

# IMEARIN

ULTRA-LIGHT DRAINAGE SYSTEM,  
ALSO WITH INTEGRATED SLOPE



**HIGH QUALITY GRP DRAINAGE SYSTEM**

FLEXIBLE PROFESSIONAL DRAINAGE SOLUTION FOR ALL APPLICATIONS

# MEARIN PLUS/EXPERT WITHOUT SLOPE

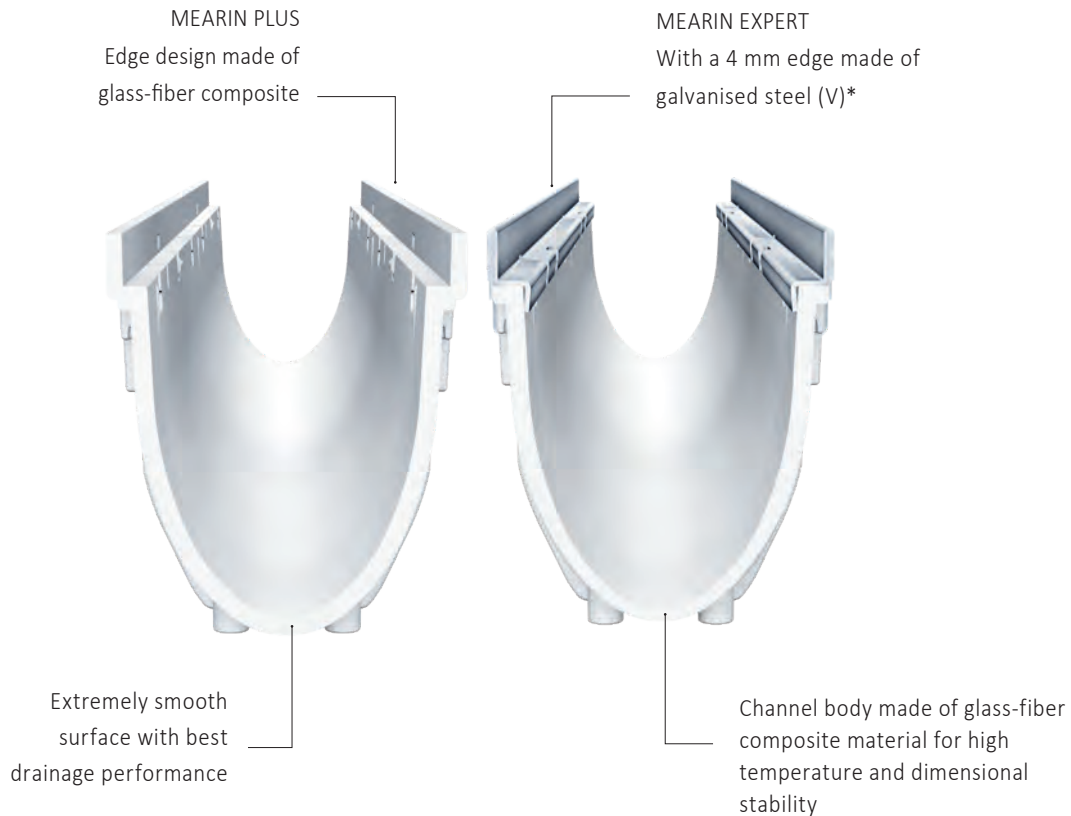
## PROFESSIONAL DRAINAGE SYSTEM



### **MEARIN PLUS and EXPERT channels without slope**

The channels are suitable for a wide range of applications in urban areas. They can be used in a variety of ways, from landscaping to areas with high traffic volumes.

They are made of high-quality glass-fiber composite with an extremely smooth surface and excellent drainage properties. Thanks to their low weight and the tongue and groove system, they can be laid quickly and perfectly and can also be completely sealed.



## MEARIN PLUS/EXPERT WITHOUT SLOPE ALL-ROUND TALENT- HIGHLY RESILIENT

### MEARIN PLUS and EXPERT without slope

- > Drainage channel made of glass-fiber composite with integrated sealing joint in accordance with DIN EN 1433
- > Completely sealable channel system
- > Available in clear widths of 100, 150, 200 and 300 mm
- > MEARIN PLUS: Loading classes A 15 to D 400
- > MEARIN EXPERT: Loading classes A 15 to E 600
- > Equipped with the CLIPFIX grating fixing mechanism
- > Can be combined with the TS-H and TS-L topslots

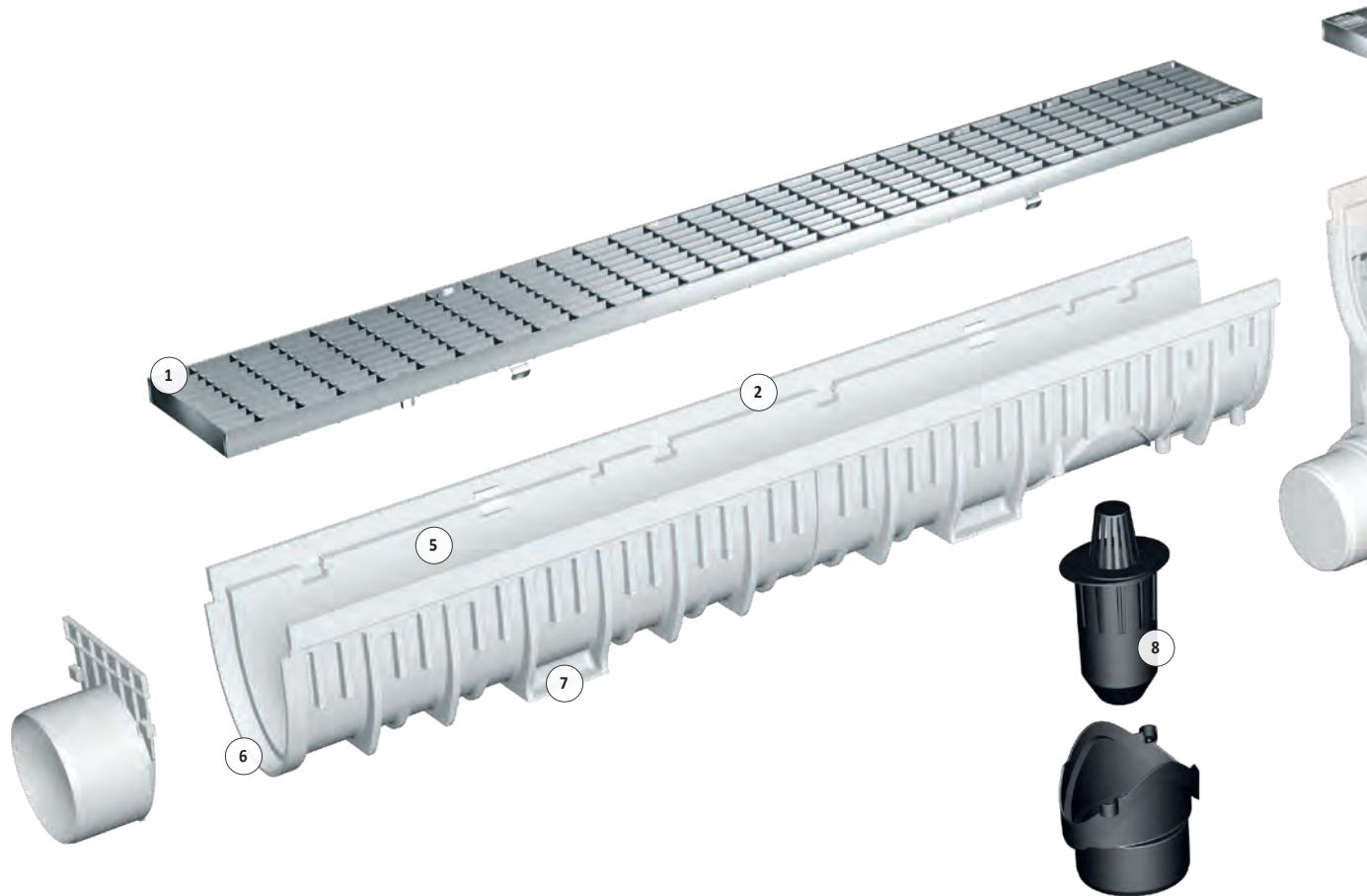
### Advantages for planners, architects and dealers

