

SAFE
ALTERNATIVE
TO METAL AND
CONCRETE

HITACHI
Inspire the N



GRP Composite Access Covers

Light | Strong | Safe

FIBRELITE 

www.fibrelite.com

We've got you covered

Why Choose Fibrelite?

Fibrelite has been at the forefront of composite quality and innovation since 1980 when we designed the world's first GRP composite manhole cover for the retail petroleum industry. And our high-performance, lightweight and safe-to-lift composite covers – including the unique F900 load-rated trench cover - are now selected by specifiers, architects and engineers worldwide.



F900 Fibrelite covers installed at the UK's largest port



Fibrelite covers installed in UK's most iconic theatre

Although GRP composite covers are now increasingly preferred to the traditional metal or concrete options, not every composite cover is going to perform to the highest standards year after year.

With a Fibrelite trench cover, you can be sure that you have a high-performance product created via resin transfer moulding (RTM) to create a durable, monolithic cover that you can fit-and-forget. What's more, each one will have been individually engineered under the watchful eye of our technical teams in our own manufacturing facilities.



Industries Using Fibrelite Covers

Ports & Airports



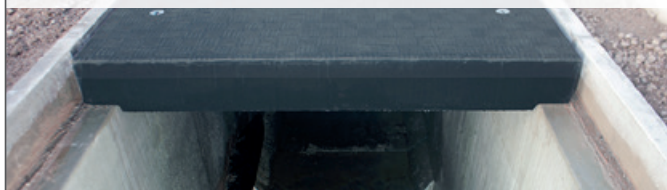
Petrol Stations & Forecourts



Power Stations & Substations



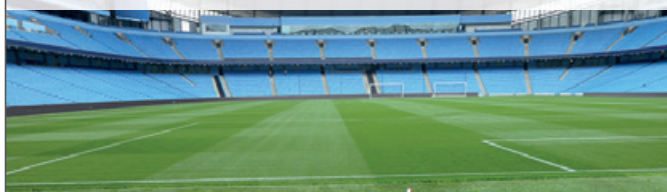
Precast Concrete Trenches



Manufacturing Facilities & Data Centres



Stadiums & Leisure



Military & Defence



Food Processing



Rail, Tram & Underground



Road & Roadside



Water & Water Treatment



Public Areas



Steam Vaults



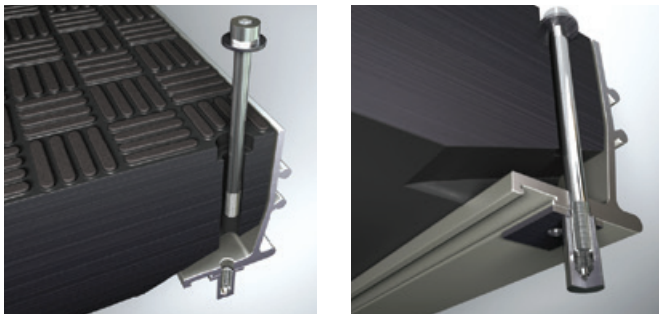
Shopping Centres & Retail Parks



Benefits in Summary

- Load ratings from A15 to F900 (BS EN 124)
- Wide range of sizes, colours and shapes
- Unaffected by underground gases and most chemicals
- Will not corrode, crack or crumble
- Excellent insulator against heat
- Easy and safe manual removal
- Lifting aid eliminates back injury and crushed fingers
- Eliminates risk of theft due to no resale value to the scrap market
- Incredibly strong monolithic structure that will not delaminate
- Treads incorporate a specialised anti-slip material equivalent to modern high grade road surface
- Perfect for access to drains, electrical ducts and underground pipework
- Range of UV stable colours available that will not flake or crack
- Cover marking/customisation available

Security Restraints Available



Out with the Old

The increased demand for composites is mainly due to the heavy, crumbling and failing traditional materials such as metal and concrete.

By using lighter materials, operational injuries are prevented, work sites are made safer and ease of installation and maintenance is made available to utility workers and contractors.

