


## PRODUCT TECHNICAL SPECIFICATION SHEET

### Key Information

ITEM	DESCRIPTIONS	SPECIFICATIONS
1	Product name	Light weight anti-slip grating
2	Product brand	 <b>LITEWALK®</b>
3	Material	Mild steel SS400 or equivalent. For other types of material enquiry are welcome
4	Industrial standard	Conformed to British standard BS 4592 Part 4
5	Third party test	Load test conducted at SIRIM Malaysia
6	Corrosion protection	Hot dip galvanised – conformed to ISO 1461 with a minimum zinc coating of 45 micron
7	Standard panel dimension	Width 960mm X Span 6000mm (Malaysian Market) Width 960mm X Span 5800mm (Export market) Customization is allowed, enquiry are welcome.
8	Manufacturer	Mastek Oil Tools Sdn. Bhd. (211461-T)  Address: Suite 3B-3-3, Level 2, Block 3B, Plaza Sentral, Jalan Stesen, Sentral 5, Kuala Lumpur, Malaysia.  Contact: + 603 2273 4534 / 2273 4536  Email: <a href="mailto:sales@mastek-ot.com.my">sales@mastek-ot.com.my</a>  Website: <a href="http://www.mastek-ot.com.my">www.mastek-ot.com.my</a>
9	Intellectual Property	This product is fully protected under the intellectual property law.

