

## 20% more productivity thanks to

### SmartMONITOR

## Ketterer uses every signal tower as a machine data collection system

Ansprechpartner:  
**WERMA Signaltechnik GmbH + Co. KG**  
Michael Groll  
Head of Strategic Marketing  
D-78604 Rietheim-Weilheim  
Tel. (07424) 9557-104  
Fax (07424) 9557-44  
michael.groll@werma.com  
www.werma.com

### Specialist manufacturer of electromechanical drive systems

Drive systems made by Ketterer can be found in most industrial sectors, from general industry to service and trade. The innovative drive systems are used to adjust the height of desks and workstations and are also deployed widely in access/entry systems, warehousing and logistics and the machine industry. The family owned SME, steeped in traditional values is well-known as a "problem solver" with a range of standard solutions as well as customised variants available to the customer.

Julian Markon has been with Ketterer for just four years. The Production Manager describes the strengths of the company: "we supply drive systems into so many segments that I would be surprised if not everybody had come into contact with our products at least once. We are especially proud of our customised solutions especially if challenged to find a solution for an existing application.

### Complete transparency of the workshop

At the moment approximately 200 staff are employed at the Furtwangen site and the company is proud to have remained loyal to its traditional Black Forest roots. Markon is also the Lean Manager at Ketterer and stresses how important it is for the company "to question, analyse and optimise processes".

With a production area covering 4,400 sq. m Markon looks after 145 members of staff and a substantial number of production machines including 5 rolling machines, 17 gear cutters 15 CNC lathes four milling machines and 104 assembly cells. The components for the shafts, drives and motors are manufactured in 2 and 3 shift operations.

### Classic traffic lights for signalisation

In order to safeguard the process it is paramount that the machine operator can see the status of each machine and for this reason Ketterer

uses WERMA signal towers and andon lights on each machine. These show immediately status changes of the machine and indicate disruptions to productions and allow the status of a line to be viewed from some distance.

Ketterer uses the classic traffic light configuration of red, amber (or clear) and green as these are most readily understood. Red of course indicates an error or disruption to production which needs to be resolved immediately. Amber or clear means that the tools are being re-set and is purely informative and green of course means that the machine is running normally.

### **Problem: physical location of all of the machines**

The machines are located in several workshops and different buildings. The signal towers show the status of the machines locally but do not allow any centralised overview. The Production Manager wanted to gain transparency of the complete production operation by seeing the status of all machines in one view.

The company then went about researching and looking at several machine data monitoring systems but most were judged to be too expensive or complex and involved considerable installation costs. Then, by coincidence, one of the buyers, Mrs Neubauer, attended an event at WERMA and discovered how WERMA's wireless machine monitoring system SmartMONITOR was being used in their own production and thought that this might be just the solution for Ketterer.

### **Simple and effective low-cost system**

Very soon afterwards WERMA's Christoph Müller from Technical Sales had SmartMONITOR installed on some of Ketterer's machines. Markon is now responsible for the WERMA system and is very pleased with the many benefits of the system: "it was great to be able to get a trail up and running so quickly and to test a machine monitoring system live in our production. In this way we could validate with our eyes and ears how the system actually works."

The plug and play wireless kit is simply added to the existing WERMA signal tower and then monitors the status and output of machines, equipment and manual work-stations. The status data is transmitted wirelessly to a

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receiver connected to a Microsoft SQL database and is output to simple visuals provided by WERMA's software which will also produce comprehensive reports at the touch of a button.

The low investment cost was important to Markon. "We did not want to invest too much in one go because we did not know if we would see the long-term benefits. The possibility to start with a trial on some of the CNCs was great and this became our pilot project but then when we saw the fantastic results with SmartMONITOR on these machines we began to roll the system out successively onto other machines."

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### **Simple software provides comprehensive analyses**

Installation of the system at Ketterer was completed without any problems. Markon continues "the system really is simple, quick to install and ready for use – we installed it on machines in the morning and had the first data in the afternoon, that's what I call quick". The software is easy to install on the company network and comes with step by step easy to follow instructions. Those connected signal towers are displayed on a central Control Station view on the PC and clients can analyse productivity, look at fault codes and then determine ways to optimise and improve the efficiency of the machines.

