



## Sorooh Majan International LLC

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# SOROOTH MAJAN COMPOSITE

## MANHOLE COVER&GULLY GRATING





Mould warehouse owning more than 500 sets different moulds, raw material production shop, more than 50 hydraulic machines in main production shop, R&D department, show room.

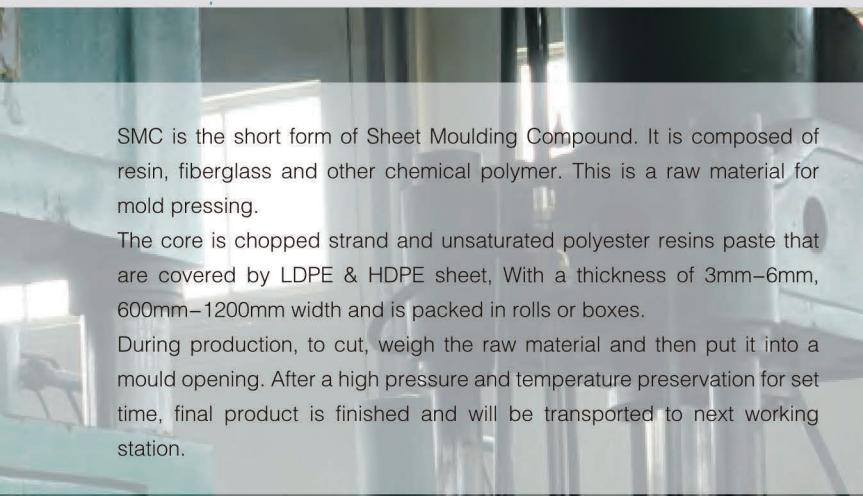


## What is SMC?

SMC is the short form of Sheet Moulding Compound. It is composed of resin, fiberglass and other chemical polymer. This is a raw material for mold pressing.

The core is chopped strand and unsaturated polyester resins paste that are covered by LDPE & HDPE sheet. With a thickness of 3mm-6mm, 600mm-1200mm width and is packed in rolls or boxes.

During production, to cut, weigh the raw material and then put it into a mould opening. After a high pressure and temperature preservation for set time, final product is finished and will be transported to next working station.



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## SINTA SMC Manhole Cover

Sorooh Majan Road Establishment owns over 13 years' experience on manufacturing and developing SMC Composite Cover, who now is the leader supplier in China.

SMC cover is a kind of FRP manhole cover which is a kind of sheet material cover that developed by Jinmeng, which is short for Sheet Moulding Compound. It is made up of fiberglass and unsaturated polyester resin. Comparing with other materials, it has a higher stretch resistance and bend resistance, which is a ideal material for composite manhole cover, and we're applying for the invention patent of this material.

Comparing with the traditional ductile cast iron, SMC manhole cover owns very similar or even better performance at testing load rating. SMC manhole cover is able to meet and exceed A15/B125/C250/D400/E600/F900 loading rating, according to En124: 1994. Meanwhile, SMC manhole cover well solves the theft and potential problems caused by thieves, as SMC is zero cycle value.

Other significant advantages are also remarkable: light-weighted, durable service life, anti-corrosion, anti-slip, UV-proof and water tight, free design.

Sorooh Majan composite covers have been widely used in inspection wells of power, telecommunication, mobile communication, fuel gas pipes, gas station, chemical bases, real estates, urban arteries, high-grade highways, expressways, freight transport piers, airports etc.

Now Sorooh Majan composite manhole cover has been exported to many countries and popular in European, US and Asia markets.



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## 1. High load rating and strength

- ◎ Similar hard property as cast iron, while have a overwhelming advantage on stretch recovery and bend resistance.
- ◎ Designed to meet and exceed A15/B125/C250/D400/E600/F900 loading rating, according to En124: 1994.
- ◎ Less noise and lower vibration transmissions.
- ◎ Certificated with CE,En124,SGS,Eurofins,BV & ISO9001.

## 2. Against theft and safety options

- ◎ Comparing with cast iron manhole cover, composite cover has zero theft value and not attractive to thieves, which reduce the potential accident and further maintenance cost caused by thieves.
- ◎ Surface anti-slip thread guarantees safe road condition even in extreme weather.
- ◎ Locks are available as an option molded into the cover to improve security rate.
- ◎ Non-electricity conduction and non-heat conduction,UV resistance.

## 3. Lightweight

- ◎ Compared with cast iron manhole covers, composited covers are 30% lighter.
- ◎ Lightweight allows easy of handling and more loading per vehicle, more convenient transportation and economical saving.
- ◎ Allows a safer working condition, which a SINGLE worker is enough for a complete installation without risk of injury.
- ◎ Easy of moving, ease and reduce the maintenance cost.

## 4. Durable service life

- ◎ More than 30 years theoretical service life at usual road condition.
- ◎ Anti corrosion, waterproof, dust and pets tight, well sealed prevent poisonous gas leaking out.
- ◎ Without displacement, freely radio signal passing.
- ◎ Higher and lower temperature tolerance with the range -40°C -200°C.

## 5. Free design

- ◎ Composite material itself allows for innovative design features, client logo and their own design is available as an option.
- ◎ Much more clear resolution ratio of surface design than cast iron or of other material.

## 6. Carbon footprint saving and environmental care

- ◎ Lower embedded energy carbon emission and during manufacturing process than cast iron covers.
- ◎ New material, manufacture technology and Lean Production idea save carbon footprint.



## 1. Classification

Description of load rating  
A15,B125,C250,D400,E600 and F900.NOTE When the standard is revised in the future, the conversion of class A15 to A30 may be considered.

## 2. Place of installation

The appropriate class of manhole covers or gully gratings to be used depends upon the place of installation. The various places of installation have been divided into groups numbered 1 to 6, as listed below. Figure 9a and Figure 9b show the location of some of these groups in a highway environment. A guide as to which class of manhole covers or gully gratings should be used is shown in parentheses for each group. The selection of the appropriate class is the responsibility of the designer. Where there is any doubt, the stronger class should be selected.

