

WELDLOK® STEEL GRATING STAIR TREADS

Stair Treads

Weldlok® stair treads can be supplied in Series 30, 40 & 60 forgebar grating. Treads may be selected using the Recommended Width and Recommended Max. Length tables. Non-standard treads can also be supplied on request. Please consult our sales department.

Ordering Stair Treads

1. Select from the tread types shown (T1 to T8).
2. Refer to Recommended Max. Lengths table. Select a Load Bar Size and Series with a maximum length equal to or greater than the required tread length. For example, if the required tread length is 1100mm, the Series 40 grating with 32 x 5 load bars (A40-325) would be appropriate.
3. From the Recommended Widths table, choose a width that corresponds to the tread type and Series selected. For example, based on the Series 40 grating and a T1 tread, the tread width would be either 125, 165, 205, 245, 285 or 325mm.

Example would be:

TREAD TYPE T1 ~ 1100 x 285 FROM A40 – 325

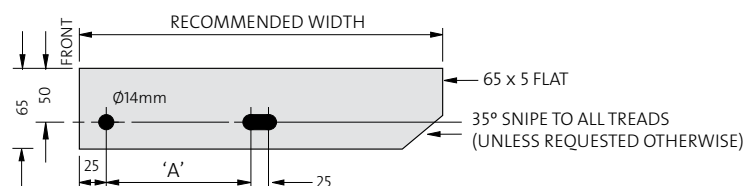
RECOMMENDED MAXIMUM LENGTHS (mm)			
LOAD BAR SIZE	25 x 5	32 x 5	40 x 5
SERIES 30	900	1300	1600
SERIES 40	750	1200	1500
SERIES 60	500	800	1300

RECOMMENDED WIDTHS (mm) *							
TREAD TYPES T1 TO T8							
SERIES 30	125	155	185	215	245	275	305
SERIES 40	125	165		205	245	285	325
SERIES 60	125		185		245		305

*Note: In order to comply with AS1657 a minimum tread width of 225mm is required.

BOLTED CONNECTIONS							
END PLATE HOLE CENTRES (mm)							
'A'	45	75	75	100	100	100	100

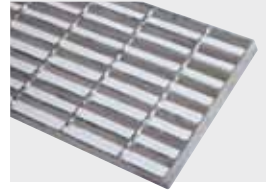
Standard End Plates for Bolted Threads



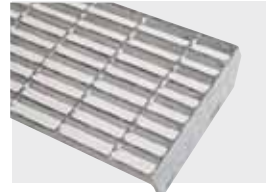
Note: Special End Plate Hole Centres available on request.

Tread Types

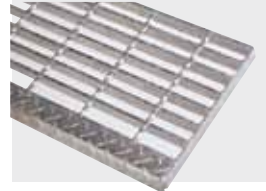
T1 Welded fixing – No nosing



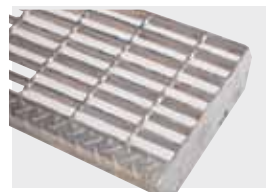
T2 Bolted fixing – No nosing



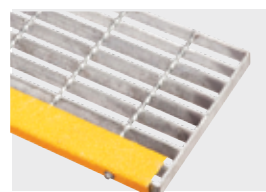
T3 Welded fixing – Floor plate nosing



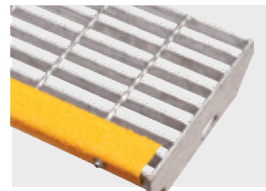
T4 Bolted fixing – Floor plate nosing



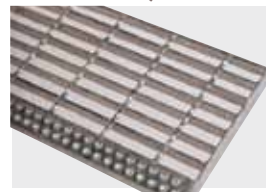
T5 Welded fixing – Abrasive nosing



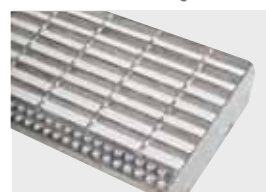
T6 Bolted fixing – Abrasive nosing



T7 Welded fixing – Perforated nosing



T8 Bolted fixing – Perforated nosing



WELDLOK® FORGEBAR GRATING FASTENING METHODS

A. Clip Down

The use of Weldlok® fixing clips to clamp the grating to the structural supports is the most common method. The clips can be installed from the top of the grating. A minimum of 4 clips per panel should be used. On large panels, extra clips at mid-span are recommended. The clips are supplied with a galvanised finish.

