How to choose the correct pad?

1 Determine the load capacity

The maximum load capacity on one stabilizer foot should be communicated by the machine manufacturer or the machine reseller. You can find this information on the technical data sheet of the machines. If not, provide us the machine data and LODAX will help you with choosing the right outrigger pad.

If we don't have any information, we usually take 80% of the overall max. load capacity of the machine. This is large enough to be safe.

2 Choose the right outrigger pad

Our product tables inform you about the maximum load capacity of each pad. These load capacities are mainly calculated for construction equipment/machines like mobile cranes, aerial platforms, concrete pumps, etc.

3 Check the pressure

Check if the pressure coming from the stabilizer foot on the pad can be carried by the material of the outrigger pad

LODAX material can handle a pressure of 8N/mm² on a long period of time and up to 25N/mm² on a short period of time (10N = +/-1kg).

Example:
A stabiliser foot ø 200mm should not have a load higher than 25T (100x100mm x ∏ x 8N/mm² = 251 328N = ~25 000kg).

4 Check the ground

After knowing the maximum load capacity on one stabilizer foot, the material and the dimensions of the outrigger pad, see if your ground or foundation can handle this pressure by consulting the following table:

Table with indicative load capacities for each type of soil

Type of foundation	Maximum allowed burden
Fine sand (< 1mm)	0,5 – 2 daN/cm² = 0.05 – 0.2 N/mm²
Rough sand (1-3mm)	2 – 3 daN/cm² = 0.2 – 0.3 N/mm²
Gravel	3 – 4 daN/cm² = 0.3 – 0.4 N/mm²
Soft clay soil	0,4 – 0,8 daN/cm² = 0.04 – 0.08 N/mm²
Medium-hard clay soil	1,5 – 3 daN/cm² = 0.15 – 0.3 N/mm²
Hard clay soil	3 – 4 daN/cm² = 0.3 – 0.4 N/mm²
Rock formation	10 – 30 daN/cm² = 1 – 3 N/mm²

The machine user has the obligation to make an examination of the ground bearing capacity before setting up the machine.

Example:
A LODAX Pad 800x800x40mm with a load of 15T would react as 0,023kg/mm² so ~0,23N/mm² so 23N/cm² (15 000kg / 800x800mm).

This outrigger pad should be used on a minimum ground density of "Medium-hard clay soil" or "Rough sand" as seen on the table.

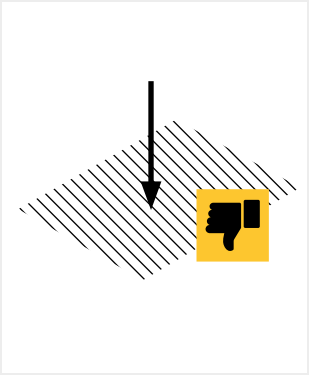
5 Consider the thickness

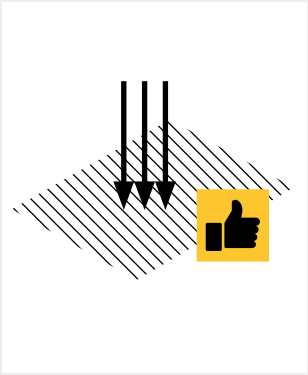
LODAX material is flexible: it can bend at the edges when there's high pressure. The areas of the pad that bend lose contact with the ground, reducing the surface where the weight is spread. To avoid the pad from bending and increase its effectiveness, choose a thicker pad.

Please contact us if you have any doubts.

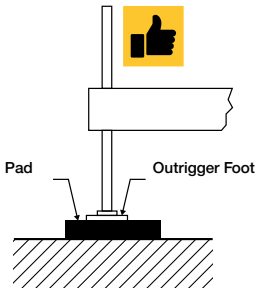
Good to know:

All information concerning capacity and dimensions of our outrigger pads is based on normal and safe conditions. Be aware that following elements also influence the use: weather conditions, the stability of the surface and the maximum load capacity of the foundation. Always try to maximise contact with the outrigger pad as shown on the drawing below.

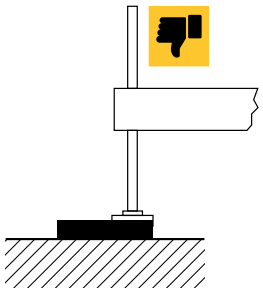




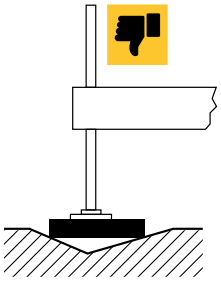
Examples of good and bad practice



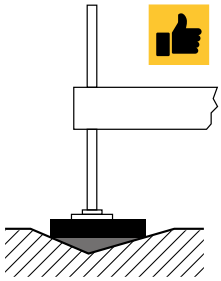
Correct



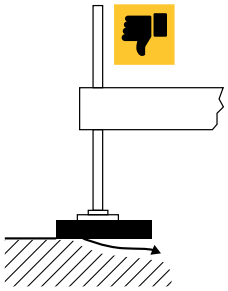
Foot not centered on spreader



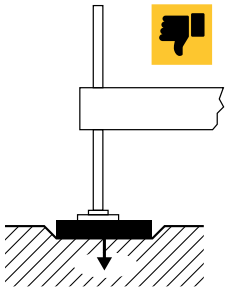
Spreader over hollow space



Hollow space filled in



Loose material washed out by rain



Outrigger positioned over void

“Spread the load and avoid accidents.”