

PALLET DESIGN SYSTEM Version 3.35

Pallet Structural Analysis

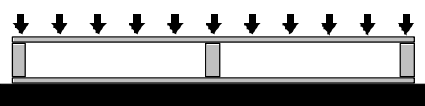
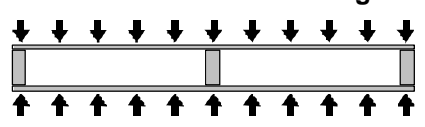
Pallet ID: GMA 48 x 40 4-Way Mixed Width Deck Boards

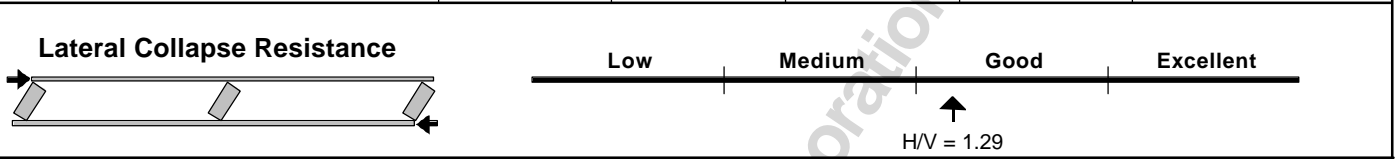
Classification: 48.00 x 40.00, Stringer-Class, Double-Face Non-Reversible, Partial 4-Way, Limited-Use, New Manufacture

Unit Load Type: Uniformly Distributed - Full Pallet Coverage

Unit Load Weight Variability: High

Service Environment: Dry Environment (EMC <= 19%)

Support Condition	Safe Maximum Load	Deflection at Maximum Load	User Specified Deflection Limit	Maximum Load for Deflection Limit	Critical Member
Stacked 1 Unit Load High 	5659 lbs.	0.19 in.	0.18 in.	4783 lbs.	Top Deckboard
Stacked 3 Unit Loads High 	2902 lbs. (each pallet)	0.19 in.	0.18 in.	2453 lbs. (each pallet)	Top Deckboard



The recommendations from PDS are based on the NWPCA's continuing program of laboratory and field research. They represent the best available engineering information compiled to date. However, the quality of workmanship, the input data, and the conditions in which pallets are used may vary widely. Therefore, the Association cannot accept responsibility for pallet performance or design as actually constructed. Wood pallets bearing the NWPCA SPEQ trademark are manufactured to the Uniform Standard for Wood Pallets established by the Association which define the prescriptive and performance criteria. Wood pallets manufactured to this PDS design are for the sole purpose of storing and/or transporting material. Under no circumstance should any person stand, step, or lean upon them or otherwise use them for support.

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<p>Pallet Design System - Version 3.3 Software developed by: The Pallet and Container Research Laboratory Department of Wood Science and Forest Products College of Natural Resources Virginia Polytechnic Institute and State University Blacksburg, Virginia 24061-0503</p>	<p>Prepared by: PDS License: 327 Date: October 04, 2004 Based on research conducted by: Virginia Polytechnic Institute and State University U.S.D.A. Forest Service APA - The Engineered Wood Association NWPCA - National Wooden Pallet and Container Association</p>
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Pallet Physical Property Analysis

Average Pallet Weight	At Manufacture	At 25% MC	At 19% MC	At 15% MC	At 12% MC
	45 lbs.	33 lbs.	32 lbs.	31 lbs.	30 lbs.

Dimensional Change due to Wood Drying



Component	Original Dimension	Shrinkage from Manufacture to 19% MC	Shrinkage from Manufacture to 15% MC
Top Deckboards	0.625 in. Thickness	0.010 in. (+/- 0.003 in.)	0.015 in. (+/- 0.004 in.)
	5.500 in. Width	0.088 in. (+/- 0.025 in.)	0.128 in. (+/- 0.036 in.)
	3.500 in. Width	0.056 in. (+/- 0.016 in.)	0.081 in. (+/- 0.023 in.)
Stringers	3.500 in. Height	0.056 in. (+/- 0.016 in.)	0.081 in. (+/- 0.023 in.)
	1.500 in. Width	0.024 in. (+/- 0.007 in.)	0.035 in. (+/- 0.010 in.)
Bottom Deckboards	0.625 in. Thickness	0.010 in. (+/- 0.003 in.)	0.015 in. (+/- 0.004 in.)
	5.500 in. Width	0.088 in. (+/- 0.025 in.)	0.128 in. (+/- 0.036 in.)
	3.500 in. Width	0.056 in. (+/- 0.016 in.)	0.081 in. (+/- 0.023 in.)

