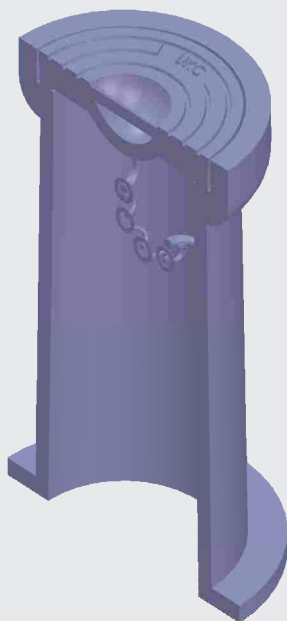


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SURFACE BOX



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Surface Boxes Warrior range

The Warrior surface box has been specifically designed to offer fast and easy access to emergency and below-ground services.

Manufactured from ductile iron and incorporating the large wedge seating principle, the Warrior surface box offers long-term stability and performance.

Conformity

The Warrior range of Grade A surface boxes fully meets the requirements of BS 5834 Part 2, 2011 and the performance requirements of BS 750, 2012 and is certified by the BSI Kitemark for quality.

Badging

A range of standard badged variants such as FH, SV, WO and AV are available. Please contact us for individual badging requirements.

Security

Safety chains can be fitted for added security.

Single-piece unit

Non-rock, heavy duty design.

Large wedge seatings

Offer non-rock performance and greater stability under heavy traffic loading.

Prising slots

Located at both front and rear of unit for easy opening and fast access to services.

Bonding ribs

To increase adhesion between the frame and bedding mortar. High-performance Polyester LTS Bedding Mortar is recommended for installation of this unit.

Positive register

A register is designed into the wedge seat for positive locating each time the cover is closed.

Wedge seat principle

The Warrior wedge seating operates in two directions and has seats to ensure the security and location of the cover within the frame.



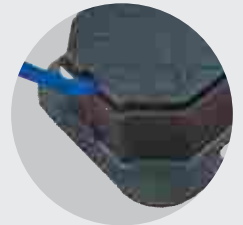
Large wedge seatings



Bonding ribs



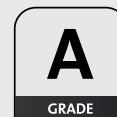
Single-piece unit



Prising slots



Surface Boxes - Grade A



Double Triangular

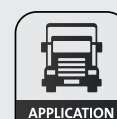
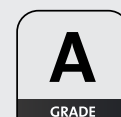
Code	SAP code	Code with security chain	SAP code security chain	BS5834 grade	Clear opening A x B (mm)	Over base C x D (mm)	Depth E (mm)	Total mass (kg)
HB07 1	168306	HB07 1/AT	186921	A	432 x 282	552 x 402	102	38

Features

- Double triangular
- Non-rock design
- Badging options
- Security chain option

Traditional double triangular design for use in city roads carrying heavy traffic.

Use loop handled lifting keys.



Solid Top

Code	SAP code	Code with security chain	SAP code security chain	BS5834 grade	Clear opening A x B (mm)	Over base C x D (mm)	Depth E (mm)	Total mass (kg)
HB20 1	168304	HB20 1/AT	186932	A	100 x 100	190 x 190	100	6
HB16 1	186926	TBC	TBC	A	430 x 280	550 x 400	100	33.5

Features

- Solid top cover

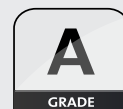
Recommended for use in areas subject to heavy loading but not subject to fast-moving through traffic.

Use loop handled lifting keys.

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Surface Boxes - Grade A



Warrior

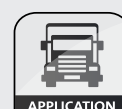
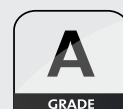
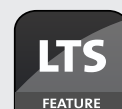
Code	SAP code	Code with security chain	SAP code security chain	BS5834 grade	Clear opening A x B (mm)	Over base C x D (mm)	Depth E (mm)	Total mass (kg)
HB50 1	FSWA15CK	HB50 1/AT	186963	A	153 x 148	225 x 225	100	7.3
HB80 1	186986	HB80 1/AT	186987	A	148 x 153	262 x 250	225	13.2
HB54 1	186972	HB54 1/AT	186973	A	229 x 227	325 x 325	100	13.3
HB58 1	186980	HB58 1/AT	186981	A	303 x 301	400 x 400	100	20.2
HB40 1	FSWA32EK	HB40 1/AT	168303	A	383 x 233	505 x 355	125	24.7

Features:

- Non-rock design
- Single-piece cover
- Badging options
- Security chain option

Recommended for use in city and roads carrying heavy traffic.