B. Screw Down

Where there is no open flange to clamp to, a galvanised top saddle clamp with hex-head self-tapping or thread-cutting screw can be used. A minimum of 4 saddle clamps per panel should be used. On large panels, extra clips at mid-span are recommended.

Anti-vibration Fastening

Where vibration may affect the integrity of the clamping arrangement, there are two methods that can be adopted – anti-vibration clips or welding.

C. Grate-Fast® Clips

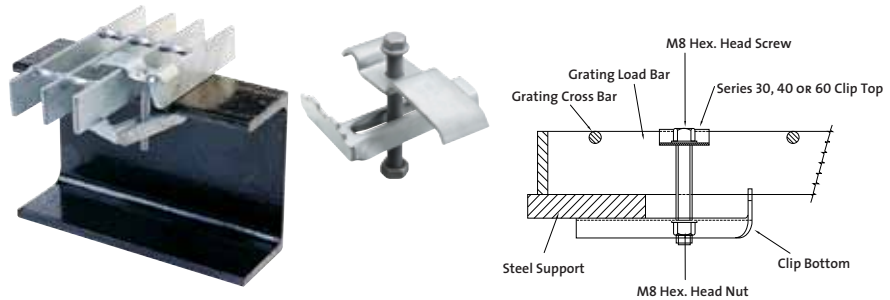
The Lloyds approved Lindapter Grate-Fast® clip is a galvanised anti-vibration clip comprising top-hat bracket, cast clip bottom and M10 socket head cap screw.

D. Weld Down

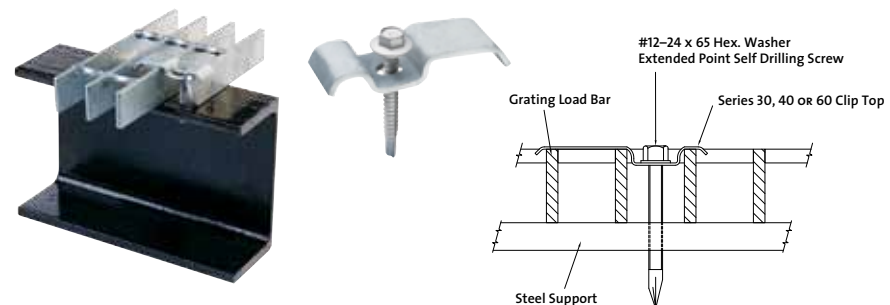
Where there is no requirement to remove grating at some later date, on-site welding of grating panels to the structural steel is considered an acceptable method of fixing. The minimum requirement is 4 welds per panel, each consisting of a 6mm fillet, 25mm long, and spaced at 1000mm centres.

Suitable weld preparation practices and surface finish touch-up should be used with this method.

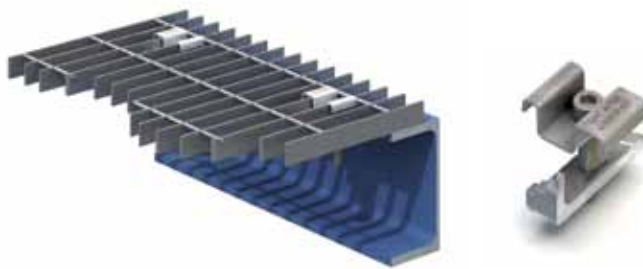
A. Galvanised Clip Set with Screw and Nut



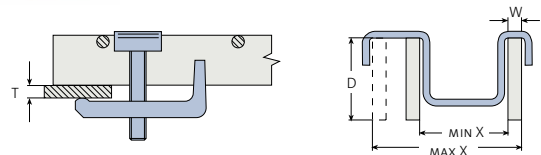
B. Galvanised Clip Top with Self-Drilling Screw



