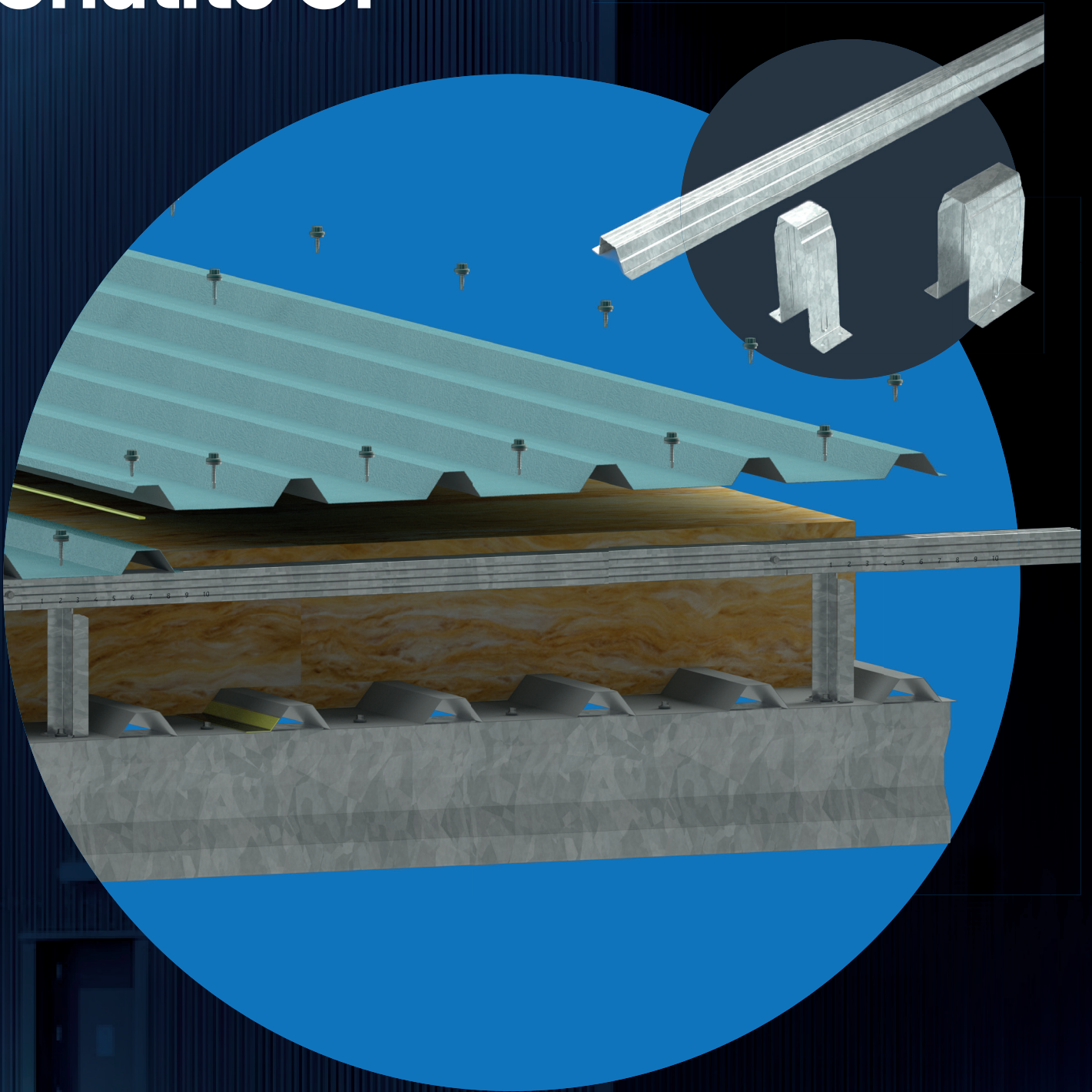


# Fixing Point.

## Gridtite and Gridtite GP<sup>+</sup>



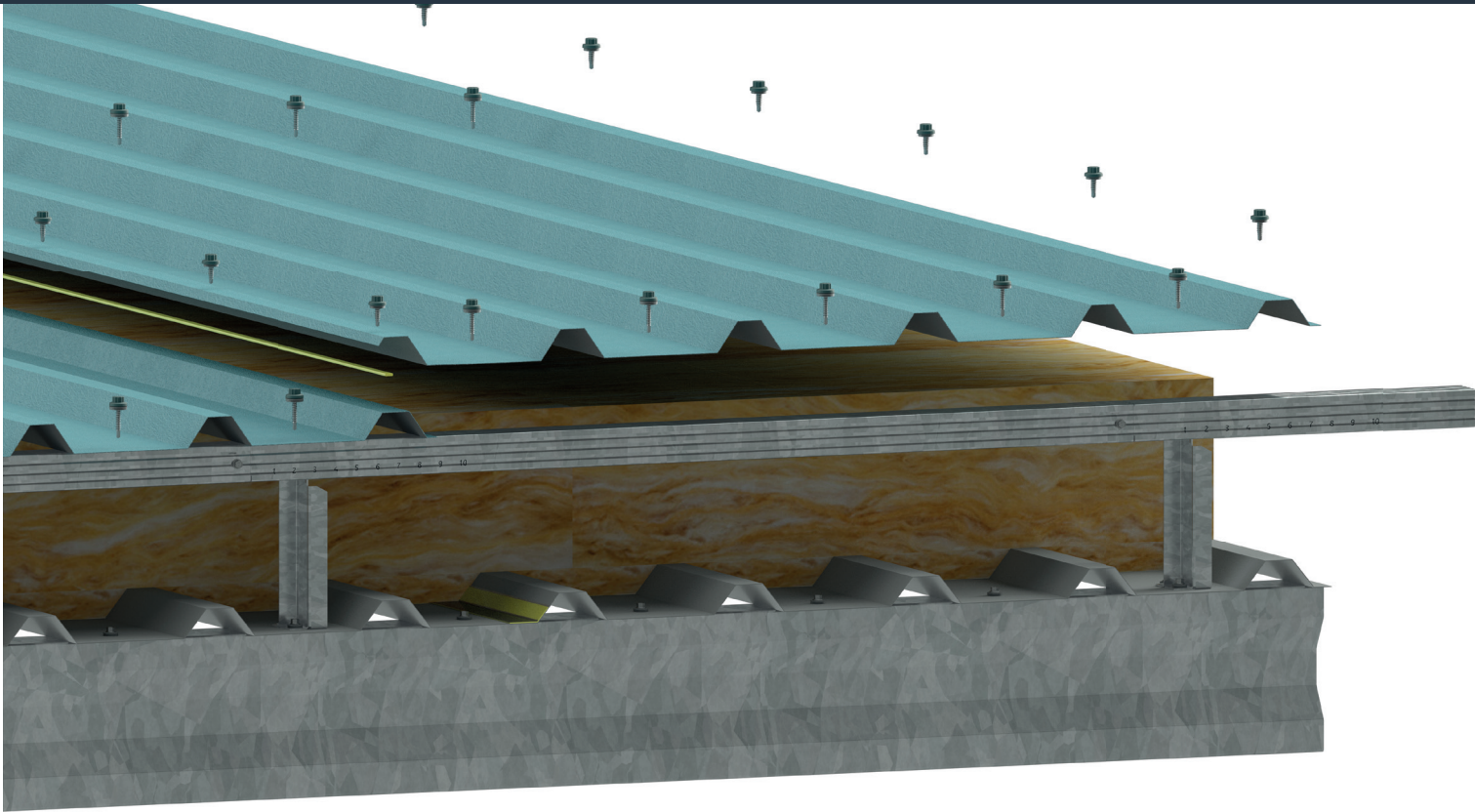
Everything on point

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Find what you need quickly...

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# Gridtite®

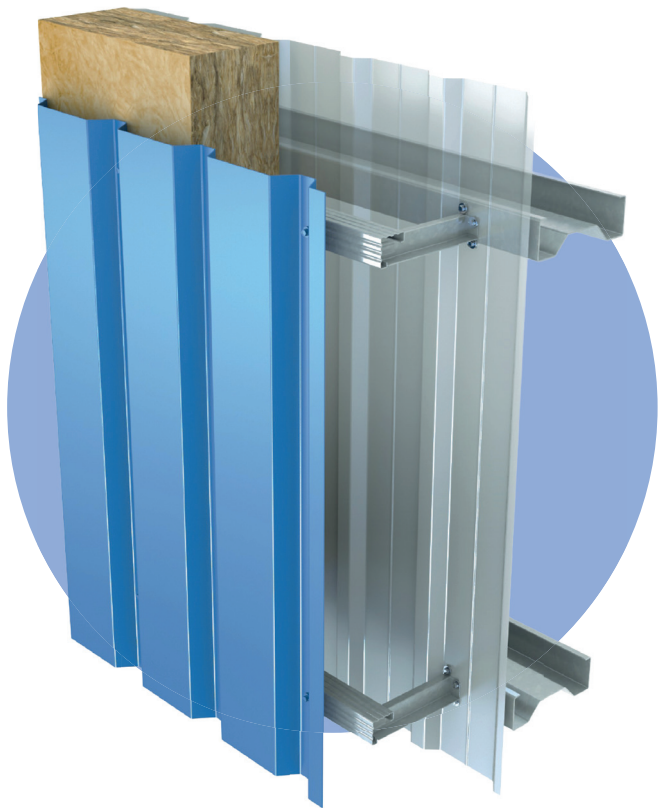


## Gridtite®

For all new build and refurbishment applications Gridtite is a long established, class leading spacer system with a proven track record. Tested extensively by independent laboratories and supported by a full technical package. Gridtite is ideal for roofing and wall cladding where the spacer system runs horizontally\* across the wall or roof, supporting 'top to bottom' sheeting.

Gridtite is a lightweight bar and bracket system that is designed to provide a controlled space between the inner and outer metal sheets that make up "twin skin" site assembled roofing and walling systems. Insulation goes into this space – usually either a glass fibre or rock fibre quilt.

