



Robust drainage of large  
and heavy duty surfaces

ACO DRAIN® Qmax Neo 300

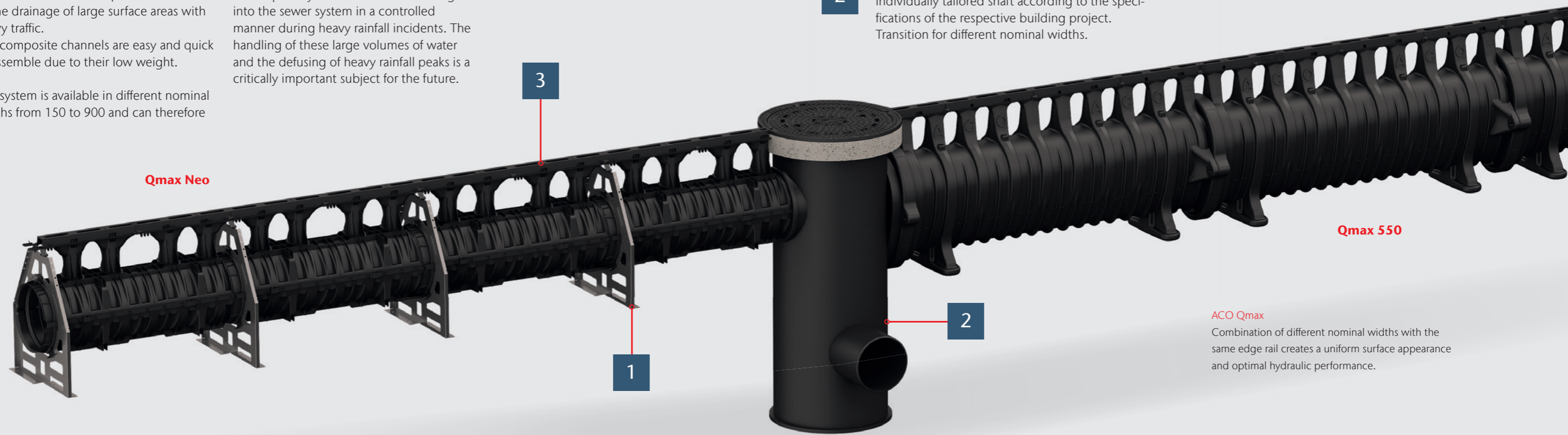


# ACO DRAIN® Qmax Family

ACO Qmax is the combination of drainage and retention. There are no limits related to the application field – everything is possible with ACO Qmax, from utilising it as a slotted channel in pedestrian areas to the drainage of large surface areas with heavy traffic. The composite channels are easy and quick to assemble due to their low weight.

The system is available in different nominal widths from 150 to 900 and can therefore

be adapted to the hydraulic requirements. In particular, the channel bodies of the larger nominal widths have an enormous retention volume: The collected rainwater can be temporarily stored and then discharged into the sewer system in a controlled manner during heavy rainfall incidents. The handling of these large volumes of water and the defusing of heavy rainfall peaks is a critically important subject for the future.



## Accessories

- 1 Installation Jig**  
Enables a fast and easy alignment of the frame.
- 2 Inspection Shaft**  
Individually tailored shaft according to the specifications of the respective building project. Transition for different nominal widths.

## Surface

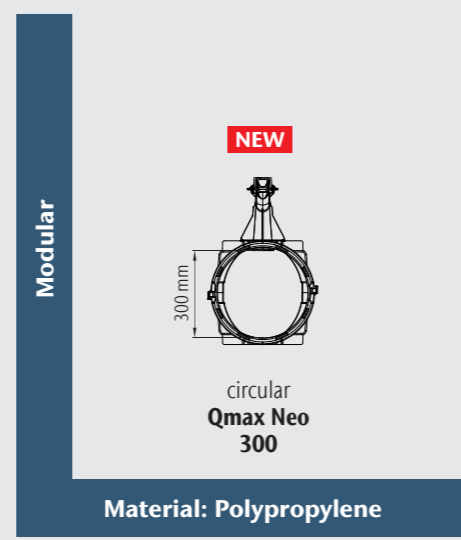
- 3 Edge Rail**  
Available in three different materials (cast iron, galvanised steel and composite) for specific applications.

**ACO Qmax**  
Combination of different nominal widths with the same edge rail creates a uniform surface appearance and optimal hydraulic performance.

