

GRP Composite Trench Covers



Technical Guide

#coveringtheworld

FIBRELITE 

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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.



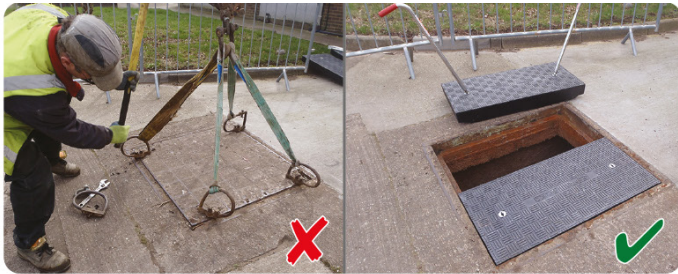
F900 Fibrelite covers installed at the UK's largest port



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 in the UK, USA and Malaysia.



Durability

Designed as a 'fit-and-forget' product, our GRP composite 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.

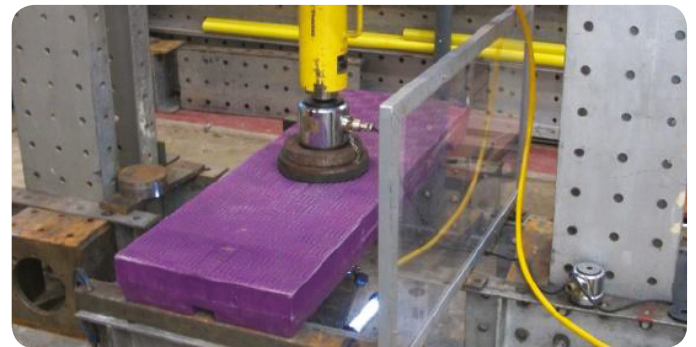


Accreditations

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:

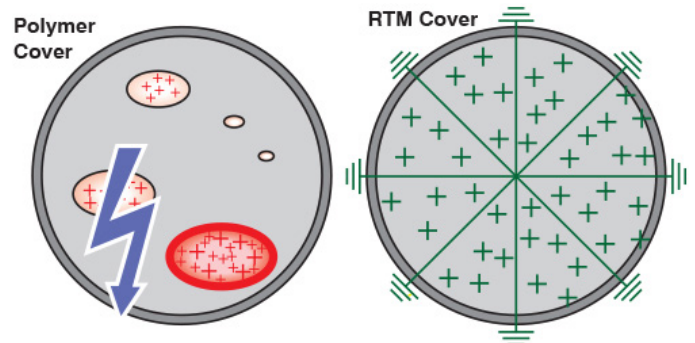
- exceed H20 and H25 load rating standards
- are BS EN 124 compliant
- are BSI Kitemark approved products



Fully Conductive Options

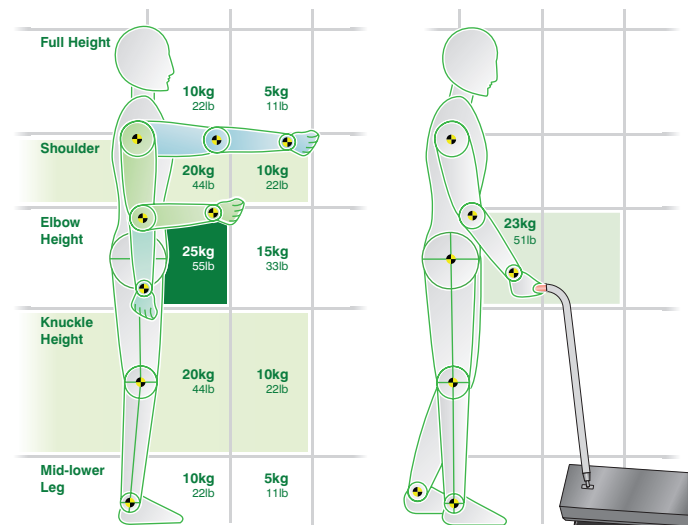
Potential electrostatic discharging can be eliminated by using the "fully conductive" Fibrelite cover which uses a Metalised fibre within the moulding process to achieve electrical continuity across the entire surface of the cover. Such covers exceed the surface resistivity requirements of PAS26.

The standard calls out for a maximum value of 1 KΩ/cm², the Fibrelite cover actually achieves a value of 0.0144 KΩ/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 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 Resistant / Skid and Heat Resistance / Security

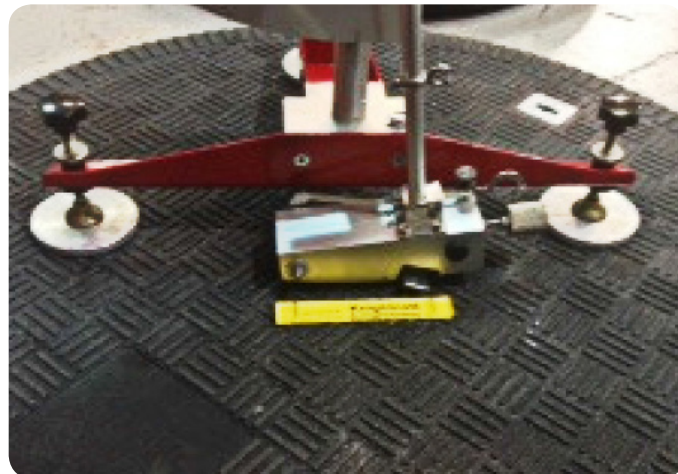
Corrosion Resistance

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.



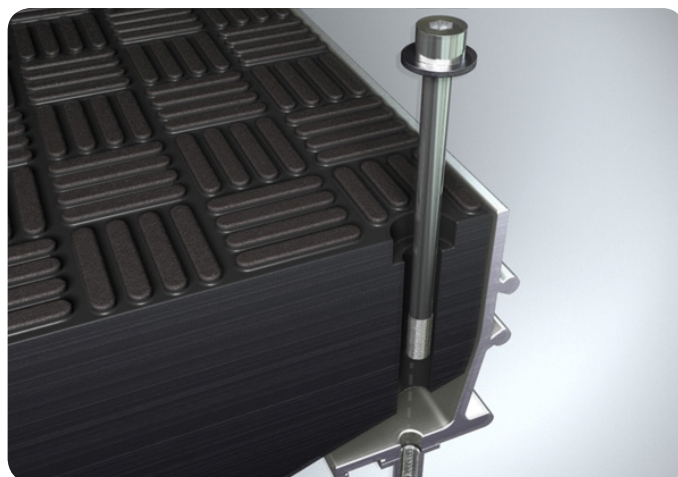
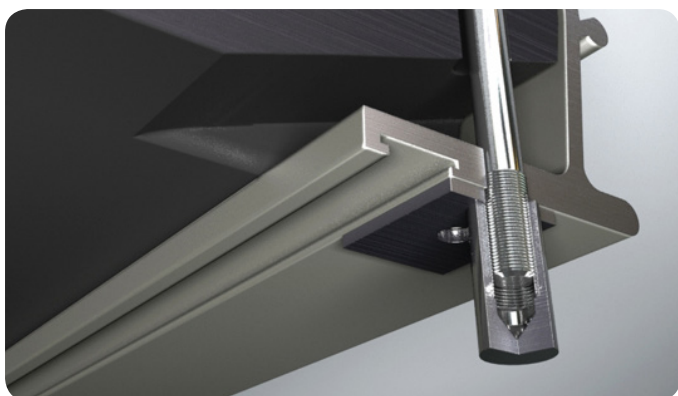
No Risk of Theft

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.



Coloured Covers / Frame or Rebate / Custom Moulded

Coloured Covers for Easy Identification

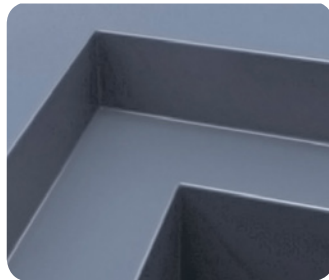
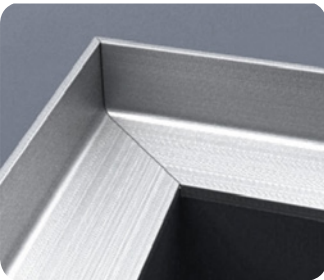
Fibrelite composite covers can also be moulded in virtually any colour or colour-combination and as the pigment is added into the resin during manufacture, there are no problems with the colour scratching or fading over time.

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.

