

ACO Building Drainage

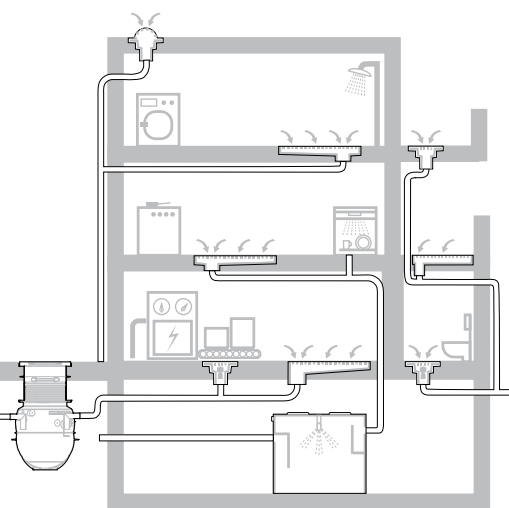


PRODUCT HANDBOOK

Stainless Steel Trench Drains

Floor Drains

Floor Troughs



ACO. The future of drainage.



The ACO system chain provides drainage solutions which meet the future needs of industries where hygiene is essential.

ACO is a global leader in surface water management with products to collect, clean, hold and release water. ACO addresses all phases of the water cycle and supports sustainable drainage (SD, SUDS), Low Impact Development (LID) and LEED principles.

In a food processing and commercial kitchen environment, hot water, grease and organic waste must be counteracted by more complex and sophisticated drainage concepts. ACO offers intelligent system solutions which optimize food safety, health and safety of employees and the protection of water. ACO's advanced manufacturing technologies ensure durability and our special surface treatment guarantees corrosion resistance. Every ACO product within the ACO system chain safely controls water as it passes along the chain to ensure it can be hygienically, economically and ecologically handled in a viable way.



collect:
Collect
and remove



clean:
Preclean
and process



hold:
Protect
and attenuate



release:
Pump, discharge
and reuse

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General introduction

ACO is one of the World's leading drainage specialists with 60 years of experience across a wide range of sectors. Our passion for producing high performance products has led us to make major investments in research and development.

We are working in partnership with commercial facility owners, managers and operators. We are continuously developing our products and enhancing our expertise. We understand the critical role that drainage plays in a successful business.

Our product portfolio includes items which are fully compliant with maximum hygienic requirements. We design our products to drain processed wastewater hygienically and economically, exceeding the highest worldwide standards, such as those laid out in the European Hygienic Engineering and Design Group (EHEDG) and by NSF/3A/ANSI 3-A 14159-1-2014.



ACO has obtained NSF/ANSI 3A 14159-1-2014 certification for its products from NSF International. This standard refers to the hygienic requirements in food processing. All of ACO's hygienic floor drains, hygienic floor troughs and hygienic cast and ladder grates for the hygienic floor drains now display the NSF certification mark.

HygieneFirst

As one of the World's leading commercial drainage specialists, the ACO Group understands the critical role that drainage plays in a successful commercial food preparation business. We appreciate that food safety, hygiene and cost control are all vital factors. We also understand that for many, drainage is out of sight and out of mind.

ACO industrial products are used in applications anywhere that hygienic, corrosion resistant and durable drainage performance is essential:

- Petrochemical
- Professional kitchens
- Food processing facilities
- Brewing, bottling and canning plants
- Chilled warehouses
- Laboratories
- Chemical industries
- Pharmaceutical industries
- Restaurants
- Food service enterprises
- Schools
- Hospitals
- Hotels
- Other demanding environments

As a result, many drainage systems are not designed well. This leads to inefficiencies and higher lifetime costs. In a worst case scenario, this can result in food contamination, increased risk of litigation, closure of a facility and the loss – or even closure – of a business. As the company that's driving the future of drainage, we are determined to change this by raising the profile of hygienic drainage and improving standards across every part of the process.



For more information on our stainless steel drainage solutions and our HygieneFirst philosophy, find us on YouTube!



Our HygieneFirst philosophy represents our commitment to delivering products that provide ultimate hygienic performance. We design intelligent drainage solutions that minimize operational costs without compromising food safety.

Drainage matters!

Proud members of:



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Hygienic design requirements

ACO offers sustainable, integrated drainage systems which are designed to protect businesses, the environment and ultimately, public health. Our aim is to improve every aspect of safety, hygiene and functional performance.

We believe that our systems and services are unique, delivering unparalleled benefits to everyone involved in project delivery or subsequent operation.

ACO's hygienic drainage solutions fulfill stringent hygienic requirements to prevent harmful bacteria contamination. We apply relevant hygienic design principles that are usually reserved for food contact surfaces to the design of our drainage products (EHEDG documents No. 8, 13 and 44) and NSF/ANSI 3-A 14159-1-2014 (Hygiene requirements for the design of meat and poultry processing equipment).

Hygienic design

Full drainability

The outlet is in the lowest position.

A sleek slope functionality provides a fully drainable solution, preventing standing or ponding water.

Rounded internal corners

Minimum radius of internal corners is 1/8 inch (3 mm), providing easy to clean and easy to maintain systems.

Hygienic joints

Butt welds are fully welded.

Metal-to-metal contact at non-disassembled joints is avoided.

Sealed joints are designed to prevent accumulation of soil and bacteria.

Edge in-fill

The channel frame edge is filled with a waterproof material.

Material

Stainless steel grade min. 304 according to AISI.

Fully pickled and passivated or electropolished material treatment eliminates surface imperfections.

Hygienic design principles

Hygienic design

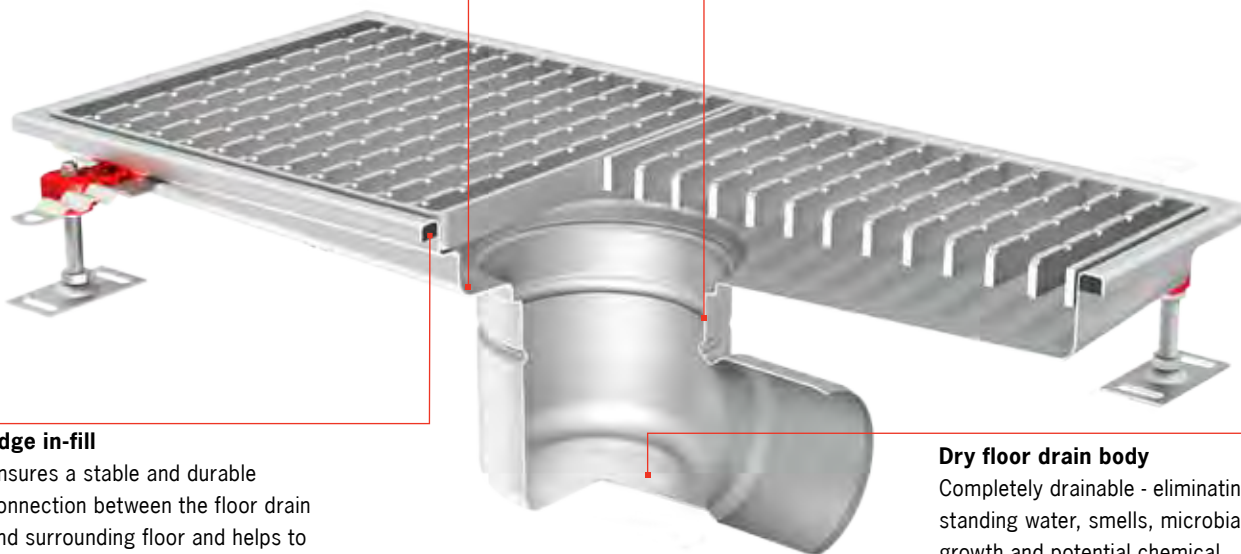
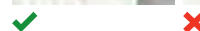
Internal radii

All internal radii equal or larger than 1/8 inch (3 mm) which greatly increases cleaning effectiveness and makes cleaning easy.



Hygienic joints

Deep-drawn body ensures smooth contours, eliminating joints or welds in corners, preventing crevices that can harbor dangerous bacteria.



Edge in-fill

Ensures a stable and durable connection between the floor drain and surrounding floor and helps to minimize the risk of floor cracks that spur bacteria growth.



Dry floor drain body

Completely drainable - eliminating standing water, smells, microbial growth and potential chemical hazards.



For more information on our stainless steel drainage solutions and hygienic design, find us on YouTube!



Material

Stainless steel

Stainless steel is the name given to a wide range of steels which have the characteristics of greatly enhanced corrosion resistance over conventional mild and low alloy steels. The enhanced corrosion resistance of stainless steel comes from the addition of at least 11% of chromium, however, most stainless steels commonly used contain around 18% of chromium. Other significant alloying elements include nickel and for superior corrosion resistant properties, molybdenum.

Stainless steel has the following unique advantages:

- High corrosion resistance
- Non-porous, easy to clean and disinfect
- Aesthetically pleasing
- Resistant to extreme temperatures and thermal shock
- Coefficient of linear expansion similar to concrete
- 100% recyclable material

ACO stainless products are manufactured from austenitic stainless steel, grades AISI 304 or 316L and are ideal for applications including food processing, leisure, dairy, brewing, pharmaceutical, chemical and petrochemical industries.

Surface treatment

The process of cutting, forming and welding stainless steel will introduce impurities into the surface of the material and unless appropriate action is taken, the material will begin to corrode and ultimately fail in service. After fabrication, it is vital that stainless steel is treated with the correct surface finish to ensure it is fully corrosion resistant. By applying pickle passivation as the primary surface treatment, the corrosion resistance of stainless steel can be fully restored to its original state, ensuring a long and reliable life with the required aesthetic appearance.

Finishes used by ACO include:

Pickle passivation (acid treatment)

All ACO industrial drainage is pickle passivated by immersing products in a series of acid baths. This is a fundamental requirement for removing embedded iron particulates introduced in the fabrication process and also for restoring the chromium depleted regions generated by the welding process. ACO has one of the largest and most advanced pickle passivation installations in Europe, which ensures the optimum corrosion resistance of our products.

Electropolishing (electrochemical process)

After pickle passivation, some products are then immersed in an electrolytic fluid in which the products become the anode of a direct current electrical circuit. This process is characterized by a selective attack of the surface of the components whereby upstanding roughness is preferentially dissolved and will yield a progressively smoother, brighter surface. All ACO Hygienic Trench Drain grates are electro-polished as standard.

Brushing (mechanical process)

ACO trench drains have a brushed upper edge for aesthetic reasons.

Standards and certifications - ACO Floor Drain and ACO Trench Drain

ACO Floor Drain and ACO Trench Drain ranges are designed, manufactured and independently tested in accordance with ASME A112.6.3, EN 1253 and EN 1433 and they are CE marked.

We apply the relevant hygienic design principles reserved for food contact surfaces (EHEDG documents No. 8, 13 and 44) and NSF/ANSI 3-A 14159-1-2014.

System overview and benefits



Benefits

ACO provides solutions which optimize food safety, employee's health and safety and water protection. Every ACO product safely controls the water to ensure it can be hygienically, economically and ecologically managed in a viable way.

Food safety

- ACO stainless drainage fulfills hygienic requirements to prevent harmful bacteria contamination. We apply relevant hygienic design principles reserved for food contact surfaces as recommended by EHEDG and NSF/ANSI.
- Our product design ensures minimal build-up of food particles and debris as well as a safe connection with the surrounding floor to minimize any opportunity for bacteria to grow throughout the drainage system.
- Smooth slopes and hygienically designed products ensure our system is fully drainable, eliminating the odor of stagnant waste water.

Health & Safety

- For additional safety in high risk areas that require heavy water usage, slip resistant grates are available.
- Each component of the drainage system is easy to remove and clean, and there are no sharp edges to ensure employee safety.
- Edge reinforcement provides a safe durable transition to the surrounding floor to prevent cracking and failure.

Cost control

- ACO drainage systems can be easily maintained, which reduces associated cleaning costs. Their state of the art hygienic design and cleaning methods have been developed in partnership with premium cleaning agent suppliers.
- ACO's advanced manufacturing technologies ensure durability and our special surface treatment guarantees corrosion resistance. Our systems perform effectively at all times and keep business disruption to a minimum.
- We provide expertise in drainage system planning, proper installation and creating a safe connection with the surrounding floor to avoid unnecessary costs.

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Stainless drainage selection guide

Application

The selection and layout of the drainage system has an impact on future operational effectiveness and costs. This guide offers a range of basic areas which need to be considered when specifying a drainage system.

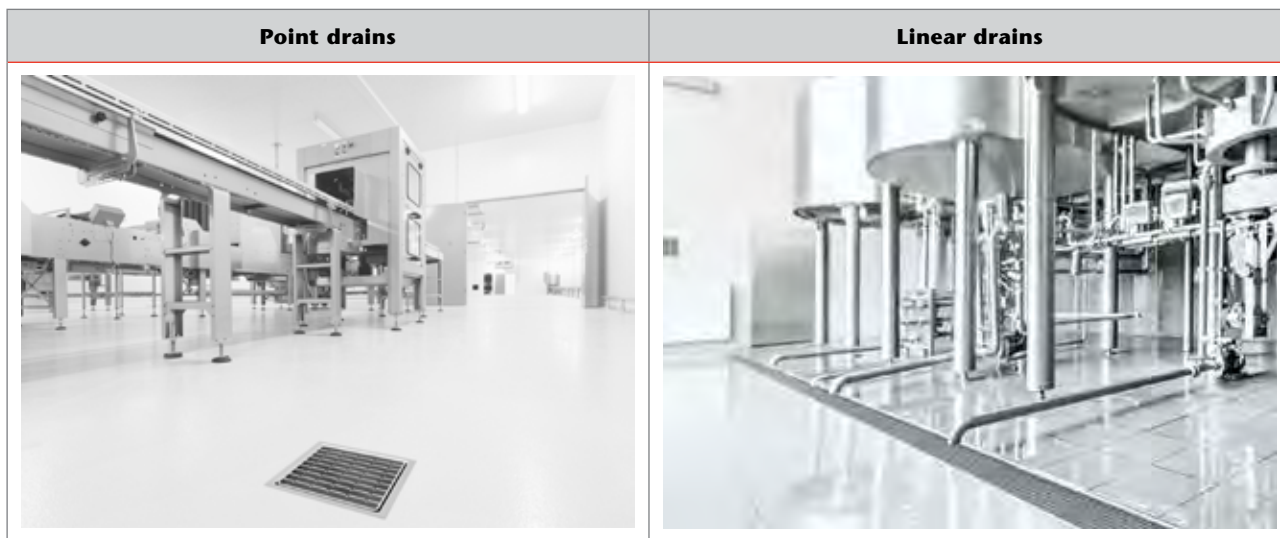
To specify an appropriate drainage system for a particular application, the area or zone of operation and volume and frequency of water used should be considered.

Production process/ Cleaning process	Zones with high risk for food safety	Zones with medium or low risk for food safety	Zones without direct risk for food safety
Wet production process/ Wet cleaning process	<ul style="list-style-type: none"> Full hygienic design - one piece solution without connections; Ladder or Cast grates 	<ul style="list-style-type: none"> Hygienic design - connections and Mesh grates could be considered if cleaning and sanitation procedures allow 	<ul style="list-style-type: none"> Hygienic design is recommended for easy cleaning and maintenance. A combination of products could be considered for easy layout design
	<ul style="list-style-type: none"> High capacity - high flow rate 	<ul style="list-style-type: none"> High retention - high flow rate 	<ul style="list-style-type: none"> High retention - high flow rate
	<ul style="list-style-type: none"> Slip resistance - high importance 	<ul style="list-style-type: none"> Slip resistance - high importance 	<ul style="list-style-type: none"> Slip resistance - high importance
Dry production process/ Wet cleaning process	<ul style="list-style-type: none"> Full hygienic design - one piece solution without connections; Ladder or Cast grates 	<ul style="list-style-type: none"> Hygienic design - connections and Mesh grates could be considered if cleaning and sanitation procedures allow 	<ul style="list-style-type: none"> Hygienic design is recommended for easy cleaning and maintenance; combination of products could be considered for easy layout design
	<ul style="list-style-type: none"> High flow rate 	<ul style="list-style-type: none"> High flow rate 	<ul style="list-style-type: none"> High flow rate
	<ul style="list-style-type: none"> Slip resistance - moderate importance 	<ul style="list-style-type: none"> Slip resistance - moderate importance 	<ul style="list-style-type: none"> Slip resistance - moderate importance
Dry production process/ Controlled wet cleaning process	<ul style="list-style-type: none"> Full hygienic design - one piece solution without connections; Ladder or Cast grates 	<ul style="list-style-type: none"> Hygienic design - connections and Mesh grates could be considered if cleaning and sanitation procedures allow 	<ul style="list-style-type: none"> Hygienic design is recommended for easy cleaning and maintenance. A combination of products could be considered for easy layout design
	<ul style="list-style-type: none"> Medium to low flow rate 	<ul style="list-style-type: none"> Medium to low flow rate 	<ul style="list-style-type: none"> Medium to low flow rate
	<ul style="list-style-type: none"> Slip resistance recommended 	<ul style="list-style-type: none"> Slip resistance recommended 	<ul style="list-style-type: none"> Slip resistance recommended

Stainless drainage selection guide

Drainage type

Based on the application, the type of drainage needs to be selected according to the layout of the operational space and processing technology and equipment used.



Material resistance

The chemical mixture of the waste water from the process and/or the cleaning regimen, as well as temperature of the final mixture influences the material resistance of the drainage system.

ACO drainage is manufactured from austenitic stainless steel; grades 304 or 316L according to AISI and is ideal for applications within food processing, dairy, brewery, commercial kitchen, pharmaceutical, chemical, petrochemical industries and leisure.

Besides stainless steel, drainage products also contain sealing materials:

ACO Floor Drains – all the seals are made of NBR (acrylonitrile-butadiene rubber)

ACO Trench Drains – flange connection seals are made of NBR (acrylonitrile-butadiene rubber)

ACO Modular Slot Drains – flange connection seals are made of NBR (acrylonitrile-butadiene rubber)

For details of material resistance see page 130 or contact our Sales/Technical department.

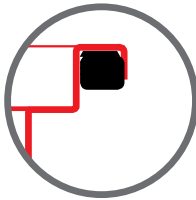
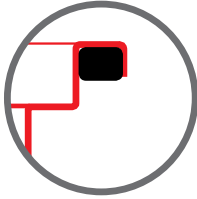


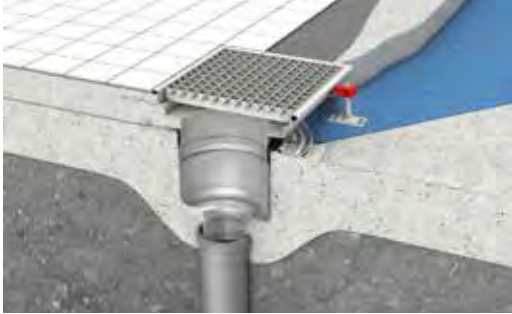

Stainless drainage selection guide

Floor structure and finish

Depending on the composition of the floor construction, the appropriate type of floor drain or channel should be selected. If there is insulation in the floor structure, the O-ring needs to be removed from the friction ring, which will allow the water from the insulation to be drained to the floor drain body.

Depending on the floor finish, the appropriate edge of the channel or floor drain top should be selected.

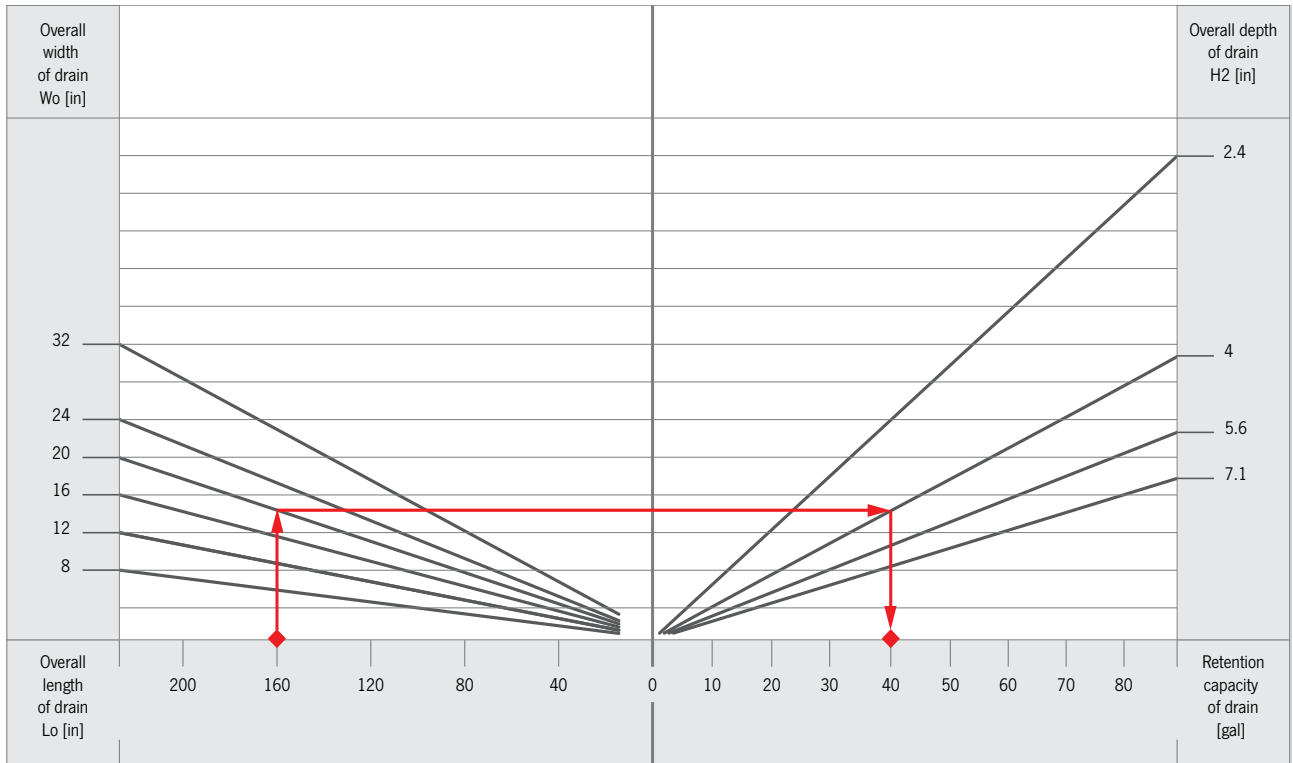
The standard edge detail is shown below. Custom options include vinyl flooring and extended edge details. Please contact our Sales/Technical department for details.

	Trench Drains and Adjustable Floor Drains	Fixed height Floor Drain
Channel or floor edge detail		
Waterproof membrane connection	May be connected to Floor Drain body	Independent of the Floor Drain
Floor drain body type	Adjustable location flange or mechanical clamping flange	Fixed-height Floor Drain
Floor drain body picture		
Installation example		

Stainless drainage selection guide

Retention capacity

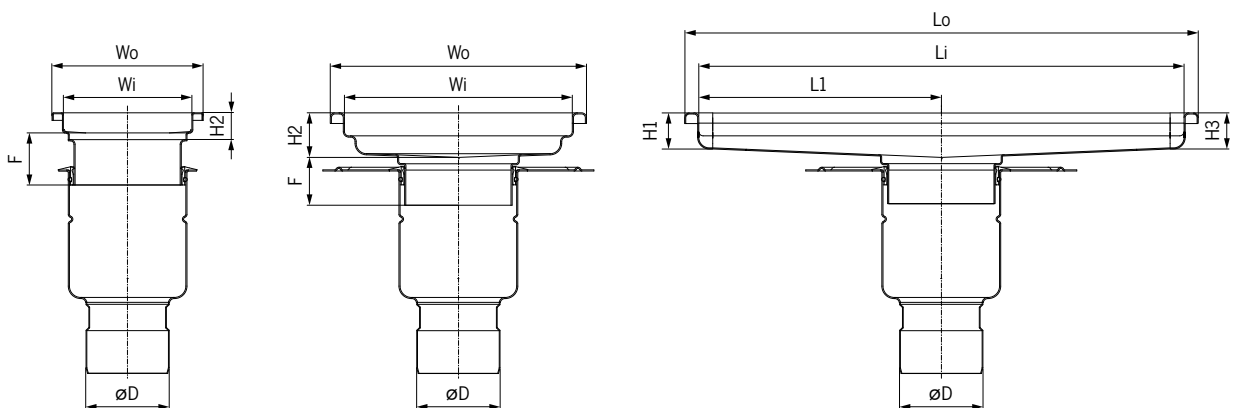
Depending on the application, the appropriate retention capacity may need to be considered.



Example: channel length 160 in, width 20 in, depth 4 in, retention capacity 40 gallons.

Drain geometry

Based on the hydraulic requirements, as well as the floor structure, the particular dimensions of a channel or floor drain top (for adjustable solution) need to be specified. For the drain, a construction height at the outlet position as well as the position of the outlet and the height of the endcaps has to be defined.



Stainless drainage selection guide

Flow rates

Flow rates reflect the system's ability to constantly drain a certain amount of water. Flow rate is defined by the ACO Floor Drain and outlet pipe size, direction and slope. Consult pipe flow rates on pages 53 to ensure pipe has adequate flow capacity.

Fixed Height Flow Rates			
Outlet position	Floor Drain type	Outlet diameter [in]	Maximum flow rate [GPM]
Vertical outlet	8"	2"	40.6
		4"	143.41
	10"	3"	74.03
		4"	168.56
	12"	4"	169.53
		6"	360.59
Horizontal outlet	8"	2"	35.67
		4"	110.9
	10"	3"	62.0
		4"	131.72
	12"	4"	132.95

Flow rate performance is without silt basket and foul air trap (flow rates with empty silt basket are approximately 15% lower than the values stated). Check with ACO's Technical Services Department if a foul air trap is being used.

Accessories

For the collection of debris, the floor drain or channel should be fitted with a silt basket.

Adjustable Floor Drains with flange for waterproofing		
ACO 8" Floor Drain	ACO 10" Floor Drain	ACO 12" Floor Drain
Accessories delivered as standard with the floor drain		
▪ Friction ring	▪ Friction ring	▪ Friction ring
Optional accessories		
▪ Silt basket See page 28 for options	▪ Silt basket See page 40 for options	▪ Silt basket See page 52 for options


Stainless drainage selection guide





Grates (ASME: A 112.6.3)

To select the appropriate grate, the following properties should be considered:

- Hygiene (cleanability)
- Load class
- Slip resistance

The best design practice is to avoid traffic across the drainage system and to minimize the risk of floor/drainage connection failures from dynamic loading. The proper load class defined by the grate has to be considered based on the defined traffic during all future operation.

 Grates shown with this mark feature a hygienic design.

		ASME: A 112.6.3 Load Class					EN 1253-1
		safe live load					
Grate	Size	Light duty	Medium duty	Heavy duty	Extra Heavy duty	Special duty	
		<i>under 2,000 lbs</i>	<i>2,000 - 4,999 lbs</i>	<i>5,000 - 7,499 lbs</i>	<i>7,500 - 10,000 lbs</i>	<i>exceeding 10,000 lbs</i>	
Cast 	8" x 8"	✓	✓	✓	✓	✓	M 125
	10" x 10"	✓	✓	✓	✓	✓	
	12" x 12"	✓	✓	✓	✓	✓	
Mesh	8" x 8"	✓	✓				L 15
	10" x 10"	✓	✓				
	12" x 12"	✓	✓				
Quadrato	8" x 8"	✓					L 15
	10" x 10"	✓					
	12" x 12"	✓					
Multi-slot 5	8" x 8"	✓	✓				L 15
	10" x 10"	✓	✓				
	12" x 12"	✓	✓				
Heelsafe	8" x 8"	✓	✓				L 15
	10" x 10"	✓	✓				
	12" x 12"	✓					
Slot Cover	8" x 8"	✓	✓	✓	✓	✓	M 125
	10" x 10"	✓	✓	✓	✓	✓	
	12" x 12"	✓	✓	✓	✓		
Ladder 	8" x 8"	✓					R 50
		✓	✓	✓			M 125
		✓	✓	✓	✓	✓	N 250
	10" x 10"	✓					R 50
		✓	✓	✓			M 125
		✓	✓	✓	✓	✓	N 250
	12" x 12"	✓					R 50
		✓	✓	✓			M 125
		✓	✓	✓	✓		N 250
Half Ladder 	8" x 8"	✓					L 15
	10" x 10"	✓					
	12" x 12"	✓					
Half Plate 	8" x 8"	✓					L 15
	10" x 10"	✓					
	12" x 12"	✓					



ACO Hygienic Floor Drain

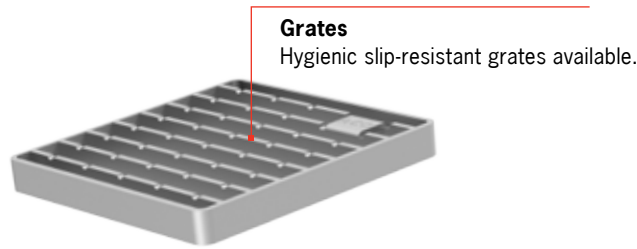
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Hygienic design

ACO hygienic drainage fulfills the most stringent hygienic requirements to prevent bacterial contamination. We apply hygienic design principles reserved for food processing equipment (EHEDG document No. 8, 13 and 44) to the floor drain design and NSF/ANSI 3-A 14159-1-2014.

ACO Floor Drain features:

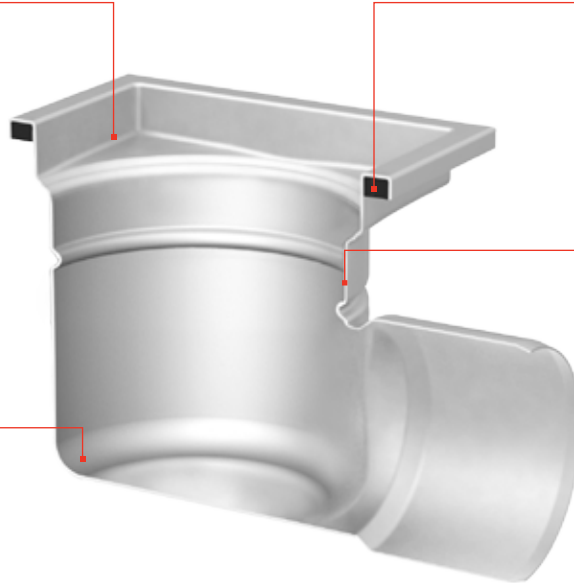
- Full drainability
- Internal radii equal or larger than 1/8 inch (3 mm)
- Hygienic joints
- Edge in-fill
- Stainless steel grade min. 304 according to AISI
- Fully pickle passivated



Grates
Hygienic slip-resistant grates available.

Internal radii

All internal radii equal or larger than 1/8 inch (3mm) which greatly increases cleaning effectiveness and makes cleaning easy.



Edge in-fill

Ensures stable and durable transmission between the floor drain and surrounding floor and helps to minimize risk of floor cracks which could harbor microorganisms.

Hygienic joints

Deep-drawn body ensures smooth contours, eliminating crevices that can harbor dangerous bacteria.

Full drainability

Dry sump design is completely drainable - eliminating standing water, smells, microbial growth and potential chemical hazards.

For more information on our stainless steel drainage solutions and hygienic design, find us on YouTube!



System overview

ACO Floor Drains are available in a number of versions featuring different grates, sizes and outlet diameters to suit various applications and flow requirements.

The floor construction and depth, together with the use of any waterproofing membrane, play an important role in the selection of the appropriate type of floor drain.

ACO Floor Drains are available with vertical or horizontal outlet options.

Fixed height floor drains are convenient and free-standing units which are suitable for concrete, resin or tiled floors.

Adjustable floor drains can be installed either with a floor drain top or ACO Trench Drain (see page 58) in most flooring constructions, including floors with waterproofing membranes.

