



SOUTHERNHEM INDUSTRIES SDN BHD

(COMPANY NO. : 541051-H)

PRODUCT GUIDE MANHOLES, GULLY TOPS, GRATINGS & SURFACE BOXES BS EN 124:1994





SOUTHERNHEM INDUSTRIES SDN BHD (541051-H)

Lot 1200, Block 7, MTL D, Jalan Demak Laut 5,
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IMPORTANT :

All information contain in this Product Guide is to our best knowledge, correct at time of printing. It is our policy to incorporate improvement on all our product as such, we reserve the right to alter without prior notice, any information published within.

The product listed in this catalog are most of common items, In any circumstances when the customer requires special product or sizes not listed within, kindly contact us. We shall be happy to assist.



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COMPANY OVERVIEW

Southernhem Industries Sdn Bhd (SI) is in the business of manufacturing and supply of quality Ductile Iron and Gray Cast Iron products mainly for potable water and sewage distribution system. Additionally, SI has facilities to undertake special casting involving cast steel, high-alloy cast irons and non-ferrous metal e.g. aluminum, which are basically for engineering replacement parts.

Southernhem Industries Sdn Bhd (SI) was incorporated in 2001. Even though still at a tender age, SI has already penetrated the West Malaysian including Brunei Darulsalam's market and since then has begin to play a major role in supporting the State's primary and secondary industries e.g. steel mills, oil palms, bricks, concrete and timber.

Southernhem Industries Sdn Bhd (SI) aggressive marketing reinforced by competitive pricing, high quality, prompt delivery and personalized services have collectively molded the foundation for continuous growth for the company.

Southernhem Industries Sdn Bhd (SI) is situated at a land area of 0.5 hectares in Sejingkat Industrial Estate, SI currently employs a workforce of 50-strength semi to skilled personnel.

The factory housed TEN (10) semi-automatic molding lines capable of producing 80 molds per hour. Molding sands are fully recycled in a 20 Mt Hopper & Segregation line. The high molten iron usage is supplied by TWO (2) Nos. 0.5Mt Induction Furnaces using clean electricity energy.

Apart from this, **Southernhem Industries Sdn Bhd (SI)** has dedicated machineries to perform delicate finishing tasks e.g. grinding, machining to size, shaping, milling and drilling.

Southernhem Industries Sdn Bhd (SI) testing facilities comprise of compression machine capable of imparting up to 100 Mt compressive loads for manhole strength testing purpose. For water leak tightness test of fittings & bends, a hydrostatic testing machine capable of exerting up to 40 Bar hydrostatic pressure is commissioned.

A material test laboratory has also been established. Material strength and microscopic analyses are carried out on a routine basis to ensure consistency in product quality.





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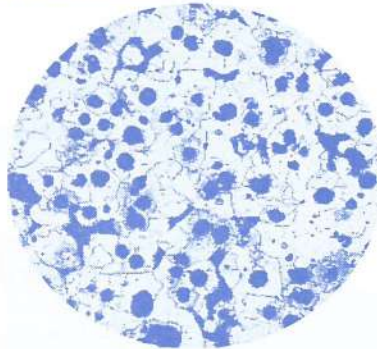
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PRODUCT INTRODUCTION

1. Introduction to Ductile Iron

The traditional grey iron tends to be brittle and thus could not find much use in modern application which requires higher impact resistance, tensile strength, toughness etc. In view of this, improvement in the field of cast iron have come up with a new material known as Ductile Iron (Spheroidal Graphite Iron).



Graphite in Nodular Structure

2. Product Advantages

Ductile Iron has properties much superior than the earlier forms of iron which provides;

- a. Greater resistance to impact caused by moving vehicles,
- b. Possesses high strength which gives rise to resistance to fatigue and also pressure surges which could arise from ground subsidence or second-comer damage,
- c. Resistance to permeation or degradation by organic contaminants in the soils thus ensures minimal water pollution.
- d. good machining characteristic.

3. Method of Use

Ductile iron can find its use in wide range of application ranging from small to large diameter pipelines for transmission and distribution mains for potable or sewage installation, or serves as a high strength anchored jointing systems for areas prone to ground movement and also other major civil works.

4. Quality Assurance

Controls undertaken on major molten chemical composition and maintained throughout the production batches as to ensure consistency in melt quality. Chemical composition are checked at every melt and test samples are prepared for Mechanical testing to ensure that the strength requirement is achieved. Minimum grade 420/12 for fittings & grade 500/7 for manhole tops.

In addition, our products are design and produce according to QMS ISO 9001:2008, are tested and certified by IKRAM QA Services (3rd party certification body) and listed in SURUHANJAYA PERKHIDMATAN AIR NEGARA (SPAN) on a periodical basis.

5. Product Warranty

We warranty our product for ONE (1) YEAR from date of installation. We shall change (free of charge) any product damaged during this period with exception to the following conditions;

- a. Inappropriate or incorrect installation by contractors,
- b. Damages caused by incorrect application e.g. selecting lower grade of manhole.
- c. Loss due to theft.



TERMINOLOGY

1. Gully

An assembly to receive surface water for discharge into the drainage system.

2. Manhole

A chamber or access shaft to underground system.

3. Gully Top

That part of a gully, consisting of a frame and grating and/or cover and which is placed on the gully pot at the place of installation.

4. Manhole Top

The part of a manhole consisting of the frame and a cover and/or a grating.

5. Frame

The fixed part of a gully top or manhole top of which receives and support a grating and/or a cover.

6. Grating

The movable part(s) of a manhole top or a gully top, which permits the passage of water through itself to the gully.

7. Cover

The movable part(s) of a manhole top or a gully top, which permits the passage of water through itself to the gully.

8. Vent

An opening in the cover of a manhole top provide ventilation.

9. Dirt Bucket

A removable component of a gully or a gully top which collects debris.

10. Dirt Pan

A removable component of a manhole or manhole top which collects debris

11. Seating

The surface on which the grating or the cover rests in the frame.

12. Depth of insertion, A mm

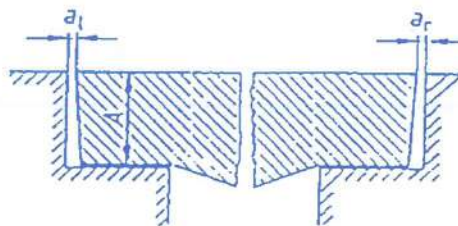


Figure 1

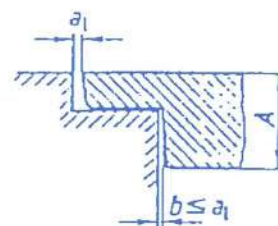


Figure 2

13. Bearing Area, mm²

The surface of the underside of a frame which rests upon the supporting structure.



TERMINOLOGY

14. Clear Opening, CO mm

The diameter of the largest circle that can be inscribed in the clear area of the frame.

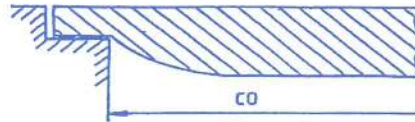


Figure 6

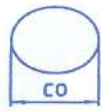


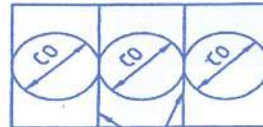
Figure 7 a



Figure 7 b



Figure 7 c



Fixed bars
Figure 7 d



Figure 7 e

15. Clear Area, m²

The unobstructed area between the seatings i.e the shaded area as shown in the figure below.



Figure 8 a

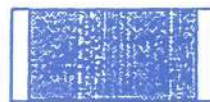


Figure 8 b



Figure 8 c

16. Mass per Unit Area (kg/m²)

Total mass of the cover or the grating in kg divided by the clear area in m².

17. Cushioning Insert

Material in a frame, grating or cover used to provide a non-rock seating.

18. Test Load (kN)

Load applied to gully tops or manhole tops when tested.

19. Pedestrian Areas

Area reserved for pedestrian and only occasionally open vehicular traffic for delivery, cleaning purposes or in emergency.

