



ACO Building Drainage Products

ACO Cast Iron Floor Drains with Nickel Bronze Tops

ACO Cast Iron Cleanouts with Nickel Bronze Tops



ACO. The future of drainage.

ACO Systems FZE

Established in 2006, ACO Systems FZE provides the highest levels of support and service to over 20 countries throughout the Middle East and parts of South Asia and Africa. As part of the ACO Group, we are world leaders in the supply of various internal and external drainage systems since 1946. With a 10,000 sqm manufacturing facility and a team of 50+ employees, we specialise in stainless steel drainage products with an emphasis on customised and hygienic solutions.

ACO Systems FZE at a glance

- 2006, company established by ACO International in Jebel Ali Free Zone in Dubai
- 50+ employees in more than 20 countries in Middle East and parts of South Asia and Africa
- 10.000 sqm production facility, office and warehouse



Stainless steel manufacture facility, office and warehouse in the Jebel Ali Free Zone Dubai, United Arab Emirates.



ACO Kitchen channel with mesh gratings in stainless steel



ACO Kitchen gully with mesh grating in stainless steel



ACO Bathroom shower channel with Quadrato Design grating in stainless steel



ACO Bathroom floor drain with tile type cover in stainless steel



ACO External drainage channel with perforated gratings in stainless steel



ACO External drainage - ACO polymer channel with Brickslot elements in stainless steel

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Floor Drains



Introduction

Floor drains are typically designed to receive and convey run-off water or other liquid from building floors to drainage system. Floor drains are used in every commercial and institutional building.

Floor drains come in all shapes and sizes. And these differ in their application. ACO has been manufacturing drainage products for over 50 years. We have standard floor drains to meet the normal installation, as well as specialize in manufacturing drains for special applications.

By application, we are referring to the drain to be installed. For example, a floor drain in a typical corridor will not be exposed to as much water drainage compared to a floor drain located in a locker room. One of the key specific information needed for determining the floor drain that best suits your application is to know the maximum amount of water the floor drain may be exposed to. Even though the drain may not be continuously exposed to water, consideration should be given for times when abnormal conditions may exist.

ACO Floor Drains are designed to use in finished floor areas with an adjustable frame and grating, a membrane clamp ring with weep holes and an optional ss silt basket. ACO provides a range of cast iron floor drains to suit almost any application, from pedestrian areas to any commercial or residential. Nickel Bronze floor gratings and covers are available both as screw-fastened and hinged options. There are a number of options of outlets available. Adjustable height tops accommodate various floor levels. Clamp rings can accommodate different waterproof membranes.

ACO Drain Benefits

Application range:

Vertical and Horizontal outlet options in different size. Screw-fastened/hinged gratings and covers are available.

Durable:

Powder coated bodies that are tested to withstand salt spray test for 200hrs as per standard ASTM B 117

Ease of installation:

Push-on gasket connections and popular no-hub connection options for easy installation. ACO drains are designed with minimal fasteners for easy assembly and maintenance.

Ease of maintenance:

Neoprene plugs and an optional ss silt basket makes cleaning of drains easy

Fully Adjustable:

Reversible membrane clamp ring allows a wide range of height adjustment. Threaded frames and slotted clamp rings allow for fine adjustments to match a wide option of finished flooring.

Note: These drains are not to be used in chemical / industrial applications. In such requirements please contact ACO for appropriate product selection and guidance.

Selecting a Floor Drain

Floor drains are primarily used for indoor locations where the flow rate into the drain can be anticipated and for outdoor areas where rainfall intensity dictates sizing. Drains should be selected with sufficient top size and grating free area to pass the anticipated flow. Grating free area is defined as "the total area of the drainage openings in the grating." The drain outlet should be sized large enough so that it will safely pass the maximum flow through the grating, without creating water buildup.

To select the proper floor drain, the following information must be known:

1. Location
2. Size of tops and outlets
3. Available flow rate
4. Body selection
5. Aesthetics
6. Type of floor construction
7. Material required
8. Load class
9. Sediment bucket

Location:

The number and location of drains are two important factors. Location and number of floor drains required can be determined only after careful review of the plans and anticipated building use.

Sizes of tops & outlets:

Top size of floor or area drain is directly related to the grating free area which is the total area of drainage openings in the grating for efficient drainage. Interior floor drains should have a grating free area equal to 1½ times the free area of the connecting pipe. Exterior drains subject to rainfall should have a minimum free area equal to 2 times the free area of the connecting pipe. This recommended ratio of free area to outlet size (connecting pipe size) is as per Floor Drain Standard ASME A112.21.1M-1980.

The size of floor drains is important because it affects the number of drains required and the amount of water which can be efficiently drained. As a general reference, floor drains should be sized to handle an overflow condition of water that may be discharged onto the floor.

Note: Products should be used for residential and commercial purpose only. Not recommended for industrial and chemical environments.

Flow rate calculation:

The required grating free area of the drain can be calculated if the water pressure head above the floor and the required flow rate are known, by using the following equation:

$$Q = 448.2 \times Cd \times A \times \sqrt{(2 \times g \times h)}$$

Where,

Q = Flow Rate
(GPM - Gallons per Minute)

Cd = Discharge Coefficient = 0.6

A = Free area [open area]
of grating (ft²)

g = Acceleration due to
gravity (32.2ft/s²)

h = Head above the floor (ft)

This equation can be solved for A:

$$A = \frac{Q}{448.2 \times Cd \times \sqrt{(2 \times g \times h)}}$$

Body Selection:

ACO features floor drains in two types.

- Vertical outlet
- Horizontal outlet.

Aesthetics:

ACO features products that can be specified and installed with confidence and pride. The floor drain is aesthetically pleasing when the proper top material and shape are specified to harmonize with the surrounding environment.

Floor Construction:

Drain selection is also dependent on elements of floor construction. Elements such as slab type and thickness, surface finish, depth of fill, finished floor materials and waterproofing requirements are primary considerations.

Materials:

ACO floor drain bodies are produced from cast iron which conforms to ASTM A48-40A or EN-GJL-300. They are then powder coated with anthracite grey (RAL7016). Powder coating increases corrosion resistance and wear resistance properties of the drain. They are tested to withstand salt spray test as per standard ASTM B 117.

Gratings, covers and frames are made of Nickel- Bronze that conforms to mechanical requirements of copper alloys as per ASTM B 584.

Neoprene gaskets provided with ACO Drains conform to requirements of ASTM C 564.

Load class:

Gratings provided with ACO Drains conform to Top Loading Classification as defined in para.5.1 of ASME A112.6.3-2001. They fall under:

- Light Duty - under 2,000lb (900kg)
- Medium Duty - between 2,000lb (900kg) and 4,999lb (2,250kg)
- Heavy Duty - between 5,000lb (2,250kg) and 7,499lb (3,375kg)

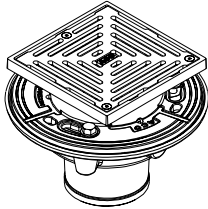
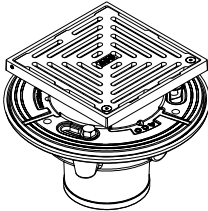
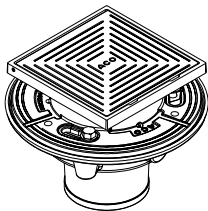
Please refer to specific article details for exact load class information.

Trapping of Sediment:

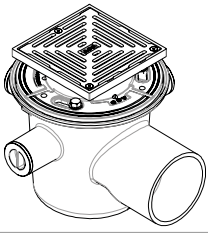
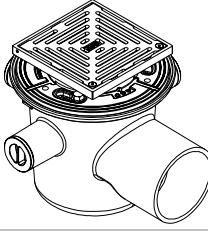
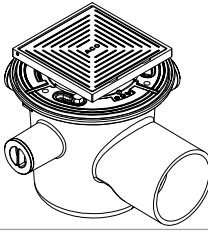
In many locations, drainage will include the sediments like leaves, twigs, paper scraps, sand, machine cuttings, hair and lint which will clog the drainage line. In such locations floor drains with ss silt basket are specified to prevent the blockage of drain lines.

