



# Section 1

## Access Covers

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## Briton

Product code	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity	Internal Ref
234849	600 x 600	802 x 802	150	86*	141	5	BK90 1
230598	675 x 675	878 x 878	150	99*	159	3	BK91 1
221195	1220 x 685	1423 x 890	150	110*	295	3	BK92 1
233039	1840 x 685	2042 x 890	150	110*	445	3	BK93 1

Recommended for use in areas that are subjected to very heavy wheel loads such as aircraft pavements, container ports and docksides.

### Features

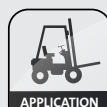
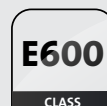
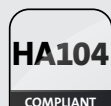
- Double triangular.
- Non-rock design.
- Frame lifting points.
- LTS installation and durability features.

### Options

- A comprehensive range of standard badging and bespoke badging is available.
- A number of sizes are able to be locked.

\*Cover mass per pair.

Use loop handle lifting keys product code 190667 460mm long or 190668 610mm long



## Briton

Product code	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity	Internal Ref
<b>Open Keyways</b>							
185941	610 x 610	815 x 815	150	78*	127	5	BK01 1
<b>Closed Keyways</b>							
185948	610 x 610	815 x 815	150	80*	129	5	BK21 1

Recommended for use in trunk roads carrying fast-moving traffic and industrial areas subject to exceptionally heavy traffic eg. dual carriageways, docks and container areas.

### Features

- Double triangular.
- Non-rock design.
- Frame lifting points.
- LTS installation and durability features.

### Options

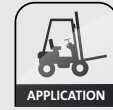
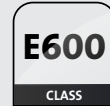
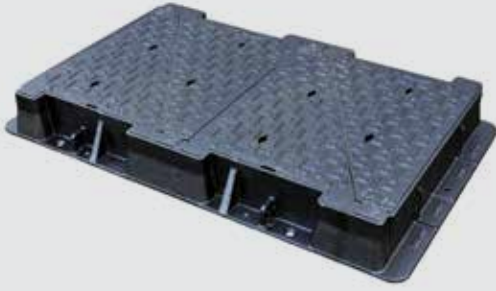
- A comprehensive range of standard badging and bespoke is available.
- A locked variant is available, please contact us for further details.

\*Cover mass per pair.

Use loop handle lifting keys product code 190667 460mm long or 190668 610mm long.



Also available as GripTop variant.



## Silent Knight E600

Product code	Product code c/w safety grids	Product code c/w security screws	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet Quantity	Internal Ref	Internal Ref c/w safety grids	Internal Ref c/w security screws
<b>Open Keyways</b>											
186103	186104	186105	1210 x 685	1375 x 850	150	82*	265	3	CJ56 1	CJ56 1/AP	CJ56 1/BL
186108	186109	186110	1825 x 685	1985 x 850	150	82*	390	3	CJ66 1	CJ66 1/AP	CJ66 1/BR
<b>Closed Keyways</b>											
186114	186115	TBA	1210 x 685	1375 x 850	150	83*	260	3	CJ76 1	CJ76 1/AP	CJ76 1/BL
186122	186123	TBA	1825 x 685	1985 x 850	150	83*	383	3	CJ86 1	CJ86 1/AP	CJ86 1/BR

Recommended for use in trunk roads carrying fast-moving traffic and industrial areas subject to exceptionally heavy traffic eg. dual carriageways, docks and container areas.

### Features

- Double triangular.
- Non-rock design.

\* Cover mass per pair.

Safety grids can be ordered separately; please refer to table below for further details.

Use loop handle lifting keys product code 190667 460mm long or 190668 610mm long.

All sizes are available with the Install Plus frame levelling system, please refer to the installation section for further details.

### Options

- A comprehensive range of standard badging and bespoke badging is available.
- A number of sizes are able to be locked.



## Safety grids for Silent Knight

Safety grid SAP code	Clear opening size of access cover A x B (mm)	Number of safety grids required
196115	1210 x 685	2
	1825 x 685	3

### Please visit our website:

[www.saint-gobain-pam.co.uk](http://www.saint-gobain-pam.co.uk)

to download electronic versions or to request hard copies of any of our brochures.



## GripTop range

At Saint-Gobain PAM UK we recognise our role in contributing to road safety and the importance in providing durable long term solutions. Through an exhaustive new product development programme we have been able to achieve a major breakthrough that has resulted in the development of GripTop. Fully compliant and Kitemarked with the requirements of BS EN 124, GripTop features a patented factory applied maintenance free top surface which brings together high performance bonding agents and bauxite aggregate on a recessed ductile iron substrate.

In partnership with Bristol City Council, large scale testing has been carried out across the city centre at regular intervals over a 5 year period. Located around the inner ring road which is subjected to continuous heavy traffic, a selection of installations were independently tested to determine any degradation in the skid resistance. The results have proven the long term performance of GripTop with an industry leading PSRV (Polished Skid Resistance Value) of >75 on average.

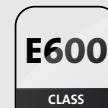
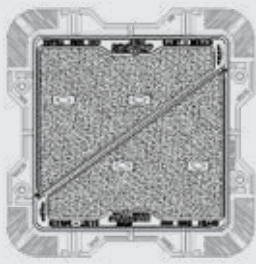
Available in E600 and D400 load classes, Inter-Ax, Briton, Opt-Emax or Ult-Emax variants and a wide range of clear opening sizes, GripTop offers a permanent high friction solution for where the road design or configuration require long-lasting grip performance such as traffic lights, pedestrian crossings and roundabouts.

