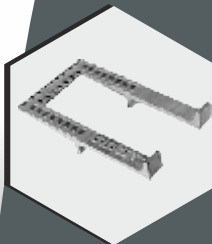
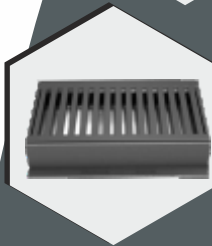
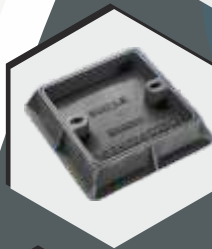
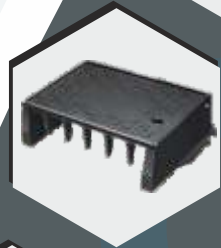
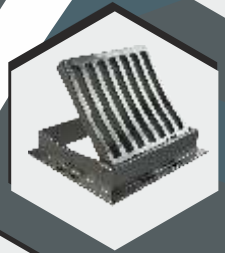


# H<sup>i</sup>CAST

“Right Choice”  
IN CASTING PRODUCTS



# HiCAST



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# About the company

Established in July 2005 with an installed capacity of 6000 MT per annum and catering to business vertical such as Automotive Castings, Industrial Castings, Railway Castings and Infrastructural Castings. JPK Metallics, within a span of just one year, has undergone hundred percent of expansion, and now is capable of producing 14000MT. per annum. With an expertise to produce high quality finished ferrous casting by implementing the state-of-the-art technologies.

**JPK Metallics is on a mission  
to be a one-stop shop  
for all castings needs and  
to provide our customers with  
the key service possible.**

Our brand HiCAST for access manhole covers, channel gratings, gully grates and kerb gully designed to fulfill the demand of our customers in middle east according to the highest standards in casting industry.



The company strictly follows the specifications laid down in standard BS EN 124 :1994. In order to keep up to its reputation in quality the Company has well equipped quality control department this facility complete physical testing such as casting's hardness, load testing, and load tensile, transverse and chemical analysis. It has an excellent batch of technicians and quality control personal to ensure perfection in all fields with proper up gradation through research and development.

Quality standards are continually improved through extensive quality control programs covering every phase, from incoming raw materials to dispatch. To meet the global demand of increasingly high standards, the plant is managed by highly skilled staff. All products undergo strict quality control measures including load testing, water testing, etc. The production undergoes stringent quality control tests, which results in creating world-class products.

## The Ductile Iron Materials

Ductile iron is not a single material but is part of a group of materials which can be produced to have a wide range of properties through control of the microstructure. The common defining characteristic of this group of materials is the shape (morphology) of the graphite. In ductile irons, the graphite is in the form of nodules rather than flakes (as in grey iron), thus inhibiting the creation of cracks and providing the enhanced ductility that gives the alloy its name. The formation of nodules is achieved by addition of nodulizing elements, most commonly Magnesium (note Magnesium boils at 1100C and Iron melts at 1500C) and, less often now, Cerium (usually in the form of Misch metal). Tellurium has also been used. Yttrium, often a component of Misch metal, has also been studied as a possible nodulizer.

- **The advantages of ductile Iron Cover:**

There are many advantages to the Ductile Iron cover compared to the cast iron or concrete ones. some of these advantages strictly related to the properties of the raw material used, others to the manufacturing process.

Comparisons between Ductile Iron & Cast Iron are listed below:

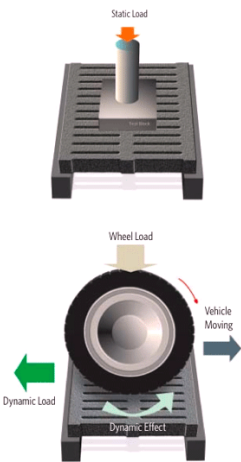


Static Loads refers to load applied vertically to the grating with no other movement, such as load from a stationary vehicle.

