SINO-BRITAIN TRADING LTD

PRODUCT CATALOGUE

Welcome

Sino-Britain Trading, a sister company of Clark-Drain, was formed in 2005 as the export division of Clarksteel Holdings.

We have been offering intelligent and innovative solutions to the construction industry since 1964, along with supplying to Government, utility, telecommunication, Ministry of Defence and the general civil engineering market all over the world.

CONTENTS

INSTALLATION AND LOADINGS

Clark-Drain have been producing municipal castings for over 50 years. Our current range is produced in accordance with BS EN124: 1994 and under an ISO 9001 Quality Management System. The foundries use modern technology such as DISA-Matic and Jolt Squeeze moulding machines.

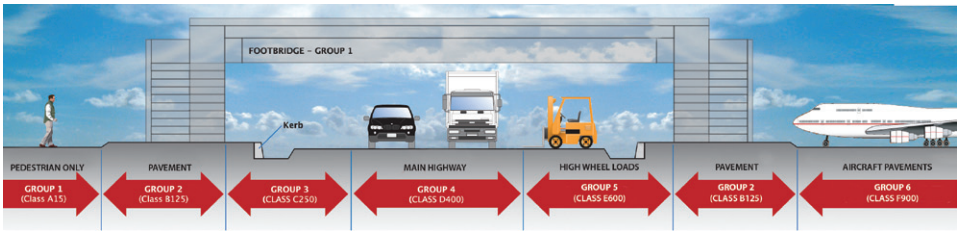
bsi. ISO 9001 Quality Management

FM 86830

The appropriate class of manhole cover or gully grate required depends on the place of installation. The various places of installation have been divided into groups numbered 1 to 6.

The diagram below shows the location of some of these groups in a highway environment. A guide as to which class of manhole top or gully top should be used is shown in parenthesis 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 (see diagram above) 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)

Carriageway of roads (including pedestrian streets), hard shoulders (see diagram above) and parking areas for all types of road vehicles.

GROUP 5 (MIN CLASS E600)

Areas imposing high wheel loads eg. docks.

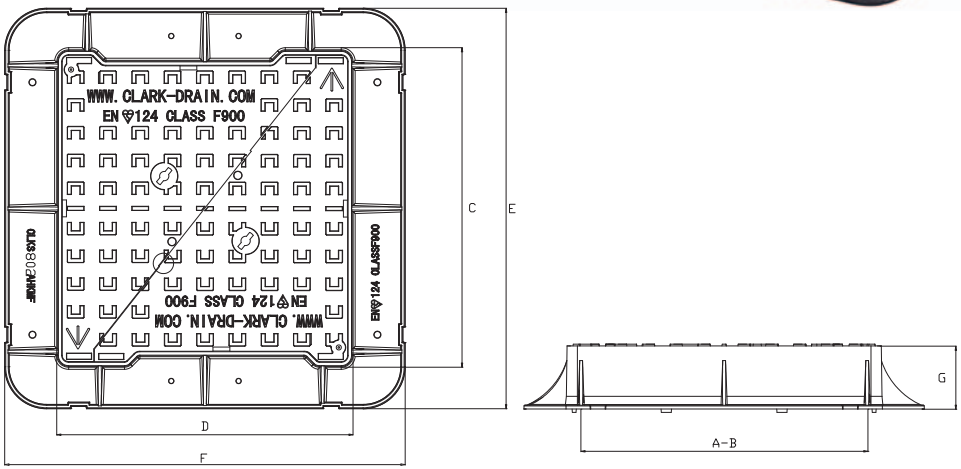
GROUP 6 (MIN CLASS F900)

Areas imposing particularly high wheel loads eg. aircraft pavements.

D/Tri Covers & Frames EN124 Class F900

EN124 F900 [90T]

- Ductile Iron Cover and Frame
- BS EN 124 Class F900
- HA104/02 and HA104/09 (low and high-risk areas) compliant
- Closed Keyways
- Black Bitumen Coated
- Non-Rock 3 Point Suspension
- Solid flange



D/TRI COVERS AND FRAMES EN124 CLASS F900

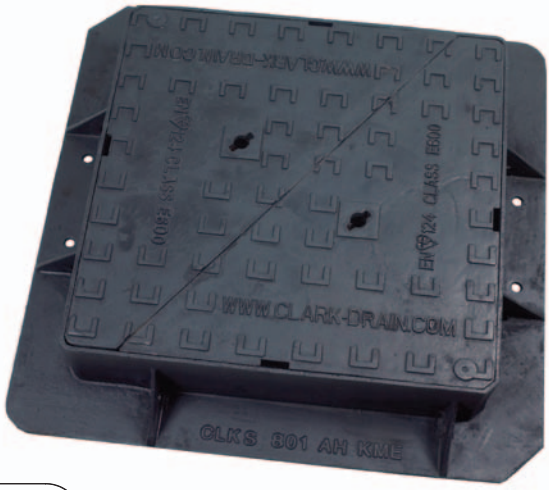
Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBF620	✓	600 x 600	629 x 629	906 x 906	150	145
SBF625	✓	675 x 675	700 x 700	952 x 952	150	172
SBF820	✓	750 x 750	775 x 775	1013 x 1013	150	200

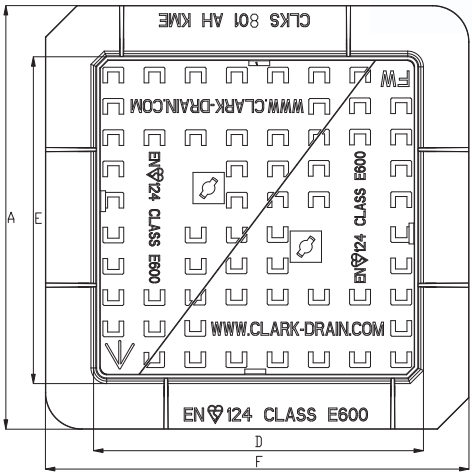
Optional Extras (add following suffix to Product Code): Locking: L | Epoxy Coating: E | GRP Plate: SP | Safety Grid: SG
All measurements are shown in mm unless otherwise stated

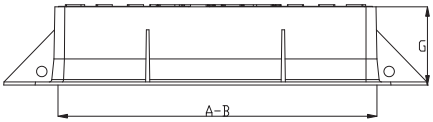
D/Tri Covers & Frames EN124 Class E600

EN124
E600
[60T]

- Ductile iron cover and frame
- BS EN 124 Class E600
- HA104/02 and HA 104/09 (low and high risk areas) compliant
- Closed keyways
- Black Bitumen Coated
- Non-Rock 3 Point Suspension
- Solid Flange







D/TRI COVERS AND FRAMES EN124 CLASS E600

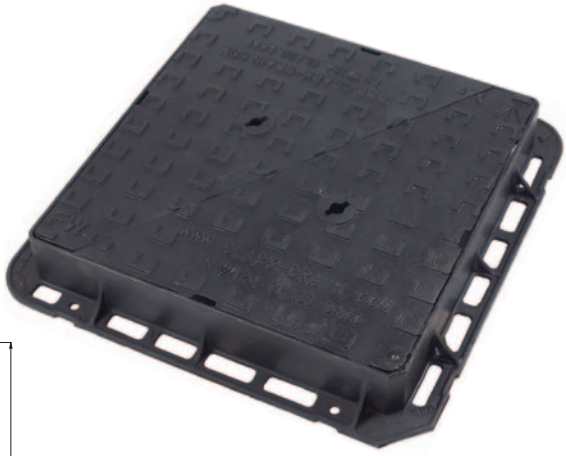
Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBE620	✓	600 x 600	620 x 620	813 x 813	150	102
SBE625	✓	675 x 675	695 x 695	875 x 875	150	110
SBE220	✓	1200 x 675	1221 x 696	1365 x 835	150	200

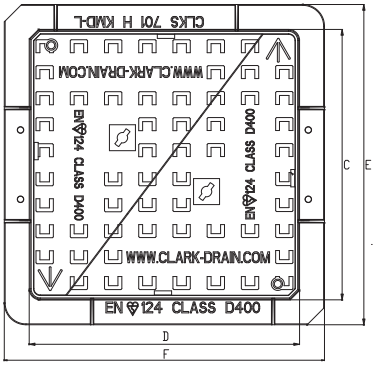
Optional Extras (add following suffix to Product Code): Locking: L | Epoxy Coating: E | GRP Plate: SP | Safety Grid: SG
All measurements are shown in mm unless otherwise stated

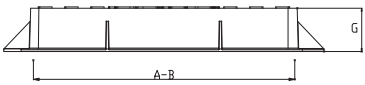
D/Tri Covers & Frames EN124 Class D400

EN124 D400 [40T]

- Ductile Iron Cover and Frame
- BS EN 124 Class D400
- Closed Keyways
- Black Bitumen Coated
- Non-Rock 3 Point Suspension







D/TRI DUCTILE COVERS & FRAMES EN124 CLASS D400

Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBD620H	✓	600 x 600	617 x 617	720 x 720	100	65
SBD620K	✓	600 x 600	617 x 617	750 x 750	150	78
SBD625H	✓	675 x 675	690 x 690	827 x 827	100	77
SBD625K	✓	675 x 675	690 x 690	835 x 835	150	88
SBD720H	✓	750 x 600	767 x 616	904 x 754	100	87
SBD820H	✓	750 x 750	766 x 766	904 x 904	100	110
SBD920H	✓	900 x 600	916 x 616	1054 x 754	100	110
SBD120H	✓	900 x 900	923 x 923	1050 x 1050	100	205

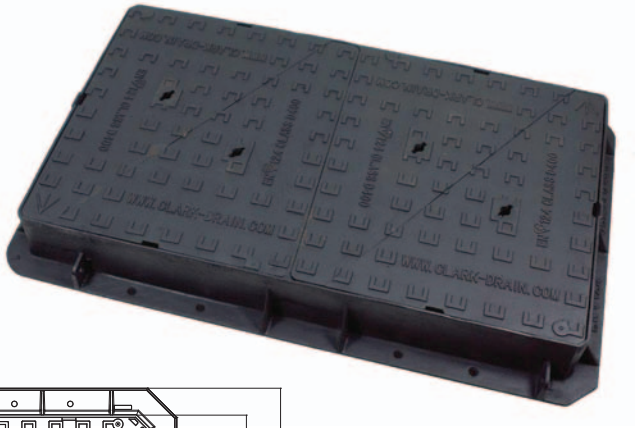
Circular Opening available upon request.

