



polycon
surface water drainage

KE 150

Service . Range . Knowledge

Welcome To Polycon

Polycon is identified as one of the leading manufacturers, distributors, and suppliers of channel drainage in the UK. We focus towards creating a diverse range of water solutions, in a variety of different materials, including composite, polymer concrete, SMC, and steel.

Polycon's unique look at the market and expert knowledge of the industry ensures that we can supply a wide range of high-quality products suitable for any application. This includes building drainage, landscaping, sports facilities, distribution centres, highways, and airports.

Our design team provides innovative and efficient hydraulic solutions to ensure we can offer the best product/ solution for your drainage needs. We have a vast and experienced overview of our working industry and have been manufacturing, distributing, and selling channel drainage for over 8 years. We thrive on acting upon your feedback to improve and develop our products to fit flawlessly with the constantly changing market and demand from our customers.

At Polycon we focus our attention on professionals who sit within the construction industry, targeting our products to specifiers, architects, engineers, and contractors. Therefore, we understand the importance of expanding our product portfolio to create the most efficient surface water drainage systems.

We are a dynamic and evolving company with a focus on quality, innovation, and service. As a result, you can rely on us to handle your project needs in every way to the best of our ability.

Contents

<i>KE 150</i>	<i>3</i>
<i>KE 150 Overview</i>	<i>5</i>
<i>KE 150 Channel Types</i>	<i>7</i>
<i>Accessories</i>	<i>9</i>
<i>Grating Options</i>	<i>10</i>
<i>Sloped, Stepped, Level</i>	<i>11</i>
<i>KE 150 Paveslots</i>	<i>13</i>
<i>Installation Guide</i>	<i>17</i>

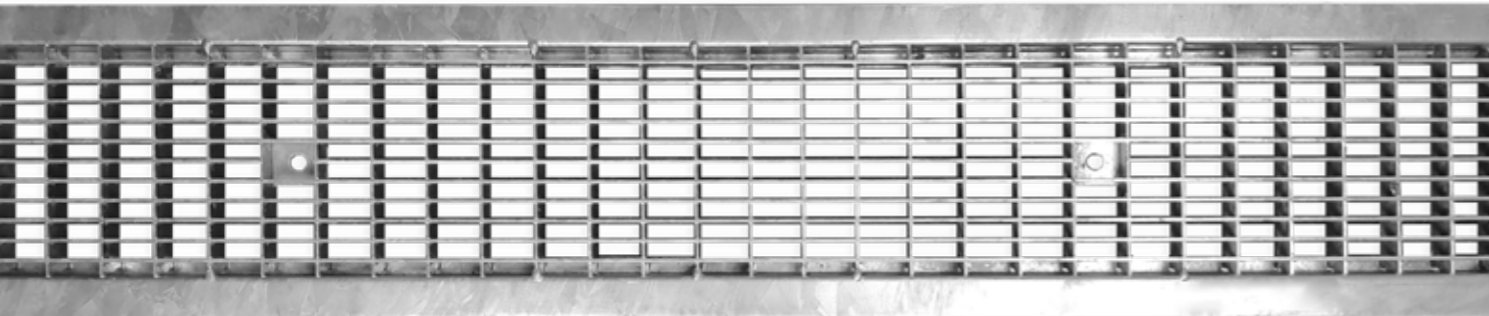
KE 150

The KE 150 channel is a versatile and innovative drainage solution that offers a multitude of advantages in construction and civil engineering projects. At the heart of its design lies the exceptional combination of a galvanized or stainless-steel edge rail and a core made from polymer concrete. This unique blend of materials results in a drainage channel that not only excels in durability but also offers a range of practical benefits that make it a popular choice for a wide array of applications.

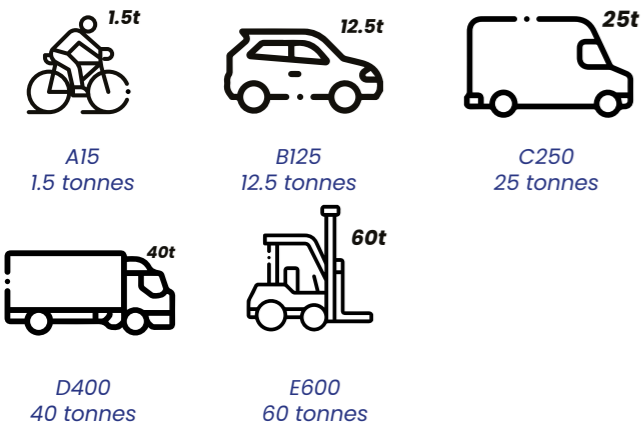
The incorporation of galvanized or stainless-steel edge rails within the KE 150 channel is a standout feature. This steel component enhances the product's strength and longevity, ensuring that it can withstand traffic loads and harsh environmental conditions.

The corrosion-resistant properties of these materials make the KE 150 channel an excellent choice for projects where extended service life and minimal maintenance are essential. Furthermore, the steel edge rail provides crucial structural support to the entire drainage system, preventing deformation and ensuring efficient water conveyance.

The core of the KE 150 channel is constructed from polymer concrete, which offers several advantages in terms of durability and performance. This material is highly resistant to chemical and physical wear, making it an ideal choice for applications in industrial and commercial settings where exposure to corrosive substances is a concern. Additionally, the polymer concrete core is lightweight, facilitating easier handling and installation, while also promoting a reduction in transportation costs.