Optional removable foul air trap
Per IAPMO UPC Chapter 10 1004.0, "S" traps, bell traps and crown-vented traps are prohibited, unless an exception is made.

Installation and local code requirements must be taken into account.

Fixed height solution



Adjustable solution



- 1** Grates
- 2** Silt basket
- 3** Optional foul air trap
- 4** Standard foul air trap support
- 5** ACO Floor Drain body - horizontal outlet
- 6** Floor Drain top
- 7** Friction ring
- 8** ACO EasyFix leveling feet
- 9** ACO Floor Drain body - vertical outlet

ACO 8" Floor Drain

Fixed height – vertical outlet

Fixed height – vertical outlet

Product information

A fixed-height floor drain can be specified as point drainage in areas where waterproofing is independent of the floor drain body.

Floor drains can be combined with different grates depending on required load class.

- Hygienic design following EHEDG document No. 8, 13 and 44 and NSF/ANSI 3-A 14159-1-2014
- Available in AISI 304 or 316L grades of stainless steel
- 2" or 4" Sch 10 outlet options
- Floor Drain top frame size: 8" x 8"
- Wide range of grates available including a slip-resistant solution
- Optional: fully removable and easily cleanable stainless steel foul air trap (FAT)
- Anchors for fixing in concrete



Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data

	Top size □ in [mm]	Outlet diameter Ø in [mm]	Material	Part number
	8" x 8" [200 x 200 mm]	2" Sch 10 [60 mm]	AISI 304	445238
			AISI 316L	445274
	8" x 8" [200 x 200 mm]	4" Sch 10 [114 mm]	AISI 304	445240
			AISI 316L	445276

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Fixed height – horizontal outlet

Product information

A fixed-height floor drain can be specified as point drainage in areas where waterproofing is independent of the floor drain body.

Floor drains can be combined with different grates depending on required load class.

- Hygienic design following EHEDG document No. 8, 13 and 44 and NSF/ANSI 3-A 14159-1-2014
- Available in AISI 304 or 316L grades of stainless steel
- 2" or 4" Sch 10 outlet options
- Floor Drain top frame size: 8" x 8"
- Wide range of grates available, including a slip-resistant solution
- Optional: fully removable and easily cleanable stainless steel foul air trap (FAT)
- Anchors for fixing in concrete



Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data

	Top size □ in [mm]	Outlet diameter Ø in [mm]	Material	Part number
	<p>8" x 8" [200 x 200 mm]</p>	<p>2" Sch 10 [60 mm]</p>	AISI 304	<p>445242</p>
			AISI 316L	<p>445278</p>
	<p>8" x 8" [200 x 200 mm]</p>	<p>4" Sch 10 [114 mm]</p>	AISI 304	<p>445244</p>
			AISI 316L	<p>445280</p>

ACO 8" Floor Drain

Adjustable – vertical outlet

Adjustable – vertical outlet

Product information

Adjustable Floor Drains can be combined either with an ACO Floor Drain top or ACO Trench Drain in most flooring constructions (see page 58).

The adjustable solution enables height and rotational adjustment of connected floor drain top or channel.

Floor Drains can be equipped with flanges for connection of waterproofing membrane.

- Hygienic design following EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014
- Available in AISI 304 or 316L grades of stainless steel
- 2" or 4" Sch 10 outlet options
- Floor drain body with location flange or integrated membrane flange for mechanical clamp
- Removable adjustable friction ring included
- Optional: fully removable and easily cleanable stainless steel foul air trap (FAT)

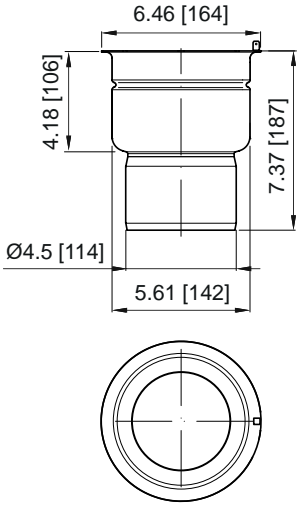


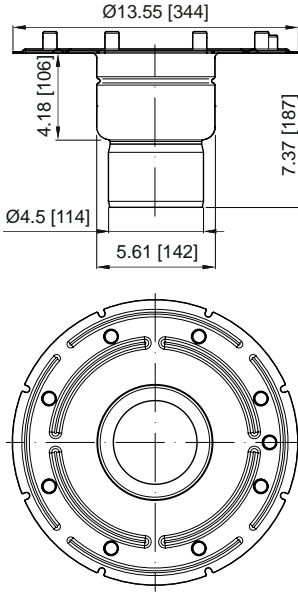





Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data

	Type of flange	Outlet diameter Ø in [mm]	Material	Part number
	Location flange	2" Sch 10 [60 mm]	AISI 304	445246
			AISI 316L	445282
	Mechanical clamping flange	2" Sch 10 [60 mm]	AISI 304	445250
			AISI 316L	445286

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	Type of flange	Outlet diameter Ø in [mm]	Material	Part number
	Location flange	4" Sch 10 [114 mm]	AISI 304	445252 
			AISI 316L	445288 
	Mechanical clamping flange	4" Sch 10 [114 mm]	AISI 304	445256 
			AISI 316L	445292 

 Items shown with the NSF Mark have been tested and Certified by NSF International.

ACO 8" Floor Drain

Adjustable – horizontal outlet

Adjustable – horizontal outlet

Product information

Adjustable Floor Drains can be combined with an ACO Floor Drain top or ACO Trench Drain in most flooring constructions.

Adjustable solution enables height and rotational adjustment of connected floor drain top or channel.

Floor Drains can be equipped with flanges for connection of waterproofing membrane.

- Hygienic design following EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014
- Available in AISI 304 or 316L grades of stainless steel
- 2" or 4" Sch 10 outlet options
- Floor drain body with location flange or integrated membrane flange for mechanical clamp
- Fully removable adjustable friction ring included
- Optional: fully removable and easily cleanable stainless steel foul air trap
- Anchors for fixing in concrete



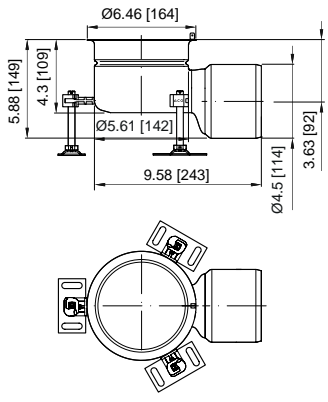


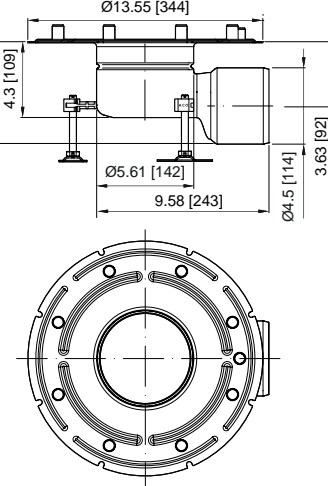


Items shown with the NSF Mark have been tested and Certified by NSF International.


Product data

	Type of flange	Outlet diameter Ø in [mm]	Material	Part number
	With location flange	2" Sch 10 [60 mm]	AISI 304	445258
			AISI 316L	445294
	With mechanical clamping flange	2" Sch 10 [60 mm]	AISI 304	445262
			AISI 316L	445298

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ACO 8" Floor Drain
Adjustable – horizontal outlet

	Type of flange	Outlet diameter Ø in [mm]	Material	Part number
	With location flange	4" Sch 10 [114 mm]	AISI 304	445264 
			AISI 316L	445300 
	With mechanical clamping flange	4" Sch 10 [114 mm]	AISI 304	445268 
			AISI 316L	445304 

 Items shown with the NSF Mark have been tested and Certified by NSF International.

Floor Drain top

Product information

Floor Drain top is used in conjunction with the adjustable Floor Drain.

Floor Drains can be combined with different grates depending on required load class.

- Hygienic design following EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014
- Available in AISI 304 or 316L grades of stainless steel
- Floor Drain top frame size: 8" x 8"
- Wide range of grate options available covering different load classes



Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data

	Floor drain top size □ in [mm]	Material	Part number
	<p>8" x 8" [200 x 200 mm]</p>	AISI 304	<p>414732</p>
		AISI 316L	<p>414832</p>

Grates for ACO 8" Floor Drain

Product information

A variety of grates are available depending on application and required load class. For applications with high hygienic demands, a Ladder or Cast grate should be selected.

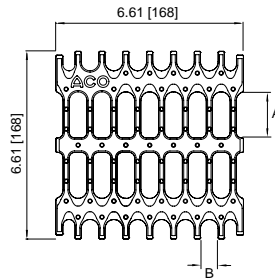
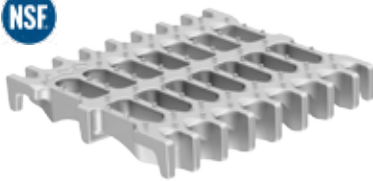
Grates have been independently load tested to ASME 112.6.3.

- Hygienic design following EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014
- Available in AISI 304 or 316L grades of stainless steel
- Grates fit Floor Drain top: 8" x 8"
- Range of grates suitable for different load classes
- Slip resistant solution available



Items shown with the NSF Mark have been tested and Certified by NSF International.

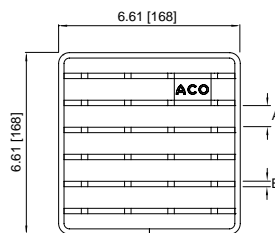
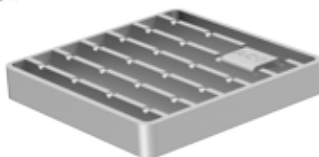
Cast Grate



Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Special duty	Yes	1.63 [41.5]	0.63 [16]	AISI 304	416942*

Note: Surface electropolished

Ladder Grate



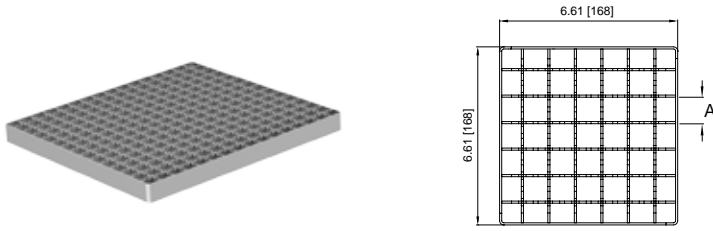
Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Light duty	Yes	0.79 [20]	0.196 [5]	AISI 304	416912*
				AISI 316L	416913*
Medium duty	Yes	0.71 [18]	0.236 [6]	AISI 304	408093*
				AISI 316L	408193*
Heavy duty	Yes	0.63 [16]	0.393 [10]	AISI 304	408043*
				AISI 316L	408143*

Note: Surface electropolished

*Grates fully hygienic according to EHEDG document 8, 13 and 44 and NSF/ANSI 3-A 14159-2014.



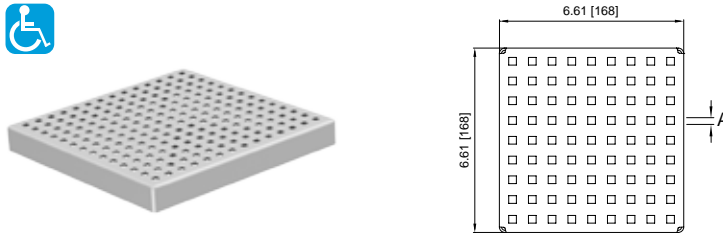
Mesh Grate



Load class	Slip resistant	Slot size in [mm]	Material	Part #
		A		
Medium duty	Yes	0.91 [23]	AISI 304	408090
			AISI 316L	408190

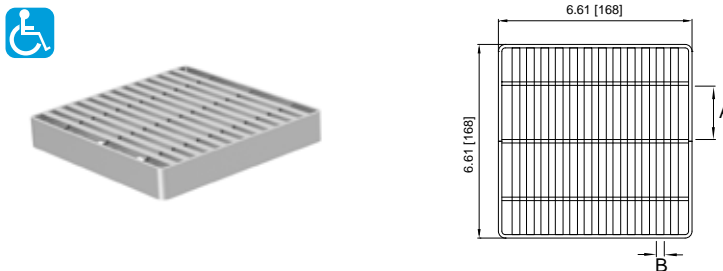
Note: Surface electropolished

Quadrato Grate



Load class	Slip resistant	Slot size in [mm]	Material	Part #
		A		
Light duty	No	0.27 [7]	AISI 304	408092
			AISI 316L	408192

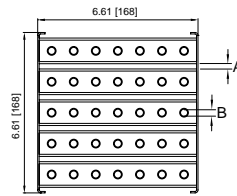
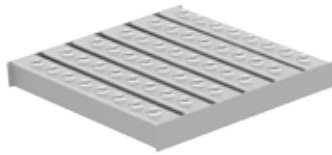
Heelsafe Grate



Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A avg	B		
Medium duty	Yes	1.51 [38.4]	0.23 [5.8]	AISI 304	408022
				AISI 316L	408122

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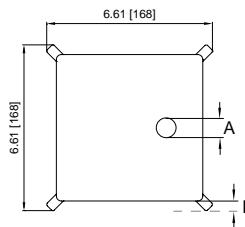
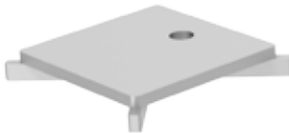
Multi-slot 5 Grate



Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Medium duty	Yes	0.28 [7]	0.37 [9.5]	AISI 304	408094
				AISI 316L	408194

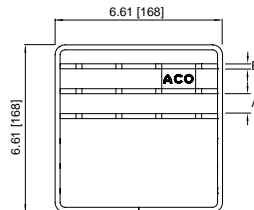
Note: Surface electropolished

Slot Cover



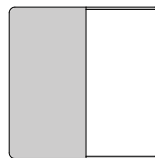
Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Special duty	Yes	0.79 [20]	0.38 [9.5]	AISI 304	408021
				AISI 316L	408121

Half Ladder Grate



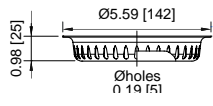
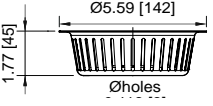
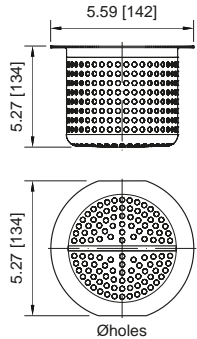
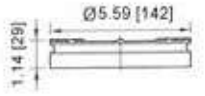
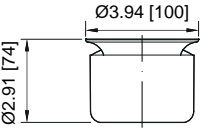
Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Light duty	Yes	0.856 [21.75]	0.196 [5]	AISI 304	415918
				AISI 316L	415919

Half Plate Grate



Load class	Slip resistant	Material	Part #
		AISI 316L	416929

Accessories for ACO 8" Floor Drain

	Description	Used with	Material	Part #
	Silt basket (can be used with foul air trap) <ul style="list-style-type: none"> Stainless steel 	ACO 8" Floor Drain <ul style="list-style-type: none"> Fixed height Vertical or horizontal 	AISI 304	416902
			AISI 316L	416903
	Silt basket (can be used with foul air trap) <ul style="list-style-type: none"> Stainless steel 	ACO 8" Floor Drain <ul style="list-style-type: none"> Adjustable Vertical or horizontal 	AISI 304	416900
			AISI 316L	416901
	Silt basket (cannot be used with foul air trap) <ul style="list-style-type: none"> Stainless steel 	ACO 8" Floor Drain <ul style="list-style-type: none"> Vertical or Horizontal 	AISI 304	445232
			AISI 316L	445233
	Standard foul air trap support <ul style="list-style-type: none"> NBR (Acrylonitrile butadiene rubber) 	ACO 8" Floor Drain <ul style="list-style-type: none"> Adjustable Fixed height 	NBR	414743
	Optional removable foul air trap* <ul style="list-style-type: none"> Stainless steel Water seal 0.20" 	<ul style="list-style-type: none"> ACO 8" Floor Drain 	AISI 304	414741
			AISI 316L	414841

*Use of a foul air trap should be approved by local authority. Building codes in North America do not encourage the use of removable foul air traps in Floor Drains. However, a removable foul air trap may be required due to restricted depth installations, client-specific requirements, marine (ships & boats) and others. Refer to ASME A112.3.1-2007 Stainless Steel Drainage Systems for Sanitary DWV, Storm and Vacuum Applications, Above and Below-Ground for more information.

Fixed height – vertical outlet

Product information

A fixed-height Floor Drain can be specified as point drainage in areas where waterproofing is independent of the floor drain body.

Floor Drains can be combined with different grates depending on required load class.

- Hygienic design following EHEDG document No. 8, 13 and 44 and NSF/ANSI 3-A 14159-1-2014
- Available in AISI 304 or 316L grades of stainless steel
- 3" or 4" Sch 10 outlet options
- Floor drain top frame size: 10" x 10"
- Wide range of grates for different load classes including a slip-resistant solution
- Optional: fully removable and easily cleanable stainless steel foul air trap (FAT).

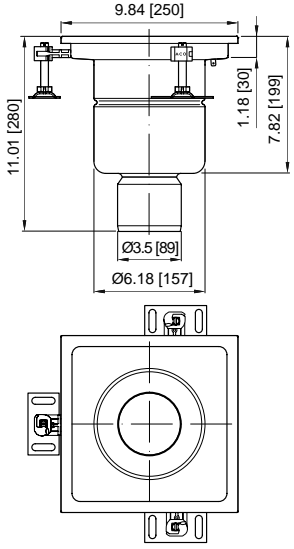





Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data

	Top size □ in [mm]	Outlet diameter Ø in [mm]	Material	Part number
	<p>10" x 10" [250 x 250 mm]</p>	<p>3" Sch 10 [89 mm]</p>	AISI 304	<p>445114</p>
			AISI 316L	<p>445180</p>

ACO 10" Floor Drain
Fixed height – vertical outlet

	Top size □ in [mm]	Outlet diameter Ø in [mm]	Material	Part number
	<p>10" x 10" [250 x 250 mm]</p>	<p>4" Sch 10 [102 mm]</p>	<p>AISI 304</p>	<p>445116</p> 
			<p>AISI 316L</p>	<p>445182</p> 

 Items shown with the NSF Mark have been tested and Certified by NSF International.

Fixed height – horizontal outlet

Product information

A fixed-height Floor Drain can be specified as a point drain in areas where waterproofing is independent of the floor drain body.

Floor Drains can be combined with different grates depending on required load class.

- Hygienic design following EHEDG document No. 8, 13 and 44 and NSF/ANSI 3-A 14159-1-2014
- Available in AISI 304 or 316L grades of stainless steel
- 3" or 4" Sch 10 outlet options
- Floor drain top frame size: 10" x 10"
- Wide range of grates for different load classes
- Optional: fully removable and easily cleanable stainless steel foul air trap (FAT).



Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data

	Top size □ in [mm]	Outlet diameter Ø in [mm]	Material	Part number
	10" x 10" [250 x 250 mm]	3" Sch 10 [89 mm]	AISI 304	445118
			AISI 316L	445184
	10" x 10" [250 x 250 mm]	4" Sch 10 [114 mm]	AISI 304	445120
			AISI 316L	445186

Adjustable – vertical outlet

Product information

Adjustable Floor Drains can be combined with an ACO Floor Drain top or ACO Trench Drain in most flooring constructions.

Adjustable solution enables height and rotational adjustment of connected Floor Drain top or channel.

Floor Drains can be equipped with flanges for connection of waterproofing membrane.

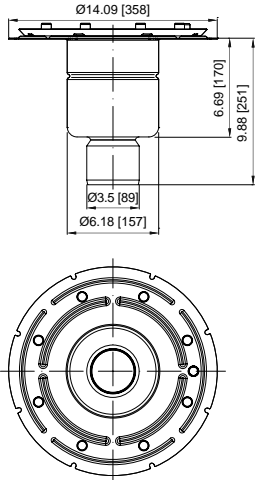


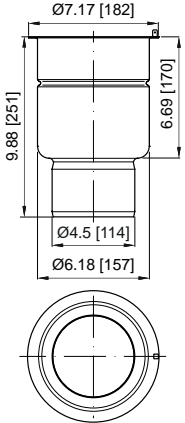


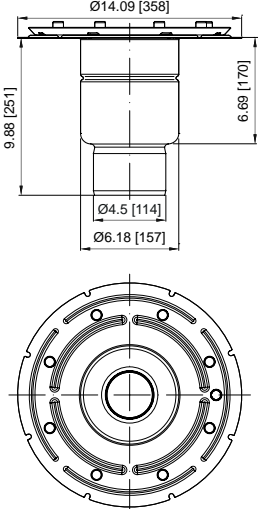


- Hygienic design following EHEDG document No. 8, 13 and 44 and NSF/ANSI 3-A 14159-1-2014
- Available in AISI 304 or 316L grades of stainless steel
- 3" or 4" Sch 10 outlet options
- Floor drain body with location flange or integrated membrane flange for mechanical clamp.
- Removable adjustable friction ring included.
- Optional: fully removable and easily cleanable stainless steel foul air trap (FAT).



Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data

	Type of flange	Outlet diameter Ø in [mm]	Material	Part number
	Location flange	3" Sch 10 [89 mm]	AISI 304	445123
			AISI 316L	445189

	Type of flange	Outlet diameter Ø in [mm]	Material	Part number
	With mechanical clamping flange	3" Sch 10 [89 mm]	AISI 304	445127 
			AISI 316L	445193 
	Location flange	4" Sch 10 [114 mm]	AISI 304	445129 
			AISI 316L	445195 
	With mechanical clamping flange	4" Sch 10 [114 mm]	AISI 304	445133 
			AISI 316L	445199 

Adjustable – horizontal outlet

Product information

Adjustable Floor Drains can be combined with an ACO Floor Drain top or ACO Trench Drain in most flooring constructions.

The adjustable solution enables height and rotational adjustment of connected floor drain top or channel.

Floor Drains can be equipped with flanges for connection of waterproofing membrane.

- Hygienic design following EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014
- Available in AISI 304 or 316L grades of stainless steel
- 3" or 4" Sch 10 outlet options
- Floor Drain body with location flange or integrated membrane flange for mechanical clamp
- Fully removable adjustable friction ring included
- Optional: fully removable and easily cleanable stainless steel foul air trap



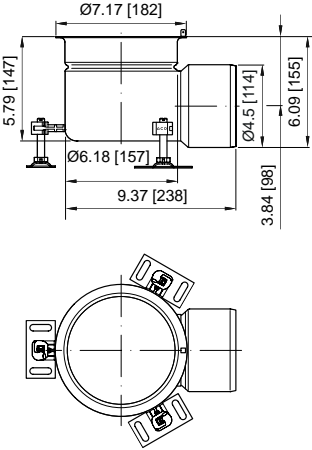


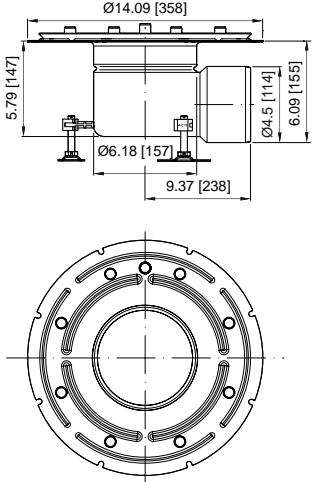


Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data

	Type of flange	Outlet diameter Ø in [mm]	Material	Part number
	With location flange	3" Sch 10 [89 mm]	AISI 304	445147
			AISI 316L	445213
	With mechanical clamping flange	3" Sch 10 [89 mm]	AISI 304	445151
			AISI 316L	445217

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ACO 10" Floor Drain
Adjustable – horizontal outlet

	Type of flange	Outlet diameter Ø in [mm]	Material	Part number
	Location flange	4" Sch 10 [114 mm]	AISI 304	445153 
			AISI 316L	445219 
	With mechanical clamping flange	4" Sch 10 [114 mm]	AISI 304	445157 
			AISI 316L	445223 

ACO Floor Drain

Floor Drain top

Product information

Floor Drain top can be combined with adjustable floor drain.

Floor Drains can be combined with different grates depending on requested load class.

- Hygienic design following EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014
- Available in AISI 304 or 316L grades of stainless steel
- Floor drain top frame size: 10" x 10"
- Wide range of grates for different load classes.



Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data

	Floor drain top type	Floor Drain top size in [mm]	Material	Part number
	Standard edge	10" x 10" [250 x 250 mm]	AISI 304	408248
			AISI 316L	408258

Grates for ACO 10" Floor Drain

Product information

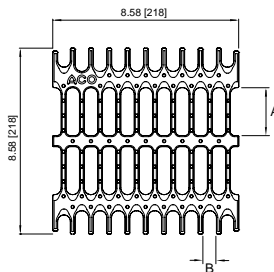
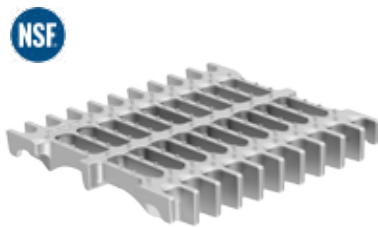
A variety of grates are available depending on application and required load class. For applications with high hygienic demands, a Ladder or Cast grate should be selected.

Grates have been independently load tested to ASME 112.6.3.

- Hygienic design following EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014.
- Available in AISI 304 or 316L grades of stainless steel.
- Grates fit Floor Drain top: 10" x 10".
- Range of grates suitable for different load classes.
- Slip resistant solution available.

Items shown with the NSF Mark have been tested and Certified by NSF International.

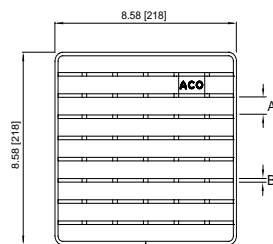
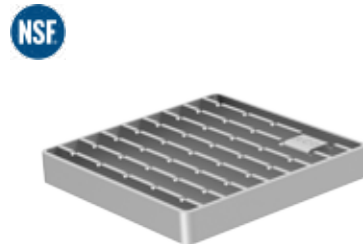
ACO Hygienic Cast Grate



Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Special duty	Yes	2.22 [56.5]	0.63 [16]	AISI 304	416943*

Note: Surface electropolished

ACO Hygienic Ladder Grate



Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Light duty	Yes	0.79 [20]	0.16 [4]	AISI 304	416914*
				AISI 316L	416915*
Heavy duty	Yes	0.79 [20]	0.2 [5]	AISI 304	408028*
				AISI 316L	408128*
Special duty	Yes	0.63 [16]	0.39 [10]	AISI 304	408044*
				AISI 316L	408144*

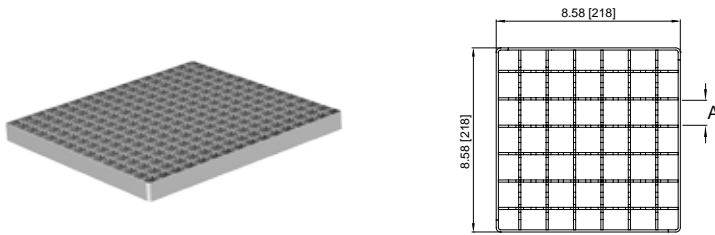
Note: Surface electropolished

*Grates fully hygienic according to EHEDG document 8, 13 and 44 and NSF/ANSI 3-A 14159-2014.

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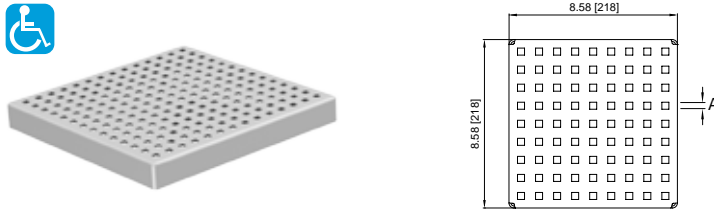
Mesh Grate



Load class	Slip resistant	Slot size in [mm]	Material	Part #
		A		
Medium duty	Yes	0.91 [23]	AISI 304 AISI 316L	408095 408195

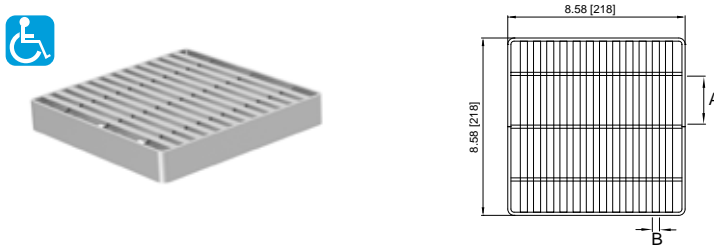
Note: Surface electropolished

Quadrato Grate



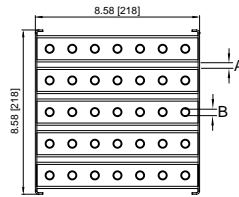
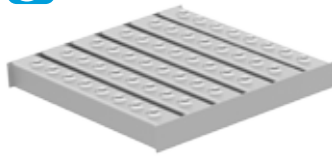
Load class	Slip resistant	Slot size in [mm]	Material	Part #
		A		
Light duty	No	0.27 [7]	AISI 304 AISI 316L	408097 408197

Heelsafe Grate



Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Medium duty	Yes	1.85 [47]	0.26 [6.5]	AISI 304 AISI 316L	408031 408131

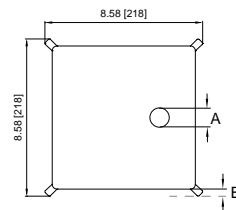
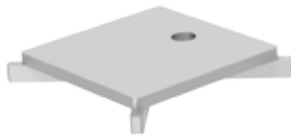
Multi-slot 5 Grate



Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Medium duty	Yes	0.28 [7]	0.37 [9.5]	AISI 304	408033
				AISI 316L	408133

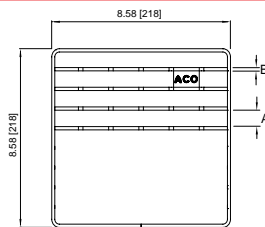
Note: Surface electropolished

Slot Cover



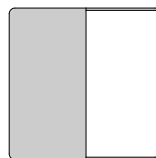
Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Special duty	Yes	0.79 [20]	0.38 [9.5]	AISI 304	408030
				AISI 316L	408130

Half Ladder Grate



Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Light duty	Yes	0.896 [22.75]	0.16 [4]	AISI 304	416920
				AISI 316L	416921

Half Plate Grate



Load class	Slip resistant	Material	Part #
		AISI 316L	416927

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Accessories for ACO 10" Floor Drain

	Description	Used with	Material	Part #
	Silt basket (can be used with foul air trap) <ul style="list-style-type: none"> ▪ Stainless steel 	ACO 10" Floor Drain <ul style="list-style-type: none"> ▪ Fixed height ▪ Adjustable 	AISI 304	416906
			AISI 316L	416907
	Silt basket (can be used with foul air trap) <ul style="list-style-type: none"> ▪ Stainless steel 	ACO 10" Floor Drain <ul style="list-style-type: none"> ▪ Vertical ▪ Horizontal ▪ Fixed height ▪ Adjustable 	AISI 304	416904
			AISI 316L	416905
	Silt basket (cannot be used with foul air trap) <ul style="list-style-type: none"> ▪ Stainless steel 	ACO 10" Floor Drain <ul style="list-style-type: none"> ▪ Vertical or horizontal ▪ Adjustable 	AISI 304	445234
			AISI 316L	445235
	Standard foul air trap support <ul style="list-style-type: none"> ▪ NBR (Acrylonitrile butadiene rubber) 	ACO 10" Floor Drain <ul style="list-style-type: none"> ▪ Fixed height ▪ Adjustable 	NBR	408201
	Optional removable foul air trap* <ul style="list-style-type: none"> ▪ Stainless steel ▪ Water seal 0.20" 	ACO 10" Floor Drain <ul style="list-style-type: none"> ▪ Fixed height ▪ Adjustable 	AISI 304	408200
			AISI 316L	408210

*Use of a foul air trap should be approved by local authority. Building codes in North America do not encourage the use of removable foul air traps in Floor Drains. However, a removable foul air trap may be required due to restricted depth installations, client-specific requirements, marine (ships & boats) and others. Refer to ASME A112.3.1-2007 Stainless Steel Drainage Systems for Sanitary DWV, Storm and Vacuum Applications, Above and Below-Ground for more information.

