TOPWET

TOPWET®
FLAT ROOF
DRAINAGE SYSTEMS

TOPSAFE®
FALL PROTECTION
SAFETY SYSTEMS

CATALOG

Company data

TOPWET s.r.o.
náměstí Viléma Mrštíka 62
664 81 Ostrovačice
Czech Republic

Id.-Nr. 273 77 377
Tax-Nr. CZ27377377

GPS 49° 12‘ 36.81“ N
16° 24‘ 34.19“ E

TOPWET

TOPWET Customer infoline

Orders, stock, invoicing

M +420 722 991 189
E export@topwet.cz

TOPWET Technical support line

Technical advice

M +420 720 960 137
E support@topwet.cz

www.topwet.com

TOPSAFE

TOPSAFE Customer infoline

Orders, stock, invoicing

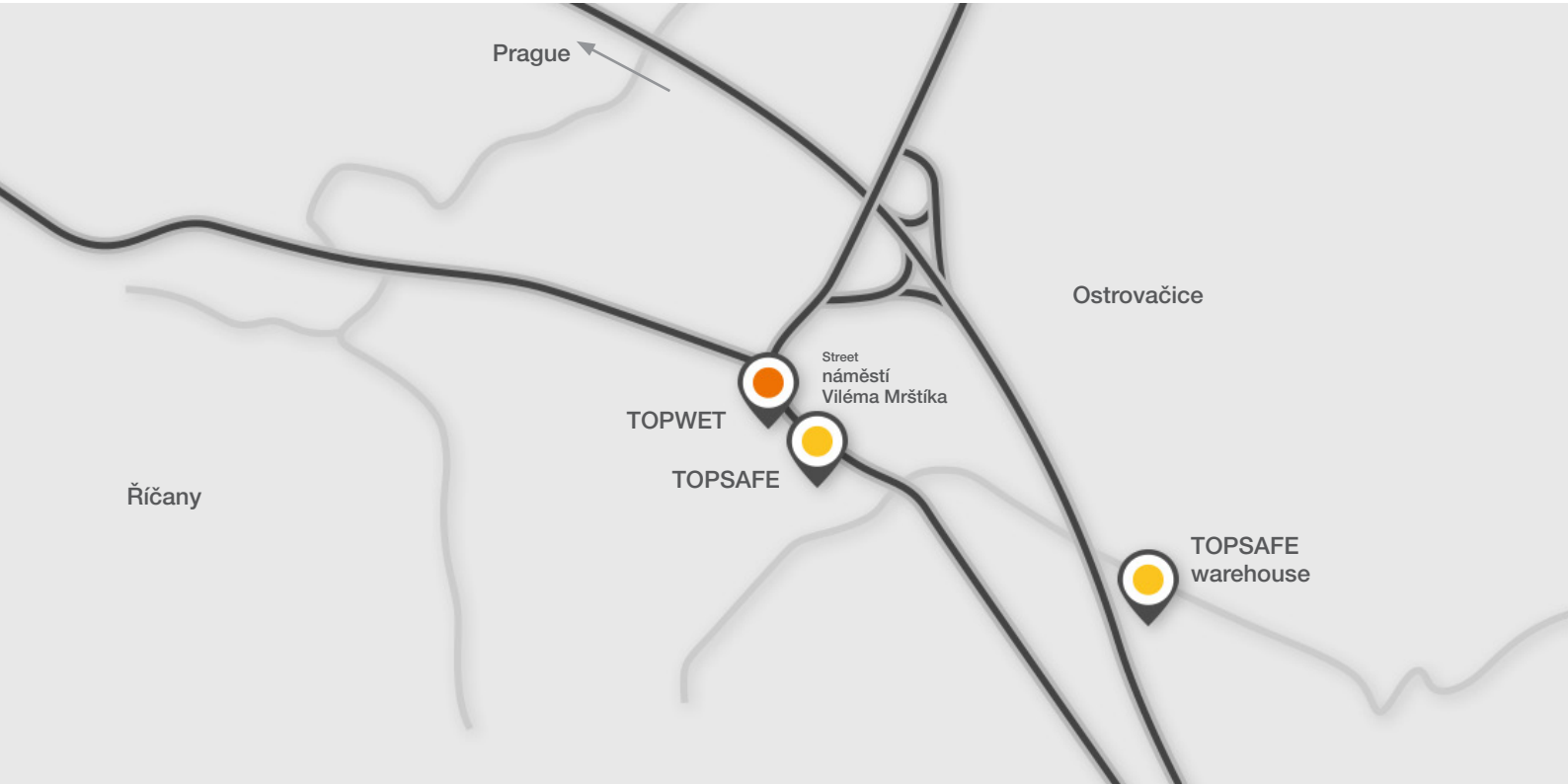
M +420 774 410 111
E info@topsafe.cz

TOPSAFE Technical support line

Desing of projects

M +420 774 410 112
E projekty@topwet.cz

www.topsafe.cz



Content

TOPWET® SYSTEMS FOR DRAINAGE OF FLAT ROOFS

About	4
Product labeling	5
Roof waterproofing sleeve	6
Custom made sleeves	7
Self-regulating heating	8
Roof outlets	10
Terrace outlets	12
Extensions for outlets and other accessories	14
Accessories for roof outlets, terrace outlets and extensions	16
Extended single-wall roof outlets	18
Universal single-wall outlet	20
Balcony outlets	22
Accessories for TOPWET balcony outlets	24
Through wall outlets	26
Safety overflows	28
Vents and penetrations	30
Ventilation turbines	34
Refurbishment outlets and vents	36
Extensions for refurbishment outlets and other accessories	38
Inspection chamber for green roofs	40
Sealing sleeves – shaped pieces for penetrations through PVC membranes	42
Sealing sleeves – shaped pieces for penetrations through TPO membrane	44
Adjustment of penetrations and details	46
Edge dividers	47
Other roof elements	48
Retention element	49
Combination options of products and accessories	50
Penetrations for the substructure	52
Solutions for multi storey car parks – traverse outlets	54

TOPSAFE® FALL PROTECTION SAFETY SYSTEMS

What services are provided in TOPSAFE	56
The key to correctly determining the anchor points	57
Anchoring points for trapezoid and sandwich constructions	58
Anchoring points for concrete construction	59
Anchoring points for inclined roofs	60
RENTAL – Safety nets and temporary guardrail	61
Collective protection	62
Industrial systems	63
Anchoring points for steel constructions	64

About

Company history

TOPWET is a purely Czech company that is part of the PF Group, a manufacturer and supplier to the construction industry, since 1999. TOPWET was established as an independent company in 2005, containing the TOPWET division, which provides drainage systems for flat roofs, and the TOPSAFE division, which provides protection systems against falls from a height.

Product certification

All our products are certified by independent European organizations and thus meet the demanding conditions for certification in the LGA testing laboratory and comply with applicable European standards.

Technical support

Technical drawings are drawn to scale and include the relevant dimensions. The drainage examples include the most commonly used drainage options today and are continuously updated. Documentation is available in PDF, DWG and RFA formats. BIM models for Revit and Archicad are also available. Due to the nature of our products and our commitment to providing a high-quality service, we often provide technical advice to customers during the design and implementation phases. We provide services to implementation companies and designers.

Customer service

We use the latest technologies in our product development. First, we produce prototypes to assess the product's form, function and ergonomics, and to verify any technological limitations. This ensures the high quality and long-term sustainability of our products.

Quality and development

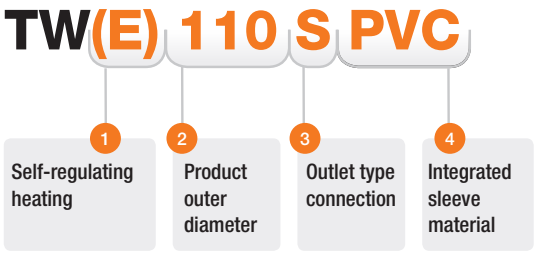
Client care is at the heart of everything we do. We develop strong relationships with our customers through intensive contact, and we always try to adapt to their requirements.

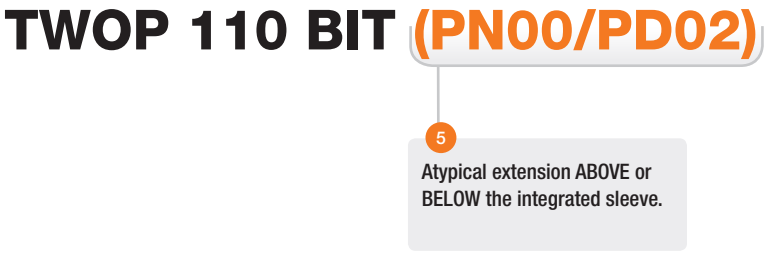
Goods delivery

Orders can only be accepted in writing via e-mail or by using the interactive order form. The general terms and conditions of TOPWET form an integral part of the catalogue and price list. Fast and reliable delivery of goods to our customers is one of our priorities.

Product labeling

Each product has its own specific designation. For example, TW is used for roof outlets, TWT for terrace outlets and TWN for roof outlet extensions. This designation is usually followed by the size and dimensions, and then other important parameters.





1 Self-regulating heating

If the product is heated, the letter E is added to the product type designation. For example, TWE indicates a heated roof outlet.

2 Product outer diameter

The numerical value indicates the outer diameter of the pipe (OD) for round products. For square products, the height and width are given in millimetres, for example 50 x 150 mm. ODs are available from 50 mm to 160 mm. Diameters of 160 mm are distinguished by the letter XL in the product name.

3 Type of the outlet connection

This information is only given for the outlets (roof, terrace and balcony), where it is possible to choose between vertical or horizontal designs.

4 Integrated sleeve material

The first piece of written information after the numbers indicates the material of the sleeve for connecting the waterproofing membrane on the roof. Standard materials are asphalt strip (BIT) or PVC foil (PVC). When manufacturing with a custom sleeve, it is advisable to write the foil type here or in the notes.

5 An atypical extension above or below the integrated sleeve

This information is only provided for products with an atypical extension. These are given at the end in brackets as PN for an extension upwards and PD for an extension downwards. The number 01 indicates an extension of 10 cm to the standard dimension. For drains and spouts, extension is only possible downwards.

Roof Waterproofing Sleeve

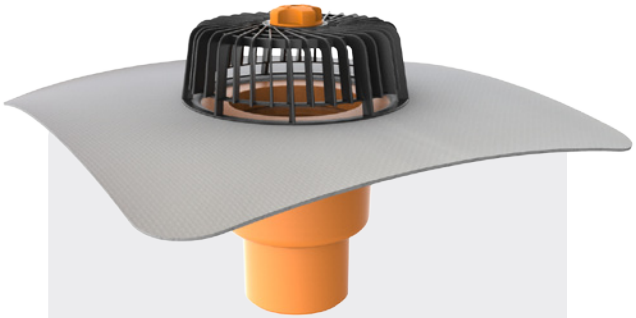
TOPWET company supplies standardly all own products with integrated bitumen and PVC sleeve waterproof to ensure 100% reliable waterproof connection.

- 100% waterproof
- Without screw flanges
- Fully compatible with roof waterproofing system

- A list of foils in stock can be found here:

BIT

Supplied with a UV stable SBS bitumen sleeve for direct welding to the main waterproofing layer.



PVC

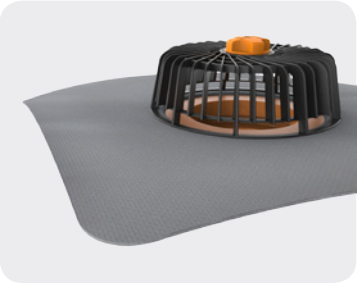
Supplied with a 1.5mm mPVC sleeve
All outlets can be manufactured with a specific manufacturers membrane (subject to additional cost).

Brands we cooperate with:

Axter Bauder BMI Group Carlisle Fatra FDT Elevate Mapei Protan Schedetal Sika Soprema VAE

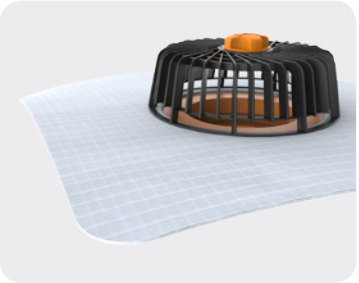
Custom made sleeves:

Material bases:



TPO (FPO)

Thermoplastic (flexible) polyelefin. A minimum thickness of 1.5mm, ideally in a homogenous version, is required. We currently produce with brands from previous page.

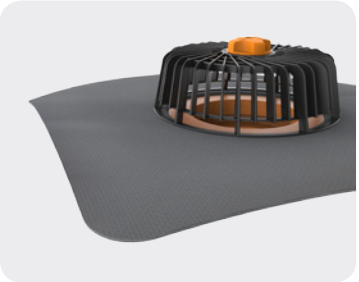


PE

Polyethylene is a vapour resistant membrane that is used mostly on roofs with a light structure.

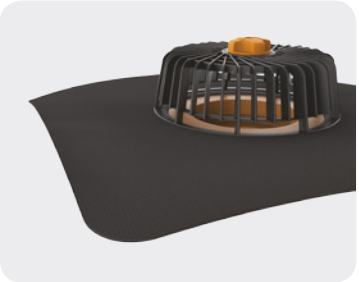
STE

A sleeve for connection to cement screed waterproofing applications.



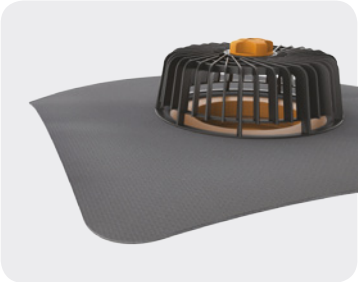
EPDM

A membrane of synthetic rubber. We currently produce with brands from previous page



ECB

Foil with a low content of asphalt. A mixture of polymers with oil asphalts. Tolerant to polystyrene foam. Compatible with bitumen insulation.

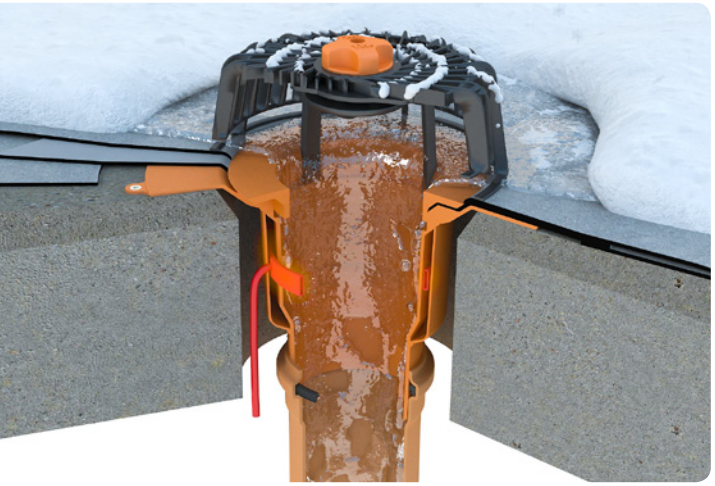


EVA

This EVA sleeve does not contain any potentially liquid plasticizers. It is tolerant to polystyrene foam.

Self-regulating heating

Drainage of flat roofs



Self-regulating electric heating of outlets and gutter overflows ensures reliable drainage during the winter season. The system works by resistance change bto semiconductors due to ambient temperature changes. During the winter periods outlets are at risk of blocking due to ice or snow build up. The heating element is designed to protect not only the orrifice of the outlet but its immediate surroundings as well.

Advantages of self-regulation heating

- Reliable drainage also in winter season
- Voltage 230 V / 50 Hz – without necessity of a transformer or a control unit
- Option of connection to heating of gutters, downpipes, entries etc.
- Simple connection via a switch or a thermostat
- Electric energy saving

Connection description

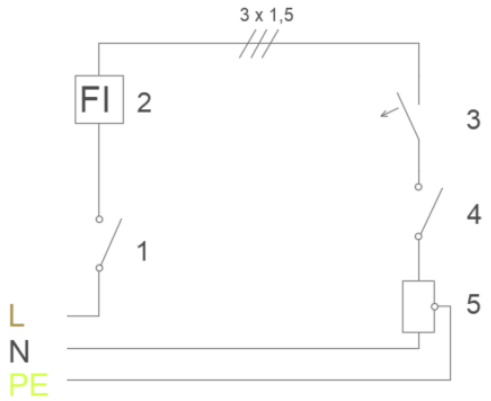
- Connection is performed in an electric box under roof structure
- Length of the outlet supply cable is 1.5 m. Cable CYKY 3 x 1.5 mm
- Wire connection: yellow-green/protective, black/phase, blue/ neutral
- AC voltage: 230 V, 50 Hz
- Input power: 10W at 20°C, 14W at 0°C, 18W at -20°C (for each product different)
- Max. current surge: 400mA (for each product different)
- Protection class: IP 67

Recommendation:

When using heating for two-stage drainage, we recommend heating the lower part, i.e. the TWE roof drain, up to a thermal insulation height of 300 mm.