Use T-handled lifting key on all units except HB40 1 (FSWA32EK) where a loop handled lifting key is required.



Warrior – Wide Flange

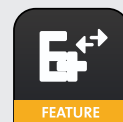
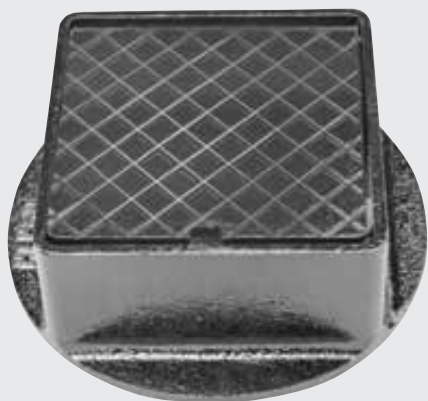
Code	SAP code	Code with security chain	SAP code security chain	BS5834 grade	Clear opening A x B (mm)	Over base C x D (mm)	Depth E (mm)	Total mass (kg)
HB36 1	186935	HB36 1/AT	186936	A	383 x 233	530 x 380	125	26.5

Features

- Wider flange to prevent lateral movement
- Non-rock design
- Single-piece cover
- Badging options
- Security chain option

Recommended for use in city and roads carrying heavy traffic.

Surface Boxes - Grade A



Hinged Pavement

Code	SAP code	BS 5834 grade	Clear opening A x B (mm)	Over base C x D (mm)	Depth E (mm)	Spigot I/D	Total mass (kg)
HH90 1	187022	Medium	135 x 125	210 dia	75	–	30.7
HH96 1	187032	Medium	185 dia	275 x 275	61	–	7.7
HH94 1 *	187029	Medium	185 dia	240 x 240	111	202	7.9
HH93E * * *	187028	Medium	185 dia	240 x 240	111	202	7.7
HH97 E *	205341	Medium	205 x 205	260 x 260	75		8.1

Features

- Single-piece cover
- Hinged
- Badging options

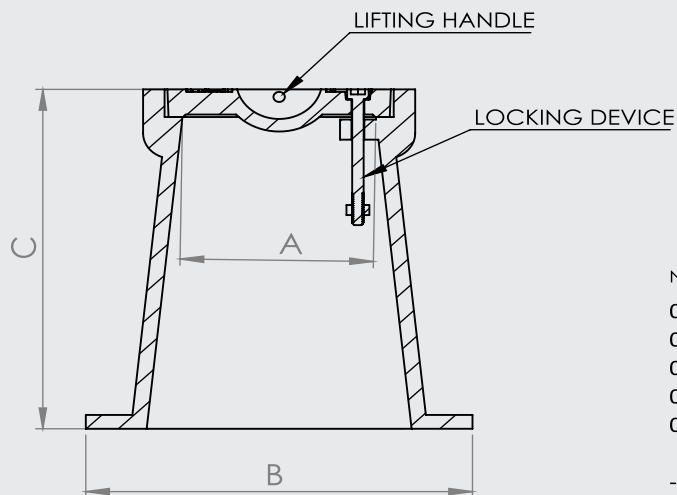
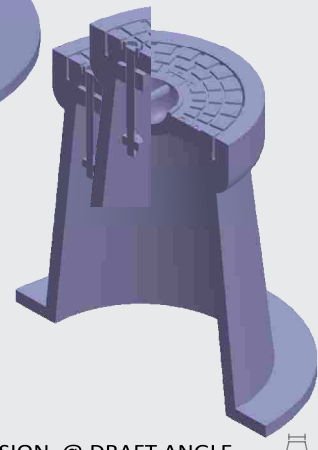
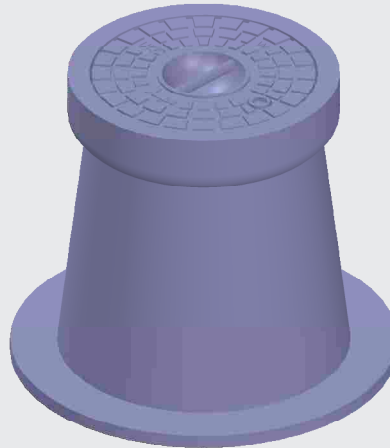
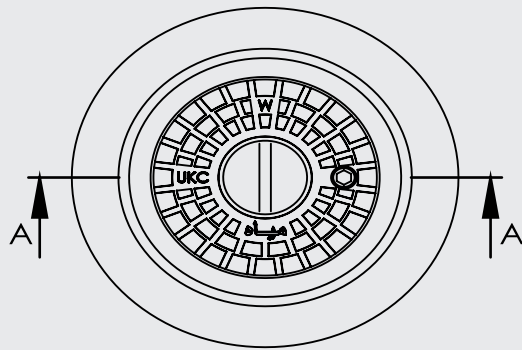
Recommended for use in pavements and other pedestrian areas where hinged access is required.

