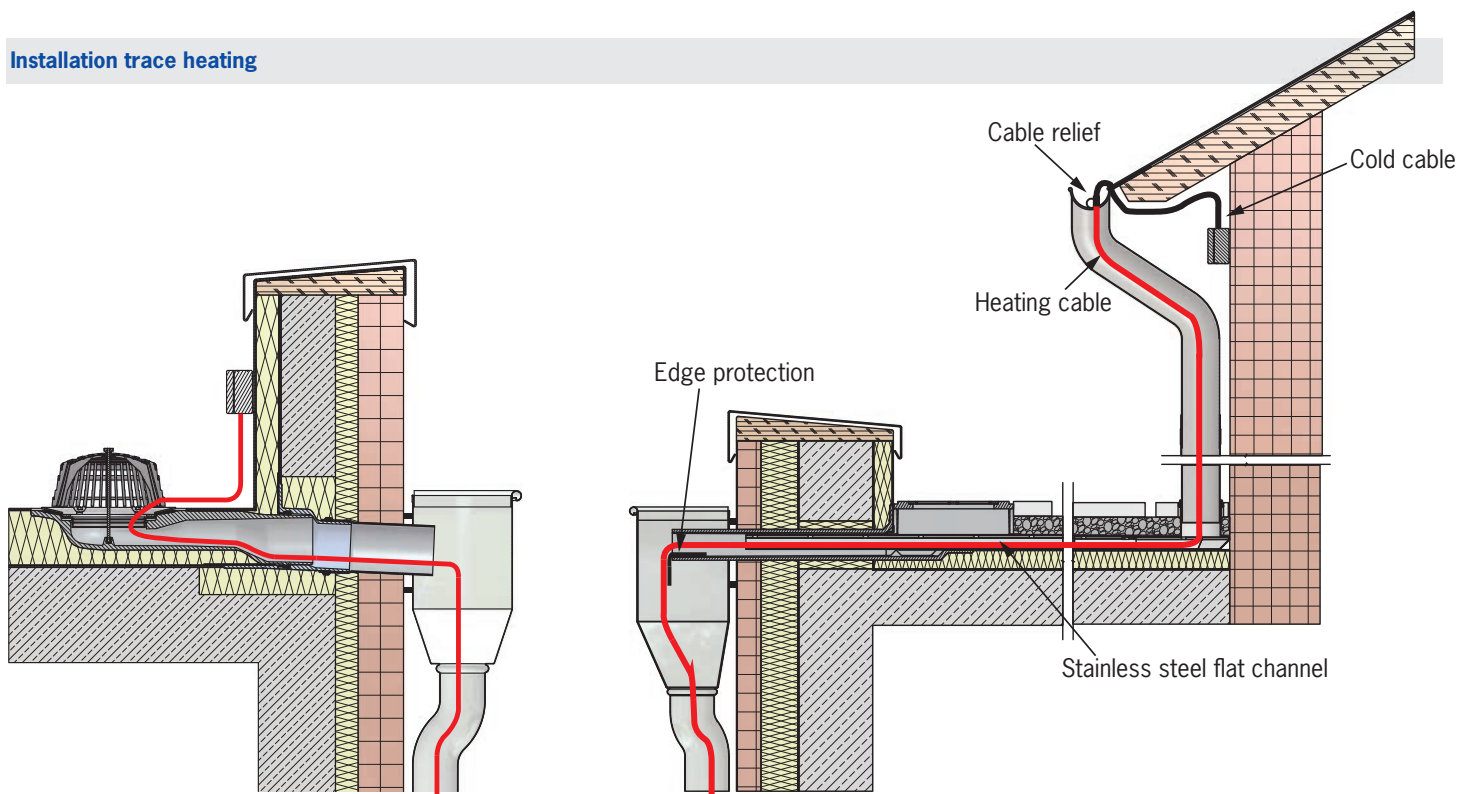
## Installation example Grumbach drain defroster with heatable Grumbach roof drains



## Trace heating for roof drains, pipes, roof channels and flat channel systems

- Prevention of frost and water damage in buildings and facades due to flooding caused by frozen water channels.
- Prevention of accidents and damage due to e.g. falling icicles.
- Maintenance- and trouble-free operation (self-regulating)
- Largely pre-mounted sets (heating band and temperature regulator basic set), each extendable
- Light, even subsequent assembly
- Minimal acquisition and operating costs.

## Installation trace heating



Dimension | Article-No.



**Drain defroster**  
up to 5 drains, 125 W, 24 V  
Typ I **5920**  
bis zu 10 Gullys, 250 W, 24 V  
Typ II **5921**



**Heating clamp 24 V, 10 W**  
control required,  
(drain defroster)  
**5930**  
**Heating clamp 230 V, 10 W**  
self-regulating  
**5931**



NEW!

**Heating band basic set**  
**5932**

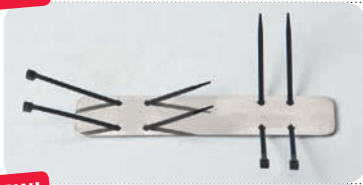
consisting of:  
1 Connection socket  
1 Cold cable bushings  
1 Heating cable 1 m long  
1 Cold cable 1 m long  
1 Heating cable bushings  
1 connection heating/  
cooling cable  
1 end piece



NEW!

**Temperature control basic set**  
**5922**

consisting of:  
1 temperature controller  
2 Cold cable bushings  
1 Cold cable 1 m long



NEW!

**Edge covers**  
to prevent damage to heating  
cables  
**5925**



NEW!

**Strain relief**  
for hanging the heating cable in  
down pipes  
**5926**

## ■ Heating with accessories

### The Grumbach-Drain-Defroster

supplies and automatically monitors the heated drains and saves electricity costs.

It is required to provide the 24 volt power supply to the heatable roof drains or 24 V heating cuffs.

### Heating cuffs

The universal heating opportunity for drains made of PUR with nominal width DN 70 or above. Ideal for subsequent installation. Supply via the drain defroster or as a self-regulating 230 v version.

### Technical data heating band basic set

Heating band type	FT 18/36
Nominal capacity	18 W/m at 0 °C air 36 W/m in ice water
Max. heating circuit length	► <b>60 m</b> at 16 A (in connection with mechanical temperature regulator set) ► <b>80 m</b> at 20 A (without mechanical temperature regulator)
Minimum bending radius	25 mm (do not bend heating line)
Nominal voltage	230 V
Max. permitted ambient temperatur	65° C (switched on)
Max. permitted ambient temperatur	85° C (switched on)
Minimum installation temperature	5° C
Maximum protective resistance	10Ω/km
Dimensions	13,7x6,2 mm
Protection coverage	at least 70 %

- Protection with FI protective switch and C-characteristic
- For channel widths above 20 cm or roof surfaces, multiple laying every 15 cm is recommended
- Heating band hanging up to 25 cm.

### Technical data temperature Basic set

Type of controller	DTR-E 3102 (mechanical)
Temperature range	-20° C bis +25° C
Operating voltage	AC 230 V
Alternating current at SC 250 V	16(4) A
Operating	3,6 KW
Contact	1 opener 1 closer (spring contact)
Permitted temperature	-25° C ... +55° C
Switching temperature difference	1-3K
Protection classe casing	IP65
Permitted relative room humidity	max.95% non-condensing

- Install on the north side of the building (protection against the elements). Alternatively, fit a protective cover!