Wiring diagram

1 main switch
2 residual current device
3 circuit breaker
4 thermostat or switch
5 roof outlet
L phase (black)
N neutral (blue)
PE protective (yellow-green))



Electronic thermostats for controlling TOPWET heated elements, heating sets and extension sets

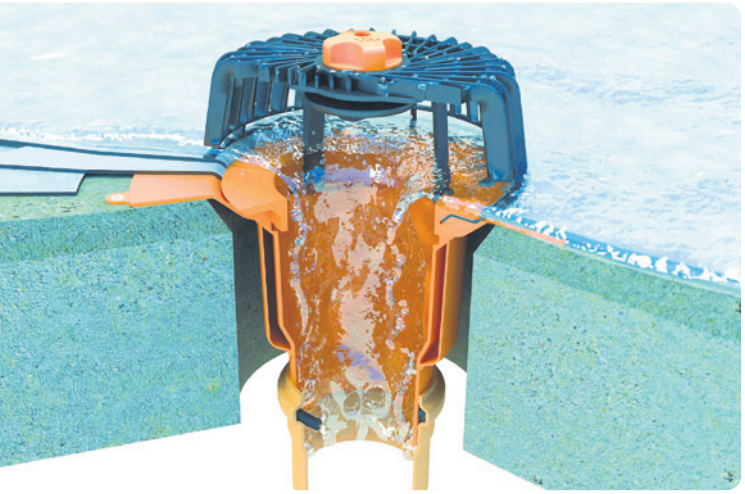
	Version	Type	Dimensions
	Universal outdoor thermostat for controlling heated TOPWET outlets with an integrated temperature sensor for measuring the outdoor temperature. One thermostat can control up to 16 outlets.	TWT 524	70x70 mm
	Universal internal thermostat for controlling heated TOPWET outlets designed to the distribution box. It is supplied with a 4 m cable and a temperature sensor for measuring the outdoor temperature. One thermostat can control up to 16 outlets.	TWT 3528	90×50 mm
	The set includes a self-regulating heating cable for an alternating voltage of 230 V at 50 Hz. The heating part is 0.4 m long (or 0.6 m for the XL variant) and the supply cable is 1.5 m long. It also includes two plastic mounting strips for fixing the cable to the drain and aluminium adhesive tape for limiting heat loss.	TW SE TW SE XL	0,4 / 1,5 m 0,6 / 1,5 m
NEW 	Extension kit for heating cables. Designed for all TOPWET products containing self-regulating heating. This professional kit comes with a certified waterproof connector. Length: 5 m.	TWN SE	5,0 m

Basic options of connecting of heated outlets

- Without possibility of switching off (energy consumption also in summer season – not recommended)
- Mechanical switch (manipulation required), or time socket Outer thermostat with integrated thermal sensor
- Thermostat to a switchboard including thermal sensor for measuring of outer temperature
- Thermostat to a switchboard including thermal and humidity sensor for measuring the outside temperature

Roof outlets

Drainage of flat roofs



- Double-wall structure of polyamide PA6
- Integrated sleeve of waterproof membrane or vapour barrier
- Protective leaf guard included each package
- Direct connection to vertical roof downpipes of DN 70, DN 100, DN 125 and DN 150 diameters
- Direct connection to horizontal pipes of DN 70, DN 100 and DN 125 diameters
- Reduced construction height for warm roofs

Dimensions of vertical roof outlets

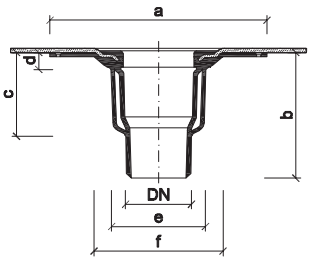
Type	DN	OD	Dimensions [mm] a	b	c	d	e	f
TW(E) 75 S	70	75	330	210	145	25	160	200
TW(E) 110 S	100	110	330	210	135	25	160	200
TW(E) 125 S	125	125	330	210	135	25	160	200
TW(E) 160 S	150	160	342	210	135	25	190	265

Dimensions of horizontal roof outlets

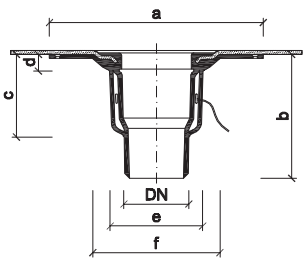
Type	DN	OD	Dimensions [mm] a	b	c	d	e	f	g
TW(E) 75 V	70	75	330	200	130	121	36	224 (238*)	46
TW(E) 110 V	100	110	330	200	130	157	25	238 (250*)	47
TW(E) 125 V	125	125	330	200	130	165	25	239 (251*)	40

* dimensions of heated version

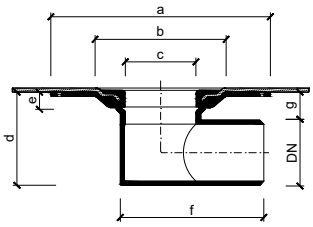
TW S



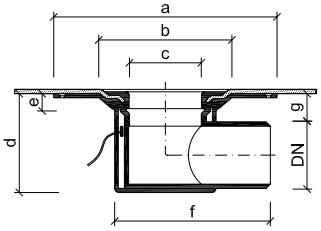
TWE S



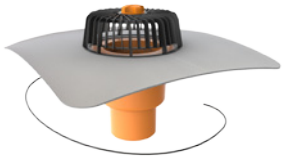
TW V



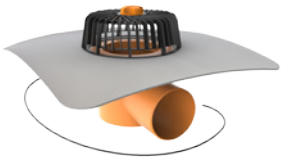
TWE V



TOPWET vertical roof outlets with integrated waterproofing sleeve

	Version	Type
	TOPWET vertical roof outlet with integrated waterproofing sleeve, thermally insulated with a double wall, supplied with a leaf guard.	TW 75 S ___ TW 110 S ___ TW 125 S ___ TW 160 S XL ___
	TOPWET vertical roof outlet with integrated waterproofing sleeve, thermally insulated with a double wall, supplied with a leaf guard. The outlet is heated with a 230 V connection cable.	TWE 75 S ___ TWE 110 S ___ TWE 125 S ___ TWE 160 S XL ___

TOPWET horizontal roof outlets with integrated waterproofing sleeve

	Version	Type
	TOPWET horizontal roof outlet with integrated waterproofing sleeve and with a leaf guard.	TW 75 V ___ TW 110 V ___ TW 125 V ___
	TOPWET horizontal roof outlet with integrated waterproofing sleeve, supplied with a leaf guard. The outlet is heated with a 230 V connection cable.	TWE 75 V ___ TWE 110 V ___ TWE 125 V ___

Products are supplied with a standard sleeve:

BIT - SBS-modified asphalt strip, PVC - PVC-based membrane

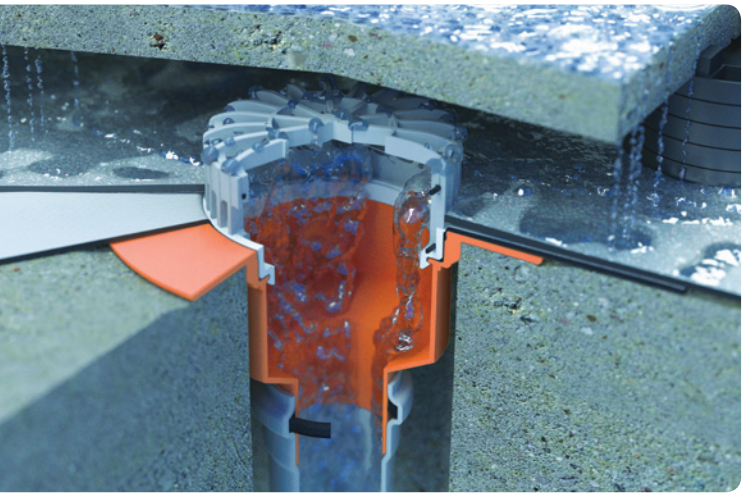
Products can also be supplied with a custom sleeve:

TPO, FPO - Thermoplastic (flexible) polyolefin membrane, EPDM - synthetic rubber membrane,
PE - polyethylene vapour barrier membrane, ECB, POCB - mixture of polymers with asphalts, EVA - EVA membrane,
STE – cement-based screed waterproofing, FLC - liquid multi-component screeds

A handling fee is charged for the production of a custom sleeve. More information about the sleeves can be found on pages 6 and 7.

Terrace outlets

Drainage of flat roofs, terraces and balconies



- Vertical version of DN 70-125, horizontal version of DN 50-125
- Construction from polyamide PA6
- Integrated sleeve made of a waterproof strip or foil
- Low construction height
- A special low leaf guard is part of every outlet, with possibility of adjustment to a flat leaf guard
- A heated version will ensure reliable drainage even in the winter season

Terrace outlets – vertical version

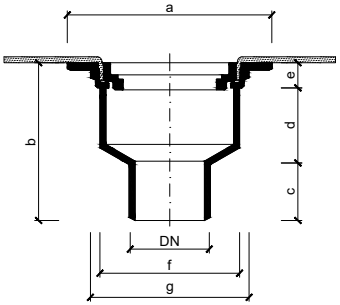
Type	DN	OD	Dimensions [mm] a	b	c	d	e	f	g
TWT(E) 75 S	70	75	204	182	80	75 (*52)	27 (*50)	133	156
TWT(E) 110 S	100	110	204	182	80	75 (*52)	27 (*50)	133	156
TWT(E) 125 S	125	125	204	182	80	75 (*52)	27 (*50)	133	156

* dimension at heated version

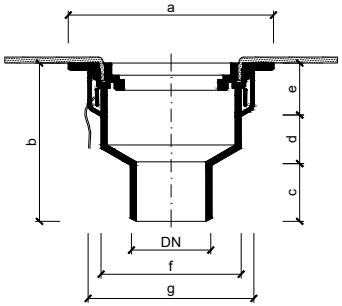
Terrace outlets – horizontal version

Type	DN	OD	Dimensions [mm] a	b	c	d
TWT(E) 50 V	50	50	204	92	225	44
TWT(E) 75 V	70	75	204	102	225	28
TWT(E) 110 V	100	110	204	143	238	33
TWT(E) 125 V	125	125	204	143	238	26

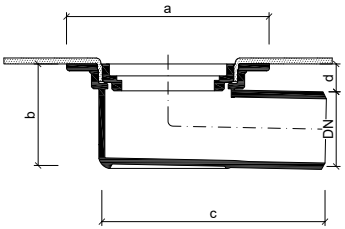
TWT S



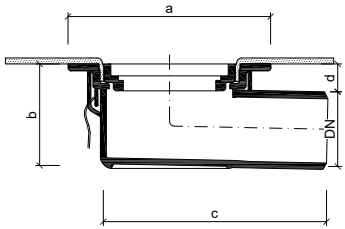
TWTE S



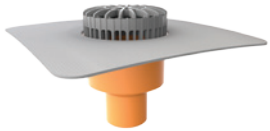
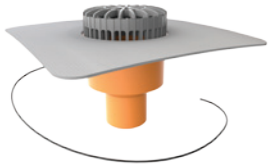
TWT V



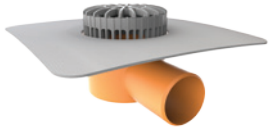
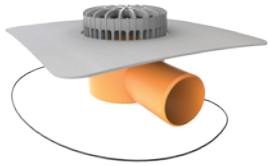
TWTE V



TOPWET vertical terrace outlets with integrated waterproofing sleeve

	Version	Type
	TOPWET vertical terrace outlet with integrated waterproofing sleeve, supplied with grey leaf guard.	TWT 75 S ___ TWT 110 S ___ TWT 125 S ___
	TOPWET vertical terrace outlet with integrated waterproofing sleeve, supplied with grey leaf guard. The outlet is heated with a 230 V connection cable.	TWTE 75 S ___ TWTE 110 S ___ TWTE 125 S ___

TOPWET horizontal terrace outlets with integrated waterproofing sleeve

	Version	Type
	TOPWET horizontal terrace outlet with integrated waterproofing sleeve, supplied with grey leaf guard.	TWT 50 V ___ TWT 75 V ___ TWT 110 V ___ TWT 125 V ___
	TOPWET horizontal terrace outlet with integrated waterproofing sleeve, supplied with grey leaf guard. The outlet is heated with a 230 V connection cable.	TWTE 50 V ___ TWTE 75 V ___ TWTE 110 V ___ TWTE 125 V ___

Products are supplied with a standard sleeve:

BIT - SBS-modified asphalt strip, PVC - PVC-based membrane

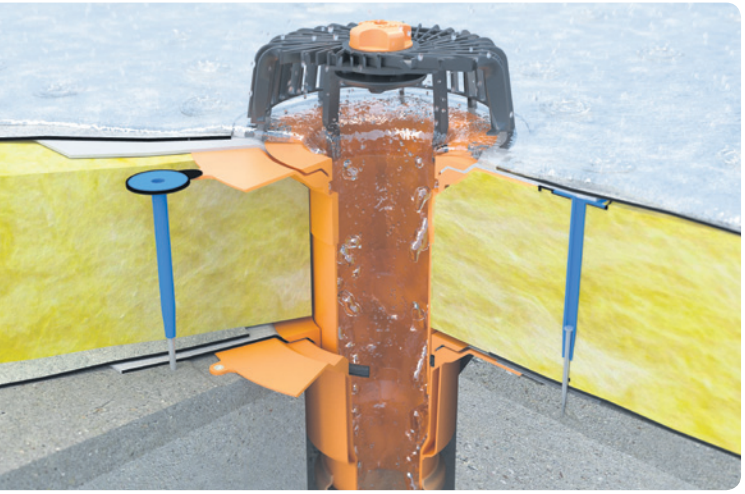
Products can also be supplied with a custom sleeve:

TPO, FPO - Thermoplastic (flexible) polyolefin membrane, EPDM - synthetic rubber membrane,
PE - polyethylene vapour barrier membrane, ECB, POCB - mixture of polymers with asphalts, EVA - EVA membrane,
STE – cement-based screed waterproofing, FLC - liquid multi-component screeds

A handling fee is charged for the production of a custom sleeve. More information about the sleeves can be found on pages 6 and 7.

Extensions for outlets and other accessories

Drainage of warm roofs



Extensions for roof outlets

- Applicable for roof outlets of DN 70, DN 100 and DN 125 diameters, outlets vertical and horizontal including heated ones
- Height depending on insulation thickness ranging from 40 mm up to 500 mm
- Sealing ring protecting against raised water included
- Heated version on request
- Complementary type XL only for vertical roof outlets of DN 150 diameter including heated ones
- PrThe diameter of the roof extension is universal - 125 mm

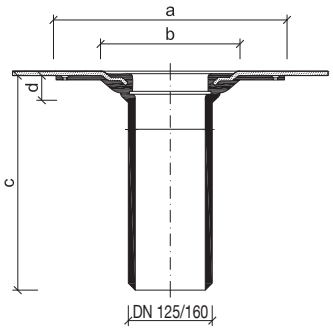
Extensions for terrace outlets

- Applicable for terrace outlets of DN 70, DN 100 and DN 125 diameters, outlets vertical and horizontal including heated ones
- The diameter of the terrace extension is universal -110 mm, with a range of thermal insulation 20–300 mm.

Dimensions of extensions for roof outlets

Type	for roof outlets TW / TWE	Dimensions [mm]				
		a	b	c	d	Insulation thickness
TWN v220	75, 110, 125	330	200	290	40	40–220
TWN v300	75, 110, 125	330	200	370	40	40–300
TWN v500	75, 110, 125	330	200	540	40	40–500
TWNE v500	75, 110, 125	330	200	540	100	100-500
TWN v300 XL	160	342	265	330	120	120–300
TWN v500 XL	160	342	265	540	120	120–500
TWNE v500 XL	160	342	265	540	120	120–500

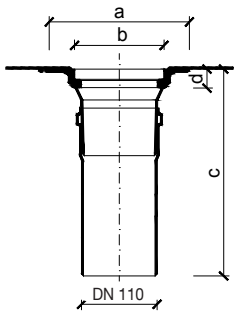
TWN



Dimensions of extensions for terrace outlets

Type	for roof outlets TW / TWE	Dimensions [mm]				
		a	b	c	d	Insulation thickness
TWTN v300	75, 110, 125	204	130	370	20	20–300

TWTN



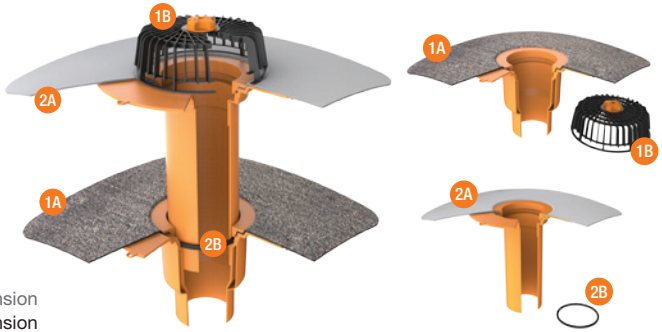
Extensions for thermal insulation for TOPWET roof outlets

Version	Type	Insulation thickness
TOPWET roof outlet extension with integrated waterproofing sleeve for vertical and horizontal versions of TOPWET roof outlets DN 70, 100 and 125 supplied with sealing ring but without a leaf guard. The XL version is only for DN 150 drains. TWNE = heated version, suitable for thermal insulation thicknesses above 300 mm.	TWN v220 ___ TWN v300 ___ TWN v500 ___ TWNE v500 ___ TWNE v500 XL ___ TWN v300 XL ___ TWN v500 XL ___	40–220 mm 40–300 mm 40–500 mm 100-500 mm 120-500 mm 120–300 mm 120–500 mm

Two-stage roof drainage - example:

A two-stage outlet comprises a roof outlet fixed to the vapour barrier and an outlet extension connected to the main waterproofing membrane.

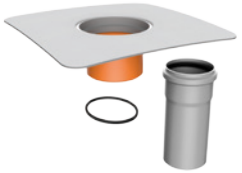
The roof outlet should always be installed as the lower part, which can serve as temporary drainage during construction before the upper layers of the roof structure are completed.