Group 1(min.class A15)

Areas which can only be used by pedestrians and pedal cyclists.

Group 2(min.class B125)

Footways, pedestrian areas and comparable areas, car parks or car parking decks.

Group 3(min.class C250)

For gully tops installed in the area of kerbside channels of roads (Figure 9a) which when measured from the kerb edge, extend a maximum of 0.5m into the carriageway and a maximum of 0.2m into the footway.

Group 4(min.class D400)

Carriageways of roads (including pedestrian streets), hard shoulders (Figure 9b) and parking areas, for all types of road vehicles.

Group 5(min.class E600)

Areas imposing high wheel loads, e.g. docks, aircraft pavements.

Group 6(min.class F900)

Areas imposing particularly high wheel loads, e.g. aircraft pavements.

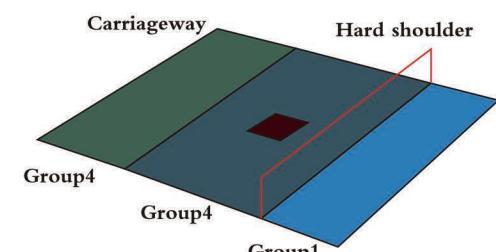


Figure 9b—Typical detail of a hard shoulder showing the location of some installation groups

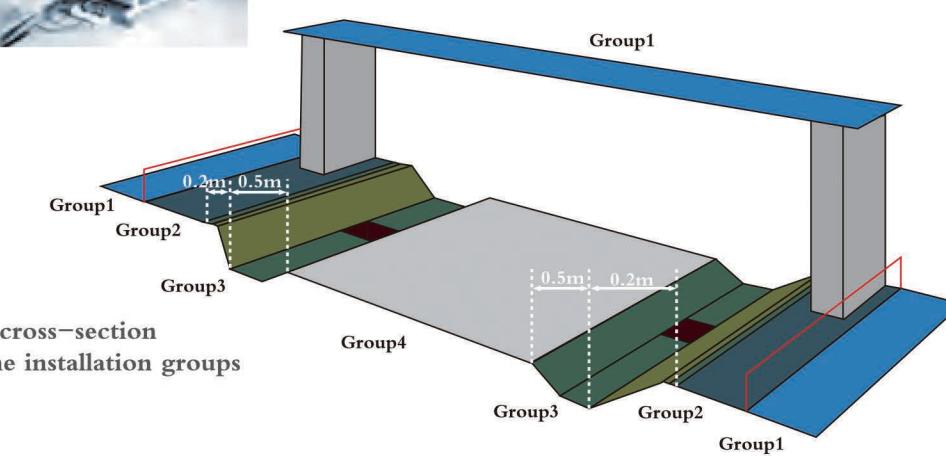
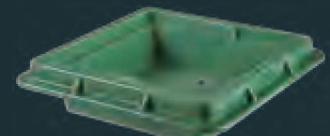
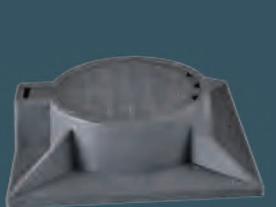
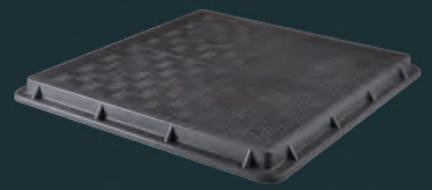


Figure 9a—Typical highway cross-section showing the location of some installation groups



