MEADRAIN® Traffic

Polymer concrete drains for public roads

MEAKERB®

MEADRAIN® D 1000

MEADRAIN® D 2000

MEADRAIN® DS 1000

Easier to plan.
Quicker to lay.
Better for driving.
With MEADRAIN® Traffic.

Whether on the motorway or in town:

MEADRAIN® Traffic offers you pioneering solutions for reliable and cost-effective drainage for all roads anywhere in the world.

You can choose from two product lines with drainage systems made of polymer concrete:

The system **MEADRAIN® D 1000 / D 2000** for motorways and highways. The DS 1000 with slim slot grating for safe pedestrian traffic. In towns, on the other hand, there is no real alternative to **MEAKERB®,** the system, which combines drain and kerb in one element. No matter

MEADRAIN® D 1000

which drainage system you use for which task, with **MEADRAIN® Traffic** you can always rely on decades of MEA know-how in professional surface drainage. Planning flexibility is guaranteed by our innovative modular systems, free design service and the excellent physical-chemical properties of polymer concrete. Work with less weight. Save money on heavy installation appliances. You too can profit from the long service life and reliability of our products.

Polymer concrete – the material from which MEADRAIN® Traffic drains are made

Strong material

MEA polymer concrete consists primarily of natural raw minerals such as quartz, basalt and granite and is bound by means of a resin compound. Its excellent physical chemical properties makes it perfectly suited for use in the manufacture of drainage systems:
The material is low in pores, impervious to fluids and durable. It is highly resistant to pressure and bending and also shows excellent resistance to chemical liquids.

Light parts

The properties of MEA polymer concrete also have a positive effect on the production of the drains. The good formability of the material is especially suitable for the MEA system concept. This feature also allows optimum material production. The result is parts with up to 75% less weight than normal concrete drains, which allows installation without the use of heavy machines and thus saves time and costs.

Environmentally-friendly solutions

MEADRAIN® Traffic drain systems do not just allow flexibility in planning; they are also simple to install, cost-effective and sparing on the environment. On the one hand, the material with its mineral additives is environmentally friendly and, on the other hand, resistant to hazardous substances such as petrol, fertilizers, salts and various acids.

Property profile of the MEA polymer concrete:

MEADRAIN® Traffic	
Compressive strength	≥ 90 N/mm²
Flexural strength	≥ 22 N/mm²
Water absorption	less than 0.05 %
Modulus of elasticity	25-35 kN/mm²
Density	2.1-2.3 kg/dm³
Water penetration level	0 mm
Material structure	capillary-free – optimum for fast drainage of water and dirt particles
Drain body weight	up to 75 % lighter than normal concrete drains
Chemical resistance	high resistance to chemical liquids
Processing	easy with cutting disk, wall drill or chisel
Environmental friendly property	environmentally friendly material with mineral additives
Durability	absolutely frost resistant, little wear and tear and service free

Twice as good: MEAKERB® combines drainage and kerb in one system

The best ideas are the simplest:
This especially applies to **MEAKERB®**, a system specially developed for all road construction situations with kerbs.
MEAKERB® performs two tasks with just one system, because it intelligently combines the drain with the kerb.

The idea is very simple but the benefits offered by **MEAKERB®** are considerable: it can be used in many different ways - for example for motorways, traffic calming zones and even car parks.

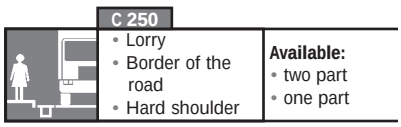
The **MEAKERB®** special modular principle also allows simple planning of drainage systems. The system also enables you to make significant savings in costs, for example in installation and maintenance. Finally, the system also offers fast, reliable drainage. This is guaranteed by the large diameter of the intake openings, the drainage optimized profile and the excellent surface property of the MEA polymer concrete.