PRODUCT TECHNICAL SPECIFICATION SHEET

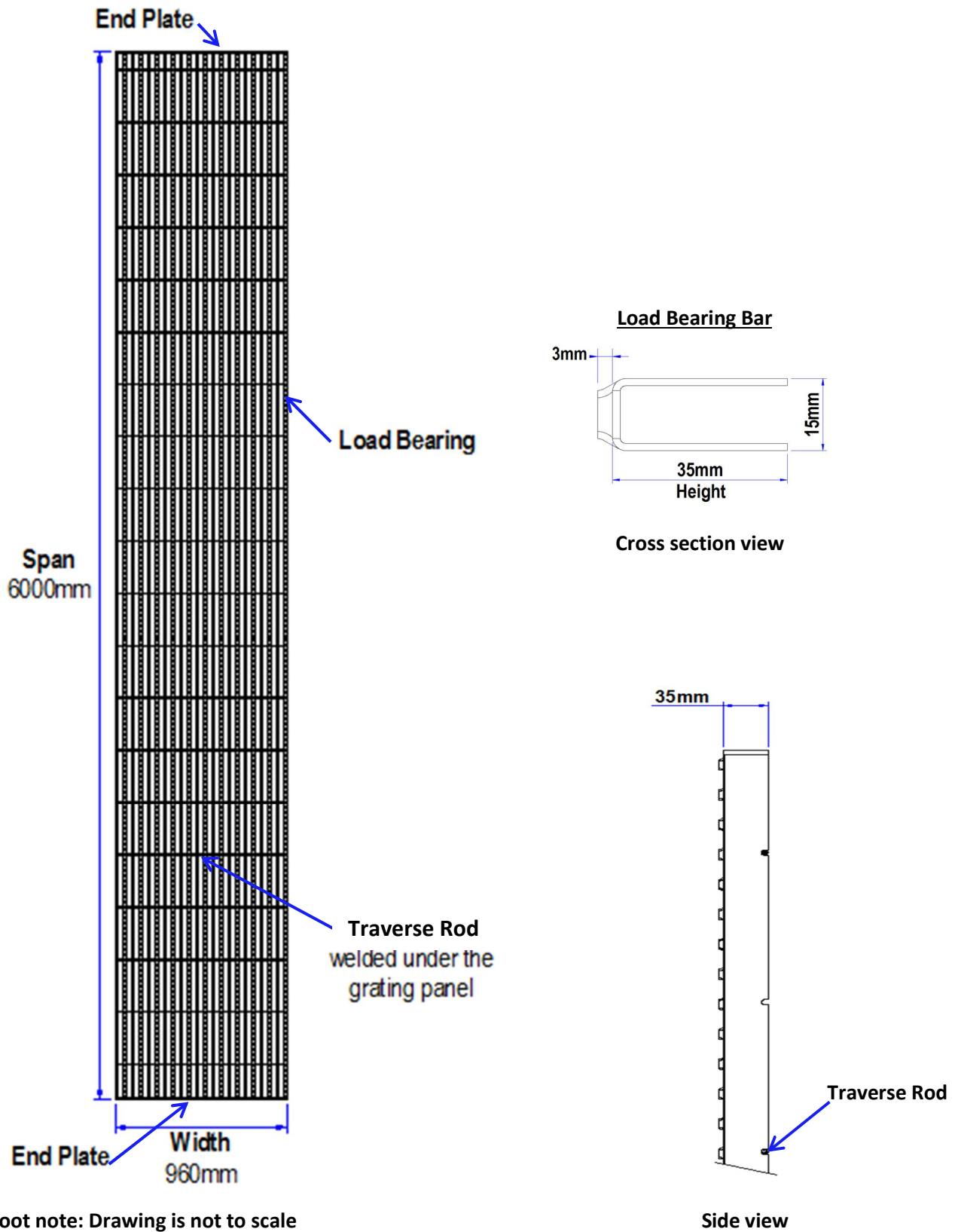
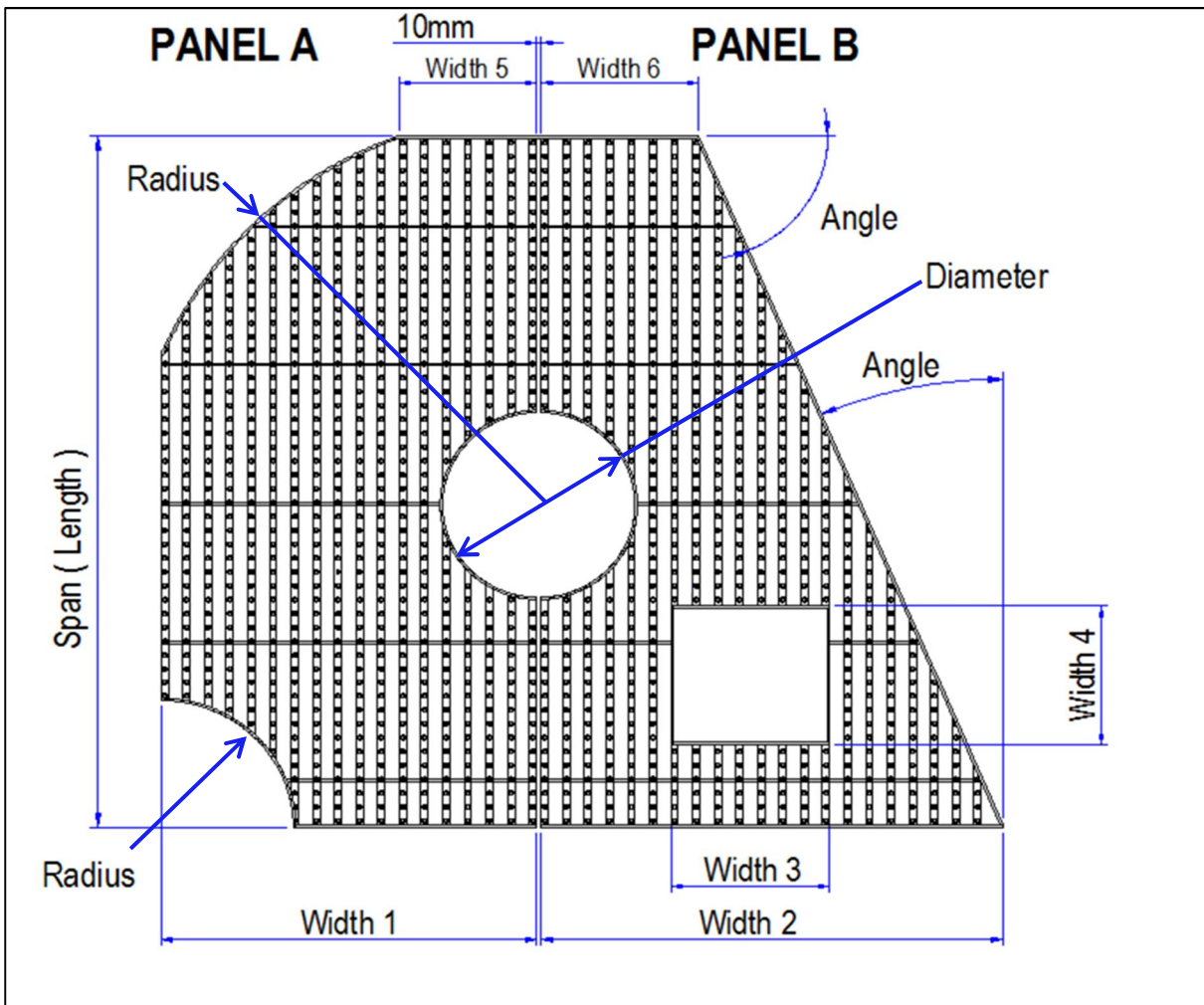


Figure 1: LITEWALK® standard size grating panel

**PRODUCT TECHNICAL SPECIFICATION SHEET**

**Customization**

At **Mastek Oil Tools**, we cater for project that requires the grating to be cut into different shape and size so that it could suit the complex design of the grating arrangement that you need. Please forward to us your floor plan and let our engineers work that out for you.



