

Cast Iron Ductile Iron Manhole Covers and Frames

SS 30:1999 / BS EN124:1994







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Load Classes

SS30:1999 (2012)

BS EN 124

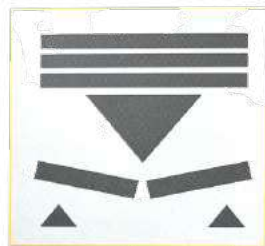
Symbol	SS30 Gr	Design Load	Place of Installation	EN124	Design Load
	AA1	900 kN	In areas imposing particularly high wheel loads, eg. Aircraft pavements	F900	900 kN
	AA2	600 kN	In areas generally not on public road imposing high wheel loads, eg. docks, aircraft pavements	E600	600 kN
	A1	400 kN	In carriageways of expressways, arterial and industrial roads and parking areas for all types of road vehicles	D400	400 kN
	A2	230 kN	In carriageways not exceeding 0.5m away from kerbside channels of all roads and in carriageways of minor residential roads	C250	250 kN
	B	125 kN	On footways where it is possible for a vehicle to mount or occasionally open to light vehicle to use and car parking decks	B125	125 kN
	C	30 kN	In precincts which are inaccessible to motor vehicles	A15	15 kN

What is Ductile Iron?

Ductile iron is also known as Spheroidal graphite cast iron or SG cast iron. Due to the addition of magnesium to the cast iron, the graphite which is present in flake form is transformed into spheroids. This process provides remarkable features, such as resistance to breakage, better shock resistance and a high modulus of elasticity.



Ductile Iron



Grey Cast Iron



Ductile Iron

under microscope



Grey Cast Iron

under microscope

Ductile Iron compare to Grey Cast Iron

The exceptional ratio of weight/mechanical strength of ductile iron allows the manufacture of access/manhole covers with weights 20% to 30% lower than the same covers manufacture in grey cast iron while achieving the same loading capacity. The overall advantages of using ductile iron are listed as follows:

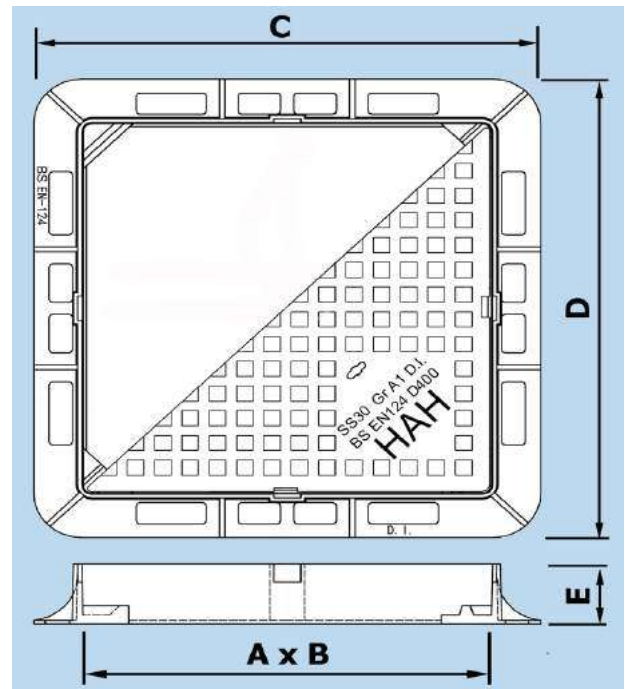
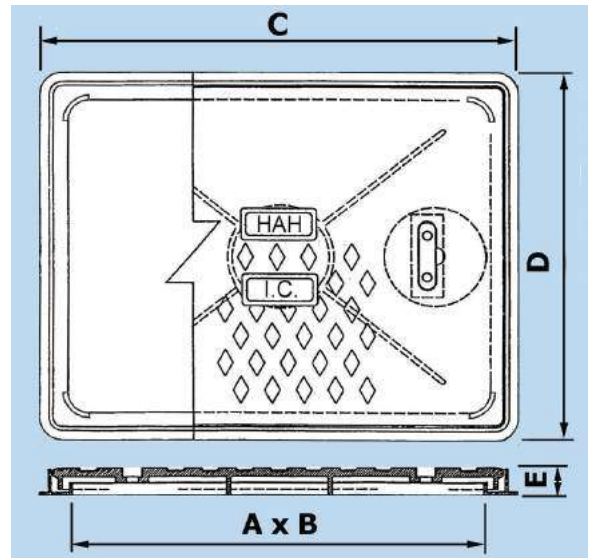
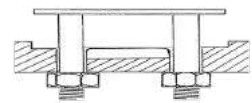
- Cost of transport can be reduced
- Handling is achieved with lower risk of injury
- Also due to strength of ductile iron, large one piece frames can be manufactured i.e. monobloc construction and this is not possible with grey cast iron.



1

Light Duty Ductile Iron Inspection chamber cover & frame
Ductile Iron Double Triangular manhole cover & frame

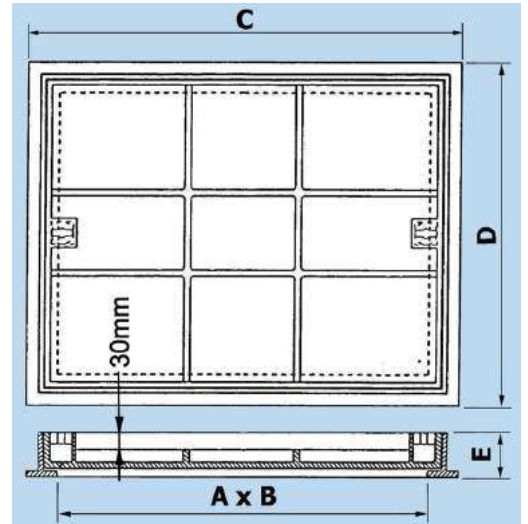
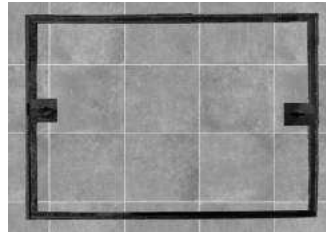
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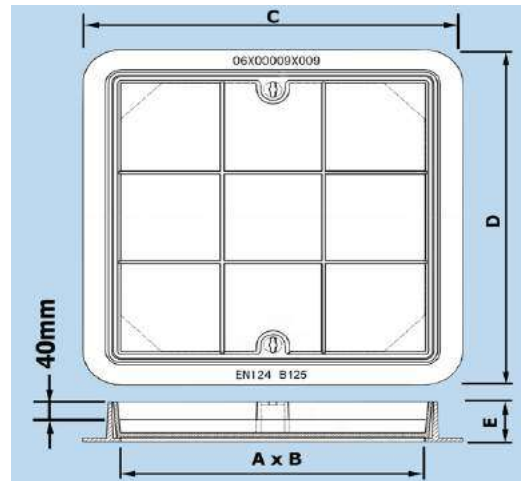
Standard: SS 30:1999 (2012)