Reference Data

Top Deckboard Locations (from Pallet End):

0.00 8.75 15.50 22.25 29.00 35.75 42.50
48.00 39.25 32.50 25.75 19.00 12.25 5.50

Stringer Locations (from Pallet Edge):

0.00 19.25 38.50
40.00 20.75 1.50

Bottom Deckboard Locations (from Pallet End):

0.00 15.00 22.25 29.50 42.50
48.00 33.00 25.75 18.50 5.50

Fasteners/Connection:

Top Deck: 3 2 2 2 2 2 3 (Total: 48)
Bottom Deck: 3 2 2 2 3 (Total: 36)

Material Volume:

Top Deck: 4.9 bd ft Stringers: 5.3 bd ft Bottom Deck: 3.7 bd ft (Total: 13.9 bd ft)

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Software developed by:

The Pallet and Container Research Laboratory
Department of Wood Science and Forest Products
College of Natural Resources
Virginia Polytechnic Institute and State University
Blacksburg, Virginia 24061-0503

Prepared by: PDS License: 327 Date: October 04, 2004

Based on research conducted by:

Virginia Polytechnic Institute and State University
U.S.D.A. Forest Service
APA - The Engineered Wood Association
NWPCA - National Wooden Pallet and Container Association

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Pallet Specification Sheet

All dimensions in inches

Customer:

The Home Depot

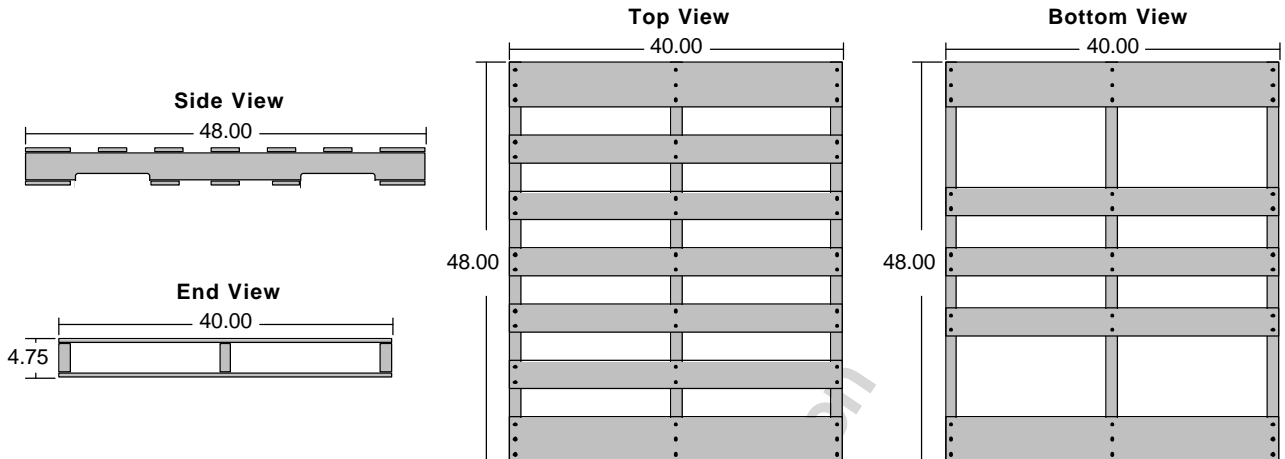
Prepared by:

North American Container Corporation
1811 West Oak Parkway, Suite D
Marietta, Ga 30062

PDS License: 327 Date: October 04, 2004

Pallet ID: GMA 48 x 40 4-Way Mixed Width Deck Boards

Classification: 48.00 x 40.00, Stringer-Class, Double-Face Non-Reversible, Partial 4-Way, Limited-Use, New Manufacture



Components

Materials

Top Deck:

Style: Deckboard **Type:** New Lumber
Thickness: 0.625 **Length:** 40.00 **Wing:** 0.00

Total Number of Deckboards: 7

Number	Width	Fasteners Per Connection
2	5.500	3
5	3.500	2

Endboards Flush, Interior boards Equally Spaced

Volume: 4.9 bd ft

Bottom Deck:

Style: Deckboard **Type:** New Lumber
Thickness: 0.625 **Length:** 40.00 **Wing:** 0.00

Total Number of Deckboards: 5

Number	Width	Fasteners Per Connection
2	5.500	3
3	3.500	2

Endboards Flush, Interior Cluster Equally Spaced

Volume: 3.7 bd ft

Stringers:

Type: New Lumber
Height: 3.500 **Length:** 48.00

Total Number of Stringers: 3

Number	Width
3	1.500

Partial 4-way Entry Notch:

