Technical Data Sheet
Flexjoint EP

Product Description / Use:
The elastic material for Flexjoint EP consists of an EPDM elastomer (ethylenpropylendiene unvulcanized rubber with saturated polymethylene main chain) with the following properties:

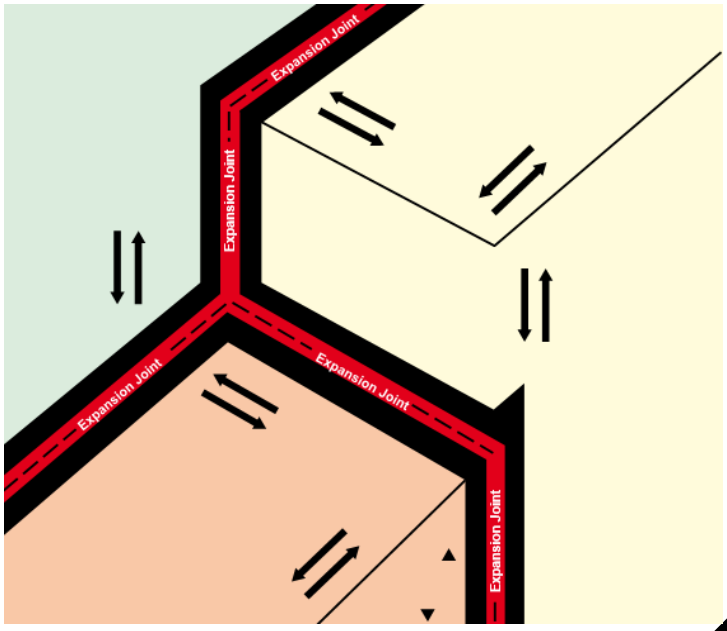
- Accommodates 3-dimensional movement at the same position.
- Available in angle change pieces or simple straight runs for flat in plane joints.
- Excellent properties for protecting against ozone & UV rays.
- Long term resistance up to +90°C
- Maintains flexibility at temperatures as low as -40°C

Additionally, EPDM materials for Flexjoint EP are generally very resistant to water, steam and chemicals such as some solvents, acids and saline solutions.

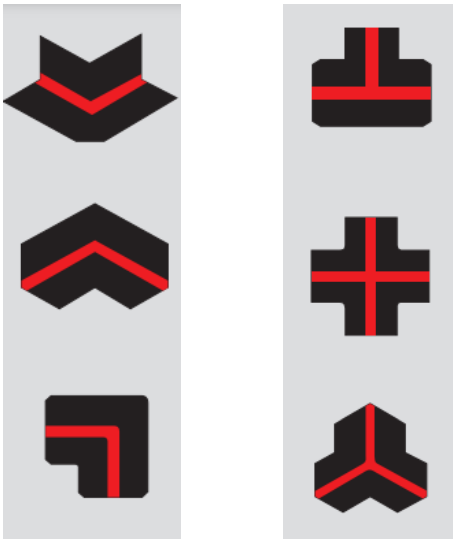
Contact during installation phase with the torch won't impair the material properties.

Low resistance to mineral oils, benzene, fuels and aromatic compounds, such as toluene. Prolonged contact with these agents should be avoided.

Jointing:
Flexjoint EP is ideally supplied to site in pre-fabricated sections, to a bespoke project design, ensuring accuracy and eliminating any weak points in the joints. Options for 'in-house' or 'on-site' jointing if necessary, but due to the vulcanisation process needing to be completed on site, this is not always feasible.



A range of pre-formed factory pieces are available for a variety of internal, external corners and jointing pieces.

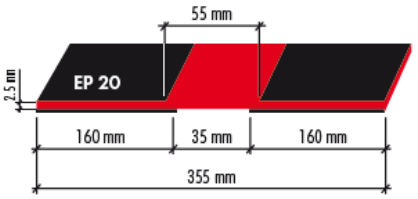


Technical Data Sheet
Flexjoint EP

Technical Specification:

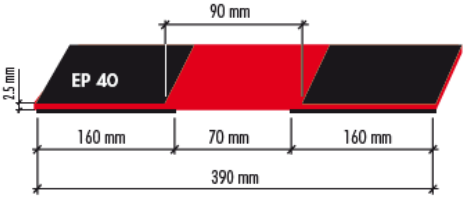
Flexjoint EP20

Horizontal movement	(max. ±30 mm)
Shear movement	(max. ±20 mm)
Vertical movement	(max. ±25 mm)



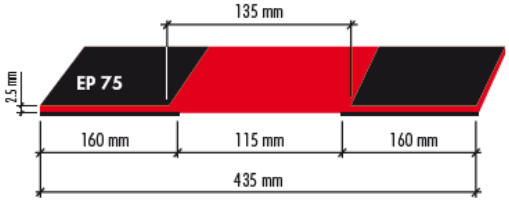
Flexjoint EP40

Horizontal movement	(max. ±60 mm)
Shear movement	(max. ±40 mm)
Vertical movement	(max. ±50 mm)



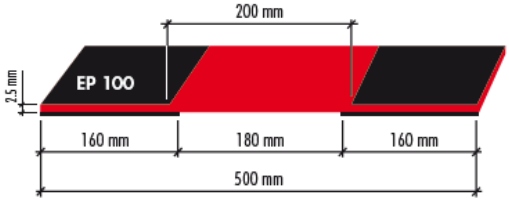
Flexjoint EP75

Horizontal movement	(max. ±100 mm)
Shear movement	(max. ±75 mm)
Vertical movement	(max. ±85 mm)



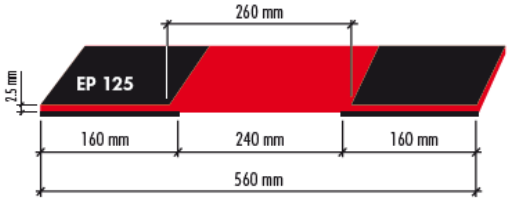
Flexjoint EP100

Horizontal movement	(max. ±150 mm)
Shear movement	(max. ±100 mm)
Vertical movement	(max. ±125 mm)



