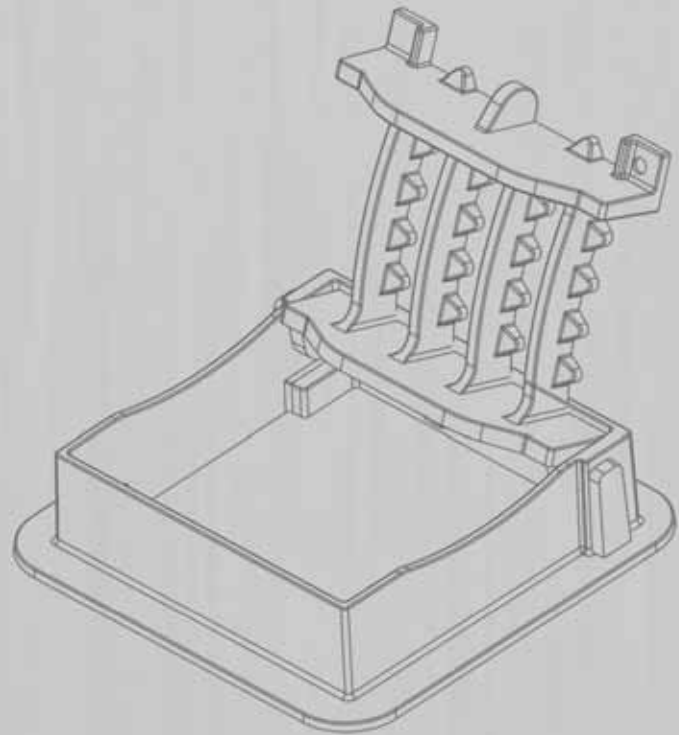


**International Casting & Modern Industries (S.A.E)
(I.C.M.I)**



MANHOLE COVERS & GRATINGS



MANHOLE COVERS & GRATINGS





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Vision Statement

To be the market leader foundry & one of the key global players in the fields of infrastructure, engineering, and automotive castings.

Mission Statement

To grant satisfaction to our customers through team commitment to QDC, implementation of the latest technologies, and environmental compliance.

Aiming at absolute fulfillment of suppliers, we constantly strive to provide variability, development, and credibility.

To continuously improve communication, development, and career path building for our team, as well as enhancing shareholders' values lie as our core philosophy.



Dear customer,

Dear business partner,

We are glad to present you the new edition of our product catalogue for Manhole covers, Gratings, Siphons and Channel gratings made from ductile and grey iron.

In addition to our quality guarantee and reliability, our product range and specialization,

We have the pleasure to always assist you with planning, service and individual customer care.

You can depend on ICMI consultants, technicians and designing engineers to attend to your questions, particular tasks and demands, At all times. Of course, we also appreciate your incitations and feedback.

Give us a call!

Sales team

+2 01226555411



Company

The casting industry is one of the important industries in the field of engineering industries worldwide. Hence the need to establish a foundry that can supply quality castings at a competitive price with short delivery time was the challenge that International Casting and Modern Industries Co. (ICMI) decided to go through by establishing its first foundry in 2007.

Production

ICMI started its production 2007 using the most advanced technologies in the casting industry (Full automated, semi-automated lines) producing the following products from grey iron:

- Centrifugal pump components
- Electrical motors frames
- Mechanical casting

In 2011, ICMI decided to start a new product range that could fully utilize its expertise over the past years in an independent way and through innovative commercial strategies.

Hence, ICMI started to export Manhole covers to Europe through five European partners in England, Germany, Poland, Cyprus and Italy.

In 2013, ICMI introduced its manhole covers to the local market.

ICMI's products are all designed, produced, machined and certified in accordance to the EN124 European Standard, that regulates the closing devices of sewage access and of crowning of sumps for collection of street waters, which are permanently and occasionally subjected to street loads.

In order to make the consultation of the catalogue easier and quicker, the wide set of crowning devices and closing ductile iron systems have been classified by product typologies: First you will find the MANHOLE COVERS section, then, the GRATINGS, and lastly, the GRATINGS FOR CHANNELS WITH LONGITUDINAL MEMBERS for linear drainage.

Ductile Cast Iron

Ductile cast iron is a ferrous alloy with carbon content higher than 2%, either loose as graphite **OR** as iron carbide Fe_3C (cementite). The former is called Grey Iron and the latter white iron. While grey iron is to be preferred to make manhole covers and gratings, white iron is very fragile and hard, so it is not suitable to make utensils.

Grey iron can be either lamellar or ductile cast iron:

Lamellar Cast Iron:

Lamellar cast iron is made up of thousands of plates which interrupt the continuity of the metal matrix and consequently jeopardize its mechanical resistance and make it subject to possible cracking **OR** breaking.

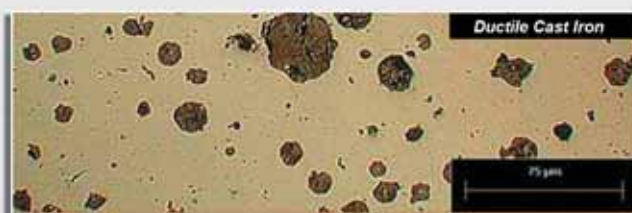
Ductile Cast Iron:

Ductile cast iron is made up of spheroids achieved by introducing suitable quantity of magnesium into the bath before the casting, This gives the product a high breaking load as well as remarkable elasticity.

A comparison between lamellar cast iron and ductile cast iron shows that:

- Ductile cast iron has a higher breaking safety coefficient, since it follows any deformation due to loads without breaking (unlike lamellar cast iron), then returning the original condition after stress;
- To manufacture a product in lamellar cast iron with the same load class as a ductile cast-iron product, you need more mass. So the product will be heavier with higher shipment and handling costs.

Ductile cast iron is therefore a very valuable building material: it has as many benefits as lamellar cast iron but it does not have some of its defects. Its mechanical characteristics as similar to those of good-quality steel.



ICMI manhole covers and gratings are manufactured in an officially ISO 9001 and OHSAS 18001 certified factory located in 10th of Ramadan city with lamellar and ductile cast iron GJS 500-7 (standard EN 1563-2004) They are designed in accordance with EN124 standard based on ISO 9001:2008 procedures, which certify the quality system of the product/service supplied by ICMI.

EXCERPT FROM STANDARD EN124







Manhole covers and gratings for pedestrian and vehicular traffic.
Manufacturing principles, type tests, marks, quality control.

4. Classification

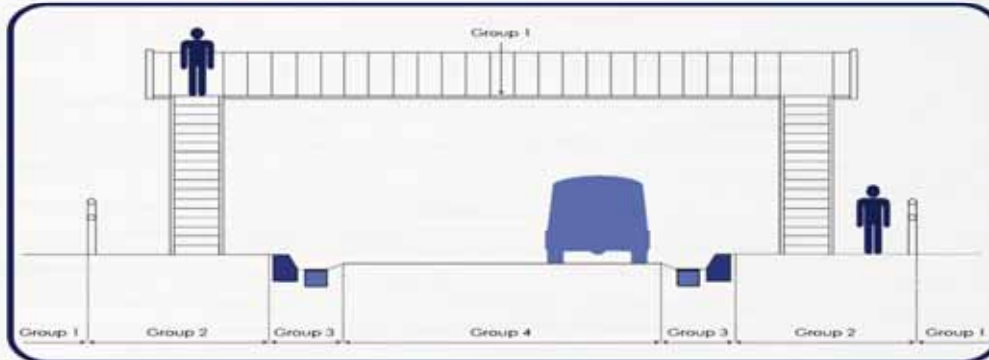
Manhole covers and gratings are divided into the following classes:

A15, B125, C250, D400, E600, F900.

LOAD CLASSES

LOAD CLASSES		
	Class A15	Areas that can only be used by pedestrians and pedal cyclists
	Class B125	Footways, pedestrian areas and comparable areas, car parks or parking decks
	Class C250	For gratings installed in the area of kerbside channels of roads which, when measured from the kerb edge, extend maximum 0.5 into the carriageway and maximum 0.2 m into the footway
	Class D400	Carriageways of roads (pedestrian streets included), hard shoulders and parking areas for all types of road vehicles.
	Class E600	Area subject to high axle loads such as docks and airports
	Class F900	Areas subject to very high axle loads such as airport

EN 124 Application Drawing



6 Materials

6.1 General

6.1.1 Manhole covers and gratings

The manhole covers gratings (gratings excluded) are manufactured in the following materials:

- Lamellar cast iron.
- Ductile cast iron.
- Steel castings.
- Rolled steel.
- One of materials a) b) c) d) Combined with concrete.
- Reinforced concrete (plain concrete excluded)

Rolled steel can be used only if suitable protection against corrosion is ensured.

The type of corrosion required against corrosion will be agreed upon by the customer and supplier.

6.1.2 the grating must be manufactured in :

- lamellar cast iron
- ductile cast iron
- steel castings

The filling of the covers can be made of concrete or other suitable materials.

8- Tests

All manhole covers and gratings must be tested as complete units in operations. Compliance with the load requirements of the relevant class must be determined by a load test.

9 Marks

All manhole covers, gratings and frames must have a legible durable mark showing:

- EN124 (reference to the standard)
- The relevant class (e.g. D400) or relevant classes for the products used for several classes (e.g. D400) – E600)
- The name and/or identification mark of the manufacturer and the place of production – which can be expressed as a code.
- Certifier's mark. The following information may be shown too
- Additional marks about the application or owner
- Product identification (name and/or number of catalogue)
Said marks must be clearly and durably shown.
They should be visible when the unit is installed, if possible.