This is classified as in BS EN 124:1994 Test-loads Table

Class	Test-load KN	TON	Class	Test-load KN	TON
A15	15	1.5	D400	400	40
B125	125	12.5	E600	600	60
C250	250	25	F900	900	90

Wheel-loads refer to the weight of the vehicle and its typical load depending on the type of the wheels. Pneumatic tyres spread the load like the test-block in the illustration and solid tyres post a greater point load, which is only recommended for Class E600 and F900. Vehicle movement, speed, braking and traffic frequency are the consolidated consideration of dynamic loads.



● Selection Of Appropriate Load Class According To BS EN 124:1994



Group 1 - (Class A15)

Areas strictly for pedestrians and pedal cyclists. House drains, pool decks, courtyards, park-walkways and pedestrian compounds within precincts.



Group 2 - (Class B125)

Public footways and comparable areas, car porches and parks. Generally for slow-moving vehicles not exceeding 3 tones in wheel-load.



Group 3 - (Class C250)

Used as curb-side grates in heavy vehicle parking areas and entrances of small precincts. Generally for slow-moving vehicles not exceeding 5 tones in wheel-load.



Group 4 - (Class D400)

Carriageways of roads, hard-standing areas for fire-engine access and parking areas for heavy vehicles. Generally for slow-moving vehicles not exceeding 11.5 tones in wheel-load.



Group 5 - (Class E600)

Areas imposing high wheel-loads such as docks, airfield pavements and heavy forklift loadings. Generally for slow-moving vehicles not exceeding 20 tones in wheel-load.



Group 6 - (Class F900)

Areas imposing particularly high wheel-loads such as airport taxiway and vehicles with solid tyres. Generally for slow-moving vehicles exceeding 20 tones in wheel-load.

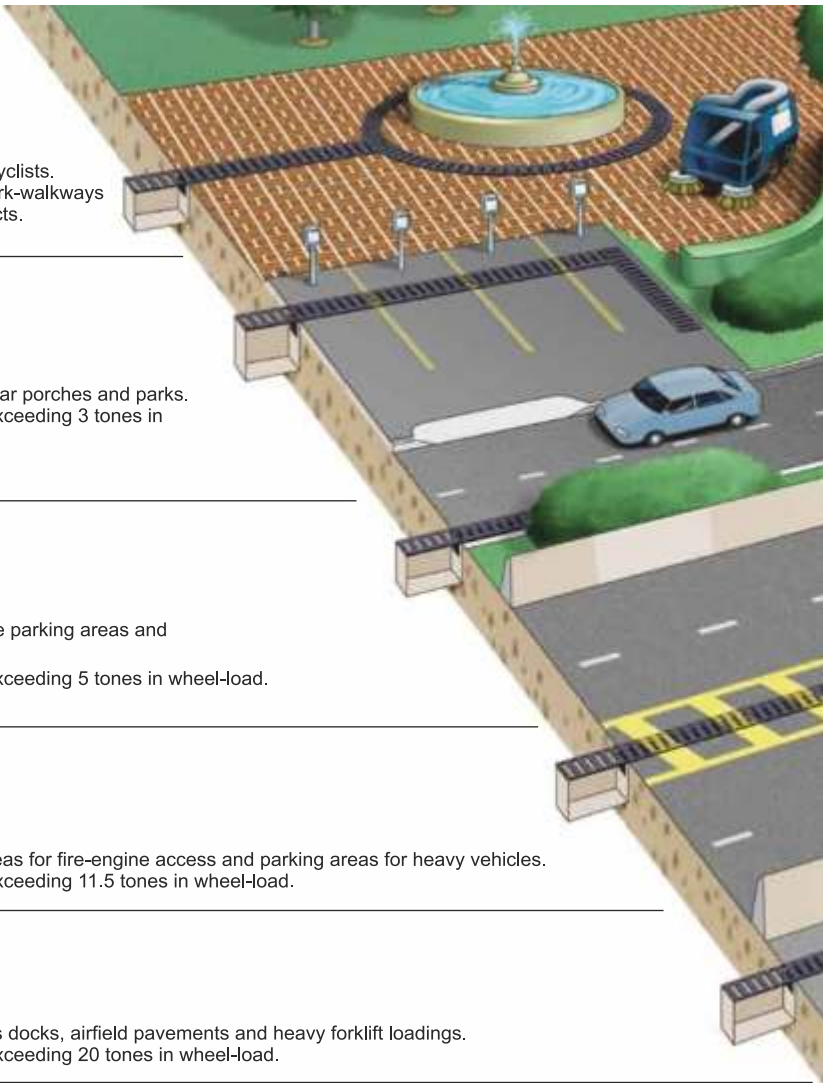


Fig - (A)

