sita

Für gutes Wetter im Bau.

MODERN ARCHITECTURE NEEDS POWERFUL TECHNOLOGY

# Gravity roof drainage

The conventional drainage for flat roofs

# **Over 30 years of expertise:**
# Welcome to Sita.

For decades the name Sita has stood for expertise in the field of drainage and emergency drainage for flat roofs. Each product contains the experience of the several million drains that have been produced. We systematically pursue one goal: quality in all areas. In the production of drainage and ventilation systems Sita is one of the leaders in Germany. We know how important good product quality is for an excellent final result. That is why we do everything we can with our products and systems to provide you with a perfect starting point for your work. With Sita you can be absolutely sure that you are building on quality.

## We provide answers!

Sita is a problem solver. Together with the specialist trade, architects, planners and users we establish the ideal solution in each case - at the service and product level.

On the one hand we are pleased to pass on our specialist knowledge, while on the other hand we benefit from all the practical suggestions. The requirements of architects, planners, users and specialist dealers take shape in the form of problem-solving products and systems.

## GOOD REASONS FOR SITA

1. **Specialist:** We are flat roof drainage
2. **Expert:** Competent and innovative since 1976
3. **Partner:** From colleague to colleague
4. **Quality:** Tested and certified
5. **Service:** Fast, reliable, on time

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# **Systematic drainage and ventilation:**
# The optimum solution for all roofing situations.

**Gravity drainage**
A SitaStandard with SitaStandard extension unit

**Siphonic drainage**
B1 SitaDSS Profi illustration shows the version with SitaFiresafe®) with SitaDSS Profi extension unit and SitaRetaining element for emergency drainage, PE pipes and pipe fittings

B2 SitaDSS Profi with SitaDSS Profi extension unit and SitaDSS adapter set to SML pipes and pipe fittings

B3 SitaDSS Multi with SitaDSS Multi extension unit and SML pipes and pipe fittings

**Emergency drainage**
C1 SitaTurbo

C2 SitaAttika pipe system

C3 SitaRondo

C4 SitaSpy

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D1 SitaCompact with SitaCompact extension unit and balcony attachment

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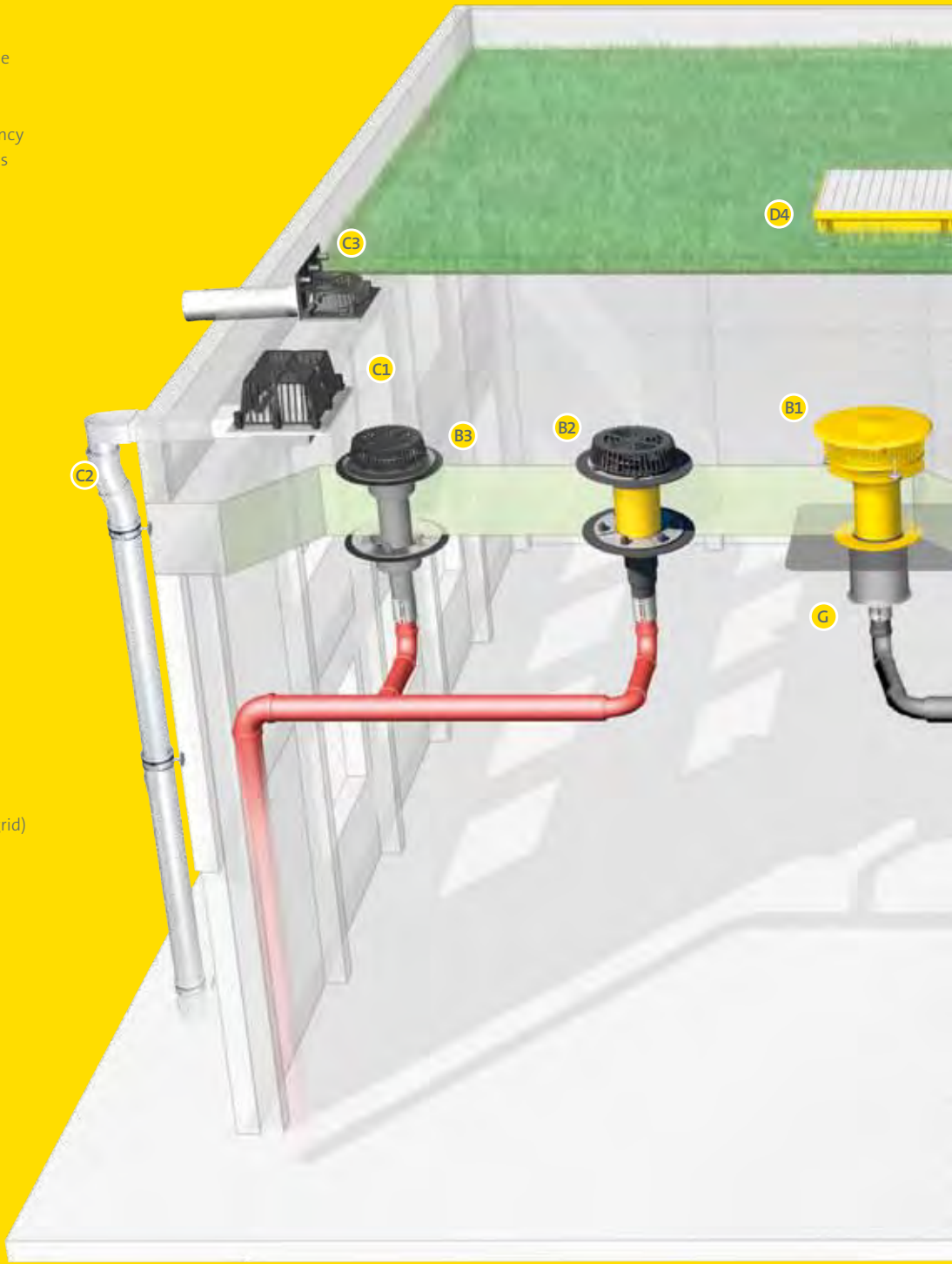
**Fire protection**
G SitaFiresafe® with SitaDSS Profi



Gravity or siphonic drainage, emergency drainage through the parapet or extension units, effective ventilation for flat roofs or reliable drainage? Sita can offer you safe and standard product and system solutions whatever the task.

## **Reliability in every case!**
Even during heavy rain.

Water is the natural enemy of the roof. In the case of flat roofs in particular, load limits can be quickly reached. For every flat roof, reliable roof drainage is essential. The increase in weather events associated with severe to extreme rainfall must now be regarded as a fact. If a large amount of rain falls within a short time, it must also be possible to drain that amount of water off the roof within a short time.

Sita offers you the perfect drainage solution for every roof surface.

## GOOD REASONS FOR THE GRAVITY ROOF DRAINAGE OF SITA

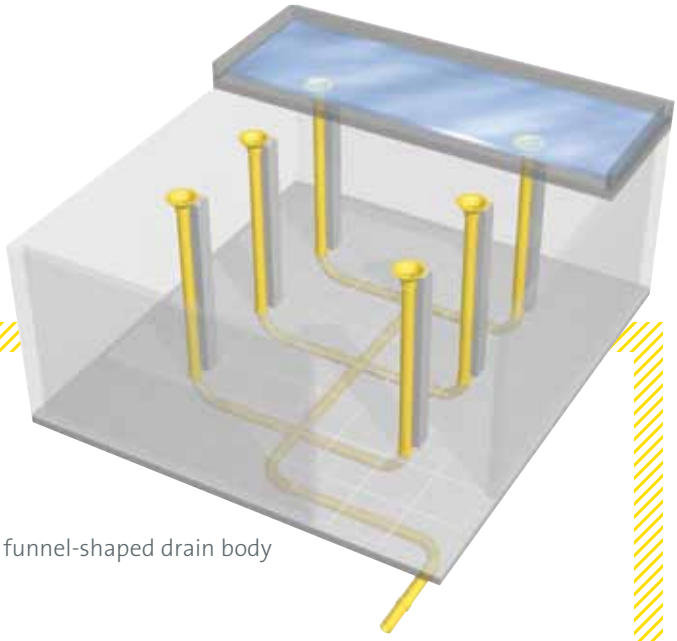
1. **Assortment:** The right solution for every flat roof
2. **Advice:** Personally & by telephone - always available
3. **Assembly:** Quick and easy installation - perfect fit
4. **Reliability:** Quality & calculation service
5. **Dealers:** Available from the local specialist trade outlets

# **Sita`s Solution:**
# Gravity roof drainage

Gravity drainage is the traditional method for the internal drainage of flat roofs and is regulated by DIN EN 12056 Part 3 and DIN 1986 Part 100.

In the gravity drainage system, the flat roof is drained via roof outlets and a pipe system laid at an incline. The pipes are partially filled with water for operation. The maximum filling level in the collection and underground pipes of h/d = 0.7 and in the downpipes of f = 0.33 may not be exceeded. The gravity drainage system is characterised by the fact that gravity is used to remove rainwater.

Here, a pipe bottom slope is used to transport the water. The drainage capacity of a gravity drainage system is significantly determined by this pipe bottom slope and the construction of the roof outlets. The inlet funnel of the drain causes an increase in drainage capacity.



**Characteristics of gravity drainage:**

- Pipeline system, at an incline
- System, partially filled
- Underground pipe network
- High drainage capacity of the roof outlets through a funnel-shaped drain body
- Designed for low point drainage
- Arrangement of an emergency drainage system

# Do you want to be absolutely sure?
Then let Sita help you with your calculations.
You save precious time.

## Calculation service

Since 2002 there has been no room for manoeuvre for the calculation of flat roof drainage in Germany. According to the current DIN 1986-100 there are two mandatory requirements. Firstly, the entire rain system must be calculated relative to the location. Secondly, separate emergency drainage is mandatory. Take advantage of our expertise and our PC-based program for the calculation of your flat roof drainage! Because it is better to be safe than sorry! Visit our website:
**www.sita-bauelemente.de**
Here you will find our calculation form:
**www.sita-bauelemente.de/service/planung-berechnung.html**

## Calculation example for a gravity drainage system

**The size of our example roof area (light construction, location: Dortmund) is: 30 m x 50 m = 1,500 m2**
**The following were determined as starting values for the calculation:**

| | |
|---|---|
| reference rainfall rate* r(5,5) according to DIN 1986-100 | r(5,5) = 302 l / (s x ha) |
| hundred-yearly rainfall* r (5,100) according to DIN 1986-100 | r(5,100)= 526 l/(s x ha) |
| Run-off coefficient according to DIN 1986-100 | C = 1.0 |
| Maximum flood level (specified by structural engineer) | hmax = 75 mm |
| Damming height for main drainage (specified by the planner) | h1 = 35 mm |
| Damming height for emergency drainage | h2 = 40 mm |

* Reference rainfall rates according to Kostra DWD 2000

**Flow rate through the main drainage system**

Q = r(5,5) x C x A
Q = 302 l/(s x ha) x 1.0 x 1,500 m2 /10000
Q = 45.3 l/s

The main drainage system must drain **45.3 l/s**.

**Flow rate through the emergency drainage system**

Qnot = [r(5,100) – r(5,5) x C] x A
Qnot = (526 – 302 x 1.0) x 1500/10000
Qnot = 33.6 l/s

The emergency drainage system must drain at least **33.6 l/s**.

## Advice + Information

Whether on site or over the phone, the experts at Sita provide you with professional and reliable advice at any time. Do you have any questions about products, installation conditions, regulations or other topics related to the drainage and ventilation of flat roofs? If so, give us a call.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**Sita direct:** +49 2522-8340-160

**Fax:**
+49 2522-8340-260

**E-Mail:**
technik@sita-bauelemente.de

**Web:**
www.sita-bauelemente.de

# Gravity roof drainage
## The conventional drainage for flat roofs

**Decision matrix:** the right product for every installation situation

| | Foamed desired connection sleeve | Loose/fixed flange construction | Internal drainage | Drainage through the parapet* | Non-combustible | Nominal diameter up to DN 200 |
|---|---|---|---|---|---|---|
| Sita**Standard**  | ✓ | | ✓ | | | ✓ |
| Sita**Trendy**  | ✓ | | ✓ | | | |
| Sita**Trendy screw-on-flange**  | | ✓ | ✓ | | | |
| Sita**Multi**  | | ✓ | ✓ | | ✓ | |
| Sita**Turbo***  | | ✓ | | ✓ | ✓ | |

* Other solutions for drainage through the parapet can be found in the parapet drainage brochure.

## Statutory regulations and standards

In the planning and design of flat roof drainage systems the following standards and regulations are to be taken into account, amongst others:

**DIN EN 12056**
Gravity drainage systems inside buildings

**DIN EN 752**
Drainage systems outside buildings

**DIN 1986**
Drainage systems for buildings and land

**DIN 18531**
Roof waterproofing

**DIN 18195**
Waterproofing of buildings

**DIN 18234**
Structural fire safety of large roofs

**LAR Directive**
Pipework guideline on fire-protection requirements for pipe systems

**ZVSHK Sanitary Engineering Manual**
Pipeline construction

**DDH Regulations**
Trade rules for roofs with seals

**FLL Directive**
Guideline for the planning, implementation and maintenance of green roofs; roof greening guideline

**FLL Recommendation**
Recommendation on the planning and construction of circulation areas on buildings

Für gutes Wetter im Bau.