Gridtite is easy to install, strong and stable when sheeted over; is durable and easy to relocate or alter if the need arises. It is easy for self-drilling fasteners to drill into, but provides good fastener grip to resist pull-out loads. Gridtite has very little effect on the thermal performance of the insulation, which assists the building in complying with Part L of the building regulations. For external walls sited at least 1m from the relevant boundary, Gridtite has a proven Warrington Fire Research tested layout. It will achieve 15 minutes insulation and 4 hours integrity in accordance with BS 476 Part 22. Please enquire for a copy of our fire assessment report.



\*for wall sheeting that runs horizontally, use Gridtite GP+

Standard Bracket.

Manufactured from 1.55mm high tensile galvanised steel to BS EN 10346-S390+Z275 incorporating stiffening ribs and vapour seal pad/thermal insulator.

Heights available 60-240mm generally in 10mm increments. Other heights can be produced by arrangement.

Brackets are boxed in varying quantities depending upon size; every box features simple, pictorial fitting instructions.

2 fixings per bracket required.

| Product Code | Depth (mm) | Weight (kg per each) |
|--------------|------------|----------------------|
| GTB060MM     | 060        | 0.043                |
| GTB070MM     | 070        | 0.05                 |
| GTB080MM     | 080        | 0.057                |
| GTB085MM     | 085        | 0.061                |
| GTB090MM     | 090        | 0.064                |
| GTB095MM     | 095        | 0.068                |
| GTB100MM     | 100        | 0.070                |
| GTB110MM     | 110        | 0.078                |
| GTB120MM     | 120        | 0.085                |
| GTB125MM     | 125        | 0.089                |
| GTB130MM     | 130        | 0.092                |
| GTB135MM     | 135        | 0.095                |
| GTB140MM     | 140        | 0.099                |
| GTB150MM     | 150        | 0.106                |
| GTB160MM     | 160        | 0.113                |
| GTB165MM     | 165        | 0.115                |
| GTB170MM     | 170        | 0.120                |
| GTB180MM     | 180        | 0.127                |
| GTB190MM     | 190        | 0.134                |
| GTB200MM     | 200        | 0.141                |
| GTB210MM     | 210        | 0.148                |
| GTB220MM     | 220        | 0.150                |

Ultra Bracket.

Due to thermal performance requirements, the depth of insulation specified has increased over the years. With this in mind Fixing Point have designed and developed our Ultra Bracket.

The improved design adds strength & stability to the bracket which allows for depths of up to 400mm without the need for additional support brackets.

Manufactured from 1.55mm high tensile galvanised steel to BS EN 10346-S450+Z275.

Heights available: 140–400mm generally in 20mm increments.

Brackets are boxed in varying quantities depending upon size; every box features simple, pictorial fitting instructions.

3 fixings per bracket required.

| Product Code | Depth (mm) | Weight (kg per each) |
|--------------|------------|----------------------|
| GTUB140MM    | 140        | 0.128                |
| GTUB160MM    | 160        | 0.144                |
| GTUB180MM    | 180        | 0.161                |
| GTUB200MM    | 200        | 0.177                |
| GTUB220MM    | 220        | 0.194                |
| GTUB240MM    | 240        | 0.210                |
| GTUB260MM    | 260        | 0.224                |
| GTUB280MM    | 280        | 0.245                |
| GTUB300MM    | 300        | 0.259                |
| GTUB320MM    | 320        | 0.276                |
| GTUB340MM    | 340        | 0.292                |
| GTUB360MM    | 360        | 0.309                |
| GTUB380MM    | 380        | 0.325                |
| GTUB400MM    | 400        | 0.342                |

Gridtite Bar.

Manufactured from 1.2mm high tensile hot-dip galvanised steel to BS EN-10346-S390GD+Z275 incorporating a 40mm spigot end for easy on-site connection to form a continuous level support.

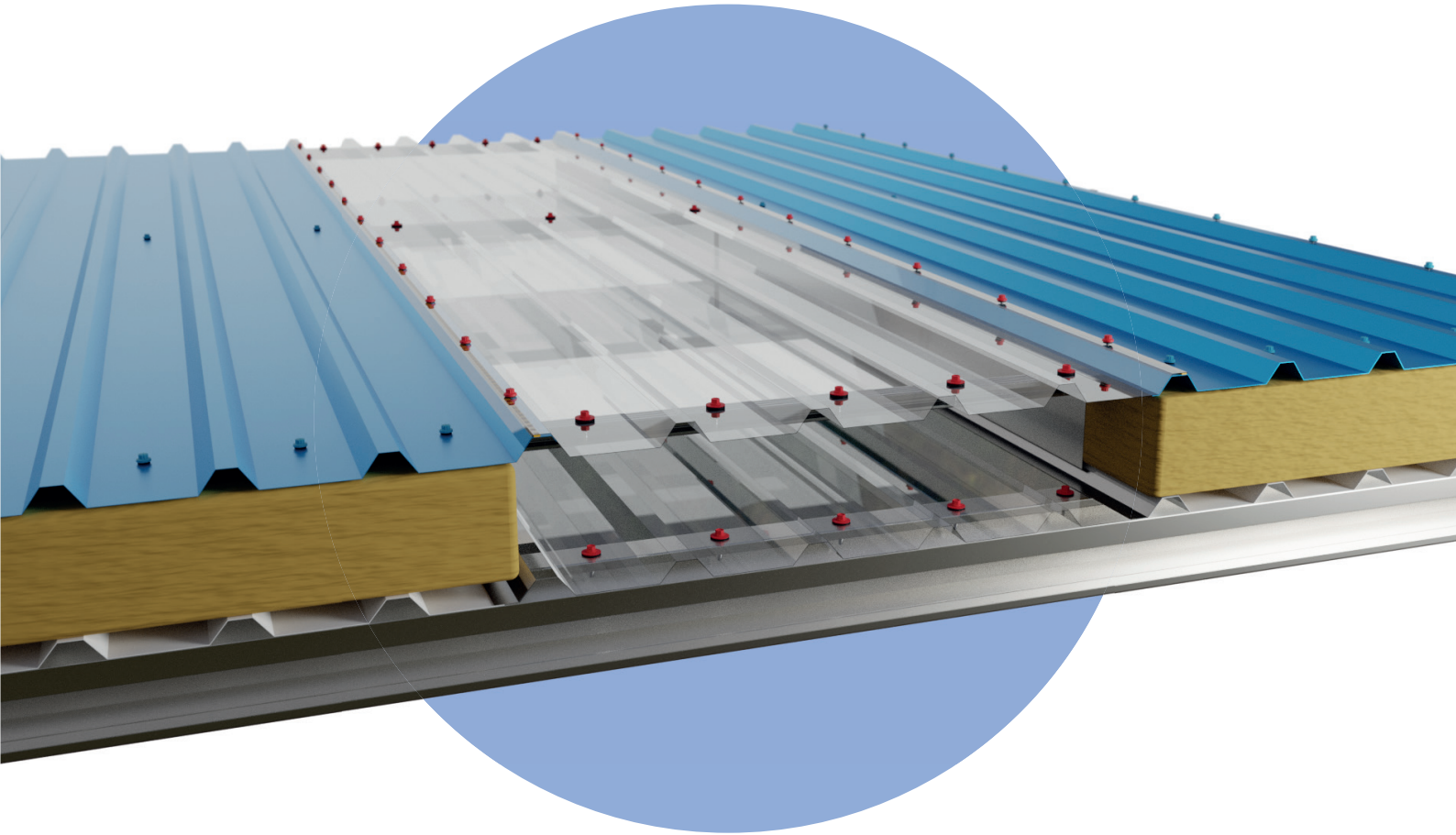
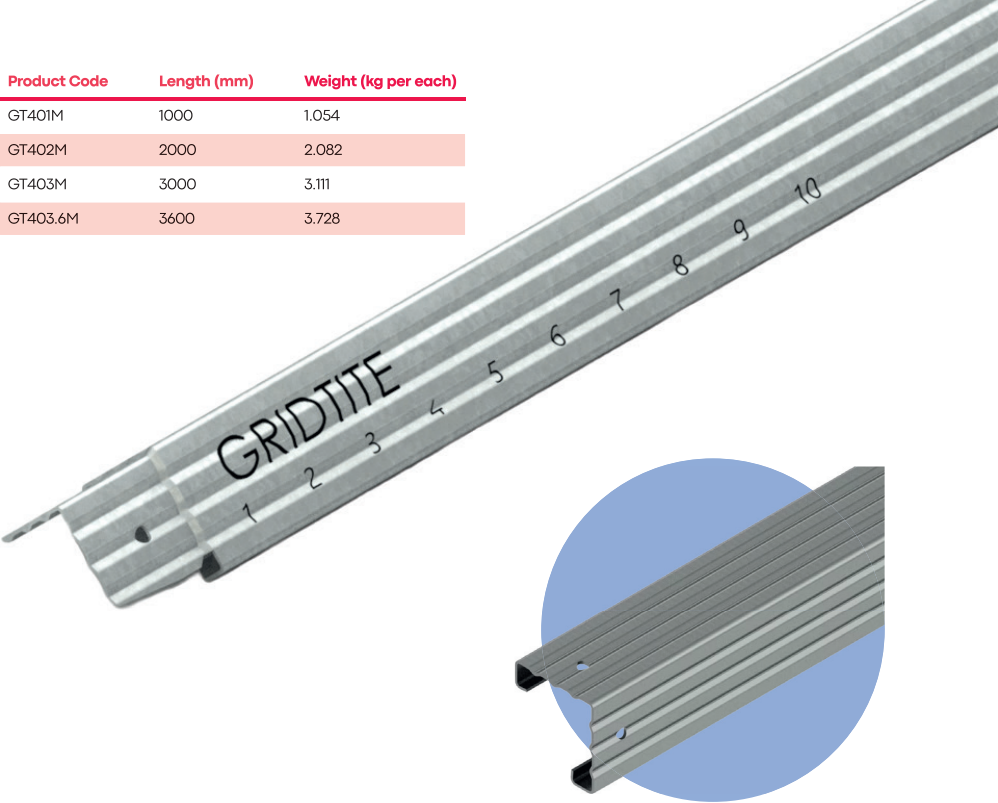
Corrugations along its length give strength, stiffness and optimum screw pull out performance.

Lengths 1, 2, 3 & 3.6m (effective cover). Bar weight = 1kg/m.

The bar length we quote is the finished 'fitted' length and ignores the 40mm joint. A pre-punched hole in both ends allows accurate alignment and, by inserting a fastener, a means to lock the lengths together in a more positive manner than a punched tab.