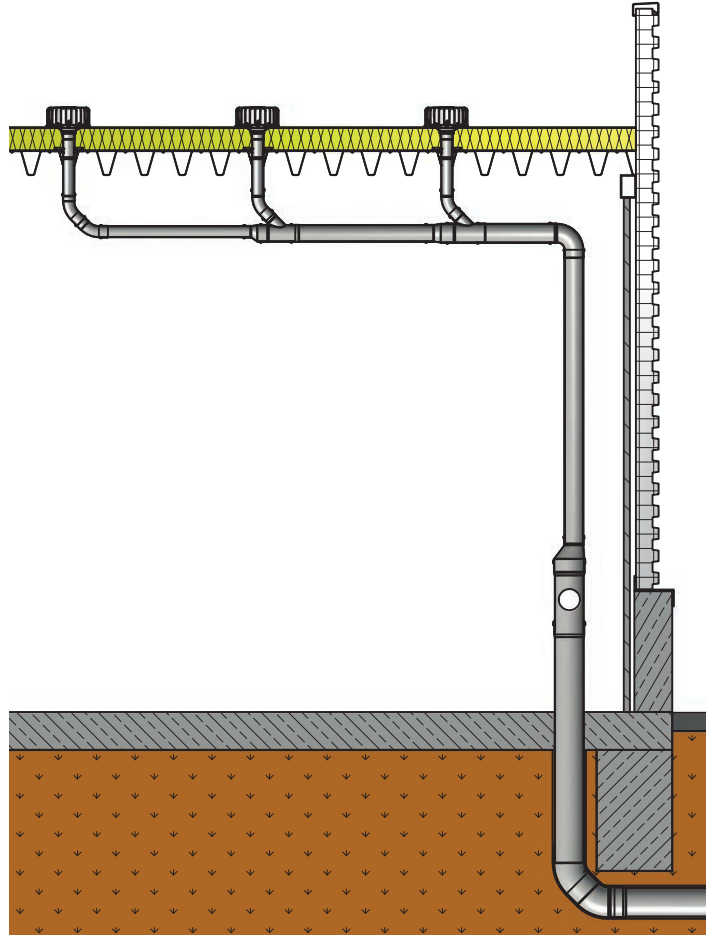


Siphonic drain made of stainless steel with bitumen collar (top) with feeder line made of bitumen, vacuum plate and pebble trap.

## Siphonic drainage

We will gladly support you with the calculation of rain drainage systems with siphonic drainage. You will receive a suggestion from us for the realisation of your drainage system with a list of the required drains, pipes and fastening pieces.

### Installation example siphonic drainage



Dimension | Article-No.



**Negative pressure drain made of stainless steel with bitumen collar (top)**

DN 50    **3620**  
DN 70    **3622**



**Negative pressure drain made of stainless steel with clamp flange (top)**

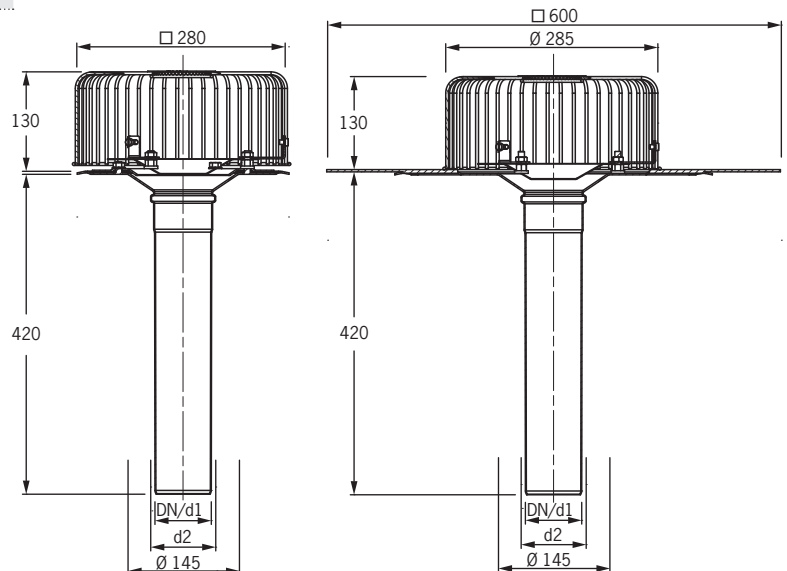
DN 50    **2620**  
DN 70    **2622**



**Stainless steel drain (bottom)**

DN 50    **2680**  
DN 70    **2682**

### Technical data siphonic drain made of stainless steel.



Art.	DN	d1	d2
3620	50	50	65
3622	70	75	90
2620	50	50	65
2622	70	75	90

# ■ Pipe system made of stainless steel

Dimension | **Article-No.**



### Stainless steel with a sleeve

	Length				
	25 cm	50 cm	100 cm	200 cm	300 cm
DN 50	<b>2631</b>	<b>2631.55</b>	<b>2631.1</b>	<b>2631.2</b>	<b>2631.3</b>
DN 70	<b>2632</b>	<b>2632.55</b>	<b>2632.1</b>	<b>2632.2</b>	<b>2632.3</b>
DN 100	<b>2634</b>	<b>2634.55</b>	<b>2634.1</b>	<b>2634.2</b>	<b>2634.3</b>

see table on the left



### Stainless steel pipe bend with a sleeve

	Angle			
	87,5°	45°	30°	15°
DN 50	<b>2650</b>	<b>2650.45</b>	<b>2650.30</b>	<b>2650.15</b>
DN 70	<b>2652</b>	<b>2652.45</b>	<b>2652.30</b>	<b>2652.15</b>
DN 100	<b>2654</b>	<b>2654.45</b>	<b>2654.30</b>	<b>2654.15</b>

see table on the left



### Stainless steel branch

	Angle	
	87,5°	45°
DN 50/50	<b>2660</b>	<b>2660.45</b>
DN 70/70	<b>2662</b>	<b>2662.45</b>
DN 100/100	<b>2664</b>	<b>2664.45</b>

see table on the left



### Stainless steel pipe with revision opening DN 100

DN 100    **2635**



### Pipe cuff made of stainless steel

for a secure connection of the stainless steel pipe to the construction. with decoupling rubber..

DN 50    **2690**  
 DN 70    **2692**  
 DN 100    **2694**

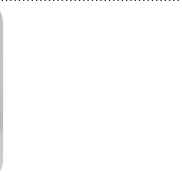
Dimension | Article-No.