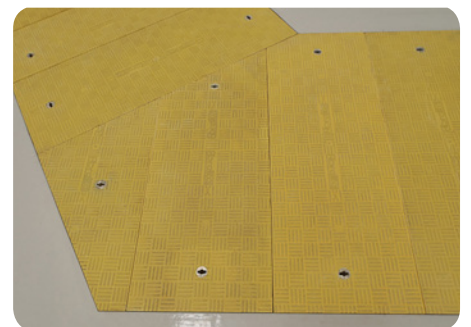
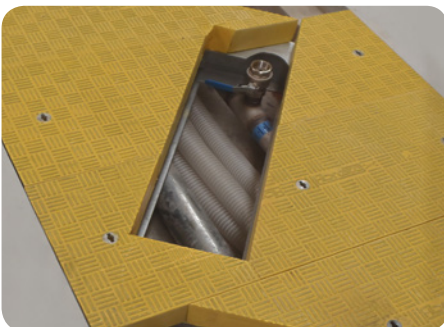


Configurations

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



Industries Using Fibrelite Covers

Commercial



Telecoms
Data Centres
Financial Centres
Offices

Education



Universities
Schools
Colleges
Training Facilities

Energy



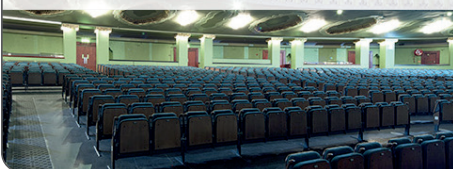
Power Stations
Electric Sub-Stations
Gas Sub-Stations
Steam
Geothermal
Mining

Food & Drink



Processing
Storage
Grease Pits
Vineyards

Leisure



Arenas
Theatres
Stadiums
Marinas
Restaurants
Sport Centres
Zoos
Museums

Manufacturing



Electrical
Mechanical

Military



Pharmaceutical



Public Sector



Roadways
Hospitals
Fire Service
Police Stations
Prisons
Court Houses
Municipalities

Retail



Markets
Shopping Centres
Boutiques
Auction Houses

Retail Fuelling



Space Industry



Transportation



Docks
Ports
Canals
Rail
Airports
Fleet Fuelling
Bus Depots

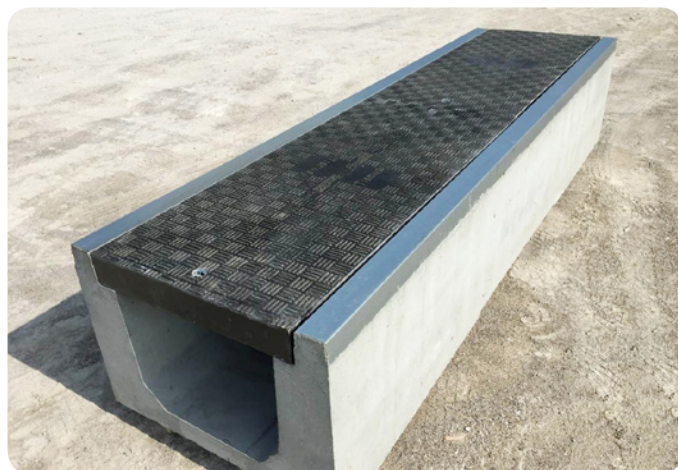
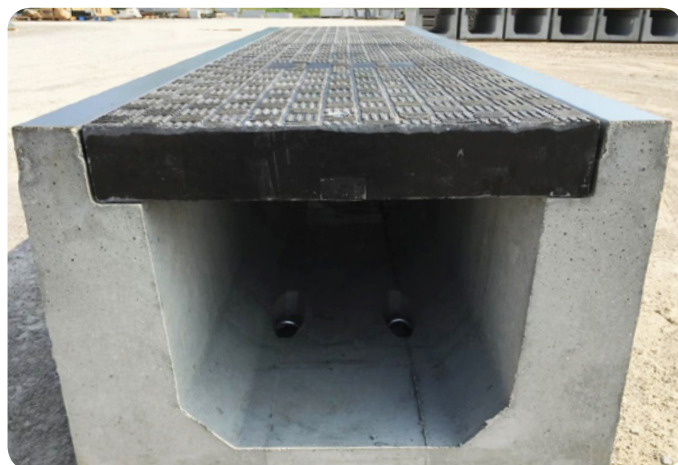
Water



Drainage Solutions
Treatment Plants
Supply
Storage
Springs
Flood Alleviation
Transportation

Pre-Cast Concrete Trenches

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



Load Ratings from 3,400lb / 1.5 Tonnes to 202,000lb / 90 Tonnes



For loads of up to
135,000lb / 60 tonnes

Super Heavy Duty (E600)
For use in areas where high wheel loads are imposed such as loading areas

Page 14



For loads of up to
56,000lb / 25 tonnes

Standard Duty (C250)
For use in car parking lots, gas stations, industrial sites and areas with slow moving traffic

Page 16



For loads of up to
28,000lb / 12.5 tonnes

Light Duty (B125)
For use in car parking lots and pedestrian areas where only occasional vehicular access is likely

Page 18



For loads of up to
3,400lb / 1.5 tonnes

Super Light Duty (A15)
For use in areas where only pedestrians have access

Page 20

For loads of up to
202,000lb / 90 tonnes

Extreme Heavy Dty (F900)
For use in areas where extremely high wheel loads are imposed such as docks



Page 13

For loads of up to
90,000lb / 40 tonnes

Heavy Duty (HS25/D400)
For use in areas with frequent bus or heavy truck traffic, including carriage ways, hard shoulders and pedestrian areas



Page 15

For loads of up to
40,000lb / 18 tonnes

Standard Duty US (HS20)
for use in traffic service areas as per AASHTO standard



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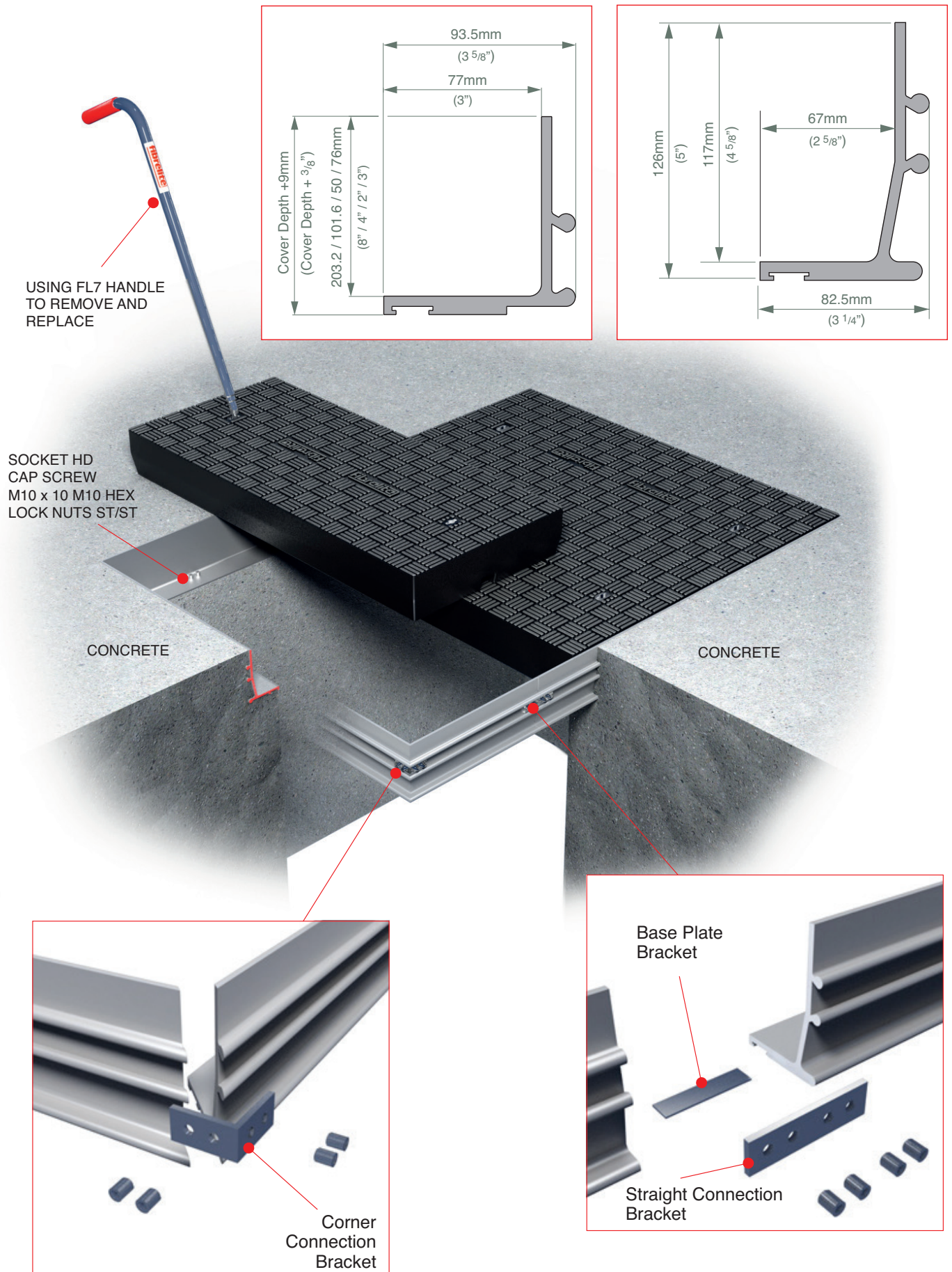
For loads of up to
11,200lb / 5 tonnes