In addition, GripTop exceeds the requirements of Highways Agency Guidance Note HA 104/09 Chamber Tops and Gully Tops for Road Drainage and Services; Chapter 3 Design Considerations for Chamber Tops in which it specifies that in areas identified as high risk, a product that can demonstrate a minimum PSRV of 60 should be used.



- Proven in service durability.
- Industry leading PSRV (Polished Skid Resistance Value).
- Available in D400 or E600 load classifications.
- Wide range of clear openings.
- BSI Kitemark certified to BS EN 124.





## GripTop Briton

Product code	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity
234110	610 x 610	815 x 815	150	80*	129	5
234964	1220 x 685	1425 x 890	150	92*	264	5
236615	1870 x 690	1985 x 890	150	92*	388	3

Recommended for use in trunk roads carrying fast moving traffic and industrial areas subject to heavy wheel loads where proven enhanced skid resistance is required.

### Features

- Double triangular.
- Non-rock design.
- Frame lifting points.
- LTS installation and durability features.

\*Cover mass per pair.



## GripTop Ult-Emax

Product code	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity
212933	600 x 600	806 x 806	100	20.0/26.0*	81.8	10
212935	600 x 600	806 x 806	150	20.0/26.0*	91.7	10
212934	675 x 675	880 x 830	100	26.4/35.0*	98.1	10
212936	675 x 675	880 x 830	150	26.4/65.0*	109.3	5

Recommended for use in carriageways carrying continuous traffic where frequent access to below ground assets and proven skid resistant performance is required.

### Features

- Double triangular.
- Non-rock design.
- Frame lifting points.
- LTS installation and durability features.

\*Cover mass per pair.

All sizes are available with the Install Plus frame levelling system, please contact us for further details.





## GripTop Opt-Emax

Product code	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity
212925	600 x 600	802 x 802	100	28	89	10
212929	600 x 600	802 x 802	150	28	101	10
212926	675 x 675	875 x 875	100	38	120	10
212930	675 x 675	875 x 875	150	38	142	5
TBA	750 x 600	940 x 746	100	39	121	5
212927	900 x 600	1102 x 802	100	24.5/36.5	127.5	5
212931	900 x 600	1102 x 802	150	24.5/36.6	143	5
TBA	1200 x 750	1350 x 945	100	39	218	5
212928	1220 x 685	1380 x 885	100	38	214	5
212932	1220 x 685	1380 x 885	150	38	249	5
TBA	1800 x 750	1955 x 940	100	39	317	5
222259	1830 x 675	2000 x 885	150	39	354	1

Recommended for use in areas that are subjected to very heavy wheel loads such as aircraft pavements, container ports and docksides.

### Features

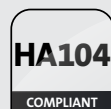
- Double triangular.
- Non-rock design.
- Frame lifting points.
- LTS installation and durability features.

Most sizes are available with the Install Plus frame levelling system, please refer to the installation section for further details.

### Options

- Available with retro fit medium or high security locking options.
- Safety grids are available on certain sizes please refer to Opt-Emax section for further details.





## GripTop Inter-Ax

Product code	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity
212937	600 x 600	803 x 803	100	44.1*	72	10
212939	600 x 600	803 x 803	150	44.1*	82.5	10
212938	675 x 675	880 x 830	100	59*	88	10
212940	675 x 675	880 x 830	150	59*	100	5

Recommended for use in carriageways carrying continuous traffic where proven skid resistant performance is required.

### Features

- Double triangular.
- Non-rock design.
- LTS installation and durability features.

\*Cover mass per pair.

Use loop handle lifting keys product code 190667 460mm long or 190668 610mm long.

All sizes are available with the Install Plus frame levelling system, please refer to the installation section for further details.

### Options

- Safety grids are available for a number of sizes please refer to Inter-Ax section for further details.



**For sales advice or pricing information please contact:**

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or tel: +44 (0) 115 9898 903.





# OPT-EMAX

## Opening



**STEP 1** – halves of cover lift separately in sequence as marked.



**STEP 2** – each cover opens to 100° for maximum access.



**STEP 3** – cover is securely held at 90° to prevent accidental closing. Cover cannot be closed unless correct procedure is followed.

Step 1 image shows the use of opening handle product code 230011

## Opt-Emax range

Available in a wide range of clear opening sizes and in 100 or 150mm frame depths, the Opt-Emax range of D400 hinged access covers offers many benefits over traditional lift out covers. Where below ground assets require regular inspection or access, Opt-Emax provides a safe ergonomic solution as it allows each cover section to be operated by one person.

The Opt-Emax range is ergonomically positive and offers all the benefits associated with the E+ feature.







# OPT-EMAX

## Closing



**Step 1** – move cover to 90°.



**Step 2** – tilt cover to side (using hinge under apex of cover as a pivot point).

**STEP 3** – lower cover to close (units close in reverse sequence to opening).



**STEP 4** – lock covers in place after closing.

## Removal



**STEP 5** – Move cover to 90° and walk out.

# Opt-Emax range

## Ergonomically positive (E+)

The Opt-Emax family of products has become the product of choice for the Highway Communications, Water and Telecom sectors. Opt-Emax includes many features that combine ease of use, safety, security and durability giving clients, specifiers and operators a versatile solution for a wide spectrum of applications.

