

# Vacuum Lumber Drying

Presented by,  
Jim Parker



**Bring your Cash Flow out of the woods**

————— EFFICIENCY —————

————— QUALITY —————

————— SPEED —————



**This is what your calendar looks like  
now**

————— EFFICIENCY —————

————— QUALITY —————


————— SPEED —————



**APRIL 2013**


SUN	MON	TUES	WED	THURS	FRI	SAT
	GET ORDER	SAW LOG	DRY	DRY	DRY	DRY
DRY	DRY	DRY	DRY	DRY	DRY	DRY
DRY	DRY	DRY	DRY	DRY	DRY	DRY
DRY	DRY	SHIP ORDER				

————— EFFICIENCY  
————— QUALITY  
————— SPEED



**This is what the Vacutherm Calendar looks like**

————— EFFICIENCY  
————— QUALITY  
————— SPEED




## APRIL 2013

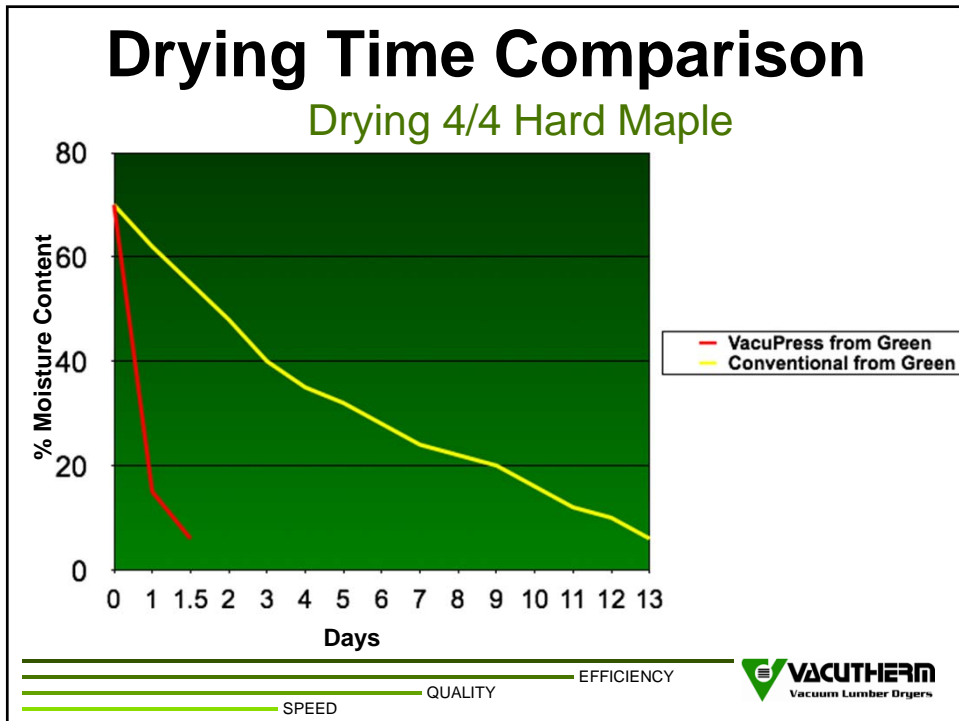
SUN	MON	TUES	WED	THURS	FRI	SAT
Go fishing	GET ORDER	SAW LOG	DRY	DRY	SHIP ORDER	Go fishing
Go fishing	GET ORDER	SAW LOG	DRY	DRY	SHIP ORDER	Go fishing
Go fishing	GET ORDER	SAW LOG	DRY	DRY	SHIP ORDER	Go fishing
Go fishing	GET ORDER	SAW LOG	DRY	DRY	SHIP ORDER	Go fishing

EFFICIENCY

QUALITY

SPEED





# Drying Times

Drying time (hours)						
Species	4/4	5/4	6/4	8/4	10/4	12/4
Maple	30	35	42	48	96	140
Birch	40	48	55	70	120	192
Red Oak	92	125	145	168	186	212
Walnut	45	50	58	65	115	168
White Pine	24	30	38	48	55	96



# Production Comparison



VS



	Conventional Steam Kiln	VacuPress 4000
Capacity	50,000 bf	4,000 bf
Drying Time (4/4 Hard Maple)	15 days	30 Hours
Annual Throughput (350 days)	1,166,666 bf	1,120,000 bf





Cash Flow Demonstration  
**click here**

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SPEED      QUALITY      EFFICIENCY



# Production Throughput




- Eliminates the 'bottleneck'
- Increases responsiveness to market
- Just-in-Time Inventory/production
- Cash flow Machine

