

K5 – Timber Drying to the highest Standards

- smart CONTROL
- quick ANALYSIS
- targeted OPTIMISATION
- simple OPERATION

MÜHLBOECK
DRYING-TECHNOLOGY

Comprehensive functionality

A single system with endless possibilities

The **MÜHLBÖCK K5** control system is the right solution for all timber drying requirements.

- For every size of operation and number of drying kilns
- For all MÜHLBÖCK drying kilns as well as drying kilns of other manufacturers
- For all species of timber
- For all operational requirements
- For a full range additional MÜHLBÖCK applications



MÜHLBÖCK DRYING KNOW-HOW

The K5 control system contains the extensive know-how derived from the experience with more than 12,000 drying plants worldwide and the latest insights from MÜHLBÖCK research and development.

- Recommended drying schedules for the most varied species of timber, applications and grades
- Various programme modes, such as:
 - Drying with timber moisture measurement points
 - Drying for a set time period
 - Drying without timber moisture measuring points (IntelliPilot)
 - SmartDry

Smart control

Innovative solutions for complex procedures

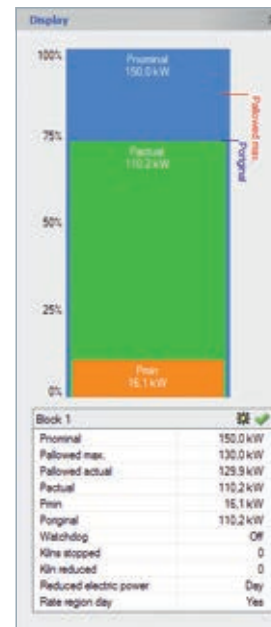
■ SmartDry - the smartest way to dry!

This drying mode ensures constant heat consumption during the heating phase, reduces the drying time by up to 20% and, in addition, considerably reduces the energy consumption for your drying process. The drying process can be optionally carried out with or without measuring points, but in every case the focus is on delivering the quality that you define.

**New
Technology**
developed by
MÜHLBÖCK

Greater drying volume – lower costs for drying timber – reduced load on the boiler

- **IntelliPilot:** Wood moisture control without measuring points. Takes over control of drying and ensures the desired final moisture content.
- **Thermal Energy Manager:** Ensures optimum distribution of the thermal energy available.
- **Electrical Energy Manager:** Keeps expensive factory peak demand consumption under control through intelligent reduction and distribution of the power load.
- **Planned Drying Schedules:** Drying schedules can be planned in advance and saved for later use.
- **Drying Time Forecast:** Continuous information on the completion time of your drying procedure.
- **Climate Phase:** Turns your drying kiln into a climatic controlled storage and ensures the desired final moisture content at a defined period of time after drying.
- **Thermal Treatment Proof:** Permits time-saving IPPC/ISPM treatment even during drying.
- **Over Temperature Control:** “When it gets too hot outside;” the lowest discolouration of timber is ensured when drying hardwood, even with high outside temperatures.
- **Industrial Control:** B&R or SIEMENS control as an option. Future-proof through simple upgrade. Simple service through direct connection to our customer service department.

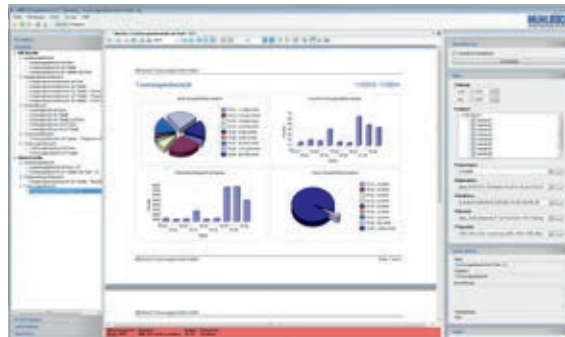


Quick analysis

All data under control, quickly and precisely analysed

Reporting:

- Clear and meaningful evaluation of all commercial and technical data
 - Utilisation and loading times
 - Many pre-prepared reports
 - Customised reports also available

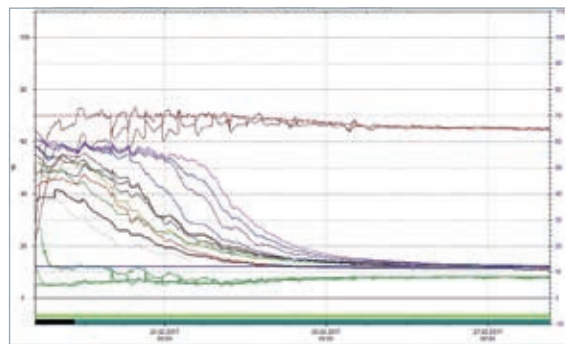


Archive Manager:

Manage all logs of current and past drying procedures and the associated settings.