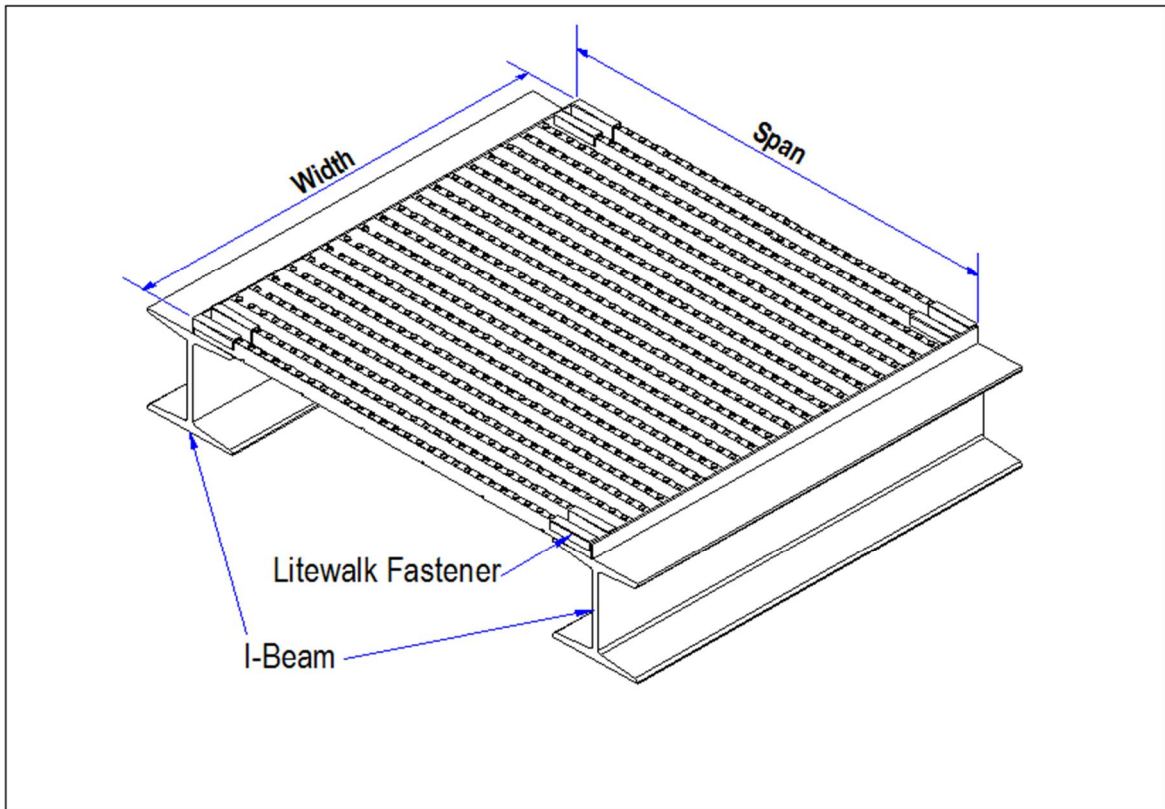
**Figure 2: Sample drawing of customized grating panel**

## TECHNICAL SPECIFICATION SHEET FOR MODEL : MD35A

### Technical specification

Model	MD35A
Load bearing bars	Dimension Height 35mm X Width 15mm
Load bearing pitch	Clear distant between two load bearing bars is 30mm
Traverse rod	Round shaft 5mm diameter placed under the grating panel
Traverse pitch	Pitch between 2 pieces of traverse rod is 300mm
Grating type	Close end with two pieces of end plate welded to the load bearing bars
End plate	Material is mild steel. Height 35mm X Thickness 5mm
Anti-slip	10mm diameter purling hole on surface of load bearing bar
Walking Direction	Walking direction is from all angles
Standard panel	Height 35mm X Width 960mm X Span 6000mm (5.76m <sup>2</sup> /panel)
Weight	Total weight per standard panel is approximately at 129kg ( 22.3kg/m <sup>2</sup> )
Load	The model is designed for 5kN/m <sup>2</sup>
Usage	Medium duty for walking and general medium duty application
Application	Good for application such as walkways, stair treads, platforms, landing ramps, stage flooring, tree guard, trench covers, paint booth, mezzanine floor, mooring docks, racks & shelves, drain cover, fencing and etc.
Not suitable	This model is not suitable for heavy load usage such as vehicle. Please check with us for heavy duty models.
Caution	Person must wear flat boots (shoe) in order to walk-on LITEWALK® grating panel. Do not walk bare-footed.