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

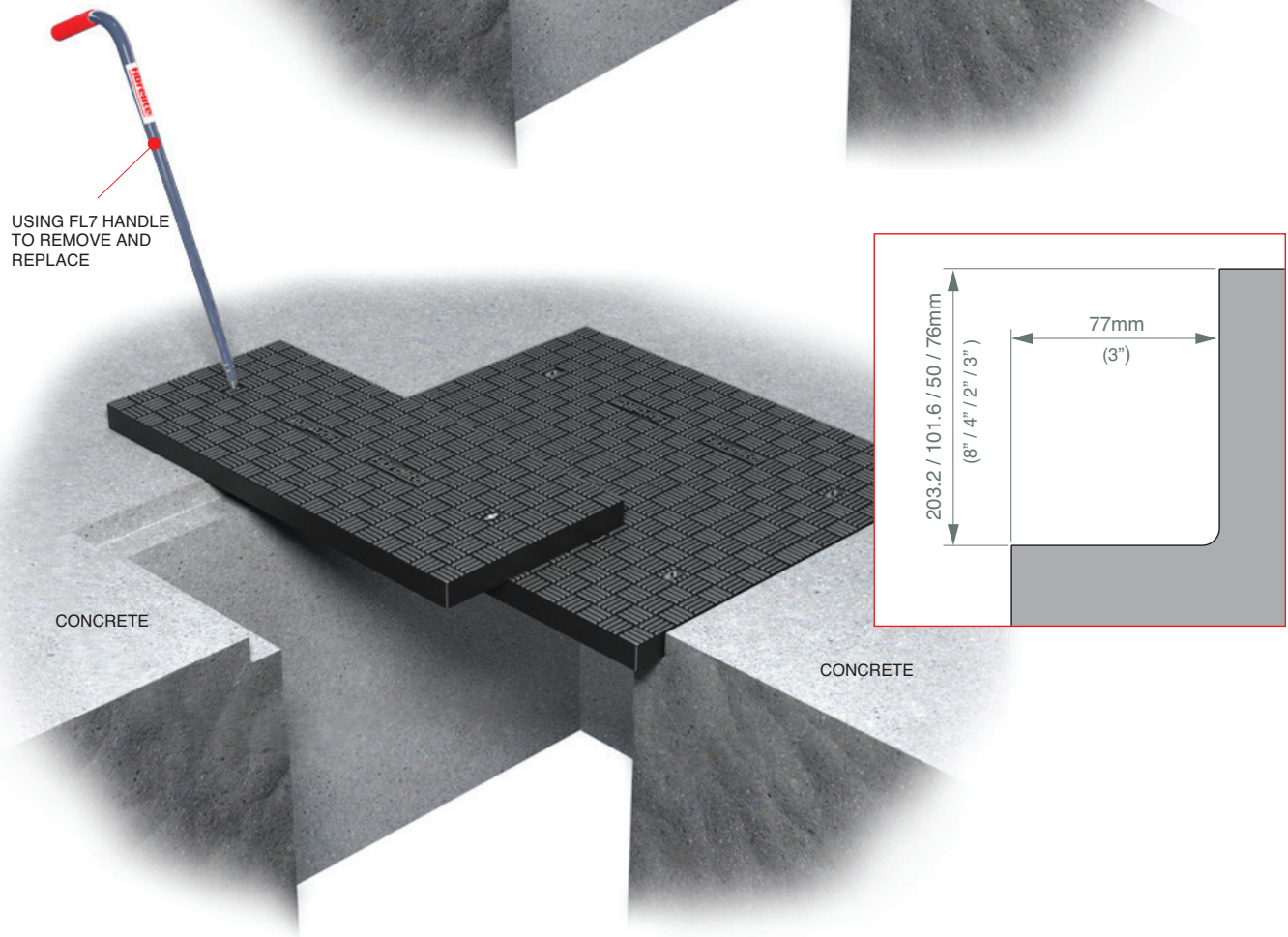
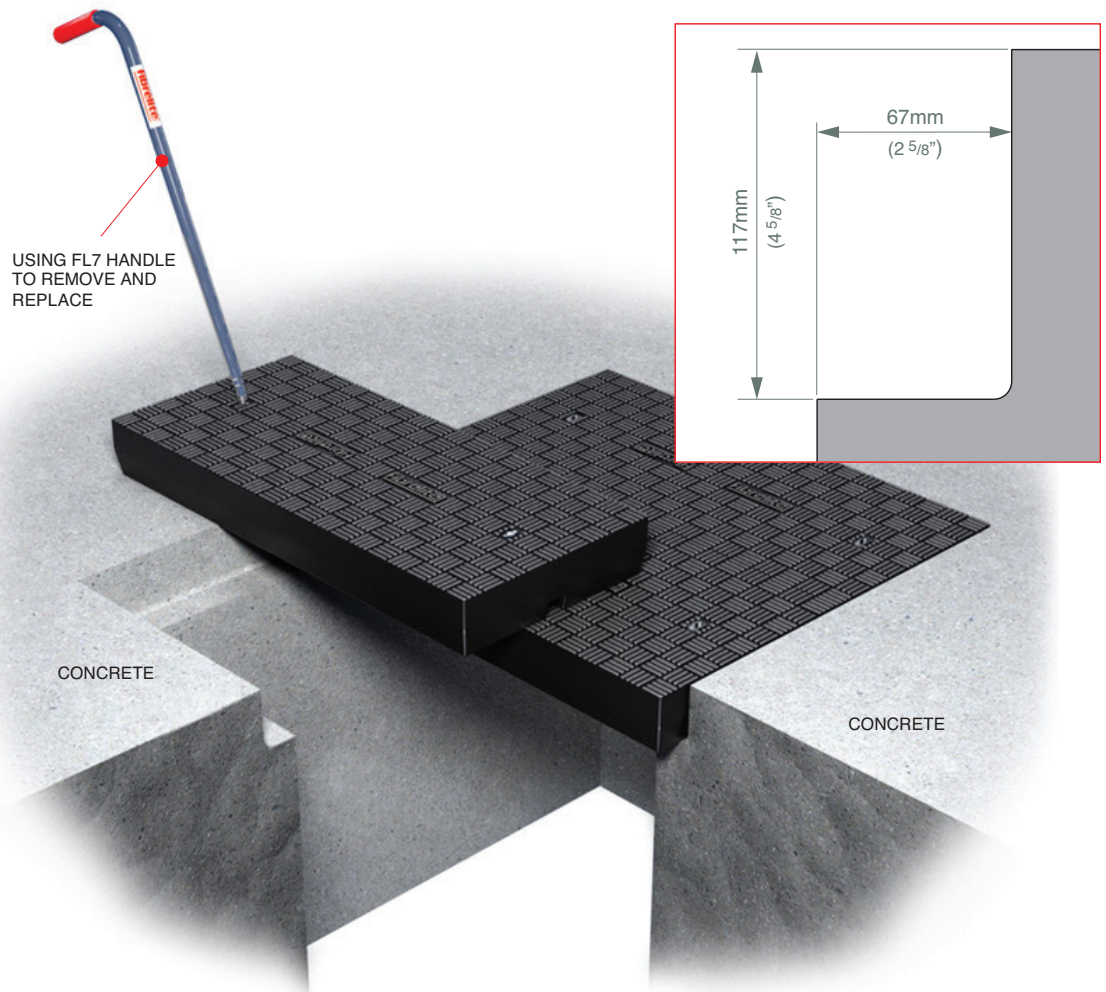