* Spigot base

* 40mm hole in cover for encoded meter application

* Badged water

Heavy Duty Surface Boxes



SECTION A-A

NOTE:

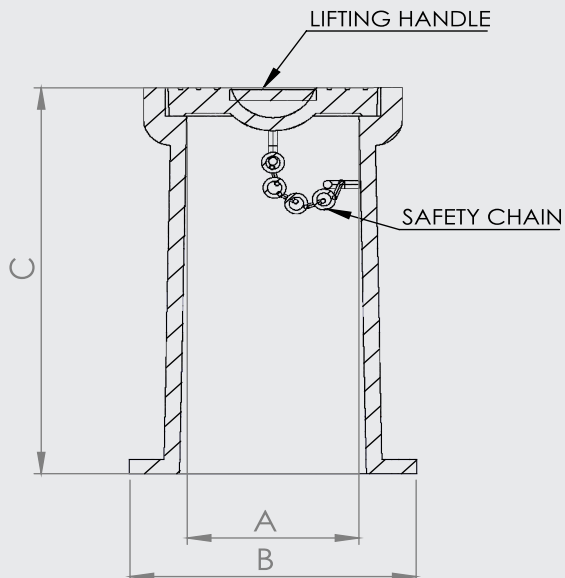
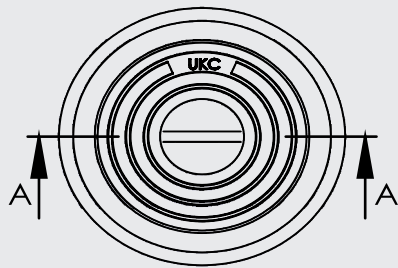
01. GIVEN MIN. DIMENSION @ DRAFT ANGLE
02. UN SPECIFIED DRAFT ANGLE 3°
03. UN SPECIFIED FILLET RADII R3-R5
04. ALL DIMENSION ARE IN MM.
05. UN SPECIFIED TOLERANCE AS PER ISO 8062

- COUNTRY OF ORIGIN: INDIA
- MATERIALS: CONFORMS TO GREY CAST IRON
- SPECIFICATIONAS PER BS-EN 124-94
- LOAD RATING AS SPECIFIED
- BLACK BITUNINOUS COATING PAINT
- SAMPLING: NOT REQUIRED
- AUTHORITY APPROVALS: NOT REQUIRED
- TEST BARS: NOT REQUIRED
- LID & FRAME CAN BE CLUBBED WITH STEEL BOLT & NUT (COST WILL BE EXTRA)
- WT. TOLERANCE ±5 % AS PER BS STANDARD

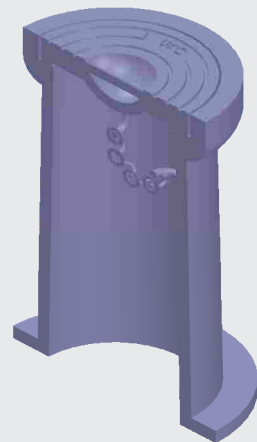
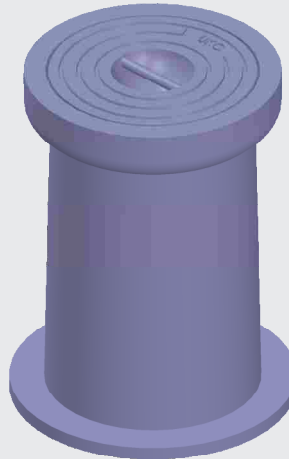
SL	Product Code	Clear Opening (A) (mm)	Over Base (B) (mm)	Height (C) (mm)	Load Class (Tons)	Lid Wt. Kg.	Frame Wt. (Kg.)	Weight (Kg.)
1	UKC 701 CI HD	Ø135	Ø270	270	40	3	15.5	18.5

				UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS				
				SURFACE FINISH: ✓				
				TOLERANCES: ±1.0				
				LINEAR: ±1.0				
				ANGULAR: ±1.0				
				DEBURR AND BREAK SHARP EDGES				
				DO NOT SCALE DRAWING				
REVISION								
APPV'D	T.B			MATERIAL:		TITLE:		A4
CHK'D	B.D			Grey Cast Iron		HEAVY DUTY SURFACE BOX		
DRAWN	B.D							
	NAME	SIGNATURE	DATE	WEIGHT:		SCALE:1:5		SHEET 1 OF 1

Heavy Duty Surface Boxes



SECTION A-A



NOTE:

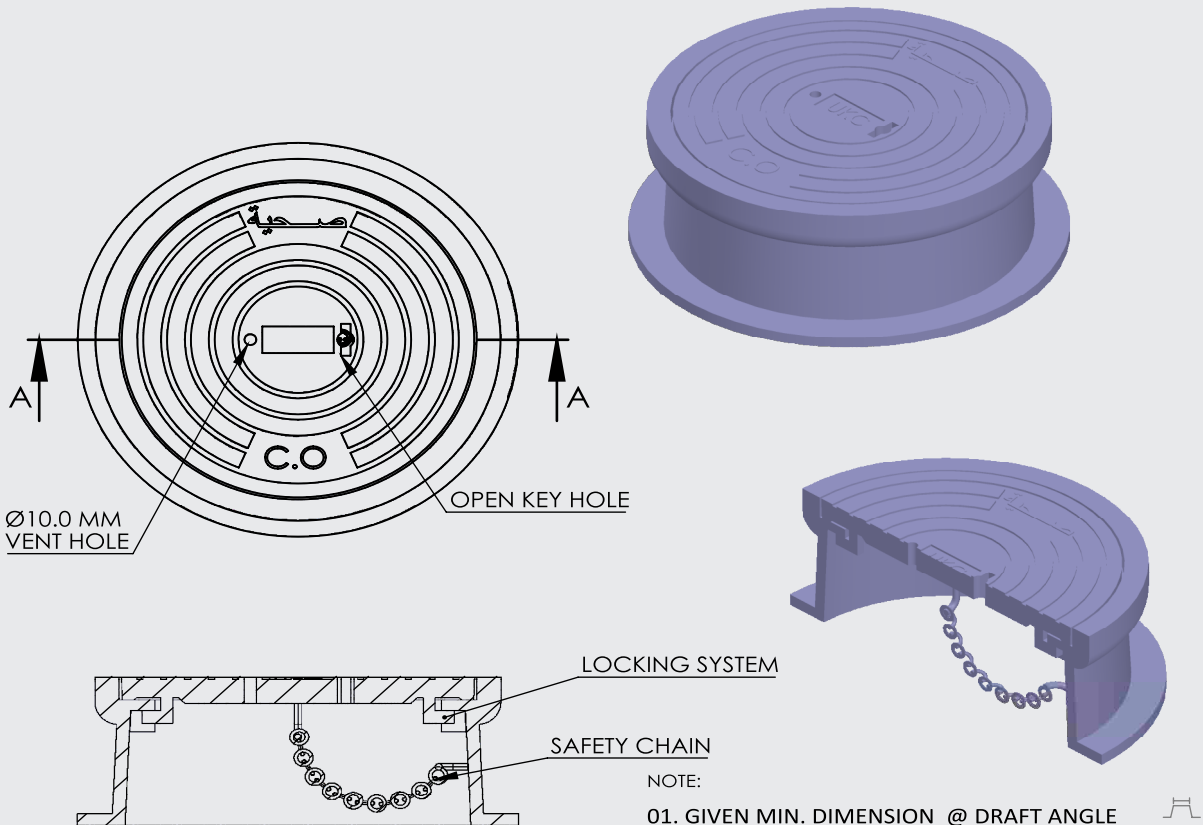
01. GIVEN MIN. DIMENSION @ DRAFT ANGLE
02. UN SPECIFIED DRAFT ANGLE 3°
03. UN SPECIFIED FILLET RADII R3-R5
04. ALL DIMENSION ARE IN MM.
05. UN SPECIFIED TOLERANCE AS PER ISO 8062

