

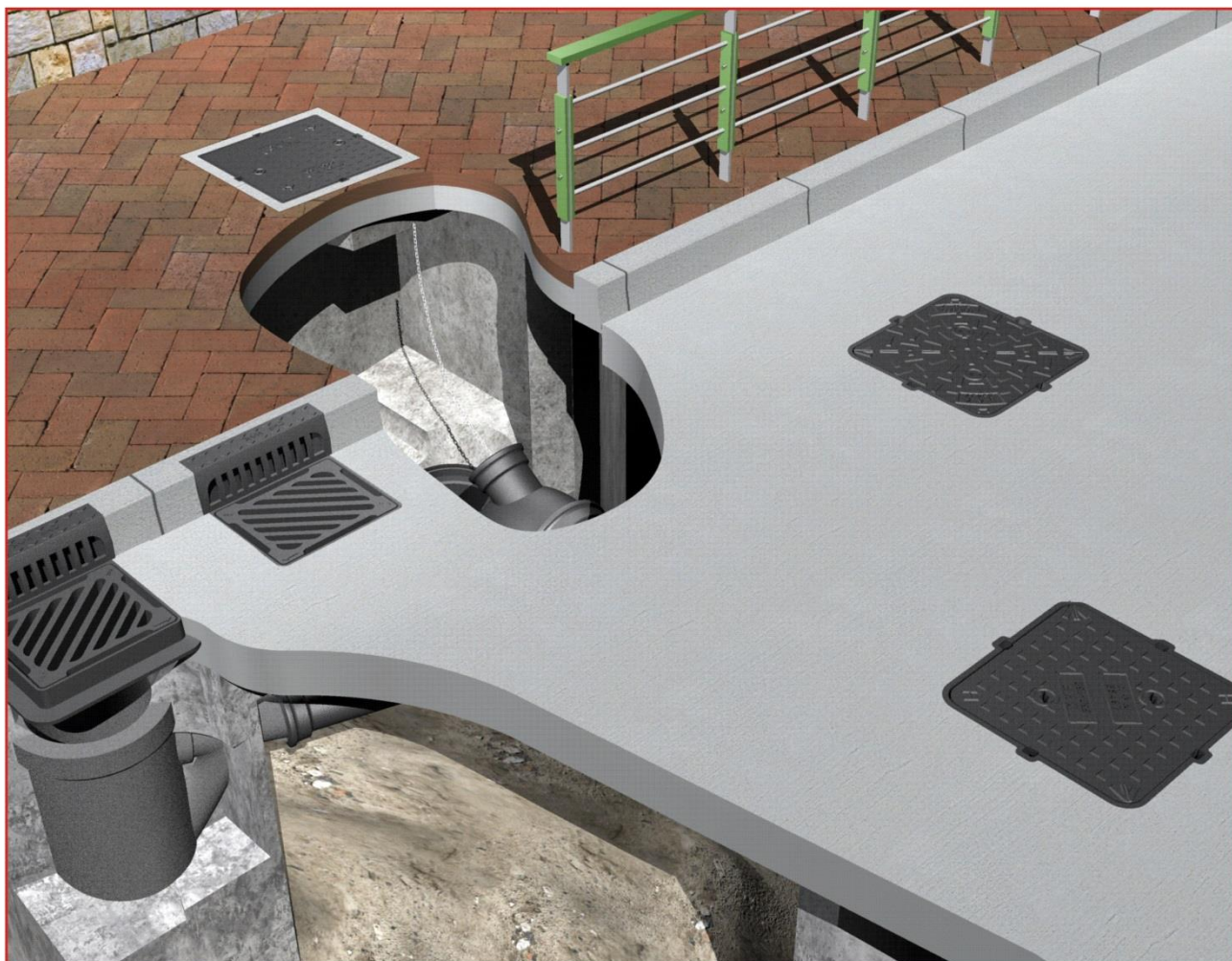


Eco-Cast Iron

Double-Triangular & Desilting Manhole Cover and Frame,
Road Gully Gratings/Kerb Overflow Weirs / Double Seal Manhole Cover and Frame

