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Product Selector

Railways & LRT Systems

Safe and effective linear surface drainage for transport infrastructure and associated facilities.

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World Leader

Reliable Performance

A world leader in the manufacture of modular surface drainage systems, HAURATON drainage products have been supplied onto major projects within international markets for over sixty-five years.

We developed our first linear drainage system in 1956. Since that time the HAURATON brand has become known around the world as a benchmark for quality, reliability, durability and service.

Environmentally Aware

HAURATON has environmentally sound production facilities, processes and procedures.

RECYFIX systems are manufactured from recycled Polypropylene (PP), which is 100% recyclable following life-time use.

HAURATON drainage systems can assist in the assignment of credits based on the BREEAM and LEED rating systems. HAURATON maintains an Environmental Management System according to DIN EN ISO 14001:2015

Refer to HAURATON for further information.

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Surface Drainage

Product Range

HAURATON offers a wide range of external surface drainage systems suitable for a variety of project applications, including residential, commercial, municipal, industrial, military, transport and major infrastructure projects.

FASERFIX – Strong and durable drainage channels in Fibre-Reinforced Concrete (FRC).

RECYFIX – A robust, high-performance range in corrosion-resistant composite materials (PP, PA-GF). HAURATON is the innovator and market-leader in this field and provides the widest range of commercial-grade composite channel systems available.

SPORTFIX, **DACHFIX**, **DRAINFIX CLEAN** and **RECYFIX TRAM** are specialist ranges available for unique applications.

Systems can be supplied with a variety of functional, decorative and HeelSafe gratings or with discreet 'longitudinal' slot channel designs, for load-class applications from A 15kN up to F 900kN, offering significant choice and flexibility.

With superior design and engineering, HAURATON sets the industry standard with high-quality, visually aesthetic and technically innovative products that meet project requirements and complement modern building and landscape design.

Product Selectors

Our Product Selector's have been designed to provide industry professionals with a quick, simple and clear guide to choosing the appropriate HAURATON system to suit their project requirements.

Each Product Selector include's project applications with similar needs regarding loading and system performance:

- Roof Terraces, Balconies & Facades
- Public Realm & Shared Space
- Car Parks & Commercial
- Industrial
- Ultra-Heavy-Duty
- Airports
- Ports & Terminals

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Railways & LRT Systems

Safe and effective linear surface drainage for transport infrastructure and associated facilities.

Drainage for Platforms, Trackside and Rail Infrastructure

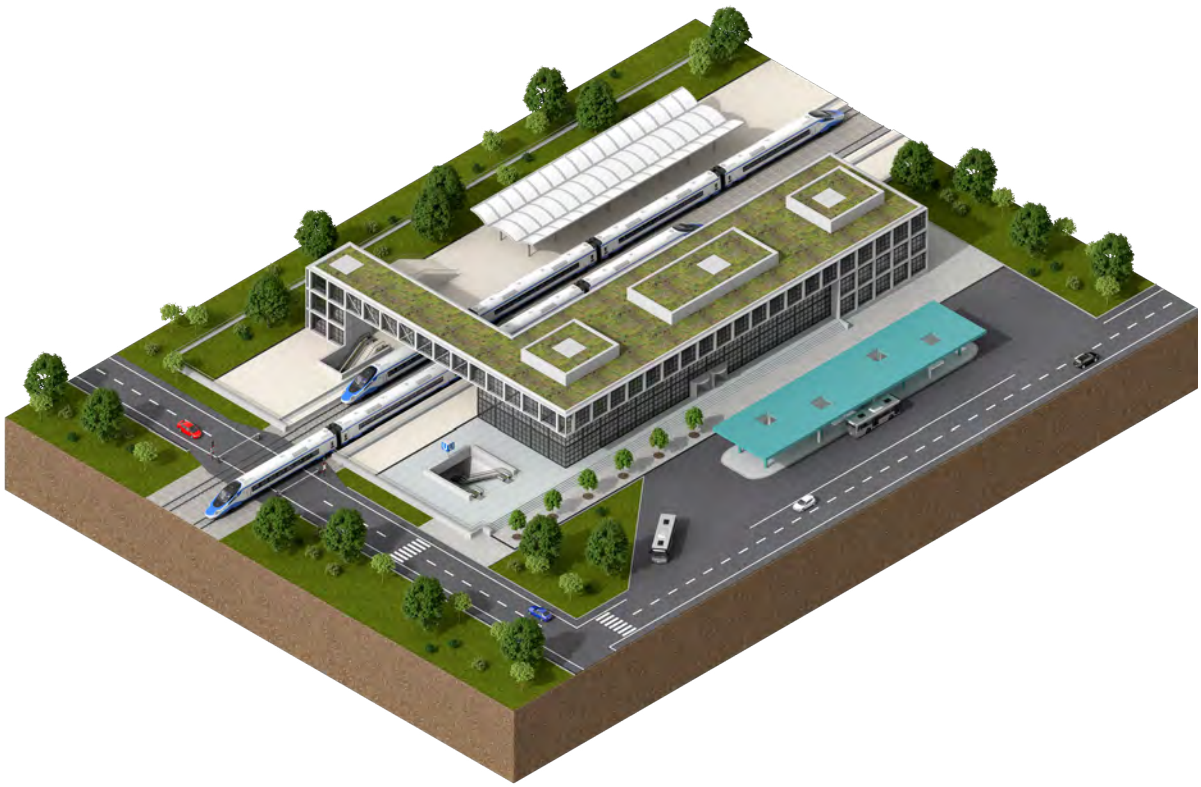
Railways and Light Rail Transit (LRT) systems serve as a transport link for many people for work, social events or a transfer between airports, cities and towns.

For such infrastructure, it is essential to have well-designed and efficient surface drainage systems to ensure minimal disruption to services, reduce degradation of mechanisms and keep commuters safe.

Depending on the station or time (e.g. peak / off-peak), rail and LRT platforms can expect to see anything from light to heavy footfall. Linear drainage must be durable enough to cope with continual foot traffic to ensure longevity. As this is a public area, HeelSafe gratings are essential for pedestrian safety.

The safe removal of surface water on railway platforms can help prevent run-off from going onto the track. The material of the drainage system should also be taken into account for platform drainage.

As an accredited supplier for Network Rail under the Rail Industry Supplier Qualification Scheme (RISQS approval), HAURATON understands the requirements for providing the right solution for these specialised projects.



Railways & LRT Systems

System Requirements

Railways and Light Rail Transit (LRT) environments typically include the following characteristics:

- Medium to heavy-duty loads; C 250 – F 900 (wheel, static, impact and dynamic; dependent on location / application). Channels subject to traffic by service vehicles; D 400 load often specified for these locations.
- Medium to high traffic flow (braking, turning and angled approach at low speed). Pedestrian use is intensive.
- Varied wheel type and configuration (solid / small-wheeled, pnuematic, service vehicles with single-tyre / multi-tyre / single-axle / double-axle).
- Systems required to be safe, aesthetic, durable, practical and easy to maintain. HeelSafe grating designs often selected.
- Composite channels / gratings with non-conductive, anti-static properties are recommended adjacent to electrified lines to reduce the effects of flux and provide a safe platform environment for passengers.
- System / grating designs with high intake capacity for efficient drainage of safety-critical areas.
- Decorative and general surfaces (asphalt, block paving, stone sets, granite, tiles, resin surfaces, concrete etc).
- Systems with neat, discreet surface detail to complement contemporary design of modern terminal buildings and public spaces, and to accommodate a variety of finishes.
- Shallow channel options for areas with restricted installation depth (eg platforms).
- Corrosive environments dependent on location.

HAURATON systems meet and exceed the requirements for Railways, LRT systems and associated facilities, providing a safe, efficient and cost effective surface drainage solution.