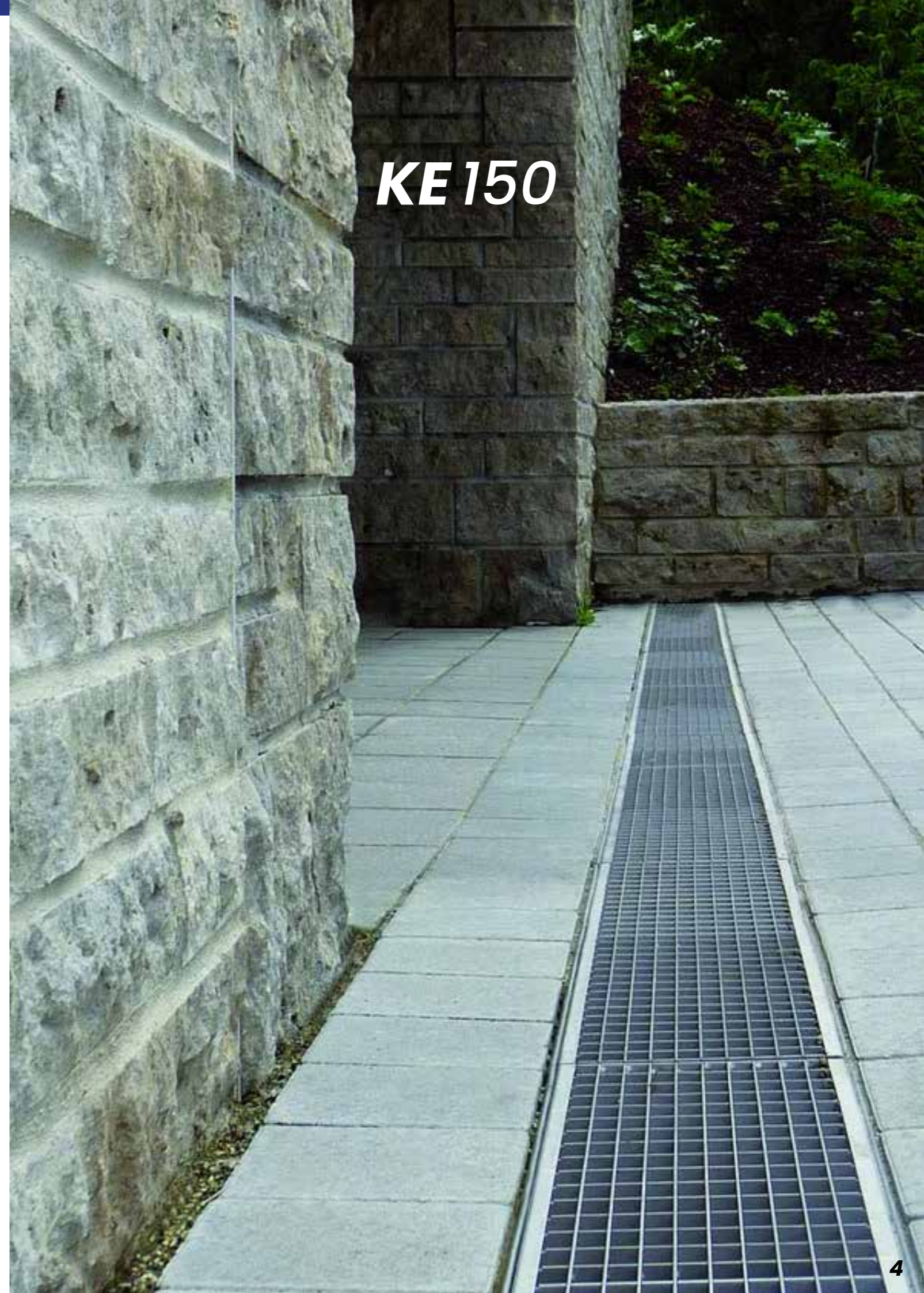
Load Class



Applications

- Driveways
- Car parks
- Farms
- Commercial & civil areas
- Residential buildings
- Urban developments

KE 150



KE 150 - Overview



Grating Options

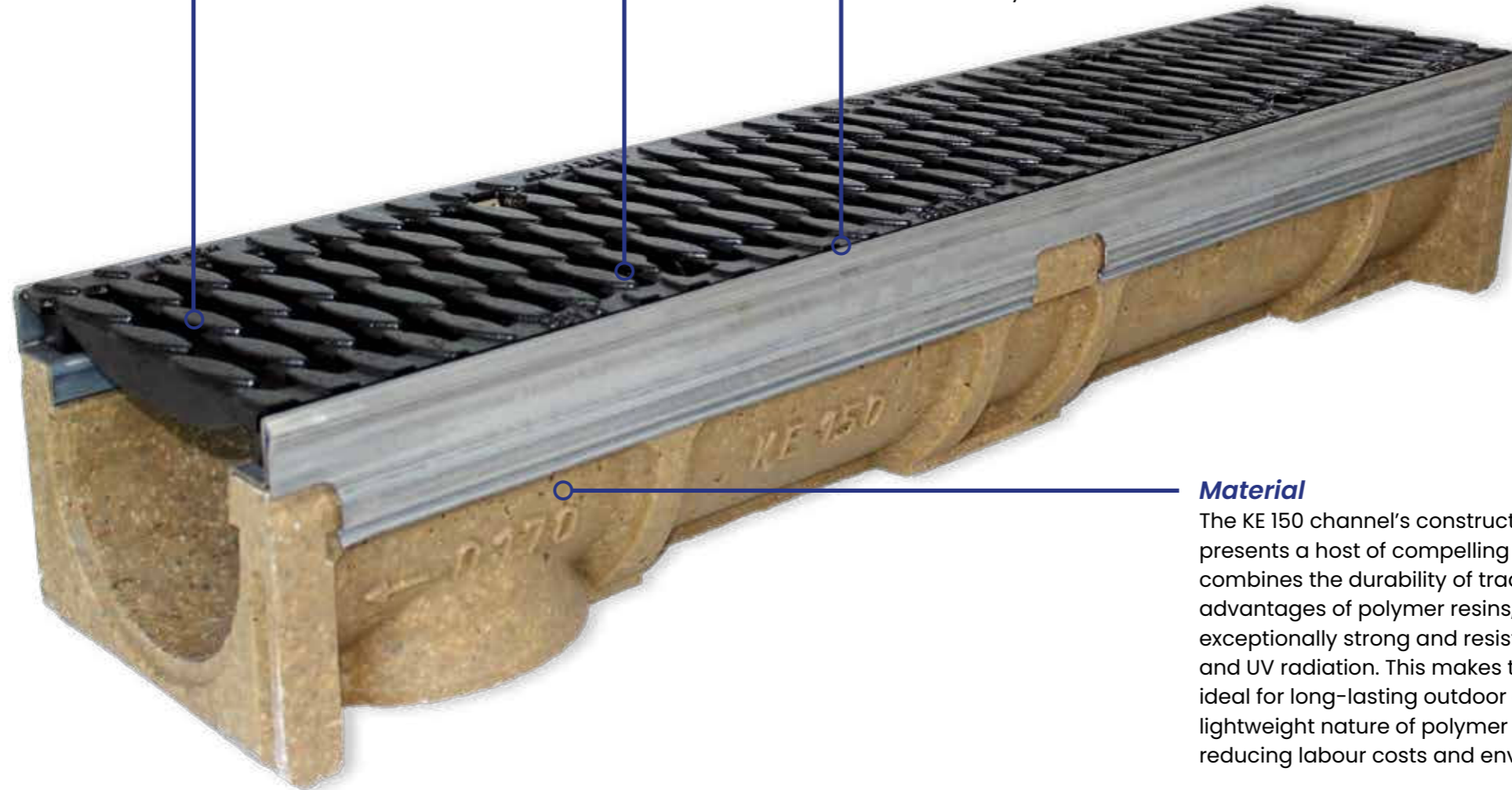
The KE 150 channel offers a remarkable variety of 5 different grating options, allowing for customized solutions tailored to specific project requirements. These grating choices encompass a wide spectrum of designs, materials, and load-bearing capacities, ensuring adaptability to diverse applications. These grates can be crafted from materials like galvanized or stainless steel and ductile iron materials, offering exceptional resistance to corrosion, exceptional load-bearing capabilities, and enhanced aesthetic appeal.

SnapLock

SnapLock fastenings are optimised for the respective load class and combine safety and quality with functional design.

Edge Rail

Stainless or galvanized steel edge rails are seamlessly incorporated into the channel profile. Their dual role is to safeguard the channel's sidewalls against damage and minimize wear and tear, while also providing essential stability for the cover gratings. This robust steel frame is exceptionally well-suited to bear heavy traffic loads, making it an ideal choice for areas subjected to substantial wear and tear, such as freight-forwarding yards and public roadways.