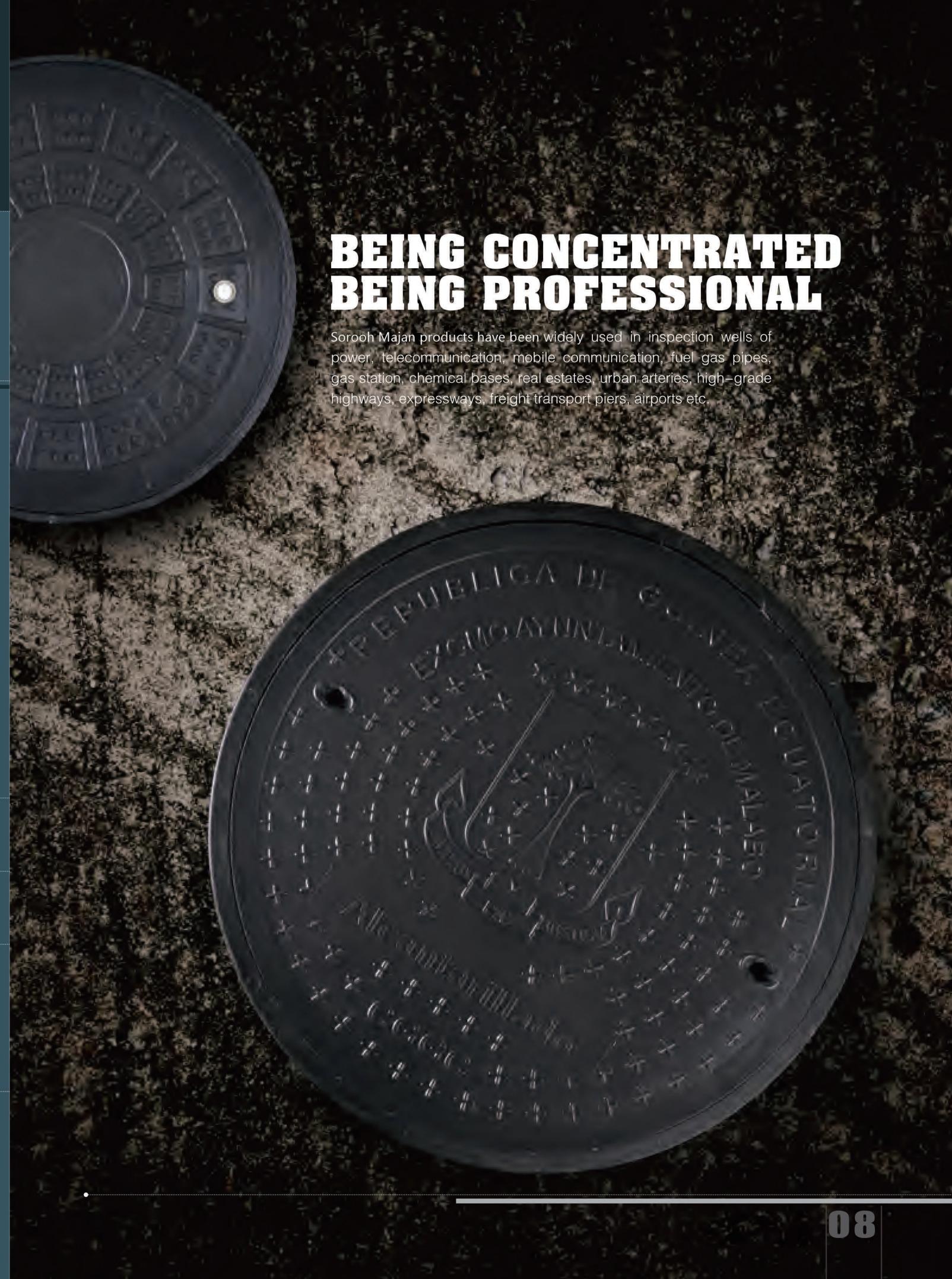
## Directory >>

- **SMC Manhole Cover 08-17**
- **SMC Gully Grating 18-20**
- **SMC Valve Box 21**
- **SMC High Temperature Resistant Dustbin 22**
- **SMC Composite Manhole Cover Installation Instruction 23-24**

## BEING CONCENTRATED BEING PROFESSIONAL

Sorooh Majan products have been widely used in inspection wells of

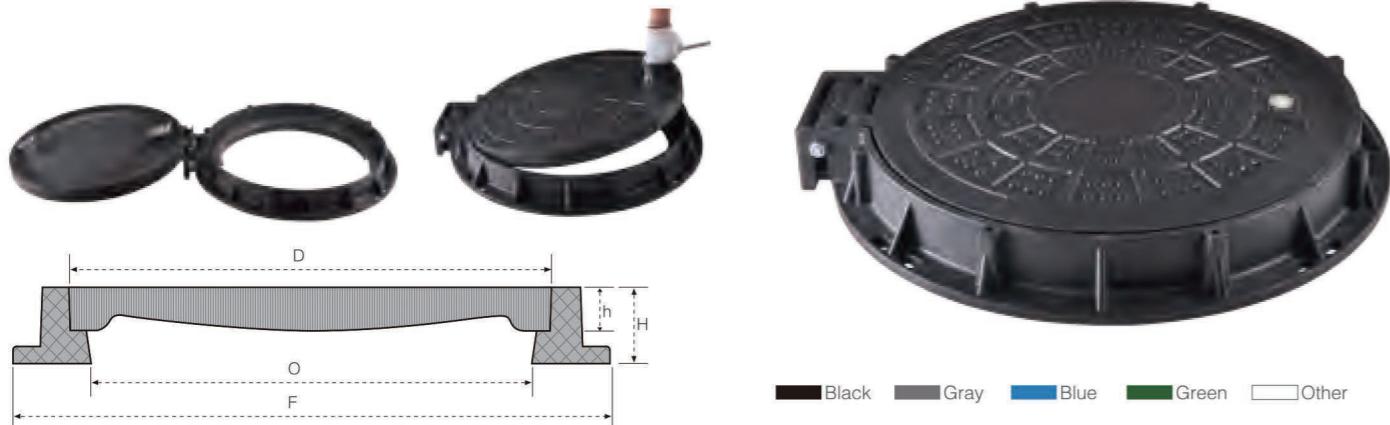
power, telecommunication, mobile communication, fuel gas pipes, gas station, chemical bases, real estates, urban arteries, high-grade highways, expressways, freight transport piers, airports etc.



## JM-MR101D Manhole cover

- High load-D400(EN124) certificated by SGS.
- Stable and Quiet—Using one lock with hinge to keep the cover stable on the road.Using a seal to reduce noise.
- Convenience and safety opened—A single worker is enough to open the cover without any risk of injury.Hinge design,cover is opened with a best safe angle of 180°.

- D400 Cerified with SGS,It is a new safety hinged manhole cover.
- Hinge design with a safe angle of 180°.
- 2 locks and separate keys ensure the cover safety.
- A single worker is enough to open and maintain the cover without risk of injury.



Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	sealing
JM-MR101D	600	D400	600	690	820	110	50	lock	yes
JM-MR101C	600	C250	600	690	820	110	50	lock	yes
JM-MR101D1	600	D400	600	690	805	100	50	lock	yes
JM-MR101C1	600	C250	600	690	805	100	50	lock	yes
JM-MR111D	700	D400	700	750	910	100	50	lock	yes
JM-MR111C	700	C250	700	750	910	75	50	lock	yes

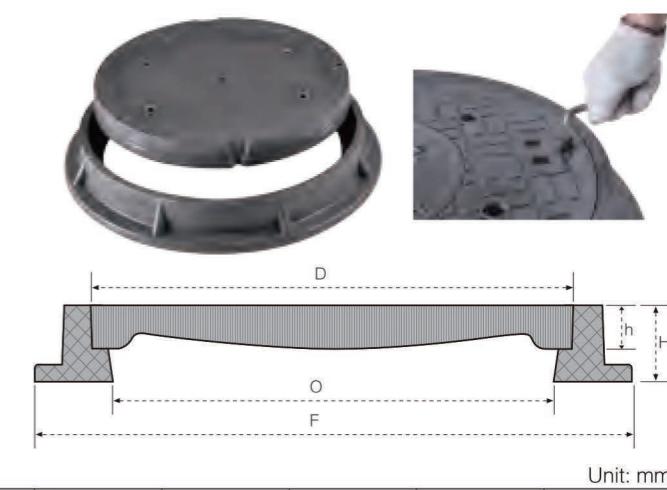


Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	sealing
JM-MR102D	600	D400	600	650	760	100	40	lock	yes
JM-MR102C	600	C250	600	650	760	60	40	lock	yes
JM-MR102B	600	B125	600	650	780	40	26	screw	no
JM-MR102A	600	A15	600	650	780	40	26	screw	no