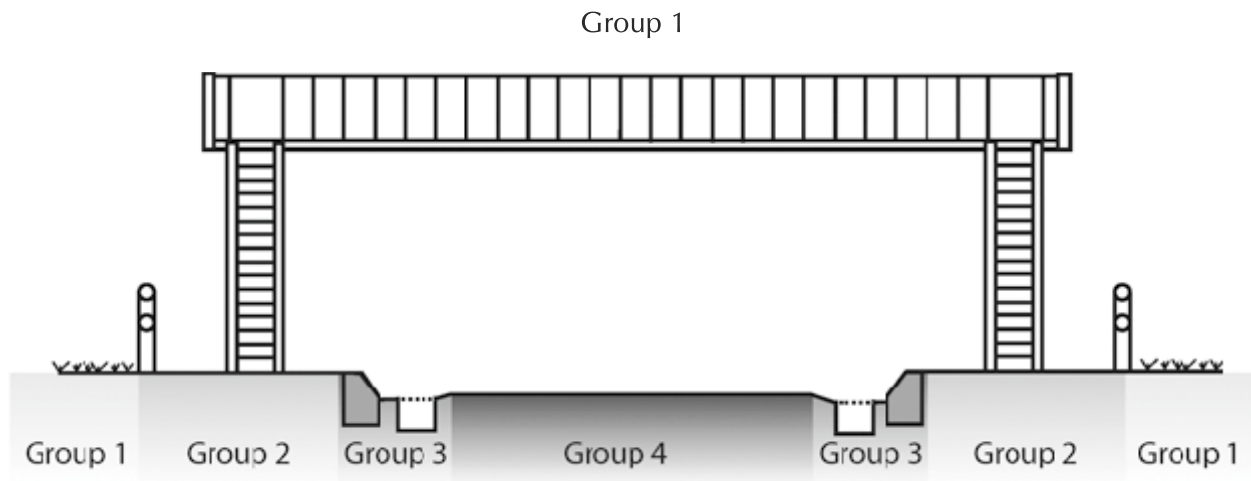


Fig - (B)

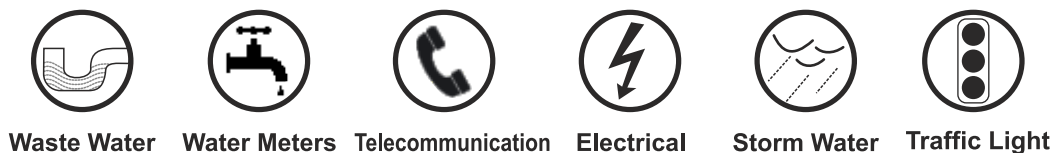
## • Marking

According to the Standard BS EN 124:1994, the following information shall be clearly and lastingly reported on each cover, grating and frame:

- Standard of reference (EN124)
- The appropriate class
- The name and/or identification mark of the manufacturer
- The place of manufacture which may be in code

## Service Key Selection

The following icons act as a keys to determined the services which the manhole cover could be used:





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C250 Kerb Gully	

B125 Access covers

Solid Top Manhole Cover & Frame



Code	Overall A (MM)	Clear Opening C (MM)	Height H (MM)	Seal Type
GCPL-141	400 x 400	300 x 300	40	DOUBLE SEAL
GCPL-135	660 x 660	600 x 600	30	SINGLE SEAL
GCPL-145	760 x 760	600 X 600	40	DOUBLE SEAL

