

Palletized Loads

When it comes to loading palletized product or other unitized loads, there are many more variables that affect the loading methodology.

The first variable that needs to be dealt with is weight. If the loads you are handling are heavy, it's possible that the capacity of the trailer or container will limit your loading options. With lighter loads, cube utilization becomes a key variable. Unfortunately it's not as simple as just determining the method that best utilizes the cube of the trailer or container.

In most situations, methods that increase cube utilization will also increase the labor required to load and unload the shipment. This is where you must balance productivity with transportation costs. Loads going further distances will justify putting more effort into utilizing the cube than those going shorter distances. You may find that it makes sense to straight-load pallets for local and regional shipments, turn the loads or use pinwheeling for more distant shipments, and floor load containers for overseas shipments.

Below is an explanation of the three load types:

Straight Loading

Involves using two-way pallets and loading them straight (in the direction of the pallet stringers) into the trailer or container. With standard 40' x 48' pallets this will allow two pallets to be loaded side by side with plenty of extra space between the pallets and the trailer sidewalls. This is the quickest method of loading pallets, but does not fully utilize the trailer cube and may not adequately prevent loads from shifting.

Very high volume operations that straight load standardized palletized loads have found the use of extended carriages with two pair of forks on their lift trucks allows them to quickly more and load two pallets at a time. This can provide significant productivity gains.

Loading Pallets Turned (or sideways)

Requires the use of four-way pallets. In this method the lift truck will pick up the pallet from the side (perpendicular to the pallet stringers) and place them in the trailer. With standard 40' x 48' pallets, this will allow two pallets to be loaded side by side in most dry trailers. There may not be adequate width in overseas containers and refrigerated trailers to do this with standard pallets. Turning pallets gives the best space utilization for loading palletized loads and provides better protection from product shifting than straight loading.

Pinwheeling

Refers to a method where you alter the direction of every other pallet. It's a combination of lading pallets straight and turned. Pinwheeling can be used to more fully utilize the space in a trailer or container when there is inadequate width to allow loading two turned pallets side by side. This is practical when the depth of the pallet is longer than half the trailer width, but the depth plus the width is less than the trailer width.

Another reason for using pinwheeling is the additional stability created by the interlocking of pallets with different load orientations. If you ship till palletized loads made of layers of stacked

cartons, you will find that the lateral forces put on the loads during the transportation of the shipment can make seemingly stable loads lean or fail over in the trailer. This is especially a problem when handling tall loads that are barely stable when standing still. The grocery industry is a good example of an industry that is challenged to deal with tall unstable loads made up of a mix of dissimilar items in weight size and shape. Since every load is different, it's often up to the skill level of the order picker to somehow assemble a stable load out of a "little bit of everything". Pinwheeling can also be used as a compromise of productivity and cube utilization since it provides greater cube utilization than straight loading but may require less labor than turning all the loads (which sometimes makes for some very tight loading conditions). When loading anything but the lightest loads, equalized weight distribution is critical. Depending on the specific loads, this may involve alternating commodities as you load using braces to leave empty spaces, or alternating side-by-side pallets with single pallets.

Palletized Loading Diagram

