MEA®

MEA®DRAIN Traffic

Always at the forefront

- Flexible
- Accepts loads
- Innovative

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NEW MEADRAIN Traffic DM 1500 up to loading class F900

Professional drainage solutions for road and traffic applications

> opA > D > DM > DS > ENS > MEA®KERB

MEA®DRAIN

Systems in overview

Traffic

Continuous optimal performance

Pioneering drainage solutions for motorways and cities

MEA®DRAIN offers you pioneering solutions for the reliable and cost-effective drainage for all the roads of this world. Our product range contains clearly designed and innovative solutions made from the material polymer concrete.

- MEA®DRAIN D and DM for the drainage of motorways and expressways
- MEA®DRAIN opA channel system for open porous asphalt
- MEA®KERB combines a drainage channel and kerb in a single element for the streetscaping of urban areas
- MEA®DRAIN TRAM for the complex and varying requirements associated with tramways

No matter which channel system you use for the task in hand, MEA®DRAIN Traffic delivers decades of MEA® expertise in professional surface drainage for every conceivable application. Endow your planning with flexibility through innovative modular systems, a free technical support and advisory service and the outstanding physical and chemical properties of polymer concrete. Work with less weight. Do away with heavy lifting equipment for installation. Benefit from the durability and reliability of our products. You'll always remain at the forefront with MEA®DRAIN Traffic.

MEA®DRAIN

Facts

MEA®DRAIN D System:
The MEA® high-performance system, designed for extreme loads to class F900, including the cross drainage of expressways and motorways.
Options: D 1000 / D 2000

MEA®DRAIN DM System:
The efficient drainage system for traffic routes. Accepts loads up to class D400.
Options: DM 2000

Traffic D and DM System

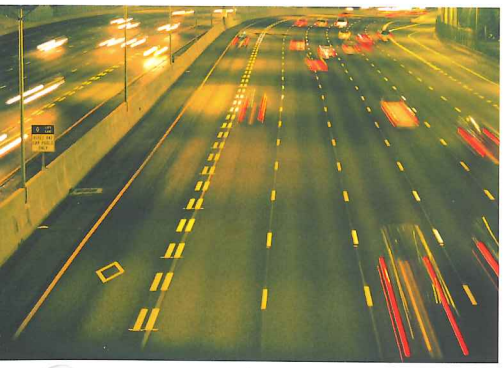
The standard solution for road and motorway drainage

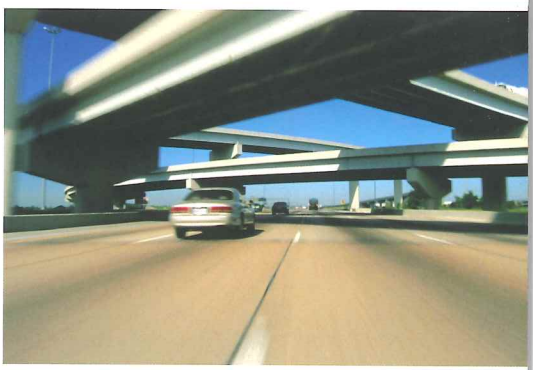
The loads exerted on traffic routes such as motorways, expressways and the operating surfaces of airports have all risen steadily in recent years, particularly as the result of the more frequent passage of HGVs and increasingly heavier vehicles. Selecting a modern and commensurately designed drainage system is critical for the on-going and reliable operability of a road or motorway.

Several key deciding factors come into play here: Firstly, the dynamic loads of fast-moving heavy traffic need to be accepted and transferred unfailingly. Secondly the system must guarantee traffic safety by ensuring the rapid drainage of water, even during high levels of rainfall. And last, but not least, it needs to be cost-effective – in planning, installation and during cleaning.

In short: The MEA®D 1000 / D 2000 channel system and the efficient DM system available from MEA® offer the ideal solutions to meet these heightened demands. In fact, it was precisely the following three factors that played a pivotal role in the development of these systems. The optimal acceptance and transfer of high dynamic loads required by fast-moving heavy traffic, compliance with the most stringent safety standards as well as an appealing cost/benefits profile.

MEA®DRAIN D and DM will withstand a diverse range of loads since the systems are made from polymer concrete, a material with superior tensile and compressive strength characteristics, and because their one-part construction of drain with integrated perforated cover guarantees maximum strength. These properties have been confirmed by the certification for loading classes D400 to F900, in which the D 1000 and D 2000 systems have been approved for the longitudinal and cross drainage of expressways and motorways





MEA®DRAIN

Traffic opA

The intelligent solution for demanding applications

The monolithic opA 2000 polymer concrete channel with a 200 clear width offers the perfect design for modern-day road construction requirements. To avoid cracks developing in the asphalt, it has been necessary to dispense with the roadside concrete liner of the channel's bedding during installation of the drainage channel.