20. Pedestrian Areas

Area where vehicular traffic is prohibited during certain periods (e.g. pedestrian areas during business hours and vehicular traffic outside these hours).



CLASSIFICATION OF MANHOLE & GULLY TOPS

Manhole tops and gully tops can be divided into 6 different classes namely A15, B125, C250, D400, E600 and F900. For the information of reader, the figure e.g D400 indicates the value of test load in k N which when applied, the manholes top shall not show signs of cracking. (*More detail explanation can be found in BS EN 124:1994*). Table below presents a detail explanation and usage of the relevant classes.

Group 1 (min. Class A15) : 1.5 Ton

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

Group 2 (min. Class B125) : 12.5 Ton

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

Group 3 (min. Class C250) : 25.0 Ton

For gully tops installed in the area of kerbside channels of roads which when measured from the kerb edge, extend a maximum of 0.5m into the carriage way and a maximum of 0.2m into the footway. (*Please refer to installation guide*).

Group 4 (min. Class D400) : 40.0 Ton

Carriage ways of roads (including pedestrian streets), hard shoulders and perking areas, for all types of road vehicles.

Group 5 (min. Class E600) : 60.0 Ton

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

Group 6 (min. Class F900) : 90.0 Ton

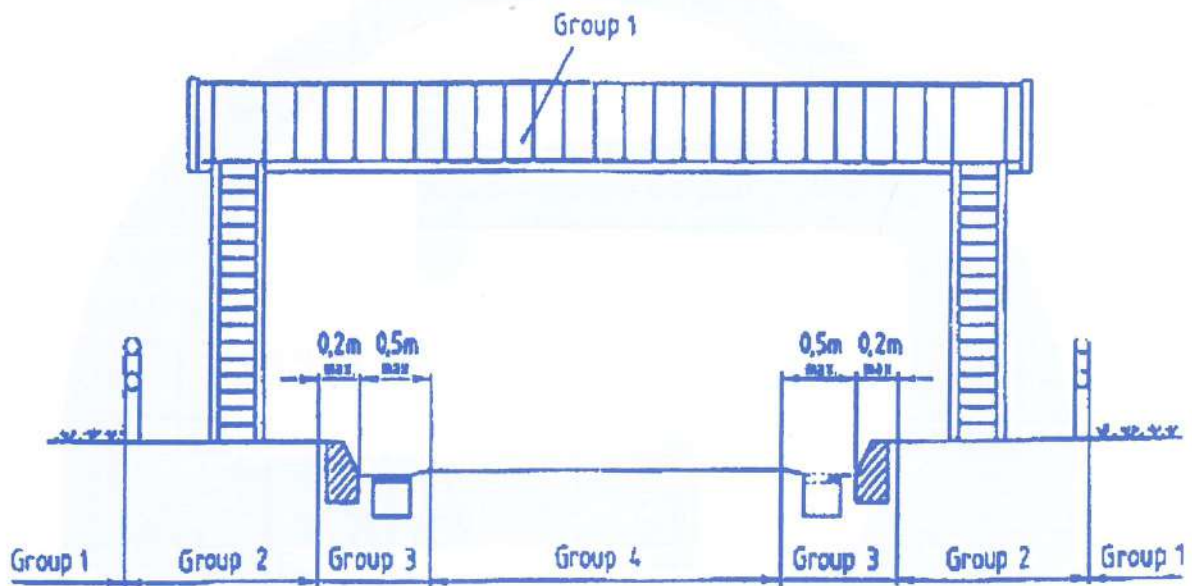
Areas imposing particularly high wheel loads e.g. aircraft pavements.

<u>COMPARISON TO BS497 : PART1 : 1976</u>		
GRADE	LOADING	MATERIAL
Grade A	350 kN (350 Ton)	Cast Iron
	235 kN (23.5 Ton)	Ductile Iron
Grade B	150 kN (15 Ton)	Cast Iron
	100 kN (10 Ton)	Ductile Iron
Grade C	10 kN (1 Ton)	Cast Iron
	7 kN (7 Ton)	Ductile Iron

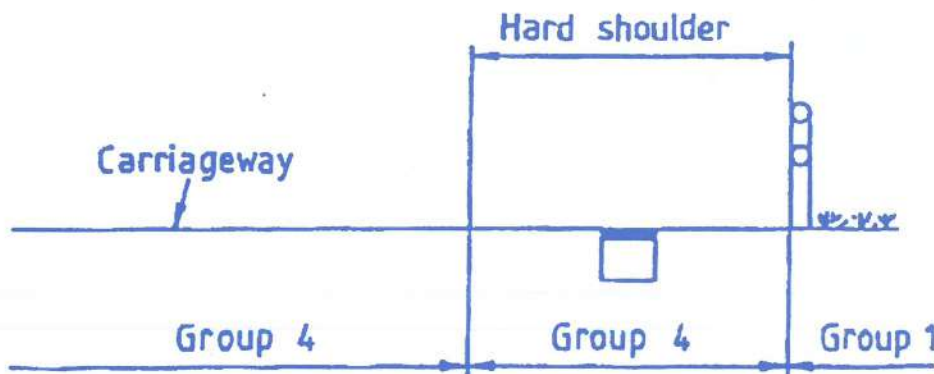


INSTALLATION GUIDE (As recommendation in BS EN 124:1994)

The appropriate class of manhole top or gully top to be used depends upon the place of installation. The various places of installation have been divided into groups numbered 1 to 6, as shown in figure below. Detail explanation of each group can be found on the following page under Classification. A guide as to which class of manhole top or gully top 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.



Typical highway cross-section showing the location of the some installation groups.



Typical detail of a hard shoulder showing the location of the some installation groups.

IMPORTANT

The products listed in this catalog are mostly of common items. Kindly CONTACT US if you require special product or sizes notlisted within. We shall be happy to assist



CAST IRON CIRCULAR MANHOLE COVER TO BS 497:PART 1: 1976

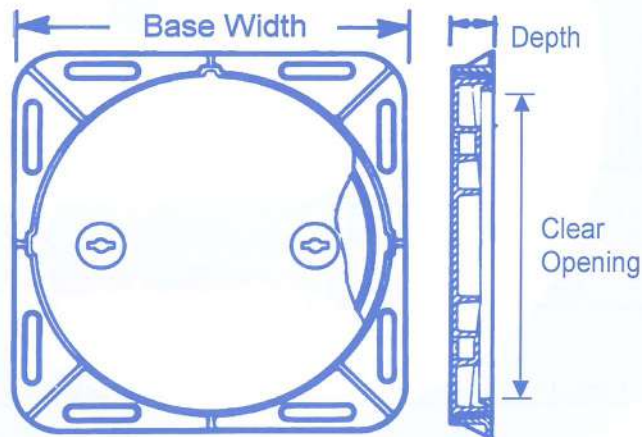
CLASSIFICATION OF MANHOLE BS 497: Part 1: 1976

Grade	Class	Test Loading	Dia. Of Test Block, mm
A	Heavy Duty	350kN (35 Ton)	300
B	Medium Duty	150kN (15 Ton)	300
C	Light Duty	10kN (1 Ton)	300

Grade A Manhole covers capable of bearing wheel loads up to 11.50 tonnes for use in carriageways.

Grade B Manhole covers capable of bearing wheel loads up to 5.00 tonnes, for use in Carriageways carrying relatively slow-moving normal commercial vehicles. (e.g. culde-sacs and minor residential roads)

Grade C Manhole or Access Covers for use in domestic premises or other places not accessible to wheeled traffic.