Flexjoint EP125

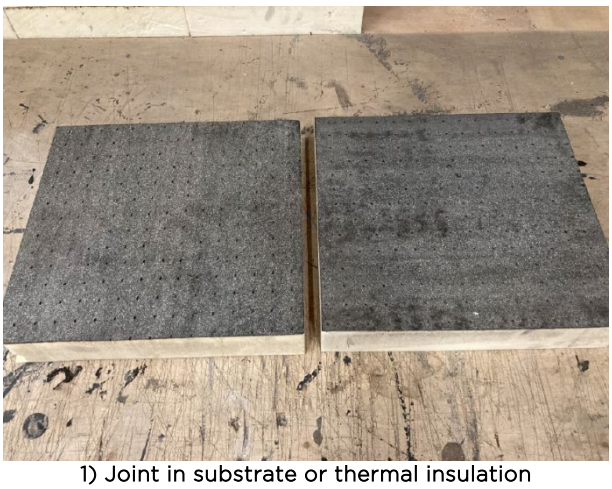
Horizontal movement	(max. ±200 mm)
Shear movement	(max. ±125 mm)
Vertical movement	(max. ±170 mm)



Characteristics	Units of measure	Specifications	Values
Hardness (H)	Shore A	DIN 53505	40 ±5
Tensile strength	N / mm²	DIN 53504	> 10
Elongation at break	%	DIN 53504	> 700
Compression set (at 23°C and 70°C)	%	DIN ISO 815-1	20 % or 44 %
Resistance to ozone cracking	crack level	DIN 53509-1	crack level 0
Water vapour permeability	µ	DIN EN ISO 12572	83,000 µ
Fire behaviour		DIN EN 13501-1	class E
Resistance to alkalis (storing in lime water)		DIN EN 1847	average > 5%
Folding under low temperature – 40°C		DIN EN 495-5	no crack
Resistance to aging (UV, temp. / water)		DIN EN 1297[4]	no crack

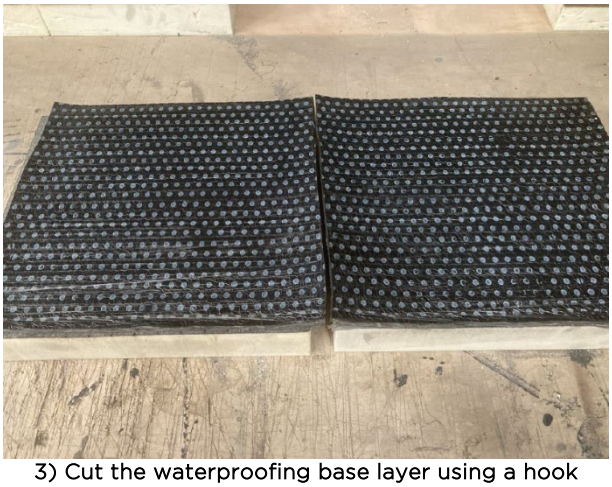
Technical Data Sheet
Flexjoint EP

Installation:

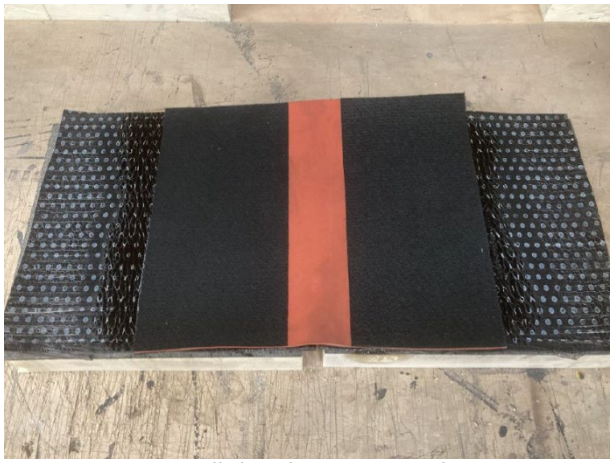


1) Joint in substrate or thermal insulation

2) Waterproofing base layer over joint *(membrane oriented along the joint line)*



3) Cut the waterproofing base layer using a hook blade



4) Install the Flexjoint over the joint

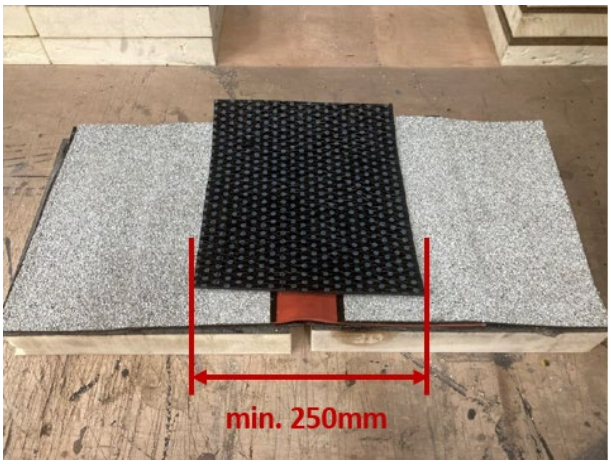
5) Heat the upper face of the waterproofing base layer as the Flexjoint roll is rolled onto the heated bitumen

6) Apply pressure using a roller

Technical Data Sheet
Flexjoint EP

7) Ensure care is taken to avoid directly torching the joint *(temporary protection of exposed joint)*

8) The waterproofing cap sheet is torch bonded to the upper side of the joint



9) A slip layer of waterproofing base layer is loose laid along the centre of the joint (min. 250mm)
(This can be fixed at either end for ease of installation)

10) Section through detail once complete

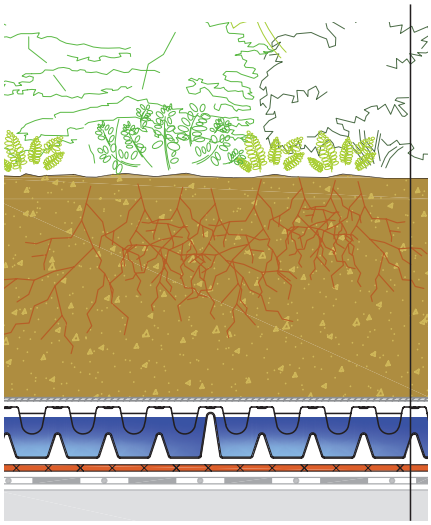
DiaDrain-40H

310224

Water-retention and flow-delay drainage board

KEY FEATURES

- High rainwater retention ⇨ nearly 19,59 l/m² of water storage capacity
- Prevention of water channel system overuse ⇨ waterflow speed decreased by stepped barriers
- Microbiological resistance test (EN 12225) ⇨ additional protection for the water-proofing layer against microbiological damage
- Recessed evaporation vents ⇨ unobstructed aeration
- Durable and high impact-resistant material (HIPS) ⇨ stability under pavements, water cooling is not needed during summer installations
- Snap the board for the required size ⇨ No cutter needed on the work site
- Negligible overlap loss ⇨ economical installation and cost savings
- Increased contact area ⇨ decreased surface pressure



DIADEM® BUILD-UP

Vegetation (Intensive)
Growing media
VLF-150/200 filter layer
DiaDrain-40H
VLU-300/VLS-500 mechanical protection layer
Root-resistant waterproofing membrane
Roof construction

APPLICATION

Water-retention and flow-delay drainage board for semi-intensive and intensive green roofs and hard-surface pedestrian areas for flat roofs and zero-degree slope roof construction, made of recycled high-impact polystyrene (HIPS). Suitable for solving standing water problems on existing roofs.

