



Eberl

The vacuum kiln

 **Dry**

energy saving
efficient



Actively pursuing a climate-neutral industry - because wood is our passion



Vacuum kilns for sawn and construction timber ranging from 1.5 m³ to 100 m³

V-Basic
V-Comfort
V-Premium



EBERL premises in Bodenkirchen, Bavaria / Southern Germany.

Your partner in drying

As pioneering inventor of energy-efficient vacuum wood drying. EBERL has become the leading provider of vacuum kilns. Today we offer a unique and complete range of wood dryers, and drying plants for a variety of other raw materials. In addition we supply customised systems and tempering ovens for use in medical engineering, biotechnology and chemistry through collaborations with international enterprises.

We see a solid quality achieved through excellence in engineering and an innovative drive as the foundation for our economic success and market leadership. Thanks to new energy-efficient technologies, EBERL has successfully forged the path to resource-saving wood drying. We are able to develop and produce systems that are tailored exactly to the needs of our customers. EBERL understands how to use physical circumstances to its advantage. The result is a reliable, effective and resource-saving drying technology **eDry**, for which no alternative exists. The standards we set ourselves convince our customers and have become a

benchmark for the whole industry.

Competent service and qualified customer support can be taken for granted when working with EBERL.

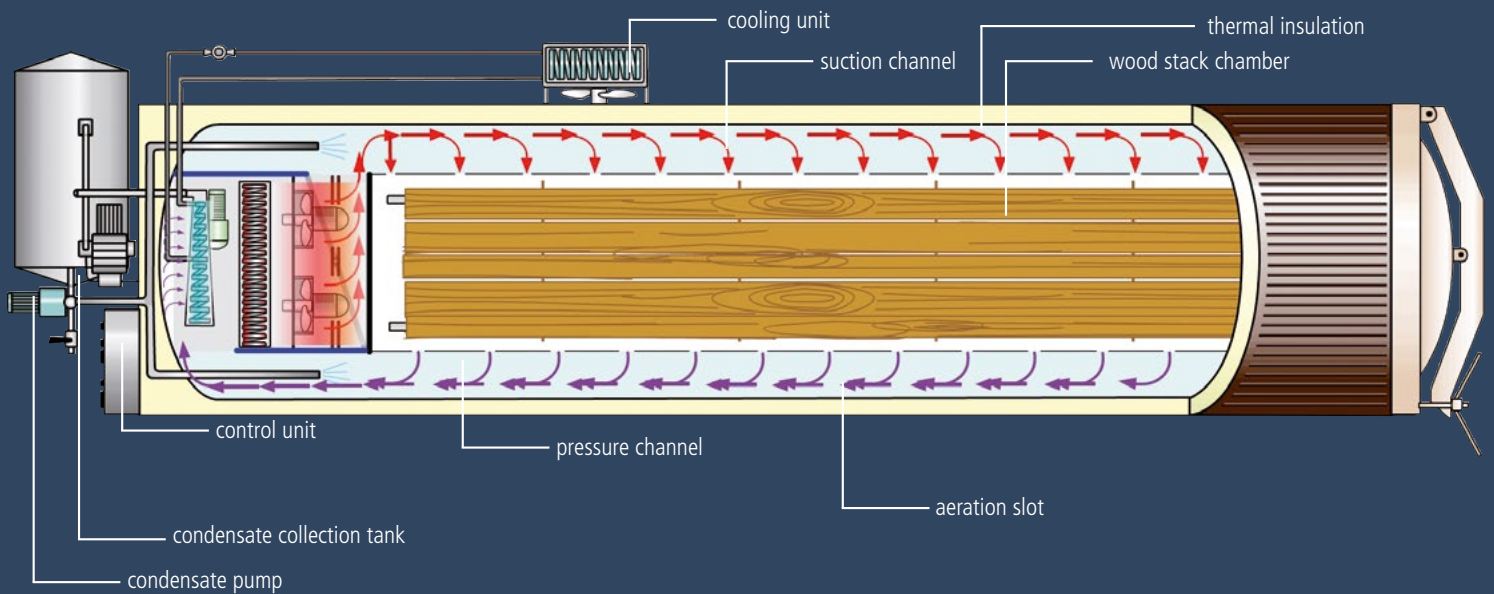
Company milestones:

- 1998 Georg Eberl and Harald Feurecker founded EBERL with the launch of the energy saving kiln V-Premium.
- 2004 Development of the V-Basic and V-Comfort.
- 2007 Development of the Air Classic.
- 2008 Development of a bulk dryer.
- 2011 Development of the V-tempering range and an increase of production space to twice its previous size.