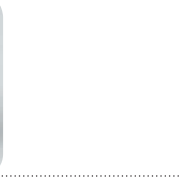
**Terrace construction set (can be walked upon) (fig. left)**  
**5900**  
**Terrace construction set with recessed sieve panel**  
**5901**



**terrace construction set (can be walked upon) (black)**  
 without odour trap **5902**  
 with odour trap **5902.G**



**Terrace construction set PLUS**  
 without odour trap **5902.E**  
 with odour trap **5902.G.E**

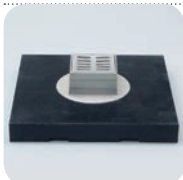


**Terrace construction set PLUS long**  
 without odour trap **5902.E.L**  
 with odour trap **5902.G.E.L**

**NEW!**

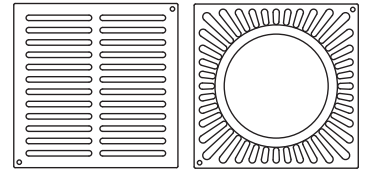
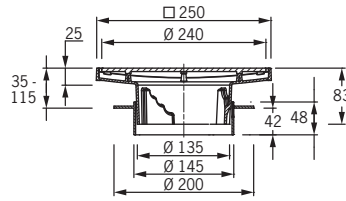
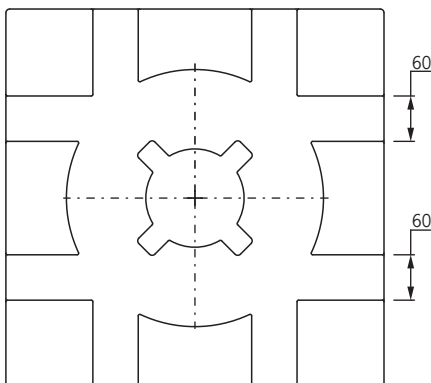
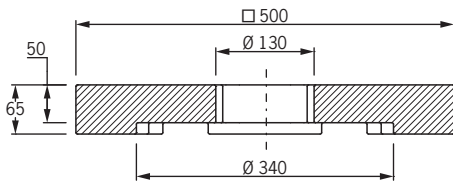


**Sieve ring made of stainless steel**  
 DN 70 **5903**  
 DN 100 **5904**

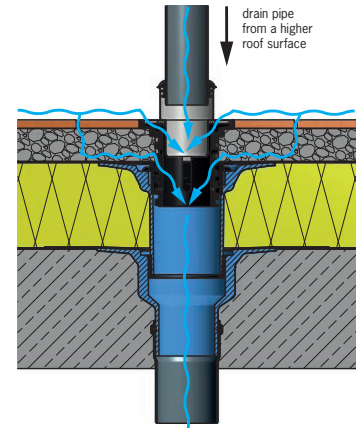
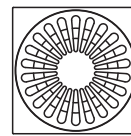
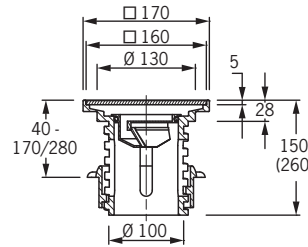


**Terrace construction set (can be driven upon)**  
**5905**  
**Extension ring 25 mm**  
**5906**  
**Load-bearing panel**  
**5907**

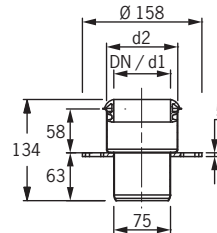
### Technical data load-bearing panel



### Installation example terrace construction set and sieve ring extension piece

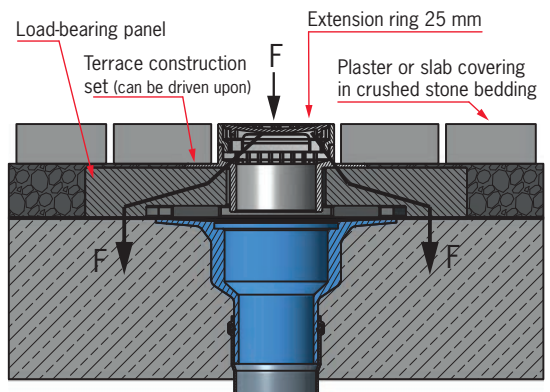


Compact collar drain with extension and terrace construction set with sieve ring extension piece built into terrace



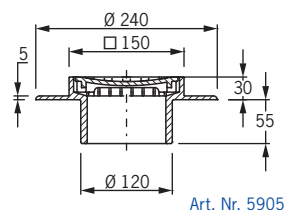
Art.	DN	d1	d2
5903	70	75	98
5905	100	110	126

### Installation example terrace construction set (can be driven upon) with load-bearing panel

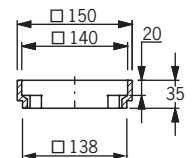


Compact collar drain with load-bearing panel and terrace construction set (can be driven upon) with slab covering installed in the crushed stone bedding. The load-bearing panel channels the force past the terrace construction set into the concrete slab.

### Technical data terrace construction set and extension frame



Art. Nr. 5905



Art. Nr. 5906



Dimension | **Article-No.**

**Pebble collar made of stainless steel**

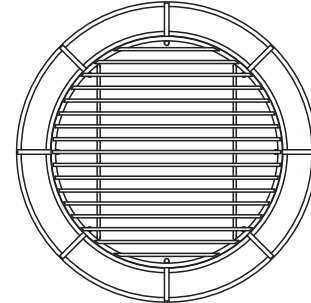
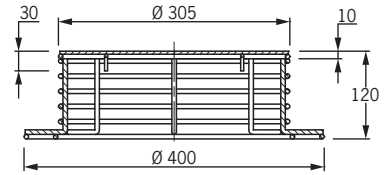
**5908**

can be fitted, even subsequently, onto any commercial drain. The long-protection against pebble blockage in pipes.

**Lid made of stainless steel**

**5909**

suitable for pebble collar made of stainless steel.



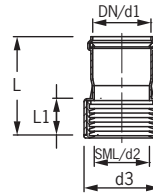
**Drain-/SML-Pipe-Connections piece**

DN 50/50 **5940**

DN 70/80 **5942**

DN 100/100 **5944**

ideal connection between Grumbach drain DN 50, 70 or 100 and an SML-Pipe of the same DN-Nominal width



Art.	DN	d1	SML	d2	d3	L	L1
5940	50	50	50	58	80	85	32
5942	70	75	80	83	100	130	48
5944	100	110	100	110	132	150	53

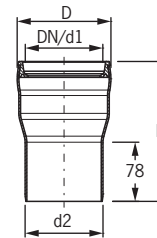


**Gully/Loro connection piece**

DN 70 **5953**

DN 100 **5954**

For a connection between Grumbach drain DN 70 Or 100 and a Loro X sleeve pipe of the same nominal width.



Art.	DN	d1	d2	H	D
5953	70	75	73	150	87
5954	100	110	103	180	124



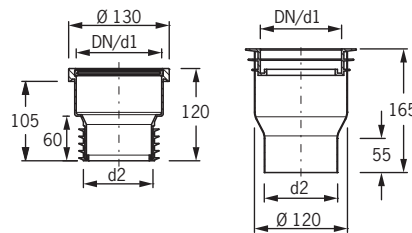
**Adaptor DN 100**

for the connection of a zinc pipe **made of titanium zinc**

DN 100 **5955**

**made of PP**

DN 100 **5955.PP**



Art.	DN	d1	d2
5955	100	110	95
5955.PP	100	110	95

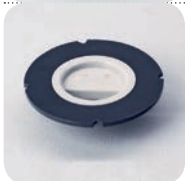
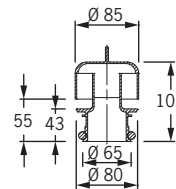
**NEW!**



**Bell odour trap**

**5950**

incl. seal, suitable for Art.-No. 2104/2124/3104/3124



**Odour trap**

Typ I **5952**

suitable for all Universal drains

Typ II **5952.2**

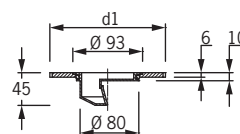
suitable for all

Compact collar drains

Typ III **5952.3**

suitable for terrace construction set - can be walked upon - (black)

Note for all types: reduces the drainage capacity to approx. 0.9 l/s!