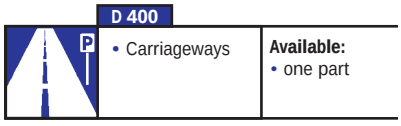
Load classes:

MEAKERB® *is available in a two part construction and in a one part construction with drain and kerb in one element.*

Two part construction certified up to:
• C250 (250 kN test force)

One part construction certified up to:
• D400 (400 kN test force)

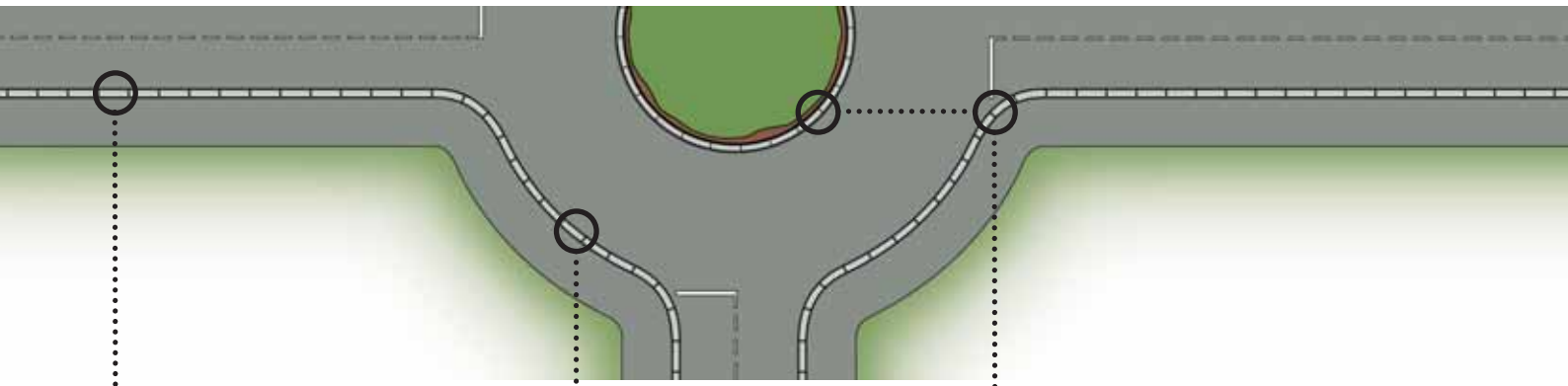




Versatile thanks to the modular principle

Are you planning a carriageway with a kerb? Then **MEAKERB®** is just the right thing for you. Suitable for the straight line drainage of town, country and inner city roads as well as for roundabouts, access roads to properties, flyovers, car parks, lay-bys and bus stops.

The **MEAKERB®** module offers you a programme that is perfectly co-ordinated for fast and safe installation with elements for radii, reduction stones and deep kerbs for access roads, as well as complete range of accessories and the special MEA planning service. Additionally – with **MEAKERB®** you have a choice. You can choose between one-part or two-part construction and the installation heights 320 mm and 500 mm. The advantage of the two-part kerb system is that a single damaged kerbstone can replaced separately – without time-consuming ground works.



Standard elements:

- *High and low kerb units*
- *Drop kerb units*
- *Access units*
- *Gully / silt box*

Elements for interior radius:

- *11 - 25 m*

Elements for outer radius:

- *6 - 7 m*
- *8 - 10 m*
- *11 - 25 m*

Details for complete installation heights	Total heights	Length(inside/outside)
Low and high kerb unit	375/555 mm	500 mm
Left and right drop kerb unit	320/500 mm	500 mm
Centre stone unit	235/415 mm	500 mm
Bus stop unit	195/375 mm	500 mm
Outer radius 6 – 7 m	320 mm / 500 mm	487 mm / 500 mm
Outer radius 8 – 10 m	320 mm / 500 mm	490 mm / 500 mm
Outer radius 11 – 25 m	320 mm / 500 mm	493 mm / 500 mm
Interior radius 11 – 25 m	320 mm / 500 mm	500 mm / 497 mm