Typical Applications

Applications regarding railways and LRT systems include:

- Platforms
- Access Roads
- Terminal Buildings
- Communal Spaces
- Stairways & Underpasses
- Trackside & Tunnel Drainage
- Rolling Stock Workshops & Sheds
- Parking Areas / Park & Ride Schemes

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RECYFIX PRO – The Perfect Solution

Non-Conducting, Anti-Static, Safe!

Railway projects have high demands and multiple requirements regarding drainage of busy platforms and public spaces, including:

- Quick, efficient drainage of surface water
- High safety standards
- Shallow installation depths
- Aesthetic appearance in keeping with the stations design
- Strong, durable, practical systems

RECYFIX PRO modular linear drainage channels (recycled polypropylene) fitted with FIBRETEC polyamide (PA-GF) composite gratings is ideal for providing safe and effective surface drainage on platforms adjacent to electrified lines, due to the following:

- Non-conducting, anti-static (no earthing work required); reduce the effects of flux
- Corrosion free (unaffected by regular de-icing in winter)
- High intake capacity
- HeelSafe and anti-slip gratings
- Strong, durable, impact resistant
- Low long-term maintenance costs
- Shallow inverts for platform construction
- High environmental credentials

Also available in a range of colours to complement the station design.

If ever there was a product perfectly suited to a safe and secure railway platform environment, this is it.

RECYFIX PRO with FIBRETEC gratings has been installed at numerous railway stations around the world.

RECYFIX MONOTEC is a monolithic linear drainage system with integral grating manufactured from high performance modified polypropylene. The same characteristics apply, offering another perfect and safe solution for railways and associated infrastructure.

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Trackside Drainage

Lightweight, Cost-Effective and Practical

Without efficient trackside drainage, storm events can disrupt services caused by surface water flooding. Any engineering work carried out trackside can have an impact on rail operators and commuters.

Speed of installation plays a major role to reduce the amount of inconvenience and bringing operations back up and running.

Drainage channels that are easy to handle and low in weight provide a quick and simple installation.

RECYFIX modular linear drainage systems offer a cost-effective solution as they don't require any lifting equipment on-site.

RECYFIX channel material (recycled polypropylene) is resistant to ground vibration that could occur in a trackside location.

When selecting the appropriate drainage system for your trackside project, HAURATON's technical support team will consider the overall design, ground conditions, track usage and local climate to achieve accurate hydraulic calculations and correct channel sizing.

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Rolling Stock Workshops & Sheds

Drainage System Requirements

Safe, efficient, durable and corrosion resistant surface drainage is also required for support infrastucture such as workshops and sheds.

It is recommended to choose grated linear drainage systems for internal use to provide entry into the channel system for easy retrieval of hardware.

Rolling stock, equipment and surfaces require regular cleaning and maintenance.

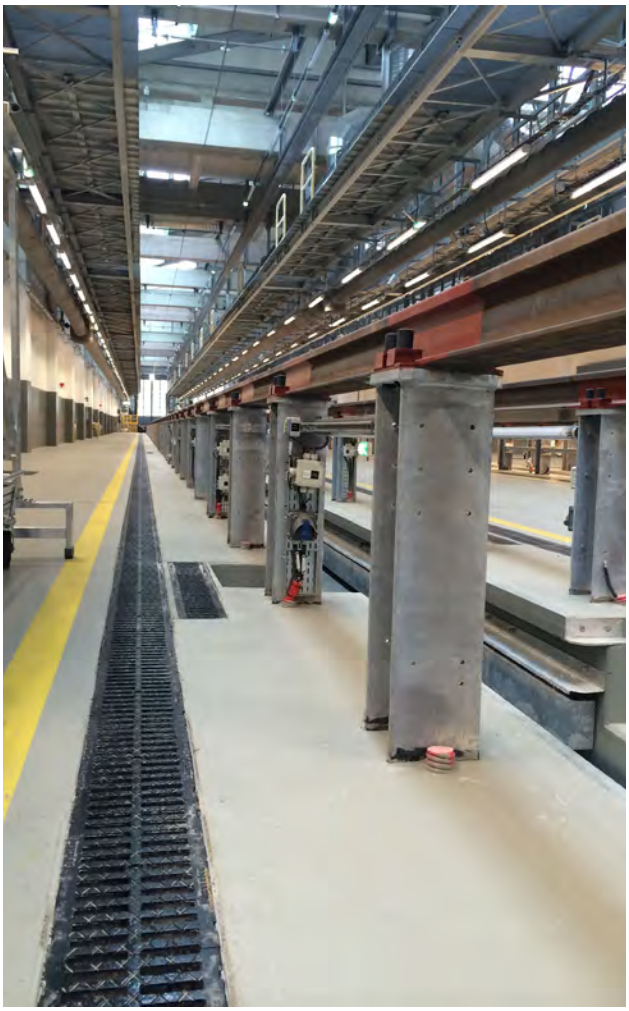
These areas are typically subject to pollutants such as cleaning fluids, fuel / oil hydrocarbons, heavy metals, microplastics, contaminated sediments and more.

HAURATON has a dedicated rainwater treatment channel (DRAINFIX CLEAN) that collects, filters, treats and releases purified water back into natural watercourses or sewer networks.

A range of light liquid separators is also available (AQUAFIX).

Refer to the following systems:

- RECYFIX NC (D 400 – E 600)
- FASERFIX KS (D 400 – E 600)
- FASERFIX SUPER (D 400 – F 900)
- DRAINFIX CLEAN (D 400 – F 900)
- AQUAFIX Light Liquid Separators



RECYFIX STANDARD

Lightweight, cost-effective and versatile, **RECYFIX STANDARD** is perfect for areas subject to heavy pedestrian use and occasional traffic by medium load vehicles.

RECYFIX STANDARD includes a visible edge detail for enhanced rigidity at the surface.

Available in nominal widths from 100mm to 300mm, and with a variety of 'lay-on' grating designs and materials, **RECYFIX STANDARD** provides a practical and economic option for linear drainage. Refer to product brochure.

Key Features

Material
- Modified Polypropylene (PP) composite

Loading
- System load rated to C 250 (EN 1433: 2002)

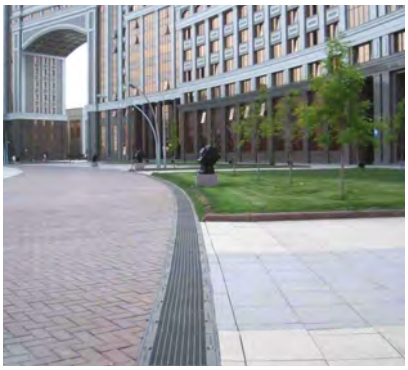
Channel Widths
- 100, 150, 200 & 300 mm

Channel Lengths
- 1.0m & 500mm (in some sizes)

Grating Options
- Lay-on design
- Load options ranging from A 15 – C 250 (EN 1433: 2002)
- Variety of grating designs and material's available
- Refer to product brochure

Channel Configuration
- Constant-depth (same channel depth)
- Stepped-fall

Edge Detail
- Integral polypropylene edge (visible on the surface)



RECYFIX PRO

A medium-duty system with practical design suitable for a variety of applications up to D 400 loading. When fitted with a composite grating, **RECYFIX PRO** is fully corrosion resistant, non-conductive and anti-static; reducing long-term maintenance costs and avoiding expensive earthing works.

RECYFIX PRO incorporates a discreet polypropylene edge-frame formed as part of the channel body structure, for improved rigidity and enhanced aesthetic appearance. The system is pre-assembled, lightweight and compact for quick and easy installation on site. Refer to product brochure for detailed information.

