AQUA







## HAURATON

### Surface drainage systems

SPORT

### HAURATON projects...



Yas Marina Circuit in Abu Dhabi, U.A.E.



Gardens by the Bay Tadpole Area in Singapore



Data Ran Merdeka in Kuala Lumpur, Malaysia



Teesport Container Terminal , Middlesbrough, UK

### Hauraton

# HAURATON surface drainage channel



shasaton mm	About HAURATON	4	hours	<b>RECYFIX<sup>®</sup>PRO</b> Corrosion-free linear drainage for private and public areas.	20	
	Benefits of RECYFIX® Channels	10		<b>RECYFIX<sup>®</sup>STANDARD</b> Linear drainage channels for public and commercial areas.	26	
	How to choose the right product?	12		Slotted Channels Slotted channels for design-sensitive applications.	32	
	HAURATON system comparison	14		RECYFIX®NC Highly stable and lightweight - linear drainage made of PP for Civils engineering.	38	
	Grating designs	16		<b>RECYFIX<sup>®</sup>MONOTEC</b> Drainage system for traffic, parking and commercial areas.	46	
			1	Installation It's running well during the installation.	56	
	Hydraulic	18	and the second	Additional products	56	

44

**Step Fall adaptors** 



# A family owned company in the third generation



Karl Hauger 1<sup>st</sup> generation



**Fabian Reuter** 2<sup>nd</sup> generation



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Marcus Reuter 3<sup>rd</sup> generation



#### All three generations of the family on one photo:

from left: Marcus Reuter (3<sup>rd</sup> generation, current Managing Director), Marianne Reuter (2<sup>nd</sup> generation and daughter of company founder Karl Hauger), Karl Hauger (1<sup>st</sup> generation), Patricia Reuter (3<sup>rd</sup> generation), Fabian Reuter (2<sup>nd</sup> generation)

### With a pioneering spirit to new concrete



It was in the year of 1963. Seven years after setting up the company, HAURA-TON founder Karl Hauger learnt of a new, Italian cement with fantastic properties. This cement should permit the concrete to be reinforced with fibres

and to achieve hitherto unknown levels of strength. On an impulse, he jumped into his company car, a DKW Master Class, to buy a sample of the new cement in Livorno for trials. Unfortunately, the DKW could not withstand the strenuous trip to Italy and packed in working with major engine damage. There was no garage

in Italy able to repair the DKW. And so, with the available cash he had, 320 marks, as the currency was in those days, Karl Hauger purchased a well-used Moto Guzzi Cardellino. Loaded with 25 kg cement, in 3 days he travelled back to Rastatt over the Gotthard Pass.



Today the original Moto Guzzi found a place in the Conference room Alte Schlosserei.



### **HAURATON in Rastatt and Ötigheim**









### Hauraton Zentrale

Main office in Rastatt

Year of construction: 1956 Extensions / alterations: 1992/ 2013 Area: 4,590 m² in total



### Alte Schlosserei

Visitor centre and offices in Rastatt Year of construction: 1921 Extensions / alterations: 2011 Area: 1.680 m<sup>2</sup> in total



### Werk Ötigheim

Production and logistics in Ötigheim

Year of construction: 2008 Area: 116.000 m<sup>2</sup> in total

### From the Black Forest to the world



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# Welcome to one of the worldwide leaders in drainage

Locations and partners all over the world

#### Subsidiaries

	Bulgaria		Poland
	Germany		Romania
	France		Russia
	United Kingdom	8	Slovakia
	Italy		Slovenia
	Lithuania		Hungary
	Netherlands	-0-	Croatia
=	Austria		

#### **Exclusive Distributors**

	Belgium		Portugal
+	Denmark	+-	Sweden
	Estonia	8	Serbia
	Finland	8	Spain
Þ.	Greece	8	Tenerife
	Ireland		Czech Republic
+	Iceland		Ukraine
	Latvia		Belarus







### Some figures from the **HAURATON** world

### FOUNDED IN 1956

BUV KM OF CHANNELS INSTALLED IN 2016

> This corresponds to the distance from Bangkok to Singapur



### KM LINEAR DISTANCE

18,500 KM as the crow flies to our most faraway project in New Zealand

Export to



# Jaton

### Your contact at HAURATON

#### Export Director Asia

Management and commercial responsibility / strategic advice



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#### **Technical Support Export**

Support with technically complex issues



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### Evolution of surface drainage systems



### **Conventional System**

#### HARAPPA 2600 B.C.

The world's first known urban waste water system appeared in Asia (Harappa/Indus) around 2600 BC.



### In-Situ

#### IN-SITU

In-Situ Systems are simple channels formed from concrete on site with a grating laid inbetween.

Disadvantages: Time consuming, costly installation, low quality finish, poor durability, rattling and rusted gratings.







### Modern System

#### HAURATON DRAINAGE SYSTEM

The drainage systems of HAURATON are efficient, sustainable and highly stable.



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### Benefits of RECYFIX<sup>®</sup> Channels compared to local in-situ solutions



#### low weight ensures easy handling on site

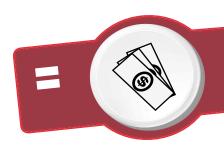
 much lighter than channels made of concrete or polymer concrete
 easy transport and quick installation = saves time



#### high stability

 channels are extremely tough, can be packed, transported and transferred with ease





My benefit: 50% cost savings on installation





### ecological and sustainable material

RECYFIX channels are made of 100% recycled Polypropylene (PP) that is very environmentally friendly



#### high resistance

- high chemical resistance against corrosive liquids
- 100% UV-resistant



#### high security

 Certified according to European Standard EN 1433





#### durability

 Polypropylene (PP) reacts very slowly to weathering such as air, light, wind, dust and therefore is extremely durable



**RECYFIX®** = a high-quality recycled composite





**RECYFIX®** channels meet the requirement of European Standard EN 1433 (drainage channels)

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### Characteristics of a drainage system How to choose the right product?

### 1. Project application



Private areas Parks Pedestrian zones

Class A, 15 kN



Public areas Garage entrances Car parks

Class B, 125 kN



Market squares Commercial areas

Class C, 250 kN

In case of any doubt a higher loading class should be chosen.

### 2. Hydraulic design

Drainage area depths in dependence on the line length of RECYFIX channels



length, width and surface layer plus the rain intensity, with the HAURATON Hydraulic-App the best system from hydraulic purpose can be calculated.

With a few information on area to be drained such as

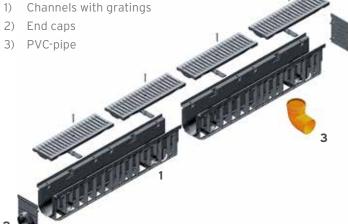
A professional hydraulic calculation by TSE team is available on request

More information on page 17.

### 3. System

A complete drainage system consists of ...