No.	Product Code	Grade	Clear Opening (AxB)	Overall Size (Cx D)	Depth (E)	Material	Remarks
1.1	HDICT-600450(T-key)	c	600 x 450	700 x 550	40	Ductile Iron	Light Duty
1.2	HDMHM-600	A2	600 x 600	750 x 750	100	Ductile Iron	Medium Duty
1.3	HDMHH-600	A1	600 x 600	800 x 800	140	Ductile Iron	Heavy Duty

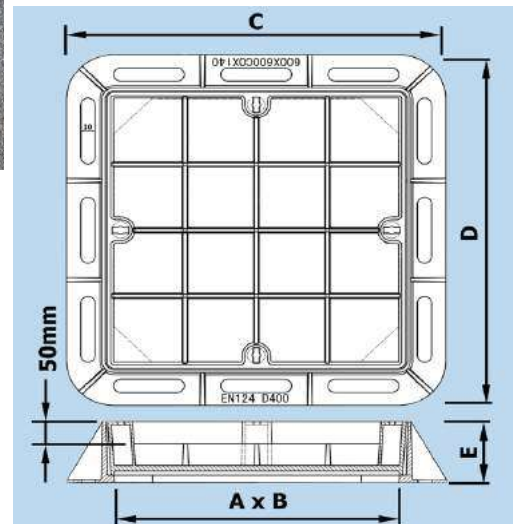
2.1



2.2



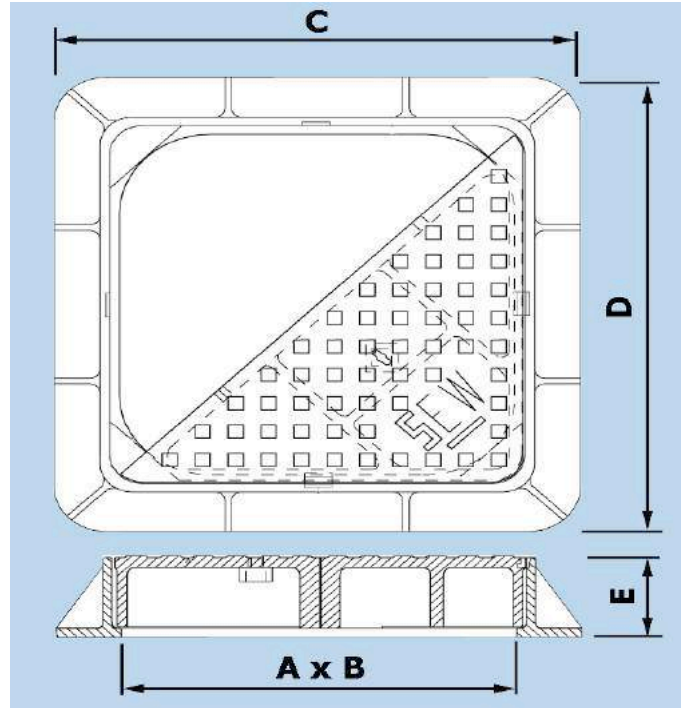
2.3



Standard: SS 30:1999 (2012)

No.	Product Code	Grade	Clear Opening (AxB)	Overall Size (Cx D)	Depth (E)	Material	Remarks
2.1	HDRCL-600450	C	600 x 450	700 x 550	65	Ductile Iron	Light Duty
2.2	HDRCM-750750	A2	600 x 600	750 x 750	90	Ductile Iron	Medium Duty
2.3	HDRCH-800800	A1	600 x 600	800 x 880	140	Ductile Iron	Heavy Duty

3.1



Drawing Ref : PUB/WRN/STD/016A

3.2

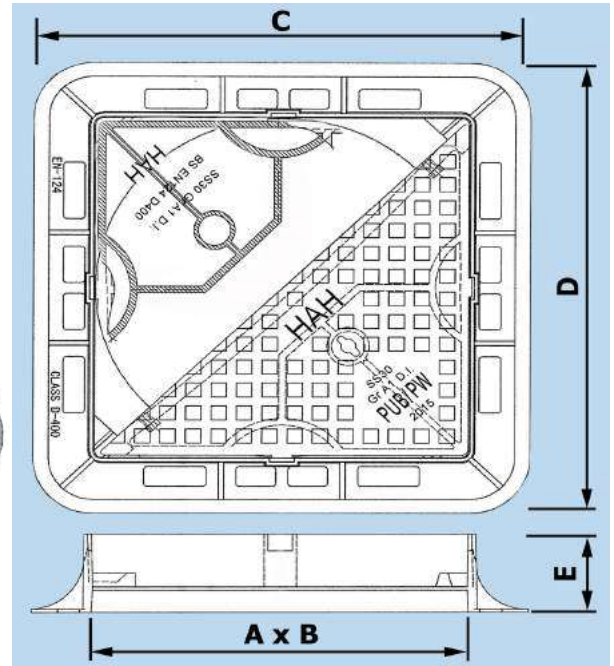
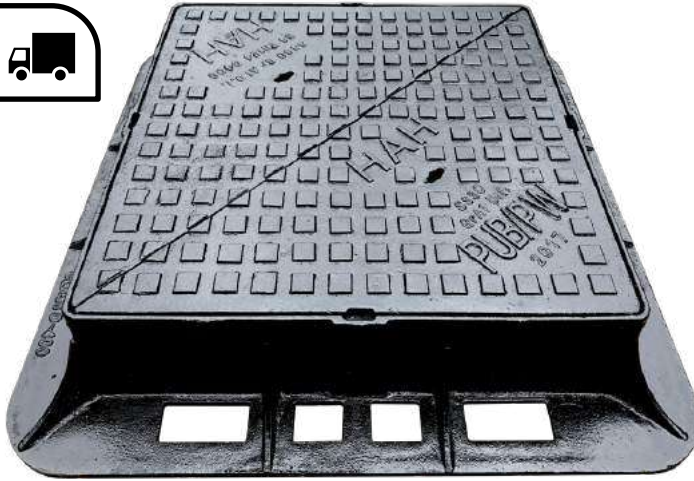


Drawing Ref : PUB/WRN/STD/015A

Standard: SS 30:1999 (2012)