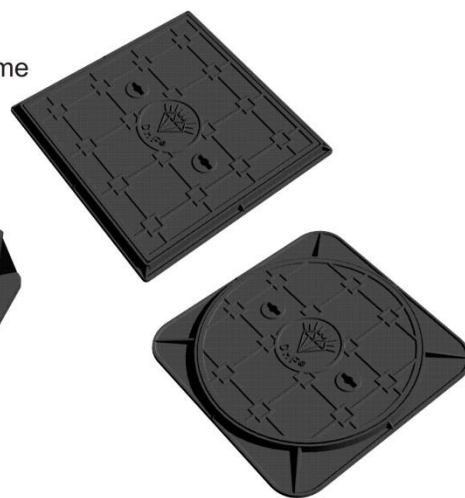
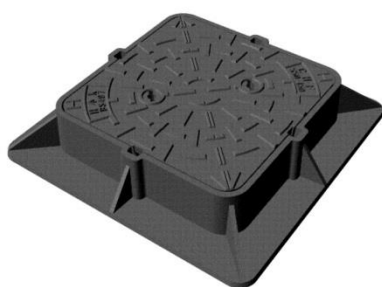
環保雙止口沙井蓋板 ATC, E&M, TCS 蓋板
DS1034B • 750X900X165 雙三角蓋板

“General Specification for Civil Engineering Works”



Cast Iron Double-Triangular &
Desilting Manhole Cover and Frame
生鐵雙三角沙井蓋板

Eco-Cast Iron Double-Seal &
Desilting Manhole Cover and Frame
環保生鐵雙止口沙井蓋板



祥興鑄鐵有限公司
CHEUNG HING FOUNDRY (HK) LIMITED



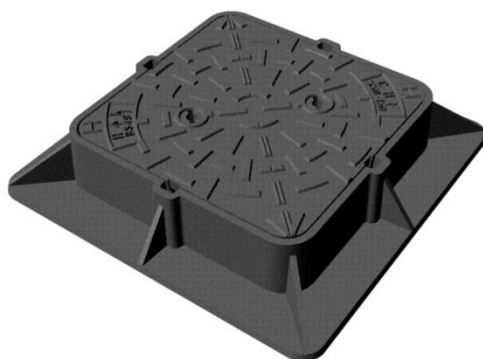
生鐵雙三角沙井蓋板

- Standard : **“General Specification for Civil Engineering Works”**
published by the Civil Engineering and Development Department,
The Government of the HKSAR.
- Functions : Designated to be used in Government roadway drainage projects.
- Applications : For Storm Water (with circumscribed raised stubs on the cover)
For Foul Water (with rectangular raised stubs on the cover)
- Material : Cast Iron Symbol EN GJL-150 of BS EN 1561 : 2011

Details of manhole covers and frames

Type of manhole cover and Frame	Grade	Test requirements	
		Diameter of test block (mm)	Test load (t)
Double triangular manhole cover and frame	Medium duty	100	5
Double triangular manhole cover for sewers Frame	Heavy duty	300	30
	Heavy duty	300	30
Double Triangular desilting manhole cover for sewers Frame	Heavy duty	300	30
	Heavy duty	300	30

STORM WATER 清水



FOUL WATER 污水





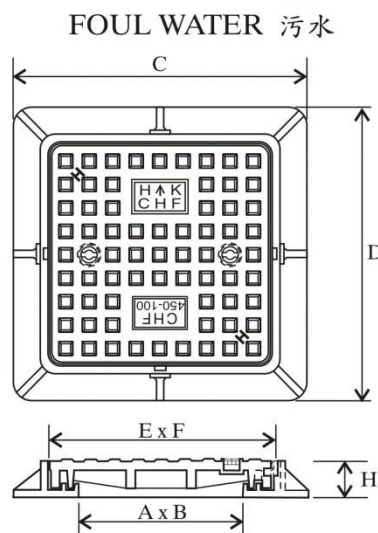
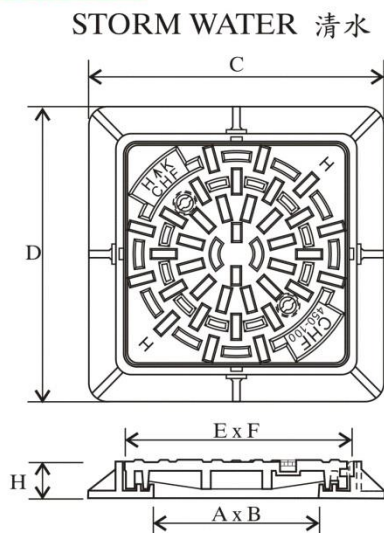
Eco-Cast Iron Double Seal Terminal Manhole Cover for sewers



