Ductile & Steel Covers

Keyline stocks a comprehensive range of covers designed to meet the needs of the our customers including:

- The Saint-Gobain Pipelines PAM range for highway applications
- Saint-Gobain Pipelines estate road range - quality at competitive prices
- Clark-Drain's Kitemarked ductile range
- Clark-Drain's steel cover range

Versatile solutions for a large range of access requirements.

Standard Classifications

Ductile manhole covers and gully grates installed in the UK should meet the requirements of the European Standard BS EN 124. This applies to all situations, road and off-road, and to all materials. Products designed to BS EN 124 are grouped and classified depending on their place of installation.

It is the responsibility of the engineer to ensure that the correct product is specified:

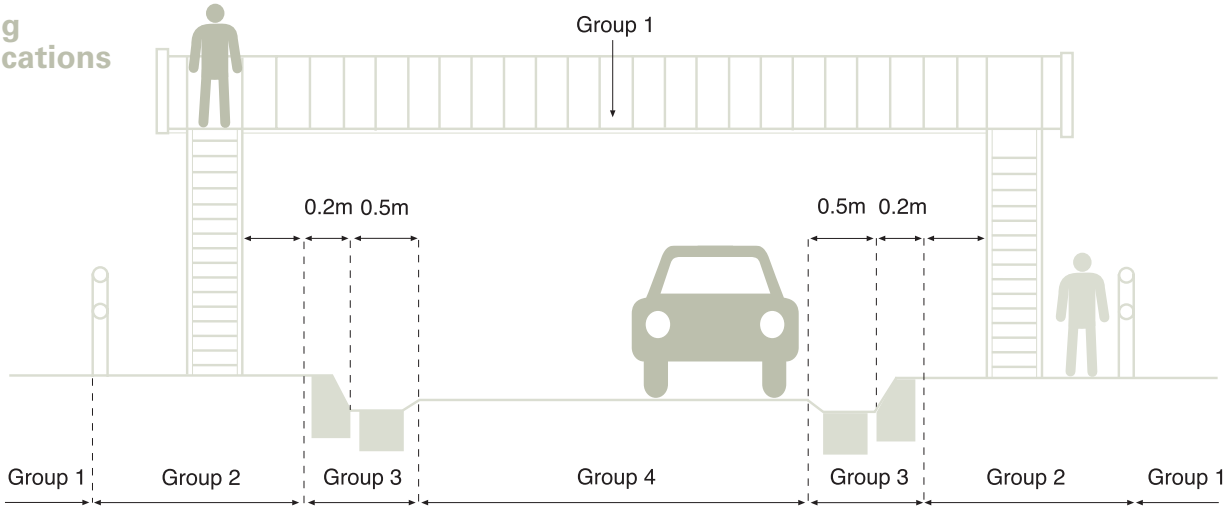
"The appropriate class of manhole top or gully top to be used depends upon the place of installation. The selection of the appropriate class is the responsibility of the designer. Where there is any doubt the stronger class should be selected." Clause 5 BS EN 124.

Markings & Badging

All covers, gratings and frames shall bear:

- BS EN 124 and the appropriate class
- The name and/or identification mark of the manufacturer and the place of manufacture, which may be in code
- The mark of a certification body
- Additional markings required by the customer
- Production identification, i.e. name or reference
- Manhole covers are offered badged to suit your requirements

Loading Specifications



EN 124 Applications

Quality Control

Companies wishing to comply with BS EN 124 must either be independently certified to EN 29001 or meet strict quality control procedures stipulated within the standard. Both the Clark-Drain and Saint Gobain Pipelines ranges of Ductile covers are registered to ISO 9001 & 9002.