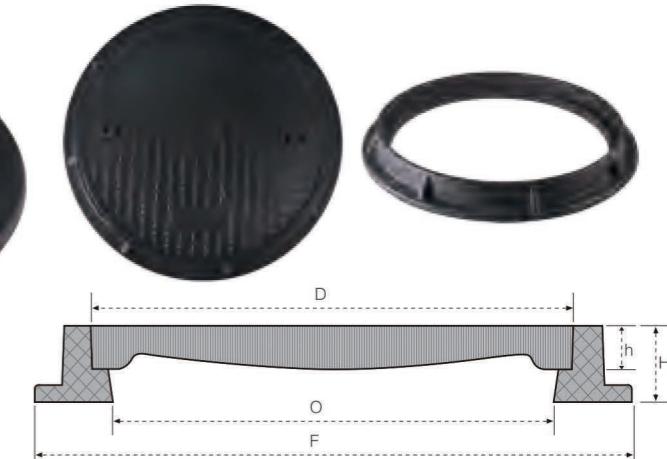
# SMC Manhole Cover

## SMC Manhole Cover Application

Soroor Majan products have been widely used in inspection wells of power, telecommunication, mobile communication, fuel gas pipes, gas station, chemical bases, real estates, urban arteries, high-grade highways, expressways, freight transport piers, airports etc.



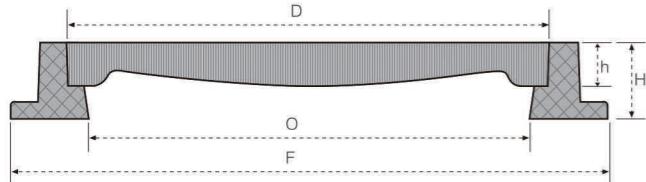
Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	sealing
JM-MR103D	550	D400	550	600	725	100	60	screw	yes
JM-MR103C	550	C250	550	600	725	90	60	screw	yes
JM-MR103B	550	B125	550	600	725	80	50	screw	no
JM-MR103A	560	A15	560	600	710	65	40	screw	no



Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	sealing
JM-MR105D	840	D400	840	900	1065	113	70	no	yes
JM-MR105C	840	C250	840	900	1065	113	70	no	yes
JM-MR105B	840	B125	840	900	1065	113	70	no	yes

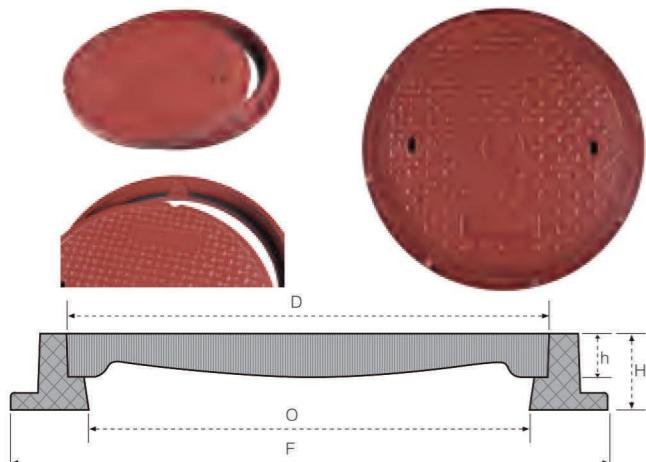
## SMC Manhole Cover Application

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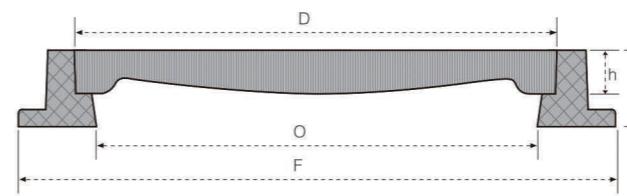
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Product Code	Clear Opening	Class	O	D	F	H	h	Unit: mm	
								lock/screw	sealing
JM-MR106D	695	D400	695	750	900	105	50	no	yes
JM-MR106C	695	C250	695	750	900	105	50	no	yes
JM-MR106B	695	B125	695	750	900	75	50	no	no
JM-MR106D1	630	D400	630	750	938	95	50	no	yes
JM-MR106C1	630	C250	630	750	938	95	50	no	yes
JM-MR106B1	630	B125	630	750	938	95	50	no	no



■ Black ■ Gray ■ Blue ■ Green ■ Other

Product Code	Clear Opening	Class	O	D	F	H	h	Unit: mm	
								lock/screw	sealing
JM-MR107E	640	E600	640	700	820	100	70	no	yes
JM-MR107D	640	D400	640	700	820	100	70	no	yes
JM-MR107C	650	C250	650	700	880	90	60	no	yes
JM-MR107B	650	B125	650	700	820	65	40	no	no
JM-MR107A	630	A15	630	700	800	47	30	screw	no