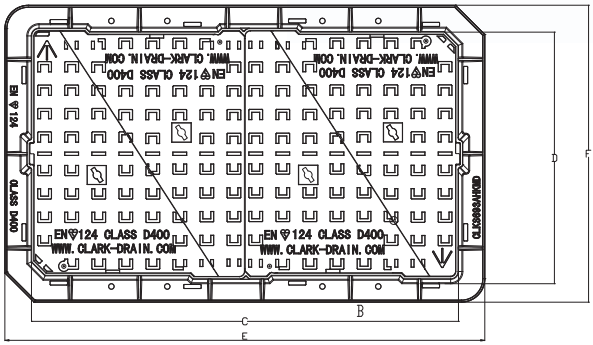
Optional Extras (add following suffix to Product Code): Locking: L | Epoxy Coating: E | GRP Plate: SP | Safety Grid: SG
All measurements are shown in mm unless otherwise stated

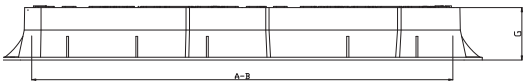
D/Tri Covers & Frames EN124 Class D400

EN124 D400 [40T]

- Ductile Iron Cover and Frame
- BS EN 124 Class D400
- Closed Keyways
- Black Bitumen Coated
- Non-Rock 3 Point Suspension







D/TRI DUCTILE COVERS & FRAMES EN124 CLASS D400

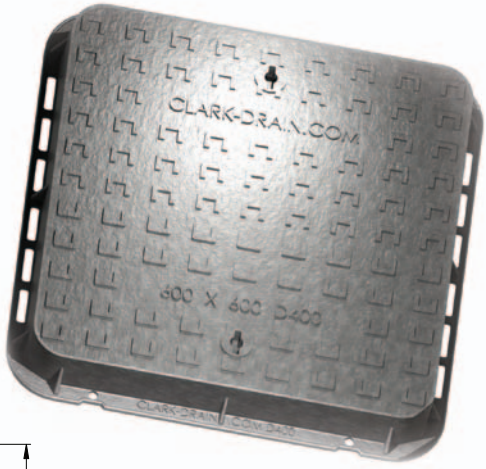
Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBD220H	✓	1220 x 675	1224 x 712	1345 x 820	100	154
SBD220K	✓	1220 x 675	1247 x 735	1374 x 850	150	176
SBD221K	✓	1800 x 675	1825 x 697	1940 x 820	150	265

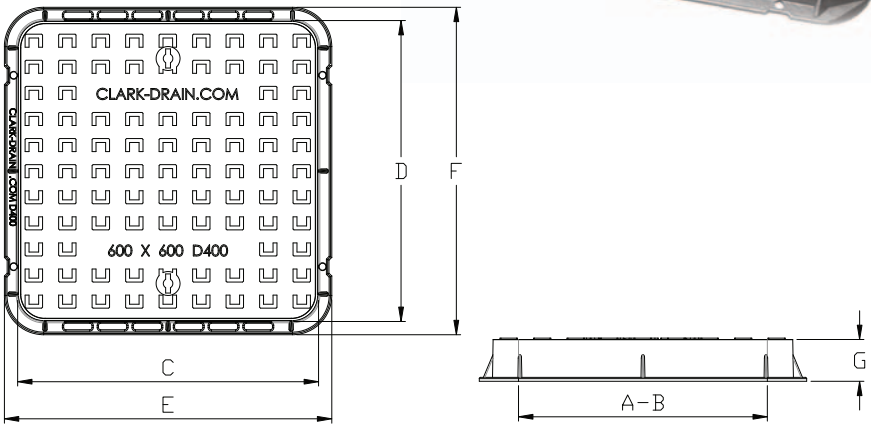
Optional Extras (add following suffix to Product Code): Locking: L | Epoxy Coating: E | GRP Plate: SP | Safety Grid: SG
All measurements are shown in mm unless otherwise stated

Solid Top Covers and Frames EN124 Class D400 (Double Seal)

EN124 D400 [40T]

- Ductile Iron
- BS EN 124 Class D400
- Sealed
- Closed Keyways
- Bitumen Coated
- All covers 2 Screw Locking as Standard





SOLID TOP COVERS & FRAMES EN124 CLASS D400 (DOUBLE SEAL)

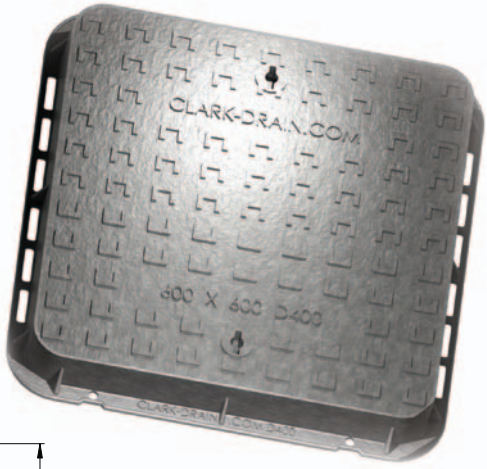
Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBD300H-DSL		300 x 300	390 x 390	455 x 455	100	42
SBD400H-DSL		450 x 450	530 x 530	605 x 605	100	64
SBD600H-DSL		600 x 600	690 x 690	755 x 755	100	83
SBD200H-DSL		800 x 800	890 x 890	955 x 955	100	101
SBD100H-DSL		900 x 900	990 x 990	1060 x 1060	100	130

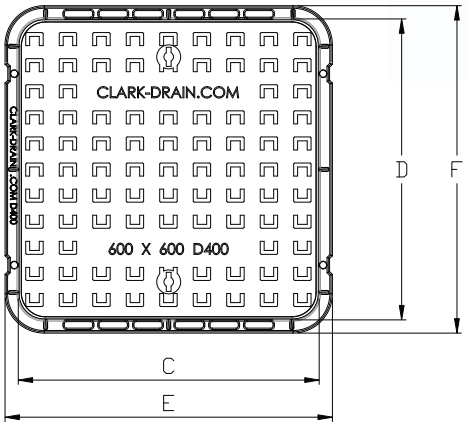
Optional Extras (add following suffix to Product Code): Locking: L | Epoxy Coating: E | GRP Plate: SP | Safety Grid: SG
All measurements are shown in mm unless otherwise stated

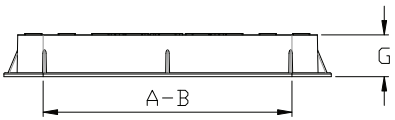
Solid Top Covers and Frames EN124 Class D400 (Single Seal)

EN124
D400
[40T]

- Ductile Iron
- BS EN 124 Class D400
- Sealed
- Closed Keyways
- Bitumen Coated
- All covers 2 Screw Locking as Standard







SOLID TOP COVERS & FRAMES EN124 CLASS D400 (SINGLE SEAL)

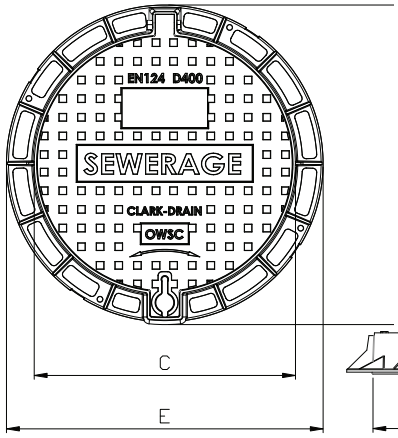
Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBD300H-SL		300 x 300	390 x 390	455 x 455	100	42
SBD400H-SL		450 x 450	530 x 530	605 x 605	100	64
SBD600H-SL		600 x 600	690 x 690	755 x 755	100	83
SBD200H-SL		800 x 800	890 x 890	955 x 955	100	101
SBD100H-SL		900 x 900	990 x 990	1060 x 1060	100	130

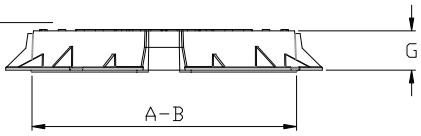
Optional Extras (add following suffix to Product Code): Locking: L | Epoxy Coating: E | GRP Plate: SP | Safety Grid: SG
All measurements are shown in mm unless otherwise stated

Solid Top Covers and Frames EN124 Class D400

EN124 D400 [40T]

- Ductile Iron Cover and Frame
- BS EN 124 Class D400
- Closed Keyways
- Black Bitumen Coated
- Non-Rock
- Sealing Gasket
- Skeleton Flange





GRP sealing plate options

SOLID TOP COVERS & FRAMES EN124 CLASS D400 (SEALED)

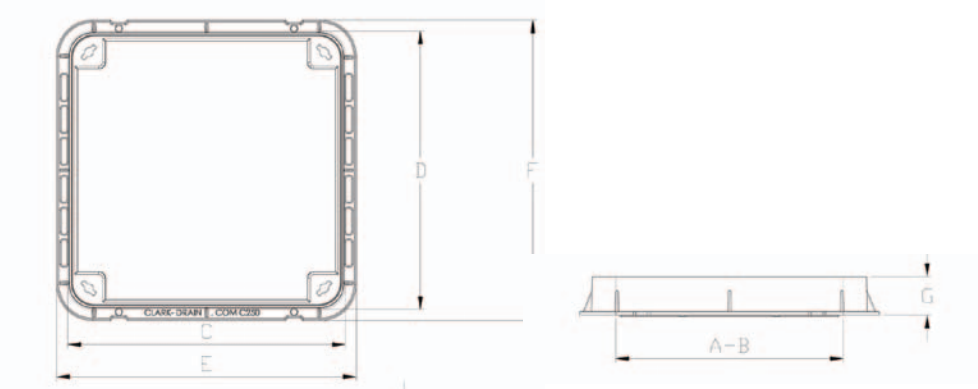
Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBD610H-SHDL	✓	600 Dia	610 Dia	820 Dia	100	60
SBD611H-SHDL		600 Dia	610 Dia	820 x 820	100	65
SBD615H-SHDL		675 Dia	690 Dia	900 Dia	100	80
SBD616H-SHDL		675 Dia	690 Dia	900 x 900	100	85

Optional Extras (add following suffix to Product Code): Locking: L | Epoxy Coating: E | GRP Plate: SP | Safety Grid: SG
All measurements are shown in mm unless otherwise stated

Recessed Covers & Frames EN124 Class D400

EN124
D400
[40T]

- Ductile Iron
- Double Seal Recess
- BS EN 124 Class D400
- 70mm Internal Recess
- Closed Keyways
- Bitumen Coated
- All covers 2 Screw Locking as Standard



RECESSED COVERS & FRAMES EN124 CLASS B125 (DOUBLE SEAL)