環保生鐵雙止口平面沙井蓋板

BS EN 124:1994

General Specification for Civil Engineering Works



Technical Specification

Item 序號	Code Number 貨號	Clear Opening 內孔 A x B mm x mm	Over Base Size 底框外皮 C x D mm x mm	Cover Size 蓋面尺寸 E x F mm x mm	Height 高度 H mm	Type 款式 清水 Storm Water/ 污水 Foul Water	Class	G.S. Grade 級別	DSD Drawing No. 渠務署 圖則編號	Type 類型
1	MAE180/400-45B	180 X 400	330 X 550	300 X 520	45	FW		L	DS 1059B	MC2-40/18A
2	MAA0450-045A	450 X 450	620 X 620	580 X 580	45	SW		L	DS 1042B	MC2-45/45B
3	MAA0450-045B	450 X 450	620 X 620	580 X 580	45	FW		L	DS 1038B	MC2-45/45A
4	MAA0450-100A	450 X 450	810 X 810	610 X 610	100	SW	C	H	DS 1040B	MA2-45/45B
5	MAA0450-100B	450 X 450	810 X 810	610 X 610	100	FW	C	H	DS 1036B	MA2-45/45A
6	MAA0450-040A	450 X 450	625 X 625	520 X 520	40	SW	A	-	-	-
7	MAA0450-040B	450 X 450	625 X 625	520 X 520	40	FW	A	-	-	-
8	MAA0550-050A	550 X 550	710 X 710	630 X 630	50	SW	A	-	-	-
9	MAA0550-050B	550 X 550	710 X 710	630 X 630	50	FW	A	-	-	-
10	MAA0550-100A	550 X 550	770 X 770	655 X 655	100	SW	B	M		
11	MAA0550-100B	550 X 550	770 X 770	655 X 655	100	FW	B	M		
12	MAA0550-125A	550 X 550	790 X 970	659 X 659	125	SW	C	-		
13	MAA0550-125B	550 X 550	790 X 790	659 X 659	125	FW	C	-		
14	MAA0550-150A	550 X 550	800 X 800	665 X 665	150	SW	D	H		
15	MAA0550-150B	550 X 550	800 X 800	665 X 665	150	FW	D	H		
16	MAA0600-050A	600 X 600	780 X 780	690 X 690	50	SW	A	L		
17	MAA0600-050B	600 X 600	780 X 780	690 X 690	50	FW	A	L		
18	MAA0600-100A	600 X 600	950 X 950	775 X 775	100	SW	B			
19	MAA0600-100B	600 X 600	950 X 950	775 X 775	100	FW	B			
20	MAA0600-150A	600 X 600	900 X 900	755 X 755	150	SW	C			
21	MAA0600-150B	600 X 600	900 X 900	755 X 755	150	FW	C			
22	MAA0675-150A	675 X 675	935 X 935	800 X 800	150	SW	C			
23	MAA0675-150B	675 X 675	935 X 935	800 X 800	150	FW	C			
24	MAB750/900-150A	750 X 900	1100X1250	925 X 1075	150	SW	C	H		
25	MAB750/900-150B	750 X 900	1100X1250	925 X 1075	150	FW	C	H		

Note : The above dimensions are for reference only. Please refer to the actual products.



祥興鑄鐵有限公司
CHEUNG HING FOUNDRY (HK) LIMITED



環保生鐵雙止口平面沙井蓋板

General Specification for Civil Engineering Works

Standard: “General Specification for Civil Engineering Works”

Published by the Civil Engineering and Development Department

The Government of the HKSAR.

Grade	Test load (t)
Medium duty (M)	5
Heavy duty (H)	20

Type of manhole cover and frame	Grade	Test requirements	
		Diameter of test block (mm)	Test load (t)
Double seal terminal sewer manhole cover Type MA2-45/45A & B	Heavy duty (H)	300	20
Type MC2-45/45A & B	Light duty (L)	Symbol GJL-150 of BS 1561-2011	

Standard: BSEN124:1994

Class	Test load (kN)	Place of installion
A	15	Suitable for areas which can be used by pedestrians and pedal cyclists.
B	125	Suitable for footways, pedestrian areas and comparable areas, car parks or car parking decks.
C	250	Suitable for gully tops installed in the area of kerbside channels of roads which when measured form the kerb edge, extend a maximum of 0.5m into the carriageway and a maximum of 0.2m into the footway.
D	400	Suitable for carriageways of roads (including pedestrian streets), hard shoulders and parking areas, for all types of road vehicles.