1)





Streets (alongside) Commercial areas

400 kN



Industrial yards Container yards

Class E, 600 kN



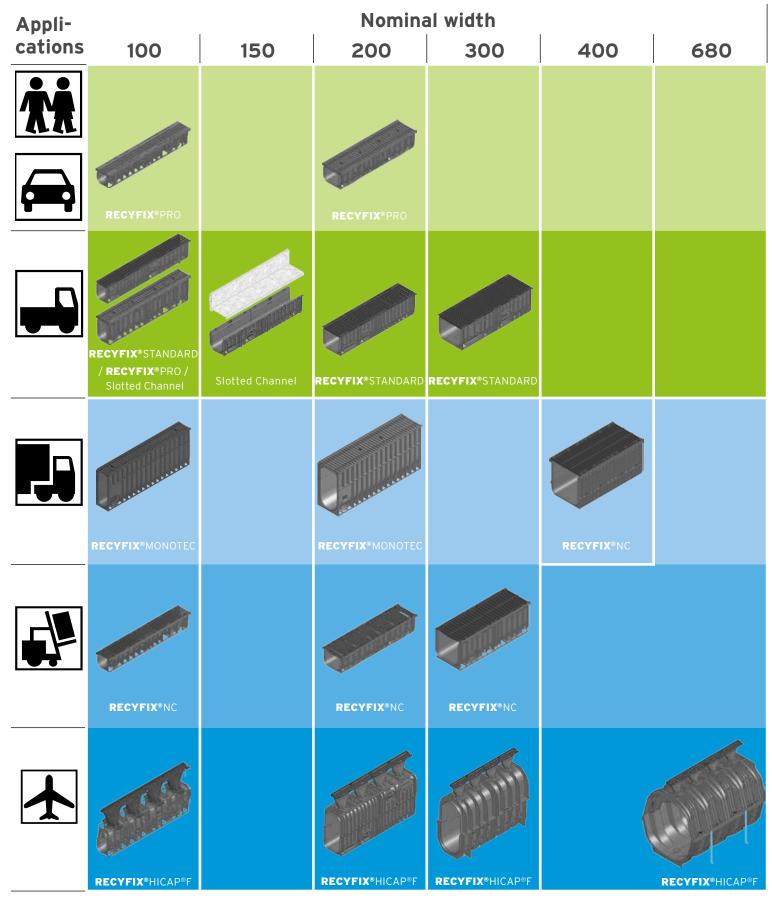
Class F, 900 kN

Airports Race tracks

Ports



### HAURATON product range



Further details on following product pages. RECYFIX HICAP F on request for project business.

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### **HAURATON** system comparison

System Characteristics	<b>RECYFIX</b> ®STANDARD
System rendered image	
Applications	<ul> <li>Landscape or domestic projects with light pedestrian use and no (or very limited) domestic car traffic</li> <li>Examples: <ul> <li>Light pedestrian use</li> <li>Lightly used pathways</li> <li>Cycle tracks (not trafficked)</li> <li>Domestic driveways</li> <li>House entrances</li> <li>None-traffic locations (against buildings and walls)</li> <li>Gardens and green areas (light pedestrian use)</li> </ul> </li> </ul>
Surface finish types	<ul> <li>Paving Units</li> <li>Concrete Pavement</li> <li>Resin Surfaces</li> <li>Other</li> </ul>
Channel edge detail	<ul> <li>Integral PP edge frame (within channel body)</li> <li>lay-on' grating design; gratings laid on PP channel edge</li> <li>Visible edge detail</li> </ul>
Grating fixing system	<ul> <li>2 locking bars and bolts per metre</li> </ul>
Highlights	<ul> <li>Basic ,commercial grade' channel system</li> <li>Lowest cost product of the listed channel systems</li> <li>System generally delivered with gratings pre-assembled</li> </ul>



<b>RECYFIX</b> ®PRO	<b>RECYFIX</b> ®NC
<ul> <li>Areas subject to heavy-duty pedestrian use; or limited use by ,slow-moving' domestic/light- commercial vehicles</li> <li>Examples: <ul> <li>Light pedestrian use and lightly used pathways</li> <li>Cycle tracks (not trafficked)</li> <li>Domestic driveways</li> <li>House entrances</li> <li>None-traffic locations (against buildings and walls)</li> <li>Gardens and green areas (light pedestrian use)</li> <li>Sidewalks</li> <li>Pedestrian areas and yards</li> <li>Shopping centres and precincts</li> <li>Light vehicle driveways and private parking areas</li> <li>Commercial and multi-storey parking areas</li> <li>Small commercial and industrial premises (use by handheld pallet trucks only)</li> <li>Railway platforms</li> </ul> </li> </ul>	<ul> <li>Areas subject to more regular traffic; light commercial forklifts/slow-moving heavy vehicles.</li> <li>*Not suitable for fast-moving traffic on roads and highways</li> <li>Examples: <ul> <li>Public areas</li> <li>Petrol filling station forecourts (not constantly traffic by heavy vehicles)</li> <li>Service yards and logistic areas; commercial and industrial areas (*refer to general note above)</li> <li>Roadsides and carriageway locations (non-traffic locations)</li> </ul> </li> </ul>
<ul> <li>Paving Units</li> <li>Concrete Pavement</li> <li>Resin Surfaces</li> <li>Asphalt</li> <li>Other</li> </ul>	<ul> <li>Concrete Pavement (recommend concrete surround installed to top surface for heavy-duty applications)</li> <li>Paving Units</li> <li>Resin Surfaces</li> <li>Asphalt</li> <li>Other</li> </ul>
<ul> <li>Integral PP edge-frame (within channel body)</li> <li>In-laid' grating design; gratings inserted inside/ in-between channel edge-frame</li> <li>Visible (narrow) edge detail (aesthetic finish)</li> </ul>	<ul> <li>Composite PP edge-frame is an integral part of the channel body; for added rigidity and corrosion resistance.</li> <li>In-laid' grating design; gratings inserted inside/in-between channel edge-frame</li> <li>Visible (narrow) edge detail (aesthetic finish)</li> <li>Gratings are bolted to channel edge-frame (8 bolts/metre)</li> </ul>
• 2 locking bars and bolts per metre	8 bolt innovative fixing system per metre
<ul> <li>Ridges prevent longitudinal movement of grating</li> <li>System generally delivered with gratings pre-assembled</li> <li>This is HAURATON's best selling product</li> </ul>	• RECYFIX®NC provides a secure grating connection to the channel edge-frame with a 8 bolt-fixing per metre for heavier and more regular loads

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### HAURATON grating designs for landscaping applications

### RECYFIX®PRO 100











### Longitudinal ductile iron grating, KTL-coated\*

Bar distance: 9 mm

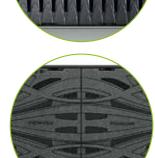


#### Ductile iron gratings, G-TEC, KTL-coated\*

Bar distance: 2 x 85 x 9 mm

on request





Ductile iron grating, METROPOLIS, black KTL-coated\*

on request



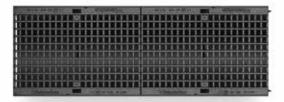
### RECYFIX®STANDARD 100



### **RECYFIX®**STANDARD 200

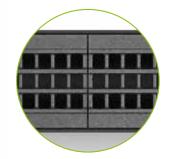


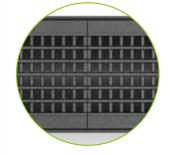
### **RECYFIX®**STANDARD 300

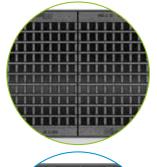


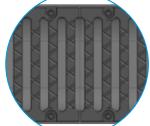
RECYFIX®NC 200 NW 100, 300 and 400 come in the same design