It is the regularity associated with traditional access cover removal that can expose the operative to the possibility of a repetitive strain injury (RSI), which can result in physical impairment or even permanent disability over a period of time.

### Safety

As each cover section is independently hinged and held within the frame, opening and closing becomes a controlled movement reducing the effort required and reducing the risk of injury.



### Security

Regardless of the number of cover sections, due to its innovative cover section master and slave configuration, Opt-Emax offers the flexibility of having additional security locking systems added to it retrospectively. Security ranges from a medium security turn buckle lock arrangement to a high security solution independently verified to SR3 of LPCB LPS1175 issue 7.



### Durability

Each cover section incorporates 3 points of suspension which ensures it is silent and non-rock in operation. In addition to this, the Opt-Emax range also features the Load Transfer System, LTS is a patented system that reduces the strain from the dynamic forces created by passing traffic that would normally be transmitted into the sub-structure leading to failure in bedding materials.



### Reduced risk of injury

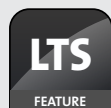
The hinged mechanism greatly reduces the risk of back injury thanks to the reduced effort required to open the covers.

### Closing

To close, simply move the cover to the 90° position, tilt using the hinge under the apex as the pivot point and lower.

### Simple removal

To allow safe access to the chamber, each cover can be easily lifted out when moved to the 90° position. (See column to left: Removal).



## Opt-Emax

Product code	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity	Internal Ref
185719	600 x 450	802 x 652	100	24†	77	10	BA02 1
172472	600 x 600	802 x 802	100	27†	91	10	BA06 1
211029	600 x 600	802 x 802	150	27†	103	10	BA14 1
CDOP67MK	675 x 675	876 x 876	100	39†	116.5	10	BA22 1
211563	675 x 675	880 x 880	150	39†	144	5	BA30 1
186787	750 x 600	940 x 745	100	39†	121	5	H524 1
242791	750 x 700	950 x 825	100	38†	139.5	5	H525 1
186785	750 x 750	910 x 940.5	100	43†	129	5	H510 1
185735	900 x 900	1102 x 802	100	25 & 37.5†	128	5	BA54 1
211032	900 x 600	1102 x 802	150	25 & 37.5†	143.5	5	BA60 1
228735	900 x 900	1163 x 1155	125	68.5†	211	5	BA66 1
186789	1060 x 700	1210 x 850	100	33 & 51.5†	172	5	H530 1
185744	1220 x 685	1380 x 885	100	39†	217	5	BA78 1
211562	1220 x 685	1385 x 883	150	39†	332	5	BA84 1
205457	1200 x 750	1350 x 945	100	39†	218	5	H564 1
230384	1340 x 900	1500 x 1060	100	53†	278	3	BA88 1
CDOP19GK	1500 x 750	1660 x 940	100	43†	242	3	H571 1
186795	1800 x 750	1955 x 940	100	43†	317	1	H584 1
215590	1800 X 750	2001 x 883	150	39†	290	1	BA96 1
230385	2010 x 900	2170 x 1060	100	53†	406.5	1	BA98 1
230108	2250 x 750	2420 x 940	100	43†	355	1	H591 1

### Features

- Hinge cover design.
- Non-rock design.
- Frame lifting points.
- LTS installation and durability features.

### Options

- A comprehensive range of standard badging is available.
- Safety grid options.
- Certain sizes available in GripTop.

† Heaviest hinged cover:

Most sizes are available with the Install Plus frame levelling system, please refer to the installation section for further details.

Use loop handle lifting keys product code 190667 460mm long or 190668 610mm long or opening handle 230011.

**GRIP TOP**  
Ductile iron and mineral technology for extra safety

**install** plus

## Locking kits

Product code	Description
<b>Standard Turnbuckle Locking Kits</b>	
187097	Locking kit with key for 100mm deep frame
187096	Locking kit without key for 100mm deep frame
215624	Locking kit with key for 150mm deep frame
215626	Locking kit without key for 150mm deep frame
190664	Opening/Locking key 175mm long
205435	Opening/Locking key 600mm long
<b>SCS High Security Locking Kits</b>	
215610	Locking kit with key for 100mm deep frame
215622	Locking kit without key for 100mm deep frame
215627	Locking kit with key for 150mm deep frame
215628	Locking kit without key for 150mm deep frame
C18	SCS Locking key



Product codes 242791 and 230384 are available as T-LOK high security variants certified to LPS 1175 SR3, please contact us for further details.

## Safety grids for Opt-Emax

Clear opening of access cover	Frame depth	Safety grid SAP code	Number of grids required
600x600	100	227516	1
600x600	150	249979	1
675x675	100	196702	1
750x600	100	236968	1
750x750	100	187091	1
900x600	100	196073	1
900x600	150	196073	1
1060x700	100	187094	1
1220x685	100	187093	2
1220x685	150	187093	2
1200x750	100	236968	2
1340x900	100	251266	2
1340x900*	100	255056	1
1500x750	100	187091	2
1830x685	150	187093	3
1800x750	100	236968	3
2010x900	100	251266	3

Safety grids must be ordered as separate items to the main access cover.

