

PALLET DESIGN SYSTEM Version 5.2

Pallet Specification Sheet

All dimensions in inches

Customer:

Company Name of Customer
Address of Customer

Prepared by:

PALLET SERVICE CORPORATION WWW.PALLETSERVICE.COM
11201 90TH AVE N, MAPLE GROVE, MN 55369 888-391-8020
525 EAST HIGHWAY 12, KNAPP, WI 54749
3213 COUNTRY DRIVE, LITTLE CANADA, MN 55117
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PDS License: 330 Printed: September 08, 2016

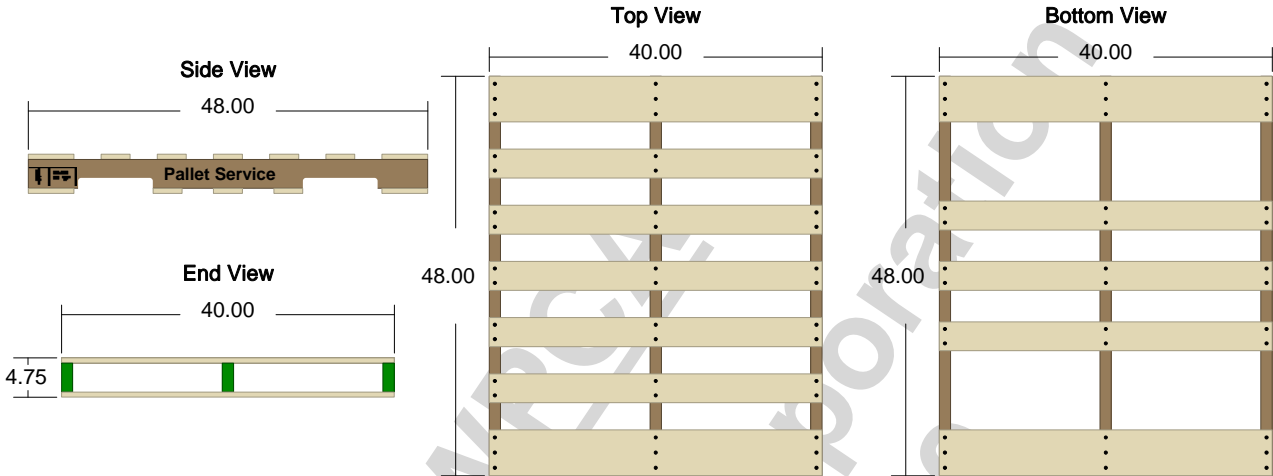
Pallet ID: Stringer-Class Pallet Example

Drawing Number: 2001 HT **Specification Date:** August 12, 2015

Revision Number: 1 **Revision Date:** September 08, 2016

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

Pallet Treatments: ISPM-15 Compliance: Heat Treatment (HT)



Components

Top Deck:

Style: Deckboard Type: New Lumber

Number	Thickness	Width	Length
5	0.625	3.500	40.00
2	0.625	5.500	40.00

Volume: 4.9 bd ft

Bottom Deck:

Style: Deckboard Type: New Lumber

Number	Thickness	Width	Length
3	0.625	3.500	40.00
2	0.625	5.500	40.00

Volume: 3.7 bd ft

Stringers:

Type: New Lumber

Number	Width	Height	Length
3	1.375	3.500	48.00

Volume: 4.8 bd ft

Partial 4-way Entry Notch:

Depth: 1.250 Length: 9.00 Location: 6.00 Radius: 0.75

Materials

Fasteners:

Fastener ID:	2-1/4 x 11-1/2 Ga. SS
Fastener Type:	Helically Threaded Nail
Fastener Length:	2.25
Thread Length:	1.25
Thread Diameter:	0.124
Wire Diameter:	0.112
Head Diameter:	0.280
Flutes:	4
Helixes:	7.5
Pitch:	0.167
Thread Angle:	60
MIBANT Angle:	36
FWC:	2.58
Total Number:	84

New Lumber:

Lumber ID: Mixed Eastern Hardwoods

Species Class	Grade	Lumber Mix
High Density Eastern Hardwoods	Standard &BTR	50 %
Eastern Oaks	Standard &BTR	50 %