- > Low weight: Easy and economical handling on the construction site and reduced transportation costs
- > Heat-resistant glass-fiber composite: enables direct asphaltting to the gutter line
- > Environmentally friendly: GRP is 100% recyclable
- > Resistant to chemical substances, salt and oils
- > Perfect anchoring of the GRP channel in the concrete bed

\*Optional with a edge protection made of stainless steel (MEARIN EXPERT E)

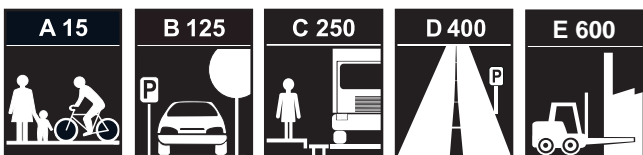
# MEARIN PLUS/EXPERT WITHOUT SLOPE

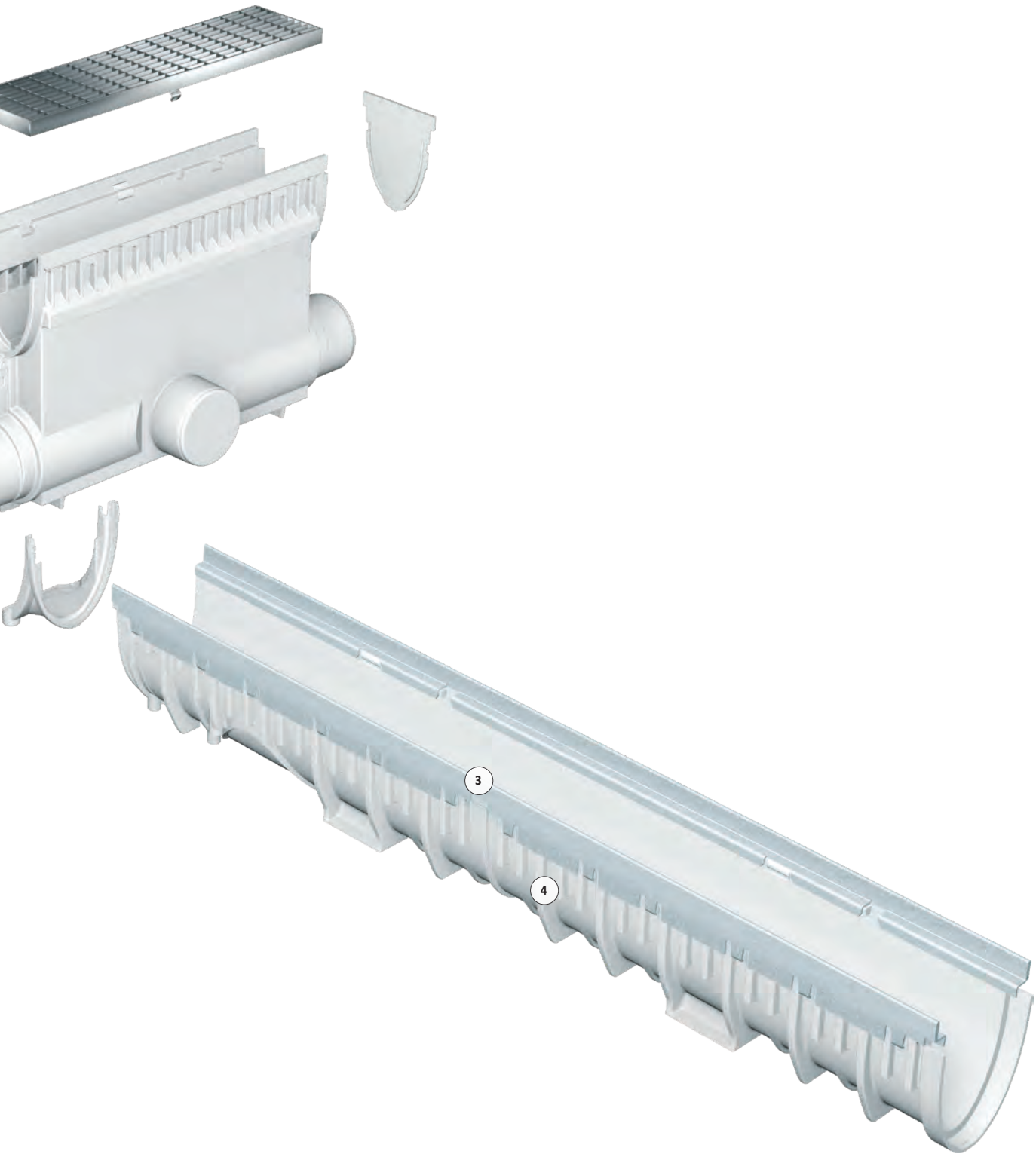
## IN CLEAR WIDTHS OF 100, 150, 200 AND 300 MM



### ILLUSTRATION OF THE SYSTEM OVERVIEW IN CLEAR WIDTH 100 MM

- 1- Innovative CLIPFIX grating locking mechanism  
Gratings made of plastic, ductile iron, galvanised and stainless-steel.
- 2- **MEARIN PLUS without slope**: Highly stable edge protection 6.0 mm made of glass-fibre-reinforced composite material.
- 3- **MEARIN EXPERT V/E without slope**: Firmly anchored 4 mm edge protection made of galvanised (V) and stainless-steel (E) fulfills even the highest requirements of users within the heavy load range.
- 4- High stability of the drainage channel body enables a broad utilization range, all the way up to drainage solutions of the class E 600.
- 5- Optimized flow cross section provides a higher drainage performance, and particularly provides a very good self-cleaning effect.
- 6- Practical plug system for an accurate setting of the drainage channel body with many strand variants.
- 7- Deep-seated anchorage bays in the drainage channel body guarantee stable attachment to the concrete bed
- 8- Extensive range of accessories: drain set, gully, end plates and adapters can be used universally (depending on nominal width) for the variant with/without slope.