**TECHNICAL SPECIFICATION SHEET FOR MODEL : MD35A**



**Figure 3: MD35A- LITEWALK® grating panel**

**TECHNICAL SPECIFICATION SHEET FOR MODEL : MD35A**

**LOAD TABLE**

**Industrial Standard Procedure: BS 4592-1:2006**

Industrial type flooring, walkways, and stair treads

Part 1: Metal open bar grating

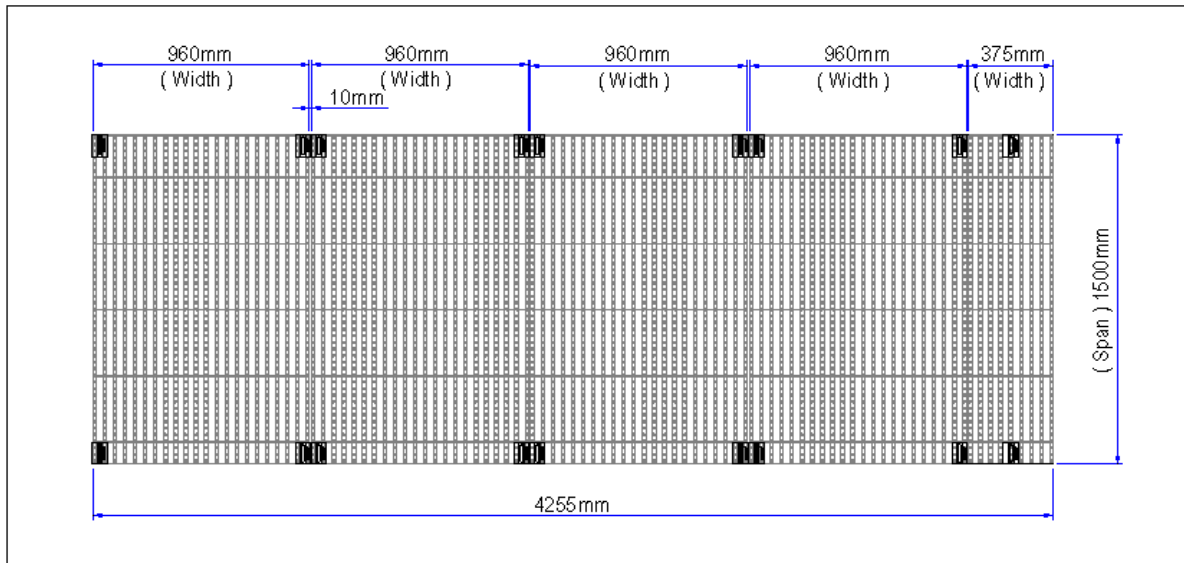
SPAN	SPECIFICATION	Deflection (mm)	
		Central load 1kN/m <sup>2</sup>	Uniform load 5kN/m <sup>2</sup>
500mm	Deflection 1/200 X effective span (2.5mm)	0.50mm	0.82mm
1000mm	Deflection 1/200 X effective span (5.0mm)	1.31mm	2.88mm
1300mm	Deflection 1/200 X effective span (6.5mm)	2.04mm	4.00mm
1500mm	Deflection 1/200 X effective span (7.5mm)	2.85mm	4.12mm
2000mm	Deflection 1/200 X effective span (10.0mm)	5.68mm	10.07mm

*Foot note: Industrial standards require the deflection to be less than **5mm** for both central load and uniform distributed load.*

## INSTALLATION TECHNICAL SPECIFICATION SHEET

### How to order

The LITEWALK® grating comes in standard panel of Width 960mm X Span 6000mm. The below is an example of a typical layout of a walkway. This will give you an idea how you can place an order for your project.



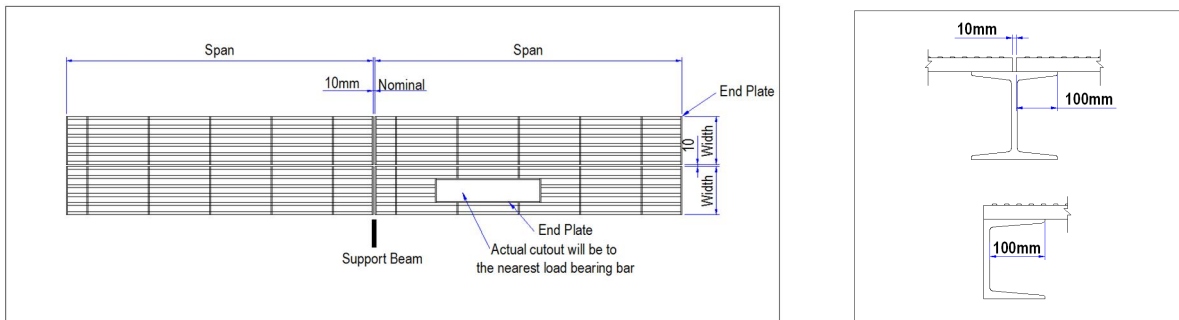
**Figure 4: Typical layout of a walkway**

If you have a walkway with the dimension as above, then your order should be

- a) 4 pieces of LITEWALK® MD35A width 960mm X span 1500mm
- b) 1 piece of LITEWALK® MD35A width 375mm X span 1500mm
- c) 18pieces of LITEWALK® fastener (M-bracket + J-clamp)

### Installation

Here is a typical installation layout of the LITEWALK® grating.