Key Features

Material
- Modified Polypropylene (PP) composite

Loading
- System load rated to D 400 (EN 1433: 2002)

Channel Widths
- 100, 150, 200 & 300 mm

Channel Lengths
- 1.0m & 500mm (selected depths)

Grating Options
- Inlay design
- Load options ranging from A 15 – D 400 (EN 1433: 2002)
- Variety of grating designs and material's available
- Refer to product brochure

Channel Configuration
- Constant-depth (same channel depth)
- Stepped-fall

Edge Detail
- Polypropylene edge-frame
- Integral part of channel body structure

*Non-conducting, anti-static, safe. Ideal for platforms adjacent to electrified lines. No expensive earthing works required.

RECYFIX PLUS

A medium-duty system selected for use when durability and aesthetics are important project requirements. **RECYFIX PLUS** incorporates a neat and discreet steel edge-rail that accommodates all surface finishes and complements contemporary features in modern buildings and landscape design. This design feature also provides improved rigidity and protection at the channel edge.

RECYFIX PLUS is fitted with a range of 'lay-on' gratings in a variety of materials, designs and loading options up to D 400. Refer to product brochure for detailed information.

Key Features

Material

- Modified Polypropylene (PP) composite

Loading

- System load rated to D 400 (EN 1433: 2002)

Channel Widths

- 100, 150, 200 & 300 mm

Channel Lengths

- 1.0m & 500mm (selected depths)

Grating Options

- Lay-on design
- Load options ranging from A 15 – D 400 (EN 1433: 2002)
- Variety of grating designs and material's available
- Refer to product brochure

Channel Configuration

- Constant-depth (same channel depth)
- Stepped-fall

Edge Detail

- Steel edge-rail fitted

Two options:

- Galvanised steel (DX51D+Z275-MA-C)
- Austenitic stainless steel (AISI Grade 304; EN CNS 1.4301)
- Neat, discreet, rigid and aesthetic

RECYFIX MONOTEC

Designed and installed as a single monolithic unit, **RECYFIX MONOTEC** is quick and easy to install and provides a stable, safe and secure surface environment for users. **RECYFIX MONOTEC** is lighter and has higher drainage capacity compared with alternative mineral-based systems (for equivalent channel sizes and installed dimensions).

Manufactured from reinforced Polypropylene (PP) composite, channel units are strong, durable and UV-stable, with high impact, chemical and corrosion resistance for low-cost maintenance during life-time use. Refer to product brochure for detailed information.

Key Features

Material
- Reinforced Polypropylene (PP) composite

Loading
- System load rated to D 400 (EN 1433: 2002)

Channel Widths
- 100 & 200 mm

Channel Lengths
- 1.0m

Grating Options
- Monolithic channel with integral grating
- D 400 (EN 1433: 2002)
- Slotted grating design (FIBRETEC style)
- Reinforced Polypropylene (PP) composite

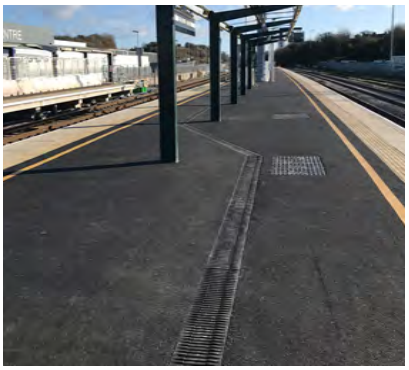
Channel Configuration
- Constant-depth (same channel depth)
- Stepped-fall

Edge Detail
- Monolithic design; channel edge and grating combined

*Not suitable for E 600 and F 900 load applications subject to traffic by forklift trucks and HGV's.

*This system is especially resilient to dynamic forces caused by the turning/twisting action of wheels.

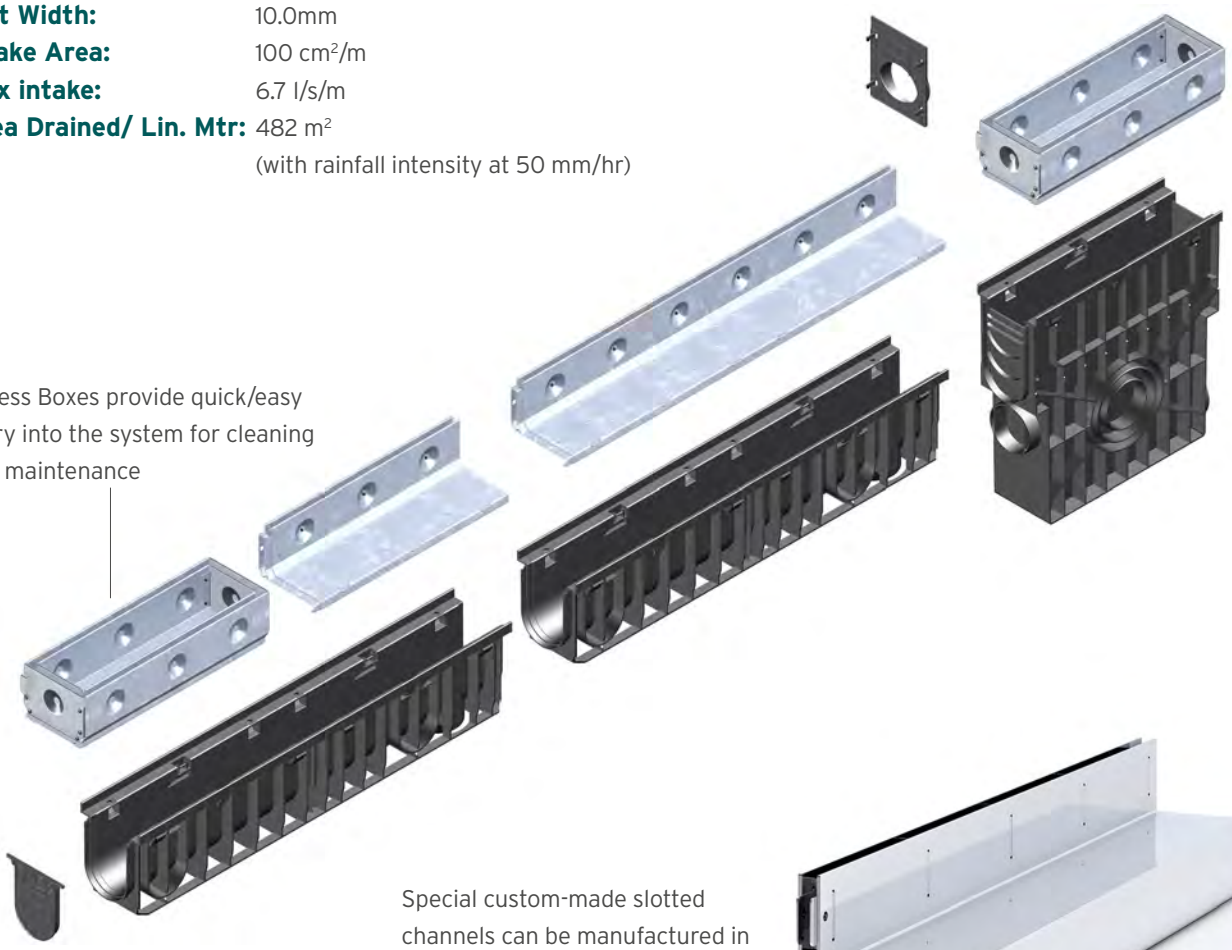
*Non-conducting, anti-static, safe. Ideal for platforms adjacent to electrified lines. No expensive earthing works required.



SLOTTED CHANNEL

Further information regarding intake capacity is available on request.

Slot Width: 10.0mm
Intake Area: 100 cm²/m
Max intake: 6.7 l/s/m
Area Drained/ Lin. Mtr: 482 m²
(with rainfall intensity at 50 mm/hr)



Access Boxes provide quick/easy entry into the system for cleaning and maintenance

Special custom-made slotted channels can be manufactured in galvanised or stainless steel for unique project applications. Refer to 'Customised Drainage Solutions'.

SLOTTED CHANNEL

SLOTTED CHANNEL achieves high standards in quality and design, combining both aesthetic appeal and practical performance. The discreet linear surface detail complements modern building architecture and external landscape design, achieving a simple, safe and durable installation.