Technical Resources

Each product is fully supported with dimensional product drawings and installation instructions. To access this information please contact Fibrelite directly or log on to our website at www.fibrelite.com

Installation

Performance of Fibrelite trench covers is dependent on correct installation and installers must follow our product specific installation instructions. For unusual installations, please contact our technical department for advice.

Fibrelite's Commitment

Fibrelite products are manufactured in the UK, US and Malaysia. Fibrelite ensures the strictest control on raw material quality and manufacturing standards. All products are manufactured in accordance with ISO9001:2008. ISO accreditation applies to the UK manufacturing plant.

Our Global Sales and Support Network

Fibrelite was established in 1980 and currently has three manufacturing plants around the world. Our head office and main manufacturing plant is located in England and serves the UK, Europe, Middle East and Africa. America and Canada are serviced by our US plant and sales office based in Smithfield. In 2011, Fibrelite opened a new manufacturing plant in Malaysia to supply products to the Asia Pacific region. Fibrelite has an established global network of distributors to ensure a local Fibrelite representative is available wherever required. Details of your nearest distributor can be found on our website.



Customer Testimonials

Theatre

"Overall I think Fibrelite is a great solution to a difficult design problem for us of achieving both a robust and high load capacity cover to the multicore cables running for stage to control desk whilst maintaining low weight and easy access."

Jonathan Size, Foster Wilson Architects

Power Station

"We were looking for an installation to replace our ageing duct covers. Fibrelite came up with this solution and it is manufactured and sourced locally."

Paul Ellis, Eggborough Power Station

Durability / Test Reports / Accreditations / Conductive Options

Durability

Designed as a 'fit-and-forget' product, our GRP composite trench covers are maintenance-free, durable and very strong as a matter of course.



Our Load Test Reports

All our trench covers are independently tested in accordance with BS EN 124 criteria and not only meet but often surpass the relevant class conditions for deflection under load as demonstrated in the reports. Trench covers supplied for use in the US have also been independently tested to ensure that they meet AASHTO (American Association of State Highway & Transportation Officials) standards.

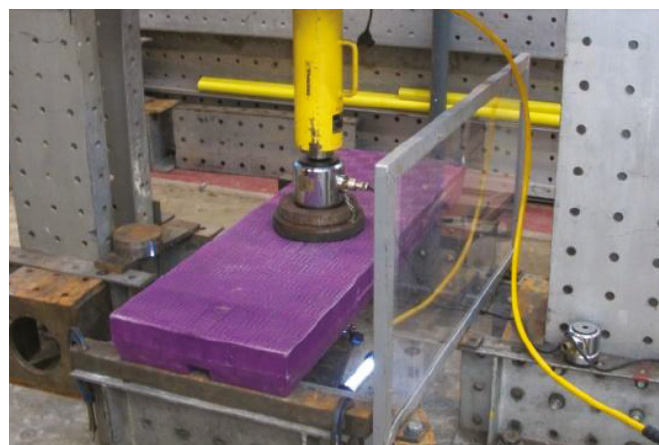


Accreditations

Fibreelite has held accreditation to the ISO quality standard (ISO 9001:2008) and British Standards Kitemark since 1998 and this commitment to product excellence enables us to provide the most comprehensive range of high strength modular and custom-made trench covers with the very best strength to weight ratio available in the market today.

Our covers:

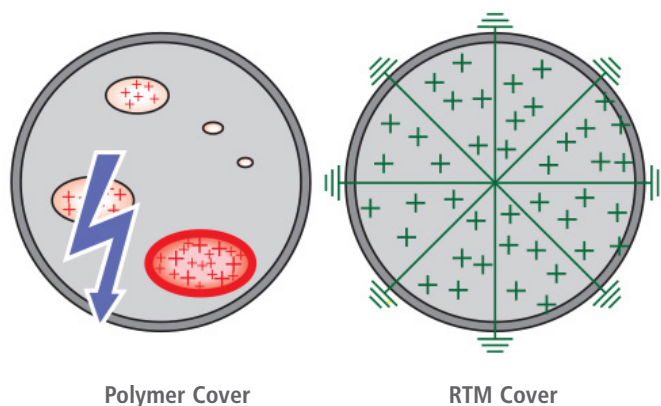
- are BS EN 124 compliant
- are BSI Kitemark approved products



Fully Conductive Options

Potential electrostatic discharging can be eliminated by using the "fully conductive" Fibreelite cover which uses a metalised fibre within the moulding process to achieve electrical continuity across the entire surface of the cover. Such covers exceed the surface resistivity requirements of PAS26.