Moisture Content (at manufacture and assembly): Green

Total New Lumber Volume: 13.5 bd ft

Spec Sheet Notes:

Information specific to Customer here

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Pallet Structural Analysis

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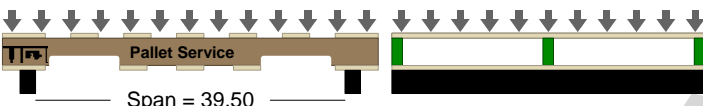
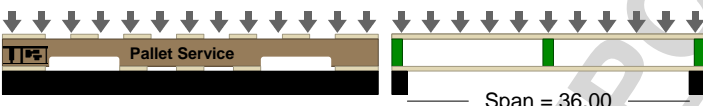
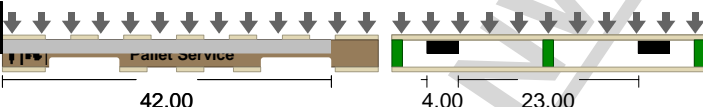
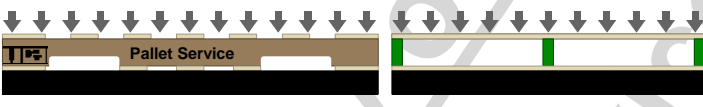
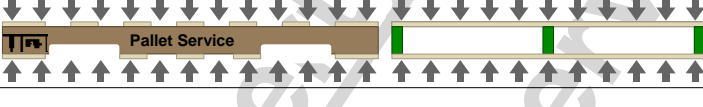

Classification: 48.00 x 40.00, Stringer-Class, Double-Face Non-Reversible, Partial 4-Way, Reusable, New Manufacture

Pallet Treatments: ISPM-15 Compliance: Heat Treatment (HT)

General Load Type: Uniformly Distributed - Full Pallet Coverage

Load Weight Variability: Medium

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
Side View	End View					
Racked Across Length 2 Beam Support 		2312 lbs.	0.47 in.	0.40 in.	1488 lbs.	Center Stringer
Racked Across Width 2 Beam Support 		2004 lbs.	1.09 in.	0.50 in.	680 lbs.	Interior Bottom Deckbd
Forklift Support Enter and Lift from Pallet End 		3111 lbs.	0.43 in.	----	----	Interior Top Deckboard
Warehouse Storage Stacked 1 Unit Load High 		6330 lbs.	0.23 in.	----	----	Interior Top Deckboard
Stacked 2 Unit Loads High 		3956 lbs. per pallet	0.23 in.	----	----	Interior Top Deckboard
Lateral Collapse Resistance 						

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 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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PALLET DESIGN SYSTEM Version 5.2

Pallet Durability Analysis

Customer:

Company Name of Customer

Prepared by:

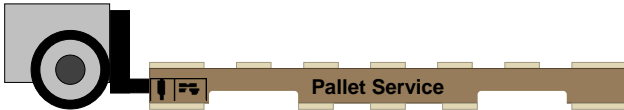
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Pallet Service Life Analysis

The **Pallet Service Life Analysis** simulates a series of forces and impacts applied to the pallet during each handling cycle. The frequency and severity of these impacts are estimates based on laboratory measurements, warehouse observations, and the Virginia Tech FasTrack Handling Cycle. The resistance to damage and the damage level requiring component repair or replacement are based on laboratory testing and the NWPCA Uniform Standard for Wood Pallets.

Service Environment Conditions:

Average Handling and Treatment, Medium-Duty Loads, Dry Environment (EMC <= 19%)

Predicted Service Life: 9 Cycles

Predicted Cycles until First Repair: 3

Results from Handling Cycle Simulation

Pallet Components		Cycles To First Repair	Cycles To First Replacement	Number of Times Replaced	Limits Pallet Service Life	Relative Component Damage during Simulation
Top Leadboards	(2)	3	5	1	Yes	
Top InteriorBoards	(5)					
Bottom Leadboards	(2)	3	5	1	Yes	
Bottom InteriorBoards	(3)					
Exterior Stringers	(2)	7				
Interior Stringers	(1)					

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Pallet Physical Property Analysis

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	At Manufacture	At 25% MC	At 19% MC	At 15% MC	At 12% MC
Average Pallet Weight	60 lbs.	45 lbs.	43 lbs.	41 lbs.	40 lbs.