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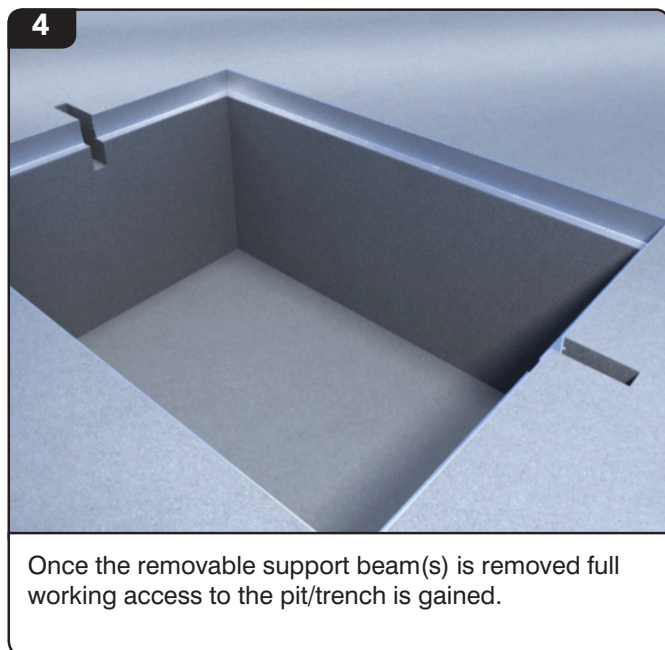
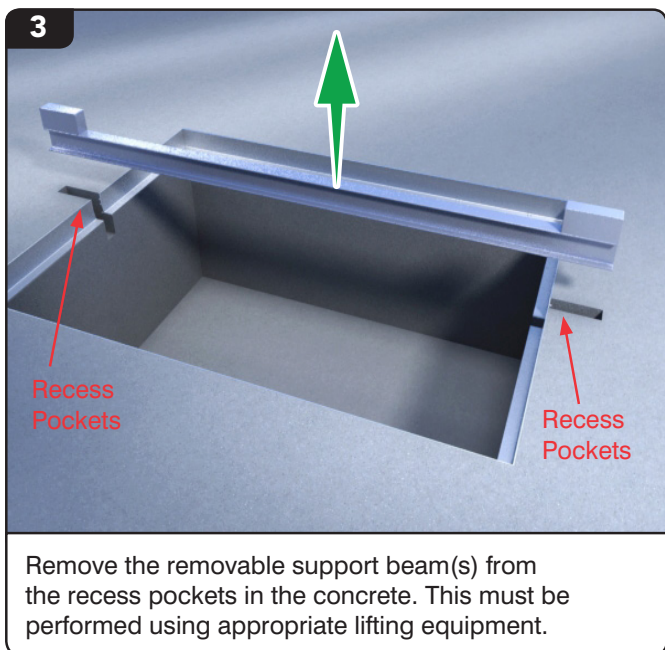
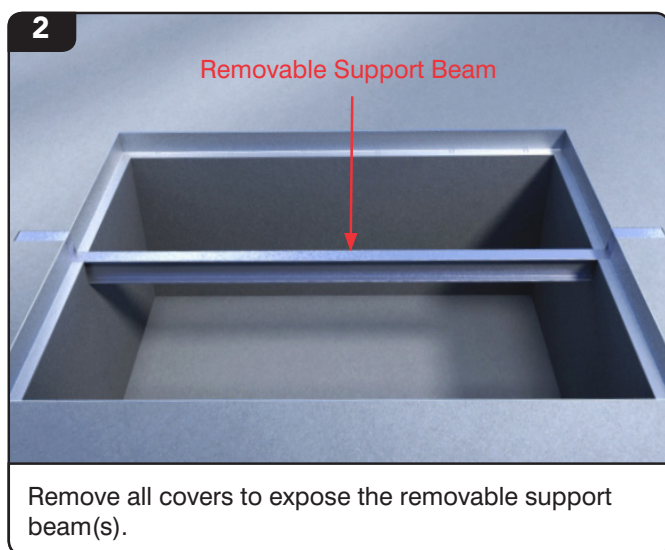
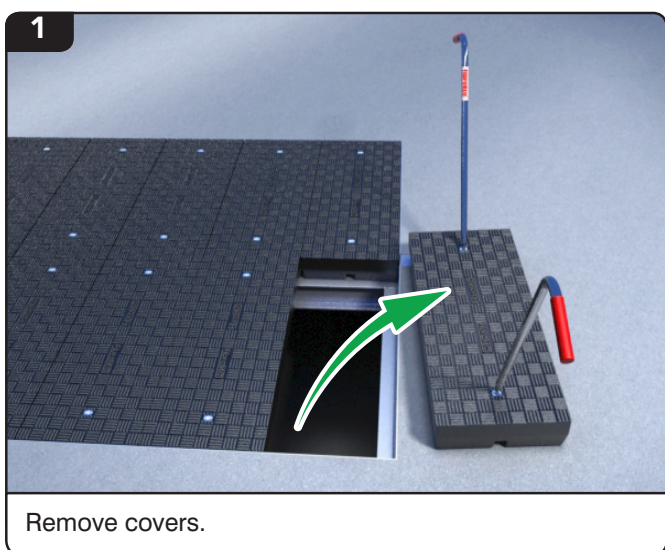
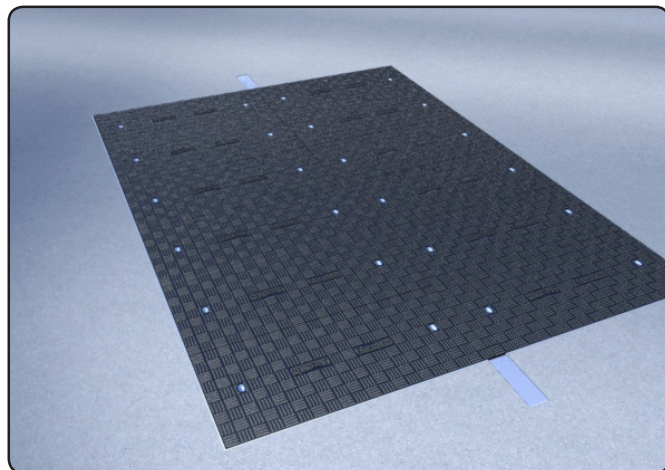
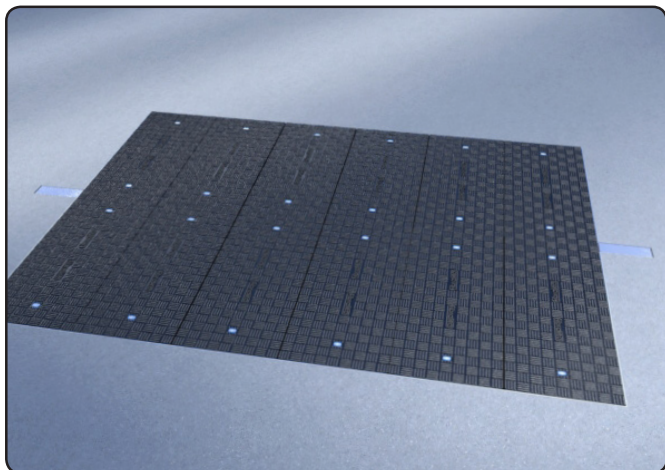
Frame Installations