The standard calls out for a maximum value of $1 \text{ K}\Omega/\text{cm}^2$, the Fibreelite cover actually achieves a value of $0.0144 \text{ K}\Omega/\text{cm}^2$.

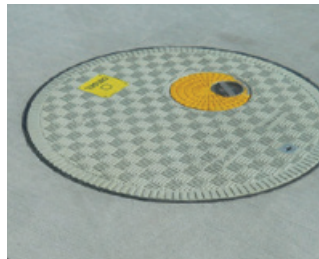


Custom Colours / Custom Branding / Custom Moulded

Custom Colours and Branding

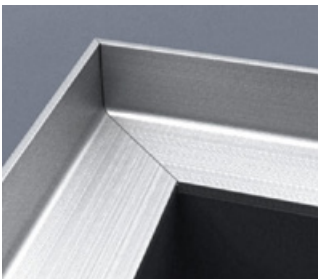
Fibrelite composite covers can also be moulded in virtually any colour or colour-combination and as the pigment is added into the resin during manufacture, there are no problems with the colour scratching or fading over time.

This means that covers can incorporate logos and/or be colour-coded to match a facility's branding or even to identify the specific underground service that can be accessed via a particular cover.



Frame or Rebate Installation

Can be installed onto our specialised frame or existing rebate.

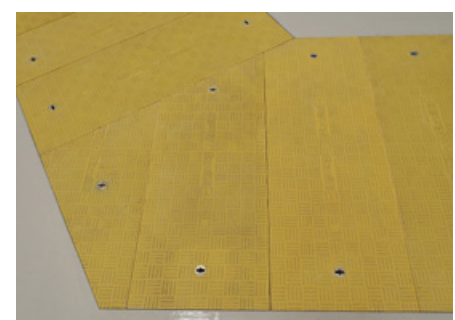
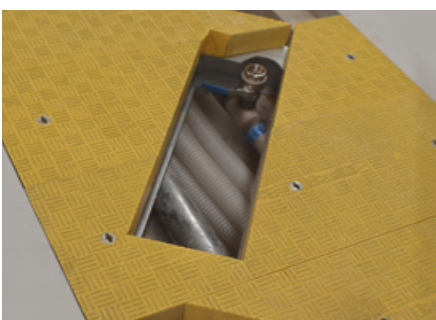


Configurations

Covers can be custom moulded to accommodate pipework entry, shallow depths with stepped cover profiles, steam and gas release vents, inspection ports and much more.



Fibrelite covers can be moulded and shaped to accommodate almost any trench opening



Corrosion, Skid and Heat-Resistance / Security

Corrosion-Resistance

A prime reason for selecting a composite cover is because of its inherent resistance to corrosion, making it an obvious choice where water, wastewater or corrosive liquids are involved. They are also ideal where underground infrastructure requires protection from external corrosive compounds such as salt.



Skid-Resistance

Independent wet and dry tests carried out by Devon CC Materials Laboratory showed that Fibrelite trench covers – even when wet – had anti-slip properties equivalent to a modern high grade road surface which far exceeds health and safety advisory limits.



Heat-Resistance

The thermal gradient properties of a composite steam cover significantly reduces the heat transfer from a steam vault to the surface of the cover. Typically the surface temperature of a composite cover is only slightly above ambient temperature, even when subjected to extremely hot temperatures on the underside. In fact, the best high-quality Fibrelite steam covers maintain their cool-to-touch properties and ability to support vehicular loads even when pushed to a test temperature 400°F.