### Qmax Family product advantages

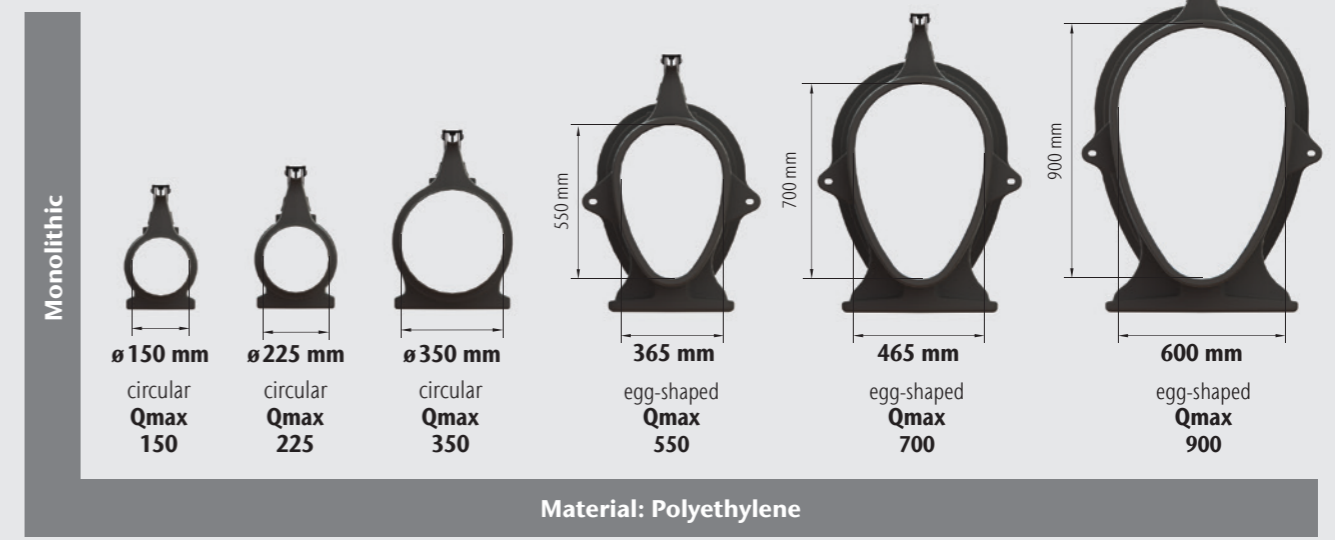
- Application variety
  - All surface finishes possible
  - Traffic loads from A 15 to F 900 certified
  - Large choice of materials for edge rail
- Design
  - Professional surface appearance due to discreet and narrow edge rail
  - Uniform and straight surface appearance even with different nominal widths underground
  - Drainage for the surface area and simultaneous retention with large storage volumes without additional sewer work
- Operating state
  - Sealed channel run
- Installation
  - High lay rates and performances without heavy lifting devices

