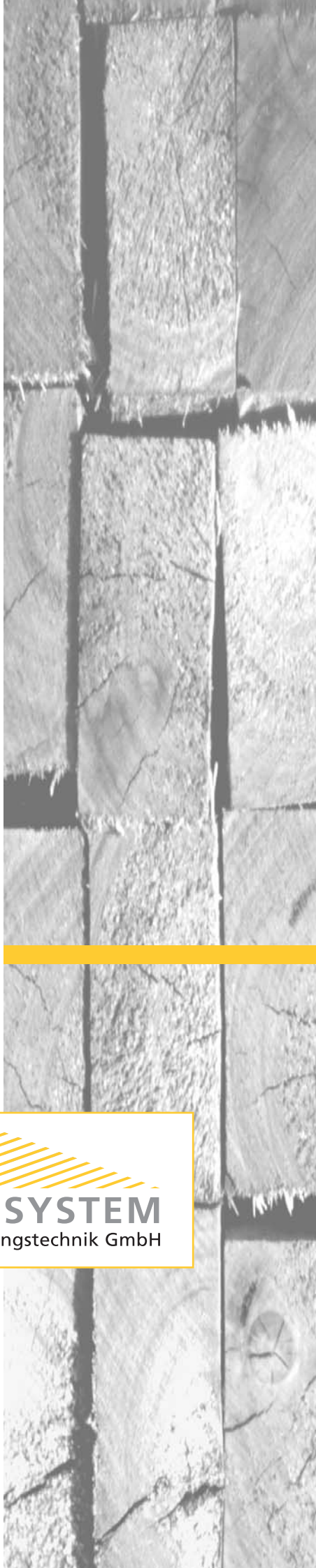


World's number 1 in solar drying technology



SOLAR DRYING

KILNS

FOR WOOD



**THERMO-SYSTEM**  
Industrie- & Trocknungstechnik GmbH



## Solar Drying Kilns for Wood

Thermo-System is worlds largest producer of solar drying technology. Our references can be found all over the world. Now we have launched a new line of solar and solar-assisted drying kilns for wood. Developed, tested and optimized over several years with the internationally renown University of Stuttgart-Hohenheim and several professional sawmills, the dryers are actually the most cost efficient state of the art drying technology for wood on the market.

Basically we offer three lines of wood dryers:

### **The Individual Line**

We have designed and constructed installations for our customers with a drying capacity of up to 35000 m<sup>3</sup> of timber annually. Chamber size and design is exactly fitted to the individual needs and wishes.

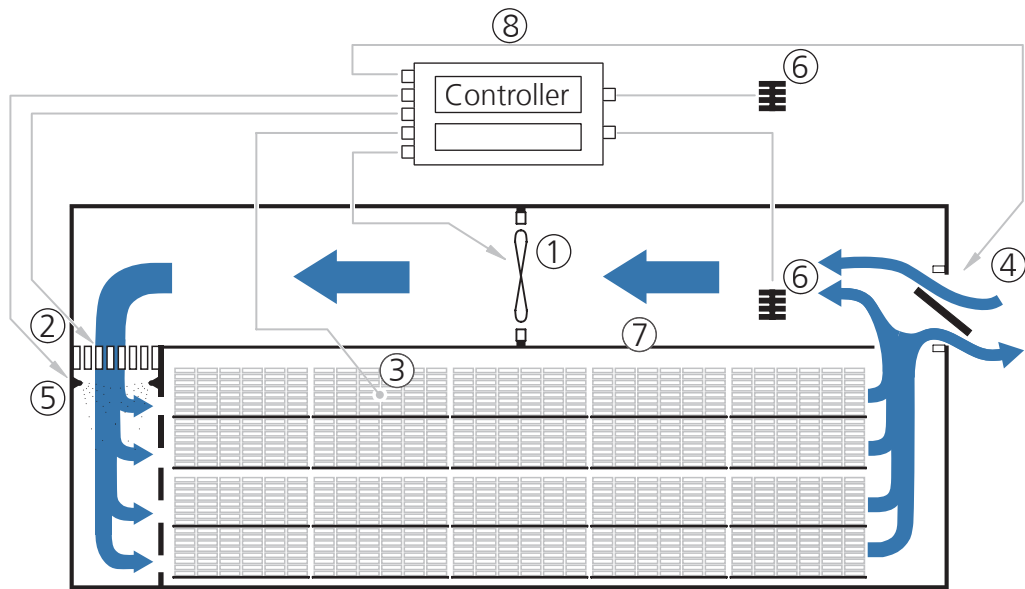
### **The Compact Line**

We offer a standardized, complete installation kit for chambers with a capacity of 60, 120 and 240 m<sup>3</sup> of timber per load. With help of our installation manual it is easy to install this dryer by your own staff or with assistance of one of our technicians. Depending on your needs you can order the dryer with or without back-up heating. This offer makes professional equipment accessible at the lowest possible price!

### **The Energy Line**

Wood is not only appreciated as building material but also as energy source. However, for an efficient use of firewood in shape of pieces or chips, most of the water should be removed. Extraordinary low energy consumption and low drying costs make our technology particularly interesting for this application.





- |                         |              |                   |
|-------------------------|--------------|-------------------|
| ① Ventilators           | ④ Air-Flap   | ⑦ Solar collector |
| ② Heat exchangers       | ⑤ Humidifier | ⑧ Controller      |
| ③ Wood moisture sensors | ⑥ Sensor     |                   |

## The Concept



- A PLC based controlling system especially developed for this purpose measures all relevant parameters, controls all components like ventilators, humidifiers, back-up-heating and flaps and provides easy operation and fully automatic drying schedules.



- A well isolating, transparent and high UV-stabilized synthetic roofing of the solar kiln ensures both: efficient solar energy utilization and low construction costs. Ambient air conditions are taken into account by the process control to reduce energy consumption and drying costs to a minimum.



- A modular construction allows flexible solutions: Single or multi-kiln plants, a kiln capacity from 50 to 500 m<sup>3</sup>, flexibility in width, length and height.

- An optional back-up-heating system guarantees a constant performance even during night, adverse weather conditions and winter.

- Low temperature and variable temperature drying schedules reduce the energy consumption and guarantee high quality products!



## The constructive characteristics

- All constructive elements are made of aluminum or stainless steel to prevent corrosion.
- Black absorber sheets are separating the drying chamber from the attic and serve in a dual function: They are protecting the timber from direct sunlight and are absorbing solar energy.
- An optional back-up heating system allows a high drying speed even during nighttime and unfavorable weather conditions.
- A humidifier guarantees the desired drying conditions during the whole process.
- The required air circulation is provided by highly efficient axial ventilators with sickle design.
- Different types of filling gates on one or both gables allow an easy filling operation.



## The Thermo-System

### clever

We are searching for intelligent, functional and simple solutions. Therefore we are co-operating with the leading scientists and Universities in the field of solar drying technology.

### cost efficient

The investment costs of Thermo-System kilns are considerable low compared to conventional systems. Solar drying is adequate and cost efficient especially for hardwoods, mixed assortments, which require gentle drying schedules, pre-drying of soft-woods and firewood.

### energy saving

Taking advantage of the natural resources, our kilns require considerable less energy than other systems, thus protecting the ambient and saving costs.

Development, production and sale:

Research and scientific assistance:



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