WATER MANAGEMENT

MEA

BUILDING SUCCESS

MEADRAIN EN

DRAINAGE SOLUTIONS FOR HEAVY LOAD AREAS

HIGH QUALITY POLYMER CONCRETE DRAINAGE SYSTEMS

PROFESSIONAL DRAINAGE SOLUTIONS FOR INDUSTRY AND INFRASTRUCTURE

MEADRAIN EN / ENS


MAX. WT.
TARE WT.
PAYLOAD
CU. CAP.
MAN

MEADRAIN EN PREMIUM DRAINAGE SOLUTION FOR HEAVY LOAD AREAS

MEADRAIN EN/ENS SYSTEM OVERVIEW

MEADRAIN EN 1000

Clear width: 100 mm
Total width: 140 mm
Total heights: from 150 mm to 305 mm

- Channel section for linear fall (0.5%) and without fall
- Also available with integral outlet connection
- Loading class A 15 to F 900**

MEADRAIN EN 1500

Clear width: 150 mm
Total width: 190 mm
Total heights: from 220 mm to 320 mm

- Channel section for stepped fall (5%) and without fall
- Also available with integral outlet connection
- Loading class A 15 to F 900**

MEADRAIN EN 2000

Clear width: 200 mm
Total width: 240 mm
Total heights: from 280 mm to 380 mm

- Channel section without fall
- Also available with integral outlet connection
- Loading class A 15 to F 900**

MEADRAIN ENS 3000

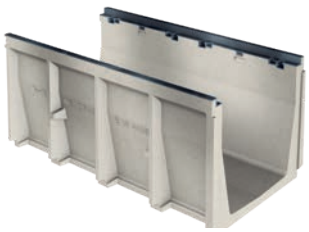
Clear width: 300 mm
Total width: 394 mm
Total height: 400 mm

- Channel section without fall
- Also available with integral outlet connection
- Loading class A 15 to F 900**

MEADRAIN ENS 3070

Clear width: 300 mm
Total width: 394 mm
Total height: 760 mm

- Channel section without fall
- Also available with integral outlet connection
- Loading class A 15 to F 900**



MEADRAIN ENS 4000

Clear width: 400 mm
Total width: 494 mm
Total height: 465 mm

- Channel section without fall
- Also available with integral outlet connection
- Loading class A 15 to F 900**

**From loading class D 400 not suitable for the cross drainage of high speed roads and motorways.

MEADRAIN EN DRAINAGE SYSTEM, PROFESSIONAL DRAINAGE SOLUTIONS FOR INDUSTRY AND INFRASTRUCTURE

MEA Water Management is one of the major players for drainage solutions in the world. We offer an extensive range of products, solutions, technical support and consulting for projects in all application fields.

Our MEADRAIN product portfolio is made of high quality polymer concrete and has been designed to respond all possible expectation for the construction of infra-structures such as airports, roads, terminals, logistic centers, industrial areas and much more.

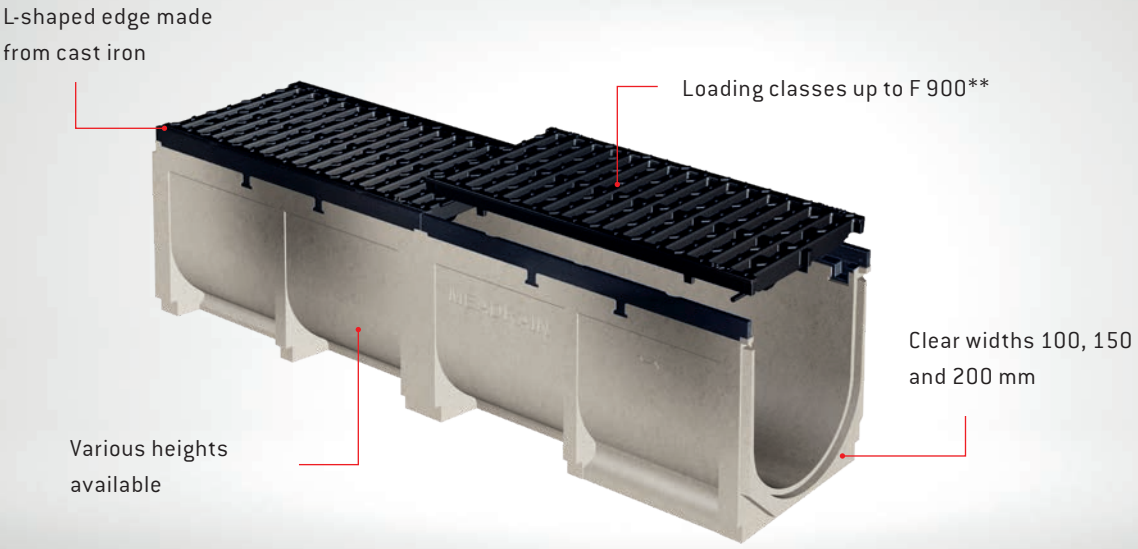
Our philosophy: Building Success. We commit to help and facilitate the work of our customers at each possible level of the construction chain. Therefore we offer a perfectly adjusted and complete product range in polymer concrete that fits all expectation.