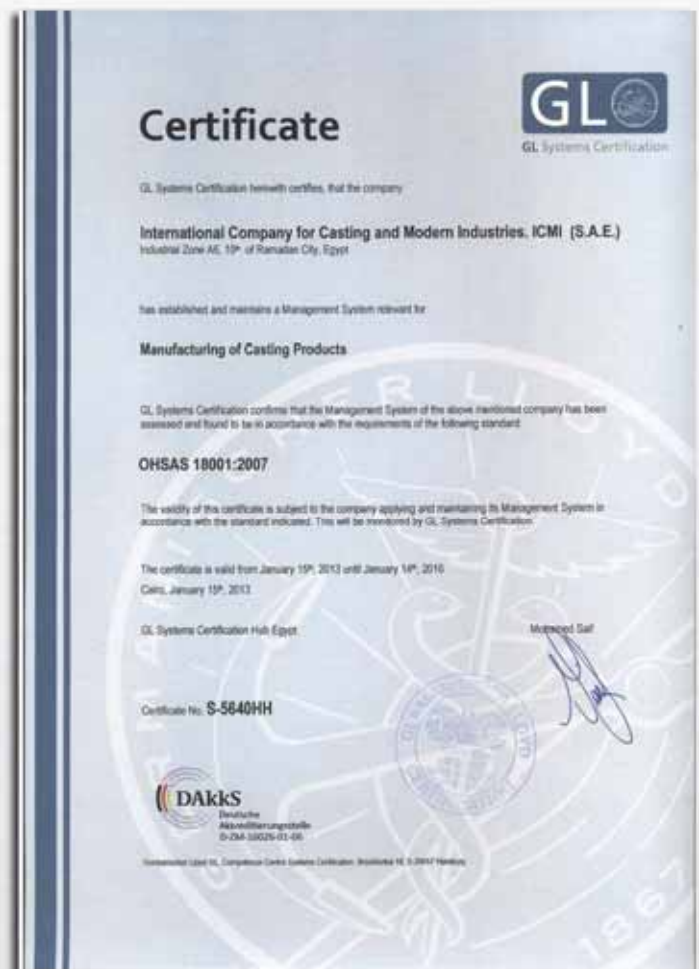


QUALITY ASSURANCE CERTIFICATES

The concept of quality in a company must be intended as the "ability to meet the needs of all the stakeholders involved in the processes of production supply and use of products and services: The customers and / or users, workers, owners and shareholders, suppliers and the community in general are consequently concerned based on the company's strategies.

In 2008, ICMI was awarded the certificates of compliance with standard ISO 9001 and OHSAS 18001 by Germanischer Lloyd SE for Manufacturing of Casting Products.

Manhole covers and gratings marked ICMI. This means that all the company's processes from the management of resources to the manufacture of the products- including the definition of responsibilities, the analysis and improvement of the processes – are handled systematically and regularly, and they are aimed to meet customers' requests and to ensure consistency in the quality of the goods manufactured.





BSI PRODUCT CERTIFICATES

Some of the manhole covers and gratings ductile iron manufactured by ICMI are KiteMark certified in accordance with the EN124 "Manhole covers and gratings".

The certificate is a further guarantee for the final customer that the products are manufactured and comply with the reference specifications.

This also ensure that the regular checks specified by standard EN124 are carried out, as ICMI continuously performs load tests in its in-house laboratory as well as metallographic analysis and tensile tests in external laboratories.

bsi.
Kitemark™ Licence



This is to certify that: **International Casting & Modern Industries Co. (ICMI)**
Industrial Zone A6
10th of Ramadan City
Egypt

Holds Kitemark Licence Number: **KM 578538**

In respect of:
BS EN 124
Gully tops and manhole tops for vehicular and pedestrian areas.

This issues the right and Licence to use the Kitemark in accordance with the Kitemark Terms and Conditions governing the use of the Kitemark, as may be updated from time to time by BSI Assurance UK Ltd (the "Conditions"). All defined terms in this Licence shall have the same meaning as in the Conditions.

The use of the Kitemark is authorized in respect of the Product(s) detailed on this Licence provided at or from the above address.

For and on behalf of BSI:

Gary Fenton, Global Assurance Director

First Issued: 16/02/2012 Latest Issue: 18/12/2013



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No. **KM 578538**

BS EN 124:1994 - Gully tops and manhole tops for vehicular and pedestrian areas.
Design requirements, type testing, marking, quality control.

Ductile Iron Gully Tops and Manhole Tops

Class	Model reference	Description	Nominal clear opening (mm)	Nominal frame depth (mm)
D400	DU001	Manhole top	600 x 600	100
D400	DU002	Manhole top	600 x 600	150
D400	DU020	Manhole top	300 x 300	100
D400	DU022	Manhole top	675 x 675	100
D400	DU034	Manhole top	600 x 600	100
D400	DU040	Manhole top	440 x 400	150
D400	DU060	Manhole top	600 x 450	100
D400	DU077	Manhole top	145 x 145	100
D400	DU079	Manhole top	450 x 450	100
D400	DU084	Manhole top	675 x 675	150
D400	DU116	Manhole top	425 x 280	100
B125	DU027R	Manhole top	450 x 450	45
B125	DU044A	Manhole top	600 x 600	42
B125	DU043A	Manhole top	600 x 450	45
D400	DU036	Gully top	435 x 380	100
D400	DU008	Gully top	435 x 435	100
D400	DU009	Gully top	435 x 380	100
D400	DU135	Gully top	435 x 380	150
D400	DU136	Gully top	435 x 380	150

First Issued: 16/02/2012 Latest Issue: 18/12/2013

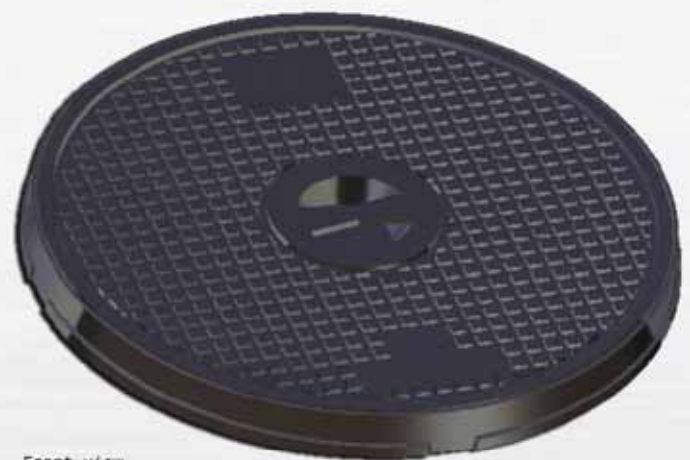
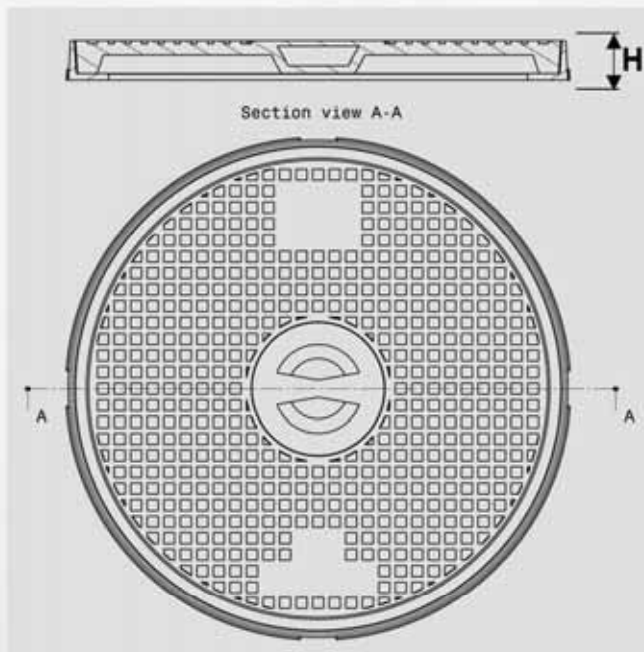
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Manhole Cover Round – None ventilated

Main Features:

- Grey iron Manhole cover EN-GJL- 250 according to EN1563
- Class A15 in compliance with EN124 – pedestrians and pedal cyclists.
- Round cover and frame with anti-slippery surface in compliance with EN124
- Single seal
- Non ventilated cover to prevent vitiated air spreading from underground to the outside
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the manhole cover surface with writing and /or logos



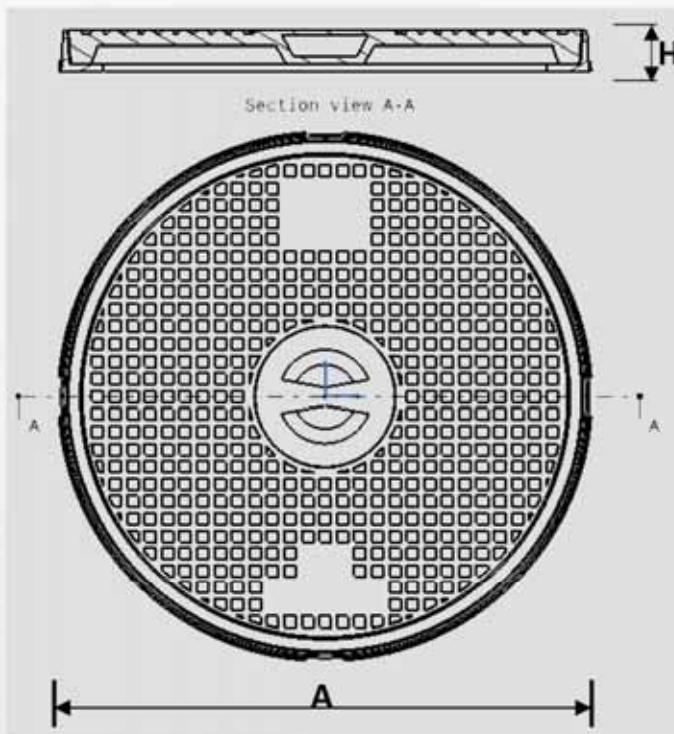
Front view
Scale: 1:3

Designation	Dimensions (mm)			Material	Coating	Grade
	A	CO	H			
Manhole cover, Class A15	320	270	30	EN 1563 Grade GJL-250	Black Bitumen	A15
	430	380	35			
	530	470	38			
	640	550	40			