Package 1
Roof outlet
Roof outlet comes with a leaf guard

Package 2
Roof outlet extension
Roof outlet extension comes with sealing ring

Extensions for thermal insulation for TOPWET terrace outlets



Version	Type	Insulation thickness
TOPWET terrace outlet extension with integrated waterproofing sleeve for vertical version of TOPWET terrace outlets DN 70, 100 and 125 supplied with 300 mm long pipe and sealing ring, but without a leaf guard.	TWTN v300 ___	20–300 mm

Products are supplied with a standard sleeve:

BIT - SBS-modified asphalt strip, PVC - PVC-based membrane

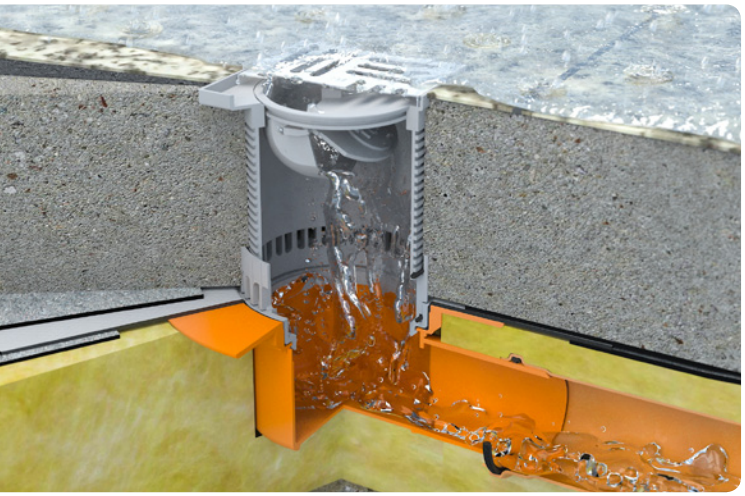
Products can also be supplied with a custom sleeve:

TPO, FPO - Thermoplastic (flexible) polyolefin membrane, EPDM - synthetic rubber membrane,
PE - polyethylene vapour barrier membrane, ECB, POCB - mixture of polymers with asphalts, EVA - EVA membrane,
STE – cement-based screed waterproofing, FLC - liquid multi-component screeds

A handling fee is charged for the production of a custom sleeve. More information about the sleeves can be found on pages 6 and 7.

Accessories for roof outlets, terrace outlets and extensions

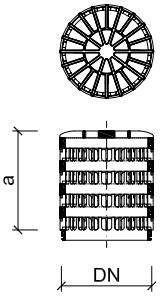
Drainage of ballast roofs, terraces and balconies and anti-stink measures



- On roofs with a ballast layer of gravel it is necessary to use a perforated leaf guard
- Wide range of accessories for walkable roofs
- Terrace attachments for drainage from the paving surface level
- Possibility of using a odour trap inserted in the outlet

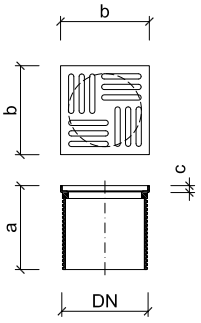
Leaf guard for roofs with gravel

Type	DN	Dimensions [mm] a	Purpose
TWOK v100	125*	100	A universal leaf guard for roof outlets DN 70, 100 and 125, terrace outlets DN 50, 70, 100 and 125, attachments for outlets, sanitation outlet and extended outlets
TWOK v133	125*	133	
TWOK v166	125*	166	
TWOK v200	125*	200	
TWOK NR v20-1000 XL	150	20–1000	For roof outlets DN 150 and attachments for XL outlets



Terasové nástavce

Type	DN	Dimensions [mm] a	b	c	Purpose
TW TER	125*	100	135	11	Univerzální terasový nástavec pro střešní vpusti DN 70, 100 a 125, terasové vpusti DN 50, 70, 100, 125, nástavce do vpustí, sanační vpusti a prodloužené vpusti
TW TER P	125*	220	135	11	
TWNR TER v10–1000 XL	150	10–1000	150	11	For roof outlets DN 150 and extensions for XL outlets



How can attachments be universal for various diameters of roof and terrace outlets DN 50, 70, 100 and 125?

The outlets have a neck or an integrated sleeve of the same construction and diameter. The outlet construction only differs below the neck. Ensuring that all the accessories are universal.

What attachment shall I use if I have screed waterproof which is at the level of the outlet neck?

For this type of finish, there is TW TER attachment which can be shortened according to the height of the screed and paving.

Odor traps into TOPWET roof outlets, terrace outlets and their extensions

	Version	Type	Height
	Mechanical roof flap TOPWET with increased drainage capacity and self-cleaning properties. It is designed for roof drains, attachments and balcony drains TOPWET. The flap can not be used for DN 150 drains and for redevelopment and extended drains. The flap should not be installed in an environment with the inhibited air circulation.	TWZU KL	
	Water odor trap TOPWET with an increased drainage capacity. It is designed for roof drains, attachments and balcony drains TOPWET. The water level of 50 mm. The cap cannot be used for DN 150 drains and for redevelopment and extended drains. The flap is designed for environments with no free air circulation and for places where a possibility of freezing is eliminated.	TWZU	50 mm

Accessories for roof outlets, terrace outlets and their extensions

	Version	Type	Height above insulation level
	Terraced attachment TOPWET for terraces with glued or otherwise mounted pavement. The package includes one drainage ring for the more continuous water runoff from the main waterproof system. The terraced attachment can be extended with another drainage ring TW ODK by about 33 mm or the attachment TWN TER. The attachment height is adjustable; the thick-walled polyamide PA6 UV Stabil design.	TW TER	10–100 mm (45–150 mm)*
	Perforated terraced attachment TOPWET for terraces with the pavement. The package includes three drainage rings for smoother water runoff from the main waterproof system. The terraced attachment can be extended with another drainage ring TW ODK by about 33 mm or the attachment TWN TER. The attachment height is adjustable; the thick-walled polyamide PA6 UV Stabil design.	TW TER P	45–220 mm
	The extended attachment for the extension of the terraced attachment by 120 mm as a maximum. The exact height of the attachment can always be adapted directly on site. The thick-walled polyamide PA6 UV Stabil design.	TWN TER	15–120 mm
	Drainage ring for extension of leaf guard TWOK or terrace attachment TW TER (P).. The thick-walled polyamide PA6 UV Stabil design. The height above the level of the waterproof system is 33 mm. The hole size of 15×7 mm.	TW ODK	+33 mm
	Flat walkable leaf guard TOPWET. The thick-walled polyamide PA6 UV Stabil design. The height above the level of the waterproof system is 10 mm.	TW PLK	+10 mm
	Perforated leaf guard TOPWET for roofs with gravel or other load-increasing strata. The basket can be extended with the drainage ring TW ODK always by 33 mm. The thick-walled polyamide PA6 UV Stabil design.	TWOK v33 TWOK v66 TWOK v100 TWOK v133 TWOK v166 TWOK v200	33 mm 66 mm 100 mm 133 mm 166 mm 200 mm

* The heights apply when the TW ODK item is used.

Extended single-wall roof outlets

Drainage of flat roofs

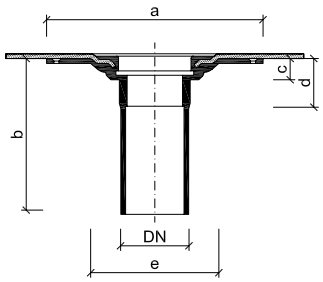
- Standard length 400 mm
- Length up to 1500 mm on request
- Option of length modification directly on construction site
- Simple assembly
- Option for heated version to order
- No possibility of combination with outlet extensions and mechanical roof flaps
- It is possible to combine with TWOK and TW TER accessories

Extended single-wall roof outlets

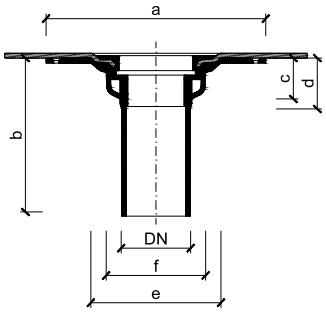
			Dimensions [mm]					
Type	DN	OD	a	b**	c	d	e	f
TWJ 50	50	50	330	400	40 (80*)	90	200	160
TWJ 75	70	75	330	400	40 (80*)	90	200	160
TWJ 90	90	90	330	400	40 (80*)	90	200	160
TWJ 110	100	110	330	400	40 (80*)	90	200	160
TWJ 125	125	125	330	400	40 (80*)	90	200	160
TWJ 160	150	160	342	400	40 (90*)	120	265	205

*dimension at heated version
** optionally extension up to 1500 mm to order

TWJ



TWJE



Extended single-walled roof outlets with integrated sleeve

Version	Type
Single-walled roof outlet TOPWET for uninsulated roofs with integrated sleeve, supplied with a leaf guard. Length 400 mm, possibility of extension up to 1500 mm on request.	TWJ 50 ___ TWJ 75 ___ TWJ 90 ___ TWJ 110 ___ TWJ 125 ___ TWJ 160 XL ___
Single-walled roof outlet TOPWET for uninsulated roofs with integrated sleeve, supplied with a leaf guard. Length 400 mm, possibility of extension up to 1500 mm on request. The outlet is heated with a 230 V connection cable.	TWJE 50 ___ TWJE 75 ___ TWJE 90 ___ TWJE 110 ___ TWJE 125 ___ TWJE 160 XL ___

Products are supplied with a standard sleeve:

BIT - SBS-modified asphalt strip, PVC - PVC-based membrane

Products can also be supplied with a custom sleeve:

TPO, FPO - Thermoplastic (flexible) polyolefin membrane, EPDM - synthetic rubber membrane,
PE - polyethylene vapour barrier membrane, ECB, POCB - mixture of polymers with asphalts, EVA - EVA membrane,
STE – cement-based screed waterproofing, FLC - liquid multi-component screeds

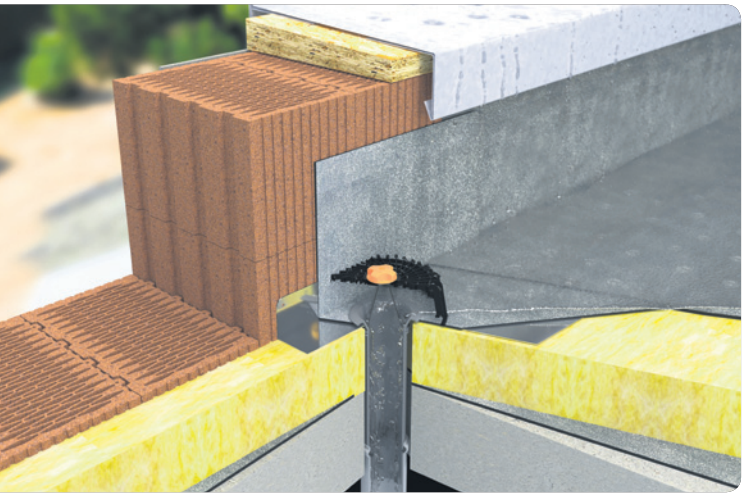
A handling fee is charged for the production of a custom sleeve. More information about the sleeves can be found on pages 6 and 7.

What is the difference between TWJ and TW SAN outlets?

TWJ and TW SAN outlets are identical extended single-walled outlets, the difference is in the addition of special TW SAN TES lip seal of a specific size to the refurbishment outlet package. This means that, for example, that the TW SAN 110 PVC drain consists of a TWJ 110 PVC drain and a TW SAN TES 110 lip sealing ring. The difference is in the further connection to the pipeline, where TWJ outlets are usually connected to the neck of the drainage pipe, while refurbishment outlets are connected to the existing pipeline WITHOUT a neck by pushing it in and displacing it with a lamellar lip seal.

Universal single-wall outlet

Complicated drainage places



- Base plate can be bent directly on site
- Wide range of useage, especially near attics and narrow roof gutters
- Suitable for renovations
- Standard length 400 mm, up to 1000 mm on request
- Easy and fast installation
- Direct connection to pipes DN 50, 70, 90, 100 and 125
- Flexible stainless steel base plate, plastic pipe
- Necessary to cut leaf guard, suitable to combine with attica shafts

Universal single-wall outlet TOPWET with the flexible base

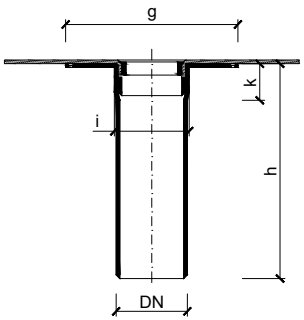
			Dimensions [mm]			
Type	DN	OD	g	h	i	k
TWJ UNI 50	50	50	245	400	58	20
TWJ UNI 75	70	75	245	400	81	20
TWJ UNI 90	90	90	245	400	96	20
TWJ UNI 110	100	110	245	400	116	20
TWJ UNI 125	125	125	245	400	131	20

Single-walled roof outlet type BZ for uninsulated roofs

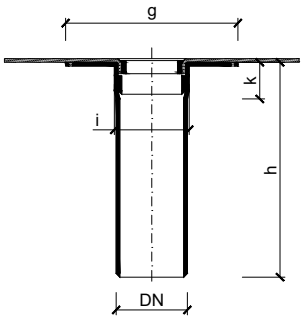
			Dimensions [mm]			
Type	DN	OD	g	h	i	k
TWJ BZ 50	50	50	250	400	56	60
TWJ BZ 75	70	75	250	400	81	60
TWJ BZ 90	90	90	250	400	96	60
TWJ BZ 110	100	110	250	400	116	60
TWJ BZ 125	125	125	250	400	131	60

This outlet can be inserted into an existing drain, pipe or gutter up to the neck, but has a lower drainage capacity

TWJ UNI



TWJ BZ



Universal single-wall outlet TOPWET with the flexible base

Version	Type
Universal single-wall outlet TOPWET with integrated waterproofing sleeve, with flexible stainless steel base and supplied with a leaf guard.	TWJ UNI 50 ___ TWJ UNI 75 ___ TWJ UNI 90 ___ TWJ UNI 110 ___ TWJ UNI 125 ___

Products are supplied with a standard sleeve:

BIT - SBS-modified asphalt strip, PVC - PVC-based membrane

What is the difference between TWJ UNI and TWJ BZ roof outlets?

TWJ UNI and TWJ BZ outlets are the same shape and dimensions, the only difference is ithe material of the base.

TWJ BZ outlets have a plastic base, while TWJ UNI outlets have a flexible stainless steel base. This allows the outlets to be placed even in hard-to-reach places.

The base can be bent directly on site, which significantly saves time and and the need for modifications of other outlets.

Single-wall outlet TOPWET type BZ

Version	Type
Single-walled roof outlet TOPWET type BZ for uninsulated roofs with integrated waterproofing sleeve, supplied with leaf guard. This BZ type has a narrower drain body to single-wall outlets and lower capacity. Length 400 mm, possibility of extension up to 1000 mm on request.	TWJ BZ 50 ___ TWJ BZ 75 ___ TWJ BZ 90 ___ TWJ BZ 110 ___ TWJ BZ 125 ___

Products are supplied with a standard sleeve:

BIT - SBS-modified asphalt strip, PVC - PVC-based membrane

Products can also be supplied with a custom sleeve:

TPO, FPO - Thermoplastic (flexible) polyolefin membrane, EPDM - synthetic rubber membrane,
PE - polyethylene vapour barrier membrane, ECB, POCB - mixture of polymers with asphalts, EVA - EVA membrane,
STE – cement-based screed waterproofing, FLC - liquid multi-component screeds

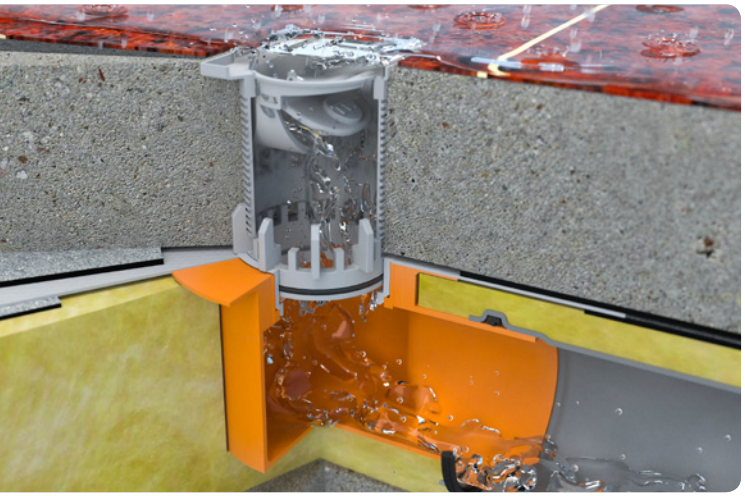
A handling fee is charged for the production of a custom sleeve. More information about the sleeves can be found on pages 6 and 7.

What is the difference between the standard single-wall TWJ outlet and the TWJ BZ outlet?

Single wall outlets marked BZ are intended for uninsulated structures, gutters or renovations, when it is necessary to insert the outlet into the pipe or opening up to the neck. Compared to the standard TWJ version, BZ-type outlets have a lower drainage capacity.