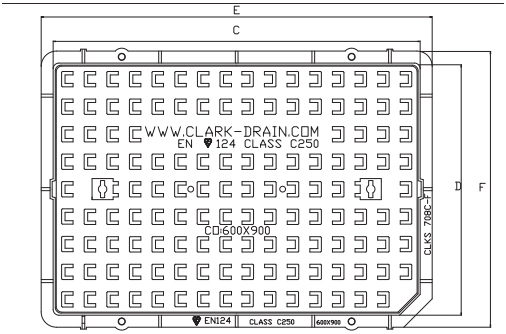
Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBB430H-DSL		450 x 450	530 x 530	605 x 605	100	64
SBB630H-DSL		600 x 600	690 x 690	755 x 755	100	83

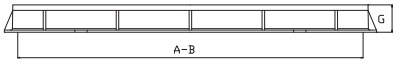
Optional Extras (add following suffix to Product Code): Locking: L | Epoxy Coating: E | GRP Plate: SP | Safety Grid: SG
All measurements are shown in mm unless otherwise stated

Solid Top Covers and Frames EN124 Class C250 (Double Seal)

EN124 C250 [25T]

- Ductile Iron Cover and Frame
- BS EN 124 Class C250
- Closed Keyways
- Black Bitumen Coated
- One piece Solid Top





SOLID TOP COVERS & FRAMES EN124 CLASS C250 (DOUBLE SEAL)

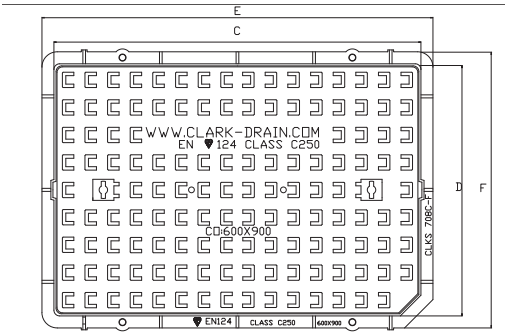
Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBD300H-DS		300 x 300	390 x 390	455 x 455	75	40
SBD400H-DS		450 x 450	530 x 530	605 x 605	75	62
SBD600H-DS		600 x 600	690 x 690	755 x 755	75	80
SBD200H-DS		900 x 600	890 x 890	955 x 955	75	100
SBD100H-DS		900 x 900	990 x 990	1060 x 1060	75	115

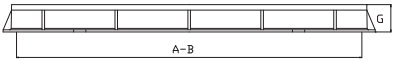
All measurements are shown in mm unless otherwise stated

Solid Top Covers and Frames EN124 Class C250 (Single Seal)

- Ductile Iron Cover and Frame
- BS EN 124 Class C250
- Closed Keyways
- Black Bitumen Coated
- One piece Solid Top

EN124 C250 [25T]





SOLID TOP COVERS & FRAMES EN124 CLASS C250 (SINGLE SEAL)

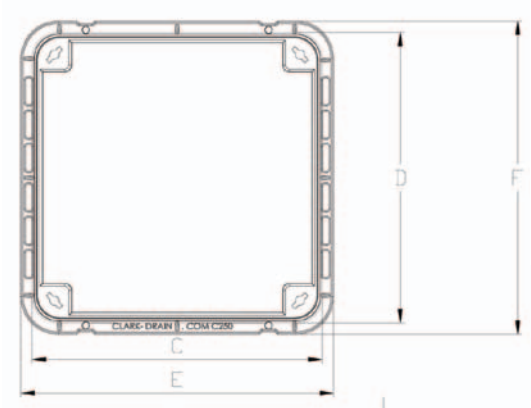
Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBC300H-S		300 x 300	390 x 390	455 x 455	75	40
SBC400H-S		450 x 450	530 x 530	605 x 605	75	62
SBC600H-S	✓	600 x 600	656 x 656	760 x 760	75	55
SBC700H-S	✓	750 x 600	808 x 634	872 x 722	75	67
SBC800H-S	✓	750 x 750	812 x 786	871 x 871	75	86
SBC900H-S	✓	900 x 600	958 x 657	1020 x 721	75	100
SBC100H-S	✓	900 x 900	958 x 958	1050 x 1050	75	120

All measurements are shown in mm unless otherwise stated

Recessed Covers & Frames EN124 Class C250

EN124
C250
[25T]

- Ductile Iron
- BS EN 124 Class C250
- 70mm Internal Recess
- Closed Keyways
- Bitumen Coated



RECESSED COVERS & FRAMES EN124 CLASS C250 (DOUBLE SEAL)

Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBC430H-DS		450 x 450	530 x 530	605 x 605	100	64
SBC630H-DS		600 x 600	690 x 690	755 x 755	100	74

RECESSED COVERS & FRAMES EN124 CLASS C250 (SINGLE SEAL)

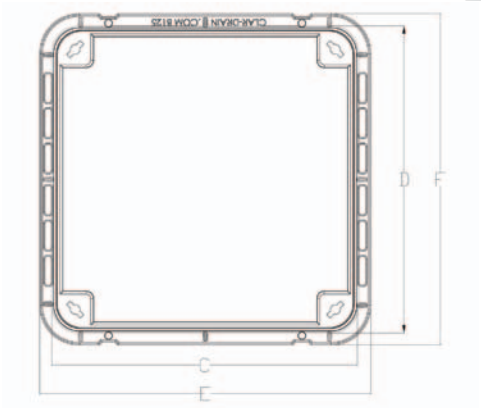
Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBC430H-S		450 x 450	530 x 530	605 x 605	100	64
SBC630H-S		600 x 600	690 x 690	755 x 755	100	74

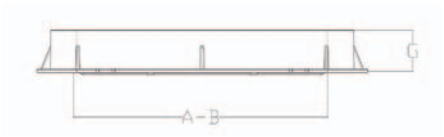
All measurements are shown in mm unless otherwise stated

Recessed Covers & Frames EN124 Class B125

EN124
B125
[12.5 T]

- Ductile Iron
- BS EN 124 Class B125
- 70mm Internal Recess
- Closed Keyways
- Bitumen Coated





RECESSED COVERS & FRAMES EN124 CLASS B125 (DOUBLE SEAL)

Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBB430H-DS		450 x 450	540 x 540	600 x 600	100	55
SBB630H-DS		600 x 600	690 x 690	750 x 750	100	74

RECESSED COVERS & FRAMES EN124 CLASS B125 (SINGLE SEAL)

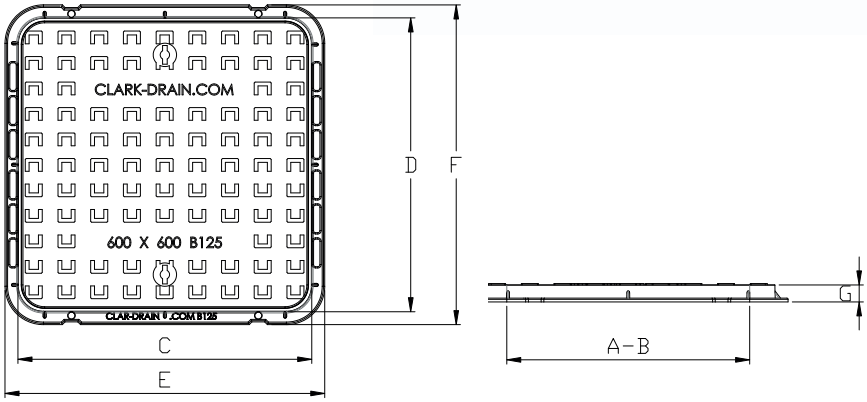
Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBD430H-S		450 x 450	540 x 540	600 x 600	100	54
SBD630H-DS		600 x 600	690 x 690	750 x 750	100	73

Optional Extras (add following suffix to Product Code): Locking: L | Epoxy Coating: E | GRP Plate: SP | Safety Grid: SG
All measurements are shown in mm unless otherwise stated

Solid Top Covers and Frames EN124 Class B125 (Double Seal)

EN124
B125
[12.5 T]

- Ductile Iron Cover and Frame
- BS EN 124 Class B125
- Closed Keyways
- Black Bitumen Coated
- One piece Solid Top



SOLID TOP COVERS & FRAMES EN124 CLASS B125 (DOUBLE SEAL)

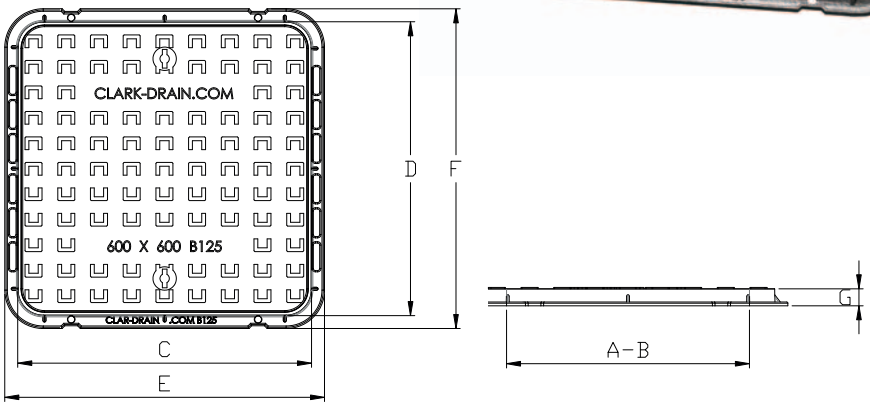
Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBB300H-DS		300 x 300	390 x 390	450 x 450	40	22
SBB400H-DS		450 x 450	540 x 540	600 x 600	40	31
SBB600H-DS		600 x 600	690 x 690	750 x 750	40	38
SBB100H-DS		900 x 900	990 x 990	1030 x 1030	40	190

Optional Extras (add following suffix to Product Code): Locking: L
All measurements are shown in mm unless otherwise stated

Solid Top Covers and Frames EN124 Class B125 (Single Seal)

EN124 B125 [12.5 T]

- Ductile Iron Cover and Frame
- BS EN 124 Class B125
- Closed Keyways
- Black Bitumen Coated
- One piece Solid Top



SOLID TOP COVERS & FRAMES EN124 CLASS B125 (SINGLE SEAL)

