

PALLET DESIGN SYSTEM Version 5.4

Pallet Specification Sheet

All dimensions in millimeters

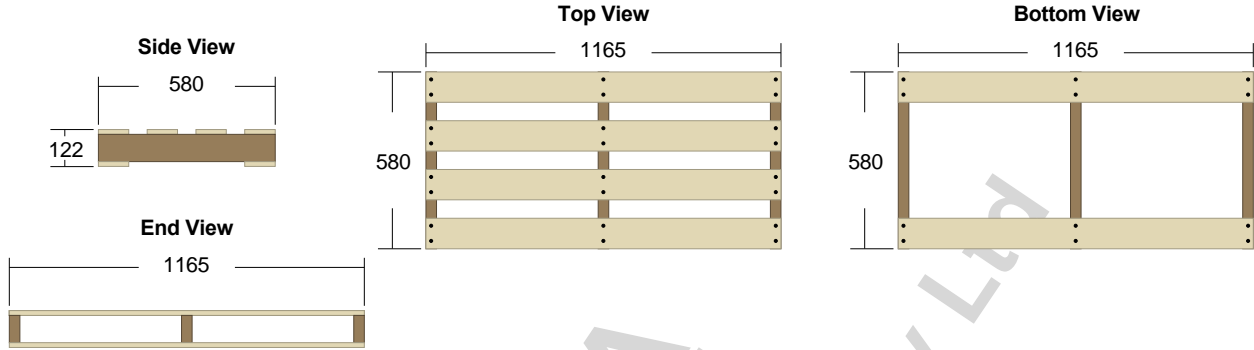
Customer:

Prepared by:

Express Pallets & Crates Pty Ltd
PDS License: 790 Printed: August 28, 2020

Pallet ID: VP1165580423TDL

Classification: 580 x 1165, Stringer-Class, Double-Face Non-Reversible, 2-Way, Reusable, New Manufacture



Components

Top Deck:

Style: Deckboard Type: New Lumber

Number	Thickness	Width	Length
4	16	100	1165

Volume: 0.0075 cubic meters

Bottom Deck:

Style: Deckboard Type: New Lumber

Number	Thickness	Width	Length
2	16	100	1165

Volume: 0.0037 cubic meters

Stringers:

Type: New Lumber

Number	Width	Height	Length
3	35	90	580

Volume: 0.0055 cubic meters

Materials

Fasteners:

Fastener ID:	57x3.06
Fastener Type:	Helically Threaded Nail
Fastener Length:	57
Thread Length:	38
Thread Diameter:	3.4
Wire Diameter:	3.1
Head Diameter:	7.2
Flutes:	2
Helixes:	4.1
Pitch:	9.3
Thread Angle:	60
MIBANT Angle:	35
FWC:	1.71
Total Number:	36

New Lumber:

Lumber ID: Radiata Pine

Species Class	Grade
Chilean Radiata Pine	Premium

Moisture Content (at manufacture and assembly): Green

Total New Lumber Volume: 0.0167 cubic meters

Spec Sheet Notes:

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Pallet Structural Analysis

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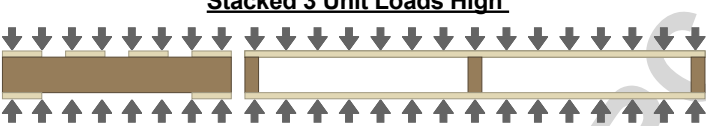
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General Load Type: Uniformly Distributed - Full Pallet Coverage

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 or Connection
Side View	End View					
<p>Warehouse Storage <u>Stacked 1 Unit Load High</u></p> 		862 kg	7 mm	6 mm	NA	Interior Top Deckboard
<p><u>Stacked 3 Unit Loads High</u></p> 		372 kg per pallet	7 mm	6 mm	NA	Lead Top Deckboard

Lateral Collapse Resistance



Low

Medium

Good

Excellent

LCR Indicator = 0.42

Pallet Design System (PDS)

Developed and owned by:

National Wooden Pallet and Container Association (NWPCA)

Research and development for early versions of PDS were conducted in cooperation with:
Center for Unit Load Design, Virginia Tech Department of Wood Science and Forest Products;
U.S.D.A. Forest Service and Forest Products Laboratory; APA - The Engineered Wood Association;
Software Technologies Laboratory, Virginia Tech Department of Industrial and Systems Engineering

The results from PDS are based on the NWPCA's continuing program of laboratory and field research. While the engineering outcomes reflected in the results are based on sound science, 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, and specifically disclaims any responsibility for such. Notwithstanding the history of the PDS system, users of the PDS system are strongly encouraged to undertake individual, unique analysis of the results as they then pertain to specific applications and the production process. 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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National Wooden Pallet and Container Association, 1421 Prince Street, Suite 340, Alexandria, Virginia 22314-2805, United States