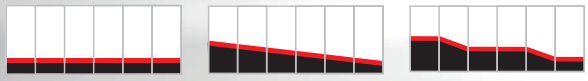
MEADRAIN EN:
Our product range for industry and Infrastructure.

**From loading class D 400 not suitable for the cross drainage of high speed roads and motorways.

MEADRAIN EN

- Drainage system for extreme environments
- Loading classes from A 15 to F 900**





No fall

Linear fall
(only for clear width 100 mm)

Stepped fall

MEADRAIN EN DRAINAGE SYSTEM FOR HEAVY LOAD APPLICATIONS

Next to appearance and the type of fall, the expected maximum load is the decisive criterion in the selection of a drainage system.

MEADRAIN EN channels have been designed to meet every expectation for all applications with extreme wheel loads such as logistic centers, harbours and areas with heavy duty traffic.

Variants: EN 1000, EN 1500, EN 2000
Loading classes from A 15 to F 900**
(according to DIN 19580 / EN 1433 standards)

- High quality polymer concrete for maximum resistance and reliability
- Almost wear and maintenance free
- Modular and lightweight construction
- Various fall possibilities
- Recyclable material
- Large choice of grating designs
- Protects groundwater
- Chemical resistant

**From loading class D 400 not suitable for the cross drainage of high speed roads and motorways.

MEADRAIN ENS DRAINAGE SYSTEM FOR EXTREME ENVIRONMENTS

The MEADRAIN ENS drainage system has been designed to respond to the evolution of society and increasingly heavier vehicles, may it be aircrafts, trucks, forklifters or even cars.

The MEADRAIN ENS system is made for:

- Airports
- Container terminals
- Port-side areas
- Logistic centers with intense forklift and truck traffic

The MEADRAIN ENS combines all the advantages of the EN system yet offering exclusive advantages for paramount sturdiness:

- Z profile edge rails made of cast iron for maximum stability and solidity
- Heavy duty gratings for highest loading classes
- General building authority approval

**From loading class D 400 not suitable for the cross drainage of high speed roads and motorways.

MEADRAIN PROFIX LOCKING MECHANISM EASY, FAST AND SAFE

PROFIX, RAPID GRATING LOCKING MECHANISM FOR MEADRAIN EN AND ENS CHANNELS

For all professionals who look for an easy, fast and convenient installation: MEADRAIN PROFIX locking mechanism.

Installation:

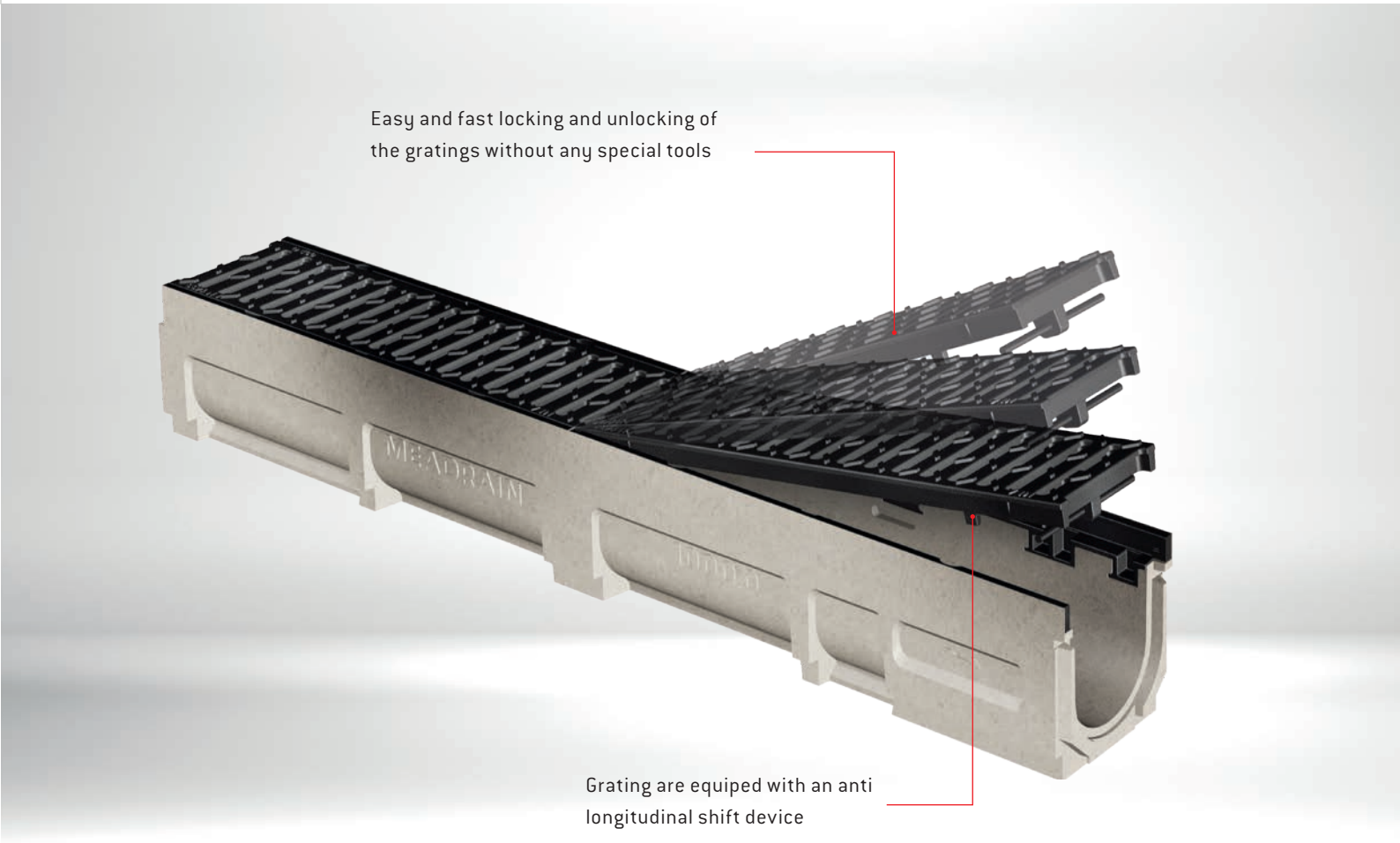
- Place the grating into the channel body
- Press in - it´s done

Removal:

- Symply use a screwdriver
- Lever the grating - it´s done

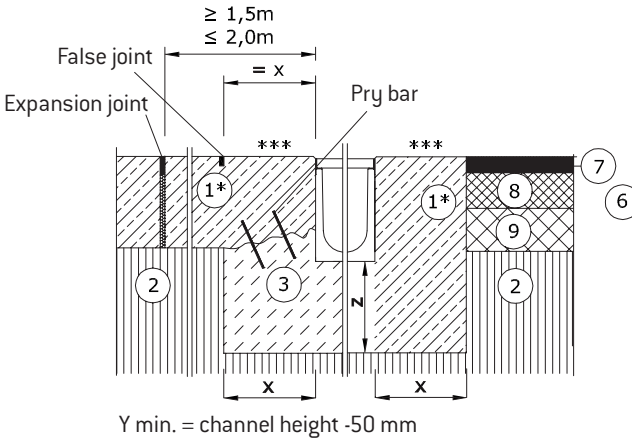
This professional fixing method is available for all non bolted heavy duty drainage channels.