Fixed height – vertical outlet


Product information

A fixed-height Floor Drain can be specified as point drainage in areas where waterproofing is independent of the floor drain body.

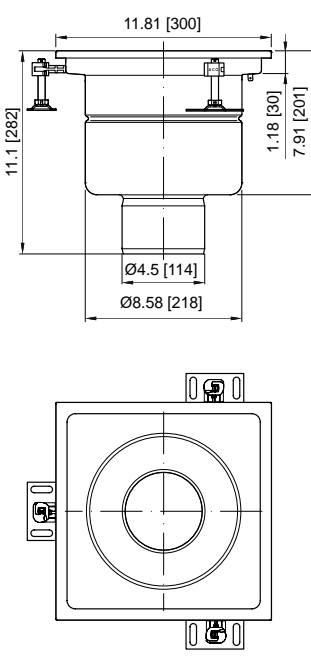


Floor Drains can be combined with different grates depending on requested load class.

- Hygienic design following EHEDG document No. 8, 13 and 44 and NSF/ANSI 3-A 14159-1-2014.
- Available in AISI 304 or 316L grades of stainless steel.
- 4" or 6" Sch 10 outlet options.
- Floor drain top frame size: 12" x 12".
- Wide range of grates for different load classes.
- Optional: fully removable and easily cleanable stainless steel foul air trap (FAT).

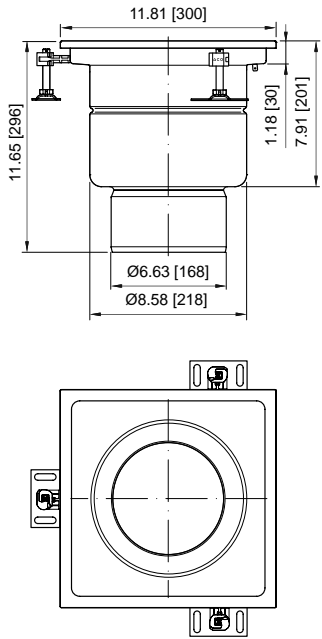




 Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data

	Top size □ in [mm]	Outlet diameter Ø in [mm]	Material	Part number
	<p>12" x 12" [300 x 300 mm]</p>	<p>4" Sch 10 [114 mm]</p>	AISI 304	<p>445104</p> 
			AISI 316L	<p>445170</p> 

ACO 12" Floor Drain
Fixed height - vertical outlet

	Top size □ in [mm]	Outlet diameter Ø in [mm]	Material	Item number
	12" x 12" [300 x 300 mm]	6" Sch 10 [168 mm]	AISI 304	445106 
			AISI 316L	445172 



Items shown with the NSF Mark have been tested and Certified by NSF International.

Fixed height – horizontal outlet

Product information

Fixed height floor drains can be specified as a point drainage in areas where waterproofing is independent of the floor drain body.

Floor drains can be combined with different grates depending on required load class.

- Hygienic design following EHEDG document No. 8, 13 and 44 and NSF/ANSI 3-A 14159-1-2014.
- Available in AISI 304 or 316L grades of stainless steel.
- 3" or 4" Sch 10 outlet options.
- Floor drain top frame size: 12 x 12 inches.
- Wide range of grates for different load classes.
- Optional: fully removable and easily cleanable stainless steel foul air trap (FAT).



Product Data

	Top size □ in [mm]	Outlet diameter Ø in [mm]	Material	Item number
	<p>12" x 12" (300 x 300 mm)</p>	<p>4" (101.6 mm) Sch 10</p>	AISI 304	<p>445112</p>
			AISI 316L	<p>445178</p>

Items shown with the NSF Mark have been tested and Certified by NSF International.

ACO 12" Floor Drain

Adjustable – vertical outlet

Adjustable – vertical outlet

Product information

Adjustable Floor Drains can be combined with an ACO Floor Drain top or ACO Trench Drain in most flooring constructions.

The adjustable solution enables height and rotational adjustment of connected floor drain top or channel.

Floor Drains can be equipped with flanges for connection of waterproofing membrane.

- Hygienic design following EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014.
- Available in AISI 304 or 316L grades of stainless steel.
- 4" or 6" Sch 10 outlet diameter.
- Floor Drain body with location flange or integrated membrane flange for mechanical clamp.
- Fully removable adjustable friction ring included.
- Optional: fully removable and easily cleanable stainless steel foul air trap (FAT).



Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data

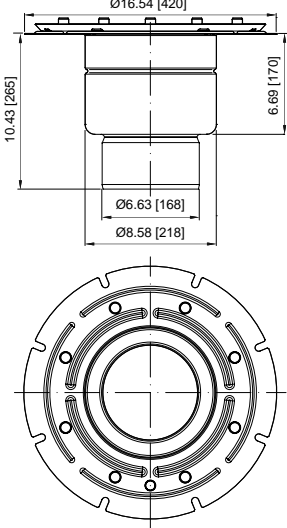


	Type of flange	Outlet diameter Ø in [mm]	Material	Part number
	Location flange	4" Sch 10 [114 mm]	AISI 304	445135
			AISI 316L	445201


ACO 12" Floor Drain
Adjustable – vertical outlet

	Type of flange	Outlet diameter Ø in [mm]	Material	Item number
	Mechanical clamping flange	4" Sch 10 [114 mm]	AISI 304	445139
			AISI 316L	445205
	Location flange	6" Sch 10 [168 mm]	AISI 304	445141
			AISI 316L	445207

Items shown with the NSF Mark have been tested and Certified by NSF International.

ACO 12" Floor Drain
Adjustable – vertical outlet

	Type of flange	Outlet diameter Ø in [mm]	Material	Item number
	Mechanical clamping flange	6" Sch 10 [168 mm]	AISI 304	445145 
			AISI 316L	445211 

 Items shown with the NSF Mark have been tested and Certified by NSF International.

Adjustable – horizontal outlet

Product information

Adjustable Floor Drains can be combined with an ACO Floor Drain top or ACO Trench Drain in most flooring constructions.

The adjustable solution enables height and rotational adjustment of connected floor drain top or channel.

Floor Drains can be equipped with flanges for connection of waterproofing membrane.

- Hygienic design following EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014.
- Available in AISI 304 or 316L grades of stainless steel.
- 4" Sch 10 outlet diameter.
- Floor Drain body with location flange or integrated membrane flange for mechanical clamp.
- Fully removable adjustable friction ring included.
- Optional: fully removable and easily cleanable stainless steel foul air trap (FAT).



Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data

	Type of flange	Outlet diameter Ø in [mm]	Material	Part number
	Location flange	4" Sch 10 [114 mm]	AISI 304	445159
			AISI 316L	445225
	Mechanical clamping flange	4" Sch 10 [114 mm]	AISI 304	445163
			AISI 316L	445229

Floor Drain top

Product information

The Floor Drain top can be combined with an adjustable floor drain body.

- Hygienic design following EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014.
- Available in AISI 304 or 316L grades of stainless steel.
- Floor drain top frame size: 12" x 12".
- Wide range of grates for different load classes.



Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data

	Floor Drain top type	Floor Drain top size Ø in [mm]	Material	Part number
	Standard edge	12" x 12" [300 x 300 mm]	AISI 304	408228
			AISI 316L	408238

Grates for ACO 12" Floor Drain

Product information

Variety of grates are available depending on application and required load class. For applications with maximum hygienic demands, a Ladder or Cast grate should be selected.

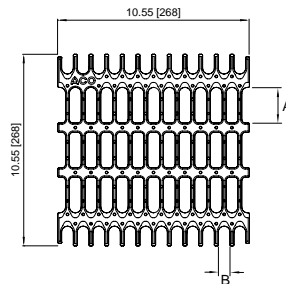
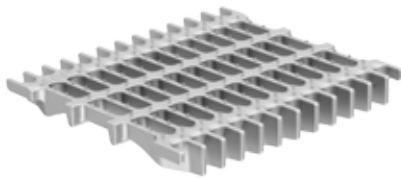
Grates have been independently load tested to ASME 112.6.3.

- Hygienic design following EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014.
- Available in AISI 304 or 316L grades of stainless steel.
- Grates fit Floor Drain top: 12" x 12".
- Range of grates suitable for different load classes.
- Slip resistant solution available.



Items shown with the NSF Mark have been tested and Certified by NSF International.

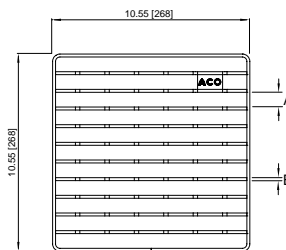
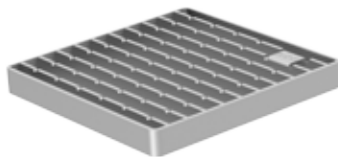
Cast Grate



Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Special duty	Yes	1.97 [50]	0.65 [16.5]	AISI 304	416944*

Note: Surface electropolished

Ladder Grate



Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Light duty	Yes	0.79 [20]	0.16 [4]	AISI 304	416916*
			AISI 316L	416917*	
Medium duty	Yes	0.79 [20]	0.2 [5]	AISI 304	408037*
				AISI 316L	408137*
Heavy duty	No	0.63 [16]	0.39 [10]	AISI 304	408045*
				AISI 316L	408145*

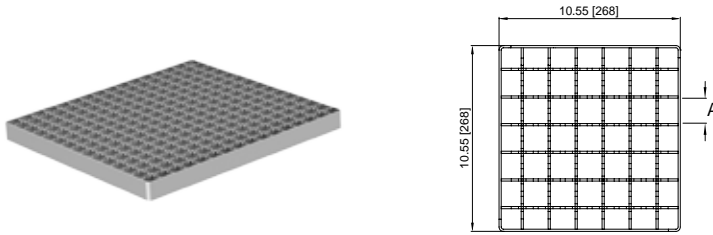
Note: Surface electropolished

*Grates fully hygienic according to EHEDG document 8, 13 and 44 and NSF/ANSI 3-A 14159-2014.

Grates

ACO 12" Floor Drain

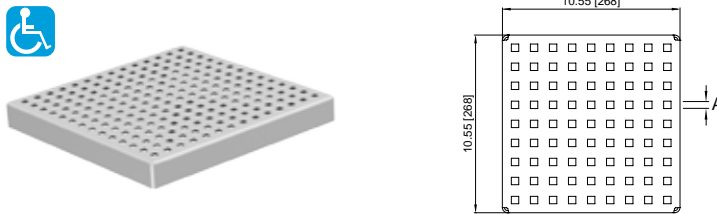
Mesh Grate



Load class	Slip resistant	Slot size in [mm]	Material	Part #
		A		
Medium duty	Yes	0.91 [23]	AISI 304 AISI 316L	408034 408134

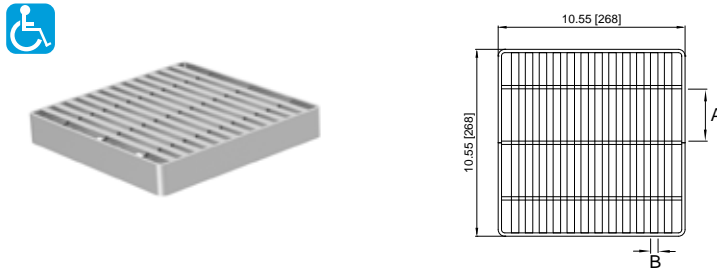
Note: Surface electropolished

Quadrato Grate



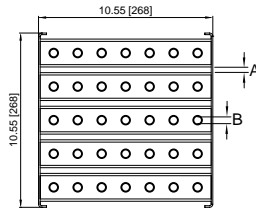
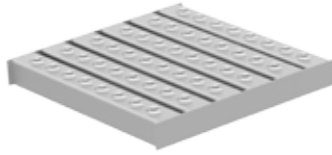
Load class	Slip resistant	Slot size in [mm]	Material	Part #
		A		
Light duty	No	0.27 [7]	AISI 304 AISI 316L	408036* 408136*

Heelsafe Grate



Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Light duty	No	1.85 [47]	0.26 [6.5]	AISI 304 AISI 316L	408040* 408140*

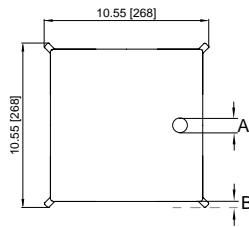
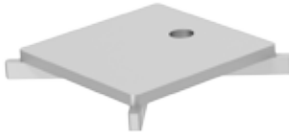
Multi-slot 5 Grate



Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Medium duty	Yes	0.28 [7]	0.37 [9.5]	AISI 304	408042
				AISI 316L	408142

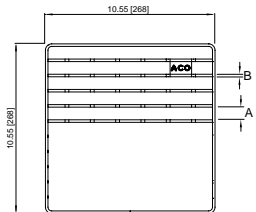
Note: Surface electropolished

Slot Cover



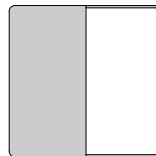
Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Extra heavy duty	No	0.79 [20]	0.38 [9.5]	AISI 304	408039
				AISI 316L	408139

Half Ladder Grate



Load class	Slip resistant	Slot size in [mm]		Material	Part #
		A	B		
Light duty	Yes	0.896 [22.75]	0.16 [4]	AISI 304	416922
				AISI 316L	416923

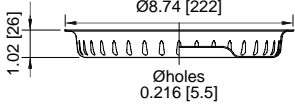
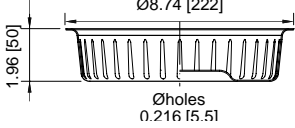
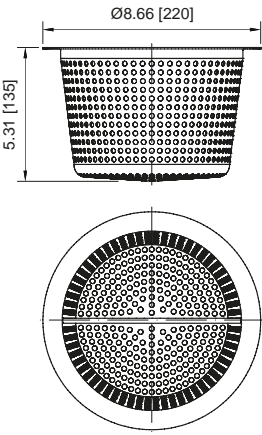
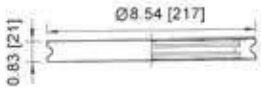
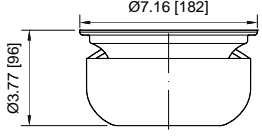
Half Plate Grate



Load class	Slip resistant	Material	Part #
		AISI 316L	416925



Accessories for ACO 12" Floor Drain

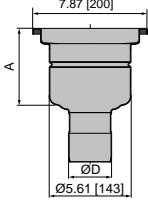
	Description	Used with	Material	Part #
	Silt basket (can be used with foul air trap) <ul style="list-style-type: none"> ▪ Stainless steel 	ACO 12" Floor Drain - horizontal <ul style="list-style-type: none"> ▪ Fixed height ▪ Adjustable 	AISI 304	416910
			AISI 316L	416911
	Silt basket (can be used with foul air trap) <ul style="list-style-type: none"> ▪ Stainless steel 	ACO 12" Floor Drain - vertical <ul style="list-style-type: none"> ▪ Fixed height ▪ Adjustable 	AISI 304	416908
			AISI 316L	416909
	Silt basket (cannot be used with foul air trap) <ul style="list-style-type: none"> ▪ Stainless steel 	ACO 12" Floor Drain <ul style="list-style-type: none"> ▪ Vertical or horizontal 	AISI 304	445236
			AISI 316L	445237
	Standard foul air trap support <ul style="list-style-type: none"> ▪ NBR (Acrylonitrile butadiene rubber) 	ACO 12" Floor Drain <ul style="list-style-type: none"> ▪ Fixed height ▪ Adjustable 	NBR	408221
	Optional removable foul air trap* <ul style="list-style-type: none"> ▪ Stainless steel ▪ Water seal 0.20" 	ACO 12" Floor Drain <ul style="list-style-type: none"> ▪ Fixed height ▪ Adjustable 	AISI 304	408220
			AISI 316L	408230

*Use of a foul air trap should be approved by local authority. Building codes in North America do not encourage the use of removable foul air traps in Floor Drains. However, a removable foul air trap may be required due to restricted depth installations, client-specific requirements, marine (ships & boats) and others. Refer to ASME A112.3.1-2007 Stainless Steel Drainage Systems for Sanitary DWV, Storm and Vacuum Applications, Above and Below-Ground for more information.

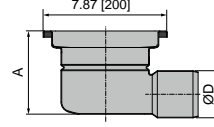
Flow rates and construction heights

ACO 8" Floor Drain – fixed height

Flow rates are calculated without foul air trap.

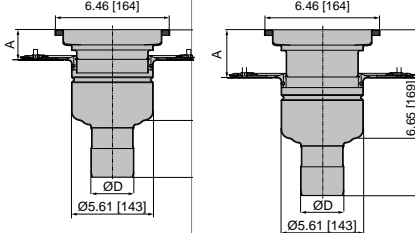


Outlet diameter	Outlet position	Flow rate [gpm]*
ØD in [mm]		A = 5.66 [144 mm]
2 Sch 10 [60]	Vertical	40.6
4 Sch 10 [114]		143.41

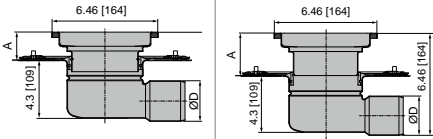


Outlet diameter	Outlet position	Flow rate [gpm]*
ØD in [mm]		A = 5.49 [140 mm]
2 Sch 10 [60]	Horizontal	35.67
4 Sch 10 [114]		110.9

ACO 8" Floor Drain – adjustable



Outlet diameter	Outlet position	Flow rate [gpm]*	
ØD in [mm]		A = 1.5 [38 mm]	A = 2.17 [55 mm]
2 Sch 10 [60]	Vertical	41.73	44
4 Sch 10 [114]		147.4	155.44



Outlet diameter	Outlet position	Flow rate [gpm]*	
ØD in [mm]		A = 1.5 [38 mm]	A = 2.17 [55 mm]
2 Sch 10 [60]	Horizontal	36.88	39.43
4 Sch 10 [114]		115.71	125.79

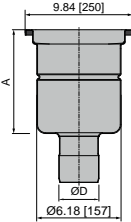
Flow rates and construction heights

ACO 10" Floor Drain

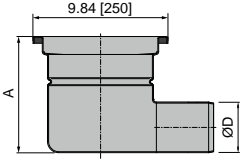
Flow rates and construction heights

ACO 10" Floor Drain – fixed height

Flow rates are calculated without foul air trap.

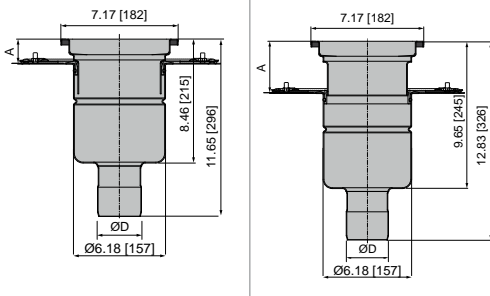


Outlet diameter	Outlet position	Flow rate [gpm]
ØD in [mm]		A = 7.82 [199 mm]
3 Sch 10 [89]	Vertical	74.03
4 Sch 10 [114]		168.56

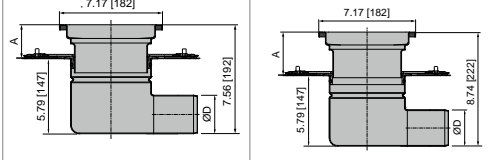


Outlet diameter	Outlet position	Flow rate [gpm]
ØD in [mm]		A = 6.88 [175 mm]
3 Sch 10 [89]	Horizontal	62
4 Sch 10 [114]		131.72

ACO 10" Floor Drain – adjustable



Outlet diameter	Outlet position	Flow rate [gpm]	
ØD in [mm]		A = 1.77 [45 mm]	A = 2.95 [75 mm]
3 Sch 10 [89]	Vertical	77	82.24
4 Sch 10 [114]		175.32	187.25



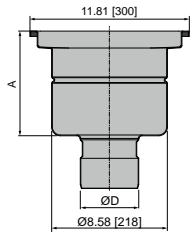
Outlet diameter	Outlet position	Flow rate [gpm]	
ØD in [mm]		A = 1.77 [45 mm]	A = 2.95 [75 mm]
3 Sch 10 [89]	Horizontal	65.73	71.75
4 Sch 10 [114]		140.78	155.27

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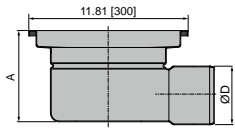
Flow rates and construction heights

ACO 12" Floor Drain – fixed height

Flow rates are calculated without foul air trap.

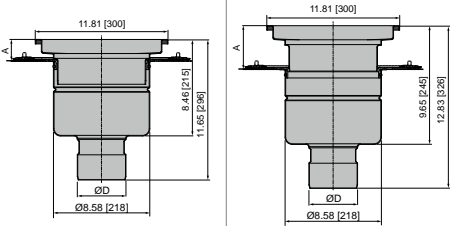


Outlet diameter	Outlet position	Flow rate [gpm]
ØD in [mm]		A = 7.91 [201 mm]
4 Sch 10 [114]	Vertical	169.53
6 Sch 10 [168]		360.59

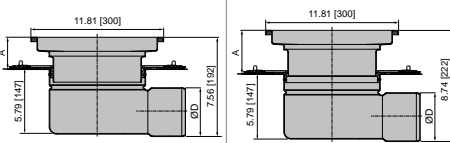


Outlet diameter	Outlet position	Flow rate [gpm]
ØD in [mm]		A = 6.97 [177 mm]
4 Sch 10 [114]	Horizontal	132.95

ACO 12" Floor Drain – adjustable



Outlet diameter	Outlet position	Flow rate [gpm]	
ØD in [mm]		A = 1.77 [45 mm]	A = 2.95 [75 mm]
4 Sch 10 [114]	Vertical	175.32	187.25
6 Sch 10 [168]		372.92	398.29



Outlet diameter	Outlet position	Flow rate [gpm]	
ØD in [mm]		A = 1.77 [45 mm]	A = 2.95 [75 mm]
4 Sch 10 [114]	Horizontal	140.78	155.27

Cleaning and Maintenance

Cleanouts

A cleanout is an access point in a drainage system that is used to inspect and rod blocked drainage pipes. This is useful when pipes are located in areas where usual inspection and rodding are not possible.

For heavy duty cleanouts, please contact ACO.



	Top type	Pipe size Ø in [mm]		Material	Load Class	Part number
		internal	external			
	Square cleanout	3.94 [100]	4.33 [110]	AISI 304	Light duty	414596
				AISI 316L		416998
	Round cleanout	3.94 [100]	4.33 [110]	AISI 304	Light duty	138220
				AISI 316L		138221

Slip resistance

Slip resistance is critical for user safety. ACO has tested grate patterns using the widely accepted pendulum test.

The pendulum skid tester, known in the U.S. as the "British pendulum", was invented at the U.S. National Bureau of Standards and is the most widely used floor slip resistance tester worldwide for measuring the slip resistance of pedestrian surfaces. Test readings are recorded as the British

Pendulum Number (BPN) or Skid Resistance Values (SRV).

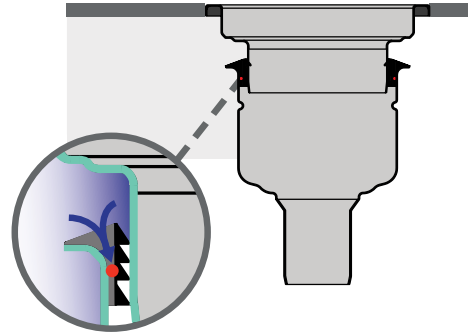
A pendulum is swung over a wet surface and the surface frictional properties are measured. Test results are given a BPN value - typically values in excess of 24 would be used. A BPN of 24 and under is regarded as high slip and skid potential.

ACO recommends selecting a grate with the similar BPN values as the surrounding pavement finish. Pavement slope, presence of surface contaminants, etc. can also negatively affect slip and skid resistance.

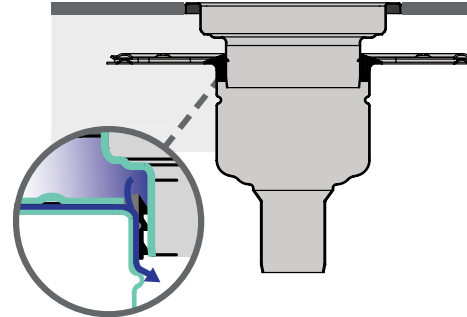
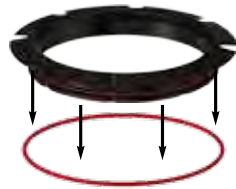
Other tests exist, such as the variable-angle ramp test and horizontal pull test and can be carried out as necessary if required for specific projects.

Friction ring

When using adjustable height floor drain with location flange, red sealing 'o' ring must be used to prevent water from entering body.



When using adjustable height floor drain with mechanical membrane clamping flange, red sealing 'o' ring must be removed to allow water to enter floor drain body through weep holes on friction ring.



ACO Trench Drain

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Hygienic Floor Trough



Slot Drain

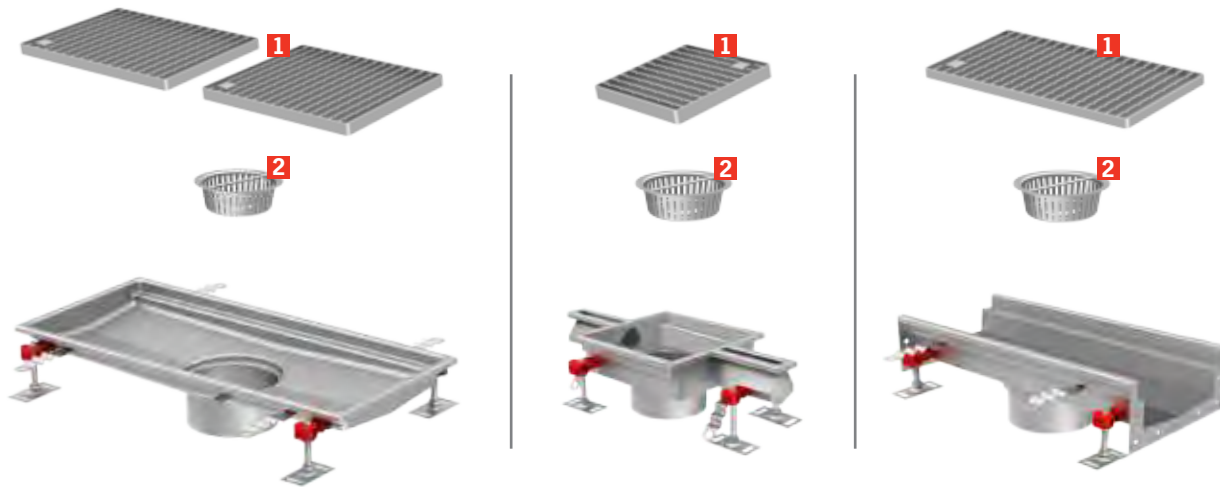


Modular

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ACO Trench Drain System overview

ACO Trench Drain



ACO Hygienic Floor Trough

ACO Slot Drain

ACO Modular System

- 1 Grates
- 2 Silt basket
- 3 Friction ring
- 4 ACO Floor Drain body



ACO Floor Drain

Introduction

ACO Trench Drain product range

The ACO Trench Drain range includes drains for all common applications and typical floor types. The ACO Trench Drain portfolio is designed with an emphasis on hygienic design requirements. Selecting a drain from the range is easy.

The unique variability of the whole range makes it easy to choose a drain that suits a customer's specific needs. Channel length, depth and outlet position are just a few of the parameters which can be specified.

ACO Trench Drain ordering

The dimensions of the ACO Trench Drain can be easily specified to meet exact project requirements. To specify a drain, please use the Specification template (see page 76) which will help you to identify the information you need, or contact our Sales/Technical department.

ACO Trench Drains with fixed dimensions are also available. These dimensions are a selection of most frequently sold ACO Trench Drains. Please see page 59 where you can find an overview.

ACO Trench Drain customization

ACO offers you full customization of your drainage solution. All ACO trench drains can be designed with:

- Custom outlet position
- Custom depth
- Custom slope
- Custom channel width
- L-shape and T-shape layout
- Custom side inlets

To review customized ACO Trench Drain solutions, please contact our Sales/Technical department.

Grate Loading Overview

Grate		ACO Recommended Load Classification				
		Light duty	Medium duty	Heavy duty	Extra heavy duty	Special duty
Hygienic Floor Trough	Cast				X	
	Ladder	X	X	X		
	Mesh	X				
Modular 125	Mesh	X	X			
	Ladder		X	X		
	Heelsafe	X	X			
	Quadrato	X				
	Plastic	X				
	Multi-slot 5	X	X			
Modular 200	Mesh		X			
	Ladder		X	X		
	Multi-slot 5	X	X			

Hygienic design

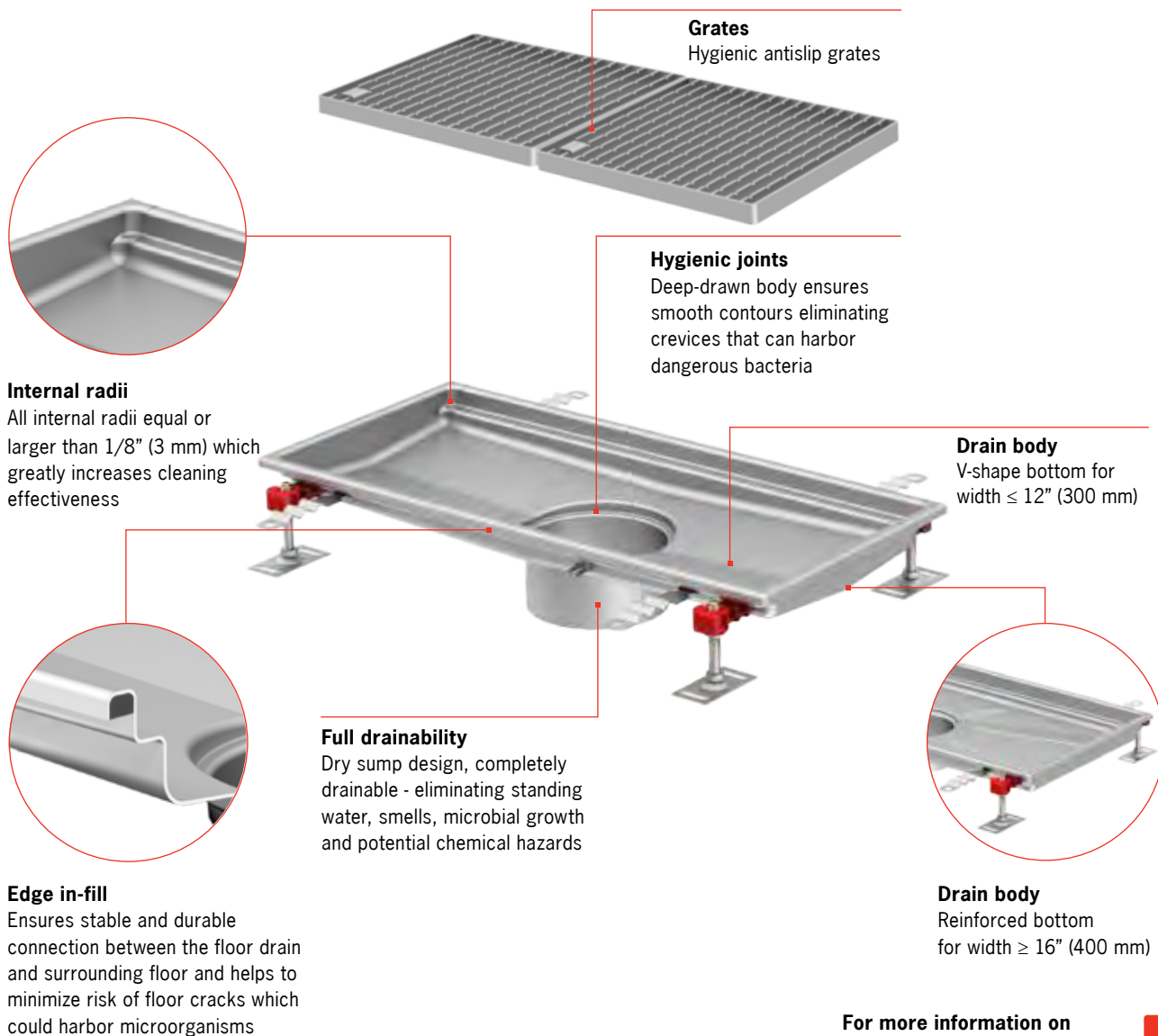
ACO offers sustainable, integrated drainage systems which are designed to protect your business, the environment and ultimately, public health. Our aim is to constantly improve every aspect of safety, hygiene and functional performance.