ACO CI Floor Drains

Floor Drains with vertical outlet

	Product Description	Outlet Size	Article-No.
	<p>Cast Iron - Floor Drain with nickel-bronze frame and screw-fastened grating (Page No. 7)</p>	DN 50	137700
		DN 75	137701
		DN 110	137702
	<p>Cast Iron - Floor Drain with nickel-bronze frame and hinged grating (Page No. 8)</p>	DN 50	137703
		DN 75	137704
		DN 110	137705
	<p>Cast Iron - Floor Drain with nickel-bronze frame and solid hinged cover with inner grating (Page No. 9)</p>	DN 50	137706
		DN 75	137707
		DN 110	137708

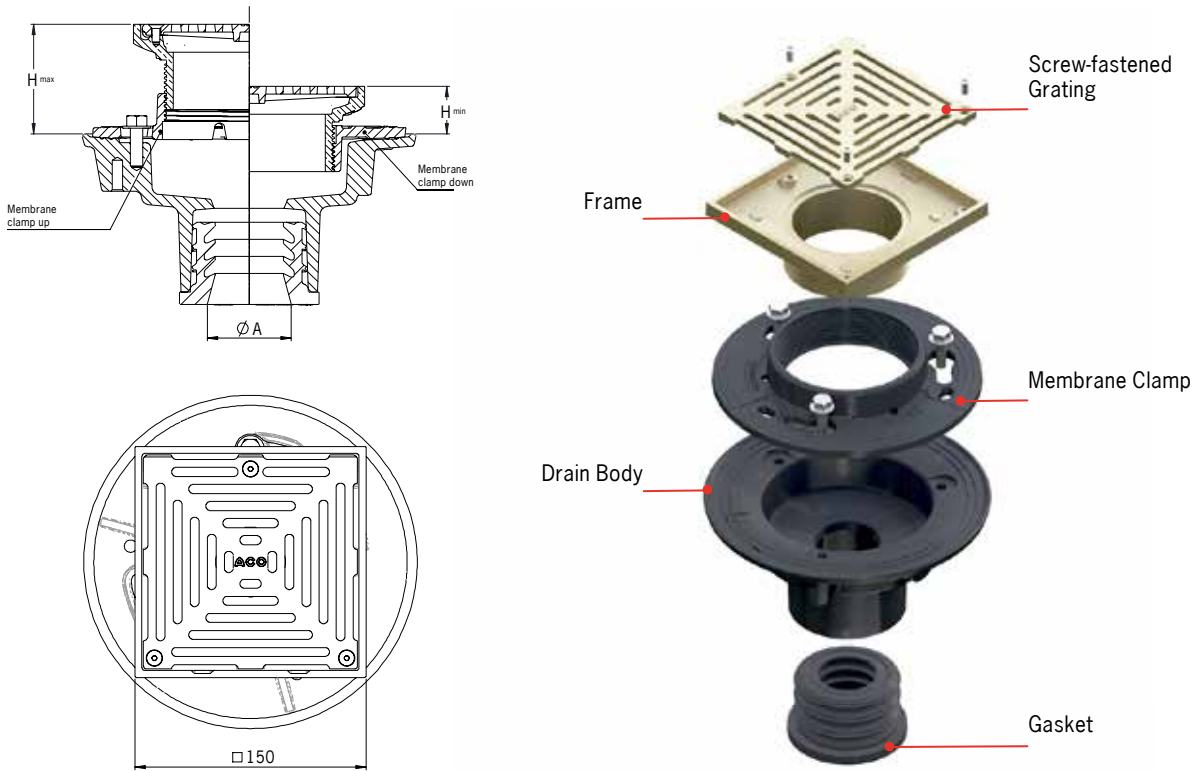
Floor Drains with horizontal outlet

	Product Description	Outlet	Article-No.
	<p>Cast Iron - Floor Drain with nickel-bronze frame and screw-fastened grating (Page No. 10)</p>	DN 110	137709
	<p>Cast Iron - Floor Drain with nickel-bronze frame and hinged grating (Page No. 11)</p>	DN 110	137710
	<p>Cast Iron - Floor Drain with nickel-bronze frame and solid hinged cover with inner grating (Page No. 12)</p>	DN 110	137711

Vertical Floor Drain

with nickel-bronze frame and screw-fastened grating:

ACO features vertical floor drains in 3 different outlet sizes. Vertical floor drain consist of powder coated cast iron body with primary and secondary weep holes, reversible membrane clamp, gasketed vertical outlet and adjustable, square, heel-safe nickel bronze grating.



Article - No.137700 Shown

Drain Type	Load class	Outlet Size, A (mm)	Frame Size (mm)	Height, H (mm) Max.	Height, H (mm) Min.	Weight (kg)	Article-No.
DN 50	Medium Duty	50	150x150	70	30	7.8	137700
DN 75	Medium Duty	75	150x150	70	30	8.1	137701
DN 110	Medium Duty	110	150x150	70	30	8.5	137702

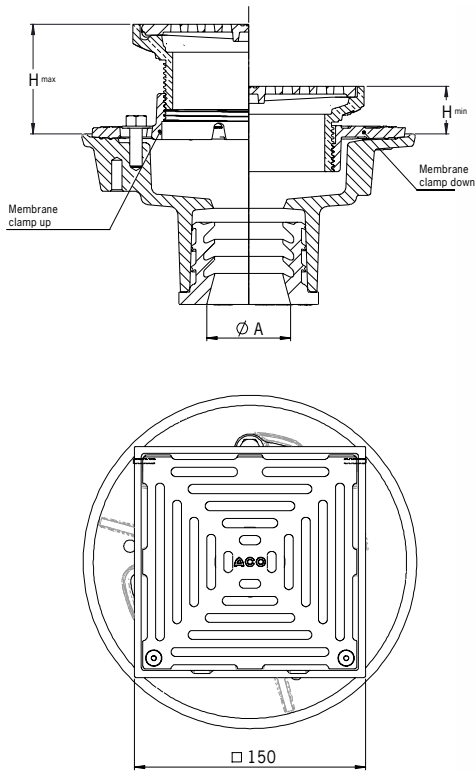
Accessories	Product Description	Article-No.
	Silt basket in stainless steel	137753
	Leveling legs, adjustable L= 250 to 280mm	137768

ACO CI Floor Drains

Vertical Floor Drain

with nickel-bronze frame and hinged grating:

ACO features vertical floor drains in 3 different outlet sizes. Vertical floor drain consist of powder coated cast iron body with primary and secondary weep holes, reversible membrane clamp, gasketed vertical outlet and adjustable, square, heel-safe nickel bronze grating.



Article - No.137703 Shown

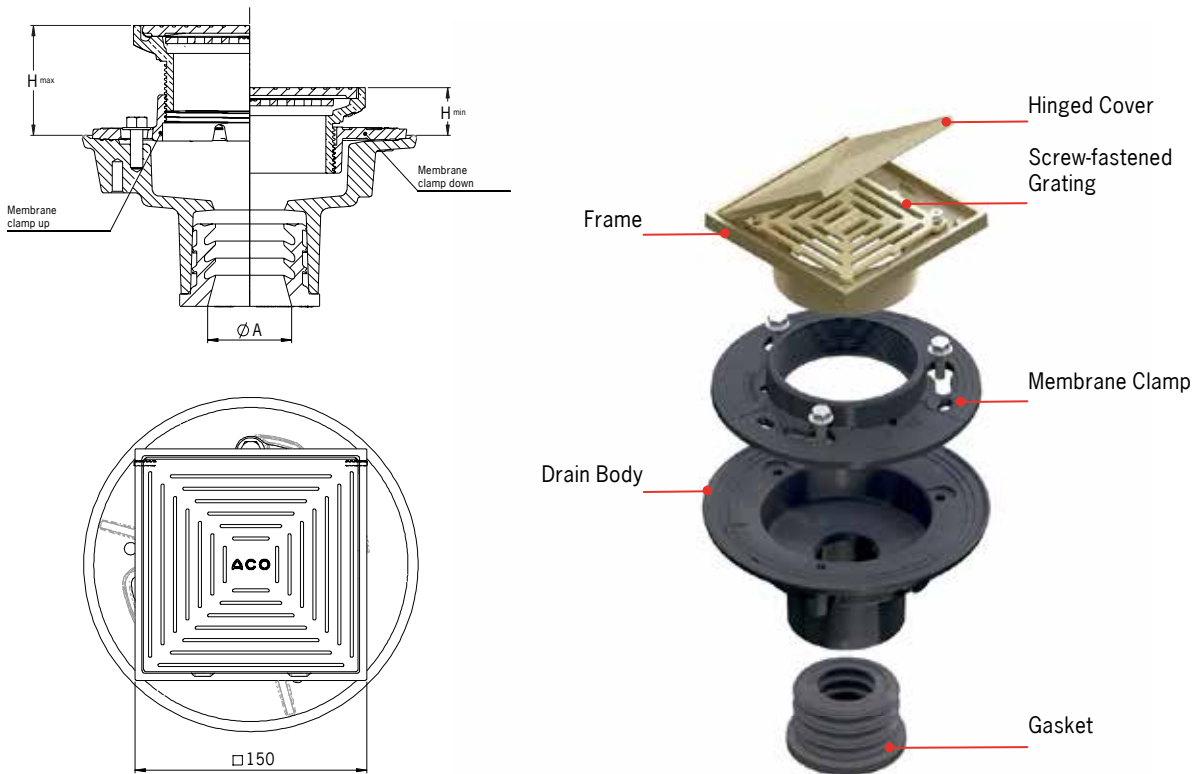
Drain Type	Load class	Outlet Size, A (mm)	Frame Size (mm)	Height, H (mm) Max.	Height, H (mm) Min.	Weight (kg)	Article-No.
DN 50	Medium Duty	50	150x150	70	30	7.8	137703
DN 75	Medium Duty	75	150x150	70	30	8.1	137704
DN 110	Medium Duty	110	150x150	70	30	8.5	137705