No.	Product Code	Grade	Clear Opening (AxB)	Overall Size (Cx D)	Depth (E)	Material	Remarks
3.1	HCMHM-750S	A2	600 x 600	750 x 750	90	Cast Iron	Medium Duty (SEW) label
3.2	HCMHH-800S	A1	600 x 600	800 x 800	140	Cast Iron	Heavy Duty (SEW) label

4.1



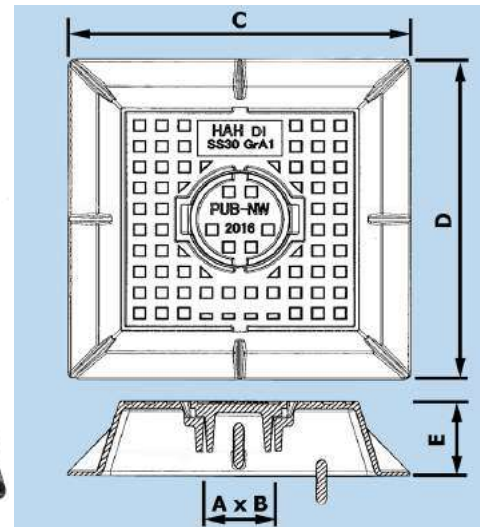
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4.3



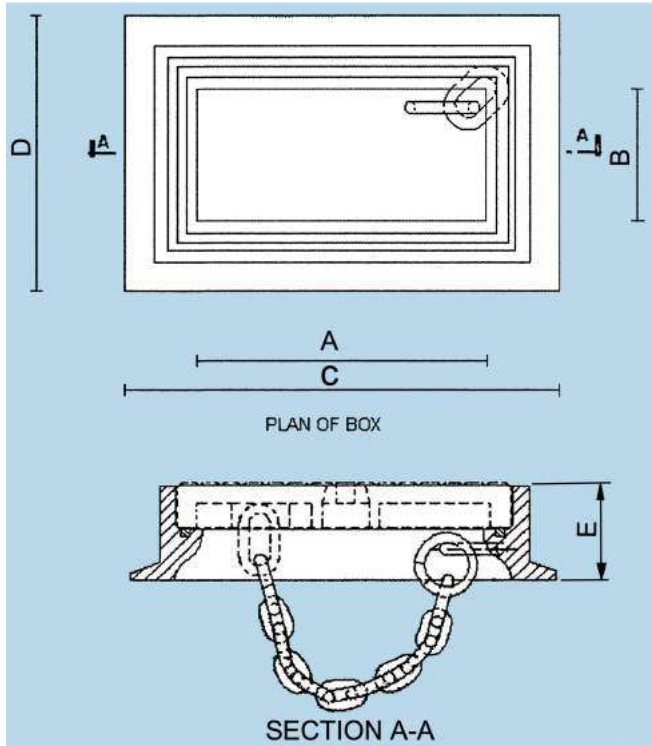
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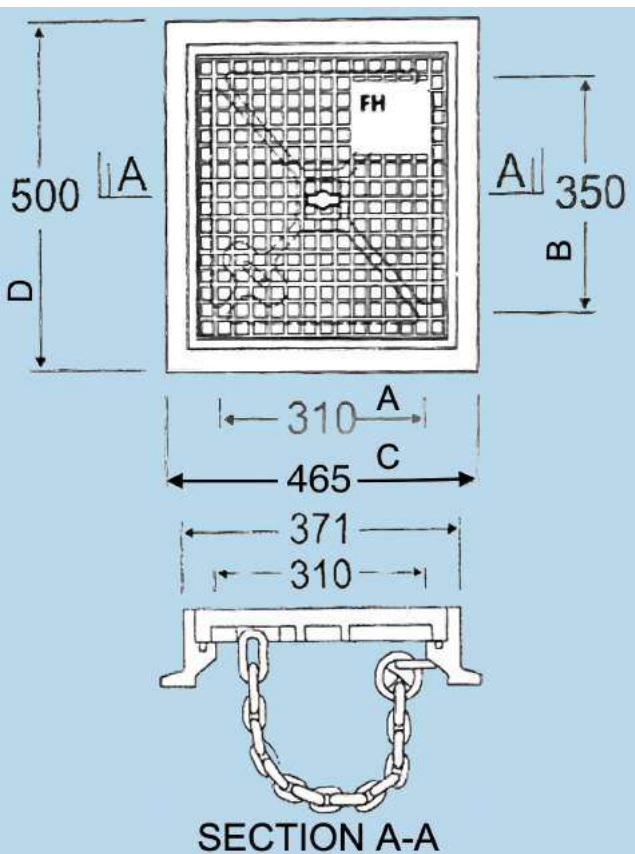
Standard: SS 30:1999 (2012)

No.	Product Code	Grade	Clear Opening (AxB)	Overall Size (Cx D)	Depth (E)	Material	Remarks
4.1	HDMHH-600PPW	A1	∅ 600	800 x 800	140	Ductile Iron	PUB/PW Label
4.2	HDMHH-600PNW	A1	∅ 600	800 x 800	140	Ductile Iron	PUB/NW Label
4.3	HDVBSQPW-445445	A1	∅ 95	445 x 445	105	Ductile Iron	PUB/PW Label
4.4	HDVBSQNW-445445	A1	∅ 95	445 x 445	105	Ductile Iron	PUB/NW Label