Rebate Installations

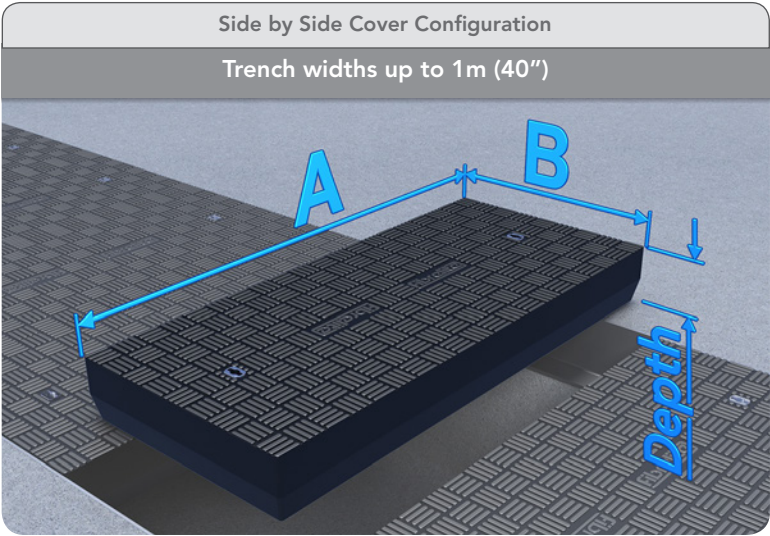


Removable Support Beam Instructions

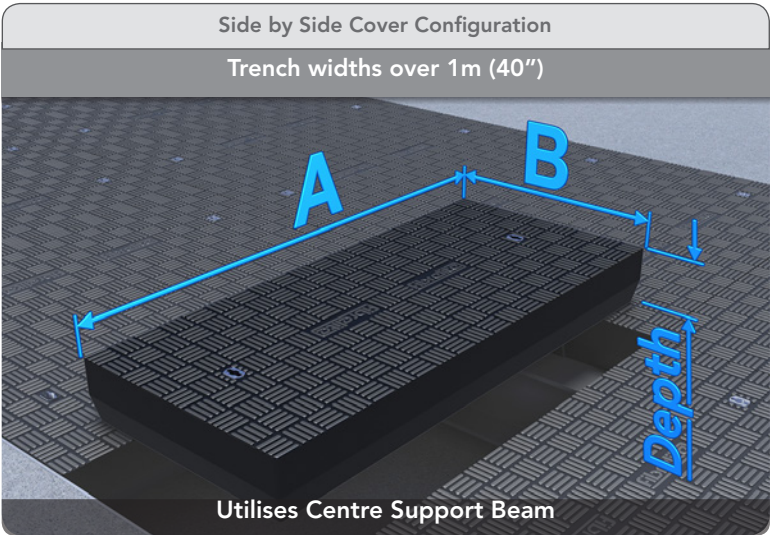


Extreme Heavy Duty F900 Trench Covers

202,000lb / 90 Tonnes



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

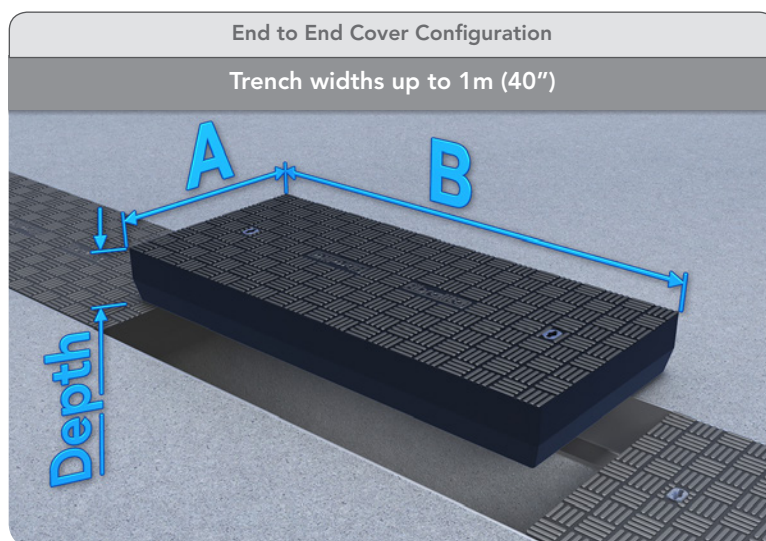


Dim 'A'	Dim 'B'	Depth	Weight
300 -1000mm (12" - 40")	450mm (18")	117mm (4 5/8")	160 kg/M² (33 lbs/ft²)

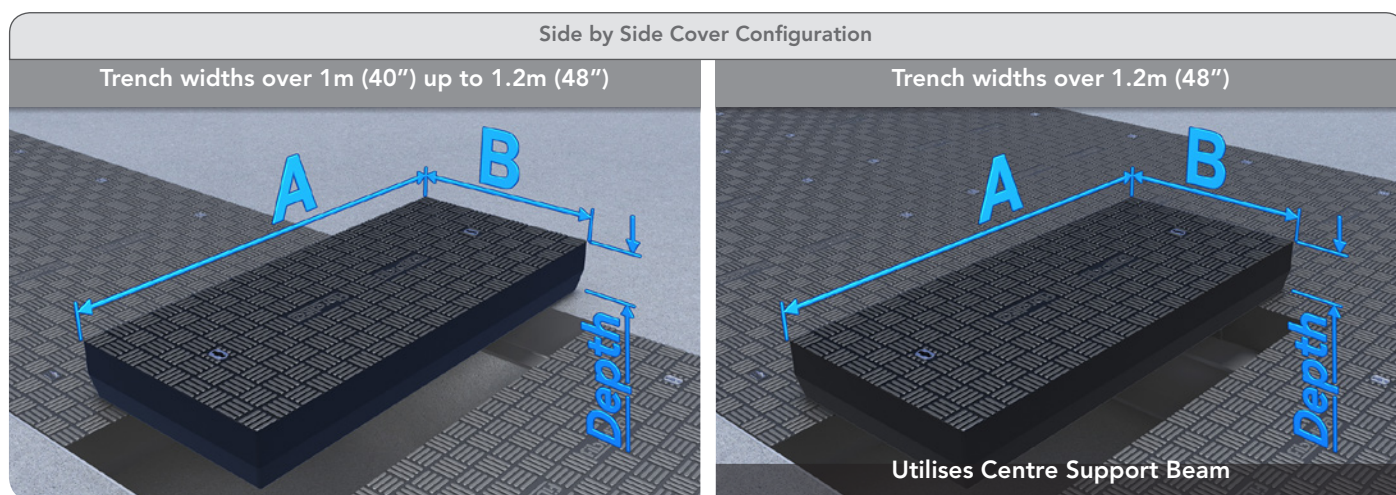
Note: For trench widths over 2m (80"), please contact Fibrelite

Super Heavy Duty E600 Trench Covers

135,000lb / 60 Tonnes



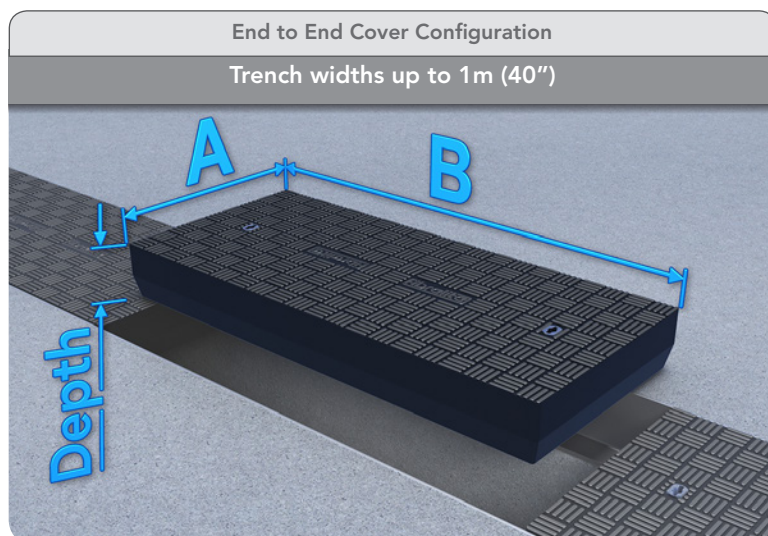
Dim 'A'	Dim 'B'	Depth	Weight
300 - 600mm (12" - 24")	450 - 1200mm (18" - 48")	117mm (4 ⁵ / ₈ ")	88 kg/M ² (18 lbs/ft ²)
650 - 1000mm (14" - 40")	450 - 700mm (18" - 28")	117mm (4 ⁵ / ₈ ")	95 kg/M ² (19 lbs/ft ²)
300 - 1000mm (12" - 40")	450 - 500mm (18" - 20")	203.2mm (8")	121 kg/M ² (25 lbs/ft ²)



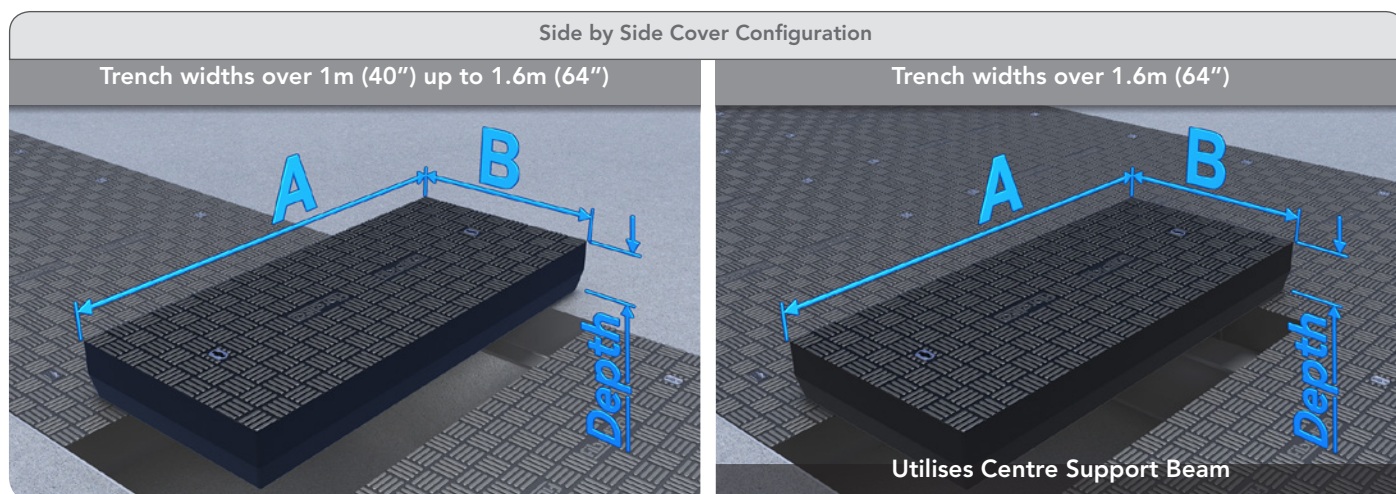
Dim 'A'	Dim 'B'	Depth	Weight
1000 - 1200mm (40" - 48")	450mm (18")	117mm (4 ⁵ / ₈ ")	133 kg/M ² (27 lbs/ft ²)