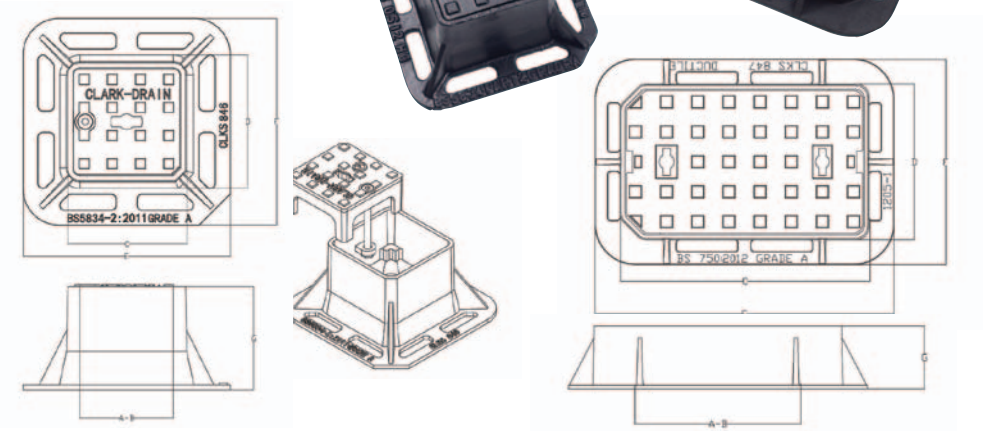
Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBB300B-S		300 x 300	390 x 390	450 x 450	40	18
SBB400B-S	✓	450 x 450	540 x 540	600 x 600	40	22
SB B610B	✓	600 Dia	652 Dia	680x680	40	53
SBB600B-S	✓	600 x 600	653 x 653	675 x 675	40	60
SBB700E-S	✓	750 x 600	790 x 640	850 x 700	40	124
SBB800E-S		750 x 750	800 x 800	850 x 850	75	130
SBB100B-S		900 x 900	950 x 950	1000 x 1000	40	180

Optional Extras (add following suffix to Product Code): Locking: L
All measurements are shown in mm unless otherwise stated

Surface Boxes

BS 5834 Part 2

- Ductile Iron Cover and Frame
- Manufactured to BS 5834 Part 2 and BS 750
- Black Bitumen Coated
- Double-Tri and Solid Top Covers
- Skeleton flange



D/TRI HEAVY DUTY DUCTILE IRON SURFACE BOX

Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBD012H-DT		100 x 100	116 x 116	200 x 200	100	5
SBD015H-DT		150 x 150	164 x 164	262 x 262	100	8
SBD022H-DT		225 x 225	240 x 240	323 x 323	100	14
SBD030H-DT		300 x 300	315 x 315	408 x 408	100	18
SBD038H-DT		380 x 230	395 x 245	490 x 340	100	21
SBD043H-DT		430 x 280	445 x 295	540 x 390	100	27

SOLID TOP HEAVY DUTY DUCTILE IRON SURFACE BOX

Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBD012H-ST		100 x 100	116 x 116	200 x 200	100	5
SBD015H-ST		150 x 150	164 x 164	262 x 262	100	8
SBD022H-ST		225 x 225	240 x 240	323 x 323	100	14
SBD030H-ST		300 x 300	315 x 315	408 x 408	100	16
SBD038H-ST		380 x 230	395 x 245	490 x 340	100	19
SBD043H-ST		430 x 280	445 x 295	540 x 390	100	24

Optional Extras (add following suffix to Product Code): Locking: L | Epoxy Coating: E
All measurements are shown in mm unless otherwise stated

Gully Gratings and Frames EN124 Class D400

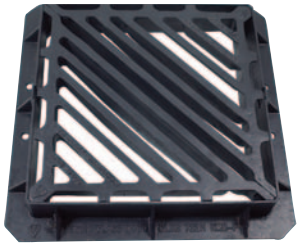
EN124 D400 [40T]

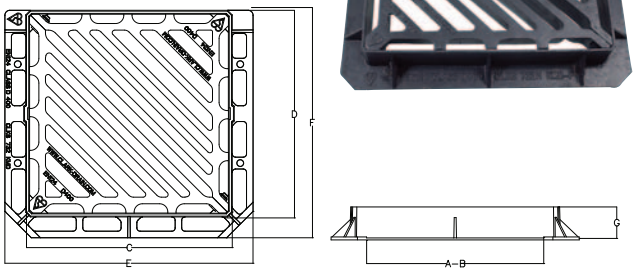
NON-ROCK HINGED

- Ductile Iron Gully Grating and Frame
- BS EN 124 Class D400
- Black Bitumen Coated
- Anti-Theft Captive Hinge
- Non-Rock Wedge Seating
- Solid flange on 3 sides

NON-ROCK 3 POINT SUSPENSION

- Ductile Iron Gully Grating and Frame
- BS EN 124 Class D400
- Black Bitumen Coated
- Solid flange on 3 sides





HINGED DUCTILE IRON GULLY GRATING & FRAME EN124 CLASS D400

Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)	Waterway Area
SBD440H	✓	430 x 370	445 x 384	570 x 459	100	36	994
SBD445H	✓	450 x 450	467 x 470	592 x 538	100	44	996

D/TRI DUCTILE IRON GULLY GRATING & FRAME EN124 CLASS D400

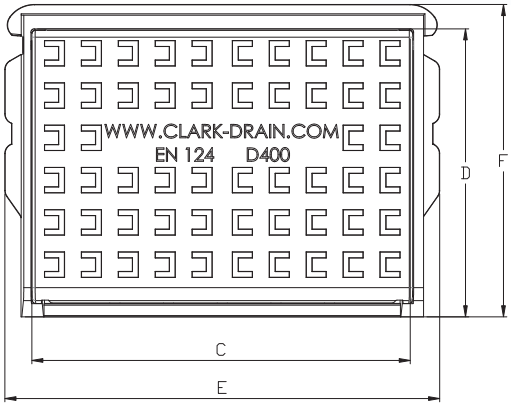
Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)	Waterway Area
SBD450H	✓	415 x 415	430 x 430	570 x 505	100	36	900
SBD450K	✓	415 x 415	430 x 430	570 x 510	150	42	900
SBD455H	✓	440 x 400	410 x 458	550 x 527	100	37	945
SBD650H	✓	600 x 600	615 x 615	750 x 690	100	70	2203
SBD655H*	✓	600 x 600	616 x 616	748 x 748	100	72	2203
SBD155H*		900 x 900	923 x 923	1050 x 1050	100	190	2400

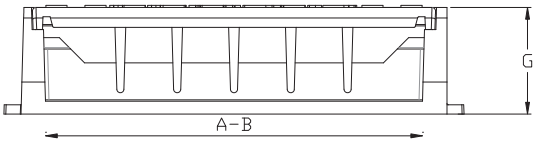
Optional Extras (add following suffix to Product Code): Locking: L | Epoxy Coating: E
All measurements are shown in mm unless otherwise stated
*4 Flanged

Kerb Gullies
EN124 Class D400

EN124
D400
[40T]

- Hinged Lid
- Ductile Iron
- BS EN 124 Class D400
- Road Retaining Bar
- Half Battered Kerb Profile





HINGED KERB GULLY C/W ROAD RETAINING BAR EN124 CLASS D400

Product Code	Kitemark	Clear Opening A/B	Over Top C/D	Overall E/F	Depth G	Approx Weight (Kg)
SBD010k		530 x 405	595 x 450	650 x 470	150	74

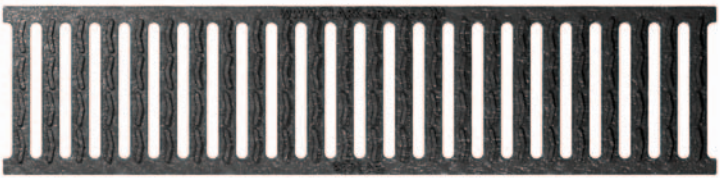
Optional Extras (add following suffix to Product Code): Locking: L | Epoxy Coating: E
All measurements are shown in mm unless otherwise stated

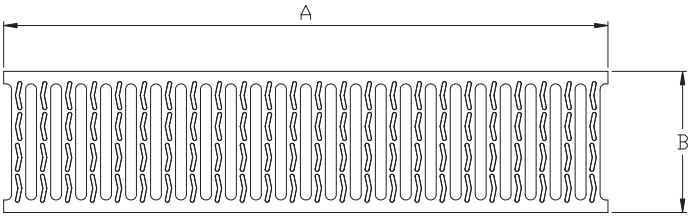
Channel Gratings

EN1433 D400 [40T]

EN1433 C250 [25T]

- Ductile Iron
- BS EN 1433 Class D400 & C250
- Bitumen Coated
- Large Water Intake Area
- Complete with Bearer Bars





CHANNEL GRATINGS EN1433 CLASS D400

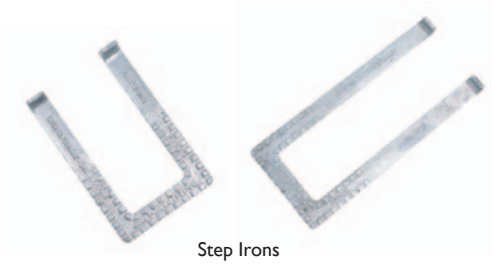
Product Code	Over Top A/B
SBD071	750 x 200
SBD072	750 x 250
SBD073	750 x 300
SBD074	750 x 450
SBD075	750 x 500
SBD076	750 x 600

CHANNEL GRATINGS EN1433 CLASS C250

Product Code	Over Top A/B
SBC071	750 x 200
SBC072	750 x 250
SBC073	750 x 300
SBC074	750 x 450
SBC075	750 x 500
SBC076	750 x 600

Optional Extras (add following suffix to Product Code): Epoxy Coating: E
All measurements are shown in mm unless otherwise stated

Miscellaneous Items



Step Irons

Lifting Keys

GRP Sealing Plates

Customer specific badging

STEP IRONS

Product Code	Description
SB001	115mm Tail Step Iron (240mm Overall Length)
SB002	230mm Tail Step Iron (350mm Overall Length)
SB003	Bolt On Step Iron

LIFTING KEYS

Product Code	Description
SB005	Lifting Keys to suit B125 Covers
SB006	Lifting Keys to suit C250 to F900 Covers

All measurements are shown in mm unless otherwise stated

Covers & Gratings Installation Procedure

The frame supporting structure will be as specified by the UK Manual of Contract Documents for Highway Works (MCHW) 1, 2 and 3, and the bedding surface will be consequentially set such that the use of packing materials within the bedding material is not necessary. The bedding depth will be within the limits permitted in MCHW and characteristics of the bedding material will be as specified in Chapter 6 of this document. The bedding material should be appropriate to suit site conditions.

It is necessary that operatives should be trained by an appropriate training body (to be agreed with the Overseeing Organisation) in the techniques necessary to achieve the standard required by a performance specification.

Mixing and Placing the Bedding Layer

Mechanical mixing of the materials is preferred, although manual mixing is permitted. The maximum quantity to be mixed by each method should not exceed 50 kg and 25 kg respectively. In cases where cementitious materials are used the manufacturer's recommended water content must be used.