CE
EN13252

100% recyclable

Microbiological resistance
EN12225
25-year stability guaranteed

SPECIFICATION

Water-retention and flow-delay drainage board with CE marking, made of recycled high-impact polystyrene, 40 mm high, stepped barrier form, with recessed evaporation vents and water channel system on the underside, compressive strength unfilled: 338 kN/m² according to test reports (average value measured by SKZ-Testing GmbH, Würzburg,Germany), compressive strength filled at 10% compressive strain: 588 kN/m², the guarenteed minimum of the compressive strength: 210 kN/m², water flow capacity on 2% roof slope 1,01 l/m×s certified according to EN ISO 12958, water storage capacity 19,59 l/m², microbiological resistance tested (EN 12225), laid. Product: DIADEM® DiaDrain-40H
Manufacturer's Certificate of Origin (MCO): APP Kft.
Website: www.diadem.com

TECHNICAL DATA

Board size (mm)	approx. 2040×1040×40 [ca. 2,12 m²/sheet]
Rainwater retention capacity (l/m²)	19,59
In-fill volume (l/m²)	22,75
Overlap loss	~5%
Surface weight (+/-5%, kg/m²)	1,96
Compressive strength (unfilled) (SKZ average value, kN/m²)	338
Compressive strength (filled)at 10% compressive strain (kN/m²)	588
Material	recycled high-impact polystyrene (HIPS)
Water flow capacity EN ISO 12958 (l/(m×s))	at 1%: 0,70 • at 2%: 1,01 • at 3%: 1,25 • at 5%: 1,63
Storage	horizontally, protect from UV radiation
Installation	adjacent to each other or overlapped, cover immediately after laying
Manufacture	Made in Germany

PRODUCT INFORMATION SHEET

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DIADEM® APP Kft., H–9028 Gyôr, Fehérvári út 75.
Tel.: +36 96 512 910 • info@diadem.com • www.diadem.com

Green Up the Roof!

09034400 • #4364

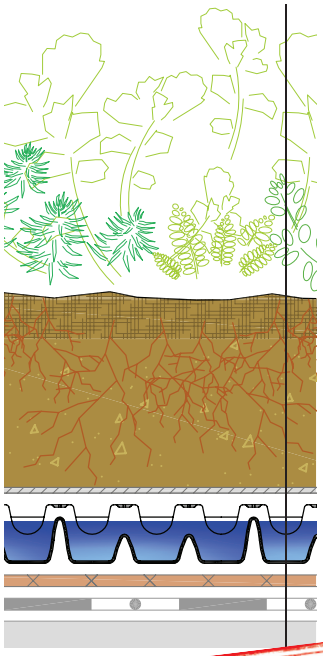
DiaDrain–25H

Flow-delay retention board

310203

KEY FEATURES

- High rainwater retention ⇨ ca. nearly 12 l/m² of water storage capacity
- Delayed rainwater runoff ⇨ stepped barriers avoid overuse of wastewater channel system
- **Runoff reference value (C) 0,29 ⇨ water delay over 70% according to FLL[1]**
- Microbiological resistance test (EN 12225) ⇨ stepped barriers avoid overuse of wastewater channel system
- Recessed evaporation vents ⇨ unobstructed aeration
- Negligible overlap loss ⇨ economical installation and cost savings
- Increased contact area ⇨ decreased surface pressure



DIADEM® BUILD-UP[1]

Vegetation
Growing media
VLF 150/200 filter layer
DiaDrain-25H
VLU 300/500 mechanical protection layer
Root resistant waterproofing membraine
Roof construction

APPLICATION

Flow-delay retention board for extensive and semi-intensive greenroofs and hard- surface pedestrian areas, made of recycled high-impact polystyrene (HIPS). The flow-delay and the retention functions are provided by the stepped barrier design.

SPECIFICATION

Flow-delay retention board with CE marking, made of recycled high-impact polystyrene, 25 mm high, stepped barrier form, with deep-drawn recessed evaporation vents and water channel system on the underside, compressive strength 322 kN/m² (unfilled), water flow capacity on 2% roof slope 0.57 l/m*s certified according to EN ISO 12958, water storage capacity 11.8 l/m², runoff reference value according to FLL: 0,29[1], microbiological resistance tested (EN 12225), fire resistance classification "B_{ROOF}(t2)" (EN 13501-5), laid.
Product: DIADEM® DiaDrain-25H. Manufacturer's Certificate of Origin (MCO): APP Kft.
Website: www.diadem.com

CE
EN13252

100% recyclable

microbiological resistance EN12225

25-year stability guaranteed!

nqa. ISO 9001 Registered UKAS QUALITY MANAGEMENT 015

nqa. ISO 14001 Registered UKAS ENVIRONMENTAL MANAGEMENT 015

TECHNICAL DATA

Board size (mm):	2020 × 1100 × 25
Rainwater retention capacity (l/m²):	11,8
Runoff reference value (C)[1]:	0,29
Overlap loss:	~3%
In-fill volume (l/m²):	13,5
Surface weight (kg/m²):	1,36
Fire resistance classification (EN 13501-5):	B_{ROOF}(t2)
Compressive strength (kN/m²):	322
Material:	recycled high-impact polystyrene (HIPS)
Water flow capacity EN ISO 12958 (l/m*s):	at 2%: 0,57 • at 3%: 0,71 • at 5%: 0,91
Storage:	store horizontally, for long-term storage protect from UV radiation
Installation:	adjacent to each other or overlapped, cover immediately after laying
Production:	Made in Germany.

[1] in case of a typical extensive green roof build-up

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Green Up the Roof!