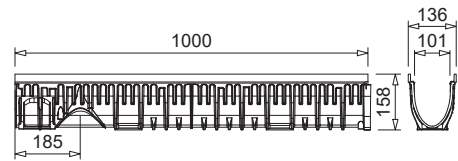
# MEARIN PLUS/EXPERT WITHOUT SLOPE

## TECHNICAL DETAILS

### MEARIN PLUS 1000 and MEARIN PLUS BLACK 1000 without slope



Clear width: 100 mm  
 Total width: 136 mm  
 Total heights: 158, 208 and  
 258 mm

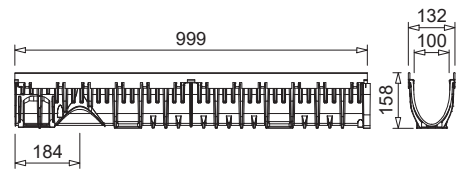


012140002

### MEARIN EXPERT 1000 without slope



Clear width: 100 mm  
 Total width: 132 mm  
 Total heights: 158, 208  
 and 258 mm

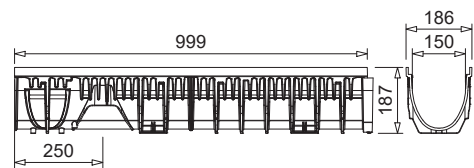


012140058

### MEARIN PLUS 1500 and MEARIN PLUS BLACK 1500 without slope



Clear width: 150 mm  
 Total width: 186 mm  
 Total height: 187 mm

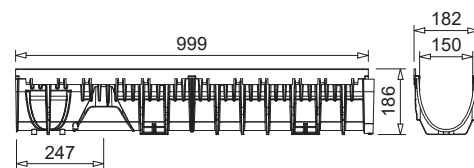


012140516

### MEARIN EXPERT 1500 without slope



Clear width: 150 mm  
 Total width: 182 mm  
 Total height: 187 mm



012140522

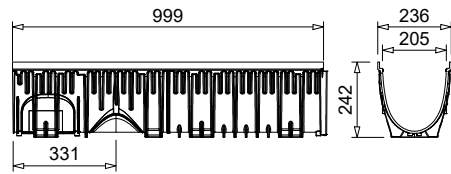
# MEARIN PLUS/EXPERT WITHOUT SLOPE

## TECHNICAL DETAILS

### MEARIN PLUS 2000 without slope



Clear width: 200 mm  
 Total width: 236 mm  
 Total heights: 242, 292  
 and 342 mm

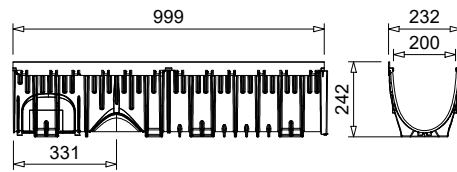


012140034

### MEARIN EXPERT 2000 without slope



Clear width: 200 mm  
 Total width: 232 mm  
 Total heights: 242, 292  
 and 342 mm

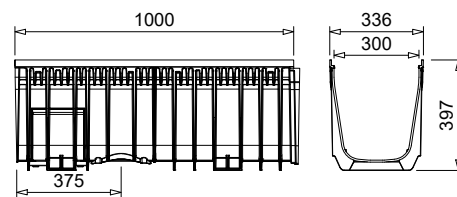


012140074

### MEARIN PLUS 3000 without slope



Clear width: 300 mm  
 Total width: 336 mm  
 Total height: 397 mm

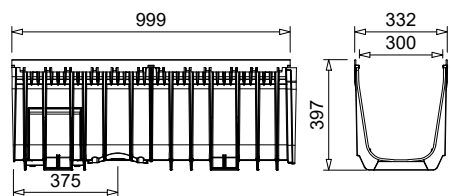


012140400

### MEARIN EXPERT 3000 without slope



Clear width: 300 mm  
 Total width: 332 mm  
 Total height: 397 mm



012140406

# MEARIN PLUS/EXPERT WITH SLOPE

## PERFECT FOR VERSATILE APPLICATIONS

### **MEARIN PLUS and EXPERT channels with slope**

The channels with gradient enable the realisation of a continuous constant gradient of 0.5% for drainage lines of up to 20 metres in length. They are made from high-quality glass-fiber composite with extremely smooth surface and excellent drainage properties. Thanks to their low weight and the tongue and groove system, they can be laid quickly and perfectly and can also be completely sealed.







## MEARIN PLUS/EXPERT WITH LINEAR SLOPE - CHANNEL SYSTEM WITH INTEGRATED SLOPE

### MEARIN PLUS and EXPERT with slope

- > Drainage channel made of glass-fiber composite with integrated sealing joint in accordance with DIN EN 1433
- > Completely sealable channel system
- > Available in clear widths of 100 and 200 mm
- > MEARIN PLUS: Loading classes A 15 to D 400
- > MEARIN EXPERT: Loading classes A 15 to E 600
- > Equipped with the CLIPFIX grating fixing mechanism
- > Can be combined with the topslots TS-H and TS-L
- > Complete system with linear slope up to 20 meters internal slope
- > Certified compliant with EN 1433 and CE

### Advantages for planners, architects and dealers

- > Low weight: Easy and economical handling on the construction site and reduced transportation costs
- > Heat-resistant glass-fiber composite: enables direct asphaltting to the gutter line
- > Environmentally friendly: GRP is 100% recyclable
- > Resistant to chemical substances, salt and oils
- > Perfect anchoring of the GRP channel in the concrete bed
- > For the realization of a linear slope (base slope 0.5%)

\*Optional with a edge protection made of stainless steel (MEARIN EXPERT E)

# MEARIN PLUS/EXPERT

WITH LINEAR SLOPE (0,5%) IN  
CLEAR WIDTHS 100 AND 200 MM

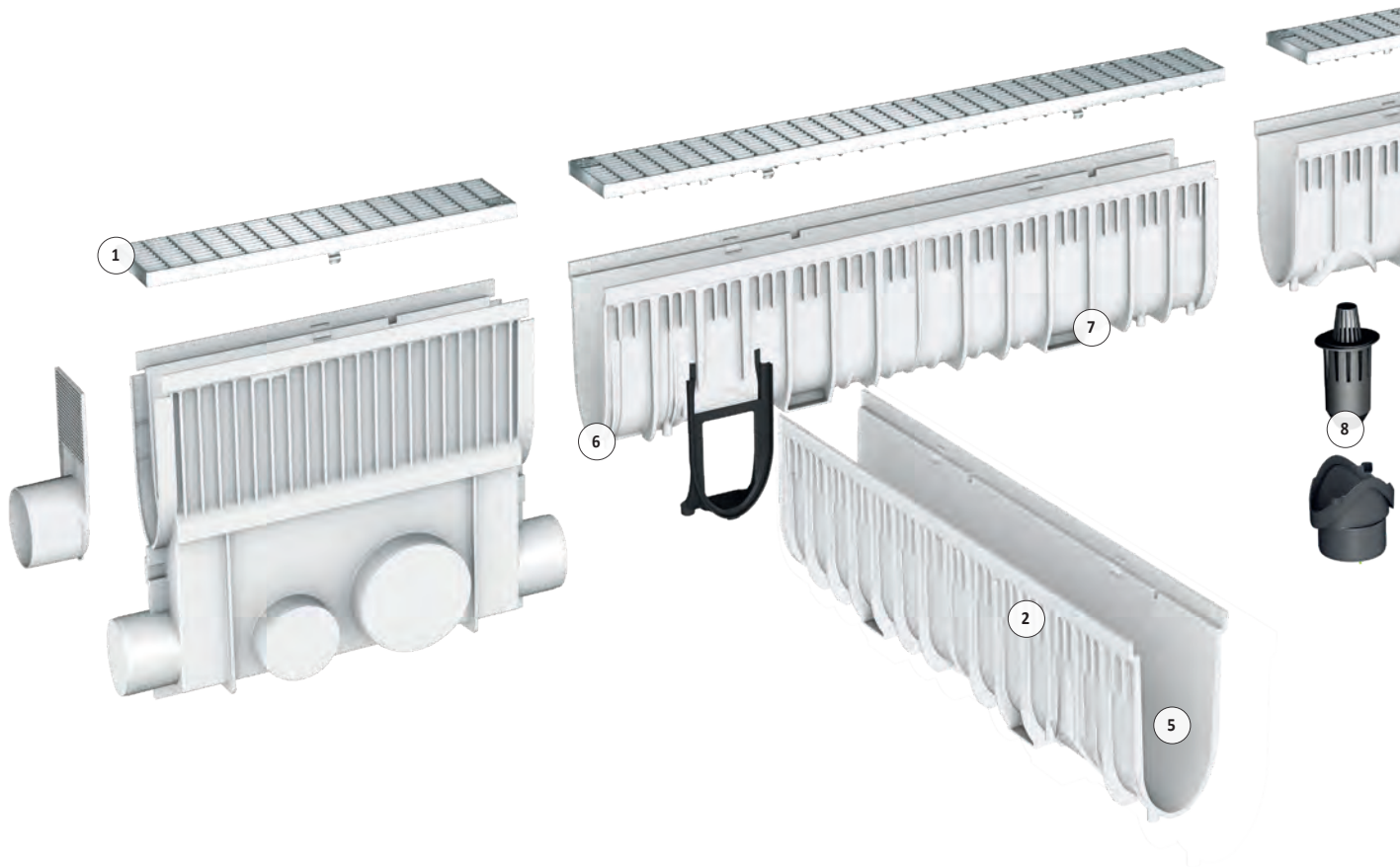
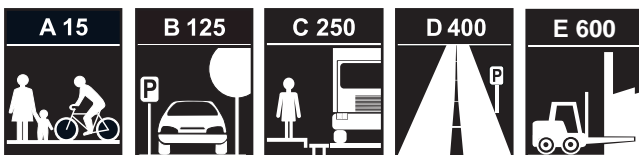