Accessories	Product Description	Article-No.
	Silt basket in stainless steel	137753
	Leveling legs, adjustable L= 250 to 280mm	137768

Vertical Floor Drain

with nickel-bronze frame and solid hinged cover and screwed inner grating:

ACO features vertical floor drains in 3 different outlet sizes. Vertical floor drain consist of powder coated cast iron body with primary and secondary weep holes, reversible membrane clamp, gasketed vertical outlet and hinged solid cover with inside square, heel-safe nickel bronze grating.



Article - No.137706 Shown

Drain Type	Load class	Outlet Size, A (mm)	Frame Size (mm)	Height, H (mm) Max.	Height, H (mm) Min.	Weight (kg)	Article-No.
DN 50	Heavy Duty	50	150x150	70	30	8.2	137706
DN 75	Heavy Duty	75	150x150	70	30	8.5	137707
DN 110	Heavy Duty	110	150x150	70	30	8.9	137708

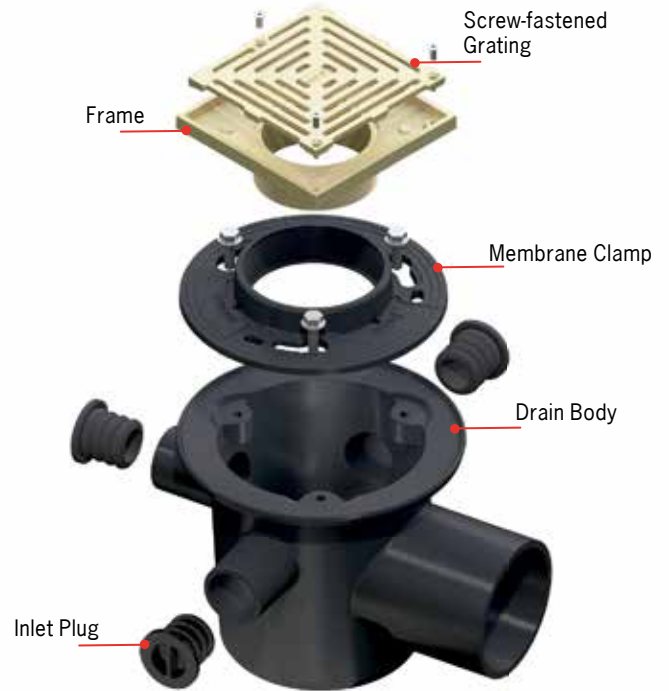
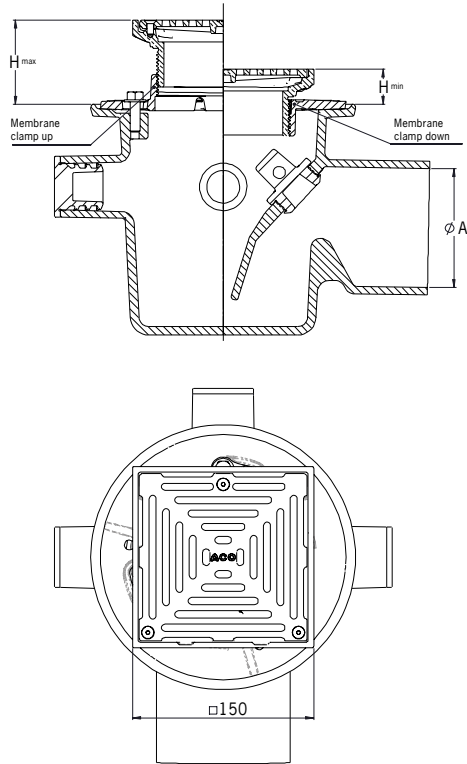
Accessories	Product Description	Article-No.
	Silt basket in stainless steel	137753
	Leveling legs, adjustable L= 250 to 280mm	137768

ACO CI Floor Drains

Horizontal Floor Drain

with nickel-bronze frame and screw-fastened grating (No-hub):

Horizontal floor drain consist of powder coated cast iron body with primary and secondary weep holes, reversible membrane clamp, three DN50 inlets closed with inlet plug (no-hub), horizontal outlet and adjustable, square, heel-safe nickel bronze grating.



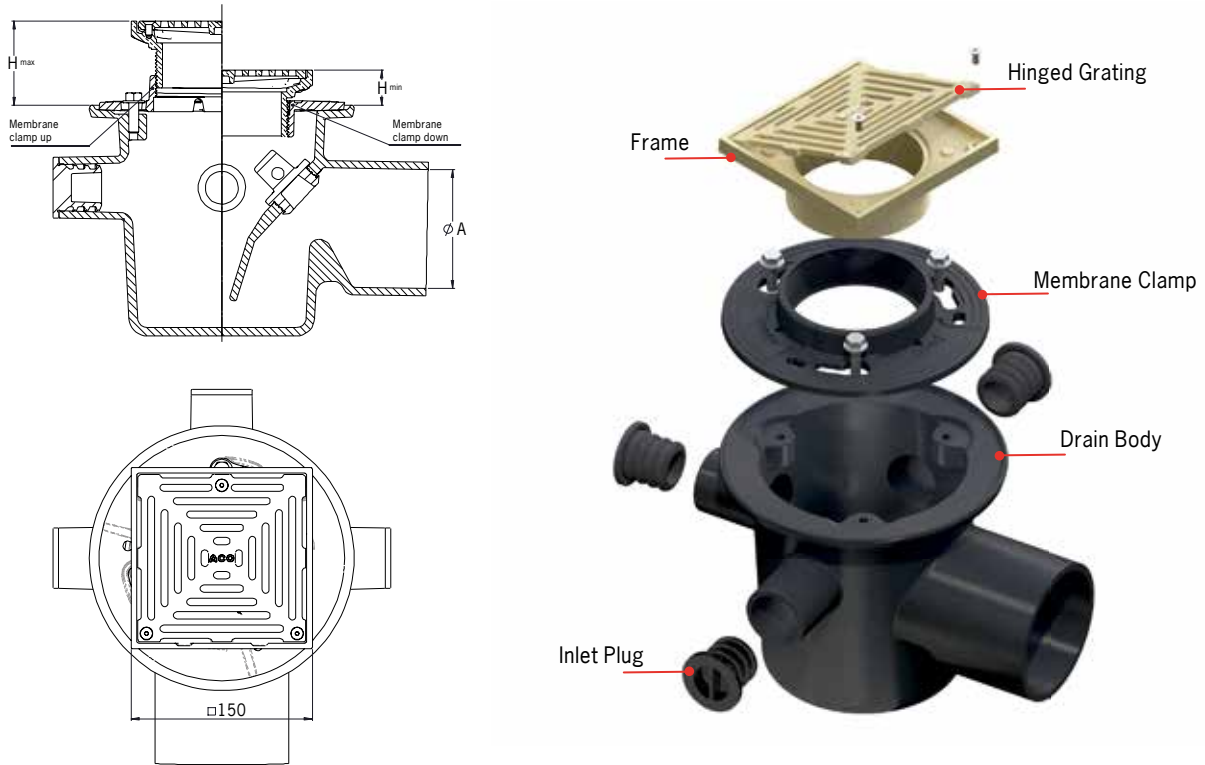
Drain Type	Load class	Outlet Size, A (mm)	Frame Size (mm)	Height, H (mm) Max.	Height, H (mm) Min.	Weight (kg)	Article-No.
DN 110	Medium Duty	110	150x150	70	30	13.1	137709