PRODUCT INFORMATION SHEET

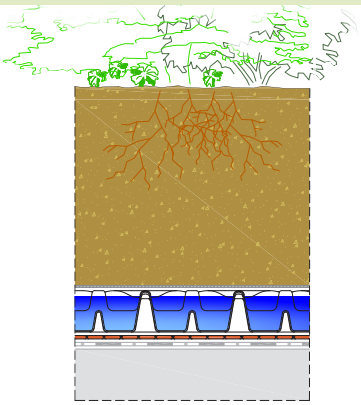
DiaDrain-60H

Water-retention and drainage board

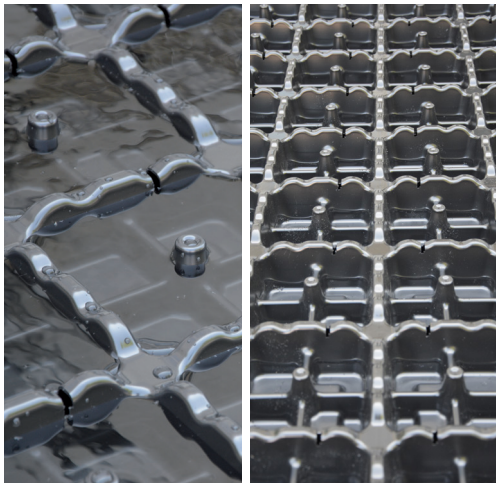
310233

KEY FEATURES

- High rain- and irrigation-water retention ⇨ approx. 30,5 l/m² water storage capacity
- Protecting the waterproofing against the scattering of the filling material ⇨ protective overlapping edge around the board
- Increased contact surface ⇨ heightened protection of the waterproofing through the favorable weight distribution
- Long-term ventillation of the root area ⇨ increased diffusion openings
- Durable and high compressive strength material (HIPS) ⇨ no water cooling needed during summer installations
- Preventing the sinking of the filter layer ⇨ dedicated support cones
- Suitable for flooded blue roof ⇨ Flooding height with approx 50 mm; with the combination of DiaDrain-60H-UP as a DiaDrain-120-WM wassermanagement system up to 100 mm water level
- Fire classification regarding EN 13501-1 ⇨ classified as class „E“ construction product, therefore without limitation applicable



DIADEM® BUILD-UP
Vegetation
Growing media
VLF-200 filter layer
DiaDrain-60H drainage board (filled)
VLS-500 water retention
and mechanical protection layer
Root resistant waterproofing membraine
Roof construction



APPLICATION

Rainwater-retention and flow-delay drainage board for semi-intensive or intesive roof gardens, for green roofs with flooded irrigation system and for paved roofs with sporadical traffic, eg. car parks, fire department access roads.

SPECIFICATION

Rainwater-retention and flow-delay drainage board with CE marking, made of recycled high-impact polystyrene (HIPS), 60 mm high, for semi-intensive or intesive roof gardens, and for green roofs with flooded irrigation system up to a water level of approx. 50 mm (even up to approx. 100 mm when used in the DiaDrain-120-WM System), and for paved roofs with sporadical traffic, eg. car parks, fire department access roads, when filled and laid with bedding layer above the filter fleece. With overlapping strip around the board, dam grid structure and large water storage cells for an outstanding water retention of 30.45 l/m², with perforations on the upside, and water channel system on the underside for water drainage and vapour diffusion, especially for inverted roofs. Can be used for diffusion- and capillary irrigation. Compressive strength: 122 kN/m² (average); Water flow capacity on 2% roof slope 2.06 l/(m×s) certified according to EN ISO 12958, fire classification as class „E“ construction product regarding EN 13501-1.
Product: DIADEM® DiaDrain-60H
Manufacturer's Certificate of Origin (MCO): APP Kft.
Website: www.diadem.com

CE
EN13252

100% recyclable

Microbiological resistance
EN12225
25-year stability guaranteed!

nqa. ISO 9001 Registered UKAS 015

nqa. ISO 14001 Registered UKAS 015

TECHNICAL DATA

Dimensions (mm)	1940x940x60 (nominal); 1980x940x60 (gross)
Surface (m²)	1,82
Water storage capacity (l/m²)	30,45
Fill-up volume (l/m²)	approx. 40
Weight (+/-5%, kg/m²)	2,2
Compressive strength (unfilled, average, kN/m²)	122
Compressive strength (filled, 21,55% compressive strain, kN/m²)	1320
Material	high impact polystyrene (HIPS)
Water flow capacity DIN EN ISO 12958 (l/(mxs))	at 2%: 2,06 • at 5%: 3,34 • at 10%: 4,81
Fire classification	Class E regarding DIN EN 13501-1
Storage	horizontally, protect from UV radiation
Installation	adjacent to each other or overlapped, cover immediately after laying
Overlapping loss (%)	1,5

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Green Up the Roof!

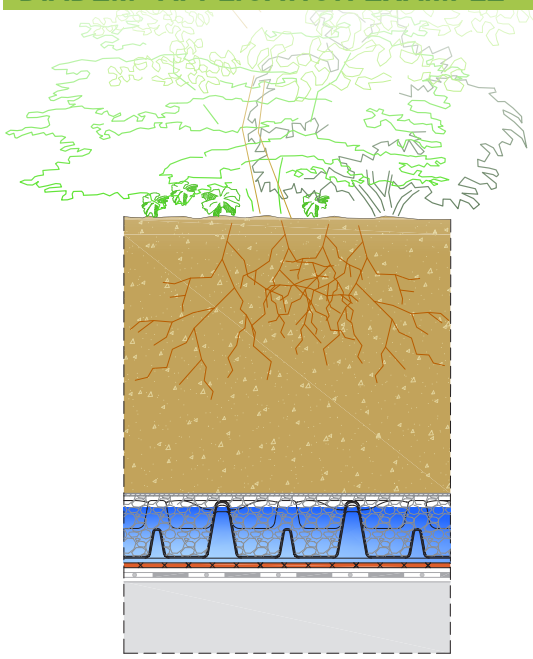
PRODUCT INFORMATION SHEET

DiaDrain-60H

Water-retention and drainage board

310233

DIADEM® APPLICATION EXAMPLE - FLOODED ROOF



Vegetation

Growing media

VLF-200 filter layer

DiaDrain-60H drainage board (filled)

VLS-500 water retention and mechanical protection layer

Root resistant waterproofing membraine

Roof construction

TEST REPORTS

Test Report No. 1.1/10560/0717.0.2-2017e page 2

kiwa Partner for progress

1. Test process

1.1 Test set-up

From the dimpled sheet to test (DiaDrain-60H) three test specimen (approx. 300 x 300 mm, 4 chambers) were cut and stored for more than 24 h at normal climate (23 °C / 50 % rel. humidity).

1.2 Test process

The test specimen were weighted in dry condition with a laboratory scale (Sartorius Quintix 6102-1CEU) with an accuracy of 0,1 g. Afterwards the specimen were filled with deionized water. It was waited for a complete filling with water, as indicator was chosen the first overflow of water. Now the specimen were weighted again. This procedure was repeated at all 3 test specimen.

