GRP Composite Trench Covers



Technical Guide

We've got you covered

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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.







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.















Durability / Test Reports / Accreditations / Conductive Options / Lifting Handles

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

our trench covers independently tested accordance with BS EN 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

Fibrelite 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

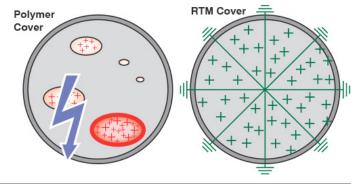




Fully Conductive Options

Potential electrostatic discharging can be eliminated by using the "fully conductive" Fibrelite 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.

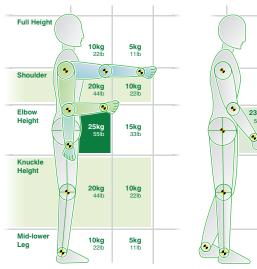
The standard calls out for a maximum value of 1 K Ω /cm², the Fibrelite cover actually achieves a value of 0.0144 K Ω /cm².



Ergonomically Designed Lifting Handle

As well as being lightweight – typically a third of the weight of an equivalent-size cover produced in metal or concrete - the Fibrelite ergonomically designed lifting aid has the added benefit of eliminating the risk of back injury and crushed fingers.





The Health & 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.



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.



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.



Secure

Locks and restraining bolts available for added security.



Skid-Resistance

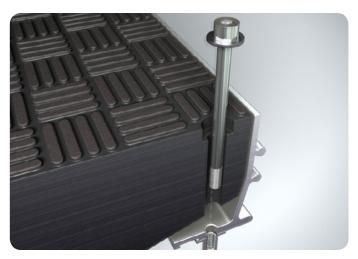
Independent wet and dry tests carried out by Devon CC Materials Laboratory showed that Fibrelite trench covers – even when wet - had anti-slip properties equivalent to a modern high grade road surface which far exceeds health and safety advisory limits



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.







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.

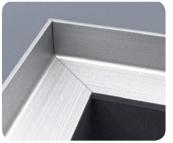


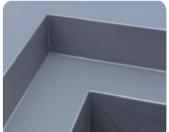






Can be installed onto our specialised frame or existing rebate.







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















Industries Using Fibrelite 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.













Load Ratings from A15 / 15 Kn to F900 / 900 Kn



E600 Super Heavy Duty

For loads 600 kN of up to: 60 tonne

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



C250 Standard Duty

For loads 250 kN of up to: 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: 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 15 kN of up to: 1.5 tonne

For use in areas where only pedestrians have access

F900 Extreme Heavy Duty

For loads 900 kN of up to: 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 400 kN of up to: 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 400 kN of up to: 18 tonne

For use in traffic service areas as per AASHTO standard



Medium Light Duty

For loads 50 kN of up to: 5 tonne

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





Cover Removal Using the FL7 Lifting Handle

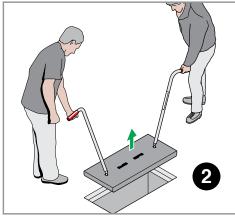
WARNING

The handles must be used at all times to remove/replace the cover. Lifting and replacing the cover is a **two person operation**. Do not insert any levering device between the cover and frame. Do not paint the tread pattern surface as this may compromise the anti-slip properties.

COVER REMOVAL

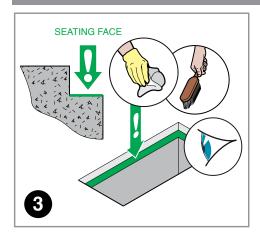


Insert handles at 90° from cover length, turn clockwise.



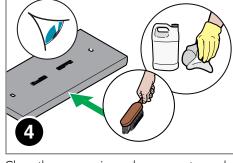
Simultaneously pull the cover upwards.

COVER REPLACEMENT / MAINTENANCE

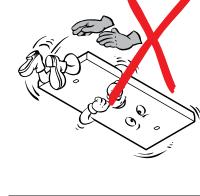


Clear and clean the frame or rebate, particularly the seating face. Inspect for damage.

clockwise.