This is now readily possible since the inverse design, the substantially strengthened roadside wall and the arched construction allow the opA 2000 to also withstand the highest traffic loads without any roadside bracing. The lowered lateral inlet openings have been specifically designed for use with single or two-layer open porous asphalt and to ensure optimal water discharge rates.

MEA®'s forward-looking expertise in presenting optimal solutions for specific needs is again much in evidence in the opA 2000 polymer concrete channel.

The advantages at a glance

① Channel groove completely visible / inspectable

② MEAgrip anchorage system to protect against displacement

③ Pre-formed indent to prevent displacement

④ Different wall thicknesses; an extremely thick, extremely strong, reinforced channel wall facing the road

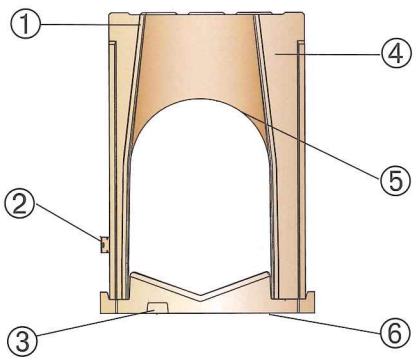
⑤ Static, perfectly arched shape

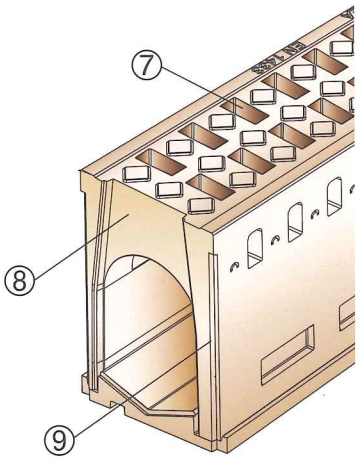
⑥ Bonded for the stress-relieved production of channel sections

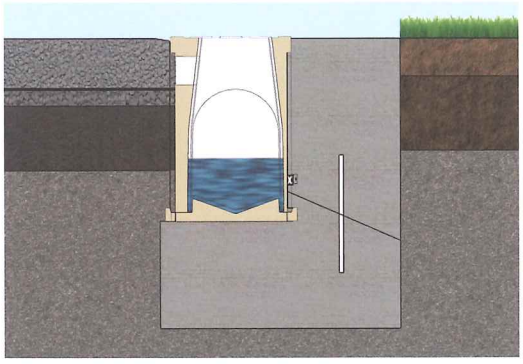
⑦ Standards-compliant inlet openings

⑧ The first channel section to exhibit an inverted structural shape; no downward narrowing

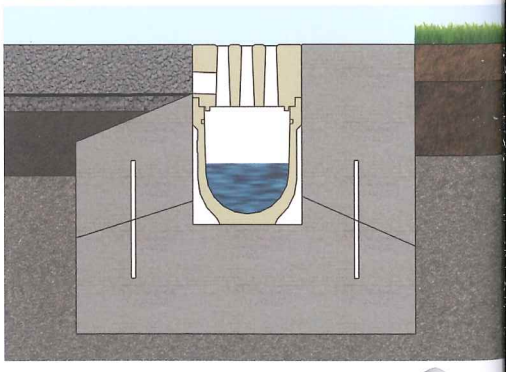
⑨ External channel groove for simple on-site sealing of the channel against emerging water







opA channel installation



Conventional monolithic channel installation

MEA®DRAIN

Fall

D 1000 channels:
> No fall
> Linear fall
> Stepped fall

D 2000 channels:
> No fall
> Stepped fall

DM 1500 channels:
> No fall

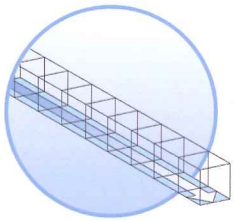
DM 2000 channels:
> No fall

opA channels:
> No fall

Traffic System

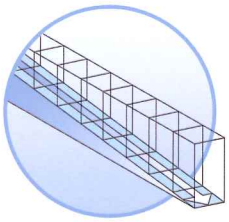
Overview of slope options

Water that cannot be drained away quickly enough after a downpour presents a considerable source of danger to road users. However this can be lessened by using a flexible drainage system that offers an appropriate water discharge rate and by taking regional rainfall volumes and local terrain types into account.
MEA®DRAIN Traffic offers three different internal slope options plus a diverse number of combination possibilities to cover most situations. What's more, the professional MEA® planning service supports partners with hydraulic calculations, layout plans and diagrams. The outcome is absolutely compelling: Precise accommodation of the terrain and optimised flow rates.
This combination even allows large volumes of surface water to be taken up and discharged quickly. The self-cleaning effect achieved by the smooth inner surfaces also guarantees long-term reliability and low maintenance costs.