Technologies: Conventional air drying, vacuum drying with or without heat pump, continuous drying processes, tempering processes.



The drying process



A horizontal cross-section of a kiln illustrating the air circulation. Seen from above.

The vacuum

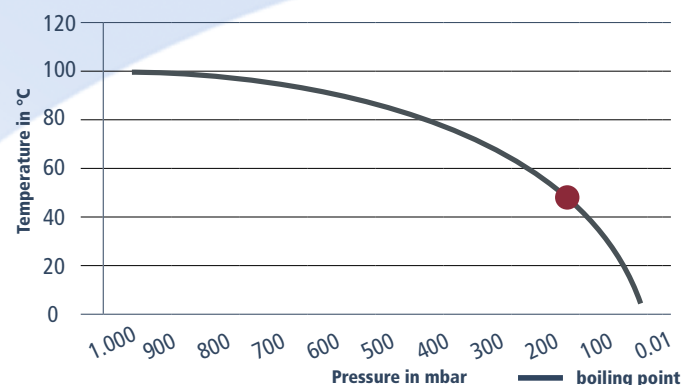
The boiling point of water decreases through a pressure reduction and as a result enables

- a fast and gentle drying through an accelerated and even moisture extraction from the wood.
- a high-quality drying and increased flexibility.
- a lower energy expenditure (for both air circulation and water evaporation), which equates to economical drying, protects the environment and saves money.

The air circulation technique

Economical central fans at the end of the chamber distribute the air current evenly throughout the wood stack via lateral aeration slots.

Boiling point of water in relation to temperature and pressure



- constant cross-ventilation throughout the entire chamber length
- no need to seal off unused stack space
- no variation in climatic conditions
- even drying without moisture accumulation
- economical ventilation system

V-Basic

The vacuum kiln for small quantities of wood ranging from 1.5 to 20 m³

- The ideal kiln for small wood processing companies, offering fast drying and post-drying for all types of wood, whilst still maintaining outstanding quality.
- The kilns are made from stainless steel and can be powered either electrically or through a hot-water heating system.
- Economical condensation by an exterior cooler.
- Condensate is disposed of through a sluice.
- Well-proven and even ventilation is provided by the air channel.
- Operating a fan in vacuum saves approx. 75% energy.



The V-Basic just before loading a wood stack.

| Technical data | Type | 10/45 | 12.5/60 | 14/60 | 16/60 | 20/100 |
|--|----------------|---------|----------|----------|----------|-----------|
| Kiln diameter | m | 1.0 | 1.25 | 1.4 | 1.6 | 2.0 |
| Stack room length | m | 4.6 | 6.1 | 6.1 | 6.1 | 10.1 |
| Stack room width | m | 0.55 | 0.76 | 0.86 | 1.0 | 1.2 |
| Stack room height | m | 0.73 | 0.94 | 1.03 | 1.19 | 1.58 |
| Stack room gross capacity | m ³ | 1.8 | 4.4 | 5.4 | 7.3 | 19.1 |
| Length of the kiln | m | 6.9 | 8.6 | 8.6 | 8.7 | 12.7 |
| Width of the kiln | m | 1.25 | 1.5 | 1.63 | 1.9 | 2.4 |
| Height of the kiln | m | 1.75 | 2.0 | 2.12 | 2.35 | 2.6 |
| Electrical power supply hw/el | kW | 5.5/9.5 | 7.2/11.2 | 7.2/16.0 | 8.0/16.0 | 12.0/30.0 |
| Average electrical consumption hw/el | kW | 1.3/1.9 | 1.6/2.9 | 1.7/3.3 | 1.7/3.9 | 2.7/8.4 |
| Hot water heating system as power supply | kW | 1.7 | 3.9 | 4.9 | 6.5 | 17.2 |
| Average consumption | kW | 0.6 | 1.3 | 1.6 | 2.2 | 5.7 |

V-Comfort

The vacuum kiln for wood quantities from 12 to 100 m³

- This kiln for hardwood and construction timber is usually connected to an external heating system.
- Low thermal and electrical energy consumption.
- Evenly distributed and reversible ventilation.
- High humidifying performance due to specially designed cooling circuits / cycles.
- No external water supply is required.
- Collected moisture is reused for spraying.
- Fast and high-quality drying.