# Sita**Standard**

- **Maximum drainage capacity**
- **Up to a nominal diameter DN 200**
- **Robust construction**
- **Homogeneous roof membrane connection**
- **Bridging of all insulation thicknesses**

**Applications** - For the main and emergency drainage of DIN EN 12056-3 and DIN 1986-100 and for preventive fire protection according to DIN 18234 for large used and unused roof surfaces

**Material** - Polyurethane

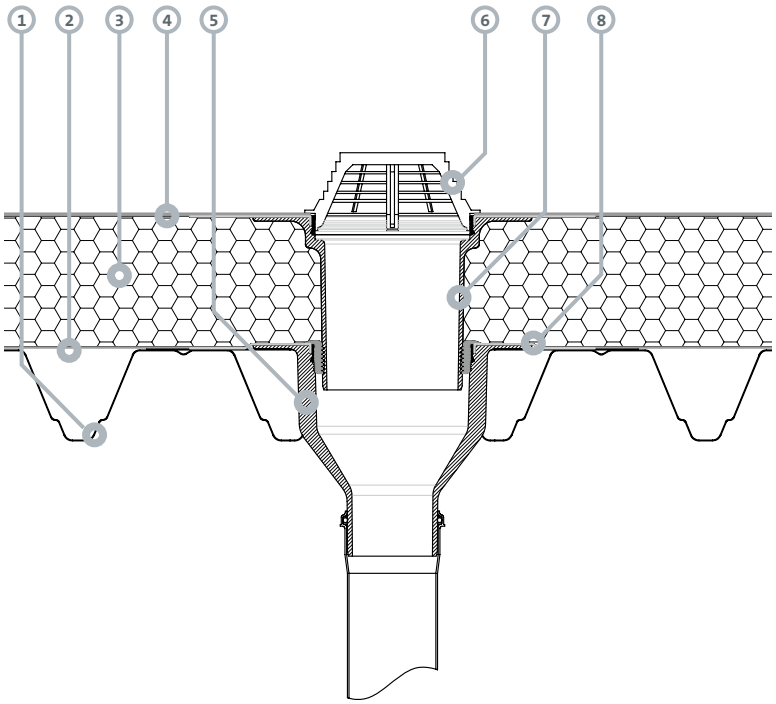
**Colour** - Yellow

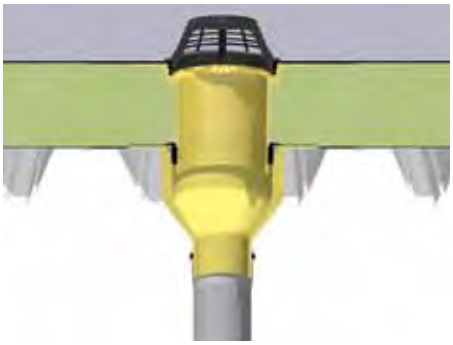
**Surface** - Smooth

**Properties** - Heat-insulated
Excellent weather resistance (UV/IR radiation)
Resistant to common influences from environmental pollution
Shock and impact-proof
Environmentally friendly production and disposal
Heat-resistant, fire protection class B2
Durable
Available with integrated heating element
Low-noise
High drainage capacity
Large hopper head

## Installation Example A:

SitaStandard roof outlet, vertical, with extension unit and dome grate in non-ventilated flat roof (warm roof).

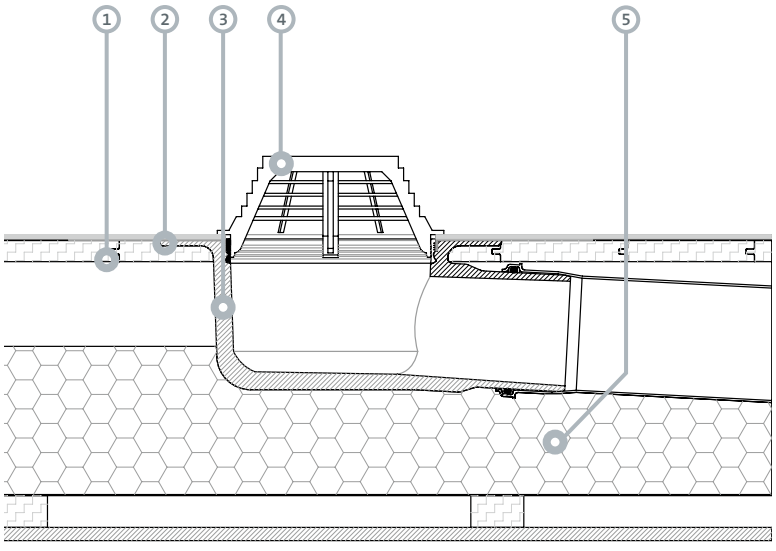


1. Substructure
2. Vapour barrier
3. Thermal insulation
4. Waterproofing to flat roof guidelines
5. SitaStandard roof outlet
6. SitaDome grate
7. SitaStandard extension unit
8. SitaReinforcement plate

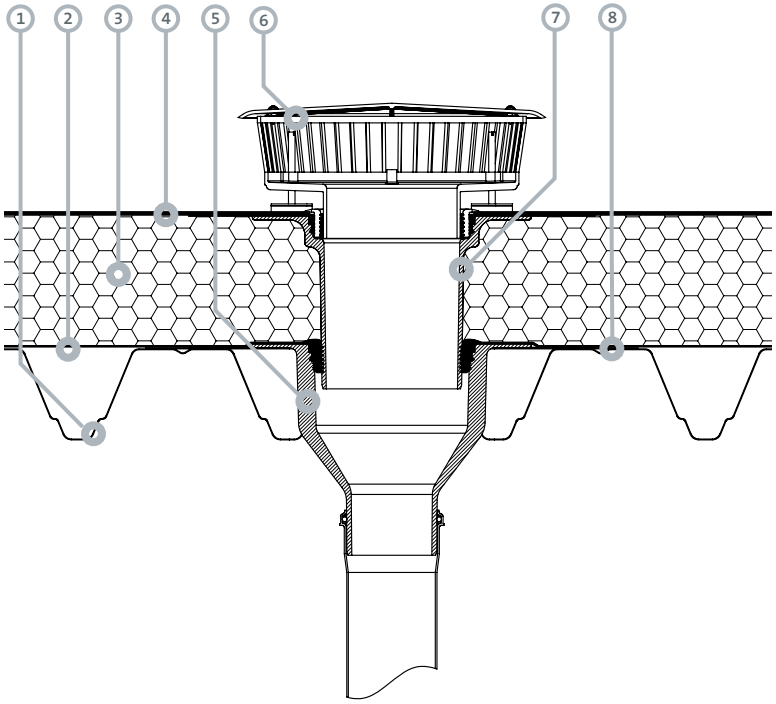
## Installation Example B:

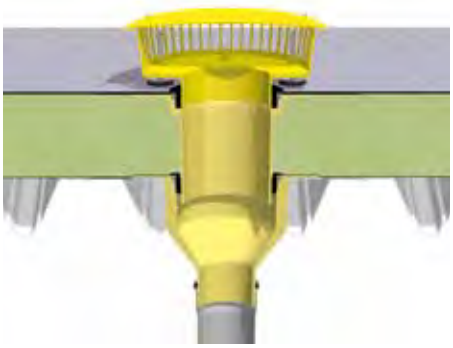
SitaStandard roof outlet, angled, with a dome grate in the ventilated flat roof (cold roof).




1. Substructure
2. Waterproofing to flat roof guidelines
3. SitaStandard roof outlet
4. SitaDome grate
5. Thermal insulation

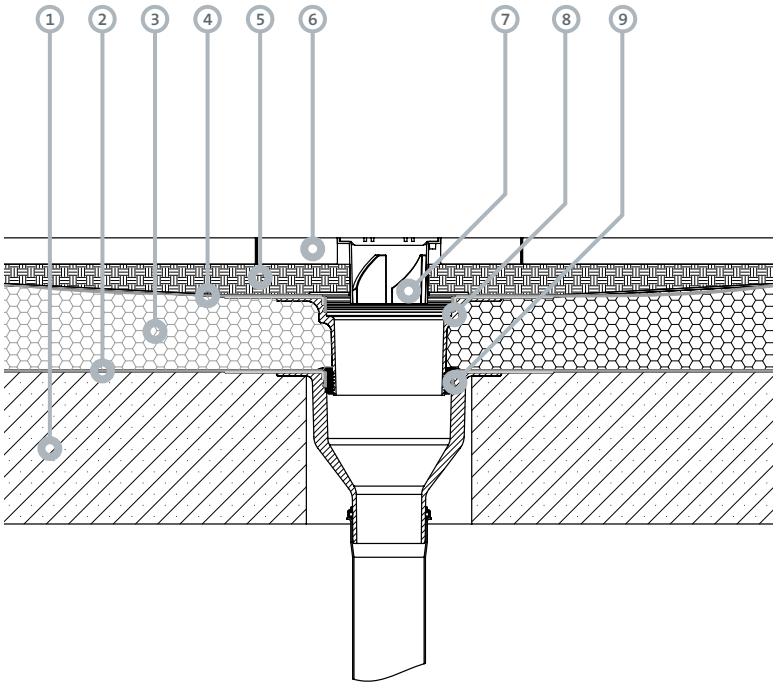
**Installation Example C:** SitaStandard roof outlet, vertical, with extension unit and retaining element for emergency draining in non-ventilated flat roof (warm roof).

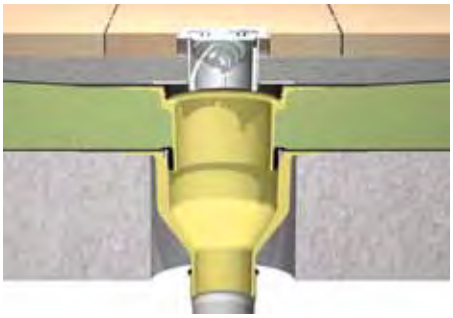


1. Substructure
2. Vapour barrier
3. Thermal insulation
4. Waterproofing to flat roof guidelines
5. SitaStandard roof outlet
6. SitaRetaining element
7. SitaStandard extension unit
8. SitaReinforcement plate

**Installation Example D:** SitaStandard roof outlet, vertical, with extension unit and terrace kit in non-ventilated flat roof (warm roof).

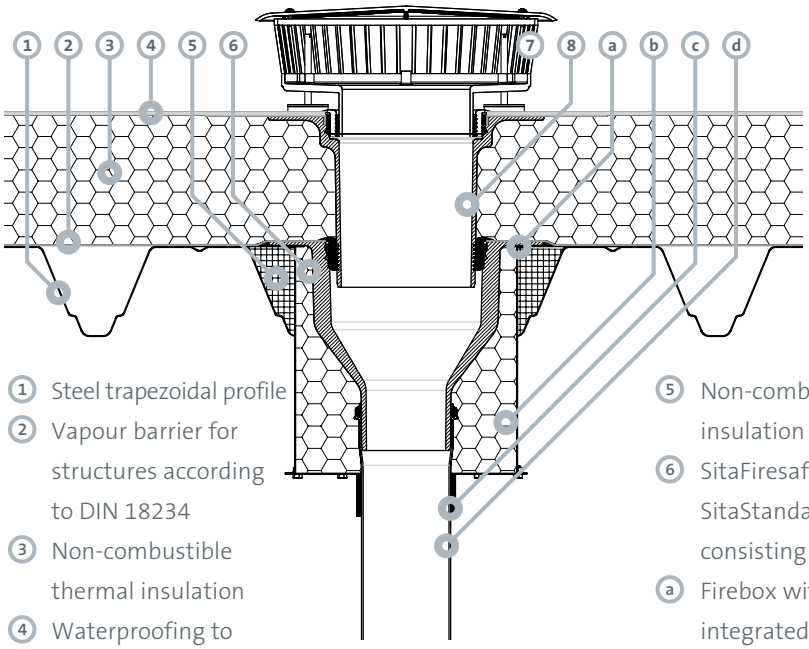


1. Substructure
2. Vapour barrier
3. Thermal insulation
4. Waterproofing to flat roof guidelines
5. Gravel bed
6. Slab covering
7. SitaTerrace kit
8. SitaStandard extension unit
9. SitaStandard roof outlet

## Installation Example E:

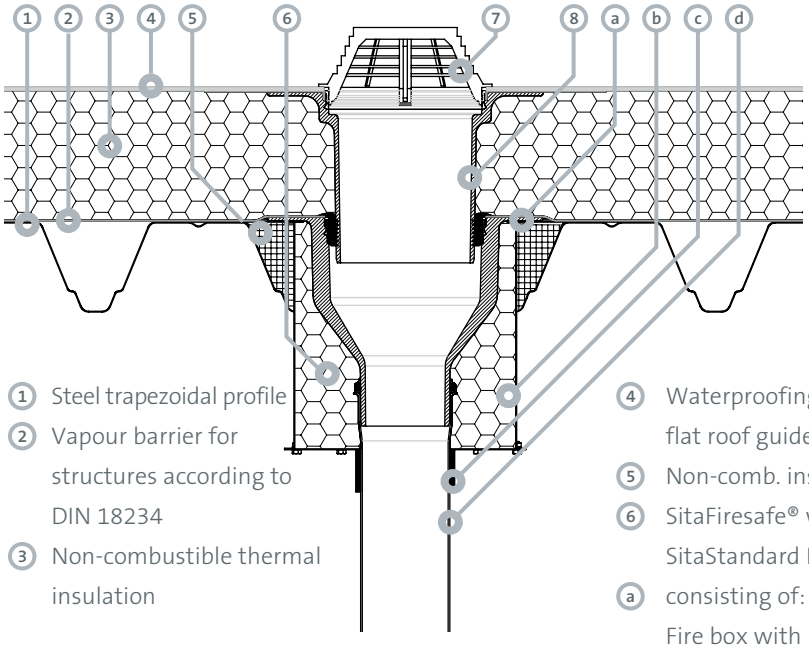
Emergency drainage with fire safety requirements: SitaFiresafe® with SitaStandard roof outlet according to DIN 18234, installed in a non-ventilated roof structure (warm roof).

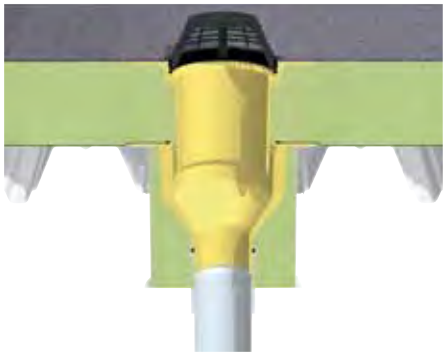



1. Steel trapezoidal profile
2. Vapour barrier for structures according to DIN 18234
3. Non-combustible thermal insulation
4. Waterproofing to flat roof guidelines
5. Non-combustible insulation fillers
6. SitaFiresafe® with SitaStandard roof outlet consisting of:
   a. Firebox with integrated reinforcement plate
   b. Non-combustible insulating material
   c. Fire protection sleeve
   d. Connection pipe
7. SitaRetaining element
8. SitaStandard extension unit

## Installation Example F:

Flat roof drainage with fire protection requirements according to DIN 18234: SitaFiresafe® with Sita Standard roof outlet and Sita extension unit in a non-ventilated roof structure (warm roof).