We believe that our systems and services are truly unique, delivering unparalleled benefits to everyone involved in project delivery or subsequent operation.

ACO hygienic systems fulfill stringent hygienic requirements helping to prevent harmful bacterial contamination. We apply the relevant hygienic design principles reserved for food contact surfaces (EHEDG documents No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014) to the channel designs.

ACO Trench Drain features:

- Fully drainable
- Internal radii equal or larger than 1/8 inch (3 mm)
- Hygienic joints
- Edge in-fill
- Stainless steel grade min. AISI 304
- Fully pickle passivated



Grates
Hygienic antislip grates

Hygienic joints
Deep-drawn body ensures smooth contours eliminating crevices that can harbor dangerous bacteria

Drain body
V-shape bottom for width $\leq 12''$ (300 mm)

Full drainability
Dry sump design, completely drainable - eliminating standing water, smells, microbial growth and potential chemical hazards



Drain body
Reinforced bottom for width $\geq 16''$ (400 mm)

Edge in-fill
Ensures stable and durable connection between the floor drain and surrounding floor and helps to minimize risk of floor cracks which could harbor microorganisms

For more information on our stainless steel drainage solutions and hygienic design, find us on YouTube!



Fixed-height, horizontal outlet solution *(available as a one-piece solution)*



ACO Hygienic Floor Trough

Adjustable, vertical outlet solution *(standard configuration)*



ACO Hygienic Floor Trough



ACO Floor Drain

ACO Hygienic Floor Trough - Standard products

Product information

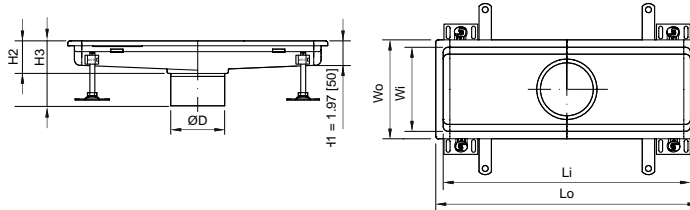
The dimensions of the ACO Hygienic Floor Trough for concrete, tile and resin floors can be easily specified to meet exact project requirements or easily chosen from predefined fixed dimensions.

- Hygienic design following EN 1672, EN ISO 14159, EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014
- Available in AISI 304 or AISI 316L grades of stainless steel
- Fully pickle passivated
- Minimum longitudinal slope 1 %
- Minimum cross sectional slope 5°
- V-shape bottom for width < 11.81"
- Reinforced bottom for width over 11.81"
- Rubber edge infill
- Rounded corners 1/8" radii or larger
- Easy and secure adjustable connection with Floor Drain
- Hygienic grates with slip resistance
- Adjustable leveling feet 2.36" - 4.33"
- Installation anchors for securing into concrete
- 4.92" diameter outlet connects to ACO 8" Floor Drain body
- 5.59" diameter outlet connects to ACO 10" Floor Drain body
- 7.87" diameter outlet connects to ACO 12" Floor Drain body



Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data



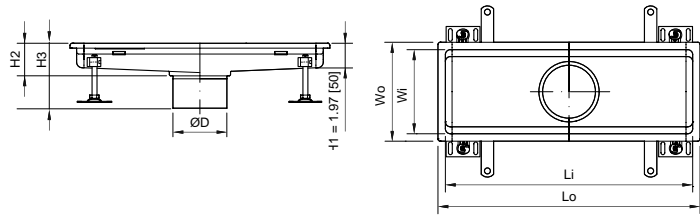
Channel dimensions							Floor Drain	Material	Part #
Wo in [mm]	Wi in [mm]	Lo in [mm]	Li in [mm]	H2 in [mm]	H3 in [mm]	ØD in [mm]			
7.87 [200]	6.69 [170]	20.87 [530]	19.69 [500]	2.36 [60]	4.25 [108]	4.92 [125]	ACO 8" Floor Drain	AISI 304	416584
		32.68 [830]	31.50 [800]					AISI 316L	416602
		40.55 [1030]	39.37 [1000]					AISI 304	416585
		48.43 [1230]	47.24 [1200]					AISI 316L	416603
		60.24 [1530]	59.06 [1500]					AISI 304	416586
		79.92 [2030]	78.74 [2000]					AISI 316L	416604
		AISI 304	416587						
		AISI 316L	416605						
AISI 304	416588								
AISI 316L	416606								
AISI 304	416589								
AISI 316L	416607								

* 4.92" diameter outlet connects to ACO 8" Floor Drain body.

ACO Hygienic Floor Trough

Standard products

Product data

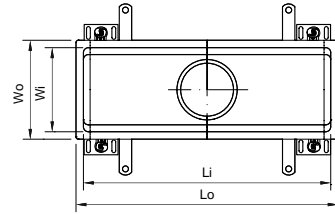
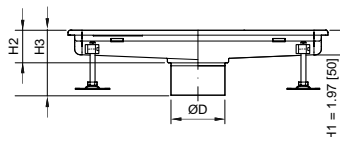


Channel dimensions							Floor Drain	Material	Part #		
Wo in [mm]	Wi in [mm]	Lo in [mm]	Li in [mm]	H2 in [mm]	H3 in [mm]	ØD in [mm]					
7.87 [200]	6.69 [170]	20.87 [530]	19.69 [500]	2.36 [60]	4.8 [122]	5.59 [142]	ACO 10" Floor Drain	AISI 304	416590		
								AISI 316L	416608		
		32.68 [830]	31.50 [800]					AISI 304	416591		
								AISI 316L	416609		
		40.55 [1030]	39.37 [1000]					AISI 304	416592		
								AISI 316L	416610		
		48.43 [1230]	47.24 [1200]					AISI 304	416593		
								AISI 316L	416611		
		60.24 [1530]	59.06 [1500]	AISI 304	416594						
				AISI 316L	416612						
		79.92 [2030]	78.74 [2000]	AISI 304	416595						
				AISI 316L	416613						
11.81 [300]	10.63 [270]	12.99 [330]	11.81 [300]	2.36 [60]	4.52 [115]	5.59 [142]	ACO 10" Floor Drain	AISI 304	416614		
								AISI 316L	416628		
		24.80 [630]	23.62 [600]	2.36 [60]	4.72 [120]			AISI 304	416615		
								AISI 316L	416629		
		40.55 [1030]	39.37 [1000]	2.36 [60]	4.72 [120]			AISI 304	416616		
								AISI 316L	416630		
		60.24 [1530]	59.06 [1500]	2.36 [60]	4.72 [120]			AISI 304	416617		
								AISI 316L	416631		
		79.92 [2030]	78.74 [2000]	2.36 [60]	4.72 [120]	AISI 304	416618				
						AISI 316L	416632				
				119.29 [3030]	118.11 [3000]	2.76 [70]	5.11 [130]	7.87 [200]	ACO 12" Floor Drain	AISI 304	416619
						AISI 316L	416633				
				158.66 [4030]	157.48 [4000]	3.15 [80]	5.51 [140]			AISI 304	416620
						AISI 316L	416634				
				12.99 [330]	11.81 [300]	2.36 [60]	4.72 [120]			AISI 304	416621
										AISI 316L	416635
		24.80 [630]	23.62 [600]	2.36 [60]	4.72 [120]	AISI 304	416622				
						AISI 316L	416636				
		40.55 [1030]	39.37 [1000]	2.36 [60]	4.72 [120]	AISI 304	416623				
						AISI 316L	416637				
		60.24 [1530]	59.06 [1500]	2.36 [60]	4.72 [120]	AISI 304	416624				
						AISI 316L	416638				
		79.92 [2030]	78.74 [2000]	2.36 [60]	4.72 [120]	AISI 304	416625				
						AISI 316L	416639				
		119.29 [3030]	118.11 [3000]	2.76 [70]	5.11 [130]	7.87 [200]	ACO 12" Floor Drain	AISI 304	416626		
				AISI 316L	416640						
		158.66 [4030]	157.48 [4000]	3.15 [80]	5.51 [140]	7.87 [200]	ACO 12" Floor Drain	AISI 304	416627		
				AISI 316L	416641						

* 4.92" diameter outlet connects to ACO 8" Floor Drain body. 5.59" diameter outlet connects to ACO 10" Floor Drain body. 7.87" diameter outlet connects to ACO 12" Floor Drain body.

www.acobuildingdrainage.com

Product data



Channel dimensions							Floor Drain	Material	Part #
Wo in [mm]	Wi in [mm]	Lo in [mm]	Li in [mm]	H2 in [mm]	H3 in [mm]	ØD in [mm]			
15.75 [400]	14.57 [370]	16.93 [430]	15.75 [400]	2.36 [60]	4.84 [123]	5.59 [142]	ACO 10" Floor Drain	AISI 304	416642
		24.80 [630]	23.62 [600]					AISI 316L	416648
		32.68 [830]	31.50 [800]					AISI 304	416643
		16.93 [430]	15.75 [400]					AISI 316L	416649
		24.80 [630]	23.62 [600]		AISI 304	416644			
		32.68 [830]	31.50 [800]		AISI 316L	416650			
		16.93 [430]	15.75 [400]		AISI 304	416645			
		24.80 [630]	23.62 [600]		AISI 316L	416651			
19.69 [500]	18.50 [470]	20.87 [530]	19.69 [500]	2.56 [65]	5.00 [127]	5.59 [142]	ACO 10" Floor Drain	AISI 304	416654
		32.68 [830]	31.50 [800]		4.84 [123]			AISI 316L	416660
		40.55 [1030]	39.37 [1000]		4.88 [124]			AISI 304	416655
		20.87 [530]	19.69 [500]		4.88 [124]			AISI 316L	416661
		32.68 [830]	31.50 [800]		4.88 [124]	AISI 304		416656	
		40.55 [1030]	39.37 [1000]		4.88 [124]	AISI 316L		416662	
		20.87 [530]	19.69 [500]		4.88 [124]	AISI 304		416657	
		32.68 [830]	31.50 [800]		4.88 [124]	AISI 316L		416663	
23.62 [600]	22.44 [570]	24.80 [630]	23.62 [600]	2.76 [70]	5.11 [130]	7.87 [200]	ACO 12" Floor Drain	AISI 304	416666
		36.61 [930]	35.43 [900]		4.88 [124]			AISI 316L	416669
		48.43 [1230]	47.24 [1200]		4.92 [125]			AISI 304	416667
		32.68 [830]	31.50 [800]		5.23 [133]			AISI 316L	416670
		24.80 [630]	23.62 [600]		5.11 [130]			AISI 304	416668
		36.61 [930]	35.43 [900]		4.88 [124]			AISI 316L	416671
31.50 [800]		24.80 [630]	23.62 [600]	3.15 [80]	5.11 [130]	7.87 [200]	ACO 12" Floor Drain	AISI 304	416672
		36.61 [930]	35.43 [900]		4.88 [124]			AISI 316L	416673



Items shown with the NSF Mark have been tested and Certified by NSF International.

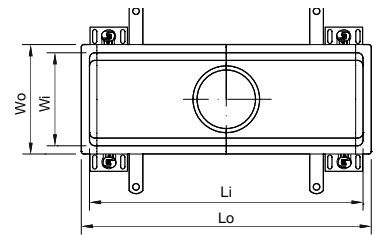
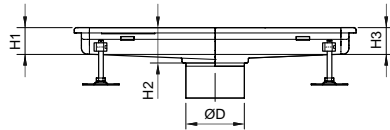
ACO Hygienic Floor Trough - Semi-standard products

Product information

The dimensions of the ACO Hygienic Floor Trough for concrete, tile and resin floors can be easily specified to meet exact project requirements.

- Hygienic design following EN 1672, EN ISO 14159, EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014
- Available in AISI 304 or AISI 316L grades of stainless steel
- Fully pickle passivated
- Minimum longitudinal slope 1 %
- Minimum cross sectional slope 5°
- V-shape bottom for width < 11.81"
- Reinforced bottom for width over 11.81"
- Rubber edge infill
- Rounded corners 1/8" radii or larger
- Easy and secure adjustable connection with floor drain
- Hygienic grates with slip resistance
- Adjustable leveling feet 2.36" - 4.33"
- Installation anchors for securing into concrete

Product data



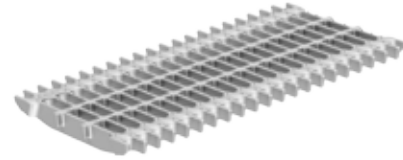
External (overall) width Wo in [mm]	Internal (grate) width Wi in [mm]	Length of channel Lo	Height at outlet of channel H2 in [mm]	Height at end of channel H1 and H3 H2 in [mm]
7.87 [200]	6.69 [170]	Variable	2.36 [60] - 7.87 [200]	1.97 [50] 3.15 [80] 4.33 [110] 5.51 [140]
11.81 [300]	10.63 [270]			
15.75 [400]	14.57 [370]			
19.69 [500]	18.50 [470]			
23.62 [600]	22.44 [570]			
31.50 [800]	30.31 [770]			

* Long channels over 3m are manufactured in sections for shipping and handling.

Cast Grate

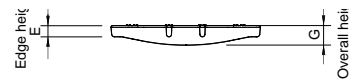
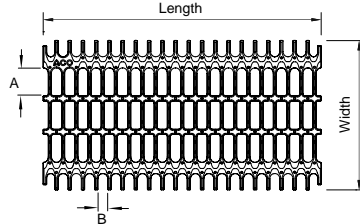
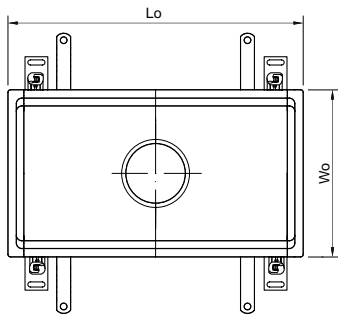
Product information

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014
- ACO Cast Grate with slip resistant finish
- Frameless design for optimum drainability and cleanliness
- Surface electropolished
- Easy to clean grates



Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data - Load class: Heavy Duty

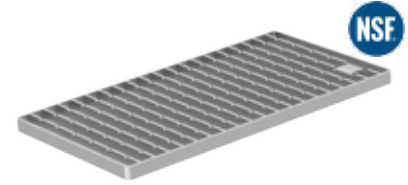


Channel dimension		Grate dimension					Material	Part #	# of Grates to fill channel					
Wo in [mm]	Lo in [mm]	Edge ht E in [mm]	Overall ht G in [mm]	Width [in]	Length in [mm]	Slot size in [mm]								
						A	B							
7.87 [200]	20.87 [530]	0.79 [20]	1.18 [30]	6.61 [168]	19.65 [499]	1.57 [40]	0.67 [17]	AISI 304	416947	1				
	32.68 [830]				15.67 [398]				416948	2				
	40.55 [1030]				19.65 [499]				416947	2				
	48.43 [1230]				15.67 [398]				416948	3				
	60.24 [1530]				19.65 [499]				416947	3				
	79.92 [2030]								416947	4				
11.81 [300]	12.99 [330]					10.55 [268]	11.73 [298]		1.99 [50.5]	0.71 [18]		416946	1	
	24.80 [630]						11.73 [298]				1.57 [40]	0.67 [17]	416946	2
	40.55 [1030]												416945	2
	60.24 [1530]												416945	3
	79.92 [2030]						19.65 [499]				1.99 [50.5]	0.71 [18]	416945	4
	119.29 [3030]												416945	6
	158.66 [4030]							416945			8			

Ladder Grate

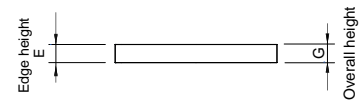
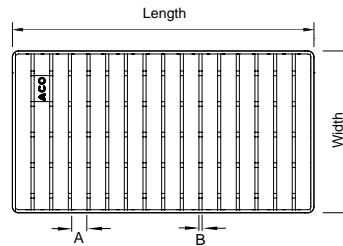
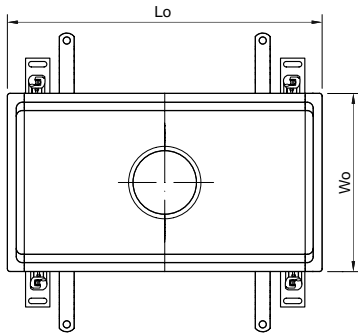
Product information

- Hygienic design following EN 1672, EN ISO 14159 and EHEDG document No. 8, 13, 44 and NSF/ANSI 3-A 14159-1-2014
- ACO Ladder Grate with slip resistant finish
- Frameless design for optimum drainability and cleanability
- Surface electropolished
- Easy to clean grates



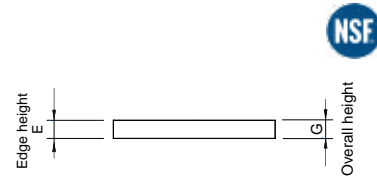
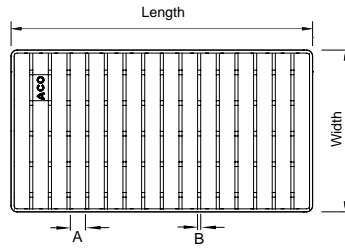
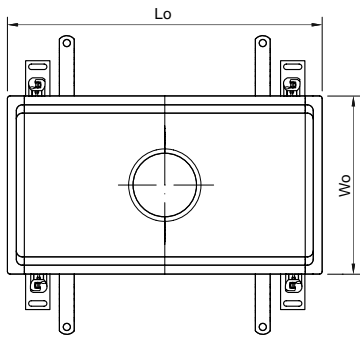
Items shown with the NSF Mark have been tested and Certified by NSF International.

Product data - Load class: Light Duty



Channel dimension		Grate dimension						Material	Part #	# of Grates to fill channel
Wo	Lo	Edge ht	Overall ht	Width	Length	Slot size				
in [mm]	in [mm]	E in [mm]	G in [mm]	in [mm]	in [mm]	A	B			
7.87 [200]	20.87 [530]	0.79 [20]	0.79 [20]	6.61 [168]	19.65 [499]	0.79 [20]	0.16 [4]	AISI 304	416802	1
								AISI 316L	416803	
	32.68 [830]				15.67 [398]			AISI 304	416808	2
								AISI 316L	416809	
	40.55 [1030]				19.65 [499]			AISI 304	416802	2
								AISI 316L	416803	
	48.43 [1230]				15.67 [398]			AISI 304	416808	3
								AISI 316L	416809	
60.24 [1530]	19.65 [499]	AISI 304	416802	3						
		AISI 316L	416803							
79.92 [2030]	19.65 [499]	AISI 304	416802	4						
		AISI 316L	416803							

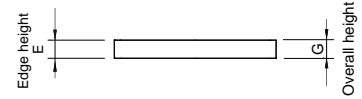
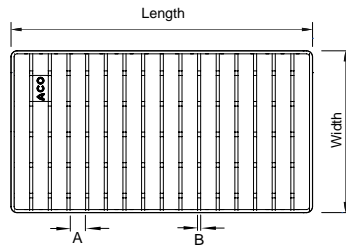
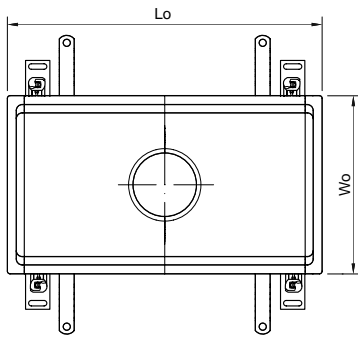
Product data - Load class: Light duty



Channel dimension		Grate dimension					Material	Part #	# of Grates to fill channel
Wo in [mm]	Lo in [mm]	Edge ht E in [mm]	Overall ht G in [mm]	Width in [mm]	Length in [mm]	Slot size in [mm]			
						A	B		
11.81 [300]	12.99 [330]	0.79 [20]	0.79 [20]	10.55 [268]	11.73 [298]	0.79 [20]	0.16 [4]	AISI 304 416812	1
	24.80 [630]							AISI 316L 416813	
	40.55 [1030]				AISI 304 416812			2	
	60.24 [1530]				AISI 316L 416813				
	79.92 [2030]				AISI 304 416814			2	
	119.29 [3030]				AISI 316L 416815				
	158.66 [4030]				AISI 304 416814			3	
					AISI 316L 416815				
					AISI 304 416814			4	
					AISI 316L 416815				
15.75 [400]	16.93 [430]	1.18 [30]	1.18 [30]	14.49 [368]	15.67 [398]	0.79 [20]	0.16 [4]	AISI 304 416820	1
	24.80 [630]				23.54 [598]			AISI 316L 416821	
	32.68 [830]				15.67 [398]			AISI 304 416822	1
								AISI 316L 416823	
								AISI 304 416820	2
								AISI 316L 416821	
19.69 [500]	20.87 [530]	1.18 [30]	1.18 [30]	18.43 [468]	19.65 [499]	0.79 [20]	0.2 [5]	AISI 304 416828	1
	32.68 [830]				15.67 [398]			AISI 316L 416829	
	40.55 [1030]				19.65 [499]			AISI 304 416830	2
								AISI 316L 416831	
23.62 [600]	24.80 [630]	1.18 [30]	1.18 [30]	22.36 [568]	11.73 [298]	0.79 [20]	0.24 [6]	AISI 304 416828	2
	36.61 [930]							AISI 316L 416829	
	48.43 [1230]							AISI 304 416838	3
								AISI 316L 416839	
31.50 [800]	32.68 [830]	1.18 [30]	1.18 [30]	30.24 [768]	15.67 [398]	0.79 [20]	0.24 [6]	AISI 304 416838	4
								AISI 316L 416839	
								AISI 304 416842	2
								AISI 316L 416843	

ACO Hygienic Floor Trough Ladder Grate

Product data - Load class: Medium Duty



ACO Hygienic Trench Drain Grates

Channel dimension		Grate dimension							Material	Part #	# of Grates to fill channel
Wo	Lo	Edge ht	Overall ht	Width	Length	Slot size					
in [mm]	in [mm]	E in [mm]	G in [mm]	in [mm]	in [mm]	A	B				
7.87 [200]	20.87 [530]	0.79 [20]	0.79 [20]	6.61 [168]	19.65 [499]	0.79 [20]	0.20 [5]	AISI 304	416804	1	
								AISI 316L	416805		
	32.68 [830]							AISI 304	416810	2	
								AISI 316L	416811		
	40.55 [1030]							AISI 304	416804	2	
								AISI 316L	416805		
	48.43 [1230]							AISI 304	416810	3	
								AISI 316L	416811		
60.24 [1530]	AISI 304		416804	3							
	AISI 316L		416805								
79.92 [2030]	AISI 304		416804	4							
	AISI 316L		416805								
11.81 [300]	12.99 [330]		0.79 [20]	1.18 [30]	10.55 [268]	11.73 [298]	0.79 [20]	0.20 [5]	AISI 304	416816	1
									AISI 316L	416817	
	24.80 [630]								AISI 304	416816	2
									AISI 316L	416817	
	40.55 [1030]	AISI 304		416818	2						
		AISI 316L		416819							
	60.24 [1530]	AISI 304		416818	3						
		AISI 316L		416819							
79.92 [2030]	AISI 304	416818	4								
	AISI 316L	416819									
119.29 [3030]	AISI 304	416818	6								
	AISI 316L	416819									
158.66 [4030]	AISI 304	416818	8								
	AISI 316L	416819									



Items shown with the NSF Mark have been tested and Certified by NSF International.

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Product data - Load class: Medium Duty

Channel dimension		Grate dimension						Material	Part #	# of Grates to fill channel
Wo in [mm]	Lo in [mm]	Edge ht E in [mm]	Overall ht G in [mm]	Width in [mm]	Length in [mm]	Slot size in [mm]				
15.74 [400]	16.93 [430]	1.18 [30]	1.18 [30]	14.49 [368]	15.67 [398]	0.79 [20]	0.20 [5]	AISI 304	416824	1
								AISI 316L	416825	
	24.80 [630]				23.54 [598]			AISI 304	416826	1
								AISI 316L	416827	
	32.68 [830]				15.67 [398]			AISI 304	416824	2
								AISI 316L	416825	
19.69 [500]	20.87 [530]	1.18 [30]	1.18 [30]	18.42 [468]	19.65 [499]	0.79 [20]	0.24 [6]	AISI 304	416832	1
								AISI 316L	416833	
	32.68 [830]				15.67 [398]			AISI 304	416834	2
								AISI 316L	416835	
	40.55 [1030]				19.65 [499]			AISI 304	416832	2
								AISI 316L	416833	

Product data - Load class: N 250

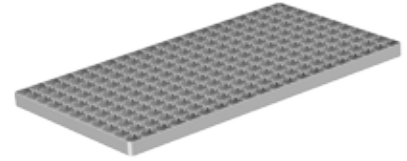
Channel dimension		Grate dimension				Material	Part #	# of Grates to fill channel	
Wo in [mm]	Lo in [mm]	Frame ht E in [mm]	Bar ht G in [mm]	Width in [mm]	Length in [mm]				
7.87 [200]	20.87 [530]	0.79 [20]	1.18 [30]	6.61 [168]	19.65 [499]	AISI 304	416844	1	
						AISI 316L	416845		
	32.68 [830]					15.67 [398]	AISI 304	416846	2
							AISI 316L	416847	
	40.55 [1030]					19.65 [499]	AISI 304	416844	2
							AISI 316L	416845	
	48.43 [1230]					15.67 [398]	AISI 304	416846	3
							AISI 316L	416847	
60.24 [1530]	19.65 [499]	AISI 304	416844	3					
		AISI 316L	416845						
79.92 [2030]	19.65 [499]	AISI 304	416844	4					
		AISI 316L	416845						
11.81 [300]	12.99 [330]	0.79 [20]	1.18 [30]	10.55 [268]	11.73 [298]	AISI 304	416850	1	
						AISI 316L	416851		
	24.80 [630]				19.65 [499]	AISI 304	416850	2	
						AISI 316L	416851		
	40.55 [1030]					AISI 304	416848	2	
						AISI 316L	416849		
	60.24 [1530]					AISI 304	416848	3	
						AISI 316L	416849		
	79.92 [2030]					AISI 304	416848	4	
						AISI 316L	416849		
119.29 [3030]	AISI 304	416848	6						
	AISI 316L	416849							
158.66 [4030]	AISI 304	416848	8						
	AISI 316L	416849							



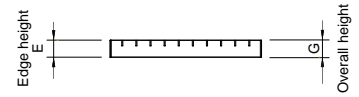
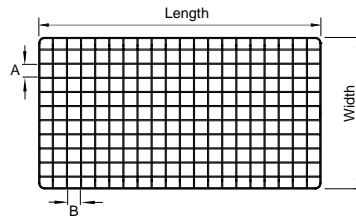
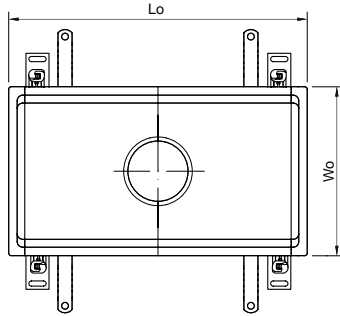
Mesh Grate

Product information

- Mesh Grate with slip resistant finish
- Surface - electropolished
- High flow capacity of grates
- Rounded corners
- Slip resistant

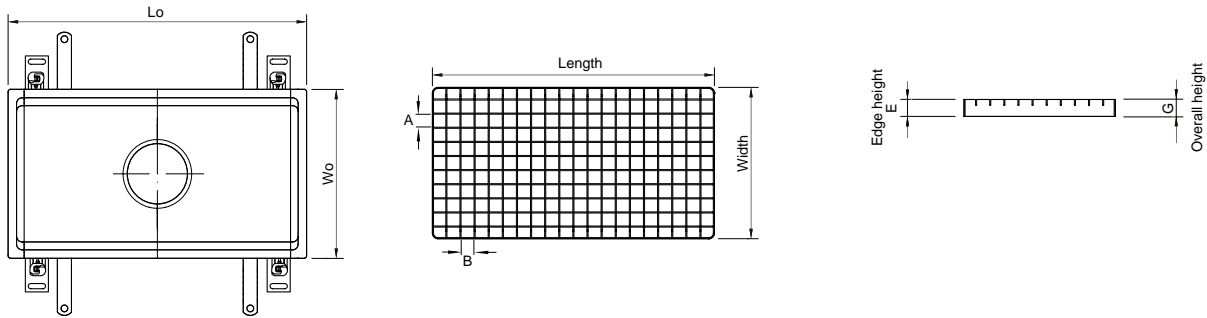


Product data - Load class: Light Duty



Channel dimension		Grate dimension					Material	Part #	# of Grates to fill channel
Wo in [mm]	Lo in [mm]	Edge ht E in [mm]	Overall ht G in [mm]	Width in [mm]	Length in [mm]	Slot size in [mm]			
						A	B		
7.87 [200]	20.87 [530]	0.79 [20]	0.79 [20]	6.61 [168]	19.65 [499]	0.91 [23]	0.08 [2]	AISI 304 416860	1
					AISI 316L 416861				
	32.68 [830]				15.67 [398]			AISI 304 416862	2
					AISI 316L 416863				
	40.55 [1030]				19.65 [499]			AISI 304 416860	2
					AISI 316L 416861				
	48.43 [1230]				15.67 [398]			AISI 304 416862	3
					AISI 316L 416863				
60.24 [1530]	19.65 [499]	AISI 304 416860	3						
	AISI 316L 416861								
79.92 [2030]	19.65 [499]	AISI 304 416860	4						
	AISI 316L 416861								

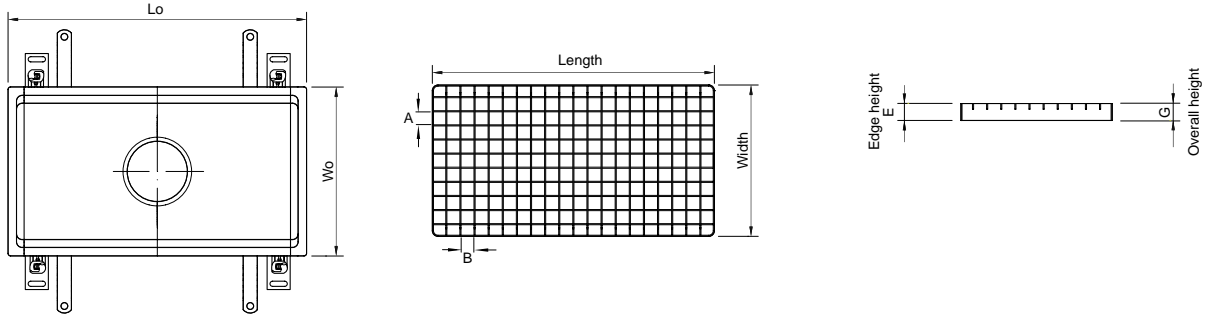
Product data - Load class: Light Duty



Channel dimension		Grate dimension						Material	Part #	# of Grates to fill channel
Wo	Lo	Edge ht	Overall ht	Width	Length	Slot size				
in [mm]	in [mm]	E in [mm]	G in [mm]	in [mm]	in [mm]	A	B			
11.81 [300]	12.99 [330]	0.79 [20]	1.18 [30]	10.55 [268]	11.73 [298]	0.91 [23]	0.08 [2]	AISI 304	416864	1
	AISI 316L							416865		
	AISI 304							416864	2	
	AISI 316L							416865		
	40.55 [1030]				AISI 304			416866	2	
	AISI 316L				416867					
	60.24 [1530]				AISI 304			416866	3	
	AISI 316L				416867					
79.92 [2030]	AISI 304	416866	4							
AISI 316L	416867									
119.29 [3030]	AISI 304	416866	6							
AISI 316L	416867									
158.66 [4030]	AISI 304	416866	8							
AISI 316L	416867									
15.74 [400]	16.93 [430]	1.18 [30]	1.18 [30]	14.49 [368]	15.67 [398]	0.91 [23]	0.08 [2]	AISI 304	416868	1
	AISI 316L				416869					
	24.80 [630]				23.54 [598]			AISI 304	416870	1
	AISI 316L				416871					
32.68 [830]	15.67 [398]	AISI 304	416868	2						
AISI 316L	416869									
19.69 [500]	20.87 [530]	1.18 [30]	1.18 [30]	18.42 [468]	19.65 [499]	0.91 [23]	0.08 [2]	AISI 304	416872	1
	AISI 316L				416873					
	32.68 [830]				15.67 [398]			AISI 304	416874	2
	AISI 316L				416875					
40.55 [1030]	19.65 [499]	AISI 304	416872	2						
AISI 316L	416873									

ACO Hygienic Floor Trough Mesh Grate

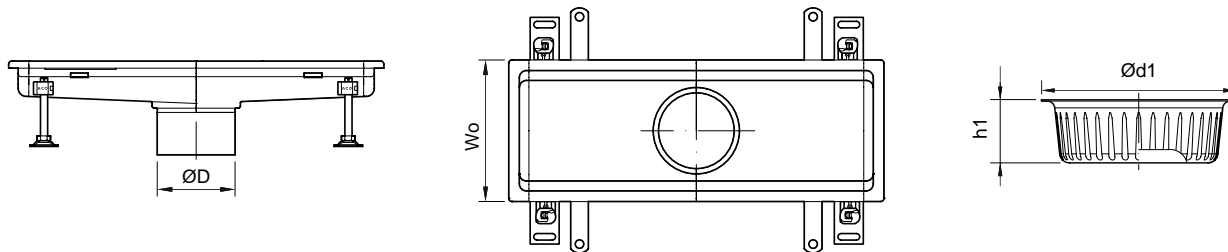
Product data - Load class: Light Duty



Channel dimension		Grate dimension					Material	Part #	# of Grates to fill channel	
Wo in [mm]	Lo in [mm]	Edge ht E in [mm]	Overall ht G in [mm]	Width in [mm]	Length in [mm]	Slot size in [mm]				
						A	B			
23.62 [600]	24.80 [630]	1.18 [30]	1.18 [30]	22.36 [568]	11.73 [298]	0.91 [23]	0.08 [2]	AISI 304	416876	2
								AISI 316L	416877	
	36.61 [930]							AISI 304	416876	3
	AISI 316L							416877		
	48.43 [1230]							AISI 304	416876	4
								AISI 316L	416877	
31.50 [800]	32.68 [830]			30.24 [768]	15.67 [398]	0.87 [22]	0.12 [3]	AISI 304	416878	2
								AISI 316L	416879	

Accessories for ACO Hygienic Floor Trough

Silt baskets



Channel dimension		Direction of floor drain outlet	Silt basket dimension		Material	Part #
Outlet size ØD in [mm]			Ød1 in [mm]	h1 in [mm]		
4.92 [125]	ACO 8" Floor Drain	vertical, horizontal	4.92 [125]	1.77 [45]	AISI 304	414339
					AISI 316L	414340
				3.94 [100]	AISI 304	445232
					AISI 316L	445233
5.59 [142]	ACO 10" Floor Drain	vertical, horizontal	5.59 [142]	1.97 [50]	AISI 304	408202
					AISI 316L	408212
				5.24 [133]	AISI 304	445234
					AISI 316L	445235
7.87 [200]	ACO 12" Floor Drain	vertical, horizontal	7.87 [200]	1.97 [50]	AISI 304	408222
					AISI 316L	408232
				5.31 [135]	AISI 304	445236
					AISI 316L	445237

* Note: If FAT is to be used, please contact ACO Technical support to ensure compatibility.