Product Code	Grade	Clear Opening, mm	Base Width, mm	Depth, mm	Weight, kgs	Sealing	Hinged Type
SI-CI-MHC-500-100	C	Ø500	590 x 590	50	50	Single	√
SI-CI-MHC-500-200	B	Ø500	610 x 610	80	100	Single	√
SI-CI-MHC-560-280	B	Ø560	740 x 740	100	130	Single	x
SI-CI-MHC-560-400	A	Ø560	805 x 805	150	180	Single	x
SI-CI-MHC-560-480	A	Ø560	805 x 805	150	220	Single	x
SI-CI-MHC-560-560	A	Ø560	805 x 805	150	256	Single	x

Technical Specification to BS 497: Part 1: 1976

- High Quality Material ie. Cast Iron (BS 1452).
- Optional Hinge or Locking Devices.
- Black bituminous coating or optional resin based paint.
- Effective sealing mechanism for best odour resistant performance.
- Efficient seating design for stability & quietness during usage.

Note:

We also produce castings as per buyer specifications and drawings. We will develop the patterns not available with us as per your requirement based on your confirmed order.

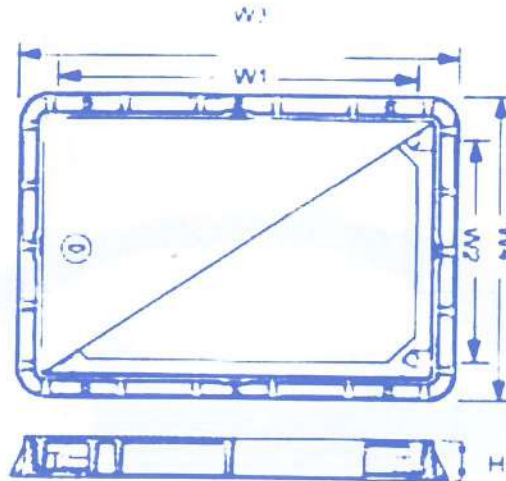


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STANDARD MANHOLE COVER & FRAME : Rectangular Clear Opening



Product Code	Grade	Clear opening		Base Size		Depth, H mm	Weight, kg	Sealing	Features	Type
		W1	W2	W3	W4					
SI-RET-L-6045	Light	600	450	710	560	40	40	Single	Solid Top	-
SI-RET-M-6045-A	Medium	600	450	660	510	36	45	Single	Recess Top	Hinged
SI-RET-M-6045-B	Medium	600	450	700	560	65	50	Double	Recess Top	-
SI-RET-M-6045-C	Medium	600	450	770	620	40	53	Double	Solid Top	-
SI-RET-M-6045-D	Medium	600	450	770	620	42	55	Double	Solid Top	-
SI-RET-H-6045	Heavy	600	450	770	620	80	57	Single	Solid Top	-
SI-RET-M-6045-E	Medium	600	450	800	650	75	100	Single	Solid Top	-
SI-RET-M-7560	Medium	750	600	920	770	50	115	Double	Solid Top	-
SI-RET-H-7560-A	Heavy	750	600	950	800	75	125	Single	Solid Top	-
SI-RET-H-7560-B	Heavy	750	600	950	800	100	170	Single	Solid Top	-
SI-RET-M-7953	Medium	790	530	1380	640	62	180	Double	Recess Top	-
SI-RET-M-8043	Medium	800	430	910	540	65	185	Double	Recess Top	-
SI-RET-H-9060-A	Heavy	900	600	1100	800	50	195	Single	Solid Top	-
SI-RET-H-9060-B	Heavy	900	600	1100	800	100	245	Single	Solid Top	-
SI-RET-H-12060	Heavy	1200	600	1300	700	40	250	Single	Solid Top	-
SI-RET-M-12753	Medium	1270	530	1380	640	62	253	Double	Recess Top	-
SI-RET-M-12781	Medium	1270	810	1380	920	62	258	Double	Recess Top	-

Features

- ▶ All units made of high performance material ie. **Ductile Iron**.
- ▶ Effective sealing mechanism gives the best **odour resistant** performance when used with an appropriate sealing agent eg grease.
- ▶ Option available for maximum protection against odour with our **Double Sealing** mechanism
- ▶ Securing of covers using **TWO** or **FOUR** Screws protect units theft or abuse.
- ▶ Units are coated with **black bituminous paint** for protection against corrosive agent
- ▶ Also available in **Recess Top** filled with Grade 25 concrete to JKR specification

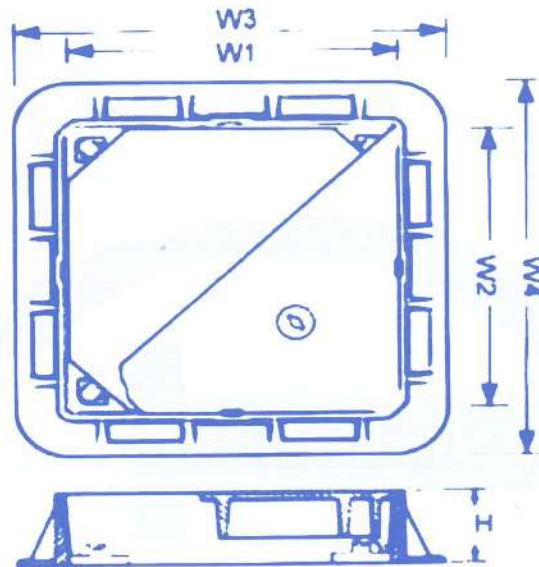


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STANDARD MANHOLE COVER & FRAME : Square Clear Opening



Product Code	Grade	Clear opening		Base Size		Depth, H mm	Weight, kg	Sealing	Features	Type
		W1	W2	W3	W4					
SI-SQR-L-5050	Light	500	500	600	600	50	40	Single	Solid Top	-
SI-SQR-M-5555	Medium	550	550	750	750	50	60	Single	Solid Top	-
SI-SQR-M-6060	Medium	600	600	700	700	50	50	Single	Solid Top	-
SI-SQR--6060-A	Heavy	600	600	700	700	50	53	Single	Solid Top	-
SI-SQR--6060-B	Heavy	600	600	750	750	50	85	Double	Solid Top	-
SI-SQR--6060-C	Heavy	600	600	800	800	75	110	Double	Solid Top	-
SI-SQR-H-6565	Heavy	650	650	830	830	100	153	Double	Solid Top	-
SI-SQR-H-7575	Medium	750	750	850	850	60	155	Single	Solid Top	-

Features

- ▶ All units made of high performance material ie. **Ductile Iron**.
- ▶ Effective sealing mechanism gives the best **odour resistant** performance when used with an appropriate sealing agent eg. grease.
- ▶ Option available for maximum protection against odour with our **Double Sealing** mechanism.
- ▶ Securing of covers using **TWO** or **FOUR** Screws protect units theft or vandalism.
- ▶ Units are coated with **black bituminous paint** for protection against corrosive agent.
- ▶ Special JPP Approved Manhole Cover & Frame.

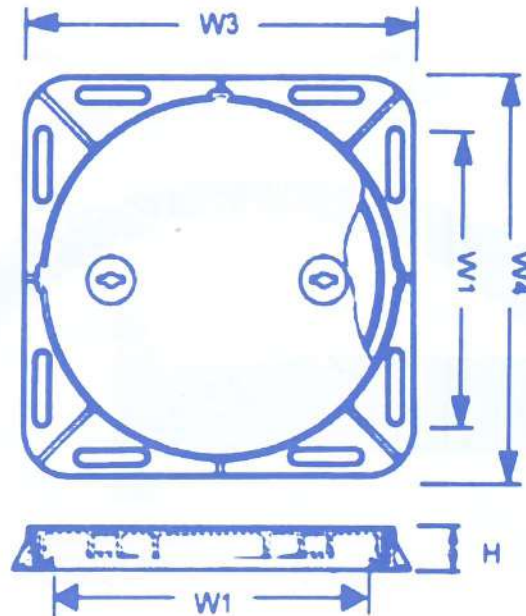


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STANDARD MANHOLE COVER & FRAME : Circular Clear Opening



