PALLET DESIGN SYSTEM Version 3.0
Pallet Specification Sheet

All dimensions in millimeters

Customer:

Prepared by:

Virginia Tech Pallet Laboratory
1650 Ramble Road
Blacksburg, VA 24061
Phone: (540) 231-3043 Fax:(540) 231-8868

PDS License: 100 Date: January 07, 2000

Pallet ID: EuroPallet-Type Design
Classification 800 x 1200, Block-Class, Double-Face Non-Reversible, Full 4-Way, Multiple-Use

Top Deck

Style: Deckboard/Stringerboard **Type:** Lumber
Thickness: 22 **Length:** 1200 **Wing:** 0
Total Number of Deckboards 5

Number	Width	Mat Fasteners Per Connection
2	145	1
2	100	3
1	145	1

Endboards Flush, Interior boards Equally Spaced
Mat Assembly Method
Volume: 0.0168 cubic meters

Bottom Deck

Style: Unidirectional Base **Type:** Lumber
Thickness: 22 **Length:** 1200 **Wing:** 0
Total Number of Deckboards 3

Number	Width
2	100
1	145

Volume: 0.0091 cubic meters

Top Stringerboards

Type: Lumber
Thickness: 22 **Length:** 800
Total Number of Stringerboards 3

Number	Width
3	145

Volume: 0.0077 cubic meters

Blocks

Type: Molded Wood Particle
Height: 78
Total Number of Blocks 9
End Block Length: 100 **Center Block Length:** 145
Block Width: 145
Volume: 0.0117 cubic meters

Lumber

Lumber ID: Scots Pine

PDS Species Class	PDS Grade	Lumber Mix
European Species Class 33	3&BTR	100 %

Moisture Content: Kiln Dry - 19%

Fastener

	Mat Fast	TD Blk Fast	BD Blk Fast
Fastener ID:	Mat Nail	Top Block Nail	Bottom Block Nail
Fastener Type:	Plain	Annular	Annular
Fastener Length:	60	90	70
Thread Length:		60	45
Thread Diameter:		4.5	4.5
Wire Diameter:	2.5	4.2	4.2
Wire Thickness:			
Wire Width:			
Head Diameter:	5.5	8.0	8.0
Crown Length:			
Helixes:			
Flutes:			
Thread Angle:			
Rings:		45	35
MIBANT Angle:	120	20	20
FWI:	22	85	85
FSI:	20	177	177
Total Number:	27	27	27

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Pallet Structural Analysis

Pallet ID: EuroPallet-Type Design
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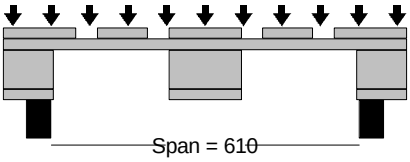
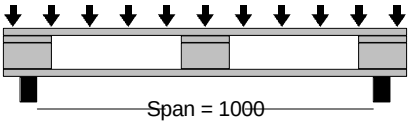
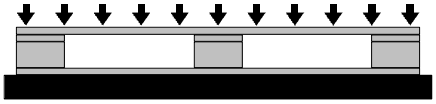
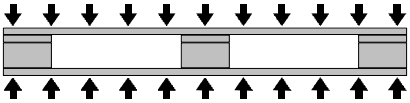
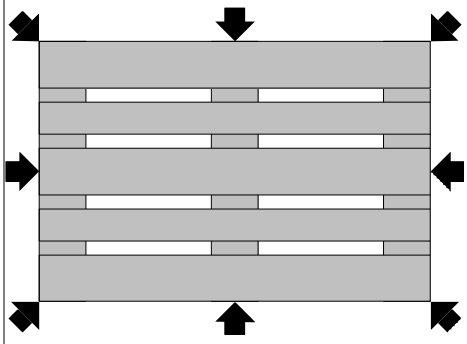
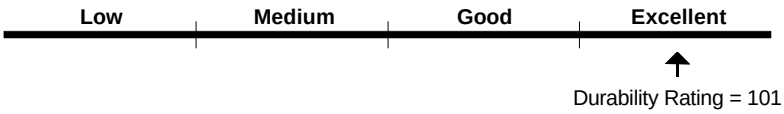
Unit Load Type: Uniformly Distributed - Full Pallet Coverage
Unit Load Weight Variability: User-Specified
Weight Coefficient of Variation: 49.5 % Maximum to Average Weight Ratio: 2.15
Service Environment: Dry Service Environment (EMC <= 19%)

Support Condition	Safe Maximum Load	Deflection at Maximum Load	User Specified Deflection Limit	Maximum Load for Deflection Limit	Critical Member
Racked Across Length 	1042 kg	8 mm	----	----	Top Stringerboard
Racked Across Width 	1566 kg	12 mm	----	----	Bottom Deckboard
Stacked 1 Unit Load High 	5756 kg	4 mm	----	----	Top Deckboard
Stacked 4 Unit Loads High 	1853 kg (each pallet)	6 mm	----	----	Center Bottom Deckbd

Pallet Durability Analysis





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Pallet Physical Property Analysis