Component	Original Dimension	Shrinkage from Manufacture to 19% MC	Shrinkage from Manufacture to 15% MC
Top Deckboards	0.625 in. Thickness	0.015 in. (+/- 0.005 in.)	0.022 in. (+/- 0.007 in.)
	3.500 in. Width	0.086 in. (+/- 0.027 in.)	0.124 in. (+/- 0.039 in.)
	5.500 in. Width	0.135 in. (+/- 0.043 in.)	0.195 in. (+/- 0.062 in.)
Stringers	3.500 in. Height	0.086 in. (+/- 0.027 in.)	0.124 in. (+/- 0.039 in.)
	1.375 in. Width	0.034 in. (+/- 0.011 in.)	0.049 in. (+/- 0.015 in.)
Bottom Deckboards	0.625 in. Thickness	0.015 in. (+/- 0.005 in.)	0.022 in. (+/- 0.007 in.)
	3.500 in. Width	0.086 in. (+/- 0.027 in.)	0.124 in. (+/- 0.039 in.)
	5.500 in. Width	0.135 in. (+/- 0.043 in.)	0.195 in. (+/- 0.062 in.)

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PALLET DESIGN SYSTEM Version 5.2

2-D Pallet Drawings

All dimensions in inches

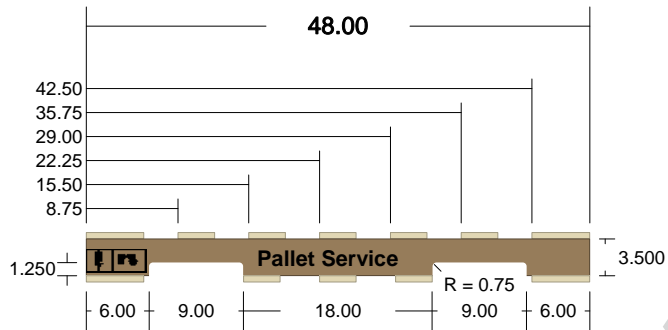
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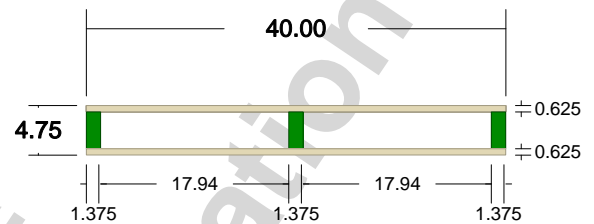
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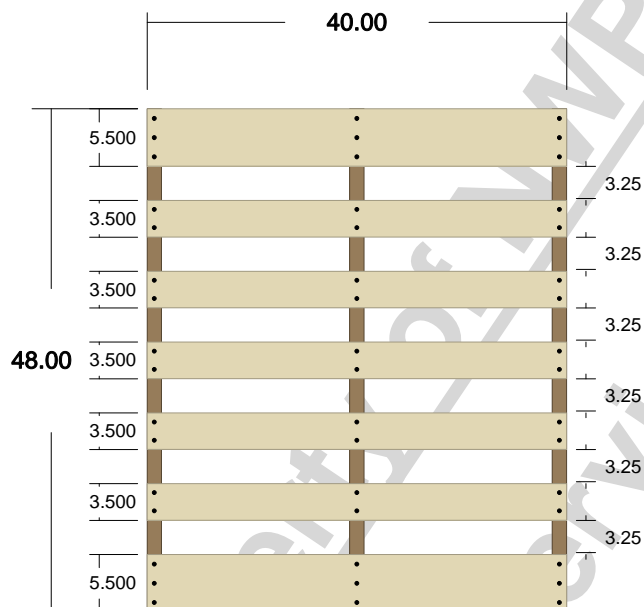
Side View



