

Guidance: Automotive NA 48 x 45 Wood Stringer Pallet Specification Recommendations

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Version 1.0

Introduction

A pallet (also called a skid) is a flat transport structure. While most pallets are wooden, pallets can also be made of plastic, metal, paper, and recycled materials.

The 48 x 45 footprint wood pallet is primarily used as back-up packaging or in service (aftermarket) for transporting goods between tiered suppliers and customers within the automotive industry.

As it stands, wood pallets within the automotive industry have internal re-use potential and are most often recycled and/or resold as a remanufactured pallet after their initial use.

However, while many tiered suppliers have flexible 48 x 45 footprint wood pallet specifications, different OEMs within North America have unique specifications which has restricted synergy for pallet re-use across OEMs and through the supply base.

A team within Suppliers Partnership for the Environment (SP) was created to evaluate opportunities to address the challenge of inconsistencies in automotive industry wood pallet specifications while supporting automotive industry sustainability initiatives.

Consideration of common 48 x 45 footprint wood stringer pallet design guidance was proposed through collaboration between original equipment manufacturers (OEMs), Tier suppliers, Pallet Manufacturers, Industry recyclers, and other subject matter experts. Similar guidance for 48 x 45 footprint block wood pallets and other pallet designs may be considered in the future.

Following are voluntary industry-developed recommendations intended to help automotive original equipment manufacturers (OEMs) and their suppliers within the North American region to source uniform 48 x 45 wood stringer pallets, where appropriate, to enable increased re-use and improve efficiency across the supply chain.

It should be noted that the quality of workmanship and the conditions in which pallets are used may vary widely. It is the responsibility of every company to undertake individual, unique analysis of the following information as it pertains to their own specific application and production process, as well as to understand and comply with all applicable laws, regulations, standards, and individual customer requirements.

I. Automotive NA 48 x 45 Wood Stringer Pallet Specification Recommendations

Pallet Type: 48 x 45, Stringer-Class, Double-Face Non-Reversible, Partial 4-Way

Measurement: All dimensions in inches.

Pallet Component and Material Specifications:

1. Top Deck

- a. Dimensions of the two (2) lead deckboards should be:
 - i. Thickness: 0.5"
 - ii. Width: 5.5"
 - iii. Length: 45"
- b. Dimensions of the remaining five (5) interior deckboards should be:
 - i. Thickness: 0.5"
 - ii. Width: 3.5"
 - iii. Length: 45"

2. Bottom Deck

- a. Dimensions of the three (3) bottom deckboards should be:
 - i. Thickness: 0.5"
 - ii. Width: 5.5"
 - iii. Length: 45"

3. Stringers

- a. Dimensions of the three (3) stringers should be:
 - i. Width: 1.25"
 - ii. Height: 3.5"
 - iii. Length: 48"
- b. Dimensions of the Partial 4-Way Entry Notch should be:
 - i. Depth: 1.5"
 - ii. Length: 9"
 - iii. Location: 6"
 - iv. Radius: 0.75"

4. Fasteners

- a. A total of seventy-five (75) nails should be used per pallet.
- b. All nails should be 2" in length.
- c. The correct number of nails to be employed at all bearing points for the various widths of deckboards is as follows:
 - i. 3.5" Deckboards: six (6) nails total [2 per runner]
 - ii. 5.5" Deckboards: nine (9) nails total [3 per runner]

5. Weight Capacity

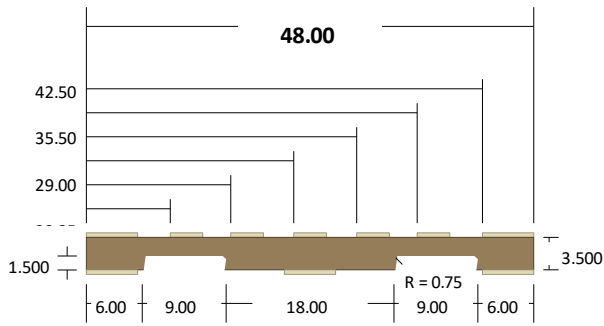
- a. Min. load bearing 2200 lbs.

6. Treatment: All wood pallets shall be ISPM-15 (International Standards for Phytosanitary Measures- Guidelines for Regulating Wood Packaging Material in International Trade) Compliant, where applicable. It is the supplier's responsibility to understand and conform to all applicable requirements.
7. Tolerances: Per National Wooden Pallet and Container Association (NWPCA) guidelines, commercial tolerances of $\pm 1/4$ " apply to all length and width dimensions and commercial tolerances of $\pm 1/8$ " apply to all thickness / height dimensions listed.
8. Material Sourcing: Natural solid wood with no adhesives should be specified for use in wood pallets. All wood products sourced for use in automotive industry packaging should be sustainably sourced with documentation of Sustainable Forestry Initiative (SFI), Forest Stewardship Council (FSC) or an equivalent certification and be compliant with the Lacey Act.