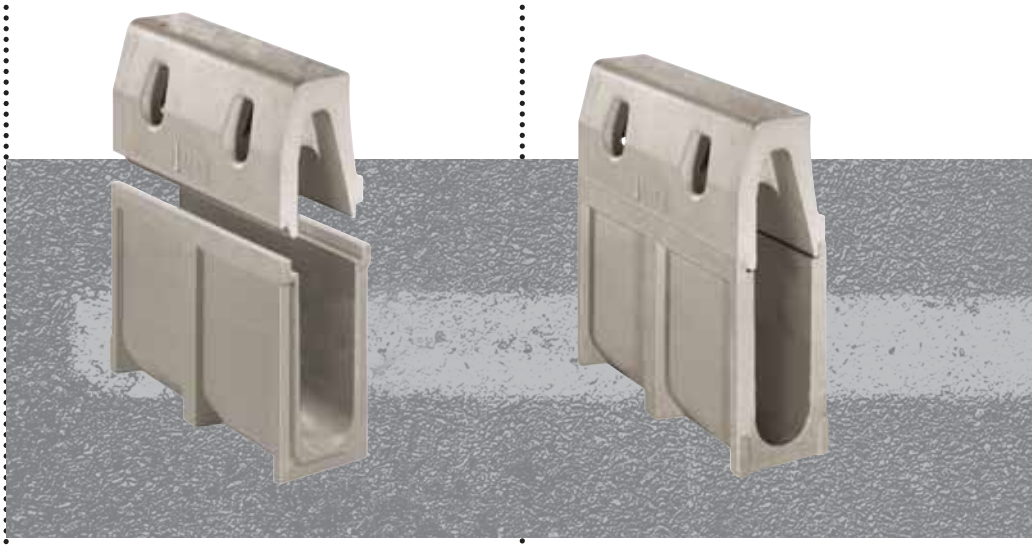
MEAKERB® range of products

An overview of the MEAKERB® advantages:

MEAKERB® is a modular system with all the advantages you have come to expect from one of the leading suppliers of surface drainage solutions – including personal consultancy by our experts, valuable assistance, available at **www.mea-group.com** and benefits that include:

- A modular principle, versatile in use and easy to plan
- Standard element two part for C250
- One part design for D400
- Two construction heights depending on drain capacity requirements
- Optimum drainage construction
- Simple installation without heavy machines through low component weight
- Quick, precise fitting due to an interlocking joint system
- Extreme stability and high resistance to aggressive materials
- Age resistant, extremely durable
- Resistant against frost and road salts
- Optimum self-cleaning effect