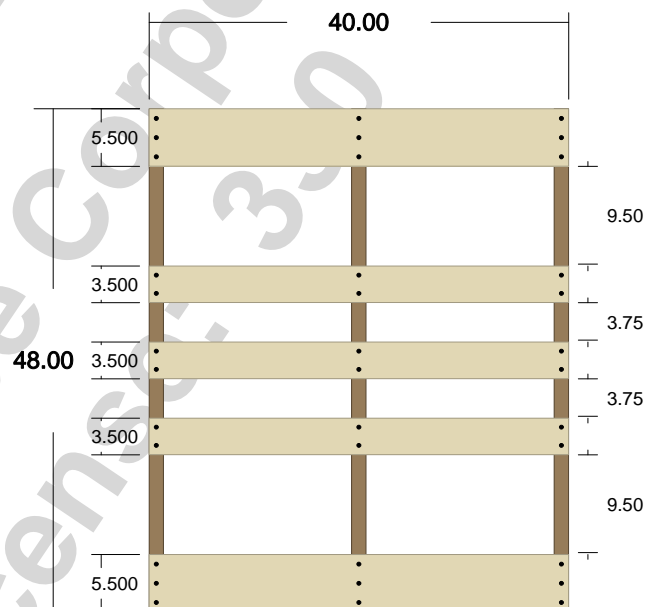
End View



Top View



Bottom View



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Unit Load Specification and Drawings

All dimensions in inches, weights in lbs.

Customer:

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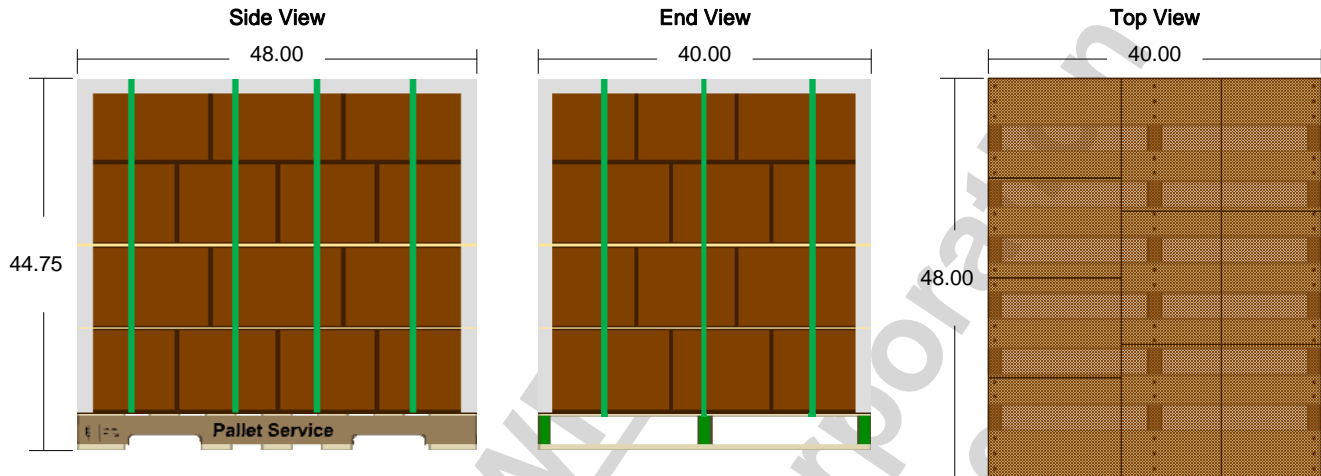
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Container Type: Corrugated Box

Box Style: Regular Slotted Container (RSC) #0201

Outside Dimensions:

Length: 16.000

Width: 12.000

Depth: 10.000 *

Weight per Box: 20 lbs.

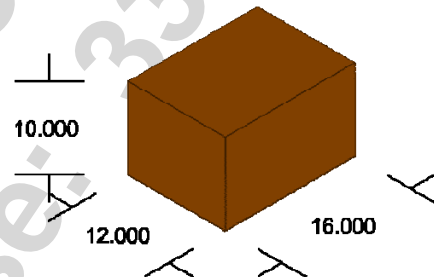
Number of Boxes per Layer: 10

Number of Layers per Unit Load: 4 **Interlock Stacked**

Number of Boxes per Unit Load: 40

Total Weight of Load: 800 lbs.

Total Height of Load: 40.000 in.



Load Stabilizers

Parallel Straps

Type: Plastic

Perpendicular Straps

Type: Plastic

Strap Protectors

Type: Plastic

Corner Protectors

Type: Plastic

Top Edge Protectors

Type: Plastic

Tie Sheet

Type: Paper