Recommended for use in carriageways carrying continuous traffic where frequent access to below ground assets is required.

\* Alternative single piece safety grid.





# PAMREX



For products that have the E+ feature, the trademark is detailed in the 'At a glance' section of the product pages.

## Pamrex range

Designed to withstand the rigors of modern traffic conditions, Pamrex is capable of withstanding loads in excess of the EN 124 D400 requirement.

This is achieved in silence thanks to its unique elastomer gasket. More recent enhancements included improved ergonomic and security features.

### Infiltration

To dramatically reduce the amount of surface water entering the sewer system, engineers at Saint-Gobain PAM UK have developed an innovative plug for the hinge housing. The 'dual wiper' plug reduces the amount of water entering the network while at the same time enabling debris to be easily removed from the hinge housing.

- The factory fitted plug is standard on all Pamrex designs and is identified with a red sticker featuring a black umbrella logo.
- A secondary seal is also available to reduce water infiltration still further.

### Safety

Protecting field personnel from the risk of injury and the below-ground networks from catastrophic failure are two of the primary concerns facing today's engineers and municipal administrators.

- Hinge incorporates a 90° blocking feature to prevent accidental closure. Personnel must ensure that the hinge housing is kept free of debris and that the 90° blocking has properly activated before entering into the chamber.
- Self-centering design of the gasket eliminates the need to guide the cover into position when closing.
- The design of the cover lifting points ensures easy insertion and removal of tools.
- Lifting loops in the frame assists safe offloading and installation with appropriate and safe equipment.
- The cover is designed to open and release the pressure if the sewer becomes surcharged (provided that no additional lock has been fitted and that the frame has been securely anchored to the top of the chamber).
- The cover opens to 130° to allow uninterrupted access. It can also be completely removed if deemed necessary.

### Design

#### Improved ergonomics

- Hinges reduce physical effort by 50%.
- Hinges allow the operator to move in a straight line thereby avoiding damaging spinal rotation.
- Hinges minimise the duration of the lift, the hinge also retains the cover in a safe and controlled way during and after the lift.
- Lifting points in the cover are designed for use with standard tools (pickaxe/hook/bar).

### Stability and durability

- Gasket rings absorb damaging traffic shock and help to prevent the breakdown of frame bedding materials. Therefore structural failure that can lead to more serious problems like frame instability is significantly reduced. Scientific analysis has clearly shown that new gaskets absorb 64% of the shock and even after many years of service continue to absorb over 50% of the shock.
- Gasket rings ensure cover stability regardless of traffic conditions.



## Pamrex

Code	BS EN 124 loading class	Clear opening A x B (mm)	Over base C x D (mm)	Depth (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity
CDPA60MFX26	D400	600 dia	840 x 840	100	55	97	10
CDPA70MFX26	D400	700 dia	940 x 940	100	71	118	10
CDPA80KFX26	D400	800 dia	1000 x 1000	125	73	122	10

### Features

- Non-rock design.
- Elastomer seating gasket.
- Hinged cover design.
- Infiltration plugs.
- Frame lifting points.
- Pry bar opening.

### Options

- Security locking option.
- Secondary gasket.

## Accessories

Product code	Description
C14	Penta head retro-fit locking kit without key
C24	Opening & locking key
C8	SCS retro-fit locking kit without key
C18	SCS Locking key
C45	600 diameter secondary sealing ring
CDPA60EF-L	600 diameter replacement gasket
CDPA70EF-L	700 diameter replacement gasket
CDPA80EF-L	800 diameter replacement gasket



For sales advice or pricing information please contact:  
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or tel: +44 (0) 115 9898 903.





# ULT-EMAX



## Ult-Emax range

Specifically designed to combine ease of use and durability with greater security and value for money, the Ult-Emax range of access covers incorporates a semi-ergonomic hinging system, making it ideal for one-man inspection operations with the master cover hinging open along the diagonal axis, the second traditional lift-out cover can be used as a working platform for activities such as jetting or CCTV surveys.

### Ult-Emax features

#### Enhanced operator safety

Weighing only 20 kilograms, the small master cover requires minimum effort to open, allowing for quick and easy inspection of the chamber below. The cover's hinging mechanism vastly reduces the risk of operator injury, while maintaining optimum stability and durability. The master cover can be easily removed through a vertical lift once it has been hinged open.

At 25 kilograms the larger slave cover also falls within health and safety guidelines and is one-man operable.

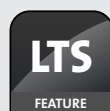
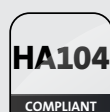
#### Increased security

Drawing on our in-depth knowledge of ductile iron and its unique properties, the Ult-Emax range also has as standard a spring locking system that firmly locks the covers in place once they are closed. This unique technology employs ductile iron's elasticity in areas where the components interact and allows for the locking of the cover within the frame without the use of a mechanical locking device.





# Ult-Emax range



## Ult-Emax

Product code	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity	Internal Ref
205763	600 x 600	806 x 806	100	27.3/20.7	82	10	BG06 1
205765	600 x 600	806 x 806	150	27.3/20.7	92	10	BG14 1
211605	676 x 675	880 x 830	100	35.5/26.2	98	10	BG22 1
211606	675 x 675	880 x 830	150	35.5/26.2	109	5	BG30 1

Recommended for use in carriageways carrying continuous traffic where frequent access to below ground assets is required.