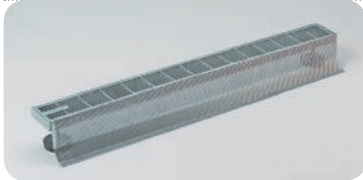


Art.	d1
5952	104
5952.2	112
5952.3	154

Dimension | **Article-No.**



**Drainage grate**  
 100x1000 mm **5960**  
 150x1000 mm **5962**  
 250x1000 mm **5964**



**Pebble trap strip**  
**5961**



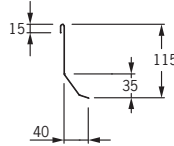
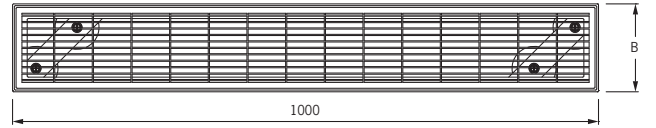
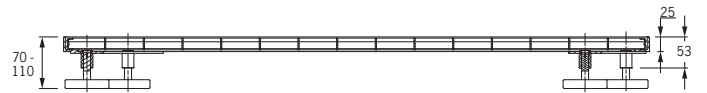
**Pebble trap (fig. left)**  
**5970**  
**Pebble trap (fig. right)**  
**5971**



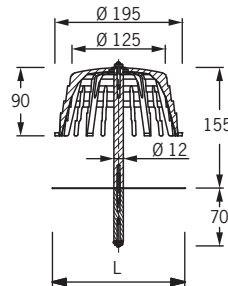
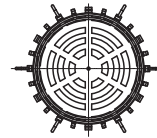
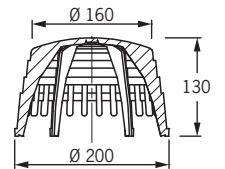
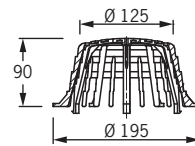
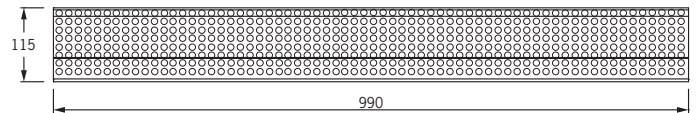
**Universal pebble trap with holder**  
 internal diameter  
 80-120 **5973**  
 120-140 **5973.3**



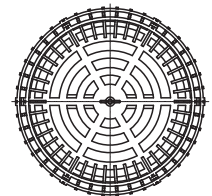
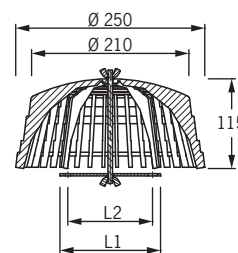
**Pebble trap**  
**5972**



Art.	B
5960	100
5962	150
5964	250



Art.	Internal diameter	L
5973	80-120	125
5973.3	120-140	140

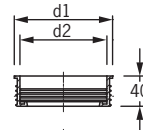


Type of drain	L1	L2
Clamp flange drain / Attika flat drain / Trapezoidal drain / Collar drain DN200 / Refurbishment drain DN 200 / Eco Drain	203	183
Stainless steel Top drain	180	160
refurbishment drain DN 150 / refurbishment drain Aluminium	170	150
Refurbishment drain 56	160	140

Dimension | **Article-No.**



**Anti-backflow seal for extension elements**  
**5990**  
 Suitable for compact collar drain and Universal drain



Art.	d1	d2	d1	d2
	Starting condition		Positioned on a support DN 125	
<b>5990</b>	130	115	138	125

**NEW!**

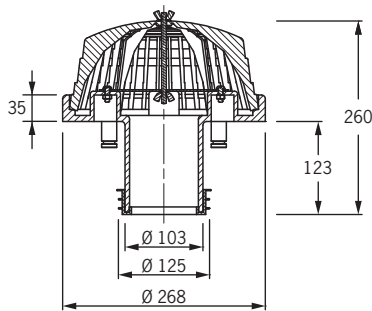


**Plug-in attachment made of PUR (black) for emergency drainage**  
**2091**

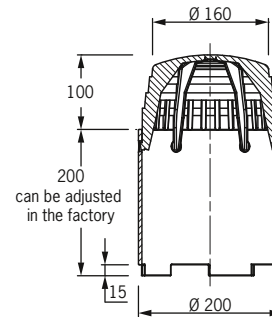


**Inverted roof attachment**  
**5918**

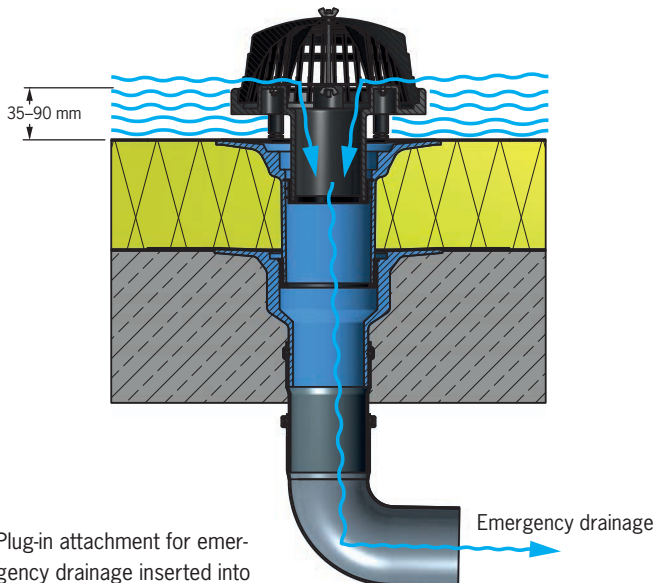
### Technical data plug-in attachment



### Technical data inverted roof attachment

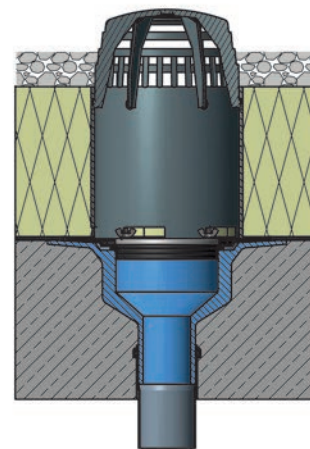


### Installation example plug-in attachment



Plug-in attachment for emergency drainage inserted into the compact collar drain with extension element in the heated roof.

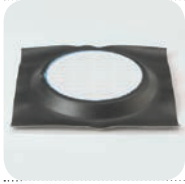
### Installation example inverted roof attachment



Height-adjusted inverted roof attachment incl. pebble trap in inverted roof with pebble trap.



Dimension | Article-No.