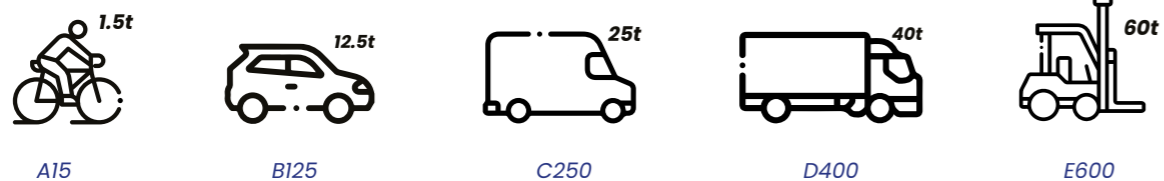
Material

The KE 150 channel's construction from polymer concrete presents a host of compelling benefits. Polymer concrete combines the durability of traditional concrete with the added advantages of polymer resins, resulting in a material that is exceptionally strong and resistant to corrosion, chemicals, and UV radiation. This makes the channel highly durable and ideal for long-lasting outdoor applications. Furthermore, the lightweight nature of polymer concrete simplifies installation, reducing labour costs and environmental impact.

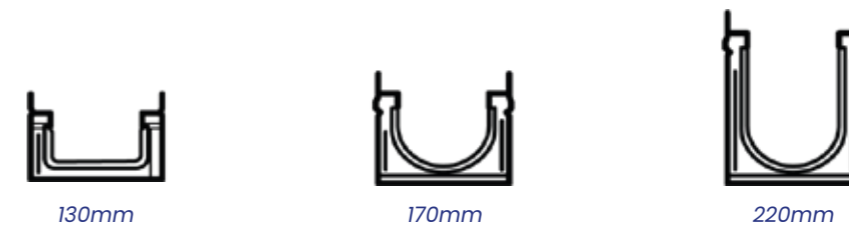
Colour Options



Load Classes

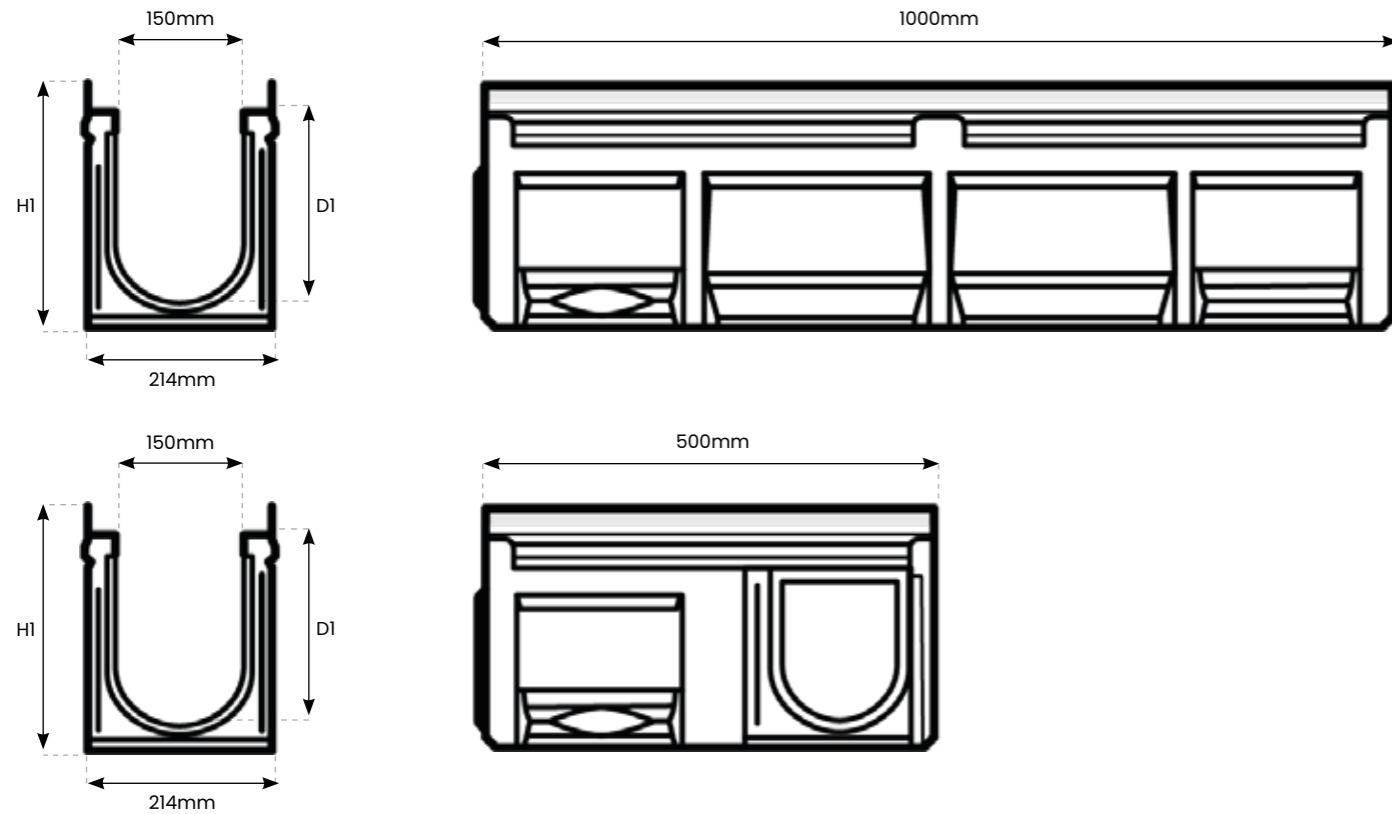


Depth Options



KE 150

The KE 150 channel's combination of a galvanised or stainless-steel edge rail and a polymer concrete core results in a robust and long-lasting drainage solution. Its superior durability, resistance to corrosion, and ease of installation make it a preferred choice for a wide range of construction and civil engineering projects, ensuring effective and sustainable water management.



Channel Properties

Polymere concrete:	Polyester resin-based with mineral aggregates, additives.
Compressive strength:	> 90 N/mm ²
Bending tensile strength:	> 22 N/mm ²
Modulus of elasticity:	ca. 25 kN/mm ²
Density:	2.1 - 2.3 g/dm ³
Heat resistance:	100°C (permanant loading)
Frost resistance:	-50°C
Water penetration depth:	0mm
Water absorption	0.05%
Edge protection:	Galvanised steel, stainless steel, profile thickness 6mm or cataphoretic black.
Channel cover:	Galvanised steel, V2A stainless steel, GJS cast-iron, PA plastic.