ILLUSTRATION OF THE SYSTEM OVERVIEW IN CLEAR WIDTH 100 MM

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- 4- High stability of the drainage channel body enables a broad utilization range, all the way up to drainage solutions of the class E 600.
- 5- Optimized flow cross section provides a higher drainage performance, and particularly provides a very good self-cleaning effect.
- 6- Practical plug system for an accurate setting of the drainage channel body with many strand variants.
- 7- Deep-seated anchorage bays in the drainage channel body guarantee stable attachment to the concrete bed
- 8- Extensive range of accessories: drain set, gully, end plates and adapters can be used universally (depending on nominal width) for the variant with/without slope.





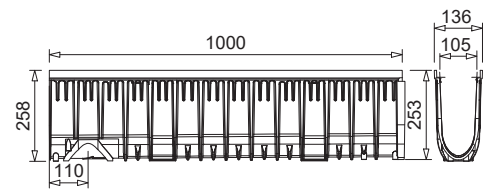
# MEARIN PLUS/EXPERT WITH SLOPE

## TECHNICAL DETAILS

### MEARIN PLUS 1000 with slope



Clear width: 100 mm  
Total width: 136 mm  
Total heights: from  
158 up to 258 mm

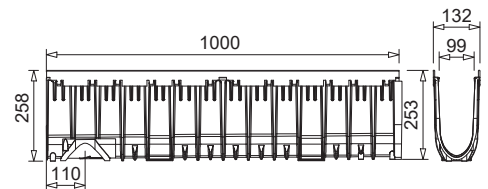


012140144

### MEARIN EXPERT 1000 with slope



Clear width: 100 mm  
Total width: 132 mm  
Total heights: from  
158 mm up to 258 mm



012140204

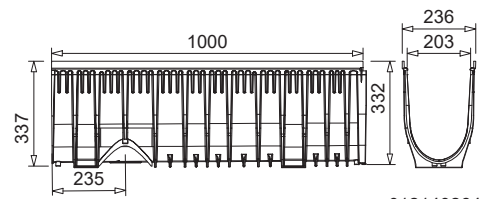
# MEARIN PLUS/EXPERT WITH SLOPE

## TECHNICAL DETAILS

### MEARIN PLUS 2000 with slope



Clear width: 200 mm  
 Total width: 236 mm  
 Total heights: from 242 up to 342 mm

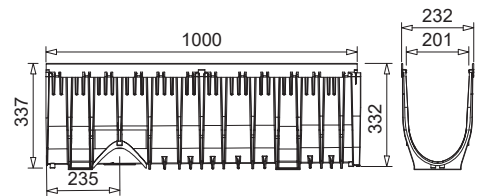


012140264

### MEARIN EXPERT 2000 with slope

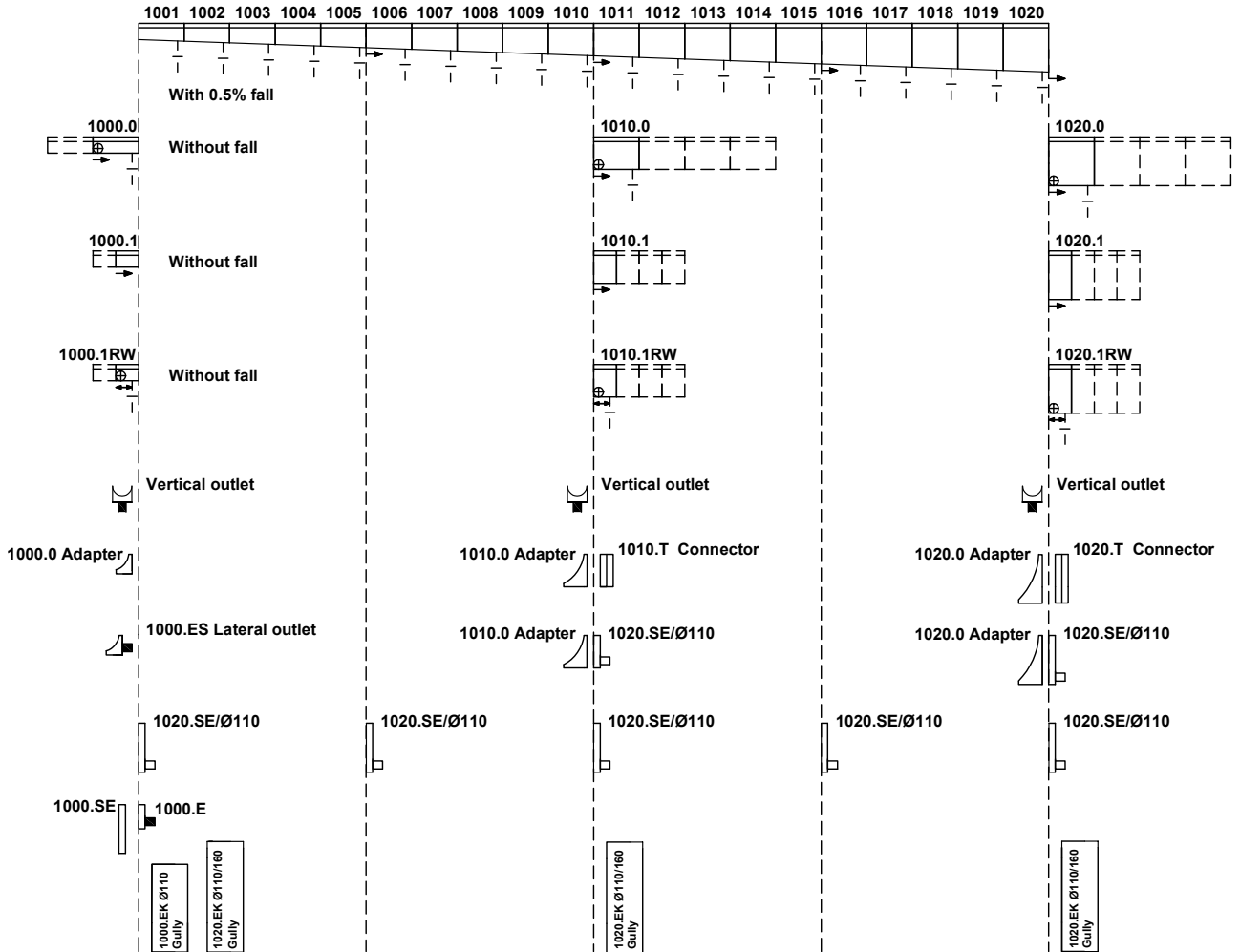


Clear width: 200 mm  
 Total width: 232 mm  
 Total heights: from 242 up to 342 mm