Application



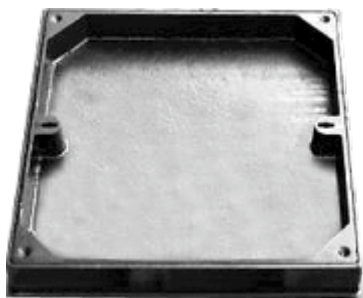
Group 2

Service



B125 Access covers

Recessed Cover & Frame



Code	Overall A (MM)	Clear Opening C (MM)	Height H (MM)	Recess Depth R (MM)	Seal Type
GCPL-195	455 x 455	300 x 300	95	70	DOUBLE SEAL
GCPL-156	760 x 760	600 x 600	90	70	DOUBLE SEAL

Application



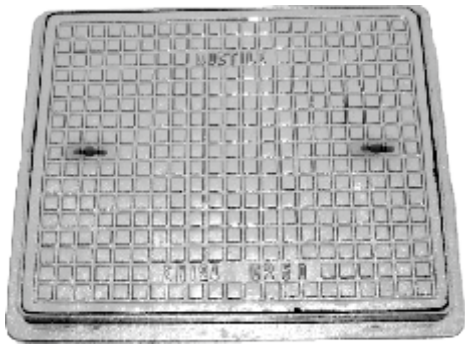
Group 2

Service



## C250 Access covers

### Solid Top Manhole Cover & Frame



Code	Overall A (MM)	Clear Opening C (MM)	Height H (MM)	Seal Type
3030D	410 x 410	300 x 300	35	DOUBLE SEAL
6060D	755 x 755	600 X 600	70	DOUBLE SEAL

Application



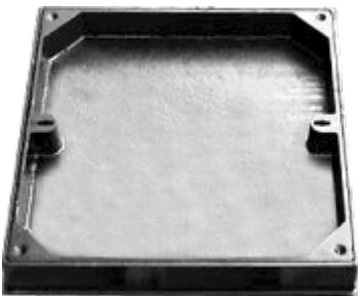
Group 3

Service



## C250 Access covers

### Recessed Cover & Frame



Code	Overall A (MM)	Clear Opening C (MM)	Height H (MM)	Recess Depth R (MM)	Seal Type
3070RDSC	455 x 455	300 x 300	95	70	DOUBLE SEAL
6070RDSC	760 x 760	600 x 600	90	70	DOUBLE SEAL

Application



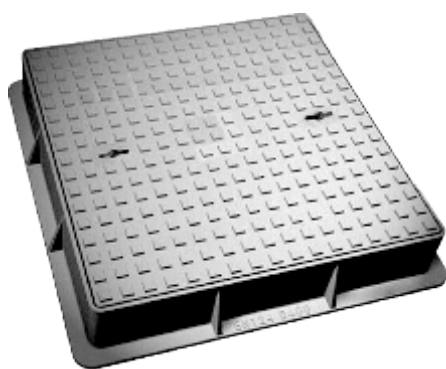
Group 3

Service



## D400 Access covers

### Solid Top Manhole Cover & Frame



Code	Overall A (MM)	Clear Opening C (MM)	Height H (MM)	Seal Type
GCPL-142	450 x 450	300 x 300	75	DOUBLE SEAL
GCPL-146	725 x 725	600 X 600	80	SINGLE SEAL
GCPL-130	755 x 755	600 X 600	80	DOUBLE SEAL

Application



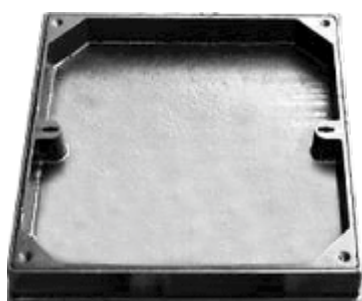
Group 4

Service



## D400 Access covers

### Recessed Cover & Frame



Code	Overall A (MM)	Clear Opening C (MM)	Height H (MM)	Recess Depth R (MM)	Seal Type
GCPL-196	455 x 455	300 x 300	95	70	DOUBLE SEAL
GCPL-157	765 x 765	600 x 600	90	70	DOUBLE SEAL