Product Code	Grade	Clear opening	Base Size		Depth, H mm	Weight, kg	Sealing	Features	Type
		W1	W3	W4					
SI-CIR-M-D500	Medium	500 Dia	610	610	50	38	Single	Solid Top	-
SI-CIR-H-D500-A	Heavy	500 Dia	620	620	75	42	Single	Solid Top	-
SI-CIR-H-D500-B	Heavy	500 Dia	640	640	80	48	-	Solid Top	-
SI-CIR-H-D560	Heavy	560 Dia	610	610	150	50	-	Solid Top	-
SI-CIR-M-D580	Medium	580 Dia	750	750	80	55	Single	Solid Top	-
SI-CIR-H-D580	Heavy	580 Dia	750	750	100	58	Single	Solid Top	-
SI-CIR-H-D600-A	Heavy	600 Dia	710	710	50	61	Single	Solid Top	-
SI-CIR-H-D600-B	Heavy	600 Dia	750	750	75	82	Single	Solid Top	-
SI-CIR-H-D600-C	Heavy	600 Dia	750	750	100	85	Single	Solid Top	Hinged
SI-CIR-H-D600-D	Heavy	600 Dia	756	756	100	120	Single	Solid Top	-
SI-CIR-H-D600-E	Heavy	600 Dia	840	840	100	140	-	Solid Top	Hinged
SI-CIR-H-D910	Heavy	910 Dia	1150	1150	100	280	Single	Solid Top	-

Features

- ▶ All units made of high performance material ie. Cast Iron & Ductile Iron.
- ▶ Effective sealing mechanism gives the best odour resistant performance when used with an appropriate sealing agent eg. grease.
- ▶ Option available for maximum protection against odour with our Double Sealing mechanism.
- ▶ Securing of covers using TWO or FOUR Screws protect units theft or abuse.
- ▶ Units are coated with **black bituminous paint** for protection against corrosive agent.
- ▶ Special JPP Approved Manhole Cover & Frame.

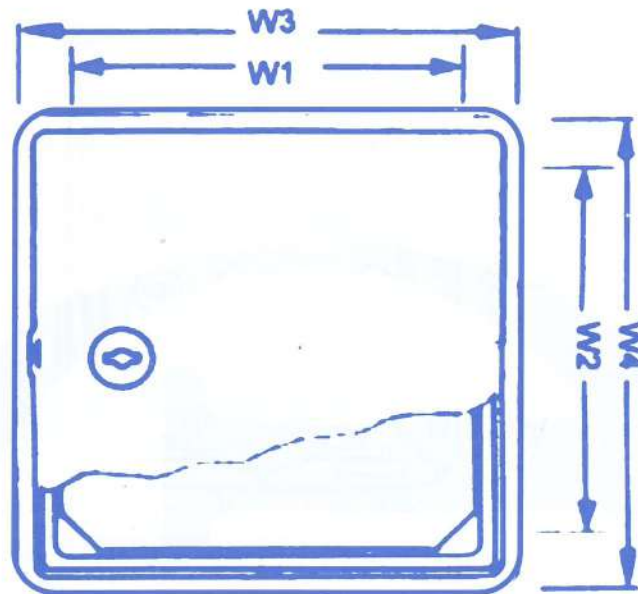


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STANDARD INSPECTION COVER & FRAME



Product Code	Grade	Clear opening		Base Size		Depth, H mm	Weight, kg	Sealing	Features	Type
		W1	W2	W3	W4					
SI-INS-M-3030	Medium	300	300	445	420	35	20	Single	Solid Top	-
SI-INS-M-4545	Medium	450	450	600	600	35	40	Double	Solid Top	-
SI-INS-H-4545	Heavy	450	450	500	500	80	42	-	Solid Top	-
SI-INS-M-6030-A	Medium	600	300	660	360	50	45	-	Solid Top	-
SI-INS-M-6060-A	Medium	600	600	630	630	35	46	-	Solid Top	Hinged
SI-INS-H-6060-A	Heavy	600	600	630	630	38	46	-	Solid Top	Hinged
SI-INS-H-6060-A	Heavy	600	600	630	630	40	46	-	Solid Top	Hinged
SI-INS-M-6060-A	Medium	600	600	660	660	38	47	-	Solid Top	Hinged
SI-INS-M-6060-A	Medium	600	600	725	575	45	50	Single	Solid Top	-
SI-INS-M-6060-B	Medium	600	600	750	725	55	75	Single	Solid Top	-
SI-INS-M-6060-C	Medium	600	600	660	660	100	70	-	Solid Top	-
SI-INS-M-7575	Medium	750	750	925	750	60	100	Single	Solid Top	-
SI-INS-M-9090	Medium	900	900	1050	1050	35	120	Double	Solid Top	-

Features

- ▶ All units made of high performance material i.e. Ductile Iron.
- ▶ Effective sealing mechanism gives the best odour resistant performance when used with an appropriate sealing agent eg. grease.
- ▶ Option available for maximum protection against odour with our Double Sealing mechanism.
- ▶ Comes with hinges.
- ▶ Units are coated with **black bituminous paint** for protection against corrosive agent.

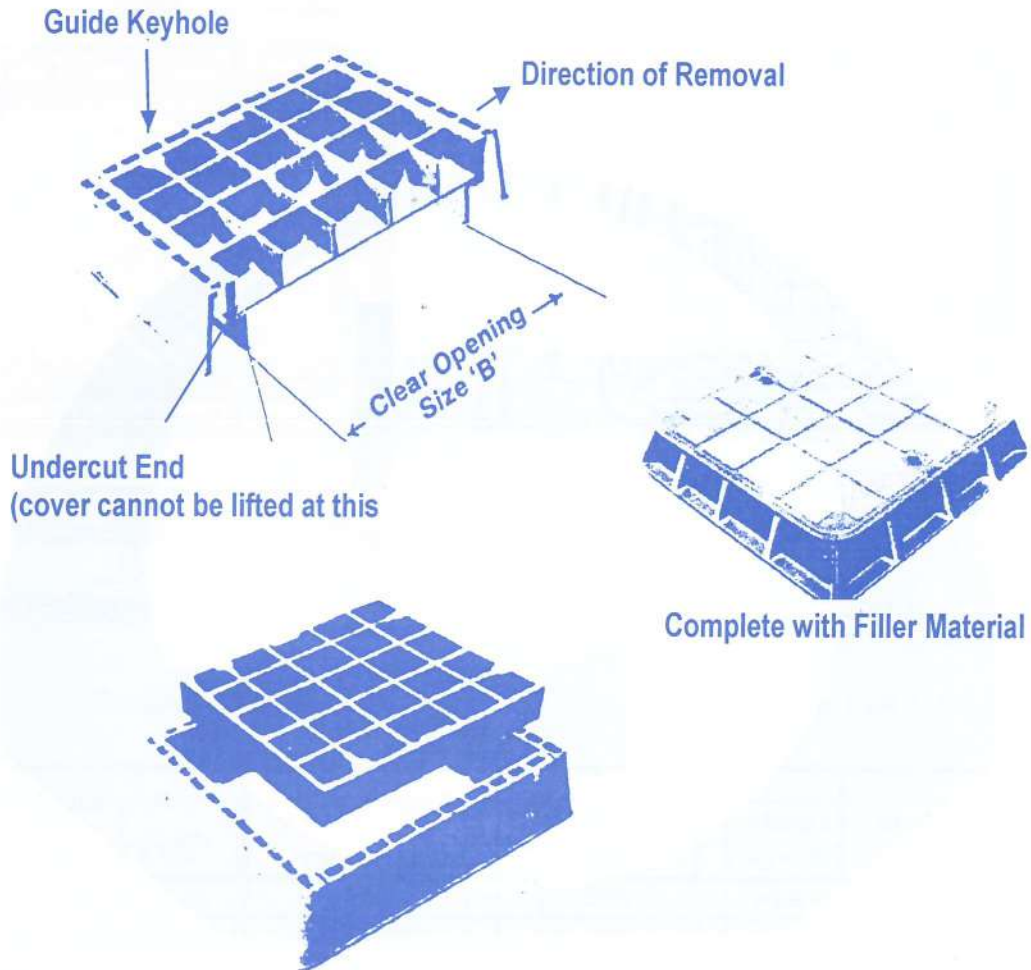


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STANDARD TELECOM MANHOLE COVER & FRAME



Product Code	Size	Grade	Clear Opening (in.)		Clear Opening (mm)		Depth, H mm	Weight, kg	Sealing	Features	Type
SI-TEL-H-3E	3E	Heavy	24	24	610	610	150	200	Single	Recess Top	-
SI-TEL-H-7E	7E	Heavy	36	24	915	610	150	270	Single	Recess Top	-

Features

- ▶ All units made of high performance material ie. **Cast Iron** (BS1452).
- ▶ Effective sealing mechanism gives the best odour resistant performance when used with an appropriate sealing agent eg. grease.
- ▶ Ease of installation due to its low weight of the unfilled cover.
- ▶ Special Design allowing single direction opening only.
- ▶ Units are coated with **black bituminous paint** for protection against corrosive agent.