**Back up ring made of PUR  
35 mm high**

**5915**



**Half back up ring made of PUR  
35 mm high**

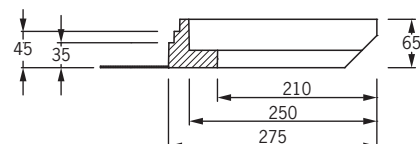
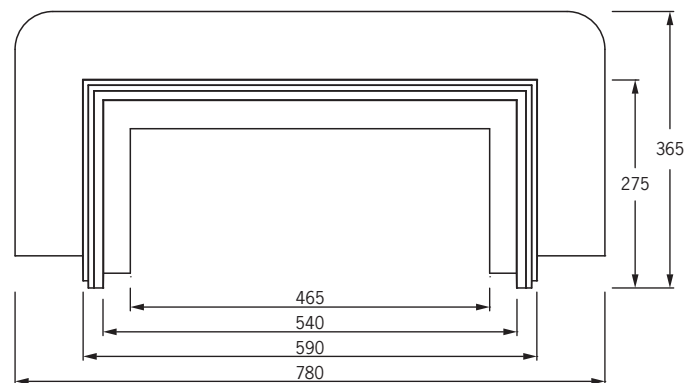
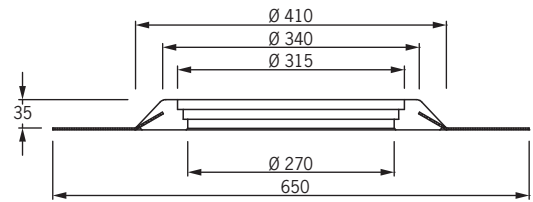
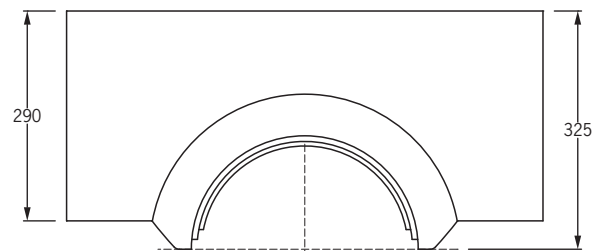
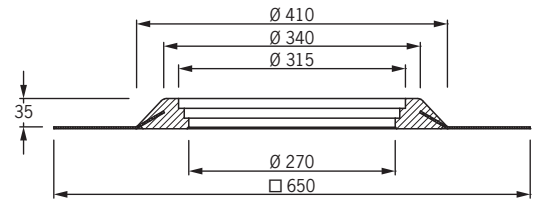
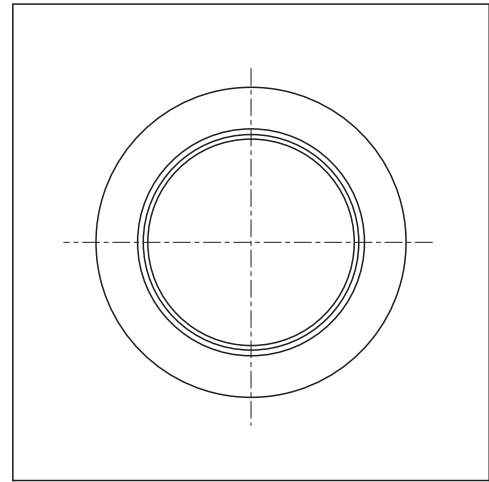
**5916**



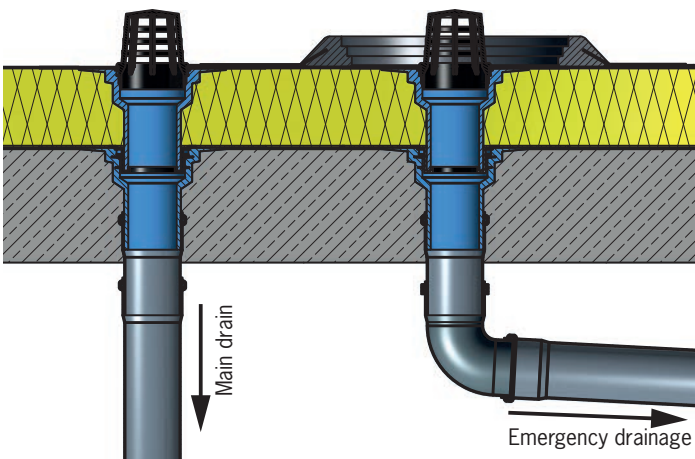
**Back up frame made of PUR  
Black**

**5917**

## Technical data back up ring and back up frame made of PUR

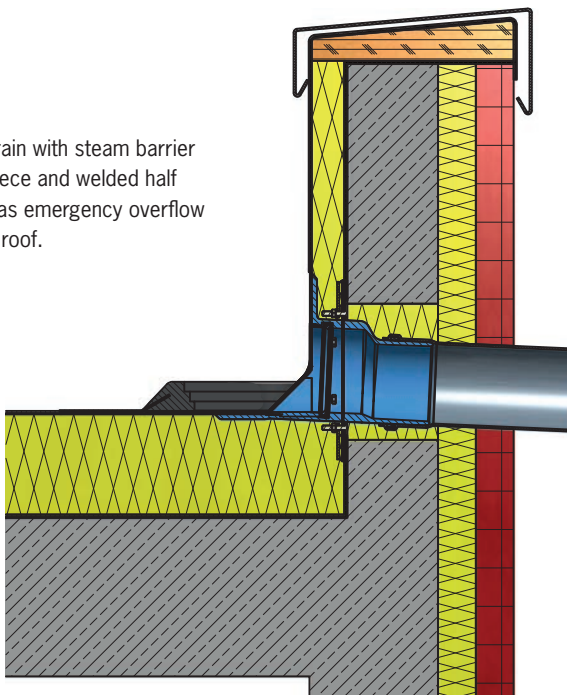


## Installation back up ring



Roof drains with extension element in heated roof, once as a main drain and once with back up ring as an emergency drain (right)

Attika floor drain with steam barrier connection piece and welded half back up ring as emergency overflow in the heated roof.