### Features

- Non-rock design.
- Automatic cover security locking.
- Semi-ergonomic hinging design.
- LTS installation and durability features.

### Options

- A comprehensive range of standard badging is available.
- Available as GripTop.
- Available as a tethered cover section variant.

All sizes are available with the Install Plus frame levelling system, please contact us for further details.

Use loop handle lifting keys product code 190667 460mm long or 190668 610mm long.

**GRIP<sup>TOP</sup>**  
Ductile iron and mineral technology for extra safety

All sizes available as GripTop variant.

**install<sup>plus</sup>**



## INTER-AX2



For products that have the LTS feature, the trademark is detailed in the 'At a glance' section of the product pages.

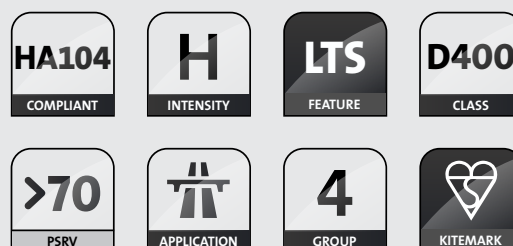
# Inter-Ax range

The Inter-Ax range of D400 double triangular access covers was developed following the conclusion of a 3 year research programme conducted by Nottingham University. The research determined the need for ironwork design to evolve and for products to;

- Resist movement and deformation under dynamic loading
- Reduce the stress transmitted through the frame into the sub-structure
- Provide an enlarged surface area to interact with installation and reinstatement materials

Inter-Ax achieves this due to its inherent high performance durability features.

- Each cover section incorporates 3 points of suspension which ensures it is silent and non-rock in operation.
- In addition to this, the Inter-Ax range also features the Load Transfer System, LTS is a patented system that reduces the strain from the dynamic forces created by passing traffic that would normally be transmitted into the sub-structure leading to failure in bedding materials.



## Inter-Ax D400 H

Product code	Product code with lock	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Internal Ref	Pallet quantity	Internal Ref with lock
185928	185929	600 x 600	800 x 800	150	55*	103	BH14 1	10	BH14 1/BK
185935†	185936	600 x 600	800 x 800	150	54*	103	BH16 1†	10	BH16 1/BK†

Recommended for use in motorways and carriageways carrying high speed continuous heavy traffic.

### Features

- Double triangular.
- Non-rock design.
- LTS features.

### Options

- Security locking option.
- Ventilated option.
- Badging options.

\*Cover mass per pair.

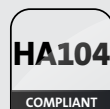
†Ventilated.

Use loop handle lifting keys product code 190667 460mm long or 190668 610mm long.

## Safety grids for Inter-Ax

Access cover product code	Safety grid code	Number of safety grids required
185928	187106	1
185935		

Safety grids can be ordered separately; please refer to table for further details.



## Inter-Ax D400-N – 150mm deep units

Product code	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity	Internal Ref
185904	600 x 600	800 x 800	150	45*	85.5	10	BD14 1
185810 <sup>†</sup>	600 x 600	820 x 770	150	45*	92	10	BC16 1 <sup>†</sup>
185811	600 dia	820 x 770	150	50*	97	10	BC18 1
211604	675 x 675	880 x 830	150	58*	102	5	BD30 1
185834 <sup>†</sup>	675 x 675	880 x 830	150	69*	120	5	BC32 1 <sup>†</sup>
185842 <sup>▼</sup>	750 x 600	960 x 810	150	70*	120	5	BC42 1 <sup>▼</sup>
237410	750 x 750	975 x 930	150	47.5	166	5	BC50
257471	900 x 600	1100 x 800	150	44	142	5	BC60

Recommended for use in carriageways carrying continuous heavy traffic where a 150 deep frame is required.

### Features

- Double triangular.
- Non-rock design.
- LTS installation and durability features.

750 x 750 & 900 x 600 cover sections are not coupled the cover mass is for one section only.

\*Cover mass per pair.

<sup>†</sup>Ventilated.

<sup>▼</sup> Covers not coupled and cover mass is for single half cover. Use loop handled lifting keys.

### Options

- Locked variants available.
- A comprehensive range of standard badging is available.
- Safety grid option on certain units.
- Certain sizes are available with the Install Plus frame levelling system, please refer to the installation section for further details.



Certain sizes are available as a GripTop Variant.



## Safety grids for Inter-Ax

Access cover product code	Safety grid code	Number of safety grids required
185904	187106	1
185810		