ACO Custom Hygienic Floor Trough

Product information

The dimensions of the ACO custom Hygienic Floor Trough for concrete, tile and resin floors can be easily specified to meet project requirements.

- Available in AISI 304 or AISI 316L grades of stainless steel
- Fully pickle passivated
- Width – up to customer request
- Length – up to customer request
- Depth – up to customer request
- Variable shape of channel – T shape, L shape
- Longitudinal slopes of the drain bottom - 1% to 5%
- Outlet position central or variable along length
- Adjustable EasyFix leveling feet
- Anchors for securing into concrete

Customization instructions

Please define drain dimensions by filling out the required entry fields.

Step 1 - Material (select one)

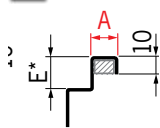
- Stainless steel grade AISI 304 Stainless steel grade AISI 316L

In addition to our standard edge profile, custom options are available as shown below.

Step 2 - Edge profiles (select one)

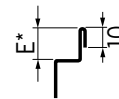


Standard

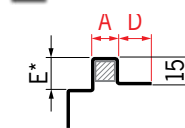


A	15	Custom
Rubber edge infill	<input type="checkbox"/>	<input type="checkbox"/>
Steel edge infill	<input type="checkbox"/>	**
No edge infill	<input type="checkbox"/>	<input type="checkbox"/>

Folded

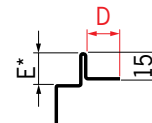


Extended



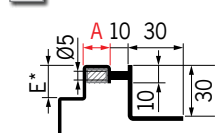
A	15	Custom
Rubber edge infill	<input type="checkbox"/>	<input type="checkbox"/>
Steel edge infill	<input type="checkbox"/>	**
No edge infill	<input type="checkbox"/>	<input type="checkbox"/>

Folded with flange



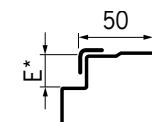
D	50	Custom
	<input type="checkbox"/>	<input type="checkbox"/>

L profile



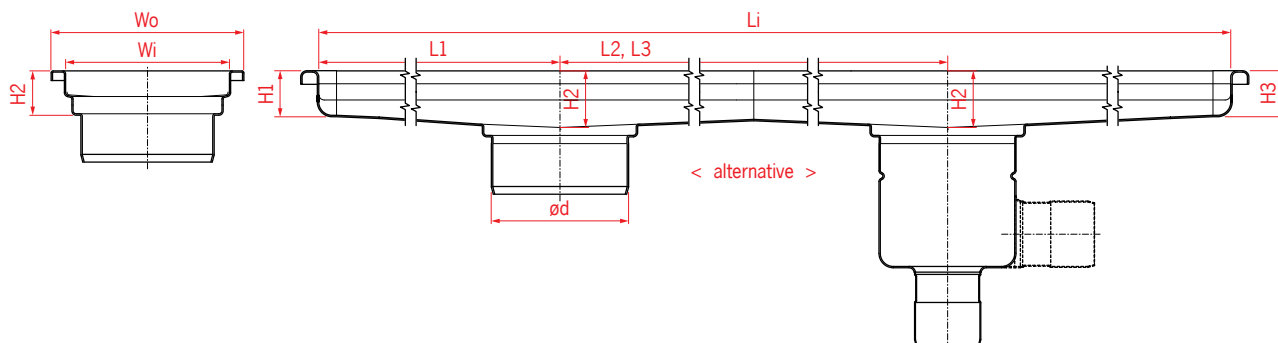
A	15	Custom
Rubber edge infill	<input type="checkbox"/>	<input type="checkbox"/>
Steel edge infill	<input type="checkbox"/>	**
No edge infill	<input type="checkbox"/>	<input type="checkbox"/>

Vinyl clamp



* Sitting height "E" for grates is defined in step 7.
 ** For hygienic solution, check with technical support.

Step 3 - Drain dimensions



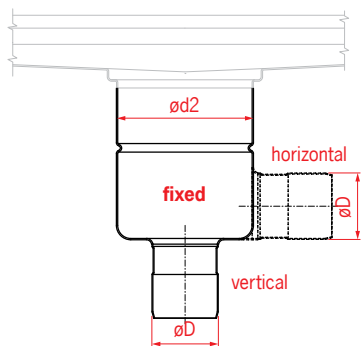
Width overall/ internal Wo/Wi		
in	mm	
7.87/6.69	200/170	<input type="checkbox"/>
11.81/10.63	300/270	<input type="checkbox"/>
15.75/14.57	400/370	<input type="checkbox"/>
19.69/18.50	500/470	<input type="checkbox"/>
23.62/22.44	600/570	<input type="checkbox"/>
31.5/30.32	800/770	<input type="checkbox"/>
Custom width		<input type="text"/>

Drain bottom height		
	H2	<input type="text"/>
Slope		
No - min slope 1%		<input type="checkbox"/>
Yes - min slope 1%		<input type="checkbox"/>
Yes - height defined (If you require values below 50 mm, please contact technical support)		
	H1	<input type="text"/>
	H3	<input type="text"/>

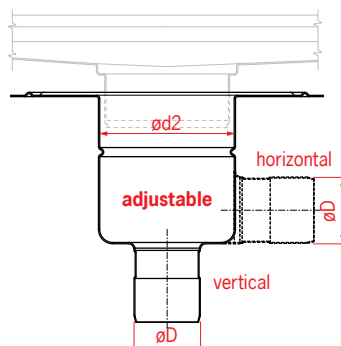
Drain lengths		
Li		<input type="text"/>
L1		<input type="text"/>
L2		<input type="text"/>
L3		<input type="text"/>
L4		<input type="text"/>

Step 4 - Drain body

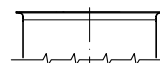
Fixed



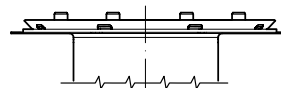
Adjustable



Location flange
(For adjustable body only)



Clamping flange
(For adjustable body only)



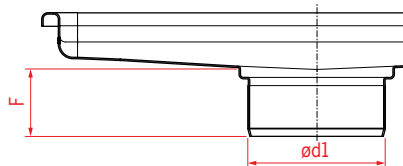
Vertical outlet		
Drain body diameter øD2 in [mm]	Outlet pipe diameter øD in [mm]	
5.59 [142]	2 Sch 10 [75]	<input type="checkbox"/>
5.59 [142]	4 Sch 10 [110]	<input type="checkbox"/>
6.18 [157]	2 Sch 10 [75]	<input type="checkbox"/>
6.18 [157]	4 Sch 10 [110]	<input type="checkbox"/>
8.58 [218]	4 Sch 10 [110]	<input type="checkbox"/>
8.58 [218]	6 Sch 10 [160]	<input type="checkbox"/>

Horizontal outlet		
Drain body diameter øD2 in [mm]	Outlet pipe diameter øD in [mm]	
5.59 [142]	2 Sch 10 [75]	<input type="checkbox"/>
5.59 [142]	4 Sch 10 [110]	<input type="checkbox"/>
6.18 [157]	2 Sch 10 [75]	<input type="checkbox"/>
6.18 [157]	4 Sch 10 [110]	<input type="checkbox"/>
8.58 [218]	4 Sch 10 [110]	<input type="checkbox"/>

ACO Trench Drain

ACO Custom Hygienic Floor Trough

Without drain (outlet pipe only)



Outlet diameter

ød1 in [mm]	<input type="checkbox"/>
4.92 [125]	<input type="checkbox"/>
5.59 [142]	<input type="checkbox"/>
7.87 [200]	<input type="checkbox"/>

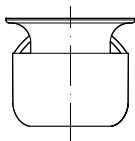
Outlet length

F in [mm]	<input type="checkbox"/>
1.42 [36]	<input type="checkbox"/>
2.28 [58]	<input type="checkbox"/>
5.91 [150]	<input type="checkbox"/>
Custom	<input type="text"/>

Step 5 - Drain accessories

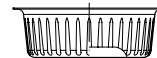
Foul air trap (FAT)

With FAT	<input type="checkbox"/>
Without FAT	<input type="checkbox"/>

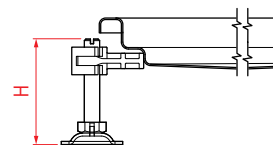
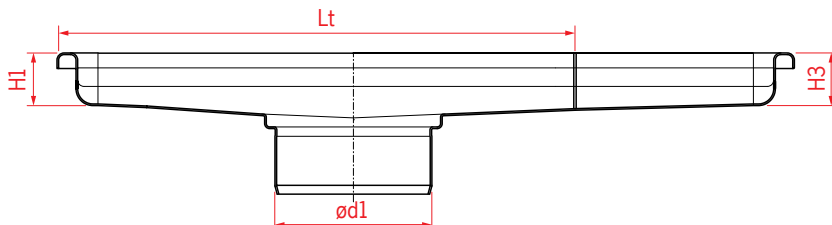


Silt basket

With Silt basket	<input type="checkbox"/>
Without Silt basket	<input type="checkbox"/>



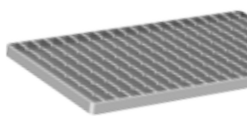
Step 6 - Delivery requirements



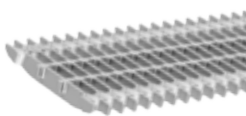
Max section length feet [inches]	Connection type		
	Welded on site	Rubber seal	
Length Lt	9.3 [236] (standard)	<input type="checkbox"/>	<input type="checkbox"/>
	9.84 [118]	<input type="checkbox"/>	<input type="checkbox"/>
	6.56 [78]	<input type="checkbox"/>	<input type="checkbox"/>

ACO EasyFix leveling feet H in [mm]	<input type="checkbox"/>
3.15 [80] (standard)	<input type="checkbox"/>
4.33 [110]	<input type="checkbox"/>
6.69 [170]	<input type="checkbox"/>
7.87 [200]	<input type="checkbox"/>

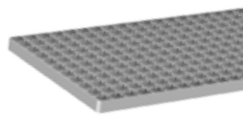
Step 7 - Grates



Hygienic Ladder Grate	<input type="checkbox"/>
Slip resistant	<input type="checkbox"/>
Load class	
Light Duty (valid up to Wo = 31.5 [800])	<input type="checkbox"/>
Medium Duty (valid up to Wo = 19.69 [500])	<input type="checkbox"/>
Heavy Duty (valid up to Wo = 11.81 [300])	<input type="checkbox"/>
Special Duty (custom)	<input type="checkbox"/>



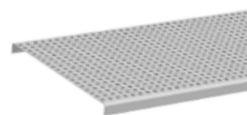
Hygienic Cast Grate	<input type="checkbox"/>
Slip resistant	<input type="checkbox"/>
Load class	
Heavy Duty (max. Wo = 11.81 [300]) (valid up to Wo = 11.81 [300])	<input type="checkbox"/>



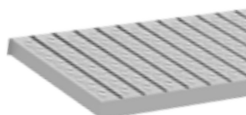
Mesh Grate	<input type="checkbox"/>
Slip resistant	<input type="checkbox"/>
Load class	
Light Duty (valid up to Wo = 39.37 [1000])	<input type="checkbox"/>
Medium Duty (max. Wo = 11.81 [300]) (valid up to Wo = 11.81 [300])	<input type="checkbox"/>
Heavy Duty (max. Wo = 11.81 [300]) (valid up to Wo = 11.81 [300])	<input type="checkbox"/>



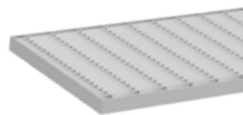
Slot Cover	<input type="checkbox"/>
Load class	
Medium Duty (valid up to Wo = 11.81 [300])	<input type="checkbox"/>
Heavy Duty (valid up to Wo = 11.81 [300])	<input type="checkbox"/>



Perforated Grate	<input type="checkbox"/>
Load class	
Light Duty (valid up to Wo = 11.81 [300])	<input type="checkbox"/>



Multi-slot 5 Grate	<input type="checkbox"/>
Load class	
Light Duty (valid up to Wo = 11.81 [300])	<input type="checkbox"/>
Medium Duty (max. Wo = 11.81 [300]) (valid up to Wo = 11.81 [300])	<input type="checkbox"/>



Heelsafe Grate	<input type="checkbox"/>
Load class	
Light Duty (max. Wo = 11.81 [300]) (valid up to Wo = 11.81 [300])	<input type="checkbox"/>

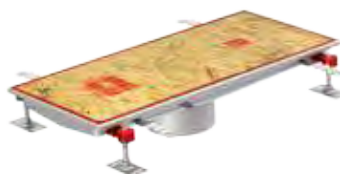
Without grates
(specify grate seat height)



Height of grates E in [mm]	
0.79 [20]	<input type="checkbox"/>
0.98 [25]	<input type="checkbox"/>
1.18 [30]	<input type="checkbox"/>
1.57 [40]	<input type="checkbox"/>

Step 8 - Protective covers

With protective covers
(For more information about protective covers, contact ACO.)



Introduction

ACO Slot Drain product range

The ACO Slot Drain range is suitable for all common applications and floor types. Selecting a drain from the range is easy. The various options in the range allow the customer to choose the right drain for their needs.

The drain's length, depth and outlet position are just a few of the parameters that can be specified.

ACO Slot Drain ordering

The dimensions of the ACO Slot Drain can be easily specified to the exact project requirements. To specify the drain, please use the Specification template (see page 90) which will help you to identify the information needed or contact our Sales/Technical department.

ACO Slot Drain customization

ACO offers you full customization of your drainage solution.

To request a custom ACO Slot Drain, please contact our Sales/Technical department.

ACO Slot Drain can be designed with:

- Custom outlet position
- Custom depth
- Custom slope
- Custom slot drain width
- L-shape and T-shape layout
- Custom side inlets

System overview

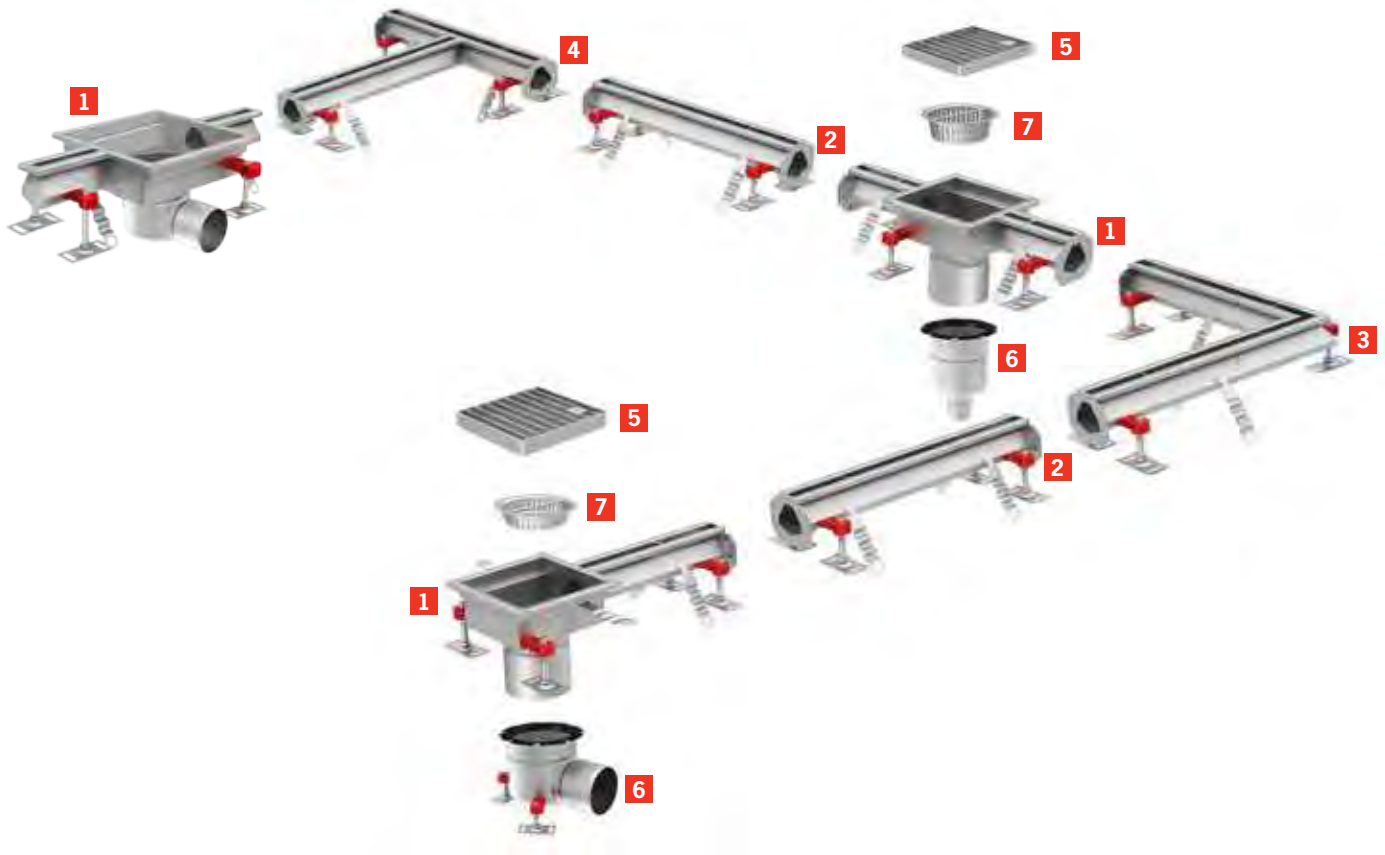
ACO Slot Drain - fixed-height, horizontal outlet *(available as a one-piece custom solution)*



ACO Slot Drain - adjustable, vertical outlet *(standard configuration)*



ACO Modular Slot Drain system overview



- | | |
|--|----------------------------|
| 1 Outlet unit | 5 Floor Drain Grate |
| 2 Neutral invert and sloping sections | 6 Floor Drain |
| 3 Corner unit | 7 Silt basket |
| 4 Branch unit | |

ACO Slot Drain 20

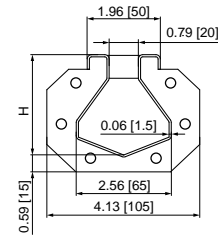
Product information

Ideal for wash-down applications or as a water break between designated wet and dry areas.

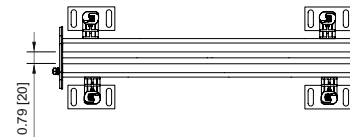
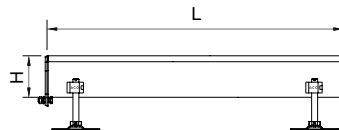
Modular concept allows specification of standard channel units to suit a variety of layouts.

Vee-bottomed (V) profile for enhanced flow efficiency at low flow rates and for improved self cleaning performance.

- Fully tested and classified to EN 1433
- Available in AISI 304 or AISI 316L grades of stainless steel
- Wide range of grates for the outlet - up to Special Duty, ASME A: 112.6.3
- Fully pickle passivated



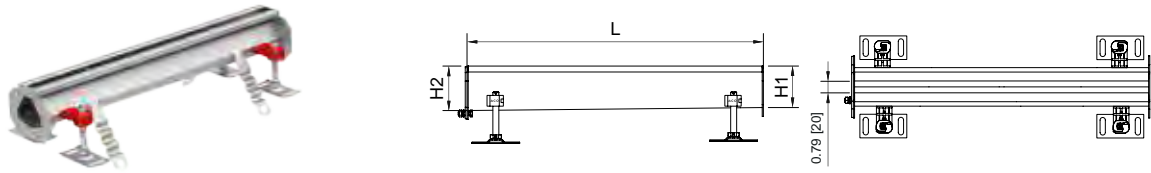
Neutral invert channel



L in [mm]	Dimensions		Part number	
	H in [mm]	AISI 304	AISI 316L	
19.69 [500]	2.76 [70]	92300	92350	
	3.54 [90]	92301	92351	
	4.72 [120]	92302	92352	
39.37 [1000]	2.76 [70]	92305	92355	
	3.54 [90]	92306	92356	
	4.72 [120]	92307	92357	
78.74 [2000]	2.76 [70]	92310	92360	
	3.54 [90]	92311	92361	
	4.72 [120]	92312	92362	
118.11 [3000]	2.76 [70]	92316	92366	
	3.54 [90]	92317	92367	
	4.72 [120]	92318	92368	

Note: Items are equipped with seal and connecting hardware on one end.

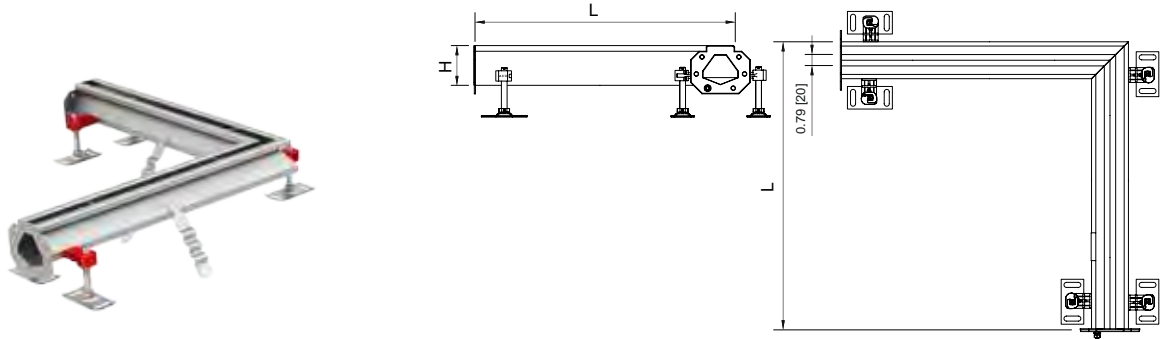
Sloping invert channels



L in [mm]	Dimensions		Part number	
	H1 in [mm]	H2 in [mm]	AISI 304	AISI 316L
19.69 [500]	2.76 [70]	2.95 [75]	92303	92353
	2.95 [75]	3.15 [80]	92304	92354
39.37 [1000]	2.76 [70]	2.95 [75]	92308	92358
	2.95 [75]	3.15 [80]	92309	92359
78.74 [2000]	2.76 [70]	3.15 [80]	92313	92363
	3.15 [80]	3.54 [90]	92314	92364
	3.54 [90]	3.94 [100]	92315	92365
118.11 [3000]	2.76 [70]	3.15 [80]	92319	92369
	3.15 [80]	3.54 [90]	92320	92370
	3.54 [90]	3.94 [100]	92321	92371
	3.94 [100]	4.33 [110]	92322	92372
	4.33 [110]	4.72 [120]	92323	92373

Note: Items are equipped with seal and connecting hardware on deeper end.

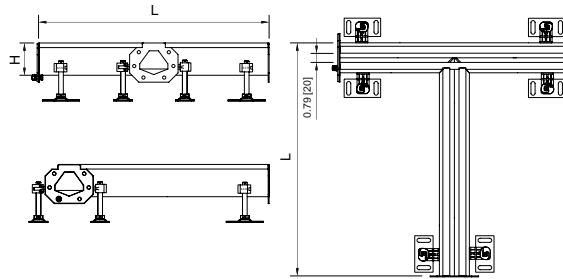
Corner units



L in [mm]	Dimensions		Part number	
	H in [mm]		AISI 304	AISI 316L
19.69 [500]	2.76 [70]		92338	92388
	2.95 [75]		92339	92389
	3.15 [80]		92340	92390
	3.54 [90]		92341	92391
	3.94 [100]		92342	92392
	4.33 [110]		92343	92393
	4.72 [120]		92344	92394

Note: Items are equipped with seal and connecting hardware on one end.

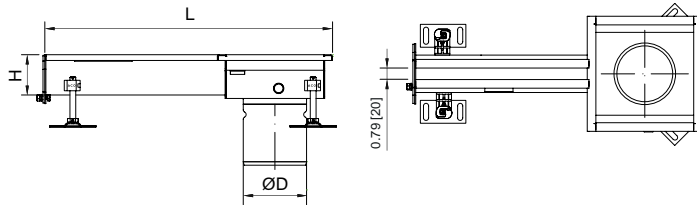
Branch units



Dimensions		Part number	
		AISI 304	AISI 316L
L in [mm] 19.69 [500]	H in [mm]		
	2.76 [70]	92345	92395
	2.95 [75]	92346	92396
	3.15 [80]	92347	92397
	3.54 [90]	92348	92398
	3.94 [100]	92349	92399
	4.33 [110]	92400	92450
4.72 [120]	92401	92451	

Note: Items are equipped with seal and connecting hardware on one end.

End outlet

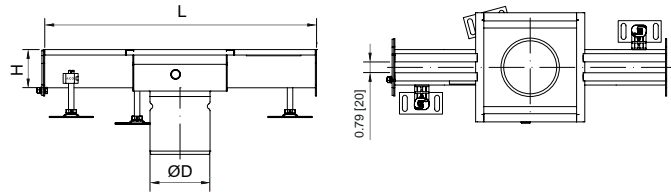


Dimensions		Used with	Floor drain top in [mm]	Outlet diameter ØD in [mm]	Part number	
L in [mm]	H in [mm]				AISI 304	AISI 316L
19.69 [500]	2.76 [70]	ACO 8" Floor Drain	7.87 x 7.87 [200 x 200]	4.92 [125]	415925	415970
	2.95 [75]				415926	415971
	3.15 [80]				415927	415972
	3.54 [90]				415928	415973
	3.94 [100]				415929	415974
	4.33 [110]				415930	415975
	4.72 [120]				415931	415976
	2.76 [70]	ACO 10" Floor Drain	9.84 x 9.84 [250 x 250]	5.59 [142]	414201	414208
	2.95 [75]				414202	414209
	3.15 [80]				414203	414210
	3.54 [90]				414204	414211
	3.94 [100]				414205	414212
	4.33 [110]				414206	414213
	4.72 [120]				414207	414214

Note: Items are without seal and connecting hardware. End outlets need a grate and location flange selected.

ACO Modular Channel
ACO Slot Drain 20 - standard products

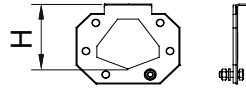
Center outlet



Dimensions		Used with	Floor drain top in [mm]	Outlet diameter ØD in [mm]	Part number	
L in [mm]	H in [mm]				AISI 304	AISI 316L
19.69 [500]	2.76 [70]	ACO 8" Hygienic Floor Drain	7.87 x 7.87 [200 x 200]	4.92 [125]	415932	415977
	2.95 [75]				415933	415978
	3.15 [80]				415934	415979
	3.54 [90]				415935	415980
	3.94 [100]				415936	415981
	4.33 [110]				415937	415982
	4.72 [120]				415938	415983
19.69 [500]	2.76 [70]	ACO 10" Hygienic Floor Drain	9.85 x 9.85 [250 x 250]	5.59 [142]	414215	414222
	2.95 [75]				414216	414223
	3.15 [80]				414217	414224
	3.54 [90]				414218	414225
	3.94 [100]				414219	414226
	4.33 [110]				414220	414227
	4.72 [120]				414221	414228

Note: Items are without seal and connecting hardware. End outlets need a grate and location flange selected.

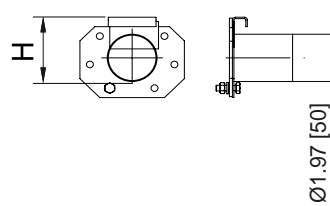
End plate



Dimensions H in [mm]	Part number	
	AISI 304	AISI 316L
2.76 [70]	92324	92374
2.95 [75]	92325	92375
3.15 [80]	92326	92376
3.54 [90]	92327	92377
3.94 [100]	92328	92378
4.33 [110]	92329	92379
4.72 [120]	92330	92380

Note: Items are equipped with seal and connecting hardware.