Water storage capacity 30,45 l/m²

2. Result

Test and calculation parameters:
Temperature: 20 °C
Density of water (at 20°C) 998 g/l
Area of test specimen: 0,09 m²

Material: KRAITEC top drain plus	Dry weight [g]	Wet weight [g]	Mass of water [g]	watervolume [l]	Water retention capability [l/m²]
Specimen 1	255,3	3007,4	2752,1	2,75	30,56
Specimen 2	245,0	2936,2	2691,2	2,69	29,89
Specimen 3	257,1	3046,0	2788,9	2,78	30,89
Mean value	252,5	2996,5	2744,1	2,74	30,45

Table 1: Results of the water retention capability test

i.V. Dipl.-Ing. (FH) Christoph Staubermann
(Head of test laboratory)

i.V. Matthias K
(Deputy head

Test Report No. 1.1 / 10560

Summary of results

Date / Ref. : 15 February 2018 / mk

Order by : APP Kft. Fehervari ut 75, 9028 Gyor, Hungary

Material : Recycling - Polystroldrainmat (black) DiaDrain - 60 H

Compressive strength (157.0 1-2014, 21,55% compressive strain) 1320 kN/m²

Test	Standard	Unit	Mean x	Standard deviation s	Coef. of variation v in %
Determination of short-term Compressive strength at 1. Peak	DIN EN ISO 25619-2 12.2015	kPa	1316	192	14,6
Compressive strain at 1. Peak		%	21,6	2,9	13,7
Compressive strain at 1 MPa		%	18,3	2,5	13,8

Remark: Test on filled samples (Split 0-4, delivered by customer). Test was stopped due to machine capacity.

Fire classification „E" regarding EN 13501-1

oeti

Report VN749 136006.2 Classification Report

5.2 Classification

Due to the results of the tests carried out, the building product „DiaDrain-60H" can be classified as following.

Classification
E

ÖTI - Institut für Ökologie, Technik und Innovation GmbH | Spengergasse 20, 1050 Vienna, Austria
tel +43 1 5442543-0 | fax +43 1 5442543-10 | email office@oeti.at | FN 326826b | VAT No. ATU65149029
UniCredit Bank Austria AG | IBAN AT941200023410378800 | BIC BKAUATWW | EORI ATEOS1000015903
Es gelten ausschließlich unsere Allgemeinen Geschäftsbedingungen | Only our general terms and conditions apply
Member of TESTEX Group

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Tel.: +36 96 512 910 • info@diadem.com • www.diadem.com

PRODUCT INFO

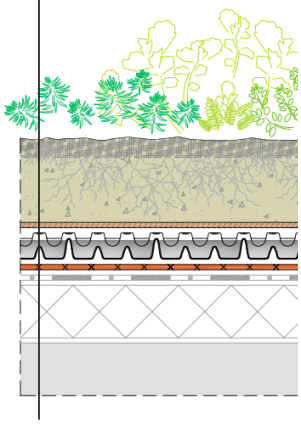
DIADEM® Geotextiles

ADVANTAGES

- Long lasting ⇨ resistant to acids and alkalis
- High load capacity, high tensile strength ⇨ due to good elasticity it takes spot loads well
- Excellent permeable capacity
- Simple installation, few tools are needed, easy to cut and drill

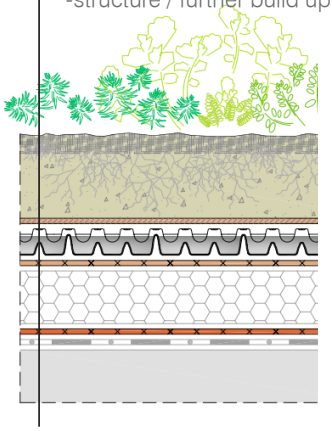
DIADEM® BUILD-UP
Warm

-substrate
-VLF-150/200 filter geotextile
-drainage board
-VLU-300/500 mechanical protection layer geotextile or VLS-300/500
-water retaining and protecting geotextile
-root resistant waterproofing
-thermal insulation
-structure / further layer build-up



DIADEM® BUILD-UP
Inverted

-substrate
-VLF-150/200 filter geotextile
-drainage board
-VLF-110 separation and filter geotextile
-closed cell insulation
-VLU-300/500 mechanical protection geotextile
-root-resistant waterproofing
-structure / further build up



APPLICATION

- The VL-type geotextile has several functions on green roofs, but filtration and mechanical protection makes up approx. 80 % of their application
- VLF geotextile is a filter layer with very low clogging indicator, allowing the water to flow away freely from the growing medium, preventing particles wash out thus assuring the flow of redundant water into the drainage system
- VLU products protect the roof insulation boards against damage during the installtion and future maintenance work serving as a protecting layer
- The VLS materials are suitable to absorb larger quanties of water due to it's mixed fibers, thus we recommend their use especially when higher water storing capacity is required due to the climate or the projects' characteristics demand it

PRODUCT DESCRIPTION

The VL-product family is a geotextile made of synthetic material suitable for fabric formation, made by needle-felting procedure and upon the mechanical features, it is excellent for separating, filering and water retaining tasks on green roofs.

TECHNICAL DATA

	VLF-110	VLF-150	VLF-200	VLU-300	VLU-500	VLS-300*	VLS-500	VLS-800*
Product number	320203	320204	320205	320416	320302	320405	320402	320426
Surface weight [g/m²]	105	150	200	300	500	300	500	800
Thickness [mm]	0,8	1,2	1,9	1,8	2,5	3,0	4,0	6,2
Tensile strength in longitudinal direction [kN/m]	8	12	16	6	10	2,6	9	6,8
Tensile strength in cross direction [kN/m]	8	12	16	7	15	3,6	11	9,0
Elongation in longitudinal direction [%]	90	90	95	45	45	100-120	70	90-110
Elongation in transverse direction [%]	75	75	46	40	40	95-110	60	95-110
CBR-test, penetration force [kN]	1,2	1,8	2	1,5	3	1	2,4	4,5
Dynamic penetration (cone tilt) [mm]	26	20	22	12	1,8	-	0+0,25	-
Characteristic opening size [mm]	0,13	0,10	0,10	0,078	0,079	0,123	0,080	-
Water retention capacity [l/m²]	-	-	-	1,56	2,09	2,7	3,6	5,5
Water permeability [Vl_{h50} [mm/s]	140	105	115	80	80	90	60	-
Robustness class	GRK 2	GRK3	GRK 3	GRK 3	GRK 4	GRK 2	GRK 3	GRK 5
Weatherproof [must be buried]	within 14 days after installation			within a day after installation				
Heat treatment	no			yes		no		
Material	PP			min. 70% PES, max. 30% PP				
Roll width [m]	2							
Roll length [m]	100	100	175	50	50	50	50	25
Roll size [m²]	200	200	350	100	100	100	100	50
Roll weight [kg]	26	36	80	30	50	30	50	40
Roll diameter [cm]	ca. 30	ca. 45	ca. 60	ca. 40	ca. 45	ca. 45	ca. 55	ca. 50
Colour	gray			colourful				

* can be ordered

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Green Up the Roof!