**HA104**  
COMPLIANT

**N**  
INTENSITY

**LTS**  
FEATURE

**D400**  
CLASS

**>70**  
PSRV

  
APPLICATION

**4**  
GROUP

  
KITEMARK

## Inter-Ax D400-N – 100mm deep units

Product code	Product code with lock	Nominal clear opening sies A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity	Internal Ref	Internal Ref with lock
CD1A45MF	185770	450 x 450	600 x 600	100	32*	50	20	BC00 1	BC00 1/BK
185775	185776	600 x 450	775 x 652	100	42*	67	10	BC02 1	BC02 1/BK
185892	185789	600 x 600	803 x 803	100	45*	75	10	BD06 1	BC06 1/BK
185796†	185797	600 x 600	802 x 802	100	49*	78	10	BC08 1†	BC08 1/BK†
185799	185801	600 dia	802 x 802	100	50*	85	10	BC10 1	BC10 1/BK
185806†	TBA	600 dia	800 x 800	100	49*	82	10	BC12 1†	BC12 1/BK†
211603	–	675 x 675	878 x 828	100	58*	91	10	BD22 1	–
185821†	185822	675 x 675	830 x 850	100	69*	102	10	BC24 1†	BC24 1/BK†
206826	211988	675 dia	830 x 856	100	70*	108	14	BC26 1	BC26 1/BK
TBA	TBA	675 dia	830 x 856	100	69*	107	14	BC28 1†	BC28 1/BK†
185836	185837	750 x 600	950 x 800	100	70*	105	5	BC38 1	BC38 1/BK
185847	185848	750 x 750	1004 x 1004	100	48	142	5	BC46▼	BC46 1/BK
185854†	185855	750 x 750	1004 x 1004	100	47	140	5	BC48 1†▼	BC48 1/BK†
185857	185858	900 x 600	1099 x 800	100	44	131	5	BC54 1▼	BC54 1/BK
185867†	185868	900 x 600	1099 x 800	100	43	129	5	BC57 1†▼	BC57 1/BK†
185870	185871	910 x 900	1163 x 1155	125	74	273	5	BC66 1▼	BC66 1/BK
185874	185876	1250 x 675	1500 x 878	100	70*	198	5	BC78 1	BC78 1/BL
185889†	185890	1250 x 675	1500 x 878	100	69*	195	5	BC81 1†	BC81 1/BL†
215534	–	1310 x 675	1500 x 878	100	70	197	5	BC82	–

Recommended for use in motorways and carriageways carrying continuous heavy traffic.

### Features

- Double triangular.
- Non-rock design.
- LTS installation and durability features.

\*Cover mass per pair.

†Vented.

▼ Covers not coupled and cover mass is for single half cover.

Use loop handle lifting keys product code  
190667 460mm long or 190668 610mm long.

### Options

- Locked variants available.
- A comprehensive range of standard badging and bespoke badging is available.
- Certain sizes are available with the Install Plus frame levelling system, please refer to the installation section for further details.

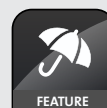
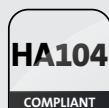
**GRIP TOP**  
Ductile iron and mineral technology for extra safety

Certain sizes are available as a GripTop Variant.

**install PLUS**

## Safety grids for Inter-Ax

Access cover product code	Safety grid code	Number of safety grids required
185796	187106	1
185874	187116	



## Inter-Ax D400-N seal capable

Product code	Product code with lock & seal	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity	Internal Ref	Internal Ref with lock and seal
257617	–	600 x 600	820 x 820	150	52*	117	8	GC14 1	–
185800	185802	600 dia	802 x 802	100	50*	85	10	BC10 1/AG	BC10 1/CC
185910	–	600 x 600	817 x 768	100	58*	93	14	BE06 1	–
185925	208323	750 x 600	960 x 820	100	75*	111	5	BE38 1	–
208323	–	750 x 600	960 x 820	100	75*	111	5	BE38 1/BK	–

Recommended for use in carriageways carrying continuous heavy traffic where control of surface water ingress or egress of odours is required.



### Features

- Double triangular.
- Non-rock design.
- Push-fit seal plate compatible frame design.
- LTS installation and durability features.

### Options

- Locked variants available.
- A comprehensive range of standard and bespoke badging is available.
- Certain sizes are available with the Install Plus frame levelling system, please refer to the installation section for further details.

\* Cover mass per pair.

Product code 185800 is complete with a bolt down MSG seal plate that is capable of withstanding 0.5 bar pressure. It is recommended that the frame is bolted to the chamber below.

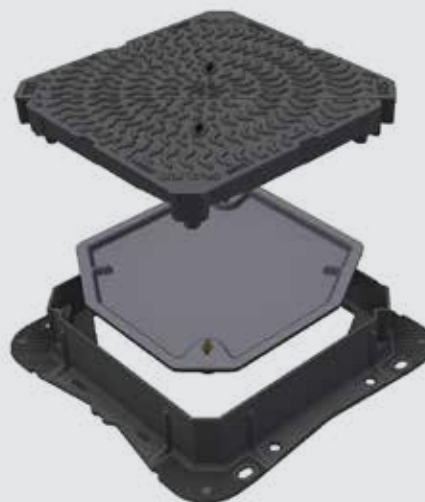
Other than for product codes 185800 and 257617 push fit seal plates should be ordered separately as detailed in the table below.

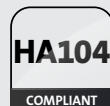
Product code 257617 has an infiltration rate of  $\leq 0.4$  L/M<sup>2</sup> per 30 minutes. This has been determined when subjected to the test method as described in Appendix B of section 2.11 within Thames Water Asset Standard WVN 101 Technical Specification Manhole Covers