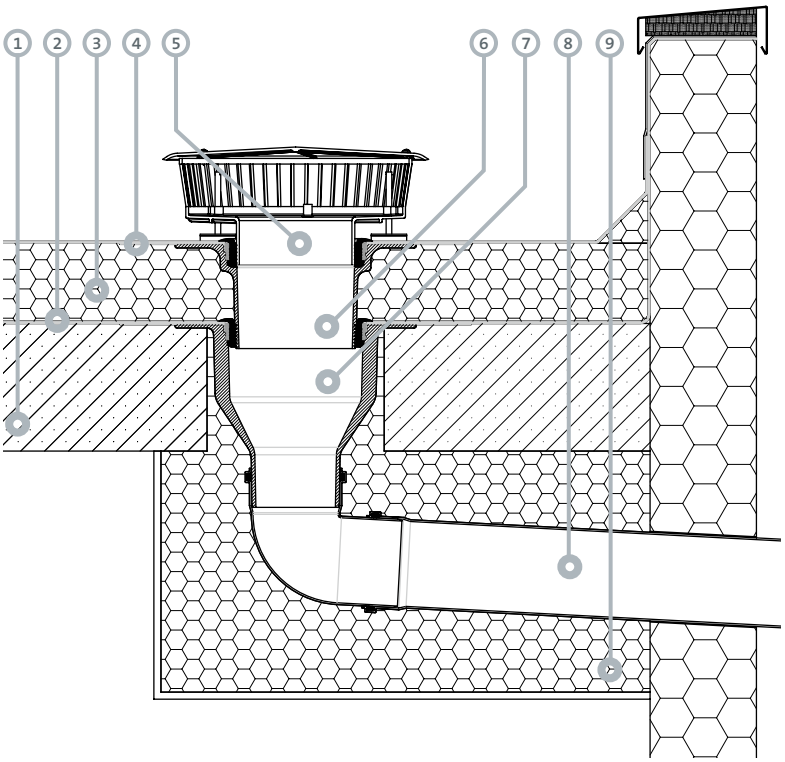


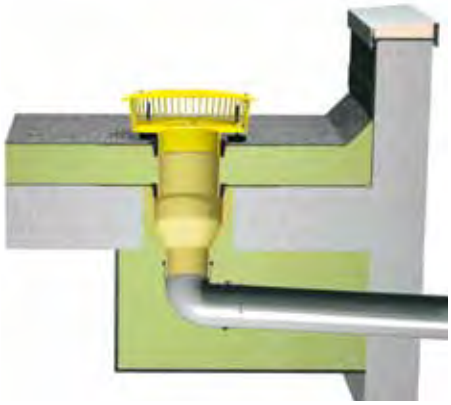



1. Steel trapezoidal profile
2. Vapour barrier for structures according to DIN 18234
3. Non-combustible thermal insulation
4. Waterproofing to flat roof guidelines
5. Non-comb. insulation filler
6. SitaFiresafe® with SitaStandard Roof drain
   a. consisting of:
   Fire box with integrated steel reinforcement
   b. Non-combustible insulation material
   c. Fire protection sleeve
   d. Connecting pipe
7. SitaDome grate
8. SitaStandard extension unit

## Installation Example G:

SitaStandard roof outlet, vertical, with extension unit and SitaRetaining element in a non-ventilated roof structure (warm roof).

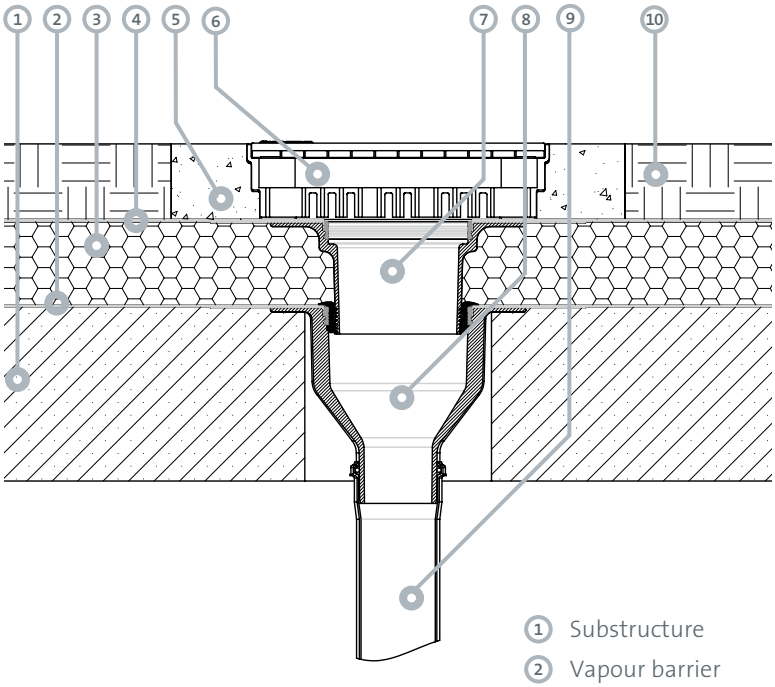


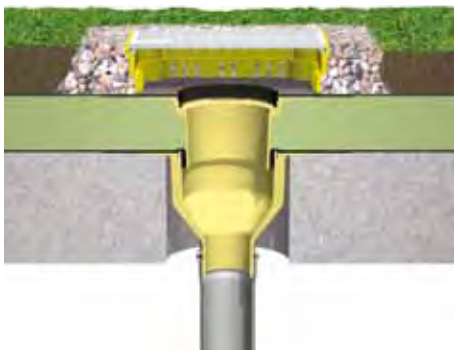



1. Substructure
2. Vapour barrier
3. Thermal insulation
4. Waterproofing to flat roof guidelines
5. SitaRetaining element
6. SitaStandard extension unit
7. SitaStandard roof outlet
8. Connecting pipe with free outlet
9. Insulation against condensation

## Installation Example H:

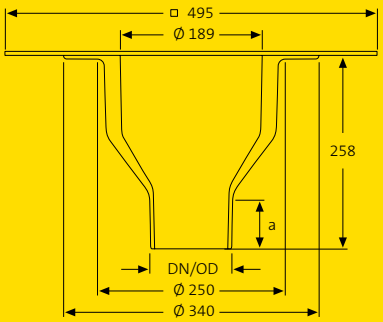
SitaStandard roof outlet, vertical, with extension unit and green roof shaft in a non-ventilated roof structure (warm roof).



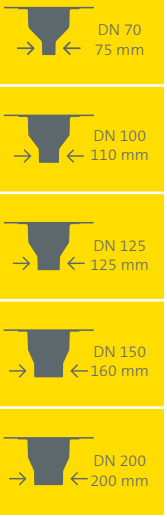



1. Substructure
2. Vapour barrier
3. Thermal insulation
4. Waterproofing to flat roof guidelines
5. Gravel strip
6. Sita green roof shaft
7. SitaStandard extension unit
8. SitaStandard roof outlet
9. Connection pipe
10. Green Roof


SitaStandard, vertical




Technical drawing






## Nominal diameters, dimensions, core drill holes and article numbers

| Nominal diameter | | a | Breakthrough/Core hole | Article number | |
|---|---|---|---|---|---|
| DN | DN/OD* | (mm) | (mm) | Without heating | With heating |
| 70 | 75 | 65 | ø 250 | 10 02 xx | 10 03 xx |
| 100 | 110 | 68 | | 10 04 xx | 10 05 xx |
| 125 | 125 | 69 | | 10 06 xx | 10 07 xx |
| 150 | 160 | 77 | | 10 08 xx | 10 09 xx |
| 200 | 200 | 101 | | 10 10 xx | 10 11 xx |

*DN/OD = outer diameter (mm)

xx = Article end number for desired connection sleeve, see „Other" section

## Flow rates according to DIN EN 1253 in l/s

| | Head of water | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| 70 | 0,7 | 1,7 | 2,7 | 3,8 | 4,8 | 6,0 | 7,1 | 8,3 | 9,4 | 10,8 | 12,2 | 13,5 | 14,8 |
| 100 | 0,7 | 1,8 | 2,8 | 3,8 | 4,8 | 6,1 | 7,4 | 8,5 | 9,6 | 11,0 | 12,3 | 13,6 | 14,8 |
| 125 | 0,7 | 1,8 | 2,9 | 4,1 | 5,2 | 6,4 | 7,6 | 8,7 | 9,7 | 11,0 | 12,3 | 14,1 | 15,8 |
| 150 | 0,6 | 1,6 | 2,6 | 3,6 | 4,6 | 5,9 | 7,2 | 8,2 | 9,2 | 11,0 | 12,8 | 14,0 | 15,1 |
| 200 | 0,5 | 1,5 | 2,5 | 3,5 | 4,5 | 5,8 | 7,1 | 8,1 | 9,2 | 10,6 | 12,0 | 13,3 | 14,5 |

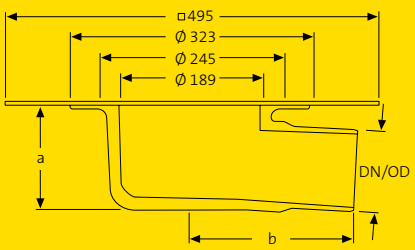
## Material: polyurethane

## Tender specifications

**SitaStandard roof outlet, vertical,** polyurethane, thermally insulated, according to GET (quality assurance drainage technology) and DIN EN 1253, in nominal diameters DN 70, DN 100, DN 125, DN 150 or DN 200. For direct connection to pipes with spigot and socket joint, for gravity drainage, with large desired connection sleeve (495 mm x 495 mm) suitable for 15 roof waterproofing and with fixing ring for additional securing of the connection sleeve and for holding the enclosed dome grate. Delivered and installed professionally.

**SitaStandard roof outlet, vertical, heated,** polyurethane, thermally insulated, according to GET (quality assurance drainage technology) and DIN EN 1253, in nominal diameters DN 70, DN 100, DN 125 or DN 150. For direct connection to pipes with spigot and socket joint, for gravity drainage, with large desired connection sleeve (495 mm x 495 mm) suitable for 15 roof waterproofing and with fixing ring for additional securing of the connection sleeve and for holding the enclosed dome grate, with foamed heating element and 2 meter long cable for direct connection to 230 V with a heat output of approx. 10 watts. Delivered and installed professionally.


SitaStandard, angled




Technical drawing




## Nominal diameters, dimensions, core drill holes and article numbers

| Nominal diameter | | a | b | Breakthrough/Core hole | Article number | |
|---|---|---|---|---|---|---|
| DN | DN/OD* | (mm) | (mm) | (mm) | Without heating | With heating |
| 70 | 75 | 122 | 224 | 250 x 350 | 10 14 xx | 10 15 xx |
| 100 | 110 | 145 | 222 | 250 x 350 | 10 16 xx | 10 17 xx |
| 125** | 125 | 148 | 298 | 250 x 430 | 10 18 xx | 10 19 xx |

*DN/OD = outside diameter (mm)

**With transition from DN 100 to DN 125

xx = Article end number for desired connection sleeve, see „Other“ section

## Flow rates according to DIN EN 1253 in l/s

| | Head of water | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| 70 | 0,7 | 1,8 | 2,8 | 3,8 | 4,7 | 5,8 | 6,9 | 7,9 | 8,9 | 10,2 | 11,5 | - | - |
| 100 | 0,5 | 1,5 | 2,4 | 3,4 | 4,3 | 5,3 | 6,3 | 7,5 | 8,6 | 9,8 | 11,0 | - | - |
| 125 | 0,8 | 1,9 | 2,9 | 4,1 | 5,3 | 6,3 | 7,3 | 8,4 | 9,4 | 10,8 | 12,1 | 13,2 | 14,3 |

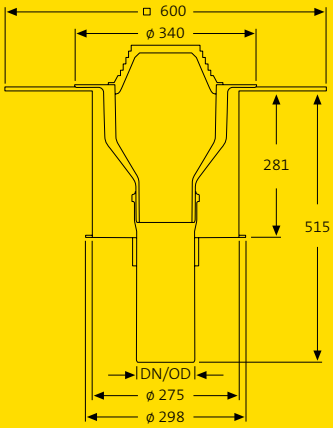
## Material: polyurethane

## Tender specifications

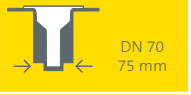
**SitaStandard roof outlet, angled,** polyurethane, thermally insulated, according to GET (quality assurance drainage technology) and DIN EN 1253, in the nominal diameters DN 70, DN 100 or DN 125. For direct connection to pipes with spigot and socket joint, for gravity drainage, with large desired connection sleeve (495 mm x 495 mm) suitable for roof waterproofing and with fixing ring for additional securing of the connection sleeve and for holding the enclosed dome grate. Delivered and installed professionally.

**SitaStandard roof outlet, angled, heated** polyurethane, thermally insulated, according to GET (quality assurance drainage technology) and DIN EN 1253, in the nominal diameters DN 70, DN 100 or DN 125. For direct connection to pipes with spigot and socket joint, for gravity drainage, with large desired connection sleeve (495 mm x 495 mm) suitable for roof waterproofing and with fixing ring for additional securing of the connection sleeve and for holding the enclosed dome grate, with foamed heating element and 2 meter long cable for direct connection to 230 V with a heat output of approx. 10 watts. Delivered and installed professionally.

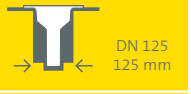
SitaFiresafe® with SitaStandard




Technical drawing









## Nominal diameters, core drill holes and article numbers

| Nominal diameter | | Breakthrough/Core hole | Article number |
|---|---|---|---|
| DN | DN/OD* | (mm) | |
| 70 | 75 | ø 300 | F10 02 90 |
| 100 | 110 | | F10 04 90 |
| 125 | 125 | | F10 06 90 |
| 150 | 160 | | F10 08 90 |

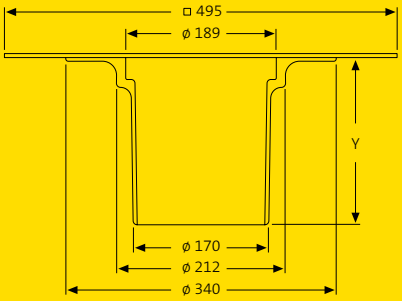
*DN/OD = outer diameter (mm)

## Material: strip-galvanized sheet steel

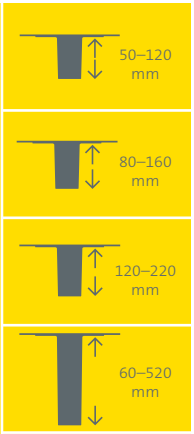
## Tender specifications

**SitaFiresafe® with SitaStandard roof outlet, vertical,** DN 70, DN 100, DN 125 and DN 150 for preventive fire protection and to prevent fire from below spreading in the case of small penetrations according to DIN 18234 Part 3 and 4. With adhesive flange according to GET (quality assurance drainage technology) and DIN EN 1253 for gravity drainage, reinforcement plate according to DIN 18807 as well as fire protection box made of strip-galvanized sheet steel, connection pipe made of PP for direct connection to pipes with spigot and socket joint and fire protection sleeve. Delivered and installed professionally.