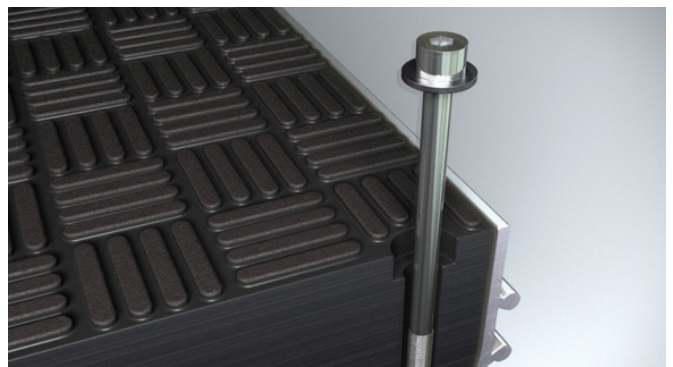
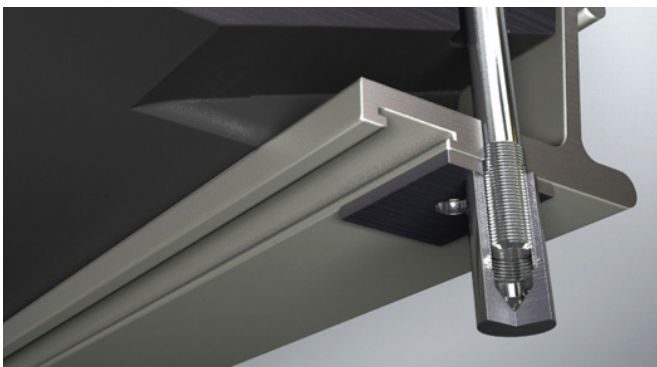
No Risk of Theft

There is no risk of theft with a Fibrelite composite cover as composites have no resale value in the scrap market – so you won't be left with a dangerous, uncovered hole in the ground.



Secure

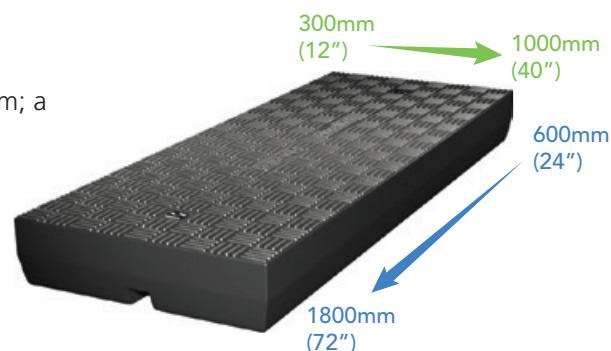
Locks and restraining bolts available for added security.



GRP Composite Trench Covers

World's Largest Range

Trench covers are available in a range of widths from 300mm to 1m; a range of lengths from 600mm to 1800mm and a range of depths from 50mm to 203.2mm. Bespoke sizes are also available.



Load Ratings From A15 to F900



E600 **Super Heavy Duty**

For loads
of up to: **600 kN**
60 tonne

For use in areas where high
wheel loads are imposed
such as loading areas



C250 **Standard Duty**

For loads
of up to: **250 kN**
25 tonne

For use in car parking lots,
gas stations, industrial sites
and areas with slow moving
traffic



B125 **Light Duty**

For loads
of up to: **125 kN**
12.5 tonne

For use in car parking lots and
pedestrian areas where only
occasional vehicular access
is likely



A15 **Super Light Duty**

For loads
of up to: **15 kN**
1.5 tonne

For use in areas where only
pedestrians have access

F900 **Extreme Heavy Duty**

For loads
of up to: **900 kN**
90 tonne

For use in areas where
extremely high wheel loads are
imposed such as ports, airports
and docks



HS25/D400 **Heavy Duty**

For loads
of up to: **400 kN**
40 tonne

For use in areas with frequent
bus or heavy truck traffic,
including carriageways, hard
shoulders and pedestrian
areas