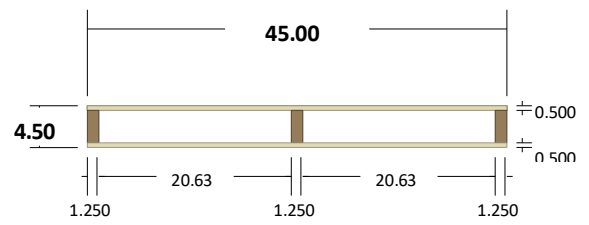
II. Automotive NA 48 x 45 Wood Stringer Pallet Drawing

All dimensions in inches

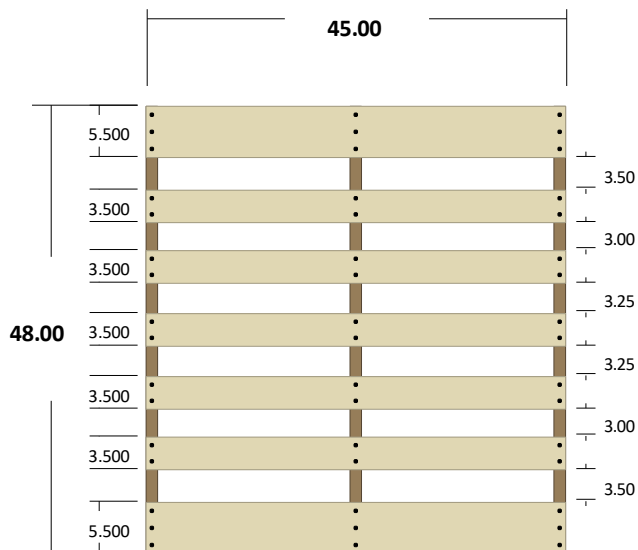
Side View



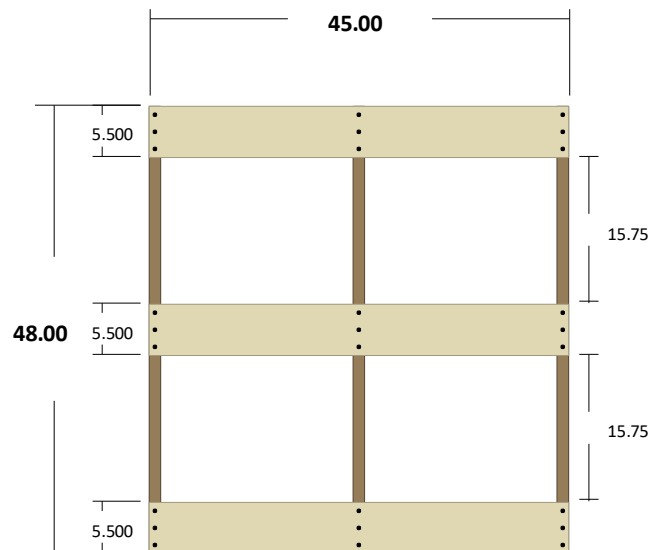
End View



Top View



Bottom View



III. Pallet Terminology

BLOCK PALLET - A pallet type featuring blocks between the pallet decks or beneath the top deck.

BLOCK - rectangular, square, multisided, or cylindrical deck spacer, often identified by its location within the pallet as corner block, end block, edge block, inner block, or center or middle block.

BLOCK SIZE - pallet member dimension, specified by width followed by height and length.

DECKBOARD (TOP DECKBOARD/BOTTOM DECKBOARD) - element or component of pallet top and bottom, perpendicular to stringers(runners).

DECKBOARD SIZE - specified by thickness followed by width and length.

DECKBOARD SPACING - Distance between adjacent deck boards.

FLUSH PALLET - A pallet with deck boards flush with the stringers, stringer-boards or blocks along the sides of the pallet.

FOUR WAY ENTRY – A pallet with notched stringers.

HARDWOOD - Wood from broad-leaved species of trees (not necessarily hard or dense).

LENGTH - Refers to the stringer or stringer board (in block pallets) length; also refers to the first dimension given to describe a pallet, i.e., 48" x 40", where 48" is the pallet stringer/stringer board length.