### GUGI-Ductile iron mesh gratings

Mesh width: 15 x 25 mm

### GUGI-Ductile iron mesh gratings

Mesh width: 15 x 25 mm

### GUGI-Ductile iron mesh gratings

Mesh width: 15 x 25 mm

### Ductile iron slotted gratings

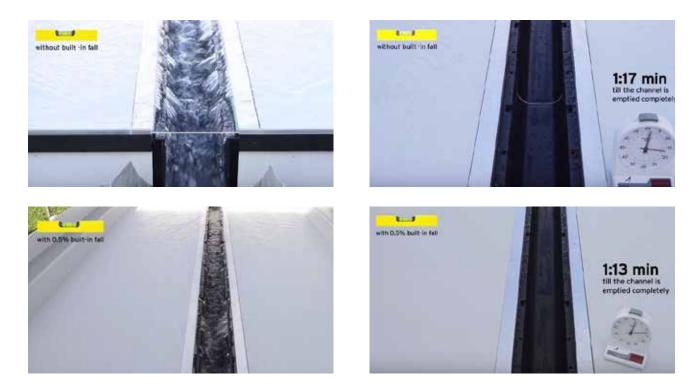
Slot width: 18 mm

SPORT

### Hydraulic performance of RECYFIX<sup>®</sup> channels

**The exemplary hydraulic performance test** on the hydraulic capacity of two channel runs (4 meter of RECYFIX<sup>®</sup> 150 Type 01), one with and one without built-in fall, clearly shows, **that at the end** the hydraulic performance is almost the same.

**Until the channels are** completely emptied of water, it takes 1:17 minutes without built-in fall compared to 1:13 minutes with 0.5% built-in fall.



**As a result, although** RECYFIX channels do not have a built-in fall, RECYFIX channels fulfill all hydraulic demands and also ensure that under all applications storm water flows into the channel.



See here the hydraulic performance test.

**HAURATON** channels have optimized hydraulics and don't require slope.

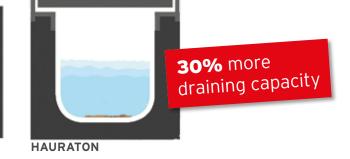


### Channel shape

Tests and hydraulic calculations have shown that channels with a U-shaped cross section have a better velocity at the end of the channel run and a higher cleaning power compared with a V-shaped or an In-Situ cross section.







#### Competitor

In-Situ

#### Results

- U-shaped channels have up to a 30 % increased draining capacity compared to V-shaped channels.
- In a U-shaped channel the water has a larger contact area with the soiling. That's why this channel cleans itself more efficiently.

### **HAURATON Hydraulic App**

With our HAURATON hydraulic app you can get a quick overview on our channel systems. Since we want to provide you with a straightforward and easy-to-use application, only four parameters need to be entered. With just one click you can select between the channel systems according to your individual needs .

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Download here:

hauraton.com/en/hydraulic-app.php



hydraulic app currently for PC, iOS and Android

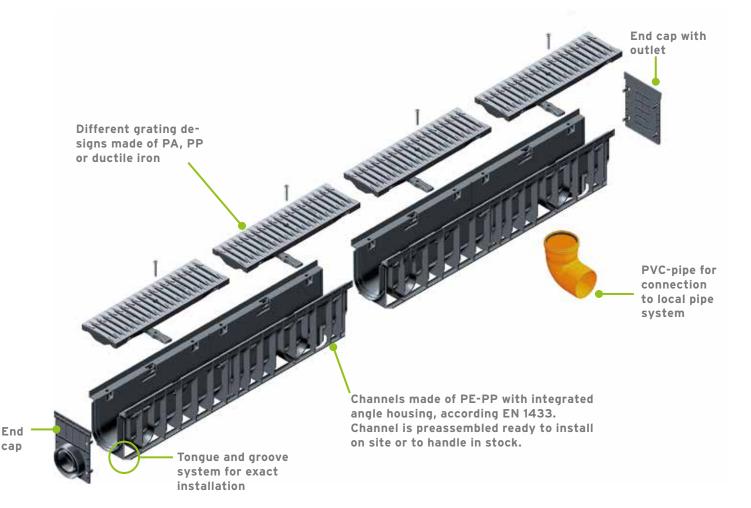
**İİ** 

AQUA

SPORT



Corrosion-free drainage system for private and public areas.









Data Ran Merdeka in Kuala Lumpur, Malaysia



Gardens by the Bay Tadpole Area in Singapore

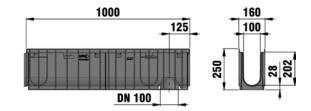
SPORT

### **RECYFIX®**PRO 100

### Combi article

#### RECYFIX®PRO 100, class B 125

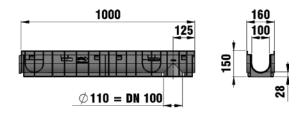




	Length mm	Width mm	Height mm	Drainage cross-sect. cm²	Intake cross-sect. cm²/m	Weight kg	ltem No.
Type 01 with GUGI-Grating made of PA-GF, MW 15/25, black, locked	1000	160	150	92	444	4,3	47035
Type 010 with GUGI-Grating made of PA-GF, MW 15/25, black, locked	1000	160	200	142	444	4,7	47040
Type 020 with GUGI-Grating made of PA-GF, MW 15/25, black, locked	1000	160	250	192	444	5,5	48623
Type 75 with GUGI-Grating made of PA-GF, MW 15/25, black, locked	1000	160	75	35	444	2,9	47032
Type 95 with GUGI-Grating made of PA-GF, MW 15/25, black, locked	1000	160	95	55	444	3,6	47033

#### RECYFIX®PRO 100, class C 250





	Length mm	Width mm	Height mm	Drainage cross-sect. cm²	Intake cross-sect. cm²/m	Weight kg	Item-No. galvanised
Type 01 with FIBRETEC slotted grating, SW 9, black	1000	160	150	92	372	4,6	47055
Type 010 with FIBRETEC slotted grating, SW 9, black	1000	160	200	142	372	4,9	47060
Type 020 with FIBRETEC slotted grating, SW 9, black, locked	1000	160	250	192	372	5,8	48625
Type 75 with FIBRETEC slotted grating, SW 9, black	1000	160	75	35	372	3,4	47062
Type 95 with FIBRETEC slotted grating, SW 9, black	1000	160	95	55	372	3,7	47063



### **RECYFIX®**PRO 100

#### End caps and further accessories



End cap closed for type 01



End cap made of PP with outlet DN 100 for type 01



Mud bucket vertical DN 100, black



Holesaw, Ø 102 mm, with tool holder for a driller

	Length mm	Width mm	Height mm	Weight kg	ltem No.
End cap closed for type 01	-	160	124	-	48681
End cap closed for type 010	-	160	176	0,1	47082
End cap made of PP with outlet DN 100 for type 010	-	160	201	0,1	47093
End cap made of PP, type 020	-	160	-	0,1	48683
End cap made of PP with outlet DN 100, type 020	-	160	-	0,1	48695
End cap Type 75	-	160	61	-	47097
End cap Type 95	-	160	81	-	47098
Mud bucket vertical DN 100, black	100	100	85	-	40293
Step Fall Adapter for step slope, from type 01 to type 010, from type 010 to type 020	174	98	92	0,2	48790
Holesaw, Ø 102 mm, with tool holder for a driller	-	-	-	0,6	980