- COUNTRY OF ORIGIN: INDIA
- MATERIALS: CONFORMS TO GREY IRON
- SPECIFICATION AS PER BS-EN
- LOAD RATING AS SPECIFIED
- BLACK BITUMINOUS COATING PAINT
- SAMPLING: NOT REQUIRED
- AUTHORITY APPROVALS: NOT REQUIRED
- TEST BARS: NOT REQUIRED
- LID & FRAME CAN BE CLUBBED WITH STEEL CHAIN (COST WILL BE EXTRA)
- WT. TOLERANCE ±5 % AS PER BS STANDARD

SL	Product Code	Clear Opening (A) mm	Over Base (B) mm	Height (C) mm	Load Class (Tons)	Lid WT. (Kg)	Frame Wt. (Kg)	Weight (Kg)
1	UKC 700 CI (HD)	Ø120	Ø200	300	HD BS 5834	2.7	13.5	16.2

				UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS				
				SURFACE FINISH: ✓				
				TOLERANCES: ±1.0				
				LINEAR: ±1.0				
				ANGULAR: ±1.0				
				DEBURR AND BREAK SHARP EDGES				
				DO NOT SCALE DRAWING				
REVISION								
APPV'D	T.B			MATERIAL:	TITLE:			
CHK'D	B.D			Grey Cast Iron		HEAVY DUTY SURFACE BOX		A4
DRAWN	B.D							⊕ ⊞
NAME		SIGNATURE	DATE	WEIGHT:	SCALE:1:5	SHEET 1 OF 1		