NOTCH - Cutout in the lower portion of the stringer to allow entry for the fork tine, usually 9" in length, 1 1/2" depth.

PALLET DIMENSIONS - When specifying pallet size, the stringer length is always expressed first; for example, a 48" x 40" pallet has a 48" stringer or stringer board and 40" deck boards.

PALLET LENGTH - pallet dimension between the extreme pallet ends, parallel to the stringers or top stringer boards.

PALLET WIDTH - pallet dimension between the extreme pallet sides, parallel to and corresponding to the length of the top deck boards.

PALLET SIZE - pallet dimension specified by stringer or stringer board length, followed by top deck board length and overall pallet height.

RECYCLED PALLET – pallet made reusable by sorting, repairing or remanufacturing, using new or reclaimed components from damaged pallets.

REMANUFACTURED PALLET - a pallet assembled entirely or in part with recycled wood pallet parts and manufactured by complete reassembly of all parts with new fasteners.

REMANUFACTURED COMBINATION "COMBO" PALLET - a pallet assembled, specifically, with both new and recycled wood parts. Combo pallets are typically assembled with recycled top and bottom deck boards and new wood stringers.

REPAIRED PALLET – a pallet with damaged components replaced with new or used components.

SHINER - protruding fastener point.

SINGLE-WING PALLET - A pallet with top deck boards that extend past the edge of stringers or stringer boards with the bottom deck boards flush (if present).

SOFTWOOD - Wood from coniferous or needle-bearing trees (not necessarily soft or low density).

STRINGER/RUNNER - continuous, longitudinal, solid, built up, or notched beam component of pallet, supporting and spacing deck components, often identified by its location as edge (side) or interior (center) stringer.

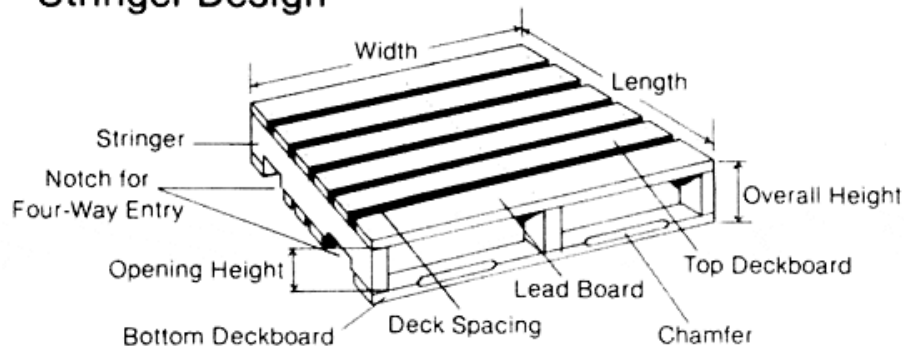
STRINGER SIZE - specified by width followed by height and length.

TWO-WAY ENTRY PALLET - An un-notched pallet with solid stringers that allow items to enter from either end.

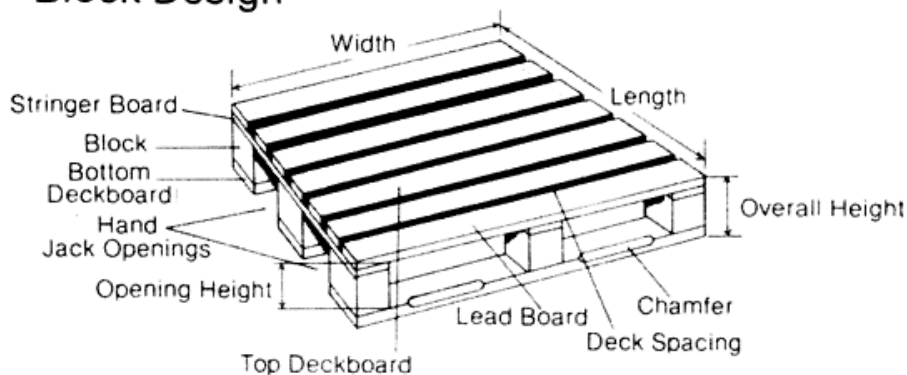
UNIT LOAD – assembly of goods or single item on pallet for handling, moving, storing, and stacking, as single entity.

WING PALLET - The overhanging portion of a deck board.

Stringer Design



Block Design



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IV. Acknowledgements

This guidance document was produced through a collaborative process by the Suppliers Partnership for the Environment (SP) Sustainable Packaging Work Group’s Wood Pallet Sub-Team. The wood pallet project was chaired by Magna International.

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