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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	10 kg	8 kg	8 kg	8 kg	7 kg



Component	Original Dimension	Shrinkage from Manufacture to 19% MC	Shrinkage from Manufacture to 15% MC
Top Deckboards	16 mm Thickness	0.3 mm (+/- 0.1 mm)	0.4 mm (+/- 0.1 mm)
	100 mm Width	1.9 mm (+/- 0.5 mm)	2.7 mm (+/- 0.7 mm)
Stringers	90 mm Height	1.7 mm (+/- 0.4 mm)	2.4 mm (+/- 0.6 mm)
	35 mm Width	0.7 mm (+/- 0.2 mm)	1.0 mm (+/- 0.3 mm)
Bottom Deckboards	16 mm Thickness	0.3 mm (+/- 0.1 mm)	0.4 mm (+/- 0.1 mm)
	100 mm Width	1.9 mm (+/- 0.5 mm)	2.7 mm (+/- 0.7 mm)

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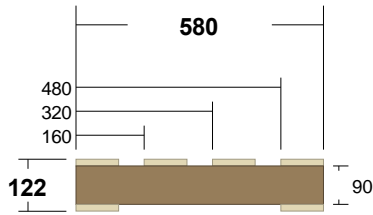
2-D Pallet Drawings

All dimensions in millimeters

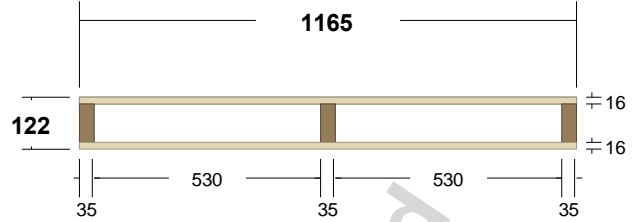
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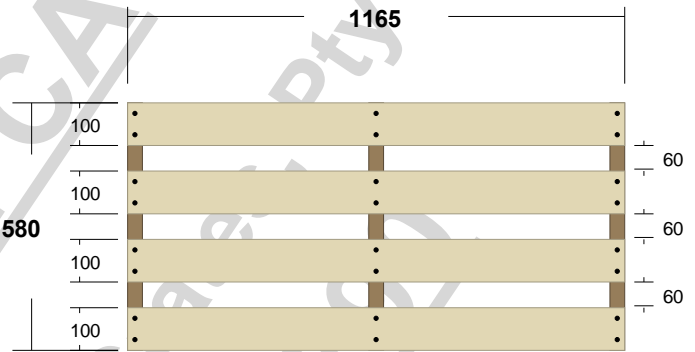
Side View



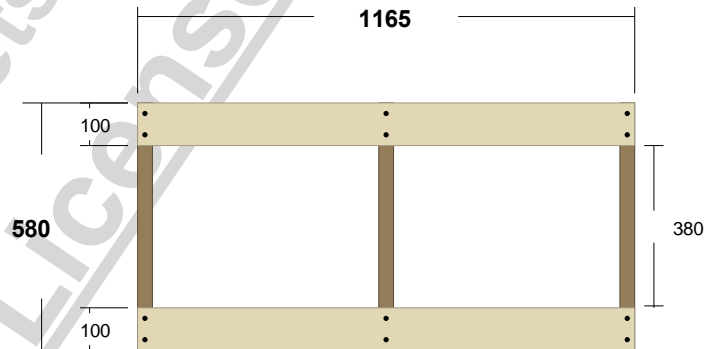
End View



Top View



Bottom View



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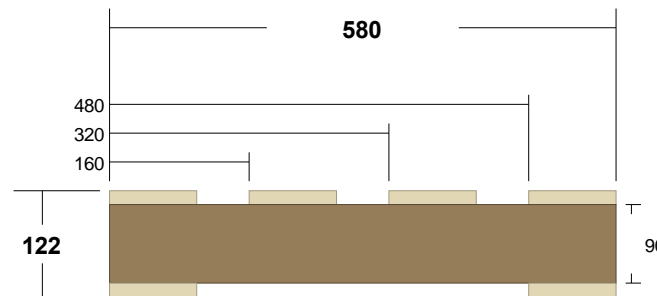
Pallet Drawing - Side and End View