**Figure 5: Typical LITEWALK® Grating Installation**

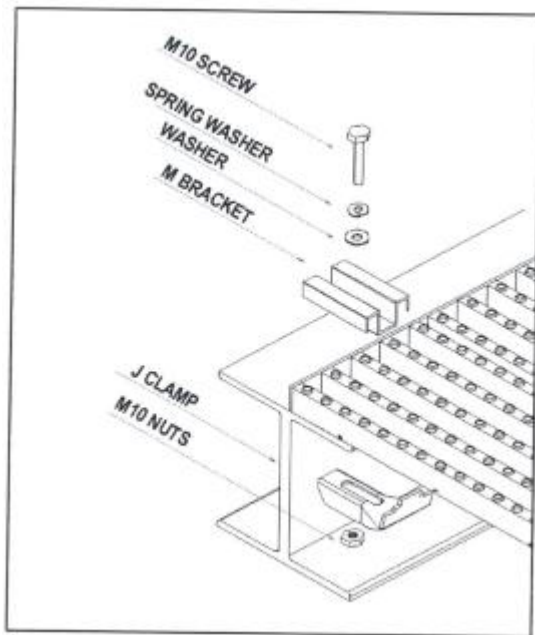
## INSTALLATION TECHNICAL SPECIFICATION SHEET

### LITEWALK® Fastener

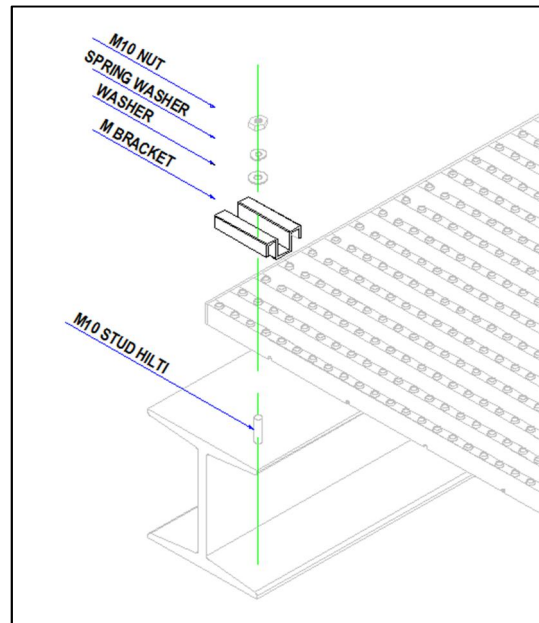
We provide specially designed fastening clamps for the installation of LITEWALK® panels onto structural beams. A piece of *M-bracket* is used to hold the panel from the top. It is fastened with a *J-clamp* at the bottom using a piece of 10mm bolt. When both the *M-bracket* and *J-clamp* is tightened with a *M10 bolt*, the clamp grips the Litewalk grating panel tightly onto the structural beam.

The LITEWALK® *M-bracket* is also designed to suit technical stud that are readily available in the market such as *Hilti Stainless Steel Threaded Stud X-BT M10*.

Please take note that there are different model of *M-brackets* and *J-clamps* for different model of the LITEWALK® grating panels.



**J – Clamp**



**M – Bracket**

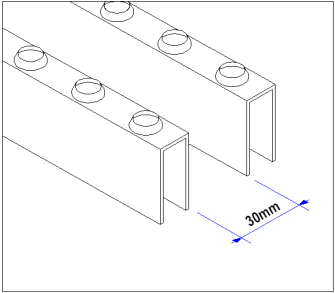
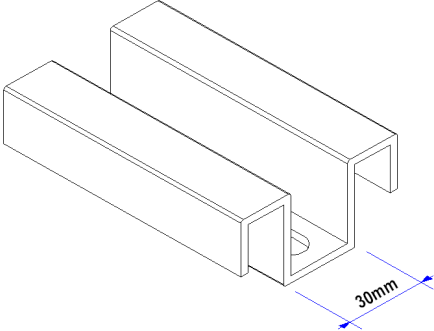
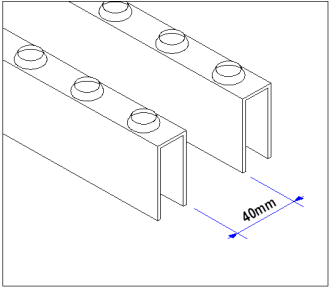
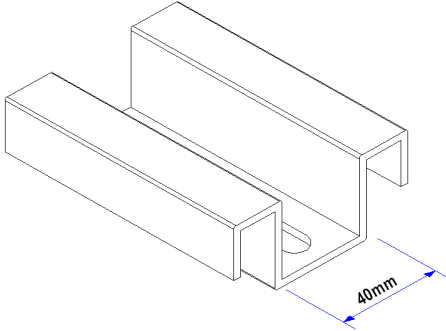
**Figure 6: LITEWALK® grating fastening device**