Bracket locations printed along length of bar for user friendly and efficient installation.

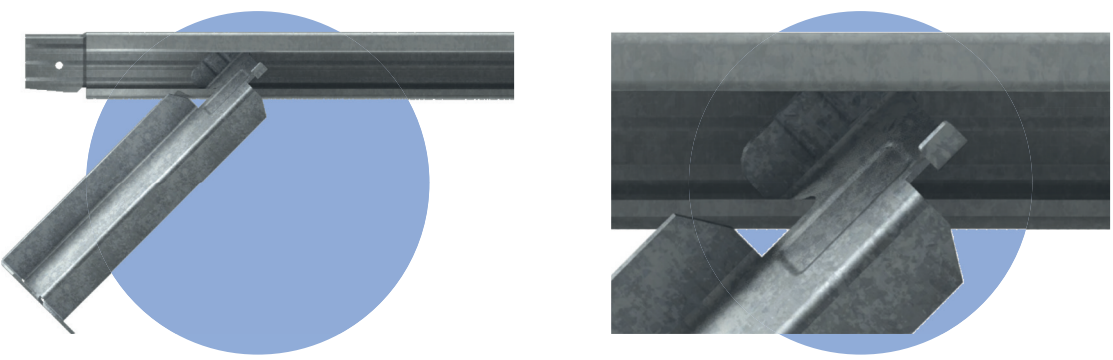
| Product Code | Length (mm) | Weight (kg per each) |
|--------------|-------------|----------------------|
| GT401M       | 1000        | 1.054                |
| GT402M       | 2000        | 2.082                |
| GT403M       | 3000        | 3.111                |
| GT403.6M     | 3600        | 3.728                |



## Installation Instructions.

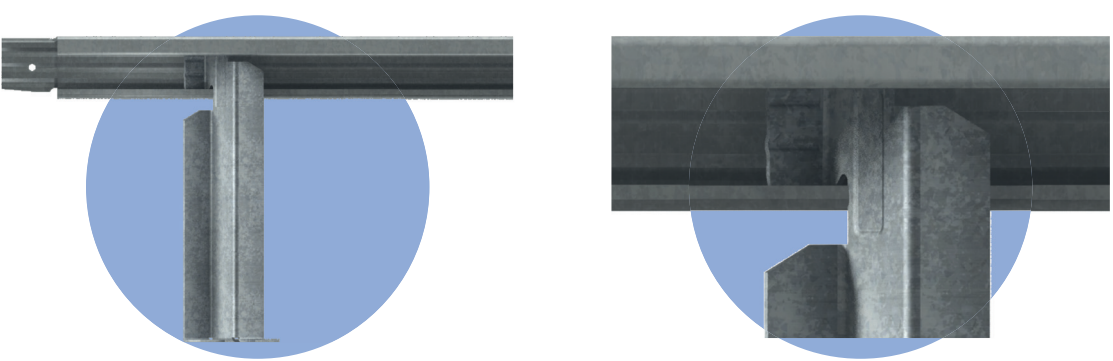
### Step 1

The bracket has a long and short tab. The long tab has a hook to the base. Holding the bracket at around a 30° angle and rotated by 45°. Located the long, hooked tab into the hook on the bar. The bracket should be positioned within 100mm on the spigot end of the bar.



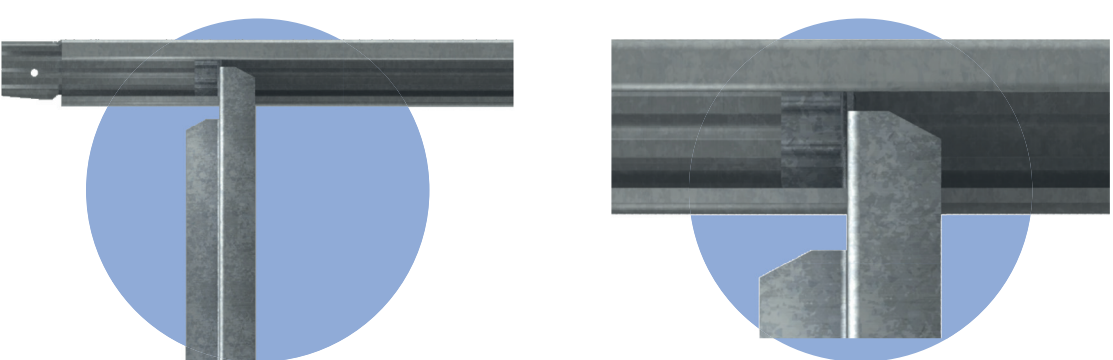
### Step 2

With the bracket still rotated by 45°, move the bracket to the vertical position. This will locate the small tab into the bar.



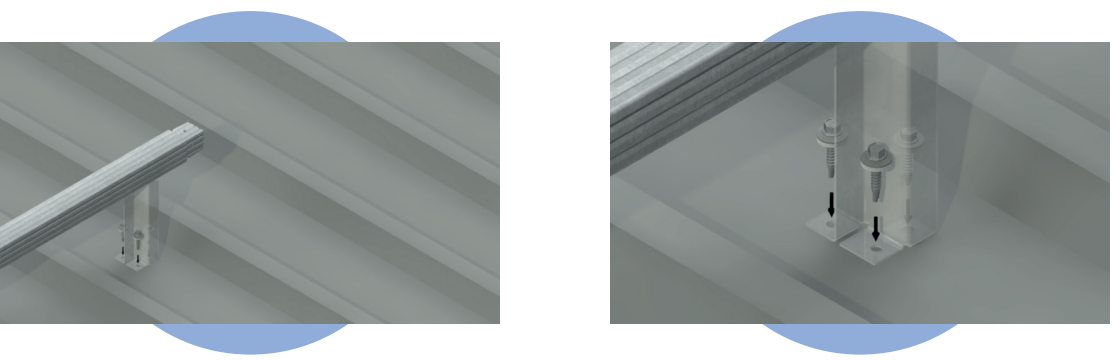
### Step 3

Rotate the bracket so that both tabs are now parallel to the bar and located into the hooks on the bar.



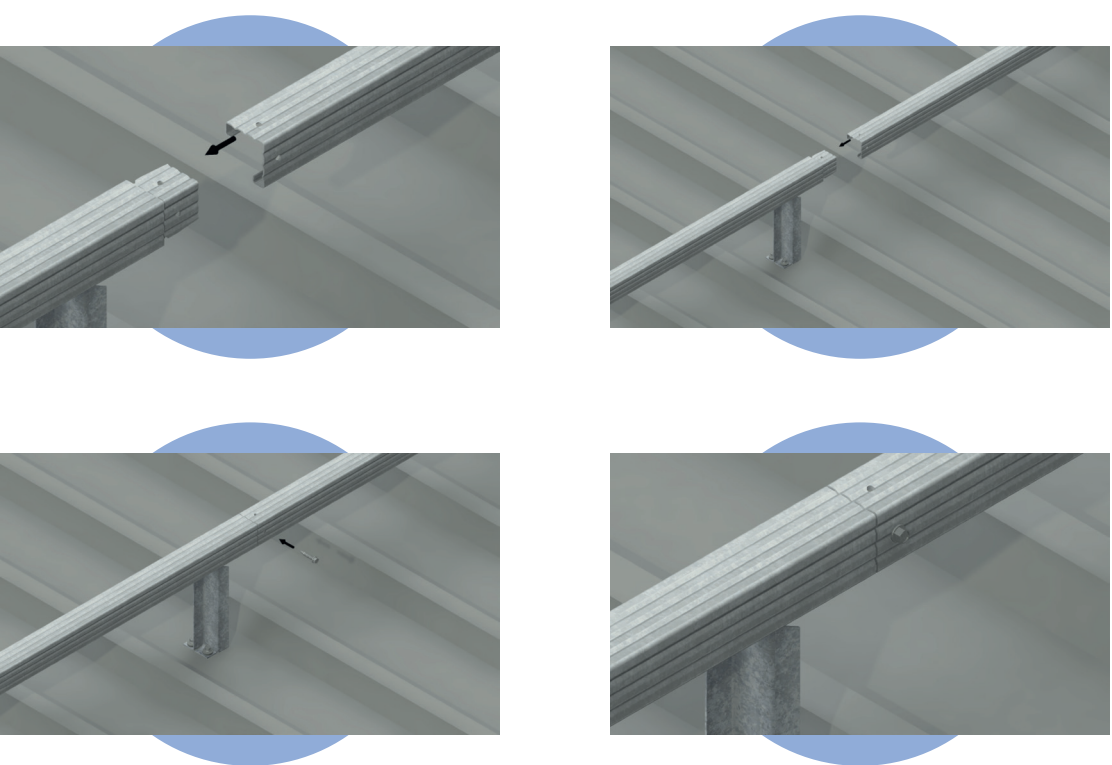
### Step 4

With the bracket positioned into the pan of the sheet, install 3no. fixings through the bracket foot through the liner sheet and into the substrate.



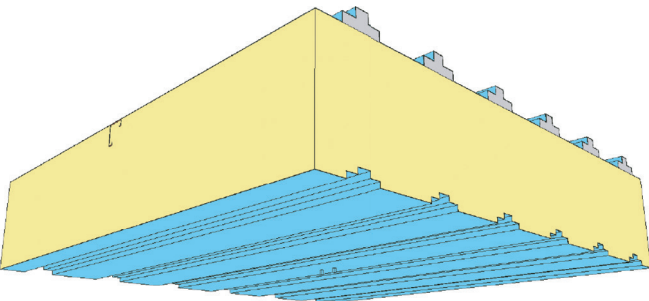
### Step 5

Slot the bars together and install a fixing through the pre-punched hole to lock the bars.



Thermal Performance Using Gridtite Brackets.

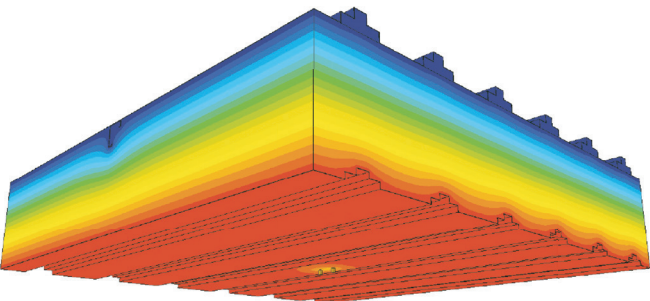
Typical Thermal Model Showing Materials.