With high intake capacity through the surface slot opening, **SLOTTED CHANNEL** provides efficient and effective drainage of surface water in locations around the world that experience the highest rainfall intensities. Test data available on request. The **SLOTTED CHANNEL** system includes an access cover accessory for quick, simple cleaning and maintenance. Refer to product brochure for detailed information.

Key Features

Material
- Modified Polypropylene (PP) composite
- Fibre-reinforced concrete

Loading
- Channel body load rated to D 400 / E 600 (EN 1433: 2002)

Channel Widths
- 100, 150 & 200 mm

Channel Heights
- Refer to Slotted Channel brochure
- Slotted channels can also be custom-made to suit most site requirements

Channel Lengths
- 1.0m & 500mm (selected depths)

Slotted Cover Options
- Load options ranging from A 15 – E 600 (EN 1433: 2002)
- A-symmetric cover design
- Slot height options of 105mm (UK)
- Slot height options of 105mm, 160mm & 200mm (international)
- Galvanised steel (DX51D Z275)
- Austenitic stainless steel (AISI Grade 304, 316, other)
- Refer to product brochure

Channel Configuration
- Constant-depth (same channel depth)
- Stepped-fall

Edge Detail
- Slot width options in 10mm (UK)
- Slot width options in 10, 12, 14 & 18 mm (international)

*The A-symmetric slotted cover can be used along building facades, walls and landscape features at ground level.

SHALLOW CHANNELS

The core range of **RECYFIX** and **FASERFIX** grated channel systems (A 15 – E 600) are available in shallow channel options, with a variety of shallow depth dimensions no greater than 115mm deep (see below).

Shallow channel options are generally 100mm wide (other channel widths are available in reduced height dimensions). Shallow channels can be used in most applications where there is a depth restriction. When used in raised concrete structures, channels should be installed with sealed joints and above a Damp Proof Membrane (DPM). Refer to product brochure for detailed information.

Key Features

Material
- Modified Polypropylene (PP) composite
- Fibre-reinforced concrete

Loading
- Depends on system selected
- A 15 – E 600 (EN 1433: 2002)

Channel Widths
- 100 mm
- Shallow channels also available in wider sizes

Channel Heights
- **RECYFIX STANDARD**: 60, 80 & 100 mm
- **RECYFIX PRO**: 75, 95 & 115 mm
- **RECYFIX PLUS**: 60, 80 & 100 mm
- **RECYFIX NC**: 75 mm
- **FASERFIX KS**: 80, 100 & 110 mm

*Overall height dimension provided

Channel Lengths
- 1.0m

Grating Options
- Lay-on or inlay design
- Load options ranging from A 15 – E 600 (EN 1433: 2002)
- Variety of grating designs and material's available
- Refer to product brochure

Channel Configuration
- Constant-depth (same channel depth)

Edge Detail
- Integral polypropylene edge (visible on the surface)
- Galvanised steel S275J263+Z
- Stainless steel CNS 1.4301
- Neat, discreet, rigid and aesthetic

CUSTOMISED DRAINAGE SOLUTIONS

HAURATON provides **CUSTOMISED DRAINAGE SOLUTIONS** to meet very specific requirements for unique and innovative applications. A bespoke approach offers total flexibility regarding channel width, depth, configuration, edge-detail, materials, inlet/grating design, type/location of outlets and other special system characteristics.

CUSTOMISED DRAINAGE SOLUTIONS provide the perfect design when project needs require high-quality aesthetics with superior and precise performance. Designs include specialist grated and slotted channel systems. Refer to product brochure for detailed information.

Key Features

Material
- Corten steel
- Galvanised steel
- Stainless steel (various grades)
- Other specialist materials to suit project needs

Loading
- Generally A 15 – D 400 (EN 1433: 2002)
- System designed to meet load requirements

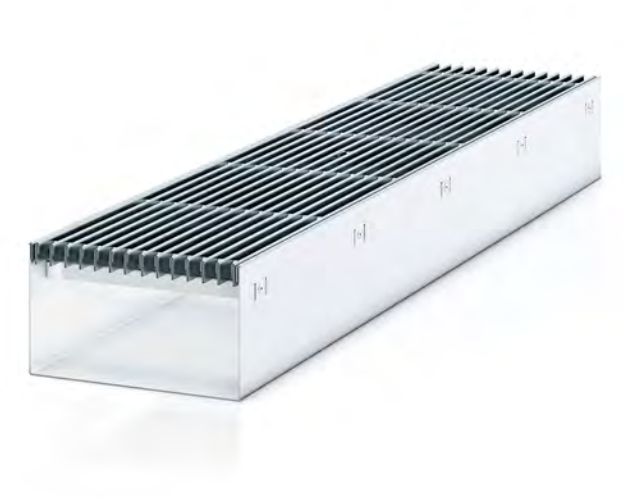
Channel Widths
- Sized to meet hydraulic requirements

Channel Lengths
- Variable
- Modular sections fabricated to meet specific configurations
- Polygon or radial designs available

Grating/Cover Options
- Designed to meet performance and load requirements (EN 1433:2002)
- Variety of designs, materials, colours and finishes available
- Refer to product brochure

Channel Configuration
- Constant-depth (same channel depth)
- Built-in fall

Edge Detail
- Designed to meet project requirements
- Neat, discreet, rigid and aesthetic



RECYFIX NC

RECYFIX NC combines heavy-duty (E 600kN) loading capability with practical design, easy handling, quick installation and high-performance on site.

RECYFIX NC has a polypropylene edge-frame incorporated within the channel body structure, for improved durability and resilience when trafficked. The system is supplied to site as a fully assembled unit, with heavy-duty slotted gratings (spheroidal ductile iron GJS 500-7) securely bolted within the edge-frame housing (eight steel bolts per metre) for extra strength and safety. Refer to product brochure for detailed information.

Key Features

Material
- Polypropylene (PP) composite

Loading
- System load rated to E 600 (EN 1433: 2002)

Channel Widths
- 100, 150, 200, 300 & 400 mm

Channel Lengths
- 1.0m & 500mm (selected depths)

Grating Options
- Inlay design
- D 400 & E 600 (EN 1433: 2002)
- Spheroidal ductile iron GJS 500-7 'EN1563'
- Slotted grating

Channel Configuration
- Constant-depth (same channel depth)
- Stepped-fall

Edge Detail
- Polypropylene edge-frame
- Integral part of channel body structure

FASERFIX KS

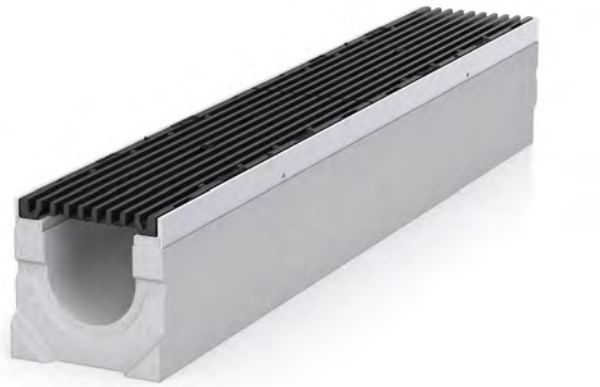
Cast from fibre-reinforced concrete, **FASERFIX KS** is a strong and durable 'general-purpose' channel system designed for use in a variety of applications (usually C 250 – E 600).

FASERFIX KS has thicker sidewalls (30mm) compared with alternatives. A metal edge-frame (galvanised or stainless steel) cast deep within the channel body achieves a rigid and discreet edge-detail for extra strength and enhanced aesthetics. Gratings are fixed into position with a 10-point locking system (SIDELOCK plus central bolt and bar arrangement) for added safety, stability and security. Refer to product brochure for detailed information.