Accessory	Product Description	Article-No.
	Silt basket in stainless steel	137753


Horizontal Floor Drain

with nickel-bronze frame and hinged grating (No-hub):

Horizontal floor drain consist of powder coated cast iron body with primary and secondary weep holes, reversible membrane clamp, three DN50 inlets closed with inlet plug (no-hub), horizontal outlet and adjustable, square, heel-safe nickel bronze grating.



Drain Type	Load class	Outlet Size, A (mm)	Frame Size (mm)	Height, H (mm) Max.	Height, H (mm) Min.	Weight (kg)	Article-No.
DN 110	Medium Duty	110	150x150	70	30	13.1	137710

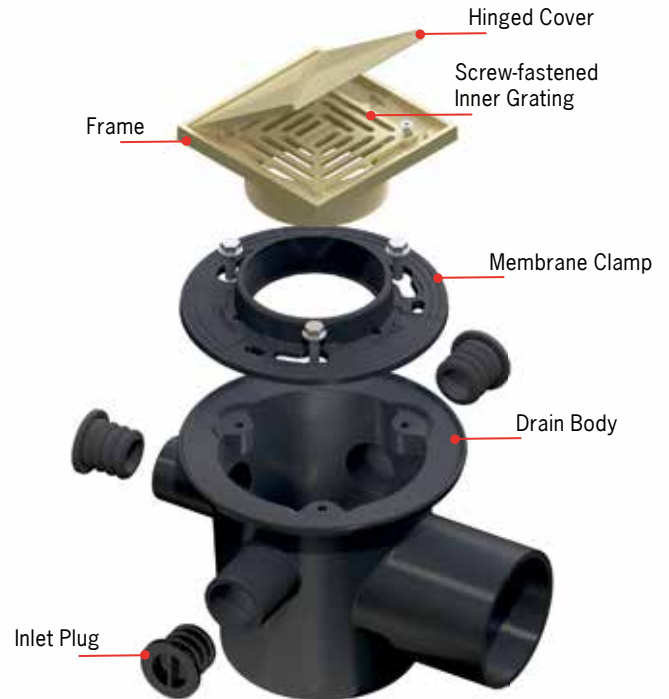
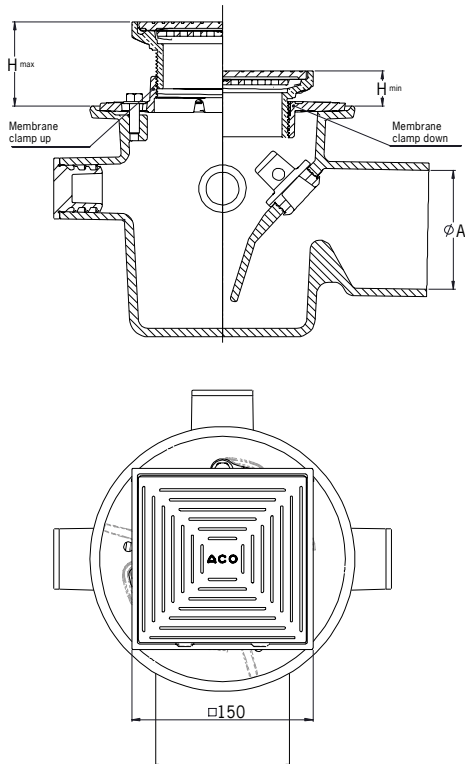
Accessory	Product Description	Article-No.
	Silt basket in stainless steel	137753

ACO CI Floor Drains

Horizontal Floor Drain

with nickel-bronze frame and solid hinged cover and inner grating (No-hub):

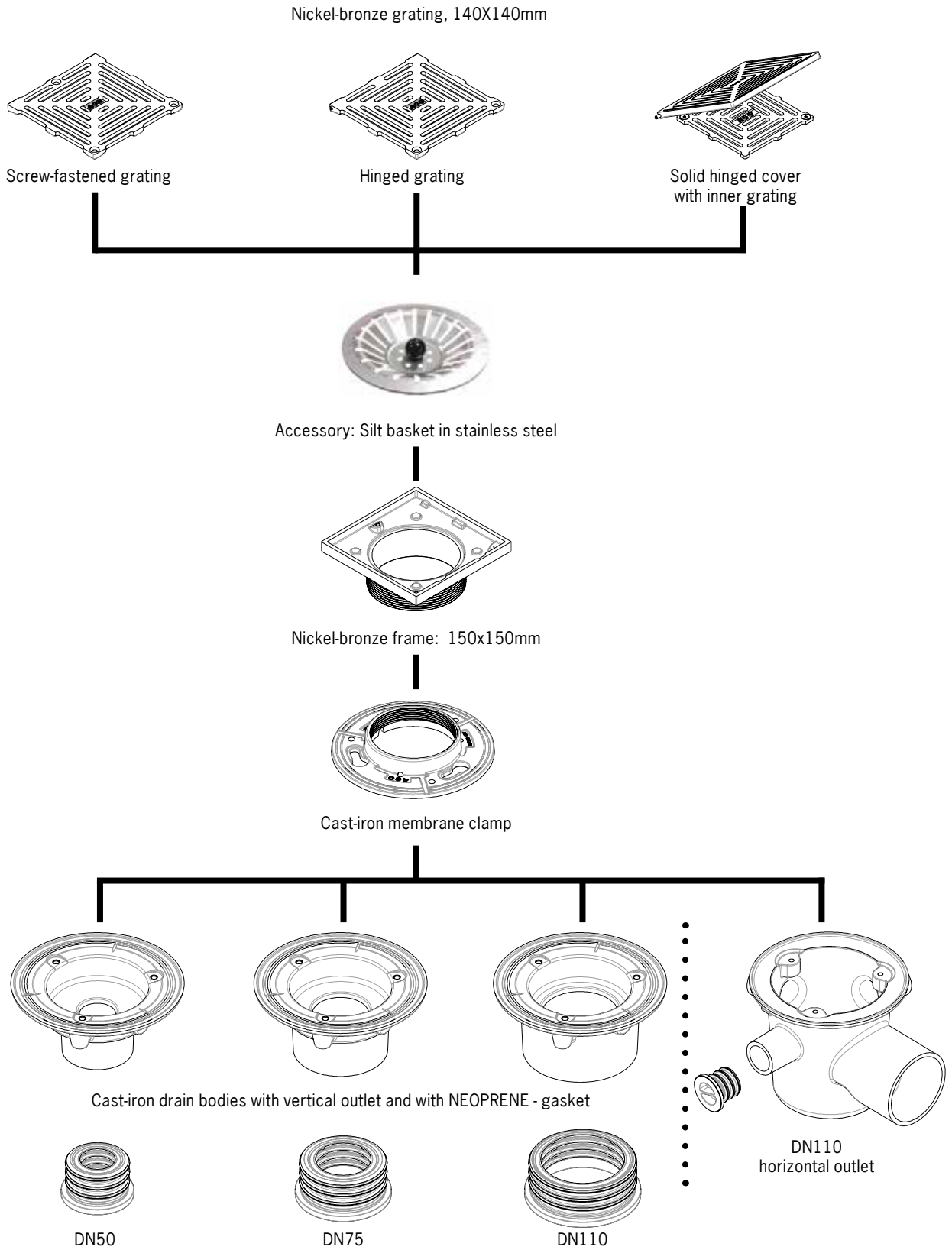
Horizontal floor drain consist of powder coated cast iron body with primary and secondary weep holes, reversible membrane clamp, three DN50 inlets closed with inlet plug (no-hub), horizontal outlet and hinged solid cover with inside square, heel-safe nickel bronze grating.