Functions: The double-seal feature of the manhole covers and frames prevents foreign Materials from entering into the underground sewage system and also prevents the pungent smell and/or methane from getting out of the underground sewage system.

Type: **SW** for storm water (with circumscribed raised stubs on the cover)

FW for foul water (with square raised stubs on the cover)

Material: Cast Iron Symbol EN GJL-150 of BS EN 1561 : 2011





Eco-Cast Iron Double Seal Terminal Manhole Cover for sewers

環保生鐵雙止口平面沙井蓋板



HOKLAS Endorsed Test Certificates

General Specification for Civil Engineering Works



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E-mail: castco@netigator.com Website: www.castco.com.hk



Test Certificate

Mass Determination and Loading Test to Cast Iron Drainage Goods
(Tested to G.S. for C.E. Works : 1992 : Cl. 5.94(2) and Appendix 5.3)

Date of issue: 08-11-2006 Page 1 of 1 page Castco Lab. Ref. No.: DP261104-0746 MISCEL

Details as supplied by the client

Client: Cheung Hing Foundry Ltd.

Client's Ref. No.: --

Contract No.: -- Title: --

Sample Description: 450 Clear Opening x 100 Height Cast Iron Double Seal Manhole Cover & Frame

Grade: heavy duty

Laboratory Test Result

Date received: 04-11-2006

Date tested: 06-11-2006

Dia. of bearing block: 300 mm

Specimen No.	Specimen Description	Grade claimed by client	Measured mass (kg)	Loading Test (Test load maintained for 30 sec)		Observation
				Test load (kN)	Loading test result (passed/failed)	
DP261104-0746	450 Clear Opening x 100 Height Cast Iron Double Seal Manhole Cover & Frame	Heavy duty	--	196.2 (20 tonnes)	Passed	N/V

BSEN 124:1994



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香港粉嶺安樂街29A號 29A, On Chuen Street, Fanling, Hong Kong Fax: 2677 0351
E-mail: castco@netigator.com Website: www.castco.com.hk



Mass Determination & Loading Test of Manhole Covers, Gully Gratings & Kerb Overflow Weirs
(Tested to BS EN 124 : 1994, Cl. 8 (AMD 8387))

Date of issue: 20-10-2006 Page 1 of 1 page Castco Lab. Ref. No.: DP260925-0624 MISCEL

Details as supplied by client

Client: Cheung Hing Foundry Ltd.

Client Ref. No.: --

Contract No.: --

Title: --

Class: A15

Sample description: 550 Clear Opening x 65 Height Cast Iron Double Seal Manhole Cover & Frame

Laboratory Test Result

Date Received: 25-09-2006

Date Tested: 30-09-2006

Specimen No.	Specimen Description	Clear opening (mm)	Size of test block (mm)	Measurement of permanent set		Application of the test load (Test load maintained for 30 sec.)		Observation
				2/3 of the test load applied (kN)	Permanent set of cover / grating (mm)	Load applied (kN)	Loading test result	
DP260925-0624	--	--	--	--	--	15	Passed	N/V

Remark: 1. Legend: FC - Fracture at cover; FF - Fracture at frame; NV - No visible fracture.
2. Test results relate only to the specimen tested.
3. At client's request, measurement of permanent set was not performed.

2. Permissible permanent set as given in BS EN 124 : 1994 (AMD 8387) Table 8:
a) For class A15 and B125: $\frac{CO}{100} \times 0.5$ OR $\frac{CO}{100} \times 0.4$ mm, when CO < 450mm.
b) For class C250 up to F900: $\frac{CO}{100} \times 0.5$ OR 1mm max, when CO < 300mm.
(When secured according to 7.8a or 7.8c)
c) For class C250 up to F900: $\frac{CO}{100} \times 0.5$ OR 1mm max, when CO < 300mm.
(When secured according to 7.8b)

Checked by: K. N. SIU

Approved signature: KEITH CHOI
Eng. MSc, MICE
Laboratory Engineer

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Mass Determination & Loading Test of Manhole Covers, Gully Gratings & Kerb Overflow Weirs
(Tested to BS EN 124 : 1994, Cl. 8 (AMD 8387))

Date of issue: 19-06-2006 Page 1 of 1 page Castco Lab. Ref. No.: DP260925-0624 MISCEL

Details as supplied by client

Client: Cheung Hing Foundry Ltd.