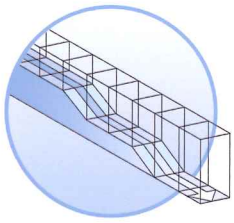
No fall

A constant-depth channel run, where no gradient is required or the natural gradient is sufficient.



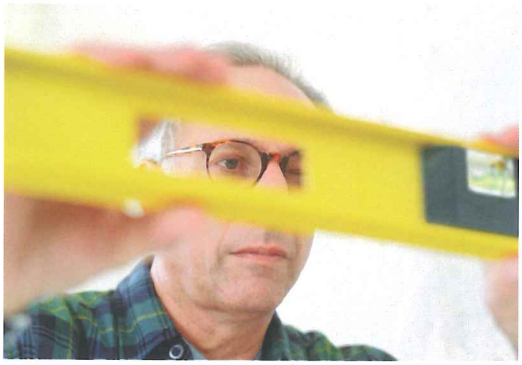
Linear fall

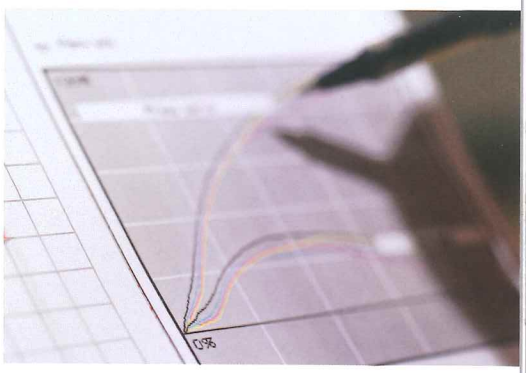
Channel runs with an integrated linear gradient and a constant gradient of 0.5%. Lengths of up to 20 m are possible as standard for channel runs. Channel runs of up to 30 m on request!



Stepped fall

Channel runs for cost-effective, efficient and uniform drainage are constructed by combining channel elements of different heights with one another.



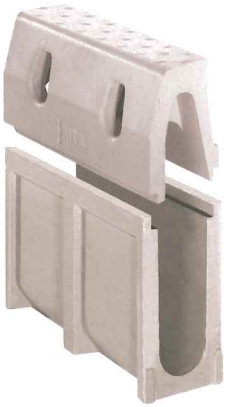


Traffic MEA®KERB

The versatile solution based on a modular principle

Are you planning a roadway with a kerb? Then MEA®KERB is the right solution for you. It's suitable for the linear drainage of rural and urban roads as well as roundabouts, property access roads, flyovers, car parks, lay-bys and bus stops.

Comprising radii, drop-kerb and centre stone units for access roads, plus a complete range of accessories, the MEA®KERB module in conjunction with the MEA® Planning Service offers you a perfectly coordinated programme for fast and professional installation. But that's not all: MEA®KERB gives you a choice. You can choose between a one-part or two-part design and installation heights of 320 mm or 500 mm. The advantage of two-part kerb elements: If a single kerbstone becomes damaged, it can be replaced individually – without costly groundwork operations.