The bedding material must be placed on the chamber immediately after mixing. It should be placed at a depth approximately 5mm greater than the required bedding thickness and spread across the full width of the chamber wall. Deep trowel marks in the bedding should be filled and the surface of the bedding floated to an approximately even finish.

Thermo-Setting Polymer Resin Materials

There are a number of issues which must be borne in mind when working with thermo-setting polymer resin materials:

- Care is required in their safe handling. Harmful vapours may be produced during mixing and the use of gloves, goggles and barrier creams is recommended by manufacturers. Some products are available in different grades to suit different temperature conditions in order to provide the necessary time of initial set, and such products should be selected accordingly.
- They remain at the same level of workability prior to setting, but the set is usually very rapid and early strengths develop quickly. Bedding of the frame must take place promptly after placement of the bedding material.
- They form a strong bond with contiguous materials, but the bond may be severely impaired if the surfaces are not kept clean and dry. Site conditions may dictate the need to take extra precautionary measures in keeping the surfaces clean and dry. Tools must be cleaned before the material sets. More importantly, frames which have been bedded on polyester resin which has set may not be separable from the resin. Removal of frames in such situations will also damage the frame supporting structure.
- Once set, the material becomes inert, and is not a toxic waste.
- Unmixed material must be mixed and disposed of with care according to Control of Substances Hazardous to Health Regulations (COSHH) Regulations, and strictly in accordance with the manufacturers' recommendations.

Placing of Frames and Covers

The frame should be lowered onto the bedding as soon as possible, preferably using a mechanical lifting device rather than by solely manual means, in accordance with Health and Safety requirements.

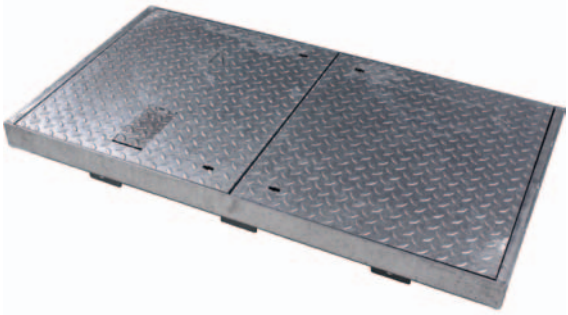
The frame must be placed on the bedding so that all webs of the frame are fully supported by the frame supporting structure. The webs must not overhang the internal faces of the frame supporting structure. There must be no voids in the bedding beneath the frame. Special care must be taken in the vicinity of the cover seatings.

The frame must be carefully tamped down to the required level and slope. This can be achieved to the Specification requirements by placing a straight edge over the frame webs and surrounding carriageway or other level control points as appropriate.

Engineered Steel Access Covers and Frames

Our fabrication facility employs the very latest in CNC and robotic manufacturing methods to ensure the lowest production costs and accurate workmanship.

Our products are assessed for behavioural characteristics when subject to their intended loading scenario. Employing the latest in FEA (Finite Element Analysis) and draughting software ensures both optimum design and accuracy.



For our full range of steel recess and solid top covers, please contact our sales office.

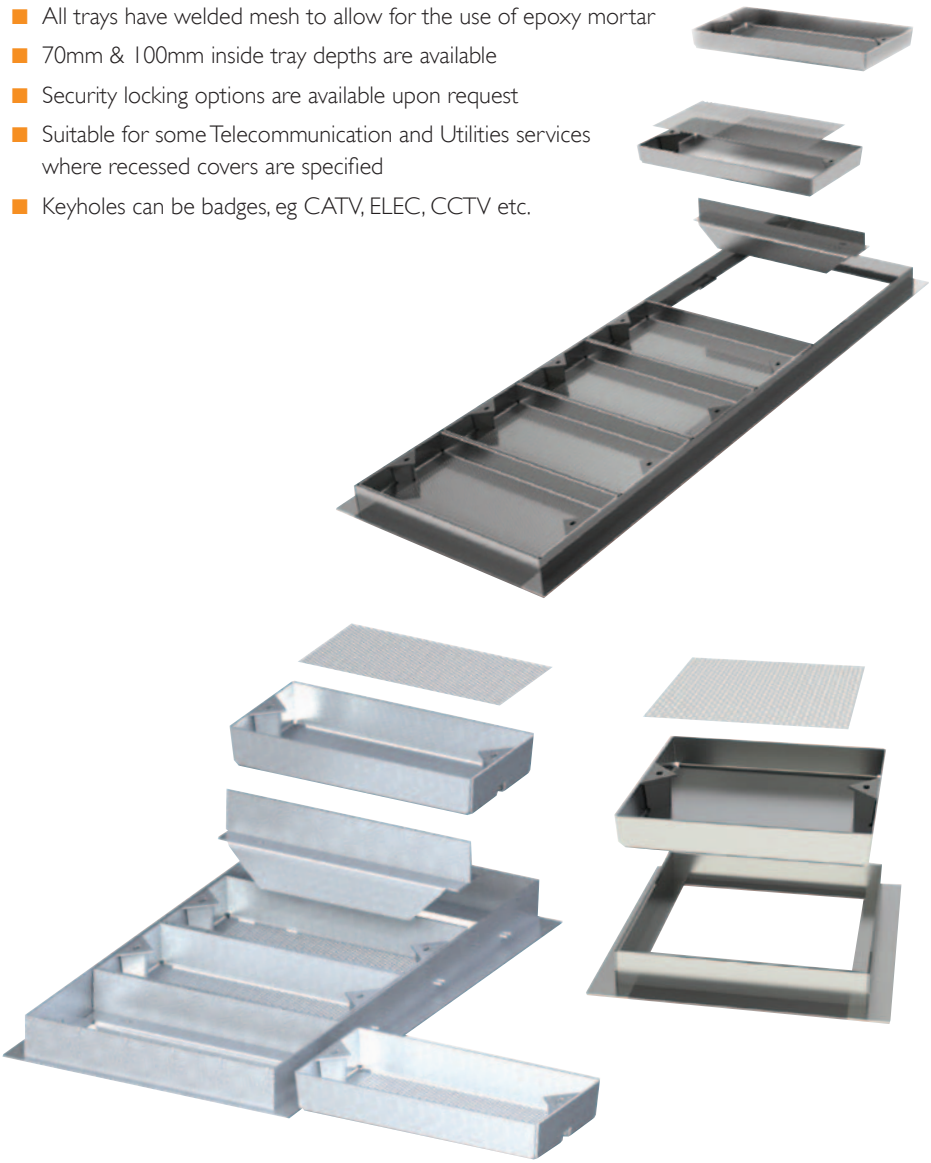
Facta Loadings

	COMPARISONS		GPW		WHEEL LOADS		LOAD TEST DATA		INSTALLATION GUIDE	
Class	EN 124 Class	BS 497 Approx Equiv. Class	GPW Slow Moving	GPW Fast Moving	Slow Moving	Fast Moving	Acceptance Test (static wheel load + overload & dynamic effects)	Strength Test (Acceptance Test load + untimate safety factor)	Installation Areas	Examples
A	A15	A	Pedestrian duty	-	0.5 tonne (5kN)	-	5x1x1 = 5kN	5x1.6 = 8kN	Areas which can only be used by pedestrians and pedal cyclists	Pedestrian areas Pedal cycle tracks Bridge footways
AA	-	-	5 tonne	-	1.5 tonne (15kN)	-	1.5x1.1x1.15 = 19kN	19x1.6 = 31kN	Areas permanently inaccessible to vehicles other than private cars	Car parking area, Car parking tracks Bridge footways
AAA	-	-	7.5 and 10 tonne	-	2.5 tonne (25kN)	-	25x1.1x1.15 = 32kN	32x1.6 = 52kN	Non carriageway locations and areas from which vehicles over the stated wheel loading or GLV weight are excluded	Restricted access roads Service/ Pedestrian areas
B	B125	B	16, 20, 25 and 38 tonne	-	5 tonne (50kN)	-	50x1.1x1.15 = 63.25kN	63.25x1.6 = 101kN	Footway locations and access areas where slow moving emergency public services and delivery vans have access and may park	Pedestrian precincts, Commercial delivery access Refuse collection access Forecourt areas Paved parking areas
C	C250	C	Special	Up to 38 tonne	6.5 tonne (65kN)	5 tonne (50kN)	65x1.1x1.15 or 50x1.1x1.15 = 82.25kN	82.25x1.6 = 132kN	Carriageways carrying all classes of (fast-moving) traffic but located within 0.5m of the kerb line and up to 0.2m into the footway	All carriageways, but restricted to the stated zones and wheel loading
D	D400	D	Special	Up to 38 tonne	11 tonne (108kN)	5 tonne (50kN)	108x1.1x1.15 or 50x1.1x1.15 = 137.5kN	137.5x1.6 = 220kN	Carriageways, hard shoulders and parking areas for all types of fast moving road vehicles	All carriageway locations - restricted only by wheel loading
E	E600	-	Special	Special	16 tonne (158kN)	-	158x1.1x1.15 = 200kN	200x1.6 = 320kN	Non-carriageway areas imposing high wheel loads	Docksides, Airports
F	F900	-	Special	Special	24 tonne (237kN)	-	237x1.1x1.15 = 300kN	300x1.6 = 480kN	Areas imposing particularly high wheel loads	Aircraft aprons

Recessed Covers

PRECINCT HEAVY DUTY RECESSED BLOCK PAVIOR

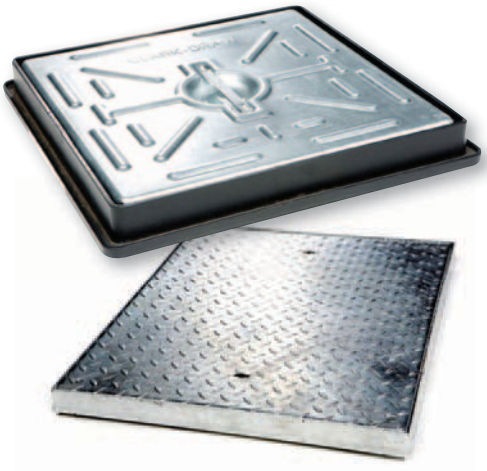
- Manufactured from 6mm Galvanised Mild Steel or Stainless Steel
- Multi trays have self supporting removable centre bar/bars
- All trays have welded mesh to allow for the use of epoxy mortar
- 70mm & 100mm inside tray depths are available
- Security locking options are available upon request
- Suitable for some Telecommunication and Utilities services where recessed covers are specified
- Keyholes can be badges, eg CATV, ELEC, CCTV etc.