Client Ref. No.: --

Contract No.: --

Title: --

Class: B125

Sample description: 550 Clear Opening x 100 Height Cast Iron Double Seal Manhole Cover & Frame

Laboratory Test Result

Date Received: 10-06-2006

Date Tested: 13-06-2006

Specimen No.	Specimen Description	Clear opening (mm)	Size of test block (mm)	Measurement of permanent set		Application of the test load (Test load maintained for 30 sec.)		Observation
				2/3 of the test load applied (kN)	Permanent set of cover / grating (mm)	Load applied (kN)	Loading test result	
DP260925-0624	--	--	--	--	--	125	Passed	N/V

Remark: 1. Legend: FC - Fracture at cover; FF - Fracture at frame; NV - No visible fracture.
2. Test results relate only to the specimen tested.
3. At client's request, measurement of permanent set was not performed.

2. Permissible permanent set as given in BS EN 124 : 1994 (AMD 8387) Table 8:
a) For class A15 and B125: $\frac{CO}{100} \times 0.5$ OR $\frac{CO}{100} \times 0.4$ mm, when CO < 450mm.
b) For class C250 up to F900: $\frac{CO}{100} \times 0.5$ OR 1mm max, when CO < 300mm.
(When secured according to 7.8a or 7.8c)
c) For class C250 up to F900: $\frac{CO}{100} \times 0.5$ OR 1mm max, when CO < 300mm.
(When secured according to 7.8b)

Checked by: W. K. LING

Approved signature: K. YEO
Technical Manager

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E-mail: castco@netigator.com Website: www.castco.com.hk



Mass Determination & Loading Test of Manhole Covers, Gully Gratings & Kerb Overflow Weirs
(Tested to BS EN 124 : 1994, Cl. 8 (AMD 8387))

Date of issue: 20-10-2006 Page 1 of 1 page Castco Lab. Ref. No.: DP260925-0625 MISCEL

Details as supplied by client

Client: Cheung Hing Foundry Ltd.

Client Ref. No.: --

Contract No.: --

Title: --

Class: C250

Sample description: 350 Clear Opening x 125 Height Cast Iron Double Seal Manhole Cover & Frame

Laboratory Test Result

Date Received: 25-09-2006

Date Tested: 30-09-2006

Specimen No.	Specimen Description	Clear opening (mm)	Size of test block (mm)	Measurement of permanent set		Application of the test load (Test load maintained for 30 sec.)		Observation
				2/3 of the test load applied (kN)	Permanent set of cover / grating (mm)	Load applied (kN)	Loading test result	
DP260925-0625	--	--	--	--	--	250	Passed	N/V

Remark: 1. Legend: FC - Fracture at cover; FF - Fracture at frame; NV - No visible fracture.
2. Test results relate only to the specimen tested.
3. At client's request, measurement of permanent set was not performed.

2. Permissible permanent set as given in BS EN 124 : 1994 (AMD 8387) Table 8:
a) For class A15 and B125: $\frac{CO}{100} \times 0.5$ OR $\frac{CO}{100} \times 0.4$ mm, when CO < 450mm.
b) For class C250 up to F900: $\frac{CO}{100} \times 0.5$ OR 1mm max, when CO < 300mm.
(When secured according to 7.8a or 7.8c)
c) For class C250 up to F900: $\frac{CO}{100} \times 0.5$ OR 1mm max, when CO < 300mm.
(When secured according to 7.8b)

Checked by: K. N. SIU

Approved signature: KEITH CHOI
Eng. MSc, MICE
Laboratory Engineer

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Mass Determination & Loading Test of Manhole Covers, Gully Gratings & Kerb Overflow Weirs
(Tested to BS EN 124 : 1994, Cl. 8 (AMD 8387))

Date of issue: 20-10-2006 Page 1 of 1 page Castco Lab. Ref. No.: DP260925-0626 MISCEL

Details as supplied by client

Client: Cheung Hing Foundry Ltd.

