



WERMA® *Success Story*

SAMSON VETEC shortens throughput times and keeps track

MACHINERY DEPLOYED IN THE OPERATION

VETEC Ventiltechnik GmbH has a long and traditional history, currently employing around 120 people at its Speyer site and is a subsidiary of the SAMSON Group. Today, the company is proud not only of its broad product range, all of which bear the 'Made in Germany' seal of quality, but also of its large and modern technical plant and machinery. In addition to three large horizontal milling machines with a maximum clamping weight of three tons, there are numerous CNC lathes, machining centres, and band saws. The highly skilled workforce produces housings as well as drive parts for VETEC valves in two-shift operation. In addition to carbon and stainless steel, materials such as titanium, zirconium and numerous specialist alloys are used in the Speyer plant.

Sven Donner has been production manager at the company for almost two years and the 34-year-old mechanical engineer has kept his eye on the productivity of the machinery right from the start. He stresses how important it is for him and the company 'to be able to evaluate processes and workflow at the touch of a button and, above all, monitor them in real time'.

For Donner, it was of great importance to be able to measure and evaluate the set-up times of the machines precisely: 'As a manufacturer of special solutions in mechanical engineering, we usually produce in batch sizes of "1" – so it is essential to have setup times under control'. He goes on to explain: 'Until now, VETEC has had no machine data collection system on which we could have relied, so a solution had to be found quickly.'

WE FOUND WHAT WE WERE LOOKING FOR AT WERMA!

The specialist for valve control tasks found what he was looking for at WERMA Signaltechnik in Rietheim-Weilheim in Southern Germany: The manufacturer of signal devices offers a simple wireless cost effective machine monitoring and data collection system that can be retrofitted quickly and easily. SmartMONITOR is the clever alternative for industrial companies who are looking for uncomplicated and reliable data collection for the optimisation of their manufacturing processes – and all at the touch of a button.

Donner has been responsible for installing the WERMA system right from the start and is delighted with the many advantages: 'It was

SAMSON VETEC – Rotary plug valves and pneumatic actuators

VETEC Ventiltechnik GmbH develops and produces rotary plug control valves and pneumatic actuators as well as specialist valves for industrial applications. The company offers solutions for the control of gaseous, vaporous, liquid and solids-laden flow media. For over four decades, VETEC has been setting standards in

the performance of valve control tasks in most industrial sectors: From the oil and gas industry and refineries in the petrochemical industry to large chemical plants, plant construction as well as the metal, paper and food industries.

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simply great to start immediately with the WERMA trial kit and to be able to test this great monitoring system live in our own production facility'. He continues: 'Here, people don't just talk about the functionality or advantages of such a system in theoretical terms, it can all be tested out right away in one's own environment'.

THE MONITORING AND DATA COLLECTION SYSTEM AT A GLANCE

WERMA's SmartMONITOR differs significantly from the other, often very complex monitoring systems on the market: It consists only of the wireless transmitters fitted to signal towers on the machines, a receiver and the software. Regardless of the type, age or manufacturer of the machine – the system only needs a WERMA signal tower as an interface. The 'WIN slave' transmitter is simply installed on the existing signal tower and transmits wirelessly changes in the machine status indicated by the signal tower light elements to the 'WIN master' receiver. This is connected to the LAN network collects the data from all transmitters connected to the network saving the data in a Microsoft SQL database integrated in the software.

All downtime and monitored conditions are recorded and easy-to-produce reports highlight opportunities for permanent improvement to processes and productivity.

Donner confirms the simplicity of the system: 'The installation was self-explanatory and took just a few minutes. Together with our IT department and our own electrician, the new system, including software, was ready for use immediately'.

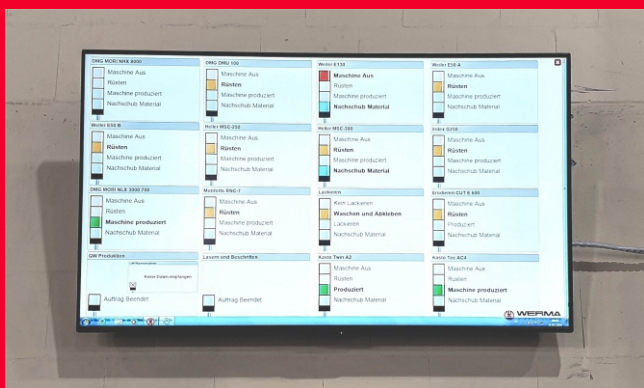
SIGNAL TOWERS FOR VISUAL MANAGEMENT

'We started our trial with the WERMA monitoring system on a CNC lathe, which we had suspected for some time was working unproductively,' says Donner. 'We wanted to know exactly how long the set-up times are and how we can shorten these times in order to be win more machining time.' Since VETEC has long relied on signal towers from WERMA, which quickly and clearly indicate faults on each machine and thus provide visual monitoring, just the wireless slave transmitter had to be fitted onto the existing tower. 'We could get started immediately', enthuses Donner. 'The great thing was you could see the first results after just one day:



The signal towers were mounted above the machines and are also clearly visible from a distance

The yellow light signals set-up time, while the green light indicates machine running. The 'cycle start' signal input from the machine PLC which switches the green light guarantees accurate start/stop time machine monitoring.