### Qmax Neo



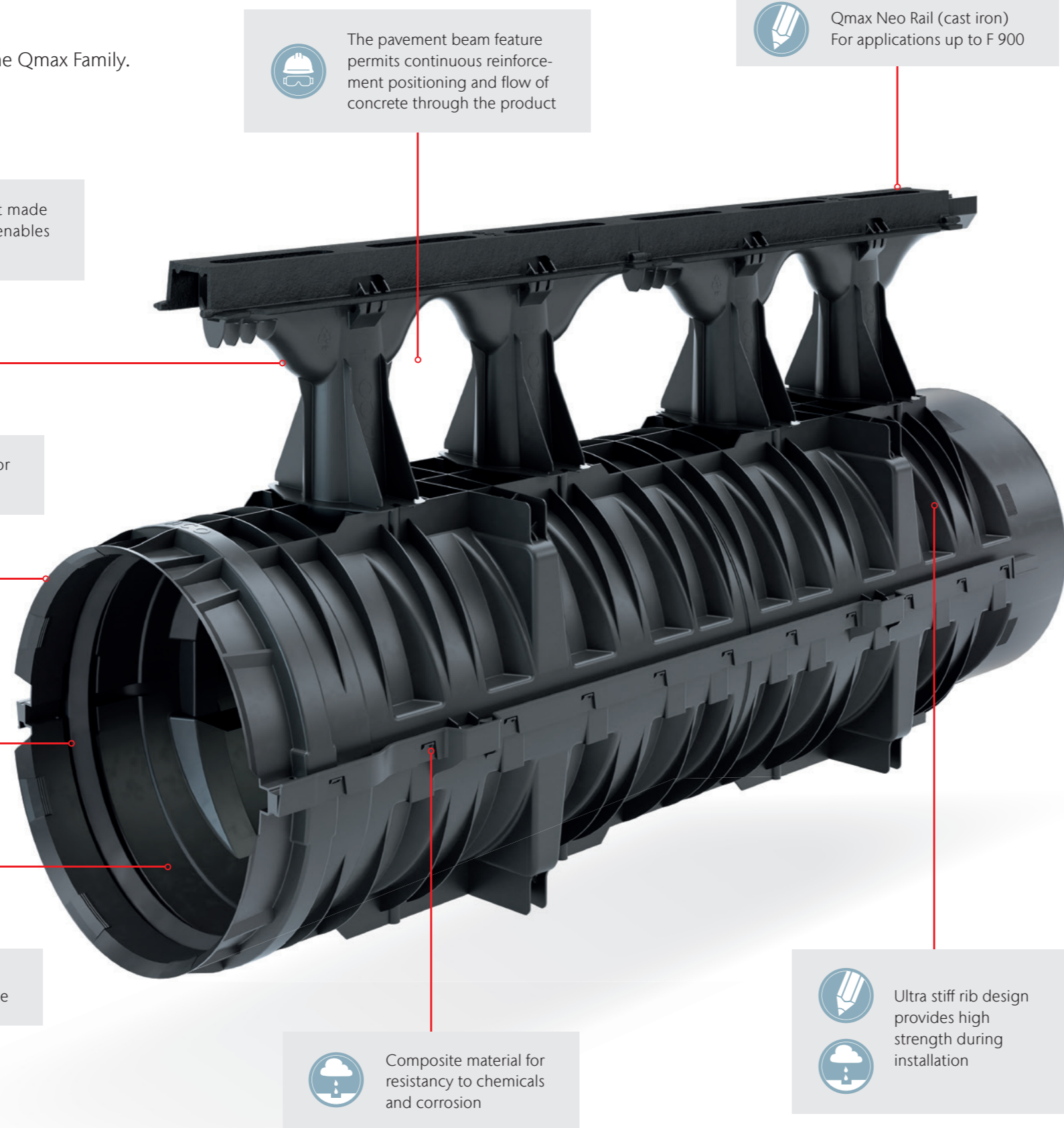
### Qmax


(more details for the monolithic Qmax see the separate Qmax Brochure)





# New Qmax Neo 300 Channel Body


Part of the subgroup "Neo" in the Qmax Family.





 Light weight product made from Polypropylene enables easy handling


 The pavement beam feature permits continuous reinforcement positioning and flow of concrete through the product


 Qmax Neo Rail (cast iron)  
For applications up to F 900

 Plug-in installation for a simple connection

 Integrated gaskets for a sealed channel run

 Smooth wash for a self cleaning surface

 Composite material for resitancy to chemicals and corrosion

 Ultra stiff rib design provides high strength during installation



For large projects: Transport optimised delivery and space saving on construction sites.

## Neo Family

ACO DRAIN® Qmax Neo is a new subgroup of the existing Qmax family. This "New Efficient Option" differs in terms of material, manufacturing and transport process. Nevertheless, the main field of application remains within highest load areas.



### Easy Installation

Due to the low component weight and the simple assembly of several channel bodys, a quick installation without additional lifting devices is possible.



### Operating State

The design enables a reliable and robust solution even in areas with highest load classes.