Solid Top Covers

Our sales department must be notified if inspection covers ordered are to carry vehicles with non pneumatic tyres eg. forklifts, mobile cranes, short wheel trollies, aircraft or any other abnormal traffic.

Products with ratings to FACTA loading classes can be supplied on request. See page 21 for FACTA Guide.



5 TONNE GROSS VEHICLE WEIGHT LOADING

Product Code	Clear Opening	Overall Size	Overall Frame Size
SPC5BG	450 x 450	513 x 513	45
SPC6BG	600 x 450	663 x 513	45
SPC7BG	600 x 600	663 x 663	45
C9BG	750 x 600	810 x 660	50
C10BG	750 x 750	810 x 810	50
C11BG	900 x 600	960 x 660	50
C12BG	900 x 750	960 x 810	50
C13BG	900 x 900	960 x 960	50

10 TONNE GROSS VEHICLE WEIGHT LOADING

Product Code	Clear Opening	Overall Size	Overall Frame Size
SPC5CG	450 x 450	513 x 513	45
SPC6CG	600 x 450	663 x 513	45
SPC7CG	600 x 600	663 x 663	45

17 TONNE GROSS VEHICLE WEIGHT LOADING

Product Code	Clear Opening	Overall Size	Overall Frame Size
SPC2DG	300 x 300	363 x 363	45
SPC6DG	600 x 450	663 x 513	45
SPC7DG	600 x 600	663 x 663	45
C9DG	750 x 600	810 x 660	50
C10DG	750 x 750	810 x 810	50
C11DG	900 x 600	960 x 660	50

All measurements are shown in mm unless otherwise stated

For our full range please contact our sales office.

Shallow PPIC Chambers and Covers

Since the 1990s the majority of newly built houses in the UK have had 300mm dia plastic inspection chambers installed. Following extensive market research Clark-Drain developed the CLKS 300 series which enables the frame to be easily connected to the top of all shallow inspection chambers.

CLKS 300 SQUARE-TO-ROUND INSPECTION COVER

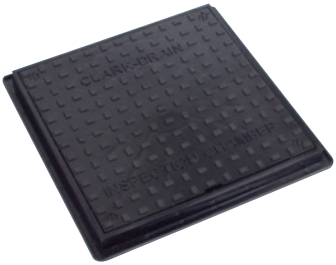
Tested to 35kN, suitable for domestic driveway loading. Suitable for all major manufacturer's PPIC chambers. Light and easy to install, ideal for tarmac, grass and gravel. Unique slip resistant surface tread pattern. Four locking screws on top.

CD U355 RISER

350mm dia riser c/w sealing ring effective height 300mm with an overall height of 340mm. Grooves on the riser enable easier cutting if needed.

CD U353 BASE

Chamber base c/w 3 bungs and 3 blanking plates. 1, 2 or 3 flows can be stopped by using the bungs and the blanking plates. The blanking plates reduce waste being deposited in the unused inlet(s). 350mm overall depth. 110mm inlets/outlets.



CD 300SR SQUARE-TO-ROUND RECESSED COVER AND FRAME

FEATURES

- Circular opening in frame fits all major manufacturer's PPIC shallow inspection chambers (Multi fit 220-300 Chambers)
- More accessible (fits directly on the chamber)
- Corrosion resistant
- Aesthetically pleasing
- Driveway loading 35kN
- Integral lifting keys
- Polypropylene cover and frame
- Quick and easy to install
- The tray can be rotated to match direction of paving
- Eliminates the need to cut the paving around a circular opening
- Made from recycled material
- 80mm internal tray depth
- Overall dimension 438 x 438mm

FITS ALL MAJOR SHALLOW INSPECTION CHAMBERS 220-300MM

INTEGRATED HANDLE

For our full range of underground fittings, please contact our sales office.

450mm Diameter PPIC Chambers and Covers

SAFETY FIRST AND FOREMOST

Part H of the 2002 Building Regulations in the UK states that small lightweight access covers have to be secured (for example with screws) to deter unauthorised access.

CLKS 452 CIRCULAR POLYPROPYLENE COVER AND FRAME

Tested to 35kN, suitable for domestic driveway loading. Dual locking (the lid locks to the frame and the frame locks to the chamber). Suitable for all major manufacturer's PPIC chambers. Light and easy to install, ideal for tarmac, grass and gravel. Unique slip resistant surface tread pattern.

CLKS 499 REDUCER

If you have an inspection chamber deeper than 1.2m the regulations call for the clear opening to be reduced to 350mm. Our solution is the CLKS 499 reducer.

CD U455 RISER

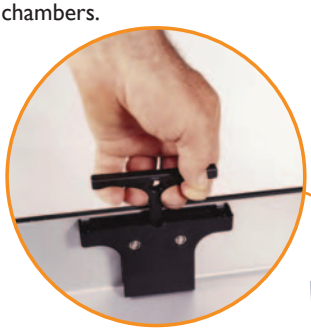
450mm dia riser c/w sealing ring effective height 300mm with an overall height of 340mm. Grooves on the riser enable easier cutting if needed.

CD U453 BASE

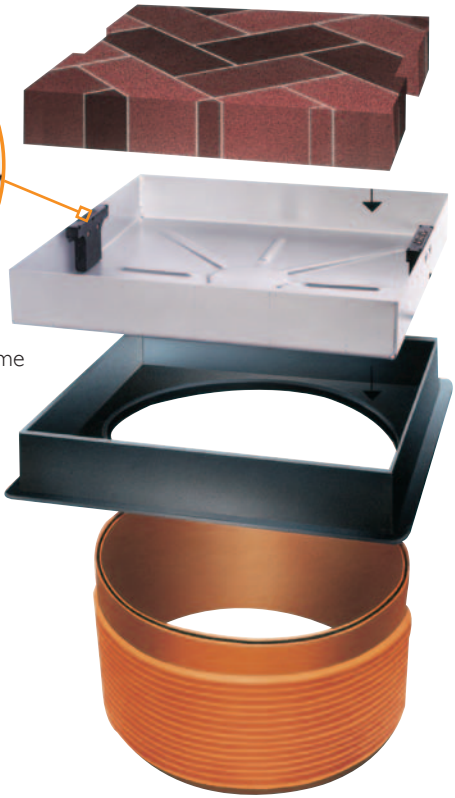
Chambers base c/w 3 bungs and 3 blanking plates. 1, 2 or 3 flows can be stopped by using the bungs and the blanking plates. The blanking plates reduce waste being deposited in the unused inlet(s). 5 x 110mm inlets/outlets. 30mm height.

CLKS 450SR – SQUARE TO-ROUND RECESSED COVER AND FRAME

The frame of our CLKS 450SR can be easily connected to the top of all major manufacturer's 450 PPIC inspection chambers. To be used where new block paving is being installed over areas with PPIC inspection chambers.



INTEGRATED HANDLE



FEATURES

- Driveway Loading
- Integral lifting keys
- Galvanised tray can be rotated to fit within the frame
- Galvanised to BS EN 1461
- Quick and easy to install
- Cover can be turned to match direction of paving
- Eliminates the need to cut paving around a circular opening
- Aesthetically pleasing
- Designed to fit a 450 PPIC chamber
- 80mm internal tray depth
- Overall size 580 x 580mm
- 10T GVW loading

MARSHALLS' APPROVED

Marshalls
Creating Better Landscapes

450mm Diameter PPIC Covers

CLKS 1657

- 15kN loading
- Cast Iron Cover and Frame
- Close Keyways
- Black Bitumen Coated
- One Piece Solid Top

CLKS 452

- Circular polypropylene cover and frame.
- Tested to 35kN
- Suitable for domestic driveway loading
- Dual locking (the lid locks to the frame and the frame locks to the chamber)
- Suitable for all major manufacturer's PPIC chambers
- Light and easy to install, ideal for tarmac, grass and gravel
- Unique slip resistant surface tread pattern

CLKS 1657 KMB

- Class B125
- Ductile Iron Cover and Frame
- Closed Keyways
- Black Bitumen Coated
- One Piece Solid Top
- Kitemark certified

Underground Fixtures and Fittings

THE CD U1150 – UNIVERSAL BOTTLE GULLY

Bottle Gullies are designed to hold water to prevent unwanted odours from escaping the drainage system and are used in conjunction with domestic waste water or surface water systems.

The CD U1150 polypropylene Bottle Gully comes complete with a rectangular top section for ease of installation which is also removable to allow 160mm diameter pipe to be inserted to raise the top of the gully to suit whatever depth is required.

The CD U1150 also comes with a sealed inlet (with bung) and outlet to allow it to be used as a standard Bottle Gully or a back inlet gully. The top section fits into the sealed base unit by way of the push fit connection, allowing full rotation to suit surrounding area or paving direction.

For ease of installation, the grating has cutting guidelines to follow when making downpipe entries.

CDU 1150

FEATURES

- Rectangular top for ease of installation
- Dual purpose inlet and outlet to allow products to be used as back inlet as well as standard
- Ability to turn top to suit surface conditions and paving
- Adjustable height option
- Cutting guidelines in grating for downpipes
- Sealed, push fit connections

For our full range of underground fittings please contact our sales office

Linear Drainage

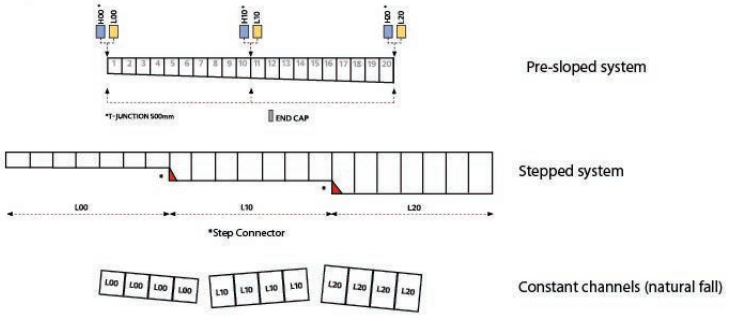
We have a wide range of polymer concrete and polypropylene linear drainage systems to suit applications as diverse as domestic patios, motorways and lorry parks.

The channels collect surface water along the length of the system, depositing it into the underground system as appropriate.