Manhole Cover Round – None ventilated

Main Features:

- Ductile Iron Manhole cover EN-GJS-500/7 according to EN1563
- Class B125 in compliance with EN124 – Footways, pedestrian areas and comparable areas, car parks or parking decks
- Round cover and frame with anti-slippery surface in compliance with EN124
- Single seal
- Non ventilated cover to prevent vitiated air spreading from underground to the outside
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the manhole cover surface with writing and /or logos

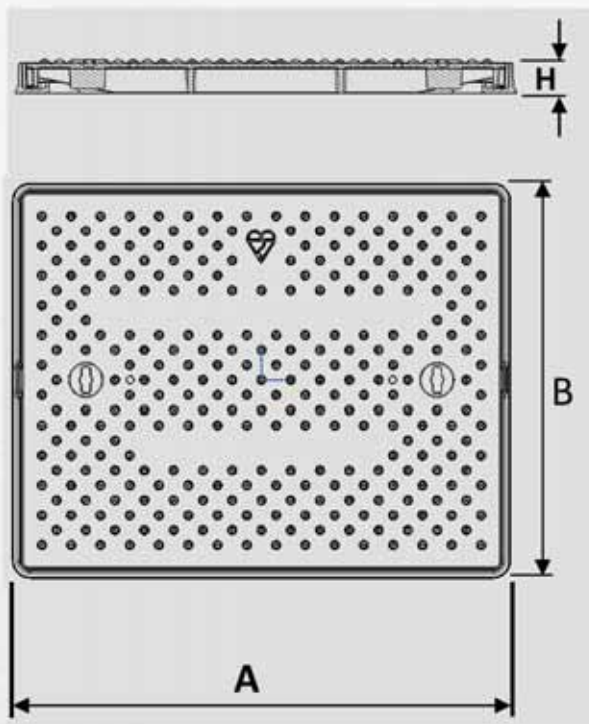


Designation	Dimensions (mm)			Material	Coating	Grade
	A	CO	H			
Manhole cover, class B125	320	270	30	EN 1563 Grade GJS-500/7	Black Bitumen	B125
	430	380	35			
	530	470	38			
	640	550	40			

Manhole Cover Square Frame – None ventilated

Main Features:

- Ductile Iron Manhole cover GJS 500/7 according to EN1563
- Class B125 in compliance with EN124 – Footways, pedestrian areas and comparable areas, car parks or parking decks
- Square covers with anti-slippery surface in compliance with EN124
- Single seal design
- Non ventilated cover to prevent vitiated air spreading from underground to the outside
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the manhole cover surface with writing and /or logos
- KiteMark certified.

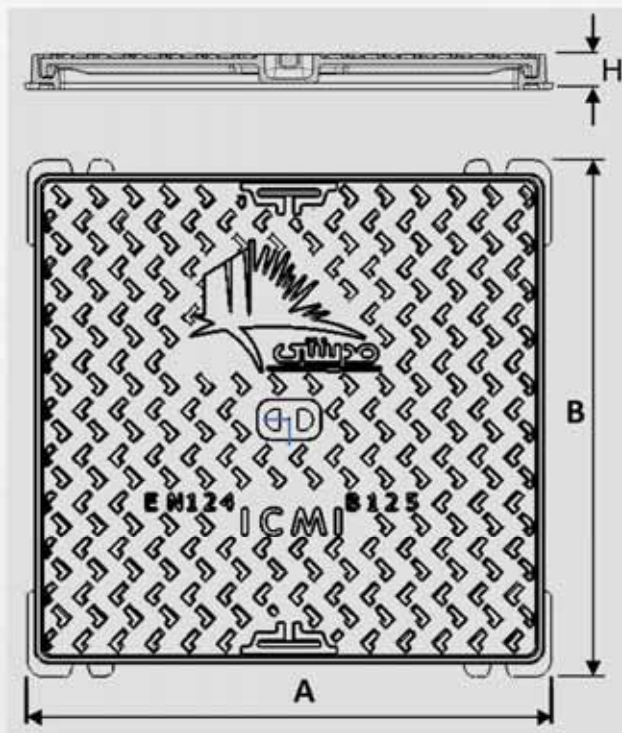


Designation	Dimensions (mm)				Material	Coating	Grade
	A	B	CO	H			
Manhole cover B125	520	520	450 x 450	42	EN 1563 Grade GJS-500/7	Black Bitumen	B125
	670	520	600 x 450	42			
	670	670	600 x 600	42			

Manhole Cover Square Frame – None ventilated (Madinaty Design)

Main Features:

- Ductile Iron Manhole cover GJS 500/7 according to EN1563
- Class B125 in compliance with EN124 – Footways, pedestrian areas and comparable areas, car parks or parking decks
- Square covers with anti-slippery surface in compliance with EN124
- Single seal design
- Non ventilated cover to prevent vitiated air spreading from underground to the outside
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the manhole cover surface with writing and /or logos

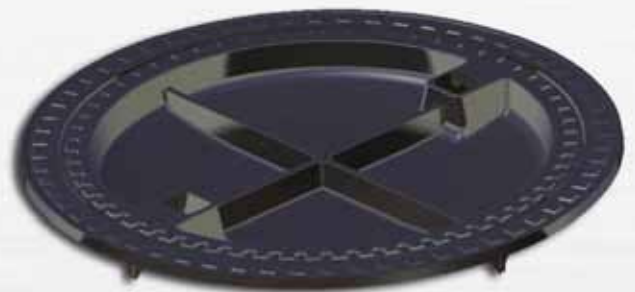
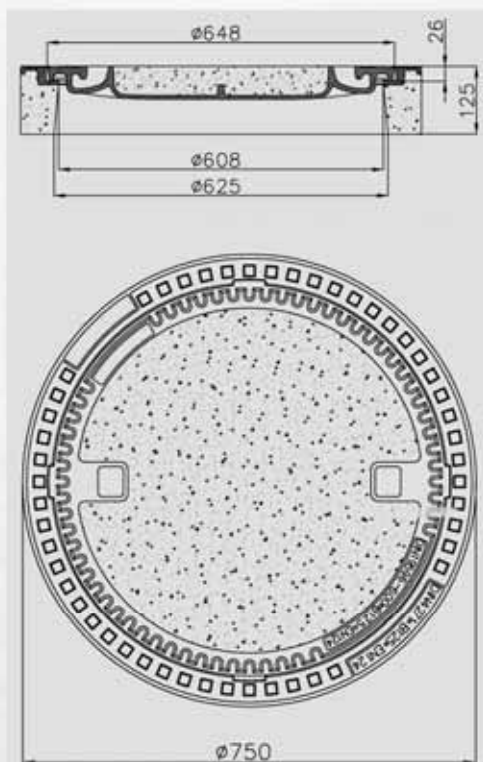


Designation	Dimensions (mm)				Material	Coating	Grade
	A	B	CO	H			
Manhole cover B125	600	605	525 x 505	42	EN 1563 Grade GJS-500/7	Black Bitumen	B125

Manhole Cover For Marble and Ceramic

Main Features:

- Grey iron Manhole covers EN-GJL-250 according to EN1563.
- Class B125 in compliance with EN124 – Footways, pedestrian areas and comparable areas, car parks or parking decks.
- Cover without vent used for Marble or Ceramic.
- Bituminous paint coating (Epoxy or galvanized covers are optional) option to customize the manhole cover surface with writing and /or logos

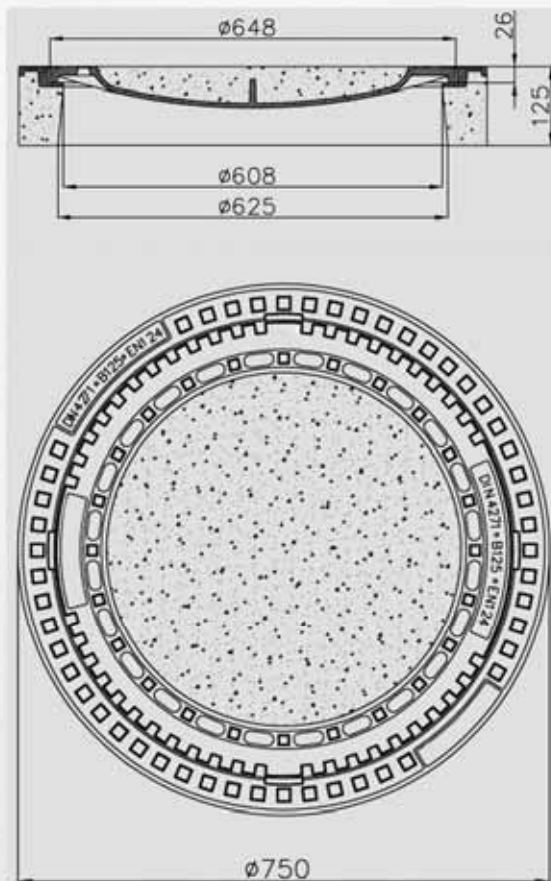


Designation	Dimensions (mm)			Material	Coating	Grade
	A	CO	H			
Manhole cover without vent	750	608	65	EN 1563 Grade GJL-250	Black Bitumen	B125

Manhole Cover For Marble and Ceramic

Main Features:

- Grey Iron Manhole covers EN-GJL-250 according to EN1563.
- Class B125 in compliance with EN124 – Footways, pedestrian areas and comparable areas, car parks or parking decks.
- Cover with vent used for Marble or Ceramic.
- Bituminous paint coating (Epoxy or galvanized covers are optional) option to customize the manhole cover surface with writing and /or logos

