

# ALIMATS®

THE MOST PRACTICAL AND COST EFFECTIVE METHOD OF  
SPREADING OUTRIGGER STABILIZER LOADS

UNIQUE, PURPOSE DESIGNED, MODULAR INTERLOCKING  
OUTRIGGER LOAD SPREAD SYSTEM



FOR USE UNDER MOBILE/SELF ERECT CRANES •  
ACCESS PLATFORMS • LORRY LOADERS • CONCRETE PUMPS



- Interlocking modular load spread system
- Each standard 1m<sup>2</sup> panel only weighs 38kg
- Comprehensive safety documentation and load spread analysis available
- Easy to set up and manhandle around site
- Compressive Strength 530 tonnes / m<sup>2</sup>
- No additional plant required to set up
- Many configurations to create a range of load spread areas
- No short rigging duties required
- Nationwide coverage

6m<sup>2</sup> Rig  
Also  
available

Two sizes of mat available

STANDARD MODULE  
1.0m<sup>2</sup> (38kg) – 1740 x 580 x 60mm

1.34m<sup>2</sup> Rig  
3 No SHORT  
MODULES  
1160 x 1160 x  
120mm

2.0m<sup>2</sup> Rig  
2 No. STANDARD  
MODULES  
2 No. SHORT  
MODULES  
1740 x 1160 x 120mm

3.0m<sup>2</sup> Rig –  
5 No STANDARD MODULE  
1740 X 1740 X 120mm

4.0m<sup>2</sup> Rig - 6 No STANDARD  
MODULES  
1740 X 2320 X 120mm

SHORT MODULE  
.67m<sup>2</sup> (25kg) –  
1160 x 580 x 60mm

ALIMATS®

New House Farm, Belper Rd, Bradley, Ashbourne,  
Derbyshire DE6 1LP Tel: +44 (0) 1335 345111

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SEE OUR NEW ALIMAT VIDEO AT [vimeo.com/158642500](https://vimeo.com/158642500)



# Spread it!

Every year since 2005 we have published a feature article highlighting the importance of spreading the loads imposed by heavy equipment - particularly those with outriggers - where very high point loadings are present. We began shortly after we started publishing crane and aerial lift accidents - or incidents as we now refer to them - and at times the features have almost been campaign-like.

In those early days it quickly became clear that the vast majority - around 80 percent or more - of crane incidents were ground or outrigger set-up related. Looking more closely at the causes, it quickly became clear that in most cases, no attempt had been made to spread the outrigger point loadings over a wider area and therefore reduce ground bearing pressure. In other words, no mats or spreader plates had been used.

Since then - helped along by some high-profile campaigns by organisations such as IPAF and OSHA - it is clear that the use of mats of whatever material - wood or composite - under the outrigger feet or pads fitted to the jacks is now

much more widespread. And sure enough, the number of crane and large truck mounted lift incidents does seem to have fallen.

So is the job now done? Well no, there are still plenty of cases where no form of spreader plate is used, especially with loader cranes which oddly often have the smallest feet - thus imposing the greatest point loadings. There has also been an incredible response from an increasing number of manufacturers investing in new product development in this area, with a great deal of innovation occurring in a product that seemed to offer little potential for further development. Modern mats are lighter, easier to handle, more durable and can often be combined in a modular manner to



*The market for temporary roadways, or large matted areas to protect surfaces such as grass, tarmac and even concrete is growing rapidly*

create much larger mats for larger cranes or lifts on softer ground.

At the same time the market for temporary roadways, or large matted areas - to protect surfaces such as grass, tarmac and even concrete - is growing rapidly. Some of the interest has come from the event market which now consumes vast quantities of tracking mats, but companies are now more ready than ever to lay temporary tracking before unloading or moving a crane or heavy aerial lift over the ground in order to eliminate the risk of damage and the resulting costs of rectification - and by costs we mean time as well as money.

A case in point was this year's Vertikal Days where everything weighing over 40 tonnes had to cross Silverstone's F1 Grand Prix track just weeks before the British Grand Prix. Any damage to the track - and this included indents of even a millimetre - would prove very costly as the track cannot be 'patched' but would require a significant length to be replaced meaning there would not be enough time to carry out the work before the actual Grand Prix.