MEA®KERB two-part

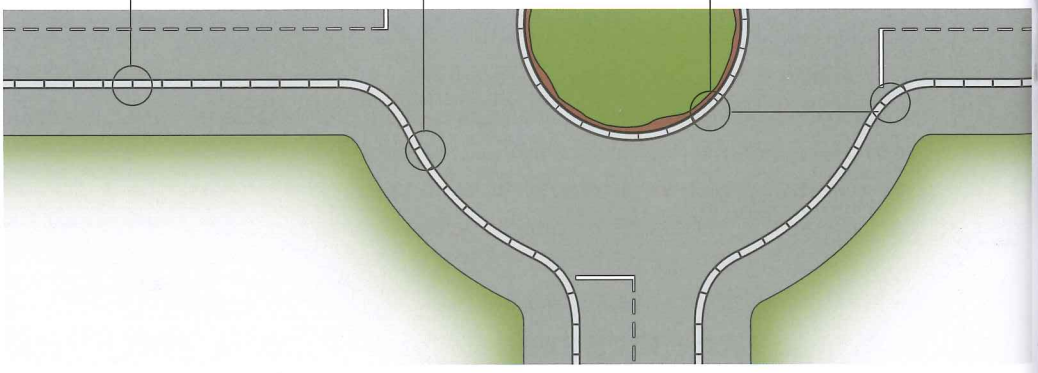
MEA®KERB one-part

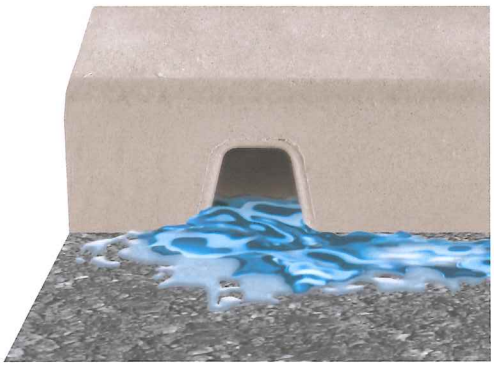
	Total height (complete)	Length (internal/external)
Bus stop kerb unit	375 / 555 mm	500 mm
High kerb unit	320 / 500 mm	500 mm
Centre stone unit	235 / 415 mm	500 mm
Road level compensation	195 / 375 mm	500 mm
Outer radius 6 -7 m	320 / 500 mm	487 / 500 mm
Outer radius 8 -10 m	320 / 500 mm	490 / 500 mm
Outer radius 11- 25 m	320 / 500 mm	493 / 500 mm
Inner radius 11- 25 m	320 / 500 mm	500 / 497 mm

Standard elements
- > High and centre stone unit
- > Drop kerb unit
- > Access unit
- > Gully unit

Elements for inner radius
- > 11 - 25 m

Elements for outer radius
- > 6 - 7 m
- > 8 - 10 m
- > 11 - 25 m





Polymer concrete

A quality material

Material

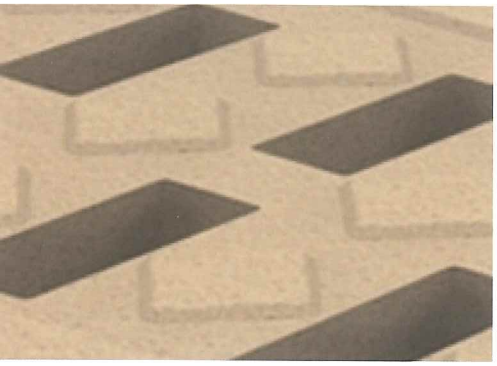
The special polymer concrete from MEA® is remarkable for its outstanding physical and chemical properties. These make it an extremely reliable and versatile material in even the toughest conditions. The material – natural mineral products like quartz, basalt and granite, bonded together with a resinous mixture – is particularly robust and has an extremely high flexural tensile and compressive strength. Another impressive feature of drainage channels in polymer concrete is their significant lightness over conventional concrete channels, making them considerably easier to install.

Because they are particularly resistant to liquid chemicals, MEA® channels in polymer concrete are the product of choice when it comes to eco-friendly drainage solutions and protecting groundwater. The numerous benefits of MEA®'s specially developed polymer concrete are what make this material the successful basis for the MEA®DRAIN Traffic channel system.

The material at a glance

- Impermeable, virtually pore-free
- Highly resistant to chemicals, oils and other aggressive substances
- Predominantly made of natural, mineral raw materials, like quartz, basalt and granite
- Significantly lighter than comparable concrete channels

Compressive strength	≥ 90 N/mm²
Flexural tensile strength	≥ 22 N/mm²
Water adsorption	Below 0.05%
Modulus of elasticity	25-35 kN/mm²
Density	2.1 - 2.3 kg/dm²
Water ingression depth	0 mm²
Material structure	Capillary-free – ideal for the rapid discharge of water and dirt particles
Channel body weight	Up to 75 % lighter than conventional concrete channels
Material structure	Highly resistant to liquid chemicals (pH range 3 to 9)
Workability	Suitable for grinding disks, rock drills and chisels
Environmental compatibility	Eco-friendly building material with mineral admixtures
Ageing resistance	Absolutely frost resistant, wear free and maintenance free