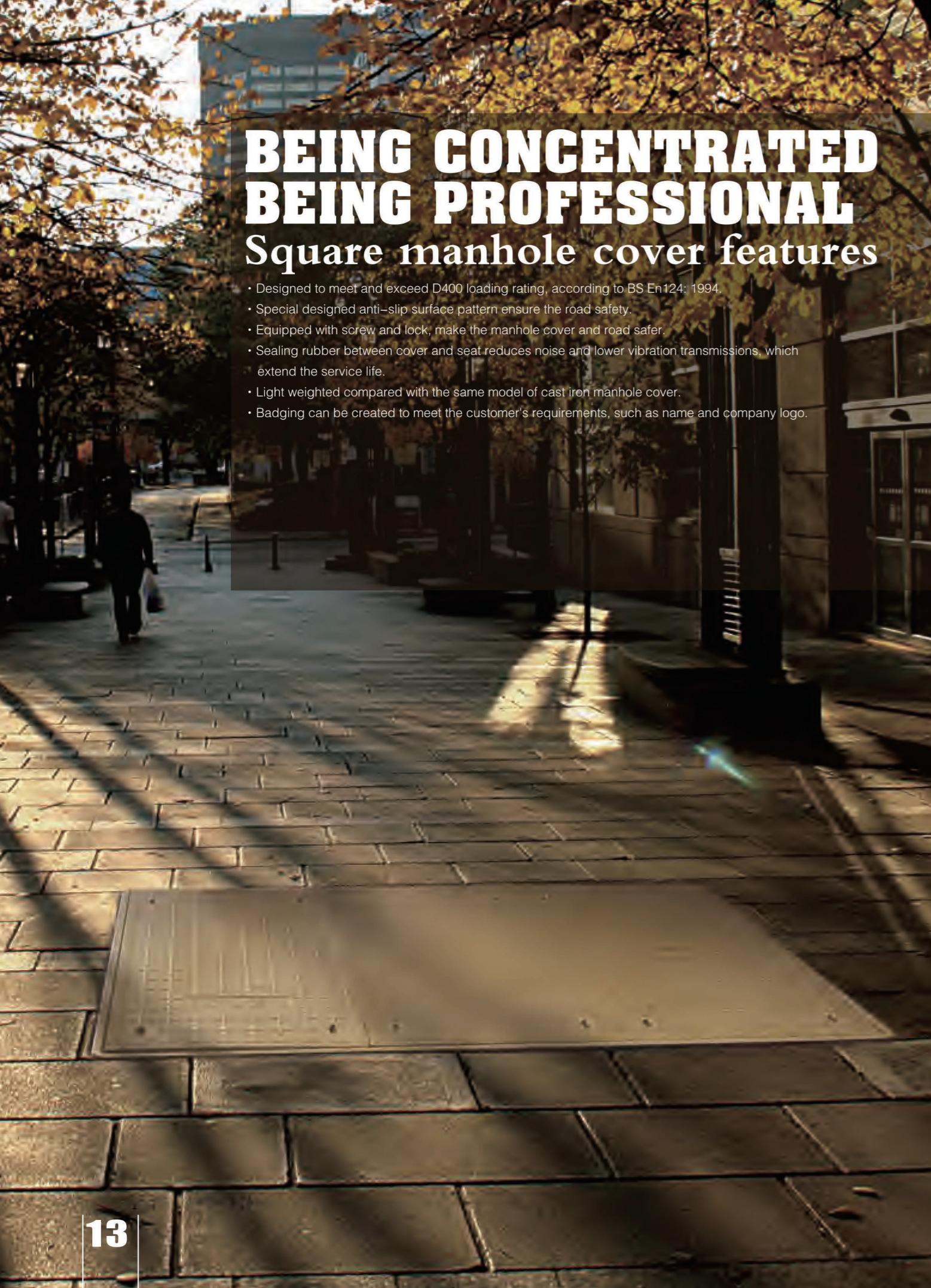
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Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	sealing
JM-MR108D	600	D400	600	690	800*800	100	50	lock	yes
JM-MR109D	600	D400	600	690	850*850	100	50	lock	yes

We have different kinds of anti-slip surface pattern and design at your option; meanwhile any customized required design and Logo is fully supported.



■ Black ■ Gray ■ Blue ■ Green ■ Other



# BEING CONCENTRATED BEING PROFESSIONAL

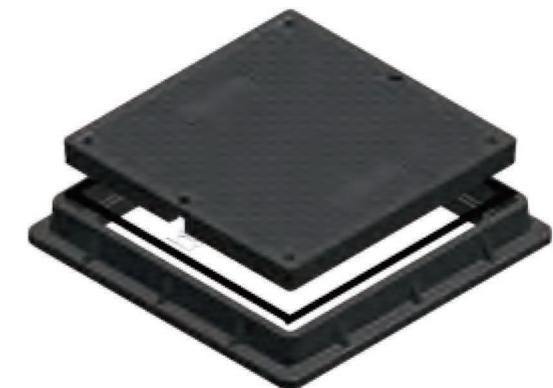
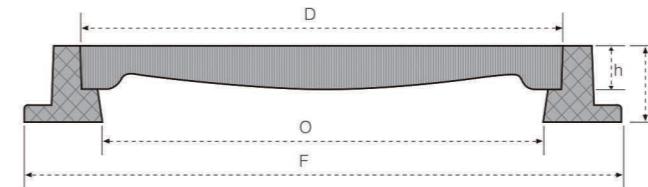
## Square manhole cover features

- Designed to meet and exceed D400 loading rating, according to BS En124: 1994.
- Special designed anti-slip surface pattern ensure the road safety.
- Equipped with screw and lock, make the manhole cover and road safer.
- Sealing rubber between cover and seat reduces noise and lower vibration transmissions, which extend the service life.
- Light weighted compared with the same model of cast iron manhole cover.
- Badging can be created to meet the customer's requirements, such as name and company logo.

# SMC Manhole Cover



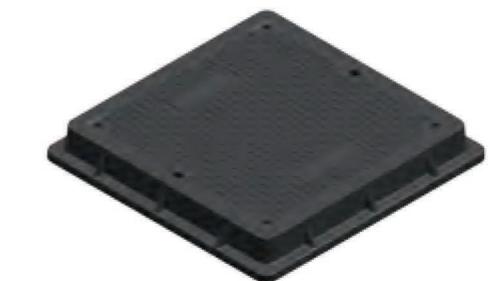
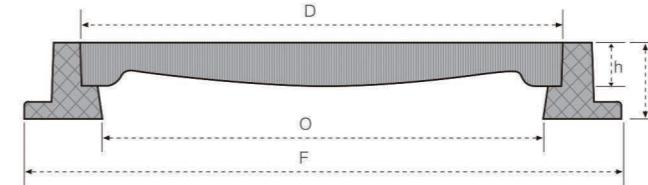
Black Gray Blue Green Other



Unit: mm

Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	sealing
JM-MS201D	600*600	D400	600*600	655*655	760*760	100	50	screw	yes
JM-MS201C	600*600	C250	600*600	655*655	760*760	75	50	screw	yes
JM-MS201B	600*600	B125	600*600	650*650	750*750	35	25	screw	no
JM-MS201A	600*600	A15	600*600	650*650	750*750	35	25	screw	no