Channel Types

Reference	Description	Slope	Length	Overall Width	Internal Width	Overall Depth(HI)	Internal Depth(DI)	Weight
KE.150.0	KE - 150 Channel No. 0*	0%	1000mm	214mm	150mm	220mm	200mm	33.0kg
KE.150.0R	KE - 150 Channel No. 0R***	0%	1000mm	214mm	150mm	220mm	200mm	33.0kg
KE.150.005	KE - 150 Channel No. 005**/*	0%	500mm	214mm	150mm	220mm	200mm	17.9kg
KE.150.1	KE - 150 Channel No. 1*	0.5%	1000mm	214mm	150mm	225mm	205mm	30.3kg
KE.150.2	KE - 150 Channel No. 2*	0.5%	1000mm	214mm	150mm	230mm	210mm	30.6kg
KE.150.3	KE - 150 Channel No. 3*	0.5%	1000mm	214mm	150mm	235mm	215mm	30.9kg
KE.150.4	KE - 150 Channel No. 4*	0.5%	1000mm	214mm	150mm	240mm	220mm	31.2kg
KE.150.5	KE - 150 Channel No. 5*	0.5%	1000mm	214mm	150mm	245mm	225mm	31.5kg
KE.150.6	KE - 150 Channel No. 6*	0.5%	1000mm	214mm	150mm	250mm	230mm	31.8kg
KE.150.7	KE - 150 Channel No. 7*	0.5%	1000mm	214mm	150mm	255mm	235mm	32.1kg
KE.150.8	KE - 150 Channel No. 8*	0.5%	1000mm	214mm	150mm	260mm	240mm	32.4kg
KE.150.9	KE - 150 Channel No. 9*	0.5%	1000mm	214mm	150mm	265mm	245mm	32.7kg
KE.150.10	KE - 150 Channel No. 10*	0.5%	1000mm	214mm	150mm	270mm	250mm	33.0kg
KE.150.010	KE - 150 Channel No. 010*	0%	1000mm	214mm	150mm	270mm	250mm	35.6kg
KE.150.010R	KE - 150 Channel No. 010R*	0%	1000mm	214mm	150mm	270mm	250mm	36.5kg
KE.150.0105	KE - 150 Channel No. 0105**/*	0%	500mm	214mm	150mm	270mm	250mm	19.0kg
KE.150.11	KE - 150 Channel No. 11*	0.5%	1000mm	214mm	150mm	275mm	255mm	35.5kg
KE.150.12	KE - 150 Channel No. 12*	0.5%	1000mm	214mm	150mm	280mm	260mm	35.8kg
KE.150.13	KE - 150 Channel No. 13*	0.5%	1000mm	214mm	150mm	285mm	265mm	36.1kg
KE.150.14	KE - 150 Channel No. 14*	0.5%	1000mm	214mm	150mm	290mm	270mm	36.4kg
KE.150.15	KE - 150 Channel No. 15*	0.5%	1000mm	214mm	150mm	295mm	275mm	36.7kg
KE.150.16	KE - 150 Channel No. 16*	0.5%	1000mm	214mm	150mm	300mm	280mm	37.0kg
KE.150.17	KE - 150 Channel No. 17*	0.5%	1000mm	214mm	150mm	305mm	285mm	37.3kg
KE.150.18	KE - 150 Channel No. 18*	0.5%	1000mm	214mm	150mm	310mm	290mm	37.6kg
KE.150.19	KE - 150 Channel No. 19*	0.5%	1000mm	214mm	150mm	315mm	295mm	37.9kg
KE.150.20	KE - 150 Channel No. 20*	0.5%	1000mm	214mm	150mm	320mm	300mm	38.2kg
KE.150.020	KE - 150 Channel No. 020*	0%	1000mm	214mm	150mm	320mm	300mm	38.6kg
KE.150.020R	KE - 150 Channel No. 020R***	0%	1000mm	214mm	150mm	320mm	300mm	38.6kg
KE.150.0205	KE - 150 Channel No. 0205**/*	0%	500mm	214mm	150mm	320mm	300mm	20.9kg
KE.150.150P	KE - 150 Channel No. 150P****	0%	1000mm	214mm	150mm	130mm	110mm	20.1kg
KE.150.150PR	KE - 150 Channel No. 150PR*****	0%	1000mm	214mm	150mm	130mm	110mm	20.1kg

* Channel with mouldings for vertical outlet DA/OD 110.

** Channel with sidewise perforations for the connection of t-junctions, elbow joints and cross-over joints and vertical outlet.

*** Channel with vertical pipe socket DA/OD 110.

Accessories

Sump Unit

Sump Units act as a reservoir, temporarily storing excess water before discharging it in a controlled manner to prevent adverse effects of water accumulation. The Sump Unit is excellent for collecting debris and waste that can get into the system. It comes with a silt bucket inside for easy cleaning.



Sump Unit

End Cap

End Caps can be used at the end of your channel run to stop the flow of water.



End Cap

End Cap Outlet

The End Cap Outlet can be used at the end of the run to allow water to be taken to your exterior drainage pipes and away from the channel.



End Cap Outlet

Access Tray

Access trays are typically used for maintenance and inspection purposes, they are installed at strategic points along the channel, often at intervals where they can be easily reached for cleaning, inspection, or repairs.



Access Tray

Accessories- Specifications

Reference	Description	Length	Height (H)	Overall Width	Slot Width	Weight (KG)	Outlet
KE.150.SU	KE 150 Sump Unit	500mm	594mm	214mm	-	54kg	160mm
KE.150.EC	KE 150 End Cap for channel No. 0 - 0205	30mm	130-220mm	214mm	-	1.5kg	-
KE.150.ECO	KE 150 End Cap Outlet	30mm	160mm	214mm	-	1.5kg	160mm
KE.150.AT.G	KE 150 Access Tray - Galvanised	500mm	105mm	200mm	10mm	7.2kg	-
KE.150.AT.SS	KE 150 Access Tray - Stainless Street	500mm	105mm	200mm	10mm	7.4kg	-

Grating Options



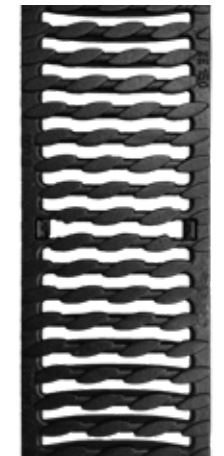
Mesh Steel Grating (D400)



Ductile Iron Longitudinal Grating (E600)



Ductile Iron Slotted Grating (E600)



Ductile Iron Oval Grating (E600)

Grating - Specifications

Reference	Description	Lengths (mm)	Overall Width	Weight	Load Class	Safe Heel
KE.150.MSG	KE 150 Mesh Steel Grating	1000	200mm	9.8kg	C/D	No
KE.150.DILG	KE 150 Ductile Iron Longitudinal Grating	500/1000	200mm	7.8kg	D/E	No
KE.150.DISG	KE 150 Ductile Iron Slotted Grating	500	200mm	4.4kg	A/B/C/D/E	Yes
KE.150.DIOG	KE 150 Ductile Iron Oval Grating	500	200mm	7.1kg	C/D/E	No

Sloped, Stepped, Level

There are 3 different scenarios in which the KE 150 drainage channel can be installed. However, the purpose of all 3 of these variations is to provide a pathway for the removal of unwanted surface water in a selected area. The specifics of which channel should be used are dependent on multiple factors such as the terrain, flow rate, and other environmental conditions.