Drain Type	Load class	Outlet Size, A (mm)	Frame Size (mm)	Height, H (mm) Max.	Height, H (mm) Min.	Weight (kg)	Article-No.
DN 110	Heavy Duty	110	150x150	70	30	13.5	137711

Accessory	Product Description	Article-No.
	Silt basket in stainless steel	137753

Product Flow Chart: Floor Drain





List of article numbers of combined and individual parts for Floor Drains:

Combined Parts:

	Combined Parts	Load Class	Dimensions (mm)	Article-No.
	Nickel-bronze frame with screw-fastened grating	Medium Duty	150x150	137740
	Nickel-bronze frame with hinged grating	Medium Duty	150x150	137741
	Nickel-bronze frame with solid hinged cover with inner grating	Heavy Duty	150x150	137742

Individual Parts:










	Individual Parts	Description	Dimensions (mm)	Article-No.
	Cast-iron drain body DN50	Vertical outlet	H=100 Flange Dia.=215	137745
	Cast-iron drain body DN75	Vertical outlet	H=100 Flange Dia.=215	137746

List of article numbers of individual parts for Floor Drains:

Individual Parts:

	Individual Parts	Description	Dimensions (mm)	Article-No.
	Cast-iron drain body DN110	Vertical outlet	H=100 Flange Dia.=215	137747
	Cast-iron drain body DN110	Horizontal outlet	H=190 Flange Dia.=215	137748
	NEOPRENE - Gasket DN50	For vertical floor drain	H=50	137749
	NEOPRENE - Gasket DN75	For vertical floor drain	H=50	137750
	NEOPRENE - Gasket DN110	For vertical floor drain	H=50	137751
	Cast-iron membrane clamp	With M110×3 thread	Flange Dia.=200	137752
	Silt basket	in stainless steel	90 X 50	137753
	Nickel-bronze screw-fastened grating	Medium duty and heel-safe	140 X 140	137754

List of article numbers of individual parts for Floor Drains:
Individual Parts:

	Individual Parts	Description	Dimensions (mm)	Article-No.
	Nickel-bronze hinged grating	Medium duty and heel-safe	140 X 140	137765
	Nickel-bronze solid hinged cover	Heavy duty	150 X 150	137766
	Nickel-bronze inner grating	For solid hinged cover	110 X 110	137767
	Nickel-bronze frame	For screw-fastened grating	150 X 150	137755
	Nickel-bronze frame	For hinged grating	150 X 150	137756
	Nickel-bronze frame	For solid hinged cover	150 X 150	137757
	Water trap Rubber plug	For horizontal floor drain	Ø40	137758
	Rubber inlet plug	For horizontal floor drain	Ø50	137759
	Leveling legs, adjustable	For vertical drain bodies DN50 DN75 DN110	Set of 3 pcs, L= 250 to 280mm	137768

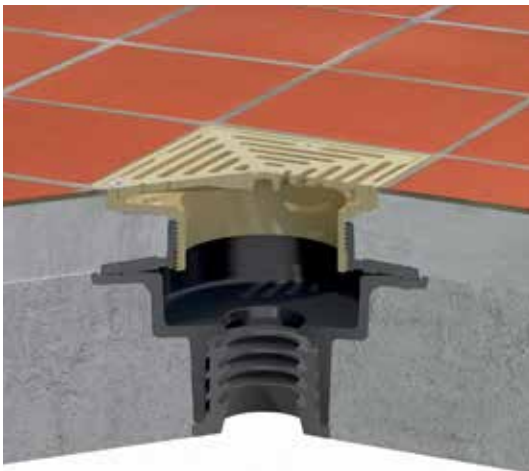
Typical Installations

ACO Floor Drains incorporate features developed and tested to meet requirements of residential and commercial grey water applications. These features ensure the specifier, installer and user of completely trouble free installation and performance.

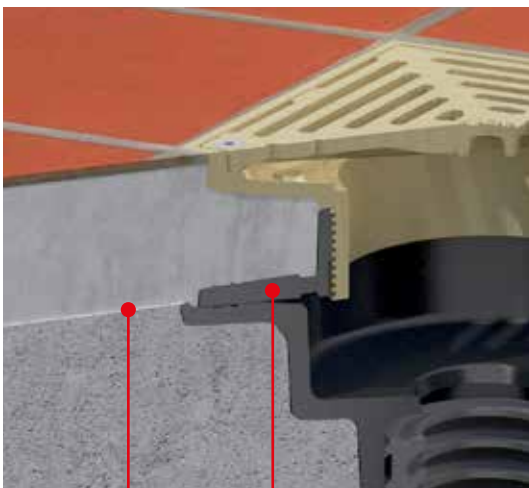
Floor Drains

The type of connection should be specified upon ordering any ACO drain.

- Initially the drain pipe is run to an elevation below the expected finished floor level, so that the drain top will be flush with (or slightly below) the finished floor.
- As the drain is set in place, the concrete sub-floor is poured to a level with the top flange of the drain body. Then the water proofing membrane is run up to and over the flange.

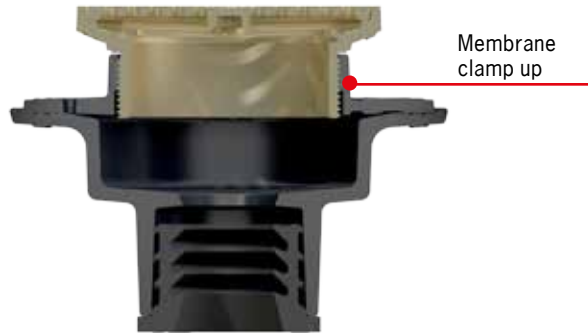


- The membrane clamp is then placed on the drain and secured. The strainer is fixed into the membrane clamp and finished floor is poured to finished grade.



Membrane Membrane clamp

- Changing the clamp ring orientation (down or up) allows for more significant height alterations. Once orientation of the clamp ring is established and fixed in place, install the adjustable grate assembly.

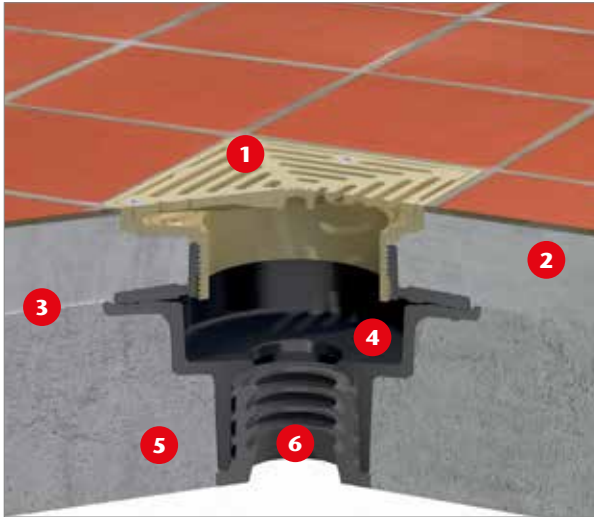


- The throat height adjustment - unique to the ACO Floor Drain. It provides exceptional flexibility and accuracy of adjustment. The throat is threaded; So it allows for easy fine tuning of height adjustment by turning either clockwise to lower, or anti-clockwise to raise, until required height is achieved.