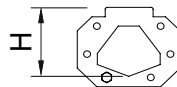
End plate with 2" [50 mm] outlet



Dimensions H in [mm]	Part number	
	AISI 304	AISI 316L
3.94 [100]	92335	92385
4.33 [110]	92336	92386
4.72 [120]	92337	92387

Note: Items are equipped with seal and connecting hardware.

Rubber gasket



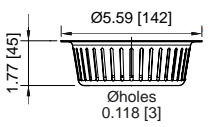
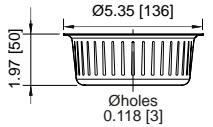
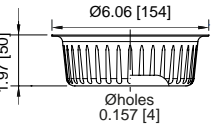
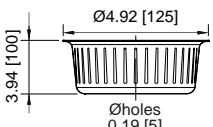
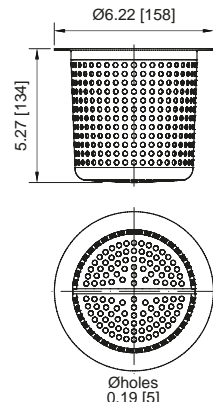
Dimensions H in [mm]	Material	Part number
2.76 [70]	NBR acrylonitrile butadiene rubber	413601
2.95 [75]		413602
3.15 [80]		413603
3.54 [90]		413604
3.94 [100]		413605
4.33 [110]		413606
4.72 [120]		413607

Note: Items include seal and connecting hardware. Rubber gasket is included with all channels.

ACO Modular Channel
Accessories for ACO Slot Drain 20

Accessories for ACO Slot Drain 20

ACO Slot Drain

	Description	Can be used with	Material	Part number
	<p>Silt basket</p> <ul style="list-style-type: none"> ▪ Stainless steel 	ACO Slot Drain 20 with 4.92 [125] outlet	AISI 304	414739
			AISI 316L	414839
		ACO Slot Drain 20 with 4.92 [125] outlet (deeper basket)	AISI 304	414339
			AISI 316L	414340
		ACO Slot Drain 20 with 5.59 [142] outlet	AISI 304	408202
			AISI 316L	408212
		ACO Slot Drain 20 with 4.92 [125] outlet (deeper basket)	AISI 304	408232
			AISI 316L	408233
		ACO Slot Drain 20 with 5.59 [142] outlet (deeper basket)	AISI 304	445234*
			AISI 316L	445235*

* Only for use with outlet units compatible with an 8" Floor Drain.

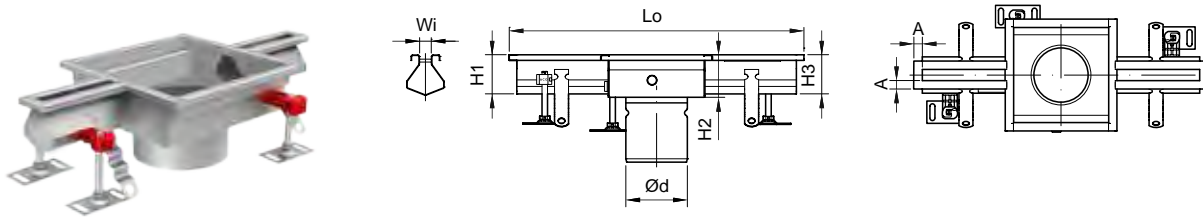
ACO Slot Drain - semi-standard products

Product information

The dimensions of the ACO Slot Drain for concrete, tile and resin floors can be easily specified to meet exact project requirements.

- Tested according to EN 1433
- Available in AISI 304 or AISI 316L grades of stainless steel
- ACO Slot Drain - 8 or 20 mm wide
- Length – up to customer requirements
- Fully pickle passivated
- Longitudinal slopes of the drain bottom - 1% to 5%
- Standardized widths
- Outlet position central or variable along length
- Adjustable leveling feet
- Anchors for securing into concrete

Product data



External (overall) width Wi in [mm]	Length of channel Lo	Dimension of edge A in [mm]	Height at outlet of channel H2 in [mm]	Height at end of channel H1 and H3 in [mm]
0.79 [20]	* Variable	0.59 [15]	1.97 [50] - 7.87 [200]	1.97 [50] - 7.87 [200]
0.31 [8]		folded		

* The maximum transportable length of channel is 3 m. Long channels over 3 m are standardly divided in 3 m sections with transport joints.

ACO Custom Slot Drain

Product information

The dimensions of the ACO custom Slot Drain for concrete, tile and resin floors can be easily specified to meet project requirements.

- Tested according to EN 1433
- Available in AISI 304 or AISI 316L grades of stainless steel
- ACO Slot Drain - 8 or 20 mm wide
- Length – up to customer request
- Longitudinal slopes of the drain bottom - 1% - 5%
- Full pickle passivated
- Outlet position central or variable along length
- Adjustable leveling feet
- Anchors for securing into concrete
- Protective covers available for drain tops. Contact ACO for more details.

Instructions

Please define drain dimensions by filling out required entry fields.

Step 1 - Material (select one)

Stainless steel grade AISI 304

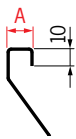
Stainless steel grade AISI 316L

Step 2 - Edge profiles (select one)



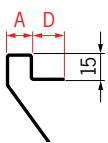
Detail of the Edge profile

Standard



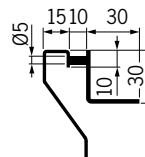
A	15	25
Rubber edge infill	<input type="checkbox"/>	<input type="checkbox"/>
Steel edge infill	<input type="checkbox"/>	<input type="checkbox"/>
No edge infill	<input type="checkbox"/>	<input type="checkbox"/>

Extended



A	15	25
Rubber edge infill	<input type="checkbox"/>	<input type="checkbox"/>
Steel edge infill	<input type="checkbox"/>	<input type="checkbox"/>
No edge infill	<input type="checkbox"/>	<input type="checkbox"/>
D	50	Custom
	<input type="checkbox"/>	<input type="checkbox"/>

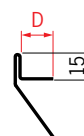
L profile



Folded

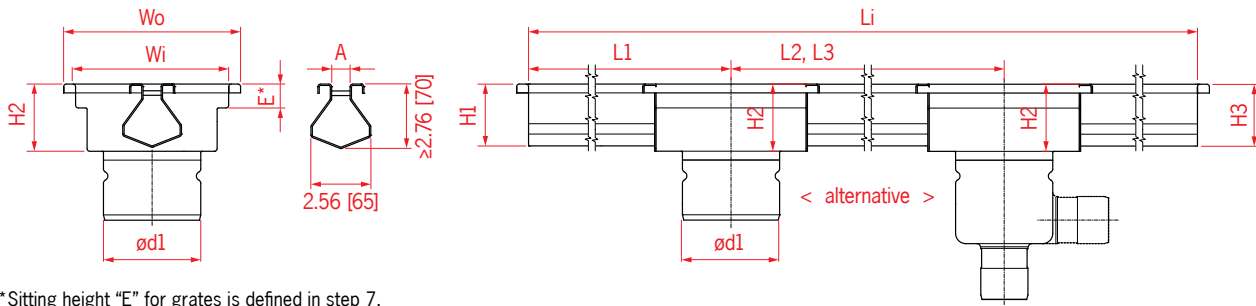


Folded with flange



D	50	Custom
	<input type="checkbox"/>	<input type="checkbox"/>

Step 3 - Drain dimensions



*Sitting height "E" for grates is defined in step 7.

Drain top dimension Wo in [mm]	Drain outlet d1 in [mm]
7.87 [200 x 200]	4.33 [110]
7.87 [200 x 200]	4.92 [125]
9.84 [250 x 250]	5.59 [142]
11.81 [300 x 300]	7.87 [200]
Custom width	

Drain bottom height	
H2	<input type="text"/>
Slope	
No - min slope 1%	<input type="checkbox"/>
Yes - min slope 1%	<input type="checkbox"/>
Yes - height defined (If you require values below 70 mm, please contact technical support)	H1 <input type="text"/>
	H3 <input type="text"/>

Drain lengths	
L1	<input type="text"/>
L1	<input type="text"/>
L2	<input type="text"/>
L3	<input type="text"/>

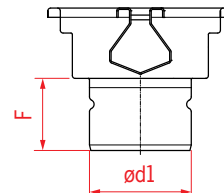
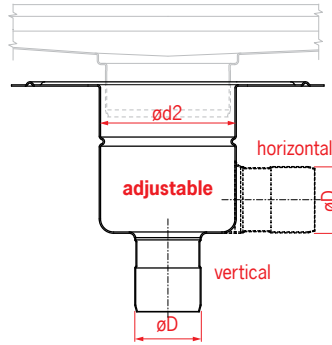
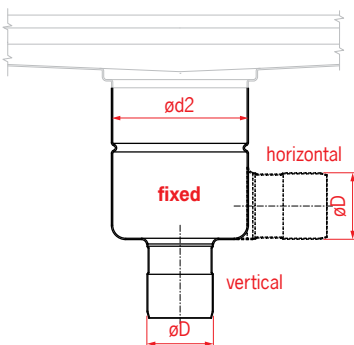
Slot dimension A	
8	<input type="checkbox"/>
20	<input type="checkbox"/>

Step 4 - Drain body

Fixed height

Adjustable

Without drain (outlet pipe only)



Vertical outlet	
Drain body diameter ød2 in [mm]	Outlet pipe diameter øD in [mm]
5.59 [142]	2 Sch 10 [75]
5.59 [142]	4 Sch 10 [110]
6.18 [157]	2 Sch 10 [75]
6.18 [157]	4 Sch 10 [110]
8.58 [218]	4 Sch 10 [110]
8.58 [218]	6 Sch 10 [160]

Horizontal outlet	
Drain body diameter ød2 in [mm]	Outlet pipe diameter øD in [mm]
5.59 [142]	2 Sch 10 [75]
5.59 [142]	4 Sch 10 [110]
6.18 [157]	2 Sch 10 [75]
6.18 [157]	4 Sch 10 [110]
8.58 [218]	4 Sch 10 [110]

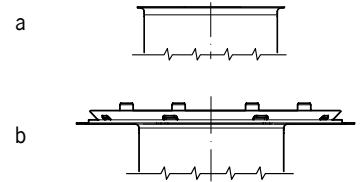
Drain outlet	
Outlet diameter	
Wo in [mm]	ød1 in [mm]
7.87 [200 x 200]	2.95 [75]
7.87 [200 x 200]	4.33 [110]
7.87 [200 x 200]	4.92 [125]
9.84 [250 x 250]	5.59 [142]
11.81 [300 x 300]	7.87 [200]

ACO Slot Drain

Custom Slot Drain

Outlet length F in [mm]	
1.42 [36]	<input type="checkbox"/>
2.28 [58]	<input type="checkbox"/>
5.91 [150]	<input type="checkbox"/>
Custom	<input type="text"/>

Flange (for adjustable drain only)	
Location flange (a)	<input type="checkbox"/>
Clamping flange (b)	<input type="checkbox"/>

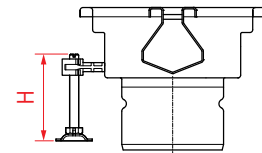
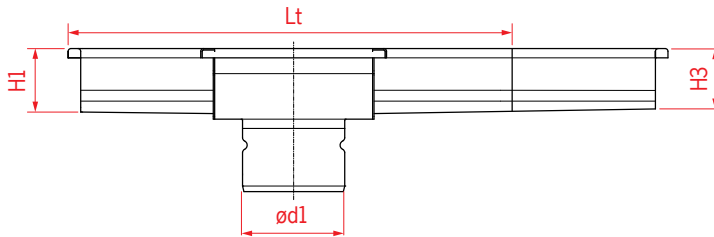


Step 5 - Drain accessories

Foul air trap (FAT)		
With FAT	<input type="checkbox"/>	
Without FAT	<input type="checkbox"/>	

Silt basket		
With Silt basket	<input type="checkbox"/>	
Without Silt basket	<input type="checkbox"/>	

Step 6 - Delivery requirements



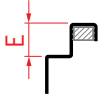
Transport connection Lt in [mm]	
118.11 [3000] (standard)	<input type="checkbox"/>
78.74 [2000]	<input type="checkbox"/>

ACO EasyFix leveling feet H in [mm]	
3.15 [80] (standard)	<input type="checkbox"/>
4.33 [110]	<input type="checkbox"/>
6.69 [170]	<input type="checkbox"/>
7.87 [200]	<input type="checkbox"/>

Step 7 - Grate options for outlets

* See pages 25 - 27; 37 - 39 for grate options for Slot Drain outlets.

Without grate (specify grate seat height)



Height of grate E in [mm]	<input type="checkbox"/>
0.79 [20]	<input type="checkbox"/>
0.98 [25]	<input type="checkbox"/>
1.18 [30]	<input type="checkbox"/>
1.57 [40]	<input type="checkbox"/>

Step 8 - Protective covers

With protective covers (Only available for outlet units)
 For more information about protective covers, contact ACO.)



Introduction

ACO Modular Channel product range

The ACO Modular Channel portfolio includes channels for all common applications and all common floor types (concrete, tile or resin). Selecting a channel from the range is easy. The unique variability of the whole product range makes it easy to choose the right channel according to a specific customer's needs.

The channel's length, depth and outlet position are just a few of the parameters which can be specified.

ACO Modular Channel ordering

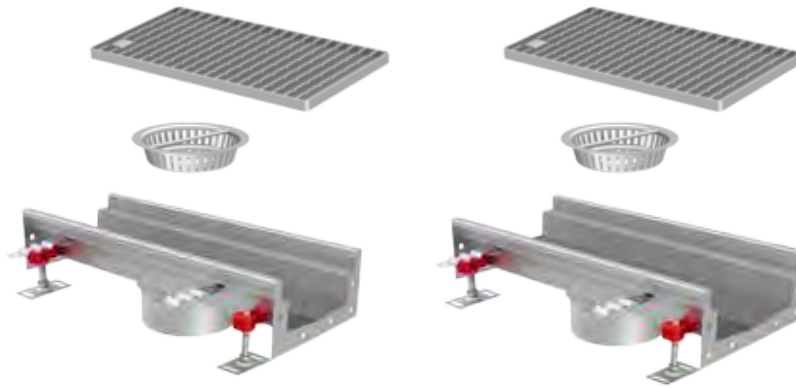
The dimensions of the ACO Modular Channel can be easily specified in respect of project requirements.

ACO Modular Channel customization

In addition, all ACO Modular Channels can be designed to a special length.

To request a custom ACO Modular Channel, please contact our Sales/ Technical department.

ACO Modular Channel system overview



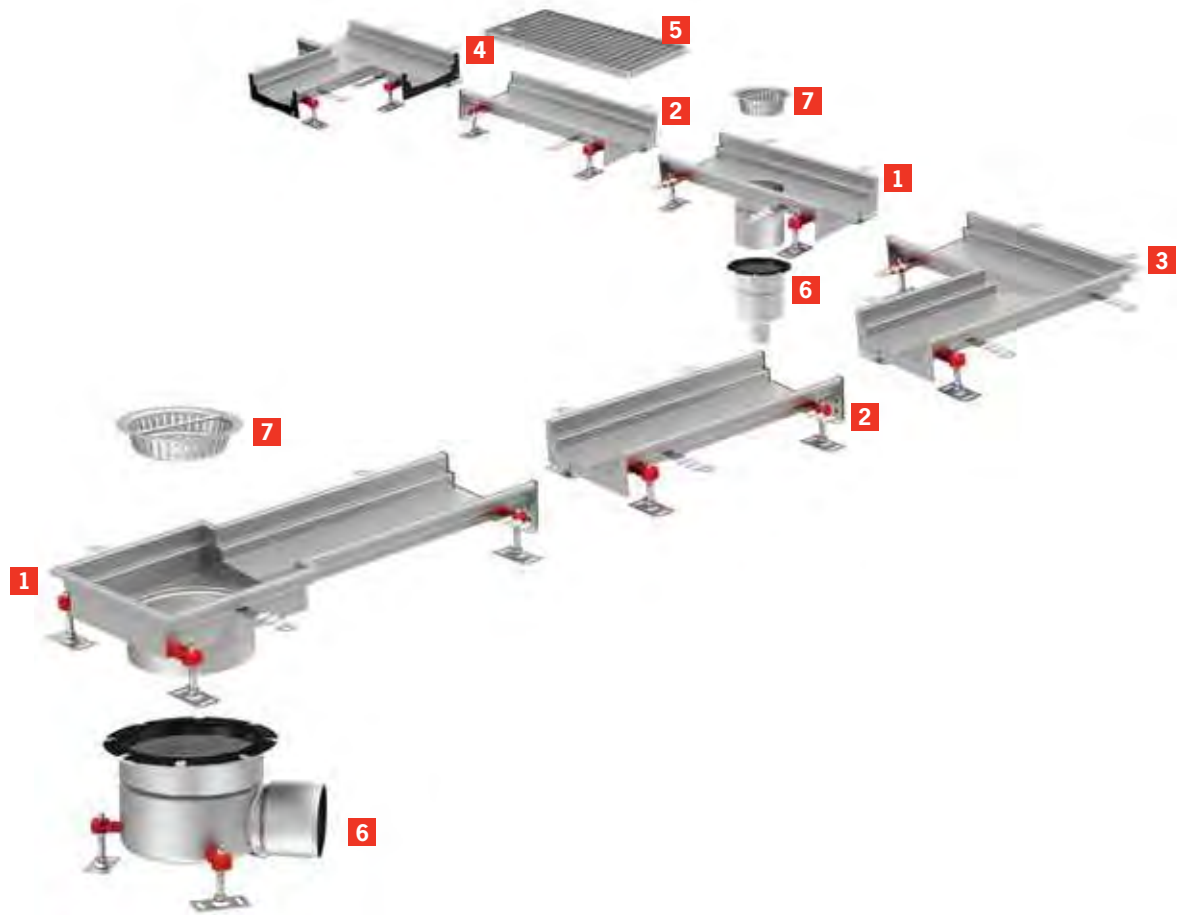
ACO Modular 125

ACO Modular 200



All ACO Modular Channel systems can be used in conjunction with ACO Floor Drain bodies and accessories

ACO Modular system overview



1 Outlet unit (pg 100-101)

2 Neutral invert and sloping sections (pg 97-99)

3 Corner unit (pg 98)

4 Branch unit (pg 99)

5 Grates (pg 103-105)

6 Floor Drain body (pg 15)

7 Silt basket (pg 106)

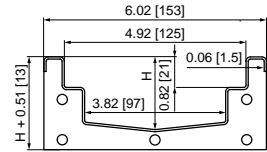
ACO Modular 125 - standard products

Product information

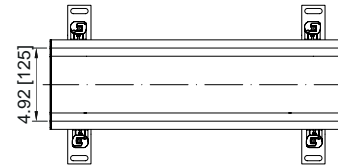
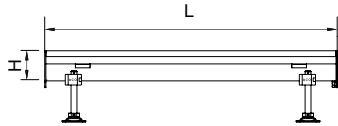
The modular concept allows for the specification of standard channel units to suit a variety of custom layouts.

The Vee-bottomed (V) profiled channel offers enhanced flow efficiency at low flow rates and improved self cleaning performance.

- Fully tested and classified to EN 1433
- Available in AISI 304 or AISI 316L grades of stainless steel
- Fully pickle passivated finish
- Easy and secure adjustable connection with floor drain
- Cut on demand products available to minimize work on site
- Wide range of grates available certified to EN1433 - standard grates up to load class E 600
- Special duty grates available on request



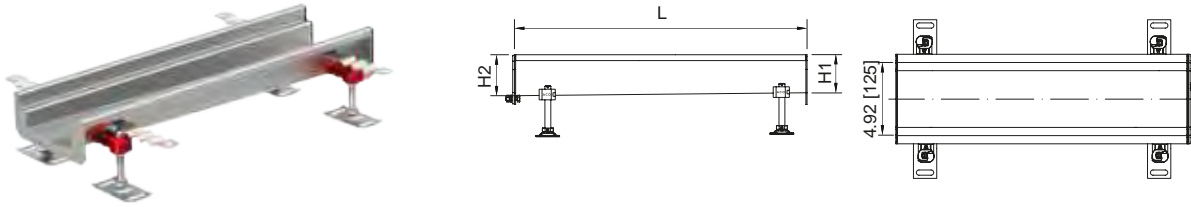
Neutral invert channel



L in [mm]	Dimensions		Part number	
	H in [mm]	AISI 304	AISI 316L	
19.69 [500]	1.97 [50]	105119	407211	
	2.56 [65]	105120	407212	
	3.15 [80]	105121	407213	
	3.74 [95]	105122	407214	
	4.33 [110]	105123	407215	
	4.92 [125]	105124	407216	
39.37 [1000]	1.97 [50]	105127	407217	
	2.56 [65]	105128	407218	
	3.15 [80]	105129	407219	
	3.74 [95]	105130	407220	
	4.33 [110]	105131	407221	
	4.92 [125]	105132	407222	
78.74 [2000]	1.97 [50]	105135	407223	
	2.56 [65]	105136	407224	
	3.15 [80]	105137	407225	
	3.74 [95]	105138	407226	
	4.33 [110]	105139	407227	
	4.92 [125]	105140	407228	
118.11 [3000]	1.97 [50]	105143	407229	
	2.56 [65]	105144	407230	
	3.15 [80]	105145	407231	
	3.74 [95]	105146	407232	
	4.33 [110]	105147	407233	
	4.92 [125]	105148	407234	

Note: Items are equipped with seal and connecting hardware on one end.

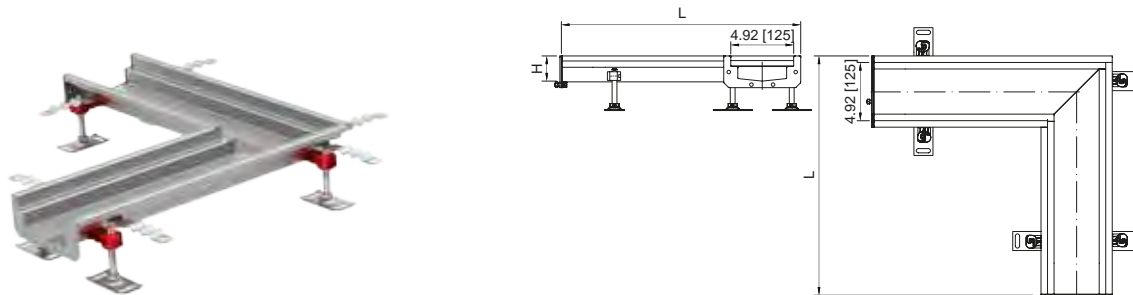
Sloping invert channels



L in [mm]	Dimensions		Part number	
	H1 in [mm]	H2 in [mm]	AISI 304	AISI 316L
19.69 [500]	1.97 [50]	2.56 [65]	105151	407235
	2.56 [65]	3.15 [80]	105152	407236
39.37 [1000]	1.97 [50]	2.56 [65]	105155	407237
	2.56 [65]	3.15 [80]	105156	407238
	3.15 [80]	3.74 [95]	105157	407239
	3.74 [95]	4.33 [110]	105158	407240
78.74 [2000]	1.97 [50]	2.56 [65]	105161	407241
	2.56 [65]	3.15 [80]	105162	407242
	3.15 [80]	3.74 [95]	105163	407243
	3.74 [95]	4.33 [110]	105164	407244
	4.33 [110]	4.92 [125]	105165	407245
118.11 [3000]	1.97 [50]	2.56 [65]	105168	407246
	2.56 [65]	3.15 [80]	105169	407247
	3.15 [80]	3.74 [95]	105170	407248
	3.74 [95]	4.33 [110]	105171	407249
	4.33 [110]	4.92 [125]	105172	407250

Note: Items are equipped with seal and connecting hardware on deeper end.

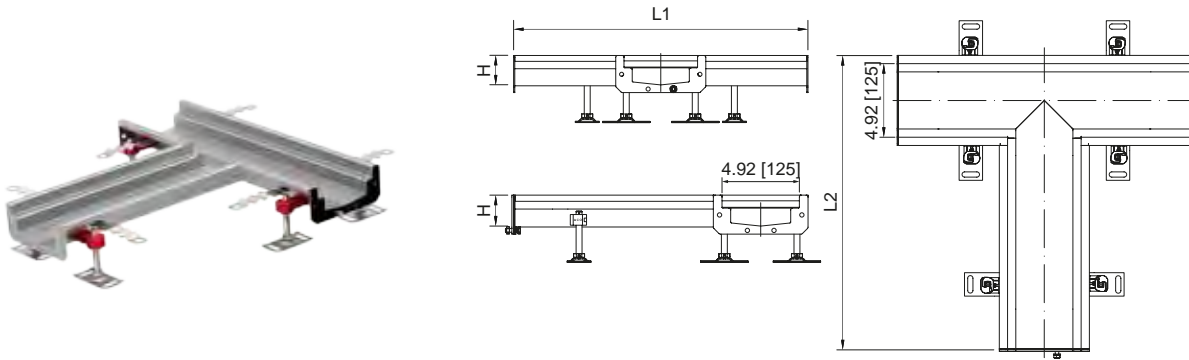
Corner unit



L in [mm]	Dimensions		Part number	
	H in [mm]		AISI 304	AISI 316L
20.28 [515]	1.97 [50]		409812	409818
	2.56 [65]		409813	409819
	3.15 [80]		409814	409820
	3.74 [95]		409815	409821
	4.33 [110]		409816	409822
	4.92 [125]		409817	409823

Note: Items are equipped with seal and connecting hardware on one end.

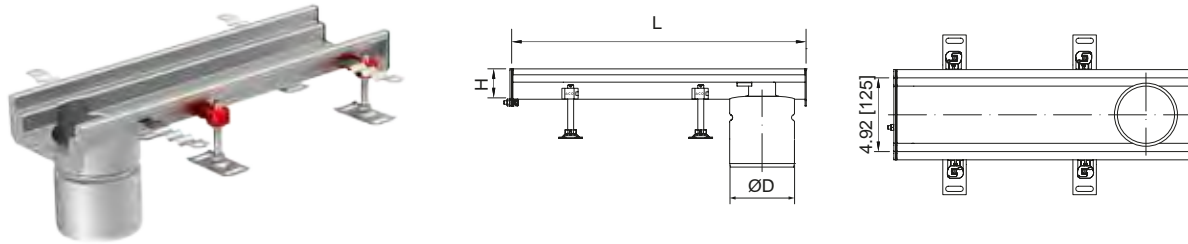
Branch unit



L1 in [mm]	Dimensions		Part number	
	L2 in [mm]	H in [mm]	AISI 304	AISI 316L
19.69 [500]	20.28 [515]	1.97 [50]	409824	409830
		2.56 [65]	409825	409831
		3.15 [80]	409826	409832
		3.74 [95]	409827	409833
		4.33 [110]	409828	409834
		4.92 [125]	409829	409835

Note: Items are equipped with seal and connecting hardware on one end.

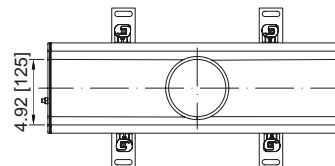
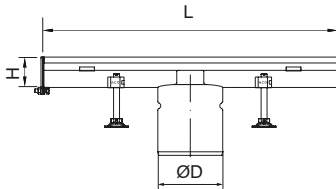
End outlet



Dimensions		Floor drain	Outlet diameter ØD in [mm]	Part number	
L in [mm]	H in [mm]			AISI 304	AISI 316L
19.69 [500]	1.97 [50]	ACO 8" Hygienic Floor Drain	4.92 [125]	415946	415991
	2.56 [65]			415947	415992
	3.15 [80]			415948	415993
	3.74 [95]			415949	415994
	4.33 [110]			415950	415995
	4.92 [125]			415951	415996
	1.97 [50]	ACO 10" Hygienic Floor Drain	5.59 [142]	409732	409733
	2.56 [65]			409736	409737
	3.15 [80]			409740	409741
	3.74 [95]			409744	409745
	4.33 [110]			409724	409725
	4.92 [125]			409728	409729
	3.15 [80]	Connect to 4" pipe	4" Sch 10	445401	445409
	3.74 [95]			445402	445410
	4.33 [110]			445403	445411
4.92 [125]	445404			445412	

Note: Items are without seal and connecting hardware.

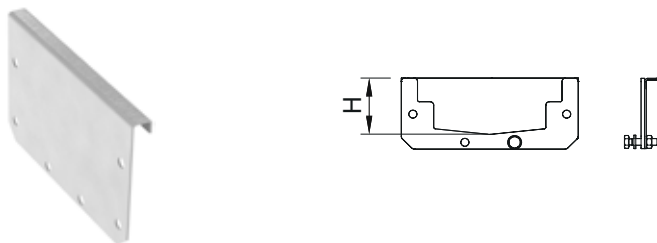
Center outlet



Dimensions		Floor drain	Outlet diameter ØD in [mm]	Part number	
L in [mm]	H in [mm]			AISI 304	AISI 316L
19.69 [500]	1.97 [50]	ACO 8" Hygienic Floor Drain	4.92 [125]	415958	416003
	2.56 [65]			415959	416004
	3.15 [80]			415960	416005
	3.74 [95]			415961	416006
	4.33 [110]			415962	416007
	4.92 [125]			415963	416008
	1.97 [50]	ACO 10" Hygienic Floor Drain	5.59 [142]	409734	409735
	2.56 [65]			409738	409739
	3.15 [80]			409742	409743
	3.74 [95]			409746	409747
	4.33 [110]			409726	409727
	4.92 [125]	409730	409731		
	3.15 [80]	Connect to 4" pipe	4" Sch 10	445405	445413
	3.74 [95]			445406	445414
	4.33 [110]			445407	445415
4.92 [125]	445408			445416	

Note: Items are without seal and connecting hardware.

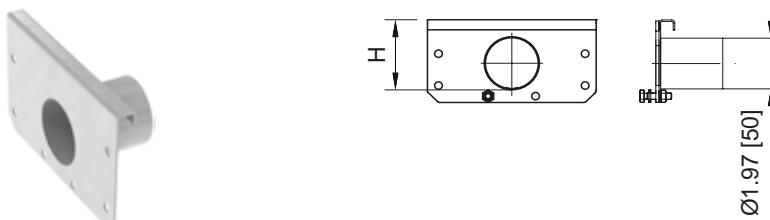
End plate



Dimensions H in [mm]	Part number	
	AISI 304	AISI 316L
1.97 [50]	105100	407196
2.56 [65]	105101	407197
3.15 [80]	105102	407198
3.74 [95]	105103	407199
4.33 [110]	105104	407200
4.92 [125]	105105	407201

Note: Items are equipped with seal and connecting hardware.

End plate with 2" [50 mm] outlet



Dimensions H in [mm]	Part number	
	AISI 304	AISI 316L
3.74 [95]	409116	409121
4.33 [110]	409117	409122
4.92 [125]	409118	409123

Note: Items are equipped with seal and connecting hardware.

Rubber gasket



Dimensions H in [mm]	Material	Part number
1.97 [50]	NBR acrylonitrile butadiene rubber	413587
2.56 [65]		413588
3.15 [80]		413589
3.74 [95]		413590
4.33 [110]		413591
4.92 [125]		413592

Note: Items include seal and connecting hardware.

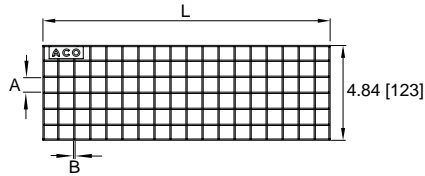
www.acobuildingdrainage.com

Grates for ACO Modular 125

Product information

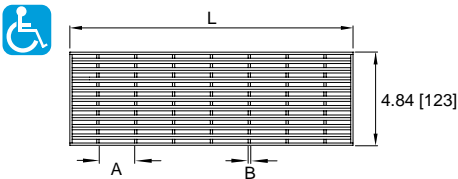
- Fully tested and classified to EN 1433
- Available in AISI 304 or AISI 316L grades of stainless steel
- Special length of 14.76" [375 mm] for branches and corner units
- Load classes A 15, B 125, C 250 and E 600
- Custom grate options available
- Locking grates also available. Please contact ACO for details.