Loading	Group	BS EN 124 Class	BS EN 124 Test Load	BS 497 Equivalent	
				Grade	Test Load
Areas imposing particularly high wheel loads	6	F900	900kN	-	-
Areas imposing high wheel loads	5	E600	600kN	-	-
Carriageways and roads (Heavy Duty)	4	D400	400kN	D A	400kN 350kN
Gully tops in kerbside channels of roads	3	C250	250kN	-	-
Footways, pedestrian areas etc.,	2	B125	125kN	B	150kN
Areas inaccessible to motor vehicles	1	A15	15kN	C	10kN

Water Authority Minimum Clear Access Opening Sizes and Requirements for Fittings

	Standard Access (Sewer Diameter mm) Manhole Types A & B Only			Manhole Fitting Requirements All Manhole Types			Non-Man Entry Chambers Accepted?
Sewerage Undertaker	150-874	875-1074	1075 or greater	Double Encapsulated Step Rungs	Safety Chains (Material)	Ladders (230mm Clearance Wall to Ladder)	For Sewer Manholes
Anglian Water	600 x 600			Less than 3m	600mm or greater (Stainless Steel or Polypropylene Rope)	Greater than 3m	Yes
United Utilities				Less than 3m	525mm or Greater (Stainless Steel)	Greater than 3m (Stainless Steel)	No
Yorkshire Water				Less than 6m	No	Greater than 6m	No
Thames Water		675 x 675		Less than 3m	900mm or Greater	Greater than 3m	No
Severn Trent Water^				Less than 3m	No	Greater than 3m	No
Dwe Cymru Welsh Water				No	600mm or Greater (Hooks Only)	No	No
Northumbrian Water				Less than 3m	600mm or Greater	Greater than 3m	No
Southern Water				No	No	No	No
South West Water				Less than 3m	375mm or Greater	Greater than 3m	No
Wessex Water				Less than 6m	600mm or Greater (Hooks Only)	Greater than 6m	No

Note: ^Severn Trent Water also require min 675 x 675 access to Chambers fitted with a ladder or flow control device. Details correct as of January 2007.

Ductile Iron Covers

Castings that qualify for the prestigious British Standard Kitemark (the internationally respected symbol of third party inspection and approval) are subjected to the demanding product design and testing criteria determined by the British Standards Institute.

The Kitemark is recognised around the world as proof that a product has been made, tested and fully complies with the technical requirements of the Standard.

Saint-Gobain Pipelines PAM Range of Kitemarked Gully Gratings

Applications	Products	BS EN 124 Class
Road Carriageways, Trunk Roads and City Roads carrying regular heavy traffic	Aquafall Watershed	D400
	Victoria	D400
Estate Roads	Victoria	C250
	Squadra	C250
	Waterflow-Non-Rock	C250
	Watergate	C250
	Waterflow	C250
Car Parks etc	Pavement Gratings	C250

Saint-Gobain Pipelines PAM Range of Kitemarked Manhole Covers

Applications	Products	BS EN 124 Class
Super Heavy Duty Areas subject to exceptionally high wheel loadings, eg docks and ports	Silentknight	E600
Road Carriageways Dual carriageways and major trunk roads carrying regular fast moving heavy traffic	Inter-Ax 'H'	D400
City and Estate Roads	Tri-Glide	D400
	Inter-Ax 'N'	D400
	Opt-Emax	D400
Pedestrian Areas and Car Parks	Valiant	B125
	Trojan	B125
	Ductile MC1/MC2	B125
	Pavement Covers	B125

Ductile Iron Covers

Valiant Cover

Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Keyline Code
BM02	B125	600 x 450	75	53	**707432**
BM06	B125	600 x 600	75	63	**707433**

Use: In pavement and pedestrian areas. Medium duty, single seal, slide out cover in ductile iron.

Opt-Emax Hinged Double Triangular Cover

Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Keyline Code
BA06	D400	600 x 600	100	95	**SR156405**
BA22	D400	675 x 675	100	127	**SR156405**
BA54	D400	900 x 600	100	142	**SR156405**
H510	D400	750 x 750	100	131	**SR156405**
H524	D400	750 x 600	100	118	**SR156405**

Use: City roads where large, clear working access is required.

Inter-AX Double Triangular Cover

Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Keyline Code
BD06	D400	600 x 600	100	73	SR156405
BD14	D400	600 x 600	150	83	SR156405
BC22	D400	675 x 675	100	107	SR156405
BC30	D400	675 x 675	150	124	SR156405
BC38	D400	750 x 600	100	106	SR156405
BC42	D400	750 x 600	150	120	SR156405
BC54	D400	900 x 600	100	131	SR156405
BC78	D400	1250 x 675	100	201	SR156405
BC06	D400	600 x 600	100	82	SR156405
BC14	D400	600 x 600	150	150	SR156405

Use: City roads carrying heavy traffic.