Art.-No.	Product name	Name suffix	Nominal wide suffix	Nominal width	Drainage capacity [l/s]			
					at the drain pipe			
					35 mm	45 mm	55 mm	65 mm
2102	Universal drain	vertical	DN	70	6.30	8.10	9.70	11.10
2104	Universal drain	vertical	DN	100	6.80	9.10	11.00	12.70
2106	Universal drain	vertical	DN	125	6.50	8.70	10.40	12.30
2111	Universal drain	horizontal	DN	70	5.80	8.00	9.90	11.60
2114	Universal drain	horizontal	DN	100	6.10	8.20	10.00	12.00
2116	Universal drain	horizontal	DN	125	6.40	8.50	10.60	12.50
2008	Clamping collar drain	vertical	DN	150	7.60	10.00	13.80	17.00
3102	Compact collar drain	vertical	DN	70	6.30	8.10	9.70	11.10
3104	Compact collar drain.	vertical	DN	100	6.80	9.10	11.00	12.70
3106	Compact collar drain	vertical	DN	125	6.50	8.70	10.40	12.30
3112	Compact collar drain.	horizontal	DN	70	5.80	8.00	9.90	11.60
3114	Compact collar drain	horizontal	DN	100	6.10	8.20	10.00	12.00
3115	Compact collar drain.	horizontal	DN	125	6.40	8.50	10.60	12.50
3008	Collar drain	vertical	DN	150	6.60	9.50	13.20	17.50
3009	Collar drain	vertical	DN	200	7.50	10.80	13.50	18.30
2306	Redevelopment drain	with clamping flange	DN	125	5.80	7.90	10.00	12.80
3306	Redevelopment drain	with adhesive collar	DN	125	6.40	8.10	11.20	13.70
2307	Redevelopment drain	with clamping flange	DN	140	5.50	7.50	9.90	11.10
3307	Redevelopment drain	with adhesive collar	DN	140	6.60	8.30	10.10	11.80
2308	Redevelopment drain	with clamping flange	DN	150	5.30	8.10	9.90	12.10
3308	Redevelopment drain	with adhesive collar	DN	150	4.60	8.30	9.10	10.40
3329	Redevelopment drain	with adhesive collar		170	5.60	8.30	9.80	12.60
3309	Redevelopment drain	with adhesive collar	DN	200	7.50	9.90	13.50	18.30
2302	Trapezoidal drain	with clamping flange	DN	70	6.70	9.10	12.00	14.80
2304	Trapezoidal drain	with clamping flange	DN	100	5.90	8.30	11.00	15.00
2303	Redevelopment drain	aus Alu	DN	90	3.90	5.70	7.30	9.00
3311	Redevelopment drain	with adhesive collar		36	1.70	3.00	3.60	4.60
3313	Redevelopment drain	with adhesive collar		56	3.20	4.90	6.00	8.60
3315	Redevelopment drain	with adhesive collar		88	4.50	5.90	7.70	10.50
3317	Redevelopment drain	with adhesive collar		103	3.30	4.90	6.50	8.90
3314	Redevelopment drain	with adhesive collar	DN	100	4.60	6.70	8.80	10.60
3300	Garage drain	with adhesive collar	DN	50	1.90	4.50	6.30	7.00
3302	Garage drain	with adhesive collar	DN	70	1.70	2.50	3.30	5.50
2204	Combi drain	made of PUR	DN	100	9.50	12.50	16.40	18.00
2500	Balcony drain	with clamping flange	DN	50	1.50	3.00	5.70	6.70
3500	Balcony drain	with adhesive collar	DN	50	1.70	3.50	5.60	6.70
2511	Balcony drain	with clamping flange	DN	50	1.50	3.00	5.70	6.70
3511	Balcony drain	with adhesive collar	DN	50	1.70	3.50	5.60	6.70
3740	Garage balcony drain	with clamping flange	DN	70	2.15	3.65	4.45	6.35
3741	Garage balcony drain	with adhesive collar	DN	100	4.10	5.10	7.00	10.50
2702	Garage balcony drain	with clamping flange	DN	70	2.50	3.40	5.25	6.65
3702	Garage balcony drain	with adhesive collar	DN	70	2.25	3.65	4.65	6.30
2711	Garage balcony drain	horizontal	DN	70	2.10	3.10	4.50	5.90
3712	Garage balcony drain	horizontal	DN	70	2.50	3.80	5.10	6.70
2600	Stainless steel drain	vertical	DN	50	1.50	4.20	6.30	6.80
2602	Stainless steel drain	vertical	DN	70	3.50	5.20	6.50	8.40
2604	Stainless steel drain	vertical	DN	100	5.10	7.50	9.00	11.50
2611	Stainless steel drain	horizontal	DN	50	2.00	3.30	5.00	5.30
2612	Stainless steel drain	horizontal	DN	70	4.10	5.80	7.20	8.60

Art.-No.	Product name	Name suffix	Nominal wide suffix	Nominal width	Drainage capacity [l/s]				Drainage capacity [l/s]			
					at the drain pipe				at free outlet			
					35 mm	45 mm	55 mm	65 mm	35 mm	45 mm	55 mm	65 mm
2614	Stainless steel drain	horizontal	DN	100	5.20	7.10	8.60	10.10	–	–	–	–
2624	Stainless steel Top drain		DN	100	6.00	8.40	9.60	12.20	–	–	–	–
2626	Stainless steel Top drain		DN	125	6.30	9.50	11.10	14.20	–	–	–	–
2701	Durchg. Balkonablauf	without sunken part	DN	70	4.70	7.00	9.45	12.45	–	–	–	–
2701	Durchg. Balkonablauf	with sunken part	DN	70	1.50	1.60	1.70	1.80	–	–	–	–
3410	Attika balcony drain	made of PUR	DN	50	0.60	1.35	2.45	2.50	0.40	0.60	0.80	1.10
3411	Attika balcony drain	made of PUR	DN	70	0.70	0.90	1.30	1.90	0.70	0.90	1.30	1.70
3412	Attika balcony drain	made of PUR	DN	100	1.00	1.30	1.95	2.40	0.90	1.20	1.70	2.20
3413	Attika balcony drain	with inserted sleeve	DN	50	0.60	1.35	2.45	2.50	0.40	0.60	0.80	1.10
3414	Attika balcony drain	with inserted sleeve	DN	70	0.70	0.90	1.30	1.90	0.70	0.90	1.30	1.70
3415	Attika balcony drain	with inserted sleeve	DN	100	1.00	1.30	1.95	2.40	0.90	1.20	1.70	2.20
3440	Attika balcony drain	with wedge	DN	50	0.60	1.35	2.45	2.50	0.40	0.60	0.80	1.10
3442	Attika balcony drain	with wedge	DN	70	0.70	0.90	1.30	1.90	0.70	0.90	1.30	1.70
3444	Attika balcony drain	with wedge	DN	100	1.00	1.30	1.95	2.40	0.90	1.20	1.70	2.20
3440 + 2450.1	Attika balcony drain	+ drain element construction height 170 mm	DN	50	5.40	5.40	5.40	5.40	1.20	1.20	1.20	1.30
3442 + 2452.1	Attika balcony drain	+ drain element construction height 170 mm	DN	70	9.70	13.20	14.20	15.20	3.20	3.40	3.50	3.70
3444 + 2454.1	Attika balcony drain	+ drain element construction height 170 mm	DN	100	10.10	13.80	17.00	20.40	6.40	7.10	7.30	7.60
3421	Attika balcony drain	with emergency overflow	DN	70	0.70	0.90	1.30	1.90	0.70	0.90	1.30	1.70
3422	Attika balcony drain	with emergency overflow	DN	100	1.00	1.30	1.95	2.40	0.90	1.20	1.70	2.20
2442	Attika flat drain	short	DN	70	3.80	9.50	11.20	11.40	2.70	3.00	3.10	3.20
2444	Attika flat drain	short	DN	100	5.80	7.80	8.90	9.60	5.60	6.00	6.50	6.80
2442.L	Attika flat drain	long	DN	70	6.30	9.60	11.70	12.10	2.60	2.70	2.80	3.20
2444.L	Attika flat drain	long	DN	100	6.40	7.40	8.90	9.60	5.80	6.30	6.90	7.00
3431	Attika Super drain	made of PUR	DN	70	3.80	5.40	7.20	9.40	2.40	2.60	2.70	2.80
3433	Attika Super drain	made of PUR	DN	100	4.90	6.90	8.80	9.90	4.60	5.40	5.90	6.20
2432	Attika Super drain	made of stainless steel	DN	70	3.80	5.40	7.20	9.40	2.40	2.60	2.70	2.80
2434	Attika Super drain	made of stainless steel	DN	100	4.90	6.90	8.80	9.90	4.60	5.40	5.90	6.20
3433.S2	Attika Super 2 drain	(lower level)	DN	100	–	–	–	–	3.00	3.30	3.50	3.70
3436	Attika Jumbo drain	made of PUR	260	x120	6.10	9.20	12.20	15.70	6.20	9.00	12.00	15.50
3435	Attika Plus drain	made of PUR	280	x85	–	–	–	–	5.00	6.50	8.00	9.60
3435 + FKS	Attika Plus drain	+ flat channel system	280	x85	–	–	–	–	2.00	2.60	3.60	4.40
3202	Eco drain bottom part		DN	70	3.90	5.40	6.70	8.60	–	–	–	–
3204	Eco drain bottom part		DN	100	5.20	7.70	8.90	11.30	–	–	–	–
3206	Eco drain bottom part		DN	125	5.70	7.80	9.10	11.50	–	–	–	–
3282	Eco drain top part		DN	70	8.00	11.00	13.30	15.20	–	–	–	–
3284	Eco drain top part		DN	100	8.80	11.00	12.80	14.00	–	–	–	–
3286	Eco drain top part		DN	125	8.20	10.40	14.20	18.00	–	–	–	–
2640	Fire protection drain	made of stainless steel	DN	50	1.50	4.20	6.30	6.80	–	–	–	–
2642	Fire protection drain	made of stainless steel	DN	70	3.50	5.20	6.50	8.40	–	–	–	–
2644	Fire protection drain	made of stainless steel	DN	100	5.10	7.50	9.00	11.50	–	–	–	–
2646	Fire protection drain	made of stainless steel	DN	125	7.40	7.80	9.30	12.30	–	–	–	–