Traffic

Solutions in practice

Motorways and expressways

Bus stops and road crossings

Roads and traffic routes

Traffic

Solutions in practice

High-speed motor racing and test circuits

Airports

Tramways

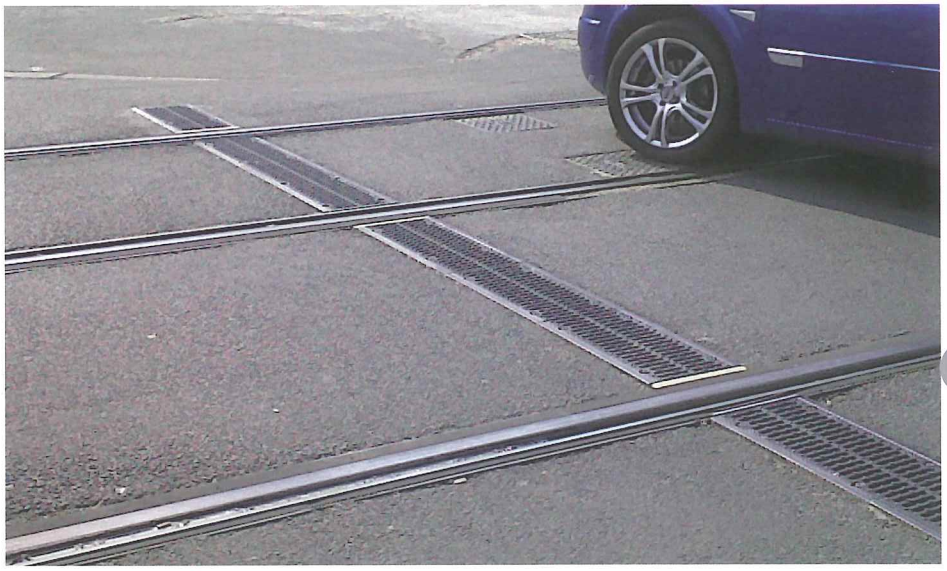
MEA®TRAM

The advantages at a glance

- Customised and professional solutions for your specific applications
- Channels and cover gratings in special lengths designed specifically to be installed across tramways
- Comprehensive project support by experienced MEA® specialists

Project solutions

The efficient and flexible solution for tramway projects



MEA®DRAIN

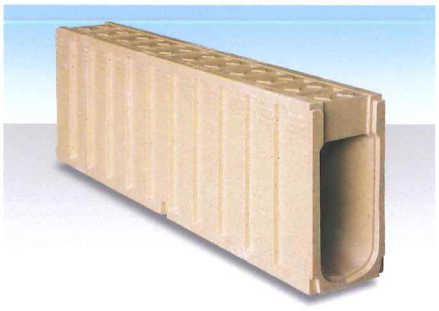
Traffic - System overview

opA 2000

Clear width: 200 mm
Total width: 300 mm
Total height: 420 mm

- Special channel for 2-layer open porous asphalt, without slope
- Inverted monolithic construction
- Loading class A15 to D400

DM 1540



Clear width: 150 mm
Total width: 204 mm
Total height: 480 mm

- Channel section without slope
- Monolithic construction
- Loading class A15 to F900 for standard variant / A15 to D400 for use in drain asphalt

DM 2000

Clear width: 200 mm
Total width: 254 mm
Total height: from 320 to 570 mm

- Channel section without slope
- Monolithic construction
- Loading class A15 to D400

D 1000

Clear width: 100 mm
Total width: 154 mm
Total height: from 250 to 350 mm

- Channel section without slope
- Monolithically bonded construction
- Loading class A15 to F900

D 2000

Clear width: 200 mm
Total width: 254 mm
Total height: from 404 to 504 mm

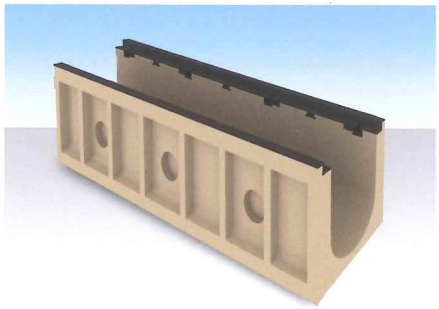
- Channel section for stepped fall (5%) and without slope
- Monolithically bonded construction
- Loading class A15 to F900

DS 1000

Clear width: 100 mm
Total width: 154 mm
Total height: from 215 to 315 mm

- Channel section for stepped fall (2.5%) and without slope
- Monolithically bonded construction
- Loading class A15 to D400

ENS 2000 Tram



Clear width: 200 mm
Total width: 294 mm
Total height: 330 mm

- Channel section without slope
- Also available with integral outlet connection
- Loading class A15 to D400

MEA®KERB

Clear width: 100 mm
Total width: 154 mm
Total height: from 195 to 555 mm

- Monolithic drainage system with top kerb section, without slope
- Monolithically bonded construction
- Loading class A15 to D400

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