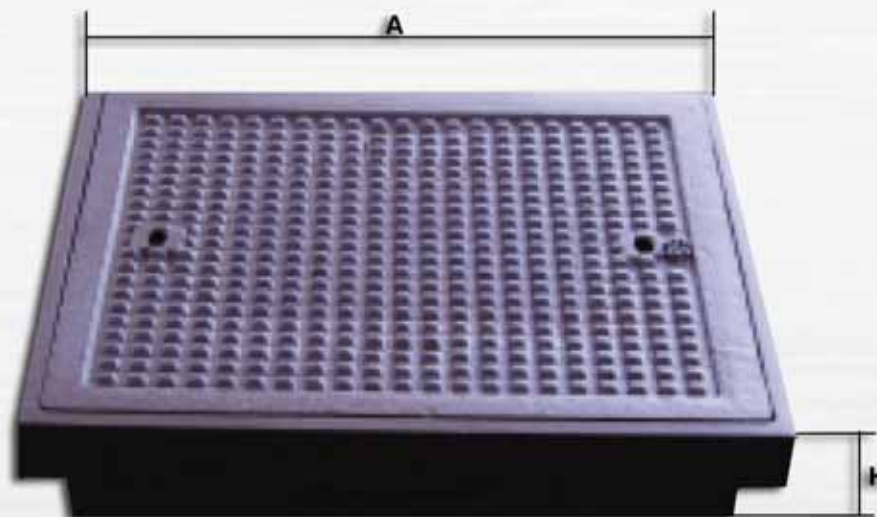


Designation	Dimensions (mm)			Material	Coating	Grade
	A	CO	H			
Manhole cover with vent	750	608	65	EN 1563 Grade GJL-250	Black Bitumen	B125

Manhole Cover Rectangular – Three pieces

Main Features:

- Grey iron Manhole cover EN-GJL-250 according to EN1563
- Class C250 in compliance with EN124
- Rectangular cover and frame with anti-slippery surface in compliance with EN124
- Made of three pieces, frame, cover and intermediate piece.
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the manhole cover surface with writing and /or logos

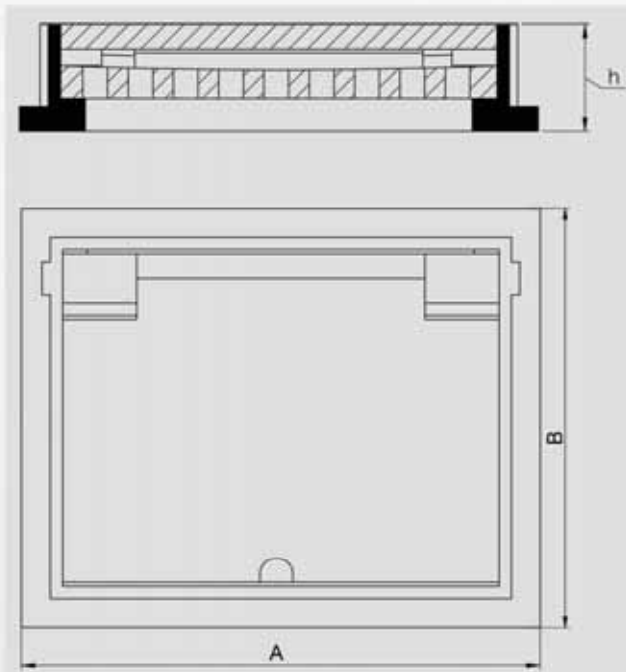


Designation	Dimensions (mm)			Material	Coating	Grade
	A	C0	H			
Manhole cover with intermediate piece	595	450	80	EN 1563 Grade GJL-250	Black Bitumen	C 250
	595	450	100			
	595	450	120			

Manhole Cover Rectangular – Three pieces

Main Features:

- Grey iron Manhole cover EN-GJL- 250 according to EN1563
- Class C 250 in compliance with EN124 – For grating installed in the area of Kerbside channels & roads.
- Rectangular, solid and blank
- Made of three pieces, Frame, Solid cover and Grating.
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the manhole cover surface with writing and /or logos

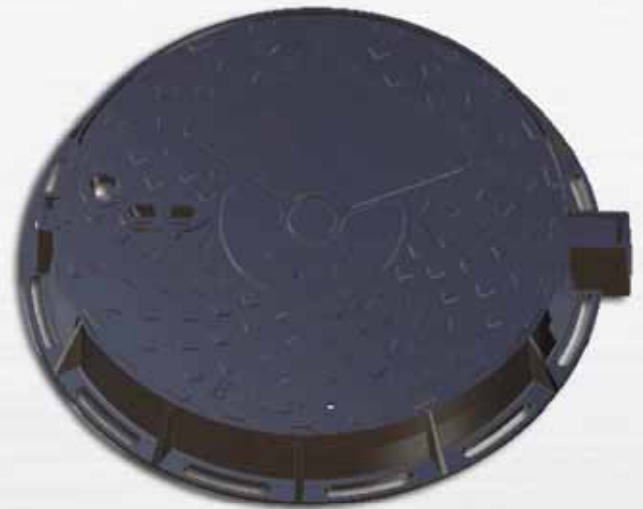
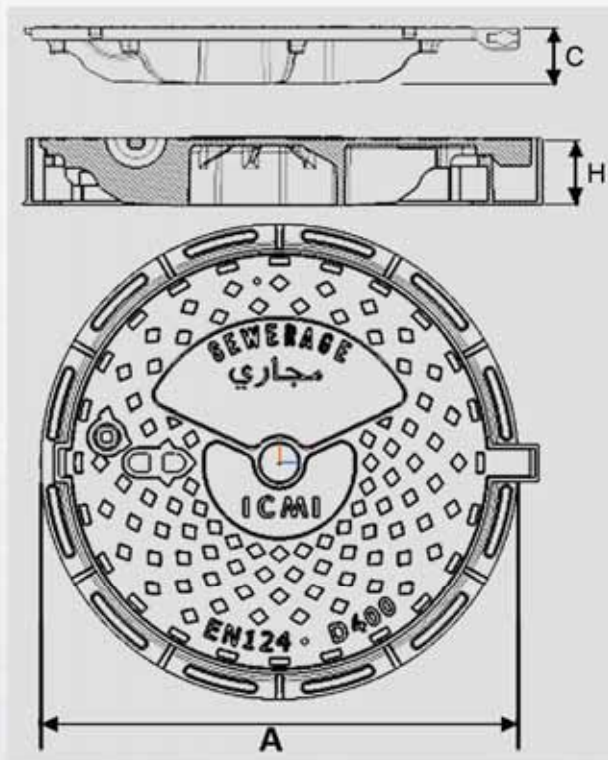


Designation	Dimensions (mm)			Material	Coating	Grade
	A	B	H			
Manhole cover with intermediate grating	600	400	100	EN 1563 Grade GJL-250	Black Bitumen	C250
	600	600	100			

Manhole Cover with hinge and lock Round Frame – None ventilated

Main Features:

- Ductile Iron Manhole cover GJS 500/7 according to EN1563
- Class D400 in compliance with EN124 – Hard shoulders and parking areas.
- Round covers with anti-slippery surface in compliance with EN124
- EPDM soundproofing gasket (single seal)
- Non ventilated cover to prevent vitiated air spreading from underground to the outside
- Anti-theft locks made from Stainless steel added to the manhole cover
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the manhole cover surface with writing and /or logos

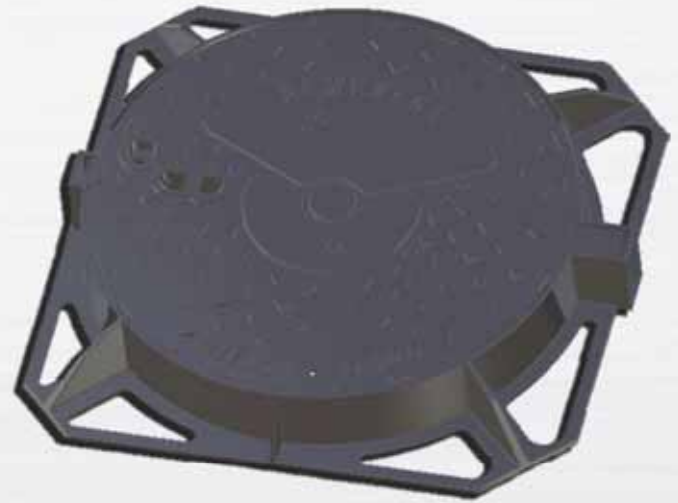
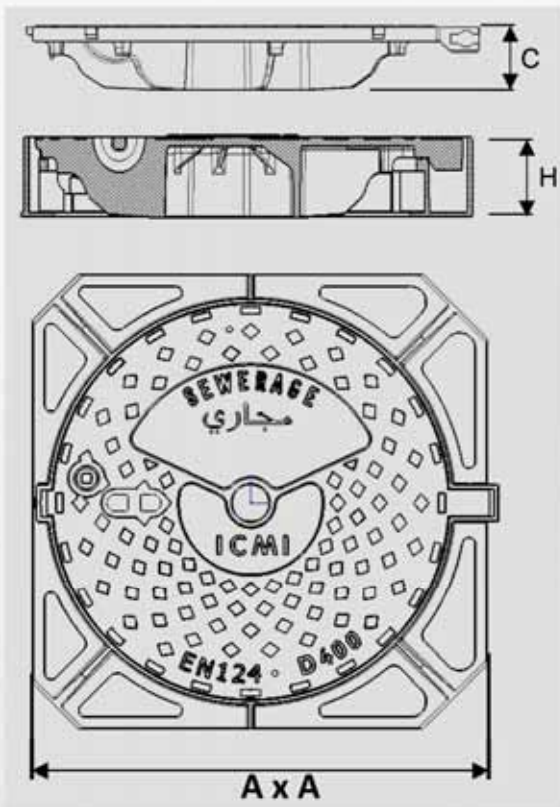


