

VACUUM DRYING TECHNOLOGIES



SINCE 1962

REPRESENTED BY
SII DRY KILNS
LEXINGTON, NC

RELIABLE AND TESTED TECHNOLOGY: VACUUM DRYING

Industrialized since 1962, vacuum drying technology has continuously evolved and improved. For decades, WDE Maspell's drying technology has met all market standards and requirements (speed, productivity, flexibility, and drying quality)

ALL TYPES OF WOOD



HARDWOOD

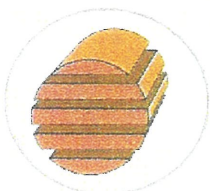


SOFTWOOD

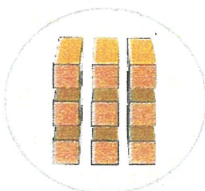


EXOTIC

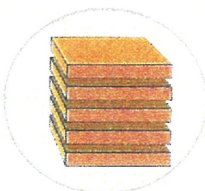
ALL TYPES OF PRODUCTS



BOARDS

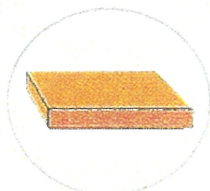


SQUARES

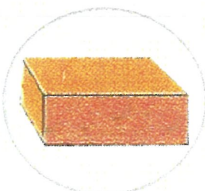


SEMI-FINISHED
PRODUCTS

ALL THICKNESSES



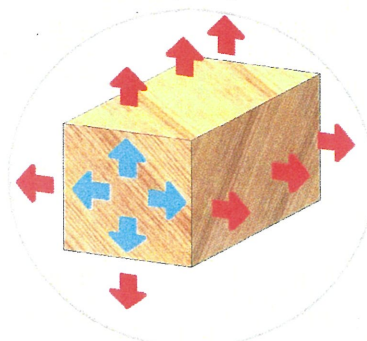
1/16"



16"

THE VACUUM DRYING PRINCIPLE

Two phenomena can be observed while drying wood:



**CIRCULATION OF WATER FROM
THE CORE TO THE SURFACE
OF THE WOOD**



**EVAPORATION OF THE WATER
AT THE SURFACE OF THE WOOD**

Since circulation "C" is much slower and more a difficult phenomenon than evaporation "E", physical laws must be implemented to increase the circulation in order to reduce drying times.

LAW No.1:

**CIRCULATION INCREASES WITH
WOOD HEATING TEMPERATURE**

LAW No.2:

**CIRCULATION INCREASES WITH
VACUUM**

LAW No.3:

**THE GREATER THE VACUUM, THE
LOWER THE BOILING WATER TEMP**

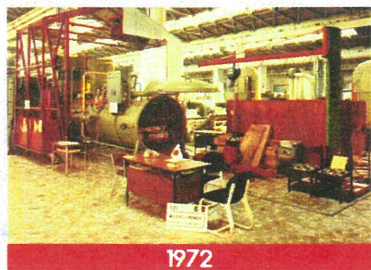
To reduce drying times and to guarantee perfectly dried wood quality, the vacuum drying method utilizes all the abovementioned physical laws.



OUR HISTORY FROM 1962



1962



1972



1983



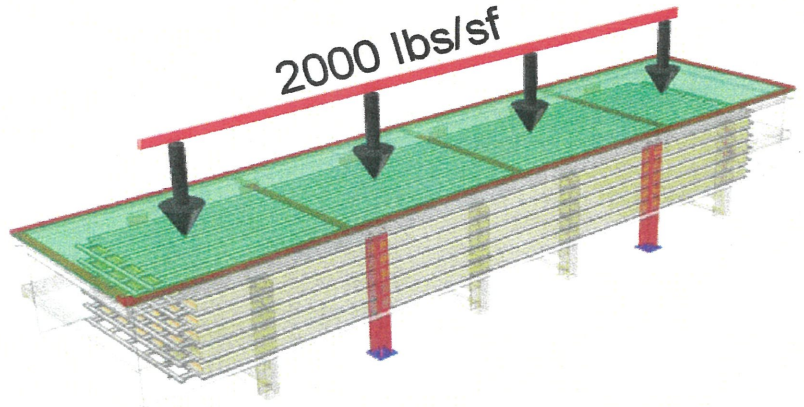
1986

THE WDE - MASPELL VACUUM DRYING TECHNIQUE



"PRESS VACUUM" FOR SOLID WOODS & VENEERS

Based on a cylindrical drying cell operating with heating plates and a continuous vacuum, the WDE Maspell company proposes a new version of the plate vacuum drying cell that uses a vacuum not only for drying, but also to exert a pressure of 2000 lbs/sf on the wood boards during the entire drying cycle. (Pagnozzi patent)