5.1



5.2

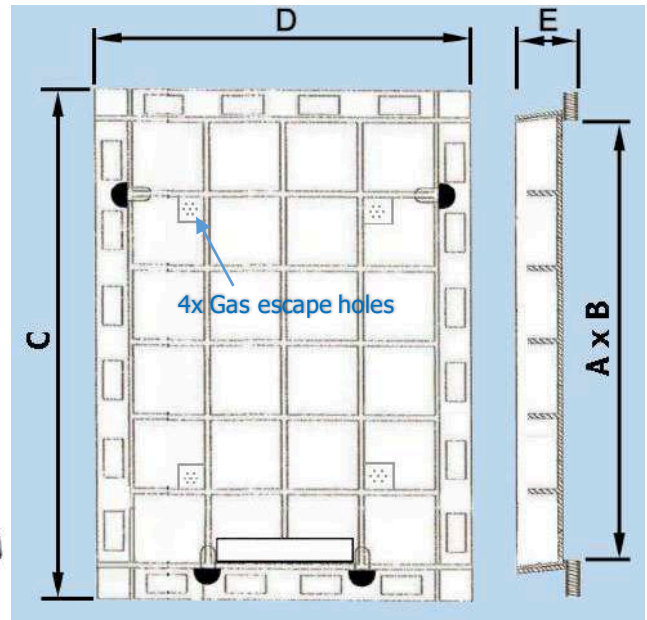
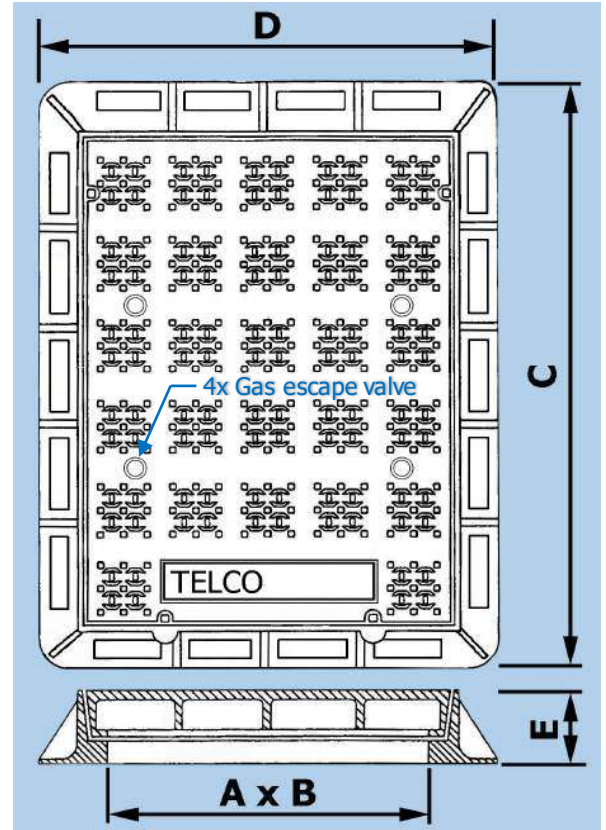
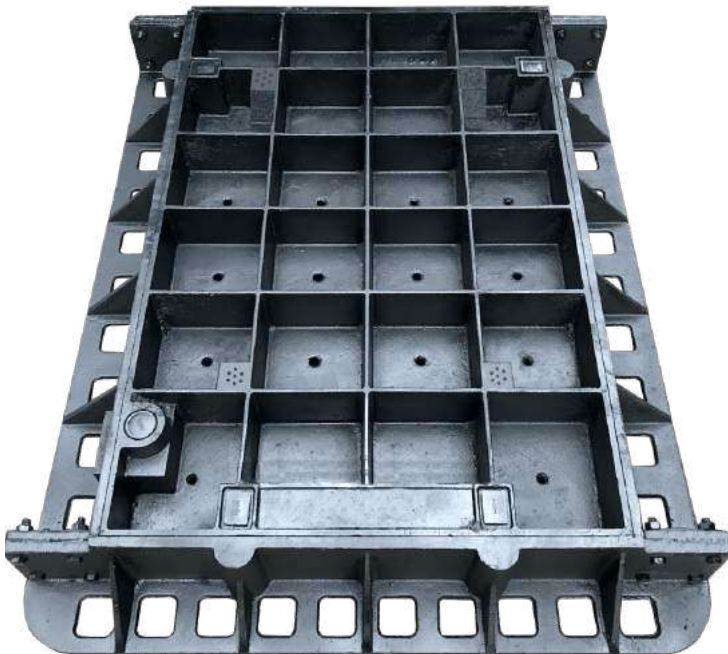


5.3



Standard: SS 30:1999 (2012)

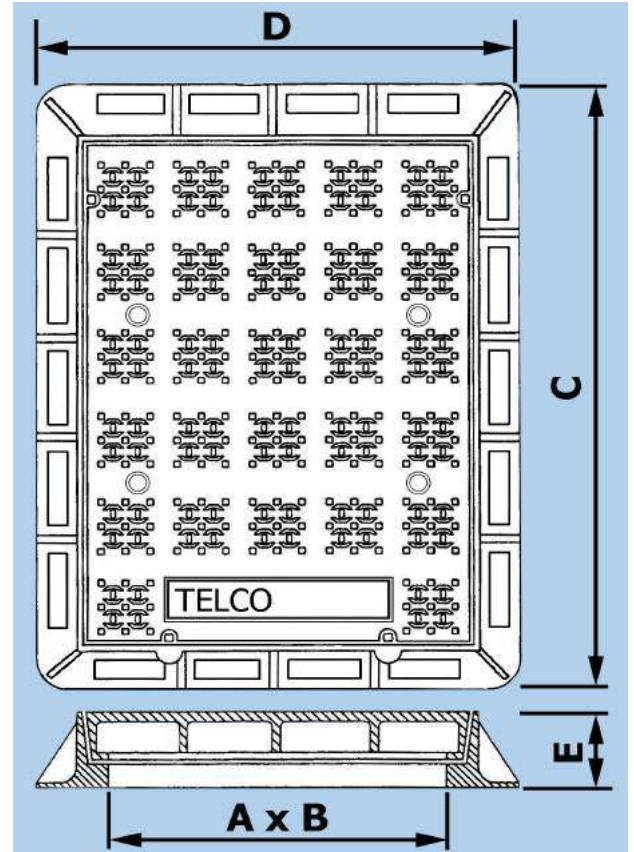
No.	Product Code	Grade	Clear Opening (AxB)	Overall Size (CxD)	Depth (E)	Material	Remarks
5.1	HDVBSF-465300	A1	310 x 140	465 x 300	100	Ductile Iron	FH Label
5.2	HDVBSF-465300PPW	A1	310 x 140	465 x 300	100	Ductile Iron	PUB/PW Label
5.3	HDVBSF-465500	A1	310 x 350	465 x 500	100	Ductile Iron	FH Label



Standard: SS 30:1999 (2012)

No.	Product Code	Grade	Clear Opening (AxB)	Overall Size (Cx D)	Depth (E)	Material	Remarks
6.1	HDTLMM-910610	B	910 x 610	1090 x 780	75	Ductile Iron	Medium Duty
6.2	HDTLMH-910610	A1	910 x 610	1230 x 920	150	Ductile Iron	Heavy Duty
6.3	HDRTLMM-910610	A1	910 x 610	1230 x 920	150	Ductile Iron	Heavy Duty