HS20 **Standard Duty US**

For loads
of up to: **400 kN**
18 tonne

For use in traffic service areas
as per AASHTO standard



Medium Light Duty

For loads
of up to: **50 kN**
5 tonne

For use in raised curb locations
where light vehicular access is
a possibility



Corrosion-resistant: Composite covers are an obvious choice where water, waste water or corrosive liquids are involved

GRP Composite Trench Covers

Modular GRP Composite Trench Covers to Cover Positions where Ease of Access and Structural Performance are Critical

At The Forefront of Quality and Innovation

Every Fibrelite trench cover is manufactured using high technology RTM production methods to create a highly engineered, monolithic composite product. Fibrelite has been at the forefront of glass reinforced plastic (GRP) composite technology since 1980 and was the very first company to design and manufacture composite covers for any application. The aim was to combat the health and safety issues associated with the removal and replacement of traditional heavy metal covers. Fibrelite has established a global reputation for high quality products and superior after sales service. The company has held accreditation to both the ISO quality standard and British Standards Kitemark since 1998.

Composites have always been seen as a high cost alternative to traditional metal products. However, with Fibrelite's technological advances in the manufacturing process, the development of our A15 and B125 trench covers and rising metal prices, composite can now compete head-to-head with the likes of cast iron.

Lightweight Strong and Safe

Fibrelite's composite trench covers are designed as a 'fit and forget' product for civil engineering situations. The maintenance free trench covers are perfect for covering large areas, gullies, trenches and ducts where occasional or frequent access may be required.

Covers can be installed on a pre-laid concrete rebate or our modular aluminium frame system which is self-keying into surrounding concrete.



Composite is the perfect alternative to crumbling concrete and heavy metal covers

For Industrial Applications

Suitable for all industries including energy and utilities, water and wastewater treatment, ports, docks, public works, arenas and stadiums, rail, retail and commercial developments. No other covering system matches its easy lift, skid resistant or load carrying properties.

Easy Safe Lifting and Replacement

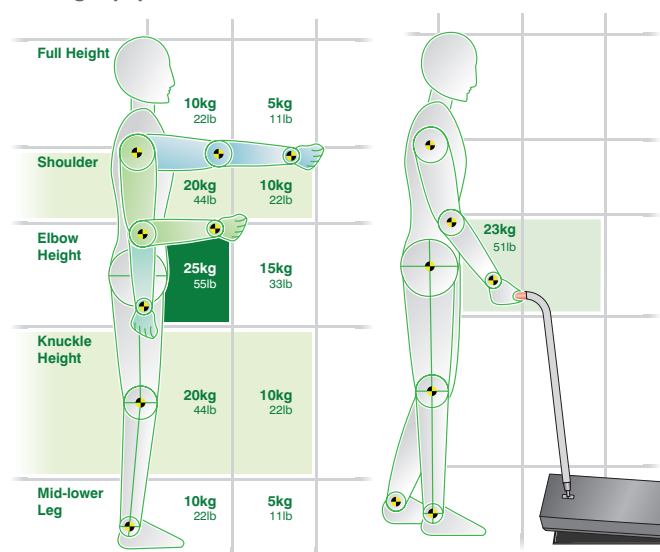
Fibrelite's composite trench covers are proven to be ergonomically safe for men and women to remove and replace. The design incorporates two lifting points for our specially designed FL7 lifting aids. These allow operators to remove the cover without trapping fingers or bending over thus maximising the safety of the lifting technique. The weight is kept close to the body preventing back injury; one of the main causes of absence from work and personal injury claims. The charts below show that the safest place to lift or pull a load is close to the body at waist height.



Heavy corroding steel covers requiring a crane & dedicated lifting equipment



Safe, fast, manual removal with Fibrelite lifting handles



The Health and Safety Executive recommended load moving capabilities in relation to weight and position

Fibrelite lifting method with a 1m (40") long C250 load rated trench cover. Weights are halved with a two person lift.

GRP Composite Trench Covers

Covers for Precast Concrete Trenches

Due to Fibrelite's unique adjustable tooling arrangement, we can provide GRP covering solutions for almost any precast concrete trench layout.