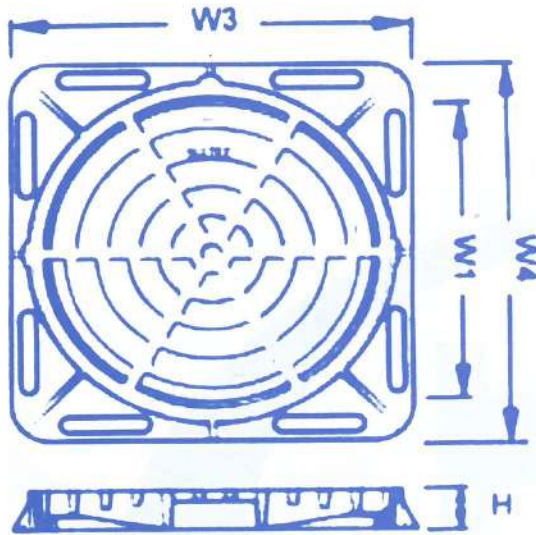


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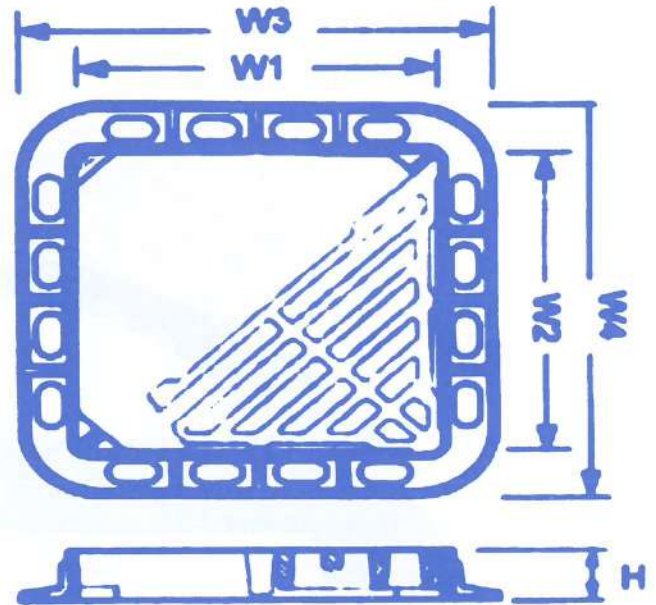
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STANDARD GULLY GRATING



Circular Cover Type



Double Triangular Cover Type

Product Code	Grade	Waterway Area	Clear Opening	Base Size	Depth, H mm	Weight kg
		cm ²	W1 x W2, mm	W3 X W4, mm		
SI-GUL-H-DIA6000	Heavy	1815	600 Dia.	750 x 750	75	80.0
SI-GUL-H-3020	Heavy	345	300 x 200	375 x 275	75	45.0
SI-GUL-H-3030-A	Heavy	345	300 x 300	370 x 370	50	48.0
SI-GUL-H-3030-B	Heavy	345	300 x 300	405 x 405	100	51.0
SI-GUL-H-4035	Heavy	668	400 x 350	575 450	150	102.0
SI-GUL-H-5035	Heavy	780	500 x 350	700 x 475	150	140.0
SI-GUL-H-6060	Heavy	1810	600 x 600	800 x 800	75	110.0

Features

- ▶ All units made of high performance material i.e. **Ductile Iron**.
- ▶ Effective sealing mechanism gives the best odour resistant performance when used with an appropriate sealing agent eg. grease.
- ▶ Ease of installation due to its low weight of the unfilled cover.
- ▶ Special Design allowing single direction opening only.
- ▶ One-way fit register on grating allows fast and simple installation.
- ▶ Units are coated with **black bituminous paint** for protection against corrosive agent.

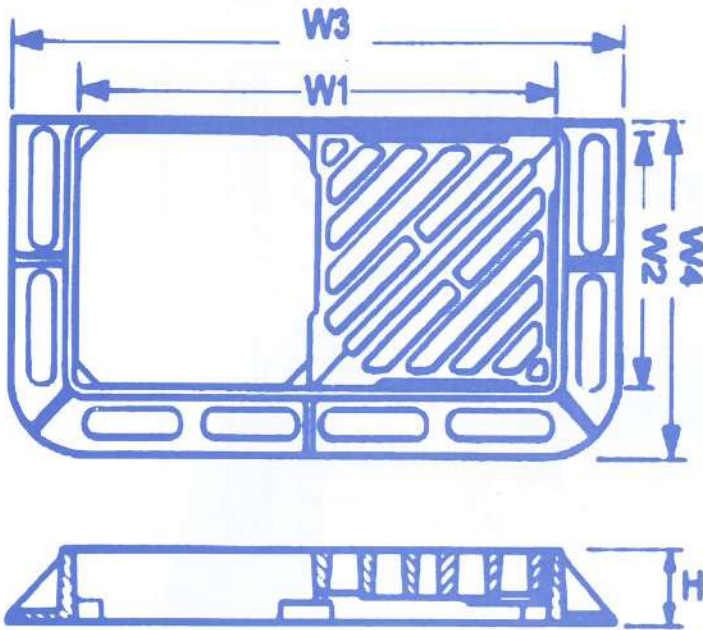


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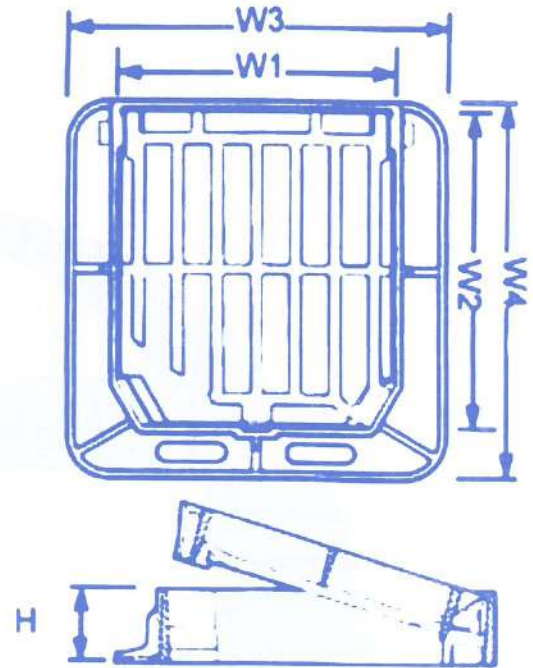
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STANDARD GULLY GRATING : Rectangular Clear Opening



Multiple Unit Type



Single Unit Type

Product Code	Grade	Waterway Area cm ²	Clear Opening W1 x W2, mm	Base Size W3 x W2, mm	Depth, H mm	Weight kg
SI-GUL-H-9045	Heavy	2430	900 x 450	1000 x 550	75	105
SI-GUL-H-1345	Heavy	3645	1300 x 450	1400 x 550	75	170
SI-GUL-H-3520	Heavy	407	350 x 200	450 x 300	75	25
SI-GUL-H-3530	Heavy	735	350 x 300	450 x 400	75	30
SI-GUL-H-3743-A	Heavy	1020	370 x 430	470 x 530	75	45
SI-GUL-H-3743-B	Heavy	1085	370 x 430	470 x 530	75	40
SI-GUL-H-5035-B	Heavy	1184	500 x 350	600 x 450	75	45

Features

- ▶ All units made of high performance material i.e. Ductile Iron.
- ▶ Specially designed grating in circular opening for use in catchpits and areas subjected to exceptional surface water run-off but limited to fast moving traffic.
- ▶ One-way fit register on grating allows fast and simple installation.
- ▶ Units are coated with black bituminous paint for protection against corrosive agent.