C. Grate-Fast® Anti-Vibration Clip Set



lindapter
Established 1934



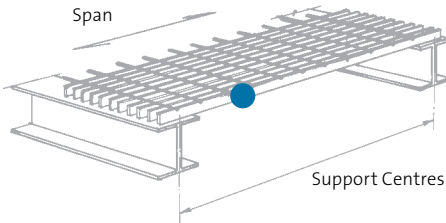
Grate-Fast® Clip Dimensions

FLANGE	LOAD BAR	LOAD BAR	LOAD BAR
T (mm)	D (mm)	W (mm)	X (mm)
3 – 19	20 – 30	3 – 7	25 – 45

WELDLOK® FORGEBAR GRATING TERMINOLOGY

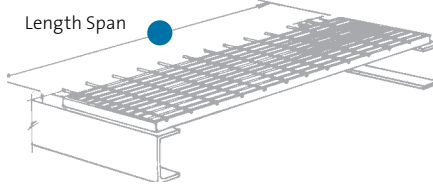
Load Bearing Bar

A load-carrying member spanning between supports.



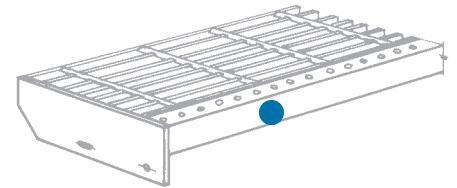
Length (Direction of Span)

The overall dimension of a panel parallel to the load-bearing bars.



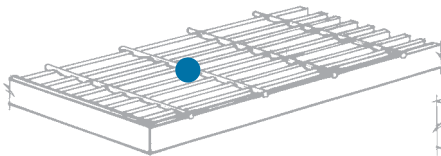
Nosing Bar

A member attached to the front edge of a stair tread or top stair landing panel.



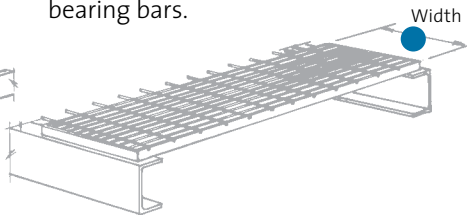
Cross Bar

A member fixed at right angles to the load bearing bars to provide lateral restraint.



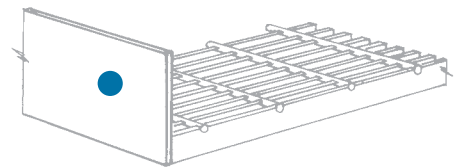
Width

The overall dimension of a panel at right angles to the load-bearing bars.



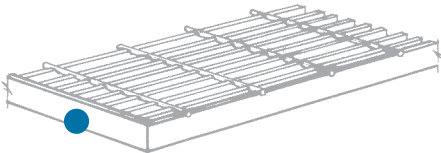
Kick Plate

A large, flat bar welded to the side of a panel or ends and around cut-outs, where specified. Nominally 100mm above walking surface.



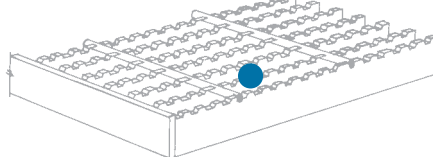
Edge Bar

Non-load-bearing bars, running at right angles to the load-bearing members.



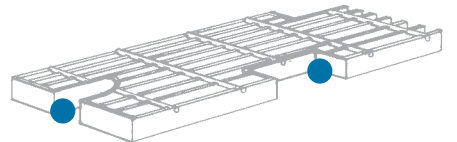
Serrations

Notches formed in the top of load-bearing bars to improve skid resistance.



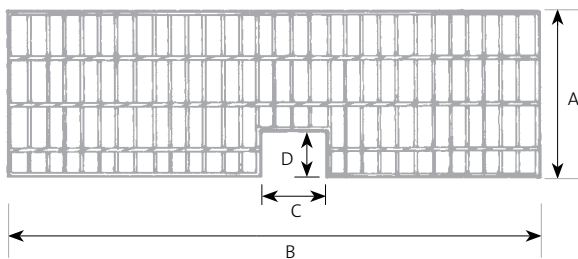
Cut-Outs

Area of flooring removed to clear around columns, pipes, machinery, etc.