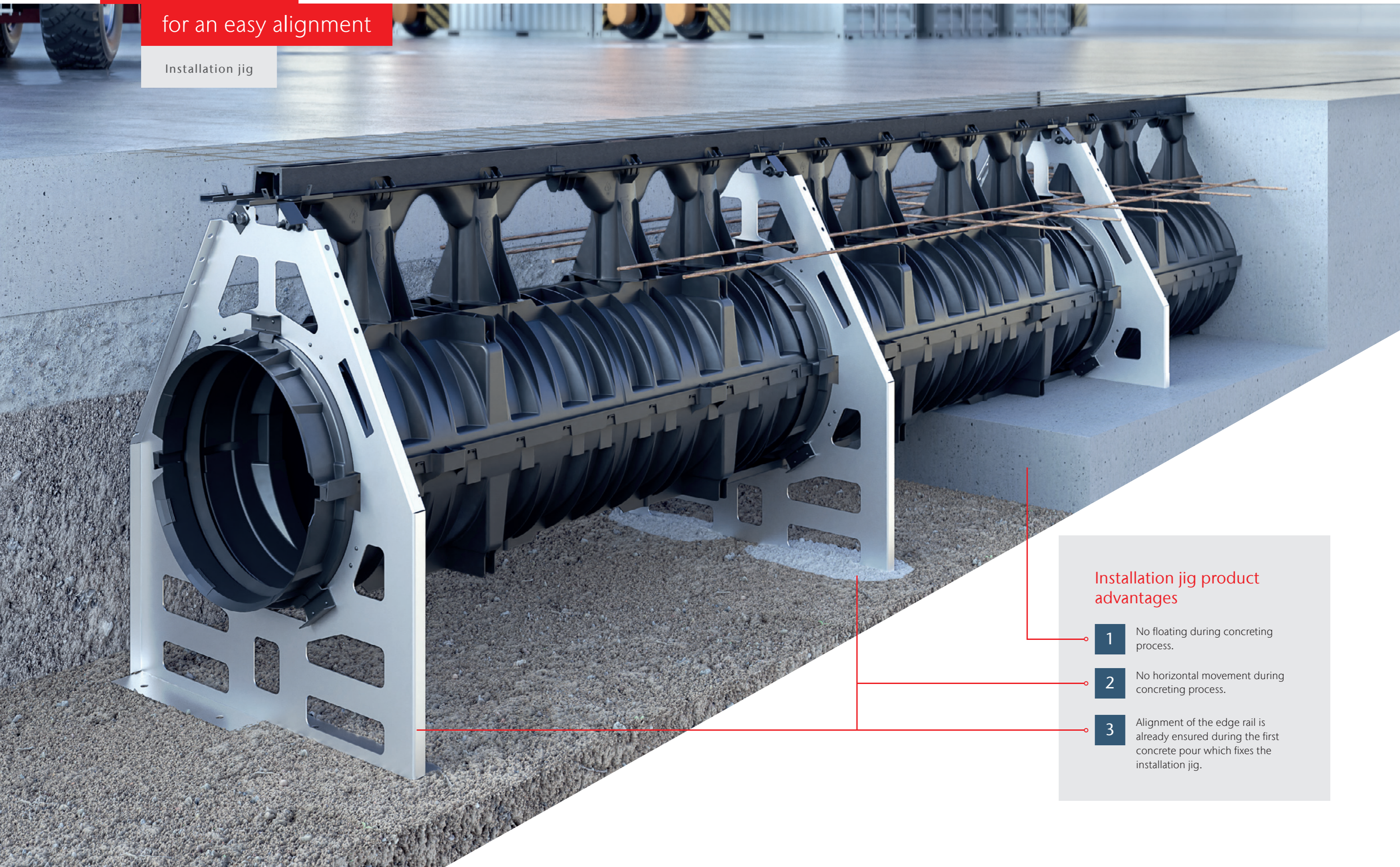
### Surface Design

The narrow rail allows a discreet drainage up to the highest load classes including F 900.

New accessory

for an easy alignment

Installation jig



### Installation jig product advantages

- 1 No floating during concreting process.
- 2 No horizontal movement during concreting process.
- 3 Alignment of the edge rail is already ensured during the first concrete pour which fixes the installation jig.

# Applications

Due to its versatility, ACO Qmax is used in various applications. The small narrow edge rail offers only a small contact area for loads, this ensures low abrasion and therefore a long, reliable product life. Additionally, the surface does not contain any screwed or loose components which could adversely affect traffic safety.


## F900

Areas with highest load classes


## Q

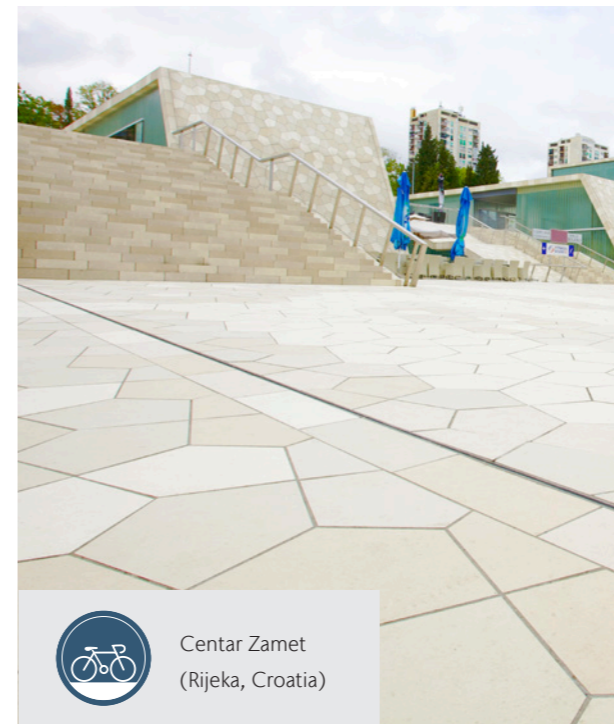
Huge sealed areas with high hydraulic requirements