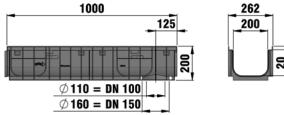
### **RECYFIX®**PRO 200

### Combi article

#### RECYFIX®PRO 200, class B 125

Type 010 with FIBRETEC slotted grating, SW 9 mm, black, locked







SPORT

•	Length mm	Width mm	Height mm	Drainage cross-sect. cm²	Intake cross-sect. cm²/m	Weight kg	ltem No.
Type 010 with FIBRETEC slotted grating, SW 9 mm, black, locked	1000	262	200	294	656	8,3	47246
Type 115 with FIBRETEC slotted grating, SW 9 mm, black, locked	1000	262	115	150	656	7,0	47233

#### End caps and further accessories



End cap combined made of PP closed / with outlet DN 100, Type 010



Mud bucket DN 150



Holesaw, Ø 102 mm, with tool holder for a driller

туре ото	Length mm	Width mm	Height mm	Weight kg	ltem No.
End cap combined made of PP closed / with outlet DN 100, Type 010	-	258	217	0,2	41387
End cap closed, Type 115	-	250	100	0,1	47297
Mud bucket vertical DN 100, black	100	100	85	-	40293
Mud bucket DN 150	-	-	180	0,6	2191
Holesaw, Ø 102 mm, with tool holder for a driller	-	-	-	0,6	980

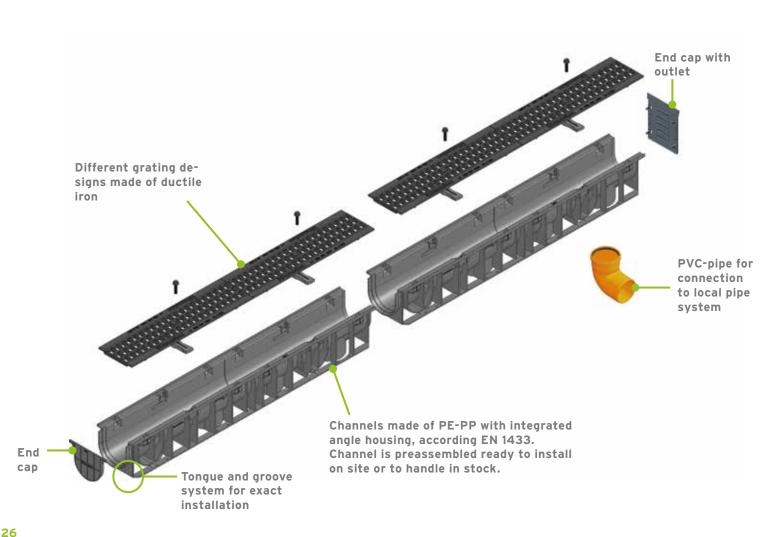




Puteri Harbour, Malaysia

### **RECYFIX®**STANDARD

Linear drainage channels for public and commercial area.







AQUA





Genting Arena of Star in Pahang, Malaysia

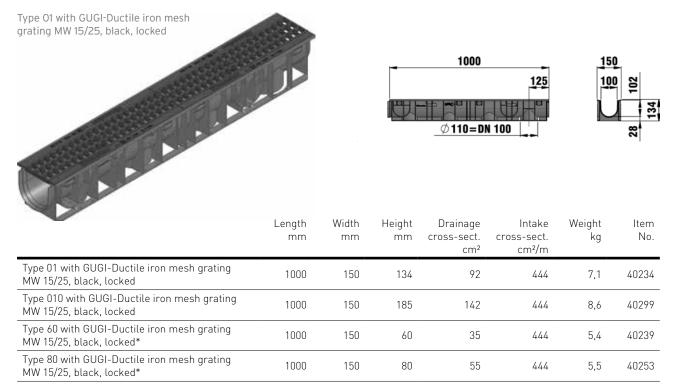


Condominium Suites Project Parque Norm Marque in Bangkok, Thailand

### **RECYFIX**®STANDARD 100

### Combi article

### RECYFIX®STANDARD 100, class C 250



\* For frequently used areas we recommend FASERFIX KS Channels shallow (see CIVILS). Type 60/type 80 with preformed outlet DN 70.

#### End caps and further accessories



End cap, closed for type 01



End cap combined made of PP with outlet DN 100, type 010



Mud bucket vertical DN 100, black



Holesaw, Ø 102 mm, with tool holder for a driller

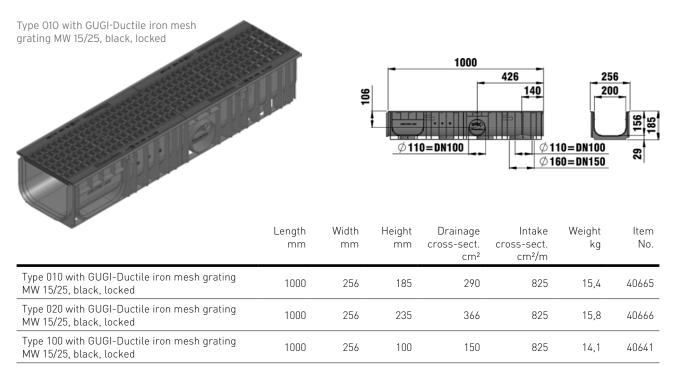
	Length mm	Width mm	Height mm	Weight kg	ltem No.
End cap, closed for type 01	-	150	108	-	48081
End cap closed for type 010	-	150	160	-	40282
End cap combined made of PP with outlet DN 100, type 010	-	148	185	0,1	40283
End cap closed, made of PP, for type 60	-	147	44	-	40284
End cap closed, made of PP, for Type 80	-	147	64	-	40291
Mud bucket vertical DN 100, black	100	100	85	-	40293
Step Fall Adapter for step slope, from type 01 to type 010	-	-	-	0,2	41290
Holesaw, Ø 102 mm, with tool holder for a driller	-	-	-	0,6	980

### Hauraton

### **RECYFIX®**STANDARD 200

### Combi article

#### RECYFIX®STANDARD 200, class C 250



### Accessories

#### End caps and further accessories



End cap combined made of PP closed / with outlet DN 100, Type 010



Mud bucket DN 150



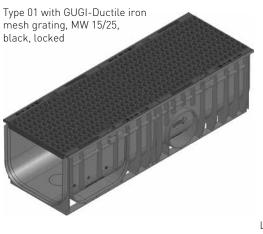
Holesaw, Ø 102 mm, with tool holder for a driller