Markon concedes that the most important data which SmartMONITOR generates is that giving the productive status of the CNC lathes. "This shows us how productive these machines are and where improvements are needed." The company takes full advantage of the displays which the software provides. In the Production Manager's office the Control Station view is used whilst near the machines themselves the current run-time of orders is displayed. Markon has uploaded as a background to the displays a factory floor layout so it is easy to identify which of the machines is being displayed and where they are located.

### **Complete transparency of the operation**

So that everyone can see the status of all machines four large screens have been installed. In each of the production areas a screen shows the status of those machines in that area. Markon continues: "the departmental managers and I use the screens most of all and we can see as soon as we walk into that shop which machines are down and need attention."

But he remarks the machine operators also use the screens as well to monitor their own activity and help colleagues to react if there is a problem on one of their machines which they might not have immediately seen. "In the past a machine going down often remained unnoticed for far too long. Now the team supports each other and works to the common goal of improving reaction times and reducing downtime."

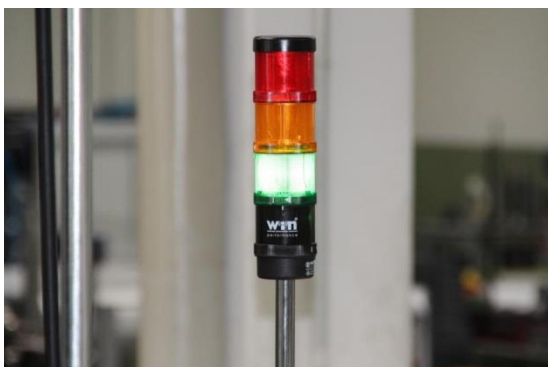
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### **Immediate tangible results and improvements**

Ketterer has been using the WERMA system now for over one year and productivity on the CNC lathes has already improved by more than 15%. "Productivity improved almost immediately from 60% to 80% and we hardly believed that such an improvement could be achieved so quickly" says Markon. He is especially impressed with the results achieved after just a few weeks which delighted the Production Director and Managing Director. "SmartMONITOR offers the perfect cost benefit solution. The system gives accurate and impartial data which we can really use. We are very pleased that we decided not to go for a more expensive and complex solution" concludes Markon.

Ketterer is very happy with the WERMA solution and will certainly extend its application. "We are indeed very satisfied with it" confirms Markon. Four more signal light sets including the SmartMONITOR kit have been ordered for the gear cutting machines. Markon says finally "the next order for more WERMA kit is ready to be placed; I think that tells you how happy we are with the WERMA solution."

### **Images**



**Image 1:** Every machine at Ketterer is fitted with a WERMA signal tower with SmartMONITOR. The additional wireless transmitter is simply "plug and

play" on the existing tower enabling it to monitor status and output of the machine.



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**Image 2:** A large screen has been installed in each production area so that the status of each machine can be easily seen.



**Image 2:** The software shows the status of the machines in the network and the client is able to analyse productivity, look at fault codes and then consider optimisation measures to improve the efficiency of the machine.



**Image 3:** SmartMONITOR is also deployed in other areas at Ketterer, here for example in an assembly cell.



**Image 4:** Production and Lean Manager at Ketterer Julian Markon

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**Image 5:** Ketterer logo

### **About Ketterer**

B Ketterer and Sons GmbH & Co KG is a family owned SME steeped in traditional values. Its drive systems deliver ergonomic solutions to a global customer base covering a wide range of industrial segments and applications. The portfolio contains lifting devices for workstations/ office and school desks, kitchen and household furniture, building infrastructure applications, entry/exit points, doors, windows, gates and sliding wall panels and also in the transport and logistics and machine building industries. Ketterer designs and manufactures new products from concept to mass production, including customer specific solutions irrespective of quantity.

In 1832 Benedikt Ketterer first set up his clock making business in Furtwangen and laid the foundations for the company today. Ketterer has remained loyal to its Black Forest roots and has an enviable reputation as a high precision mechanical manufacturer. Today some 200 staff work at the site on Furtwangen.

### **About WERMA Signaltechnik**

WERMA Signaltechnik GmbH & Co. KG is a growing international company with more than 350 employees located in 8 sites. The company, established in 1950, is one of the global leaders in signal devices and is the technology leader in its field.

The company has established an industry standard with its modular signal tower range. Today WERMA manufactures a wide range of optical and audible signal devices as well as intelligent systems for process optimisation for the general industry and logistics. These systems enable customers, through the networking of intelligent signal devices, to generate durable process optimisation measures together with analytical tools in manufacturing processes, logistics and material handling and manual workstation applications.

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