The V-Comfort after the drying process.

| Technical data | Type | 20/65 | 20/125 | 23/150 | 25/150 | 27/150 | 29/150 | 30/150 | 34/150 | 34/225 |
|--|----------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| Kiln diameter | m | 2.0 | 2.0 | 2.3 | 2.5 | 2.7 | 2.9 | 3.0 | 3.4 | 3.4 |
| Stack room length | m | 6.6 | 12.6 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 22.6 |
| Stack room width | m | 1.2 | 1.2 | 1.25 | 1.25 | 1.4 | 1.25 | 1.4 | 1.5 | 1.5 |
| Stack room height | m | 1.58 | 1.58 | 1.93 | 2.18 | 2.28 | 2.58 | 2.68 | 3.03 | 3.03 |
| Stack room gross capacity | m ³ | 12.5 | 23.9 | 36.4 | 41.1 | 48.2 | 48.7 | 56.7 | 68.6 | 102.7 |
| Length of the kiln | m | 10.3 | 16.3 | 18.9 | 19.0 | 19.1 | 19.1 | 19.2 | 19.25 | 27.25 |
| Width of the kiln | m | 2.6 | 2.6 | 2.6 | 2.85 | 3.0 | 3.2 | 3.4 | 3.8 | 3.8 |
| Height of the kiln | m | 2.65 | 2.65 | 2.9 | 3.14 | 3.16 | 3.4 | 3.5 | 3.85 | 3.85 |
| Electrical power supply | kW | 11.2 | 18.2 | 17.5 | 21.5 | 21.5 | 25.5 | 27.0 | 27.0 | 42.0 |
| Average electrical consumption | kW | 2.0 | 3.7 | 4.5 | 5.0 | 6.0 | 6.0 | 7.0 | 8.7 | 12.5 |
| Hot water heating system as power supply | kW | 11.3 | 21.5 | 32.8 | 37.0 | 43.4 | 43.8 | 51.0 | 61.8 | 92.4 |
| Average consumption | kW | 3.8 | 7.2 | 10.9 | 12.3 | 14.5 | 14.6 | 17.0 | 20.6 | 30.8 |

V-Premium

The energy-saving kiln with heat pump, no heating connection or water supply needed, low electricity requirement.

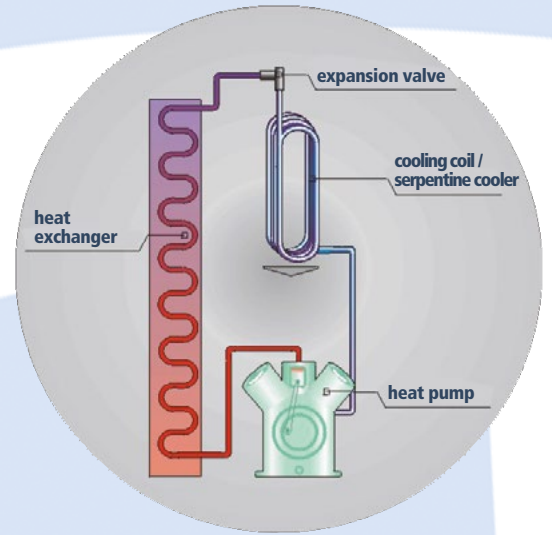
- Energy-efficient system.
- 100% heat recovery during dehumidification, therefore no external heating source required.
- Highest possible energy efficiency because the heat pump is located directly in the stream of circulating air.
- Fast, economical, high-quality drying.
- Only electrical power connection required, thus giving complete flexibility in choice of location.
- Outside installation possible thanks to a frost-resistant and integrated control room.



The V-Premium in use.

Save time, save energy = efficient drying

Thanks to the conversion of energy, whereby we dehumidify through condensation and heat using heat recovery; we achieve a high level of energy efficiency. Within the EBERL system, the heat-pump circuit is located directly within the convection stream of circulating air of the vacuum kiln, therefore providing the highest increase in efficiency.