ACO Mesh Grate



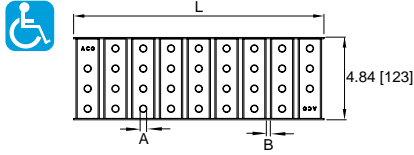
Length L in [mm]	Load class	Slip resistant	Slot size in [mm]		Material	Part number
			A	B		
14.76 [375]	A 15	Yes	0.91 [23]	0.08 [2]	AISI 304	414130
19.69 [500]					AISI 316L	414180
39.37 [1000]					AISI 304	21710
					AISI 316L	21715
					AISI 304	21610
14.76 [375]	C 250		0.91 [23]	0.12 [3]	AISI 316L	21615
19.69 [500]					AISI 304	414131
39.37 [1000]					AISI 316L	414181
					AISI 304	21910
					AISI 316L	21915
39.37 [1000]	C 250	0.87 [22]	0.12 [3]	AISI 304	21810	
				AISI 316L	21815	

ACO Heelsafe Grate



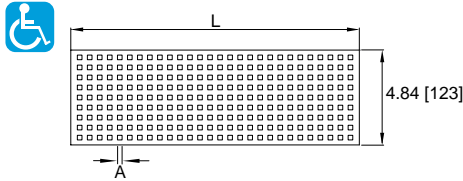
Length L in [mm]	Load class	Slip resistant	Slot size in [mm]		Material	Part number
			A	B		
14.76 [375]	A 15	No	1.85 [47]	0.12 [3]	AISI 304	414135
19.69 [500]					AISI 316L	414185
					AISI 304	96819
39.37 [1000]					AISI 316L	401238
					AISI 304	96818
					AISI 316L	401237

ACO Multi-slot 5 Grate



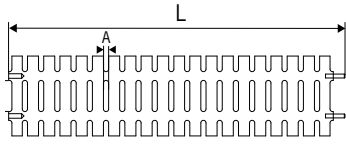
Length L in [mm]	Load class	Slip resistant	Slot size in [mm]		Material	Part number
			A	B		
14.76 [375]	A 15	Yes	0.26 [6.5]	0.24 [6]	AISI 304	414139
19.69 [500]					AISI 316L	414189
39.37 [1000]					AISI 304	409290
19.69 [500]	AISI 316L		409291			
39.37 [1000]	B 125		AISI 304		409286	
			AISI 316L		409287	
		AISI 304	409294			
19.69 [500]	B 125	AISI 316L	409295			
39.37 [1000]		AISI 304	409236			
			0.20 [5]	AISI 316L	409237	

ACO Quadrato Grate



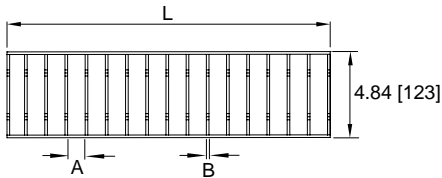
Length L in [mm]	Load class	Slip resistant	Slot size in [mm]		Material	Part number
			A			
14.76 [375]	A 15	No	0.24 [6]		AISI 304	414138
19.69 [500]					AISI 316L	414188
39.37 [1000]					AISI 304	105528
	AISI 316L		407925			
	AISI 304		105527			
	AISI 316L		407924			

ACO Plastic Grate



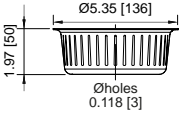
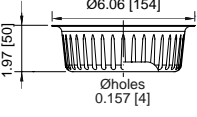
Length L in [mm]	Load class	Slip resistant	Slot size in [mm]	Material	Part number
			A		
19.69 [500]	A 15	No	0.31 [8]	-	21790
39.37 [1000]				-	21690

ACO Hygienic Ladder Grate



Length L in [mm]	Load class	Slip resistant	Slot size in [mm]		Material	Part number
			A	B		
14.76 [375]	C 250	Yes	0.79 [20]	0.2 [5]	AISI 304	414134
					AISI 316L	414184
19.69 [500]					AISI 304	21740
					AISI 316L	21745
39.37 [1000]					AISI 304	21741
					AISI 316L	21746
14.76 [375]	E 600	Yes	0.79 [20]	0.4 [10]	AISI 304	138222
					AISI 316L	138225
19.69 [500]					AISI 304	138223
					AISI 316L	138226
39.37 [1000]					AISI 304	138224
					AISI 316L	138227

Accessories for ACO Modular 125

	Description	Can be used with	Material	Part number
	<p>Silt basket</p> <ul style="list-style-type: none"> ▪ Stainless steel 	ACO Modular 125 with 125mm outlet	AISI 304	414339
			AISI 316L	414340
		ACO Modular 125 with 4" Sch 10 outlet	AISI 304	409190
			AISI 316L	409189

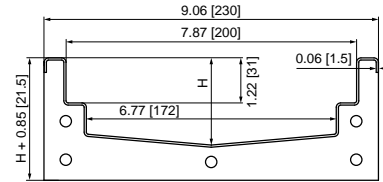
ACO Modular 200 - standard products

Product information

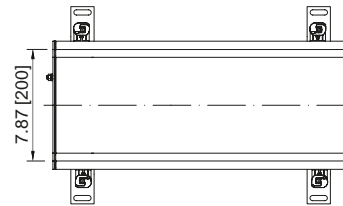
The modular concept allows for the specification of standard channel units to suit a variety of custom layouts.

The Vee-bottomed (V) profiled channel offers enhanced flow efficiency at low flow rates and improved self cleaning performance.

- Fully tested and classified to EN 1433
- Available in AISI 304 or AISI 316L grades of stainless steel
- Fully pickle passivated finish
- Easy and secure adjustable connection with floor drain
- Cut on demand products available to minimize work on site
- Wide range of grates for load class up to E 600 (EN 1433)
- Custom grate options available



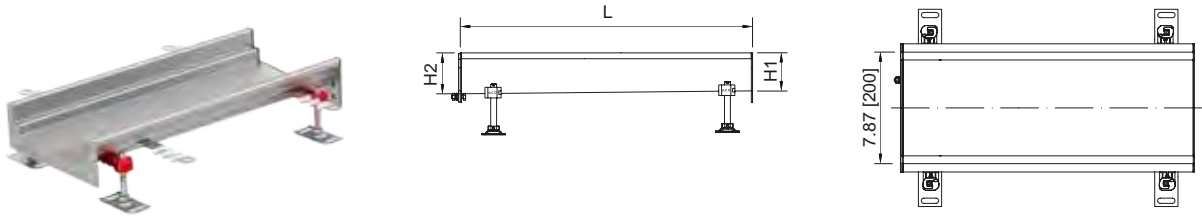
Neutral invert channel



L in [mm]	Dimensions		Part number	
	H in [mm]		AISI 304	AISI 316L
19.69 [500]	2.36 [60]		409072	409050
	2.76 [70]		409047	409051
	3.15 [80]		409048	409052
	3.94 [100]		409049	409053
39.37 [1000]	2.36 [60]		401859	401860
	2.76 [70]		409054	409057
	3.15 [80]		409055	409058
	3.94 [100]		409056	409059
78.74 [2000]	2.36 [60]		401875	401876
	2.76 [70]		409060	409063
	3.15 [80]		409061	409064
	3.94 [100]		409062	409065
118.11 [3000]	2.36 [60]		401895	401896
	2.76 [70]		409066	409069
	3.15 [80]		409067	409070
	3.94 [100]		409068	409071

Note: Items are equipped with seal and connecting hardware for one end.

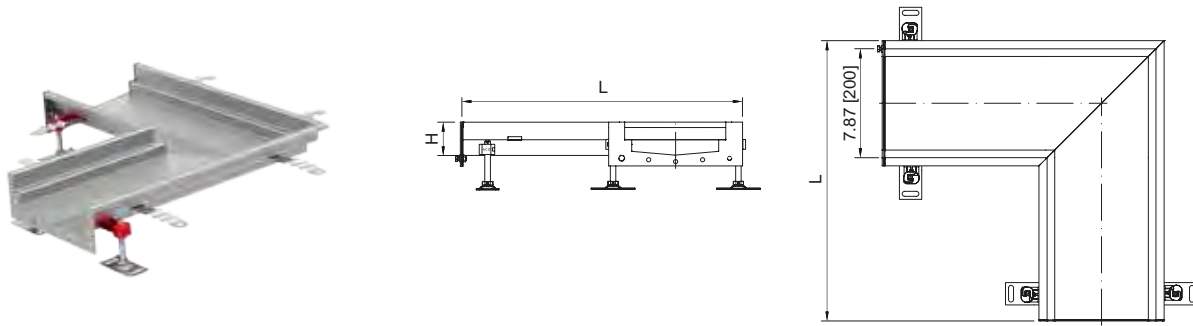
Sloping invert channels



L in [mm]	Dimensions		Part number	
	H1 in [mm]	H2 in [mm]	AISI 304	AISI 316L
19.69 [500]	2.17 [55]	2.36 [60]	401855	401856
39.37 [1000]	2.36 [60]	2.76 [70]	401871	401872
	2.76 [70]	3.15 [80]	402464	402465
	3.15 [80]	3.54 [90]	402466	402467
	3.54 [90]	3.94 [100]	402468	402469
	3.94 [100]	4.33 [110]	402470	402471
78.74 [2000]	2.36 [60]	2.76 [70]	401887	401888
	2.76 [70]	3.15 [80]	402472	402473
	3.15 [80]	3.54 [90]	402474	402475
	3.54 [90]	3.94 [100]	402476	402477
	3.94 [100]	4.33 [110]	402478	402479
118.11 [3000]	4.33 [110]	4.72 [120]	402480	402481
	2.36 [60]	3.15 [80]	402482	402483
	3.15 [80]	3.94 [100]	402484	402485
	3.94 [100]	4.72 [120]	402486	402487
	4.72 [120]	5.51 [140]	402488	402489

Note: Items are equipped with seal and connecting hardware on deeper end.

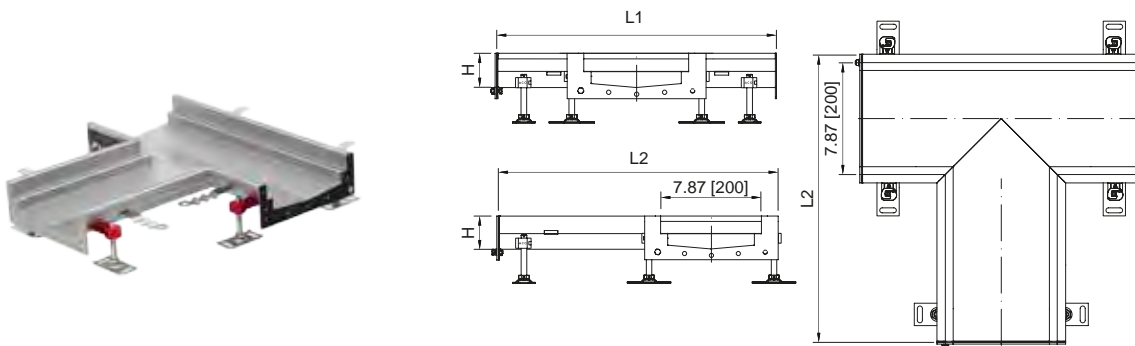
Corner unit



L in [mm]	Dimensions		Part number	
	H in [mm]	AISI 304	AISI 316L	
20.28 [515]	2.36 [60]	401921	401922	
	3.15 [80]	402490	402491	
	3.94 [100]	402492	402493	

Note: Items are equipped with seal and connecting hardware on one end.

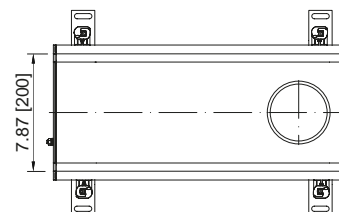
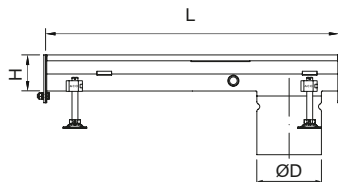
Branch unit



L1 in [mm]	L2 in [mm]	Dimensions		Part number	
		H in [mm]	AISI 304	AISI 316L	
19.69 [500]	20.28 [515]	2.36 [60]	401933	401934	
		3.15 [80]	402494	402495	
		3.94 [100]	402496	402497	

Note: Items are equipped with seal and connecting hardware on one end.

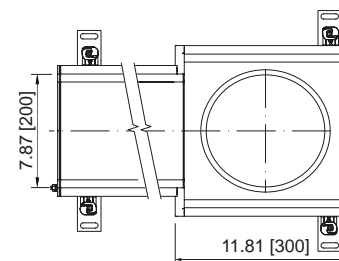
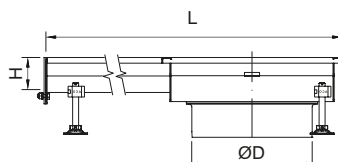
End outlet



Dimensions		Floor drain	Outlet diameter ØD in [mm]	Part number	
L in [mm]	H in [mm]			AISI 304	AISI 316L
19.69 [500]	2.36 [60]	ACO 10" Hygienic Floor Drain	5.59 [142]	409900	409908
	2.76 [70]			409901	409909
	3.15 [80]			409902	409910
	3.54 [90]			409903	409911
	3.94 [100]			409904	409912
	4.33 [110]			409905	409913
	4.72 [120]			409906	409914
	5.51 [140]	409907	409915		
	3.15 [80]	Connect to 6" pipe	6" Sch 10	445417	445423
	3.54 [90]			445418	445424
	3.94 [100]			445419	445425
	4.33 [110]			445420	445426
	4.72 [120]			445421	445427
	5.51 [140]			445422	445428

Note: Items are without seal and connecting hardware.

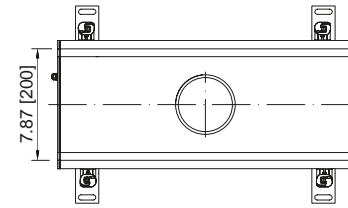
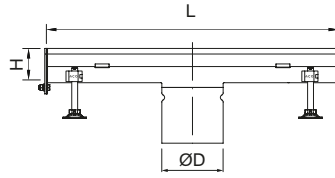
End outlet



Dimensions		Floor drain	Outlet diameter ØD in [mm]	Part number	
L in [mm]	H in [mm]			AISI 304	AISI 316L
30.91 [785]	2.36 [60]	ACO 12" Hygienic Floor Drain	7.87 [200]	414259	414267
	2.76 [70]			414260	414268
	3.15 [80]			414261	414269
	3.54 [90]			414262	414270
	3.94 [100]			414263	414271
	4.33 [110]			414264	414272
	4.72 [120]			414265	414273
	5.51 [140]			414266	414274

Note: Items are without seal and connecting hardware.

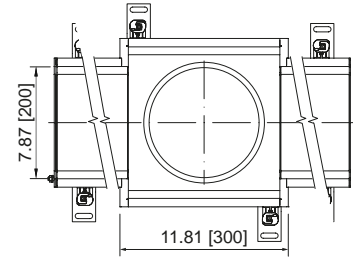
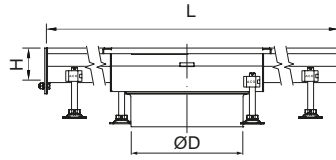
Center outlet



Dimensions		Floor drain	Outlet diameter ØD in [mm]	Part number	
L in [mm]	H in [mm]			AISI 304	AISI 316L
19.69 [500]	2.36 [60]	ACO 10" Hygienic Floor Drain	5.59 [142]	409916	409924
	2.76 [70]			409917	409925
	3.15 [80]			409918	409926
	3.54 [90]			409919	409927
	3.94 [100]			409920	409928
	4.33 [110]			409921	409929
	4.72 [120]			409922	409930
	5.51 [140]			409923	409931
	3.15 [80]			Connect to 6" pipe	6" Sch 10
	3.54 [90]	445430	445436		
	3.94 [100]	445431	445437		
	4.33 [110]	445432	445438		
	4.72 [120]	445433	445439		
	5.51 [140]	445434	445440		

Note: Items are without seal and connecting hardware.

Center outlet



Dimensions		Floor Drain	Outlet diameter ØD in [mm]	Part number	
L in [mm]	H in [mm]			AISI 304	AISI 316L
50 [1270]	2.36 [60]	ACO 12" Hygienic Floor Drain	7.87 [200]	414243	414251
	2.76 [70]			414244	414252
	3.15 [80]			414245	414253
	3.54 [90]			414246	414254
	3.94 [100]			414247	414255
	4.33 [110]			414248	414256
	4.72 [120]			414249	414257
	5.51 [140]			414250	414258

Note: Items are without seal and connecting hardware.

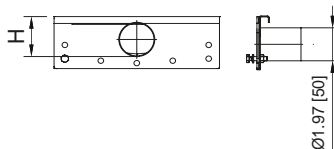
End plate



Dimensions H in [mm]	Part number	
	AISI 304	AISI 316L
2.17 [55]	402683	402684
2.36 [60]	402028	402029
2.76 [70]	402030	402031
3.15 [80]	402514	402515
3.54 [90]	402032	402033
3.94 [100]	402516	402517
4.33 [110]	402518	402519
4.72 [120]	402036	402037
5.51 [140]	402520	402521

Note: Items are equipped with seal and connecting hardware.

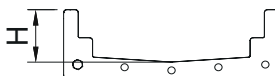
End plate with 2" [50 mm] outlet



Dimensions H in [mm]	Part number	
	AISI 304	AISI 316L
3.94 [100]	402024	402025
4.33 [110]	402020	402021
4.72 [120]	402022	402023
5.51 [140]	401999	402000

Note: Items are equipped with seal and connecting hardware.

Rubber gasket



Dimensions H in [mm]	Material	Part number
2.36 [60]	NBR acrylonitrile butadiene rubber	413593
2.76 [70]		413594
3.15 [80]		413595
3.54 [90]		413596
3.94 [100]		413597
4.33 [110]		413598
4.72 [120]		413599
5.51 [140]		413600

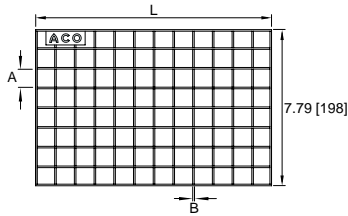
Note: Items include seal and connecting hardware.

Grates for ACO Modular 200

Product information

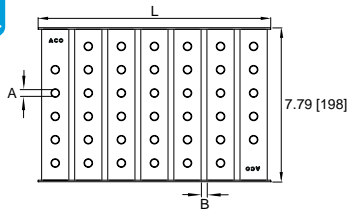
- Fully tested and classified to EN 1433
- Available in AISI 304 or AISI 316L grades of stainless steel
- Special length 11.81" [300 mm] for branches and corner units
- Slip resistant grates available for added user safety
- Load class A 15, B 125, C 250 and E 600 options available
- Full pickle passivated
- Locking grates also available. Please contact ACO for details.

ACO Mesh Grate



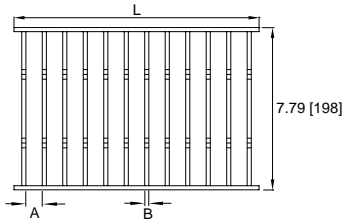
Length L in [mm]	Load class	Slip resistant	Slot size in [mm]		Material	Part number
			A	B		
11.81 [300]	A 15	Yes	0.91 [23]	0.08 [2]	AISI 304	414140
19.69 [500]					AISI 316L	414190
					AISI 304	92200
39.37 [1000]	AISI 316L	92250				
	AISI 304	92201				
					AISI 316L	92251

ACO Multi-slot 5 Grate



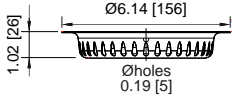
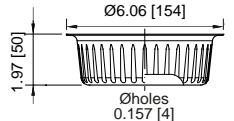
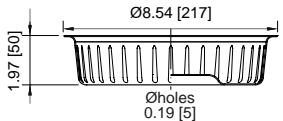
Length L in [mm]	Load class	Slip resistant	Slot size in [mm]		Material	Part number
			A	B		
11.81 [300]	A 15	No	0.37 [9.5]	0.30 [7.5]	AISI 304	414145
19.69 [500]					AISI 316L	414195
					AISI 304	409292
39.37 [1000]	AISI 316L	409293				
	AISI 304	409288				
19.69 [500]	B 125	Yes	0.24 [6]	0.20 [5]	AISI 316L	409289
					AISI 304	409296
AISI 316L					409297	
39.37 [1000]	AISI 304	409240				
	AISI 316L	409241				

ACO Hygienic Ladder Grate



Length L in [mm]	Load class	Slip resistant	Slot size in [mm]		Material	Part number
			A	B		
11.81 [300]	C 250	Yes	0.79 [20]	0.20 [5]	AISI 304	414142
19.69 [500]					AISI 316L	414192
39.37 [1000]			AISI 304		92214	
			AISI 316L		92264	
14.76 [375]	E 600	Yes	0.78 [19.7]	0.4 [10]	AISI 304	92215
19.69 [500]					AISI 316L	92265
39.37 [1000]			AISI 304		138228	
			AISI 316L		138231	
			AISI 304		138229	
			AISI 316L		138232	
	AISI 304	138230				
	AISI 316L	138233				

Accessories for ACO Modular 200

	Description	Can be used with	Material	Part number
	Silt basket - stainless steel	ACO Modular 200 with 5.59 [142] outlet	AISI 304	408202
			AISI 316L	408212
		AISI 304	445234	
		AISI 316L	445235	
		AISI 304	408222	
		AISI 316L	408232	

ACO Modular Channel - Semi-standard products

Product information

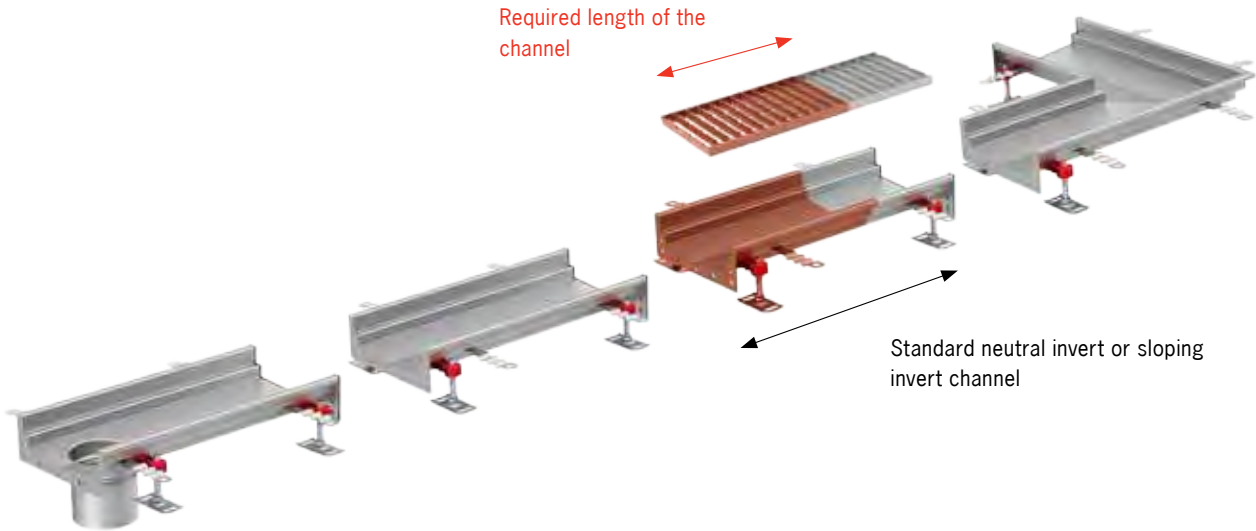
Semi-standard products provide an easy and fast way to get a slot or trench drain of a special length to complete a linear drainage project from standard products. Simply specify the length you need.

How to specify semi-standard products:

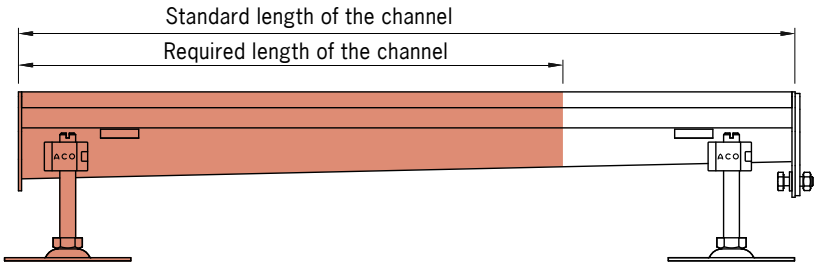
Specify the part number from which the semi-standard product will be produced.

How it works:

The semi-standard product is produced from a standard product (neutral invert and sloping invert channels only) which is shortened according to the customer's need. The shortened product is then equipped with flange and sealing materials to fit the channel in the drainage project. A grate of the same length is also produced.



- Specify the required length of the product (start at the deeper end of channel if a channel with slope is used).

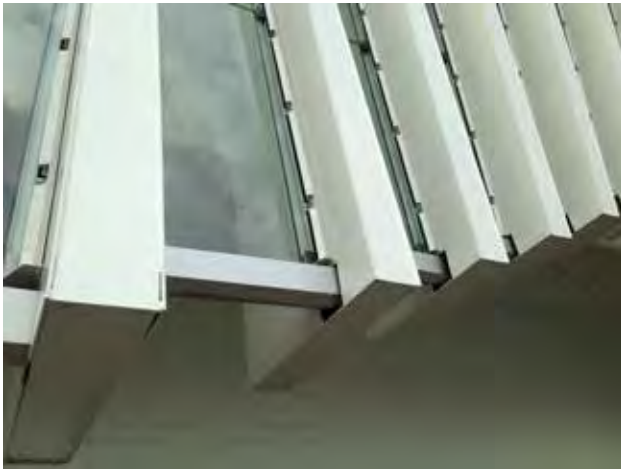


ACO Full Custom Solutions

Product information

Even atypical solutions can be easily realized using stainless steel. The broad spectrum of finishes and shapes gives complete design freedom.

Customers' individual project designs will be managed by our expert team with tailor-made services for specific projects with complete technical support, CAD layout drawings and assembly instructions. Contact our Sales/Technical department team and we will help you find the best solution.



Shipping & Handling information

ACO Floor Drain

- ACO Floor Drains are packed on framed pallets, protected by cardboard inserts and bubble wrapped. Individual products are packed in protective plastic net.
- Outlet pipes are equipped with protective lids.
- Floor Drain tops and flanges are covered with protective blister packs, which also protect the inside areas during installation. Individual products are packed in plastic protective net.
- Handle the Floor Drain and related parts with care. Any rough manipulation (like dragging along the ground, dumping off the truck...) can cause deformation and potentially cause product malfunctions. Contact with carbon steel may cause stainless steel corrosion.

ACO Trench Drain

- The maximum transportable length of channel is 118.11" [3 meters]. In case of container or air transport, the recommended maximum transport length is 78.74" [2 m]. Long channels over 118.11" [3 meters] are standardly divided in sections with transport joints.
- If a one piece channel is required, the channel will have to be welded on site. Please contact our Sales/Technical department.
- ACO Trench Drain is packed on framed/ non framed pallets fixed by plastic tape.
- Products are protected by wooden inserts and frames, and bubble wrap is used on unmodified parts.
- Products are either wrapped separately in ACO paper box or placed loose within crated pallets. It is strongly recommended that channels / channel parts / accessories are transported in their original packaging to avoid damage and / or loss of parts.
- Store on dry and flat surfaces.
- Handle the channels/ channel parts/ accessories with care. Careful truck unloading procedures are crucial. Any rough manipulation (like dragging along the ground, dumping off the truck etc...) can cause deformation and potentially cause product malfunctions.
- Contact with carbon steel may cause stainless steel corrosion.

ACO Grates

- Standard grate length for ACO Hygienic Trench Drains are 1/2 meter and 1 meter for ACO Modular Trench Drain.
- ACO grates are packed on framed pallets protected by cardboard inserts and bubble wrap.
- Articles are either wrapped separately in ACO paper box or placed loose within crated pallets.
- It is strongly recommended to transport grates in their original packaging to avoid damage. Store on dry and flat surfaces.
- Handle the grates with care.
- Any rough manipulation (like dragging along the ground, dumping off the truck...) can cause deformation and potentially cause product malfunctions.
- Contact with carbon steel may cause stainless steel corrosion.

Introduction

Drainage is a critical component affecting the hygienic performance of any commercial food preparation business. Effective drainage helps to mitigate hazards from the external environment and is central to the safe and hygienic operation internally. Within the food production facility, surface liquids represent a potential hazard of microbiological contamination. Liquids

may be part of the cleaning process, may originate from specific equipment, or it may simply be the result of an accidental spillage. Quite often, the liquids contain other components – organic matter being predominant. Floor drainage components cater to these situations through three core functions - interception, conveyance of fluids, and ability to act as a barrier.

Effective cleaning of drainage in a commercial food preparation business reduces risk of contamination and spoiling of food during preparation, processing, and storage. The main objective of cleaning is to remove soil to obtain a clean surface and thereby reduce the number of microorganisms. A further reduction of microorganisms can be obtained by adding a disinfection step.

Principles of cleaning

The principles of cleaning involve combination of thermal, kinetic and chemical energy. The cleaning processes are always a combination of these factors and the time it takes to work. The key point to highlight is that all equipment – **including drainage** – in food processing plants should have a hygienic design which is easy to clean and disinfect. Otherwise, the cleaning process is time and energy consuming and not cost effective. All surfaces of ACO stainless steel drainage solutions are hygienically designed – no sharp corners, edges, dead spaces and crevices. ACO drainage is easily accessible for cleaning and visual inspection.

The effectiveness of drainage cleaning depends on a number of factors:

- Soil type and properties
- Material, design and surfaces
- Water quality
- Cleaning chemicals
- Cleaning procedure
- Cleaning parameters; like temperature, time, flow velocity and concentration of chemicals

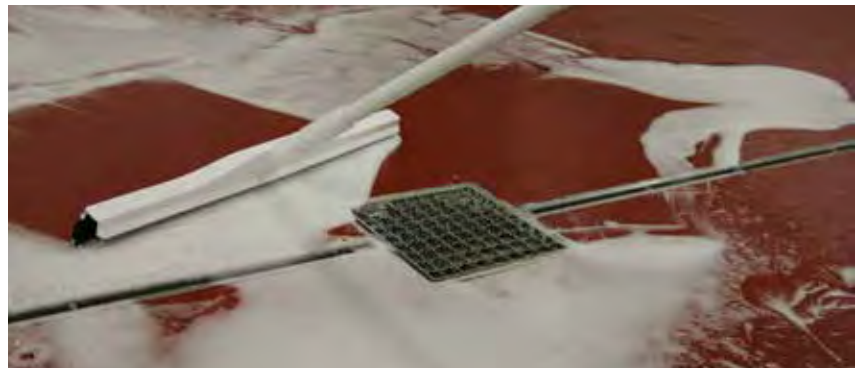
There are two different types of surfaces to be cleaned:

Product contact surface

All equipment that intentionally or unintentionally (e.g. due to splashing) comes into contact with final products or from which product or condensation may drain, drop or be drawn into.

Non product contact surface

All other exposed surfaces, including surfaces associated with equipment, such as support structures, control panels and external surfaces. It also includes surfaces related to the manufacturing environment, such as floors, walls and drain channels.



We also differentiate the cleaning process between whether it is applied dry or wet.

Dry cleaning

Dry cleaning is essentially a mechanical removal of soils using sweeping, brushing, wiping and vacuuming. Environments typical to be cleaned by dry methods include plants which are producing flour, cocoa, dry milk products, dry soups and dry infant formulas.