- Longitudinal displacement security of the grating
- Long lasting, no rattling with vehicular traffic
- Long term functionality (even under extreme conditions)
- Easy and fast locking and unlocking of the gratings without any special tools



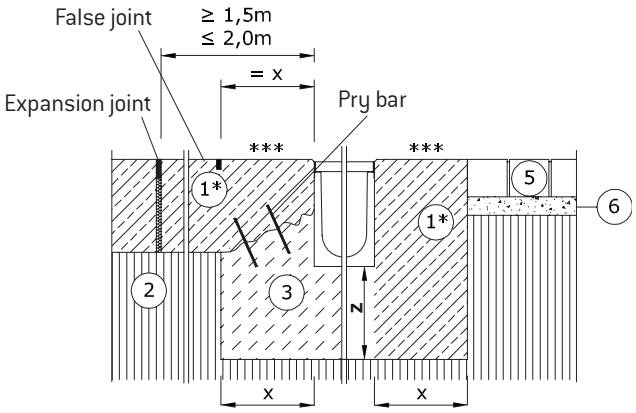
INSTALLATION INSTRUCTIONS

Lanes of roadways (also pedestrian roads), shoulders of roads and parking areas approved for all types of road vehicles. (Test force 400 kN)

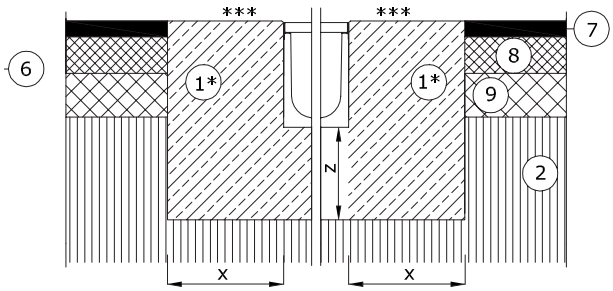


Y min. = channel height -50 mm

Areas that are driven upon by high wheel loads, e.g. harbours and dock facilities. (Test force 600 kN)



Surfaces that are driven on with particularly high wheel loads, e.g. aviation areas. (Test force 900 kN)



① Road concrete
② Base course according to RstO
③ Concrete coating
④ Grown soil
⑤ Pavement
⑥ Pavement base
⑦ Bituminous base cover
⑧ Binder layer
⑨ Bituminous base layer
⑩ Mortar bed

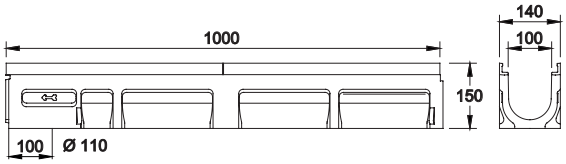
*Reinforcement of the exposure class as specified by the responsible planner.

***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.

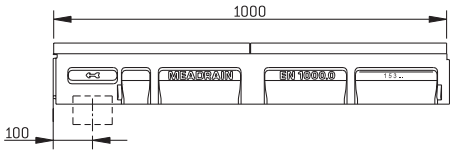
****Cross drainage of pedestrian streets, entrances to parking areas and comparably paved areas.
Settlement-free, frost-resistant base layers must be laid in accordance with RStO.

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.

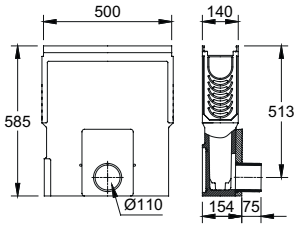
TECHNICAL DETAILS



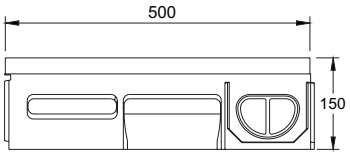
MEADRAIN EN 1000.0 channel [4]



MEADRAIN EN 1000.0/A channel with vertical outlet Ø 110 mm[8]



MEADRAIN EN 1000.EK110 silt box



MEADRAIN EN 1000.1 channel [4] [14]

> **REMARK** 4) Connection option for the vertical discharge Ø 110 mm; End cap with connector or gully
8) With tight formed-in drain socket Ø 110 mm
14) Connection possibility for corner, T- and crossing element

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 EN 1433	A 15 kN	B 125 kN	C 250 kN	D 400 kN	E 600 kN	F 900 kN
Foundation dimension X (mm)	> 80	> 100	> 150	> 200	> 200	> 250
Foundation dimension Z (mm)	> 80	> 100	> 150	> 200	> 200	> 250
Reinforcement of the concrete casing (3) as specified by the responsible planner	no	no	no	yes	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	≥ C 30/37

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.