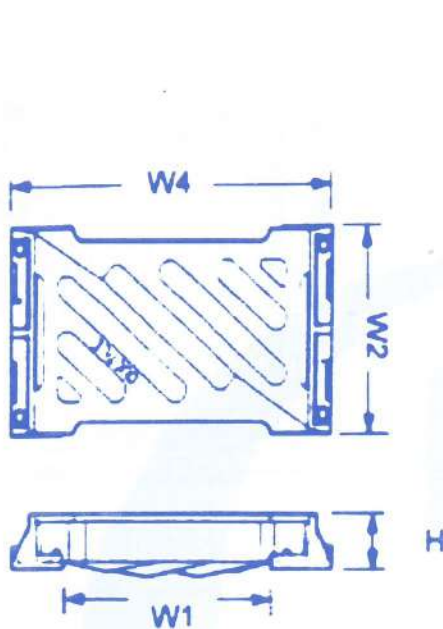


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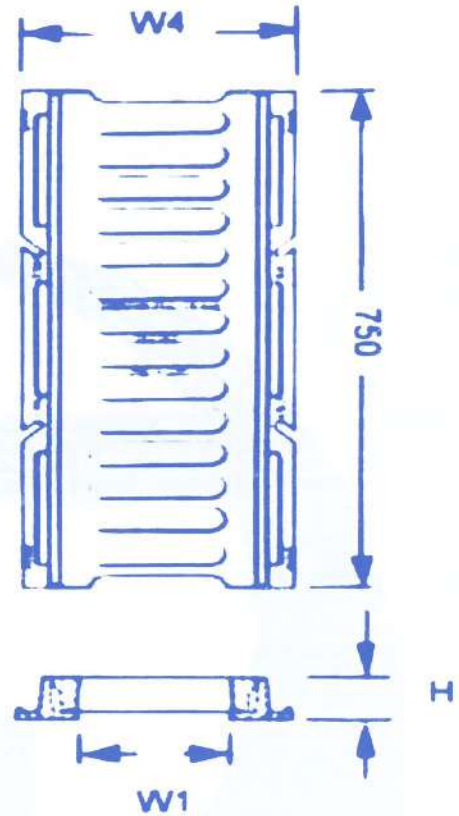
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STANDARD DUCT GRATING



Duct Grating



SPECIAL : Extended Length

Product Code	Grade	Duct Width, W1 mm	Minimum Rebate Width, W4 mm	Rebate Depth, H mm	Length, W2 (per pair) mm	Weight kg
SI-DUC-H-2239	Heavy	220	390	75	500	48
SI-DUC-H-3047	Heavy	300	470	75	550	68
SI-DUC-H-3855	Heavy	380	550	75	550	80
SI-DUC-H-4057	Heavy	400	570	75	550	85
SI-DUC-H-4562	Heavy	450	620	75	600	96
SI-DUC-H-6077	Heavy	600	770	75	600	120

Features

- ▶ All units made of high performance material i.e. Ductile Iron.
- ▶ Double Triangular cover pieces provide silent, non-rock performance
- ▶ Wide range of width selection for suit various conditions.
- ▶ Units are coated with **black bituminous paint** for protection against corrosive agent

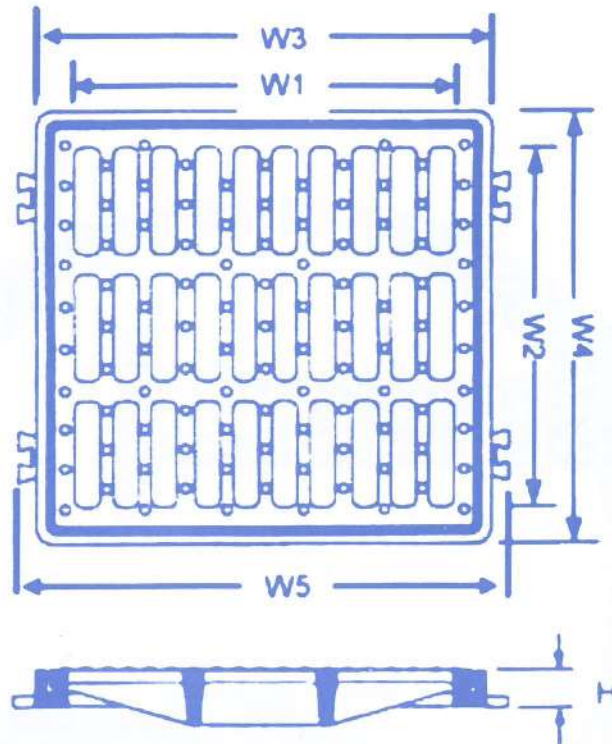


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STANDARD PAVEMENT GRATING



Pavement Grating

Product Code	Grade	Clear Opening W1 x W2, mm	Base Size W3 x W4, mm	Base Size W5 x W4, mm	Depth, H mm	Weight kg
SI-PAV-L-1616	Light	160 x 160	210 x 210	-	38	8
SI-PAV-L-2121	Light	210 x 210	360 x 260	-	38	12
SI-PAV-L-2525	Light	250 x 250	300 x 300	-	38	16
SI-PAV-L-3535	Light	350 x 350	420 x 420	460 x 420	38	30
SI-PAV-L-4545	Light	450 x 450	520 x 520	560 x 520	38	40
SI-PAV-L-5555	Medium	550 x 550	620 x 620	660 x 620	38	58
SI-PAV-L-6565	Medium	650 x 650	720 x 720	760 x 720	40	93
SI-PAV-L-7575	Medium	750 x 750	830 x 830	870 x 830	45	114

Features

- ▶ All units made of high performance material i.e. **Ductile Iron**.
- ▶ Specially designed grating in circular opening for use in catchpits and areas subjected to exceptional surface water run-off but limited to fast moving traffic.
- ▶ One-way fit register on grating allows fast and simple installation.
- ▶ Units are coated with **black bituminous paint** for protection against corrosive agent.