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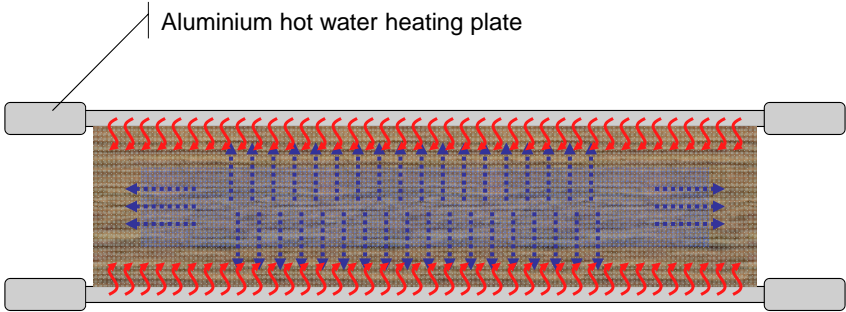
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SPEED      QUALITY      EFFICIENCY





# Contact Heating

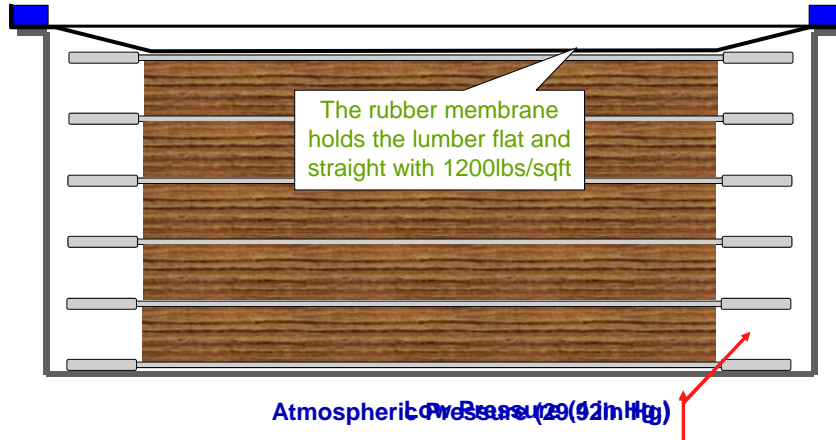


The hot water heating plates or heated air (for AirVac) heat the wood very efficiently and help drive the moisture out.



# The “Press” in VacuPress

Atmospheric Pressure (29.92 in Hg.)



————— EFFICIENCY —————

————— QUALITY —————

————— SPEED —————



# The “Press” in VacuPress

- Appox. 1200 lbs per foot of pressure
- Does not affect dimension of wood
- Prevents:
  - Cup
  - Bow
  - Twist
  - Crook
- Can Eliminate cup, bow and twist already in lumber

————— EFFICIENCY —————

————— QUALITY —————

————— SPEED —————



# VacuPress Equipment Costs

Drying 4/4 Hard Maple

Model	Cost per Bf of production (paid for over 5 years + interest)
VacuPress 500	\$0.09
VacuPress 1000	\$0.05
VacuPress 2500	\$0.04
VacuPress 4000	\$0.03

————— EFFICIENCY  
————— QUALITY  
————— SPEED



# AirVac Vacuum Kiln

- Circulated Hot Air
- Stickered Pack of Lumber
- Track or Side Loaded
- Cold Water EMC Control



————— EFFICIENCY  
————— QUALITY  
————— SPEED









## AirVac 40 (40,000 Board Feet)




SPEED      QUALITY      EFFICIENCY






<b>AirVac Drying time (HOURS)</b>			
<b>Species</b>	<b>4/4</b>	<b>8/4</b>	<b>12/4</b>
<b>Maple</b>	<b>48</b>	<b>96</b>	<b>360</b>
<b>Birch</b>	<b>50</b>	<b>105</b>	<b>384</b>
<b>Red Oak</b>	<b>92</b>	<b>360 (15 days)</b>	<b>720 (30 days)</b>
<b>Walnut</b>	<b>60</b>	<b>360 (15 days)</b>	<b>720 (30 days)</b>
<b>White Pine</b>	<b>35</b>	<b>60</b>	<b>96</b>

## AirVac Equipment Costs

Drying 8/4 Hard Maple

<b>Model</b>	<b>Cost per Bf of production</b> (paid for over 5 years + interest)
AirVac2.5	\$0.20
AirVac4	\$0.17
AirVac8	\$0.15
AirVac20	\$0.08
AirVac40	\$0.07

# TOUCHDRY :: Kiln Controls

Integrated Moisture Meter :: Remote Control :: Automatic or Manual Mode



SPEED ————— QUALITY ————— EFFICIENCY

 **VACUTHERM**  
Vacuum Lumber Dryers

## Total Energy Cost

Wood Heat = **\$0.03/BF**

Propane Heat = **\$0.08/BF**

SPEED ————— QUALITY ————— EFFICIENCY

 **VACUTHERM**  
Vacuum Lumber Dryers

# QUESTIONS??

[www.vacutherm.com](http://www.vacutherm.com)

PHONE: 1-802-496-4241

EMAIL: [sales@vacutherm.com](mailto:sales@vacutherm.com)