Balcony outlets

Drainage of balconies



- DN 50 and 70 vertical and horizontal version
- PA6 polyamide construction
- Integrated sleeve of waterproof strip or foil
- Low construction height
- Suitable to drain smaller areas
- Protective and removable grid included in each outlet
- Heated version ensures reliable drainage even in winter season

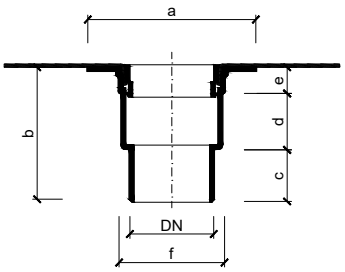
Balcony outlets – vertical version

			Dimensions [mm]							
Type	DN	OD	a	b	c	d	e	f	g	h
TWB 50 S	50	50	150	120	45	51	24	99	-	-
TWB 75 S	70	75	150	120	45	51	24	99		
TWBE 50 S	50	50	150	120	45	-	-	134	32	43
TWBE 75 S	70	75	150	120	45	-	-	134	32	43

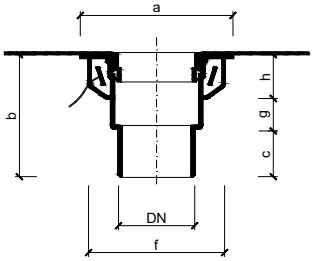
Balcony outlets – horizontal version

			Dimensions [mm]			
Type	DN	OD	a	b	c	d
TWB 50 V	50	50	150	61	167	14
TWB 75 V	70	75	150	96	163	21
TWBE 50 V	50	50	150	61	187	14
TWBE 75 V	70	75	150	96	183	21

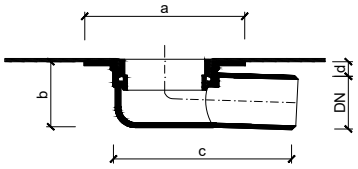
TWB S



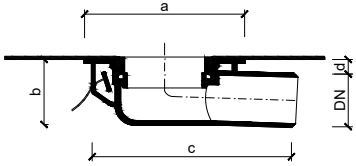
TWBE S



TWB V



TWBE V



TOPWET vertical balcony outlets with integrated waterproofing sleeve

	Version	Type
	TOPWET vertical balcony outlet with integrated sleeve, supplied with a flat protective leaf guard.	TWB 50 S ___ TWB 75 S ___
	TOPWET vertical balcony outlet with integrated sleeve, supplied with a flat protective leaf guard. The outlet is heated with a 230 V connection cable.	TWBE 50 S ___ TWBE 75 S ___

TOPWET horizontal balcony outlets with integrated waterproofing sleeve

	Version	Type
	TOPWET vertical balcony outlet with integrated sleeve, supplied with a flat protective leaf guard.	TWB 50 V ___ TWB 75 V ___
	TOPWET horizontal balcony outlet with integrated sleeve, supplied with a flat protective leaf guard. The outlet is heated with a 230 V connection cable.	TWBE 50 V ___ TWBE 75 V ___

Products are supplied with a standard sleeve:

BIT - SBS-modified asphalt strip, PVC - PVC-based membrane

Products can also be supplied with a custom sleeve:

TPO, FPO - Thermoplastic (flexible) polyolefin membrane, EPDM - synthetic rubber membrane,
PE - polyethylene vapour barrier membrane, ECB, POCB - mixture of polymers with asphalts, EVA - EVA membrane,
STE – cement-based screed waterproofing, FLC - liquid multi-component screeds

A handling fee is charged for the production of a custom sleeve. More information about the sleeves can be found on pages 6 and 7.

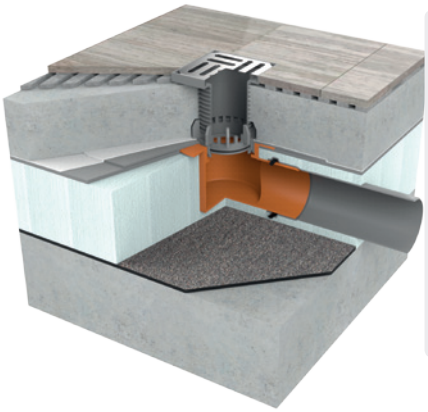
Accessories for TOPWET balcony outlets

	Version	Type	Height above insulation level
	TOPWET balcony attachment of a new generation with a stainless steel grid 100x100 mm. For balconies with glued or differently laid tiles. The balcony attachment can be extended using another TWB ODK drainage ring of 25 mm. The package includes drainage ring for the more continuous water runoff from main waterproof system. The exact height of the attachment can always be adapted directly on site. The thick-walled polyamide PA6 UV Stabil design.	TWB TER	14-95 mm (39-120 mm)*
	TOPWET balcony attachment of a new generation with a stainless steel grid 100x100 mm. For balconies with glued laid tiles. The exact height of the attachment can always be adapted directly on site. The thick-walled polyamide PA6 UV Stabil design.	TWB TER TH	18-95 mm
	TOPWET balcony attachment of a new generation with a stainless steel grid 100x100 mm. For balconies with glued laid tiles and integrated membrane increase adhesion. The exact height of the attachment can always be adapted directly on site.	TWB TER STE	10-95 mm
	Balcony drainage ring for extension of the TWB TER balcony attachment, always by 25 mm. The thick-walled polyamide PA6 UV Stabil design. The hole size of 10x6.5 mm.	TWB ODK	25 mm
	Flat TOPWET walkable protective leaf guard balcony outlets. The thick-walled polyamide PA6 UV Stabil design. The height above the level of the waterproof system is 10 mm.	TWB PLK	10 mm
	Perforated protective leaf guard TOPWET for balcony outlets. The leaf guard can be extended with the drainage ring TWB ODK always by 25 mm. The thick-walled polyamide PA6 UV Stabil design.	TWOK BAL v35 TWOK BAL v60 TWOK BAL v85 TWOK BAL v110	35 mm 60 mm 85 mm 110 mm
	Mechanical stink trap for vertical and horizontal version of TOPWET TWB balcony outlets.	TWZU BAL	

* The heights apply when the TW ODK BAL item is used

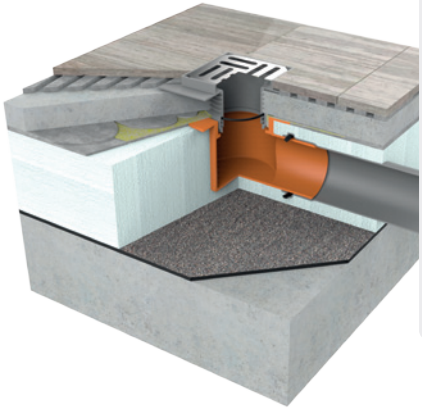
Possible combinations of accessories for TOPWET balcony outlets for various types of balcony compositions

Balcony composition with a drainage layer



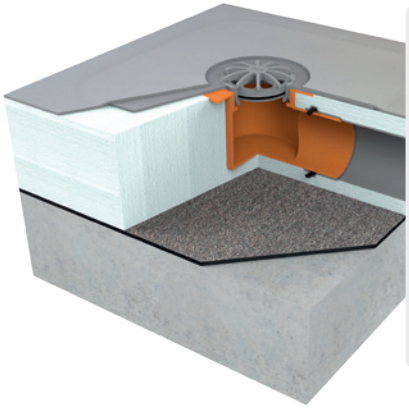
Combination of a TOPWET balcony outlet with an integrated sleeve and a balcony attachment with a stainless steel grid and a drainage ring used for water drainage from the main hydro-insulation layer.

Balcony composition with a glued layer



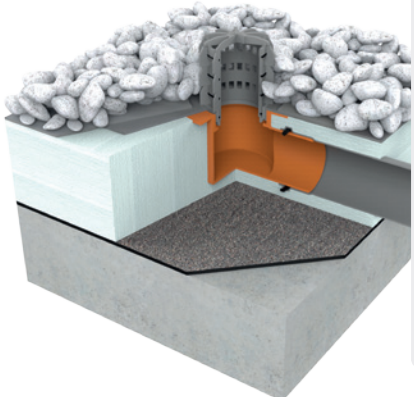
Combination of a TOPWET balcony outlet with an integrated sleeve for screed insulation and a balcony attachment with a stainless steel grid adjusted on site as required.

Balcony composition with a walkable roof foil



Combination of a TOPWET balcony outlet with an integrated sleeve and a flat walkable protective basket supplied as standard with balcony outlets.

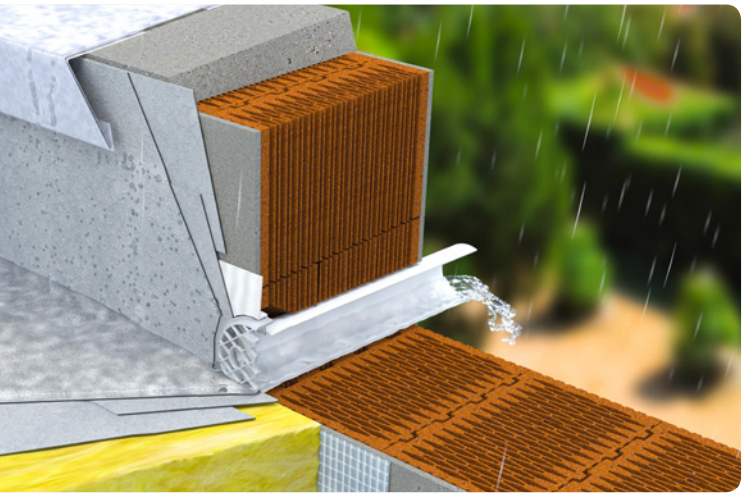
Balcony composition with a gravel layer



Combination of a TOPWET balcony outlet with an integrated sleeve and a flat walkable protective basket supplied as standard with balcony outlets, complemented with balcony drainage rings as required.

Through wall outlets

Drainage of flat roofs, terraces and balconies



Basic type – round through wall outlet of 600 mm length

- Construction with a lowered drain edge
- Integrated sleeve of waterproofing membrane
- Protective and removable grid included in each through wall outlet
- Possibility to extend up to 1500 mm
- Through wall outlet made of UV stable PVC
- Heated version ensures reliable drainage even in winter season
- Possibility of connection to a rain hopper or to downpipes DN 50, DN 70, DN 100, DN 125 and DN 150

Basic type - throught wall outlet squared of 500 mm length

- Five basic dimensions
- Same dimensions as round version
- Custom made dimensions to order (always 50 mm)

Complementary type – mini through wall outlet of 200 mm length

- For drainage of small terraces and balconies
- Low construction height 60 mm
- Special sleeve for connection to trowelled insulationi

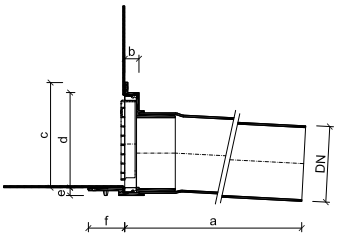
Through wall outlets – round

			Dimensions [mm]							
Type	DN	OD	a	b	c	d	e	f	g	h
TWC(E) 50	50	50	600	24	107	90	13	62	22	62
TWC(E) 75	70	75	600	24	107	90	13	62	22	62
TWC(E) 110	100	110	600	24	174	157	13	60	22	60
TWC(E) 125	125	125	600	24	174	157	13	60	22	60
TWC(E) 160	150	160	600	24	174	157	13	60	22	60
TWC 40 MINI	40	40	200	5	90	22	13	44	13	44

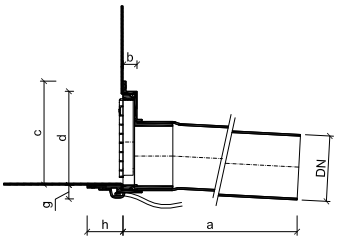
Through wall outlets – squared

		Dimensions [mm]					
Type	a x b	c	d	e	f	g	h
TWC 50x100	50x100	500	4	92	38	8	50
TWC 50x150	50x150	500	4	92	38	8	50
TWC 100x100	100x100	500	4	142	88	8	50
TWC 150x150	150x150	500	4	192	138	8	50
TWC 100x300	100x300	500	4	142	88	8	50

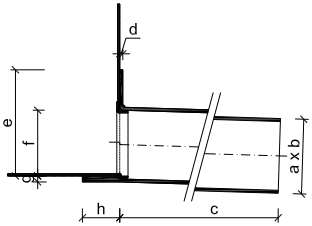
TWC



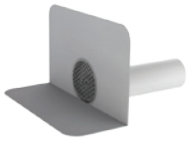
TWCE

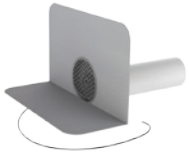


TWC



Round through wall outlets TOPWET with integrated sleeve



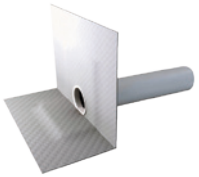


Version	Type
TOPWET round through wall outlet with an integrated sleeve and with a leaf guard. Length 600 mm, option of extension up to 1500 mm on request.	TWC 50 ___ TWC 75 ___ TWC 110 ___ TWC 125 ___ TWC 160 ___
TOPWET round through wall outlet with an integrated sleeve, supplied with a flat protective leaf guard. Length 600 mm, option of extension up to 1500 mm on request. The outlet is heated with a 230 V connection cable.	TWCE 50 ___ TWCE 75 ___ TWCE 110 ___ TWCE 125 ___ TWCE 160 ___

Squared through wall outlets TOPWET with integrated sleeve

Version	Type
TOPWET squared through wall outlet with an integrated sleeve. Outlet spout material is PVC, white colour. Length 500 mm, option of extension up to 1000 mm on request.	TWC 50x100 ___ TWC 50x150 ___ TWC 100x100 ___ TWC 150x150 ___ TWC 100x300 ___

Round mini through wall outlet TOPWET with integrated sleeve



Version	Type
TOPWET MINI through wall outlet. Length 200 mm, option of extension up to 1500 mm on request.	TWC 40 ___ MINI

Products are supplied with a standard sleeve:

BIT - SBS-modified asphalt strip, PVC - PVC-based membrane

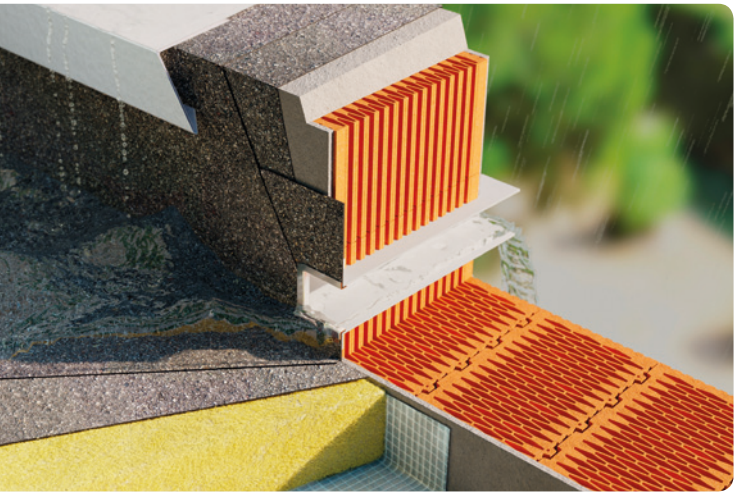
Products can also be supplied with a custom sleeve:

TPO, FPO - Thermoplastic (flexible) polyolefin membrane, EPDM - synthetic rubber membrane,
PE - polyethylene vapour barrier membrane, ECB, POCB - mixture of polymers with asphalts, EVA - EVA membrane,
STE – cement-based screed waterproofing, FLC - liquid multi-component screeds

A handling fee is charged for the production of a custom sleeve. More information about the sleeves can be found on pages 6 and 7.

Safety overflows

Safety oveflows of flat roofs, terraces and balconies



Round safety overflow of 600 mm length

- Made of UV stabile PVC
- Integrated sleeve of waterproofing membrane
- Produced at DN 50, 70, 100 and 125
- Possibility to extend up to 1500 mm
- Recommended overlap over the facade is at least 100 mm

Squared safety overflow of 500 mm length

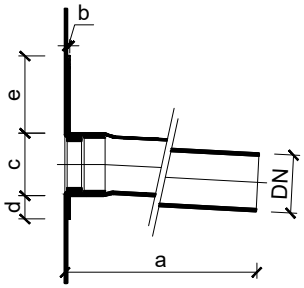
- Five basic variants in stock
- Made of UV stable, hardened PVC
- Integrated sleeve of waterproofing membrane
- Recommended overlap over the facade is at least 100mm
- Possibility of custom-made production in multiples of 50 mm up to 200 x 800 mm
- Optionally extension up to 1000 mm

Safety overflows - round

Type	DN	OD	Dimensions [mm] a*	b	c	d	e
TWPP 50	50	50	600	20	56	30	97
TWPP 75	70	75	600	20	81	30	84
TWPP 110	100	110	600	20	116	30	67
TWPP 125	125	125	600	20	131	30	59

*optionally extension up to 1500 mm to order

TWPP ○

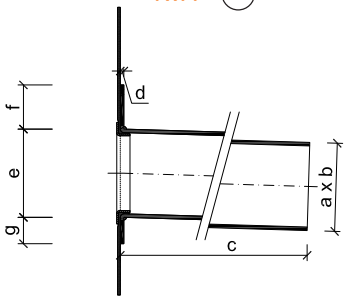


Safety overflows - squared

Type	Dimensions [mm] a x b	c*	d	e	f	g
TWPP 50x100	50x100	500	4	50	50	30
TWPP 50x150	50x150	500	4	50	50	30
TWPP 100x100	100x100	500	4	100	50	30
TWPP 150x150	150x150	500	4	150	50	30
TWPP 100x300	100x300	500	4	100	50	30

*optionally extension up to 1000 mm to order

TWPP □



Round safety overflows TOPWET with integrated sleeve

Version	Type
TOPWET round safety overflow with an integrated sleeve, without a leaf guard. Length 600 mm, option of extension up to 1500 mm on request.	TWPP 50 ___ TWPP 75 ___ TWPP 110 ___ TWPP 125 ___

Squared safety overflows TOPWET with integrated sleeve

Version	Type
TOPWET squared safety overflow with an integrated sleeve. Outlet spout material is PVC, white colour. Length 500 mm, option of extension up to 1000 mm on request.	TWPP 50x100 ___ TWPP 50x150 ___ TWPP 100x100 ___ TWPP 150x150 ___ TWPP 100x300 ___

Products are supplied with a standard sleeve:

BIT - SBS-modified asphalt strip, PVC - PVC-based membrane

Products can also be supplied with a custom sleeve:

TPO, FPO - Thermoplastic (flexible) polyolefin membrane, EPDM - synthetic rubber membrane,
PE - polyethylene vapour barrier membrane, ECB, POCB - mixture of polymers with asphalts, EVA - EVA membrane,
STE – cement-based screed waterproofing, FLC - liquid multi-component screeds

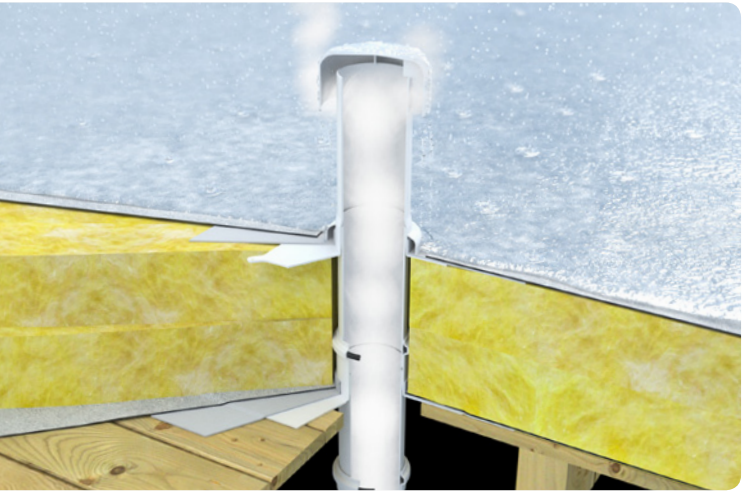
A handling fee is charged for the production of a custom sleeve. More information about the sleeves can be found on pages 6 and 7.