Heavy Duty Surface Boxes



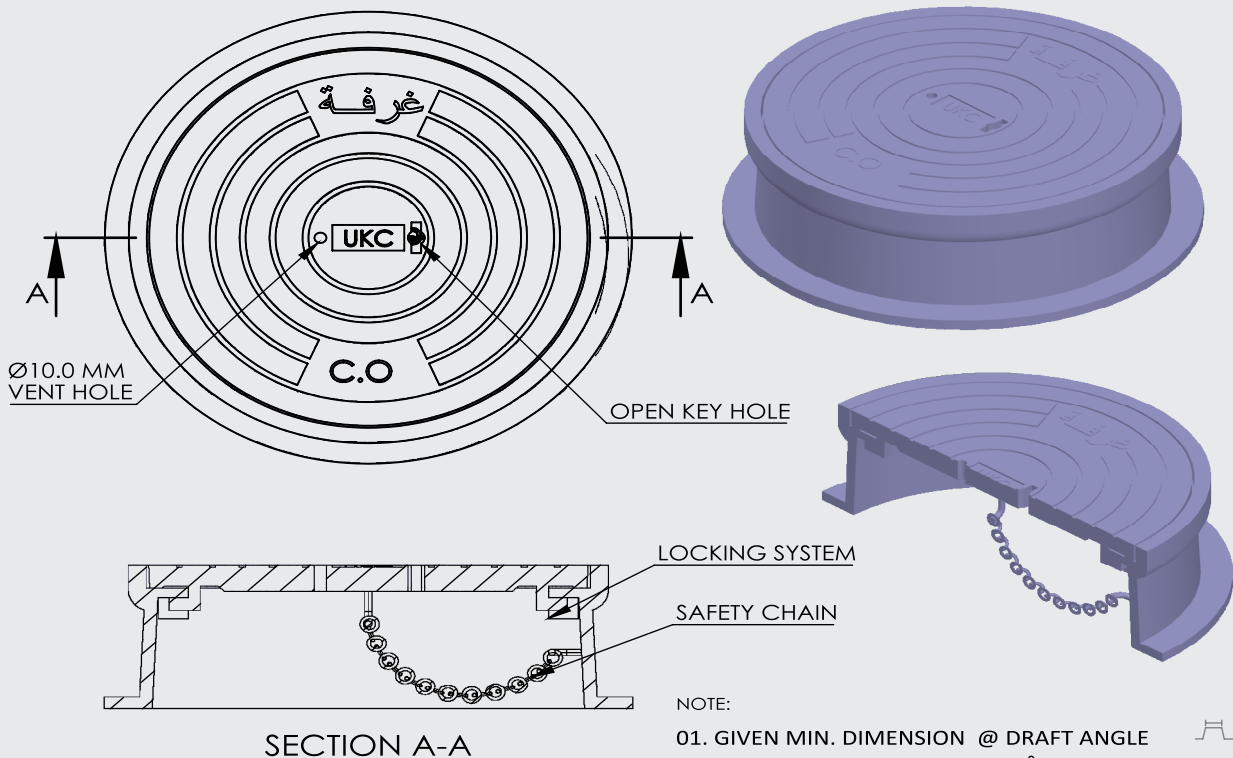
SECTION A-A

- COUNTRY OF ORIGIN: INDIA
- MATERIALS: CONFORMS TO GREY IRON
- SPECIFICATION AS PER BS-EN
- LOAD RATING AS SPECIFIED
- BLACK BITUMINOUS COATING PAINT
- SAMPLING: NOT REQUIRED
- AUTHORITY APPROVALS: NOT REQUIRED
- TEST BARS: NOT REQUIRED
- LID & FRAME CAN BE CLUBBED WITH STEEL CHAIN (COST WILL BE EXTRA)
- WT. TOLERANCE $\pm 5\%$ AS PER BS STANDARD

SL	Product Code	Clear Opening (A) mm	Over Base (B) mm	Height (C) mm	Load Class (Tons)	Lid WT. (Kg)	Frame Wt. (Kg)	Weight (Kg)
1	UKC 708 CI HD	Ø280	Ø370	140	HD BS 5834	11.5	17.5	29

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS					
SURFACE FINISH: ☒ TOLERANCES: ± 1.0 LINEAR: ± 1.0 ANGULAR: ± 1.0 DEBURR AND BREAK SHARP EDGES DO NOT SCALE DRAWING					
REVISION					
APPV'D	T.B		MATERIAL:	TITLE:	
CHK'D	B.D		Grey Cast Iron	HEAVY DUTY SURFACE BOX	A4
DRAWN	B.D				
NAME	SIGNATURE	DATE	WEIGHT:	SCALE: 1:6	SHEET 1 OF 1

Heavy Duty Surface Boxes



NOTE:

01. GIVEN MIN. DIMENSION @ DRAFT ANGLE
02. UN SPECIFIED DRAFT ANGLE 3°
03. UN SPECIFIED FILLET RADII R3-R5
04. ALL DIMENSION ARE IN MM.
05. UN SPECIFIED TOLERANCE AS PER ISO 8062

- COUNTRY OF ORIGIN: INDIA
- MATERIALS: CONFORMS TO GREY IRON
- SPECIFICATIONAS PER BS-EN
- LOAD RATING AS SPECIFIED
- BLACK BITUNINOUS COATING PAINT
- SAMPLING: NOT REQUIRED
- AUTHORITY APPROVALS: NOT REQUIRED
- TEST BARS: NOT REQUIRED
- LID & FRAME CAN BE CLUBBED WITH STEEL CHAIN (COST WILL BE EXTRA)
- WT. TOLERANCE ±5 % AS PER BS STANDARD

SL	Product Code	Clear Opening (A) mm	Over Base (B) mm	Height (C) mm	Load Class (Tons)	Lid WT. (Kg)	Frame Wt. (Kg.)	Weight (Kg)
1	UKC 709 CI HD	Ø350	Ø420	140	HD BS 5834	17.5	19	36.5

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS							
SURFACE FINISH: ✓ TOLERANCES: ±1.0 LINEAR: ±1.0 ANGULAR: ±1.0 DEBURR AND BREAK SHARP EDGES DO NOT SCALE DRAWING							
REVISION	T.B			MATERIAL:	TITLE:	A4	
APPV'D	B.D			Grey Cast Iron		HEAVY DUTY SURFACE BOX	
CHK'D	B.D						
DRAWN	B.D						
NAME	SIGNATURE	DATE	WEIGHT:	SCALE:1:6	SHEET 1 OF 1		

Heavy Duty Grey Cast Iron Surface Boxes - Grade B



FEATURES

Manufactured to **BS EN124 class C250**.

Kitemarked for third party assurance of quality.

Suitable for carriageway applications not exceeding 500mm from the kerbside.

25 tonne safe test load.

Works safely tested to 27.5 tonnes = +10%.

Yard gullies with flat top & dished types available.

Non-rock design for increased stability & silent operation.

Ductile iron for improved weight to strength ratio.

Black coated finish.