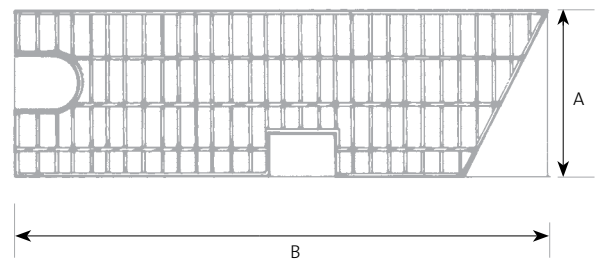
Nett Area

The area of flooring remaining after deducting cut-outs $([A \times B] - [C \times D])$.



Gross Area

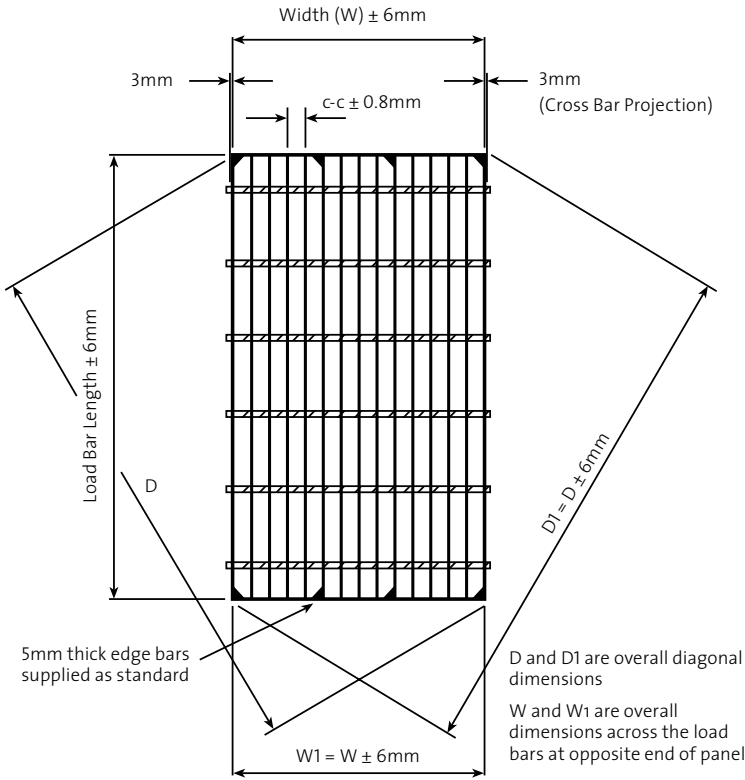
Total area of flooring, including cut-outs $(A \times B)$.



WELDLOK® FORGE BAR GRATING MANUFACTURING TOLERANCES

Overall Dimensions and Squareness

All dimensions are maximum permissible tolerances



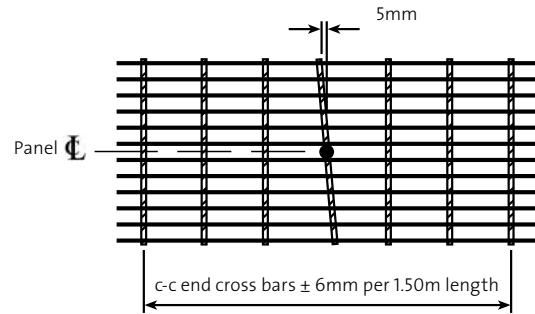
Standard Fabrication Welding

Edge bars and attachments are welded with a minimum 3mm fillet weld to one side of:
 Every 5th load bar on Series 30 Grating
 Every 4th load bar on Series 40 Grating
 Every 3rd load bar on Series 60 Grating

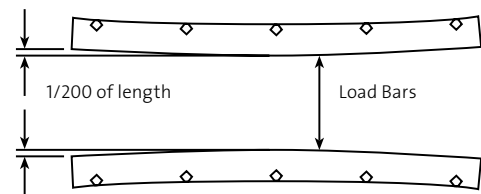
Optional Welding

Full Weld:
 Weld one side of every load bar.
Seal Weld:
 Weld both sides of every load bar.