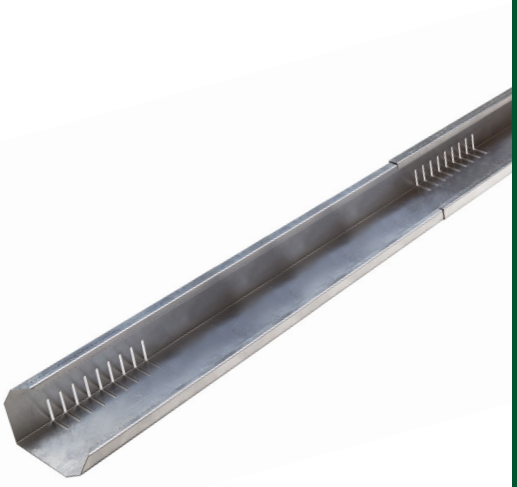
PRODUCT INFORMATION SHEET

KLS

Length-adjustable gravel board

ADVANTAGES

- One product can be applied for six - two per type - different media depth ⇨ board can be turned to select different heights
- Sliding length adjustment avoids need to cut ⇨ telescoping design from 2 m up to ca. 3.9 m
- Stable structure ⇨ once length is set, the included locking clips prevent slippage
- Increased drainage capacity by a total of 54 cm^2 slots / meter, corresponding to a Ø 8.2 cm drain
- Secures green roof termination on a slightly inclined roof ⇨ forms a truss when used with holding textile and fixing element
- Adjustable corner angles ⇨ corner elements available which can be adjusted between 88° and 359°
- Rigid and stable design with clearly recognisable separation ⇨ 5-angle bent edges provide strength and visual appeal
- High corrosion protection ⇨ constructed from durable and recyclable high-grade aluminum
- Easy to transport and handle ⇨ light construction and efficient packaging with up to 720 lm/pallet
- Free standing and easy to install ⇨ fixable without adhesives or fastening, held in place by ballast



SPECIFICATION

Length-adjustable and lockable green roof edge profile and separation board with perforation for drainage, constructed from aluminum. Supplied with two (2) locking clips, six optional heights of 6 or 9; 8 or 12; 14 or 22 cm, fixed by ballast (no roof structure penetration). Corner pieces for any angle between 88° and 359°, and holding textile and textile fixing elements. Suitable for flat to gentle inclines.

Product: DIADEM® KLS
Manufacturer's certificate: APP Kft.
Website: www.diadem.com

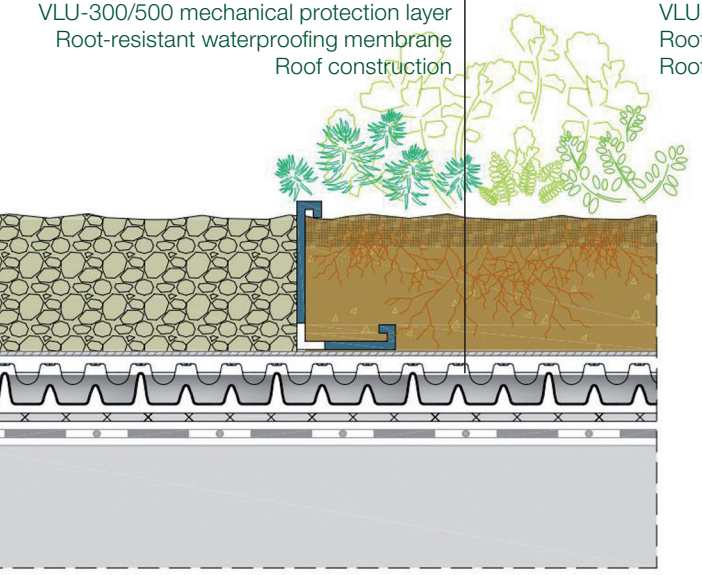
APPLICATION

Border of extensive green roofs, or separation of various aggregates (eg: gravel, substrate), as erosion protection and to form a roof edge in the absence of a parapet. Installed on the waterproofing membrane or on the protective layer without any roof penetration.

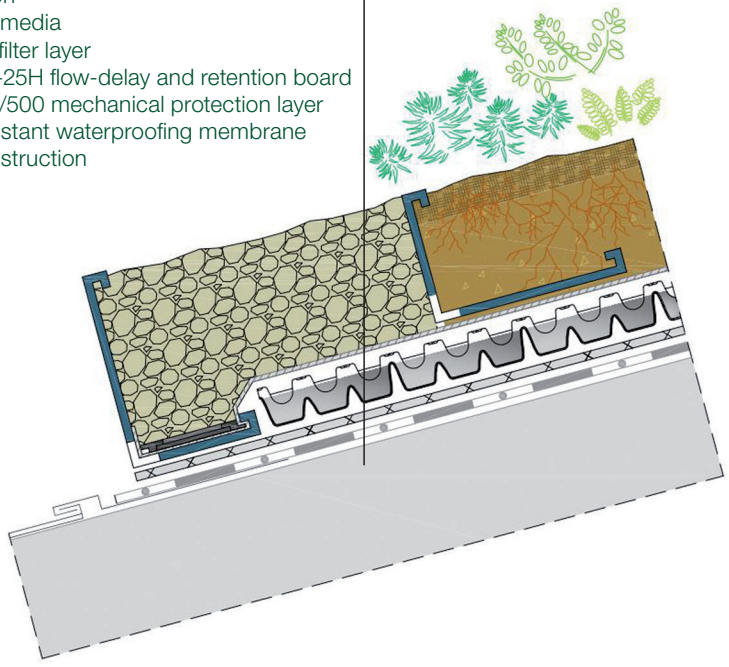
FLL Guidelines (Edition 2008) – Section 6.11.1 – 6.11.3

DIADEM® BUILD-UP

KLS-AL-6/9-TK
Vegetation
Growing media
VLF-150 filter layer
DiaDrain-25H flow-delay and retention board
VLU-300/500 mechanical protection layer
Root-resistant waterproofing membrane
Roof construction



KLS-AL-6/9-TK; KLS-AL-9/6-TK
Vegetation
Growing media
VLF-150 filter layer
DiaDrain-25H flow-delay and retention board
VLU-300/500 mechanical protection layer
Root-resistant waterproofing membrane
Roof construction