Alarm History:

Complete documentation of all alarms that have occurred in the past.



Drying Trend:

In graphic and tabular view. The complete drying process at a glance; many preset filters available; free selection of time span and values.

Data Export:

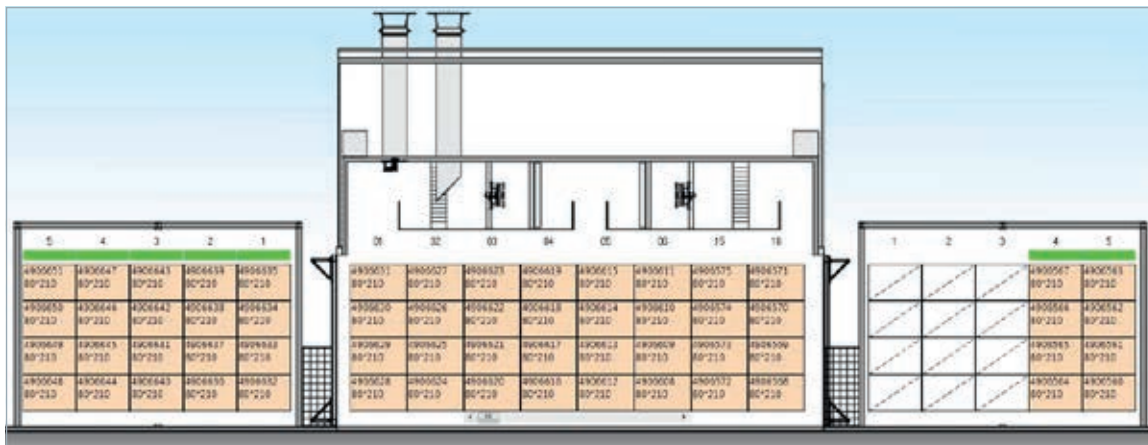
Export of trends, alarms, drying programs, etc. as a CSV file for further processing by external programs (e.g. Excel, Access, etc.).

Actions:

Complete and historically traceable documentation of all actions associated with the drying kiln control.

Article, Batch and Package Management:

Management of drying batches and package numbers, etc.



Targeted optimisation

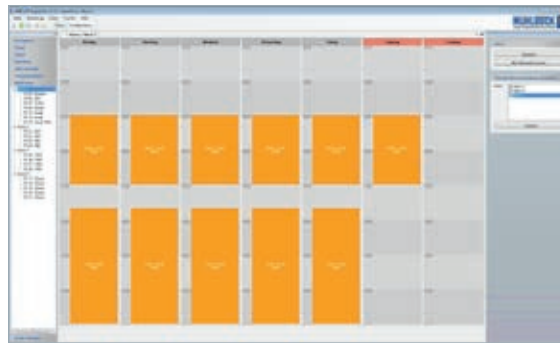
Recognise potential, set actions, save on costs

IntelliVent:

Saves up to 50% in electricity, without extending drying time as a result, by continuous adjustment of the fan speed.

Weektimer:

Automatic fan speed restriction dependent on the time of day and day of the week (e.g. for noise reduction during the night time or for lowering peaks when starting up the sawing line).



Drying Wizard:

Always selects the correct measuring points fully automatically.

The image shows a control system interface for the Drying Wizard. It displays moisture and temperature data for various measuring points (MP 01 to MP 07). The interface includes a sidebar on the left and a top navigation bar.

| Moisture | | Temperature | |
|-------------------------------------|--------|-------------|-----------------------------------|
| MC: Measured value (AUTO) | | | |
| DCV | 42.7 % | FMC | 50.7 % |
| Dcr | Value | 0% - 100% | |
| <input type="checkbox"/> | MP 01 | 48.5 % | <div style="width: 48.5%;"></div> |
| <input checked="" type="checkbox"/> | MP 02 | 60.3 % | <div style="width: 60.3%;"></div> |
| <input type="checkbox"/> | MP 03 | 58.9 % | <div style="width: 58.9%;"></div> |
| <input type="checkbox"/> | MP 04 | 9.7 % | <div style="width: 9.7%;"></div> |
| <input type="checkbox"/> | MP 05 | 36.0 % | <div style="width: 36.0%;"></div> |
| <input type="checkbox"/> | MP 06 | 37.1 % | <div style="width: 37.1%;"></div> |
| <input type="checkbox"/> | MP 07 | 10.5 % | <div style="width: 10.5%;"></div> |

Delayed Start:

You can shift or delay the start-up of drying kilns that are already loaded. This prevents energy peaks and, in addition, leads to optimisation of the production process.

Service & Support:

Our aim is to develop a long-term working partnership and deliver the highest level of customer satisfaction, which drives us to support you in every situation when it comes to the drying of timber.