Cross Bar Alignment Spacing

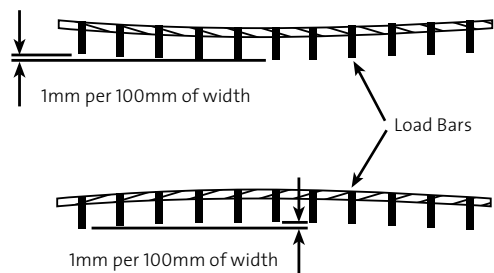


Longitudinal Bow

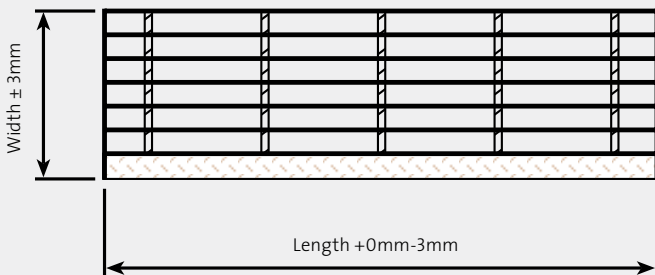


Transverse Bow

(Before fastening to supports)



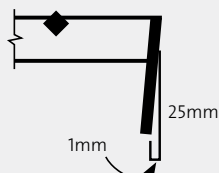
Stair Tread Tolerances



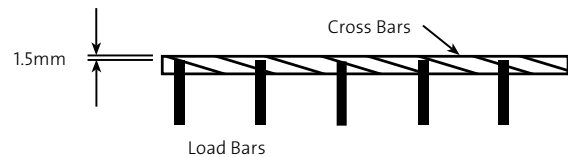
Note: Length of tread is distance between outer faces of end flats

Stair Tread End Flat Lean

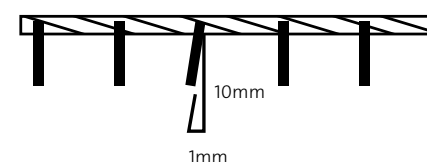
Fabrication: Edge bars and end plates welded on side of every load bar with minimum 3mm fillet weld