Heavy Duty D400/H25 Trench Covers

90,000lb / 40 Tonnes



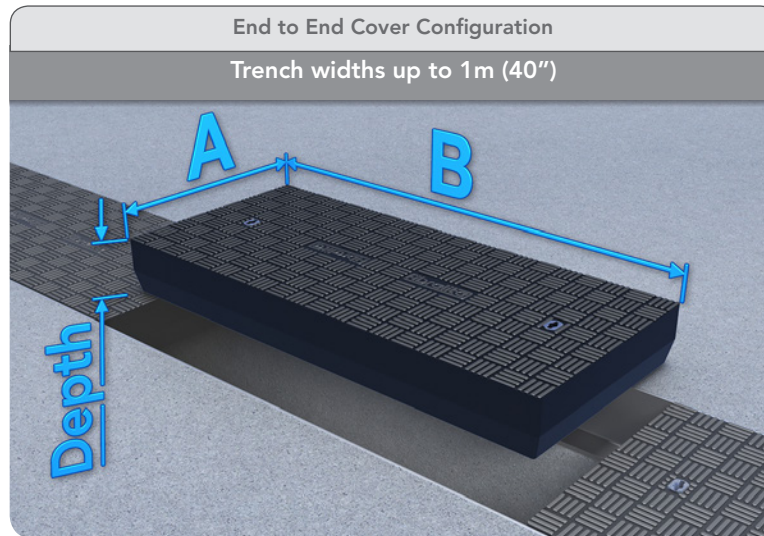
Dim 'A'	Dim 'B'	Depth	Weight
300 - 600mm (12" - 24")	450 - 1600mm (18" - 64")	117mm (4 ⁵ / ₈ ")	65 kg/M ² (13 lbs/ft ²)
650 - 1000mm (26" - 40")	450 - 1000mm (18" - 40")	117mm (4 ⁵ / ₈ ")	65 kg/M ² (13 lbs/ft ²)
300 - 1000mm (12" - 40")	450 - 600mm (18" - 24")	203.2 mm (8")	96 kg/M ² (20 lbs/ft ²)



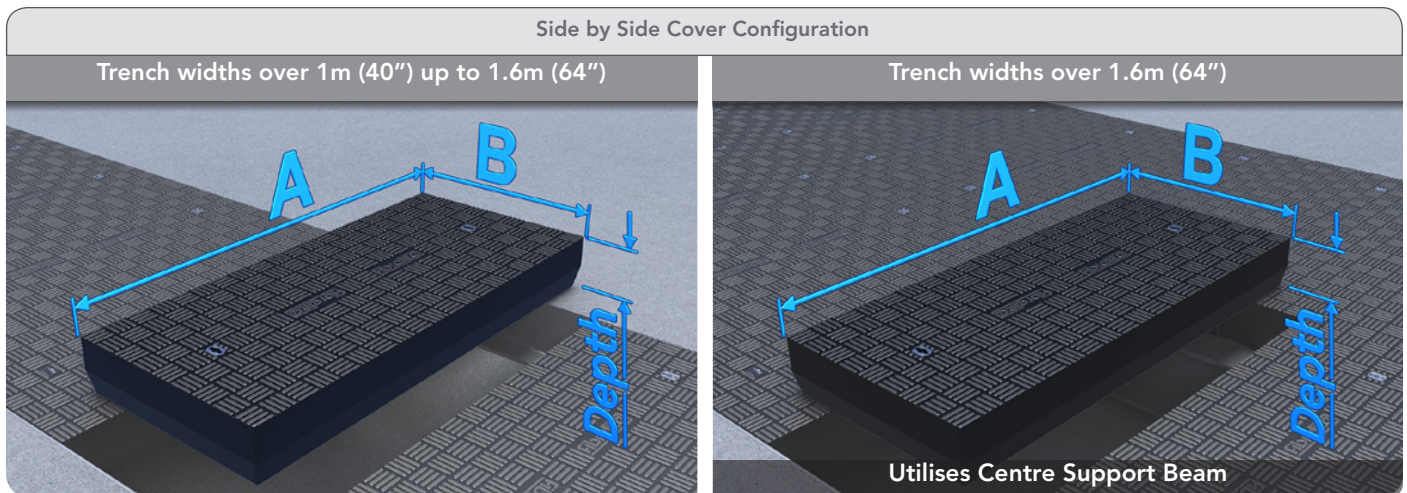
Dim 'A'	Dim 'B'	Depth	Weight
1000 - 1200mm (40" - 48")	450 - 600mm (18" - 24")	117mm (4 ⁵ / ₈ ")	85 kg/M ² (17 lbs/ft ²)
1250 - 1350mm (50" - 54")	450mm (18")	117mm (4 ⁵ / ₈ ")	100 kg/M ² (20 lbs/ft ²)
1400 - 1600mm (56" - 64")	450mm (18")	117mm (4 ⁵ / ₈ ")	133 kg/M ² (27 lbs/ft ²)

Standard Duty C250 Trench Covers

56,000lb / 25 Tonnes



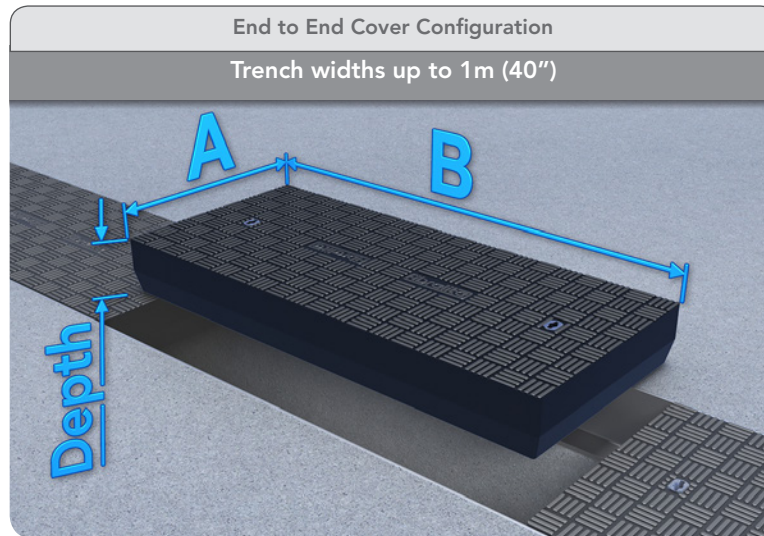
Dim 'A'	Dim 'B'	Depth	Weight
300 - 700mm (12" - 28")	450 - 1800mm (18" - 72")	76mm (3")	48 kg/M ² (10 lbs/ft ²)
700 - 1000mm (28" - 40")	900 - 1200mm (36" - 48")	76mm (3")	48 kg/M ² (10 lbs/ft ²)
300 - 1000mm (12" - 40")	600 - 1200mm (24" - 48")	101.6mm (4")	46 kg/M ² (9 lbs/ft ²)
300 - 500mm (12" - 20")	450 - 1800mm (18" - 72")	117mm (4 5/8")	60 kg/M ² (12 lbs/ft ²)
500 - 1000mm (20" - 40")	450 - 1000mm (18" - 40")	117mm (4 5/8")	60 kg/M ² (12 lbs/ft ²)
300 - 1000mm (12" - 40")	450 - 700mm (18" - 28")	203.2mm (8")	83 kg/M ² (17 lbs/ft ²)