OPTIONS (See pages 27 & 28 for full details)

Locking - standard bolts

Locking - approved high security bolts / keys



PRODUCT CODE	OVER GRATE	FRAME DEPTH	OVERALL FRAME	MASS apx Kg's	WATERWAY apx cm2	SUITS GULLY	HA102 REF
Captive hinged design							
KD51C	380x310mm	75mm	472x370mm	22	764	375mm	S
KD51CB	380x310mm	75mm	555x410mm	22	764	375mm	S
KD51CPL	380x310mm	75mm	555x410mm	28	543	375mm	T
*KD50CN	420x420mm	75mm	520x510mm	29	1100	450mm	R
Non rock double triangular							
KD41C	445x445mm	75mm	535x500mm	38	950	450mm	R
Proprietary yard gully gratings							TYPE
KD70	225x225mm	75mm	285x265mm	9	228	228mm	Flat top
KD71	225x225mm	75mm	285x265mm	9	228	228mm	Dished
KD72	300x300mm	75mm	360x340mm	16	450	304mm	Flat top
KD73	300x300mm	75mm	360x340mm	16	450	304mm	Dished

**KD51CPL has a pedestrianised grating & is locked as standard*

Heavy Duty Grey Cast Iron Surface Boxes - Grade B



FEATURES

Manufactured to **class C250** where appropriate.
Suitable for areas with slow moving heavy traffic.
Captive hinged design (except D46-1).
25 tonne safe test load.
Ductile iron for improved weight to strength ratio.
Black coated finish.



PRODUCT CODE	OVER GRATE	FRAME DEPTH	OVER TOP OF FRAME	OVER BASE	DEPTH OF DISH	No of Flanges
Savage Blogully						
D58-2	340x170mm	145mm	400x200mm	450x270mm	15mm	3
D58-3	340x170mm	145mm	400x200mm	450x320mm	15mm	4
D58-1	170x170mm	125mm	200x200mm	300x250mm	15mm	3

Dished to suit proprietary block paving drainage channel systems with a block size of 200x200mm (O/Top)

Savage Congully						
D58-4	360x240mm	145mm	375x250mm	480x305mm	30mm	3
D58-5	360x240mm	145mm	375x250mm	480x355mm	30mm	4

Dished to suit proprietary 225 x 125mm (10"x5") concrete channel systems

Savage Gully Chute Connector						
	Top catchment	Spigot	Overall	Bottom catchment	Catchment depth	Overall depth
D46-1	420x330mm	150mm	530x415mm	170x160mm	175mm	185mm

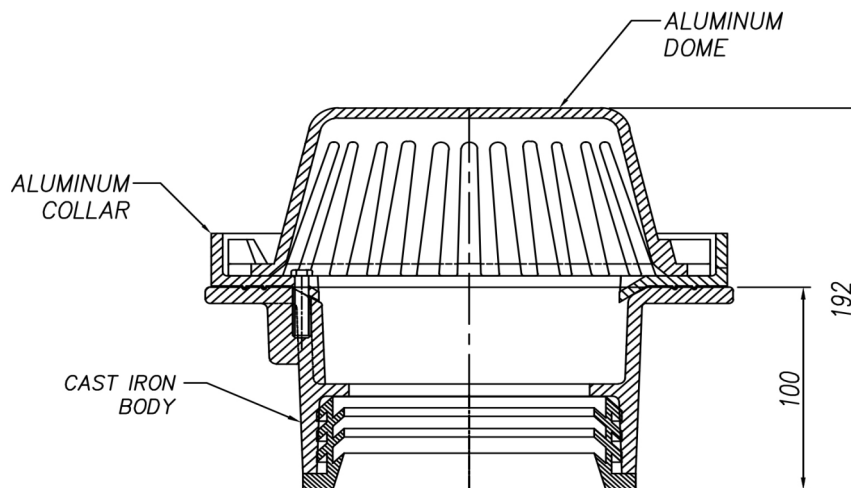
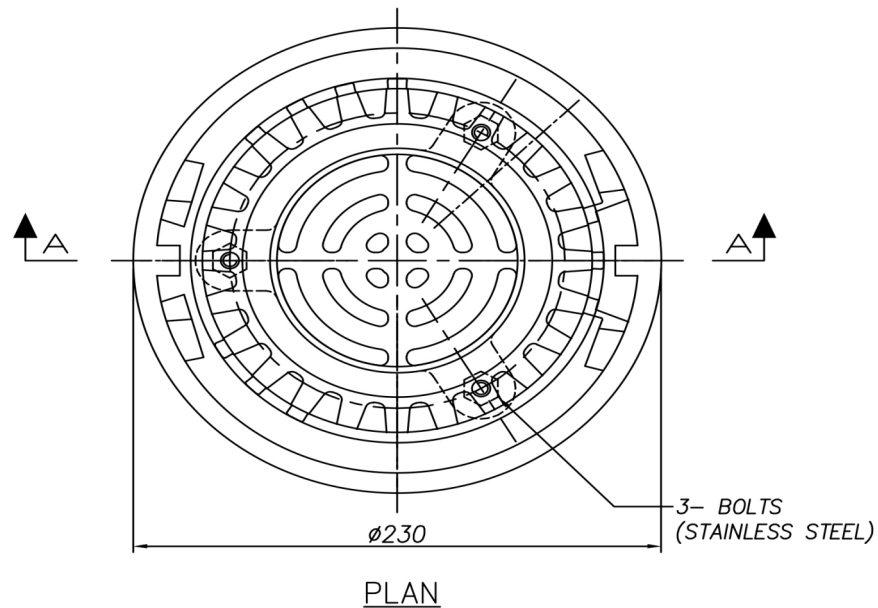
Gully chute connector for sub-kerb gully grating installation. This item does not require a loading category.
Suitable for : all KD41D, KD50D & KD115 patterns, KD52D, KD50CN, KD41C & DSUB.