GRP Composite Trench Covers



GRP Composite Steam Covers

Fibrelite Steam Covers

Benefits Compared to Metal Covers:

- Significant reduction in heat transfer
- Lightweight without compromising strength
- Ergonomic removal and replacement with specially designed handle
- Watertight with proven performance under load
- Produces significantly less condensation on underside of cover
- Anti-static and does not conduct electricity
- Improved anti-skid and anti-wear properties
- Non-corrosive and resistant to sodium chloride
- Eliminates risk of theft due to no scrap/ resale value

Other Benefits:

- Exceeds EN 124 D400 load requirements
- Monolithic structure will not crack or delaminate
- Maintenance free
- Multifaceted design that won't spin out

Fibrelite provide manhole covers to some of the largest District Energy companies in the US, as well as universities and utility companies.



The excellent thermal properties of composite materials remain cool to the touch despite high surrounding temperatures.

Sealed Covers

Product Code and Description

F125	300mm dia. flat sealed cover and frame
F45	450mm sq. flat sealed cover and frame
F185	450mm dia. flat sealed cover and frame
F605	600mm sq. flat sealed cover and frame
F65	600mm dia. flat sealed cover and frame
F765	760mm sq. flat sealed cover and frame
F75	760mm dia. flat sealed cover and frame
F96	600mm x 900mm flat sealed cover and frame
F95	900mm dia. flat sealed cover and frame
F900	900mm sq. flat sealed cover and frame
F105	1020mm dia. flat sealed cover and frame
F140	700mm x 1400mm flat sealed cover and frame

Vented Covers

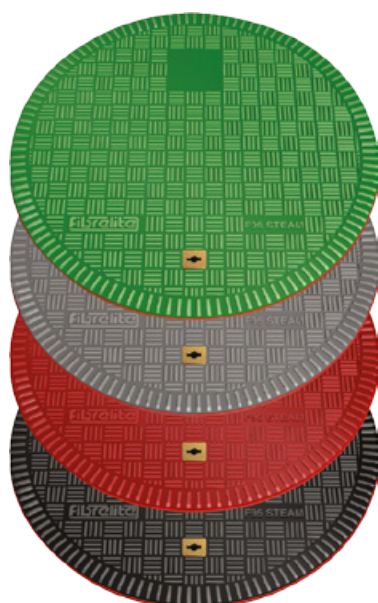
Product Code and Description

F95V	900mm dia. flat sealed cover with venting holes and frame
F105V	1020mm dia. flat sealed cover with venting holes and frame

Sizes refer to the clear opening inside the frame.

Load Ratings Available

Various load rated covers are available upon request.



Colours Available

Covers are available in various colours from the traditional black to red, grey and green.

Further colours are available upon request

GRP Composite Steam Covers

Excellent Thermal Properties, Lightweight, Watertight, Non-Corrosive, Strong and Durable.

At the Forefront of Quality and Innovation

Fibrelite has been at the forefront of composite manhole technology since 1980 and the first company in the world to design and manufacture a composite manhole cover for any application. The aim was to combat the health and safety issues associated with the removal and replacement of traditional metal manhole covers.

Today, Fibrelite is established as a leading world player in this specialist field, with a global reputation for high quality products and superior after sales service.

The company has held the ISO quality standard for over 14 years and continues to lead the way in composite innovation.

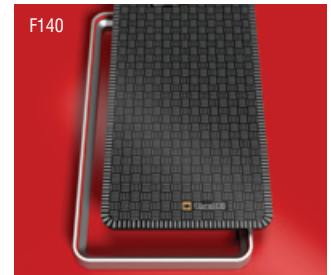
The Advantages of Fibre Reinforced Composite Manhole Covers

Composites are now used for a wide range of applications; from simple products in general construction, to cutting edge uses in the marine and aerospace industries. The key benefit of composite is the strength to weight ratio compared to other materials, however many other benefits are apparent when using composite technology to produce manhole covers.