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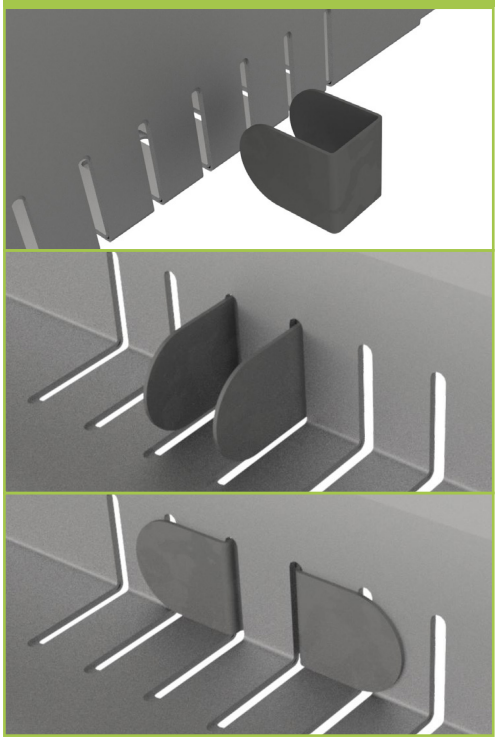
KLS

Length-adjustable gravel board

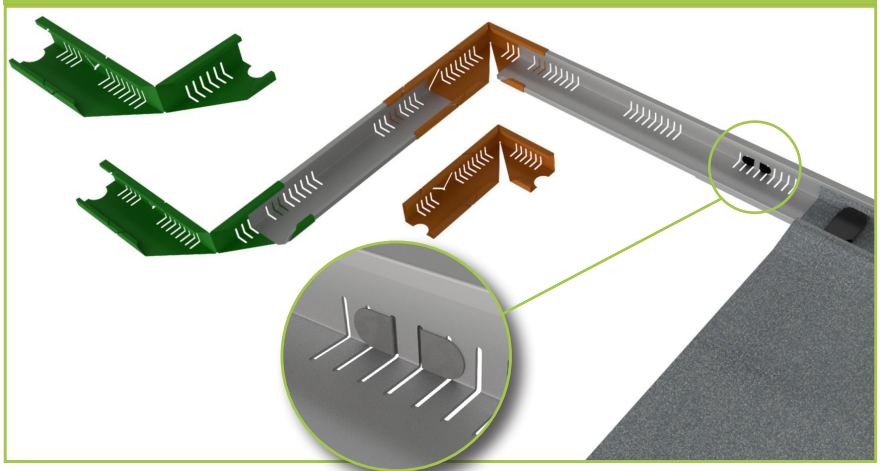
ACCESSORIES

Locking clips[1]: used to lock gravel boards after the length has been adjusted.
Holding textile[2]: used to prevent displacement of the gravel boards at the edges on slightly sloping roofs. Application is complete with the textile fixing elements.
KLSD textile fixing element[2]: used to attach the holding textile mat to gravel boards.
KLS-AL-6/9-TK-UNI-ECKE[2]: 6 or 9 cm-high gravel board corner piece to set corner angles between 88° and 359°
[1] Standard accessories • [2] Special accessories

LOCKING CLIPS

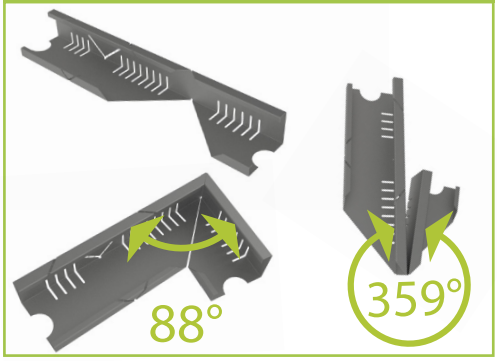


INSTALLATION SHEME



HOLDING TEXTILE AND TEXTILE FIXING ELEMENT

CORNER PIECES



TECHNICAL DATA

Height of the profile	6 or 9; 8 or 12; 14 or 22 cm
Length of the profile	The 2 m piece is extendable to 3.9 (at 5 cm joint overlap)
Water drainage	54 cm²/m (equivalent to a Ø 8.2 cm drain outlet)
Weight	6/9: 1,6 kg/pc; 8/12: 2,35 kg/pc; 14/22: 5,6 kg/pc
Material	aluminium
Standard Accessories	
Locking clips	
Special Accessories	
Corner piece: KLS-AL-6/9|8/12|14/22-TK-UNI-ECKE	height of 6 or 9; 8 or 12; 14 or 22 cm
Fixing textile	0,8 × 50 m
Textile fixing element	required quantiy
Custom sizes	on request

PRODUCT INFORMATION SHEET

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DIADEM® inspection boxes

KSE · KSA · KSR

ADVANTAGES

- Compatibility ⇨ independently of the water outlet type, it can be installed on any green- or gravel roof
- Long lasting the material is shock- and UV-proof
- It offers variable solutions ⇨ may be used for different types of water drainage systems, suitable for receiving drain tubes, irrigation equipments and their fittings
- Safe ⇨ the cover plate is step-resistant and lockable
- Protects from pollutions ⇨ conducts surface water through a filter
- Prevents sunlight reaching the inside, therefore the growth of vegetation around the water outlet

KSE

KSA

PRODUCT DESCRIPTION

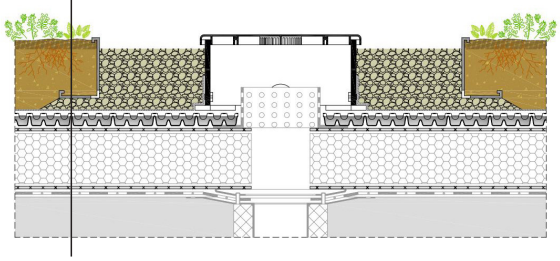
- The KSE inspection boxes ensure unimpeded water drainage on green roofs, and they are suitable for the professional installation, control and cleaning of the water outlets. The thickness of the growing media may be flexibly followed with the help of the 10cm high extension elements.
- The KSA inspection boxes thanks to theis special form, ensure access for maintenance to the water outlets at the parapet wall on extensive and simpler intensive green roofs.

APPLICATION

- The KSE inspection boxes ensure easy location, maintenance and professional handling of the water outlets on extensive green roofs. The product may be excellently used for housing irrigation equipments, placing level-regulator fittings, and for storage of other garden accessories.
- The characteristic of the KSA controll shaft is the perforated bottom corner, rendering possible the placement directly along the parapet wall, making the professional installation of the water outlet near the parapet wall possible.