SitaStandard extension unit




Technical drawing




## Heights, bridging for thermal insulation and article numbers

| Y (mm) | Bridging for thermal insulation from-to (mm) | Article number |
|---|---|---|
| 150 | 50–120 | 10 24 xx |
| 206 | 80–160 | 10 25 xx |
| 254 | 120–220 | 10 26 xx |
| 555 | 60–520 | 10 50 xx |

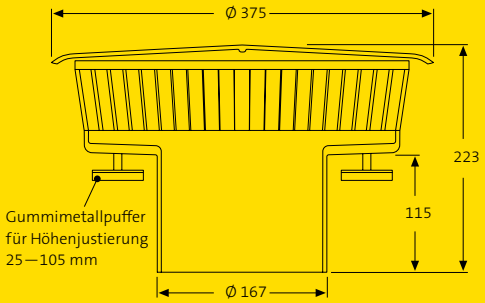
xx = Article end number for desired connection sleeve, see „Other“ section

## Material: polyurethane

## Tender specifications

**SitaStandard extension unit,** polyurethane, thermally insulated, according to GET (quality assurance drainage technology) and DIN EN 1253, for insulation thicknesses of 50-120 mm, 80-160 mm, 120-220 mm or 60-520 mm. With large foamed-in desired connection sleeve (495 mm x 495 mm), suitable for roof waterproofing, with fixation ring for additional securing of the connection sleeve and for holding the dome grate. Complete with lubricant and multiple lipped angled sealing for backflow protection. Delivered and installed professionally.

SitaRetaining element




Technical drawing



## Damming height and article number

| Damming height from-to (mm) | Article number |
|---|---|
| 25–105 | 10 90 01 |

## Flow rates according to DIN EN 1253 in l/s

| | | SitaStandard with SitaRetaining element | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Neck | Head of water | | | | | | | | | | | | |
| DN | inclination | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| 70 | 3°-angled | 1,2 | 2,3 | 3,3 | 4,8 | 6,2 | 7,8 | 9,4 | 11,3 | 13,1 | 14,2 | 15,3 | 15,4 | 15,5 |
| | Vertical | 1,2 | 2,2 | 3,1 | 4,6 | 6,0 | 7,6 | 9,2 | 11,1 | 13,0 | 13,9 | 14,8 | 14,9 | 14,9 |
| 100 | 3°-angled | 1,2 | 2,3 | 3,4 | 4,9 | 6,3 | 8,1 | 9,8 | 11,8 | 13,8 | 16,5 | 19,1 | 22,9 | 26,7 |
| | Vertical | 1,6 | 2,8 | 4,0 | 5,5 | 7,0 | 8,8 | 10,5 | 12,3 | 14,1 | 16,7 | 19,3 | 22,8 | 26,2 |
| 125 | Vertical | 1,2 | 2,3 | 3,4 | 4,9 | 6,3 | 7,9 | 9,5 | 11,6 | 13,6 | 16,1 | 18,6 | 21,9 | 25,2 |
| 150 | Vertical | 1,4 | 2,4 | 3,4 | 4,9 | 6,3 | 8,0 | 9,6 | 11,6 | 13,6 | 16,2 | 18,7 | 22,3 | 25,8 |

## Material: polyamide

## Tender specifications

**SitaRetaining element,** polyamide, for SitaStandard roof outlets and extension units, for emergency drainage, with multiple-lipped angled sealing ring to seal the retaining element with respect to the roof outlets or the extension unit. With three continuously height-adjustable rubber metal buffers, installation surface per foot: 19.6 cm², with zinc-plated threaded rod M 8 x 90 mm, with closed screw cover that can be removed for inspection purposes, housing with 51 circumferential ridges, in the signal colour yellow. Damming heights continuously adjustable from 25-105 mm, with a large hopper head to increase the drainage capacity, supplied in full and professionally installed.

Für gutes Wetter im Bau.

# Sita**Trendy** | Sita**Trendy screw-on-flange**

- Compact design
- Drainage capacity significantly above DIN EN 1253
- Excellent value for money
- With desired connection sleeve
- Compatible with SitaTrendy screw-on-flange

**Applications** - For the main and emergency drainage of DIN EN 12056-3 and DIN 1986-100 and for preventive fire protection according to DIN 18234 for large used and unused roof surfaces

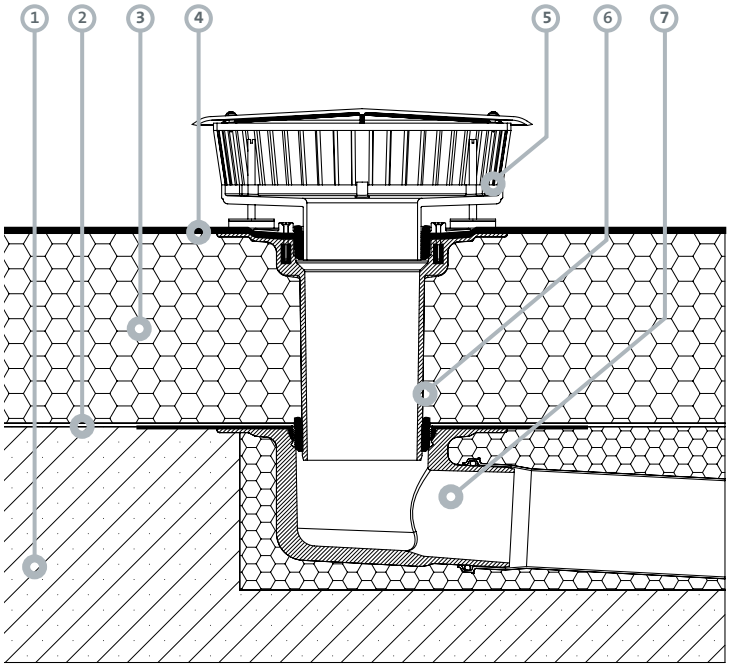
**Material** - Polyurethane

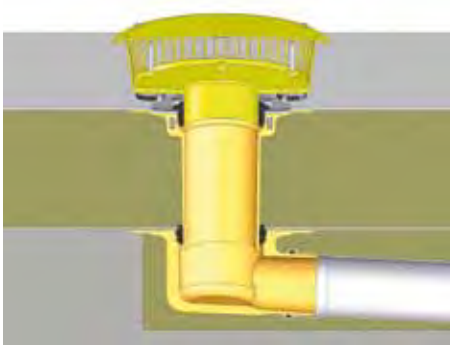
**Colour** - Yellow

**Surface** - Smooth

**Properties** - Thermally insulated
Excellent weather resistance (UV/IR radiation)
Resistant to common influences from environmental pollution
Shock and impact-proof
Environmentally friendly production and disposal
Heat-resistant, fire protection class B2
Durable
Available with integrated heating element
Low-noise
Flow rates
Large hopper head

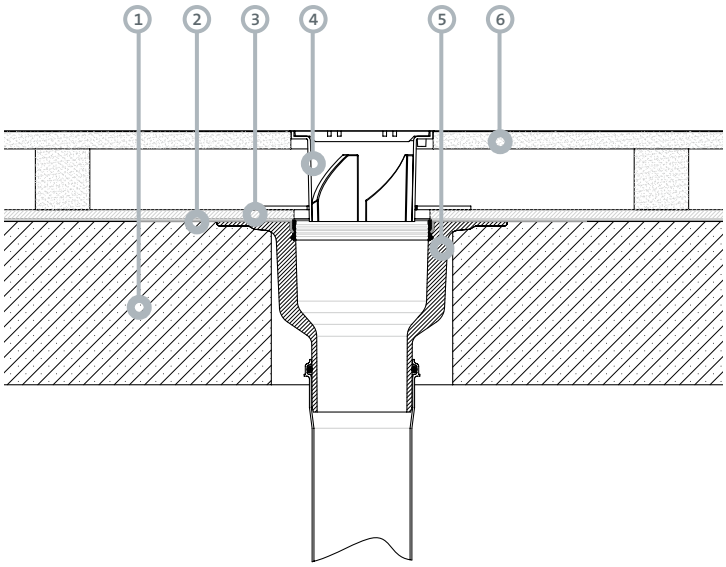
**Installation Example A:** SitaTrendy roof outlet with SitaTrendy screw-on-flange extension unit and retaining element for emergency drainage in a non-ventilated roof structure (warm roof).

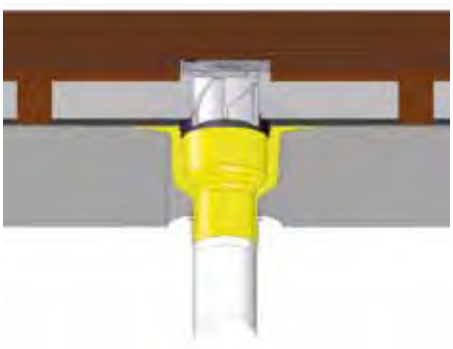


1. Substructure
2. Vapour barrier
3. Thermal insulation
4. Waterproofing to flat roof guidelines
5. SitaRetaining element
6. SitaTrendy screw-on-flange extension unit
7. SitaTrendy roof outlet, angled

**Installation Example B:** SitaTrendy roof outlet with terrace kit, installed in a roof area with a pedestrian surface.

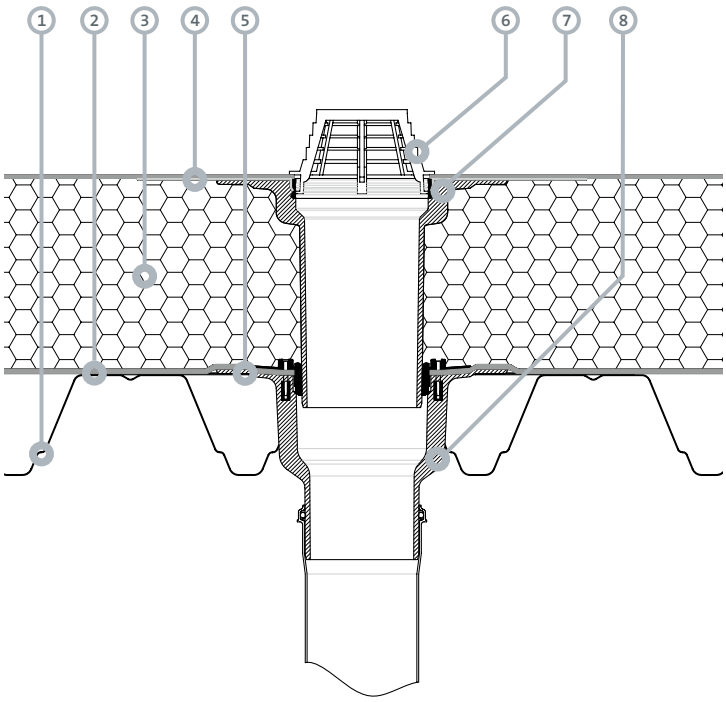


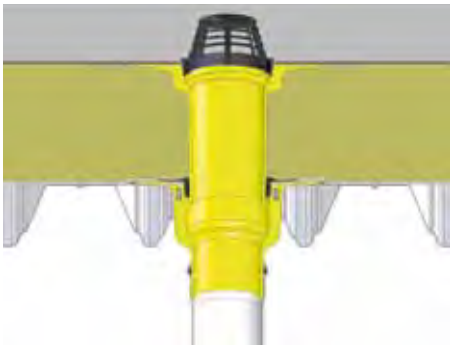



1. Concrete substructure
2. Waterproofing to flat roof guidelines
3. Protective layer
4. SitaTerrace kit
5. SitaTrendy roof outlet, vertical
6. Pedestrian surface

## Installation Example C:

SitaTrendy screw-on-flange roof outlet with SitaTrendy extension unit, installed in a non-ventilated roof structure (warm roof).

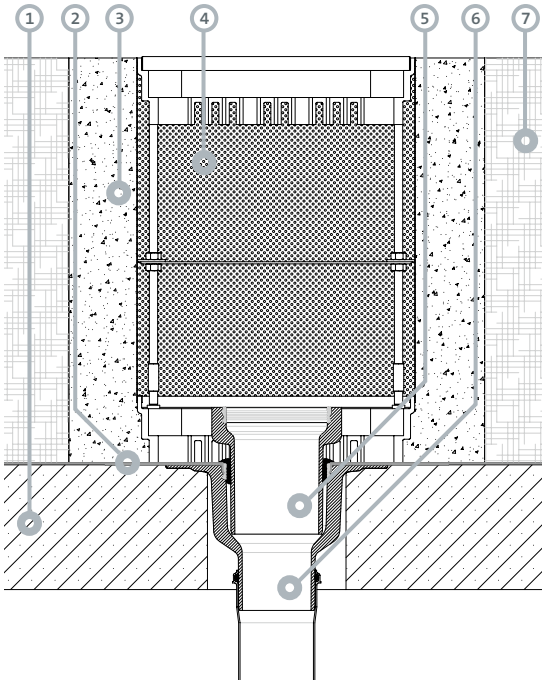


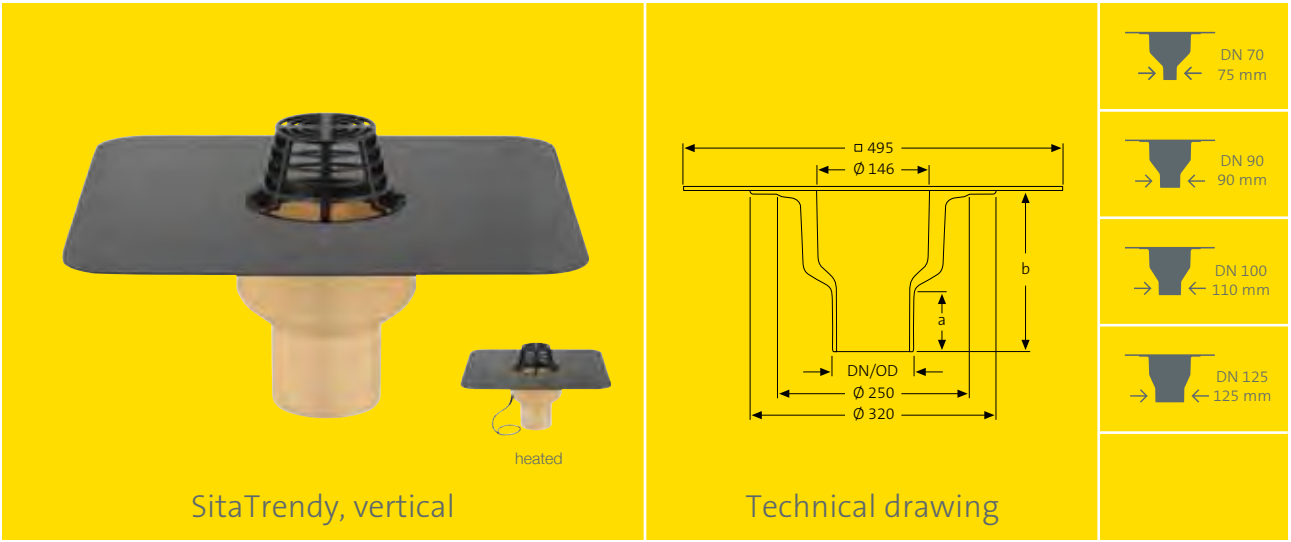
1. Substructure
2. Vapour barrier
3. Thermal insulation
4. Waterproofing to flat roof guidelines
5. SitaReinforcement plate
6. SitaDome grate
7. SitaTrendy extension unit
8. SitaTrendy screw-on-flange roof outlet, vertical