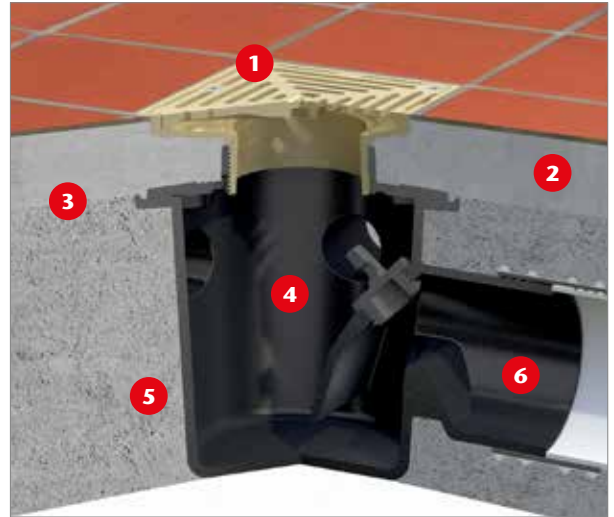
Installation illustrations

Vertical Floor Drain: 137700



- 1** Top grating
- 2** Screed/Mortar

Horizontal Floor Drain: 137709



- 3** Waterproof membrane
- 4** Drain body
- 5** Concrete slab
- 6** Outlet pipe

Care And Maintenance

ACO floor drains require minimum maintenance when they have been correctly installed. Scheduled inspections should be carried out to ensure that they continue to perform efficiently.

Initial Inspection

Once drains have been installed they should be inspected to ensure that all parts are accounted for and correctly fitted. Nuts and bolts need to be tight and secure. Care must be taken around sharp objects (screws etc.) left by other trades, as they may be trodden on. This can cause damage to the surface material and/or waterproof membrane.



Floor Drain Maintenance

Regular drain cleaning is very important where there is the potential of severe flooding. Floor drains are an entry point into the sanitary or stormwater drainage system. Waste is often washed down from floors as well as leaves and litter from external pavements. If maintenance is neglected, solid debris will inevitably clog the underlying pipework causing backups.

Drains in commercial kitchens need particular attention, because wastewater generally contains fats, oil and grease.

The use of stainless steel silt baskets for such applications are recommended to prevent debris from reaching pipework and resulting in costly maintenance.

Stainless steel silt baskets must be cleaned regularly. Cleaning intervals are determined by the amount of debris present after each cleaning session.

ACO floor grates are appropriate for general use in and around buildings including most coastal locations.

Clean with soap, warm water rinse and wipe dry. Under no circumstances treat with chemicals, metal scouring pads, metal scrapers or wire wool as these will contaminate surfaces leaving rust spots.

Cleanouts



Introduction

ACO Cleanouts incorporate features developed to meet the latest in building construction methods. These cleanouts ensure the specifier, installer and user of completely trouble-free installation and performance. Cleanouts provide access to drainage piping for cleaning out purposes. ACO cleanouts come with a variety of sizes and shapes. Certain things to be taken into consideration when selecting the right cleanout during installation.

Selecting a Cleanout

To select the proper cleanout, the following information must be known:

1. Location
2. Top shape
3. Aesthetics
4. Material
5. Load class

Location:

Areas having finished floors such as hospitals, offices and restaurants will require finished floor cleanouts. Scoriated nickel bronze finish is most used in such areas.

Top shape:

ACO features square and round shaped cleanout frame tops. Round cover is available that fits both the frames. Round cover is most preferred because it does not conflict with floor design, nor does it require alignment to adjacent walls.

Aesthetics:

ACO features products that can be specified and installed with confidence and pride. The cleanout is aesthetically pleasing when the proper top material and shape are specified to harmonize with the surrounding environment.

Material:

ACO cleanout bodies are produced from cast iron which conforms to ASTM A48-40A or ENGL- 300. They are then powder coated with anthracite grey (RAL7016). Powder coating increases corrosion resistance and wear resistance properties of the drain. They are tested to withstand salt spray test as per standard ASTM B 117.

Covers and frames are made of Nickel-Bronze that conforms to mechanical requirements of copper alloys as per ASTM B 584.

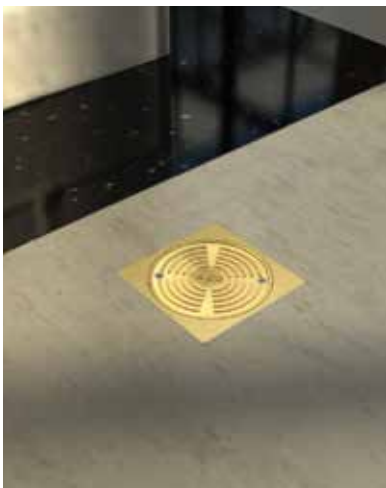
Neoprene gaskets provided with ACO Drains conform to requirements of ASTM C 564.

Load class:

Type of traffic that the cleanout top must withstand should also be considered. Covers provided with ACO cleanout conform to Top Loading Classification as defined in para. 5.1 of ASME A112.6.3-2001. They fall under:

- Light Duty - under 2,000lb (900kg)
- Medium Duty - between 2,000lb (900kg) and 4,999lb (2,250kg)
- Heavy Duty - between 5,000lb 2,250kg) and 7,499lb (3,375kg)

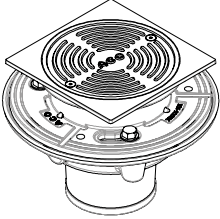
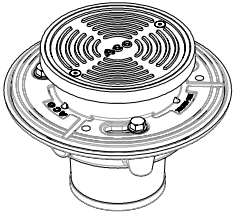
Please refer to specific article details for exact load class information.



Note: Products should be used for residential and commercial purpose only. Not recommended for industrial and chemical environments.

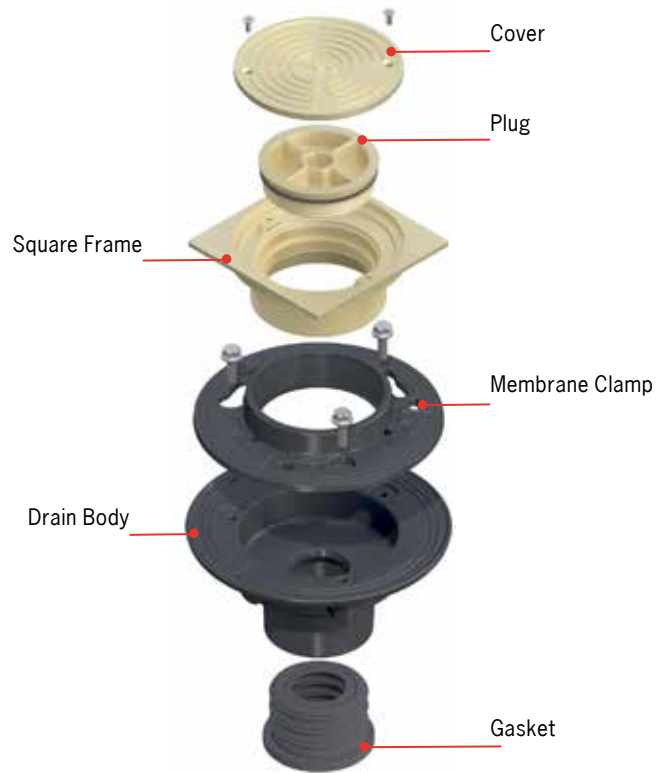
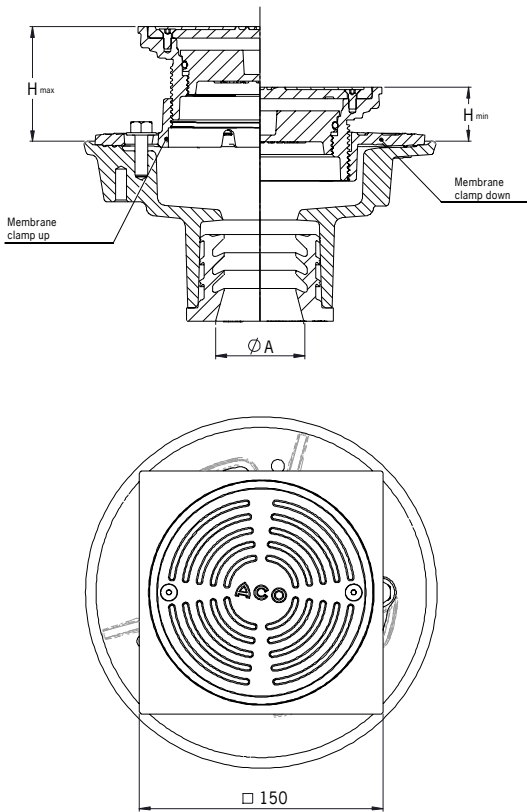
ACO CI Cleanouts

Cleanouts with vertical outlet

	Product Description	Outlet Size	Article-No.
	Cast-Iron Cleanout with nickel-bronze square frame (Page No. 21)	DN 50	137712
		DN 75	137713
		DN 110	137714
	Cast-Iron Cleanout with nickel-bronze round frame (Page No. 22)	DN 50	137715
		DN 75	137716
		DN 110	137717

Vertical Cleanout – Square Frame:

ACO features vertical cleanouts in 3 different outlet sizes. Vertical cleanout consist of powder coated cast iron body with weep holes, gasketed vertical outlet, reversible membrane clamp, height adjustable frame with odor proof plug and cover.