Walls

| Bracket Depth (mm) | Insulation Thermal Conductivity W/mK | U values in W/m²K at rail centres (m) |      |      |      |      |      |
|--------------------|--------------------------------------|---------------------------------------|------|------|------|------|------|
|                    |                                      | 1.0                                   | 1.2  | 1.4  | 1.6  | 1.8  | 2.0  |
| 120                | 0.040                                | 0.38                                  | 0.37 | 0.37 | 0.36 | 0.36 | 0.36 |
|                    | 0.037                                | 0.35                                  | 0.35 | 0.34 | 0.34 | 0.34 | 0.34 |
|                    | 0.035                                | 0.34                                  | 0.33 | 0.33 | 0.32 | 0.32 | 0.32 |
|                    | 0.032                                | 0.31                                  | 0.31 | 0.30 | 0.30 | 0.30 | 0.30 |
| 140                | 0.040                                | 0.33                                  | 0.32 | 0.32 | 0.31 | 0.31 | 0.31 |
|                    | 0.037                                | 0.31                                  | 0.30 | 0.30 | 0.29 | 0.29 | 0.29 |
|                    | 0.035                                | 0.29                                  | 0.29 | 0.28 | 0.28 | 0.28 | 0.28 |
|                    | 0.032                                | 0.27                                  | 0.27 | 0.26 | 0.26 | 0.26 | 0.26 |
| 160                | 0.040                                | 0.29                                  | 0.28 | 0.28 | 0.28 | 0.28 | 0.27 |
|                    | 0.037                                | 0.27                                  | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 |
|                    | 0.035                                | 0.26                                  | 0.25 | 0.25 | 0.25 | 0.25 | 0.24 |
|                    | 0.032                                | 0.24                                  | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| 180                | 0.040                                | 0.26                                  | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
|                    | 0.037                                | 0.24                                  | 0.24 | 0.23 | 0.23 | 0.23 | 0.23 |
|                    | 0.035                                | 0.23                                  | 0.23 | 0.22 | 0.22 | 0.22 | 0.22 |
|                    | 0.032                                | 0.21                                  | 0.21 | 0.21 | 0.21 | 0.20 | 0.20 |
| 200                | 0.040                                | 0.23                                  | 0.23 | 0.23 | 0.23 | 0.22 | 0.22 |
|                    | 0.037                                | 0.22                                  | 0.22 | 0.21 | 0.21 | 0.21 | 0.21 |
|                    | 0.035                                | 0.21                                  | 0.21 | 0.20 | 0.20 | 0.20 | 0.20 |
|                    | 0.032                                | 0.20                                  | 0.19 | 0.19 | 0.19 | 0.19 | 0.18 |

Typical Thermal Model Showing Temperatures.



Roofs

| Bracket Depth (mm) | Insulation Thermal Conductivity W/mK | U values in W/m²K at rail centres (m) |      |      |      |      |      |
|--------------------|--------------------------------------|---------------------------------------|------|------|------|------|------|
|                    |                                      | 1.0                                   | 1.2  | 1.4  | 1.6  | 1.8  | 2.0  |
| 160                | 0.040                                | 0.28                                  | 0.28 | 0.27 | 0.36 | 0.27 | 0.27 |
|                    | 0.037                                | 0.26                                  | 0.26 | 0.26 | 0.25 | 0.25 | 0.25 |
|                    | 0.035                                | 0.25                                  | 0.25 | 0.24 | 0.24 | 0.24 | 0.24 |
|                    | 0.032                                | 0.23                                  | 0.23 | 0.22 | 0.22 | 0.22 | 0.22 |
| 180                | 0.040                                | 0.25                                  | 0.25 | 0.24 | 0.24 | 0.24 | 0.24 |
|                    | 0.037                                | 0.23                                  | 0.23 | 0.23 | 0.22 | 0.22 | 0.22 |
|                    | 0.035                                | 0.22                                  | 0.22 | 0.22 | 0.21 | 0.21 | 0.21 |
|                    | 0.032                                | 0.21                                  | 0.21 | 0.20 | 0.20 | 0.20 | 0.19 |
| 200                | 0.040                                | 0.23                                  | 0.23 | 0.22 | 0.22 | 0.22 | 0.21 |
|                    | 0.037                                | 0.21                                  | 0.21 | 0.20 | 0.20 | 0.20 | 0.20 |
|                    | 0.035                                | 0.20                                  | 0.20 | 0.19 | 0.19 | 0.19 | 0.19 |
|                    | 0.032                                | 0.19                                  | 0.19 | 0.18 | 0.18 | 0.18 | 0.17 |
| 220                | 0.040                                | 0.21                                  | 0.21 | 0.20 | 0.20 | 0.20 | 0.19 |
|                    | 0.037                                | 0.19                                  | 0.19 | 0.19 | 0.18 | 0.18 | 0.18 |
|                    | 0.035                                | 0.18                                  | 0.18 | 0.18 | 0.17 | 0.17 | 0.17 |
|                    | 0.032                                | 0.17                                  | 0.17 | 0.16 | 0.16 | 0.16 | 0.16 |
| 240                | 0.040                                | 0.18                                  | 0.18 | 0.18 | 0.17 | 0.17 | 0.17 |
|                    | 0.037                                | 0.17                                  | 0.17 | 0.16 | 0.16 | 0.16 | 0.16 |
|                    | 0.035                                | 0.16                                  | 0.16 | 0.16 | 0.15 | 0.15 | 0.15 |
|                    | 0.032                                | 0.15                                  | 0.15 | 0.14 | 0.14 | 0.14 | 0.14 |

Thermal Performance Using Gridtite Ultra Brackets.

Gridtite Ultra U Value: Walls

| Bracket Depth (mm) | Insulation Thermal Conductivity W/mK | U values in W/m²K at rail centres (m) |      |      |      |      |      |
|--------------------|--------------------------------------|---------------------------------------|------|------|------|------|------|
|                    |                                      | 1.0                                   | 1.2  | 1.4  | 1.6  | 1.8  | 2.0  |
| 140                | 0.040                                | 0.32                                  | 0.31 | 0.31 | 0.31 | 0.30 | 0.30 |
|                    | 0.037                                | 0.30                                  | 0.29 | 0.29 | 0.29 | 0.28 | 0.28 |
|                    | 0.035                                | 0.29                                  | 0.28 | 0.28 | 0.27 | 0.27 | 0.27 |
|                    | 0.032                                | 0.27                                  | 0.26 | 0.26 | 0.25 | 0.25 | 0.25 |
| 180                | 0.040                                | 0.25                                  | 0.25 | 0.24 | 0.24 | 0.24 | 0.24 |
|                    | 0.037                                | 0.24                                  | 0.23 | 0.23 | 0.23 | 0.22 | 0.22 |
|                    | 0.035                                | 0.23                                  | 0.22 | 0.22 | 0.22 | 0.21 | 0.21 |
|                    | 0.032                                | 0.21                                  | 0.21 | 0.20 | 0.20 | 0.20 | 0.20 |
| 220                | 0.040                                | 0.21                                  | 0.21 | 0.20 | 0.20 | 0.20 | 0.20 |
|                    | 0.037                                | 0.20                                  | 0.19 | 0.19 | 0.19 | 0.19 | 0.18 |
|                    | 0.035                                | 0.19                                  | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
|                    | 0.032                                | 0.18                                  | 0.17 | 0.17 | 0.17 | 0.16 | 0.16 |
| 260                | 0.040                                | 0.18                                  | 0.18 | 0.17 | 0.17 | 0.17 | 0.17 |
|                    | 0.037                                | 0.17                                  | 0.17 | 0.16 | 0.16 | 0.16 | 0.16 |
|                    | 0.035                                | 0.16                                  | 0.16 | 0.16 | 0.15 | 0.15 | 0.15 |
|                    | 0.032                                | 0.15                                  | 0.15 | 0.15 | 0.14 | 0.14 | 0.14 |
| 300                | 0.040                                | 0.16                                  | 0.16 | 0.15 | 0.15 | 0.15 | 0.15 |
|                    | 0.037                                | 0.15                                  | 0.15 | 0.14 | 0.14 | 0.14 | 0.14 |
|                    | 0.035                                | 0.14                                  | 0.14 | 0.14 | 0.14 | 0.13 | 0.13 |
|                    | 0.032                                | 0.13                                  | 0.13 | 0.13 | 0.13 | 0.12 | 0.12 |
| 340                | 0.040                                | 0.14                                  | 0.14 | 0.14 | 0.14 | 0.13 | 0.13 |
|                    | 0.037                                | 0.13                                  | 0.13 | 0.13 | 0.13 | 0.13 | 0.12 |
|                    | 0.035                                | 0.13                                  | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 |
|                    | 0.032                                | 0.12                                  | 0.12 | 0.11 | 0.11 | 0.11 | 0.11 |
| 380                | 0.040                                | 0.13                                  | 0.13 | 0.12 | 0.12 | 0.12 | 0.12 |
|                    | 0.037                                | 0.12                                  | 0.12 | 0.12 | 0.11 | 0.11 | 0.11 |
|                    | 0.035                                | 0.12                                  | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
|                    | 0.032                                | 0.11                                  | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |

Gridtite Ultra U Value: Roofs

| Bracket Depth (mm) | Insulation Thermal Conductivity W/mK | U values in W/m²K at rail centres (m) |      |      |      |      |      |
|--------------------|--------------------------------------|---------------------------------------|------|------|------|------|------|
|                    |                                      | 1.0                                   | 1.2  | 1.4  | 1.6  | 1.8  | 2.0  |
| 140                | 0.040                                | 0.33                                  | 0.32 | 0.31 | 0.31 | 0.31 | 0.30 |
|                    | 0.037                                | 0.31                                  | 0.30 | 0.30 | 0.29 | 0.29 | 0.28 |
|                    | 0.035                                | 0.29                                  | 0.28 | 0.28 | 0.28 | 0.27 | 0.27 |
|                    | 0.032                                | 0.27                                  | 0.26 | 0.26 | 0.26 | 0.25 | 0.25 |
| 180                | 0.040                                | 0.26                                  | 0.25 | 0.25 | 0.24 | 0.24 | 0.24 |
|                    | 0.037                                | 0.24                                  | 0.23 | 0.23 | 0.23 | 0.23 | 0.22 |
|                    | 0.035                                | 0.23                                  | 0.22 | 0.22 | 0.22 | 0.22 | 0.21 |
|                    | 0.032                                | 0.21                                  | 0.21 | 0.20 | 0.20 | 0.20 | 0.20 |
| 220                | 0.040                                | 0.21                                  | 0.21 | 0.20 | 0.20 | 0.20 | 0.20 |
|                    | 0.037                                | 0.20                                  | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 |
|                    | 0.035                                | 0.19                                  | 0.19 | 0.18 | 0.18 | 0.18 | 0.18 |
|                    | 0.032                                | 0.18                                  | 0.17 | 0.17 | 0.17 | 0.17 | 0.16 |
| 260                | 0.040                                | 0.18                                  | 0.18 | 0.18 | 0.17 | 0.17 | 0.17 |
|                    | 0.037                                | 0.17                                  | 0.17 | 0.16 | 0.16 | 0.16 | 0.16 |
|                    | 0.035                                | 0.16                                  | 0.16 | 0.16 | 0.15 | 0.15 | 0.15 |
|                    | 0.032                                | 0.15                                  | 0.15 | 0.15 | 0.14 | 0.14 | 0.14 |
| 300                | 0.040                                | 0.16                                  | 0.16 | 0.15 | 0.15 | 0.15 | 0.15 |
|                    | 0.037                                | 0.15                                  | 0.15 | 0.14 | 0.14 | 0.14 | 0.14 |
|                    | 0.035                                | 0.14                                  | 0.14 | 0.14 | 0.14 | 0.13 | 0.13 |
|                    | 0.032                                | 0.13                                  | 0.13 | 0.13 | 0.13 | 0.12 | 0.12 |
| 340                | 0.040                                | 0.14                                  | 0.14 | 0.14 | 0.14 | 0.13 | 0.13 |
|                    | 0.037                                | 0.13                                  | 0.13 | 0.13 | 0.13 | 0.13 | 0.12 |
|                    | 0.035                                | 0.13                                  | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 |
|                    | 0.032                                | 0.12                                  | 0.12 | 0.22 | 0.11 | 0.11 | 0.11 |
| 380                | 0.040                                | 0.13                                  | 0.13 | 0.12 | 0.12 | 0.12 | 0.12 |
|                    | 0.037                                | 0.12                                  | 0.12 | 0.12 | 0.11 | 0.11 | 0.11 |
|                    | 0.035                                | 0.12                                  | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
|                    | 0.032                                | 0.11                                  | 0.11 | 0.10 | 0.10 | 0.10 | 0.10 |

# Gridtite GT Load Span Tables.

Application: Wall      Span: Multi-Span      Bracket Depth: GTUB180MM      Substrate: 1.5mm (S450)

Table is based on 180mm Ultra Brackets and 1.5mm S450 cladding rails.

## Download Capacities - Working Load UDL (kN/m²)

| Bar Spacing (m) | Bracket Centres Along Bar (m) |        |        |        |        |        |        |
|-----------------|-------------------------------|--------|--------|--------|--------|--------|--------|
|                 | 0.300                         | 0.500  | 0.600  | 0.750  | 0.800  | 0.900  | 1.000  |
| 0.2             | 46.467                        | 27.880 | 23.233 | 18.587 | 17.425 | 15.489 | 13.555 |
| 0.3             | 30.978                        | 18.587 | 15.489 | 12.391 | 11.617 | 10.326 | 9.037  |
| 0.4             | 23.233                        | 13.940 | 11.617 | 9.293  | 8.713  | 7.744  | 6.777  |
| 0.5             | 18.587                        | 11.152 | 9.293  | 7.435  | 6.970  | 6.196  | 5.422  |
| 0.6             | 15.489                        | 9.293  | 7.744  | 6.196  | 5.808  | 5.163  | 4.518  |
| 0.7             | 13.276                        | 7.966  | 6.638  | 5.310  | 4.979  | 4.425  | 3.873  |
| 0.8             | 11.617                        | 6.970  | 5.808  | 4.647  | 4.356  | 3.872  | 3.389  |
| 0.9             | 10.326                        | 6.196  | 5.163  | 4.130  | 3.872  | 3.442  | 3.012  |
| 1               | 9.293                         | 5.576  | 4.647  | 3.717  | 3.485  | 3.098  | 2.711  |
| 1.1             | 8.448                         | 5.069  | 4.224  | 3.379  | 3.168  | 2.816  | 2.465  |
| 1.2             | 7.744                         | 4.647  | 3.872  | 3.098  | 2.904  | 2.581  | 2.259  |
| 1.3             | 7.149                         | 4.289  | 3.574  | 2.859  | 2.681  | 2.383  | 2.085  |
| 1.4             | 6.638                         | 3.983  | 3.319  | 2.655  | 2.489  | 2.213  | 1.936  |
| 1.5             | 6.196                         | 3.717  | 3.098  | 2.478  | 2.323  | 2.065  | 1.807  |
| 1.6             | 5.808                         | 3.485  | 2.904  | 2.323  | 2.178  | 1.936  | 1.694  |
| 1.7             | 5.467                         | 3.280  | 2.733  | 2.187  | 2.050  | 1.822  | 1.595  |
| 1.8             | 5.163                         | 3.098  | 2.581  | 2.065  | 1.936  | 1.721  | 1.506  |
| 1.9             | 4.891                         | 2.935  | 2.446  | 1.956  | 1.834  | 1.630  | 1.427  |
| 2               | 4.647                         | 2.788  | 2.323  | 1.859  | 1.743  | 1.549  | 1.355  |
| 2.1             | 4.425                         | 2.655  | 2.213  | 1.770  | 1.660  | 1.475  | 1.291  |
| 2.2             | 4.224                         | 2.535  | 2.112  | 1.690  | 1.584  | 1.408  | 1.232  |

## Uplift Load Capacities - Working Load UDL (kN/m²)

| Bar Spacing (m) | Bracket Centres Along Bar (m) |        |        |        |        |        |        |
|-----------------|-------------------------------|--------|--------|--------|--------|--------|--------|
|                 | 0.300                         | 0.500  | 0.600  | 0.750  | 0.800  | 0.900  | 1.000  |
| 0.2             | 40.467                        | 24.280 | 20.233 | 16.187 | 15.175 | 13.489 | 12.140 |
| 0.3             | 26.978                        | 16.187 | 13.489 | 10.791 | 10.117 | 8.993  | 8.093  |
| 0.4             | 20.233                        | 12.140 | 10.117 | 8.093  | 7.588  | 6.744  | 6.070  |
| 0.5             | 16.187                        | 9.712  | 8.093  | 6.475  | 6.070  | 5.396  | 4.856  |
| 0.6             | 13.489                        | 8.093  | 6.744  | 5.396  | 5.058  | 4.496  | 4.047  |
| 0.7             | 11.562                        | 6.937  | 5.781  | 4.625  | 4.336  | 3.854  | 3.469  |
| 0.8             | 10.117                        | 6.070  | 5.058  | 4.047  | 3.794  | 3.372  | 3.035  |
| 0.9             | 8.993                         | 5.396  | 4.496  | 3.597  | 3.372  | 2.998  | 2.698  |
| 1               | 8.093                         | 4.856  | 4.047  | 3.237  | 3.035  | 2.698  | 2.428  |
| 1.1             | 7.358                         | 4.415  | 3.679  | 2.943  | 2.759  | 2.453  | 2.207  |
| 1.2             | 6.744                         | 4.047  | 3.372  | 2.698  | 2.529  | 2.248  | 2.023  |
| 1.3             | 6.226                         | 3.735  | 3.113  | 2.490  | 2.335  | 2.075  | 1.868  |
| 1.4             | 5.781                         | 3.469  | 2.890  | 2.312  | 2.168  | 1.927  | 1.734  |
| 1.5             | 5.396                         | 3.237  | 2.698  | 2.158  | 2.023  | 1.799  | 1.619  |
| 1.6             | 5.058                         | 3.035  | 2.529  | 2.023  | 1.897  | 1.686  | 1.518  |
| 1.7             | 4.761                         | 2.856  | 2.380  | 1.904  | 1.785  | 1.587  | 1.428  |
| 1.8             | 4.496                         | 2.698  | 2.248  | 1.799  | 1.686  | 1.499  | 1.349  |
| 1.9             | 4.260                         | 2.556  | 2.130  | 1.704  | 1.597  | 1.420  | 1.278  |
| 2               | 4.047                         | 2.428  | 2.023  | 1.619  | 1.518  | 1.349  | 1.214  |
| 2.1             | 3.854                         | 2.312  | 1.927  | 1.542  | 1.445  | 1.285  | 1.156  |
| 2.2             | 3.679                         | 2.207  | 1.839  | 1.472  | 1.380  | 1.226  | 1.104  |

**Notes:**  
All loads are working load  
Gridtite material based upon 390N/mm2 Steel  
Download Deflection based upon L/150

Figures limited to bar/bracket connection of 2.428kN  
Figures limited to bracket compression of 2.788kN  
Figure limited by pull out at bracket to substrate of 5.637kN  
Ultimate bending stress is based upon a load factor of 1.5

# Gridtite GT Load Span Tables.

Application: Roof      Span: Multi-Span      Bracket Depth: GTUB280MM      Substrate: 1.5mm (S450)

Table is based on 280mm Ultra Brackets and 1.5mm S450 grade purlins.