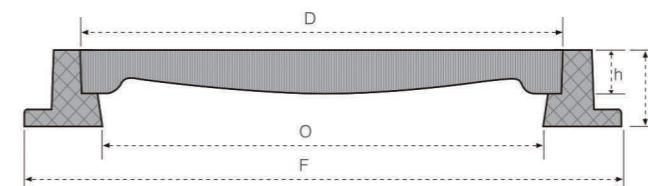
Black Gray Blue Green Other



Unit: mm

Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	sealing
JM-MS202D	550*550	D400	550*550	600*600	705*705	100	50	no	yes
JM-MS202C	550*550	C250	550*550	600*600	705*705	75	50	no	yes
JM-MS202B	550*550	B125	550*550	600*600	705*705	65	40	no	no
JM-MS202A	550*550	A15	550*550	600*600	705*705	65	40	no	no
JM-MS220B	450*450	B125	450*450	500*500	620*620	75	50	no	no
JM-MS221B	300*300	B125	300*300	400*400	515*515	60	40	no	no

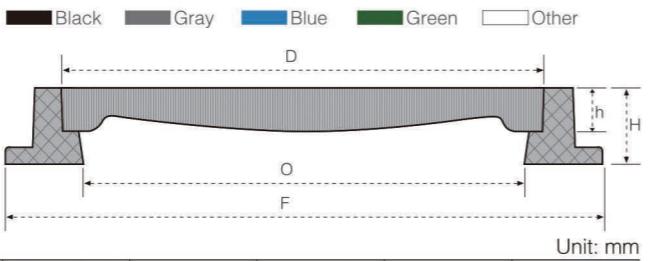
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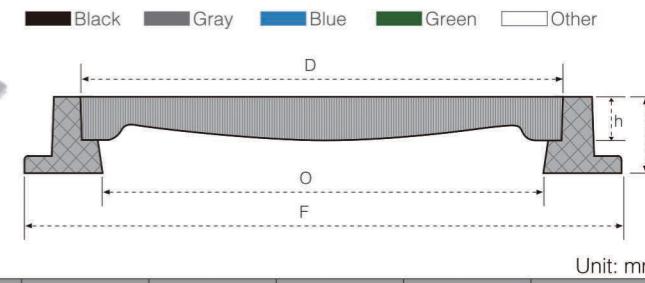
Unit: mm

Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	sealing
JM-MS203D	900*900	D400	900*900	1000*1000	1150*1150	100	65	screw	yes
JM-MS203C	900*900	C250	900*900	1000*1000	1150*1150	75	55	screw	yes
JM-MS203B	900*900	B125	900*900	1000*1000	1150*1150	70	40	no	no
JM-MS203A	900*900	A15	900*900	1000*1000	1150*1150	70	40	no	no

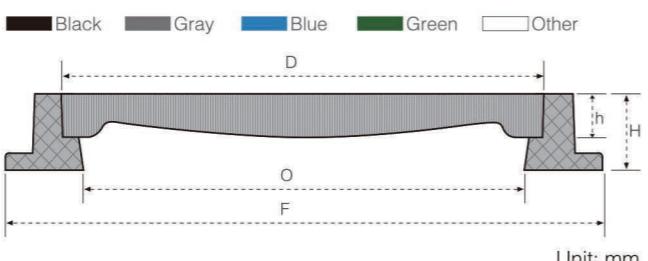
# SMC Manhole Cover



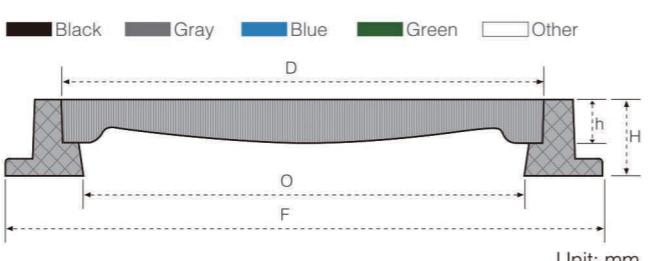
Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	sealing
JM-MS205B	990*990	B125	990*990	1060*1040	1210*1190	100	45	no	no
JM-MS205A	990*990	A15	990*990	1060*1040	1210*1190	100	45	no	no
JM-MS206B	850*770	B125	850*770	940*860	1060*980	70	40	no	no
JM-MS206A	850*770	A15	850*770	940*860	1060*980	70	40	no	no
JM-MS207B	750*550	B125	750*550	800*600	920*720	65	40	no	no
JM-MS207A	750*550	A15	750*550	800*600	920*720	65	40	no	no



Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	sealing
JM-MS211B	1540*960	B125	1540*960	1590*1040	1720*1170	100	45	no	no
JM-MS211A	1540*960	A15	1540*960	1590*1040	1720*1170	100	45	no	no
JM-MS212B	1420*920	B125	1420*920	1500*1000	1650*1150	70	40	no	no
JM-MS212A	1420*920	A15	1420*920	1500*1000	1650*1150	70	40	no	no
JM-MS213B	1325*770	B125	1325*770	1410*860	1555*1000	70	40	no	no
JM-MS213A	1325*770	A15	1325*770	1410*860	1555*1000	70	40	no	no
JM-MS214B	1280*760	B125	1280*760	1350*840	1480*960	100	45	no	no
JM-MS214A	1280*760	A15	1280*760	1350*840	1480*960	100	45	no	no



Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	sealing
JM-MS209D	600*450	D400	600*450	655*505	760*610	100	50	screw	yes
JM-MS209C	600*450	C250	600*450	655*505	760*610	100	50	screw	yes



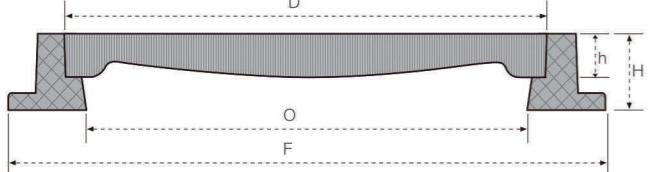
Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	sealing
JM-MS210D	900*600	D400	900*600	960*660	1070*760	100	65	screw	yes
JM-MS210C	900*600	C250	900*600	960*660	1070*760	100	65	screw	yes