Designation	Dimensions (mm)				Material	Coating	Grade
	A	CO	C	H			
Manhole cover CO 600 mm D400	740	600	100	100	EN 1563 Grade GJS 500/7	Black Bitumen	D400
Manhole cover CO 760 mm D400	870	760	110	110			

Manhole Cover CO 600 mm with hinge and lock Square Frame – None ventilated

Main Features:

- Ductile Iron Manhole cover GJS 500/7 according to EN1563
- Class D400 in compliance with EN124 – Hard shoulders and parking areas.
- Round cover and square frame with anti-slippery surface in compliance with EN124
- EPDM soundproofing gasket (single seal)
- Non ventilated cover to prevent vitiated air spreading from underground to the outside
- Anti-theft locks made from Stainless steel added to the manhole cover
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the manhole cover surface with writing and /or logos

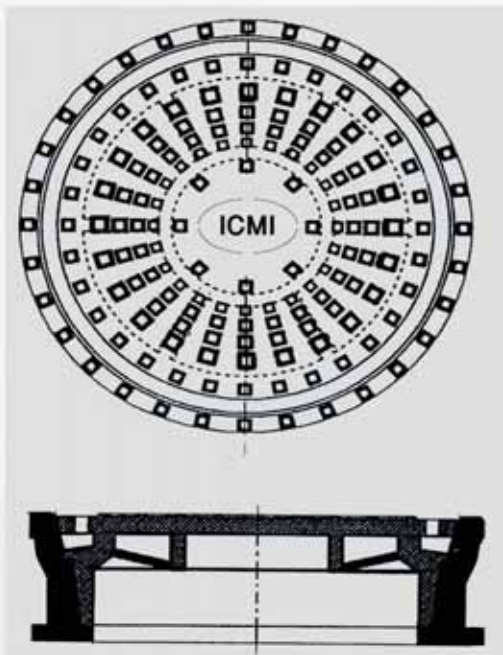


Designation	Dimensions (mm)				Material	Coating	Grade
	A	CO	C	H			
Manhole cover CO 600 mm D400	740	600	100	100	EN 1563 Grade GJS 500/7	Black Bitumen	D400

Manhole Cover
Round Frame – None ventilated
(General Organization for Sewerage and Sanitary Drainage)

Main Features:

- Grey or Ductile Iron Manhole cover GJL 250 or GJS 500/7 according to EN1563
- Weight is 285 Kg
- Round covers with anti-slippery surface in compliance with EN124
- Non ventilated cover to prevent vitiated air spreading from underground to the outside
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the manhole cover surface with writing and /or logos

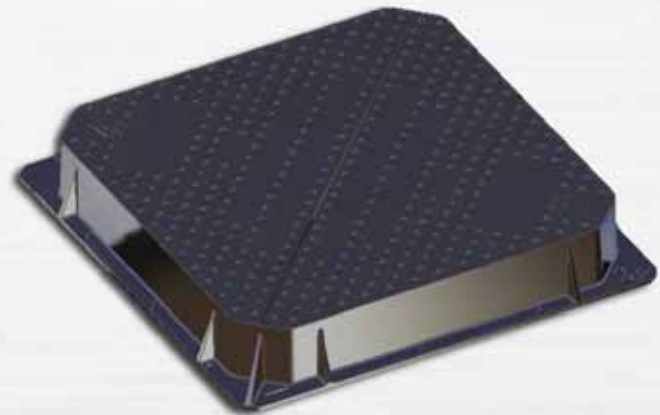
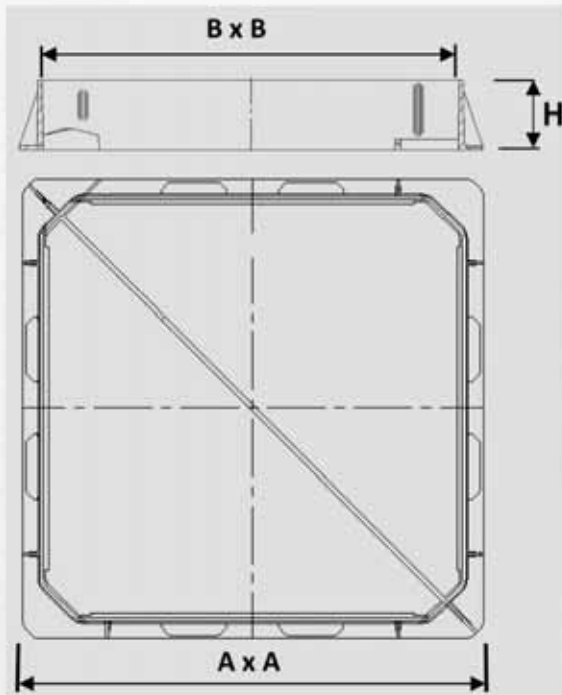


Designation	Dimensions (mm)		Material	Coating	Grade
	External Dim.	CO			
Manhole cover D400	600	530	EN 1563 Grade GJL-250 OR GJS 500/7	Black Bitumen	D400

Manhole Cover Rectangular Frame with Double Triangular Cover

Main Features:

- Ductile Iron Manhole cover EN-GJS-500/7 according to EN1563.
- Class D400 in compliance with EN124 - Hard shoulders and parking areas.
- Light weight, heavy duty, doubles triangular.
- KiteMark certified
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the manhole cover surface with writing and /or logos

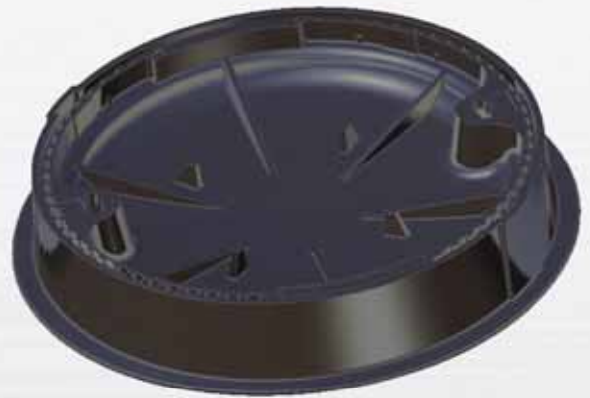
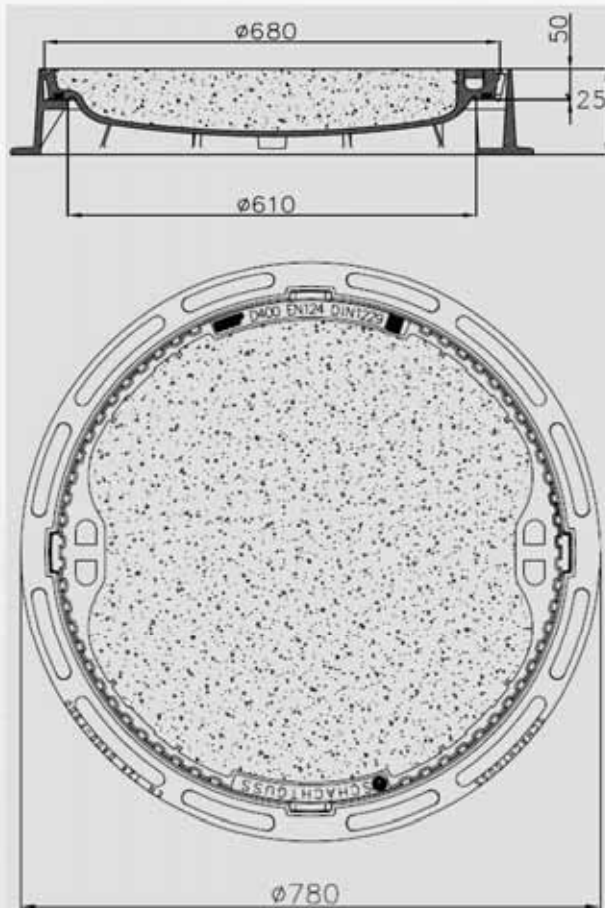


Designation	Dimensions (mm)			Material	Coating	Grade
	A x A	B x B	H			
Manhole cover with double triangular cover	240 x 240	150 x 150	100	EN 1563 Grade GJS-500/7	Black Bitumen	D400
	390 x 390	300 x 300	100			
	520 x 370	430 x 280	100			
	550 x 550	450 x 450	100			
	700 x 560	600 x 450	100			
	670 x 670	600 x 600	100			
	670 x 670	600 x 600	150			
	750 x 750	675 x 675	100			
	815 x 815	675 x 675	150			

Manhole Cover For Marble and Ceramic

Main Features:

- Grey iron Manhole covers EN-GJL-250 according to EN1563.
- Class D400 in compliance with EN124 - Hard shoulders and parking areas for all types of road vehicles.
- Cover without vent used for Marble or Ceramic
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the manhole cover surface with writing and /or logos.