 Logistic Area (Mannheim, Germany)




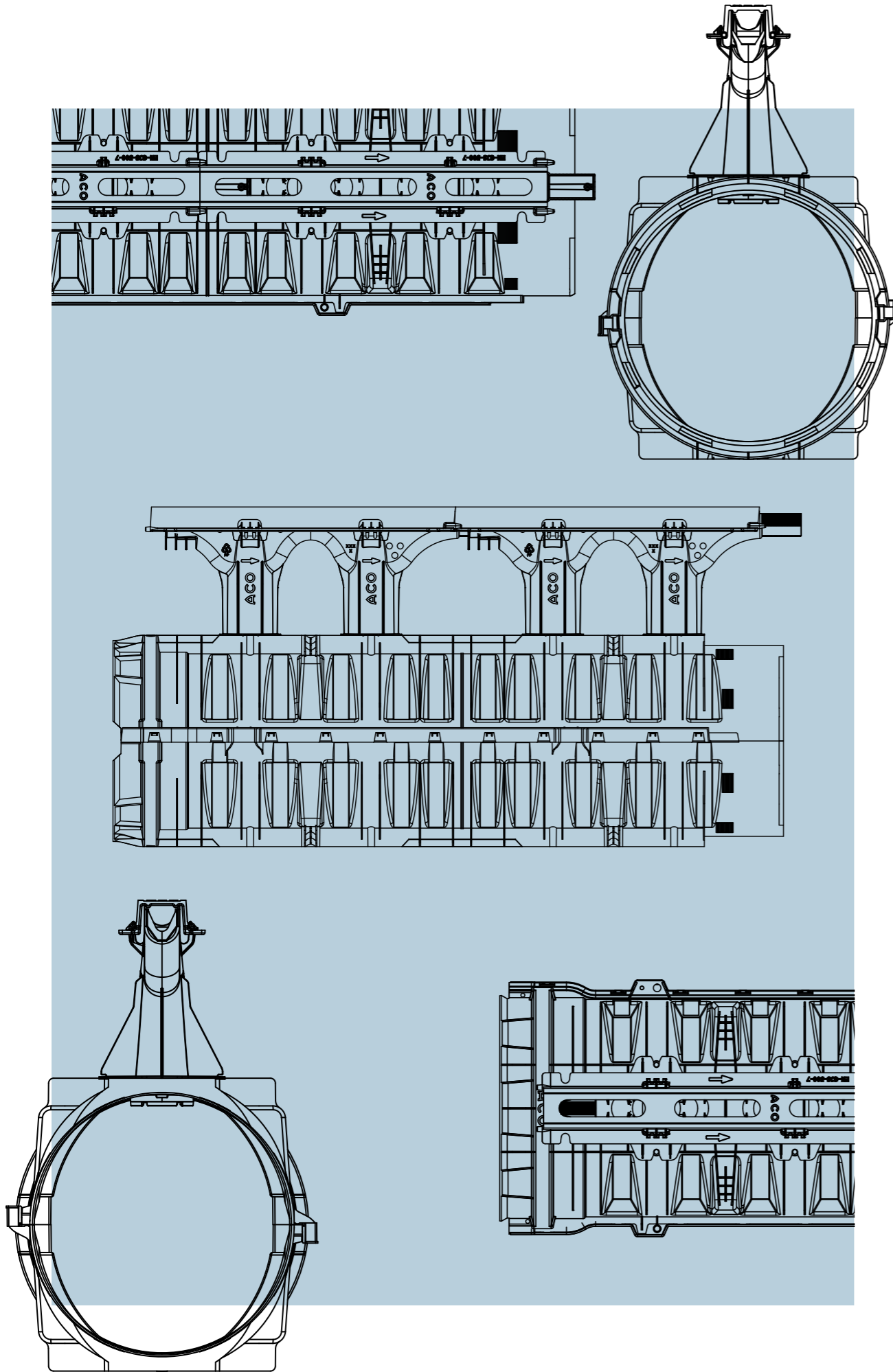
 Airport Franjo Tudman (Zagreb, Croatia)