Clean the cover using only warm water and standard cleaning detergents. Inspect for damage. Frequency depends on use and the working environment but it is recommended that cleaning and inspection are carried out at least once every 6 months. It is recommended that spillages are clean up immediately.



6

Insert handles at 90° from cover length, turn Lower the cover into position.



NOTE

If the covers become damaged due to impact they must be repaired to prevent long-term damage to the internal structure.

Contact Fibrelite's Technical Department



Restrained Cover Removal Using the FL7 Lifting Handle

WARNING

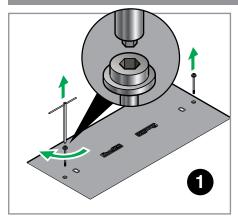
The handles must be used at all times to remove/ replace the cover. Lifting and replacing the cover is a **two person operation**. Do not insert any levering device between the cover and frame. Do not paint the tread pattern surface as this may compromise the anti-slip properties.



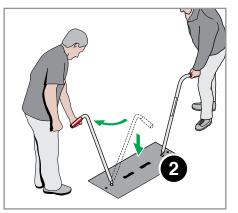




COVER REMOVAL



Using the T-bar Allen Key, remove the 2 No. restraining bolts.

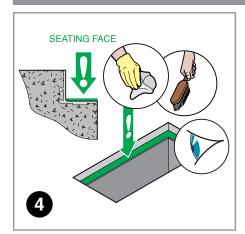


Insert handles at 90° from cover length, turn clockwise.

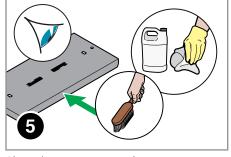


Simultaneously pull the cover upwards.

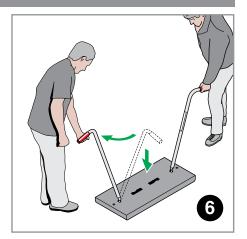
COVER REPLACEMENT / MAINTENANCE



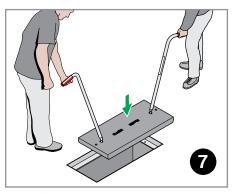
Clear and clean the frame or rebate, particularly the seating face. Inspect for damage.



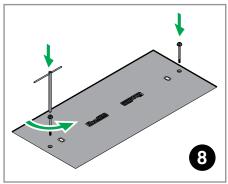
Clean the cover using only warm water and standard cleaning detergents. Inspect for damage. Frequency depends on use and the working environment but it is recommended that cleaning and inspection are carried out at least once every 6 months. It is recommended that spillages are clean up immediately.



Insert handles at 90° from cover length, turn clockwise.



Lower the cover into position.



Using the T-bar, replace the 2 No. restraining bolts.

Cover Load Rating

The covers are badged/Marked B125, which means they comply with the loading requirements of BS EN 124, This standard identifies the point load on the B125 covers as a concentrated point load of 125kN on a footprint of 250 mm diameter test disc so this is used as the wheel footprint/point load.