Application



Group 4

Service



## D400 Access covers

Circular Manhole Cover with Circular or Square Frame



Code	Overall A (MM)	Clear Opening C (MM)	Height H (MM)	Seal Type
60WCSSD	815 Ø	600 Ø	100	SINGLE SEAL
60FCSSD	750 x 750	600 Ø	100	DOUBLE SEAL

Application



Group 4

Service



## D400 Access covers

Double & Multi Triangular Manhole Cover & Frame



Code	Overall A (MM)	Clear Opening C (MM)	Height H (MM)	Seal Type
6060DTSSD	755 x 755	600 x 600	100	SINGLE SEAL
6060DTDSD	755 x 755	600 x 600	100	DOUBLE SEAL
1220675MTD	1370 x 825	1220 x 675	100	SINGLE SEAL
1224900MTD	1374 x 1050	1224 x 900	100	SINGLE SEAL
1835700MTD	1985 x 850	1835 x 700	100	SINGLE SEAL

Application



Group 4

Service



## C250 Channel Grating



Code	Width D (MM)	Length L (MM)	Clear Opening C (MM)	Frame Depth H (MM)	Seat Depth B (MM)
200750CGC	200	750	150	40	27
250750CGC	250	750	200	45	27
300750CGC	300	750	250	50	27

Application



Group 3

Service



## D400 Channel Grating



Code	Width D (MM)	Length L (MM)	Clear Opening C (MM)	Frame Depth H (MM)	Seat Depth B (MM)
GCPL-267	400	750	250	75	63
GCPL-110	450	750	300	75	63

Application



Group 4

Service



## C250 Gully Grates



Code	Overall A (MM)	Clear Opening C (MM)	Height H (MM)
3030GGC	400 x 400	300 x 300	36
4040GGC	500 x 500	400 x 400	36
5050GGC	600 X 600	500 x 500	36

\* Flat or Dished And / or Hinged

Application

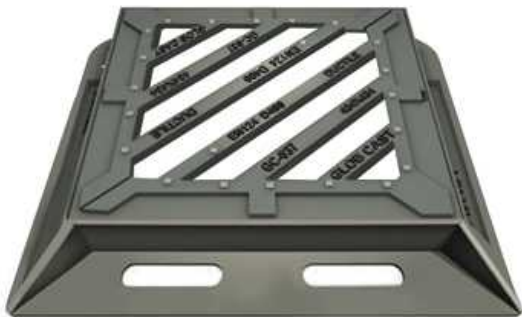


Group 3

Service



## D400 Gully Grates



Code	Overall A (MM)	Clear Opening C (MM)	Height H (MM)
GCPL-210	380 x 380	300 x 300	75
GCPL-183	550 x 509	450 x 450	100
GCPL-109	762 x 762	600 x 600	100