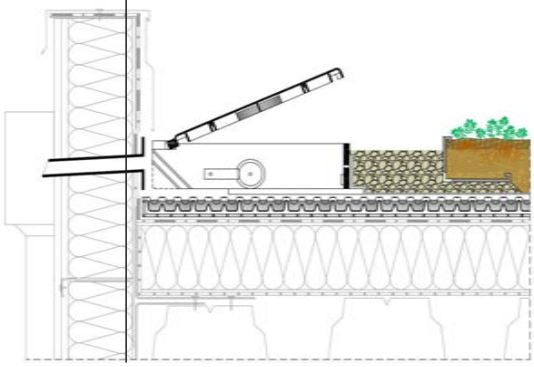
DIADEM® BUILD-UP, KSE

extensive substrate
VLF-150 filter layer
DD-25H drainage board
VLT-100 separation layer
closed cell insulation
VLU-300 mechanical protection layer
root-resistant water proofing
further layers



DIADEM® BUILD-UP, KSA

extensive substrate
VLF-150 filter layer
DD-25H drainage board
VLU-300 mechanical protection layer
root-resistant water proofing
further layers



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Green Up the Roof!

DIADEM® inspection boxes

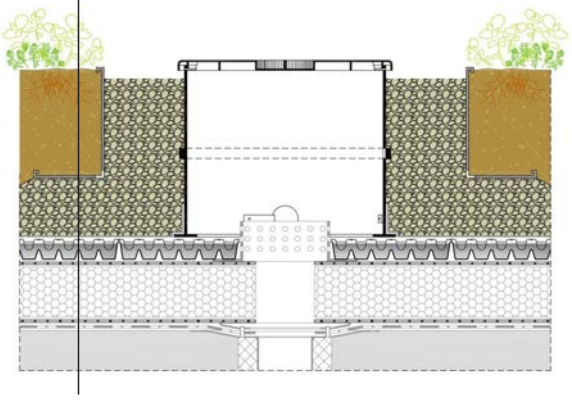
KSE · KSA · KSR

PRODUCT DESCRIPTION

The KSR inspection boxes serve the impeded water drainage of intensive, green roofs with greater thickness, and the inspection and easy cleaning of water outlets.

DIADEM® BUILD-UP, KSR

intensive substrate
VLF-200 filter layer
DD-40H drainage board
VLT-100 separation layer
closed cell insulation
VLU-300 mechanical protection layer
root-resistant water proofing
further layers



KSR

APPLICATION

The KSR inspection boxes makes the professional maintenance and inspection of water outlets in intensive greenroof with thick substrate layer possible.They also make the visual location of these outlets easy.The product may be excellently used for installing irrigation equipments, placing level-regulator fittings, and storage of other garden accessories. The thickness of the growing media may be flexibly followed with the help of the 10cm high extension elements.

TECHNICAL DATA

	KSR- 35/45/55/65	KSR+ ext. element	KSA- 10/15/20/30	KSA-10-34	KSE- 10/15/20/30	KSE-10-34	KSE/KSA+34	KSE+ ext. element
Product number	120111 120112 120113 / 120114	100201 100202	110211 / 110212 110213 / 110214	130047	110111 / 110112 110113 / 110114	130046	130048	100211 100265
Width [mm]	d=400	d=400	300	340	300	340	342	300
Length [mm]	-	-	350	340	300	340	342	300
Height with cover	350 / 450 550 / 650	50 / 100	100 / 150 200 / 300	100	100 / 150 200 / 300	100	145	50 / 100
Surface drainage opening [mm²]	900	-	900	8066	900	14425	-	-
Applied screwed joint	DIN 7505 A2	-	DIN 7505 A2	-	DIN 7505 A2	-	-	-
Drainage tube connection	4 pcs, d=52 mm	-	3 pcs, d=52 mm	-	4 pcs, d=52 mm	-	-	-
Drain latch	basic pack	-	basic pack	-	basic pack	-	-	-
Insulated cover	can be ordered (3 cm extr. PS)	-	can be ordered (3 cm extr. PS)	-	can be ordered (3 cm extr. PS)	-	-	-
Material	polypropylene	polypropylene	polypropylene	hot dip galvanized powder coated steel	polypropylene	hot dip galvanized powder coated steel		polypropylene
Colour (RAL)	7032	7032	7032	9007	7032	9007		7032
Weight [kg]	4,61 / 5,48 6,06 / 6,92	0,8	1,65 / 2,25 3,85 / 4,45	3	1,49 / 2,19 3,47 / 4,85	3,4	2,2	1,4
Transport	on pallets in cartons	in cartons	on pallets in cartons	on pallets	on pallets	on pallets	on pallets	in cartons
Packaging unit [pc/pallet]	24 / 18 12 / 12	-	90 / 60 42 / 30	60	90 / 60 42 / 30	60	60	-

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100% recyclable

Green Up the Roof!

ESTABLISHMENT, INSPECTION & MAINTENANCE OF MOY EXTENSIVE GREEN ROOF SYSTEMS.

Owner Inspection *&* Maintenance Recommendations:

Inspect the roof at least twice yearly, in spring and autumn, and inspect all roofs after any severe storm. Make frequent inspections on buildings that house manufacturing facilities that evacuate exhaust debris onto the roof. Clean roof drains of debris. Remove leaves, twigs, cans, balls, etc. which could plug roof drains. Bag and remove all debris from the roof since debris on the roof surface will be quickly swept into drains by heavy rains and drainage problems may occur.

Notify the roofing contractor immediately if a roof leak occurs. If possible, note conditions resulting in leakage. Heavy or light rain, wind direction, temperature and the time of year that the leak occurs are all important clues to tracing roof leaks. Note whether the leaks stop shortly after each rain or continue to drip until the roof is dry. If the owner is prepared with facts, the diagnosis and repair of roof problems can proceed more rapidly.

File all job records, plans and specifications for future reference. Setup a maintenance schedule. Record maintenance procedures as they occur. Log all access times and parties working on the roof in case damage should occur.

Do not allow foot traffic on the roof in very cold or very hot temperatures as damage can result. Do not allow the installation of television and radio antennae or mechanical equipment without notifying the roofing contractor and consulting with him about the methods and details for these installations.

One of the keys to avoiding roof damage is the key to the padlock on the roof hatch! Allow only authorised personnel on the roof.

In emergency situations, patch leaks to minimise property loss.

Except for emergency situations, do not attempt owner-performed roof repairs. The puncturing of a blister or the spreading of a coating or mastic only covers up evidence the roofing contractor needs to ascertain the problem. Do not consider using maintenance coatings, "recovery sprays" or "miracle" products without consulting a qualified roofing contractor.