PAM Range Gully Grates

Waterway 1200 Double Triangular Gully Grate

	Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Waterway Size cm²	Keyline Code
	BZ32	D400	434 x 434	100	43	1200	**SR186303**

Use: City and trunk roads carrying continuous heavy traffic and in areas prone to excessive traffic clipping.

Watershed Gully Grate

	Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Waterway Size cm²	Keyline Code
	HR865 Hinged	D400	370 x 430	100	41	980	**SR186303**

Use: City and trunk roads carrying continuous heavy traffic.

Waterflow 1000 Gully Grate Double Triangular

	Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Waterway Size cm²	Keyline Code
	BZ10	C250	436 x 436	75	40	1006	SR186303

Use: City roads carrying continuous heavy traffic and in areas prone to excessive traffic clipping.

Waterflow Gully Grate

	Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Waterway Size cm²	Keyline Code
	HP894 l/h opening	C250	325 x 312	75	22	655	SR186303

Use: City roads where regular access for cleaning is required.

Watergate

	Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Waterway Size cm²	Keyline Code
	HY815	C250	510 x 360	100	41	1184	SR186303

Use: City roads where regular access for cleaning is required and 100mm frame is preferred.

Double Triangular Grating & Frame

	Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Waterway Size cm²	Keyline Code
	MX45	C250	435 x 485	75	36	1010	**SR186303**
	MX50	D400	435 x 380	100	43	995	**SR186303**

Hinged Grating & Frame

	Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Waterway Size cm²	Keyline Code
	MX40	C250	370 x 305	75	25	735	**SR186303**
	MX55	D400	380 x 430	100	35	970	**SR186303**

Estate Range Manhole Covers

Double Triangular Square Cover & Frame

Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg
MX80	D400L	600 x 600	100	69
MX10	D400L	600 x 600	150	78
MX12	D400L	675 x 675	100	102
MX14	D400L	750 x 600	100	110
MX17	D400L	900 x 900	100	118
MX20	D400L	1290 x 675	100	212

This comprehensive purpose-designed product portfolio consists of ductile iron covers and gratings to suit a wide range of low traffic intensity applications, including estate roads, driveways and patio areas.

Single Seal Pavement Cover & Frame

Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Keyline Code
MX30	B125	600 x 450	41	40	**SR156405**
MX32	B125	600 x 600	44	55	**SR156405**
MX38	B125	600 x 600	75	67	**SR156405**
RMX28	B125	450 dia	35	21	**SR156405**

Clark-Drain Range of Ductile Covers

Keyline is a stockist of Clark-Drain Municipal Castings.

Clark-Drain castings are accredited to BS EN 124 and are badged with the Kitemark or LRQA logo for quality and third party assurance.

Clark-Drain's range of BS EN 124 castings includes those that meet the criteria for the Highways Agency Advice Note HA104/02 – Design Manual for Roads and Bridges.

High-Max Highway Maximum Performance D400 Manhole Cover Heavy Duty

- Manufactured from ductile iron
- Non-rock design
- Closed keyways
- Kitemarked for quality and third party accreditation
- Manufactured to BS EN 124 class D400

Manhole Covers

High-Max Manhole Cover

Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Keyline Code
*CLKS 801 KMD	D400	600 x 600	150	107	**644631**
*CLKS 802 KMD	D400	675 x 675	150	126	**268007**
*CLKS 805 KMD	D400	600 x 600	100	89	-
*CLKS 806 KMD	D400	675 x 675	100	108	-

* Meets the design criteria for the Highways Agency Advice Note HA104/02 - design manual for roads and bridges

