

# COMPETENCE IN WOOD DRYING

Today it is essential that wood is technically dried prior to use. The condition of the wood and its drying degree are decisive preconditions for the high quality of the final product. The Ebac FD 100 is a powerful and durable wood dryer and is particularly suitable for joiners who work with large quantities of wood. Ebac guarantees drying that is both economic and offers consistently good quality results.

The FD 100 has many advantages over other drying solutions. The unit is very easy to operate, attractively

## FD 100 POWERFUL AND ROBUST



Automatic control unit BC 2015

priced and cheap to run. The average daily energy consumption is under 25 kWh. The FD 100 incorporates the latest technology including a control unit with microprocessor for maximized performance. Investment costs can be considerably reduced by do-it-yourself-work: We supply the machinery and you yourself build the drying chamber according to the instructions supplied by Ebac free of charge.



# Ebac

## Drying techniques in comparison

Drying by dehumidification is simple: Heat is used to gently warm the wood and release its moisture content. The moisture is then collected by the dehumidification system. This process has many advantages over alternative drying techniques:



### Wood drying without technical means ("natural drying"):

Relying on the weather does not only mean a very slow and uneven drying but also that moisture contents lower than 16 % cannot be achieved. Because the process is so slow, large amounts of capital are tied up in wood stocks that cannot be used.

### Wood drying by heating and venting ("conventional drying"):

This is a viable alternative, however there are disadvantages that make the process quite expensive. This type of dryer vents large quantities of expensive heating energy to the outside where it is lost. Unlike dehumidification systems, the latent energy bound up in the moist air cannot be recovered and is also lost to the outside. Because such drying kilns usually operate at high temperatures there is a risk of damage to wood being dried.

### Drying by dehumidification

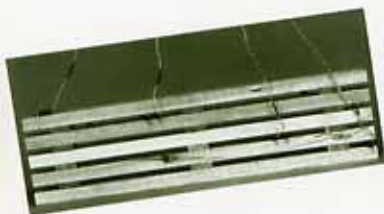
Ebac wood dryers incorporate three separate functions in a single package: heating, dehumidification, ventilation. An integral fan circulates air inside the drying chamber ensuring that the wood is evenly heated. Air is drawn into the dryer where it is cooled to a temperature at which most of the air's moisture condenses. This moisture is collected and drained away.



The air is finally rewarmed with the same heat extracted during the cooling phase and is returned back to the wood stack. Hence, there is no loss of energy. A small auxiliary heater is incorporated which helps start the process during cool weather. Additional fans may be installed in the drying chamber to ensure even drying throughout the stack.

TECHNICAL DATA	FD 100
max. wood load*	7 m <sup>3</sup>
max. drying temperature	55 °C
airflow	1,000 m <sup>3</sup> /h
max. water extraction	45 l/24 h
average water extraction	30 l/24 h
mains supply	230 V/50 Hz
connected load	2.5 kW
max. power consumption dryer	1 kW
heating power	1.5 kW
weight	76 kg
height	820 mm
depth	290 mm
width	1,070 mm

\*depending on wood species and thickness



Model of a wood stack showing the arrangement of the moisture probes