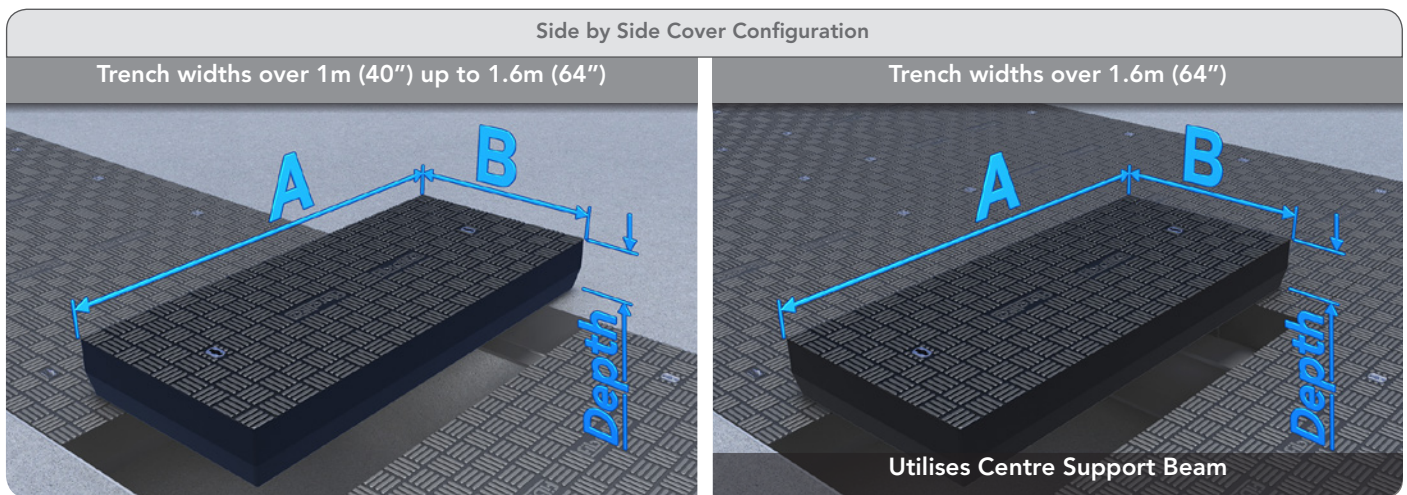
Dim 'A'	Dim 'B'	Depth	Weight
1000 - 1200mm (40" - 48")	450 - 800mm (18" - 32")	117mm (4 5/8")	60 kg/M ² (12 lbs/ft ²)
1200 - 1400mm (48" - 56")	450 - 700mm (18" - 28")	117mm (4 5/8")	67 kg/M ² (14 lbs/ft ²)
1400 - 1600mm (56" - 64")	450 - 500mm (18" - 20")	117mm (4 5/8")	75 kg/M ² (15 lbs/ft ²)
1000 - 1200mm (40" - 48")	450 - 600mm (18" - 24")	203.2mm (8")	83 kg/M ² (17 lbs/ft ²)
1200 - 1400mm (48" - 56")	450 - 500mm (18" - 20")	203.2mm (8")	83 kg/M ² (17 lbs/ft ²)

Standard Duty US H20 Trench Covers

40,000lb / 18 Tonnes (40,000lbf)



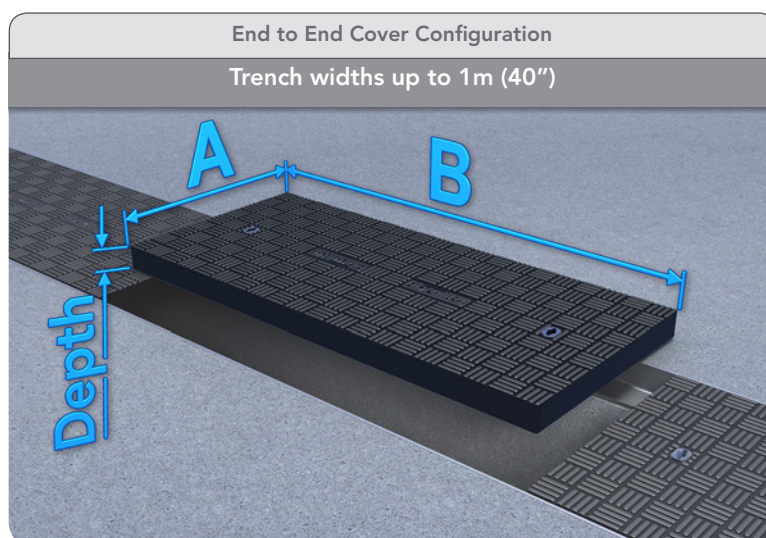
Dim 'A'	Dim 'B'	Depth	Weight
300 - 800mm (12" - 32")	450 - 1800mm (18" - 72")	76mm (3")	44 kg/M ² (9 lbs/ft ²)
300 - 1000mm (12" - 40")	450 - 1800mm (18" - 72")	101.6mm (4")	40 kg/M ² (8 lbs/ft ²)
300 - 1000mm (12" - 40")	450 - 1800mm (18" - 72")	117mm (4 5/8")	44 kg/M ² (9 lbs/ft ²)
300 - 1000mm (12" - 40")	450 - 900mm (18" - 36")	203.2mm (8")	61 kg/M ² (12 lbs/ft ²)
300 - 800mm (12" - 32")	450 - 1200mm (18" - 48")	203.2mm (8")	61 kg/M ² (12 lbs/ft ²)
300 - 600mm (12" - 24")	450 - 1600mm (18" - 64")	203.2mm (8")	61 kg/M ² (12 lbs/ft ²)



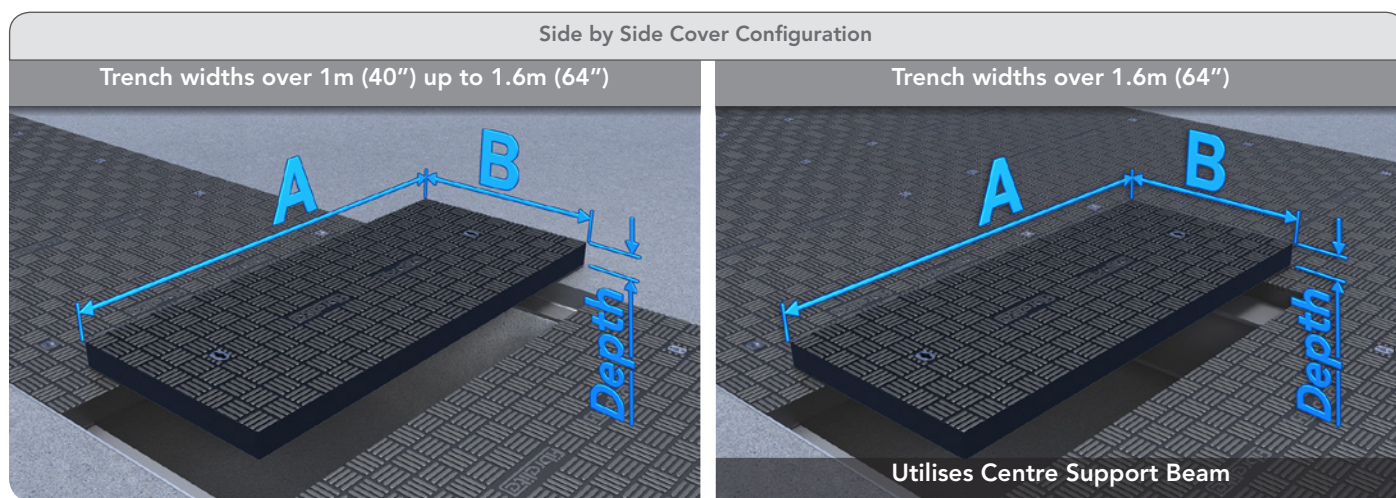
Dim 'A'	Dim 'B'	Depth	Weight
1000 - 1200mm (40" - 48")	450 - 900mm (18" - 36")	101.6mm (4")	55 kg/M ² (11 lbs/ft ²)
1000 - 1400mm (40" - 56")	450 - 1000mm (18" - 40")	117mm (4 5/8")	52 kg/M ² (11 lbs/ft ²)
1400 - 1600mm (56" - 64")	700 - 1000mm (28" - 40")	117mm (4 5/8")	52 kg/M ² (11 lbs/ft ²)
1000 - 1200mm (40" - 48")	450 - 600mm (18" - 24")	203.2mm (8")	61 kg/M ² (12 lbs/ft ²)
1200 - 1600mm (48" - 64")	450 - 800mm (18" - 32")	203.2mm (8")	61 kg/M ² (12 lbs/ft ²)

Light Duty B125 Trench Covers

28,000lb / 12.5 Tonnes



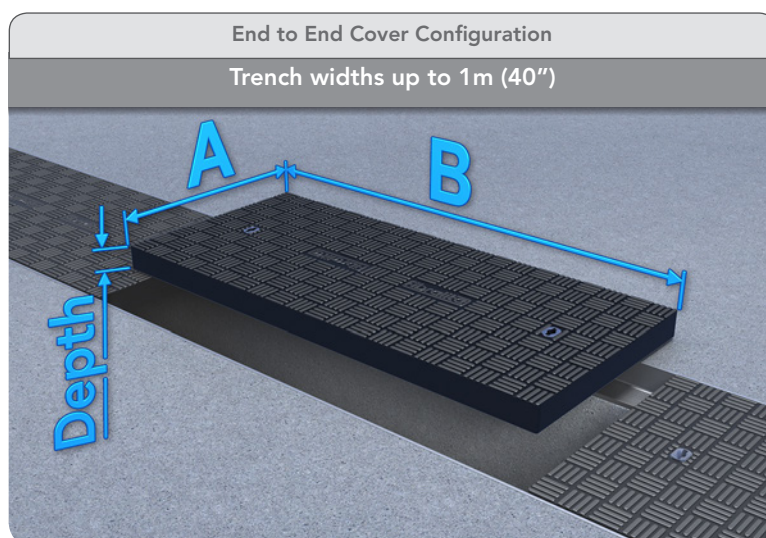
Dim 'A'	Dim 'B'	Depth	Weight
300 - 800mm (12" - 32")	450 - 1800mm (18" - 72")	50mm (2")	35 kg/M ² (7 lbs/ft ²)
300 - 1000mm (12" - 40")	450 - 1800mm (18" - 72")	76mm (3")	42 kg/M ² (9 lbs/ft ²)
300 - 1000mm (12" - 40")	450 - 1600mm (18" - 64")	101.6mm (4")	42 kg/M ² (9 lbs/ft ²)
300 - 800mm (12" - 32")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