All dimensions in millimeters

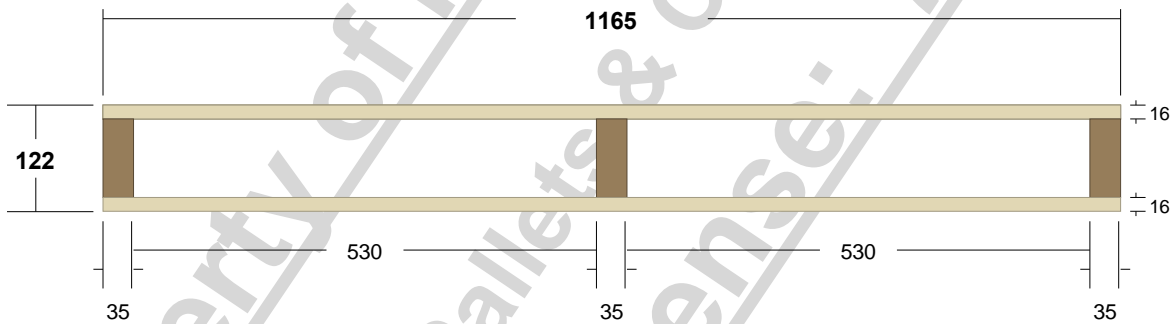
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Side View



End View



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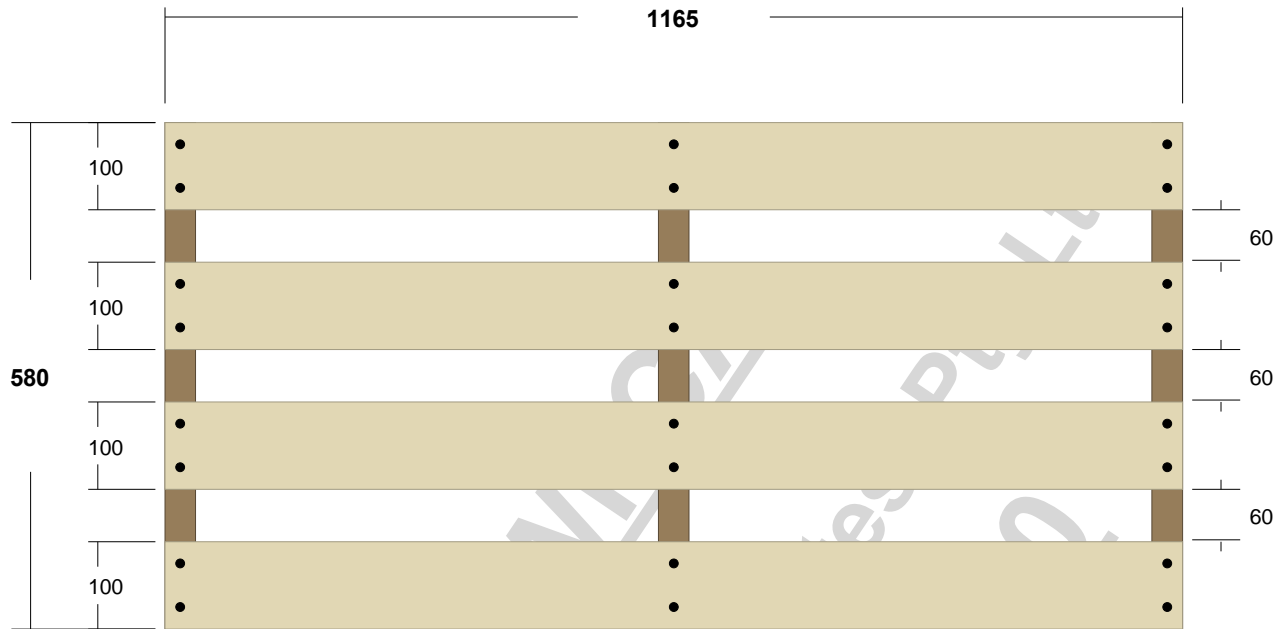
Pallet Drawing - Top View