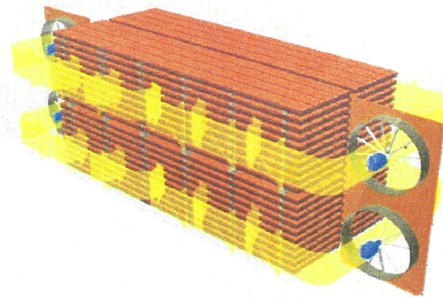


PRESS MODEL ADVANTAGES
IMPROVES DRYING QUALITY
STRAIGHTENS WARPED BOARDS
INCREASES DRYING SPEED
CAPACITY

170 BF TO 8500 BF

"AIR VACUUM" FOR STICKERED LUMBER

This type of drying is performed with cylindrical cell (ROLL, LOLA, MAGNUM models) operating with either a continuous or discontinuous vacuum used in conjunction with heating coils and internal fans



AIR MODEL ADVANTAGES
DRYING STICKERED WOOD STACKS
FORK LIFT LOADING
CAPACITY

1300 BF TO 10,000 BF

ENERGY SOURCES

EITHER VACUUM DRIER CAN BE CONNECTED TO ANY TRADITIONAL HEATING SYSTEM, WOOD-WASTE, GAS, OIL, HOT-WATER OR ELECTRIC

TWO DIFFERENT APPLICATIONS

- COMPLEMENTARY TO TRADITIONAL DRY KILNS FOR BATCH DRYING
- MASS PRODUCTION DRYING

WDE - MASPELL OFFERS THE FOLLOWING SERVICES

- DEFINITIVE CUSTOMER REQUIREMENT LISTING
- TECHNICAL SUPPORT STAFF COMMITTED TO FIND THE BEST SOLUTIONS FOR THE END USER
- WDE - MASPELL PRODUCTION QUALITY CONTROL
- RECOMMENDATIONS ON THE DRYING FIELD

- PERSONNEL TRAINING
- TECHNICAL ASSISTANCE
- INSTALLATION AND START-UP
- AFTER-SALES SERVICE & SUPPORT

CURRENT PRODUCTS



PRESS L 3 - 1300 BF CAPACITY



PRESS XL 10 - 4200 BF CAPACITY



ROLL 6 - 2500 BF CAPACITY



LO-LA 20 - 8500 BF CAPACITY

ADVANTAGES

01 DRYING TIME

5 to 10 times faster than traditional dry kilns.
The vacuum drying technique can be used to meet all requirements very quickly, with no defects.

02 DRYING QUALITY

- Compliance with requested final MC %
- Homogeneity of the final wood moisture
- No deformations in the dried wood

03 FLEXIBILITY

The small-capacity cells optimise drying thanks to the possibility of creating wood loads with homogeneous wood-type, initial MC, & thickness

04 VERSATILITY

The vacuum drier is very versatile, it can be used as a production machine and also to complement traditional dry kilns

05 RELIABILITY

- Our driers offer extended service life that is guaranteed by:
- The use of superior components
 - The cell built with AISI 304 Stainless Steel, which guarantee excellent resistance against corrosion

06 OPERATION

Equipment to ensure completely automatic (via computer) or semi-automatic operation of the drying process make the use of our dryers very simple, functional, and intuitive to operate.

07 INSTALL & START-UP

Fast and simple: half a day for press driers (which only require power and water supplied)
In addition, the vacuum drier is a modular "drying machine", it can be easily transported to fit into any organizational scheme.

08 TOUCH SCREEN CTRL



The wood is dried by controlling the temperature and the pressure inside the cell in relation to the type of wood, its thickness and moisture content; this process is automatically controlled by the PLC and Touch Screen Interface.
It is equipped with Remote Control; the user can check and modify the process by use of a PC or Smartphone from anywhere in the world and our technicians can provide immediate assistance.

MODEL: PRESS XL 6



MODEL: PRESS XL 10



MODEL: MAGNUM 50



MODEL: SQUARE 80



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