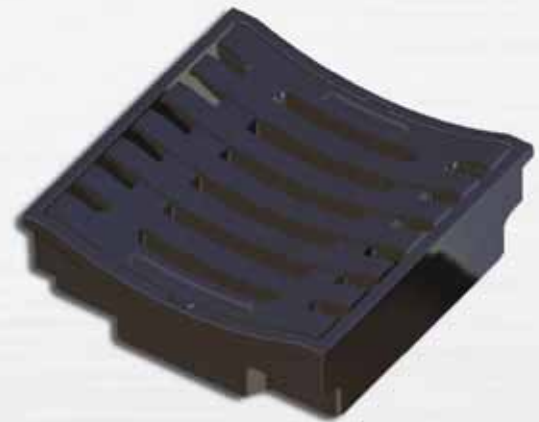
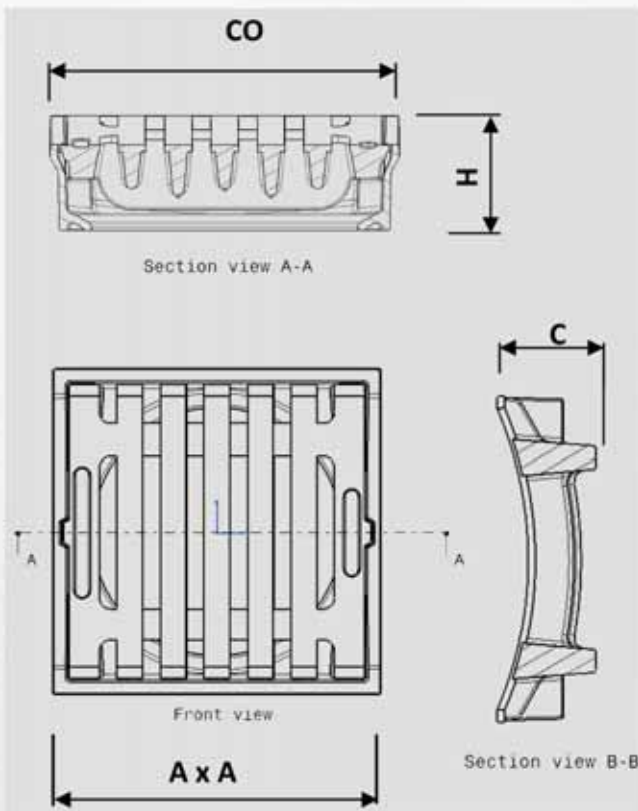


Designation	Dimensions (mm)			Material	Coating	Grade
	A	CO	H			
Manhole cover without vent	750	610	125	EN 1563 Grade GJL-250	Black Bitumen	D400

Gully Grating, Dished

Main Features:

- Ductile Iron Grating EN-GJL-250 according to EN1563
- Class B125 in compliance with EN124 – Footways, pedestrian areas and comparable areas, car parks or parking decks
- Square gully grating, and dished
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the grating surface with writing and /or logos

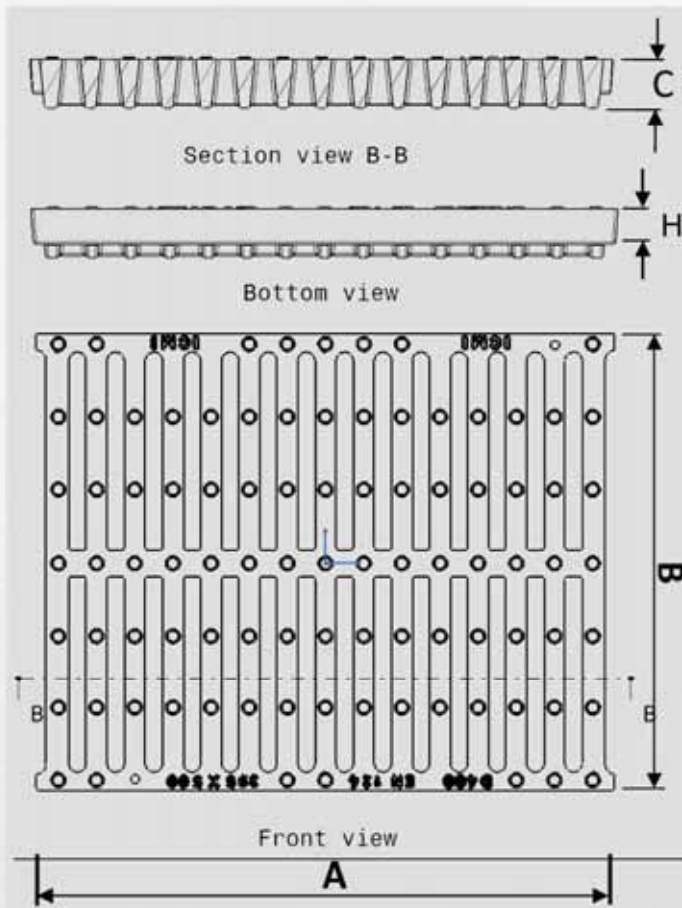


Designation	Dimensions (mm)				Material	Coating	Grade
	A	CO	C	H			
Square Gully Grating	300	272	82	100	EN 1563 Grade GJL-250	Black Bitumen	B125

Channel Grating EN 124

Main Features:

- Ductile Iron channel Grating EN-GJL-250 according to EN1563
- Class B125 in compliance with EN124 - pedestrians and pedal cyclists.
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the grating surface with writing and /or logos

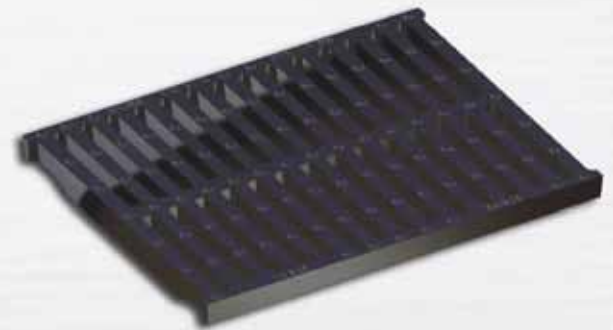
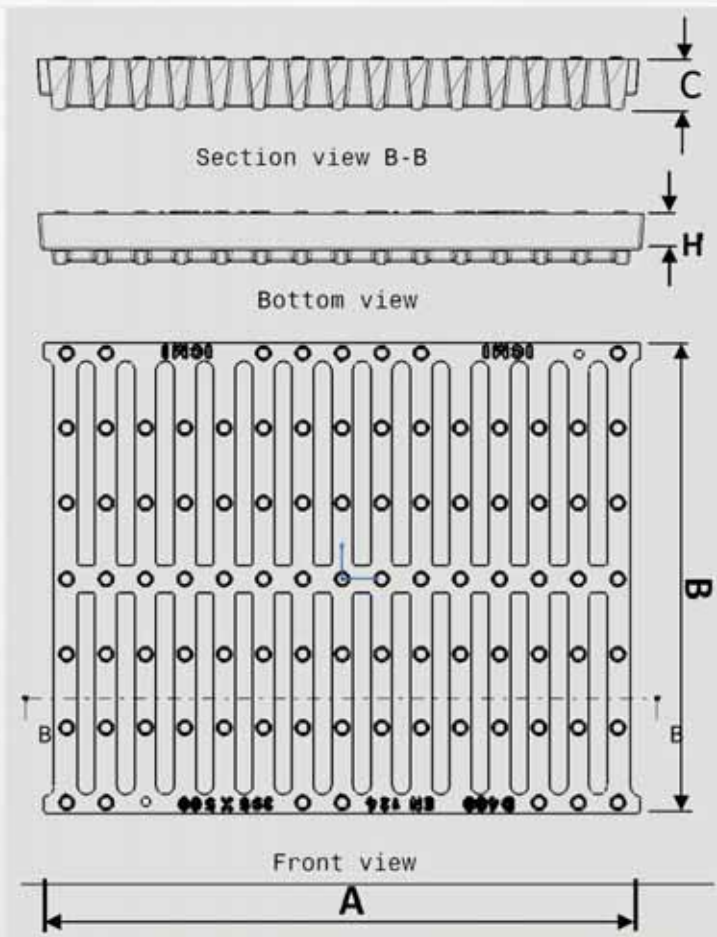


Designation	Dimensions (mm)				Material	Coating	Grade
	A	B	C	H			
Channel Grating	500	200	40	30	EN 1563 Grade GJL-250	Black Bitumen	B125
	500	250	45	30			
	500	300	45	30			
	500	400	50	30			

Channel Grating EN 124

Main Features:

- Ductile Iron channel grating EN-GJS-500/7 according to EN1563
- Class C250 in compliance with EN124 - For gratings installed in the area of kerbside channels of roads.
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the grating surface with writing and /or logos

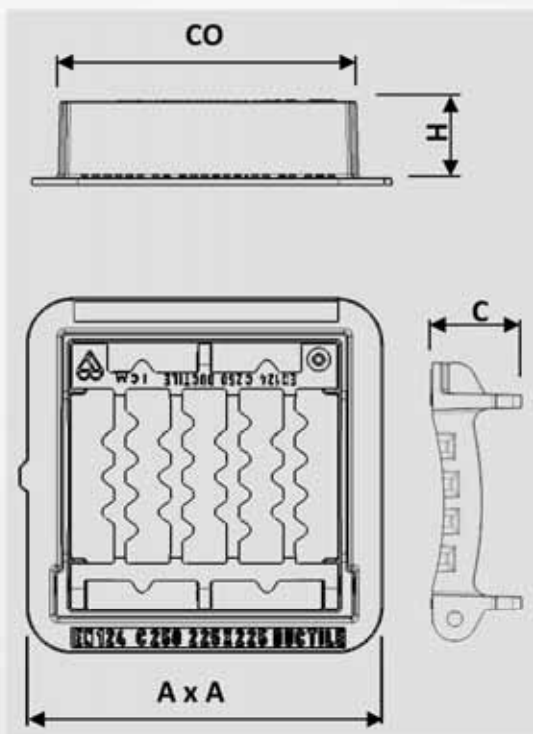


Designation	Dimensions (mm)				Material	Coating	Grade
	A	B	C	H			
Channel Grating	500	200	40	24	EN 1563 Grade GJS-500/7	Black Bitumen	C250
	500	250	45	24			
	500	300	45	24			
	500	400	50	24			

Gully Grating, Hinged, Dished

Main Features:

- Ductile Iron Grating EN-GJS-500/7 according to EN1563
- Class C250 in compliance with EN124 – For gratings installed in the area of kerbside channels of roads
- Square gully grating, hinged and dished
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the grating surface with writing and /or logos

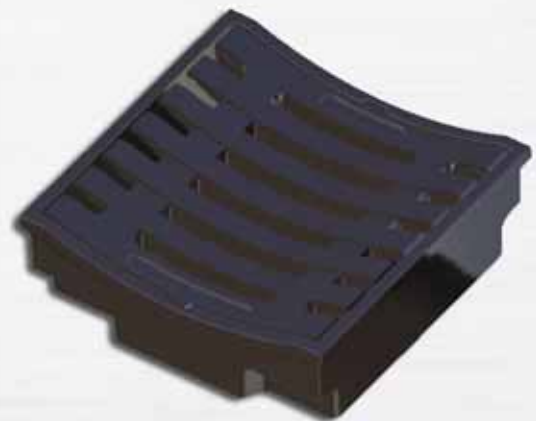
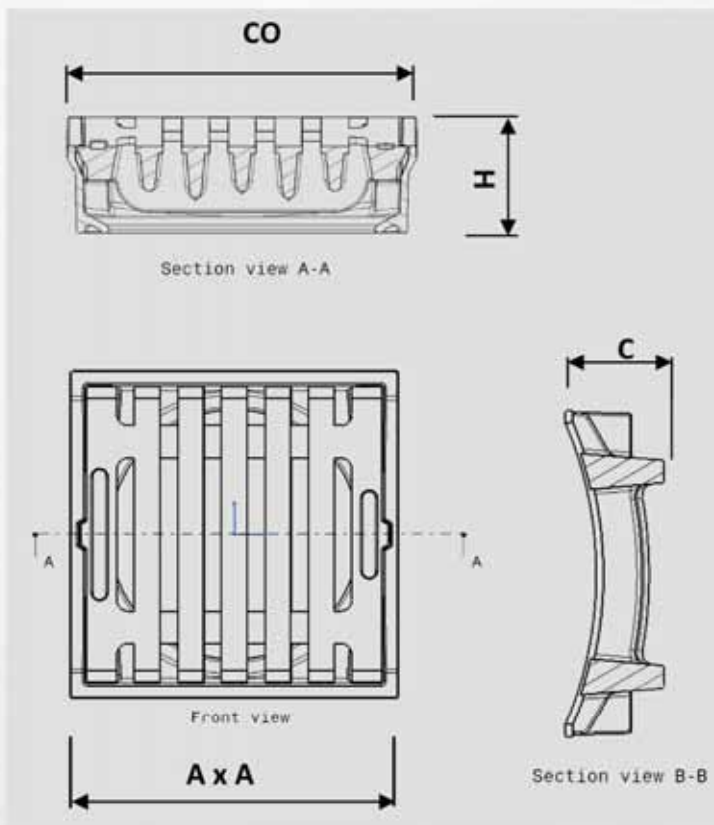


Designation	Dimensions (mm)				Material	Coating	Grade
	A	CO	C	H			
Square Gully Grating	295	225	70	70	EN-GJS-500/7	Black Bitumen	C250
	378	300	70	70			

Gully Grating, Dished

Main Features:

- Ductile Iron Grating EN-GJS-500/7 according to EN1563
- Class D400 in compliance with EN124 – Hard shoulders and parking areas.
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the grating surface with writing and /or logos
- Square gully grating, and dished

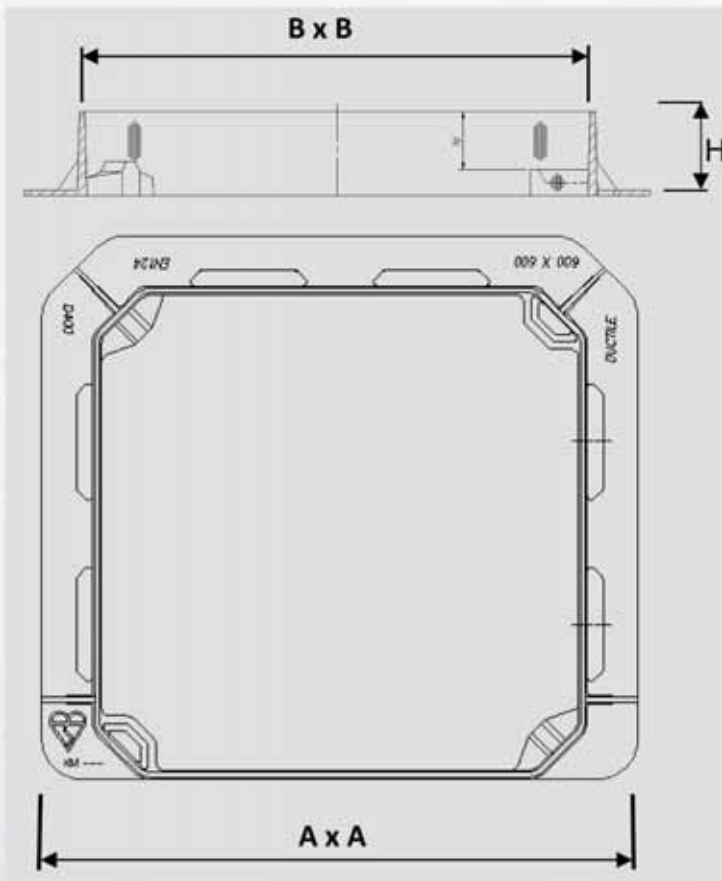


Designation	Dimensions (mm)				Material	Coating	Grade
	A	CO	C	H			
Square Gully Grating	300	272	82	100	EN 1563 Grade GJS-500/7	Black Bitumen	D400

Gully Grating Rectangular Frame with Double Triangular Grating

Main Features:

- Ductile Iron Gully Grating EN-GJS-500/7 according to EN1563.
- Class D400 in compliance with EN124 - Hard shoulders and parking areas.
- Light weight, heavy duty, doubles triangular grating.
- KiteMark certified
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the manhole cover surface with writing and /or logos

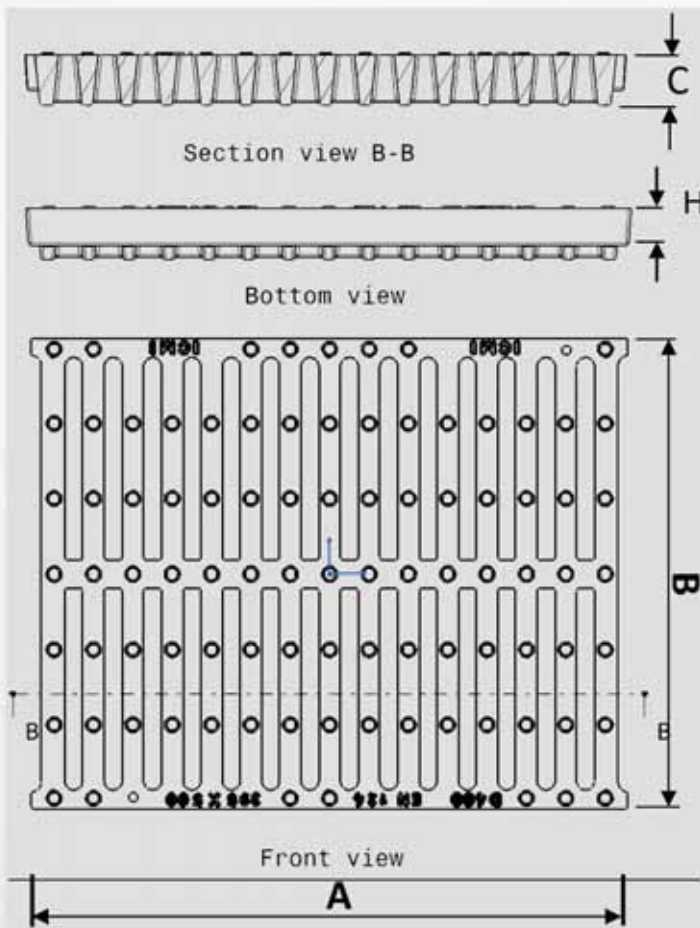


Designation	Dimensions (mm)			Material	Coating	Grade
	A x A	B x B	H			
Gully Grating Rectangular frame with double Triangular grating	550 x 530	440 x 400	100	EN 2563 Grade GJS-500/7	Black Bitumen	D400
	580 x 520	435 x 435	100			
	750 x 685	600 x 600	100			

Channel Grating EN 124

Main Features:

- Ductile Iron channel Grating EN-GJS-500/7 according to EN1563
- Class D400 in compliance with EN124 - Hard shoulders and parking areas.
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the grating surface with writing and /or logos

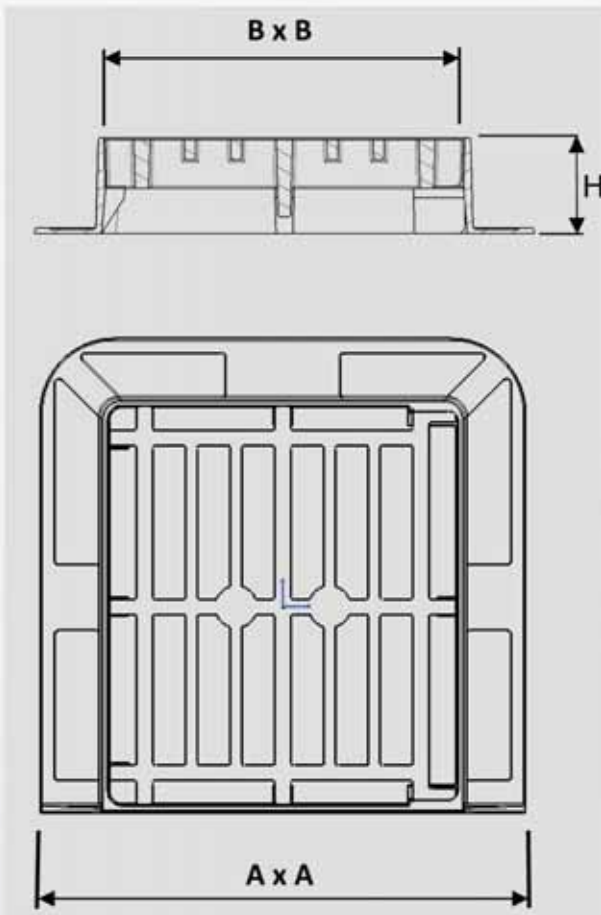


Designation	Dimensions (mm)				Material	Coating	Grade
	A	B	C	H			
Channel Grating	500	200	40	30	EN 1563 Grade GJS-500/7	Black Bitumen	D400
	500	250	46	30			
	500	300	46	30			
	500	400	50	30			