## Download Capacities - Working Load UDL (kN/m²)

| Bar Spacing (m) | Bracket Centres Along Bar (m) |        |        |        |        |        |        |
|-----------------|-------------------------------|--------|--------|--------|--------|--------|--------|
|                 | 0.300                         | 0.500  | 0.600  | 0.750  | 0.800  | 0.900  | 1.000  |
| 0.2             | 46.467                        | 27.880 | 23.233 | 18.587 | 17.425 | 15.489 | 13.555 |
| 0.3             | 30.978                        | 18.587 | 15.489 | 12.391 | 11.617 | 10.326 | 9.037  |
| 0.4             | 23.233                        | 13.940 | 11.617 | 9.293  | 8.713  | 7.744  | 6.777  |
| 0.5             | 18.587                        | 11.152 | 9.293  | 7.435  | 6.970  | 6.196  | 5.422  |
| 0.6             | 15.489                        | 9.293  | 7.744  | 6.196  | 5.808  | 5.163  | 4.518  |
| 0.7             | 13.276                        | 7.966  | 6.638  | 5.310  | 4.979  | 4.425  | 3.873  |
| 0.8             | 11.617                        | 6.970  | 5.808  | 4.647  | 4.356  | 3.872  | 3.389  |
| 0.9             | 10.326                        | 6.196  | 5.163  | 4.130  | 3.872  | 3.442  | 3.012  |
| 1               | 9.293                         | 5.576  | 4.647  | 3.717  | 3.485  | 3.098  | 2.711  |
| 1.1             | 8.448                         | 5.069  | 4.224  | 3.379  | 3.168  | 2.816  | 2.465  |
| 1.2             | 7.744                         | 4.647  | 3.872  | 3.098  | 2.904  | 2.581  | 2.259  |
| 1.3             | 7.149                         | 4.289  | 3.574  | 2.859  | 2.681  | 2.383  | 2.085  |
| 1.4             | 6.638                         | 3.983  | 3.319  | 2.655  | 2.489  | 2.213  | 1.936  |
| 1.5             | 6.196                         | 3.717  | 3.098  | 2.478  | 2.323  | 2.065  | 1.807  |
| 1.6             | 5.808                         | 3.485  | 2.904  | 2.323  | 2.178  | 1.936  | 1.694  |
| 1.7             | 5.467                         | 3.280  | 2.733  | 2.187  | 2.050  | 1.822  | 1.595  |
| 1.8             | 5.163                         | 3.098  | 2.581  | 2.065  | 1.936  | 1.721  | 1.506  |
| 1.9             | 4.891                         | 2.935  | 2.446  | 1.956  | 1.834  | 1.630  | 1.427  |
| 2               | 4.647                         | 2.788  | 2.323  | 1.859  | 1.743  | 1.549  | 1.355  |
| 2.1             | 4.425                         | 2.655  | 2.213  | 1.770  | 1.660  | 1.475  | 1.291  |
| 2.2             | 4.224                         | 2.535  | 2.112  | 1.690  | 1.584  | 1.408  | 1.232  |

## Uplift Load Capacities - Working Load UDL (kN/m²)

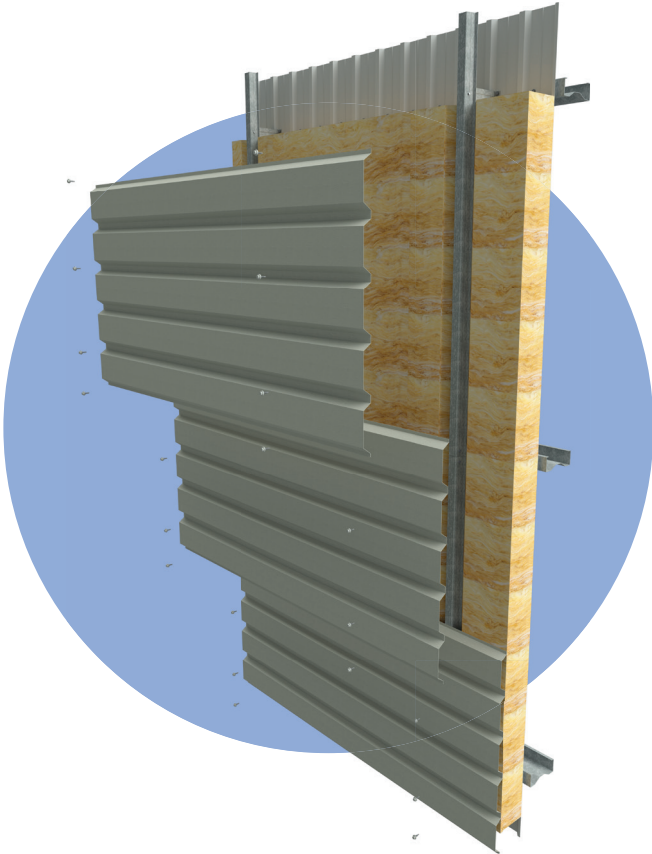
| Bar Spacing (m) | Bracket Centres Along Bar (m) |        |        |        |        |        |        |
|-----------------|-------------------------------|--------|--------|--------|--------|--------|--------|
|                 | 0.300                         | 0.500  | 0.600  | 0.750  | 0.800  | 0.900  | 1.000  |
| 0.2             | 40.467                        | 24.280 | 20.233 | 16.187 | 15.175 | 13.489 | 12.140 |
| 0.3             | 26.978                        | 16.187 | 13.489 | 10.791 | 10.117 | 8.993  | 8.093  |
| 0.4             | 20.233                        | 12.140 | 10.117 | 8.093  | 7.588  | 6.744  | 6.070  |
| 0.5             | 16.187                        | 9.712  | 8.093  | 6.475  | 6.070  | 5.396  | 4.856  |
| 0.6             | 13.489                        | 8.093  | 6.744  | 5.396  | 5.058  | 4.496  | 4.047  |
| 0.7             | 11.562                        | 6.937  | 5.781  | 4.625  | 4.336  | 3.854  | 3.469  |
| 0.8             | 10.117                        | 6.070  | 5.058  | 4.047  | 3.794  | 3.372  | 3.035  |
| 0.9             | 8.993                         | 5.396  | 4.496  | 3.597  | 3.372  | 2.998  | 2.698  |
| 1               | 8.093                         | 4.856  | 4.047  | 3.237  | 3.035  | 2.698  | 2.428  |
| 1.1             | 7.358                         | 4.415  | 3.679  | 2.943  | 2.759  | 2.453  | 2.207  |
| 1.2             | 6.744                         | 4.047  | 3.372  | 2.698  | 2.529  | 2.248  | 2.023  |
| 1.3             | 6.226                         | 3.735  | 3.113  | 2.490  | 2.335  | 2.075  | 1.868  |
| 1.4             | 5.781                         | 3.469  | 2.890  | 2.312  | 2.168  | 1.927  | 1.734  |
| 1.5             | 5.396                         | 3.237  | 2.698  | 2.158  | 2.023  | 1.799  | 1.619  |
| 1.6             | 5.058                         | 3.035  | 2.529  | 2.023  | 1.897  | 1.686  | 1.518  |
| 1.7             | 4.761                         | 2.856  | 2.380  | 1.904  | 1.785  | 1.587  | 1.428  |
| 1.8             | 4.496                         | 2.698  | 2.248  | 1.799  | 1.686  | 1.499  | 1.349  |
| 1.9             | 4.260                         | 2.556  | 2.130  | 1.704  | 1.597  | 1.420  | 1.278  |
| 2               | 4.047                         | 2.428  | 2.023  | 1.619  | 1.518  | 1.349  | 1.214  |
| 2.1             | 3.854                         | 2.312  | 1.927  | 1.542  | 1.445  | 1.285  | 1.156  |
| 2.2             | 3.679                         | 2.207  | 1.839  | 1.472  | 1.380  | 1.226  | 1.104  |

**Notes:**  
All loads are working load  
Gridtite material based upon 390N/mm² Steel  
Download Deflection based upon L/200

Figures limited to bar/bracket connection of 2.428kN  
Figures limited to bracket compression of 2.788kN  
Figure limited by pull out at bracket to substrate of 5.637kN  
Ultimate bending stress is based upon a load factor of 1.5

## Gridtite GP<sup>+</sup>

Gridtite GP<sup>+</sup> is a lightweight bar and bracket system designed for high load applications such as horizontal wall cladding.



GP<sup>+</sup> is easy to install, strong and stable when sheeted over; is durable and easy to relocate or alter if the need arises. It is easy for self-drilling fasteners to drill into, but provides good fastener grip to resist pull-out loads.

GP<sup>+</sup> has little effect on the thermal performance of the insulation, which assists the building in complying with Part L of the building regulations. Gridtite GP<sup>+</sup> has also been approved for use in firewall applications.

Please enquire for a copy of our fire assessment report.

## Benefits.

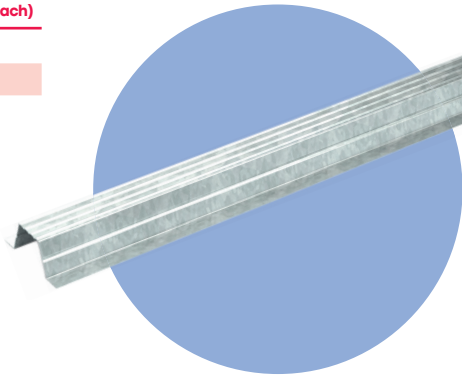
- User friendly high strength design.
- Design specifically for Horizontal Cladding.
- Suits most profile-insulation-liner combinations.
- Secure fixing detail.
- Minimum components.
- Firewall assessment up to 2.0m and Load Span Tables up to 2.4m sheeting rail centres.
- GP<sup>+</sup> rails up to 6m long.
- Range of bracket sizes to suit most U values.
- Limited cold bridging.
- Non-combustible.
- Compliments Gridtite GT system.
- Brackets can be either pre-positioned into the bars, or attached to the structure individually– it's your choice. Pre-positioning helps prevent the risk of misalignment of fixed brackets.
- No loose spigot sections are required.
- Simply butt bar sections up to each other on the appropriate brackets.
- Brackets are solid and do not hinge

## Gridtite GP<sup>+</sup> Bar.

Manufactured from 1.2mm high tensile hot-dip galvanised steel to BS EN 10345-S390GD+Z275.