## INSTALLATION TECHNICAL SPECIFICATION SHEET

### M- Bracket

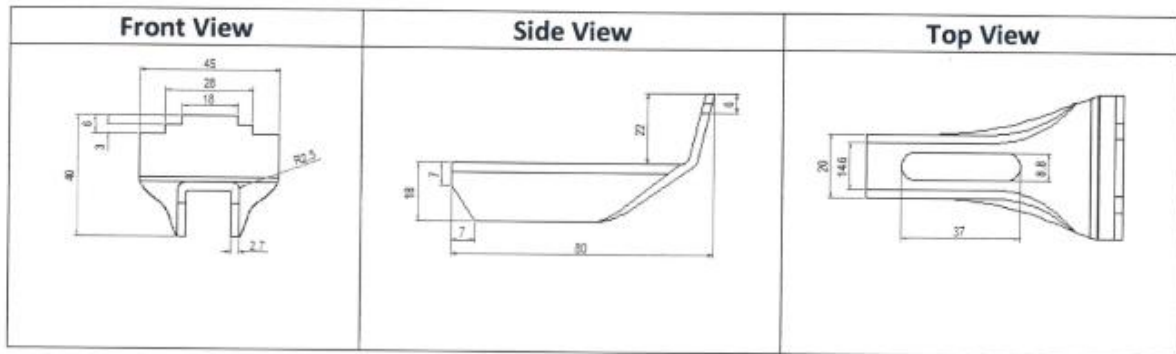
The *M-bracket* is the upper part of the LITEWALK® fastening device. We have two types to suit two different LITEWALK® panels.

TYPE	SUITABLE FOR	CLEAR DISTANCE BETWEEN TWO LOAD BEARING BARS	DIMENSIONAL VIEW
<b>M35A</b>	LITEWALK® grating model MD35A	Clear distance 30mm (distance between two load bearing bars) 	
<b>M35B</b>	LITEWALK® grating model MD35B	Clear distance 40mm (distance between two load bearing bars) 	

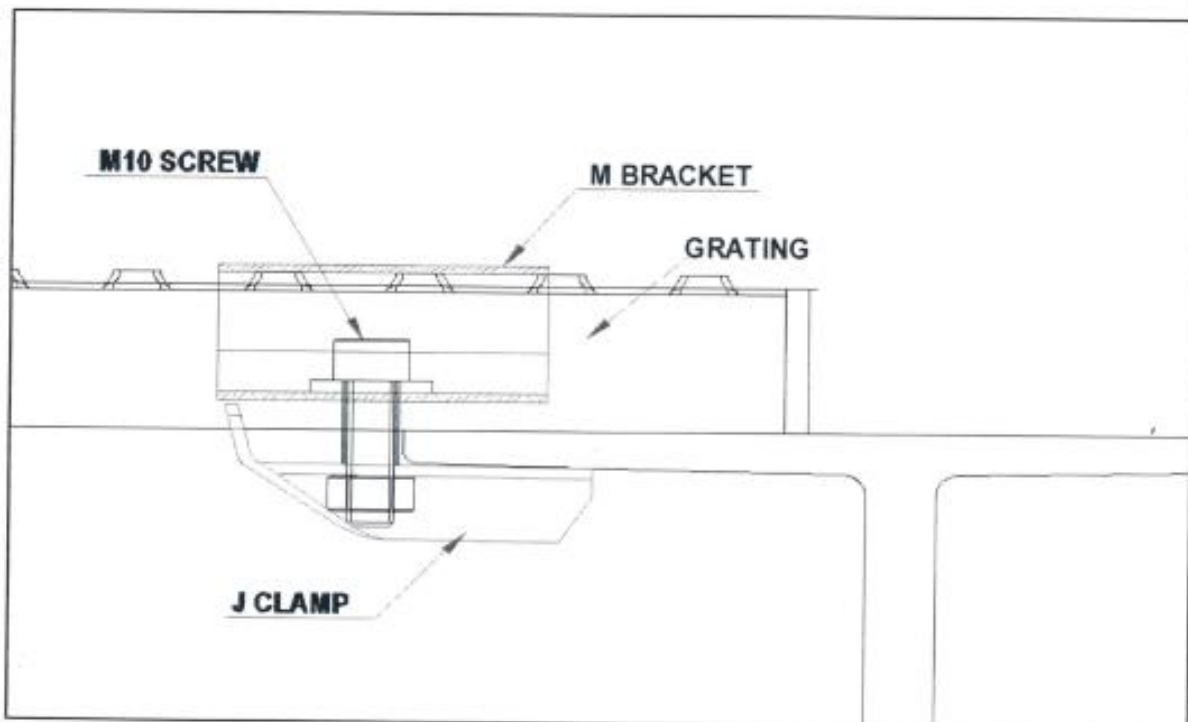
**INSTALLATION TECHNICAL SPECIFICATION SHEET**

**J- Clamp**

The *J-clamp* is the lower part of the LITEWALK® fastening device.