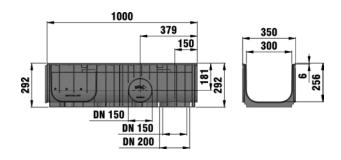
	Length mm	Width mm	Height mm	Weight kg	ltem-No. galvanised	ltem-No. stainless steel
End cap combined made of PP closed / with outlet DN 100, Type 010	-	254	199	0,2	40792	-
End cap closed, Type 01	-	260	275	1,1	12081	12581
End cap closed, type 100	-	262	100	0,1	40690	-
Step Fall Adapter for step slope, from type 010 to type 020	218	200	99	0,4	49590	-
Mud bucket vertical DN 100, black	100	100	85	-	40293	
Mud bucket DN 150	-	-	180	0,6	2191	
Holesaw, Ø 102 mm, with tool holder for a driller	-	-	-	0,6	980	-

SPORT

### Combi article

#### RECYFIX®STANDARD 300, class C 250



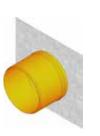


	Length mm	Width mm	Height mm	Drainage cross-sect. cm²	Intake cross-sect. cm²/m	Weight kg	ltem No.
Type 01 with GUGI-Ductile iron mesh grating, MW 15/25, black, locked	1000	350	292	725	1385	29,1	40870
T ype 010 with GUGI-Ductile iron mesh grating, MW 15/25, black, locked	1000	420	381	857	1385	33,20	40875

### Accessories

#### End caps and further accessories





End cap closed, galvanised, type 01

End cap with vertical UPVC outlet, galvanised, type 01



Mud bucket DN 150

	Length mm	Width mm	Height mm	Weight kg	ltem No.
End cap closed, galvanised, Type 01	-	360	340	1,8	40882
End cap with vertical UPVC outlet, galvanised, Type 01	-	360	340	2,3	40892
Mud bucket DN 150	-	-	180	0,6	2191
Holesaw, Ø 102 mm, with tool holder for a driller	-	-	-	0,6	980





Teega Residence - Iskandar, Puteri, Johor - Malaysia



Teega Residence - Iskandar, Puteri, Johor - Malaysia

### **Slotted Channels**





Channels made of PE-PP with integrated angle housing, according EN 1433. Channel is preassembled ready to install on site or to handle in stock.

End cap

 Tongue and groove system for exact installation

32





Mercedes-Benz Arena in Berlin, Germany



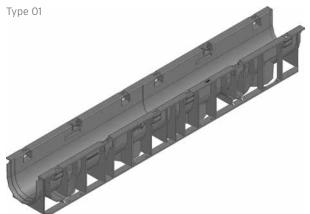
Tycoon Project in Bangkok, Thailand

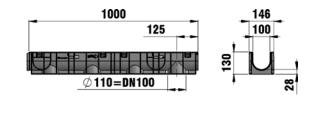
SPORT

### **Slotted Channel 100**

### Channels

#### **RECYFIX®**STANDARD 100





	Length mm	Width mm	Height mm	Drainage cross-sect. cm²	Weight kg	ltem No.
Туре 01	1000	146	130	92	1,9	48200
Туре 010	1000	147	181	142	2,5	40321

### Gratings

#### Slotted Covers 100, neck height 160, class C 250





Asymmetric

Access cover asymmetric

	Length mm	Width mm	Height mm	Intake cross-sect. cm²/m	Weight kg	ltem-No. galvanised	ltem-No. stainless steel
Asymmetric	1000	160	196	125	8,2	5725	5775
Access cover asymmetric	500	160	188	7,1	7,1	5756	5786
Extraction bail for access covers (2 pieces required)	-	400	150	0,8	0,8	740	-

Bigger nominal sizes and individual neck heights as tailor-made production possible for more than 30 m. The quality of stainless steel material corresponds to CNS 1.4301.



### **Slotted Channel 100**

### Accessories

#### **RECYFIX®**STANDARD 100 Channels



End cap, closed for type 01

End cap closed for type 010



Mud bucket vertical DN 100, black



Holesaw, Ø 102 mm, with tool holder for a driller

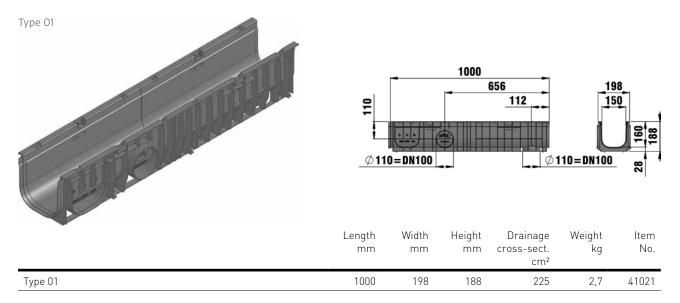
	Length mm	Width mm	Height mm	Weight kg	ltem No.
End cap, closed for type 01	-	150	108	-	48081
End cap closed for type 010	-	150	160	-	40282
Mud bucket vertical DN 100, black	100	100	85	-	40293
Holesaw, Ø 102 mm, with tool holder for a driller	-	-	-	0,6	980

SPORT

### **Slotted Channel 150**

### Channels

#### **RECYFIX®**STANDARD 150



### Gratings

#### Slotted Covers 150, neck height 160, class C 250





Asymmetric

Access cover asymmetric

	Length mm	Width mm	Height mm	Intake cross-sect. cm²/m	Weight kg	ltem-No. galvanised	ltem-No. stainless steel
Asymmetric	1000	210	196	125	8,9	452	462
Access cover asymmetric	500	210	188	7,9	7,9	476	486
Extraction bail for access covers (2 pieces required)	-	400	150	0,8	0,8	740	-

Bigger nominal sizes and individual neck heights as tailor-made production possible for more than 30 m. The quality of stainless steel material corresponds to CNS 1.4301.



# **Slotted Channel 150**

# Accessories

### **RECYFIX**<sup>®</sup>STANDARD 150 channels





End cap combined made of PP with outlet DN 70/100, Type 01

Mud bucket DN 150

	Length mm	Width mm	Height mm	Weight kg	ltem No.
End cap combined made of PP with outlet DN 70/100, Type 01	-	210	203	0,1	40191
Mud bucket DN 150	-	-	180	0,6	2191
Holesaw, Ø 102 mm, with tool holder for a driller	-	-	-	0,6	980