6.4



6.5



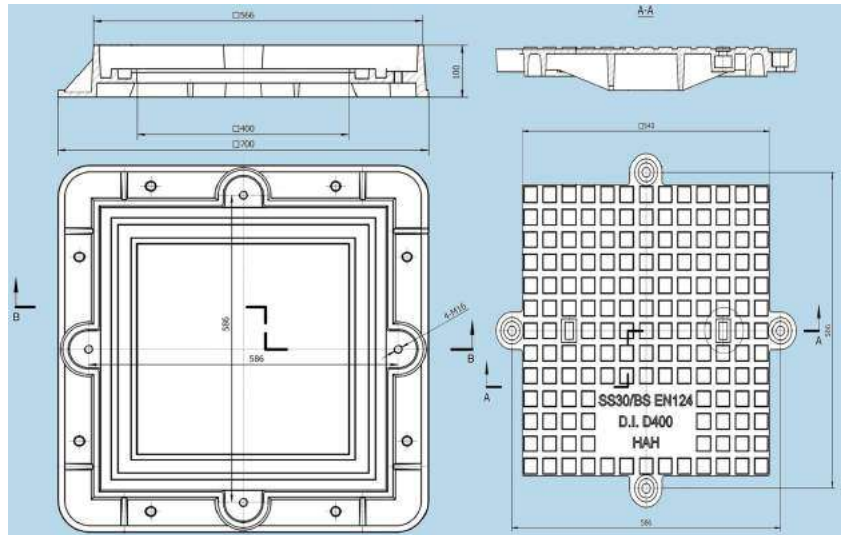
Standard: SS 30:1999 (2012)

No.	Product Code	Grade	Clear Opening (AxB)	Overall Size (Cx D)	Depth (E)	Material	Remarks
6.4	HDTLMM-910610	B	910 x 610	1090 x 780	75	Ductile Iron	Medium Duty
6.5	HDTLMH-910610	A1	910 x 610	1230 x 920	150	Ductile Iron	Heavy Duty

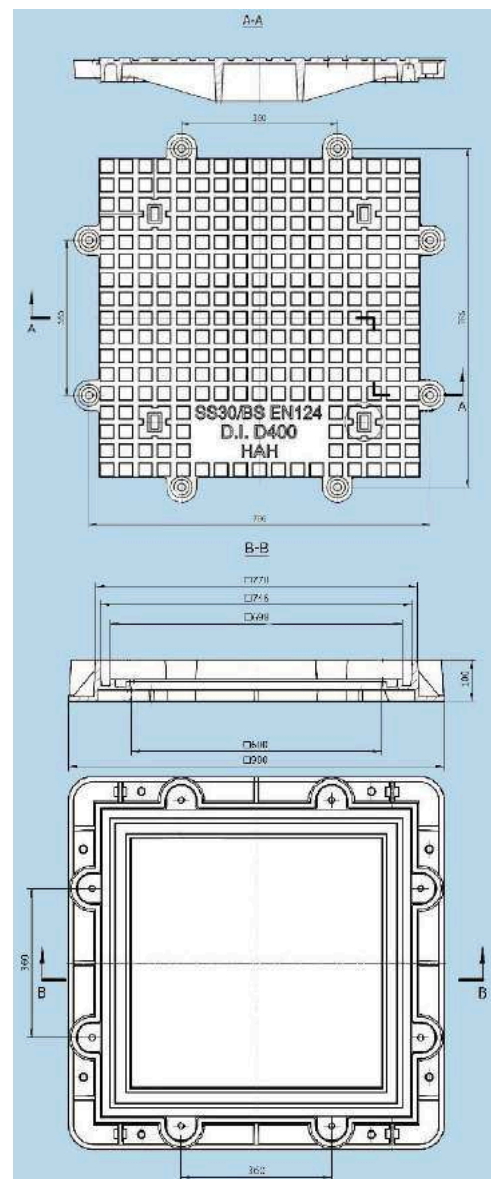
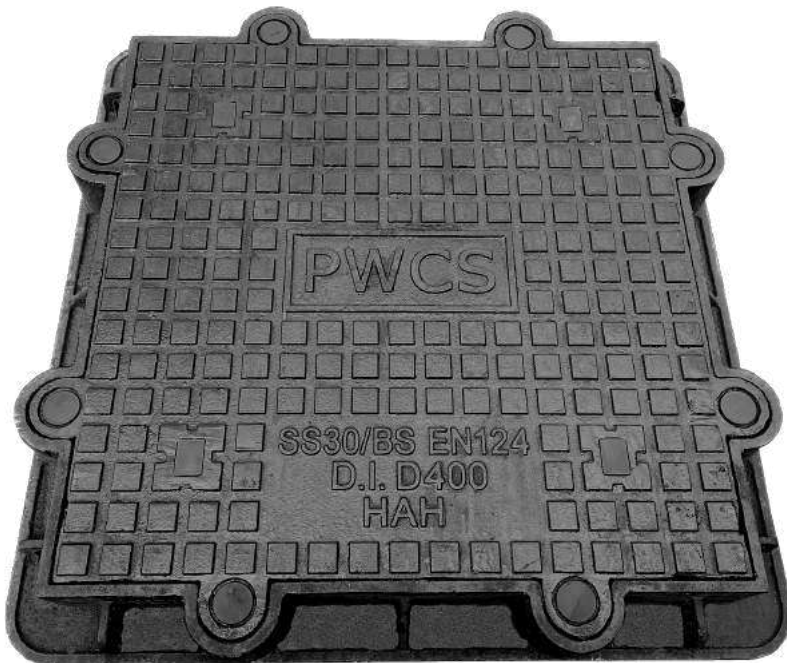
7 Heavy Duty Air/Water Tight Double Seal manhole cover & frame (PWCS)

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7.1



7.2



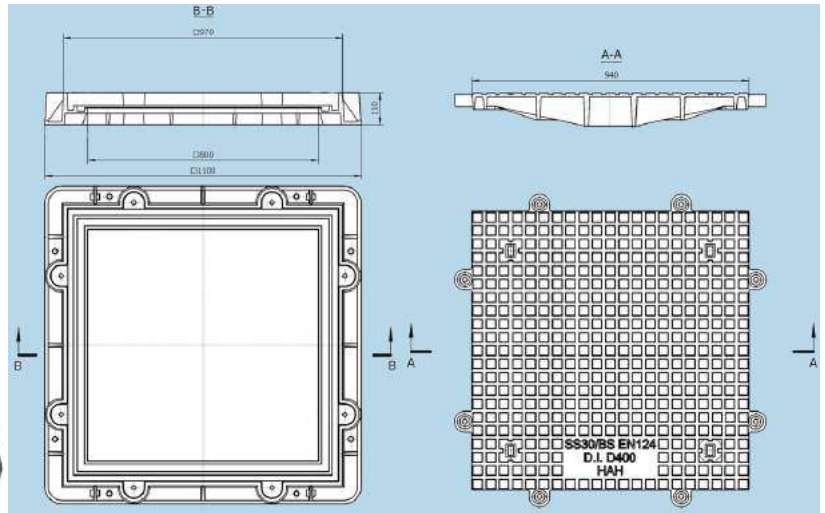
Standard: SS 30:1999 (2012), BS 9124:2008