Client Ref. No.: --

Contract No.: --

Title: --

Class: D400

Sample description: 550 Clear Opening x 150 Height Cast Iron Double Seal Manhole Cover & Frame

Laboratory Test Result

Date Received: 25-09-2006

Date Tested: 30-09-2006

Specimen No.	Specimen Description	Clear opening (mm)	Size of test block (mm)	Measurement of permanent set		Application of the test load (Test load maintained for 30 sec.)		Observation
				2/3 of the test load applied (kN)	Permanent set of cover / grating (mm)	Load applied (kN)	Loading test result	
DP260925-0626	--	--	--	--	--	400	Passed	N/V

Remark: 1. Legend: FC - Fracture at cover; FF - Fracture at frame; NV - No visible fracture.
2. Test results relate only to the specimen tested.
3. At client's request, measurement of permanent set was not performed.

2. Permissible permanent set as given in BS EN 124 : 1994 (AMD 8387) Table 8:
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b) For class C250 up to F900: $\frac{CO}{100} \times 0.5$ OR 1mm max, when CO < 300mm.
(When secured according to 7.8a or 7.8c)
c) For class C250 up to F900: $\frac{CO}{100} \times 0.5$ OR 1mm max, when CO < 300mm.
(When secured according to 7.8b)

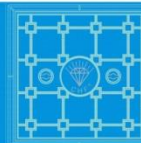
Checked by: K. N. SIU

Approved signature: KEITH CHOI
Eng. MSc, MICE
Laboratory Engineer

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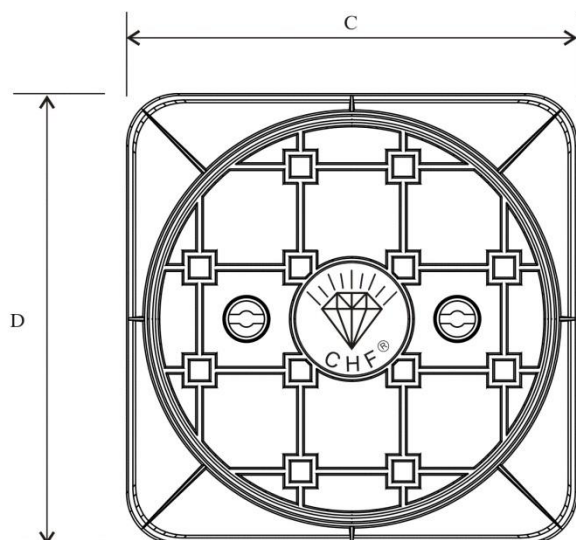
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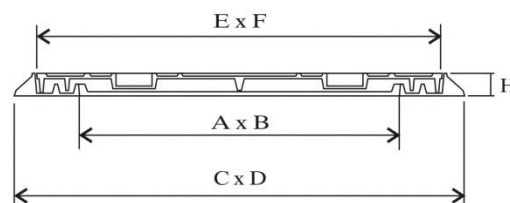
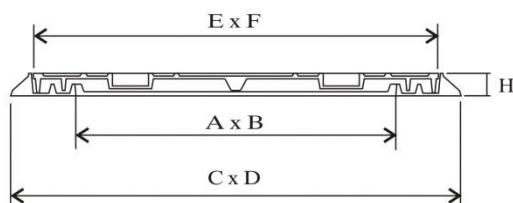
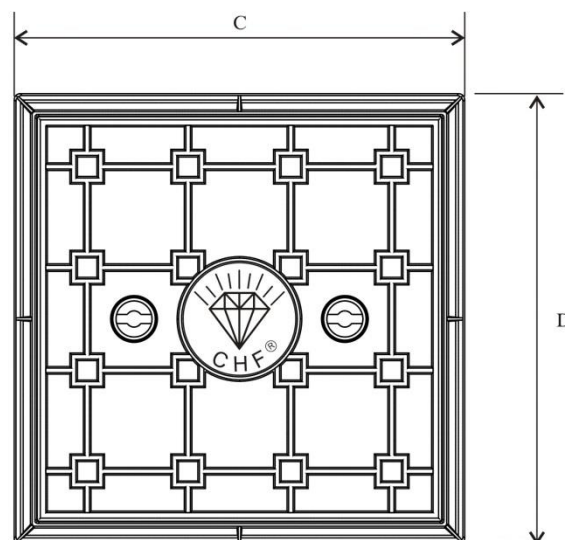
環保生鐵雙止口平面沙井蓋板