## Installation Example D:

Sita green roof shaft for intensive greening with perforated metal frame in an intensively greened roof construction. With SitaTrendy roof outlet and SitaRetaining element




1. Substructure
2. Waterproofing to flat roof guidelines
3. Gravel strip
4. SitaGreen roof shaft for intensive greening
5. SitaRetaining element for rain retention
6. SitaTrendy roof outlet, vertical
7. Green roof structure




## Nominal diameters, dimensions, core drill holes and article numbers

| Nominal diameter | | a | b | Breakthrough/Core hole | Article number | |
|---|---|---|---|---|---|---|
| DN | DN/OD* | (mm) | (mm) | (mm) | Without heating | With heating |
| 70 | 75 | 63 | 210 | ø 250 | 15 02 xx | 15 03 xx |
| 90 | 90 | 56 | 125 | | 15 01 xx | SitaTherm |
| 100 | 110 | 75 | 210 | | 15 04 xx | 15 05 xx |
| 125 | 125 | 79 | 210 | | 15 06 xx | 15 07 xx |

*DN/OD = outer diameter (mm)

xx = Article end number for desired connection sleeve, see „Other" section

## Flow rates according to DIN EN 1253 in l/s

| | Head of water | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| 70 | 0,6 | 1,4 | 2,2 | 3,1 | 3,9 | 4,7 | 5,5 | 6,6 | 7,6 | 8,6 | 9,5 | 10,4 | 11,3 |
| 90 | 0,4 | 1,3 | 2,1 | 3,3 | 4,5 | 5,5 | 6,5 | 7,3 | 8,0 | 8,6 | 9,2 | - | - |
| 100 | 0,6 | 1,5 | 2,3 | 3,3 | 4,3 | 5,2 | 6,1 | 7,3 | 8,5 | 9,4 | 10,3 | 11,0 | 11,7 |
| 125 | 0,7 | 1,6 | 2,4 | 3,3 | 4,2 | 5,1 | 5,9 | 7,3 | 8,7 | 10,1 | 11,4 | 12,7 | 14,0 |

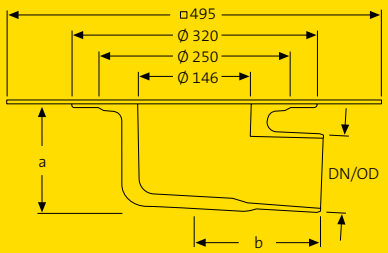
## Material: polyurethane

## Tender specifications

**SitaTrendy roof outlet, vertical,** polyurethane, thermally insulated, according to GET (quality assurance drainage technology) and DIN EN 1253, in nominal diameters DN 70, DN 90, DN 100 or DN 125. For direct connection to pipes with spigot and socket joint, for gravity drainage, with large desired connection sleeve (495 mm x 495 mm) suitable for roof waterproofing and with fixing ring for additional securing of the connection sleeve and for holding the enclosed dome grate. Delivered and installed professionally.

**SitaTrendy roof outlet, vertical, heated** polyurethane, thermally insulated, according to GET (quality assurance drainage technology) and DIN EN 1253, in the nominal diameters DN 70, DN 100 or DN 125. For direct connection to pipes with spigot and socket joint, for gravity drainage, with large desired connection sleeve (495 mm x 495 mm) suitable for roof waterproofing and with fixing ring for additional securing of the connection sleeve and for holding the enclosed dome grate, with foamed-in heating element and 2.0 m long cable for direct connection to 230 V with a heat output of approximately 10 watts. Delivered and installed professionally.


SitaTrendy, angled




Technical drawing


## Nominal diameters, dimensions, core drill holes and article numbers

| Nominal diameter | | a | b | Breakthrough/Core hole | Article number | |
|---|---|---|---|---|---|---|
| DN | DN/OD* | (mm) | (mm) | (mm) | Without heating | With heating |
| 70 | 75 | 117 | 165 | ø 250 x 350 | 15 14 xx | 15 15 xx |
| 100 | 110 | 153 | 162 | ø 250 x 350 | 15 16 xx | 15 17 xx |
| 125** | 125 | 161 | 241 | ø 250 x 420 | 15 18 xx | 15 19 xx |

*DN/OD = outside diameter (mm) **With transition from DN 100 to DN 125 xx = Article end number for desired connection sleeve, see „Other“ section

## Flow rates according to DIN EN 1253 in l/s

| | Head of water | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| 70 | 0,5 | 1,1 | 1,6 | 2,6 | 3,5 | 4,5 | 5,4 | 6,5 | 7,5 | 8,5 | 9,5 | 10,8 | 12,1 |
| 100 | 0,5 | 1,2 | 1,8 | 2,7 | 3,6 | 4,6 | 5,6 | 6,7 | 7,8 | 9,0 | 10,2 | 11,9 | 13,5 |
| 125 | 0,6 | 1,5 | 2,4 | 3,1 | 3,8 | 4,8 | 5,7 | 6,8 | 7,9 | 9,5 | 11,0 | 12,4 | 13,8 |

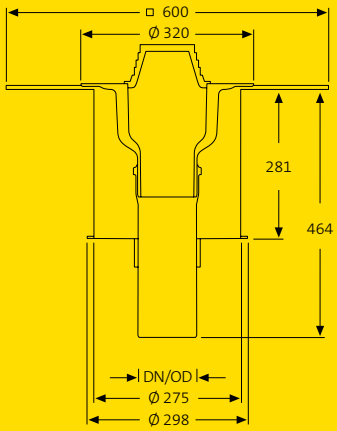
## Material: polyurethane

## Tender specifications

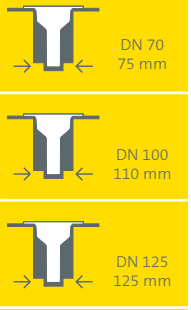
**SitaTrendy roof outlet, angled** polyurethane, thermally insulated, according to GET (quality assurance drainage technology) and DIN EN 1253, in the nominal diameters DN 70, DN 100 or DN 125. For direct connection to pipes with spigot and socket joint, for gravity drainage, with large desired connection sleeve (495 mm x 495 mm) suitable for roof waterproofing and with fixing ring for additional securing of the connection sleeve and for holding the enclosed dome grate. Delivered and installed professionally.

**SitaTrendy roof outlet, angled, heated** polyurethane, thermally insulated, according to GET (quality assurance drainage technology) and DIN EN 1253, in the nominal diameters DN 70, DN 100 or DN 125. For direct connection to pipes with spigot and socket joint, for gravity drainage, with large desired connection sleeve (495 mm x 495 mm) suitable for roof waterproofing and with fixing ring for additional securing of the connection sleeve and for holding the enclosed dome grate, with foamed heating element and 2 meter long cable for direct connection to 230 V with a heat output of approx. 10 watts. Delivered and installed professionally.

SitaFiresafe® with SitaTrendy




Technical drawing




## Nominal diameters, core drill holes and article numbers

| Nominal diameter | | Breakthrough/Core hole | Article number |
|---|---|---|---|
| DN | DN/OD* | (mm) | |
| 70 | 75 | ø 300 | F15 02 90 |
| 100 | 110 | | F15 04 90 |
| 125 | 125 | | F15 06 90 |

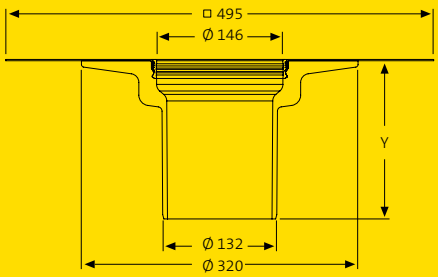
*DN/OD = outer diameter (mm)

## Material: strip-galvanized sheet steel

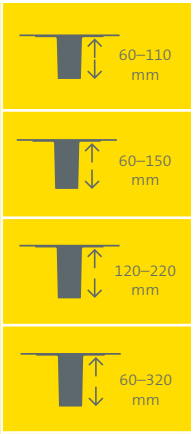
## Tender specifications

**SitaFiresafe® with SitaTrendy roof outlet,** DN 70, DN 100 or DN 125 for preventive fire protection and to prevent fire from below spreading in the case of small penetrations according to DIN 18234 Part 3 and 4. With adhesive flange according to GET (quality assurance drainage technology) and DIN EN 1253 for gravity drainage, reinforcement plate according to DIN 18807 as well as fire protection box made of strip-galvanized sheet steel, connection pipe made of PP for direct connection to pipes with spigot and socket joint and fire protection sleeve. Delivered and installed professionally.

SitaTrendy extension unit




Technical drawing




## Heights, bridging for thermal insulation and article numbers

| Y (mm) | Bridging for thermal insulation from-to (mm) | Article number |
|---|---|---|
| 142 | 60–110 | 15 24 xx |
| 183 | 60–150 | 15 25 xx |
| 251 | 120–220 | 15 26 xx |
| 355 | 60–320 | 15 27 xx |

xx = Article end number for desired connection sleeve, see „Other" section

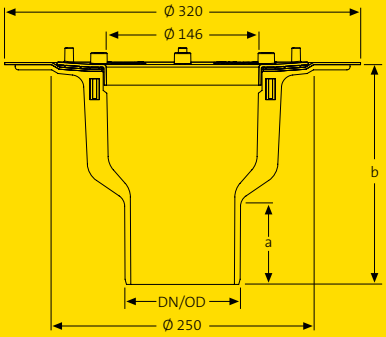
## Material: polyurethane

## Tender specifications

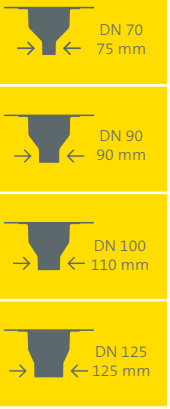
**SitaTrendy extension unit,** polyurethane, manufactured according to DIN EN 1253 for insulation thicknesses of 60-110 mm, 60-150 mm, 120-220 mm or 60-320 mm. With large foamed-in desired connection sleeve (495 mm x 495 mm), suitable for roof waterproofing, with fixation ring for additional securing of the connection sleeve and for holding the dome grate. Complete, including multiple-lipped angled sealing ring for backflow protection and lubricant, delivered and installed professionally.

# Sita**Trendy screw-on-flange**


SitaTrendy screw-on-flange, vertical




Technical drawing




## Nominal diameters, dimensions, core drill holes and article numbers

| Nominal diameter | | a | b | Breakthrough/Core hole | Article number | |
|---|---|---|---|---|---|---|
| DN | DN/OD* | (mm) | (mm) | (mm) | Without heating | With heating |
| 70 | 75 | 63 | 210 | ø 250 | 15 02 99 | 15 03 99 |
| 90 | 90 | 56 | 125 | | 15 01 99 | SitaTherm |
| 100 | 110 | 75 | 210 | | 15 04 99 | 15 05 99 |
| 125 | 125 | 79 | 210 | | 15 06 99 | 15 07 99 |

*DN/OD = outer diameter (mm)

## Flow ratest according to DIN EN 1253 in l/s

| | Head of water | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| 70 | 0,6 | 1,4 | 2,2 | 3,1 | 3,9 | 4,7 | 5,5 | 6,6 | 7,6 | 8,6 | 9,5 | 10,4 | 11,3 |
| 90 | 0,4 | 1,3 | 2,1 | 3,3 | 4,5 | 5,5 | 6,5 | 7,3 | 8,0 | 8,6 | 9,2 | - | - |
| 100 | 0,6 | 1,5 | 2,3 | 3,3 | 4,3 | 5,2 | 6,1 | 7,3 | 8,5 | 9,4 | 10,3 | 11,0 | 11,7 |
| 125 | 0,7 | 1,6 | 2,4 | 3,3 | 4,2 | 5,1 | 5,9 | 7,3 | 8,7 | 10,1 | 11,4 | 12,7 | 14,0 |

## Material: polyurethane

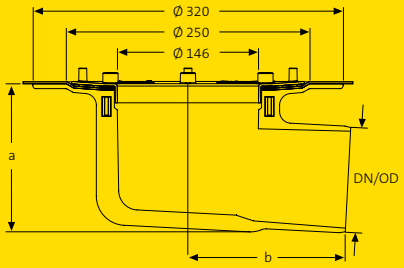
## Tender specifications

**SitaTrendy screw-on-flange roof outlet, vertical,** polyurethane, thermally insulated, according to GET (quality assurance drainage technology) and DIN EN 1253, in nominal diameters DN 70, DN 90, DN 100 or DN 125. For direct connection to pipes with spigot and socket joint, for gravity drainage, with ready-made drill holes for mounting the component on the substructure. With foamed-in insert ring to hold the screws supplied, loose flange made of aluminium and two sealing sleeves for clamping in bitumen, plastic or rubber waterproofing membranes. Complete, including dome grate, delivered and professionally installed.

**SitaTrendy screw-on-flange roof outlet, vertical, heated,** polyurethane, thermally insulated, according to GET (quality assurance drainage technology) and DIN EN 1253, in the nominal diameters DN 70, DN 100 or DN 125. For direct connection to pipes with spigot and socket joint, for gravity drainage, with ready-made drill holes for mounting the component on the substructure. With foamed-in heating element and 2.0 m long cable for direct connection to 230 V with a heat output of approximately 10 watts, with foamed-in insert ring to hold the screws supplied, loose flange made of aluminium slugs and two sealing sleeves for clamping in bitumen, plastic or rubber waterproofing membranes. Complete, including dome grate, delivered and professionally installed.