MEAKERB® two part



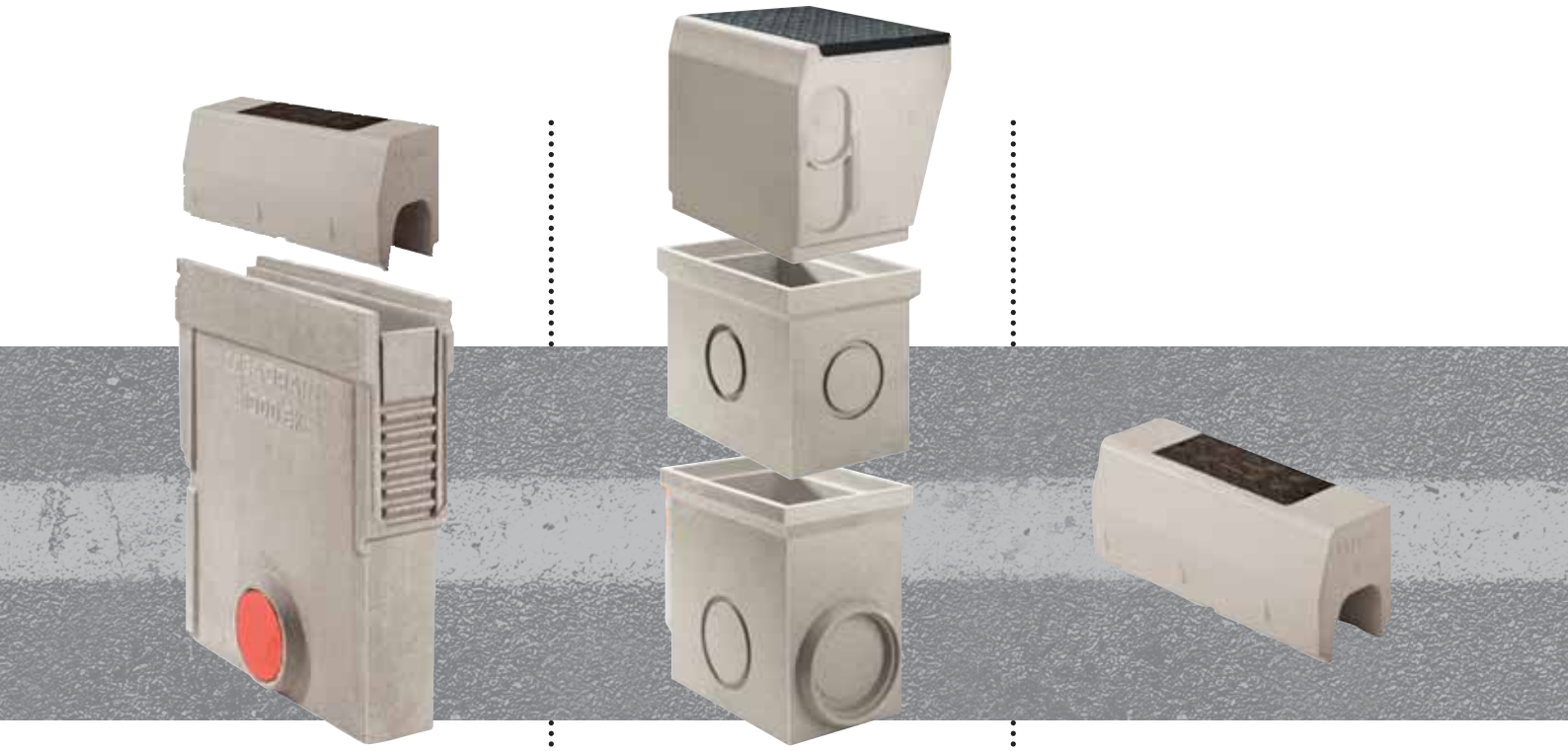
Installation height top: 190 mm
Installation height bottom: 130 mm and 310mm

- With drains for external and internal radii
- In case of two part construction fast cheap repair of damaged kerbs

MEAKERB® one part

Installation height complete:
320 mm and 500 mm

- With drains for external and internal radii



Silt box for MEAKERB®

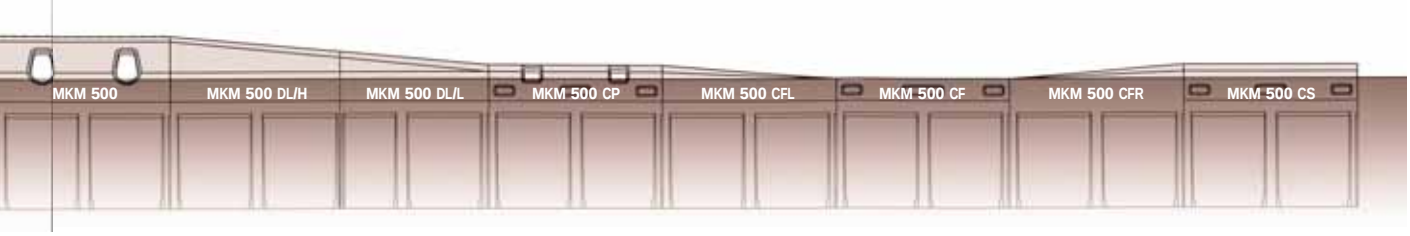
The silt box complete with access point, has a removable sediment bucket. The increased depth stops the water from backflowing into the channel.
Access is achieved by removing a traf-ficsecured solid cover. The silt box offers connection facility for Ø 110 and Ø 160 outlets.