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Heavy Duty Grey Cast Iron Surface Boxes - Grade B



NOTES

1. FOR DIRECT CONNECTION TO BS 416 PIPEWORK.
2. AREA DRAINED: 290 SQUARE METERS.
3. DRAINAGE CAPACITY: 129.8 GPM or 8.2 LITERS/S.

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Heavy Duty Grey Cast Iron Surface Boxes - Grade B



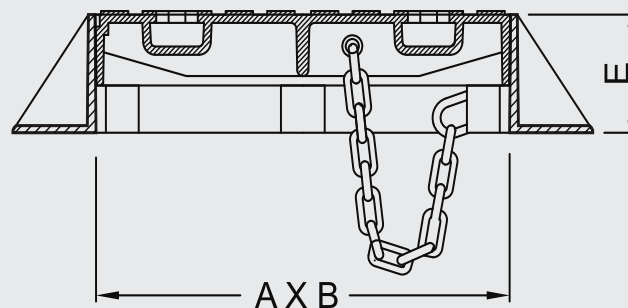
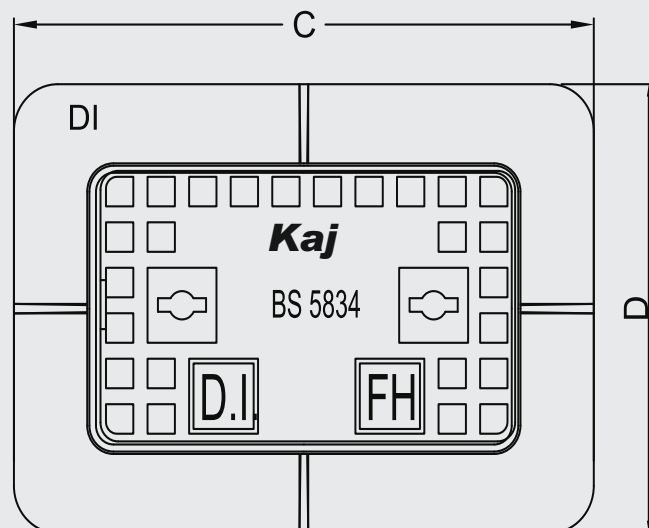
D 1106

FEATURES

- Manufactured as per BS 5834
- Heavy Duty Surface Box with Single Piece/Double Triangular Cover

OPTIONS

- Chain Attachment for Anti-theft



PRODUCT CODE	CLEAR OPENING A x B(MM)	OVER BASE CXD(MM)	TOTAL DEPTH E(MM)	LOAD CLASS	KITE MARK
D-1106	150x150	225x225	100	D400	♥
D-1150	150x150	225x225	150	E600	
CBS-2626	265x265	345x345	150	E600	
D-1105	380x230	530x380	100	D400	♥
D-1380	380x230	530x380	100	E600	