 Centar Zamet (Rijeka, Croatia)



 Royal Museum Cutty Sark (London, England)



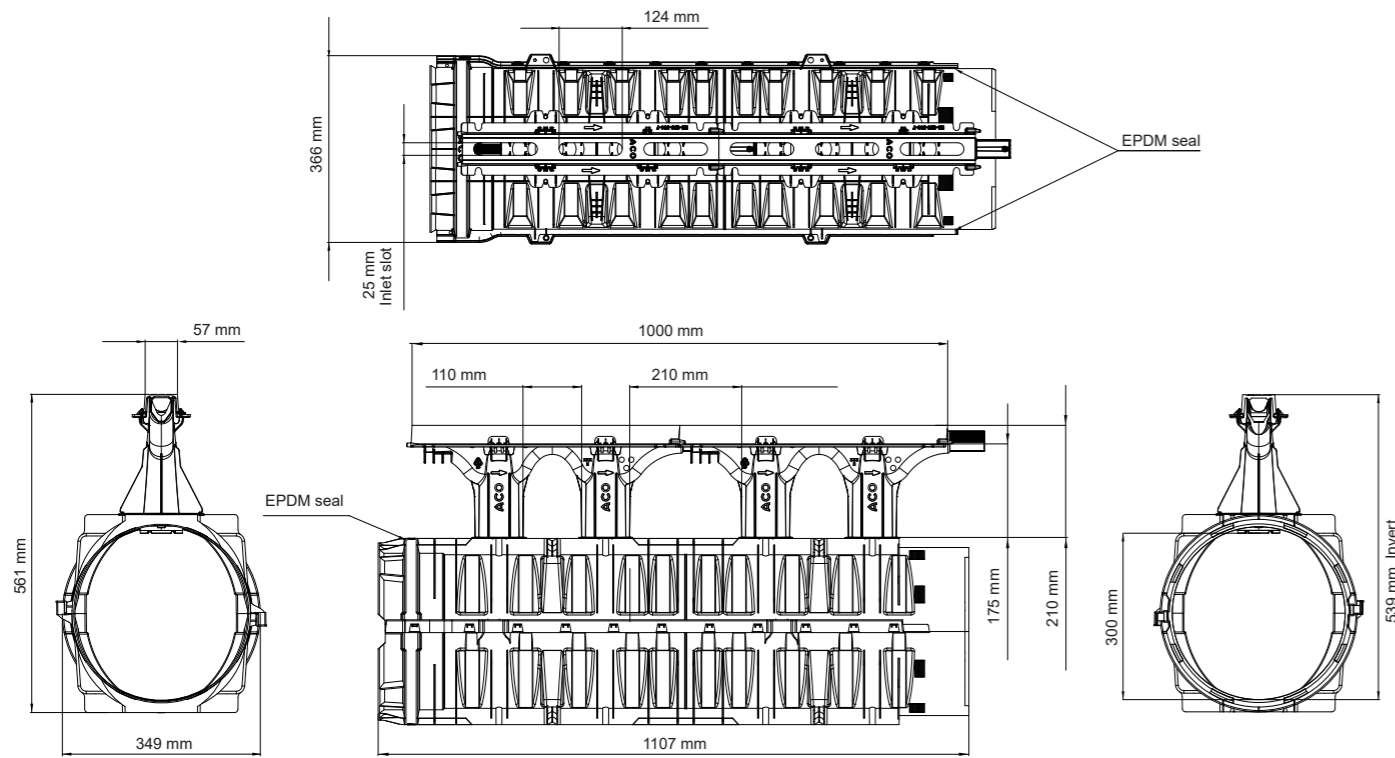
## Technical Data

Qmax Neo 300

Due to the very narrow cast iron top, Qmax is ideal for heavy-duty applications. However, the small drainage slot can also be the perfect solution for visually demanding installations. By combining the existing Qmax family with Qmax Neo, the system can meet hydraulic requirements in the most effective way and provide safe and efficient drainage.