# SMC Manhole Cover



## SMC Manhole Cover

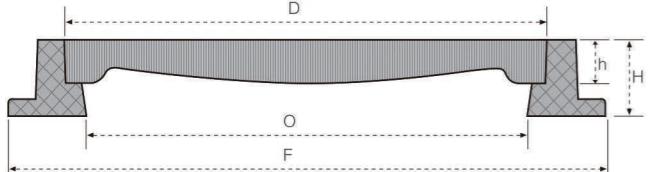
■ Black ■ Gray ■ Blue ■ Green ■ Other



Unit: mm

Product Code	Clear Opening	Class	O	D	F	H	h	hinge
JM-MS215B	535*360	B125	535*360	560*385	700*480	75	30	yes
JM-MS215A	535*360	A15	535*360	560*385	700*480	75	30	yes
JM-MS216B	615*500	B125	615*500	640*530	795*610	70	30	yes
JM-MS216A	615*500	A15	615*500	640*530	795*610	70	30	yes
JM-MS217B	935*500	B125	935*500	960*530	1115*610	70	30	yes
JM-MS217A	935*500	A15	935*500	960*530	1115*610	70	30	yes

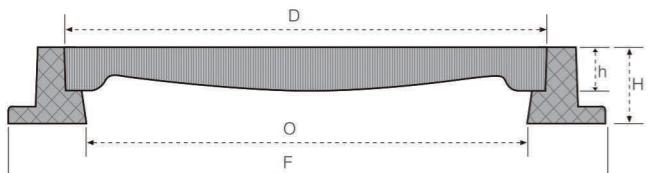
■ Black ■ Gray ■ Blue ■ Green ■ Other



Unit: mm

Product Code	Clear Opening	Class	O	D	F	H	h	hinge
JM-MS218B	370*275	B125	370*275	400*305	500*400	75	30	yes
JM-MS218A	370*275	A15	370*275	400*305	500*400	75	30	yes

■ Black ■ Gray ■ Blue ■ Green ■ Other



Unit: mm

Product Code	Clear Opening	Class	O	D	F	H	h	hinge
JM-MS219B	505*295	B125	505*295	530*320	610*500	70	30	yes
JM-MS219A	505*295	A15	505*295	530*320	610*500	70	30	yes

## SMC Gully Grating



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### Advantage of SMC composite grating

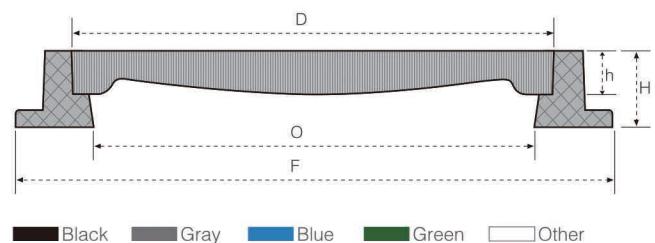
It is now widely accepted that increased carbon dioxide generation is causing global warming. Therefore it means increased rainfall, which demand more efficient gratings to disperse larger quantity of road water safely and quickly.

Jinmeng has developed several high efficient gratings ,with following advantages.

1. High load rating and efficient.
2. Increased security with zero theft value.
3. Light weighted than same model that made of cast iron.
4. Anti corrosion, anti-UV and lower noise.
5. Longer service life.

## Advantage of SMC composite grating

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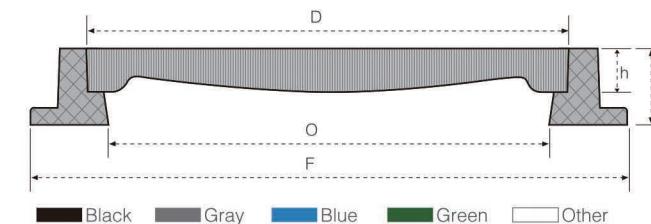


■ Black ■ Gray ■ Blue ■ Green ■ Other

Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	Water area
JM-WG401D	450*450	D400	450*450	500*500	650*550	100	75	screw	≥30%
JM-WG401C	450*450	C250	450*450	500*500	650*550	100	75	screw	≥30%



Unit: mm

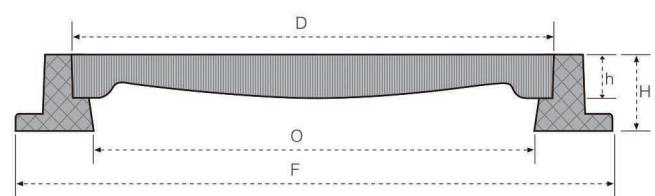


■ Black ■ Gray ■ Blue ■ Green ■ Other



Unit: mm

Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	Water area
JM-WG406B	610*440	B125	610*440	640*495	760*585	75	50	no	≥30%
JM-WG406A	610*440	A15	610*440	640*495	760*585	75	50	no	≥30%
JM-WG407B	550*350	B125	550*350	600*400	710*500	65	40	no	≥30%
JM-WG407A	550*350	A15	550*350	600*400	710*500	65	40	no	≥30%
JM-WG408B	450*350	B125	450*350	500*400	620*520	70	50	no	≥30%
JM-WG408A	450*350	A15	450*350	500*400	620*520	70	50	no	≥30%
JM-WG409B	345*245	B125	345*245	400*300	500*400	65	38	no	≥30%
JM-WG409A	345*245	A15	345*245	400*300	500*400	65	38	no	≥30%