No.	Product Code	Grade	Clear Opening	Overall Size	Depth	Material	Remarks
7.1	HDDSATH-400	A1	400 x 400	700 x 700	100	Ductile Iron	Heavy Duty
7.2	HDDSATH-600	A1	600 x 600	900 x 900	100	Ductile Iron	Heavy Duty

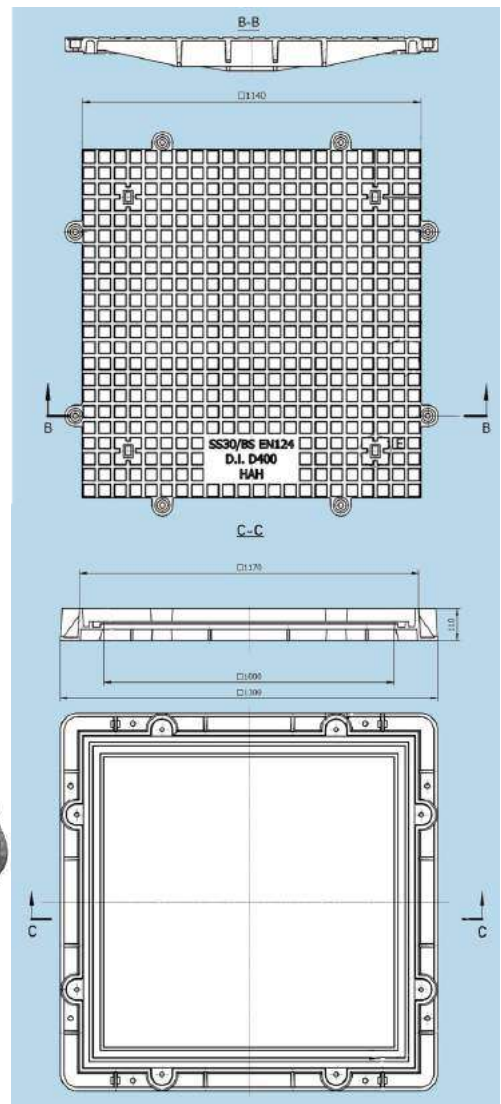
7 Heavy Duty Air/Water Tight Double Seal manhole cover & frame (PWCS)

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7.3



7.4



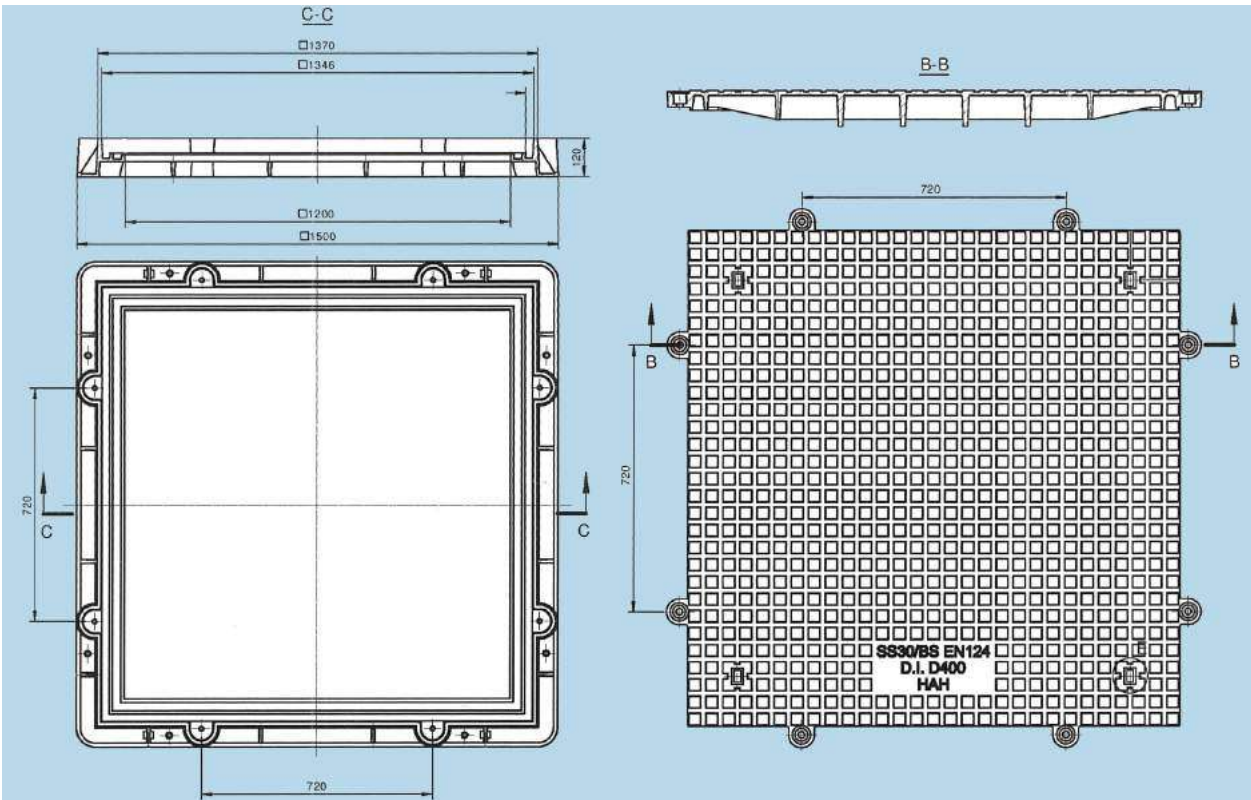
Standard: SS 30:1999 (2012), BS 9124:2008

No.	Product Code	Grade	Clear Opening	Overall Size	Depth	Material	Remarks
7.3	HDDSATH-800	A1	800 x 800	1100 x 1100	110	Ductile Iron	Heavy Duty
7.4	HDDSATH-1000	A1	1000 x 1000	1300 x 1300	110	Ductile Iron	Heavy Duty

7 Heavy Duty Air/Water Tight Double Seal manhole cover & frame (PWCS)

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7.5



Standard: SS 30:1999 (2012), BS 9124:2008

No.	Product Code	Grade	Clear Opening	Overall Size	Depth	Material	Remarks
7.5	HDDSATH-1200	A1	1200 x 1200	1500 x 1500	120	Ductile Iron	Heavy Duty