Wet cleaning

Wet cleaning involves the application of fluids (usually water based) to achieve the desired cleaning result. This can be applied to Open Plant Cleaning (OPC); surfaces to be cleaned have to be accessible to fluids. In addition, some components may be physically removed from the production area and cleaned separately – Cleaning out of place (COP), where drainage systems require wet cleaning.

Distinction between whether the cleaning process is done manually or automatically.

Manual cleaning

Manual cleaning is generally considered as labor intensive and, therefore, often expensive. The manual tools should be hygienic – resistant to applied chemicals and suitable for a specific operation. In addition, operators should be properly trained to be able to perform cleaning as expected to achieve clean surfaces. ACO drainage systems have all the elements of hygienic design that make the cleaning much easier and faster when compared to competitor products.

Automatic cleaning

Utensils and dismantled parts of equipment are cleaned and disinfected automatically in industrial washing machines and tray or tunnel washers (automatic COP). CIP is also defined as an automatic cleaning system.

Cleaning chemicals

There are three main classes of cleaning compounds:

- detergents
- alkalines
- acids
- disinfectants/sanitizers

Detergents

This broad group of chemicals is widely used in households and in food industries brings different type of soil from surfaces into cleaning foams and emulsions that could be easily rinsed off.

Alkalines

Alkaline compounds are effective for dissolution of proteins and removal of fats. Example of alkalines are sodium hydroxide (caustic soda) and potassium hydroxide. These compounds are hazardous to personnel and mostly used in CIP – automatic dosing system is recommended.

Acids

Acids, both organic and inorganic, are commonly used for removal of mineral deposits, such as: hard water scale or milkstone. Acids are potentially corrosive to construction materials and must be used with care.

When chemical cleaning is performed, it is necessary to use low-pressure sprays, foam or gel. Foam and gel are more viscous than sprayed agents and preferred as they are not prone to aerosol formation. Selection of the correct detergent for given application should be always done in cooperation with the detergent supplier.

Disinfectants/sanitizers

In case of high risk areas or production areas with microbiological sensitive products, the floors and drain systems should be sprayed with disinfectants/sanitizers, which will reduce the contamination risk even more. The disinfectants/sanitizers will kill remaining micro-organisms, according to the required specifications.

The plant downtime and labor associated with cleaning is a major cost of any food processing operation.

Sources of soil

Primary source of soil is from processed food product itself. Microbiological biofilms mainly contribute to the soil build ups on drainage surfaces. These films vary in their solubility depending on such factors as heat effect, age, dryness, time, etc. It is essential that personnel involved in the cleaning process design have an understanding of the nature of the soil to be removed before selecting a detergent and cleaning method. The rule of thumb is that acid cleaners dissolve alkaline soils (minerals), and and detergents dissolve acid soils and food wastes (proteins).



Manual cleaning of drainage



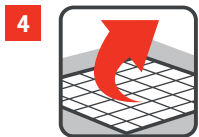
1 Remove all present groceries, raw materials, wrapping materials and tools.



2 Cover all equipment that could be contaminated.



3 Remove excess dirt from floor and grates, and place into designated container.



4 Remove grates.



5 Remove and empty silt basket and foul air trap.



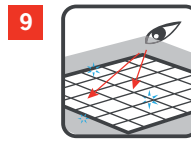
6 Place collected waste and dirt into designated container. Rinse grate, silt basket and foul air trap with clean water. Then place foul air trap into its original position.



7 Wash all surfaces with designated detergent and designated hand brush.



8 Rinse all surfaces with clean water.



9 Visually check surface cleanliness - repeat cleaning process if necessary.



10 Place silt basket and grate to its original position.



11 Rinse the entire equipment with clean water.

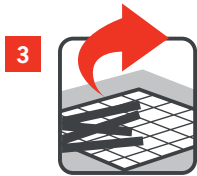
Chemical cleaning of drainage system



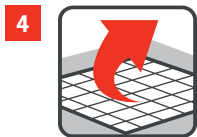
Remove all present groceries, raw materials, wrapping materials and tools.



Cover all equipment that could be contaminated.



Remove excess dirt from floor and grates; and place into designated container.



Remove grates.



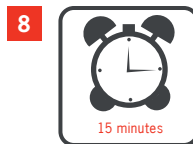
Remove and empty silt basket and foul air trap.



Place collected waste and dirt into designated container. Rinse grate, silt basket and foul air trap with clean water. Then place foul air trap into its original position.



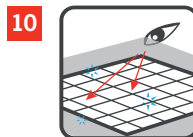
Apply foam to all surfaces.



Leave foam for 15 minutes (or duration as recommended by supplier).



Rinse off foam with clean water.



Visually check surface cleanliness - repeat cleaning process if necessary.



Place silt basket and grate to its original position.



Rinse the entire equipment with clean water.

Overview with recommended cleaning procedures for drainage

These instructions are for guidance only. **Always follow manufacturer’s instructions.**
All procedures must be verified and adjusted to the application specifics.

Frequency	Procedure	Physical agents	Chemical agents	Examples of chemical cleaning agents suitable for ACO stainless steel drainage
Daily	Removal of organic deposits (fats, proteins, saccharides and polysaccharides)	<ul style="list-style-type: none"> ▪ Steam ▪ Medium pressure water to max 25 bar ▪ Mechanical / kinetic energy (brushes, CIP medium velocity) 	<ul style="list-style-type: none"> ▪ Caustics (sodium hydroxide, potassium hydroxide) ▪ Detergents / surfactants 	Standard chemical agents used for floor cleaning should be sufficient (should be validated) Oxofoam, Endorochlor (Diversey)
Weekly	Removal of inorganic deposits that could promote very resistant biofilms	Mechanical abrasive methods – polishing	<ul style="list-style-type: none"> ▪ Nitric acid for stainless steel passivation where chlorine attack could be expected ▪ Inorganic acids (phosphoric acid) ▪ Weak organic acids 	<ul style="list-style-type: none"> ▪ Acifoam (Diversey) ▪ Acigel (Diversey) ▪ Super Dilac (Diversey)
Note	Removal of rinse water residues	Removal of excess water with a squeegee	Alcohols (isopropylalcohol, ethanol)	Chlorine tablets (Suma Tab D4 by Diversey) are often added to the water in foul trap in microbial sensitive production area's

Any cleaning procedures, including those recommended by equipment suppliers, must be properly validated at the equipment, where it will be applied and on the soil that could be expected even after certain time of usage.

Always follow manufacturer’s instructions to avoid damage to the equipment.

Installation recommendations
Typical installation examples



Typical installation examples

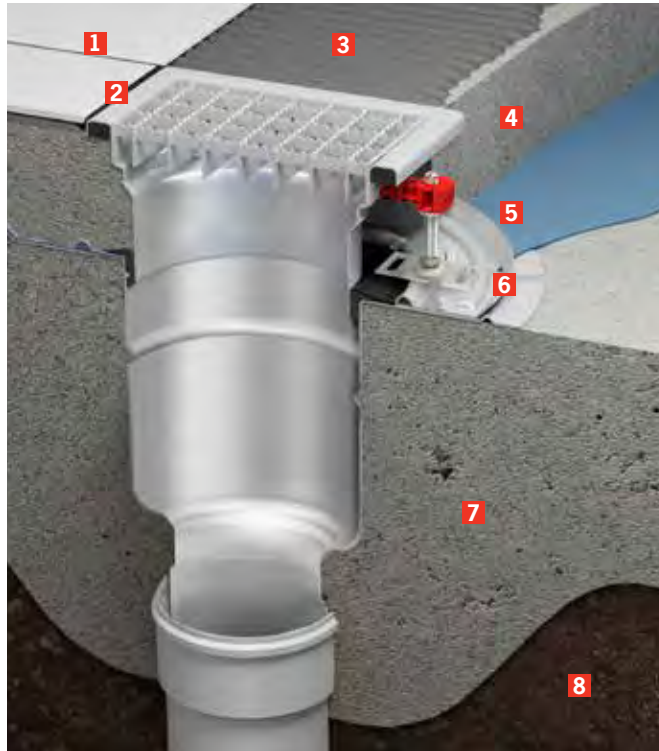
Installation recommendations

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ACO Floor Drain

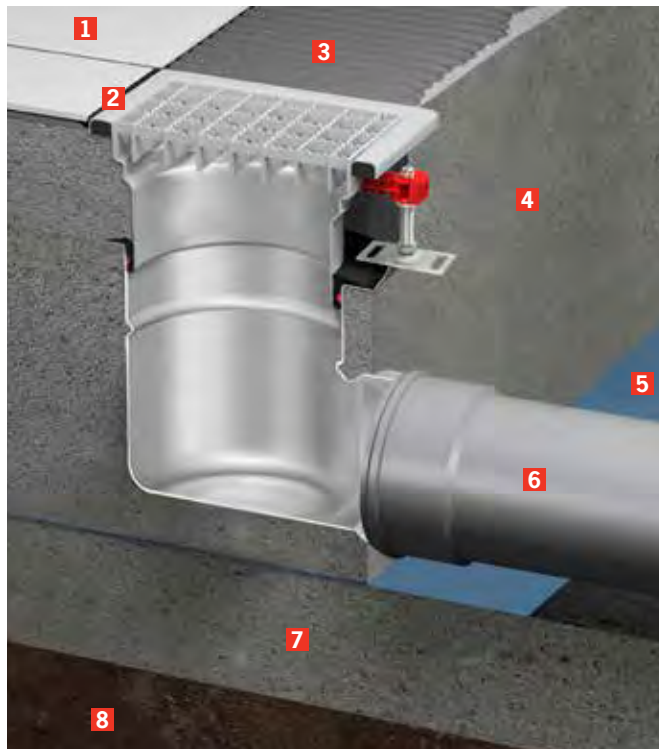
ACO Floor Drain – adjustable flanged floor drain installed in solid concrete floor

- 1** Tile
- 2** Flexible sealant
- 3** Cement/tile adhesive
- 4** Screed
- 5** Waterproof membrane (liquid/fabric)
- 6** Waterproofing Bonding/Clamp Flange (contact ACO)
- 7** Suspended concrete slab
- 8** Compacted soil



ACO Floor Drain – fixed height floor drain installed in solid concrete (tiled) floor

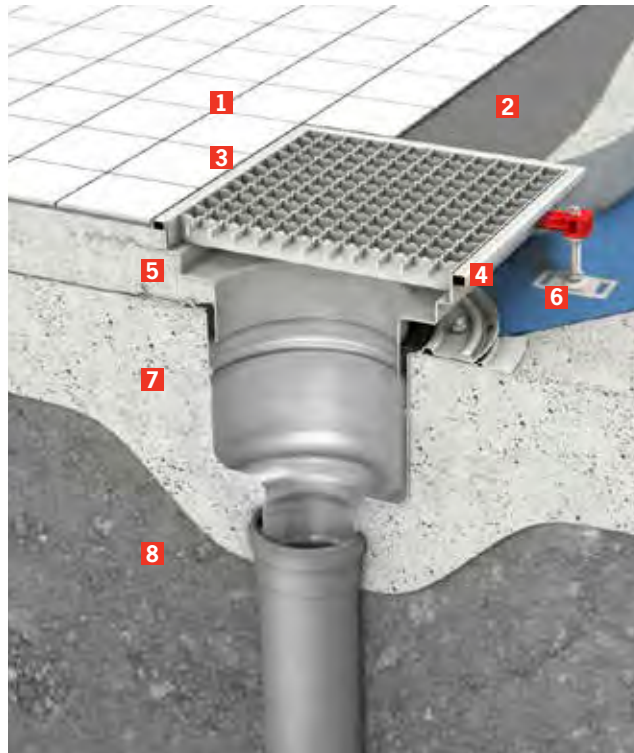
- 1** Tile
- 2** Flexible sealant
- 3** Cement/tile adhesive
- 4** Screed
- 5** Waterproof membrane
- 6** Socketed pipe (by ACO)
- 7** Ground slab
- 8** Compacted soil



ACO Hygienic Trench Drain

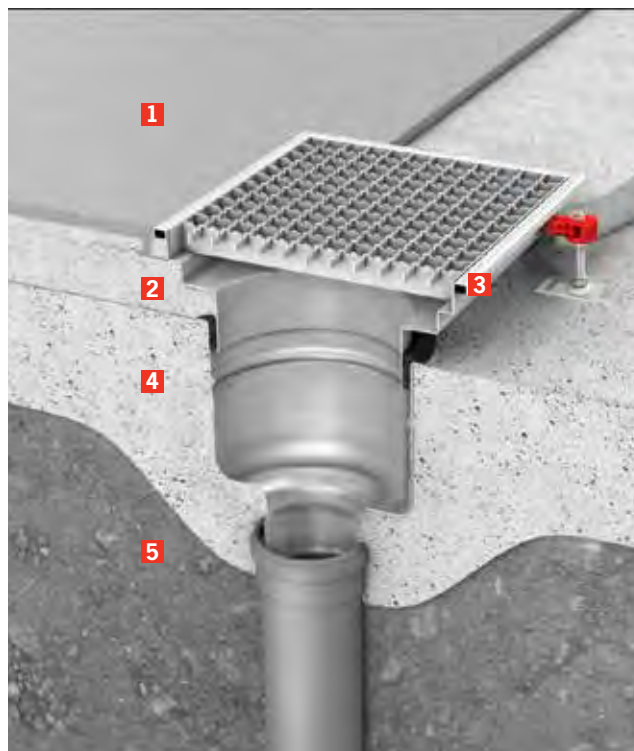
ACO Hygienic Trench Drain – ACO Floor Drain with mechanical clamping flange (Tiled floor)

- 1 Tile
- 2 Cement/tile adhesive
- 3 Flexible sealant
- 4 Edge infill
- 5 Screed
- 6 Waterproof membrane
- 7 Solid concrete floor slab
- 8 Compacted soil



ACO Hygienic Trench Drain – ACO Floor Drain with location flange (Resin floor)

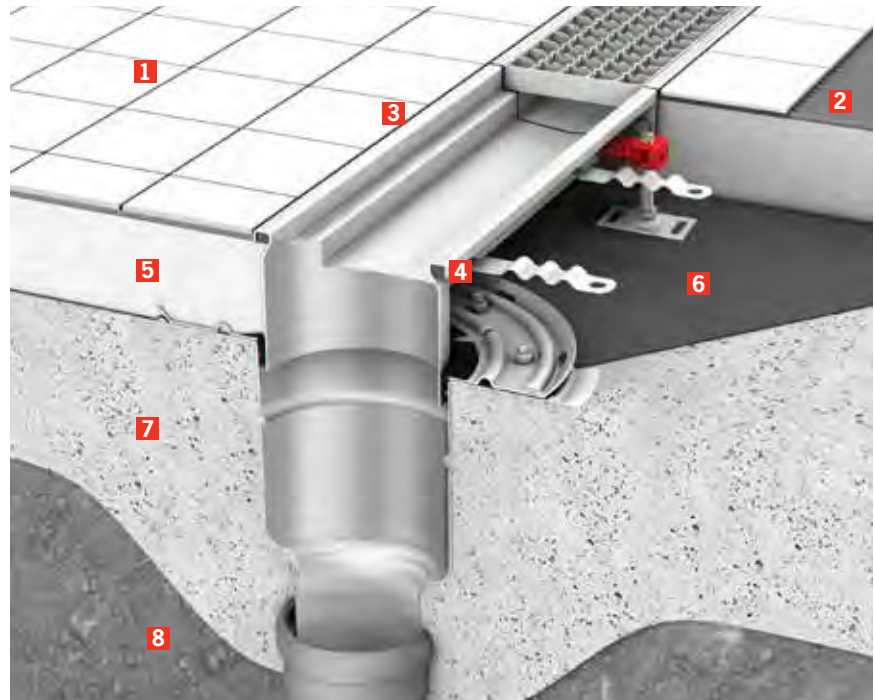
- 1 Epoxy/resin floor
- 2 Screed
- 3 Edge infill
- 4 Solid concrete floor slab
- 5 Compacted soil



ACO Modular Trench Drain

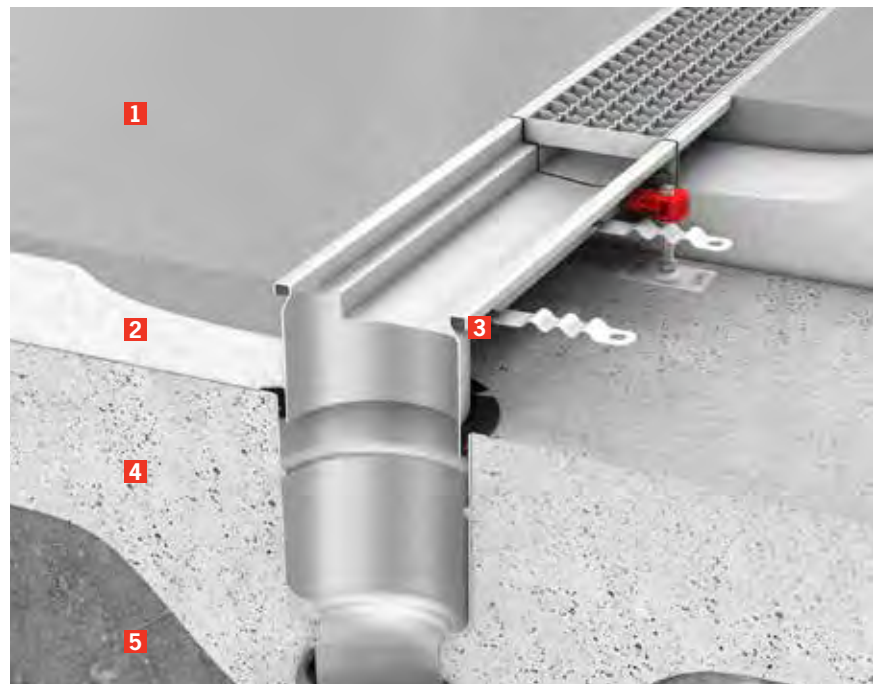
**ACO Modular Trench Drain – ACO Floor Drain with mechanical clamping flange
(Tiled floor)**

- 1** Tiles
- 2** Cement/tile adhesive
- 3** Flexible sealant
- 4** Edge infill
- 5** Screed
- 6** Waterproof membrane
- 7** Solid concrete floor slab
- 8** Compacted soil



ACO Modular Trench Drain – ACO Floor Drain with location flange (Resin floor)

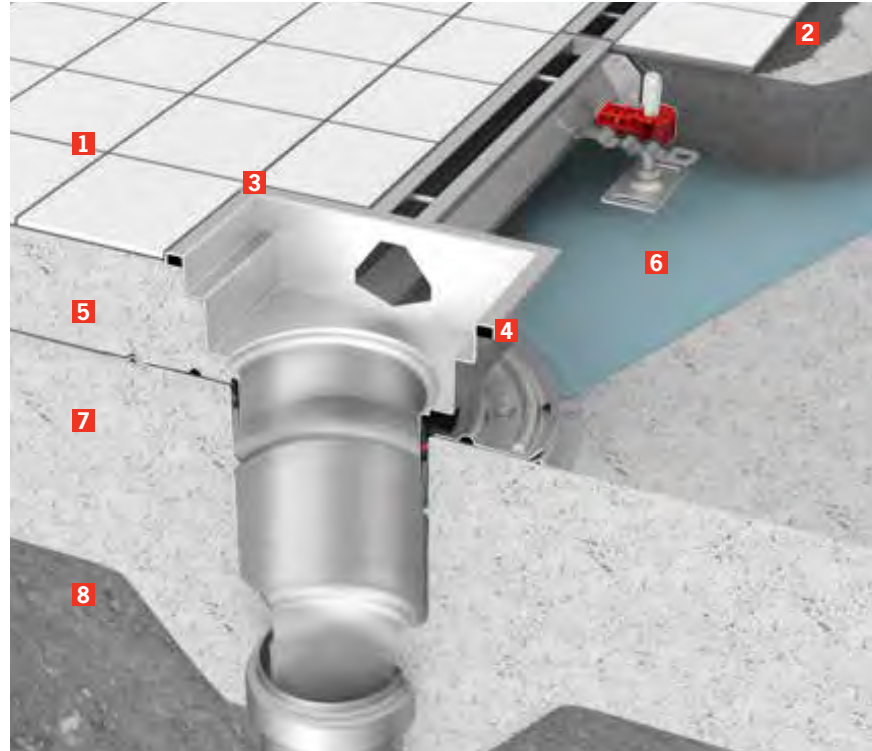
- 1** Epoxy/resin floor
- 2** Screed
- 3** Edge infill
- 4** Solid concrete floor slab
- 5** Compacted soil



ACO Modular Slot Drain

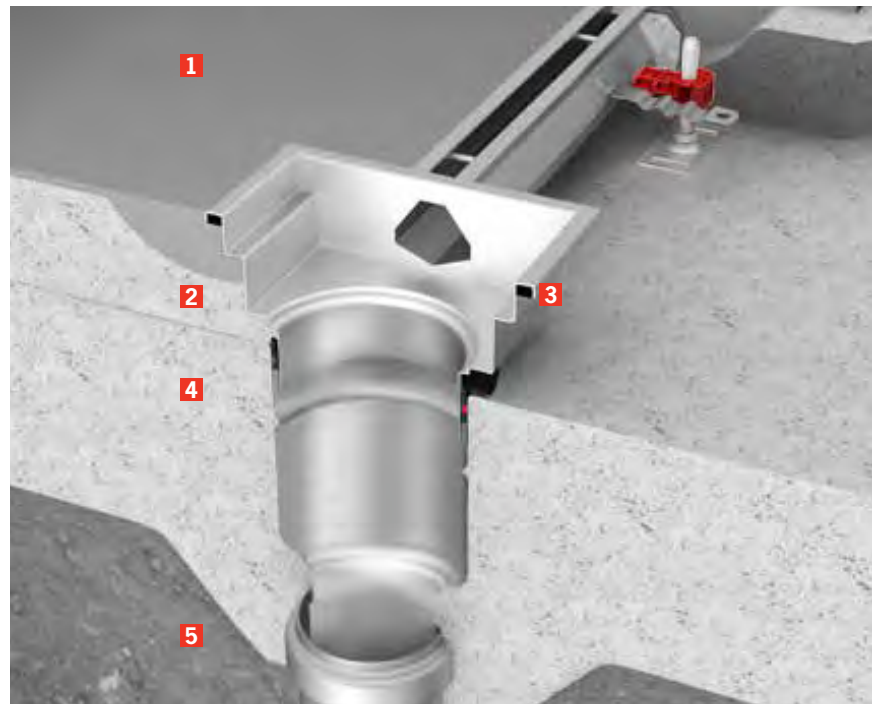
ACO Modular Slot Drain – ACO Floor Drain with mechanical clamping flange (Tiled floor)

- 1 Tile
- 2 Cement/tile adhesive
- 3 Flexible sealant
- 4 Edge infill
- 5 Screed
- 6 Waterproof membrane
- 7 Solid concrete floor slab
- 8 Compacted soil



ACO Modular Slot Drain – ACO Floor Drain with location flange (Resin floor)

- 1 Epoxy/resin floor
- 2 Screed
- 3 Edge infill
- 4 Solid concrete floor slab
- 5 Compacted soil



Material

Resistance of material

1 = Very good service to operating limit of material 2 = Moderate service 3 = Limited or variable service 4 = Unsatisfactory	AISI 316L	AISI 304	EPDM	NBR	FPM
Acetone	1	1	1	4	4
Acetic acid (diluted) 30%	1	1	1	2	2
Acetic acid 100%	1	1	1	3	3
Acetic acid anhydride	1	1	2	3	4
Aluminium chloride	4	4	1	1	1
Aluminium sulfate	1	4	1	1	1
Ammonium carbonate	1	1	1	4	-
Ammonium chloride	2	3	1	1	-
Ammonium hydroxide	1	1	1	4	2
Amyl chloride	1	1	-	-	-
Anilin	1	1	2	4	3
Anilin hydrochloride	4	4	2	2	2
Barium chloride	2	2	1	1	1
Barium hydroxide	1	1	1	1	1
Benzaldehyde	1	1	1	4	4
Benzene	1	1	4	4	1
Benzoic acid	1	1	-	-	1
Borax	1	1	1	2	1
Boric acid	1	1	1	1	1
Bromine	4	4	-	-	1
Bromine chloride acid	4	4	1	2	1
Bromine hydrogen acid	4	4	1	4	1
Bromoethylene	1	1	-	-	-
Butanol	1	1	4	1	1
Butyl acetat	1	1	2	-	4
Butyric acid	1	1	-	-	-
Calcium bisulfate el sulfite	1	1	4	1	1
Calcium chloride	2	2	1	1	1
Calcium hydroxide	1	1	1	1	1
Calcium hypoklorite	2	3	1	3	1
Carbon disulfide	1	1	-	-	-
Carbon tetrachloride	1	1	4	3	1
Chloracetic acid (mono)	4	4	2	-	-
Chloride	4	4	-	-	-
Chloril acid	4	4	-	-	-
Chlorine (dry)	1	1	-	-	1
Chlorobenzene	1	1	4	4	1
Chloroform	2	2	4	4	1
Chlorosulfonic acid	2	3	4	4	3
Copper chloride	2	2	1	1	1
Copper nitrate	1	1	-	-	-
Copper sulfate	1	1	1	1	1
Ether	1	1	-	-	-
Ethyl chloride	1	1	1	1	1
Fatty acid	1	1	4	2	1
Flouiner (dry)	1	1	-	-	-
Flourine hydrogen acid	4	4	2	4	1
Formaldehyde	1	1	1	2	1
Formic acid	1	1	1	2	3
Furfural	1	1	2	4	4
Gallic acid	1	1	2	2	1
Hydrochloric acid	4	4	1	4	1
Hydrogen peroxide	1	1	3	4	2
Iodine (wet)	4	4	-	-	-

Note:

Concentration levels and length of exposure have a direct influence on the resistance of stainless steel to certain chemicals. Each application should therefore be carefully reviewed to determine the suitability of stainless steel.

Assumptions:

Data presented are used as a guide only. For detailed information, please contact our Sales/Technical department.

Resistance of material

1 = Very good service to operating limit of material 2 = Moderate service 3 = Limited or variable service 4 = Unsatisfactory	AISI 316L	AISI 304	EPDM	NBR	FPM
Lead acetate	1	1	1	2	-
Magnesium chloride	2	2	1	1	1
Magnesium sulfate	1	1	1	1	1
Mercury	1	1	1	1	1
Methanol	1	1	1	1	3
Methyl chloride	1	1	3	4	1
Methylene chloride	2	2	4	4	2
Natphalene	1	1	4	4	1
Nickel chloride	2	2	1	1	1
Nickel sulfate	1	1	1	1	1
Nitric acid	3	3	3	4	1
Oxalic acid	3	3	1	2	1
Perchloric acid	4	4	2	-	1
Phosphoric acid	1	1	2	4	1
Picric acid	1	1	2	2	1
Potassium bromide	1	1	-	-	-
Potassium carbonate	1	1	-	-	-
Potassium chlorate	1	1	-	-	-
Potassium cyanide	1	1	1	1	1
Potassium hydroxide	1	1	1	2	2
Potassium nitrate	1	1	1	1	1
Potassium permanganate	1	1	-	-	-
Potassium sulfate	1	1	1	1	1
Potassium sulfide	1	1	-	-	-
Potassiumchloride	2	2	1	1	1
Propylene dichloride	1	1	-	-	-
Sal ammoniac	2	3	1	1	-
Silver nitrate	1	1	1	2	1
Soda (ash)	1	1	-	-	-
Sodium acetate	1	1	1	2	4
Sodium bicarbonate	1	1	1	1	1
Sodium bisulfate	1	3	-	-	-
Sodium bisulfite	1	1	1	1	1
Sodium bromide	2	2	-	-	-
Sodium chlorate	1	1	-	-	-
Sodium chloride	4	4	-	-	-
Sodium cyanide	1	1	1	1	1
Sodium fluoride	1	1	-	-	-
Sodium hydroxide	1	1	1	2	2
Sodium hypochlorite	4	4	2	2	1
Sodium nitrate	1	1	1	2	-
Sodium sulfate	1	1	1	1	1
Sodium sulfide	1	1	-	-	-
Sodium sulfite	1	1	-	-	-
Stannous chloride	2	3	2	1	1
Sulfur	1	1	1	4	1
Sulfur chloride	1	1	4	3	1
Sulfur dioxide	1	2	1	4	1
Sulfuric acid	4	4	2	4	1
Sulfurous acid	1	3	2	2	1
Tionyl chloride	1	1	4	-	1
Toluene (toluol)	1	1	4	4	1
Trichloroethylene	1	1	4	3	1
Turpentine	1	1	4	1	1
Xylene (xylol)	1	1	-	-	-
Zinc sulfate	1	1	-	-	-

Note:

Concentration levels and length of exposure have a direct influence on the resistance of stainless steel to certain chemicals. Each application should therefore be carefully reviewed to determine the suitability of stainless steel.

Assumptions:

Data presented are used as a guide only. For detailed information, please contact our Sales/Technical department.

Sealing material information

EPDM (ethylene propylene diene monomer)

Black sealing rubber ring, which is suitable for most applications where there are no oil or petrol residues in the waste water.

NBR (acrylonitrile butadiene rubber)

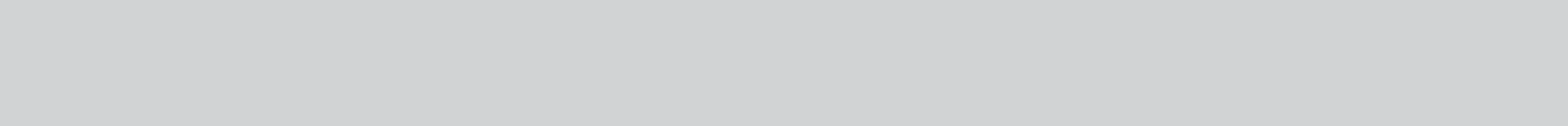
Black sealing rubber ring which is suitable for waste water applications where there are petrol or oil residues. NBR is not resistant to solvents and high temperatures.

FPM (fluoroelastomer) – Viton®

Green sealing rubber ring which is suitable for special applications where oil, solvents and strong acids are present in waste water; and for applications with higher temperatures. Viton® seal has limited resistance to chemicals like acetone, methyl alcohol.

To be sure of suitability for special applications please consult exact seal material features within ACO installation guide.

Rubber type	Sealing materials		
	EPDM	NBR	FPM (Viton)
Color	black	black	green
Temperature range	-58 / +266 / +302 °F	-22 / +176 / +212 °F	-4 / +392 / +572 °F
Resistance			
Water	excellent	good	good
Chemicals			
Acids	good	fair	excellent
Bases	good	fair	excellent
Benzene/Petrol	unsatisfied	excellent	excellent
Oils			
ASTM Oil No. 1	unsatisfied	excellent	excellent
ASTM Oil No. 3	unsatisfied	excellent	excellent
Ozone & weather stresses	good	limited	good



Other ACO products

External drainage

ACO Drain

Modular trench drain systems for commercial, industrial and landscape applications.

ACO Sport

Surface drainage and building accessories for track & field.

ACO Infrastructure

Surface drainage products engineered for highways, urban roads and bridges.

Aquaduct

Custom design and manufacture of fiberglass trench drain systems.

ACO Duct

Linear ducting system with removable solid covers.

ACO Environment

Oil water separators and spill containment systems.

ACO Wildlife

Tunnel and fence system to guide amphibians and other small creatures safely across roads.

ACO StormBrixx

A unique and patented plastic geocellular storm water management system.

ACO Self

Simple drainage and building components for use around the home, garden and office.

Building drainage

ACO Stainless

Stainless steel trench drains.

ACO Floor Drain

Stainless steel floor drains.

ACO BuildLine

Drainage products for thresholds, balconies, green roofs and building façades.

ACO Pipe

Stainless steel push-fit pipe system.

ACO ShowerDrain

Shower drainage.

QuARTz

Designer bathroom floor solutions.



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