Article - No.137712 Shown

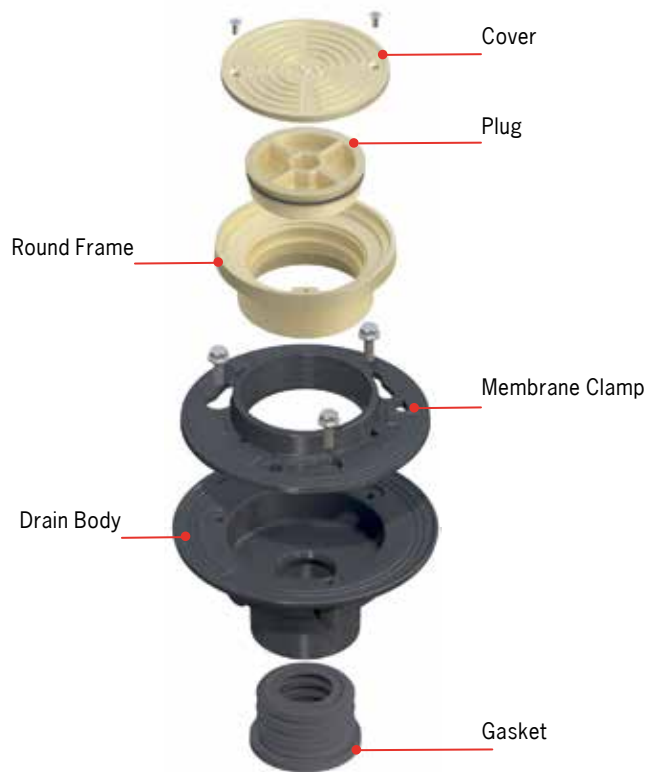
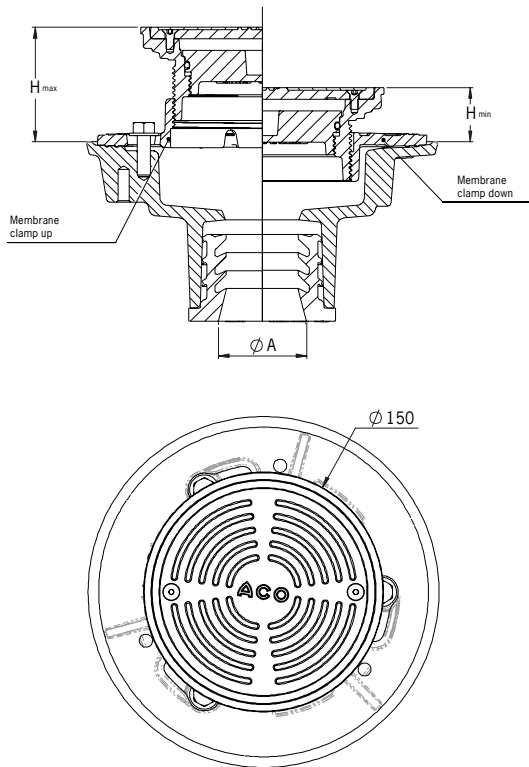
Drain Type	Load class	Outlet Size, A (mm)	Frame Size (mm)	Height, H (mm) Max.	Height, H (mm) Min.	Weight (kg)	Article-No.
DN 50	Heavy duty	50	150x150	70	30	8.9	137712
DN 75	Heavy duty	75	150x150	70	30	9.2	137713
DN 110	Heavy duty	110	150x150	70	30	9.6	137714

Accessory	Product Description	Article-No.
	Leveling legs, adjustable L= 250 to 280mm	137768

ACO CI Cleanouts

Vertical Cleanout – Round Frame:

ACO features vertical cleanouts in 3 different outlet sizes. Vertical cleanout consist of powder coated cast iron body with weep holes, gasketed vertical outlet, reversible membrane clamp, height adjustable frame with odor proof plug and cover.

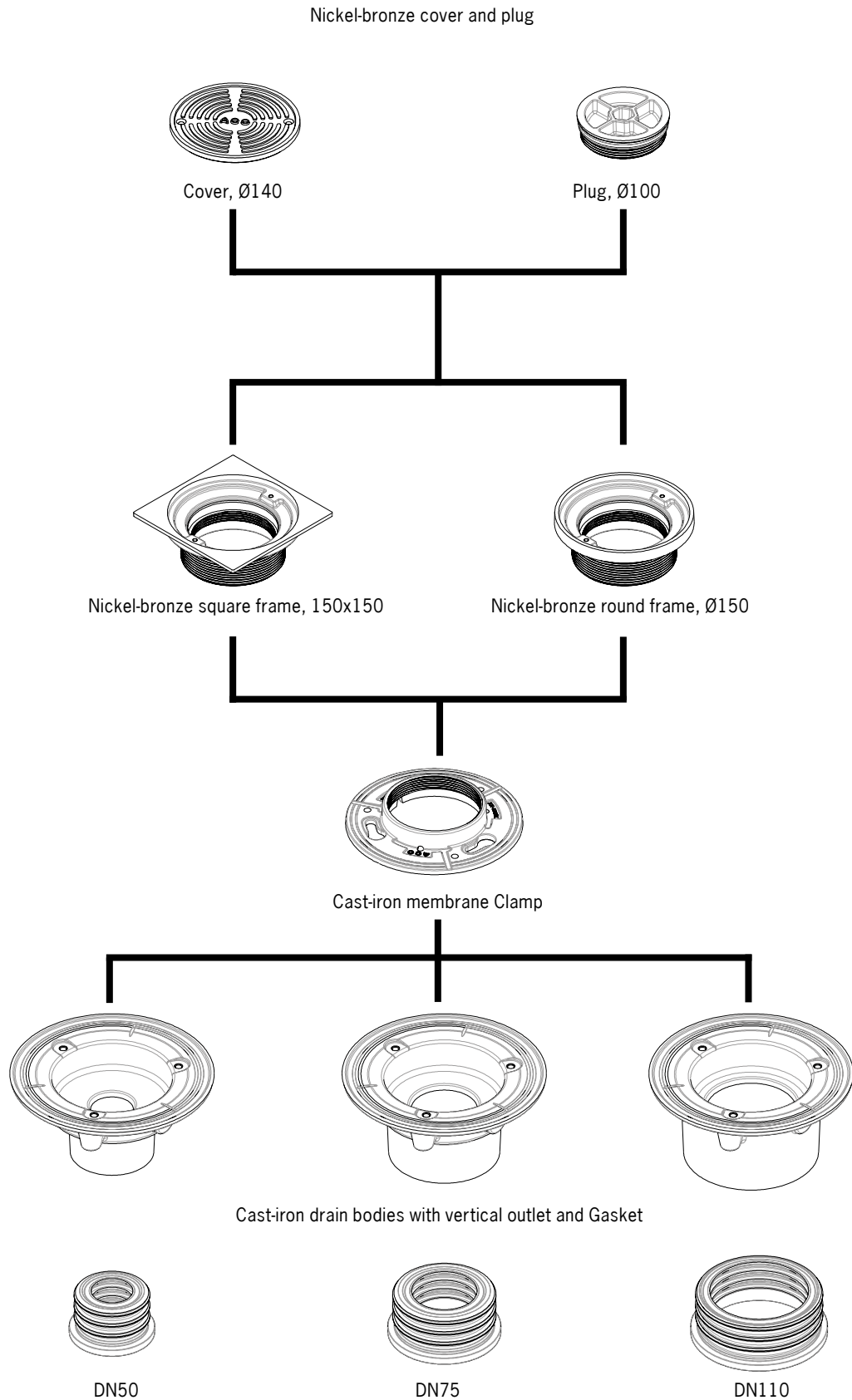


Article - No.137715 Shown

Drain Type	Load class	Outlet Size, A (mm)	Frame Size (mm)	Height, H (mm) Max.	Height, H (mm) Min.	Weight (kg)	Article-No.
DN 50	Heavy duty	50	Ø150	70	30	8.7	137715
DN 75	Heavy duty	75	Ø150	70	30	9.0	137716
DN 110	Heavy duty	110	Ø150	70	30	9.4	137717