The 40mm deep bar section is readily available in 3, 3.6 & 4m lengths, other sizes are available upon request. For ease of handling we recommend that double spans are used giving 3.6m lengths with horizontal rails at 1.8m centres.

| Product Code | Length (mm) | Weight (kg per each) |
|--------------|-------------|----------------------|
| XGP403.0     | 3000        | 5.577                |
| XGP403.6     | 3600        | 6.692                |
| XGP404.0     | 4000        | 7.436                |



## Gridtite GP<sup>+</sup> Standard Bracket.

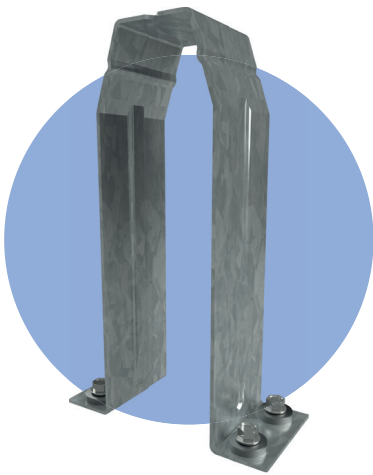
Manufactured from 1.6mm galvanised steel.

Heights available 100–260mm generally in 20mm increments. Other heights can be produced by arrangement.

Standard brackets: 50mm wide—for intermediate positions or at the end of a run.

Four fixings required in the 'foot' of each bracket, two each side.

| Product Code | Depth (mm) | Weight (kg per each) |
|--------------|------------|----------------------|
| XGPSB080MM   | 80         | 0.153                |
| XGPSB100MM   | 100        | 0.178                |
| XGPSB120MM   | 120        | 0.205                |
| XGPSB135MM   | 135        | 0.225                |
| XGPSB140MM   | 140        | 0.231                |
| XGPSB150MM   | 150        | 0.245                |
| XGPSB160MM   | 160        | 0.257                |
| XGPSB170MM   | 170        | 0.271                |
| XGPSB180MM   | 180        | 0.286                |
| XGPSB200MM   | 200        | 0.313                |
| XGPSB220MM   | 220        | 0.339                |
| XGPSB240MM   | 240        | 0.365                |
| XGPSB260MM   | 260        | 0.392                |



## Gridtite GP<sup>+</sup> Butt Bracket.

Manufactured from 1.6mm galvanised steel.

Butt brackets: 100mm wide—where two lengths of bar butt against each other.

Four fixings required in the 'foot' of each bracket, two each side.

| Product Code | Depth (mm) | Weight (kg per each) |
|--------------|------------|----------------------|
| XGPSB080MM   | 80         | 0.306                |
| XGPSB100MM   | 100        | 0.357                |
| XGPSB120MM   | 120        | 0.409                |
| XGPSB135MM   | 135        | 0.450                |
| XGPSB140MM   | 140        | 0.462                |
| XGPSB150MM   | 150        | 0.490                |
| XGPSB160MM   | 160        | 0.515                |
| XGPSB170MM   | 170        | 0.543                |
| XGPSB180MM   | 180        | 0.573                |
| XGPSB200MM   | 200        | 0.625                |
| XGPSB220MM   | 220        | 0.678                |
| XGPSB240MM   | 240        | 0.731                |
| XGPSB260MM   | 260        | 0.784                |



## Installation Instructions.

### Step

1

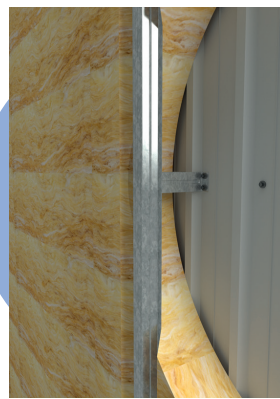
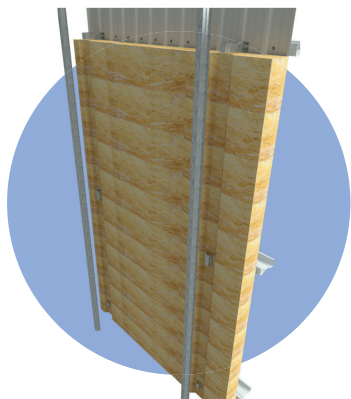
Position the bracket over the sheeting rail and install 4no. fasteners through the pre-drilled holes in the bracket through the liner sheet and to the sheeting rail. If you install the uppermost bracket first, you can use the 'V' cuts in the head of the bracket with a drop line to ensure the vertical alignment.



### Step

2

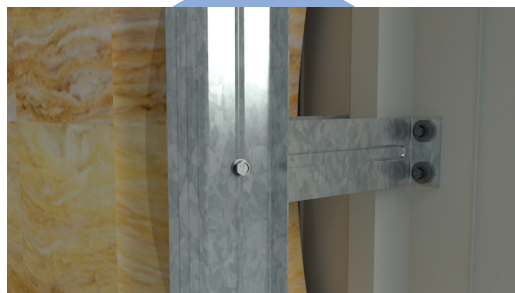
Position the GP40 rail over the brackets. The ribs in the rail and bracket located together to aid installation.



### Step

3

Standard brackets – Install 2no. fasteners (1no. either side of the rail) through the rail and to the bracket.



### Step

4

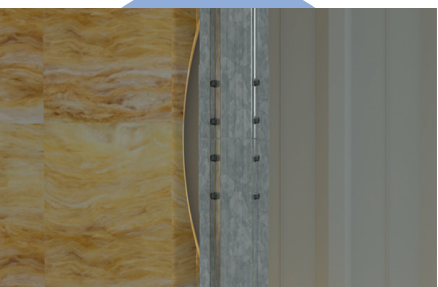
Butt bracket – Position the joint of the bars to the centre bracket and install 4no. fasteners (1no. either side of the rail at both ends of the rail) through the rail to the bracket.



### Step

5

If Butt brackets are not being used and a joint in the rails is required a splice joint should be installed. The splice should be positioned mid-point at the joint between the GP40 rails and 8no. fasteners (2no. either side of the rail on both sides of the joint) through the rail to the splice.



Thermal Performance.

Horizontal Cladding.

The tables below show U values achievable using Gridtite GP<sup>+</sup> and quilt insulation, either rock fibre or glass fibre, with thermal conductivity of 0.040 W/mK. U values for other grades of quilt are available from Fixing Point.

These figures are appropriate for any external profile as its shape has virtually no effect upon the thermal performance of the system. The liner protrudes into the insulation zone however and therefore must be considered. The modelling for these tables was carried out using a 19mm liner with 167mm pitch, other liner shapes will change the U values slightly.

Gridtite GP<sup>+</sup> Spacer.

U Values W/m²K using 140mm of 0.040 quilt

| Centres of support rails (mm) | Centres of GP <sup>+</sup> Bars (mm) |      |      |      |      |      |
|-------------------------------|--------------------------------------|------|------|------|------|------|
|                               | 1000                                 | 1200 | 1400 | 1600 | 1800 | 2000 |
| 1200                          | 0.35                                 | 0.34 | 0.33 | 0.32 | 0.32 | 0.32 |
| 1400                          | 0.34                                 | 0.33 | 0.33 | 0.32 | 0.32 | 0.31 |
| 1800                          | 0.33                                 | 0.32 | 0.32 | 0.31 | 0.31 | 0.31 |
| 1600                          | 0.34                                 | 0.33 | 0.32 | 0.32 | 0.31 | 0.31 |
| 2000                          | 0.33                                 | 0.32 | 0.32 | 0.31 | 0.31 | 0.30 |

U Values W/m²K using 160mm of 0.040 quilt

| Centres of support rails (mm) | Centres of GP <sup>+</sup> Bars (mm) |      |      |      |      |      |
|-------------------------------|--------------------------------------|------|------|------|------|------|
|                               | 1000                                 | 1200 | 1400 | 1600 | 1800 | 2000 |
| 1200                          | 0.31                                 | 0.30 | 0.29 | 1.29 | 0.28 | 0.28 |
| 1400                          | 0.30                                 | 0.29 | 0.29 | 0.28 | 0.28 | 0.27 |
| 1800                          | 0.29                                 | 0.29 | 0.28 | 0.28 | 0.27 | 0.27 |
| 1600                          | 0.29                                 | 0.28 | 0.28 | 0.28 | 0.27 | 0.27 |
| 2000                          | 0.28                                 | 0.28 | 0.28 | 0.27 | 0.27 | 0.27 |

U Values W/m²K using 180mm of 0.040 quilt

| Centres of support rails (mm) | Centres of GP <sup>+</sup> Bars (mm) |      |      |      |      |      |
|-------------------------------|--------------------------------------|------|------|------|------|------|
|                               | 1000                                 | 1200 | 1400 | 1600 | 1800 | 2000 |
| 1200                          | 0.27                                 | 0.27 | 0.26 | 1.25 | 0.25 | 0.25 |
| 1400                          | 0.27                                 | 0.26 | 0.25 | 0.25 | 0.25 | 0.24 |
| 1800                          | 0.26                                 | 0.26 | 0.25 | 0.25 | 0.24 | 0.24 |
| 1600                          | 0.26                                 | 0.25 | 0.25 | 0.25 | 0.24 | 0.24 |
| 2000                          | 0.26                                 | 0.25 | 0.25 | 0.24 | 0.24 | 0.24 |

Download Capacities - Working Load UDL (kN/m²)