Use loop handle lifting keys product code 190667 460mm long or 190668 610mm long

## Push Fit Seal Plates

Access cover product code	Seal plate SAP code
185910	187079
185925	187078
208323	





## Silent Knight D400

Product code	Product code c/w safety grids	Product code c/w security screws	Product code c/w safety grid & security screws	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet qty.	Internal Ref	Internal Ref c/w safety grids	Internal Ref c/w security screws	Internal Ref c/w safety grid & security screws
<b>Open Keyways</b>													
186072	186073	TBA	TBA	1210 x 685	1375 x 850	100	72*	207	5	CJ14 1	CJ14 1/AP	CJ14 1/BL	CJ14 1/BN
186079	TBA	186080	TBA	1825 x 685	1985 x 850	100	72*	306	3	CJ24 1	CJ24 1/AP	CJ24 1/BR	CJ24 1/BP
186074	186075	186076	TBA	1210 x 685	1375 x 850	150	72*	238	3	CJ16 1	CJ16 1/AP	CJ16 1/BL	CJ16 1/BN
186082	186083	186085	186084	1825 x 685	1985 x 848.5	150	72*	350	3	CJ26 1	CJ26 1/AP	CJ26 1/BR	CJ26 1/BP
<b>Closed Keyways</b>													
186086	186087	206866	TBA	1210 x 685	1375 x 850	100	72*	209	3	CJ34 1	CJ34 1/AP	CJ34 1/BL	CJ34 1/BN
186097	TBA	186098	TBA	1825 x 685	1985 x 850	100	72*	308	3	CJ44 1	CJ44 1/AP	CJ44 1/BR	CJ44 1/BP
186091	186092	186093	TBA	1210 x 685	1375 x 850	150	72*	239	3	CJ36 1	CJ36 1/AP	CJ36 1/BL	CJ36 1/BN
186100	186101	TBA	TBA	1825 x 685	1985 x 848.5	150	72*	351	3	CJ46 1	CJ46 1/AP	CJ46 1/BR	CJ46 1/BP

Recommended for use in city roads carrying heavy traffic.

### Features

- Double triangular.
- Non-rock design.

### Options

- Locked variants available.
- A comprehensive range of standard badging and bespoke badging is available.



\*Cover mass per pair.

Use loop handle lifting keys product code  
190667 460mm long or 190668 610mm long

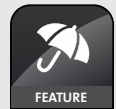
Safety grids can be ordered separately; please refer to table below for further details.

All sizes are available with the Install Plus frame levelling system, please refer to the installation section for further details

## Safety grids

Safety Grid SAP Code	Clear opening size of access cover A x B (mm)	Number of safety grids req.
196115	1210 x 685	2
	1825 x 685	3





## Pamtight

Product code	Clear opening	Over base	Depth	Cover mass (kg)	Total mass (kg)	Pallet quantity	Internal Ref
CDPE60AF	600 dia	850 dia	100	53	100	10	RE 61 R1FD

Recommended for use in city roads where pressure tight sealing is required.

### Features

Recommended that frame is bolted to chamber.

- Two rings – polyethylene.  
– elastomer seating.
- Fastened by six bolts and clamping claws.
- Resistant to one bar pressure.

### Accessories

Product code	Description
C49	PAMTIGHT replacement clamps & securing bolts
CDPE60AF-L	PAMTIGHT replacement elastomer gasket
CDPE60RF-J	PAMTIGHT replacement polyethylene gasket



## Valiant C250-40T

Product code	Product code c/w 2 security screws	Product code c/w 4 security screws	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet qty	Internal Ref	Internal Ref c/w 2 security screws	Internal Ref c/w 4 security screws
CCVA76HK	186022	186023	600 x 450	760 x 610	100	57	89	10	C5144	C5144/L2	C5144/L4
CCVA77HK	204116	212358	600 x 600	760 x 762	100	71	108	10	C5145	C5145/L2	C5145/L4
186025	186026	TBA	750 x 600	910 x 765	100	85	130	5	C5146	C5146/L2	C5146/L4
172789	186028	186029	900 x 600	1060 x 760	100	100	147	5	C5148	C5148/L2	C5148/L4

Recommended for use in medium duty applications that extend ≤ 500mm from the kerb line into the carriageway.

### Features

- Tested to D400 loading.
- Single-piece cover.
- Slide-out cover design.
- Single seal.

### Options

- Locked variants available.
- A comprehensive range of standard badging is available.

Use loop handle lifting keys product code 190667 460mm long or 190668 610mm long.



FEATURE



CLASS



PSRV



APPLICATION



GROUP



KITEMARK

## Trojan

Product code	Product code c/w 2 security screws	Product code c/w 4 security screws	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet qty	Internal Ref	Internal Ref c/w 2 security screws	Internal Ref c/w 4 security screws
185919	185920	218215	600 x 600	804 x 804	76	86	125.5	10	BE30 1	BE30 1/AA	BE30 1/AC

Recommended for use inside industrial buildings where a double sealed unit is essential to meet building regulations.

### Features

- Single-piece cover.
- Double seal.

Use loop handle lifting keys product code 190667 460mm long or 190668 610mm long.

### Options

- Locked variants available.
- A comprehensive range of standard badging is available.