One of the first convoys across the track included an exceptional load truck carrying a fully assembled Kobelco crawler crane weighing 132 tonnes, followed by a 450



*Aluminium trackway used by an exhibitor at Platformers' Days*



*Timber being used to protect grass from the tracks of a large crawler crane*



Silverstone tracking prevented damage to the surface of the F1 circuit

tonne capacity, nine axle Liebherr LTM1450-9.1. A-Plant's Live Trakway division was called in to lay the track which could only begin on Sunday night after historic car racing had ended. A large convoy of cranes and heavy trucks weighing thousands of tonnes passed over the tracking during the night before it was removed in time for a major motor bike race day which got underway first thing Monday morning.

On day two the team from Vertikal and A-Plant decided that running a double width trackway would not only spread the load better, but also speed up the crossing, given that keeping the wider loads on the single trackway had proved particularly challenging - especially for those loads which had to reverse over after negotiating a tight turn from the perimeter access road. It was also decided to lay a cushioning membrane under the trackway, given that the sheer volume of heavy traffic resulted in trackway movement which might have caused scratches to the sacred race track surface. This format worked perfectly leaving the track in pristine condition for the 2017 F1 Grand Prix.

**Use mats!**

As mentioned earlier, there have been several high-profile campaigns aimed at getting users to not only use an outrigger mat, but also to use mats of the correct size. In 2014 the UK's Strategic Forum

Plant Safety Group produced the Ground Conditions good practice guide in conjunction with national associations such as the HSE and the CPA. The document covered the ground below a machine's outrigger jacks, tracks or wheels, as well as highlighting the challenges of getting a heavy crane or truck mounted lift across uncertain ground to the working area.

IPAF's 'Spread the load Ready Reckoner' is a simple interactive tool designed to offer guidance to operators and those involved in determining the size of mats when required when setting a platform, the weight of which is fully carried by the outriggers. After the gross vehicle weight has been entered, the ready reckoner displays the minimum area of spreader plate sizes for differing ground types and strengths. This however is being replaced with a new version of the Ready Reckoner due out in a few weeks. Outrigger mat specialist Outriggerpads is currently working with IPAF to create a new spreader plate calculator which takes into account factors such as the maximum allowable ground pressure and the machine load per outrigger or wheel. It also helps operators identify where they can locate that information on each machine type.

The new calculator aims to provide more accurate results in a more user friendly format, and will be available as a web application from the IPAF website as part of its 'Spread the



What can happen to an outrigger when mats are not used



DICA's Sliding Shoe mat fits around the outrigger foot allowing it to slide securely within the retainer



The new Power Pad Eco

load!' safety campaign.

At the same time the loader crane association ALLMI is working on a new smartphone App which will calculate the vertical loads placed on stabiliser legs and the mat sizes required for a particular lifting operation.

**New Power Pads**

UK-based Crowland Cranes has launched two new Power Pad mats - the HD and the Power Pad Eco. The HD is a large two metres by one metre by 90mm thick steel pad weighing 330kg with a capacity of 40 tonnes. The locating corner sockets allow for simple stacking and provides lifting eyes for easier handling.

Available in various sizes the Power Pad Eco has a steel frame with similar locating corner sockets but uses recycled plastic



The new spreader plate calculator takes into account factors such as the maximum allowable ground pressure and the machine load per outrigger.

and composite material resulting in a lightweight but high capacity mat.

**Sliding shoe from DICA**

American manufacturer DICA is set to launch a new style of outrigger mat. The SafetyTech Sliding Shoe outrigger pad is designed for equipment with multi position, self-levelling outriggers such as spider cranes and lifts where positioning normal mats under the unfolding the legs can be problematic, or at the very least challenging. Due to their geometry the legs can often move horizontally after making contact with the mat and while levelling the machine.

To combat this the Sliding Shoe mat fits around the outrigger foot allowing it to slide securely within the retainer so it is in the right position when the foot engages with the ground. This results in less re-positioning for operators



DICA circular pads

# **MAT & TIMBER SERVICES**



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# mats & trackway C&a



Belgian pad and mat manufacturer Lodax has just launched a new heavy-duty ground mat

during set-up, improving safety and efficiency. As the mats...or pads are securely held they can remain on the outrigger foot when driving into position. The standard models have a working capacity of more than eight tonnes.