Key Features

Material

- Fibre-reinforced concrete



Loading

- Channel body load rated to F 900 (EN 1433: 2002)
- System typically installed in E 600 load environments
- Suitable for F 900 environments (light traffic only)
- Refer to FASERFIX SUPER for F 900 environments (heavily trafficked)

Channel Widths

- 100, 150, 200 & 300 mm

Channel Lengths

- 1.0m & 500 mm (selected depths)

Grating Options

- Inlay design
- Load options ranging from A 15 – F 900 (EN 1433: 2002)
- Variety of grating designs and material's available (over 20)
- Refer to product brochure

Channel Configuration

- Constant-depth (same channel depth)
- Built-in fall (150, 200, 300)
- Stepped-fall

Edge Detail

Two options:

- Galvanised steel S275J263+Z
- Stainless steel CNS 1.4301
- Neat, discreet, rigid and aesthetic

*When gratings are fixed with locking bolts/bars, this system is especially resilient to dynamic forces caused by the turning/twisting action of wheels.

MONOTEC ULTRA

MONOTEC ULTRA incorporates an elevated grating structure (100mm high) in spheroidal ductile iron GJS 500-7, designed for maximum strength and durability to withstand dynamic forces and heavy-duty loads (F 900).

The 'grating-to-channel body' connection sits deep underground, achieving a monoblock type structure (no removable gratings) when installed for high-security and improved safety for vehicles and pedestrians. The grating is fully retained and supported by the channel concrete encasement through extended grating flanges (no loads / no forces imposed on channel body). Refer to product brochure for detailed information.

Key Features

Material
- Recycled Polypropylene (PP) composite

Loading
- MONOTEC ULTRA system load rated to F 900 (EN 1433)

Channel Widths
- 200mm & 300mm

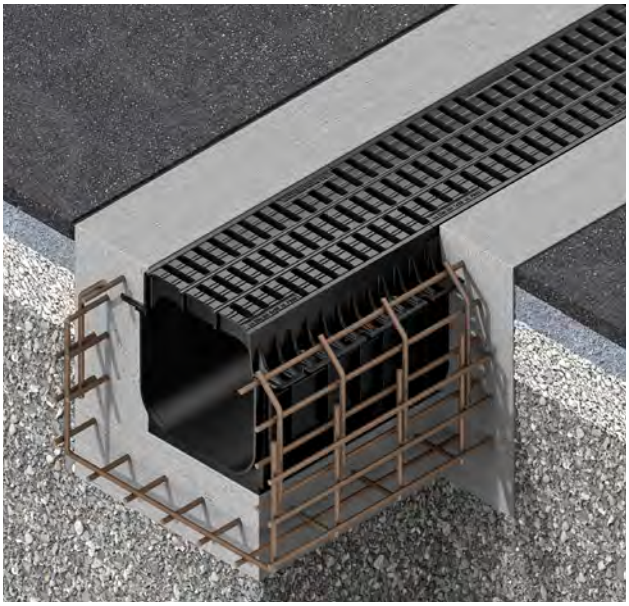
Channel Length
- 1.0m

Grating Options
- Elevated grating structure (non-removable)
- Extended grating flange supported by channel concrete encasement
- Slotted grating design; anti-slip surface
- Spheroidal ductile iron GJS 500-7 'EN1563'

Channel Configuration
- Constant-depth (same channel depth)

Edge Detail
- Elevated grating in spheroidal ductile iron GJS 500-7 'EN1563'
- Durable edge; impact resistant

*Ideal for level crossings



FASERFIX SUPER

A strong, durable and reliable grated channel system in fibre-reinforced concrete, with a proven structural design for superior resistance to dynamic forces and extreme loads.

FASERFIX SUPER has a higher specification compared to alternatives, for assured performance and reduced maintenance costs during all stages of the projects life. Refer to product brochure for detailed information.

Key Features

Material
- Fibre-reinforced concrete

Loading
- Channel body load rated to F 900 (EN 1433: 2002)

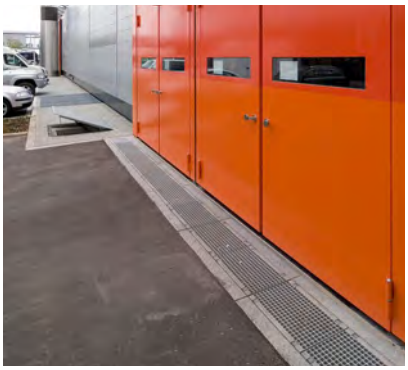
Channel Widths
- 100, 150, 200, 300, 400 & 500 mm

Channel Lengths
- 1.0m & 500mm (selected depths)

Grating Options
- Inlay design
- D 400, E 600 & F 900 (EN 1433: 2002)
- Spheroidal ductile iron GJS 500-7 'EN1563'
- Slotted grating
- GUGI-mesh grating
- Solid cover
- KTL 'cathodic dip' coating (optional)

Channel Configuration
- Constant-depth (same channel depth)
- Built-in fall (150, 200, 300)
- Stepped-fall

Edge Detail
Two options:
- Galvanised steel S275J263+Z
- Spheroidal ductile iron GJS 500-7 'EN1563' (KTL 'cathodic dip' coated).



RECYFIX HICAP F SLOT CHANNEL

Manufactured from high-grade modified Polypropylene (PP) composite, **RECYFIX HICAP F SLOT CHANNEL** is a high-capacity linear drainage system used to provide efficient and cost-effective drainage and attenuation within extensive hard surface areas. Refer to product brochure for detailed information.

Key Features

Material

- Modified Polypropylene (PP) Composite
- Some components in Polyamide (PA-GF)

Loading

- System load rated to F 900 (EN 1433: 2002)

Channel Sizes

- HICAP F 1000, 2000, 3000, 5000, 8000 & 10000

Channel Lengths

- 1.0m & 1.145m (RECYFIX HICAP F 10000)

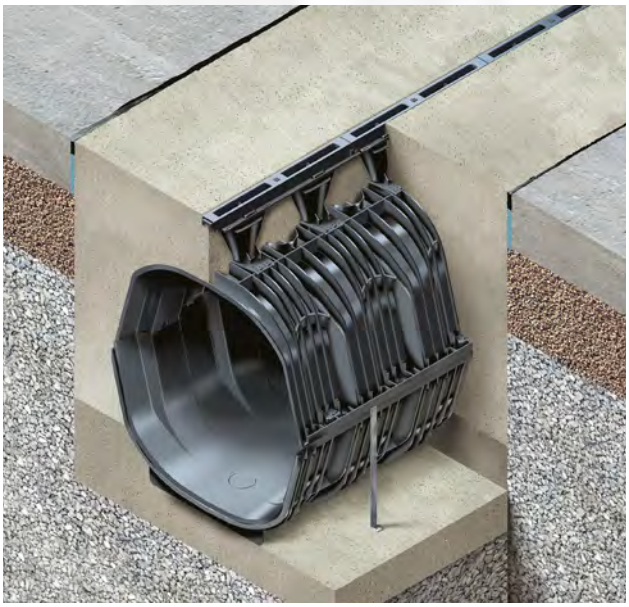
Grating Options

- Retained grating design (non-removable)
- D 400 & F 900 (EN 1433: 2002)
- Spheroidal ductile iron GJS 500-7 'EN1563' (KTL 'Cathodic Dip' Coated)
- Slot 14mm
- Slot 28mm
- Mesh 13/28mm
- Slot 6mm

Channel Configuration

- Constant-depth (same channel depth)
- Stepped-fall

*This system is especially resilient to dynamic forces caused by the turning/twisting action of wheels.



RECYFIX TRAM

Designed specifically for Light Rail Transit (LRT) projects, **RECYFIX TRAM** is a simple system with a special design that provides efficient drainage of rainwater and stormwater from tram-line surfaces and rail recesses.