Linear systems are more efficient because:

- Less buried pipes
- Water transfer improved
- Simpler layout
- Quicker, easier and cheaper to install
- Easy to maintain
- Risk of ponding is reduced
- Bespoke linear drainage products available on request, such as Stainless Steel Block slot/solid top/duct runs, etc

TYPES OF SLOPE OPTIONS



Pre-sloped system

Stepped system

Constant channels (natural fall)

LOAD CLASS DESCRIPTIONS

Class	Load	Usage
Class A	Up to 15kN	Redestrian and cycleways, domestic garage thresholds
Class B	Up to 125kN	Pedestrian precincts, light vehicles, private car parks and drives
Class C	Up to 250kN	Parkside areas, service stations (cars), car parks
Class D	Up to 400kN	Cross drainage of roads and motorways
Class E	Up to 600kN	Industrial areas, heavy wheel loads, slow-moving HGVs and service stations
Class F	Up to 900kN	Airport runways, heavy industrial installations, forklifts, service yards and lorry parks

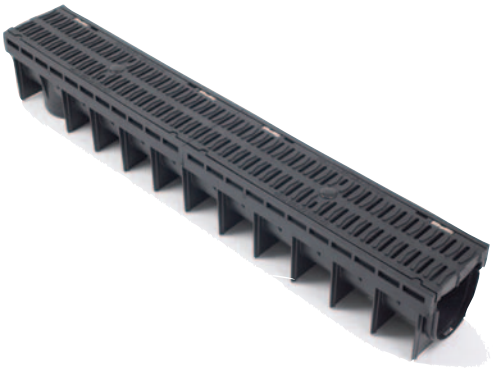
Polypropylene Channel

The CLKS 400 Series drainage system incorporates many unique features. The channel is supplied with male/female sliding connections with additional SpringLock incorporated and a SnapLock grating. These aid the installation, so several lengths can be laid at one time.

CD 436 – CLASS C250

APPLICATIONS:

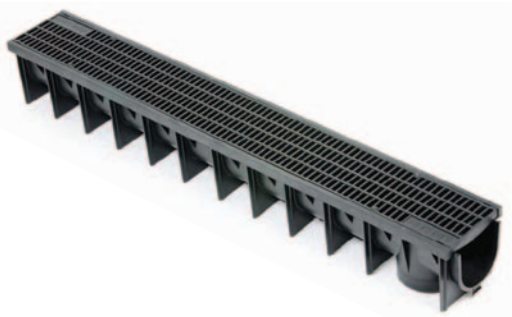
- Building entrance, car parks, pedestrian precincts, schools, colleges and universities, private housing estates, shared driveways, communal parking areas, railway platforms



CLKS 422 – CLASS A15

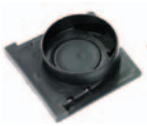
APPLICATIONS:

- Perfect for garage thresholds, patios, gardens and play areas



END CAPS / DEBRIS TRAP

- Male and Female end cap/end cap outlet



End Cap

Debris trap

DIMENSIONS:

Product Code	Length	Internal Width	External Width	Internal Height	External Height	Grate Slot Size
CD 436	1000	100	147	110	160	6 x 40
CLKS 422	1000	100	142	85	135	8 x 24
CLMS 425	1000	100	142	85	135	6 x 76

All measurements are shown in mm unless otherwise stated

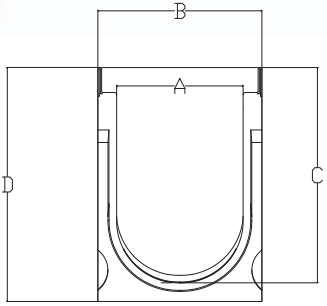
Stainless Steel Edged Channels EN1433 Class A15-D400

APPLICATIONS:

- Building entrances
- Pedestrian precincts
- Slow moving, light commercial vehicles
- Internal drainage
- Food factories
- Kitchens
- Shopping arcades

SPECIFICATION:

- Material: Polymer Concrete
- Resistance to compression: 90MPa
- Resistance to bending: 22MPa
- Resistance to heat: 70°c (resin HDT)



STAINESS STEEL EDGED (CD SSE SERIES)

Product Code	Internal Width A	External Width B	Internal Height C	External Height D	Area (cm^2)	Max. Though Flow (l/s)	Plain End Cap	Outlet End Cap
CD SSE10.L00	100	130	112	127	70.5	7	CD SSE10.E20	CD SSE10.OU00
CD SSE10.L10	100	130	172	187	128	17	CD SSE10.E20	CD SSE10.OU10
CD SSE10.L20	100	130	232	247	185	29.7	CD SSE10.E20	CD SSE10.OU20
CD SSE15.L00	150	190	190	225	241	14.5	CD SSE15.E20	CD SSE15.OU00
CD SSE15.L10	150	190	240	275	313	24	CD SSE15.E20	CD SSE15.OU10
CD SSE15.L20	150	190	290	325	384	39	CD SSE15.E20	CD SSE15.OU20
CD SSE20.L00	200	240	260	295	449	32.3	CD SSE20.E20	CD SSE20.OU00
CD SSE20.L10	200	240	310	345	545	48.3	CD SSE20.E20	CD SSE20.OU10
CD SSE20.L20	200	240	360	395	640	66.3	CD SSE20.E20	CD SSE20.OU20
CD SSE30.L00	300	340	370	415	968	83.5	CD SSE30.E20	CD SSE30.OU00
CD SSE30.L10	300	340	420	465	1112	112.8	CD SSE30.E20	CD SSE30.OU10
CD SSE30.L20	300	340	470	515	1255	143	CD SSE30.E20	CD SSE30.OU20

All measurements are shown in mm unless otherwise stated

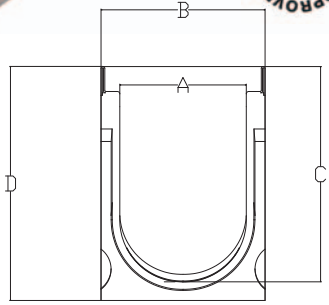
Galvanised Steel Edged Channels EN1433 Class A15-D400

APPLICATIONS:

- Building entrances
- Service stations
- Car parks
- Pedestrian precincts
- Kerbside drainage
- Slow moving, light commercial vehicles
- Slow moving, HGVs and forklifts (not turning)

SPECIFICATION:

- Material: Polymer Concrete
- Resistance to compression: 90MPa
- Resistance to bending: 22MPa
- Resistance to heat: 70°c (resin HDT)



GALVANISED STEEL EDGED (CD SE SERIES)

Product Code	Internal Width A	External Width B	Internal Height C	External Height D	Area (cm^2)	Max. Though Flow (l/s)	Plain End Cap	Outlet End Cap
CD SE10.L00	100	130	112	127	70.5	7	CD SE10.E20	CD SE10.OU00
CD SE10.L10	100	130	172	187	128	17	CD SE10.E20	CD SE10.OU10
CD SE10.L20	100	130	232	247	185	29.7	CD SE10.E20	CD SE10.OU20
CD SE15.L00	150	190	190	225	241	14.5	CD SE15.E20	CD SE15.OU00
CD SE15.L10	150	190	240	275	313	24	CD SE15.E20	CD SE15.OU10
CD SE15.L20	150	190	290	325	384	39	CD SE15.E20	CD SE15.OU20
CD SE20.L00	200	240	260	295	449	32.3	CD SE20.E20	CD SE20.OU00
CD SE20.L10	200	240	310	345	545	48.3	CD SE20.E20	CD SE20.OU10
CD SE20.L20	200	240	360	395	640	66.3	CD SE20.E20	CD SE20.OU20
CD SE30.L00	300	340	370	415	968	83.5	CD SE30.E20	CD SE30.OU00
CD SE30.L10	300	340	420	465	1112	112.8	CD SE30.E20	CD SE30.OU10
CD SE30.L20	300	340	470	515	1255	143	CD SE30.E20	CD SE30.OU20

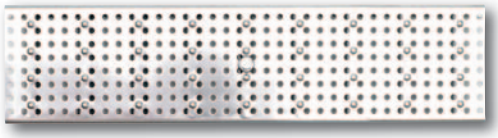
All measurements are shown in mm unless otherwise stated

100 Series Grating Options EN1433 Class C250

Narrow Slot Ductile

Stainless/Galvanised Slotted

Standard Slot Ductile



Stainless Perforated

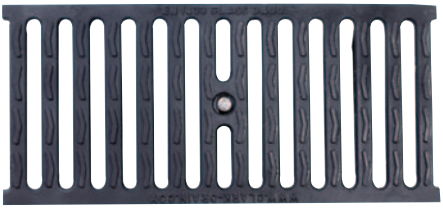
NRP Narrow Slot

100MM INTERNAL WIDTH CHANNELS

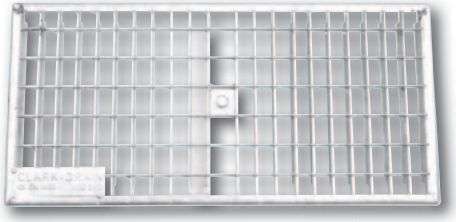
Product Code	Material	Description	EN-1433 Class	Slot Size	Overall Width	Length
CD CO10.09	Stainless Steel	Slotted	C250	9.5 x 80	122	1000
CD CO10.17	Stainless Steel	Mesh	C250	30 x 10	122	1000
CD CO10.52	Stainless Steel	Perforated	C250	6mm dia	122	1000
CD CO10.03	Galvanised Steel	Slotted	C250	9.5 x 80	122	1000
CD CO10.17	Galvanised Steel	Mesh	C250	30 x 10	122	1000
CD CO10.20	Ductile Iron	Slotted	C250	18 x 102	122	500
CD CO10.26	Ductile Iron	Narrow Slotted	C250	6 x 94	122	500
CD CO10.36	Nylon Reinforced	Narrow Slotted	C250	6 x 94	122	500

All measurements are shown in mm unless otherwise stated

150/200/300 Series Grating Options EN1433 Class C250-D400



Ductile Slotted



Steel Mesh

150MM INTERNAL WIDTH CHANNELS

Product Code	Material	Description	EN-1433 Class	Slot Size	Overall Width	Length
CD C015.17	Stainless Steel	Mesh	C250	20 x 30	180	1000
CD C015.13	Galvanised Steel	Mesh	C250	20 x 30	180	1000
CD C015.21	Ductile Iron	Slotted	D400	18 x 136	180	500
CD C015.27	Ductile Iron	Narrow Slotted	D400	6 x 136	180	500

200MM INTERNAL WIDTH CHANNELS

Product Code	Material	Description	EN-1433 Class	Slot Size	Overall Width	Length
CD C020.17	Stainless Steel	Mesh	C250	20 x 30	230	1000
CD C020.13	Galvanised Steel	Mesh	C250	20 x 30	230	1000
CD C020.21	Ductile Iron	Slotted	D400	6 x 180	230	500