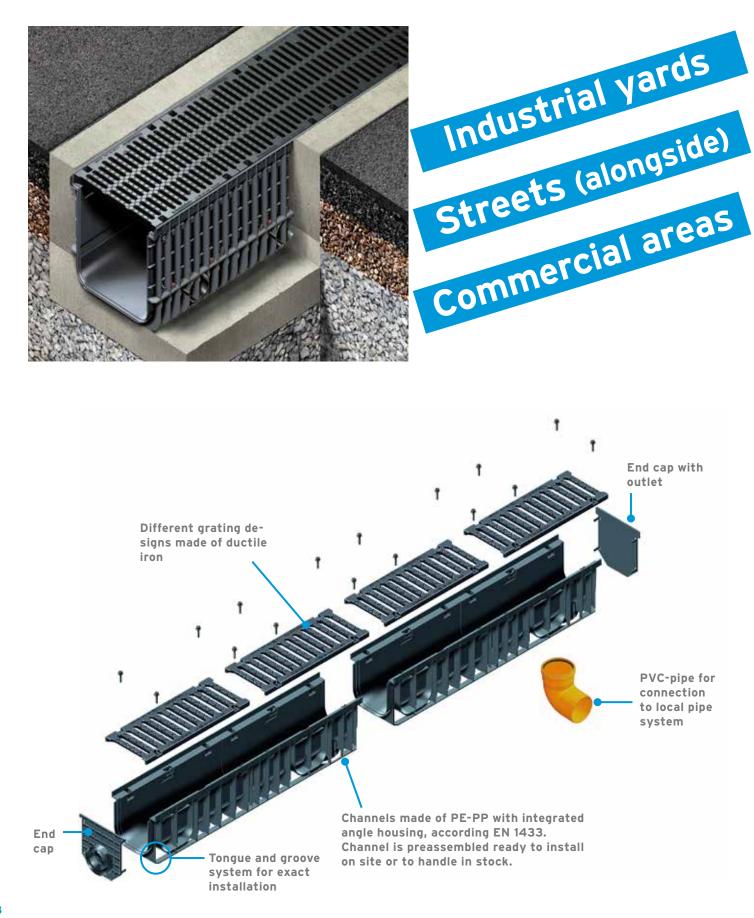
AQUA

SPORT

# **RECYFIX®**NC

Linear drainage channels for public and commercial area.





# 📕 hauraton



Mega Yard project Johor in Johor, Malaysia

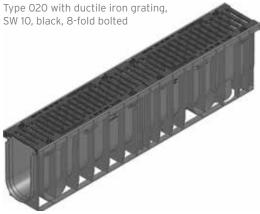


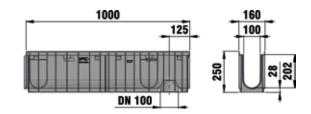
Industrial hall, Poland

# RECYFIX®NC 100 NEW

# Combi article

#### RECYFIX®NC 100, class E 600





	Length mm	Width mm	Height mm	Drainage cross-sect. cm²	Intake cross-sect. cm²/m	Weight kg	ltem No.
Type 01 with ductile iron grating, black, SW 10 mm, 8-fold bolted	1000	160	150	92	427	10,7	48770
Type 010 with ductile iron grating, black, SW 10 mm, 8-fold bolted	1000	160	200	142	427	11,6	48772
Type 020 with ductile iron grating, SW 10 mm, black, 8-fold bolted	1000	160	250	192	427	12,5	48776
Type 75 with ductile iron grating, black, SW 10 mm, 8-fold bolted	1000	160	75	35	427	10,2	48774

### Accessories

#### End caps and further accessories



End cap closed for type 01



End cap made of PP with outlet DN 100 for type 01



Mud bucket vertical DN 100, black



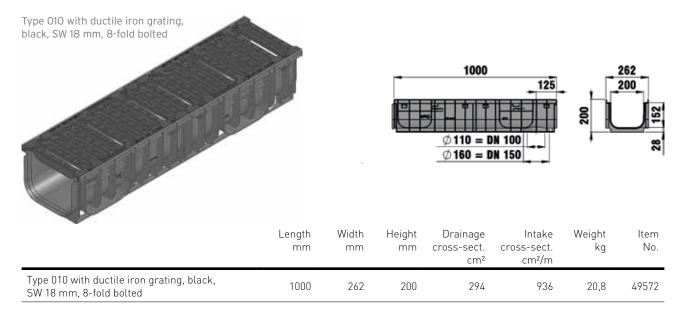
Holesaw, Ø 102 mm, with tool holder for a driller

	Length mm	Width mm	Height mm	Weight kg	ltem No.
End cap closed for type 01	-	160	124	-	48681
End cap closed for type 010	-	160	176	0,1	47082
End cap made of PP with outlet DN 100 for type 010	-	160	201	0,1	47093
End cap made of PP, type 020	-	160	-	0,1	48683
End cap made of PP with outlet DN 100, type 020	-	160	-	0,1	48695
End cap Type 75	-	160	61	-	47097
Mud bucket vertical DN 100, black	100	100	85	-	40293
Step Fall Adapter for step slope, from type 01 to type 010, from type 010 to type 020	174	98	92	0,2	48790
Holesaw, Ø 102 mm, with tool holder for a driller	-	-	-	0,6	980

# RECYFIX®NC 200 NEW

### Combi article

#### RECYFIX®NC 200, class E 600



### Accessories

#### End caps and further accessories



End cap combined made of PP closed / with outlet DN 100, Type 010



Mud bucket DN 150



Holesaw, Ø 102 mm, with tool holder for a driller

	Length mm	Width mm	Height mm	Weight kg	ltem No.
End cap combined made of PP closed / with outlet DN 100, Type 010	-	258	217	0,2	41387
Mud bucket vertical DN 100, black	100	100	85	-	40293
Mud bucket DN 150	-	-	180	0,6	2191
Holesaw, Ø 102 mm, with tool holder for a driller	-	-	-	0,6	980

# RECYFIX®NC 300 NEW

# Combi article

#### RECYFIX®NC 300, class E 600

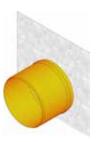
Type 010 with ductile iron grating, black, SW 18 mm, 8-fold bolted				1000 DN 100 beidseitig	249       	360	40 00 00 00 00
	Length mm	Width mm	Height mm	Drainage cross-sect. cm²	Intake cross-sect. cm²/m	Weight kg	ltem No.
Type 010 with ductile iron grating, black, SW 18 mm, 8-fold bolted	1000	362	360	873	1293	35,0	49872

### Accessories

#### End caps and further accessories



End cap closed, galvanised, type 010



End cap with horizontal UPVC-outlet DN 200, galvanised, Type 010



Mud bucket DN 150

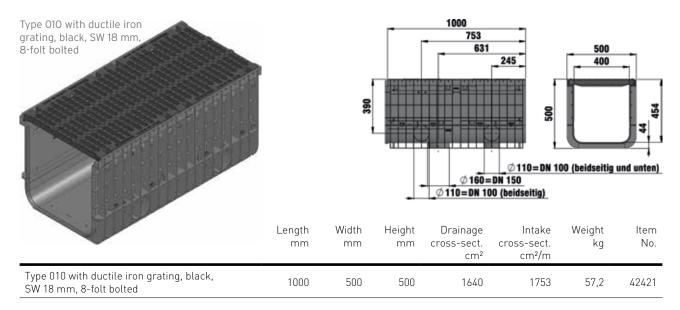
	Length mm	Width mm	Height mm	Weight kg	ltem No.
End cap closed, galvanised, Type 010	-	360	360	1,9	49783
End cap with horizontal UPVC-outlet DN 200, galvanised, Type 010	-	360	360	2,6	49791
Mud bucket DN 150	-	-	180	0,6	2191