Manhole Cover

Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Keyline Code
CLKS 756 KMD	D400	600 x 450	100	73	**507692**
CLKS 701 H KMD*	D400	600 x 600	100	68	**854103**
CLKS 701 AH KMD*	D400	600 x 600	150	77	**864590**
CLKS 1659 KMD*	D400	675 x 675	100	86	**883953**
CLKS 1659 AH KMD*	D400	675 x 675	150	94	**883954**
CLKS 750 KMD	D400	750 x 600	100	104	**519251**
CLKS 750A KMD	D400	750 x 600	150	123	-
CLKS 752 KMD	D400	900 x 600	100	103	**508976**
CLKS 752A KMD	D400	900 x 600	150	150	**511326**
CLKS 693 KMD	D400	1200 x 675	100	189	**877943**
CLKS 693A KMD	D400	1200 x 675	150	220	**833952**
CLKS 751 KMD	D400	900 x 900	100	192	-

- Manufactured from ductile iron
- Closed keyways
- Kitemarked for quality and third party accreditation

Manhole Covers

	Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Keyline Code
	CLKS 762 KMD	B125	600 x 450	60	40	**854105**
	CLKS 777 KMD	B125	600 x 600	50	49	**854101**
	CLKS 759 KMD	B125	600 diameter	50	44	**854107**

- Manufactured from ductile iron
- Single seal
- Closed keyways
- Kitemarked for quality and third party accreditation

Manhole Cover Light Duty

	Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Keyline Code
	CLKS 62 ENA	A15	600 x 450	32	23	**854097**
	CLKS 12 ENA	A15	600 x 600	32	36	**854098**

- Manufactured from grey iron
- Single seal
- Closed keyways
- LRQA badged for quality and third party accreditation

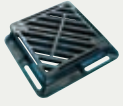
Gully Grates

Captive Hinged

Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Keyline Code
CLKS 180 KMD	D400	430 x 370	100	39	**875091**
CLKS 179 KMD	D400	510 x 360	100	45	**967487**
CLKS 185 KMD	D400	450 x 450	100	37	-

- Manufactured from ductile iron
- Non-rock design
- Kitemarked for quality and third party accreditation

Double Triangular



Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Keyline Code
*CLKS 644 KMD	D400	415 x 415	100	39	**854115**
*CLKS 502 KMD	D400	440 x 400	100	45	**875090**
CLKS 732 KMD	D400	600 x 600	100	88	**507696**

- Manufactured from ductile iron
- Non-rock design
- Kitemarked for quality and third party accreditation

*Meets the design criteria for the Highways Agency Advice Note HA104/02 – Design Manual for roads and bridges.

Gully Grates

Gully Grates

	Supplier Code	BS EN 124 Class	Clear Opening mm	Depth mm	Weight kg	Keyline Code
	CLKS 127 KMC	C250	336 x 308	75	29	**877944**
	CLKS 128 KMC	C250	440 x 335	75	29	**877945**
	CLKS 129 KMC	C250	340 x 305	100	24	**854119**
	CLKS 130 KMC	C250	430 x 330	100	31	**854117**

- Manufactured from ductile iron
- Captive hinged
- Kitemarked for quality and third party accreditation

Suggested suitable carrying capacities for Clark-Drain standard steel covers and frames*

	Clark-Drain Ref. A Gross Plated Weight 2.5T. For pedestrian use only.
	Clark-Drain Ref. B Gross Plated Weight 5T. Will support a slow moving wheel load of 1.25T. Especially recommended for domestic driveway applications.
	Clark-Drain Ref. C Gross Plated Weight 10T. Will support a slow moving wheel load of 2.5T. Restricted access and service areas.
	Clark-Drain Ref. D Gross Plated Weight 17T. Will support a slow moving wheel load of 4.25T. Small rigid commercial vehicles.

	Clark-Drain Ref. E Gross Plated Weight 25T. Will support a slow moving wheel load of 6.25T. Pedestrian precincts, commercial delivery access and emergency services.
	Clark-Drain Ref. F Gross Plated Weight 38T. Will support a slow moving wheel load of 9.5T. Petrol forecourt and articulated lorries.
	Other traffic Clark-Drain must be notified if inspection covers ordered are to carry vehicles with non pneumatic tyres eg. forklifts, mobile cranes, short wheel trollies etc. plus aircraft or any abnormal traffic.