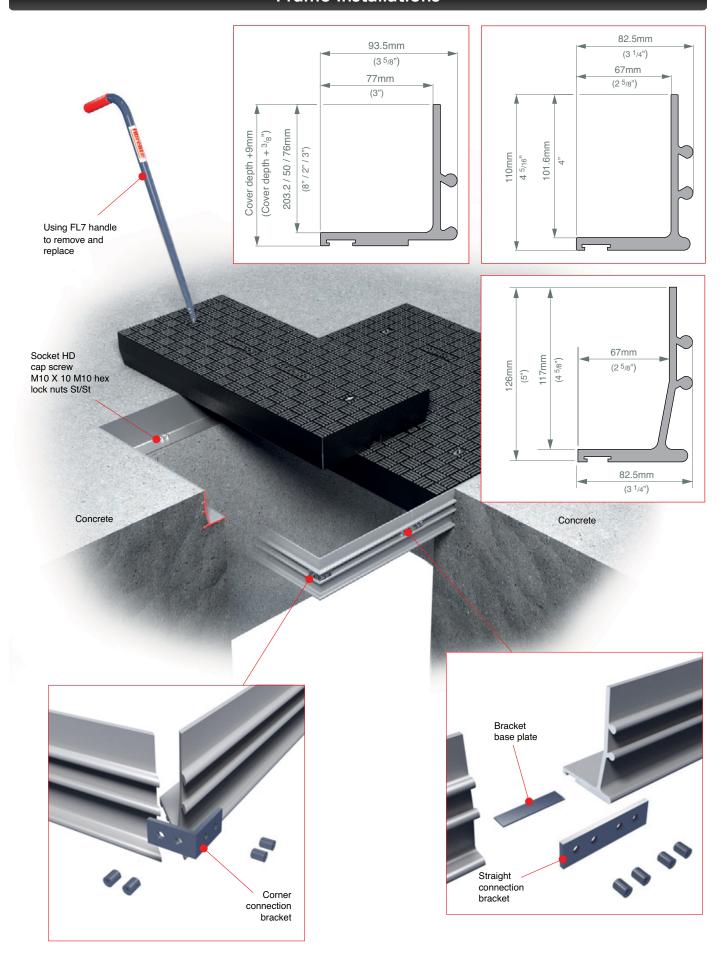
NOTE

If the covers become damaged due to impact they must be repaired to prevent long-term damage to the internal structure.

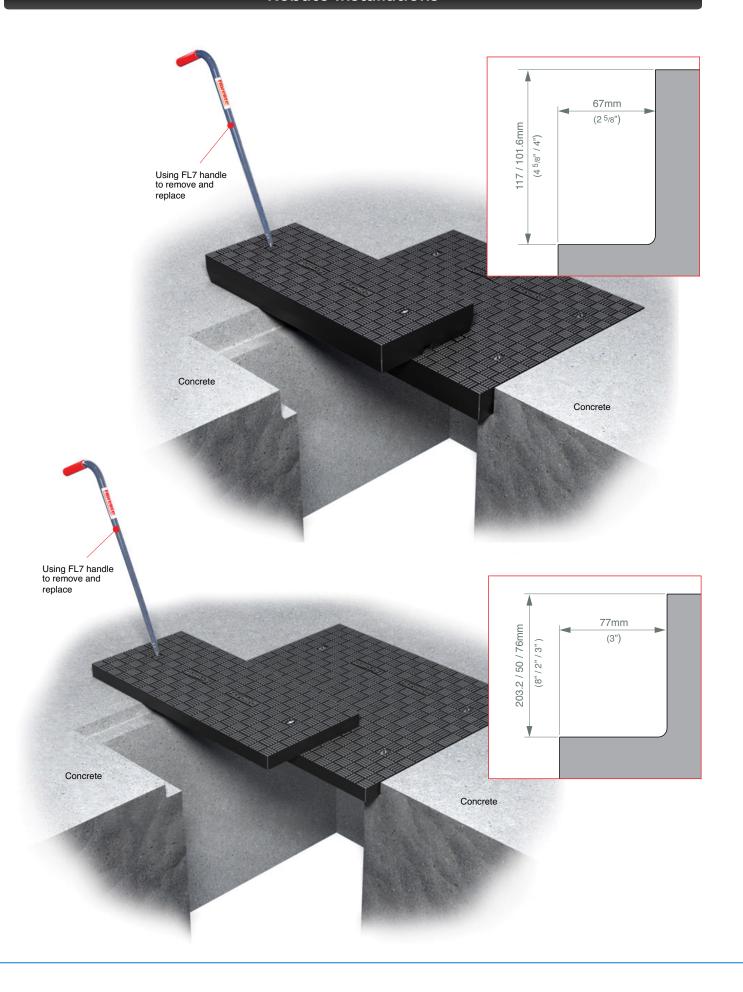
Contact Fibrelite's Technical Department