RECYFIX TRAM is strong, durable and corrosion resistant, ensuring high-performance and low maintenance costs for the life of the project. The channel incorporates a discreet steel edge-rail for improved rigidity and enhanced aesthetic appearance at the surface. Refer to product brochure for detailed information.

Key Features

Material
- Recycled Polypropylene (PP) composite

Loading
- A 15 – E 600 (EN 1433)

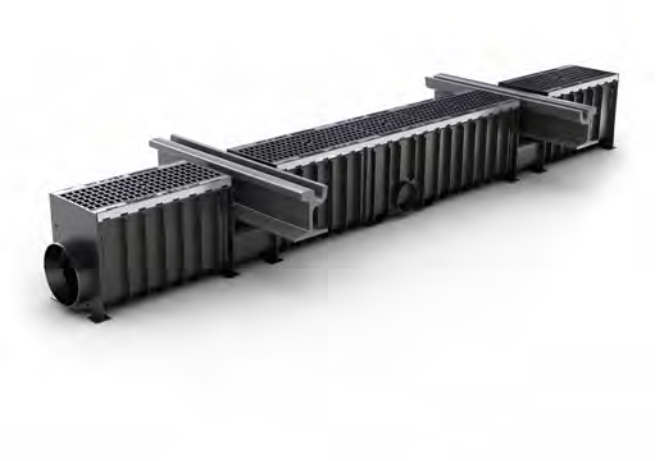
Channel Widths
- 200mm

Channel Lengths
- 200mm, 500mm, 1000mm
- Special lengths to suit project requirements

Grating Options
- GUGI Mesh
- Various designs and materials
- Spheroidal ductile iron GJS 500-7 ‘EN1563‘

Channel Configuration
- Constant-depth (same channel depth)

Edge Detail
- Steel edge-rail for improved rigidity and aesthetics



TRAM BOX

A simple but special drainage gully in durable ductile iron that sits immediately beside the rail to provide effective drainage from the adjacent surface and track recess.

TRAMBOX is a compact drainage unit designed specifically for LRT rail tracks to ensure smooth and uninterrupted operations. Refer to product brochure for detailed information.

Key Features

Material

- Ductile Iron
- KTL 'Cathodic Dip' coating available on request

Loading

- D 400

Dimensions

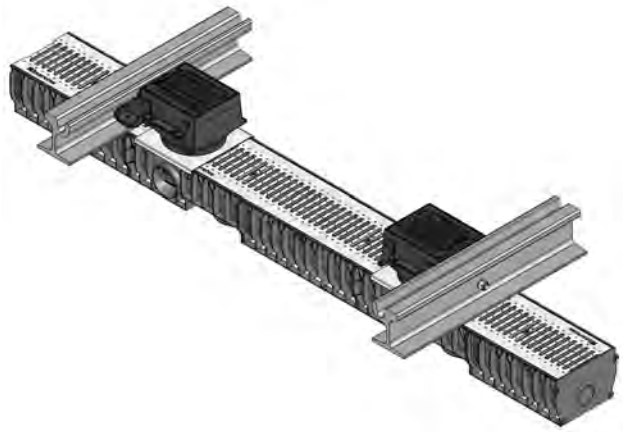
- Overall Length: 316mm
- Overall Width: 300mm
- Overall Height: 190mm
- Spigot Height: 70mm

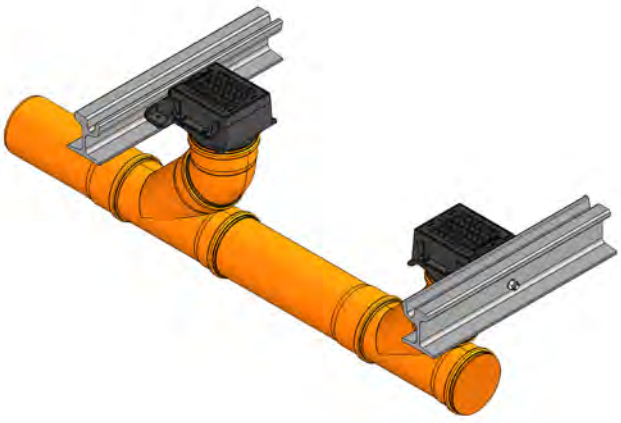
Outlet Sizes

- DN 125 & DN 200

Grating

- GUGI mesh grating in ductile iron
- D 400





SERVICE CHANNELS

HAURATON SERVICE Channels provide a safe, practical and durable solution for the management and routing of underground cables, utilities and services. The system is supplied with a range of modular accessories including cable trays and junction boxes for easy access and flexible 'space-efficient' design.

SERVICE Channels can be configured from either **RECYFIX** or **FASERFIX** systems, with the most suitable type and size of channel selected to suit specific project requirements.

Key Features

Material

- **RECYFIX** channels in modified Polypropylene (PP)
- **FASERFIX** channels in fibre-reinforced concrete

Loading

- Polypropylene (PP) channels load rated to E 600
- Fibre-reinforced concrete channels load rated to E 600 (EN 1433: 2002)

Channel Widths

- 100, 200, 300, 400 & 500 mm

Channel Lengths

- 1.0m

Cover Options

- Inlay design
- Solid covers (anti-slip)
- A 15 & E 600 (EN 1433: 2002)
- Galvanised steel 'chequer plate' (A 15)
- Spheroidal ductile iron GJS 500-7 'EN1563'
- KTL 'cathodic dip' coating (optional)
- Side-Lock boltless locking mechanism

Channel Configuration

- Constant-depth (same channel depth)

Edge Detail

- Galvanised steel S275J263+Z
- Spheroidal ductile iron GJS 500-7 'EN1563' (KTL 'cathodic dip' coated)

DRAINFIX CLEAN

DRAINFIX CLEAN linear drainage 'water treatment' system is a cost-effective, ecological, efficient and immediate solution for the draining, collection and treatment at source of storm water run-off.

The system contains CARBOTEC 60, a carbonate-rich filter substrate through which the cleansing of stormwater occurs, for safe and hygienic use as sanitary water (toilet flushing) and irrigation of soft-landscaping. **DRAINFIX CLEAN** is very effective when used in densely populated areas (streets, parking areas, service yards, landscape projects).

Key Features

Material

- RECYFIX channels in modified Polypropylene (PP)
- FASERFIX channels in fibre-reinforced concrete
- CARBOTEC 60 filter substrate (high carbonate content)

Loading

- Polypropylene (PP) channels load rated to D 400
- Fibre-reinforced concrete channels load rated to F 900 (EN 1433: 2002)

Channel Widths

- 300, 400 & 500 mm

Channel Lengths

- 1.0m

Grating Options

- Inlay design
- Slotted grating
- D 400, E 600 & F 900 (EN 1433: 2002)
- Spheroidal ductile iron GJS 500-7 'EN1563'
- KTL 'cathodic dip' coating (optional)

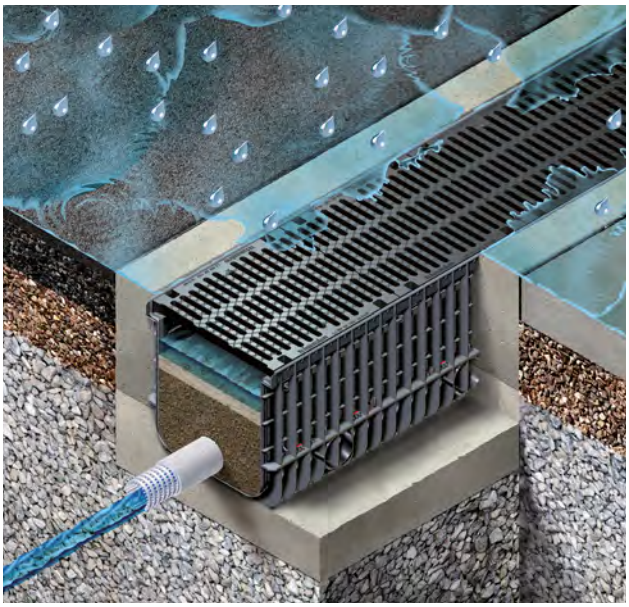
Channel Configuration

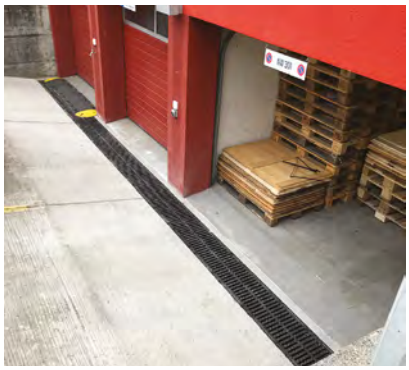
- Constant-depth (same channel depth)