# Sita**Trendy screw-on-flange**


SitaTrendy screw-on-flange, angled




Technical drawing




## Nominal diameters, dimensions, core drill holes and article numbers

| Nominal diameter | | a | b | Breakthrough/Core hole | Article number | |
|---|---|---|---|---|---|---|
| DN | DN/OD* | (mm) | (mm) | (mm) | Without heating | With heating |
| 70 | 75 | 117 | 165 | 250 x 320 | 15 14 99 | 15 15 99 |
| 100 | 110 | 153 | 162 | | 15 16 99 | 15 17 99 |
| 125** | 125 | 161 | 241 | 250 x 420 | 15 18 99 | 15 19 99 |

*DN/OD = outside diameter (mm) **With transition from DN 100 to DN 125

## Flow rates according to DIN EN 1253 in l/s

| | Head of water | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| 70 | 0,5 | 1,1 | 1,6 | 2,6 | 3,5 | 4,5 | 5,4 | 6,5 | 7,5 | 8,5 | 9,5 | 10,8 | 12,1 |
| 100 | 0,5 | 1,2 | 1,8 | 2,7 | 3,6 | 4,6 | 5,6 | 6,7 | 7,8 | 9,0 | 10,2 | 11,9 | 13,5 |
| 125 | 0,6 | 1,5 | 2,4 | 3,1 | 3,8 | 4,8 | 5,7 | 6,8 | 7,9 | 9,5 | 11,0 | 12,4 | 13,8 |

## Material: polyurethane

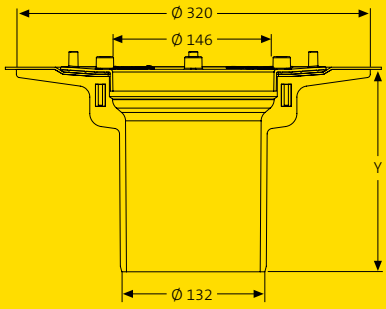
## Tender specifications

**SitaTrendy screw-on-flange roof outlet, angled** polyurethane, thermally insulated, according to GET (quality assurance drainage technology) and DIN EN 1253, in the nominal diameters DN 70, DN 100 or DN 125. For direct connection to pipes with spigot and socket joint, for gravity drainage, with ready-made holes for mounting the component on the substructure, with foamed-in insert ring to hold the screws supplied, loose flange made of aluminium and two sealing sleeves for clamping in bitumen, plastic or rubber waterproofing membranes. Complete, including dome grate, delivered and professionally installed.

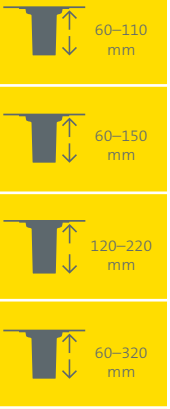
**SitaTrendy screw-on-flange roof outlet, angled, heated** polyurethane, thermally insulated, according to GET (quality assurance drainage technology) and DIN EN 1253, in the nominal diameters DN 70, DN 100 or DN 125. For direct connection to pipes with spigot and socket joint, for gravity drainage, with ready-made holes for mounting the component on the substructure, with foamed-in heating element and 2.0 m long cable for direct connection to 230 V with a heat output of 10 watts, with foamed-in insert ring to hold the screws supplied, loose flange made of aluminium and two sealing sleeves for clamping in bitumen, plastic or rubber waterproofing membranes. Complete, including dome grate, delivered and professionally installed.

# Sita**Trendy screw-on-flange**

SitaTrendy screw-on-flange extension unit




Technical drawing




## Heights, bridging for thermal insulation and article numbers

| Y (mm) | Bridging for thermal insulation from-to (mm) | Article number |
|---|---|---|
| 142 | 60–110 | 15 24 99 |
| 183 | 60–150 | 15 25 99 |
| 251 | 120–220 | 15 26 99 |
| 355 | 60–320 | 15 27 99 |

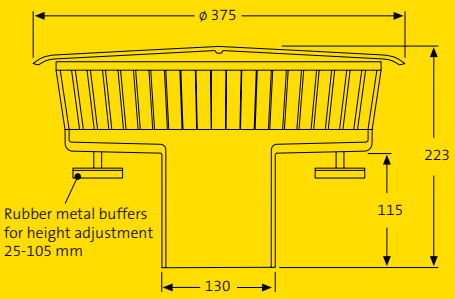
## Material: polyurethane

## Tender specifications

**SitaTrendy screw-on-flange extension unit,** made of polyurethane, according to GET (quality assurance drainage technology) and DIN EN 1253, for insulation thicknesses of 60-110 mm, 60-150 mm, 120-220 mm or 60-320 mm, with ready-made drill holes for mounting the component on the substructure. With foamed-in insert ring to hold the screws supplied, loose flange made of aluminium and two sealing sleeves for clamping in bitumen, plastic or rubber waterproofing membranes. Complete, including multiple-lipped angled sealing ring for backflow protection and lubricant, supplied and professionally installed.

# Sita**Trendy** | Sita**Trendy screw-on-flange**

SitaRetaining element




Technical drawing

## Damming height and article number

| Damming height from-to (mm) | Article number |
|---|---|
| 25–105 | 15 90 01 |

## Flow rates according to DIN EN 1253 in l/s

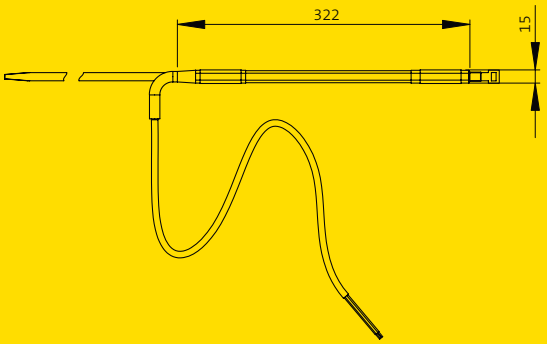
| | | SitaTrendy \| SitaTrendy screw-on-flange with SitaRetaining element | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Neck | Head of water | | | | | | | | | | | | |
| DN | inclination | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| 70 | 3°-angled | 1,2 | 2,2 | 3,1 | 4,6 | 6,0 | 7,5 | 8,9 | 10,5 | 12,0 | 12,6 | 13,1 | 13,6 | 14,0 |
| | Vertical | 1,2 | 2,1 | 2,9 | 4,4 | 5,8 | 7,3 | 8,8 | 10,5 | 12,1 | 12,4 | 12,6 | 13,1 | 13,5 |
| 90 | Vertical | 1,2 | 2,3 | 3,3 | 4,9 | 6,4 | 7,9 | 9,4 | 11,2 | 13,0 | 14,8 | 16,6 | 18,8 | 20,9 |
| 100 | 3°-angled | 1,2 | 2,3 | 3,3 | 4,7 | 6,0 | 7,5 | 9,0 | 10,5 | 11,9 | 14,5 | 17,0 | 19,9 | 22,8 |
| | Vertical | 1,2 | 2,3 | 3,3 | 4,7 | 6,1 | 7,8 | 9,4 | 11,4 | 13,3 | 15,2 | 17,0 | 19,6 | 22,2 |
| 125 | Vertical | 1,2 | 2,2 | 3,2 | 4,6 | 6,0 | 7,5 | 9,0 | 10,7 | 12,4 | 14,3 | 16,2 | 18,5 | 20,8 |

## Material: Polyamide

## Tender specifications

**SitaRetaining element,** polyamide, for SitaTrendy and SitaTrendy screw-on-flange roof outlets and extension units, for emergency drainage, with multiple-lipped angled sealing ring to seal the retaining element with respect to the roof outlet or the extension unit. With three continuously height-adjustable rubber metal buffers, installation surface per foot: 19.6 cm², with zinc-plated threaded rod M 8 x 90 mm, with closed screw cover that can be removed for inspection purposes, housing with 51 circumferential ridges, in the signal colour yellow. Damming heights continuously adjustable from 25-105 mm, with a large hopper head to increase the drainage capacity, supplied in full and professionally installed.

SitaTherm pipe sleeve heating




Technical drawing

## Tender specifications

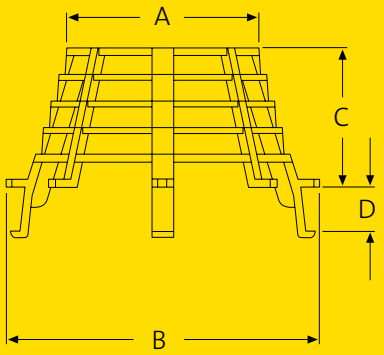
**SitaTherm pipe sleeve heating,** for heating roof outlets and pipes, self-regulating PTC heating element with a heat output of approximately 10 watts at -20°C and 230 volts with two cable ties for easy attachment to pipes or roof gullies. No transformer is required. Delivered and installed professionally.

## Power Supply and Article Number

| Power supply | Article number |
|---|---|
| 230 V (approx. 10 watts) | 10 90 35 |



SitaDome grate

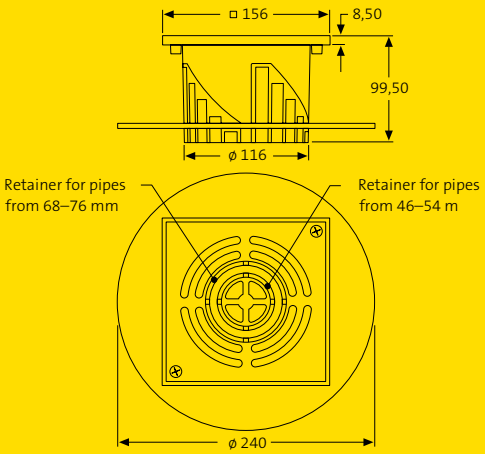



Technical drawing

## Model and article number

| For model | A mm | B mm | C mm | D mm | Article number |
|---|---|---|---|---|---|
| SitaStandard | 128 | 214 | 74 | 19 | E10 90 11 |
| SitaTrendy screw-on-flange | 98 | 160 | 71 | 22 | E15 90 15 |

SitaTerrace kit



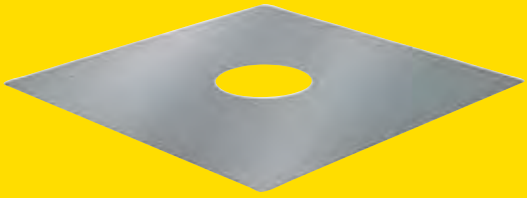

Technical drawing

## Tender specifications

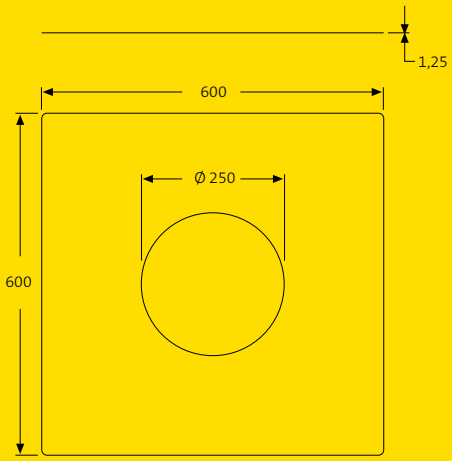
**SitaTerrace kit,** made of aluminium, for SitaStandard roof outlet or SitaStandard extension units. Consisting of height adjustment ring, housing (height-adjustable from 34-100 mm) and top grating with integrated recesses for receiving a downpipe in the nominal diameters DN 50 or DN 70, fully supplied and professionally installed.

## Model and article number

| For model | Article number |
|---|---|
| SitaStandard/SitaTrendy | 15 90 60 |



SitaReinforcement plate




Technical drawing

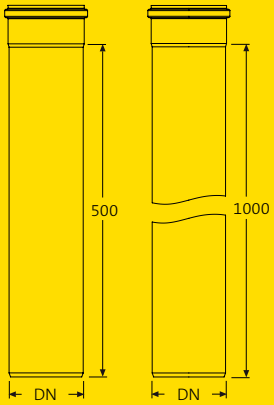
## Tender specifications

**SitaReinforcement plate,** according to DIN 18807 made of strip-galvanized steel sheet. Thickness 1.25 mm, for reinforcing small penetrations in steel trapezoidal profile roofs, delivered and professionally installed.

## Model and article number

| For model | Article Number |
|---|---|
| SitaStandard/SitaTrendy | 10 90 00 |
| SitaTrendy screw-on-flange | |

SitaAttica pipe




Technical drawing

## Nominal diameters, dimensions and article numbers

| Nominal diameter | | Pipe length | Thickness | Weight | Article number |
|---|---|---|---|---|---|
| DN | DN/OD* | (mm) | (mm) | (kg) | |
| 50 | 50 | 500 | 1,0 | 0,6 | 70 00 50 05 |
| 50 | 50 | 1.000 | 1,0 | 1,2 | 70 00 50 10 |
| 70 | 75 | 500 | 1,0 | 1,0 | 70 00 75 05 |
| 70 | 75 | 1.000 | 1,0 | 1,8 | 70 00 75 10 |
| 100 | 110 | 500 | 1,0 | 1,4 | 70 00 11 05 |
| 100 | 110 | 1.000 | 1,0 | 2,7 | 70 00 11 10 |
| 125 | 125 | 500 | 1,0 | 1,7 | 70 00 12 05 |
| 125 | 125 | 1.000 | 1,0 | 3,2 | 70 00 12 10 |
| 150 | 160 | 500 | 1,0 | 2,5 | 70 00 16 05 |
| 150 | 160 | 1.000 | 1,0 | 5,0 | 70 00 16 10 |

*DN/OD = outer diameter (mm) **Further pipe lengths available on request.

Material: Stainless steel, material no. 1.4301

Für gutes Wetter im Bau.

# Sita**Multi**

- Non-combustible
- Loose/fixed flange construction according to DIN 18195
- High drainage capacity
- Nominal diameter DN 150
- Installation in one part with the SitaMulti DN 80 and DN 100 or in two parts possible

**Applications** - For main and emergency drainage (gravity roof drainage) according to DIN EN 12056-3 and DIN 1986-100 and for preventive fire protection for large used and unused roof surfaces

**Material** - Cast iron EN-GJL-200 according to DIN EN 1561

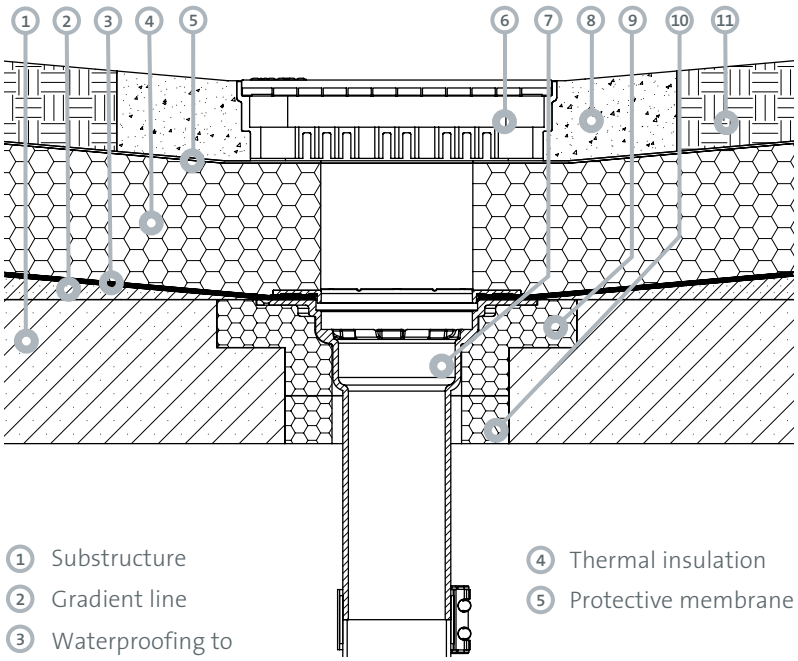
**Colour** - Grey

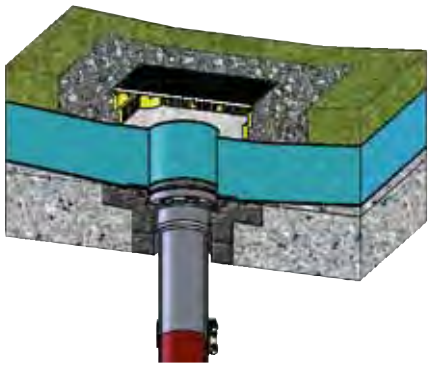
**Surface** - Smooth

**Properties** - Resistant to common influences from environmental pollution
Shock and impact-proof
Heat-resistant, fire protection class A1
Durable
Low-noise
Large hopper head
Also suitable for emergency drainage
Universal for any seal
Problem-solving insulating body

## Installation Example A:

SitaMulti roof outlet with insulating bodies and Sita green roof shaft in an inverted roof with roof greening.