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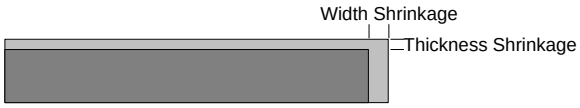
	At Manufacture			At 15% MC	At 12% MC
Average Pallet Weight	25 kg			25 kg	24 kg



Dimensional Change due to Wood Drying

Component	Original Dimension	Shrinkage from Manufacture to 19% MC	Shrinkage from Manufacture to 15% MC
Top Deckboards	22 mm Thickness 145 mm Width 100 mm Width 145 mm Width		0.2 mm (+/- 0.1 mm) 1.3 mm (+/- 0.4 mm) 0.9 mm (+/- 0.3 mm) 1.3 mm (+/- 0.4 mm)
Top Stringerboards	22 mm Thickness 145 mm Width		0.2 mm (+/- 0.1 mm) 1.3 mm (+/- 0.4 mm)
Bottom Deckboards	22 mm Thickness 100 mm Width 145 mm Width		0.2 mm (+/- 0.1 mm) 0.9 mm (+/- 0.3 mm) 1.3 mm (+/- 0.4 mm)

Pallet Design System - Version 3.0

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

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

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 Voluntary 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.

PALLET DESIGN SYSTEM Version 3.0
Pallet Drawing - Side and End View

All dimensions in millimeters

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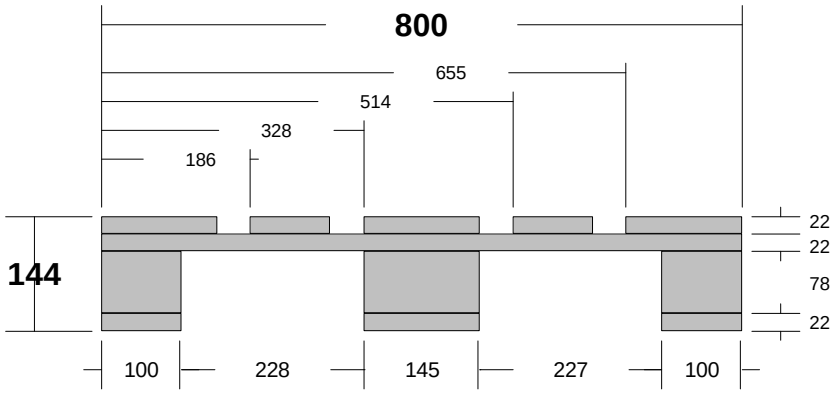
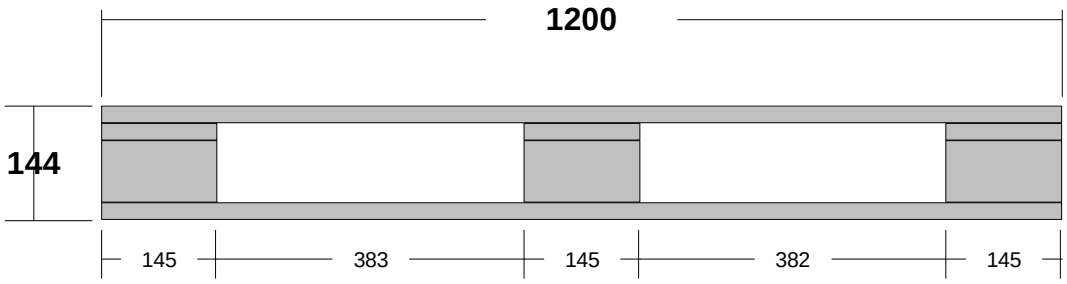
Side View