Emergency drainage

Version	Type
Safety overflow for drainage in the middle area of the roof. Flooding height is 40 - 120mm. It is compatible with terrace and roof outlets and their extensions. It includes 3 O-ring seals and an orange protective leaf guard. Universal version for roof and terrace outlets, or version XL for outlets of DN150 (then the minimum flooding height is 120mm).	TWN OVER

Vents and penetrations

Ventilation of roofs, sewerage and cable penetrations



- Simple construction for effective ventilation of double-level roofs with the air gap
- Fixing points for firm attachment to the bearing construction
- Integrated waterproof sleeve for reliable connection to the roof membrane
- Fully professional products with UV protection
- Applicable for all commonly used DN 50, DN 70, DN 100 and DN 125 of plastic piping
- Base plate enables air-tight penetration through a vapour resistant barrier
- Expert penetration through the waterproofing that does not require either ordinary inspections or maintenance
- UV-stable white and black colour for all dimensions
- White standard colour is for products with a PVC and custom-made sleeve, black for the products with a BIT sleeve.

Ventilation of flat roofs and piping ventilation

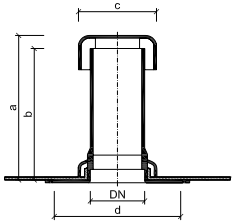
Type	DN	OD	Section [cm²]	Dimensions [mm] a*	b*	c	d	e*	f	g
TWO a TWOP 50	50	50	15	360	332	110	250	200	60	56
TWO a TWOP 75	70	75	37	360	332	110	250	200	60	81
TWO a TWOP 110	100	110	85	360	332	160	250	200	60	116
TWO a TWOP 125	125	125	111	360	332	160	250	200	60	131

Penetration for cables and base plate

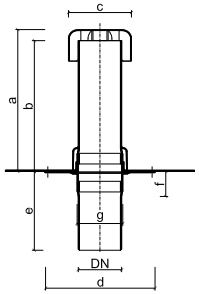
Type	DN	OD	Section [cm²]	Dimensions [mm] a*	b*	c	d	e*	f*	g	h
TWP a TWOD 50	50	50	15	450	332	260	250	200	90	60	56
TWP a TWOD 75	70	75	37	480	332	310	250	200	90	60	81
TWP a TWOD 110	100	110	85	520	332	400	250	200	100	60	116
TWP a TWOD 125	125	125	111	545	332	440	250	200	100	60	131

*custom-made extension possible up to 1000 mm for TWOP, TWP and up to 1500
**lenght of the TWOD product mm for TWOD.

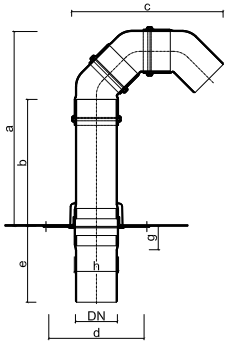
TWO



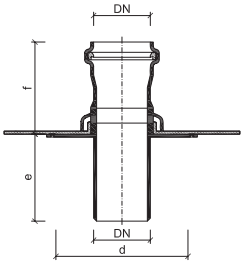
TWOP



TWP



TWOD



Ventilation of roofs, sewerage and cable penetrations with integrated sleeve

	Version	Type
	TOPWET roof vent with an integrated sleeve, including a rain cap. Height 300 mm, option of extension up to 500 mm on request. Elements with a diameter of DN 150 are listed on pages 32-33.	TWO 50 ___ TWO 75 ___ TWO 110 ___ TWO 125 ___
	TOPWET sewerage ventilation for connection to vent piping with an integrated sleeve, including a rain cap. Height above insulation 300 mm (500 mm custom made), depth under insulation 200 mm, option to extend up to 1000 mm on request. Usable in combination with TWOD base plate from thermal insulation height of 160 mm. Elements with a diameter of DN 150 are listed on pages 32-33.	TWOP 50 ___ TWOP 75 ___ TWOP 110 ___ TWOP 125 ___
	TOPWET penetration for cables with an integrated sleeve, including three 45-degree necks. Height above insulation 300 mm (500 mm custom made), depth under insulation 200 mm, option to extend up to 1000 mm on request. Usable in combination with TWOD base plate from thermal insulation height of 160 mm. Elements with a diameter of DN 150 are listed on pages 32-33.	TWP 50 ___ TWP 75 ___ TWP 110 ___ TWP 125 ___
	TOPWET penetration through the vapor barrier with an integrated sleeve, enables connection to the TWOP and TWP. Depth under the insulation 200 mm, extension up to 1000 mm is possible on request. This product cannot be used as a penetration for the substructure and is not UV stable. Elements with a diameter of DN 150 are listed on pages 32-33.	TWOD 50 ___ TWOD 75 ___ TWOD 110 ___ TWOD 125 ___

Products are supplied with a standard sleeve:

BIT - SBS-modified asphalt strip, PVC - PVC-based membrane

Products can also be supplied with a custom sleeve:

TPO, FPO - Thermoplastic (flexible) polyolefin membrane, EPDM - synthetic rubber membrane,
PE - polyethylene vapour barrier membrane, ECB, POCB - mixture of polymers with asphalts, EVA - EVA membrane,
STE – cement-based screed waterproofing, FLC - liquid multi-component screeds

A handling fee is charged for the production of a custom sleeve. More information about the sleeves can be found on pages 6 and 7.

Vents and penetrations

Ventilation of roofs, sewerage and cable penetrations

- Simple construction for effective ventilation of double-level roofs with the air gap
- Fixing points for firm attachment to the bearing construction
- Integrated waterproof sleeve for reliable connection to the roof membrane
- Professional finishing piece for sewer ventilation pipes with the TWOP element.
- Applicable for all commonly used plastic piping of DN 150
- TWP element is a reliable solution for bringing cables, hoses and other media carriers onto the roof.
- Expert penetration through the waterproofing that does not require either ordinary inspections or maintenance
- UV-stable white and black colour for all dimensions
- White standard colour is for products with a PVC and custom-made sleeve, black for the products with a BIT sleeve.

Ventilation of flat roofs and sewerages

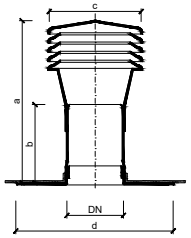
Type	DN	OD	Cross section [cm²]	Dimensions [mm]				
				a*	b*	c	d	e*
TWO a TWOP 160	150	160	186	510	270	260	345	300

Cable penetrations and the baseplate

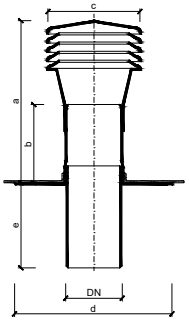
Type	DN	OD	Cross section [cm²]	Dimensions [mm]					
				a*	b*	c	d	e*	f*
TWP a TWOD 160	150	160	186	610	420	450	345	300 (200**)	125

* custom-made extension possible up to 1000 mm for TWOP, TWP and up to 1500 mm for TWOD.
** lenght of the TWOD product

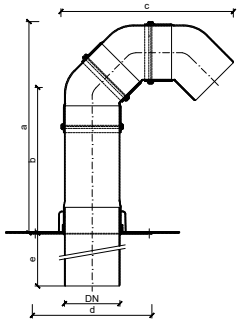
TWO



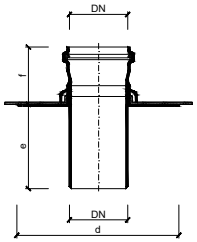
TWOP



TWP



TWOD



Ventilation of roofs, sewerage and cable penetrations with integrated sleeve

	Version	Type
	TOPWET roof vent with an integrated sleeve, including a rain cap in DN 150. Height 300 mm, option of extension up to 500 mm on request.	TWO 160 ___
	TOPWET sewerage ventilation for connection to vent piping DN 150 with an integrated sleeve, including a rain cap. Height above insulation 300 mm (500 mm custom made), depth under insulation 300 mm, option to extend up to 1000 mm on request. Usable in combination with TWOD base plate from thermal insulation height of 130 mm.	TWOP 160 ___
	TOPWET penetration for cables with an integrated sleeve, including three 45-degree necks. Height above insulation 300 mm (500 mm custom made), depth under insulation 200 mm, option to extend up to 1000 mm on request. Usable in combination with TWOD base plate from thermal insulation height of 130 mm.	TWP 160 ___
	TOPWET penetration through the vapor barrier with an integrated sleeve, enables connection to the TWOP and TWP. Depth under the insulation 200 mm, extension up to 1000 mm is possible on request. This product cannot be used as a penetration for the substructure and is not UV stable.	TWOD 160 ___

Products are supplied with a standard sleeve:

BIT - SBS-modified asphalt strip, PVC - PVC-based membrane

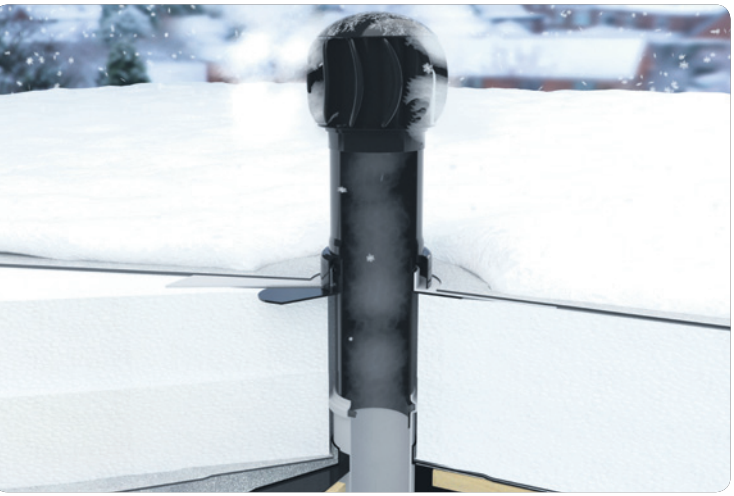
Products can also be supplied with a custom sleeve:

TPO, FPO - Thermoplastic (flexible) polyolefin membrane, EPDM - synthetic rubber membrane,
PE - polyethylene vapour barrier membrane, ECB, POCB - mixture of polymers with asphalts, EVA - EVA membrane,
STE – cement-based screed waterproofing, FLC - liquid multi-component screeds

A handling fee is charged for the production of a custom sleeve. More information about the sleeves can be found on pages 6 and 7.

Ventilation turbines

Ventilation turbines



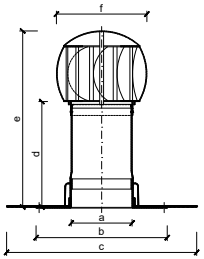
- For air ventilation (even with very high humidity), cellars, garages, radon subsoil, bathroom, toilets, roof parts, sewerage, etc.
- Polyamide PA6 and PVC base with integrated insulation sleeve as required
- Turbine made of UV-stable ASA polymer in black
- Greater suction power than conventional vents

Ventilation turbine TOPWET

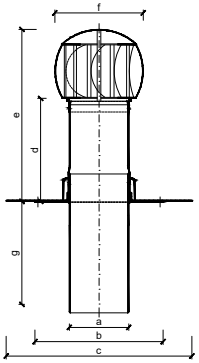
Type	Dimensions [mm]							Suction power	
	a	b	c	d*	e	f	g**	v [km/h]***	V [m3/h]****
TWO TUR 160 ___	160	345x345	500x500	241	463	236		3	51
								6	142
								8	182
								10	248
TWOP TUR 160 ___	160	345x345	500x500	241	463	236	300	3	51
								6	142
								8	182
								10	248

*on request, the possibility to extend the pipe above the waterproofing membrane to 500 mm, ** on request, the possibility to extend the pipe below the waterproofing membrane up to 1000 mm *** wind speed, **** the amount of air extracted

TWO TUR



TWOP TUR



Ventilation turbines

Version	Type
TOPWET ventilation turbine with an integrated sleeve. Pipe height above the sleeve is 250 mm. The possibility to extend the pipe above the sleeve to 500 mm.	TWO TUR 160 ___
TOPWET ventilation turbine with an integrated sleeve and connection to the plastic piping with neck DN 160. Pipe height above the sleeve is 250 mm. The possibility to extend the pipe above the sleeve 500 mm. Pipe height under the sleeve is 300 mm. The possibility to extend the pipe above the sleeve to 1000 mm.	TWOP TUR 160 ___

Products are supplied with a standard sleeve:

BIT - SBS-modified asphalt strip, PVC - PVC-based membrane

Products can also be supplied with a custom sleeve:

TPO, FPO - Thermoplastic (flexible) polyolefin membrane, EPDM - synthetic rubber membrane,
PE - polyethylene vapour barrier membrane, ECB, POCB - mixture of polymers with asphalts, EVA - EVA membrane,
STE – cement-based screed waterproofing, FLC - liquid multi-component screeds

A handling fee is charged for the production of a custom sleeve. More information about the sleeves can be found on pages 6 and 7.

Recommendation:

Install the system in an air wash around the entire perimeter, ensuring it is always above the attic to allow sufficient wind movement around the head.

Important notice:

Never place it near the wall of a building as reflected wind can affect the operation of the turbine. Do not use for ventilation in areas where there are stoves with air suction or pneumatic machines, as these could reverse the turbine and cause air to be sucked into the building.

Refurbishment outlets and vents

Flat roof refurbishment

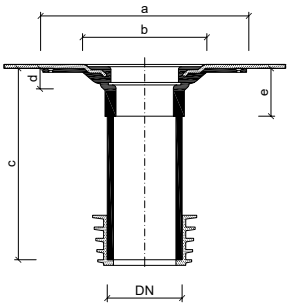
- Basic lenght 400 mm
- Direct connection to existing roof outlets or vertical downpipes
- Wide assortment of fine graduated diameters
- Easy application with refurbishment with use of a new heat-insulated layer from a thickness of 50 mm
- Custom manufacturing of higher refurbishment outlets with a tube of a length up to 1500 mm
- Lip seal against raised water included in each outlet
- Slippery means included in each package
- Heated version on request

Refurbishment outlets for warm roofs

Type	Dimensions [mm] a	b	c**	d	e
TW SAN 50	330	220	400	40 (80*)	90
TW SAN 63	330	220	400	40 (80*)	90
TW SAN 75	330	220	400	40 (80*)	90
TW SAN 90	330	220	400	40 (75*)	90
TW SAN 100	330	220	400	40 (80*)	90
TW SAN 110	330	220	400	40 (80*)	90
TW SAN 125	330	220	400	40 (80*)	90
TW SAN 140	330	220	400	40 (80*)	90
TW SAN 160	342	265	400	40 (90*)	120

* dimension at heated version
** optionally extension up to 2000 mm to order

TW SAN

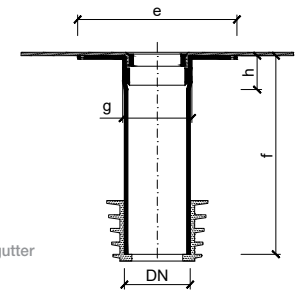


Refurbishment outlets for cold roofs

Type	Dimensions [mm] e	f	g	h
TW SAN BZ 50	250	400	56	60
TW SAN BZ 75	250	400	81	60
TW SAN BZ 90	250	400	96	60
TW SAN BZ 100	250	400	116	60
TW SAN BZ 110	250	400	116	60
TW SAN BZ 125	250	400	131	60

The outlet may be inserted into existing outlet, pipe or gutter up to a neck, but it has lower drain capacity

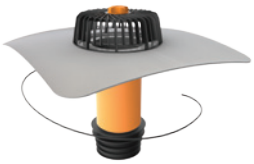
TW SAN BZ



Selection table for refurbishment outlets

Type	For connection to piping of diameter	Type of existing downpipe [DN] Cast iron 70	80	100	110	125	150	200	PE 63	75	90	110	125	150	200	PVC 70	100	125	150	200	PP 100	125	150	200
TW SAN 50	54–72 mm	✓							✓	✓						✓								
TW SAN 63	69-81 mm	✓	✓							✓	✓					✓								
TW SAN 75	79–102 mm		✓								✓										✓			
TW SAN 90	99–106 mm			✓								✓					✓				✓			
TW SAN 100	106–116 mm				✓																			
TW SAN 110	116–129mm					✓							✓					✓				✓		
TW SAN 125	144–154 mm						✓							✓					✓				✓	
TW SAN 140	154-186 mm						✓								✓				✓	✓			✓	✓
TW SAN 160	186–200 mm							✓							✓					✓				✓