Frame Installations

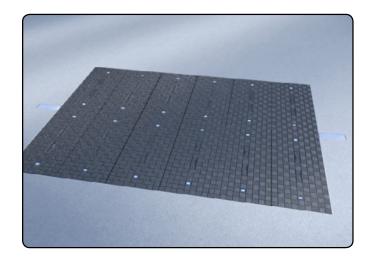


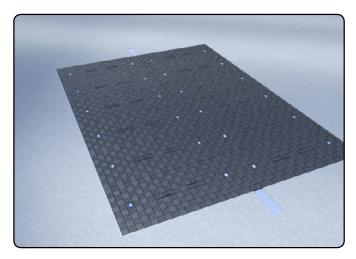
Rebate Installations

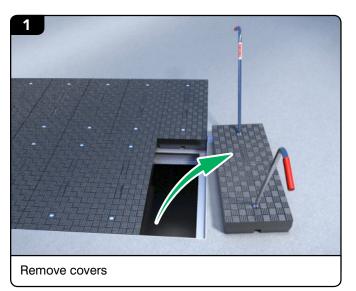


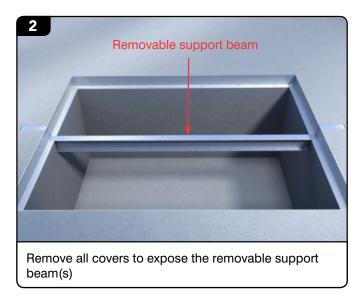


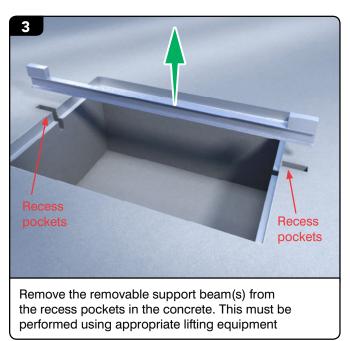
Removable Support Beam Instructions







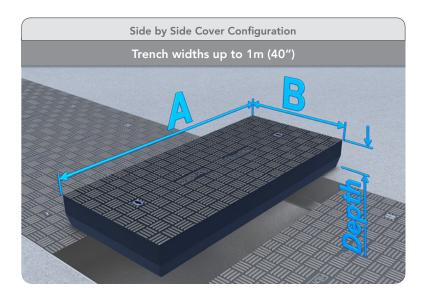




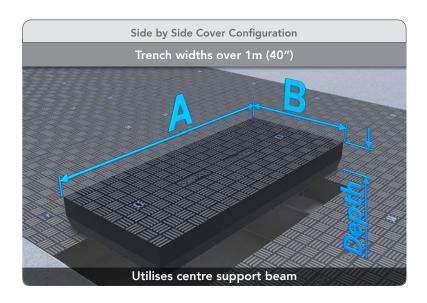


Extreme Heavy Duty F900 Trench Covers

900 kN / 90 Tonne



Dim 'A'	Dim 'B'	Depth	Weight
300 -1000mm (12" - 40")	450mm (18")	117mm (4 ⁵ / ₈ ")	160 kg/M² (33 lbs/ft²)



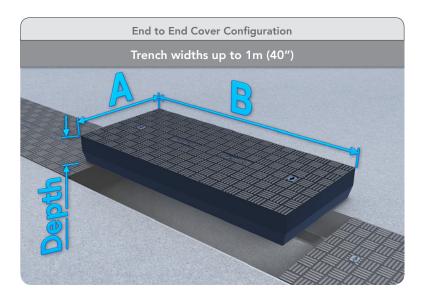
Dim 'A'	Dim 'B'	Depth	Weight
300 -1000mm (12" - 40")	450mm (18")	117mm (4 ⁵ / ₈ ")	160 kg/M² (33 lbs/ft²)

Note: For trench widths over 2m (80"), please contact Fibrelite

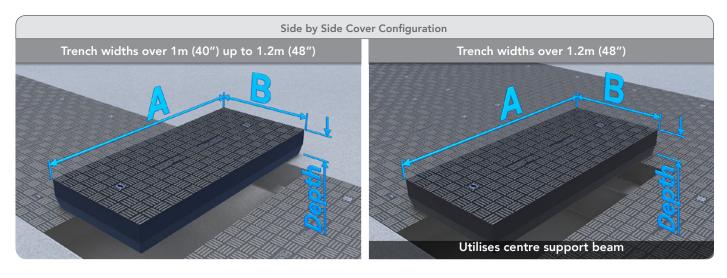


Super Heavy Duty E600 Trench Covers

600 kN / 60 Tonne



Dim 'A'	Dim 'B'	Depth	Weight
300 - 600mm (12" - 24")	450 - 1200mm (18" - 48")	117mm (4 ⁵ / ₈ ")	88 kg/M² (18 lbs/ft²)
650 - 1000mm (14" - 40")	450 - 700mm (18" - 28")	117mm (4 ⁵ / ₈ ")	95 kg/M² (19 lbs/ft²)
300 - 1000mm (12" - 40")	450 - 500mm (18" - 20")	203.2mm (8")	121 kg/M² (25 lbs/ft²)