FEATURE



FEATURE



CLASS



PSRV



APPLICATION



GROUP



KITEMARK

## Valiant B125

Product code	Product code c/w 2 security screws	Product code c/w 4 security screws	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity	Internal Ref	Internal Ref c/w 2 security screws	Internal Ref c/w 4 security screws
185949	199553	223926	600 x 450	752 x 602	75	33	53	10	BM02 1	BM02 1/AA	BM02 1/AC
185959	185960	211345	600 x 600	752 x 752	75	41	63	10	BM06 1	BM06 1/AA	BM06 1/AC
185964	204852	TBA	900 x 600	1068 x 768	75	59	89	10	BM54 1	BM54 1/AA	BM54 1/AC
<b>Ventilated</b>											
185958	-	-	600 x 450	752 x 602	75	33	53	10	BM04 1	-	-
185963	-	-	600 x 600	752 x 752	75	41	63	10	BM08 1	-	-
185966	-	-	900 x 600	1068 x 768	75	50	89	10	BM57 1	-	-

Recommended for medium duty applications where a seal capability is required against the egress of odours or gases

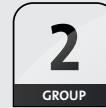
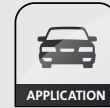
### Features

- Single-piece cover.
- Slide-out cover design.
- Single seal.

Use loop handle lifting keys product code 190667 460mm long or 190668 610mm long.

### Options

- Locked variants available.
- A comprehensive range of standard badging is available.



## Rapide Slide Out

Product code	Product code c/w screw down locking option	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity	Internal Ref
186464	–	380 x 230	482 x 332	40	9	14	60	H018 1
186466	–	550 x 320	652 x 427	40	17	25	20	H020 1
186535	205338	450 x 450	552 x 552	40	16	24	15	H036 1
CBRA75GK	205339	600 x 450	702 x 552	40	22	31	15	H041 1
CBRA70CK	186548	600 x 600	702 x 702	40	29	39	15	H042 1
186551	186552	750 x 600	852 x 702	40	37	49	15	H043 1
CBRA17GK	–	900 x 600	1002 x 702	50	27	68	10	H050 1
CBRA18GK	–	1000 x 675	1102 x 777	50	32	82	10	H055 1
186557	–	1310 x 610	1412 x 712	50	36	90	10	H060 1
241137	256610	1300 x 900	1420 x 1055	75	65	168	5	B088

Recommended for medium duty applications such as pavements and pedestrian areas where regular access to the below ground network is required.

### Features

- Single piece cover configuration  
UTi clear opening 750x600 sizes above this have a 2 piece cover configuration.
- Slide out cover design.

### Options

- Locked variants available.
- A comprehensive range of standard badging is available.

Use T handle lifting keys product code C15 for all clear opening sizes UTi 1310x610. For product code 241137 use loop handle lifting key product code 190667 460mm long or 190668 610mm long



## Ductile light duty

Product code	Product code c/w 2 security screws	Product code c/w 4 security screws	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet qty	Internal Ref	Internal Ref c/w 2 security screws	Internal Ref c/w 4 security screws
<b>Single Seal</b>											
186870	TBA	186871	600 x 450	706 x 556	41	26	40	20	HA02 1	HA02 1/AA	HA02 1/AC
186874	186875	186876	600 x 600	713 x 713	44	34	52	20	HA03 1	HA03 1/AA	HA03 1/AC
<b>Double Seal</b>											
186884	186885	186886	600 x 450	776 x 624	41	30	53	10	HA08 1	HA08 1/AA	HA08 1/AC
186889	186890	186891	600 x 600	776 x 776	44	49	79	10	HA09 1	HA09 1/AA	HA09 1/AC

Recommended for use in areas where vehicular trafficking is not expected and where a single or double seal is required.

### Features

- Single-piece cover.
- Single or double seal.

### Options

- Security locking options.

Use T handle lifting keys product code C15.



## Ductile light duty recessed

Product code	Product code c/w 2 security screws	Product code c/w 4 security screws	Nominal clear opening sizes A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity	Internal Ref	Internal Ref c/w 2 security screws	Internal Ref c/w 4 security screws
<b>Single Seal</b>											
186879	TBA	186880	600 x 450	711 x 559	70	30	50	20	HA05 1	HA05 1/AA	HA05 1/AC
186881	186882	186883	608 x 600	711 x 711	69	32	54	20	HA06 1	HA06 1/AA	HA06 1/AC
<b>Double Seal</b>											
186894	186895	186896	600 x 450	776 x 624	72	39	65	10	HA11 1	HA11 1/AA	HA11 1/AC
186899	186900	186901	600 x 600	776 x 776	72	52	82	10	HA12 1	HA12 1/AA	HA12 1/AC

Recommended for use in domestic applications eg. driveways, patio areas and featuring recessed cover for infill.

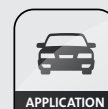
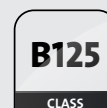
### Features

- 30mm recessed single-piece cover.
- Single or double seal.

### Options

- Security locking options.

Use T handle lifting keys product code C15.



## BriPave DI

Product code	Clear opening A x B (mm)	Over base C x D (mm)	Depth E (mm)	Cover mass (kg)	Total mass (kg)	Pallet quantity	Internal Ref
CBHY56QK	450 x 450	558 x 558	100	27	49	5	HA24 1
CBHY71QK	600 x 600	711 x 711	100	38	68	10	HA26 1

Recommended for use in domestic applications eg. driveways, patio areas and featuring recessed cover for infill.

### Features

- 75mm recessed single-piece cover.
- Single seal.
- Four corner lifting points.

Use loop handle lifting keys product code 190667 460mm long or 190668 610mm long.

## Access Covers and Gratings Technical Enquiries and Assistance

Tel: +44 (0) 1664 814014

Fax: +44 (0) 1664 814025

Email: [technical.covers.uk.pam@saint-gobain.com](mailto:technical.covers.uk.pam@saint-gobain.com)