# RECYFIX®NC 400 NEW

### Combi article

#### RECYFIX®NC 400, class D 400

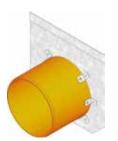


### Accessories

### End caps and further accessories



End cap closed, type 010



End cap with horizontal UPVC - outlet DN 300, type 010



Mud bucket DN 150

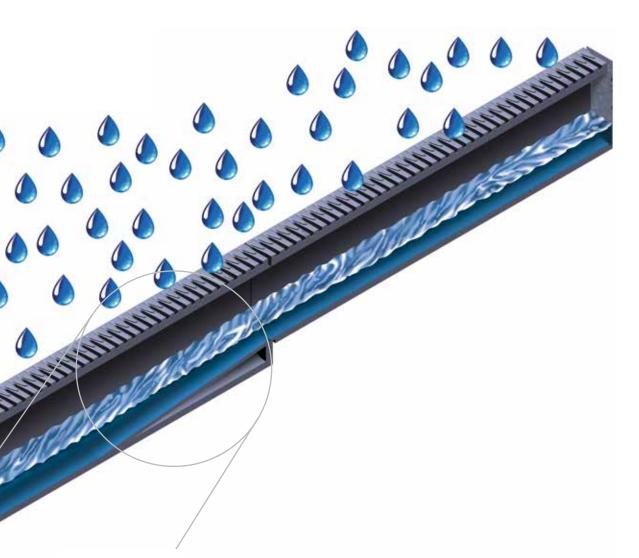
	Length mm	Width mm	Height mm	Weight kg	ltem No.
End cap closed, type 010	=	500	498	3,1	42481
End cap with horizontal UPVC - outlet DN 300, type 010	-	500	498	4,9	42487
Mud bucket vertical DN 100, black	100	100	85	-	40293
Mud bucket DN 150	-	-	980	0,6	2191
Holesaw, Ø 102 mm, with tool holder for a driller	-	-	-	0,6	980

# **Step Fall adaptors** (with the example of RECYFIX MONOTEC)

### Installation with a stepped slope.

When RECYFIX MONOTEC channels are laid to a stepped construction, an artificial slope is created using channels of different heights. RECYFIX MONOTEC step fall adapters are used at the transition from one level to the next. They bridge the difference in height, ensuring that the water drains away smoothly.

# 📕 hauraton



**RECYFIX**<sup>®</sup>MONOTEC Step Fall Adapter, black, for channel runs with step fall



Step Fall Adapter for transition from type 230 to 280



Step Fall Adapter for transition from type 280 to 380

#### **RECYFIX® MONOTEC Channels 100:**



# **RECYFIX®**MONOTEC

Highly stable and lightweight - linear drainage made of PP for Civils engineering







End caps for channel start/ channel end (DN 100).

Trash box made of galvanized steel with pipe connection possibility DN 200. Removable grating made of modified polypropylene for access to channel system.

Connection plate for flexible connection of different channel types with the trash box and closing cap for the closing of trash box.

End caps for channel start/ channel end (DN 100).

> RECYFIX MONOTEC channels made of modified polypropylene, according to DIN EN 1433, CE-conform.







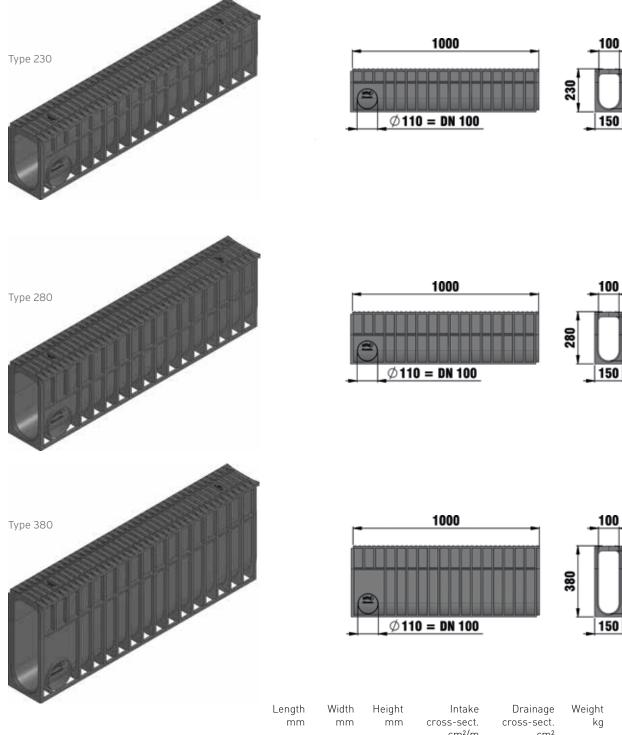
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335

ltem

#### **RECYFIX®**MONOTEC 100 NEW

### RECYFIX®MONOTEC 100, class D 400



	mm	mm	mm	cross-sect. cm²/m	cross-sect. cm²	kg	No.
Туре 230	1000	150	230	372	190,5	7,85	36000
Туре 280	1000	150	280	372	245,5	8,63	36005
Туре 380	1000	150	380	372	355,5	10,25	36015

# Hauraton

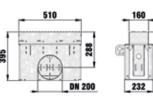
# **RECYFIX®**MONOTEC 100 **NEW**

### Accessories

#### Trash box



Trash box with galvanised bucket



Technical drawing, trash box with galvanised bucket



channel type 230



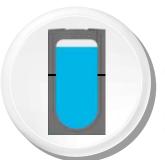
Closing cap with screw set, galvanised

	Length mm	Width mm	Height mm	Weight kg	ltem No.
Trash box with galvanised bucket	510	160	395	-	36045
Looking handle with screw for protection against vandalism	-	-	-	-	36098
Connection plate with screw set, galvanised, channel type 230	-	216	283	-	36032
Connection plate with screw set, galvanised, channel type 280	-	216	283	-	36037
Connection plate with screw set, galvanised, channel type 380	-	216	283	-	36047
Closing cap with screw set, galvanised, for trash box/inspection box	-	216	283	-	36023

All trash and inspection boxes are factory-made with the end face open to enable a modular use for all application situations:

- Option 1: one-sided channel connection: You will need 1 connection plate with the same channel height (= same type) and an closing cap.

- Option 2: two-sided channel connection: You will need 2 connection plates with the same channel height (= same type).



#### monolithic drainage channel for highest stability

- manufactured with two parts, which are put together to a monolithic channel in a mirror
- welding process.\*
- vandalism proof
- withstands frequently traffic permanently



\* In the mirror welding process the joining surfaces are heated with heating elements (= mirror) and finally pressed together.

All this is done without any additional connecting material.

The connections are afterwards extremely reliable.

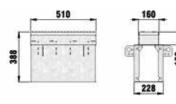
# **RECYFIX®**MONOTEC 100 NEW

### Accessories

#### Inspection box



Inspection box



Technical drawing, inspection box



Connection plate with

screw set, galvanised,

channel type 280



Closing cap with screw set, galvanised

	Length mm	Width mm	Height mm	Weight kg	ltem No.
Inspection box	520	160	388	-	36035
Looking handle with screw for protection against vandalism	-	-	-	-	36098
Connection plate with screw set, galvanised, channel type 230	-	216	283	-	36032
Connection plate with screw set, galvanised, channel type 280	-	216	283	-	36037
Connection plate with screw set, galvanised, channel type 380	-	216	283	-	36047
Closing cap with screw set, galvanised, for trash box/inspection box	-	216	283	-	36023

All trash and inspection boxes are factory-made with the end face open to enable a modular use for all application situations:

Option 1: one-sided channel connection: You will need 1 connection plate with the same channel height (= same type) and an closing cap.
 Option 2: two-sided channel connection: You will need 2 connection plates with the same channel height (= same type).