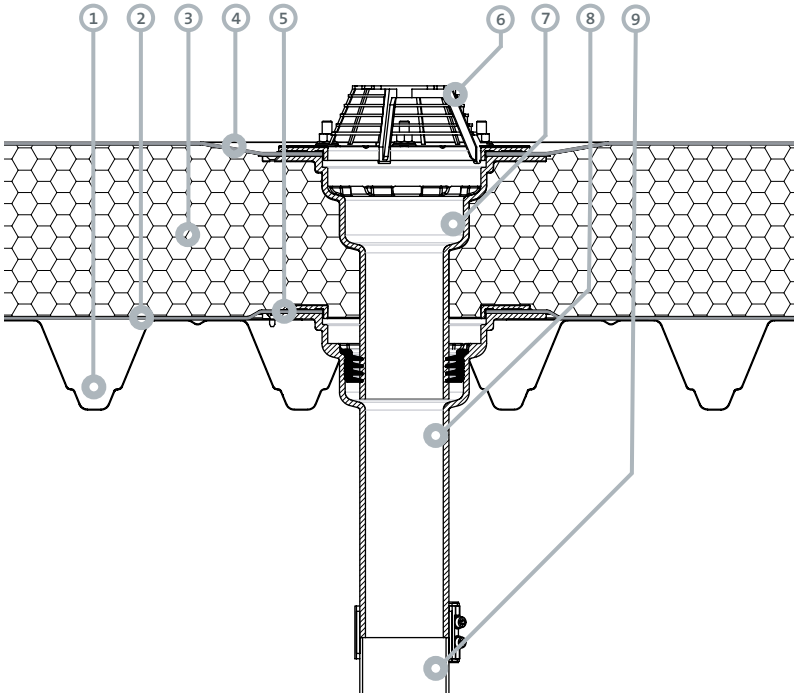


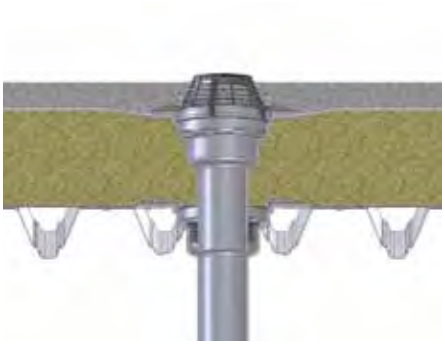



1. Substructure
2. Gradient line
3. Waterproofing to flat roof guidelines
4. Thermal insulation
5. Protective membrane
6. Sita green roof shaft
7. SitaMulti roof outlet
8. Gravel strip
9. SitaMulti insulating body type A
10. SitaMulti compensating ring for insulating body type A
11. Green Roof

## Installation Example B:

SitaMulti roof outlet with extension unit in a non-ventilated roof structure (warm roof).

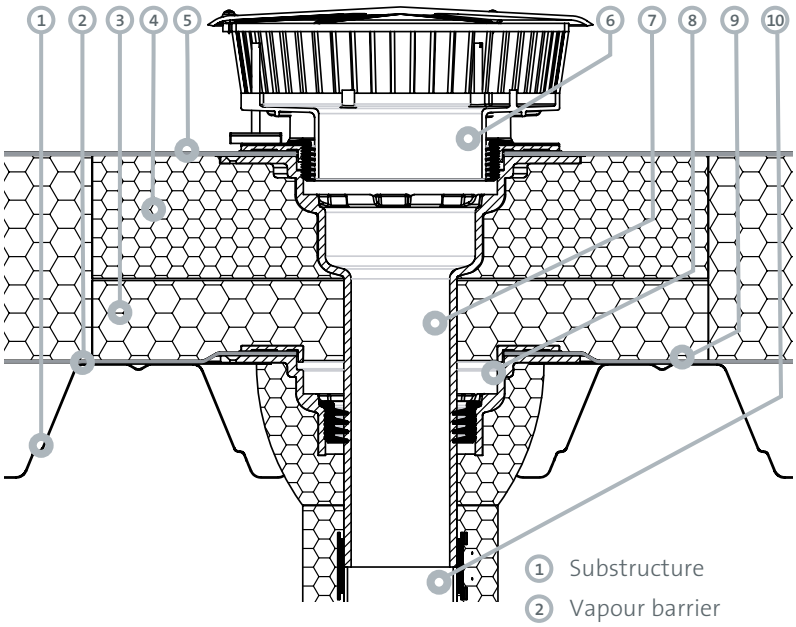


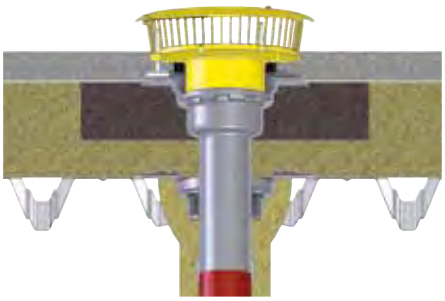
1. Substructure
2. Vapour barrier
3. Thermal insulation
4. Waterproofing to flat roof guidelines
5. SitaReinforcement plate
6. SitaDome grate
7. SitaMulti extension unit
8. SitaMulti roof outlet
9. SML pipe

## Installation Example C:

SitaMulti roof outlet, with baseplate, SitaRetaining element for emergency drainage and insulating body in the non-ventilated roof construction (warm roof).



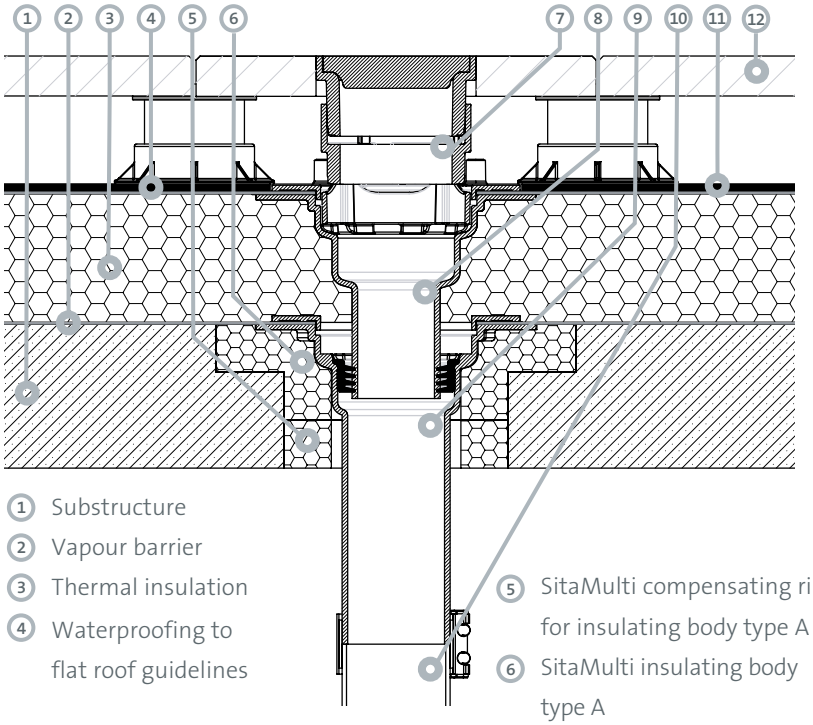

1. Substructure
2. Vapour barrier
3. Thermal insulation
4. SitaMulti insulating body Type B



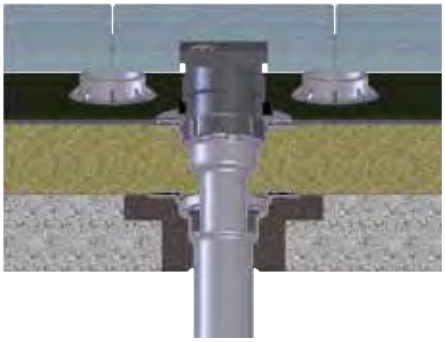
5. Waterproofing to flat roof guidelines
6. SitaRetaining element
7. SitaMulti roof outlet
8. SitaMulti base plate
9. SitaReinforcement plate
10. SML pipe

## Installation Example D:

SitaMulti roof outlet, with extension unit, stacking frame and insulating bodies on a roof surface with slab covering.

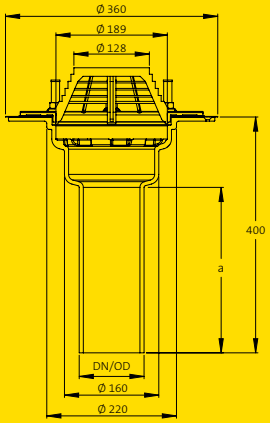



1. Substructure
2. Vapour barrier
3. Thermal insulation
4. Waterproofing to flat roof guidelines
5. SitaMulti compensating ring for insulating body type A
6. SitaMulti insulating body type A

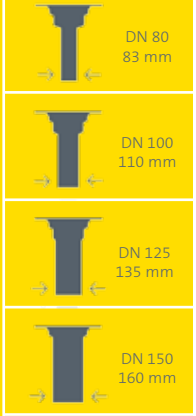


7. SitaMulti grating frame with height adjustment unit
8. SitaMulti extension unit
9. SitaMulti roof outlet
10. SML pipe
11. Protective layer
12. Paving Slab covering

SitaMulti, vertical




Technical drawing




## Nominal diameters, dimensions, core drill holes and article numbers

| Nominal diameter | | a | Breakthrough/Core hole | Article number |
|---|---|---|---|---|
| DN | DN/OD* | (mm) | (mm) | |
| 80 | 83 | 277 | ø 250 | 40 03 99 |
| 100 | 110 | 280 | | 40 04 99 |
| 125 | 135 | 286 | | 40 06 99 |
| 150 | 160 | 343 | | 40 08 99 |

*DN/OD = outer diameter (mm)

## Flow rates according to DIN EN 1253 in l/s

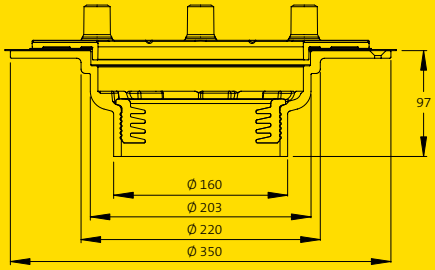
| | Head of water | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DN | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| 80 | 0,5 | 1,4 | 2,2 | 3,3 | 4,4 | 5,6 | 6,7 | 8,0 | 9,3 | 10,7 | 12,0 | 13,4 | 14,7 |
| 100 | 0,8 | 1,8 | 2,7 | 4,1 | 5,4 | 6,6 | 7,7 | 8,9 | 10,1 | 11,3 | 12,5 | 13,9 | 15,2 |
| 125 | 0,5 | 1,4 | 2,2 | 3,3 | 4,4 | 5,6 | 6,8 | 7,9 | 9,0 | 10,4 | 11,8 | 13,2 | 14,5 |
| 150 | 0,5 | 1,1 | 1,7 | 2,8 | 3,9 | 5,1 | 6,2 | 7,5 | 8,7 | 10,2 | 11,6 | 13,1 | 14,6 |

## Material: cast iron

## Tender specifications

**SitaMulti roof outlet, vertical,** cast iron, material EN-GJL-200, according to GET (quality assurance drainage technology) and DIN EN 1253, in the nominal diameters DN 80, DN 100, DN 125 or DN 150. For direct connection to SML pipes, for gravity drainage, with internal lugs for receiving the stacking frame, with drill holes for mounting the roof gullies in the substructure, with loose flange according to DIN 18195 with seepage openings, two sealing sleeves, six screwed-in M12 threaded rods made of stainless steel, washers, hex nuts made of brass and protective caps for clamping in bitumen, plastic or rubber waterproofing membranes. Complete, including dome grate, delivered and professionally installed.

SitaMulti Ground plate




Technical drawing

## Bridging for the thermal insulation and article number

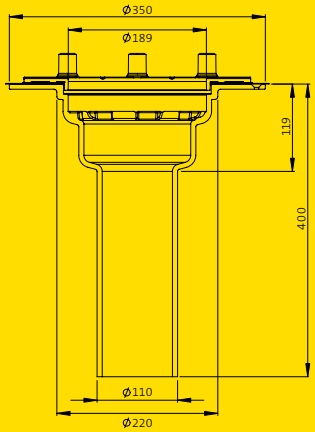
| DN | Bridging for thermal insulation from-to (mm) | Article number |
|---|---|---|
| 80 | 80–260 | 42 26 99 |
| 100 | 80–260 | 40 26 99 |

## Material: cast iron

## Tender specifications

**SitaMulti Ground plate,** cast iron, material EN-GJL-200, for SitaMulti roof outlet in the nominal diameter DN 80 or DN 100. For insulation thicknesses of 80 - 260 mm. With drill holes for mounting the baseplate in the substructure, with loose flange according to DIN 18195 with seepage openings, two sealing sleeves, six screwed-in M12 threaded rods made of stainless steel, washers, hex nuts made of brass and protective caps for clamping in bitumen, plastic or rubber waterproofing membranes. Complete, including multiple-lipped angled sealing ring for vapour-tight connection, supplied and professionally installed.

SitaMulti extension unit




Technical drawing

## Bridging for the thermal insulation and article number

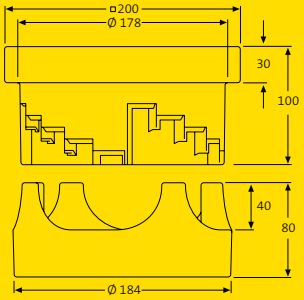
| Bridging for thermal insulation from-to (mm) | Article number |
|---|---|
| 80–300 | 40 27 99 |

## Material: cast iron

## Tender specifications

**SitaMulti extension unit,** made of cast iron, material EN-GJL-200, according to GET (quality assurance drainage technology) and DIN EN 1253, for insulation thicknesses of 80 to 300 mm. With internal lugs for receiving the stacking frame, drill holes for mounting the extension unit in the substructure, with loose flange according to DIN 18195 with seepage openings, two sealing sleeves, six screwed-in M12 threaded rods made of stainless steel, washers, hex nuts made of brass and protective caps for clamping in bitumen, plastic or rubber waterproofing membranes. Complete, including multiple-lipped angled sealing ring for backflow protection, supplied and professionally installed.