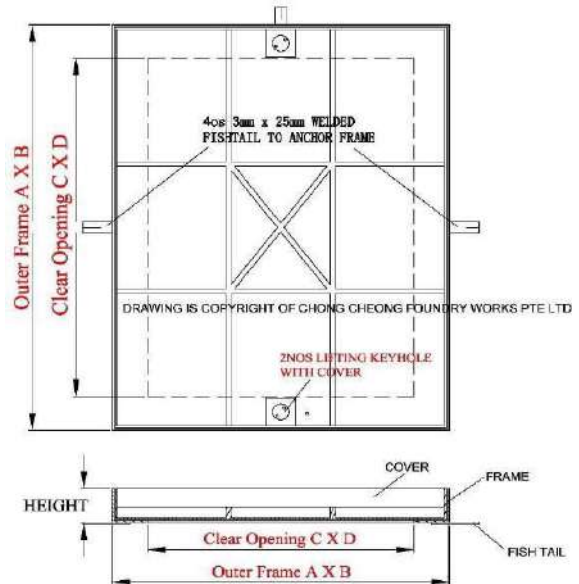
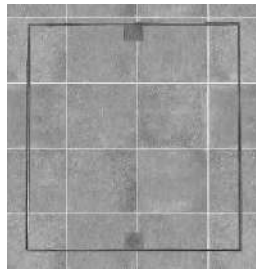
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8.1



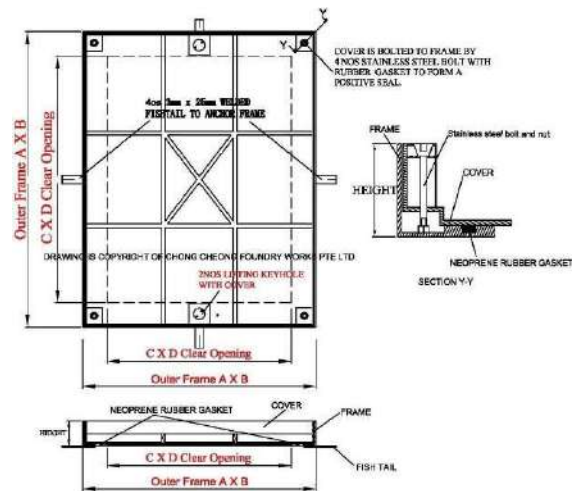
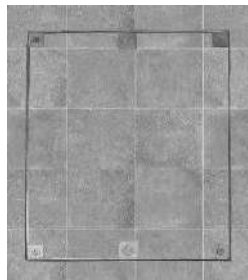
450mm x 600mm
non watertight
cover and frame



8.3



450mm x 600mm
watertight cover and
frame.



No.	Product Code	Grade	Clear Opening (AxB)	Overall Size (Cx D)	Height (E)	Material	Loading	Remarks
8.1	MCLDSSR-304	C	550 x 700	450 x 600	50	SS304	30KN	Light Duty
8.2	MCLDSSR-316	C	550 x 700	450 x 600	50	SS316	30KN	Light Duty
8.3	MCLDSSRW-304	C	550 x 700	450 x 600	50	SS304	30KN	Light Duty
8.4	MCLDSSRW-316	C	550 x 700	450 x 600	50	SS316	30KN	Light Duty

9

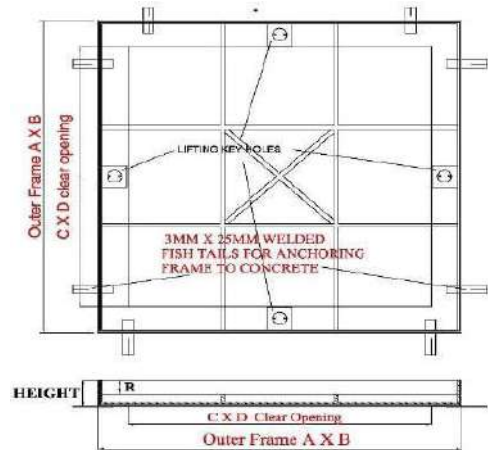
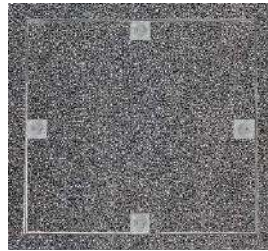
Heavy / Medium Duty Stainless Steel Non-Watertight Recessed Cover & Frame (SS304 & SS316)

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9.1



600MM X 600MM CLEAR OPENING HEAVY DUTY STAINLESS STEEL RECESSED COVER & FRAME



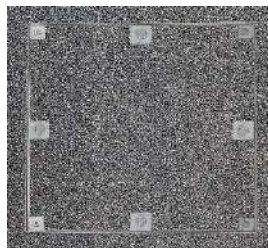
No.	Product Code	Grade	Clear Opening (AxB)	Overall Size (CxD)	Height (E)	Material	Loading	R	Remarks
9.1	MCHDSSR-304	A1	750 x 750	600 x 600	140	SS304	400KN	40	Heavy Duty
9.2	MCHDSSR-304	A2	750 x 750	600 x 600	140	SS304	230KN	40	Heavy Duty
9.3	MCHDSSR-316	A1	750 x 750	600 x 600	140	SS316	400KN	40	Heavy Duty
9.4	MCMDSSR-304	B	750 x 750	600 x 600	90	SS304	125KN	30	Medium Duty
9.5	MCMDSSR-316	B	750 x 750	600 x 600	90	SS316	125KN	30	Medium Duty

Heavy/Medium Duty Stainless Steel Watertight/Airtight Recessed Cover & Frame (SS304 & SS316)