Sloped Invert

A channel run with a sloped invert has a consistent downward gradient along its length. The slope is designed to provide a continuous downward flow of water, allowing gravity to assist in the drainage of water. When using a sloped channel it is carefully calculated to ensure that the water will flow at an appropriate velocity to prevent sedimentation or excessive erosion.

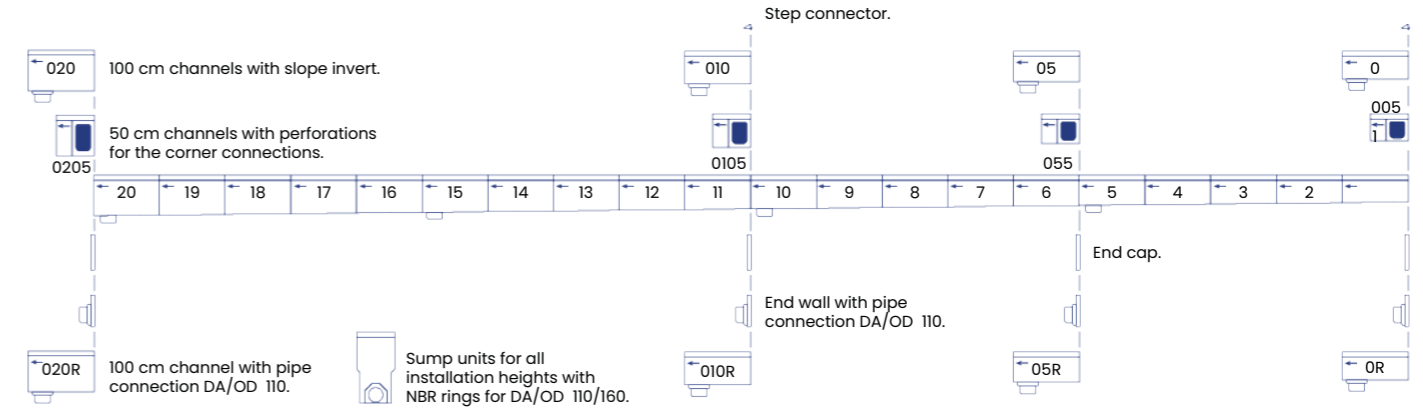
Stepped Invert

Stepped drainage channels are designed with a series of steps or drops along the run of the channel. These steps create a cascading effect, which helps to control the velocity of the water and prevent erosion.

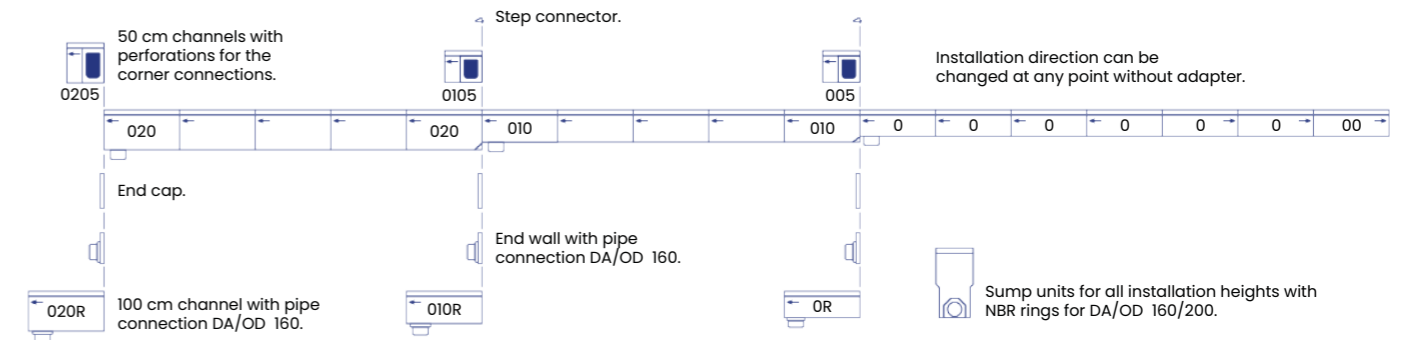
Level Invert

Level inverts are usually used in areas with relatively low slopes or insignificant water rates. They allow water to flow smoothly and evenly without the need for any significant changes in elevation. Channels with a level invert are often used in urban areas, where the goal is to transport water efficiently and prevent flooding.

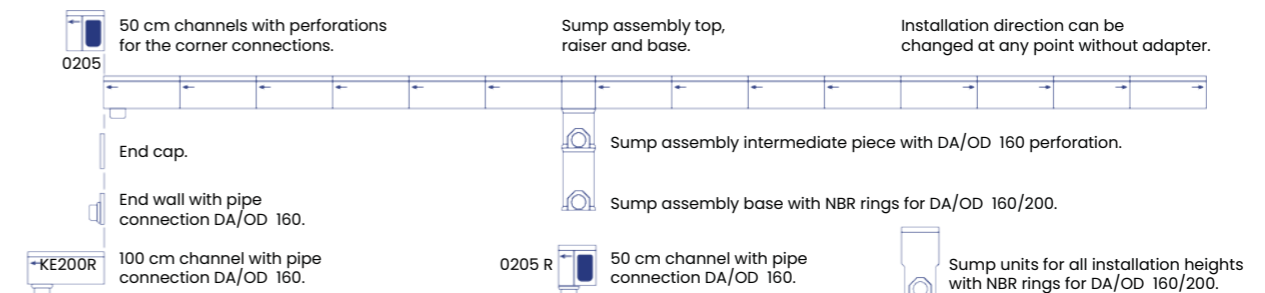
Sloped Invert



Stepped Invert



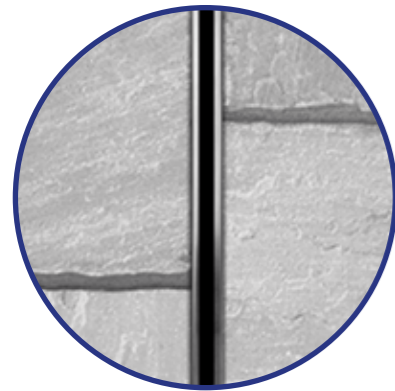
Level Invert



KE 150 – Offset Single Paveslot

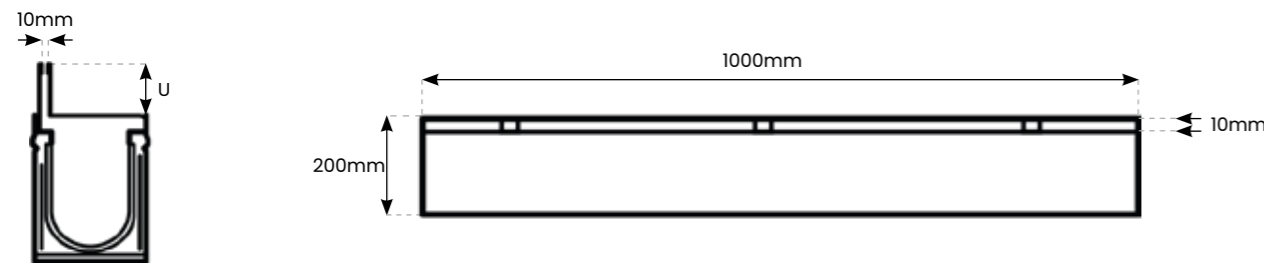
KE 150 Offset Paveslot is specifically designed for integration into high-quality natural stone and paving surfaces. The discrete inlet slot enables efficient drainage without compromising the ground design. We offer both single & twin slotted Paveslot as well as an access tray for cleaning purposes.