End View



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Pallet Drawing - Top View

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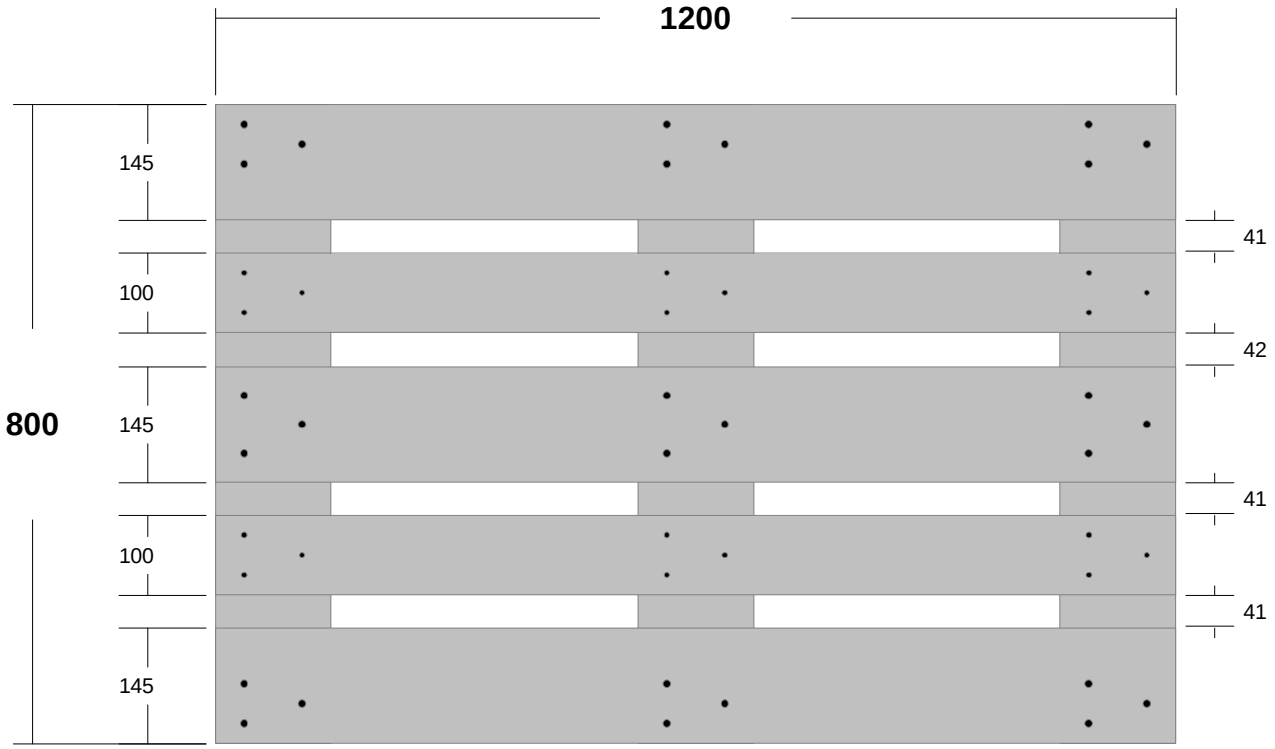
Top View



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Pallet Drawing - Bottom View

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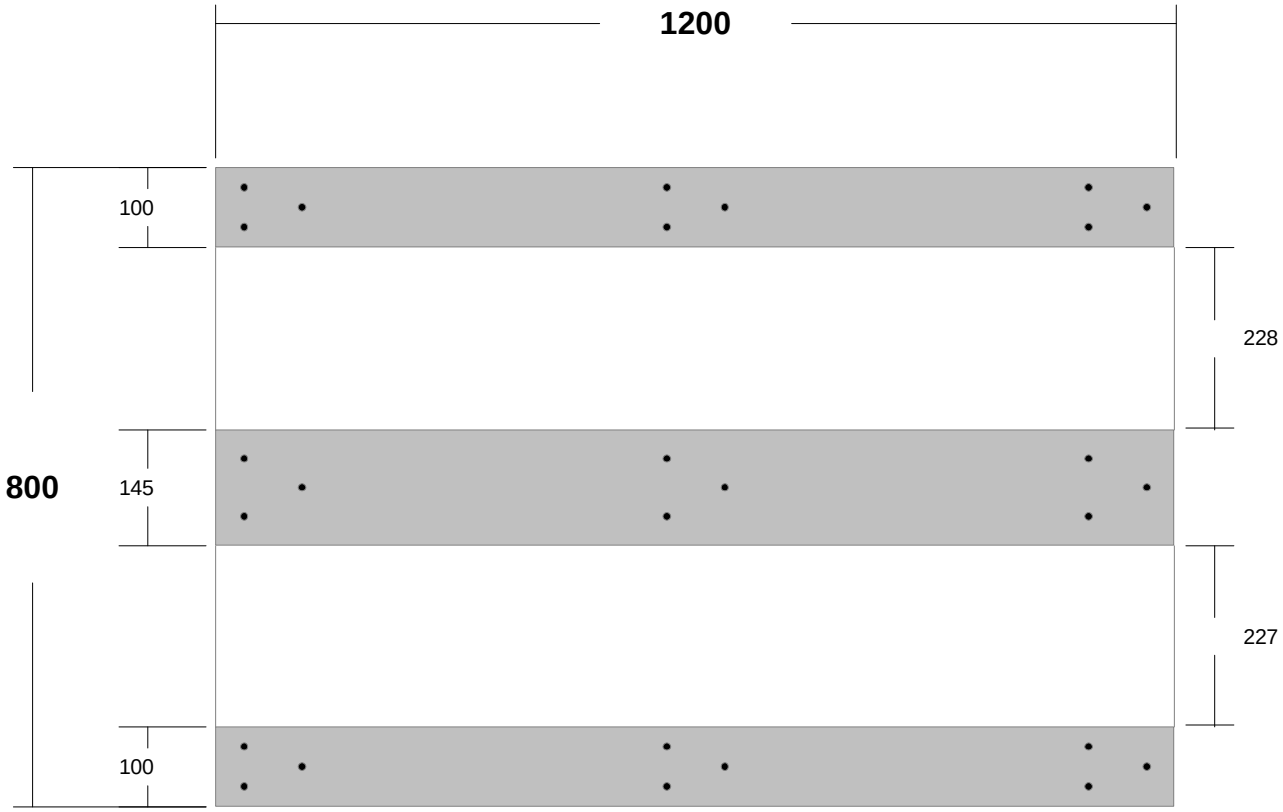
Bottom View



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