# ■ Calculation of the number of drains required

## Example calculation

updated!

### How you determine the number of drains required per roof area:

Copy the form on the next page if required

- 1 Determine roof area (A)
  - 2 Determine type of roof (C) the drain coefficient C is a measure for the time lapse of the rainwater drainage. Water on heavily planted roofs flows away after the longest delay (C=0.3).
  - 3 Choose a location from the rainfall statistics list and insert the values  $r_{(5,5)}$  and  $r_{(5,100)}$ .
  - 4 Determine desired size of drain, which fulfil the requirements of DIN ! The following Grumbach drains fulfil DIN requirements (self-tested):  
 Universal drain\*, Clamp flange-Drain, Compact-Collar-Drain\*, Collar drain, Redevelopment drain, Combi-Drain, Balcony drain, Garage-/Balcony drain, Stainless steel-Drain, Attika-Super-Drain\*, Attika-Jumbo-Drain, Attika-Flat drain
  - 5 If none of the information for 4 are relevant, e.g. if, according to the manufacturer's information, the drainage capacity is below the minimum requirements of DIN 1986-100.
  - 6 You now have all the required data; you may now use the formula
  - 7 The result is rounded up to the next full unit and you can now see the number of drains required
- \* for capacities of these drains have also been tested by LGA Bayern!

### Flat roof drainage according to DIN 1986-100

DIN 1986-100 is important as it also takes extreme rainfall into account.

We are of the opinion that by conforming to the relatively new standard (valid since March 2002), our drains are fit for the future.

According to DIN 1986-100 the flat roof should be able to withstand „Once every hundred years rainfall“.

This refers to the statistical rainfall which occurs every hundred years for five minutes.

### Data sheet : NORMAL AND Emergency drainage (free level drainage)

for the calculation of the number of drains required for a particular roof area according to DIN 1986 - 100

The following data are required for the calculation:

<b>1</b>	<b>Roof area (A)</b>	please insert the roof area [m <sup>2</sup> ]	<b>A = 550</b>	<b>m<sup>2</sup></b>			
<b>2</b>	<b>Type of roof (C)</b>	Without covering <small>(e.g. bitumen)</small>	Pebble roof	Green roof Extensive <small>surfacing up to 10cm</small>	Green roof Extensive <small>Surfacing upwards of 10cm</small>	Green roof intensive	
	<b>Please mark</b>	<input checked="" type="checkbox"/> C=1.0	<input type="checkbox"/> C=0.5	<input type="checkbox"/> C=0.5	<input type="checkbox"/> C=0.3	<input type="checkbox"/> C=0.3	
<b>3</b>	<b>Location</b> [ $r_{(5,5)}$ , $r_{(5,100)}$ ]	<b>Place:</b> <small>(see rear of sheet)</small>		$r_{(5,5)}$ <small>(see rear of sheet)</small>	$r_{(5,100)}$ <small>(see rear of sheet)</small>		
	<b>Please insert</b>	<i>Frankfurt am Main</i>		<i>329</i>	<i>601</i>		
<b>4</b>	<b>Roof drain (Q<sub>G</sub>)</b>	DN 50 Q <sub>G</sub> =0.9 l/s	DN 70 Q <sub>G</sub> =1.7 l/s	DN 100 Q <sub>G</sub> =4.5 l/s	DN 125 Q <sub>G</sub> =7.0 l/s	DN 150 Q <sub>G</sub> =8.1 l/s	<b>DN</b> Q <sub>G</sub> = <b>5</b>
	<b>Please mark</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> free entry
		<b>Normal drainae</b> <small>(basic drainage)</small>	<b>Emergency drainage</b> – from 35 mm accumulation height DN 50/70/100 – from 45 accumulation height DN 125/150				
<b>6</b>	<b>Formula</b>	$n_G = (r_{(5,5)} \times C \times A) : (Q_G \times 10000)$			$n_G = \{ [r_{(5,100)} - (r_{(5,5)} \times C)] \times A \} : (Q_G \times 10000)$		
<b>7</b>	<b>Solution: number of drains</b>	<i>4 = 4 Drains DN 100</i>			<i>3,3 = 4 Drains DN 100</i>		

Key (description)	<p><math>n_G</math> the minimum number of drains in pieces, rounded up to full pieces.</p> <p>C Drainage value, is dependent on the type of roof surfacing and varies between 0.3 and 1.0.</p> <p>A the roof area in [m<sup>2</sup>]</p> <p>Q<sub>G</sub> the minimum drainage capacity of the drain according to DIN in liters per second [l/s], is dependent, among other things, on nominal width of the drain.</p> <p><math>r_{(0,1)}</math> The rainfall <math>r_{(0,1)}</math> defined in litres per second and hectare [l/(s.ha)]. Only <math>r_{(5,5)}</math> and <math>r_{(5,100)}</math> are required here</p>
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### Note:

The data sheet developed by us, and all our information, have been processed to the best of our knowledge. For further or more complete information, please refer to the relevant DIN standards, which we also used as our main source. Possible errors will not constitute or result in an implied warranty of any kind.

Pages 52-54 are to be regarded as non-binding information and should be checked by the user.