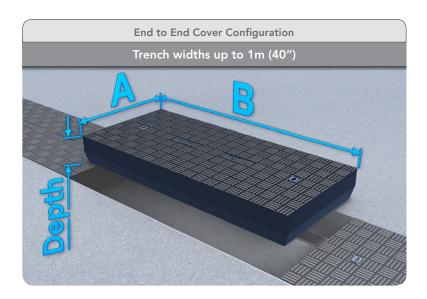


Dim 'A'	Dim 'B'	Depth	Weight
1000 - 1200mm (40" - 48")	450mm (18")	117mm (4 ⁵ / ₈ ")	133 kg/M² (27 lbs/ft²)

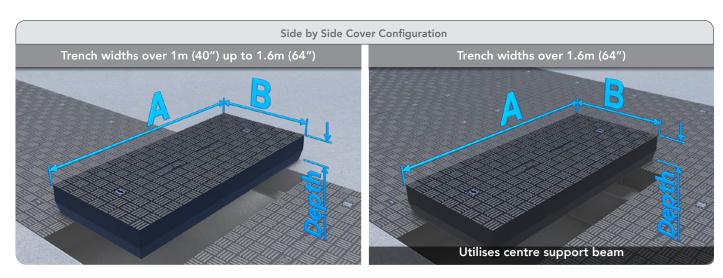


Heavy Duty D400/H25 Trench Covers

400 kN / 40 Tonne



Dim 'A'	Dim 'B'	Depth	Weight
300 - 600mm (12" - 24")	450 - 1600mm (18" - 64")	117mm (4 ⁵ / ₈ ")	65 kg/M² (13 lbs/ft²)
650 - 1000mm (26" - 40")	450 - 1000mm (18" - 40")	117mm (4 ⁵ / ₈ ")	65 kg/M² (13 lbs/ft²)
300 - 1000mm (12" - 40")	450 - 600mm (18" - 24")	203.2 mm (8")	96 kg/M² (20 lbs/ft²)

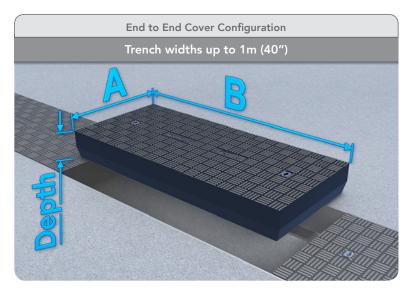


Dim 'A'	Dim 'B'	Depth	Weight
1000 - 1200mm (40" - 48")	450 - 600mm (18" - 24")	117mm (4 ⁵ / ₈ ")	85 kg/M² (17 lbs/ft²)
1250 - 1350mm (50" - 54")	450mm (18")	117mm (4 ⁵ / ₈ ")	100 kg/M² (20 lbs/ft²)
1400 - 1600mm (56" - 64")	450mm (18")	117mm (4 ⁵ / ₈ ")	133 kg/M² (27 lbs/ft²)

