

RAMMER VS. COMPACTOR: WHICH IS RIGHT FOR ME?



In order to create a strong foundation on a construction site, the process begins with having a solid base to build upon. When soil or dirt have been added or removed, it's imperative to compact the area in order to have groundwork that will hold up.

At this point, a compactor of some sort is needed to prepare the ground. Whether using a vibratory plate compactor, a tamping rammer (otherwise known as a jumping jack), or

a vibrating roller, the intended outcome is the same: compact the ground well enough to build upon.

Choosing the right tool to do this job is crucial if you want a structure that isn't going to crumble or settle poorly into place after being built.

For most contractors, a plate or rammer seem to be the most desirable options when adding a new machine to their fleet or simply renting something for a job.

But which should you choose: a rammer or a compactor?

TWO DIFFERENT MACHINES

Perhaps one of the most important things to understand about these two machines is that they perform entirely different jobs.

At a quick glance, it would appear that a plate compactor has a wider base and would be better suited to bigger jobs, whereas the rammer is more ideal for small areas needing compaction. While, to some small degree, this is true, there's a lot more to it than that.

SOIL TYPES

What it comes down to, when choosing between a plate compactor or rammer, is what types of material you're compacting and the area in which you're working.

In general, there are 2 different soil types on job sites:

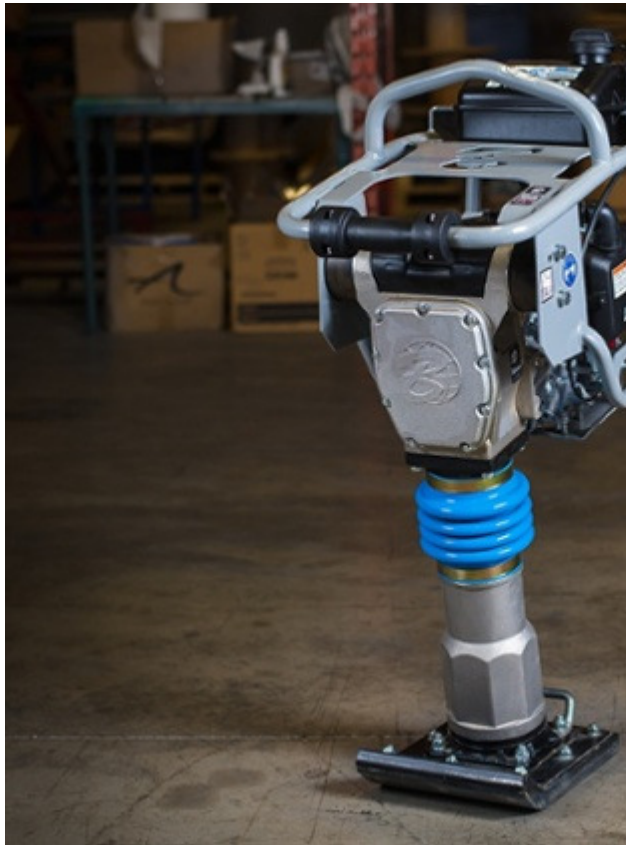
- Granular
- Cohesive

It's important to understand the differences in order to know what machine you'll need on site.

Granular soils, like gravel and sand, are loose soils that can be compacted whether they're wet or dry. They tend to crumble when picked up and don't have much cohesive strength.

Cohesive soils, on the other hand, are tightly-packed dirt types. They need to contain a certain amount of moisture in order to be compacted properly on the job site. If they are too wet or dry, air bubbles or lack of compaction can become a problem.

With a very brief overview of each type of soil, now we can begin to pick which machine we'll need.



RAMMER

Generally speaking, rammers shine when used on cohesive soils. Because of the fact that a rammer compacts with impact, this allows them to compact in layers much thicker than what a vibratory compactor can handle.

A rammer's plate is much smaller than a compactor's, which means that even if, on paper, the compaction force is the same, in reality it will be different because a



PLATE COMPACTOR

Due to the fact that a plate compactor uses vibration to settle the soil, granular soils are ideal for these types of machines. The small pieces tend to fall into place with a plate compactor working otop of it.

Plate compactors are wider than rammer plates, which means that its weight and compaction force is spread out over a greater area. This plays well to its strength in vibrating base material into place.

rammer's plate is more focused. Rammers are great in trenches and tight spots where a compactor couldn't be maneuvered as easily due to their skinny, upright design. Because they compact deeper than a plate compactor, soil can be added in bigger layers which can make the process of filling a hole and compacting it faster.

As a result of the way they work, plate compactors aren't ideal at compacting in layers as deep as a rammer. Instead, soil must be added in smaller layers and compacted more frequently to be effective. Additionally, because of their ergonomics and operating procedure, these machines are better on larger, flat surfaces.

WHAT AM I COMPACTING?

Really, choosing between these machines is not quite as clean-cut as someone might think. While they both compact base material at the end of the day, they compact different types in very different ways.

What matters is the type on most of your jobs, and the size and depth of the project that needs compacting. While every situation is different, as a general rule, you can follow these guides:

If you're doing trench work with cohesive soil, a rammer is likely ideal. Its small, focused plate makes it easy to maneuver and its ability to compact deep means that you won't need to do numerous passes to make the material sufficiently compact.

If you're compacting granular soils over large, flat areas, a plate compactor would probably suit you better. Its wider plate and vibrating nature means that layers can be more uniform and the way in which it is operated works better over big sites.

Truth be told, most contractors encounter circumstances where having both are ideal.

Why pit these machines against each other? Add both to your fleet and not only get the job done faster, but get the job done better.