General Specification for Civil Engineering Works

450mm Round Cover for Storm Water



450mm Square Cover for Foul Water



Technical Specification:

Item 序號	Code Number 貨號	Clear Opening 內孔 A x B mm x mm	Over Base Size 底框外皮 C x D mm x mm	Cover Size 蓋面尺寸 E x F mm x mm	Height 高度 H mm	Type 款式 清水 Storm Water/ 污水 Foul Water	Material 材質
1	MBC450N	Ø 355	500 x 500	Ø 450	25	SW	Cast Iron
2	MBA450P	355 x 355	500 x 500	450 x 450	25	FW	Cast Iron

Note :The above dimensions are for reference only. Please refer to the actual products.



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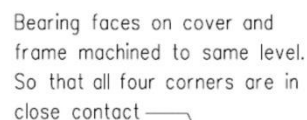
Address : 299, Pak Sha Tsuen,
Kung Um Road, Yuen Long, Hong Kong
Tel : (852) 2447-1262 Fax : (852) 2447-0198

祥興鑄鐵有限公司

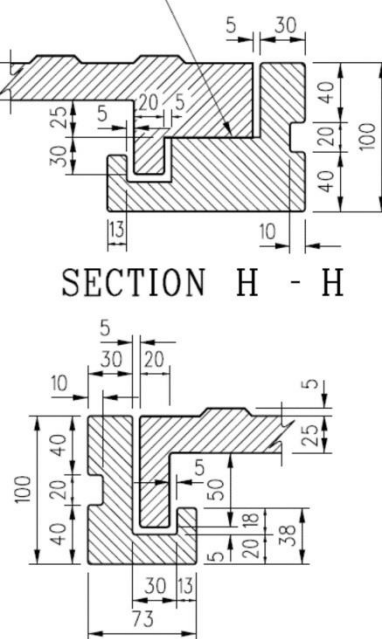
地址：香港 元朗 公庵路 白沙村 299 號

Email : chf@chfhk.com http://www.chfhk.com

600X600 clear opening X100 height cover & frame (ATC / TCS / E&M)

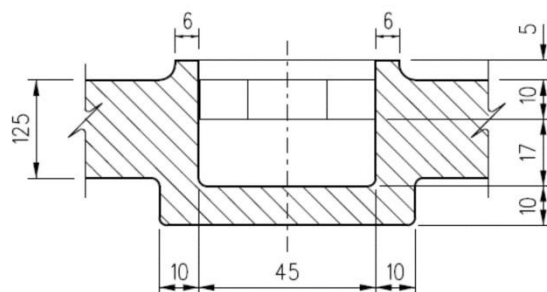


SECTION H - H



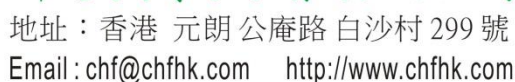
DETAIL 'Y'