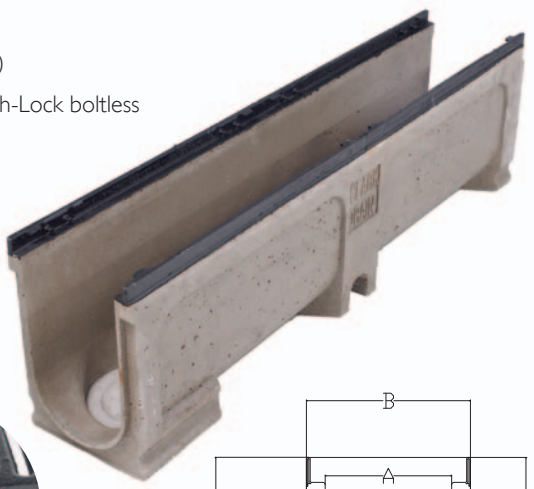
300MM INTERNAL WIDTH CHANNELS

Product Code	Material	Description	EN-1433 Class	Slot Size	Overall Width	Length
CD C030.17	Stainless Steel	Mesh	C250	20 x 30	330	1000
CD C030.13	Galvanised Steel	Mesh	C250	20 x 30	330	1000
CD C030.21	Ductile Iron	Slotted	D400	18 x 297	330	500

All measurements are shown in mm unless otherwise stated

Ductile Iron Edged Channels EN1433 Class F900

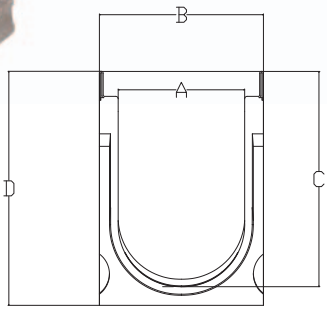
- Ductile Iron Edged Channels (Class F900)
- Channel and Grating complete with Catch-Lock boltless locking mechanism



APPLICATIONS:

- Heavy wheel load areas such as HGVs, Forklifts, Military plant, etc
- Airports, loading bays, industrial areas, service stations, service yards, lorry parks

Catch lock clip



CHANNEL SPECIFICATION

Product Code	Internal Width A	External Width B	Internal Height C	External Height D	Area (cm^2)	Max. Though Flow (l/s)	Plain End Cap	Outlet End Cap
CE10.L00	100	142	112	127	70.5	7	CD SE10.E20	CD SE10.OU00
CE10.L10	100	142	172	187	128	17	CD SE10.E20	CD SE10.OU10
CE10.L20	100	142	232	247	185	29.7	CD SE10.E20	CD SE10.OU20
CE15.L00	150	192	190	225	241	14.5	CD SE15.E20	CD SE15.OU00
CE15.L10	150	192	240	275	313	24	CD SE15.E20	CD SE15.OU10
CE15.L20	150	192	290	325	384	39	CD SE15.E20	CD SE15.OU20
CE20.L00	200	242	260	295	449	32.3	CD SE20.E20	CD SE20.OU00
CE20.L10	200	242	310	345	545	48.3	CD SE20.E20	CD SE20.OU10
CE20.L20	200	242	360	395	640	66.3	CD SE20.E20	CD SE20.OU20
CE30.L00	300	342	370	415	968	83.5	CD SE30.E20	CD SE30.OU00
CE30.L10	300	342	420	465	1112	112.8	CD SE30.E20	CD SE30.OU10
CE30.L20	300	342	470	515	1255	143	CD SE30.E20	CD SE30.OU20

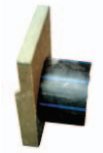
All measurements are shown in mm unless otherwise stated

Ductile Iron Gratings EN1433 Class F900

Product Code	Material	Description	EN1433 Class	Slot Size	Overall Width (cm^2)	Length
CE10.63	Ductile Iron	Slotted	F900	13 x 97	125	500
CE15.63	Ductile Iron	Slotted	F900	13 x 140	175	500
CE20.63	Ductile Iron	Slotted	F900	13 x 180	225	500
CE30.63	Ductile Iron	Slotted	F900	17 x 276	325	500

Gullies and End Caps

We offer a range of gully assembles to fit channel widths 150/200/300mm. They are available with either galvanised steel/stainless steel or ductile iron edge. They all come complete with both 110mm dia and 160mm dia knockouts in the base unit to enable connection to pipe. Each gully comes complete with a mud basket.



Outlet End Cap

Plain End Cap

Product Code	Internal Width	Material
CDSSE15.SG	150mm	Stainless Steel Edged to suit CDSSE15 Series Channels
CDSE15.SG	150mm	Galvanised Steel Edged to suit CDSE15 Series Channels
CDCE15.SG	150mm	Ductile Iron Edged to suit CDCE15 Series Channels
CDSSE20.SG	200mm	Stainless Steel Edged to suit CDSSE20 Series Channels
CDSE20.SG	200mm	Galvanised Steel Edged to suit CDSE20 Series Channels
CDCE20.SG	200mm	Ductile Iron Edged to suit CDCE20 Series Channels
CDSSE30.SG	300mm	Stainless Steel Edged to suit CDSSE30 Series Channels
CDSE30.SG	300mm	Galvanised Steel Edged to suit CDSE30 Series Channels
CDCE30.SG	300mm	Ductile Iron Edged to suit CDCE30 Series Channels

All measurements are shown in mm unless otherwise stated

Linear Drainage Installation Procedures

1 It is always recommended that you start at the discharge/outlet end of the run.

2 Dig a trench for the channel installation with dimensions dependent on the width and height of the channel and the load class required (as shown in table).

3 Locate outlet channel, Silt-Box or Gully dependent on which is to be used, pour bedding concrete and position to proper level and alignment.

4 Install pipe connections and back fill to required level with concrete.

5 If using pre-sloped channels it is always recommended that the channels are laid out at the side of the trench in numerical order prior to laying.

6 When using constant channel and pre-sloped the constant channel always comes above the sloped channel with the same number (ie. No.10 > L10 > No 11).

7 On the bottom of the trench place a bed of concrete. (Thickness and quality will be dependent on load class required as per Fig A.)

8 Lay the channels beginning with deepest first and in numerical order counting down.

9 Fit the channels together by sliding them from top to bottom ensuring no concrete gets in between the joint. Adjust channels for alignment as you go.

10 To complete the run place the closing end cap and seal to the channel.

11 Once the run is complete and end cap in place the final surround of concrete can be poured. The concrete surround must be finished between 2–3mm above the grating surface. It is important that the channels are protected against any kind of lateral forces and/or pressures during and after installation and it is therefore recommended that the gratings or pieces of wood are placed in the channels prior to pouring concrete.

12 Once the concrete surround has set, the gratings can then be installed ensuring all fixings are securely fastened.

Class		a	b	Surrounding concrete
Class A	1 5 kN	>8 cm	>8 cm	15 N/mm^2
Class B	12 5 kN	>10 cm	>10 cm	25 N/mm^2
Class C	250kN	>15 cm	>15 cm	25 N/mm^2
Class D	400kN	>20 cm	>20 cm	25 N/mm^2
Class E	600kN	>20 cm	>20 cm	25 N/mm^2
Class F	900kN	>25 cm	>25 cm	25 N/mm^2

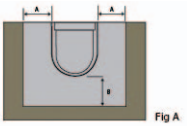


Fig A

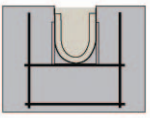


Fig B

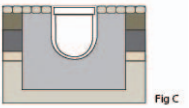


Fig C

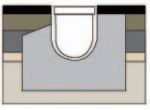


Fig D

For F900 class installation, you may want to put a wire netting in the concrete to avoid any cracking due to longitudinal sagging. Using such netting allows to add transverse reinforcing rods to sustain the channel's weight when pouring concrete (as Fig B).

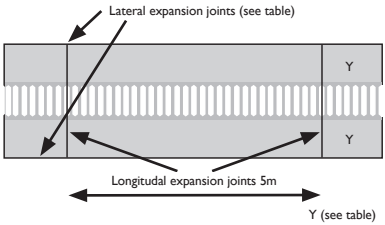
- **Block Paving:** Paving stones must be 2 – 3mm higher than the upper edge of the channel. In case of paving stones the first 3 rows of blocks adjacent to the channels must be bedded in concrete. (as Fig C)
- **Bitumen:** The final coating should be flush with the upper edge of the channel or, even better, should be 2 – 3mm higher than the upper edge of the channel. (as Fig D)

LATERAL AND LONGITUDINAL EXPANSION JOINTS

Longitudinal expansion joints have to be placed approximately every 5 metres and at any junctions. These joints have to be continued into the concrete case (bedding).

A lateral expansion joint should be placed between each face of the concrete case and the bitumen or concrete paving. These expansion joints are there to absorb thermic expansions and therefore prevent any crushing or destruction of the channel lines (as shown).

All Clark-Drain channels can be easily accessed for rodding or flushing to maintain their efficiency.



LINEAR DRAINAGE CARE AND MAINTENANCE

FREQUENCY OF INSPECTION

It is not possible to state the frequency of inspections, as it will vary upon the location and environment in which the channel is situated. In general the frequency of inspection should be based upon local knowledge. Inspections should pay particular regard to the condition of the following:

- Gratings or covers where fitted Locking for gratings or covers
- Sump/gully outlet Concrete surround (where exposed at surface)
- Pavement condition adjacent to the channel

MAINTENANCE

Channels may be rodded or cleaned with shovels (generally in a direction away from outlet to avoid contaminating the underground connections)

- Ensure gratings (or covers) are relocked into position on completion of maintenance operation. Damaged gratings (or covers) should be replaced.
- The locking system (whether removed for cleaning or otherwise) should always be checked for security.
- Replace any damaged bolts or locking bars.
- Remove sump/gully sediment buckets and clean out. Replace bucket before cleaning channel and re-empty following cleaning of the channel if necessary. Flush sump/gully to ensure it runs freely to underground connections.
- Where exposed the concrete haunch should be repaired if damaged. The edge of the channel should not be left exposed. The level along the haunch should be checked and compared with construction drawings.
- Deviations from installation drawings may indicate or suggest suspect ground conditions and engineering advice may be necessary.
- If applicable, joint seals should be repaired or renewed in accordance with manufacturers recommendations.
- Steam cleaning agents should not normally be required if maintenance is a regular procedure.
- Steam cleaning of polyester and vinylester channels is not recommended.

SINO-BRITAIN TRADING LTD

CALL +44 1733 765373
+44 7884 068506

FAX +44 1733 246940

EMAIL sales@sinotrade.co.uk

LOCAL STOCKIST

CAT001A

www.sinotrade.co.uk

STATION ROAD | YAXLEY | PETERBOROUGH | PE7 3EQ | UNITED KINGDOM