All dimensions in millimeters

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Top View



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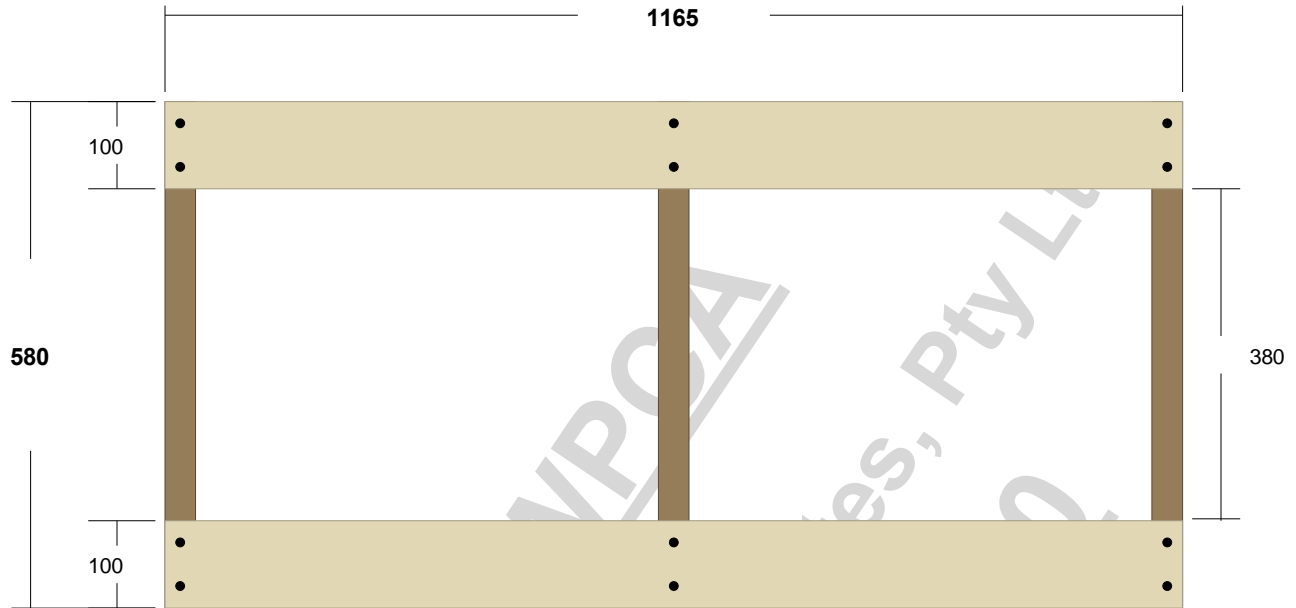
Pallet Drawing - Bottom View

All dimensions in millimeters

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Bottom View



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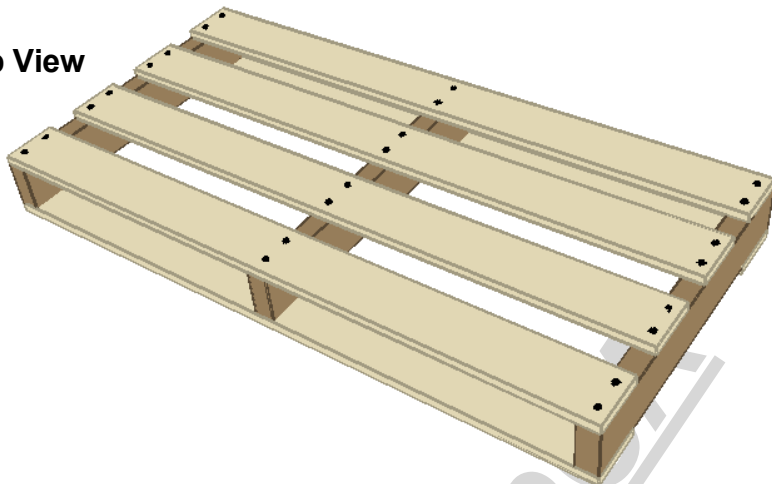
3-D Pallet Drawings

All dimensions in millimeters

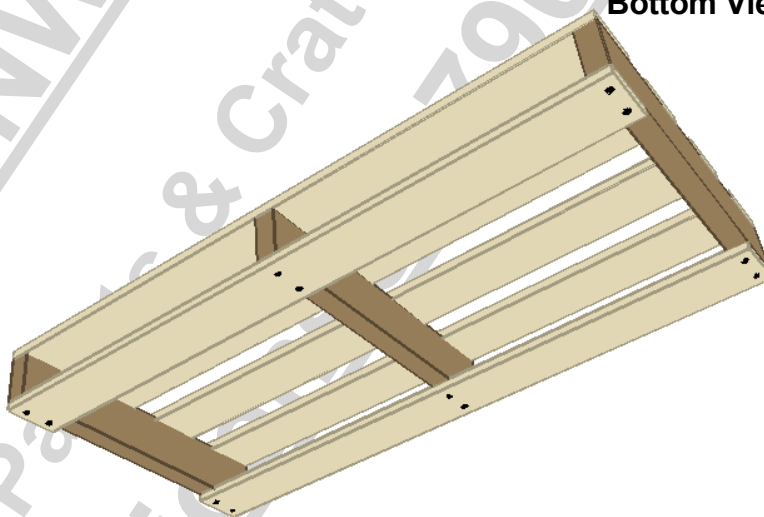
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Top View



Bottom View



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