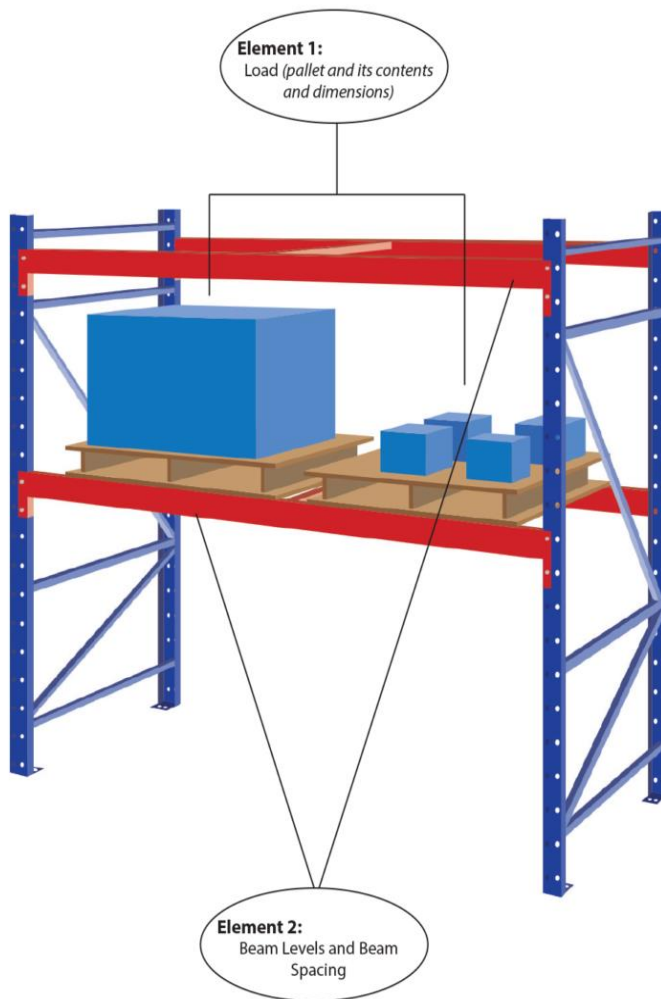


## How To: A Guide to Determine Pallet Rack Capacity



Pallet rack capacity is a crucial factor to the safety of your warehouse. It is important to ensure that both the racking frames and beams are designed to hold the required weight to avoid a possible collapse. When calculating the pallet rack capacity, there are several elements to take into consideration.

The first element to consider is the **load**, or the pallet and its contents and dimensions. *How much weight will be placed on each level? How tall and deep will each pallet be?* Height, weight and depth are important factors in making sure the beams are being uniformly loaded. The beams must be able to support the weight.

For example, if you have two pallet loads of 1500 lbs. each, your rack beam capacity will need to be at least 3000 lbs. per pair of beams to support the load. Beam capacities can vary by manufacturer and it is important to refer to the manufacturer's rack capacity chart when selecting your beams.

Next you will need to determine the **number of beam levels per bay**, along with the beam spacing. If your facility will have multiple bay configurations you need to ensure that each configuration is evaluated. Capacity ratings for rack frames are rated based on a maximum unsupported span. Meaning, the further apart the beam spacing the less capacity the frame is rated to hold.

For example, if you have a 16' tall frame, with (4) beam levels rated at 3,000 lbs. each, the total frame capacity needed will be 12,000 lbs. The spacing of the beams may impact the frame design. If the maximum distance between levels is 8',

then the gauge of the frame will most likely be increased as opposed to a configuration where the maximum distance is 4'.

There are several factors that impact the capacity ratings for both frames and beams. The strength of the steel used to fabricate the racking components has a significant impact. Steel thickness, or gauge, will also impact the capacity of these components. Also, each manufacturer will have different section properties that affect their rated capacities.

Slab and soil conditions, seismic requirements, and potential rack damage should also be considered when designing your storage system. To ensure your system is safe and compliant with all applicable building codes, consult a professional.

**Now that you have a better understanding of rack capacities, we'd appreciate the opportunity to help you with the next step in your research, whether that be more information or a quote request.**

Email [info@rebstorage.com](mailto:info@rebstorage.com) or call 800-252-0400 to give us a better idea of your needs.