V-Premium being loaded.

| Technical data | Type | 20/65 | 20/125 | 23/150 | 25/150 | 27/150 | 29/150 | 30/150 | 34/150 | 34/225 |
|--------------------------------|----------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| Kiln diameter | m | 2.0 | 2.0 | 2.3 | 2.5 | 2.7 | 2.9 | 3.0 | 3.4 | 3.4 |
| Stack room length | m | 6.6 | 12.6 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 22.6 |
| Stack room width | m | 1.2 | 1.2 | 1.25 | 1.25 | 1.4 | 1.25 | 1.4 | 1.5 | 1.5 |
| Stack room height | m | 1.58 | 1.58 | 1.93 | 2.18 | 2.28 | 2.58 | 2.68 | 3.03 | 3.03 |
| Stack room gross capacity | m ³ | 12.5 | 23.9 | 36.4 | 41.1 | 48.2 | 48.7 | 56.7 | 68.6 | 102.7 |
| Length of the kiln | m | 10.3 | 16.3 | 18.9 | 19.0 | 19.1 | 19.1 | 19.2 | 19.25 | 27.25 |
| Width of the kiln | m | 2.6 | 2.6 | 2.6 | 2.85 | 3.0 | 3.2 | 3.4 | 3.8 | 3.8 |
| Height of the kiln | m | 2.65 | 2.65 | 2.9 | 3.14 | 3.16 | 3.4 | 3.5 | 3.85 | 3.85 |
| Electrical power supply | kW | 17.0 | 25.0 | 37.0 | 45.0 | 49.0 | 53.0 | 57.0 | 65.0 | 93.0 |
| Average electrical consumption | kW | 3.0 | 5.5 | 9.0 | 10.0 | 12.0 | 12.0 | 14.0 | 17.3 | 25.0 |

Operation

Simple, intuitive, quick

On our user-friendly touch panel, simply enter the wood type, wood thickness and the desired final moisture content. After that, all you have to do is press the start button, and the kiln will take care of the rest by itself.



Pro-face

Visualisation as displayed on a PC.

In order to facilitate your daily work with our kilns, we offer a visualisation program. With this you can comfortably monitor and control your kiln from your office computer. The simple interface allows you to enter all relevant data and settings as well as saving and

printing logs or diagrams of the drying process. It is even possible to remotely control your kiln using your smartphone.

Special equipment

Heat treatment ISPM No. 15

This IPPC-standard is a legal requirement for the export of wood packaging abroad, for example to the USA, Canada, Mexico or China.

First the core temperature sensors are inserted into the thickest timber section. Then you can start the corresponding program using the touch panel or visualisation program. The batch is heated until the core temperature of the wood is at 56° C for at least 30 minutes. After a short cooling period the packaging timber is retracted from the kiln. For the required drying logs a printer is necessary.



EBERL Remote-Measurement

The wireless wood-moisture measuring device saves the on the time-consuming laying of cables, which would otherwise be required. After connecting the transmitters to the electrodes, the data is automatically transferred to the control unit.



Control room

The room is completely insulated and equipped with a lockable door and lighting as well as a frost monitor and controlled ventilation. Additionally, the vacuum pump, condensate tank and control unit are all encased in frost proofed housing.



Service

EBERL not only produces first-class equipment, but also provides excellent after-sales service. Our project technicians and engineers, as well as our managing directors are personally available for you.

Remote access

If you grant us access to your machine, we can access the data of your kiln online. Thanks to desktopsharing, we can see what you see. Especially in the early stages, when you are not yet that familiar with the kiln, we can support you with its operation. You can still access the control system from your PC or smartphone at the same time.

A lot of customers of other manufacturers actually use our excellent service too and we happily assist them. Please do not hesitate to contact us. We have a service team ready to promptly assist you on site in each country that we currently deliver to.

If you should have any questions concerning:

- Drying guidance
- Special types of wood, special products
- Program updates
- Selection of the suitable kiln
- Possible error messages
- Original spare parts
- ISPM compliance



Technical advisor

then please simply call or write to us.

Phone number: +49 (0) 8745 964460 or E-mail: info@eberl-trocknungsanlagen.de

We are always ready to help.

Further products

Dry Air Classic firewood kiln



Dry Air Classic



Dry e-vacuum-tempering-oven



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