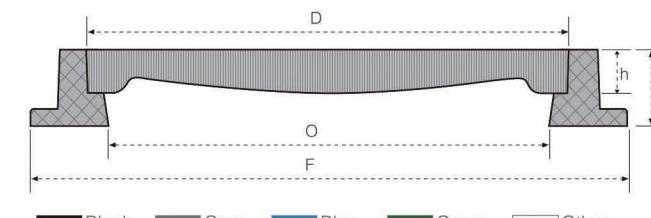


■ Black ■ Gray ■ Blue ■ Green ■ Other



Unit: mm

Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	Water area
JM-WG402D	460*370	D400	460*370	520*430	680*595	110	70	no	≥30%
JM-WG403D	460*370	D400	460*370	530*430	680*535	110	70	no	≥30%

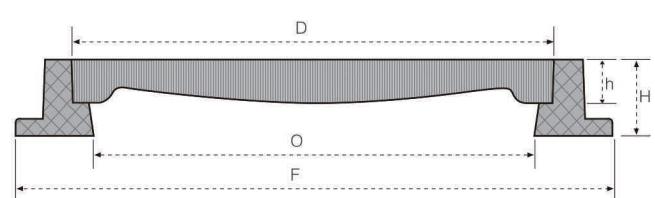


■ Black ■ Gray ■ Blue ■ Green ■ Other



Unit: mm

Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	Water area
JM-WG410B	305*205	B125	305*205	350*250	440*340	55	35	no	≥30%
JM-WG410A	305*205	A15	305*205	350*250	440*340	55	20	no	≥30%

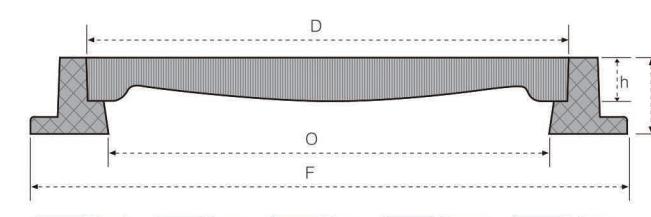


■ Black ■ Gray ■ Blue ■ Green ■ Other



Unit: mm

Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	Water area
JM-WG404B	680*380	B125	680*380	750*450	880*580	90	45	no	≥30%
JM-WG404A	680*380	A15	680*380	750*450	880*580	90	45	no	≥30%
JM-WG405B	630*330	B125	630*330	680*380	810*510	70	40	no	≥30%
JM-WG405A	630*330	A15	630*330	680*380	810*510	70	40	no	≥30%



■ Black ■ Gray ■ Blue ■ Green ■ Other



Unit: mm

Product Code	Clear Opening	Class	O	D	F	H	h	lock/screw	Water area
JM-WG412D		D400		550*340			70		≥30%
JM-WG412C		C250		550*340			50		≥30%
JM-WG413B		B125		450*300			35		≥30%
JM-WG414A		A15		450*300			35		≥30%

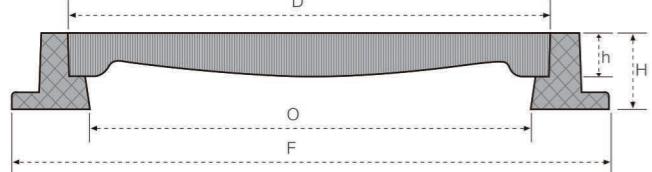
# SMC Valve Box



■ Black ■ Gray ■ Blue ■ Green ■ Other

Product Code	Clear Opening	Class	O	D	F	H	h	hinge
JM-MV301C	210	C250	210	250	400*400	115	40	yes
JM-MV302C	160	C250	160	180	250*250	200	30	yes
JM-MV303C	160	C250	160	200	300	160	30	no

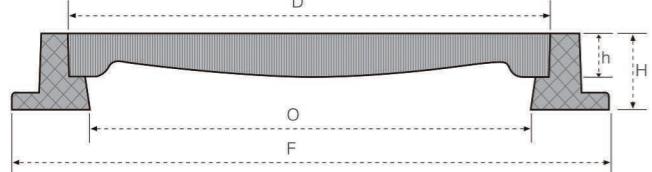
Unit: mm



■ Black ■ Gray ■ Blue ■ Green ■ Other

Product Code	Clear Opening	Class	O	D	F	H	h	hinge
JM-MV305B	575*445	B125	575*445	655*525	675*545	300	35	no

Unit: mm



■ Black ■ Gray ■ Blue ■ Green ■ Other

Product Code	Clear Opening	Class	O	D	F	H	h	hinge
JM-MV306C	250	C250	250	150*150	320*320	110	20	yes

Unit: mm



- More harder than normal material of dustbin.
- Long product life & maintenance free.
- Fire resistance.
- Light weighted and no risk to be stolen because of SMC material.
- Anti-corrosion.

Product Code	Volume
JM-D80001	240L
JM-D80002	120L

■ Black ■ Gray ■ Blue ■ Green ■ Other



JNMENG also specializes in the production of dustbin-liners for outdoor or indoor trash bins.

This dustbin-liners is high strength, high temperature resistant, anti-aging, and corrosion resistance.

■ Black ■ Gray ■ Blue ■ Green ■ Other





1. Check the hole depth and manhole opening diameter that the frame is to be fitted on, ensuring the latter manhole cover to be installed is on the same flat with road.  
If necessary, insert a formwork around the manhole on which the cover is to be fitted.  
Make sure that the frame does not lay on the formwork when in its final position.



2. Check the condition of the manhole opening and remove any dust from the support and manhole opening.



4. Lay the frame directly on the sealing product.



NOTE: In case of some HINGED manhole cover, leave a clearance space under the hinge box and lock part.



5. Adjust the frame to the same level as the wearing course. The adjustment should be carried out by the exerting downward pressure on the frame with wooden hammer to ensure that the sealing product spreads evenly under the surface. The requirement of the thickness under the frame, please refer to POINT 3.

6. Clean the edge of clear opening and put on the cover.



7. Fill with sealing product and use a float to level off the product.  
If the road is asphalt, leaving 30–50mm for the latter laying of the asphalt course.



8. After the concrete final set, clean the installation area and maintain with water no less than 7 days.

NOTE: Any manhole cover quality problems caused by UNQUALIFIED INSTALLATION will not be suitable to our product WARRANTY TERMS.

We strongly recommend installing the product according to our INSTRUCTION.

Tiny installation improvement is recommended according to different installing condition.