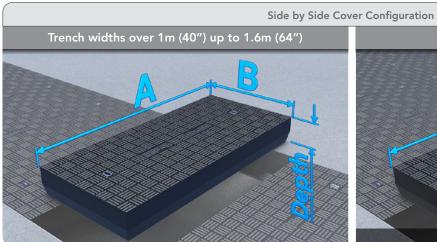


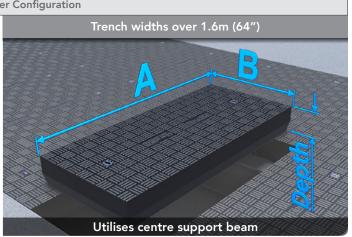
Standard Duty C250 Trench Covers

250 kN / 25 Tonne



Dim 'A'	Dim 'B'	Depth	Weight
300 - 700mm (12" - 28")	450 - 1800mm (18" - 72")	76mm (3")	48 kg/M² (10 lbs/ft²)
700 - 1000mm (28" - 40")	900 - 1200mm (36" - 48")	76mm (3")	48 kg/M² (10 lbs/ft²)
300 - 1000mm (12" - 40")	600 - 1200mm (24" - 48")	101.6mm (4")	46 kg/M² (9 lbs/ft²)
300 - 500mm (12" - 20")	450 - 1800mm (18" - 72")	117mm (4 ⁵ / ₈ ")	60 kg/M² (12 lbs/ft²)
500 - 1000mm (20" - 40")	450 - 1000mm (18" - 40")	117mm (4 ⁵ / ₈ ")	60 kg/M² (12 lbs/ft²)
300 - 1000mm (12" - 40")	450 - 700mm (18" - 28")	203.2mm (8")	83 kg/M² (17 lbs/ft²)



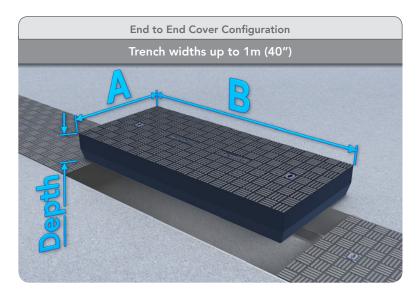


Dim 'A'	Dim 'B'	Depth	Weight
1000 - 1200mm (40" - 48")	450 - 800mm (18" - 32")	117mm (4 ⁵ / ₈ ")	60 kg/M² (12 lbs/ft²)
1200 - 1400mm (48" - 56")	450 - 700mm (18" - 28")	117mm (4 ⁵ / ₈ ")	67 kg/M² (14 lbs/ft²)
1400 - 1600mm (56" - 64")	450 - 500mm (18" - 20")	117mm (4 ⁵ / ₈ ")	75 kg/M² (15 lbs/ft²)
1000 - 1200mm (40" - 48")	450 - 600mm (18" - 24")	203.2mm (8")	83 kg/M² (17 lbs/ft²)
1200 - 1400mm (48" - 56")	450 - 500mm (18" - 20")	203.2mm (8")	83 kg/M² (17 lbs/ft²)

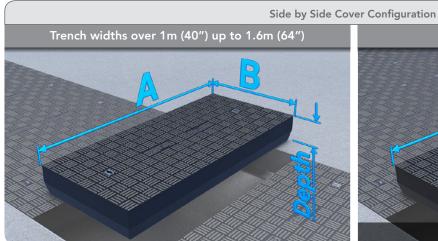


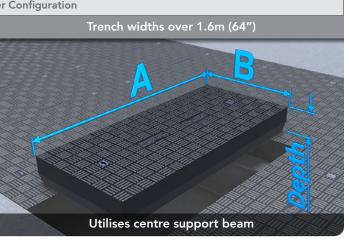
Standard Duty HS20 Trench Covers

180 kN / 18 Tonne



Dim 'A'	Dim 'B'	Depth	Weight
300 - 800mm (12" - 32")	450 - 1800mm (18" - 72")	76mm (3")	44 kg/M² (9 lbs/ft²)
300 - 1000mm (12" - 40")	450 - 1800mm (18" - 72")	101.6mm (4")	40 kg/M² (8 lbs/ft²)
300 - 1000mm (12" - 40")	450 - 1800mm (18" - 72")	117mm (4 ⁵ / ₈ ")	44 kg/M² (9 lbs/ft²)
300 - 1000mm (12" - 40")	450 - 900mm (18" - 36")	203.2mm (8")	61 kg/M² (12 lbs/ft²)
300 - 800mm (12" - 32")	450 - 1200mm (18" - 48")	203.2mm (8")	61 kg/M² (12 lbs/ft²)
300 - 600mm (12" - 24")	450 - 1600mm (18" - 64")	203.2mm (8")	61 kg/M² (12 lbs/ft²)