View From Above



Available In Galvanised and Stainless Steel

Diagram – Offset Single Paveslot

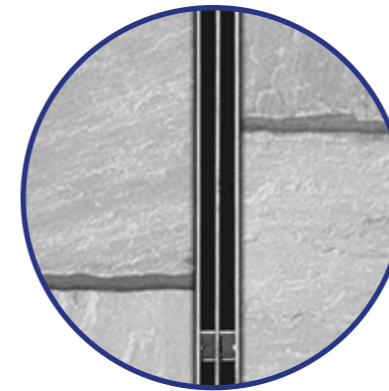


Reference	Description	Length (mm)	Slot Width	Overall Width	Load Class	Upstand (U)
OS.15060.P.G	Galvanised Offset Single Paveslot 60mm	500/1000	10mm	200mm	C/D	60mm
OS.15105.P.G	Galvanised Offset Single Paveslot 105mm	500/1000	10mm	200mm	C/D	105mm
OS.15150.P.G	Galvanised Offset Single Paveslot 150mm	500/1000	10mm	200mm	C/D	150mm
OS.15060.P.SS	Stainless Steel Offset Single Paveslot 60mm	500/1000	10mm	200mm	C/D	60mm
OS.15105.P.SS	Stainless Steel Offset Single Paveslot 105mm	500/1000	10mm	200mm	C/D	105mm
OS.15150.P.SS	Stainless Steel Offset Single Paveslot 150mm	500/1000	10mm	200mm	C/D	150mm

KE 150 – Offset Twin Paveslot

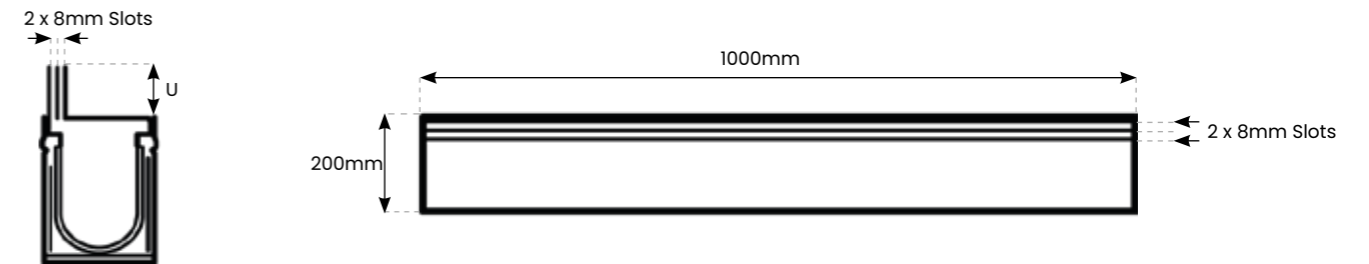
KE 150 Offset Paveslot is specifically designed for integration into high-quality natural stone and paving surfaces. The discrete inlet slot enables efficient drainage without compromising the ground design. We offer both single & twin slotted Paveslot as well as an access tray for cleaning purposes.

View From Above



Available In Galvanised and Stainless Steel

Diagram – Offset Twin Paveslot

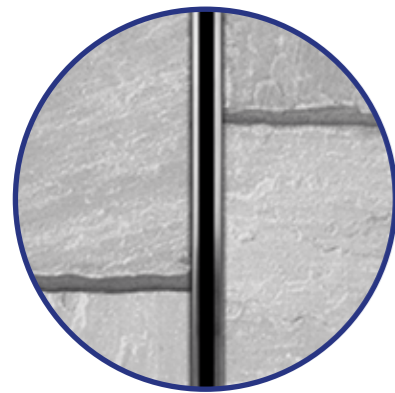


Reference	Description	Length (mm)	Slot Width	Overall Width	Load Class	Upstand (U)
OT.15060.P.G	Galvanised Offset Twin Paveslot 60mm	500/1000	2x8mm	200mm	C/D	60mm
OT.15105.P.G	Galvanised Offset Twin Paveslot 105mm	500/1000	2x8mm	200mm	C/D	105mm
OT.15150.P.G	Galvanised Offset Twin Paveslot 150mm	500/1000	2x8mm	200mm	C/D	150mm
OT.15060.P.SS	Stainless Steel Offset Twin Paveslot 60mm	500/1000	2x8mm	200mm	C/D	60mm
OT.15105.P.SS	Stainless Steel Offset Twin Paveslot 105mm	500/1000	2x8mm	200mm	C/D	105mm
OT.15150.P.SS	Stainless Steel Offset Twin Paveslot 150mm	500/1000	2x8mm	200mm	C/D	150mm

KE 150 – Centre Single Paveslot

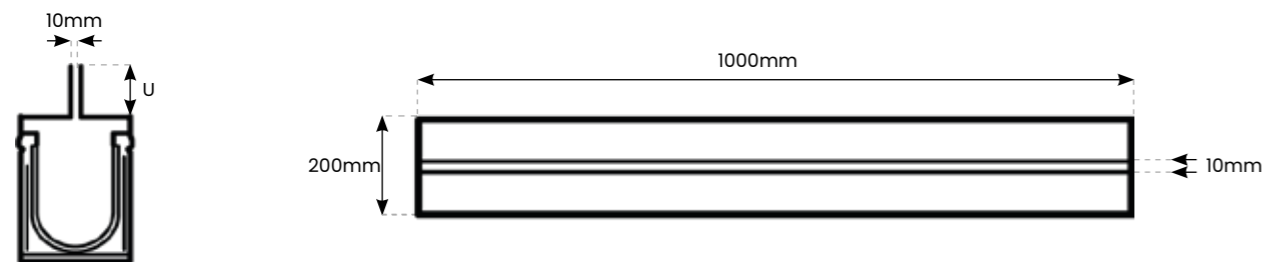
KE 150 Centre Paveslot is specifically designed for integration into high-quality natural stone and paving surfaces. The discrete inlet slot enables efficient drainage without compromising the ground design. We offer both single & twin slotted Paveslot as well as an access tray for cleaning purposes.