Depth: 1.000 Length: 9.00 Location: 6.00 Radius: 0.50

Volume: 5.3 bd ft

Fasteners:

Fastener ID:
Fastener Type: Helically Threaded Nail
Fastener Length: 2.25
Thread Length: 1.50
Thread Diameter: 0.120
Wire Diameter: 0.112
Head Diameter: 0.281
Helixes: 6.0
Flutes: 4
Thread Angle: 69
MIBANT Angle: 36
FWI: 46
FSI: 67
Total Number: 84

New Lumber:

Lumber ID:

Species Class	Grade	Lumber Mix
SPF	Standard & BTR	100 %

Moisture Content: Green
Total New Lumber Volume: 13.9 bd ft

Custom Notes and Information:

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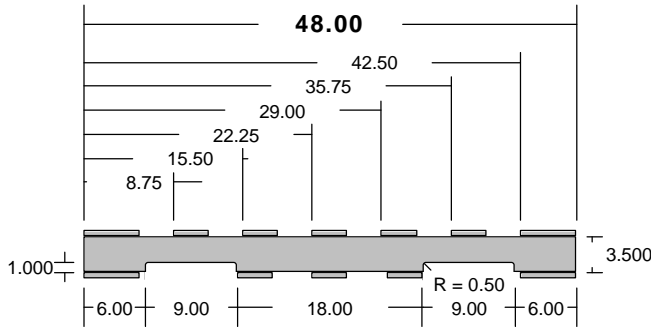
Pallet Drawing

All dimensions in inches

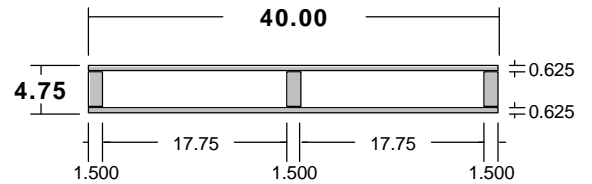
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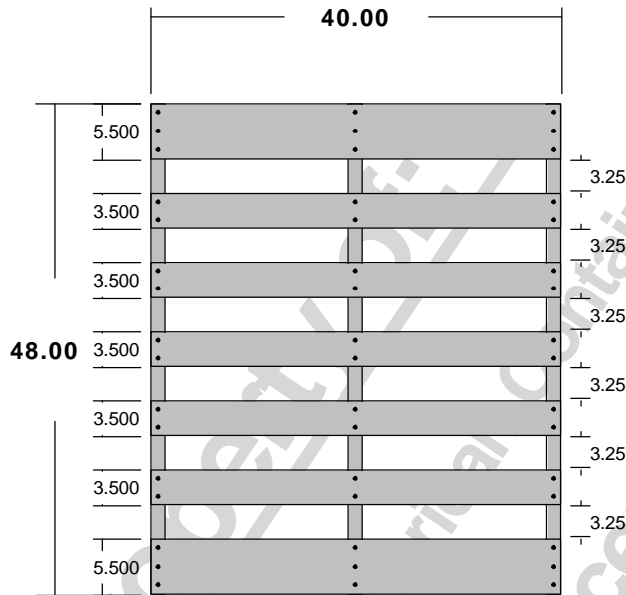
Side View



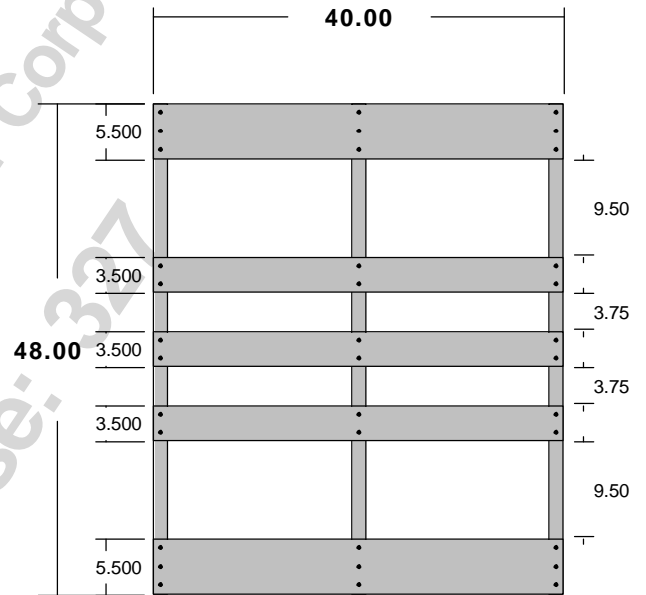
End View



Top View



Bottom View



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Customer:

The Home Depot

Prepared by:

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