012140324

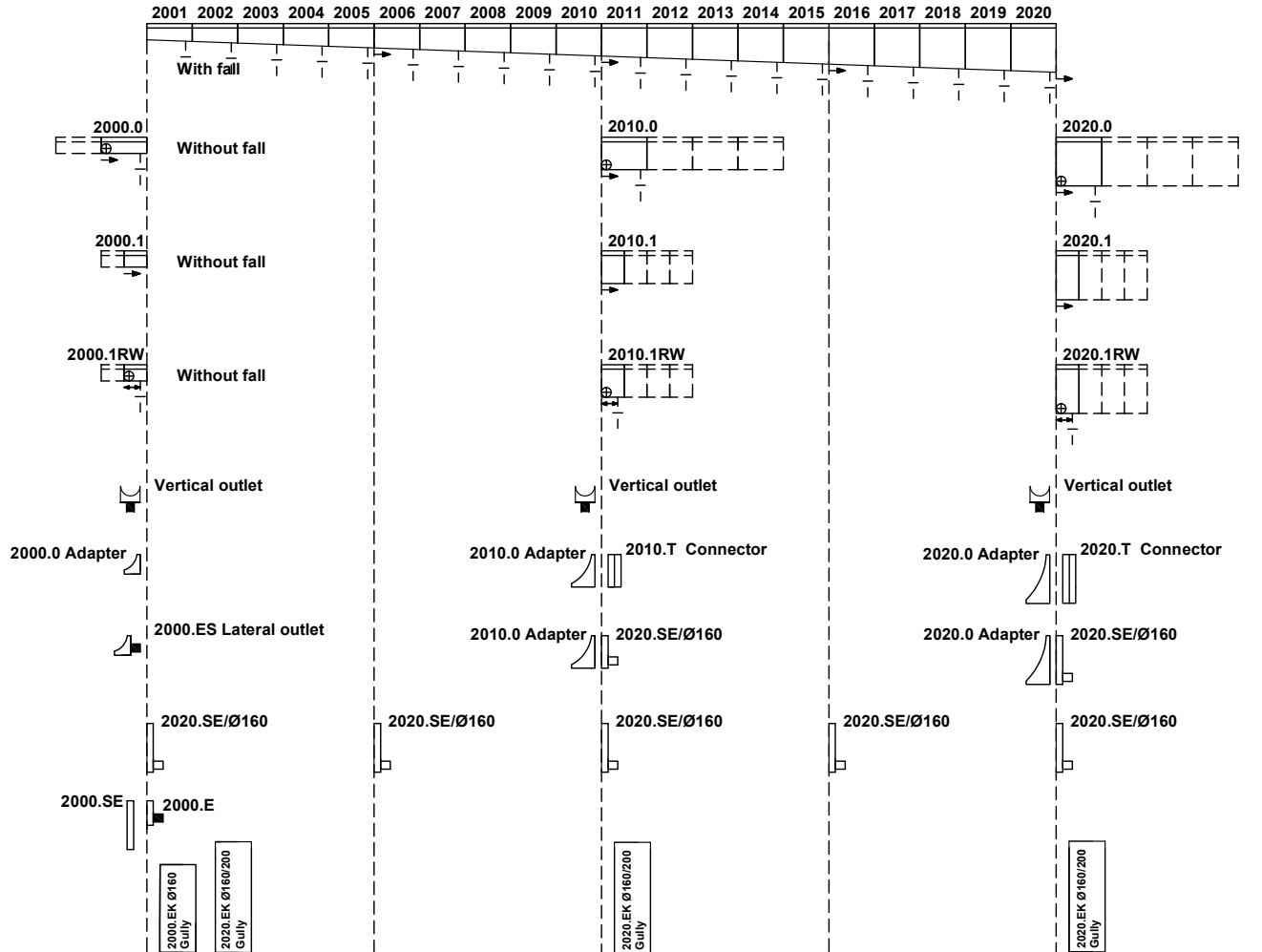
System overview MEARIN PLUS/EXPERT 1000 according to DIN EN 1433



- ⊥ = Connection option for vertical drain
- ⊕ = Connection option for corner-, t- and cross- connections
- ↔ = Utilization option as a flow direction change
- = Flow direction
- └ = Adapter for lateral connection for corner-, t- and cross-connections or front plate with connector
- ▭ = Connector between two tongue sides at line low point

- ⊥ = Vertical outlet
- └ = Lateral outlet incl. adapter
- ▭ = Closed end cap plate for channel start and end
- └ = End cap with open outlet for channel end
- ▭ = Closed end cap plate for channel start/end with optional outlet

System overview MEARIN PLUS/EXPERT 2000 according to DIN EN 1433



- ⊥ = Connection option for vertical drain
- ⊕ = Connection option for corner-, t- and cross- connections
- ↔ = Utilization option as a flow direction change
- = Flow direction
- └┘ = Adapter for lateral connection for corner-, t- and cross-connections or front plate with connector
- ▭ = Connector between two tongue sides at line low point
- ⌋ = Vertical outlet
- └┘ = Lateral outlet incl. adapter
- ▭ = Closed end cap plate for channel start and end
- ▭ = End cap with open outlet for channel end
- ▭ = Closed end cap plate for channel start/end with optional outlet

# MEARIN PLUS F SHALLOW CHANNELS

## LIGHTWEIGHT WITH BEST WATER DRAINAGE PERFORMANCE

### **MEARIN PLUS F shallow channels**

Due to their low height, the flat channels are ideal for the drainage of platforms, parking decks and multi-storey car parks for new buildings and renovations. The robust GRP channel body in Duroplast quality is dimensionally stable, abrasion-resistant and resistant to chemicals, frost and salty condensation.







## MEARIN PLUS F SHALLOW CHANNELS

### EXTREMELY ROBUST WITH LOW (INSTALLATION) HEIGHT

#### MEARIN PLUS F shallow channel

- > Drainage channel made of glass-fiber composite with integrated sealing joint in accordance with DIN EN 1433
- > Completely sealable channel system
- > Available in clear widths of 100, 150 and 200 mm
- > Loading classes A 15 to D 400
- > Equipped with the CLIPFIX grating fixing mechanism
- > Can be combined with the topslots TS-H and TS-L
- > Certified compliant with EN 1433 and CE

#### Advantages for planners, architects and dealers

- > Low weight: Easy and economical handling on the construction site and reduced transportation costs
- > Heat-resistant glass-fiber composite: enables direct asphaltting to the gutter line
- > Environmentally friendly: GRP is 100% recyclable
- > Resistant to chemical substances, salt and oils
- > Perfect anchoring of the GRP channel in the concrete bed
- > Ideal for applications that only allow a low installation height
- > Also available as MEARIN PLUS F BLACK