View From Above



Available In Galvanised and Stainless Steel

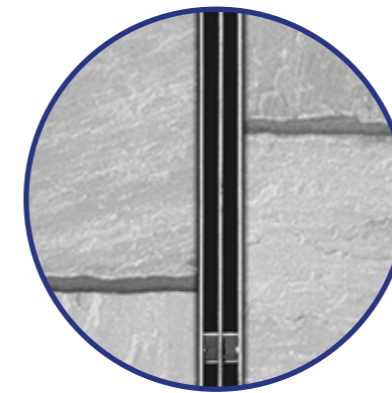
Diagram – Centre Single Paveslot



KE 150 – Centre Twin Paveslot

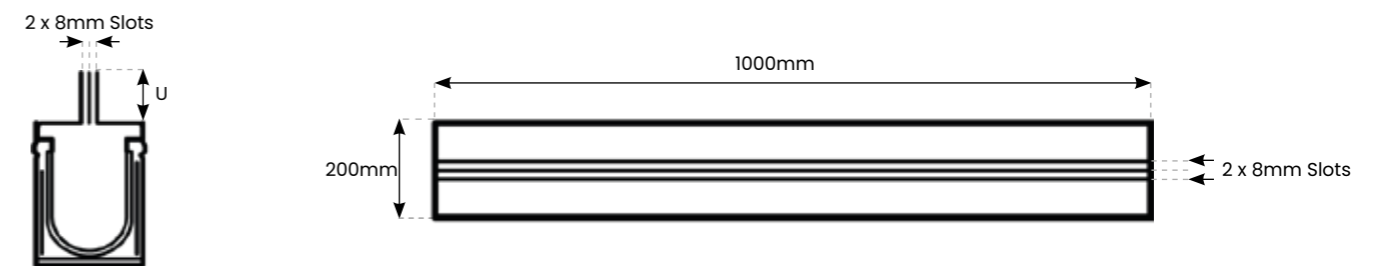
KE 150 Centre Paveslot is specifically designed for integration into high-quality natural stone and paving surfaces. The discrete inlet slot enables efficient drainage without compromising the ground design. We offer both single & twin slotted Paveslot as well as an access tray for cleaning purposes.

View From Above



Available In Galvanised and Stainless Steel

Diagram – Centre Twin Paveslot



Reference	Description	Length (mm)	Slot Width	Overall Width	Load Class	Upstand (U)
CS.15060.P.G	Galvanised Centre Single Paveslot 60mm	500/1000	10mm	200mm	C/D	60mm
CS.15105.P.G	Galvanised Centre Single Paveslot 105mm	500/1000	10mm	200mm	C/D	105mm
CS.15150.P.G	Galvanised Centre Single Paveslot 150mm	500/1000	10mm	200mm	C/D	150mm
CS.15060.P.SS	Stainless Steel Centre Single Paveslot 60mm	500/1000	10mm	200mm	C/D	60mm
CS.15105.P.SS	Stainless Steel Centre Single Paveslot 105mm	500/1000	10mm	200mm	C/D	105mm
CS.15150.P.SS	Stainless Steel Centre Single Paveslot 150mm	500/1000	10mm	200mm	C/D	150mm

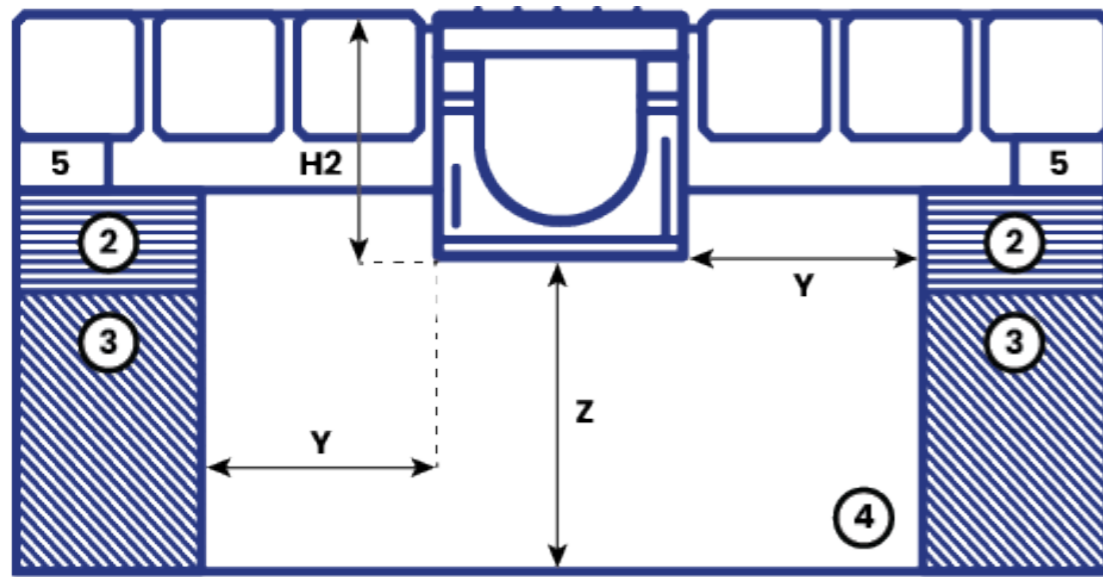
Reference	Description	Length (mm)	Slot Width	Overall Width	Load Class	Upstand (U)
CT.15060.P.G	Galvanised Centre Twin Paveslot 60mm	500/1000	2x8mm	200mm	C/D	60mm
CT.15105.P.G	Galvanised Centre Twin Paveslot 105mm	500/1000	2x8mm	200mm	C/D	105mm
CT.15150.P.G	Galvanised Centre Twin Paveslot 150mm	500/1000	2x8mm	200mm	C/D	150mm
CT.15060.P.SS	Stainless Steel Centre Twin Paveslot 60mm	500/1000	2x8mm	200mm	C/D	60mm
CT.15105.P.SS	Stainless Steel Centre Twin Paveslot 105mm	500/1000	2x8mm	200mm	C/D	105mm
CT.15150.P.SS	Stainless Steel Centre Twin Paveslot 150mm	500/1000	2x8mm	200mm	C/D	150mm

Installation Guide

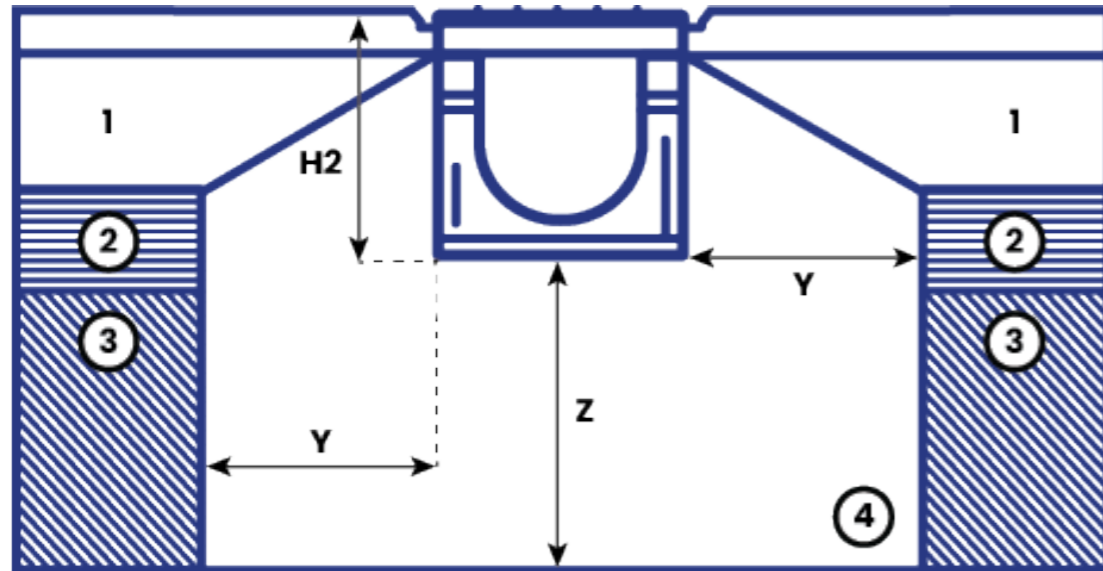
Ground conditions must be suitable and all dimensions shown are the minimum requirement. Engineering advice should be taken where necessary and any questions should be directed to Polycon's technical team by emailing us at sales@polycon.co.uk or by calling us on **0151 424 9747**.