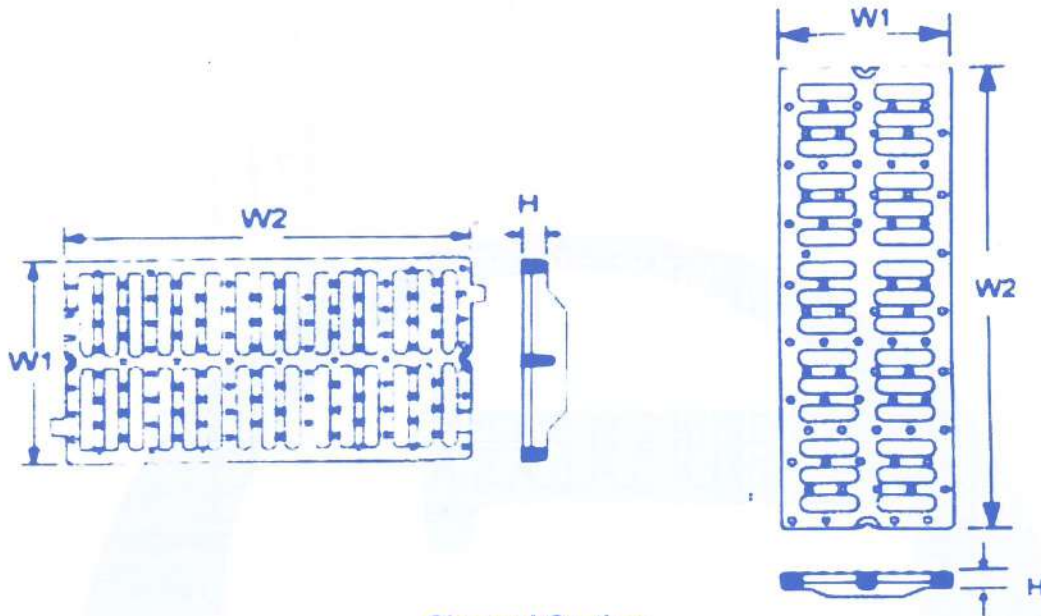


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STANDARD CHANNEL GRATING



Channel Grating

Product Code	Heavy Duty Channel Grating					
	Duct Width mm	Width, W1 mm	Length, W2 mm	Minimum Rebate Width mm	Rebate Depth, E mm	Weight kg
SI-CHN-H-3575	330	350	750	460	50	51
Medium Duty Channel Grating						
SI-CHN-M-2075	140	200	750	270	38	18
SI-CHN-M-2575	190	250	750	320	38	24
SI-CHN-M-3075	240	300	750	370	38	29
SI-CHN-M-4075	340	400	750	470	38	39
SI-CHN-M-5075	440	500	750	570	38	47
SI-CHN-M-6075	540	600	750	670	38	60
SI-CHN-M-7075	640	700	750	770	38	74

Features

- ▶ All units made of high performance material i.e. Ductile Iron.
- ▶ Units are design to sustained up to 25 Mt.
- ▶ Channel Gratings are linked to each other using a connecting piece.
- ▶ Units are coated with **black bituminous paint** for protection against corrosive agent.

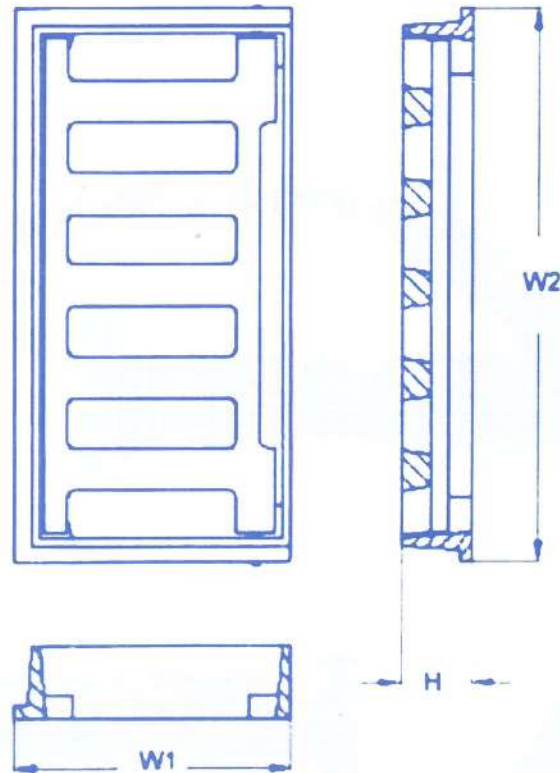


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STANDARD SUMP GRATING



Product Code	Grade	W1	W2	H
SI-SUM-L-1530	Light	150	300	38
SI-SUM-L-1530	Light	150	300	50
SI-SUM-L-18535	Light	185	350	38
SI-SUM-L-3060	Light	300	600	50
SI-SUM-L-3030	Light	300	300	50
SI-SUM-L-3550	Light	350	500	50
SI-SUM-M-6045	Medium	600	450	50
SI-SUM-L-6060	Medium	600	600	50
SI-SUM-M-6060	Medium	600	600	100

Features

- ▶ All units made of high performance material ie. Quality Grey or Ductile Iron.
- ▶ Welded hinged to protect units against theft or abuse
- ▶ Units are coated with **black bituminous paint** for protection against corrosive agent.
- ▶ Special ARTISTIC design available.

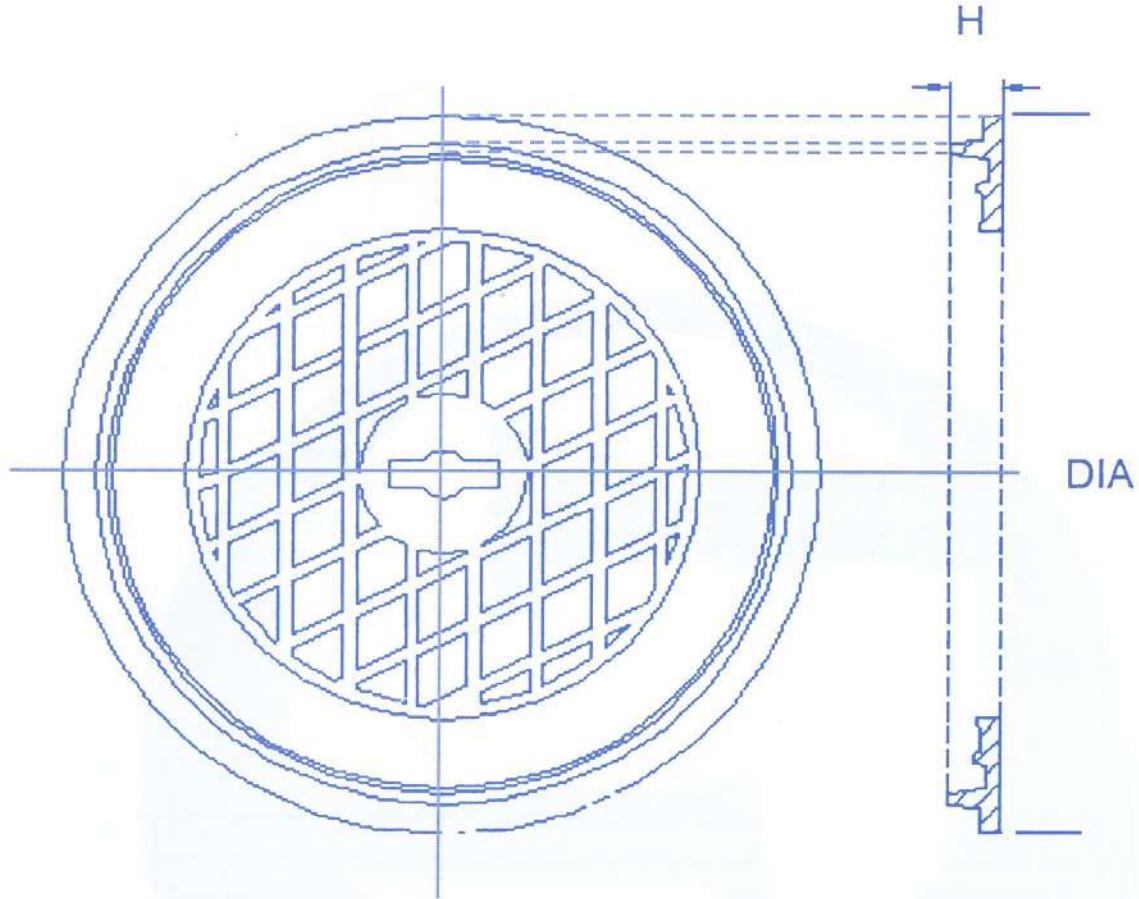


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STANDARD SEPTIC TANK COVER & FRAME



Product Code	Grade	DIA	H
SI-SEP-DIA300	Light	300	12
SI-SEP-DIA500	Light	500	18
SI-SEP-DIA550	Light	550	18
SI-SEP-DIA580	Light	580	24

Features

- ▶ All units made of high performance material i.e. **Quality Grey Iron**.
- ▶ Units are coated with **black bituminous paint** for protection against corrosive agent.