Gully for MEAKERB®

The gully unit can store and discharge much greater volumes of water. There-fore it is appropriate for use on scemes with longer individual ***MEAKERB®*** *runs. The gully´s upper section has the same profile as the Kerb face and is fitted with a sediment bucket.*
A ductile iron cover locks into a cast frame, ensuring a traffic secure installa-tion.

MEAKERB® Access point

For areas with low discharge demands the ***MEAKERB®*** *access point offers easy access to the drain line in case of ser-vice, cleaning and installation work.*

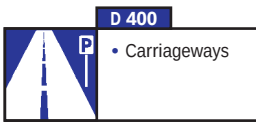


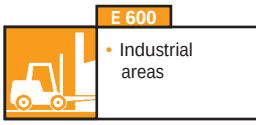
Fast and reliable drainage with MEADRAIN® DS 1000, D 1000 and D 2000

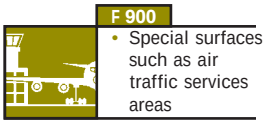
Heavily trafficked routes such as motorways, highways and operating surfaces at airports make extreme demands on any drainage system. It must firstly be able to accept and discharge dynamic loads from fast moving heavy goods vehicles. Secondly, the system must guarantee road safety by ensuring rapid drainage of large volumes of water at times of intense rainfall. Last but not least, it must be cost-effective – in design, installation and maintenance.

Loading classification:

- *D400 (400 kN test force)*
  Also suitable for cross drainage of high speed roads and motorways.
- *E600 (600 kN test force)*
- *F900 (900 kN test force)*







MEADRAIN® D 1000 / D 2000 has been developed to specifically meet all three of these criteria, so making it the obvious choice for such applications.

Optimum acceptance and dissipation of high dynamic loads

Fast moving heavy goods traffic requires a drainage system which complies with the maximum safety standards; as it will be exposed to constantly changing loads. **MEADRAIN® D 1000 / D 2000** provide reliable support for all such loads, ecause they are made of polymer concrete, which has superior compressive and tensile strength characteristics. Their one part construction combines the drain with an integrated slotted cover, so guaran-teeing total stability. These qualities are confirmed by the certification for load categories D400 to F900, which qualifies the systems for use on high speed roads and motorways; either 'in-line' or 'cross drainage' situations.

In addition to systems designed for highway use, we have also developed a system for safe pedestrian traffic: the **MEADRAIN® DS 1000**. The monolithic construction made of polymer concrete combines the drain with a slotted cover, guaranteeing extreme stability and is not vulnerable to vandalism or loosening. The special slimslot design of the grating offers a pedestrian friendly opening, which also allows easy crossing (surpassing) with high heels.

Safe playgrounds and shopping areas

The slimslot grating makes the system very suitable for areas where children play, as it has no removable parts which can lead to injuries. Other suitable application areas are pedestrian accessible roadways as well as the entrance to public and government buildings with frequent pedestrian traffic.

The perfect solution for all building sites

Fast drainage for high rainfall

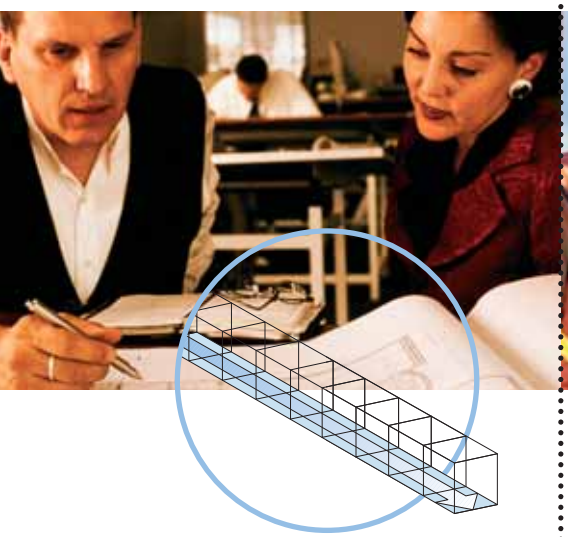
Water remaining on road surfaces after rain showers poses one of the greatest dangers for drivers. This danger can be reduced by installing a variable drainage system with a suitable drainage capacity; also through the consideration of local rainfall levels and terrain.