# Product Information

Art. No.	Description	Length (mm)	Width (mm)	Depth overall (mm)	Slot width (mm)	Weight (kg)
157009	ACO Qmax Neo 300 channel assembly complete with ACO Neo Q-Flow cast iron edge rail	1000	366	561	25	9,8



# Accessories

## 1 Installation Jig

Art. No.: 157408



## 2 End Cap

Art. No.: 157430



## 3 Double Fitting

Art. No.: 157431

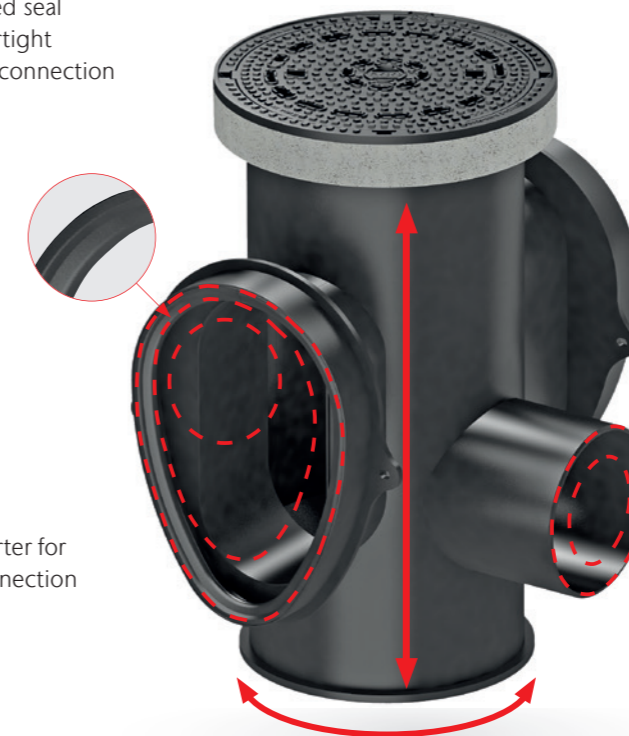


## 4 Inlet shafts and inspection elements

Design your shaft according to your needs.

Integrated seal for watertight channel connection

ACO manhole cover screwless, quiet and durable D 400/F 900



Object-related connection adapter for sealed channel connection Qmax 150 – 900 Qmax Neo 300

Supports for pipeconnection according to your choice DN/OD 110 – 500

Construction height and diameter adapted to the different Nominal sizes of the Qmax system