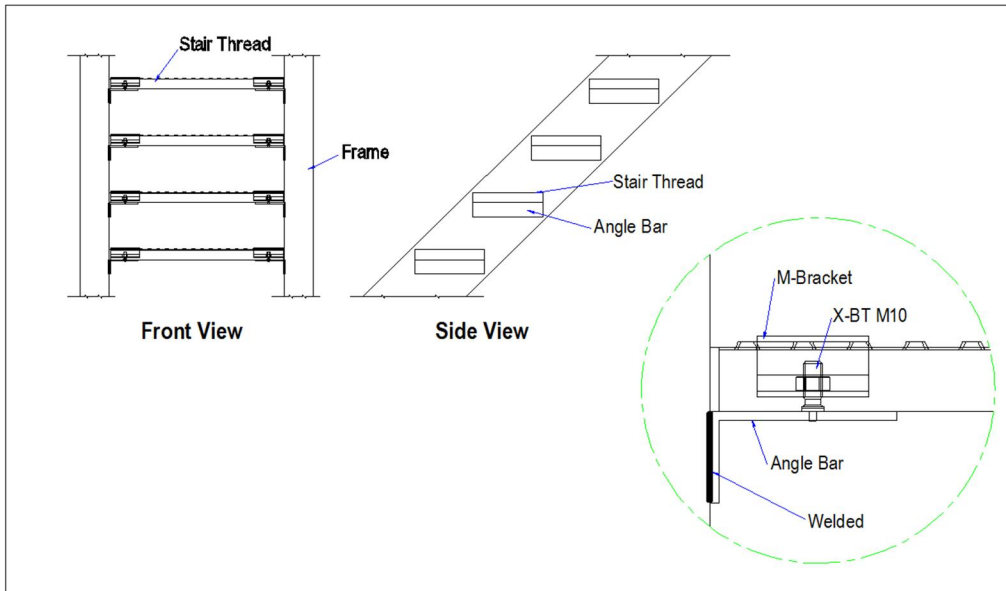
**Litewalk fastening assembly (M-bracket & J-clamp)**



**Figure 7: LITEWALK® Fastener**

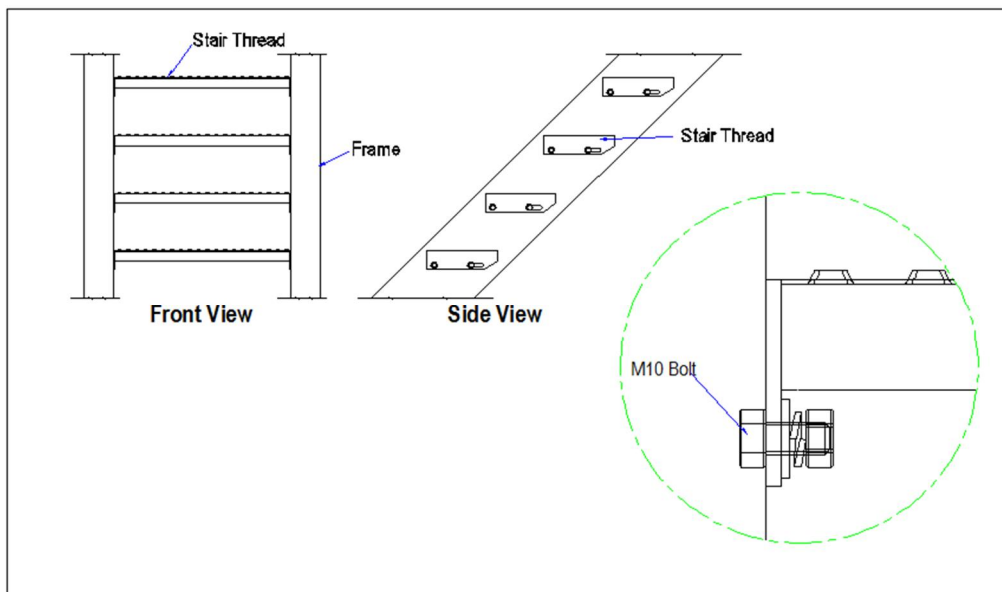
**TECHNICAL SPECIFICATION SHEET FOR STAIR TREADS**

We provide two types of stair tread for stair case. Please refer Figure 8 for type **MST** and Figure 9 for type **BST**.



**Figure 8: MST stair tread**

A piece of angle bar is welded onto the stair structure. The LITEWALK® fastening device is used to tighten the tread onto the angle bar.



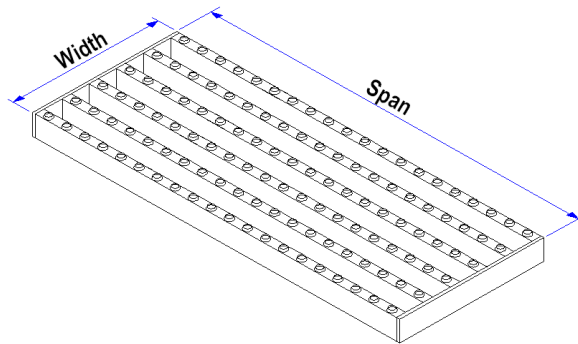
**Figure 9: BST stair tread**

The stair tread is fastened onto the stair structure directly by bolts.