Traditional metal covers create health and safety hazards for both the general public and company employees. The thermal gradient properties of composite significantly reduce heat transfer from a steam vault to the surface of the cover. The same properties also mean that the cover will take much longer to heat up when subjected to a simple heat source such as direct sunlight. Both these facts will eliminate the risk of skin burns to the general public. From an operational perspective, the lightweight nature of composite will also facilitate easy removal and replacement of the cover without compromising on strength.



Combine these benefits with the non-corrosion properties and the fact that it does not conduct electricity, composite manhole covers are a viable alternative to traditional metal.



Why Use Fibrelite Manhole Covers?

Aside from the general benefits given for composite manhole covers, Fibrelite offers many other significant features. The patented monolithic structure of the covers means that they will not crack or delaminate during usage, and the multi-faceted design of the underside of the cover eliminates the danger of the covers spinning out. Water intrusion problems are also eliminated with a proven gasket design that has been tested when the cover is under load.

The covers exceed EN 124 D400 even when subjected to temperatures up to 200°C and are available in different load ratings without altering the dimensions of the cover. Equally as important are the anti-skid and anti-wear properties achieved using special materials in the cover surface. Removal and replacement of the Fibrelite covers is facilitated using a special ergonomically designed lifting aid.



GRP Composite Covers

Fibrelite Composite Covers

Benefits in Summary

- Load ratings from A15 to F900 (BS EN 124)
- Wide range of sizes, colours and shapes
- Unaffected by underground gases and most chemicals
- Will not corrode, crack or crumble
- Sealed manhole covers are water and odour tight
- Excellent insulator against heat
- Easy and safe manual removal
- Lifting aid eliminates back injury and crushed fingers
- Eliminates risk of theft due to no resale value to the scrap market
- Incredibly strong monolithic structure that will not delaminate
- Treads incorporate a specialised anti-slip material
- Perfect for access to drains, electrical ducts and underground pipework
- Range of UV stable colours available that will not flake or crack
- Security locks available
- Cover marking / customisation available
- Conductive and non-conductive options available



Corrosion-resistant: Composite covers are an obvious choice where water, waste water or corrosive liquids are involved



Cost Benefit Summary

- A Fibrelite cover will be a one-time charge as it will not be stolen for scrap value
- Covers will not corrode or need to be painted
- No moving mechanical parts
- Very low maintenance
- Lightweight, zero risk of back/finger injuries (zero cost from employee insurance claims)
- Covers will not leave a dangerous open hole in the ground (zero cost from public injury claims)

BS EN 124

Fibrelite's covers comply with the load test requirement of BS EN 124: 1994, classes C250 and D400.

Skid Resistance (wet and dry)

A ceramic aggregate is incorporated into the cover surface during moulding. This aggregate gives the cover its unique antislip properties and high wear resistance characteristics.

Independent tests were carried out by Devon County Council Materials Laboratory. A ceramic aggregate (incorporated into the surface of the cover) combined with the specially designed tread pattern gave results showing the Fibrelite cover has antislip properties 'equivalent to a high grade road surface'.

Fibrelite's excellent anti-slip/skid surface is guaranteed for the life of the panel providing a Polished Skid Resistance Value PSRV60> when wet which exceeds the requirements of HA 104/09, part 5, for potentially high risk sites.

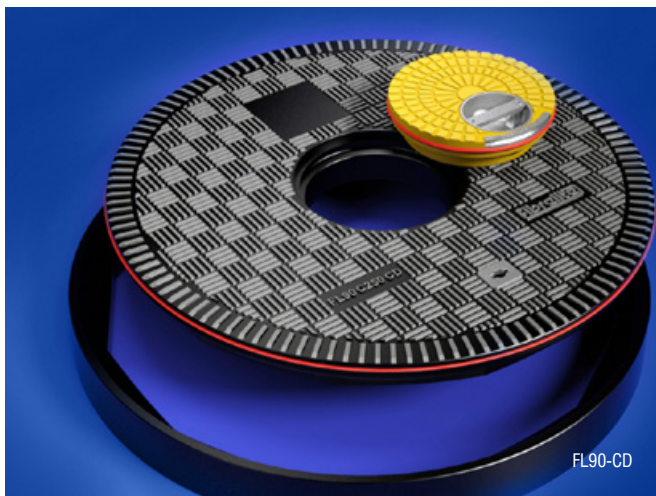
GRP Composite Covers

Watertight Flat Sealed Covers

The leading watertight, easy to remove, composite access cover on the market is available in a range of sizes, load ratings and colours. Available with centre and off set inspection port.