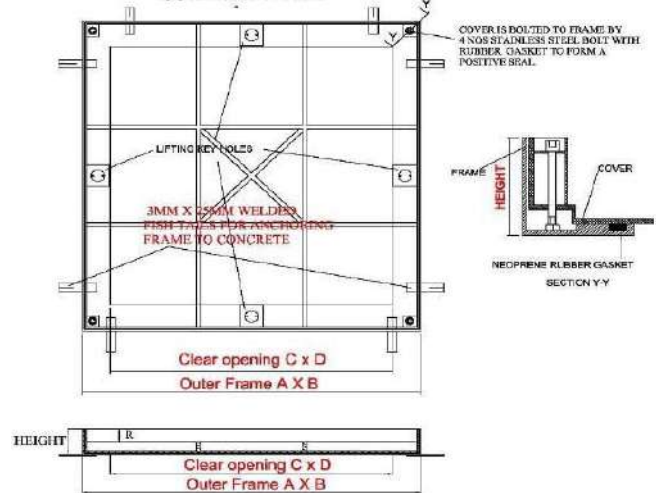
9.6



600MM X 600MM CLEAR OPENING MEDIUM DUTY WATERTIGHT RECESSED COVER & FRAME



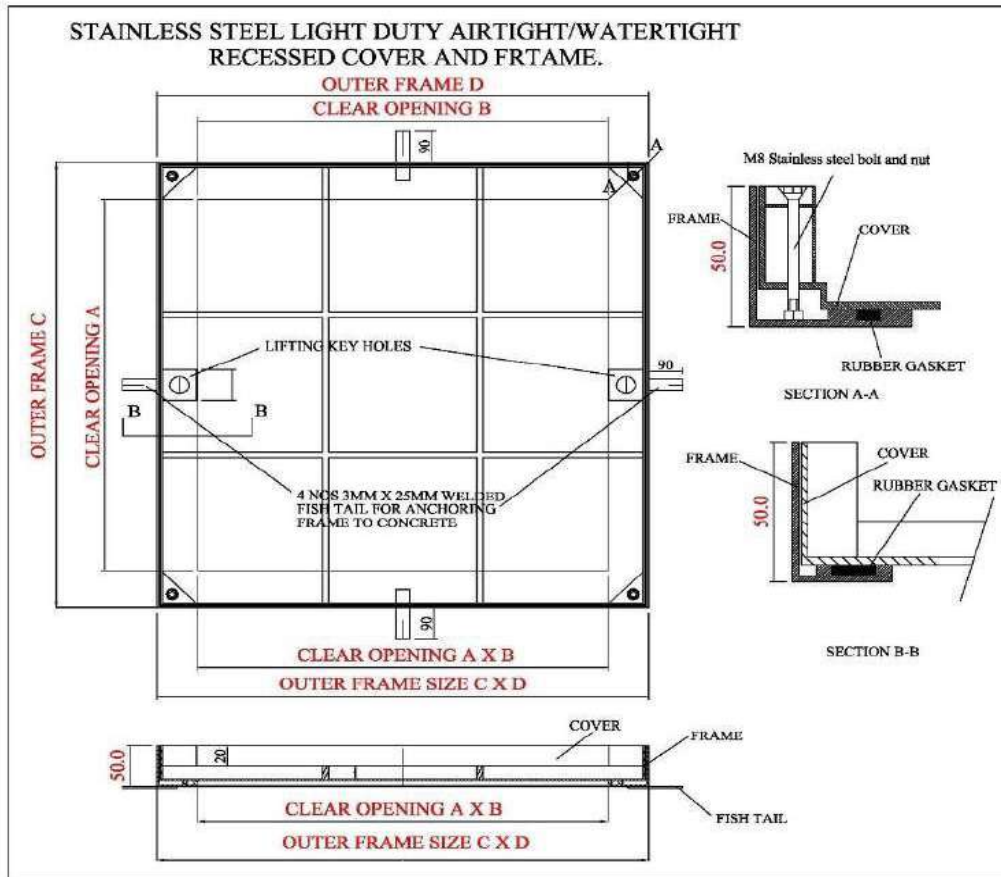
STAINLESS STEEL WATERTIGHT/AIRTIGHT RECESSED COVER AND FRAME



No.	Product Code	Grade	Clear Opening (AxB)	Overall Size (CxD)	Height (E)	Material	Loading	R	Remarks
9.6	HDRCL-600450	A1	750 x 750	600 x 600	140	SS304	400KN	40	Heavy Duty
9.7	HDRCM-750750	A1	750 x 750	600 x 600	140	SS316	400KN	40	Heavy Duty
9.8	HDRCL-600450	B	750 x 750	600 x 600	90	SS304	125KN	30	Medium Duty
9.9	HDRCM-750750	B	750 x 750	600 x 600	90	SS316	125KN	30	Medium Duty

10 Light Duty Stainless Steel Watertight/Airtight Recessed Cover & Frame (SS304 & SS316)

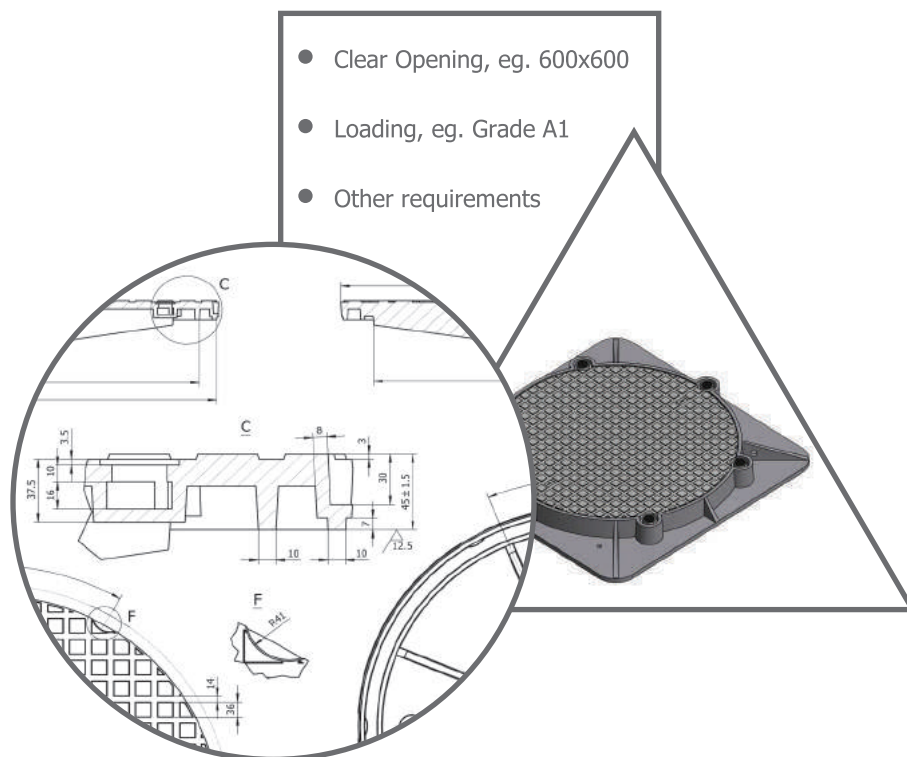
10.1



No.	Product Code	Grade	Clear Opening (AxB)	Overall Size (CxD)	Height (E)	Material	Loading	Remarks
10.1		C	550 x 550	450 x 450	50	SS304 / SS316	30KN	Light Duty
10.2		C	700 x 700	600 x 600	50	SS304 / SS316	30KN	Light Duty
10.3		C	900 x 900	800 x 800	50	SS304 / SS316	30KN	Light Duty
10.4		C	1100 x 1100	1000 x 1000	50	SS304 / SS316	30KN	Light Duty

CUSTOM Made?

Other grades of Manhole covers & frames available upon request. We can also custom design the Manhole covers & frames to your specific requirements in various sizes and weights.



Contact Us

Please feel free to contact us via e-mail or phone. We will be glad to answer your questions, concerns and/or feedback.

Address:

2 Benoi Crescent
Singapore 629969

Tel: +65 6266 1836 / +65 6861 0770

Fax: +65 6261 5638

Email: sales@chongcheong.com.sg

Web: www.chongcheong.com.sg