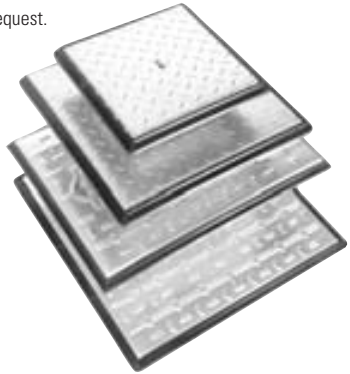
*Design not suitable for highways.

Clark-Drain Standard Galvanised Steel Solid Top Access Covers

	Supplier Code	Clear Opening mm	Overall Size mm	Overall Depth mm	Keyline Code
5T GPW ref B	PC2BG	300 x 300	356 x 356	23	**559788**
	PC5BG	450 x 450	506 x 506	23	**770237**
	PC6BG	600 x 450	656 x 506	23	**770235**
	PC7BG	600 x 600	656 x 656	23	**963240**
17T GPW ref D	PC5DG	450 x 450	506 x 506	23	**245505**
	PC6DG	600 x 450	656 x 506	23	**770236**
	PC7DG	600 x 600	656 x 656	23	**770238**

Please contact Keyline for advice should you require units slightly over the specifications shown. Gross vehicle plated weight expressed as the gross weight of road vehicles with pneumatic tyres and four points of road contact.

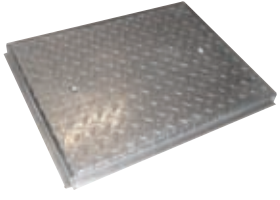
Loads to FACTA classes can be supplied on request.



Clark-Drain Deep Seal Chequer Plate Covers

	Superior Pressed	Chequer Plate Supplier Code	Clear Opening mm	Overall Size mm	Overall Depth mm	Keyline Code
5T GPW	Ref B	C2BG	300 x 300	356 x 356	40	**550790**
		C5BG	450 x 450	506 x 506	40	**559792**
		C6BG	600 x 450	656 x 506	40	**592078**
		C7BG	600 x 600	656 x 656	40	**592080**
		C9BG	750 x 600	824 x 674	40	**553028**
		C11BG	900 x 600	974 x 674	40	**559797**
38T GPW	Ref F	C2FG	300 x 300	356 x 356	40	-
		C5FG	450 x 450	506 x 506	40	-
		C6FG	600 x 450	656 x 506	40	**751907**
		C7FG	600 x 600	656 x 656	65	**988816**
		C9FG	750 x 600	824 x 674	65	**988821**
		C11FG	900 x 600	974 x 674	65	**507700**

	Chequer Plate Supplier Code	Clear Opening mm	Overall Size mm	Overall Depth mm
FORKLIFT	C2G	300 x 300	356 x 356	65
	C5G	450 x 450	506 x 506	65
	C6G	600 x 450	656 x 506	65
	C7G	600 x 600	656 x 656	65
	C9G	750 x 600	824 x 674	65
	C11G	900 x 600	974 x 674	65



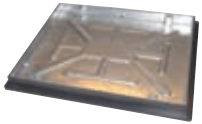
Recessed Covers - Clark-Drain

The advantages of the new recessed series.

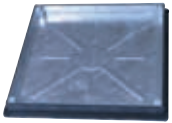
1. Frame manufactured from recycled material and fully recyclable
2. Moulded grouting flange
3. Improved handling characteristics
4. Improved aesthetics
5. Easier removal of lid from frame, especially after some service time (grit jamming etc.)
6. One piece pressed cover – extra strength with reduced weight.
7. Integrated lifting keys
8. Guaranteed interchangeability

CLKS 790R

CLKS 450SR



CLKS 790R/46



CLKS 450SR/46SL

T11G3

Recessed Block Pavior Manhole Covers and Frames

Application:

For use in domestic block pavior areas, e.g. patios and driveways, achieving aesthetically pleasing results.

CLKS 790R

Features:

- One-piece pressed cover – extra strength without obstruction
- Frame manufactured from fully recycled material
- Moulded grouting flange
- Fully interchangeable cover
- Keyhole protection caps
- Galvanised after manufacture to BS EN 1461

(CLKS 791R and 100mm deep covers are supplied with steel frame).