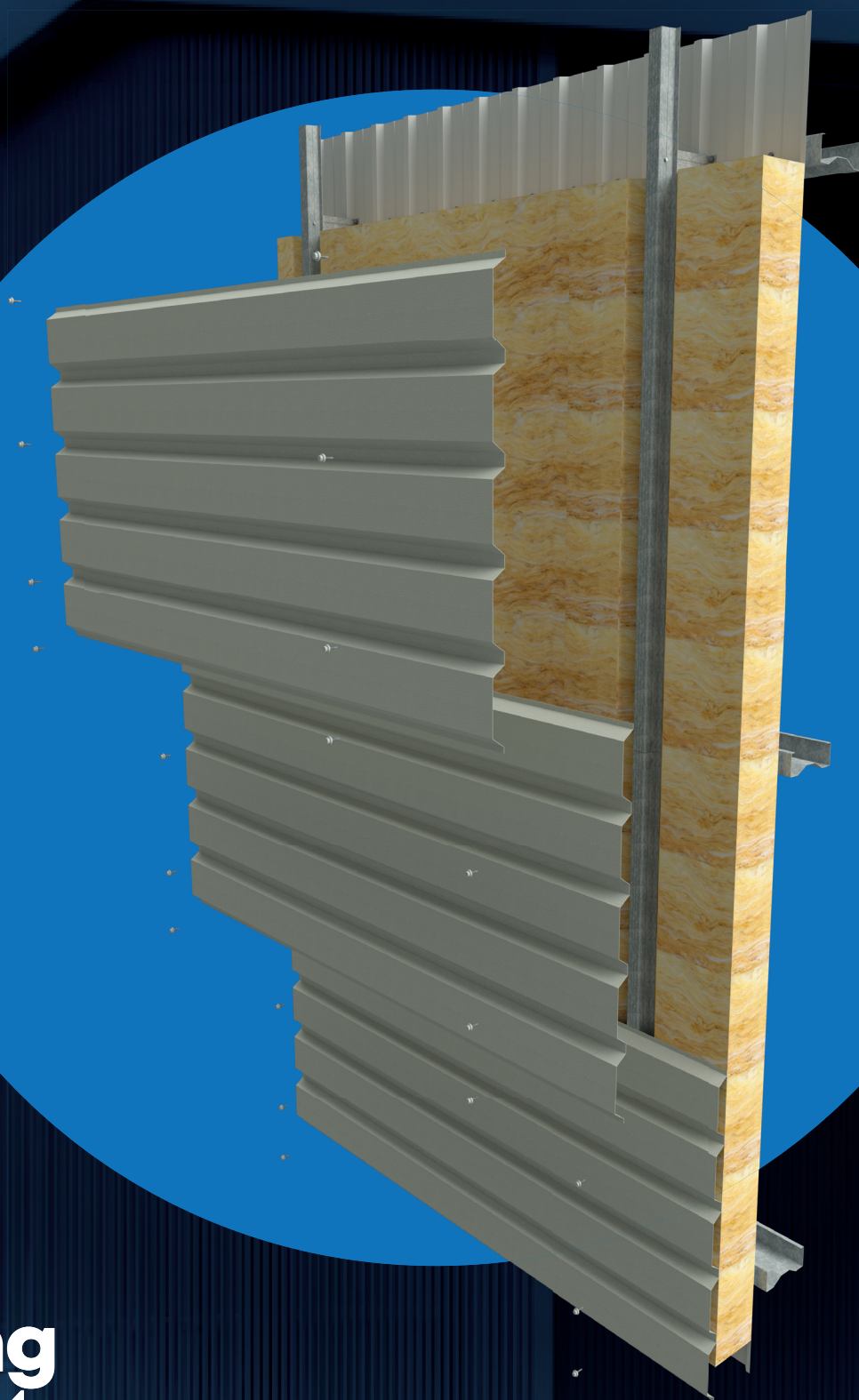
| Sheeting Rail / Bracket Spacing (m) | Vertical Rail Centres (m) |        |        |        |        |        |        |        |        |        |        |        |        |       |       |       |       |
|-------------------------------------|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
|                                     | 0.600                     | 0.800  | 1.000  | 1.100  | 1.200  | 1.300  | 1.400  | 1.500  | 1.600  | 1.700  | 1.800  | 1.900  | 2.000  | 2.100 | 2.200 | 2.300 | 2.400 |
| 0.6                                 | 34.106                    | 25.579 | 20.463 | 18.603 | 17.053 | 15.741 | 14.617 | 13.642 | 12.790 | 12.037 | 11.369 | 10.770 | 10.232 | 9.745 | 9.302 | 8.897 | 8.526 |
| 0.8                                 | 19.184                    | 14.388 | 11.511 | 10.464 | 9.592  | 8.854  | 8.222  | 7.674  | 7.194  | 6.771  | 6.395  | 6.058  | 5.755  | 5.481 | 5.232 | 5.005 | 4.796 |
| 1                                   | 12.278                    | 9.209  | 7.367  | 6.697  | 6.139  | 5.667  | 5.262  | 4.911  | 4.604  | 4.333  | 4.093  | 3.877  | 3.683  | 3.508 | 3.349 | 3.203 | 3.070 |
| 1.1                                 | 10.147                    | 7.610  | 6.088  | 5.535  | 5.074  | 4.683  | 4.349  | 4.059  | 3.805  | 3.581  | 3.382  | 3.204  | 3.044  | 2.899 | 2.767 | 2.647 | 2.537 |
| 1.2                                 | 8.526                     | 6.395  | 5.116  | 4.651  | 4.263  | 3.935  | 3.654  | 3.411  | 3.197  | 3.009  | 2.842  | 2.693  | 2.558  | 2.436 | 2.325 | 2.224 | 2.132 |
| 1.3                                 | 7.265                     | 5.449  | 4.359  | 3.963  | 3.633  | 3.353  | 3.114  | 2.906  | 2.724  | 2.564  | 2.422  | 2.294  | 2.180  | 2.076 | 1.981 | 1.895 | 1.816 |
| 1.4                                 | 6.264                     | 4.698  | 3.759  | 3.417  | 3.132  | 2.891  | 2.685  | 2.506  | 2.349  | 2.211  | 2.088  | 1.978  | 1.879  | 1.790 | 1.708 | 1.634 | 1.566 |
| 1.5                                 | 5.457                     | 4.093  | 3.274  | 2.977  | 2.728  | 2.519  | 2.339  | 2.183  | 2.046  | 1.926  | 1.819  | 1.723  | 1.637  | 1.559 | 1.488 | 1.424 | 1.364 |
| 1.6                                 | 4.724                     | 3.543  | 2.834  | 2.577  | 2.362  | 2.180  | 2.025  | 1.890  | 1.772  | 1.667  | 1.575  | 1.492  | 1.417  | 1.350 | 1.288 | 1.232 | 1.181 |
| 1.7                                 | 3.939                     | 2.954  | 2.363  | 2.148  | 1.969  | 1.818  | 1.688  | 1.575  | 1.477  | 1.390  | 1.313  | 1.244  | 1.182  | 1.125 | 1.074 | 1.027 | 0.985 |
| 1.8                                 | 3.318                     | 2.488  | 1.991  | 1.810  | 1.659  | 1.531  | 1.422  | 1.327  | 1.244  | 1.171  | 1.106  | 1.048  | 0.995  | 0.948 | 0.905 | 0.866 | 0.829 |
| 2                                   | 2.419                     | 1.814  | 1.451  | 1.319  | 1.209  | 1.116  | 1.037  | 0.968  | 0.907  | 0.854  | 0.806  | 0.764  | 0.726  | 0.691 | 0.660 | 0.631 | 0.605 |

Uplift Load Capacities - Working Load UDL (kN/m²)

| Sheeting Rail / Bracket Spacing (m) | Vertical Rail Centres (m) |        |        |        |        |        |        |        |        |        |        |        |        |       |       |       |       |
|-------------------------------------|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
|                                     | 0.600                     | 0.800  | 1.000  | 1.100  | 1.200  | 1.300  | 1.400  | 1.500  | 1.600  | 1.700  | 1.800  | 1.900  | 2.000  | 2.100 | 2.200 | 2.300 | 2.400 |
| 0.6                                 | 34.106                    | 25.579 | 20.463 | 18.603 | 17.053 | 15.741 | 14.617 | 13.642 | 12.790 | 12.037 | 11.369 | 10.770 | 10.232 | 9.745 | 9.302 | 8.897 | 8.526 |
| 0.8                                 | 19.184                    | 14.388 | 11.511 | 10.464 | 9.592  | 8.854  | 8.222  | 7.674  | 7.194  | 6.771  | 6.395  | 6.058  | 5.755  | 5.481 | 5.232 | 5.005 | 4.796 |
| 1                                   | 12.278                    | 9.209  | 7.367  | 6.697  | 6.139  | 5.667  | 5.262  | 4.911  | 4.604  | 4.333  | 4.093  | 3.877  | 3.683  | 3.508 | 3.349 | 3.203 | 3.070 |
| 1.1                                 | 10.147                    | 7.610  | 6.088  | 5.535  | 5.074  | 4.683  | 4.349  | 4.059  | 3.805  | 3.581  | 3.382  | 3.204  | 3.044  | 2.899 | 2.767 | 2.647 | 2.537 |
| 1.2                                 | 8.526                     | 6.395  | 5.116  | 4.651  | 4.263  | 3.935  | 3.654  | 3.411  | 3.197  | 3.009  | 2.842  | 2.693  | 2.558  | 2.436 | 2.325 | 2.224 | 2.132 |
| 1.3                                 | 7.265                     | 5.449  | 4.359  | 3.963  | 3.633  | 3.353  | 3.114  | 2.906  | 2.724  | 2.564  | 2.422  | 2.294  | 2.180  | 2.076 | 1.981 | 1.895 | 1.816 |
| 1.4                                 | 6.264                     | 4.698  | 3.759  | 3.417  | 3.132  | 2.891  | 2.685  | 2.506  | 2.349  | 2.211  | 2.088  | 1.978  | 1.879  | 1.790 | 1.708 | 1.634 | 1.566 |
| 1.5                                 | 5.457                     | 4.093  | 3.274  | 2.977  | 2.728  | 2.519  | 2.339  | 2.183  | 2.046  | 1.926  | 1.819  | 1.723  | 1.637  | 1.559 | 1.488 | 1.424 | 1.364 |
| 1.6                                 | 4.724                     | 3.543  | 2.834  | 2.577  | 2.362  | 2.180  | 2.025  | 1.890  | 1.772  | 1.667  | 1.575  | 1.492  | 1.417  | 1.350 | 1.288 | 1.232 | 1.181 |
| 1.7                                 | 3.939                     | 2.954  | 2.363  | 2.148  | 1.969  | 1.818  | 1.688  | 1.575  | 1.477  | 1.390  | 1.313  | 1.244  | 1.182  | 1.125 | 1.074 | 1.027 | 0.985 |
| 1.8                                 | 3.318                     | 2.488  | 1.991  | 1.810  | 1.659  | 1.531  | 1.422  | 1.327  | 1.244  | 1.171  | 1.106  | 1.048  | 0.995  | 0.948 | 0.905 | 0.866 | 0.829 |
| 2                                   | 2.419                     | 1.814  | 1.451  | 1.319  | 1.209  | 1.116  | 1.037  | 0.968  | 0.907  | 0.854  | 0.806  | 0.764  | 0.726  | 0.691 | 0.660 | 0.631 | 0.605 |

Notes:  
All loads are working load  
Gridtite material based upon 450N/mm² Steel  
Download Deflection based upon L/150  
Ultimate bending stress is based upon a load factor of 1.5





# Fixing Point

Everything on point

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