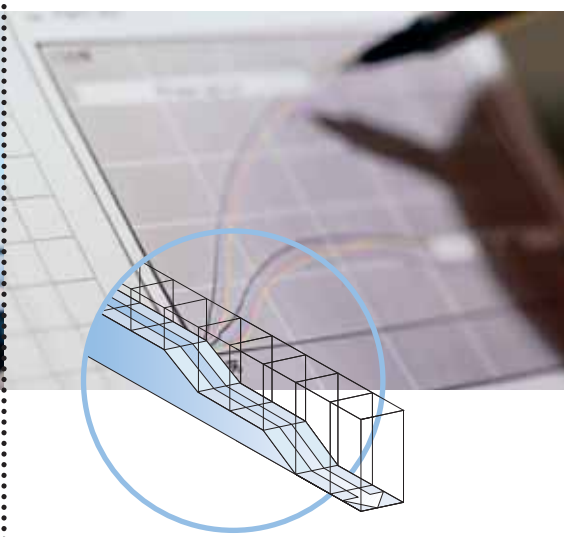
MEADRAIN® DS 1000, D 1000 / D 2000 offers three different gradients which have multiple combinations. In addition, the free of charge MEA design service provides support in the form of diagrams and hydraulic calculations. The results will convince you: designed to suit the terrain and offering optimum flow speed. The systems accept large volumes of surface water quickly thanks to the generous intake cross sections, thereby significantly increasing road safety. The smooth inner surface gives added reliability while guaranteeing a selfcleaning effect.

MEADRAIN® Traffic Traffic is also the solution for road surfaces constructed of porous asphalt. The water is absorbed into the asphalt and subsequently conducted into the drainage channel via side intake openings in the drain wall, so greatly reducing the risk of aquaplaning.

High cost-effectiveness and durability

MEADRAIN® DS 1000, D 1000 and D 2000 saves you time and trouble, as well as offering a significant reduction in costs. MEA does all the planning and layout. There are fewer components and no heavy machinery is required to lay the drain. Longevity is as-sured because MEA products are made from polymer concrete, which is virtually indestructible.





No fall

The straight drain line can be used where no gradient is required or where the existing drain gradient is sufficient. You can choose different installation heights and standard widths (1000 mm and 2000 mm).

Linear fall

Drain lines with integrated linear gradients, with a constant slope of 0.5 %, Suitable e.g. in cases where materials hazardous to the environment have to be discharged quickly. D 1000 and DS 1000 have a constant fall of 0.5% over a length of 20 metres.

Stepped fall

Drain lines with stepped gradients guarantee inexpensive, uniform drainage. Gradient obtained with a combination of connection elements. The foundation gradient is 2.5% for D 1000, DS 1000 and 5.0% for D 2000. The connection element replaces one metre of drain; no addition-al parts are required.

MEADRAIN® DS 1000, D 1000 and D 2000 product ranges

With less parts, optimal co-ordinated to each other, **MEADRAIN® DS 1000 / D 1000 / D 2000** represent systems with which you can quickly and reliably drain large areas.