# Edge Rail

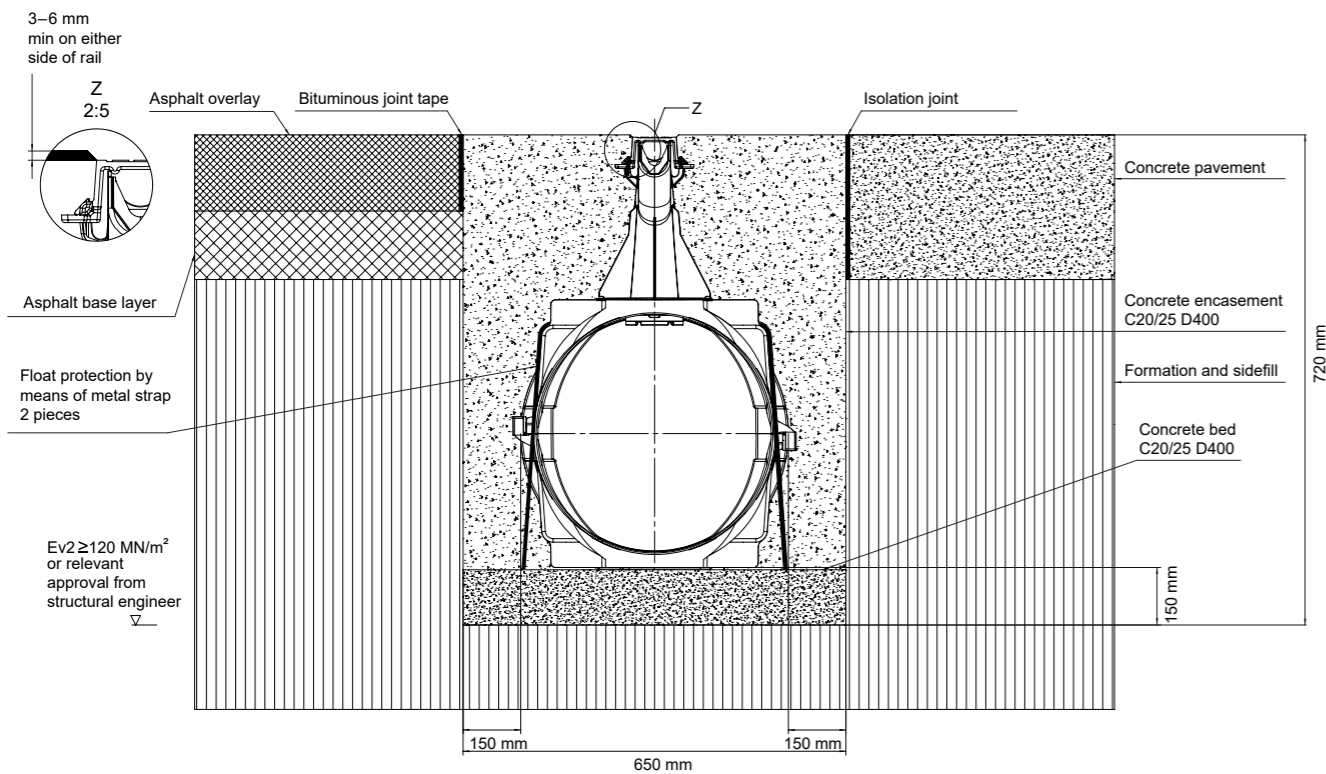


Q-Flow (Cast Iron)*		
Load class (up to)	D 400	F 900
Surface covering	Asphalt/concrete	Concrete
Slot width [mm]	26	
Intake cross-section [cm <sup>2</sup> /m]	187	

\* Other Qmax Rail options available in the existing Qmax Brochure on request. Protective Strip available for covering cast iron edge rail during the construction phase (reusable/magnetic).

# Installation Qmax Neo 300

Drawing for D 400



Always refer to the detailed installation drawing for your specific application requirement and variant. Please contact your local ACO Service Design Team for support.

## Watertight Installation to EN 1433:2002

Where ACO Qmax channels are to be installed with watertight joints, the seal between channel units must be checked for cleanliness and then smeared with lubricant grease such as proprietary pipe joining lubricant. ACO Qmax channels are tested to confirm compliance with the watertightness requirements of EN 1433 when filled with water to the top of the channel bore

(below the inlet arches). Installation must be in accordance with ACO's recommendations and the recommendations of the lubricant manufacturer.

It is envisaged that the channel joints would not be subject to movement, but any movement of the joint might compromise the watertightness.

## Ground Conditions

The long term performance of a channel installation to sustain vertical and lateral loads depends upon A) ground conditions B) stability of the adjacent pavement and C) a durable concrete bed and surround.

The recommended installation detail may require the minimum dimensions to be revised to achieve site specific EN1433 load class requirements.

## Concrete Surround and Reinforcement

Ensure that the channels do not float while pouring the concrete. The reinforcement required in the concrete surround varies with the installation group (load class) and channel size.

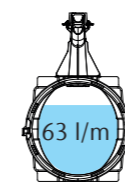
The combined depth of the asphalt pavement must not exceed the required dimensions. Ensure the edge rail anchors -if present- are well embedded into the concrete.

<b>Load class</b>	(according to EN 1433)	D400	F900
<b>Class of compressive strength of foundation concrete</b>	(according to EN 206-1)	≥ C20/25	≥ C30/37
<b>Exposure class *1)</b>		(X0)	XC3
<b>Dimension of foundation - Type M</b>	(according to EN 1433)	<b>x (mm)</b>	≥ 650
		<b>y (mm)</b>	≥ 720
<b>Reinforcement</b>		No	Yes

\*1) Exposure class: X0 only for non-reinforced and fully covered foundation concrete. XC3 only exposed to freezing and thawing but not to chlorides. It is mandatory that the planner/engineer is defining individually the relevant exposure class.

## Hydraulic performance tables

The table below shows the maximum capacity of the unit Qmax Neo 300, assuming uniform lateral flow.



Qmax Neo 300

Length to outlet [m]	Q [l/s]	
	0 %	0,5 %
up to 10 m	45,0	55,8
up to 25 m	42,5	63,2
up to 50 m	39,7	71,0
up to 100 m	35,8	78,1
up to 200 m	30,6	85,0



Every ACO product supports  
the ACO system chain



- 
- Drainage channels
  - Road and yard drains
  - Gully tops
  - Manhole covers
  - Rainwater treatment
  - Infiltration and attenuation
  - Pump shafts
  - Flow control systems
  - Tree protection
  - Amphibian protection
- 

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