Refurbishment outlets, vents and penetrations with integrated sleeve

	Version	Type	For connection to piping of diameter
	TOPWET refurbishment outlet with an integrated sleeve, supplied with a leaf guard. Length 400 mm, option of extension up to 1500 mm on request.	TW SAN 50 ___ TW SAN 63 ___ TW SAN 75 ___ TW SAN 90 ___ TW SAN 100 ___ TW SAN 110 ___ TW SAN 125 ___ TW SAN 140 ___ TW SAN 160 XL ___	54–72 mm 69-81 mm 79–102 mm 99–106 mm 106–116 mm 116–129 mm 144–154 mm 154-186 mm 186–200 mm
	TOPWET refurbishment outlet with an integrated sleeve, supplied with a leaf guard. Length 400 mm, possibility of extension up to 1500 mm on request. The outlet is heated with a 230 V connection cable.	TWE SAN 50 ___ TWE SAN 63 ___ TWE SAN 75 ___ TWE SAN 90 ___ TWE SAN 100 ___ TWE SAN 110 ___ TWE SAN 125 ___ TWE SAN 140 ___ TWE SAN 160 XL ___	54–72 mm 69-81 mm 79–102 mm 99–106 mm 106–116 mm 116–129 mm 144–154 mm 154-186 mm 186–200 mm
	TOPWET refurbishment outlet type BZ for uninsulated roofs with integrated waterproofing sleeve, supplied with leaf guard. This BZ type has a narrower drain body to single-wall outlets and lower capacity. Length 400 mm, possibility of extension up to 1000 mm on request.	TW SAN BZ 50 ___ TW SAN BZ 75 ___ TW SAN BZ 90 ___ TW SAN BZ 100 ___ TW SAN BZ 110 ___ TW SAN BZ 125 ___	54–72 mm 79–102 mm 99–106 mm 106–116 mm 116–129 mm 144–154 mm
	TOPWET refurbishment vent determined for connection to sewerage ventilation piping with an integrated sleeve, including a rain cap. A height above insulation of 300 mm, a height below insulation of 200 mm, option of extension up to 1500 mm on request.	TWOP SAN 50 ___ TWOP SAN 75 ___ TWOP SAN 90 ___ TWOP SAN 100 ___ TWOP SAN 110 ___ TWOP SAN 125 ___ TWOP SAN 160 ___	54–72 mm 79–102 mm 99–106 mm 106–116 mm 116–129 mm 144–154 mm 186–200 mm
	TOPWET refurbishment cable penetration with an integrated sleeve, including a rain cap. It is determined for connection to existing pipingA height above insulation of 300 mm, a height below insulation of 200 mm, option of extension up to 1500 mm on request.	TWP SAN 50 ___ TWP SAN 75 ___ TWP SAN 90 ___ TWP SAN 100 ___ TWP SAN 110 ___ TWP SAN 125 ___ TWP SAN 160 ___	54–72 mm 79–102 mm 99–106 mm 106–116 mm 116–129 mm 144–154 mm 186–200 mm

Products are supplied with a standard sleeve:

BIT – SBS-modified asphalt strip, PVC – PVC-based membrane

Products can also be supplied with a custom sleeve:

TPO, FPO – Thermoplastic (flexible) polyolefin membrane, EPDM - synthetic rubber membrane,
PE – polyethylene vapour barrier membrane, ECB, POCB - mixture of polymers with asphalts, EVA - EVA membrane,
STE – cement-based screed waterproofing, FLC - liquid multi-component screeds

A handling fee is charged for the production of a custom sleeve. More information about the sleeves can be found on pages 6 and 7.

Extensions for refurbishment outlets and other accessories

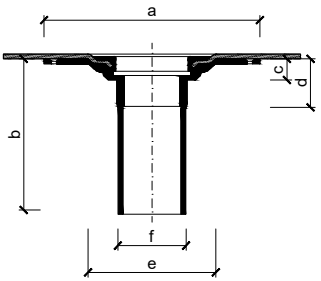
Two-stage refurbishment seal

- Special rubber gasket
- The seal makes it possible to use two stages drainage solutions for roof refurbishment
- Applicability for refurbishment and single-wall outlets diameter DN 50 - 125
- As the second stage, we recommend using TWJ 110 for the thermal insulation thickness from 55 mm
- Reliable connection and sealing of the upper and lower part
- TWN SAN TES seal and TWJ 110 extension are two separate items, that must be ordered separately

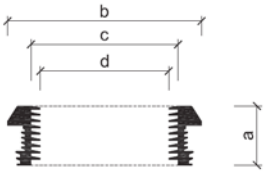
Dimension of extension and seal

Type	Dimensions [mm]					
	a	b	c	d	e	f
TWJ 110	330	400	40 (80*)	90	200	110
TWN SAN TES	47	155	118	103		

TWJ 110



TWN SAN TES



Two-stage refurbishment drainage

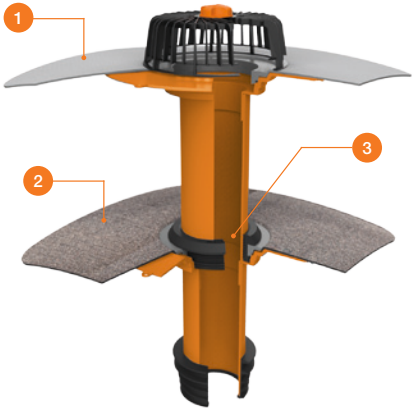
Version	Type
Single-walled roof outlet TOPWET for uninsulated roofs with integrated sleeve, supplied with a leaf guard. Dimension DN 110. Length 400 mm, possibility of extension up to 1500 mm on request.	TWJ 110 ___

Why does the upper part (extension) always have to be 110 mm in size?

This is for compatibility with the TWN SAN TES refurbishment rubber seal. This connection must be tight to prevent leakage into the thermal insulation. The extension in this case would be the TWJ 110 ___ or TWJ BZ 110 ___ with this suitable dimension of the outlet (lower part).

The lower part, into which the TWN SAN TES two-stage sanitation seal is inserted from above, is only solved when connecting to the existing drainage pipe. In this case, a TW SAN refurbishment outlet or a TWJ single-walled outlet of adequate dimension can be used.

Version	Type	Outer / inner diameter
Two-stage refurbishment seal TOPWET for connecting the second stage to refurbishment outlets and single-walled extended outlets. Can be combined with diameters DN 50-DN 125	TWN SAN TES	130 mm / 110 mm



Scheme of assembly of a two-stage refurbishment outlet

1 Outlet TWJ 110 with leaf guard
2 Outlet TW, TWJ or TW SAN, DN 50-125
3 Two-stage refurbishment seal TWN SAN TES

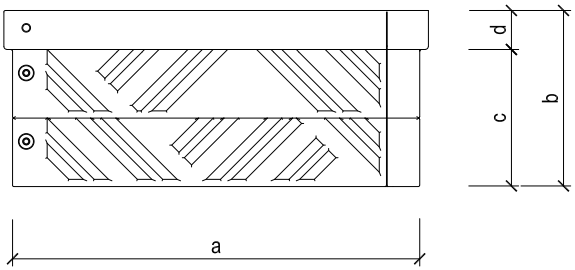
Inspection chamber for green roofs

Accessories for roofs with vegetation layers

- Dimensions 300x300, 400x400 and 550x550 mm
- Variable height adjustment - basic set of 100 mm, additional set of 50 mm
- New design, stronger construction, finer perforations, fluent drainage of water from the vegetation
- Removable lid in neutral gray
- Solid, UV stable material
- Easy to check and roof outlet maintenance

	Dimensions [mm]			
Type	a	b	c	d
TWZ (F) 300x300	280	130	100	30
TWZ (F) 400x400	380	130	100	30
TWZ (F) 550x550	530	130	100	30
TWZN v100 300x300	280	130	100	30
TWZN v100 400x400	380	130	100	30
TWZN v100 550x550	530	130	100	30
TWZN v50 300x300	280	80	50	30
TWZN v50 400x400	380	80	50	30
TWZN v50 550x550	530	80	50	30

TWZ



Self - assembly

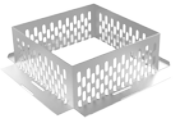
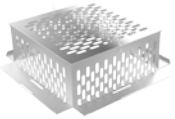
Chambers for green roof is structurally adapted, so that the chambers can be assembled in required height self-help directly on construction.

Using height slats (50 mm or 100 mm) and fasteners to the cover grid TWZ or TWZF can be easy to assemble the whole protective chamber to the required height according to vegetation formation.

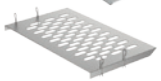
Inspection chamber for green roofs

	Version	Type	Dimensions
	Inspection chamber for green roofs, height 130 mm, including perforated plastic cover grid. Fasteners included in the package	TWZ 300x300x130 TWZ 400x400x130 TWZ 550x550x130	300x300 mm 400x400 mm 550x550 mm
	Inspection chamber for green roofs, height 130 mm, including non-perforated plastic cover grid. Fasteners included in the package	TWZF 300x300x130 TWZF 400x400x130 TWZF 550x550x130	300x300 mm 400x400 mm 550x550 mm
	Basic set of four slats for an increase of 100 mm, fasteners are included. Fasteners included in the package	TWZN v100 300x300 TWZN v100 400x400 TWZN v100 550x550	300x300 mm 400x400 mm 550x550 mm
	Additional set of four slats for an increase of 50 mm, fasteners are included. Fasteners included in the package	TWZN v50 300x300 TWZN v50 400x400 TWZN v50 550x550	300x300 mm 400x400 mm 550x550 mm

Aluminium shafts

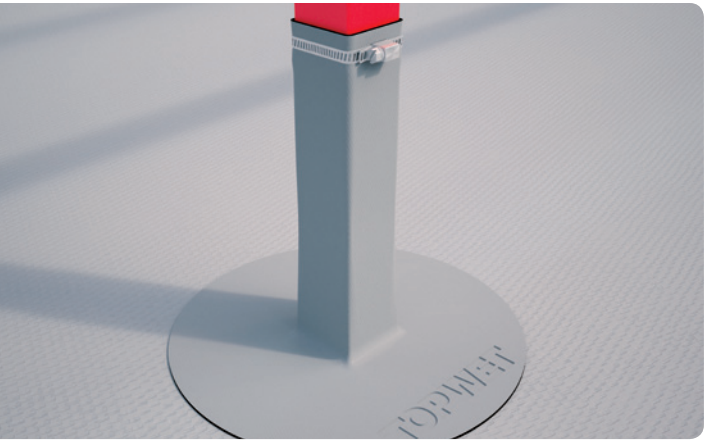
	Version	Type	Dimensions
	Aluminum shafts for roof and sanitation outlets, for roofs with a gravel. Dimensions 250x250 mm, height 100 mm and 200 mm.	TWS 250x250x100 TWS 250x250x200	250x250x100 mm 250x250x200 mm
	Aluminum shafts with grid for roof and sanitation outlets, for roofs with a gravel. Dimensions 250x250 mm, height 100 mm and 200 mm.	TWS 250x250x100+TWSK TWS 250x250x200+TWSK	250x250x100 mm 250x250x200 mm
	Aluminum shafts for roof and sanitation outlets, for roofs with a gravel. Dimensions 300x300 mm, height 100 mm and 200 mm.	TWZ AL 300x300x100 TWZ AL 300x300x200	300x300x100 mm 300x300x200 mm

Aluminium shaft

	Version	Type	Dimensions (Height / Width)
	Aluminium shaft for TOPWET through wall outlets and safety overflows for roofs with ballast.	TWS C 250x150x100 TWS C 250x150x200	100 mm 200 mm
	Protective cover for protective shafts for TOPWET through wall and overflows. Material aluminium.	TWSK C 250x150	

Sealing sleeves – shaped pieces for waterproofing penetrations through PVC membranes

System solution for penetration of hydro-insulation layer



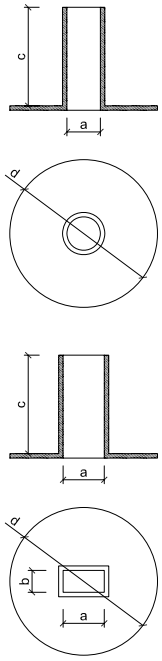
Shaped pieces

- Wide range of dimensions
- Open design for penetrations without a put on possibility
- Height of all shaped pieces 150 mm
- System treatment of penetrations
- For round and sqaured penetrations

Sealing sleeves – shaped pieces for waterproofing penetrations of PVC membranes

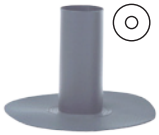
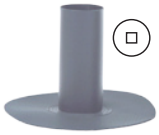
Type = Dimensions „a“ [mm]	Dimensions [mm] c*	d**
TWUT 11, 12, 14	150	150
TWUT a TWOT 15, 16, 17, 18, 20, 21, 22, 24, 25, 30, 32, 35, 40, 42, 43, 45, 50	150	150
TWUT a TWOT 51, 56, 60, 63, 65, 70, 72, 75, 76, 77, 80	150	180
TWUT a TWOT 83, 90, 100, 102, 105, 110, 114	150	250
TWUT a TWOT 120, 125, 130, 138, 140, 150, 160, 170	150	275
TWUT a TWOT 180	150	300
TWUT a TWOT 200	150	350

Type = Dimensions „a“ x „b“ [mm]	Dimensions [mm] c*	d**
TWUT a TWOT 8×35, 8×40, 10×30, 10×35, 10×40, 15×15, 15×35, 15×40, 20×20, 20×35, 20×40, 25×25, 25×30, 25×35, 27×40, 30×30, 30×40, 35×35	150	150
TWOT 12×40, 16×16	150	150
TWUT 8×60	150	180
TWUT a TWOT 8×50, 10×50, 10×60, 15×50, 15×60, 20×50, 20×60, 20×70, 25×45, 25×50, 30×50, 30×60, 35×50, 35×70, 40×40, 40×50, 40×55, 40×60, 45×45, 50×50	150	180
TWOT 8×90, 25×80	150	250
TWUT 12×100, 15×80, 17×82	150	250
TWUT a TWOT 8×80, 10×90, 10×100, 10×120, 10×140, 15×100, 18×83, 40×70, 40×80, 40×90, 50×70, 50×80, 50×100, 55×85, 60×60, 60×100, 70×70, 80×80	150	250
TWOT 75×120	150	275
TWUT a TWOT 10×160, 15×150, 50×120, 50×150, 60×120, 70×120, 75×145, 100×100, 120×120	150	275
TWUT a TWOT 80×160, 100×150, 120×140	150	300
TWOT 100×180	150	350
TWUT a TWOT 140×140, 150×150, 160×160	150	350



* only closed sealing sleeves ** on request can be delivered at a height of 300 mm *** on request can be delivered in diameters up to 350 mm

Sealing sleeves – shaped pieces for waterproofing penetrations through PVC membranes

	Version	Type (inner diameter / dimensions in mm)
	Closed round shaped piece of PVC film designed for processing the penetration elements. The type indicates the internal diameter of the shaped piece in mm. The height of all cuffs is 150 mm. Material: homogenous foil based on mPVC, thickness of 1.5 mm. Color execution: light gray finish, the approximate number according to RAL 7035.	TWUT 11, 12, 14, 15, 16, 17, 18, 20, 21, 22, 24, 25, 30, 32, 35, 40, 42, 43, 45, 50, 51, 56, 60, 63, 65, TWUT 70, 72, 75, 76, 77, 80, 83, 90, 100, 102, 105, 110, 114, 120, 125, 130, 138, 140, 150, 160, 170, 180, 200
	Closed square shaped piece of PVC film designed for processing the penetration elements. The type indicates the internal dimensions of the shaped piece in mm. The height of all cuffs is 150 mm. Material: homogenous foil based on mPVC, thickness of 1.5 mm. Color execution: light gray finish, the approximate number according to RAL 7035.	TWUT 8x35, 8x40, 8x50, 8x80, 10x30, 10x35, 10x40, 10x50, 10x60, 10x90, 10x100, 12x100, 10x120, 50x120, 70x120, 10x140, 140x140, 10x160, 15x15, 15x35, 15x40, 15x50, 15x60, 15x80, 15x100, 15x150, 16x16, 17x82, 18x83, 20x20, 20x35, 20x40, 20x50, 20x60, 20x70, 25x25, 25x30, 25x35, 25x45, 40x45, 25x50, 27x40 TWUT 30x30, 30x40, 30x50, 30x60, 35x35, 35x50, 35x55, 35x70 TWUT 40x40, 40x50, 40x55, 40x60, 40x70, 40x80, 45x45, TWUT 50x50, 50x70, 50x80, 50x100, 50x150, 55x85, TWUT 60x60, 60x100, 60x120, 70x70, 75x145, 80x80, 80x160, TWUT 100x100, 100x150, 120x120, 120x140, 150x150, 160x160
	Open round shaped piece of PVC film designed for processing the penetration elements. The type indicates the internal diameter of the shaped piece in mm. The height of all cuffs is 150 mm. Material: homogenous foil based on mPVC, thickness of 1.5 mm. Color execution: light gray finish, the approximate number according to RAL 7035.	TWOT 15, 16, 17, 18, 20, 21, 22, 24, 25, 30, 32, 35, 40, 42, 43, 45, 50, 51, 56, 60, 63, 65, 70, 72, 75, 76, 77, 80, 83, TWOT 90, 100, 102, 105, 110, 114, 120, 125, 130, 138, 140, 150, 160, 170, 180, 200
	Open square shaped piece of PVC film designed for processing the penetration elements. The type indicates the internal dimensions of the shaped piece in mm. The height of all cuffs is 150 mm. Material: homogenous foil based on mPVC, thickness of 1.5 mm. Color execution: light gray finish, the approximate number according to RAL 7035.	TWOT 8x35, 25x35, 8x40, 25x45, 8x50, 8x80, 8x90, 10x30,10x35, 10x40, 10x50, 10x60, 25x80, 10x90, 10x100, 10x120, 10x140, 10x160, 15x15, 15x35, 15x40, 27x40, 40x45, 15x50, 15x60, 40x90, 15x100, 15x150, 70x120, 16x16, TWOT 20x20, 20x35, 20x40, 20x50, 20x60, 20x70, 25x25, 25x30, 25x50, TWOT 30x30, 30x40, 30x50, 30x60, 35x35, 35x50, 35x70, TWOT 40x40, 40x50, 40x55, 40x60, 40x70, 40x80, 45x45, TWOT 50x50, 50x70, 50x80, 50x100, 50x120, 50x150, 55x85, TWOT 60x60, 60x100, 60x120, 70x70, 75x145, 80x80, 80x160, TWOT 100x100, 100x150, 120x120, 120x140, 140x140, 150x150, 160x160
	Closed round shaped piece of PVC foil designed for treatment of cable penetrations with diameter up to 11 mm. The shaped piece height is 300 mm. Base diameter 150 mm.	TWUT 11/300