POLYMER CONCRETE
THE QUALITY MATERIAL

MEA POLYMER CONCRETE

The special polymer concrete from MEA is remarkable for its outstanding physical and chemical properties. These make it an extremely reliable and versatile material in even the toughest conditions.

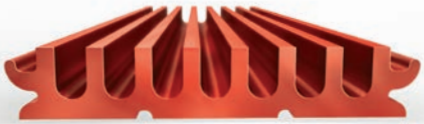
MEA polymer concrete channels are particularly eco-friendly. Mostly made out of minerals, polymer concrete channels are easy to recycle. Because of the quality material channels have a particularly long lifetime, saving future investments and unnecessary new building sites. Polymer concrete channels are the more extremely resistant to liquid chemicals and acids, making them the perfect protection devices for the environment and ground waters.

Last but not least, polymer concrete channels are significantly lighter than comparable concrete channels, making them considerably easier to install.

MATERIAL CHARACTERISTICS

Compressive strength	> 90 N/mm^2
Flexural tensile strength	> 22 N/mm^2
Water adsorption	Below 0.05%
Modulus of elasticity	25-35 kN/mm^2
Density	2.1 - 2.3 kg/dm^2
Water ingression depth	0 mm
Material structure	Capillary-free – ideal for the rapid discharge of water and dirt particles
Channel body weight	Significantly lighter than conventional concrete channels
Workability	Suitable for grinding disks, rock drills and chisels
Environmental compatibility	Eco-friendly building material with mineral admixtures
Ageing resistance	Entirely frost proof, wear-resilient, and maintenance-free. Highly resistant to liquid chemicals (pH range 3 to 9)

THE ADDITIONAL PRODUCT PORTFOLIO OF MEA WATER MANAGEMENT



MEARIN PG EVO
Drainage system for
multi-storey car parks

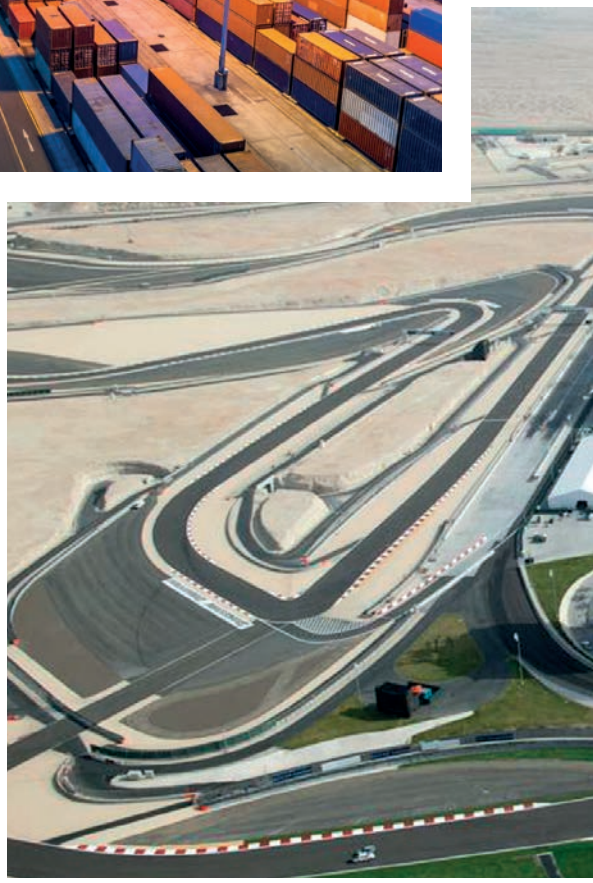
MEATEC
Professional drainage system for
façades and terraces

MEARIN
Professional lightweight
drainage system made of GRP

MEADRAIN TRAFFIC
Professional drainage systems
for infrastructure and traffic

HARBOURS AND CONTAINER TERMINALS

MEADRAIN EN APPLICATION AREAS



RACING AND TESTING TRACKS

AIRSIDES

ENVIRONMENT AND AGRICULTURE

LOGISTIC AREAS

INDUSTRY

BUILDING SUCCESS

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Business unit MEA Water Management

010264144 | GB | 04.2021