### Data sheet : NORMAL AND Emergency drainage (free level drainage)

for the calculation of the number of drains required for a particular roof area according to DIN 1986 - 100

The following data are required for the calculation:

<b>Roof area (A)</b>	please insert the roof area [m <sup>2</sup> ]	<b>A =</b>		<b>m<sup>2</sup></b>
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Type of roof (C)	Without covering <i>(e.g. bitumen)</i>	Pebble roof	Green roof Extensive <i>surfacing up to 10cm</i>	Green roof Extensive <i>Surfacing upwards of 10cm</i>	Green roof inten- sive
Please mark	C=1.0	C=0.5	C=0.5	C=0.3	C=0.3

Location [ r <sub>(5, 5)</sub> , r <sub>(5, 100)</sub> ]	Place: <i>(see rear of sheet)</i>	r <sub>(5, 5)</sub> <i>(see rear of sheet)</i>	r <sub>(5, 100)</sub> <i>(see rear of sheet)</i>
Please insert			

Roof drain (Q <sub>G</sub> )	DN 50 Q <sub>G</sub> =0.9 l/s	DN 70 Q <sub>G</sub> =1.7 l/s	DN 100 Q <sub>G</sub> =4.5 l/s	DN 125 Q <sub>G</sub> =7.0 l/s	DN 150 Q <sub>G</sub> =8.1 l/s	DN Q <sub>G</sub> =
Please mark						entry free

	Normal drainage <i>(basic drainage)</i>	Emergency drainage – up to 35mm accumulation height with DN 50/70/100 – up to 45mm accumulation height with DN 125/150
The formula	$n_G = (r_{(5,5)} \times C \times A) : (Q_G \times 10000)$	$n_G = \{ [r_{(5,100)} - (r_{(5,5)} \times C)] \times A \} : (Q_G \times 10000)$
<b>The solution: The number of drains</b>		

Key (description)	n <sub>G</sub> the minimum number of drains in pieces, rounded up to full pieces
C	Drainage value, is dependent on the type of roof surfacing and varies between 0.3 and 1.0
A	he roof area in [m <sup>2</sup> ]
Q <sub>G</sub>	the minimum drainage capacity of the drain according to DIN in litres per second [ l/s ] is dependent,, among other things, on nominal width of the drain
r <sub>(D, T)</sub>	The rainfall r <sub>(D, T)</sub> dependent on rain fall (D in minutes) and the annuality (T in years) defined in litres per second and hectare [l/(s.ha)]. Only r <sub>(5, 5)</sub> and r <sub>(5, 100)</sub> are required here

## Rainfall statistics in Germany in acc. with DIN 1986-100:2008-05

Town	$r_{(5,5)}$	$r_{(5,100)}$
Aachen	251	462
Aschaffenburg	307	567
Augsburg	339	648
Aurich	255	459
Bad Kissingen	361	722
Bad Salzflun	287	492
Bad Tölz	354	627
Bamberg	316	566
Bayreuth	357	674
Berlin	371	668
Bielefeld	285	533
Bocholt	217	350
Bonn	299	572
Braunschweig	307	568
Bremen	205	304
Bremerhaven	274	498
Chemnitz	346	597
Cottbus	286	536
Cuxhaven	277	494
Dessau	313	566
Dortmund	302	526
Dresden	323	602
Duisburg	268	457
Düsseldorf	316	607
Eisennach	293	529
Emden	282	538
Erfurt	255	459
Erlangen	320	604
Essen	281	493
Frankfurt/Main	329	601
Garmisch-Partenkirchen	292	527
Gera	340	637
Göppingen	310	564
Görlitz	310	565
Göttingen	316	570
Halle/Saale	313	566
Hamburg	266	463
Hamm	307	567
Hanau	313	566
Hannover	328	652
Heidelberg	355	634
Heilbronn	303	527
Helmstedt	319	562
Hildesheim	293	529
Ingolstadt	269	460
Kaiserslautern	345	636

Town	$r_{(5,5)}$	$r_{(5,100)}$
Karlsruhe	337	603
Kassel	302	568
Kiel	239	425
Koblenz	323	602
Köln	312	610
Konstanz	327	600
Leipzig	365	682
Lindau	326	604
Lingen	342	639
Lübeck	293	552
Lüdenscheid	333	601
Magdeburg	308	583
Mainz	285	533
Mannheim	309	533
Minden	320	617
Mönchengladbach	270	502
München	352	633
Münster	307	567
Neubrandenburg	365	682
Neustadt/Weinstr.	345	636
Nürnberg	316	566
Oberstdorf	258	431
Osnabrück	337	641
Paderborn	339	639
Passau	348	633
Pforzheim	323	602
Pirmasens	345	636
Regensburg	303	570
Rosenheim	452	853
Rostock	230	388
Saarbrücken	260	462
Schweinfurt	299	534
Schwerin	286	496
Siegen	302	568
Speyer	336	639
Stuttgart	446	858
Trier	310	564
Ulm	316	563
Villingen-Schwenningen	371	668
Willingen/Upland	349	677
Wittenberge	260	459
Würzburg	314	569
<b>Average</b>	<b>312</b>	<b>570</b>
<b>Maximum</b>	<b>452</b>	<b>858</b>
<b>Minimum</b>	<b>205</b>	<b>304</b>

Abbreviation	Brand/Product	Type of surface	Manufacturer
<b>AEG</b>	Evalon V grey	EVA	Alwitra GmbH & Co.
<b>AEV</b>	Evalastic V	EPDM	Alwitra GmbH & Co.
<b>AEW</b>	Evalon V white	EVA	Alwitra GmbH & Co.
<b>AGR</b>	Austroplan FG+V	FPO	Agro Kunststofftechnik GmbH
<b>ALP</b>	Alkorplan A 35179	PVC	Renolit AG
<b>BIT</b>	Bauder Flex SAB (black)	Bitumen	Bauder GmbH & Co. KG
<b>DUR</b>	Durabit x 20 SMB	ECB	Durabit-Bauplast GmbH & Co. KG
<b>ECB</b>	O.C.-Plan 4230	ECB	Polyfin AG
<b>EPD</b>	Superseal ST	EPDM	SealEco GmbH
<b>EXT</b>	Extrupol F light grey	FPO	Schedetal Folien GmbH
<b>FLA</b>	Flagon EP/PR F 150	FPO	Soprema-Klewa GmbH
<b>FTP</b>	Firestone FS TPO*	TPO	Flatec Vertriebs GmbH
<b>OFO</b>	without foil		
<b>POL</b>	Polyfin 4230 light grey	FPO	Polyfin AG
<b>PVB</b>	Polyester fleece	Fleece	
<b>PVC</b>	Sikaplan SGK	PVC	Sika GmbH
<b>SON</b>	Special brand		
<b>STG</b>	Sarnafil TG 66-20*	FPO	Sika GmbH
<b>TEC.G</b>	Tectofin RV grey	PVC	Henkel AG & Co. KGaA
<b>TEC.W</b>	Tectofin RV weiß	PVC	Henkel AG & Co. KGaA
<b>TER.S</b>	Thermoplan-T 20 silver grey*	FPO	Bauder GmbH & Co. KG
<b>TER</b>	Thermoplan-T 20 pearl white*	FPO	Bauder GmbH & Co. KG
<b>VAE</b>	VAEPLAN Typ VB1040/D12	EVA	Hirler VAEPLAN GmbH
<b>WOL</b>	Wolfen IB	PVC/P BV	Henkel AG & Co. KGaA
<b>VEDAFIN</b>	Vedafin S (black)	FPO	Vedag GmbH
	*without fleece lamination		

**When ordering articlea with adhesive collars, please mention the required connecting surface!**

In the table, the connecting surfaces and foils are labelled as follows:

- Blue:** standard foil: bitumen and PVC
- Red:** special foil/special cuffs



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