Fittings must always be stabilized against the effects of wind suction. For more information, see the assembly instructions at www.topwet.eu

Sealing sleeves – shaped pieces for waterproofing penetrations through TPO membrane

Adjustment of penetrations

Shaped pieces

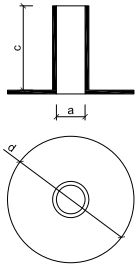
- Unique production technology
- Round versions only
- Wide range of small dimensions
- System treatment of penetrations
- The height of all shaped pieces is 300 mm
- The minimum production run is 20 pieces

Adjustment of penetrations and solution of details made of TPO foil

Version	Type
Closed round sleeve made of TPO-based foil designed for adjustment penetrations. The type indicates the inner diameter of the fitting in mm. Height of all cuffs 300 mm. Material: foil based on TPO th. 1.5 mm, types of foils are listed on page 45.	TWUT 11, 12, 14, 15, 16, 17, 18, 20 TPO (FPO)) TWUT 21, 22, 24, 25, 28, 30, 32, 35, 40, 42, 43, 50, 60, 65, 70 TPO (FPO) TWUT 75, 80, 90, 100, 110, 120 TPO (FPO) TWUT 125, 130, 140, 150, 160, 170 TPO (FPO) TWUT 180, 200 TPO (FPO)

Dimensions of sealing sleeves - fittings for penetrations of waterproofing from TPO foils

	Dimensions [mm]	
Type = Dimensions „a“ [mm]	c	d
TWUT 11, 12, 14, 15, 16, 17, 18, 20 TPO (FPO)	300	200
TWUT 21, 22, 24, 25, 28, 30, 32, 35, 40, 42, 43, 50, 60, 65, 70 TPO (FPO)	300	250
TWUT 75, 80, 90, 100, 110, 120 TPO (FPO)	300	300
TWUT 125, 130, 140, 150, 160, 170 TPO (FPO)	300	350
TWUT 180, 200 TPO (FPO)	300	400



Fittings must always be stabilized against the effects of wind suction. For more information, see the assembly instructions at www.topwet.cz

Standard foil for the production of cuffs based on TPO

	Producer	Order code	Material	Approximate RAL
	Bauder	TWUT __ FPO THERMOPLAN GREY	FPO	7001
	Bauder	TWUT__FPO THERMOPLAN PEARL WHITE	FPO	1013
	Mapei	TWUT__TPO MAPEPLAN WHITE	TPO	9010
	Mapei	TWUT__TPO MAPEPLAN DARK GREY	TPO	7012
	Sika	TWUT__FPO SARNAFIL GREY	FPO	7040
	Elevate	TWUT__TPO ULTRAPLY WHITE	TPO	9010

Adjustment of penetrations and details

Other roof elements

Details

- Adjustment of inner and outer corners

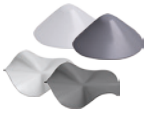
Endless jubilee bands

- Designed for highly corrosive places
- The endless band enables the production of clips in any diameter

Heat shrink tubes

- New dimensions 265/75
- UV stabil
- Penetration waterproofing on the roof
- System solution

Adjustment of penetrations and solution of details from PVC foil

	Version	Type
	Cone (KUZ) and a bellows (VLN) fittings of homogenous foil based on mPVC. Color: SV – light grey, TM – dark grey	TW KUZ TW VLN
	Endless jubilee band completely made of stainless steel with independent lock pieces enable production of jubilee bands of any diameter. Locks packed by 25 pcs. Band length 3 m or 25 m. Material: stainless chromium-nickel steel. The lock pieces have a zinc coated stainless steel screw. Zinc serves as a lubricant, without this the clamp is hard to tighten.	TWSP NEK 3 – tape width 8 mm TWSP NEK 25 – tape width 8 mm TWSP ZAM – lock width 14 mm TWSP NEK 25 š14 – tape width 14 mm TWSP ZAM š14 – lock width 14 mm
	Heat shrink tube with glue for general use in the temperature range from -55 ° C to 105 ° C. Made from modified polyolefin. The tubes are highly resistant to solvents and chemicals. Suitable for universal industrial usage or as an electrical protection of all types of plastic cables. The minimum shrink temperature of 120 °C using hot air or soft yellow flame. * The dimension marked with is the dimension for the maximum shrink.	TWH 22/6* TWH 33/8* TWH 55/16* TWH 75/22* TWH 95/25* TWH 115/34* TWH 140/42* TWH 160/50* TWH 180/58* TWH 235/65* TWH 265/75*
	Universal open fitting for processing penetrations in the roof sheathing based on mPVC, for dimensions of 200 - 600 mm. Parameters of the TWOT UNI 2M fitting - length 2000 mm, height 200 mm, after processing height above the insulation 150 mm, without supporting insert, thickness 1,8 mm, color light gray.	TWOT UNI 2M

Edge dividers

Other roof elements

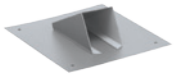
- For roofs with load increasing layer of gravel and pavement profile completion
- Aluminum moulding for all types of waterproof systems
- A wide selection of dimensions
- Custom production
- Easy installation
- Connecting piece as a part of each moulding
- The length of 2000 mm
- Custom made TPO versions

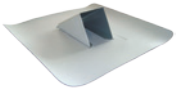
Edge dividers

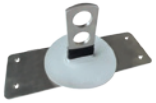
	Version	Type	Dimensions of moulding: height / base / length
	Edge dividers for roofs with a load increasing layer of gravel and the completion of the pavement profile. Material: Aluminum with the thickness of 1,5 mm, the length of the moulding of 2000 mm. The moulding has holes – every 250 mm - for the passage of the blank of all kinds of waterproof systems. The stiffness of the moulding is secured by 10 mm bending at the ends of both arms. Supplied with connecting piece for easy connection to another moulding; the delivery time of the custom moulding depends on the ordered quantity. Mounting the moulding to the base is done using a waterproof tape. Maximum height of product to order is 200 mm.	TW KL AL 30 TW KL AL 40 TW KL AL 50 TW KL AL 60 TW KL AL 70 TW KL AL 80 TW KL AL 90 TW KL AL 100 TW KL AL _ _	30 mm / 65mm / 2000 mm 40 mm / 65mm / 2000 mm 50 mm / 65mm / 2000 mm 60 mm / 65mm / 2000 mm 70 mm / 65mm / 2000 mm 80 mm / 80mm / 2000 mm 90 mm / 80mm / 2000 mm 100 mm / 80mm / 2000 mm _ _ mm / 80mm / 2000 mm
	Edge dividers for roofs with a load increasing layer of gravel and the completion of the pavement profile for roofs and terraces with the main PVC waterproof layer. Material: plastic-coated metal sheet with the total thickness of 1.6 mm, length of the moulding of 2000 mm. The stiffness of the moulding is secured by bending of 10 mm at ends of both arms. Supplied with connecting piece for easy connection of another moulding. The delivery time of the custom made moulding is depending on the ordered quantity. At the moulding there are high frequency welded 3-5 pieces of blanket of foil mPVC 80×130 mm for easy mounting. A different color execution is available for a surcharge of +20 %. In other colour implementation, pieces of blanket of the mPVC foil are not part of the edge dividers.	TW KL 40 TW KL 50 TW KL 65 TW KL 90	40 mm / 65mm / 2000 mm 50 mm / 65mm / 2000 mm 65 mm / 65mm / 2000 mm 90 mm / 65mm / 2000 mm
	The package of aluminum skirting boards from a height of 130 mm includes an inclined strut, which prevents deformation of the bar due to forces acting on it. The package includes 4 pieces of struts, including 8 pieces of anchoring rivets, which are used for anchoring. The struts are distributed evenly along the length of the bar.	TW KL AL VZPER	The size of the strut is variable according to the height of the bar

Other roof elements

Snow catcher for roofs with the main PVC waterproof sleeve





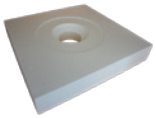


Version	Type	Delivery time /minimum purchase
Metal sheet snow catcher. A shaped piece for catching of snow layer and protecting its sliding from the roof structure, for roofs with the main waterproof sleeve of PVC. Light grey colour.	TW SZ TW SZ 250x250	3 dny / 5 ks 4 týdny / 50ks
Metal sheet snow catcher with an integrated waterproof sleeve. A shaped piece for catching of snow layer and protecting its sliding from the roof structure, for roofs with the main waterproof sleeve of PVC. Light grey colour.	TW SZM TW SZM 250x250	3 dny / 5 ks 4 týdny / 50ks
Versions of selected types of TPO/FPO membranes are available upon request.		
Holder for tubular snow trap with an integrated sleeve of foil based on mPVC made of the stainless steel, designed for mounting and fixing of one or two pipes with the diameter of up to 28 mm. The system design should always be made by a responsible designer, depending on particular conditions. Piping is not included in the supply.	TW SZ 2TR	3 týdny / 3 ks

Formwork element for roof outlets

Version	Type	Dimensions
The formwork polyurethane part is designed to create a suitable bed in the load-bearing roof construction for installing vertical roof drains. No core drilling, thermal bridges and the consumption of heat insulator around the outlet are eliminated	TW BED	500x500x220mm

Heat insulating element for roof extensions



Version	Type	Dimensions
The heat insulating element made of EPS 150 polystyrene foam is intended for extension pieces for the roof outlet. The size of the part is 600 x 600 x 100 mm.	TWN TI	600x600x100mm

Lightning conductor holder

Version	Type	Height
A plastic holder for lightning conductors for fitting the conductors on flat roofs. Colour: grey, black, green or red. It can be supplied with a cut-out part of the mPVC foil sleeve.	TW HR 10 TW HR 12 TW HR 10 + MANŽETA TW HR 12 + MANŽETA	120 mm 120 mm 120 mm 120 mm

Foil cleaner on mPVC basis

Version	Type	Volume
Highly effective foil cleaner on PVC basis.	TW CLEANER 5 TW CLEANER 1 TW CLEANER 0,25	5 l 1 l 0,25 l

Retention element

Reduction of drainage capacity of rainwater into the sewer network

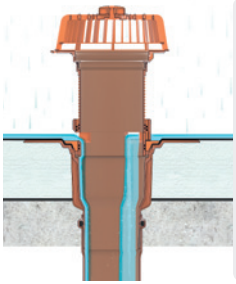
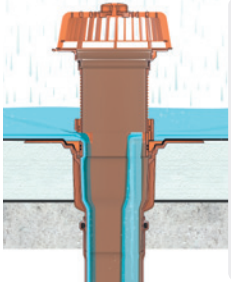
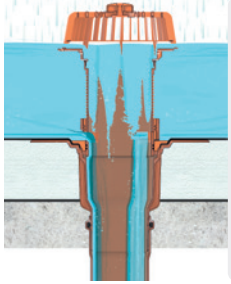
Retention roof

- Reduction of drainage capacity into the sewer network
- Fast installation and easy maintenance
- Reduction of acquisition costs compared to other retention systems

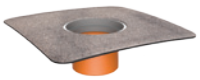
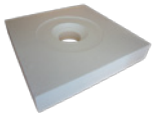
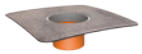
Retention attachments

	Version	Type	For overflow height
	Retenční nástavec TOPWET je určený ke snížení odtokové kapacity srážkových vod do stokové sítě s možností plynulého nastavení hodnoty odtoku v určitém rozsahu. Návrh retenčního opatření je proveden výpočtem v návaznosti na vyjádření od dotčených orgánů.	TW RETN	80 mm - 176 mm

Basic phases of rainwater runoff

Beginning phase	Proposed phase	Emergency phase
		
At normal rainfall intensity, the water flows freely through the lower openings into the sewer as with conventional roof outflow	In the event of heavy rain, the water level begins to rise up and the lower openings of the retention outlet provide an outflow corresponding to the permissible outflow, based on the opinion of the authorities concerned.	After exceeding the time of the storm sites longer than 15 minutes, the water is drained by a safety overflow in the upper part of the retention outlet

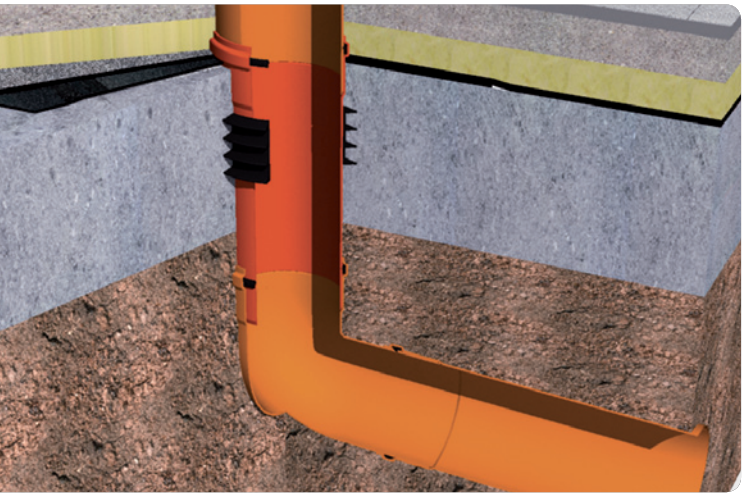
Combination options of products and accessories

	 **TWN** Roof outlet attachments	 **TWTN** Outlet attachments	 **TWN OVER** Safety overflow attachment	 **TW RETN** Retention attachments	 **TWN TI** Heat insulating element
Roof outlets p.10 	✓		✓	✓	
Roof outlet extension p.18 			✓	✓	✓
Terrace outlets p.12 		✓ only vertical outlet	✓	✓	
Terrace outlet extension p.14 			✓	✓	
Refurbishment outlets p.36 			✓	✓	
Refurbishment outlets BZ p.36 					
Extended outlets p.38 			✓	✓	
Extended outlets BZ p.20 					
Balcony outlets TWB p.22 	TWB balcony outlets have their own complete line of accessories, for more information see the catalogue page 24				

TWN SAN TES Refurbishment seal	TWZU KL Odour trap	TWZU Water odour trap	TWOK Leaf guard for gravel	TW TER Terrace attachment	TW PLK Walkable protective leaf guard	TW ODK Drainage ring	TWZ Inspection chamber for green roofs
							
Accessories cannot be combined with drains in variant XL							
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
	✓	✓	✓	✓	✓	✓	✓
	✓	✓	✓	✓	✓	✓	✓
✓			✓	✓	✓	✓	✓
							✓
✓			✓	✓	✓	✓	✓
							✓
							✓

Penetrations for the substructure

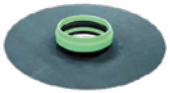
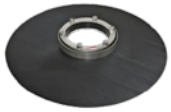
Solution with an integrated waterproofing sleeve



- Systematic and reliable solution
- Full technical support
- Tailor-made solutions for any penetration
- Made from solid wall materials
- Abrasion resistant
- High strength and rigidity, resistant to impact and pressure
- Trouble-free installation at low temperatures
- We provide technical advice on the system and assistance in the project documentation phase as part of our free technical support.