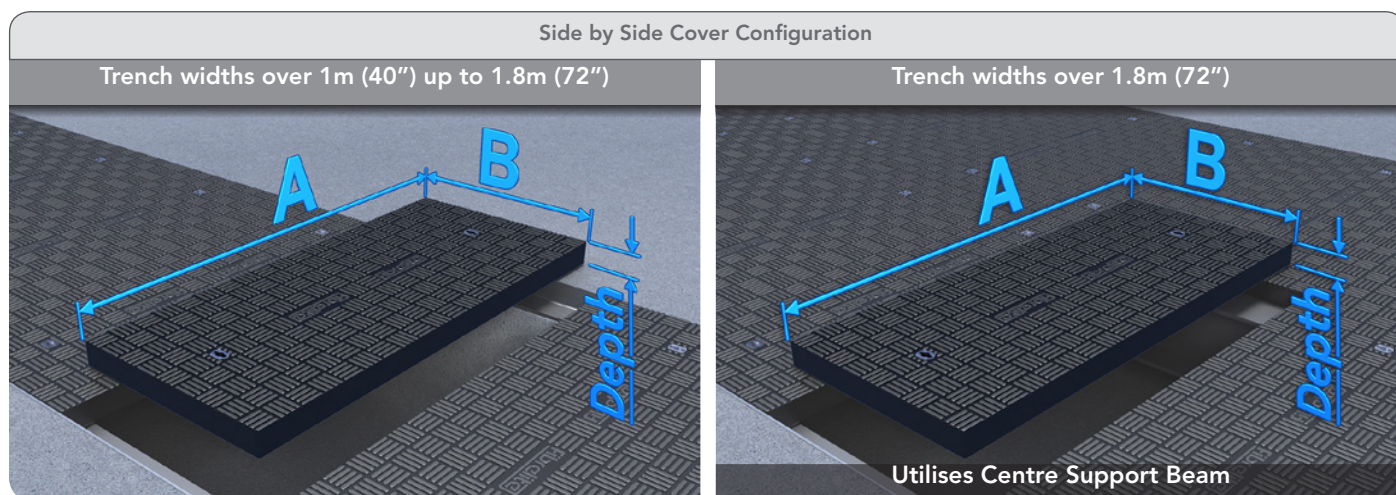
Dim 'A'	Dim 'B'	Depth	Weight
1000 - 1200mm (40" - 48")	450 - 800mm (18" - 32")	76mm (3")	52 kg/M ² (11 lbs/ft ²)
1000 - 1500mm (40" - 60")	450 - 800mm (18" - 32")	101.6mm (4")	48 kg/M ² (10 lbs/ft ²)
1000 - 1600mm (40" - 64")	450 - 700mm (18" - 28")	117mm (4 5/8")	53 kg/M ² (11 lbs/ft ²)
1600 - 1800mm (40" - 72")	450 - 600mm (18" - 24")	117mm (4 5/8")	53 kg/M ² (11 lbs/ft ²)
1000 - 1600mm (40" - 64")	450 - 600mm (18" - 24")	203.2mm (8")	61 kg/M ² (12 lbs/ft ²)

Medium Light Duty

11,200lb / 5 Tonnes



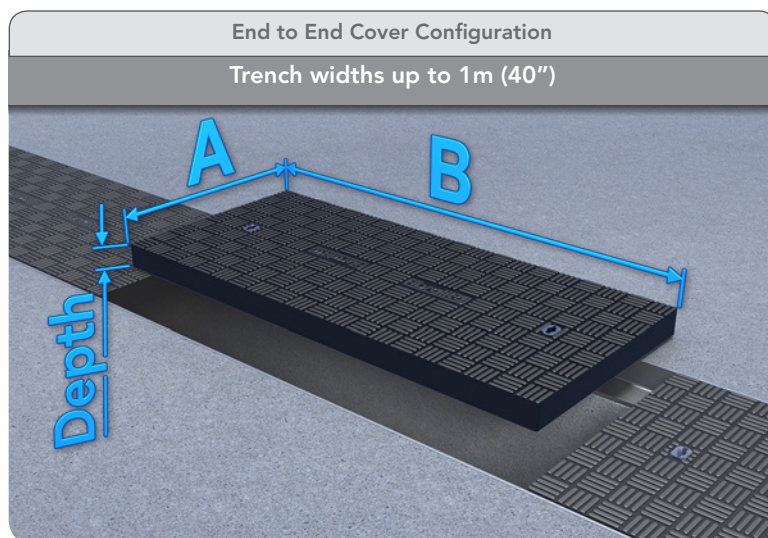
Dim 'A'	Dim 'B'	Depth	Weight
300 - 1000mm (12" - 40")	450 - 1800mm (18" - 72")	50mm (2")	26 kg/M ² (5 lbs/ft ²)
300 - 1000mm (12" - 40")	450 - 1800mm (18" - 72")	76mm (3")	30 kg/M ² (6 lbs/ft ²)
300 - 1000mm (12" - 40")	450 - 1800mm (18" - 72")	101.6mm (4")	32 kg/M ² (7 lbs/ft ²)
300 - 1000mm (12" -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



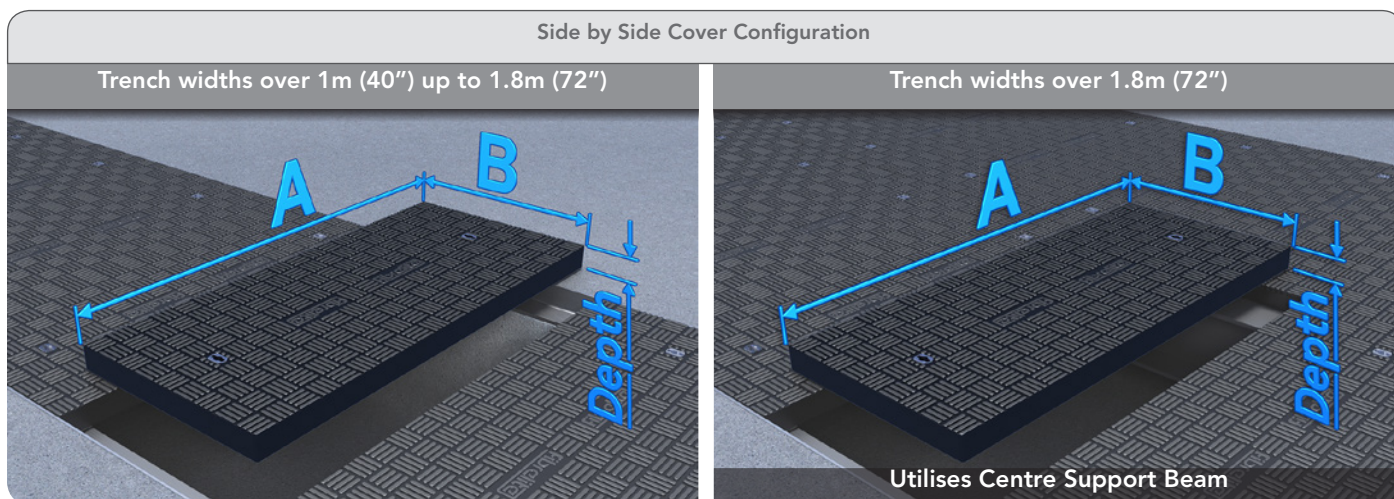
Dim 'A'	Dim 'B'	Depth	Weight
1000 - 1300mm (40" - 52")	450 - 1000mm (18" - 40")	50mm (2")	37 kg/M ² (8 lbs/ft ²)
1300 - 1500mm (52" - 60")	600 - 800mm (24" - 32")	50mm (2")	53 kg/M ² (11 lbs/ft ²)
1000 - 1600mm (40" - 64")	450 - 1000mm (18" - 40")	76mm (3")	33 kg/M ² (7 lbs/ft ²)
1000 - 1800mm (40" -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

Super Light Duty A15 Trench Covers

3,400lb / 1.5 Tonnes



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



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

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