PLAN



SECTION J - J

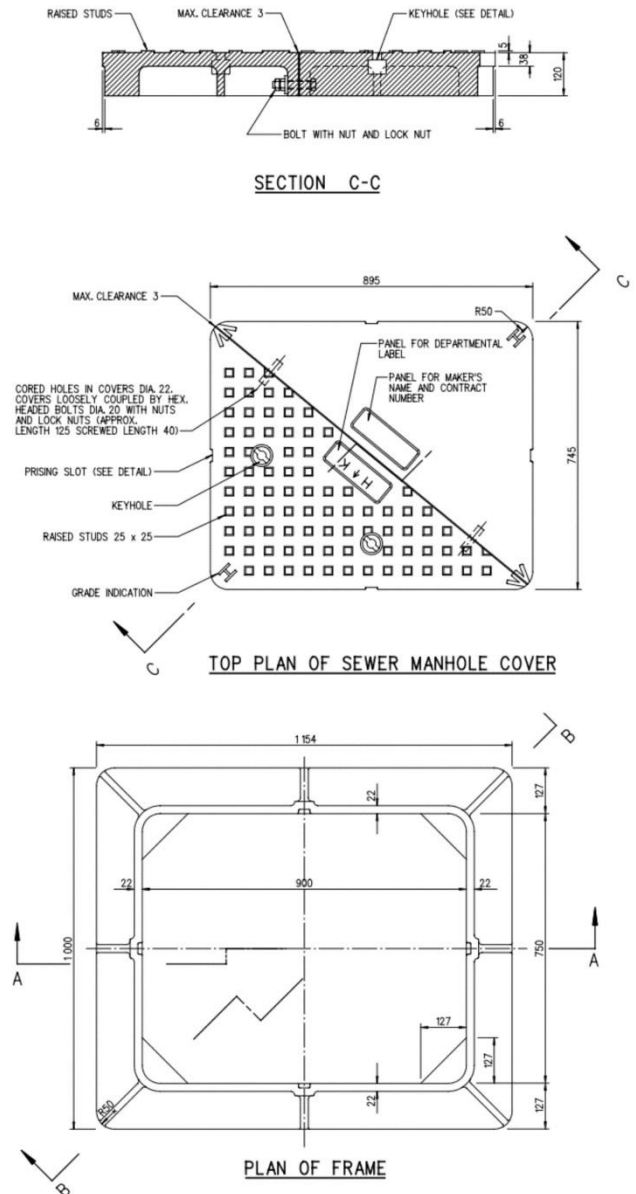
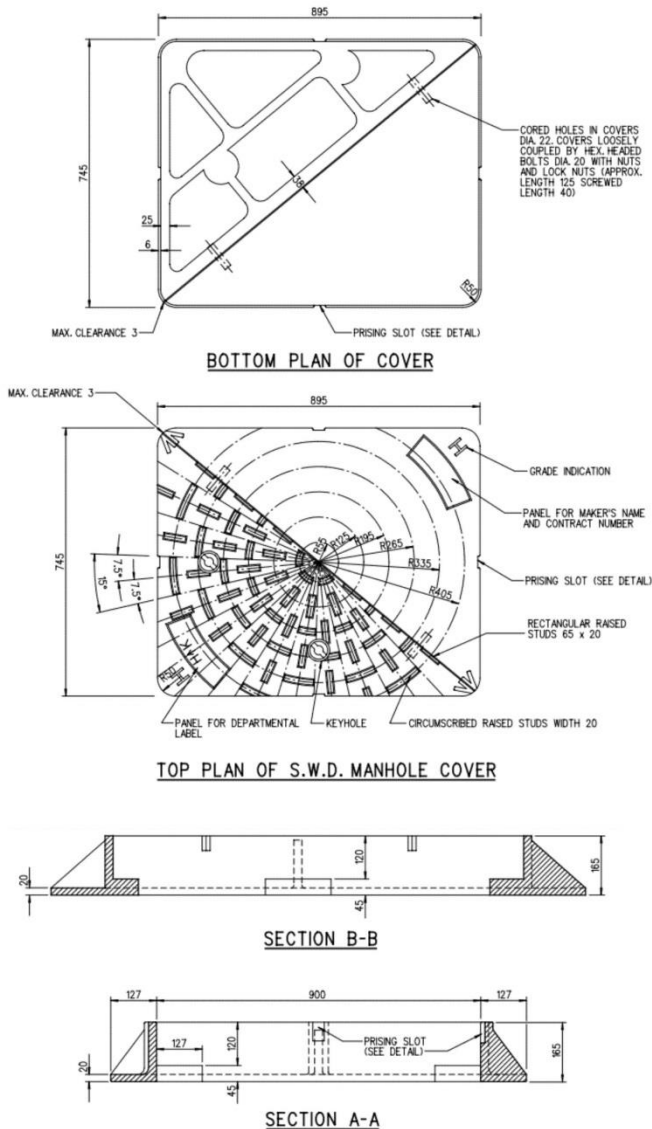
PLAN OF KEY HOLE



750X900mm 內孔165mm高雙三角生鐵沙井蓋板

750X900mm Clear Opening 165mm Height Double triangular Cast iron Manhole Cover and Frame

DS1034B



Technical Specification:

Item 序號	Code Number 編號	Clear Opening 內孔 mm	Over Base Size 底框外皮 C x D mm x mm	Height H mm	Type 款式 清水 Storm Water/ 污水 Foul Water	Grade 級別 H=Heavy Duty 重磅
1	MAF750/900-165A	750 X 900	1000 X 1154	165	SW	H
2	MAF750/900-165B	750 X 900	1000 X 1154	165	FW	H

Note :The above dimensions are for reference only. Please refer to the actual products.



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