Cat (Step) Ladder to BS1247:1955

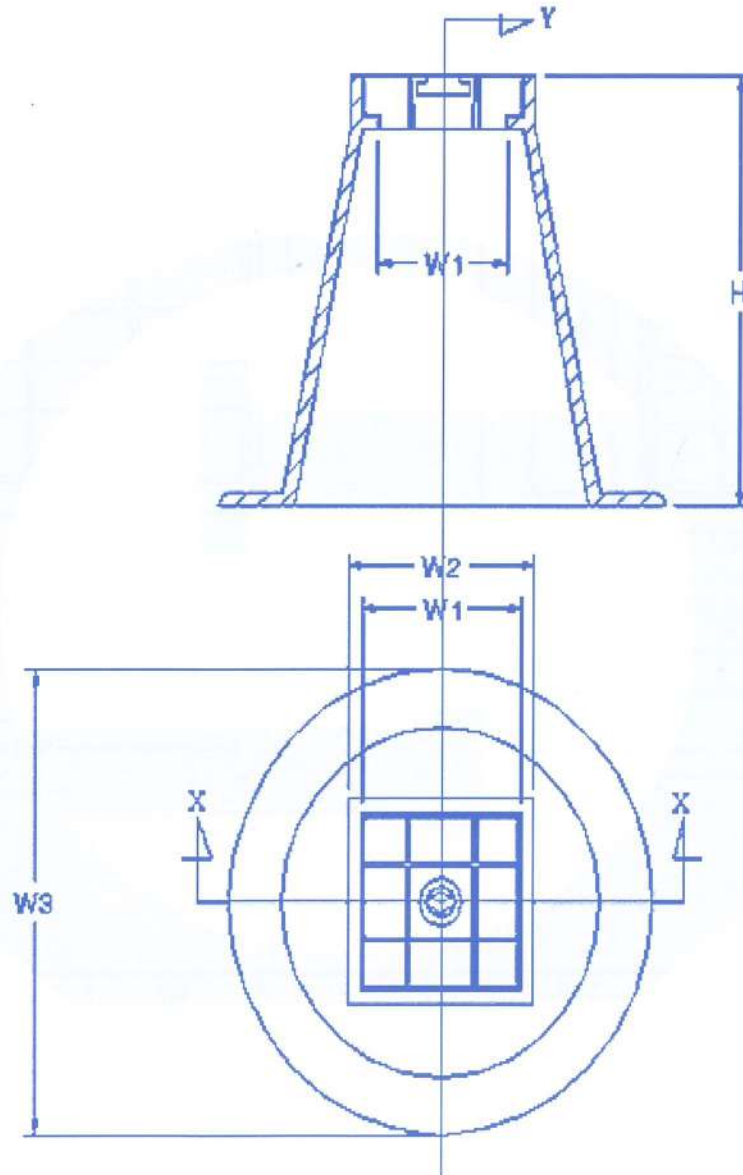


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SURFACE BOX FOR SLUICE VALVE



Product Code	TYPE	W1	W2	W3	H
SI-SBSV	Standard	125	146	330	305

Features

- ▶ All units made of high performance material i.e. Quality Grey Iron.
- ▶ Units are coated with **black bituminous paint** for protection against corrosive agent.
- ▶ Surface Box for Sluice Valve with **Recessed Top's** design are available.

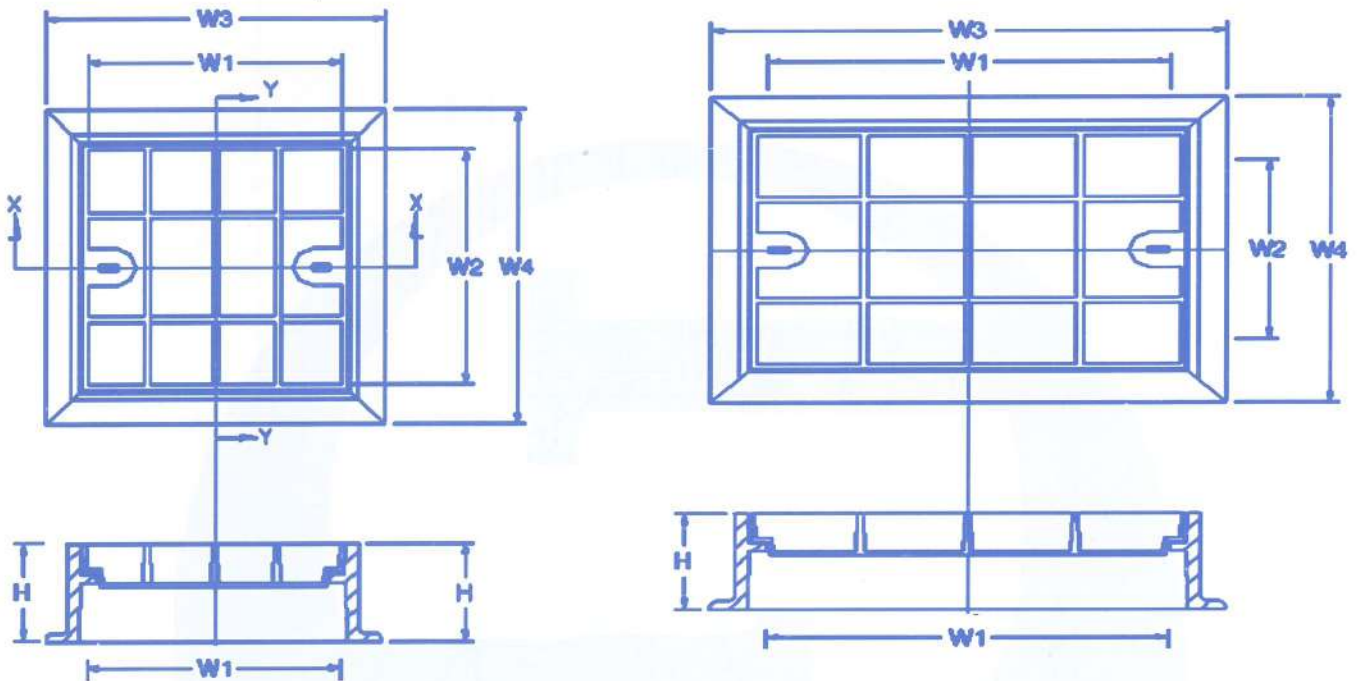


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STANDARD SURFACE BOX



Product Code	TYPE	W1	W2	W3	W4	H
SI-SBFH	For ScrewDown Hydrant	381	229	521	368	130
SI-SBSAV	For Single Air Valve	260	260	400	400	152
SI-SBDAV	For Double Air Valve	616	320	756	459	152
SI-SBSVH	For Single S.V Hydrant	667	787	216	337	130

Features

- ▶ All units made of high performance material i.e. **Quality Grey Iron**.
- ▶ Units are coated with **black bituminous paint** for protection against corrosive agent.
- ▶ Surface Box for all types with **Hinge Type Cover** and **Recessed Top's** design are available.

PRODUCTION FACILITIES & PROCESS FLOW



PATTERN MAKING



CORE & MOLD FLOOR MAKING



MOLTEN COMPOSITION TEST



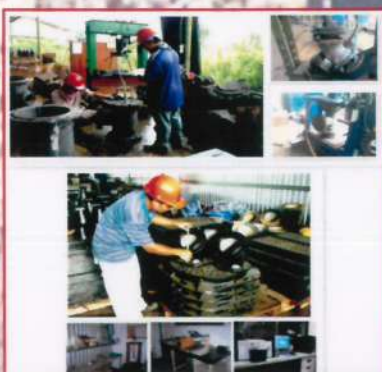
**FINISHING WORK
(GRINDING, LATHE & DRILLING)**



BREAKOUT & SHOT BLAST



MELTING PROCESS



**PRODUCT QUALITY
INSPECTION**



PAINTING



**PACKING & READY TO
DELIVERY**

Specialized Foundry Machinery Complete with :

4 Nos Induction Furnace,
10 Semi-Automatic Molding Line,
20 Mt Sand Hopper & Re-claimer,
Shot Blasting,
Lathe & Drilling Machineries,
Hydrostatic & Compression Testing Machine,
Coating Equipment,
Q.C Laboratory,
Transportation & e.t.c.