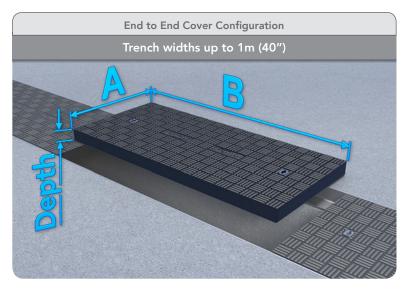


Dim 'A'	Dim 'B'	Depth	Weight
1000 - 1200mm (40" - 48")	450 - 900mm (18" - 36")	101.6mm (4")	55 kg/M² (11 lbs/ft²)
1000 - 1400mm (40" - 56")	450 - 1000mm (18" - 40")	117mm (4 ⁵ / ₈ ")	52 kg/M² (11 lbs/ft²)
1400 - 1600mm (56" - 64")	700 - 1000mm (28" - 40")	117mm (4 ⁵ / ₈ ")	52 kg/M² (11 lbs/ft²)
1000 - 1200mm (40" - 48")	450 - 600mm (18" - 24")	203.2mm (8")	61 kg/M² (12 lbs/ft²)
1200 - 1600mm (48" - 64")	450 - 800mm (18" - 32")	203.2mm (8")	61 kg/M² (12 lbs/ft²)

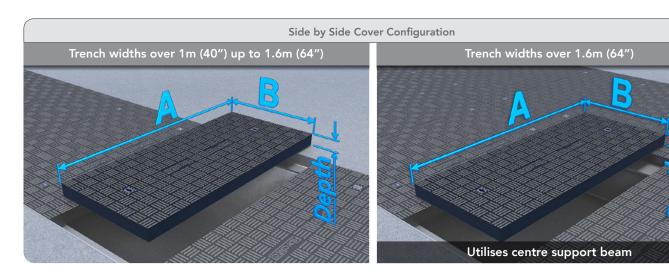


Light Duty B125 Trench Covers

125 kN / 12.5 Tonne



Dim 'A'	Dim 'B'	Depth	Weight
300 - 800mm (12" - 32")	450 - 1800mm (18" - 72")	50mm (2")	35 kg/M² (7 lbs/ft²)
300 - 1000mm (12" - 40")	450 - 1800mm (18" - 72")	76mm (3")	42 kg/M² (9 lbs/ft²)
300 - 1000mm (12" - 40")	450 - 1600mm (18" - 64")	101.6mm (4")	42 kg/M² (9 lbs/ft²)
300 - 800mm (12" - 32")	450 - 1600mm (18" - 64")	117mm (4 ⁵ / ₈ ")	43 kg/M² (9 lbs/ft²)
800 - 1000mm (32" - 40")	450 - 1400mm (18" - 56")	117mm (4 ⁵ / ₈ ")	43 kg/M² (9 lbs/ft²)
300 - 1000mm (12" - 40")	450 - 900mm (18" - 36")	203.2mm (8")	61 kg/M² (12 lbs/ft²)

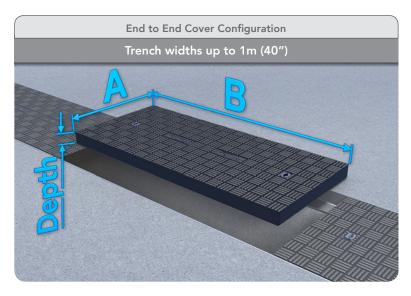


Dim 'A'	Dim 'B'	Depth	Weight
1000 - 1200mm (40" - 48")	450 - 800mm (18" - 32")	76mm (3")	52 kg/M² (11 lbs/ft²)
1000 - 1500mm (40" - 60")	450 - 800mm (18" - 32")	101.6mm (4")	48 kg/M² (10 lbs/ft²)
1000 - 1600mm (40" - 64")	450 - 700mm (18" - 28")	117mm (4 ⁵ / ₈ ")	53 kg/M² (11 lbs/ft²)
1600 - 1800mm (40" - 72")	450 - 600mm (18" - 24")	117mm (4 ⁵ / ₈ ")	53 kg/M² (11 lbs/ft²)
1000 - 1600mm (40" - 64")	450 - 600mm (18" - 24")	203.2mm (8")	61 kg/M² (12 lbs/ft²)