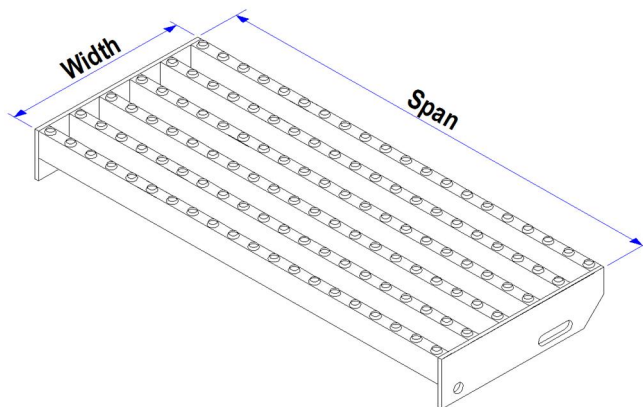
## TECHNICAL SPECIFICATION SHEET FOR STAIR TREADS

Recommended width and span for **LITEWALK®** stair treads

TYPE	STANDARD WIDTH AND SPAN OF TREAD		
	WIDTH x SPAN	WIDTH x SPAN	WIDTH x SPAN
<b>MST stair tread</b>	195mm x 750mm	195mm x 960mm	195mm x 1190mm
	240mm x 750mm	240mm x 960mm	240mm x 1190mm
<b>BST stair tread</b>	195mm x 750mm	195mm x 960mm	195mm x 1190mm
	240mm x 750mm	240mm x 960mm	240mm x 1190mm



**Figure 10a: LITEWALK® MST stair tread**



**Figure 10b: LITEWALK® BST stair tread**

*Foot note: 1) The height of load bearing bar is 35mm.*

*2) The LITEWALK® stair tread has very good anti-slip therefore there is no need to install anti-slip nosing.*

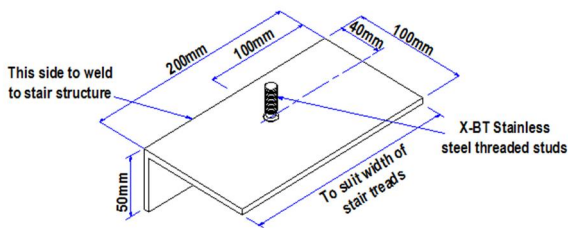
## TECHNICAL SPECIFICATION SHEET FOR STAIR TREADS

### How to order LITEWALK® stair treads

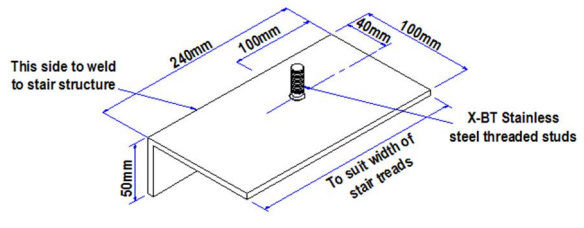
Have a look at the two systems that we offer. You can select either MST type, where the treads are fastened onto a piece of angle bar by mean of using LITEWALK® fastening device onto the stair structure. Or you can select BST type which is fastened onto the stair structure using bolts and nuts.

In case you have selected MST type, you need to weld a piece of angle bar to the stair structure with a minimum size of 50mm x 100mm. The length of angle bars must suit the width of the treads that you have selected. It's either 195mm or 240mm.

### Dimension of angle bar

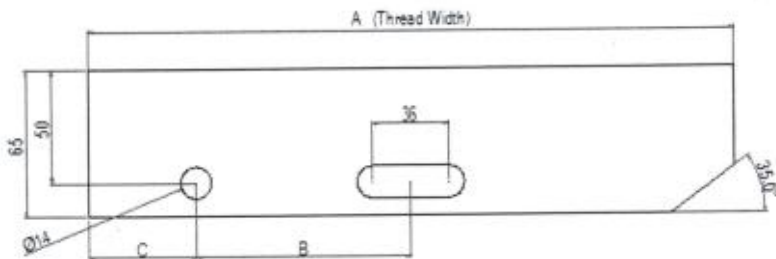


**Figure 11a: Thread width 195mm**



**Figure 11b: Thread width 240mm**

In case you have selected BST type, you need to prepare holes on the stair structures. These holes will be used for inserting the bolts when the treads are installed. Please see Figure 12 for dimension. You will notice for every tread there are a hole and a slot. The holes are mirrored on both sides left and right of the treads.



No	Tread Width A	Distant hole to slot	
		B	C
1	195	100	25
2	240	100	50
3	285	140	50

**Figure 12: End Plate for BST Stair Tread**