Gully Grating, hinged

Main Features:

- Ductile Iron Gully Grating EN-GJS-500/7 according to EN1563.
- Class D400 in compliance with EN124 - Hard shoulders and parking areas.
- Light weight, heavy duty, hinged.
- KiteMark certified
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the Grating surface with writing and /or logos

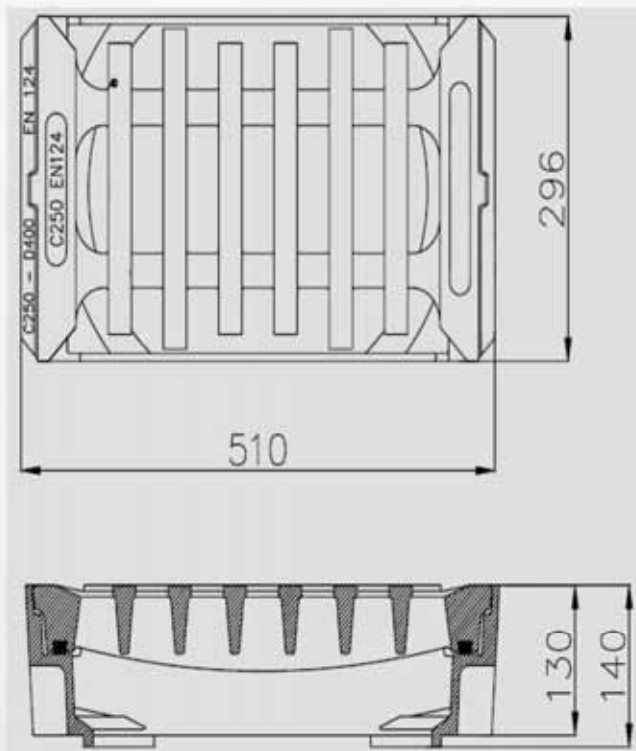


Designation	Dimensions (mm)			Material	Coating	Grade
	A x A	B x B	H			
Gully Grating	525 x 515	375 x 435	100	EN 2563 Grade GJS-500/7	Black Bitumen	B125
	525 x 515	375 x 435	150			
	580 x 520	435 x 435	100			

Gully Grating

Main Features:

- Grey Iron Gully Grating EN-GJL-250 according to EN1563.
- Class D400 in compliance with EN124 - Hard shoulders and parking areas.
- Damping rubber to avoid rocking
- Bituminous paint coating (Epoxy or galvanized covers are optional)
- Option to customize the Grating surface with writing and /or logos



Designation	Dimensions (mm)			Material	Coating	Grade
	A	B	H			
Gully Grating with frame	510	296	140	EN1563 Grade GJS-250	Black Bitumen	D400
	550	500	130			



Scupper Drain

Cast iron scupper drain with flashing clamp, Secured angle grate



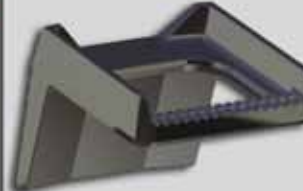
Roof Drain

With stainless steel perforated extension



Gully Trap

Cover 300 x 300 mm



Cast Iron Step

For underground man entry chambers designed in accordance with DIN1212-GS



Cast Iron Step

Made from grey iron



Cast Iron Step

For underground man entry chambers designed in accordance with DIN1212-E



Grating EN124

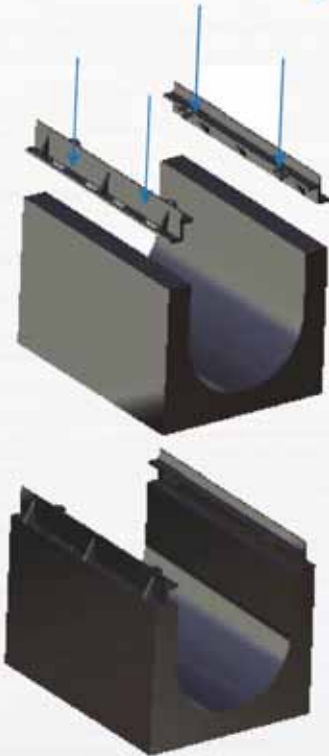
Class B125 with St.Hinge



Cast Iron Step

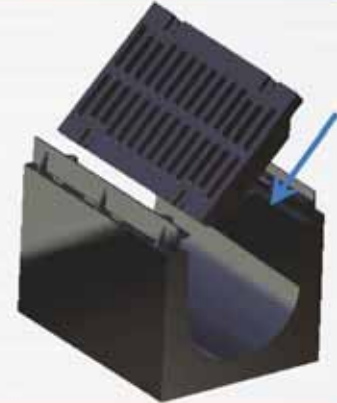
Made from grey iron

The Assembling consists of 3 steps

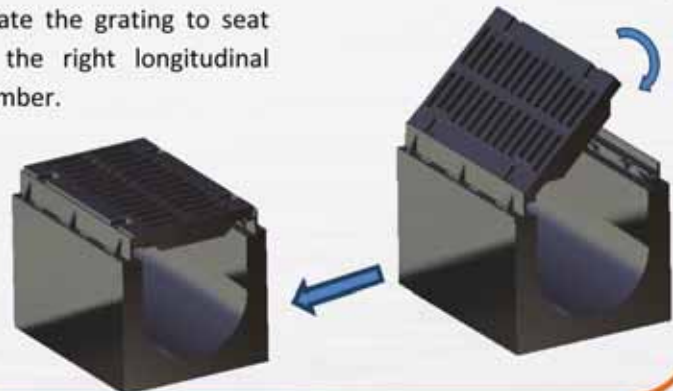


1. Install the longitudinal members to the tunnel structure.

2. Insert the grating to the left longitudinal member.



3. Rotate the grating to seat on the right longitudinal member.



For the appropriate use of a manhole cover or grating it is necessary to:

- Have a load class suitable to the function and installation place. To this end the specifications of Standard EN124 must be considered (see par. 4 of this catalogue on page 4);
- Carry out a perfect installation so that the other materials used will be able to house the loads due to pedestrian and/or vehicular traffic and to withstand them properly.

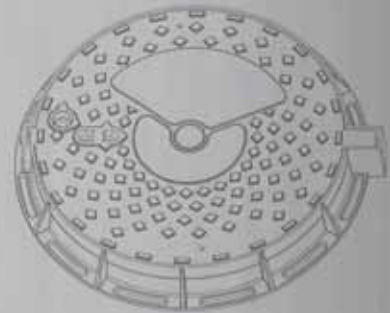
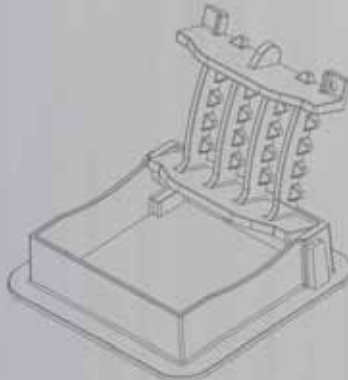
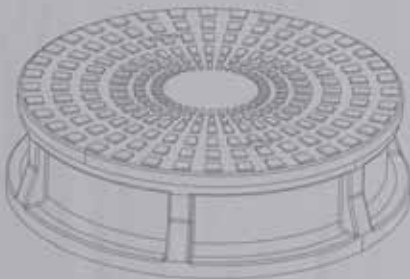
The following recommendation are about the installation:

- a. Use concrete with a minimum compression strength of $R_{ck} 35 \text{ N/mm}^2$ and stone aggregate with max granulometry 6/8 mm in compliance with the hardening times specified.
- b. Use units with a frame base designed so as to be dimensionally compatible with all the gullies (either standard or non-standard).
- c. Use units whose frames have a supporting surface which guarantees compliance with max pressure value, i.e. 7.5 N/mm^2 according to EN124. This requirement is guaranteed for certified products.
Warning: The frame must rest perfectly on the top of the gully to be sure that the pressure value is guaranteed.
- d. Remove any foreign bodies from the frame and the gully before preparing a layer of cement mortar between them of about 2 cm.

- e. Level the frame to ensure that, once the work has been completed, there are no uneven sections between the road surface and the unit level, as they cause traffic troubles and in the long term can cause aging of the manhole cover or grating.
- f. Include a stiffening edge of at least 250/300 mm per side. Metal reinforcements can be used to properly counter the traction stress generated in the concrete support (in case of heavy loads during use).
- g. According to the type of cement used for the installation and the climatic conditions in which the work is carried out (temperature, humidity level, ... etc.), comply with minimum hardening times before inserting the cover or the grating into the frame and before making the installation area suitable to transit. In some case concrete additives can be used to speed up these times (quick setting cement).
- h. Make sure there are no concrete residues or bituminous conglomerate between the cover and the frame in the hinge area or closing systems (if any), as they can jeopardize the steadiness of the cover and make it noisy.



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