Cross Bar Location



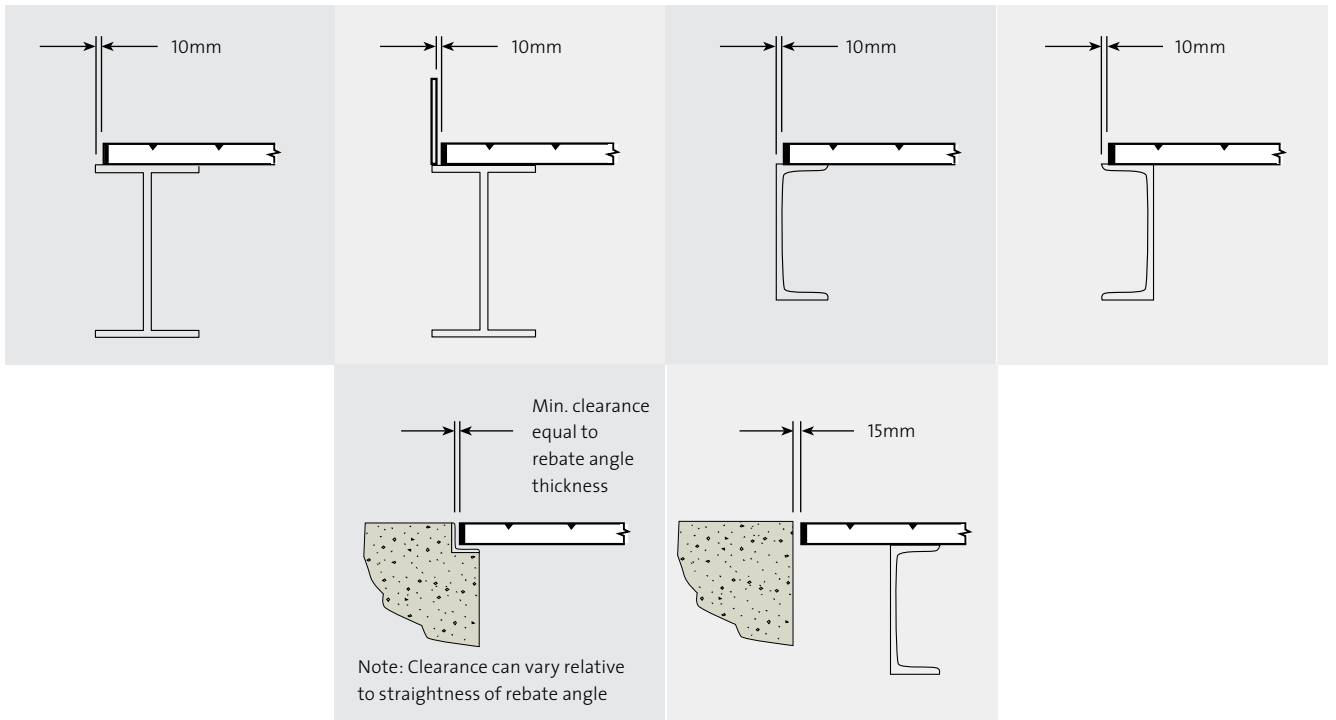
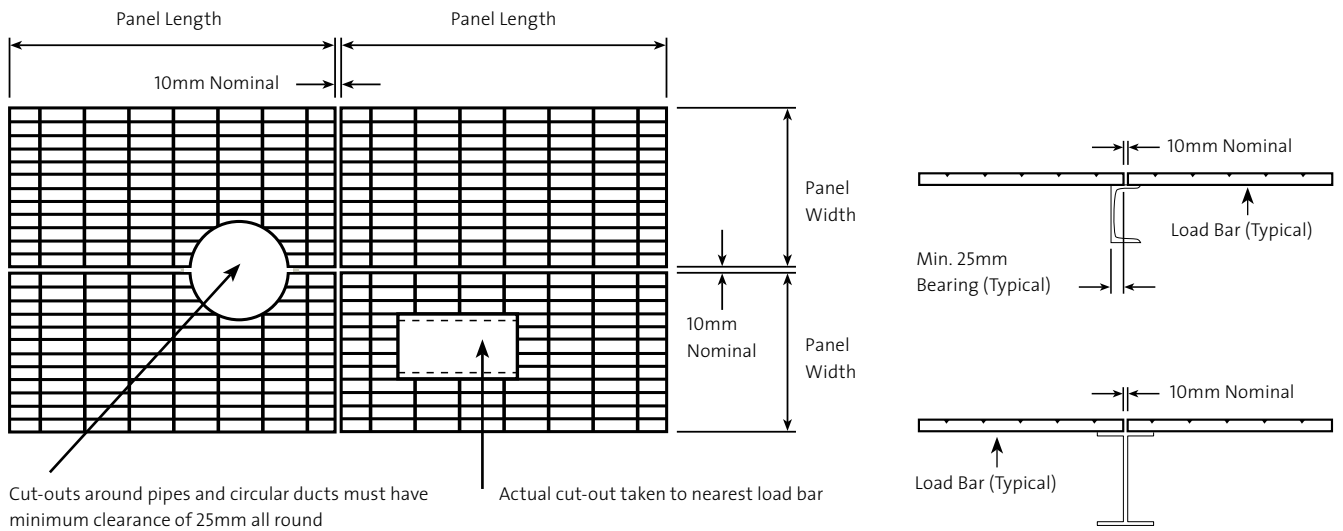
Load Bar Lean



WELDLOK® FORGEBAR GRATING INSTALLATION TOLERANCES

Installation Tolerances

All dimensions are maximum permissible tolerances



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