- Remote maintenance option for visualisation and PLC via the Internet
- Software updates of the control system can be installed by remote maintenance
- Service hotline 7 days a week, 365 days a year
- Optimisation of your drying process by our experts



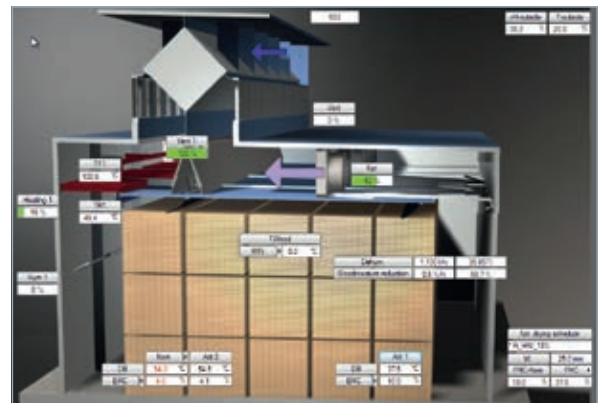
Simple operation

„Keep it simple” – Operation without deviations



- **SmartClient:** Operation via smartphone, tablet or smartwatch independent of the location of the drying plant.
- **Logbook:** Messages, hints and tasks, related to the drying kilns, for the operators (e.g., instructions for shift changeover or to document completed activities).
- **WebService Interface & DataAccess:** Direct data transfer between your K5 control system and the ERP system of your choice.
- **Document Management:** Key documents at a glance. Drawings, photos, circuit diagrams, notes, etc. can be conveniently assigned to a drying procedure or drying kiln.
- **Backup and Restore:** Reliable protection against data loss through regular, automatic backup and easy recovery.
- **Server Installation:** Simultaneous operation of K5 visualisation from multiple PCs.

- **3D-View:** User-friendly full-graphic 3D visualisation (matched to the corresponding type of kiln).
- **Individually Adjustable Visualisation:** Adjust the K5 visualisation according to your needs.



- **User Administration:** Individual assignment of functions and rights prevents incorrect operation; changes are traceable; the language can be assigned for each user.
- **More than 20 languages:** Our recognition of internationality.

K5 Functional Scope

| | K5 Basic | K5 Pro |
|--|----------|--------|
| Actions | – | incl. |
| Adaption of drying kiln overview (graphic / tabular) | – | incl. |
| Alarm history | – | incl. |
| Alarm output | opt. | incl. |
| Archiv-manager incl. settings history | incl. | incl. |
| Backup & Restore (automatic backup) | incl. | incl. |
| Climate phase | – | opt. |
| CSV-data export of drying schedules, trend data and alarms | – | incl. |
| DataAccess-interface | – | opt. |
| Delayed start | incl. | incl. |
| Document management | – | incl. |
| Drying time forecast | incl. | incl. |
| Drying wizard | incl. | incl. |
| Dual-drying | – | incl. |
| Electrical power management | – | opt. |
| IntelliPilot | opt. | opt. |
| IntelliVent | opt. | opt. |
| K5-Basic licence | incl. | incl. |
| K5-Pro licence | opt. | incl. |
| K5-PC incl. Windows 10, language package, screen + printer | opt. | opt. |
| K5-installationfee for on-site PC or virtual machine | opt. | opt. |
| K5-Laptop for emergency and/or backup | opt. | opt. |
| Logbook | – | incl. |
| MB message | – | opt. |
| Overtemperature regulation | – | opt. |
| Planned drying schedules | – | incl. |
| Print function (settings, status, etc.) | incl. | incl. |
| Range and batch management | – | opt. |
| Reporting | – | opt. |
| Server installation incl. 2 Clients | – | opt. |
| SmartClient (installation for one device) | opt. | opt. |
| SmartClient-Installation for each further client | opt. | opt. |
| SmartDry | – | opt. |
| Thermal energy management | – | opt. |
| Thermal treatment proof (IPPC/ISPM) | opt. | opt. |
| Trend (current and historic) | incl. | incl. |
| WEB-Service-interface | – | opt. |
| Weektimer | opt. | incl. |

„incl.“ = included in scope of supply; „opt.“ = additional price; „–“ = not available for chosen scope of supply

K5 Basic

Step up to top class of timber drying:

- Ideal for those who are new or transferring to the system.
- Affordable and full-featured drying kiln control with a wide range of additional options.
- Can be upgraded to the K5 PRO at any time.

If you want to operate professional drying: Then upgrade your existing drying kilns with the **MÜHLBÖCK K5 Control System.**

Irrespective of the manufacturer, age, equipment or size of the drying kiln, there are solutions to optimise your drying process and to bring it right up to date.



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DRYING - TECHNOLOGY

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