Edge Detail

Three options:

- Polypropylene (PP)
- Galvanised steel S275J263+Z
- Spheroidal ductile iron GJS 500-7 'EN1563'





AQUAFIX SEPARATORS

HAURATON's range of advanced and efficient **AQUAFIX** Separators reduce pollution for environmental protection by providing mechanical separation of contaminants (hydrocarbon compounds, light liquids, metals, fine particles, grease, fatty acids, other harmful elements) from surface water or effluents, achieving water cleansing efficiency up to 99.9%.

AQUAFIX units help return clean water to the natural eco-system for sustainable preservation of vital resources. Contaminants are captured for onward disposal.

Key Features

Material

Separators are available in:

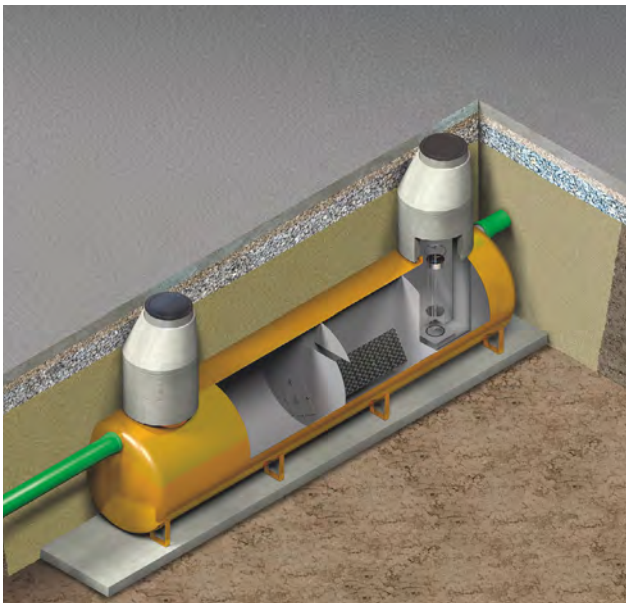
- Steel
- Concrete
- Polyethylene (PE)
- Polypropylene (PP)

Capacities

- Systems customised to suit project needs
- AQUAFIX SKG Coalescence Separators in steel (multiple bypasses fitted) can accommodate flow rates over 4000 lit / sec

System Design

- Corrosion resistant
- Durable, high quality materials
- Modular design for flexibility
- Advanced and innovative systems
- Modern coalescence separation technology
- Simple, practical design for ease of maintenance



Treatment Efficiency

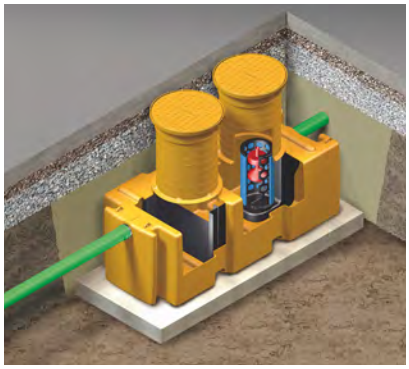
- Water cleansing efficiency up to 99.9%.
- Ultra-efficient separation and treatment process

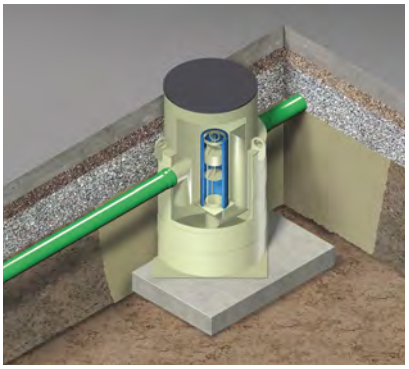
Standards

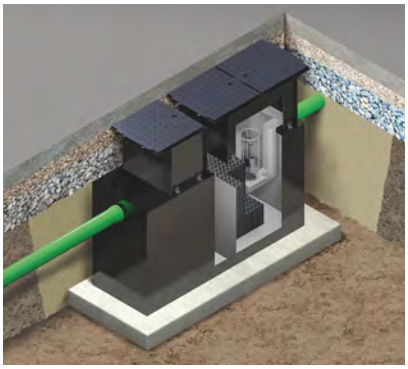
- Systems comply with all recognised standards and regulations

Applications

- Airports
- Ports
- Highways
- Factories
- Parking Areas
- Industrial Plants
- Vehicle Washing Facilities
- Warehouse & Logistics Centres
- Service Stations & Fuel Stations
- Service Yards & Industrial Areas







HAURATON GRATINGS

HAURATON offers a variety of grating designs supplied as standard with the range of linear drainage systems, including mesh, slotted, longitudinal, perforated and HeelSafe. HAURATON also provides unique, innovative 'award-winning' designs such as GUGI-MESH and FIBRETEC gratings.

Grating materials include spheroidal ductile iron, galvanised steel, stainless steel and specialist composites such as 'glass-reinforced polyamide' (PA-GF). DECORATIVE and COLOURED gratings provide an extra dimension to the project design.

Durability

HAURATON gratings are designed for long-term durability and low maintenance.

Channel systems are often installed in corrosive environments.

FIBRETEC and GUGI MESH gratings are supplied in glass-reinforced polyamide (PA-GF), a high-performance composite that is highly corrosion resistant. Once in place, gratings will not corrode (no oxidation) and will maintain their aesthetic appearance for the projects life.

For extra durability and design flexibility, selected ductile iron gratings can be supplied with a galvanised coating.

Powder coatings can also be arranged on request to provide additional colour options and enhanced resistance (min. order quantity/extended lead time may apply).

FIBRETEC GRATINGS

Bring colour, bring life to projects.

HAURATON's range of FIBRETEC gratings in Glass-Reinforced Polyamide composite combines superior performance with enhanced aesthetics, bringing longevity and life to projects.

Benefits

FIBRETEC gratings have the following benefits:

- UV stable
- HeelSafe (9mm opening)
- Corrosion resistant; no oxidation
- Anti-static and none conducting
- High resistance to chemicals, fuels, salts etc

*Compatible with **RECYFIX PRO** and **FASERFIX KS** systems

Readily available in standard colours:

- Fern
- Sand
- Stone
- Black

*Other standard colours also available.

KTL COATING

HAURATON provides selected ductile iron gratings with a 'KTL' coating.

The coating is applied to the grating using a 'cathodic dip' process.

Benefits

- High durability and weather resistance
- Protects against corrosion and oxidation
- High resistance to chemicals, acids, fuels and salts
- Complies with environmental standards
- No risk to users when applied (non-hazardous)
- Paintable

**If ductile iron gratings are preferred, specifiers are advised to select HAURATON gratings with a 'KTL' coating as standard, to maintain the aesthetic appeal of the installation.

York Station - 2007

York Station - 2017

York Railway Station, United Kingdom

RECYFIX STANDARD system with Ductile Iron Slotted Gratings with 'KTL' coating applied.

The installation looks as good today as it did ten years ago.

Rusty Gratings!

Ductile iron gratings may be subject to oxidation (a natural process) when channels are installed in locations that may not be trafficked (or trafficked infrequently).