CLKS 450SR

Supplier Code	Clear Opening Size mm	Overall Size mm	Loading GPW	Keyline Code
❑ CLKS 790R	600 x 450 x 80	740 x 590 x 98	10T	**802195**
❑ CLKS 791R	600 x 600 x 80	696 x 696 x 85	10T	**862677**
▼ CLKS 790R/100	600 x 450 x 100	696 x 546 x 105	10T	**296600**
▼ CLKS 791R/100	600 x 600 x 100	696 x 696 x 105	10T	-
❑ CLKS 450SR	450 Diameter	580 x 580 x 93	10T	**861465**
* CLKS 790R/46	600 x 450 x 46	740 x 590 x 55	5T	**770288**

(Further sizes are available upon application)

❑ Now supplied with integral lifting key.

▼ CLKS 556 Lifting Keys are required for use with these products.

* CLKS 776 Lifting Keys are required for use with this product. For Pattern Imprinted Concrete.

Inspection Chamber Covers

CLKS 452 Keyline Code 517407

Clark-Drain has been working with NHBC and has developed probably the industry's most effective and safety conscious polypropylene inspection cover.

Typical hazard situation

- Fully compliant to Part H of the Building Regulations
- Suits all major PPIC access chambers
- All units are interchangeable
- Approved by LABC (Local Authority Building Control) Certificate number 228/9/7067

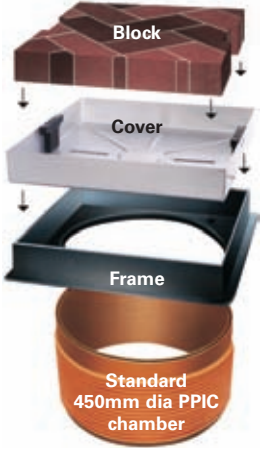
Dual Locking Polypropylene Cover and Frame

Clark-Drain also supply a B125 inspection chamber cover, ductile iron cover and frame.
Ref: CLKS 1657 KMB. Keyline Code 854085

Square-to-Round Recessed Cover

Clark-Drain's Square-to-Round Recessed Cover.

- Quick and easy to install
- Cover can be turned to match direction of paving
- Circular opening in frame fits all major PPIC inspection chambers
- Eliminates the need to cut paving round a circular opening
- Guaranteed interchangeability
- Galvanised to BS EN 1461



Supplier Code	Clear Opening mm	Depth mm	Overall Size mm	Loading GPW	Keyline Code
▼ CLKS 300SR	300	80	390 x 390 x 85	10T	-
❑ CLKS 450SR	450	80	580 x 580 x 93	10T	**861465**
*CLKS 450SR/SL	450	46	580 x 580 x 55	5T	**551853**

❑ Now supplied with integral lifting key.

▼ CLKS 556 Lifting Keys are required for use with these products.

* CLKS 776 Lifting Keys are required for use with this product.
For Pattern Imprinted Concrete.

CLKS 450SR

Engineered Steel Products

Fabricated steel covers provide a highly versatile solution to a large range of access requirements. Keyline is able to supply an extensive range to fulfil even the most demanding specifications.

Whatever the application, Keyline can provide the solution you need.

- Recessed block pavior covers
- Recessed covers for screed infill
- Stainless steel edge or brass edge covers
- Hinged – spring assisted
- Manual handling compliant
- Protection from falling
- MOD approved
- Security covers
- Ducting runs
- Complete stainless steel or aluminium covers

All bespoke items are manufactured in accordance to FACTA (Fabricated Access Covers Trading Association) specifications

Bespoke Security Covers for all situations

Municipal Handling Compliant

Delivering Outstanding Service

Keyline is known for its civils and drainage expertise, offering you a total solution to all your requirements. With branches across the country, Keyline will provide the specialist civils products you need directly from stock.

- Branches nationwide
- A huge range and depth of materials always in stock
- Our staff are helpful, friendly and knowledgeable
- We provide a speedy, efficient and accurate service
- We get it right first time