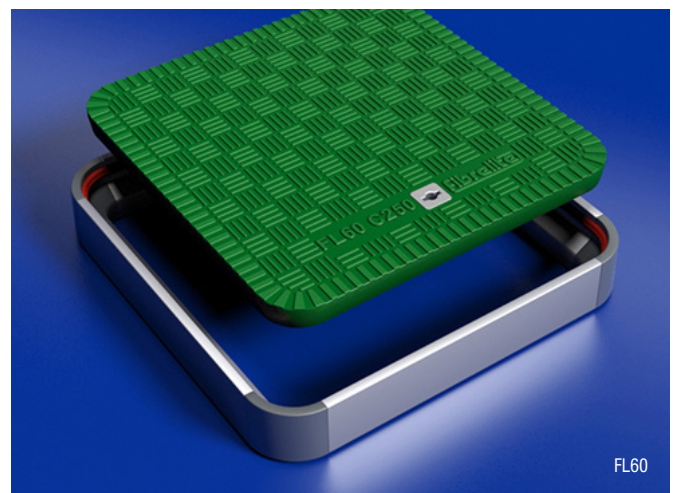
Round Covers

Product Code	Clear Opening	Description
FL100	1020mm dia.	Flat sealed cover and composite frame
FL90	900mm dia.	Flat sealed cover and composite frame
FL760	760mm dia.	Flat sealed cover and composite frame
FL600	610mm dia.	Flat sealed cover and composite frame
FL180	457mm dia.	Flat sealed cover and composite frame
FL120	300mm dia.	Flat sealed cover and composite frame



Square and Rectangular Covers

Product Code	Clear Opening	Description
FL140	1400 x 700mm	Flat sealed cover and aluminium frame
FL900	900 x 900mm	Flat sealed cover and aluminium frame
FL96	900 x 600mm	Flat sealed cover and aluminium frame
FL76	760 x 760mm	Flat sealed cover and aluminium frame
FL60	600 x 600mm	Flat sealed cover and aluminium frame
FL450	450 x 450mm	Flat sealed cover and aluminium frame



GRP Composite Underground Drawpits/Junction Boxes

Electrical Drawpits/Junction Boxes

The electrical drawpit range offers a perfect watertight containment solution. There is a choice of either fixed height or adjustable height systems. The adjustable height system includes a skirt, which allows the frame to be set to grade level more easily during installation. All systems are completed at grade level with a Fibrelite watertight sealed cover.

Fixed Height Systems

Product Code	Internal Dimensions	Description
S1-1450	450 x 450 x 600mm	GRP solid base sump with watertight flat sealed cover and frame
S2-160	600 x 600 x 600mm	GRP solid base sump with watertight flat sealed cover and frame
S3-176	760 x 760 x 600mm	GRP solid base sump with watertight flat sealed cover and frame
S4-176	760 x 760 x 760mm	GRP solid base sump with watertight flat sealed cover and frame
S7SB-276	1200 x 1200 x 1200mm	GRP solid base sump with watertight flat sealed cover and frame
S80-2760	862 x 862 x 675mm	GRP solid base sump with watertight flat sealed cover and frame



Adjustable Height Systems

Product Code	Internal Dimensions	Description
S1-3450-SKIRT	450 x 450 x 600mm	GRP solid base sump and skirt with watertight flat sealed cover and frame
S2-360-SKIRT	600 x 600 x 600mm	GRP solid base sump and skirt with watertight flat sealed cover and frame
S3-376-SKIRT	760 x 760 x 600mm	GRP solid base sump and skirt with watertight flat sealed cover and frame
S4-376-SKIRT	760 x 760 x 760mm	GRP solid base sump and skirt with watertight flat sealed cover and frame



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