Water-based coatings provide only superficial and cosmetic protection, so oxidation may occur at some point in the future.

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Total Support

Projects Team

HAURATON provides close support to ensure drainage design, specification and installation is quick, efficient and cost-effective.

A team of regional, specification and project managers are available to assist industry professionals at every stage of the construction process. Refer to HAURATON for contact details (www.hauraton.com).

A multinational company, HAURATON has production facilities, subsidiary offices, technical engineers and partners located in many countries and regions of the world.

HAURATON has the knowledge, experience and resources to manage and support all projects successfully, regardless of location.

Design Service

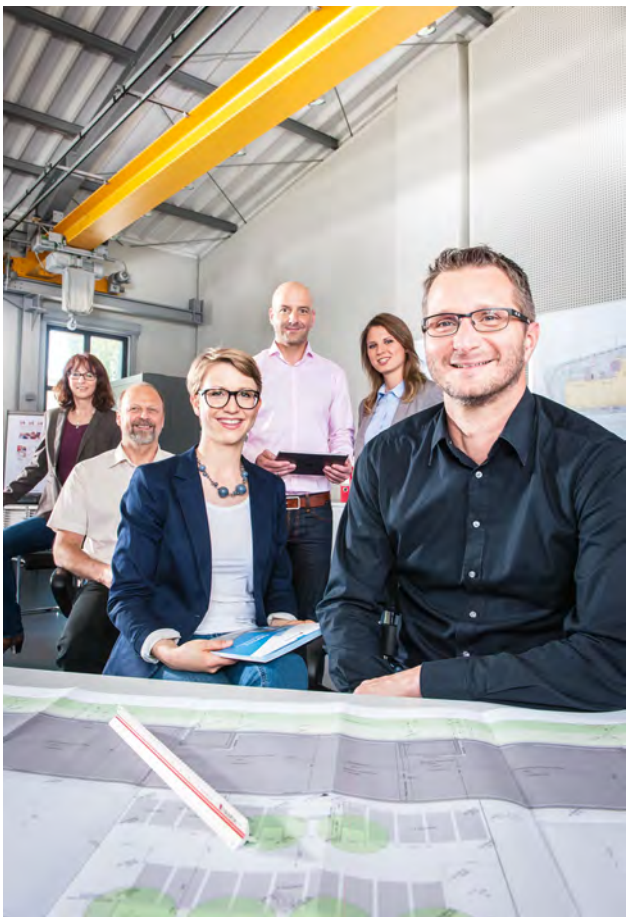
HAURATON offers a comprehensive design service for all product ranges. This is available free of charge and without obligation.

Our approach is to provide innovative 'value-engineered' designs to achieve the most cost-effective drainage solution for the benefit of all parties.

Design proposals can be provided within 24 – 48 hours, depending on the size of the project. Information offered includes:

- Hydraulic calculations for each channel run
- System configuration drawings
- Parts list schedules
- Product dimension drawings
- System installation drawings
- Product and material technical datasheets
- Other technical and support information

Feel free to contact us should you require assistance.



Design Software

Hydraulic Design Software

HAURATON provides a comprehensive design service, which is free of charge.

Our channel drainage configurations are designed and sized using 'hydraulic design software' specifically developed for HAURATON systems.

The formula used within the software is based on that determined by Gauckler-Manning-Strickler. Accuracy has been verified by physical testing of HAURATON systems within a hydraulic discharge test flume, replicating and evaluating hundreds of flow scenarios.

HAURATON 'hydraulic design software' has been used successfully in-house by our technical personnel and partners for over 30 years with total reliability.

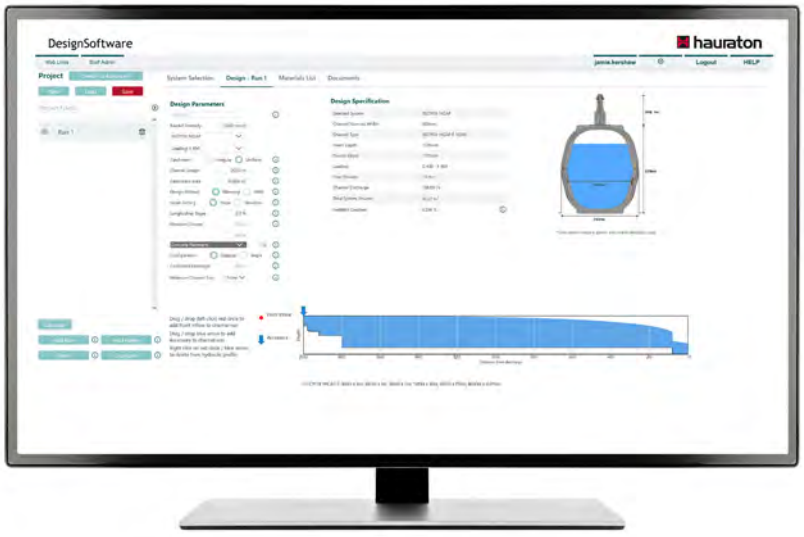
HAURATON DesignSoftware

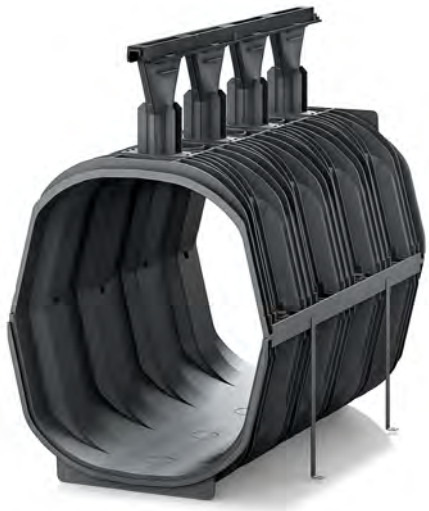
User-friendly and free-of-charge, our web-based application 'DesignSoftware' provides construction industry professionals with quick, simple hydraulic analysis, channel sizing, project design and product specification for the company's core range of surface drainage systems (for landscape, commercial and civils projects) whilst working on their own desk-top and lap-top computers.

HAURATON 'DesignSoftware' provides engineers with the flexibility to create their own drainage designs, with just three clicks to a hydraulic calculation.

Follow the link below to register and use the software:

https://hydraulicdesign.hauraton.com/register/





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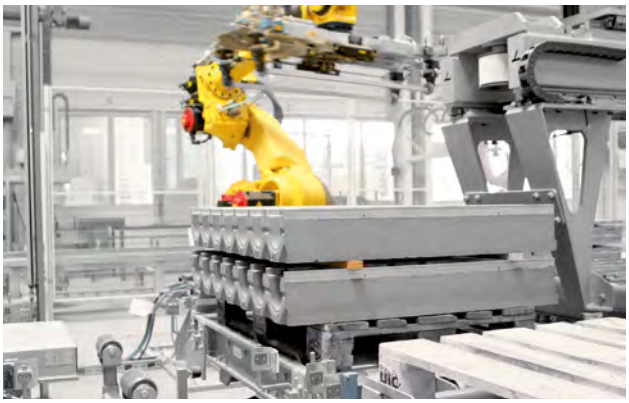
Quality Assurance

High Standards

HAURATON products and procedures bring quality assurance.

The company operates in accordance with EN ISO 9001: 2015. Production within modern, mechanised facilities in Europe is carefully monitored and controlled to achieve consistent product quality.

HAURATON drainage channels have been independently tested for load capacity and watertightness in accordance with the European Standard EN 1433: 2002. Systems are CE marked for quality assurance.



Proven Performance

Supplied for over sixty-five years and thirty years respectively, **FASERFIX** and **RECYFIX** systems have proven performance, having been used successfully on major projects around the world. Individual project case studies are available from HAURATON.

HAURATON has a reputation for products of the highest quality, durability and reliability.

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