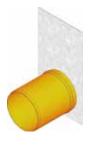


# **RECYFIX®**MONOTEC 100 **NEW**

#### End caps



End cap closed, galvanised, type 230



End cap with horizontal UPVC-outlet DN 100, galvanised, type 280

	Length mm	Width mm	Height mm	Weight kg	ltem No.
End cap closed, galvanised, type 230	-	150	225	0,5	36080
End cap closed, galvanised, type 280	-	150	275	0,6	36082
End cap closed, galvanised, type 380	-	150	375	0,8	36086
End cap with horizontal UPVC-outlet DN 100, galvanised, type 230	-	150	225	-	36090
End cap with horizontal UPVC-outlet DN 100, galvanised, type 280	-	150	275	-	36092
End cap with horizontal UPVC-outlet DN 100, galvanised, type 380	-	150	375	-	36096

#### Further accessories



Step Fall Adapter for step slope, from type 230 to 280

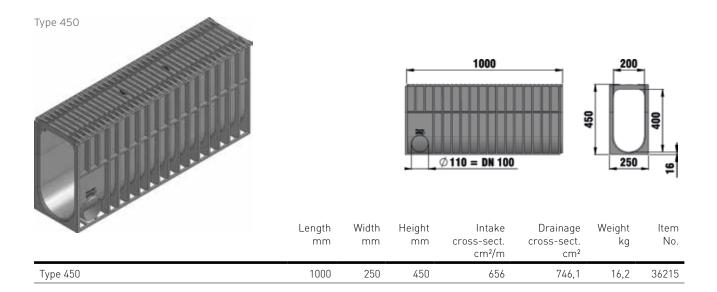


Step Fall Adapter for step slope, from type 280 to 380

	Length mm	Width mm	Height mm	Weight kg	ltem No.
Step Fall Adapter for step slope, from type 230 to 280	510	125	112,5	0,7	36070
Step Fall Adapter for step slope, from type 280 to 380	510	125	162,5	0,8	36071

# **RECYFIX®**MONOTEC 200 NEW

### RECYFIX®MONOTEC 200, class D 400

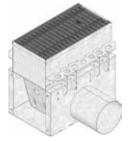


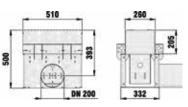
# Hauraton

# **RECYFIX®**MONOTEC 200 NEW

### Accessories

#### Trash box





Trash box with galvanised bucket

Technical drawing, trash box with galvanised bucket

	Length mm	Width mm	Height mm	Weight kg	ltem No.
Trash box with galvanised bucket	510	260	500	-	36245
Looking handle with screw for protection against vandalism	-	-	-	-	36298
Connection plate with screw set, galvanised, channel type 450	-	316	283	-	36247
Closing cap with screw set, galvanised, for trash box/inspection box	-	316	283	-	36223

All trash and inspection boxes are factory-made with the end face open to enable a modular use for all application situations: - Option 1: one-sided channel connection: You will need 1 connection plate with the same channel height (= same type) and an closing cap. - Option 2: two-sided channel connection: You will need 2 connection plates with the same channel height (= same type).

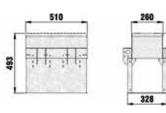
# **RECYFIX®**MONOTEC 200 NEW

### Accessories

#### Inspection box



Inspection box



Technical drawing, inspection box



Connection plate with

screw set, galvanised,

channel type 450



Closing cap with screw set, galvanised, for trash box/inspection box

	Length mm	Width mm	Height mm	Weight kg	ltem No.
Inspection box	510	260	493	-	36235
Looking handle with screw for protection against vandalism	-	-	-	-	36298
Connection plate with screw set, galvanised, channel type 450	-	316	283	-	36247
Closing cap with screw set, galvanised, for trash box/inspection box	_	316	283	-	36223

All trash and inspection boxes are factory-made with the end face open to enable a modular use for all application situations: - Option 1: one-sided channel connection: You will need 1 connection plate with the same channel height (= same type) and an closing cap.

- Option 2: two-sided channel connection: You will need 2 connection plates with the same channel height (= same type).

#### End caps



End cap closed, galvanised, type 450



End cap with horizontal UPVC-outlet DN 150, galvanised, type 450

	Length mm	Width mm	Height mm	Weight kg	ltem No.
End cap closed, galvanised, type 450	-	250	445	1,7	36286
End cap with horizontal UPVC-outlet DN 150, galvanised, type 450	-	250	445	-	36296



### Maximum hydraulic capacity

The fiber-reinforced polypropylene material enables a slim channel design. As a result, a maximum hydraulic capacity is achieved.



NW 100, Type 230



NW 100, Type 280



NW 100, Type 380



NW 200, Type 450



NW 200, Type 450



Lower drainage capacity, up to 45%, with monolithic channels made from other materials

CIVILS

AQUA

# Money-saving installation, easy to process



### Light weight.

Its light weight will keep your back in good health: A channel with a nominal width of 100 mm weighs just 4 kg.



### Easy processing.

The recycled composite is easy to process. Fitting pieces, pre-cuts and openings can be made using simple tools such as a saw or core drill bit with little effort.



### Combination items.

**RECYFIX**<sup>®</sup> channels are delivered to site pre-assembled with an inlaid grating, and can be directly removed from the palette and laid by one person.

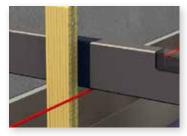
Look uo our current installation instructions on the internet under www.hauraton.com

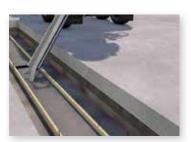
# Step by step installation videos

See here the exemplary illustration of step by step installation animations of RECYFIX®MONOTEC.











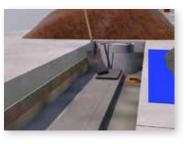












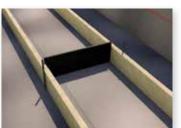


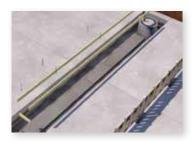
















# Additional drainage systems

# **RECYFIX**<sup>®</sup>HICAP<sup>®</sup>F

Drainage- and retention system for larger areas and highest loading capacities up to airports.



- Migh capacity drainage channel
- suitable for heavy load areas

no expensive crane or machine hours for installation required



<complex-block><complex-block>



# **RECYFIX®**GREEN STANDARD

Turf honeycomb for infiltration of rainwater in parking areas.



- the product is light and strong making it quick and easy to install
- helps to directly drain the rainfall
- the product when laid gives more than 90% of the area to turf

## **SPORTFIX®**

The comprehensive range for all Sports Facilities.



- high quality systems for track and field drainage
- water jump, longjump, sand traps and soft kerb compliment the product range
- all products met the IAAF Standards





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76437 Rastatt Germany Tel.+49 7222 958 0 Fax+49 7222 958 222 info@hauraton.com www.hauraton.com 10/2016 | Printed in Germany All drawings, measurements and weights are noncommittal! We reserve the right to do technical changes for improvement. EN 001-06-0916