SitaMulti grating frame




Technical drawing

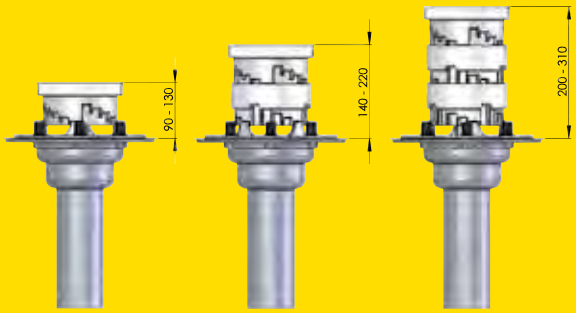
## Tender specifications

**SitaMulti grating frame,** made from cast iron, material EN-GJS-500-7, according to GET (quality assurance drainage technology) and DIN EN 1253. Consisting of frame, support ring and screwed end grid. Height adjustment from 90 to 130 mm. Delivered and installed professionally.

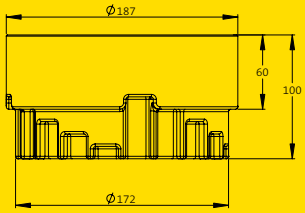
## Material: cast iron

## SitaMulti grating frame

| Height from-to (mm) | Article number |
|---|---|
| 90–130 | 11 90 60 |




SitaMulti height adjustment unit




Technical drawing

## Tender specifications

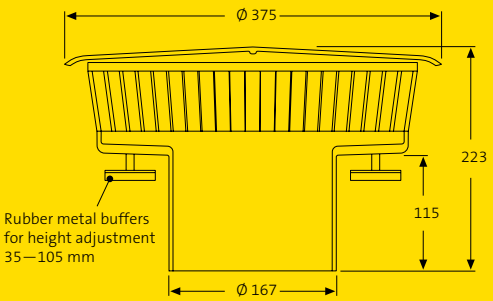
**SitaMulti height adjustment unit,** cast iron, material EN-GJS-500-7 for additional height adjustment of the SitaMulti grating frame. Delivered and installed professionally.

## Material: cast iron

## Height and article number

| Number | Height from-to (mm) | Article number |
|---|---|---|
| 1 | 140–220 | E11 90 66 |
| 2 | 200–310 | |

SitaRetaining element




Technical drawing

## Damming height and article number

| Damming height from-to (mm) | Article number |
|---|---|
| *35–105 | 10 90 01 |

*In the case of damming heights of 35-50 mm it is necessary to shorten the threaded rods of the drain and extension element.

## Flow rates according to DIN EN 1253 in l/s

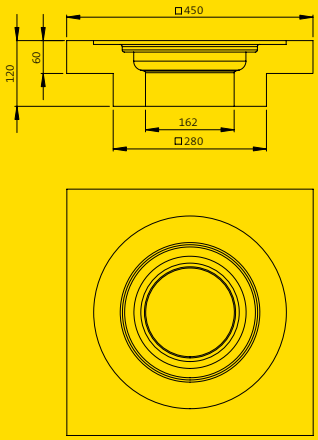
| SitaMulti with SitaRetaining element | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Head of water | | | | | | | | | | | | | |
| DN | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 |
| 80 | 0,5 | 1,6 | 2,6 | 4,0 | 5,4 | 7,1 | 8,7 | 10,6 | 12,5 | 14,7 | 16,8 | 17,6 | 18,4 |
| 100 | 0,9 | 2,2 | 3,4 | 4,9 | 6,4 | 8,1 | 9,8 | 12,1 | 14,3 | 16,9 | 19,4 | 23,3 | 27,2 |
| 125 | 1,0 | 2,3 | 3,5 | 5,0 | 6,4 | 8,3 | 10,2 | 12,4 | 14,5 | 17,1 | 19,7 | 25,9 | 32,1 |
| 150 | 0,6 | 1,9 | 3,2 | 4,6 | 5,9 | 7,7 | 9,5 | 11,6 | 13,7 | 16,5 | 19,3 | 26,4 | 33,4 |

## Material: polyamide

## Tender specifications

**SitaRetaining element,** polyamide, for SitaMulti roof outlets and extension unit, for emergency drainage, with multiple-lipped angled sealing ring to seal the retaining element with respect to the roof outlet or the extension unit. With three continuously height-adjustable rubber metal buffers, installation surface per foot: 19.6 m², with zinc-plated threaded rod M 8 x 90 mm, with closed screw cover that can be removed for inspection purposes, housing with 51 circumferential ridges, in the signal colour yellow. Damming heights continuously adjustable from 50-105 mm, with a large hopper head to increase the drainage capacity, supplied in full and professionally installed.

SitaMulti insulating body type A




Technical drawing

## Height and article number

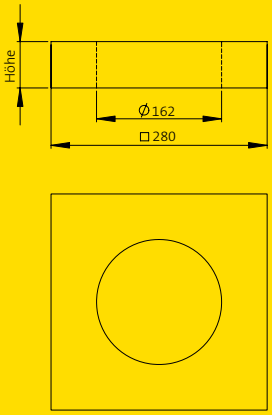
| Height (mm) | Article number |
|---|---|
| 120 | E40 90 03 |

## Material: cellular glass

## Tender specifications

**SitaMulti insulating body type A,** cellular glass, WLG 040 for thermal insulation of the SitaMulti roof outlet in the concrete slab, 120 mm height, can be used as lost formwork when concreting-in, delivered and installed professionally.

SitaMulti compensating ring
for insulating body type A




Technical drawing

## Height and article number

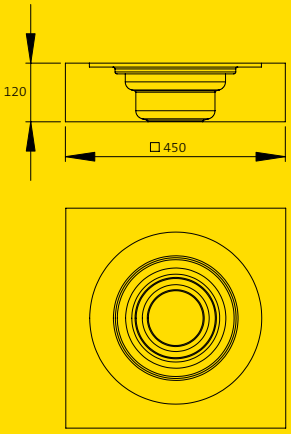
| Height (mm) | Article number |
|---|---|
| 40 | E40 90 04 |
| 60 | E40 90 05 |

## Material: cellular glass

## Tender specifications

**SitaMulti compensating ring for insulating body type A,** cellular glass, WLG 040, 40 mm or 60 mm height. For the thermal insulation of the SitaMulti roof outlet in the concrete slab at heights above 120 mm, delivered and installed professionally.

SitaMulti insulating body type B

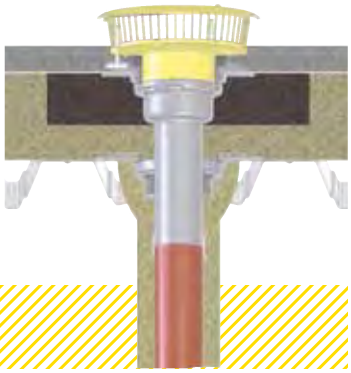



Technical drawing

## Height and article number

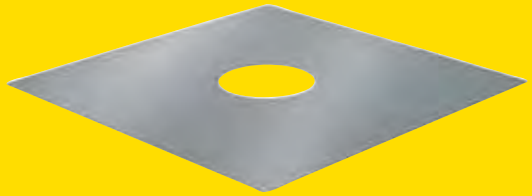
| Height (mm) | Article number |
|---|---|
| 120 | E40 90 06 |

## Material: cellular glass

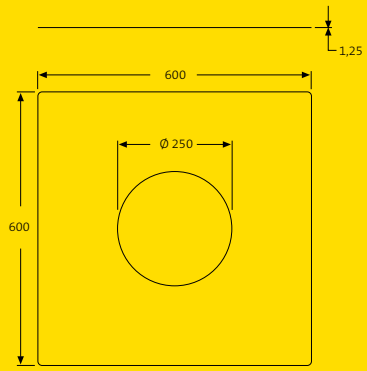


## Tender specifications

**SitaMulti insulating body type B,** cellular glass, WLG 040 for thermal insulation and holding the extension unit, as well as the SitaMulti DN 100 in conjunction with the SitaMulti Ground plate 120 mm high, delivered and installed professionally.



SitaReinforcement plate




Technical drawing

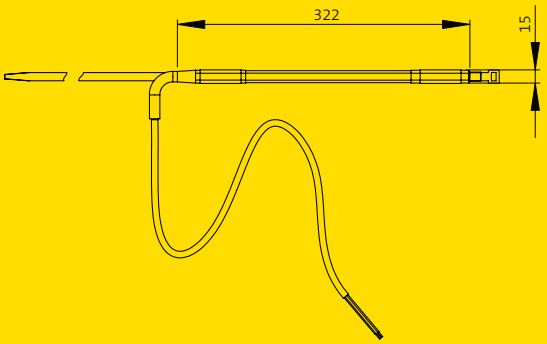
## Tender specifications

**SitaReinforcement plate,** according to DIN 18807 made of strip-galvanized steel sheet. Thickness 1.25 mm, for reinforcing small penetrations in steel trapezoidal profile roofs, delivered and professionally installed.

## Model and article number

| For model | Article number |
|---|---|
| SitaMulti | 10 90 00 |

SitaTherm pipe sleeve heating




Technical drawing

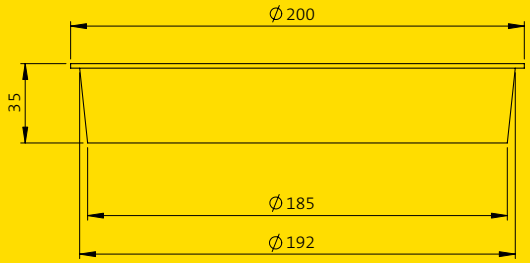
## Tender specifications

**SitaTherm pipe sleeve heating,** for heating roof outlet and pipes, self-regulating PTC heating element with a heat output of approximately 10 watts at -20°C and 230 volts with two cable ties for easy attachment to pipes or roof gullies. No transformer is required. Delivered and installed professionally.

## Power Supply and article number

| Power Supply | Article number |
|---|---|
| 230 V (approx. 10 watts) | 10 90 35 |

SitaMulti construction period protective cover




Technical drawing

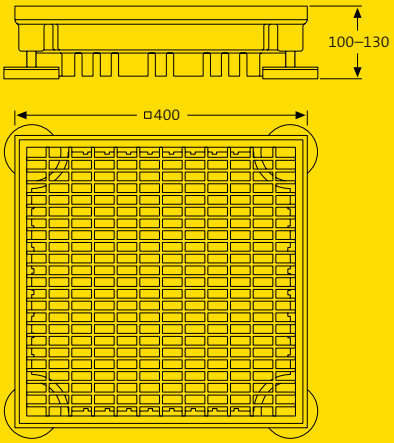
## Tender specifications

**SitaMulti construction period protective cover,** inserted in the drain body it prevents the penetration of objects during the construction period.

## Model and article number

| For model | Article number |
|---|---|
| SitaMulti | E40 90 10 |

Sita green roof shaft




Technical drawing

**see also Sita Drainage**

## Tender specifications

**Sita green roof shaft,** made of polyurethane, with hot dipped galvanised top grating, mesh size 9 mm x 32 mm and four height-adjustable rubber feet, for continuous height adjustment from 100-130 mm, supplied and professionally installed.

## Height adjustment, dimensions and article

| Height adjustment (mm) | Dimensions (mm) | Article number |
|---|---|---|
| 100–130 | 400 x 400 | 23 00 40 |

# Connection sleeves for roof outlets with article end-numbers

For the series: SitaStandard, SitaTrendy, SitaDSS Pro, SitaEasy, SitaEasy Plus, SitaSani®, SitaSani® Spezial, SitaCompact, SitaMini and SitaVent pipe.

## Sleeves from the **series production**

| Product/trade name | Article No.-End number | type |
|---|---|---|
| Bitumen | **00** | Elastomerbitumen |
| PVC soft | **10** | PVC – light grey |

## Sleeves from the **special production**

Delivery time up to 8 working days

**8,00 € gross surcharge per unit.**

| Product/trade name | Article No.-End number | type | manufacturer |
|---|---|---|---|
| Alkortec® | **05** | EVA – dark grey | Renolit AG |
| Alkortop® | **41** | FPO – light grey | |
| Austroplan | **38** | FPO – light grey | Agru Kunststofftechnik GmbH |
| Atlantic FPO | **63** | FPO – dark grey | Bailey Roofing Systems |
| Atlantic FPO | **64** | FPO – light grey | |
| Evalastic | **22** | EPDM – dark grey | Alwitra GmbH |
| Evalon | **25** | EVA – white | |
| Evalon | **37** | EVA – light grey | |
| Extrupol | **32** | FPO – light grey | Schedetal Folien GmbH |
| Firestone UltraPly | **42** | FPO – grey | Firestone Building Products |
| Firestone SA Flashing | **03** | EPDM – black | |
| Flagon EP/S | **31** | FPO – sand grey | SOPREMA-KLEWA GmbH |
| Inofin | **21** | FPO – grey | Wolfin Bautechnik |
| Mapeplan | **06** | PVC – light grey | Mapei GmbH (DE) |
| Mapeplan-T | **04** | FPO – light grey | |
| NOVOPROOF® | **60** | EPDM – black | DURAPROOF technologies GmbH |
| O.C. Plan | **30** | ECB – black | Polyfin AG |
| Polyfin 4230 | **16** | FPO – light grey | |
| Resistit | **61** | EPDM – black | Phoenix AG |
| Resitrix | **01** | EPDM – black | |
| Rhepanol-h | **34** | PIB – grey | FDT Flachdachtechnologie GmbH & Co. KG |
| Sarnafil®-TG 66 | **24** | FPO – beige | Sika GmbH |
| Sikaplan® 15G | **09** | PVC – light grey | |
| Sucoflex-C | **26** | FPO – beige | Huber & Suhner |
| Sucoflex | **15** | PVC – light grey | |
| Tectofin | **18** | ASA-PVC-P – grey | Wolfin Bautechnik |
| Thermofin | **02** | FPO – silver grey | Paul Bauder GmbH & Co. KG |
| Thermoplan T | **29** | FPO – pearl white | |
| Trocal S | **12** | PVC – light grey | Sika GmbH |
| VAEPLAN | **35** | EVA – grey | Hirler GmbH |
| VEDAFIN® F | **43** | FPO – creme white | VEDAG GmbH |
| Wolfin IB | **20** | PVC-PBV – black | Wolfin Bautechnik |

Our generell terms and conditions apply.

**For your notes:**

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Für gutes Wetter im Bau.

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Siphonic drainage