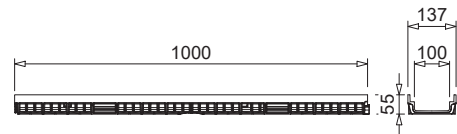
# MEARIN PLUS F SHALLOW CHANNELS

## TECHNICAL DETAILS

### MEARIN PLUS F 1000 And MEARIN PLUS F BLACK 1000 shallow channel



Clear width: 100 mm  
Total width: 137 mm  
Total height: 55 mm

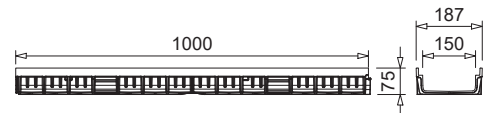


010140740

### MEARIN PLUS F 1500 and MEARIN PLUS F BLACK 1500 shallow channel

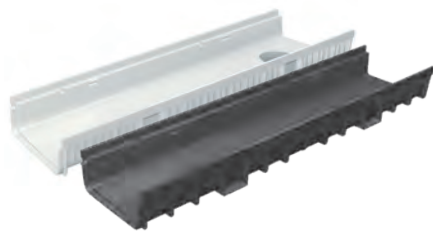


Clear width: 150 mm  
Total width: 187 mm  
Total height: 75 mm

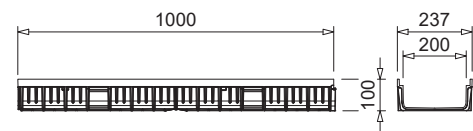


010140750

### MEARIN PLUS F 2000 and MEARIN PLUS F BLACK 2000 shallow channel



Clear width: 200 mm  
Total width: 237 mm  
Total height: 100 mm



010140760

# IMEA GRP

## PREMIUM MATERIAL

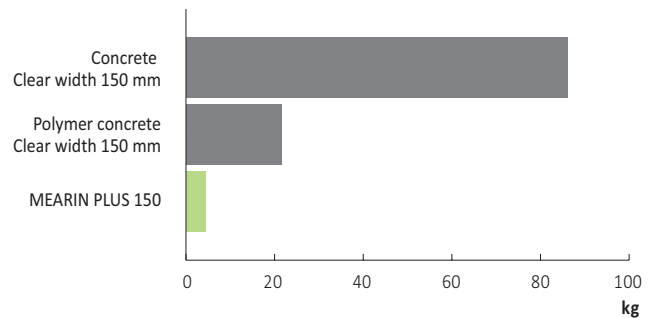
All MEARIN channels systems are manufactured from high-quality MEA GRP. GRP stands for glass-fibre-reinforced composite material, and is used in a broad range of applications with high requirements, including aircraft construction, the automotive industry and also in motorsports.

But not all GRP types are equal, as the quality and specific characteristics sometimes differ considerably. Thereby, we rely on SMC technology, (Sheet Moulding Compound) - a composite of polyester resin, mineral filler materials, additives and fibreglass mats.

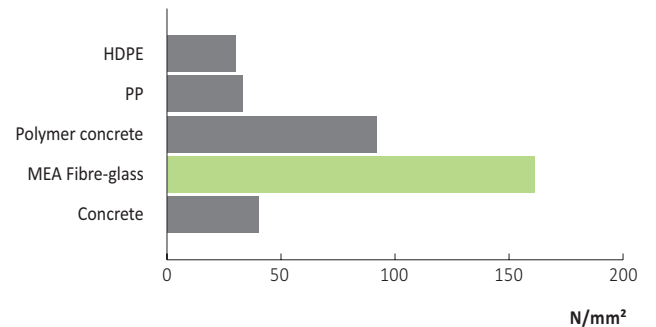
GRP convinces with the highest degree of strength and dimensional stability. This means extreme stability even under high temperatures, combined with a very low thermal expansion. In contrast to thermoplastics, GRP can be not deform after curing, but rather remains stable and durable in its form. Our many years of experience and expertise with this material will guarantee light-weight and equally long-lasting products that create sustainable values for our customers and partners.



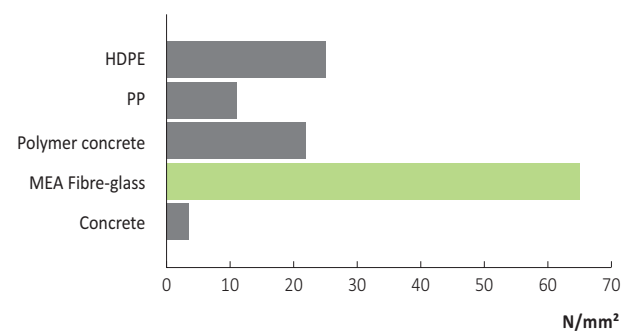
Weight in kg



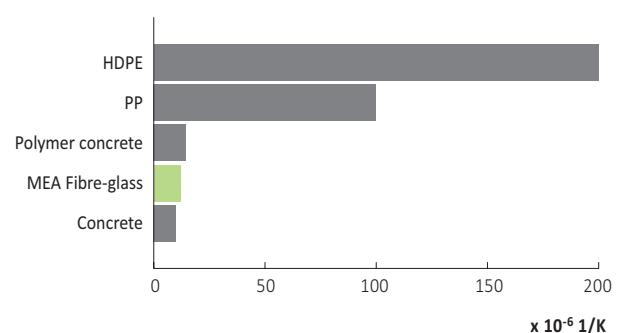
Tensile strength



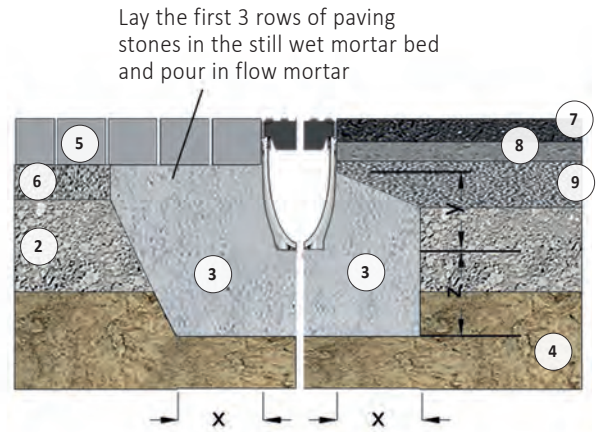
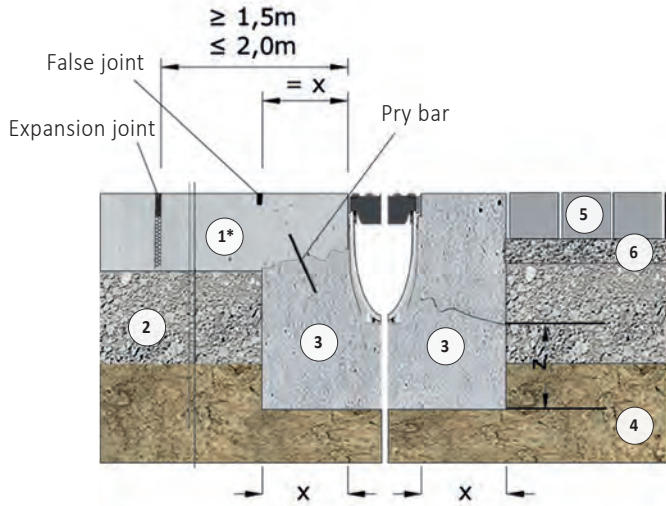
Compression resistance