	Version	Type	OD
	A penetration fitting made of thick-walled PVC, used for watertight and gastight penetration of smooth KG/HT waste pipes through the black tank. The fitting is equipped with a sleeve for connection to asphalt strips and for welding with PVC foil. The length of the fitting is 500 mm.	TW PSS 110/500 BIT/PVC TW PSS 125/500 BIT/PVC TW PSS 160/500 BIT/PVC TW PSS 200/500 BIT/PVC TW PSS 250/500 BIT/PVC TW PSS 315/500 BIT/PVC TW PSS 400/500 BIT/PVC TW PSS 500/500 BIT/PVC	110 125 160 200 250 315 400 500
	Thick-walled PVC penetration fitting, used for waterproof and gas-tight penetration of smooth KG/HT waste pipes through the black and white tank. The fitting is equipped with a 4LOCK sealing ring and a sleeve for connection to asphalt strips and for welding with PVC foil. The length of the fitting is 500 mm.	TW PSH 110/500 BIT/PVC TW PSH 125/500 BIT/PVC TW PSH 160/500 BIT/PVC TW PSH 200/500 BIT/PVC TW PSH 250/500 BIT/PVC TW PSH 315/500 BIT/PVC TW PSH 400/500 BIT/PVC TW PSH 500/500 BIT/PVC	110 125 160 200 250 315 400 500
	Thick-walled PVC penetration fitting, used for waterproof and gas-tight penetration of smooth KG/HT waste pipes through the white tank. The fitting is equipped with a 4LOCK sealing ring. The length of the fitting is 500 mm.	TW PSH 110/500 BV TW PSH 125/500 BV TW PSH 160/500 BV TW PSH 200/500 BV TW PSH 250/500 BV TW PSH 315/500 BV TW PSH 400/500 BV TW PSH 500/500 BV	110 125 160 200 250 315 400 500

Penetrations for the substructure

	Version	Type	OD
	Penetration fitting – a sliding socket made of thick-walled PVC, used for watertight and gastight penetration of smooth KG/HT waste pipes without a socket through the black tank. The fitting is equipped with a sleeve for connection to asphalt strips.	TW PH 110 BIT TW PH 125 BIT TW PH 160 BIT TW PH 200 BIT TW PH 250 BIT TW PH 315 BIT	110 125 160 200 250 315
	Penetration casing made of thick-walled PVC, used to define a watertight and gastight penetration through the black tank. The casing is equipped with a sleeve for connection to asphalt strips and for welding with PVC foil. The length of the casing is 500 mm.	TW PAZ 80/500 BIT/PVC TW PAZ 100/500 BIT/PVC TW PAZ 125/500 BIT/PVC TW PAZ 150/500 BIT/PVC TW PAZ 200/500 BIT/PVC TW PAZ 250/500 BIT/PVC TW PAZ 300/500 BIT/PVC	80 100 125 150 200 250 300
	Penetration casing made of thick-walled PVC, used to define a watertight and gastight penetration through the white tank. The casing is equipped with a 4LOCK sealing ring. The length of the casing is 500 mm.	TW PAZ 80/500 BV TW PAZ 100/500 BV TW PAZ 125/500 BV TW PAZ 150/500 BV TW PAZ 200/500 BV TW PAZ 250/500 BV TW PAZ 300/500 BV	80 100 125 150 200 250 300
	Sealing insert, undivided, divided, multiple variant for placement in penetration casings and core boreholes.	TW VLT STANDARD 80/Ø* TW VLT STANDARD 100/Ø* TW VLT STANDARD 125/Ø* TW VLT STANDARD 150/Ø* TW VLT STANDARD 200/Ø* TW VLT STANDARD 250/Ø* TW VLT STANDARD 300/Ø*	80 100 125 150 200 250 300
	Sealing insert, undivided, divided, multiple variant for placement in penetration casings and core boreholes. Tightening nut with already set optimal tightening torque.	TW VLT STANDARD DD 80/Ø* TW VLT STANDARD DD 100/Ø* TW VLT STANDARD DD 125/Ø* TW VLT STANDARD DD 150/Ø* TW VLT STANDARD DD 200/Ø* TW VLT STANDARD DD 250/Ø* TW VLT STANDARD DD 300/Ø*	80 100 125 150 200 250 300
	Sealing insert with collar for pipes and cables with smooth and solid walls, pre-wall installation, or in casings and core boreholes. Tightening nut with already set optimal tightening torque. When ordering, specify the inner diameter of the hole and the outer diameter of the pipe/cable. Integrated sealing collar made of BIT/PVC, or on request: EPDM, FPO, RESITRIX, PP, PE, etc.	TW PTV 80/Ø BIT/PVC TW PTV 100/Ø BIT/PVC TW PTV 125/Ø BIT/PVC TW PTV 150/Ø BIT/PVC TW PTV 200/Ø BIT/PVC TW PTV 250/Ø BIT/PVC TW PTV 300/Ø BIT/PVC	80 100 125 150 200 250 300
	Sealing, high-quality, permanently elastic and adhesive sealant designed for fixing the foil sleeve to the substrate. Can also be used on damp concrete substrates. For all fittings and casings with foil sleeve.Cartridge 290 ml.	TW TMEL PU 50	

* Variant divided, undivided, multiple

When ordering, please specify the inner diameter of the hole and the outer diameter of the pipe/cable.

Dimensions not listed, atypical versions, KTW - versions with certification for contact with drinking water, eccentric placement of pipes in the sealing insert, oval versions of the sealing insert, multiple versions of undivided and undivided sealing inserts can be ordered according to technological possibilities and project needs - upon request.

Solutions for multi storey car parks – traverse outlets

Drainage of parking lots and driving areas LORO

- Traverse outlets and extensions divided according to permissible load 1.5 t and 12.5 t
- Extreme mechanical resistance against the damage
- Removable grate for easy cleaning and inspection

LORO roof, terrace and balcony drainage systems

- A continuous drainage system enables draining water from the individual balconies without using a side connection for every floor
- The outlets and pipes are made from hot-dip galvanized steel, which ensures higher mechanical resistance against external influences
- Simple assembly and maintenance
- Connection to KG and HT systems using a simple transitional piece

Preparation of a technical solution for a specific construction free of charge

	Version	Type	Dimensions
	Traverse grate for traverse outlets and attachments version up to 1.5 t and up to 12,5 t.	TW ROST 110 TW ROST 110 12T TW ROST 125 TW ROST 125 12T	Do 1,5 t Do 12,5 t Do 1,5 t Do 12,5 t
	Drainage ring for drainage layers in traverse roofs.	TW ODK POJEZD 110 TW ODK POJEZD 125	DN 100 DN 125
	Attachment for the traverse gate for car parks, traverse areas, garages and multi-storey car parks. The attachment is made of stainless steel.	TWN POJEZD 110 TWN POJEZD 125	DN 100 DN 125
	Traverse outlet for car parks, traverse areas, garages and multi-storey car parks. The outlet is made of stainless steel.	TW POJEZD 110 TW POJEZD 125	DN 100 DN 125
	Transitional part for connecting the traverse outlet to a KG/HT pipe.	TW TRANS 110 TW TRANS 125	DN 100 DN 125

Version

LORO outlets, pipes and accessories made of hot-dip galvanized steel or stainless steel can be supplied including all accessories, elbows, branches, seals, sleeves, reducers, transition pieces and other elements. For a free design for your project, do not hesitate to contact us.

Accessories

TOP SAFE

What services are provided in TOPSAFE

Proposals, implementation & support

- We provide own delivery and installation of anchoring points
- We have a large network of trained certified installation companies
- We always have standard anchor points in stock
- We perform inspections and revisions of safety systems
- Free consultation including price calculations
- Free safety system design
- Anchor points details in DWG for free download
- We offer only stainless steel products certified in accordance with valid standards

Why must safety be ensured on roofs?

When fall protection is necessary?

For height differences of more than 1.5 m, if there is a risk of:

- falling from the roof edge
- sliding off the roof at a slope of more than 25 degrees
- falling through the roof (e.g. roof skylight)

What are the requirements for anchor points?

- certification according to the ČSN EN 795 standard carried out in an accredited testing laboratory
- must resist corrosion - the most suitable is the stainless steel type, incl. anchoring materials

We are able to propose a specific solution for your roof free of charge

The key to correctly determining the anchor points

Roof structure

- specifications of the supporting structure and covering
- thermal insulation thickness

Element location

- endpoint, corner point
- intermediate

For safe and correct functionality of the safety system it is not enough just to choose a suitable anchor point. The entire proposal is needed adapt to all the requirements and conditions of a specific building.

We are able to propose a specific solution for your roof free of charge

Marking of TOPSAFE products for easy selection

Can be complemented with a reinforcing pipe – then it can be used as end and turn points in the systems with permanent anchoring lines from a stainless steel rope

Suitable for use as end and turn points in the systems with permanent anchoring lines from a stainless steel rope

Suitable for use only as an intermediate point in the straight sections in the systems with permanent anchoring lines from a stainless steel rope

Made of stainless steel

Suitable for use as corner and turn points in the systems with permanent anchoring lines from a stainless steel rope

Maximum number of users attached to the anchoring device

Can be loaded in both vertical and horizontal direction

Can be loaded in horizontal / vertical direction

Anchoring points for trapezoid and sandwich constructions

TSL-xxx-T10

Trapezoid sheet metal with the minimum thickness of 0.5 mm

TSL-xxx-TX10

Trapezoid sheet metal with the minimum thickness of 0.5 mm

TSL-xxx-SW10

Sandwich panels. Trapezoid sheets with minimum thickness of 0,5 mm

XXX -height in mm

TSL-xxx-SWSR10

Sandwich panels. Trapezoid sheets with minimum thickness of 0,5 mm

TSL-R

Sheet metal with the minimum thickness of 0.45 mm

TSL-T6

Trapezoid sheet metal with the minimum thickness of 0.75 mm

Anchoring points for wooden constructions

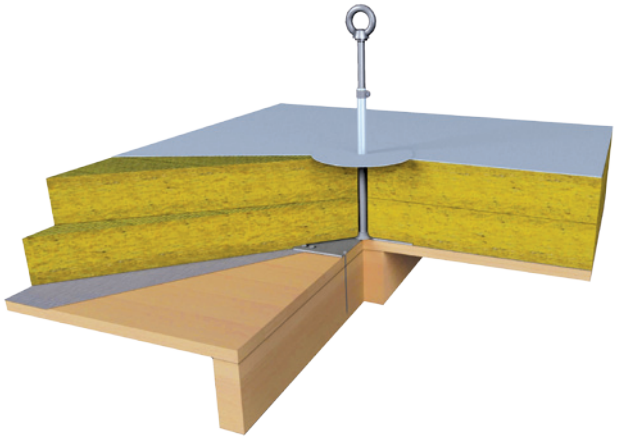
TSL-xxx-H1016

Boarding from wooden plank with the min. thickness of 24 mm, OSB boarding with the min. thickness of 18 mm

TSL-xxx-HSL3

A wooden girder (rafter) with the minimum dimensions of 100 x 120 mm

XXX -height in mm



Anchoring points for concrete construction

TSL-XXX-BE3

Concrete slab/girder of minimum thickness of 125 mm

TSL-XXX-B3

Concrete slab/girder of minimum thickness of 140 mm

TSL-XXX-BSR10

Concrete slab/girder of the minimum thickness of 80 mm

TSL-XXX-HD10

Hollow panels with the minimum thickness of the hollow covering layer of 25 mm

TSL-XXX-K10

Anchorage by clenching

XXX -height in mm

TSL-XXX-STK10

Anchorage by clenching

TSL-XXX-BSL3

Concrete slab with the minimum thickness of 110 mm

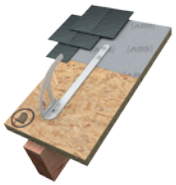
TSL-360-B

Concrete slab with the minimum thickness of 120 mm

TSL-B5

Concrete slab with the minimum thickness of 80 mm

Anchoring points for inclined roofs



TSL-DH04P

Wooden girder (rafter) with the minimum dimensions of 60 x 120 mm

TSL-DH04Z

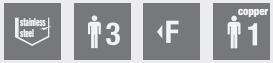
Wooden girder (rafter) with the minimum dimensions of 60 x 120 mm

TSL-LOOP

Wooden girder (rafter) with the minimum dimensions of 60 x 120 mm

TSL-F5

Stainless steel and galvanized sheets with minimum thickness of 0,5 mm



TSL-F4

Stainless steel and galvanized sheets with minimum thickness of 0,5 mm

TSL-F4ZW

Stainless steel and galvanized sheets with minimum thickness of 0,5 mm

Anchoring points for rope suspension work

TSL-xxx-BSR10AS

Concrete slab with the minimum thickness of 120 mm

TSL-xxx-STSR10

Minimum slab wide 150 mm

XXX -height in mm

TSL-0-ST3

Minimum steel thickness 5 mm

TSL-0-B3

Concrete slab with the minimum thickness of 140 mm

RENTAL – Safety nets and temporary guardrail

Safety nets for construction industry

We offer sale and rental of safety nets

Use

- As a collective protection means against fall during construction of halls, shopping centres and bridges
- Protection of unguarded edges and openings in constructions
- Fall protection on scaffolding
- Protection against fall of material
- As walkable nets with the grid of 45 mm

Advantages

- Unnecessary PPE
- More comfortable safety fall of person than when using a safety harness
- Higher safety for workers working under the safety net

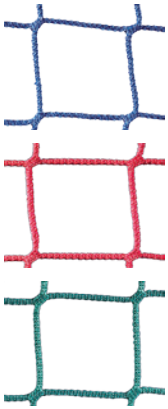
Temporary Guardrail

We offer temporary guardrail rental for construction sites

- Temporary guardrail for construction sites constructed from scaffolding tubes
- Quick installation using scaffolding connectors
- Possibility of anchoring to any construction base (sandwich panel, concrete and wood)
- Guardrail height 110 cm
- Middle tube height 50 cm

We offer a complete service including design, installation and inspections. Our systems are ideal for temporary construction, reconstruction and work at heights. Thanks to quick assembly and a wide range of anchoring, we ensure the safety of your team while working.

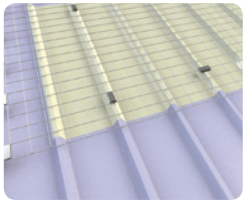
Certificated nets types



Product description	Type marking
System S - A safety net with a peripheral rope It is a basic and most frequent net type intended for fall retention. Safety nets of the system S are attached in the horizontal position by means of suspension ropes or other means on the anchoring points capable of load transfer. The minimum net area is 35 m2.	TSN-S
System U - A safety net connected to the load-bearing construction for vertical use These nets are supposed to prevent fall of persons or material from height over unguarded edges nearby the edge of the floors, roofs, staircases etc. The standard dimensions are 1.5 - 2 m x the required length. Possibility of easy installation by means of straps. Generally, the installation of these nets is governed by EN 13374.	TSN-U

Collective protection

Guardrail anchored to the base by fusing

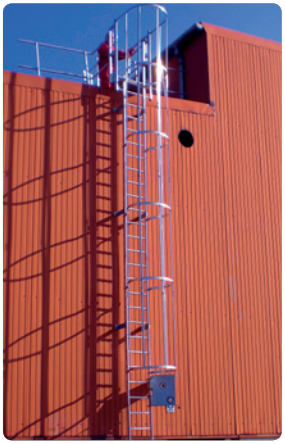


Safety grids for illumination strips

Free-standing guardrail with weights

Safety grids for roof skylights

Industrial systems and Roof access constructions



Ladders

- Made of high quality aluminium
- Very light construction compared to galvanized steel
- Low static load of building structures

Safety systems for ladders

- Security with every step when moving on a ladder
- Simple solution with high efficiency
- Easy and intuitive use

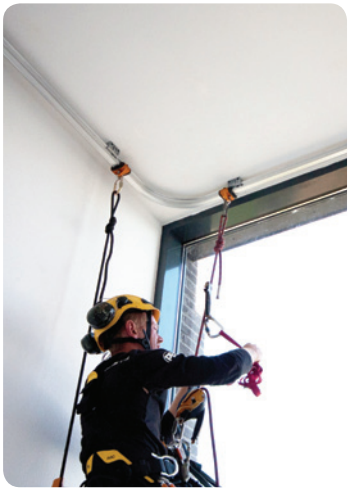
Walkways and platforms

- High quality aluminum modular system of walkways and platforms designed to suit the project
- Transport without lifting equipment (very low weight)
- Possibility of anchoring to the base and free standing with counterweight

Industrial systems

- Safety for workers in industrial buildings, such as halls, production plants, warehouses etc.
- Possibility of securing footbridges, crane tracks, servicing places and rack systems
- For industrial systems, it is possible to use basic anchoring points specified in the previous chapters according to the types of the base construction

Rail systems



- It can also be used as a system for work when suspended on rope
- Smooth movement along the whole length of rail lines
- Possible turning thanks to a curved rail and a special motorized element

Anchoring points for steel constructions

TSL-XXX-ST3

Steel girder

TSL-XXX-STSR10

Min. flange width 150 mm
Min. steel thickness 5 mm

TSL-XXX-STSL3

Max. flange width 55 mm (calculated from the vertical part) Min. steel thickness 5 mm

TSL-XXX-STK10

Steel girder with the maximum flange width of 150 mm

Industrial systems

TSL-360-ST

Steel construction, thickness:
min. 6 mm, max. 26 mm

TSL-F-333

Trapezoid sheets of minimum thickness 0,5 mm

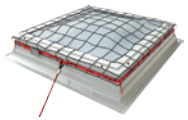
TSL-TRIPOLE

A mobile tripod used for securing of workers in shafts with the entrance hole.

TSL-AA

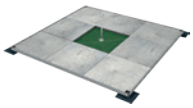
A system for securing a person, e.g. on a means of transport (a cistern truck etc.).

Special products



TSN-DOME

Protective net against falling through the spotlight and anchor point in one.



TSL-MB

A mobile anchoring point intended for 1 person.

TSL-OT

A stainless steel anchoring point intended for flat roofs (up to the maximum inclination of 10°).

TS-ML

Intended for arresting systems with a temporary flexible anchoring line.

TOPSAFE®

TOPWET® SYSTEMS FOR DRAINAGE OF FLAT ROOFS

System elements for drainage and adjustment of all penetrations waterproofing layer on a flat roof.

TOPSTEP® STAIRCASE SYSTEM

Maintenance-free stair system made of laminate and vinyl for lining new stairs as well as for quick renovation without remove the old staircase.

TOPSAFE® FALL PROTECTION SAFETY SYSTEMS

Fall protection systems
for all types of roofs, from design
to implementation.

TOPSET® WINDOW SILLS

Aesthetic window sills of the highest quality,
resistant to moisture and swelling, creating
decorative element in the interior.

CEMVIN CEMENT-FIBROUS BOARDS

Quality cement fiber boards with the
possibility of extensive use
in construction.

TOPWET

TOPWET s.r.o.
Náměstí Viléma Mrštíka 62 | 664 81 Ostrovačice

www.topwet.com

TOPWET®
FLAT ROOF DRAINAGE SYSTEMS

TOPSAFE®
FALL PROTECTION SAFETY SYSTEMS

TOPSET®
WINDOW SILLS

TOPSTEP®
STAIRCASE SYSTEM

CEMVIN®
CEMENT-FIBROUS BOARDS