1	2	3	4	5	6
Concrete	Sub Base	Earth	Concrete Haunch	Sand Layer	Expansion Joint

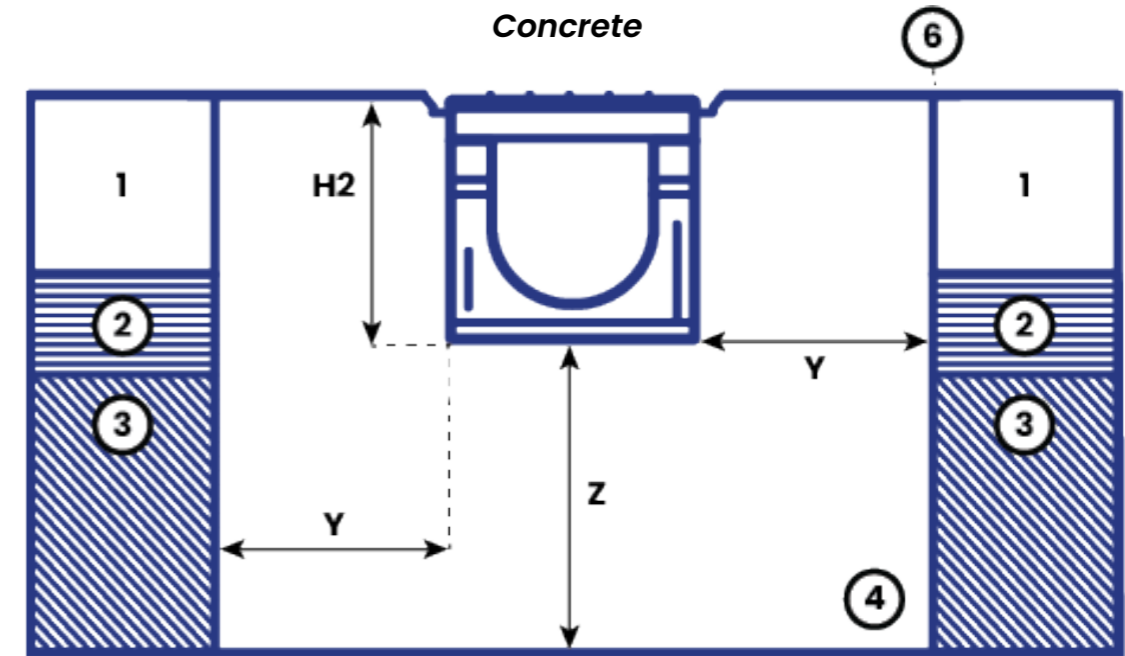
Block Paving



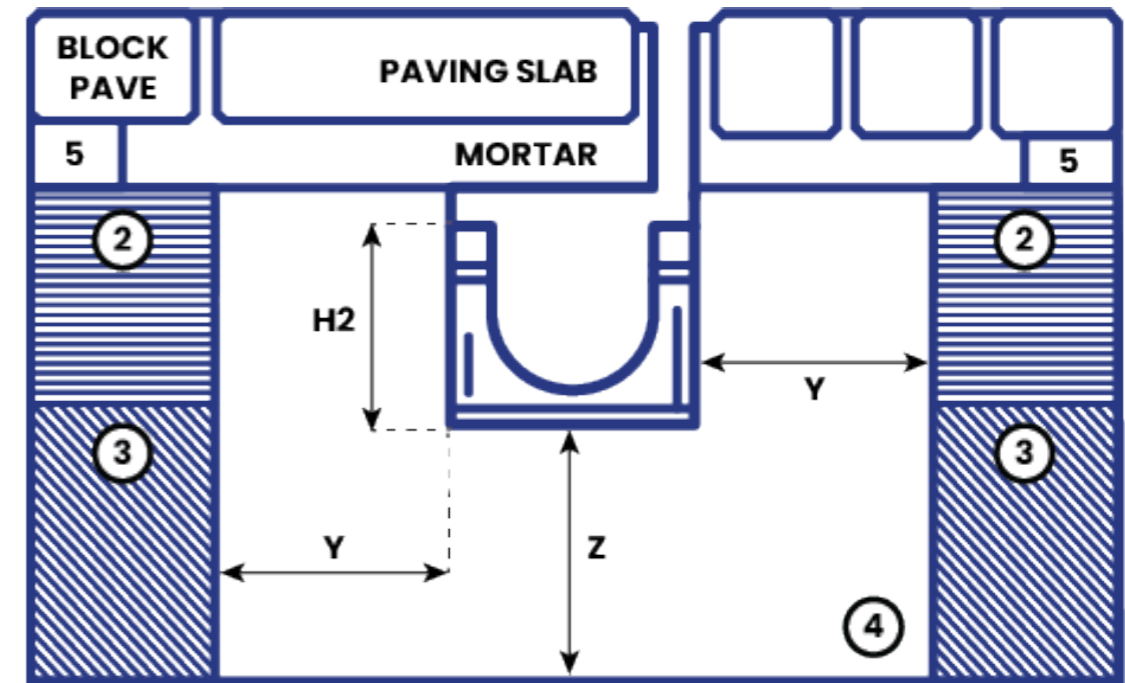
Tarmac



Concrete



Paveslot



Load Class	A15	B125	C250	D400	E600
H2 - Channel Height	Channel Height	Channel Height	Channel Height	Channel Height	Channel Height
Y - Minimum Surround	100mm	150mm	150mm	200mm	200mm
Z - Minimum Surround	100mm	150mm	150mm	200mm	200mm
T1 - Minimum Depth	40mm	40mm	40mm	40mm	40mm
T2 - Maximum Depth	95mm	55mm	55mm	55mm	55mm

** Minimum Concrete Haunch 25 N/mm².
Detail A allow for overbuild of 3mm to 5mm above the grating surfaces.



Polycon Surface Water Drainage

**Widnes Business Park
Foundry Lane
Widnes
Cheshire
WA8 8UB**

**www.polycon.co.uk
0151 422 9747
sales@polycon.co.uk**

Service . Range . Knowledge