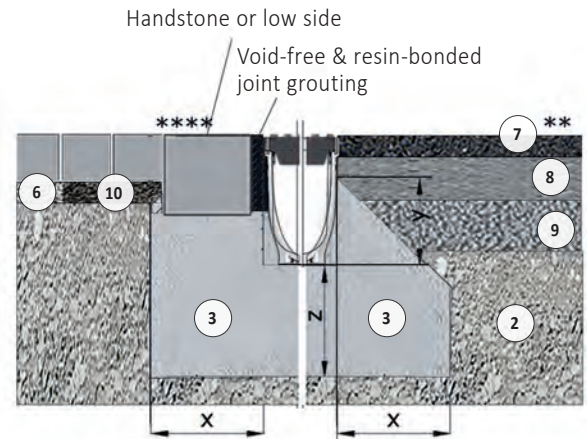
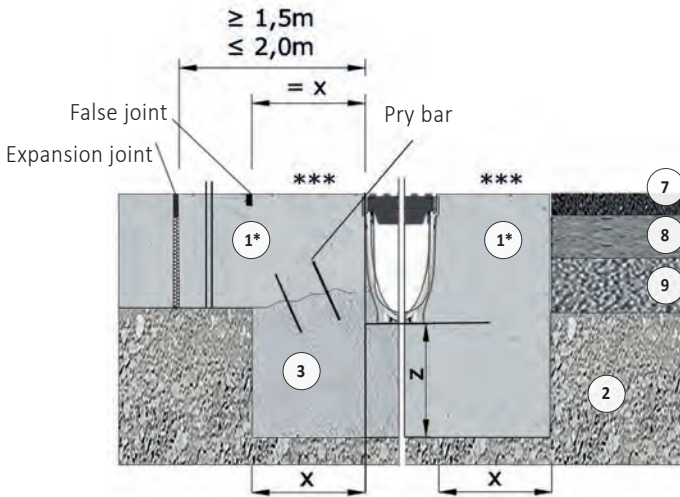
Thermal expansion coefficient  $\alpha$



## INSTALLATION INSTRUCTIONS C 250



## INSTALLATION INSTRUCTIONS D 400



- 1-Road concrete
- 2-Base course according to RStO
- 3-Concrete coating
- 4-Grown soil

- 5-Pavement
- 6-Pavement bed
- 7-Bituminous base cover
- 8-Binder layer
- 9-Bituminous base layer
- 10-Mortar bed

Y min.= channel height-50 mm

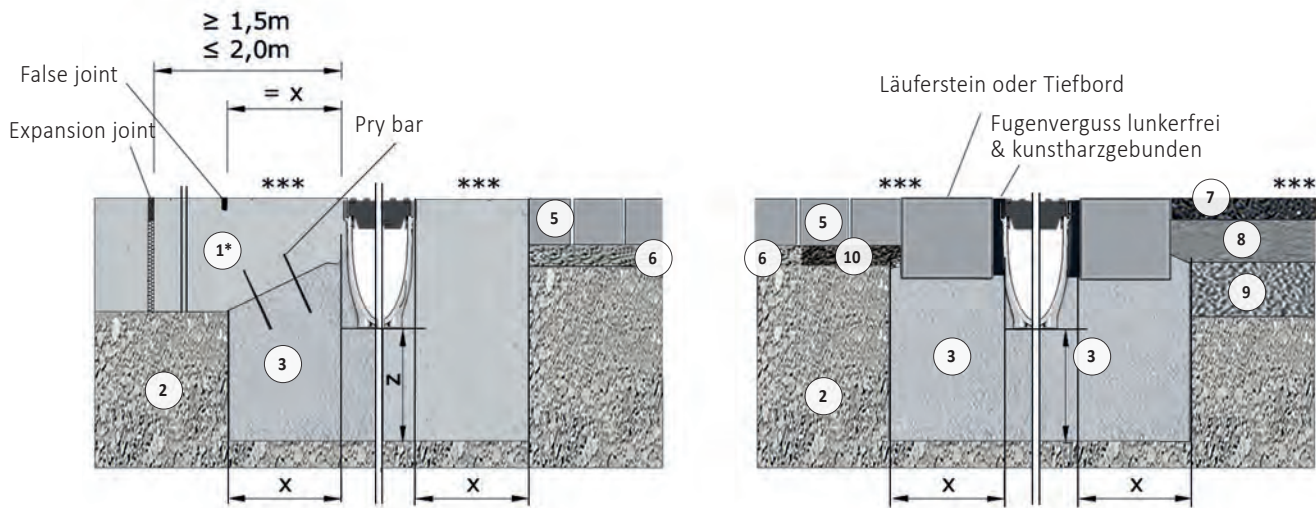
\*Reinforcement of the exposure class as specified by the responsible planner.

\*\*Not suitable for the diagonal or transverse travel of motorways and highways.

\*\*\*Drainage of highly dynamically loaded surfaces, e.g. cross drainage of highways, motorways and railway crossings, exclusively when installing our DM drainage channel systems and after consultation with our application technology. Inspection parts and inlet boxes must always be positioned outside dynamically loaded surfaces. Settlement-free, frost-resistant base layers must be laid in accordance with RStO.

\*\*\*\*Cross drainage of pedestrian streets, entrances to parking areas and comparably paved areas. Settlement-free, frost resistant base layers must be laid in accordance with RStO.

# INSTALLATION INSTRUCTIONS E 600



- 1-Road concrete
- 2-Base course according to RstO
- 3-Concrete coating
- 5-Pavement
- 6-Pavement bed
- 7-Bituminous base cover
- 8-Binder layer
- 9-Bituminous base layer
- 10-Mortar bed

\*Reinforcement of the exposure class as specified by the responsible planner.

\*\*\*Drainage of highly dynamically loaded surfaces, e.g. cross drainage of highways, motorways and railway crossings, exclusively when installing our DM drainage channel systems and after consultation with our application technology. Inspection parts and inlet boxes must always be positioned outside dynamically loaded surfaces. Settlement-free, frost-resistant base layers must be laid in accordance with RStO.

## FOUNDATIONS

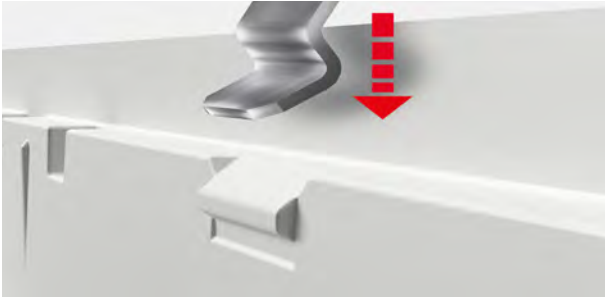
The requirements for the concrete with regard to durability against environmental influences must generally be specified by the planner by specifying the corresponding exposure class. For example: Exposure class for road concrete for the transverse drainage of highways and freeways C30/37 (LP), XF4, XM2 (Source: Cement Concrete Technology Information Leaflet B9 3.2006, www.beton.org)

Loading classes according to EN1433	A 15 kN	B 125 kN	C 250 kN	D 400 kN	E 600 kN
Foundation dimension X (mm)	> 80	> 100	> 150	> 200	> 200
Foundation dimension Z(mm)	> 80	> 100	> 150	> 200	> 200
Reinforcement of the concrete casing (3) as specified by the responsible planner	no	no	no	yes	yes
Concrete quality DIN EN 206-1/DIN 1045-2 For road concrete (1) ≥ C 30/37 with reinforcement	≥ C 12/15	≥ C 20/25	≥ C 20/25	≥ C 25/30	≥ C 25/30

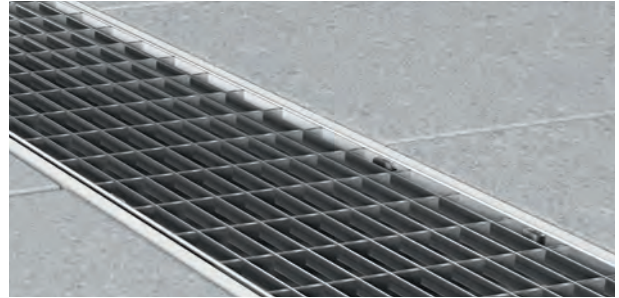
The adjacent covering must be designed in such a way that no horizontal forces act on the channel elements. After the installation, the drainage channel bodies must be fitted with covers to achieve the stiffening.