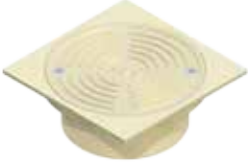

Accessory	Product Description	Article-No.
	Leveling legs, adjustable L= 250 to 280mm	137768

Product Flow Chart: Cleanout



List of article numbers of combined and individual parts for Cleanouts:

Combined Parts:

	Combined Parts	Load Class	Dimensions (mm)	Article-No.
	Nickel-bronze square frame and cover with plug	Heavy Duty	150x150	137743
	Nickel-bronze round frame and cover with plug	Heavy Duty	ø150	137744

Individual Parts:

	Individual Parts	Description	Dimensions (mm)	Article-No.
	Cast-iron drain body DN50	With vertical outlet	H=100 Flange Dia.=215	137745
	Cast-iron drain body DN75	With vertical outlet	H=100 Flange Dia.=215	137746
	Cast-iron drain body DN110	With vertical outlet	H=100 Flange Dia.=215	137747
	NEOPRENE - Gasket for drain body DN50	For vertical drain	H=50	137749

List of article numbers of individual parts for Cleanouts:

Individual Parts:

	Individual Parts	Description	Dimensions (mm)	Article-No.
	NEOPRENE - Gasket for drain body DN75	For vertical drain	H=50	137750
	NEOPRENE - Gasket for drain body DN110	For vertical drain	H=50	137751
	Cast-iron membrane clamp	With M110×3 thread	Flange Dia.=200	137752
	Nickel-bronze square frame	For cleanout	150x150	137760
	Nickel-bronze round frame	For cleanout	Ø150	137761
	Nickel-bronze round cover	Heavy duty	Ø140	137762
	Nickel-bronze Cleanout plug	For cleanout	Ø100	137763
	O-Ring	For nickel-bronze cleanout plug	Ø95	137764
	Leveling legs, adjustable	For vertical drain bodies DN50 DN75 DN110	Set of 3 pcs, L= 250 to 280mm	137768

ACO CI Cleanouts

Typical Installations

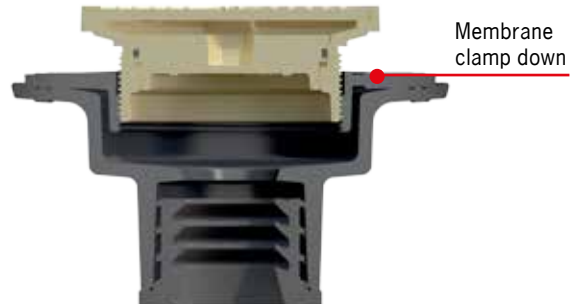
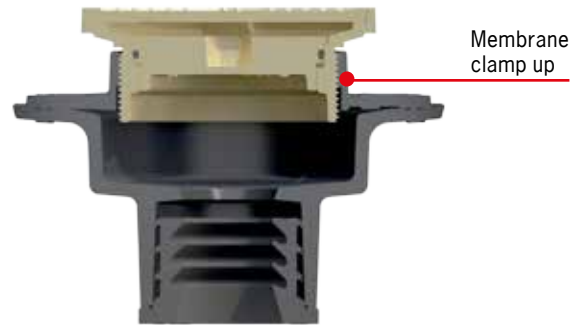
ACO Cleanouts incorporate features developed and tested to meet the requirements of all types of modern floor and surface construction related to our industry and the plumbing drainage systems involved. These features ensure the specifier, installer and user of completely trouble free installation and performance.

Cleanouts

The type of connection should be specified upon ordering any ACO drain.

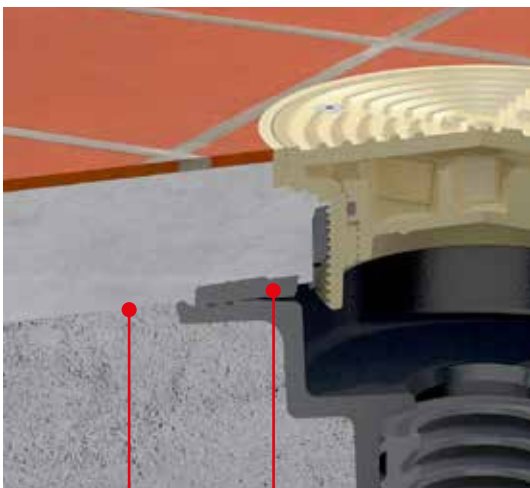
- Initially the drain pipe is run to an elevation below the expected finished floor level, so that the drain top will be flush with (or slightly below) the finished floor.
- As the drain is set in place, the concrete sub-floor is poured to a level with the top flange of the drain body. Then the water proofing membrane is run up to and over the flange.

- Changing the clamp ring orientation (down or up) allows for more significant height alterations. Once orientation of the clamp ring is established and fixed in place, install the adjustable frame-cover assembly.



- The membrane clampe is then placed on the drain and secured.

- The throat height adjustment - unique to the ACO Cleanout. It provides exceptional flexibility and accuracy of adjustment. The throat is threaded; So it allows for easy fine tuning of height adjustment by turning either clockwise to lower, or anti-clockwise to raise, until required height is achieved.

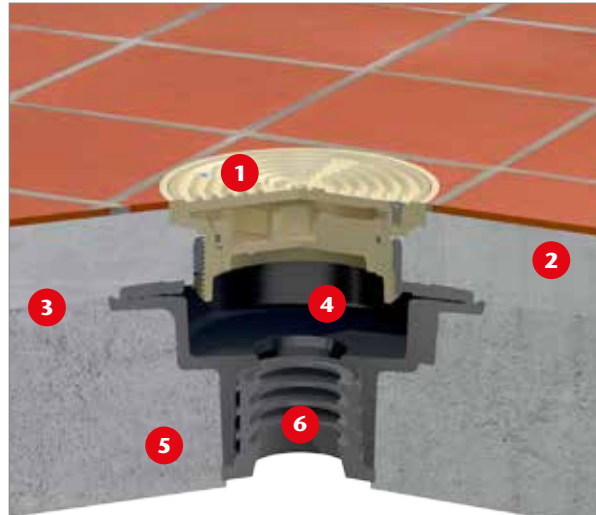


Membrane Membrane clamp



Installation Illustrations

Vertical Cleanout: 137715



- | | | |
|------------------------|------------------------------|------------------------|
| 1 Top grating | 3 Waterproof membrane | 5 Concrete slab |
| 2 Screed/Mortar | 4 Drain body | 6 Outlet pipe |

Care And Maintenance

ACO cleanouts require minimum maintenance when they have been correctly installed. Scheduled inspections should be carried out to ensure that they continue to perform efficiently.

Initial Inspection

Once drains have been installed they should be inspected to ensure that all parts are accounted for and correctly fitted. Nuts and bolts need to be tight and secure. Care must be taken around sharp objects (screws etc.) left by other trades, as they may be trodden on. This can cause damage to the surface material and/or waterproof membrane.



Cleanout Maintenance

Cleanouts are located at various points on a property. In order to keep sewer systems functioning properly, they must be cleaned regularly. Determining the location of cleanout pipes is must. Once the location of cleanouts is determined, ensure that they are unobstructed for easy access. Use a wrench to access a cleanout pipe. Once opened, plumbing snake is pushed down into the pipe and blockages are cleared to enable the continuous flow of waste. It may be necessary at times to use a camera to determine where the blockage is. The plumbing camera is also inserted down into the pipe and transmits an image of the environment inside the pipe. Once the blockage is identified, the plumbing snake should be employed to remove the blockage to prevent backup.

ACO cleanouts are appropriate for general use in and around buildings including most coastal locations. Clean with soap, warm water rinse and wipe dry. Under no circumstances treat with chemicals, metal scouring pads, metal scrapers or wire wool as these will contaminate surfaces leaving rust spots.

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