Application

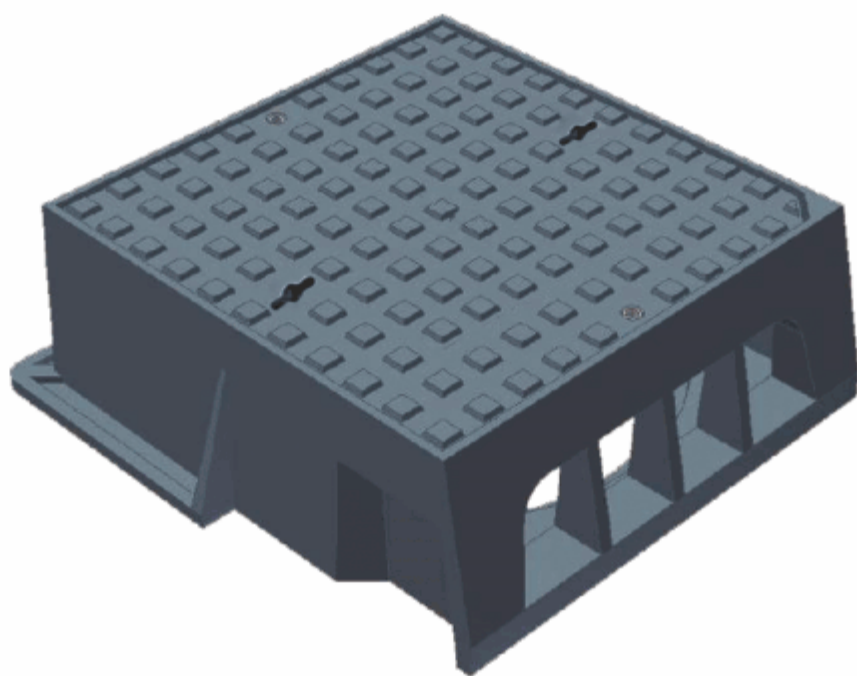


Group 4

Service



## C250 Kerb Gully



Code	Overall A (MM)	Clear Opening C (MM)	Height H (MM)	Debris Grid
470YKG	515 x 570	470 x 470	220	Yes
470NKG	515 x 570	470 x 470	220	No

\* Hinges or Cottered

Application



Group 3

Service



- **Seal plates (push-fit glass reinforced plastic (GRP) seal plates) & Road Gully Trap:**

GRP seal plates act as a protective barrier against the egress of odours.  
Fabricated Road Gully Trap with Sand Bucket for rain water drain.




- **Badging and Coating:**

Special badging including service type badge as per buyer's requirements, depend on specific order quantity and suitability of particular designs.

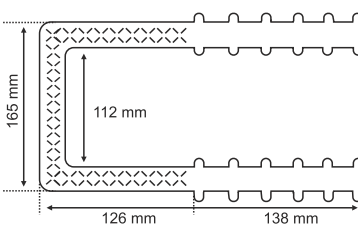
**HiCAST** access covers and gratings are supplied with black bitumen coating as per BS 4164 Standard or with epoxy as per BS EN 14901: 2006 standard.

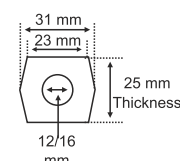
Casting could be supplied un coated as per buyer's request.


- **Step irons (Galvanized as per BS EN ISO 1461 : 1999 or un galvanized) - Plastic Step:**



Code	Overall Length L (MM)	Overall Width W (MM)	Thread Length T (MM)
230UGS	230	150	125
230GIS	230	150	125
370PMS	370	150	125







Code	Overall Length L (MM)	Overall Width W (MM)	Thread Length T (MM)
264PMS	264	165	138

- **Steel lifting keys**

Nickel plated keys with different shapes and sizes (Loop handle key – T handle key)



- **Bearer Bar**

Side frame (angle) only. Used in pairs in channel gratings

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**BS EN 124:1994**

- Gully tops and manhole tops for vehicular and pedestrian areas. Design requirements type testing, marking, quality control

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**BS EN 14901:2006**

- Ductile iron pipes, fittings and accessories. Epoxy coating (heavy duty) of ductile iron fittings and accessories. Requirements and test methods

---

**BS 4164:2002**

- Specification for coal-tar-based hot-applied coating materials for protecting iron and steel including a suitable primer

---

**BS EN ISO 1461:1999**

- Hot dip galvanized coatings on fabricated iron and steel articles. Specifications and test methods

---

- **Clear opening**

Vacant access opening in the frame. In gratings the clear opening is the channel width x the unit length x the number of units used.

---

- **Double Seal**

Double vertical tongue in groove between cover with double rim and frame with double groove. The benefit of double grease seal against egress of odour

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- **Double Triangular**

Covers or gratings formed from two triangular sections giving stable seating under load and non-rock performance

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- **Grp Seal Plate**

Plate acts as a protective barrier against sewer gases

---

- **Keyways (closed)**

Blind lifting holes in covers for lifting keys which prevent ingress of dirt and water

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- **Keyways (open)**

Lifting holes in covers for lifting keys

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- **Non-rock**

Cover/grating and frame design which gives quiet stable seating by means of 3 point non-rock seating, as in double triangular cover

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- **Recessed Cover**

Top of the cover recessed to allow infilling with a chosen material, concrete quarry tiles, interlock etc.

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- **Single Seal**

Single vertical tongue in groove between cover with single rim and frame with single groove.





# HiCAST

*Authorized Agent*

## HAIFA

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