# CLIPFIX

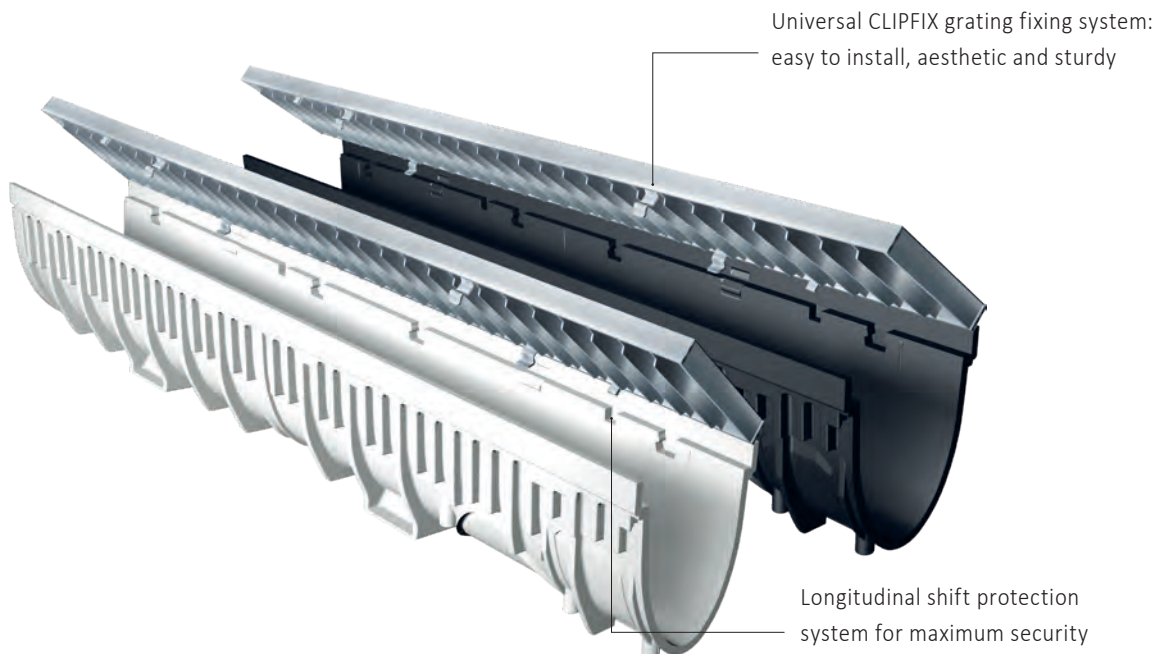
## UNIVERSAL GRATING FIXING MECHANISM



The MEARIN PLUS/EXPERT channels have been designed and optimised for our universal CLIPFIX grating fixing mechanism with longitudinal shift protection. The advantages: a large choice of gratings and an easy to understand product program.



Thanks to the CLIPFIX system, the channel and the grating offer an aesthetically pleasing solution when mounted, because no locking devices or screws are apparent on the outside.



# MEARIN PLUS AND EXPERT

## CHANNEL COVERS WITH CLIPFIX

MEA offers a wide range of covers for the MEARIN system that not only functional, but also sets standards in product design. From efficient mesh gratings to the the classical slotted gratings, up to the elegant design gratings, the name MEA also stands for quality, innovation and creativity.

### Slotted gratings made of galvanised steel or PAG:

- > The intelligent slot/grating design is a visual alternative to mesh grates. Particularly stable and weather resistant
- > Loading classes A 15 to C 250

### Ductile iron slotted gratings:

- > Especially suitable for extreme loads and heavily frequented areas.
- > Loading classes C 250 to E 600

### Longitudinal bar gratings:

- > The aesthetic solution made of galvanised steel, stainless steel or ductile iron
- > Loading classes A 15 to E 600

### Mesh gratings:

- > Gratings made of galvanised or stainless steel
- > Loading classes A 15 to D 400

### Ductile iron gratings:

- > Aesthetic solutions for use in representative areas
- > Loading classes A 15 to D 400



MEA PRIME grating, stainless steel, polished



Longitudinal bar grating made of galv. and stainl. steel



Slotted grating made of galvanised and stainless steel



Ductile iron slotted grating



Mesh grating made of galvanised and stainless steel



Ductile iron design grating WAVE



Plastic longitudinal bar grating in grey and black



Ductile iron design grating BAVARIA



PAG slotted grating (regranulate), heelguard



Ductile iron design grating HONEYCOMB



## MEA TOPSLOTS

### ELEGANT DRAINAGE SOLUTION WITH HIGH FUNCTIONALITY

In addition to its simple elegance, the MEA TSH TOPSLOT system offers a large array of advantages during and after installation.

The MEA TSH TOPSLOT system has been designed for loading classes from A 15 to E 600. Beyond the standard height of 160 mm, the MEA TSH TOPSLOT system can be delivered in very cost effective custom heights for specific projects. The flush positioned external contours simplify the paving.

The special, extra thick, zinc coating of the TSH TOPSLOT guarantees maximum functional reliability and best possible resistance to corrosion. The TSH system is also available in stainless steel for making it a unique and longlasting design solution for drainage purposes.





# IMEARIN PLUS AND EXPERT

## MEA TOPSLOTS FOR CHANNEL BODIES WITH OR WITHOUT SLOPE

Example clear width 100 mm



TS-H Topslot galvanised and stainless steel

TS-L Topslot, with and without dirt trap, galvanised and stainless steel

TS-C Topslot, plastic





TOWN CENTRES AND PEDESTRIAN AREAS



GARDENING AND LANDSCAPING



PARKING SPACES

# IMEARIN

AREAS OF APPLICATION



STREETS AND ROADS

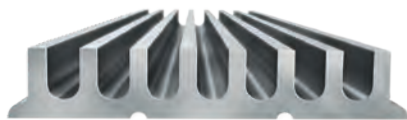


HOME AND GARDEN



INDUSTRY AND COMMERCE

# THE ADDITIONAL PRODUCT PORTFOLIO OF MEA WATER MANAGEMENT



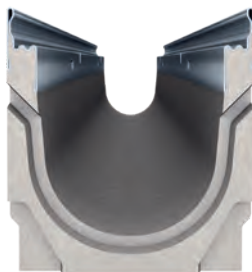
## **MEARIN PG EVO**

Drainage solution for multi-storey car parks



## **MEATEC II**

Professional drainage system for facades and terraces



## **MEADRAIN S**

Professional drainage systems for the heavy loaded areas



## **MEADRAIN DMD**

For the drainage of contaminated water along roads and highways



**BUILDING SUCCESS**

MEA Bautechnik GmbH ■ Sudetenstraße 1 ■ D-86551 Aichach ■ [www.mea-group.com](http://www.mea-group.com)  
Business unit MEA Water Management