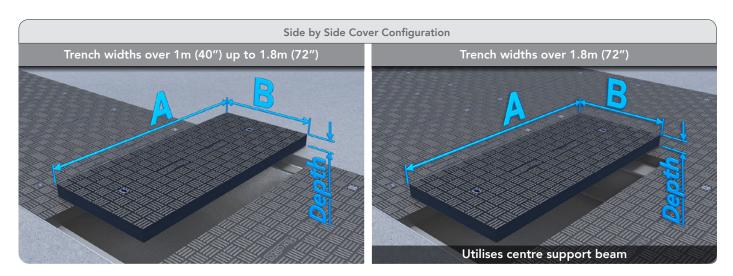


Medium Light Duty Trench Covers

50 kN / 5 Tonne



Dim 'A'	Dim 'B'	Depth	Weight
300 - 1000mm (12" - 40")	450 - 1800mm (18" - 72")	50mm (2")	26 kg/M² (5 lbs/ft²)
300 - 1000mm (12" - 40")	450 - 1800mm (18" - 72")	76mm (3")	30 kg/M² (6 lbs/ft²)
300 - 1000mm (12" - 40")	450 - 1800mm (18" - 72")	101.6mm (4")	32 kg/M² (7 lbs/ft²)
300 - 1000mm (12" - 40")	450 - 1800mm (18" - 72")	117mm (4 ⁵ / ₈ ")	37 kg/M² (8 lbs/ft²)
300 - 1000mm (12" - 40")	450 - 1200mm (18" - 48")	203.2mm (8")	51 kg/M² (10 lbs/ft²)

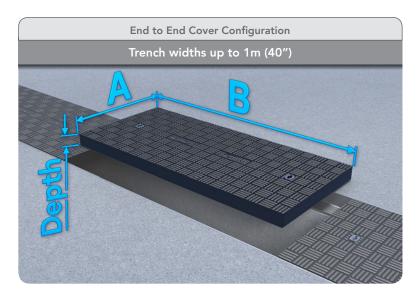


Dim 'A'	Dim 'B'	Depth	Weight
1000 - 1300mm (40" - 52")	450 - 1000mm (18" - 40")	50mm (2")	37 kg/M² (8 lbs/ft²)
1300 - 1500mm (52" - 60")	600 - 800mm (24" - 32")	50mm (2")	53 kg/M² (11 lbs/ft²)
1000 - 1600mm (40" - 64")	450 - 1000mm (18" - 40")	76mm (3")	33 kg/M² (7 lbs/ft²)
1000 - 1800mm (40" - 72")	450 - 1000mm (18" - 40")	101.6mm (4")	32 kg/M² (6.5 lbs/ft²)
1000 - 1800mm (40" - 72")	450 - 1000mm (18" - 40")	117mm (4 ⁵ / ₈ ")	35 kg/M² (7 lbs/ft²)
1000 - 1800mm (40" - 72")	450 - 600mm (18" - 24")	203.2mm (8")	51 kg/M² (10 lbs/ft²)

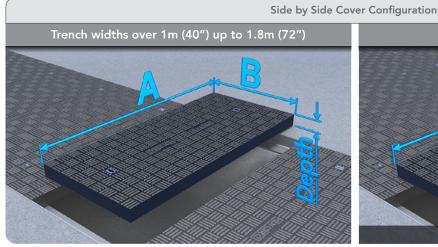


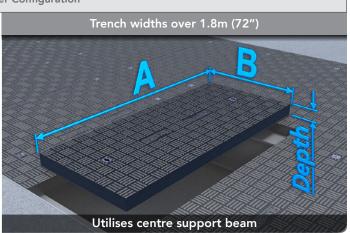
Super Light Duty A15 Trench Covers

15 kN / 1.5 Tonne



Dim 'A'	Dim 'B'	Depth	Weight
300 - 1000mm (12" - 40")	600 - 1800mm (24" - 72")	50mm (2")	24 kg/M² (5 lbs/ft²)





Dim 'A'	Dim 'B'	Depth	Weight
1000 - 1800mm (40" - 72")	300 - 1000mm (12" - 40")	50mm (2")	24 kg/M² (5 lbs/ft²)

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