### Lodax heavy-duty mat

Belgian pad and mat manufacturer Lodax has just launched a new heavy-duty ground mat measuring three by two metres. Available in two different thicknesses - 25mm or 40mm - the mats have a load capacity of 80 and 150 tonnes suitable for heavy construction or smaller machinery and pedestrians. Weights are 130kg and 215kg respectively.

### Outriggerpads mats

During the summer, Outriggerpads launched two new ground mats aimed at the equipment rental market. The smaller 1.8 metre by 900mm version has integrated handles and weighs 24kg. The larger heavy duty 2.8 metre by 1.44 metre mat is 65kg with a maximum load capacity of 65 tonnes. The durable mats are lightweight, and portable, ideal for creating temporary roads or larger areas. Manufactured from high density polyethylene (HDPE) they are also resistant to water, oil and chemicals. A standard steel connector joins the mats together to form a temporary roadway, while a four-way link bar is available for creating a large surface area such as for parking. The mats have a non-slip 8mm extruded finish on both sides, meaning they grip the ground as well as providing a superior grip for machine tyres or tracks.



Available in two sizes, Outriggerpads ground mats are lightweight and durable.

### Ground-Guards Maxitrack

Often heavy duty high capacity mats can be heavy, however Ground-Guards' MaxiTrack system is made from a lightweight polymer Zetralene - which it claims to be five times stronger than standard HDPE - and can support loads up to 130 tonnes. Each mat however weighs 40kg and therefore can be safely lifted by two people, without the need for additional equipment. The mats are made from 100 percent recycled plastic and are also recyclable at the end of their lifetime, satisfying the growing need for sustainability. The design features a simple bolt connection system as well as overlapping flange joints that eliminate board movement and reduce mud seepage.

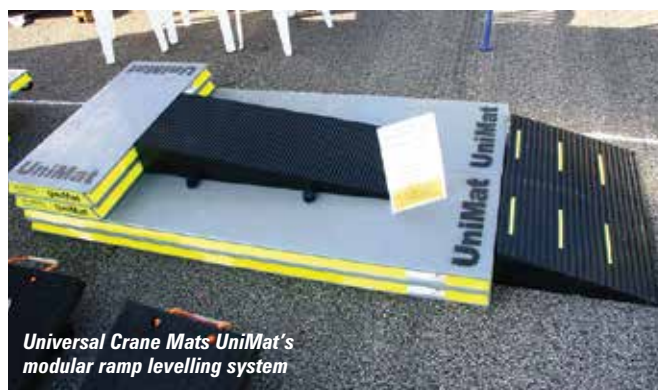
### Universal Crane Mats

Vertikal Days saw the introduction of Universal Crane Mats UniMat wheel levelling system incorporating its UniMat aluminium modules and extreme high density foam ramps. Aimed primarily at the aerial lift market to provide safer machine levelling, the system also facilitates ease of access onto heavy duty load spreader mats.

### Storing them

And finally, one of the main headaches for users is how to store the mats on the equipment when not in use. Several third-party suppliers are offering bespoke crane mat stowage racks that can be fitted to the machines' carrier or chassis.

The feature on mobile self-erecting tower cranes on Page 20 shows



Universal Crane Mats UniMat's modular ramp levelling system



Ground-Guards' MaxiTrack easy to handle 40kg mats



Failing to use mats under outriggers



A bespoke crane mat stowage rack from Crowland Cranes

Southern Cranes & Access' new Liebherr MK140 fitted with the 'UK and Ireland Extension' option which adapts the tool carrier at the rear to allow an additional three tonnes for additional ballast, jib extension and four 2.1 metre long alloy mats

complete with rigging device. The solution provides not only a specific place to store the mats when the crane is on the road, but also a means of lifting and placing them when on site.



Liebherr's MK140 mobile self erecting tower crane with the adapted tool carrier at the rear to carry four, 2.1 metre long alloy mats



## Rugged Simplicity

**NEW EUROSKY** HQ  
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# Timbermat Ltd

Hardwood Crane Mats



Timbermat Ltd provides expert advice with over 25 years' experience in the mat industry and over 40 years in Civil Engineering. Ideally used for crane access and outrigger pads, Timbermat offer an extensive range in various sizes to suit every application. Our service is prompt and efficient with quick delivery throughout the UK and Europe.

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**08000 12 12 31**  
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