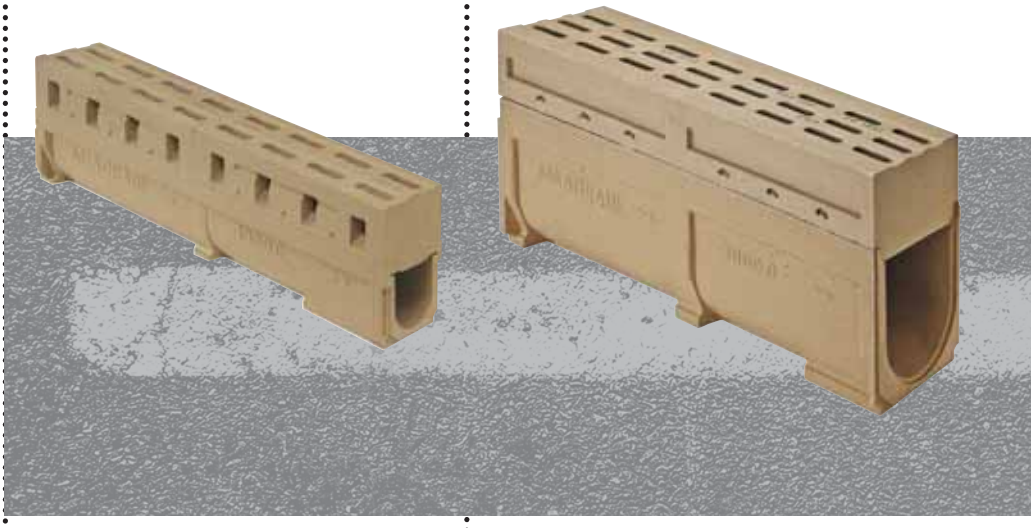
The programme includes units with various installation heights together with a comprehensive range of accessories.

Benefits include:

- Monolithic unit constructed from polymer concrete
- Simple to install, no heavy machines needed due to low individual component weight.
- Extreme stability and highly resistant to aggressive substances
- Ageing resistant, very durable
- Frost and road salt resistant
- Optimum self-cleaning effect
- Comprehensive MEA planning service with personal advice and design assistance including hydraulic calculations

MEADRAIN® D 1000

MEADRAIN® D 2000



Clear width: 100 mm
Construction width: 154 mm
Installation height: from 250 to 350 mm

- Choice of units available for level invert, stepped fall or 'in-built' gradient; (foundation gradient 0.5 %).
- Loading classification: D400 / E600 / F900

D 1000 DAL / DAR

- Special version with side inlets for drainage asphalt
- Load classes A15 to D400

Clear width: 200 mm
Construction width: 254 mm
Installation height: from 404 to 506 mm

- Choice of units available for level invert and stepped fall.
- Loading classification: D400 / E600 / F900

D 2000 DAL / DAR

- Special version with side inlets for drainage asphalt
- Load classes A15 to D400

High intake capacity
Both systems have generously dimensioned intake openings ensuring fast drainage of large volumes of rainwater; thus increasing road safety.

Flexible outfalls

The modular set-up of the **MEADRAIN®** *silt box and / or gully units makes for easy straightforward design. Outlets can be introduced at almost any point in the drain run.*

MEADRAIN® DS 1000

Clear width: 100 mm
Construction width: 154 mm
Installation height: from 215 to 315 mm

- Choice of units available for level invert and stepped fall.
- Loading classification A15 till D400

Silt box for D 1000 and DS 1000

The silt box for the D 1000 is exactly the same width as the rest of the drain run.
It has a sediment bucket which protects against below ground blockages. The system gets extra stability through a special coated riser frame. The bonded and coated steel frame has a matching cast removable PROFIX cover. This 'bolt free' fast locking mechanism ensures ease of maintenance.

Gully unit for D 2000

The gully unit, (as with the silt box for the D 1000), is custom built to match the nominal width of the D 2000. It is reinforced with a bonded steel frame, which has a special coating guaranteeing long life. Again the inclusion of a matching cover with PROFIX fast lock results in low maintenance costs.

End cap / outlet

Polymer concrete end caps can also be utilised to start or finish off a drain run. They are available either with or without a horizontal outlet.

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