The screen is used for visualisation and shows the current status at a central location in the company

With local clear visual management of the shop-floor through the signal towers and the displays on the control station on the software response times can be significantly shortened and the manufacturing process optimised. Notification of a disruption to productivity can be sent to a smartphone thus accelerating the speed of intervention.

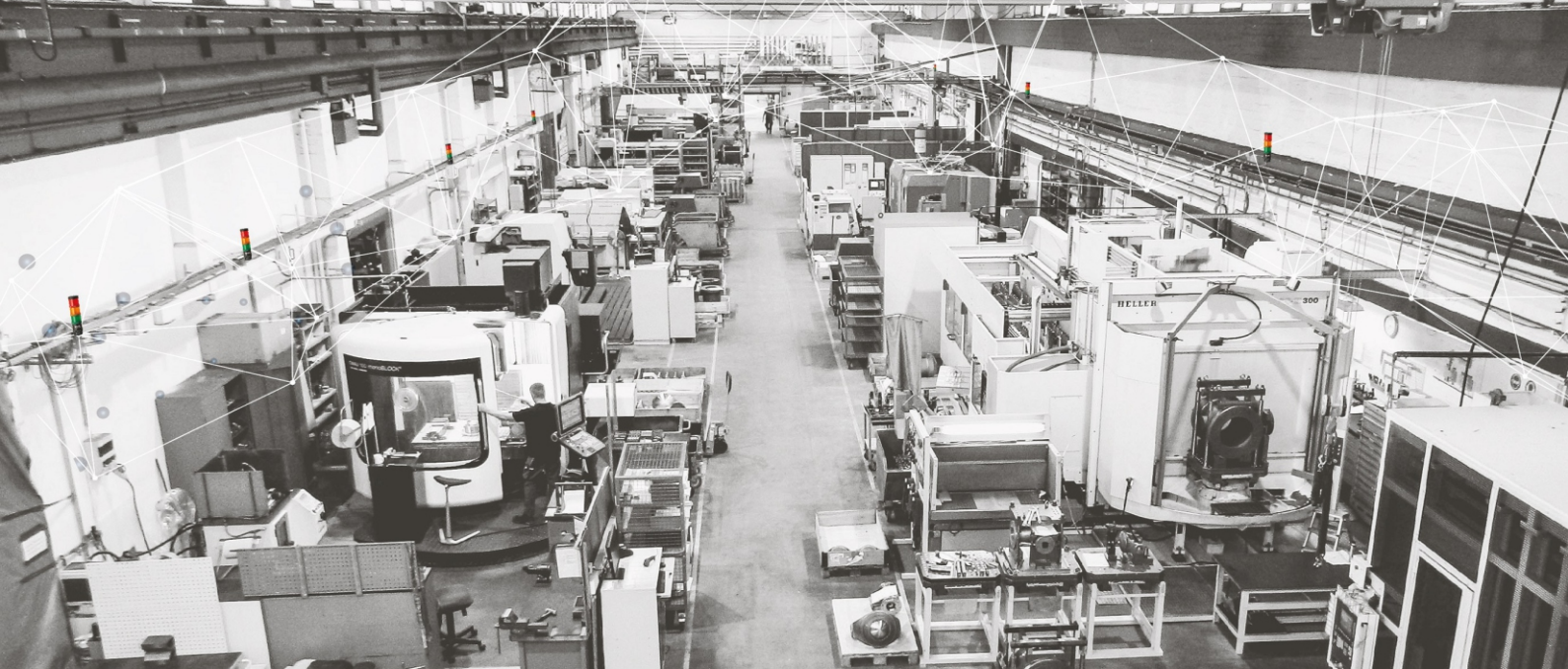
We noticed how unbelievably long our set-up time was! Thanks to the WERMA system, it was possible for the first time to record, clearly distinguish and visualise productive and non-productive times'.

At VETEC, the 'classic' traffic light colours of red, yellow and green are used, as these are easy to understand and unambiguous: The red light illuminates when the machine is switched off.

PILOT PROJECT IS A COMPLETE SUCCESS

Donner can certainly confirm that the trial phase with the system was a complete success: 'We decided to roll out the project to the entire machine shop the Speyer site even before the 30-day test phase was over'. Their electrician has fitted the individual slaves to the signal towers, which are mounted on the busbar above the machines. The company adopted the same colour assignment of the signal towers from the pilot project, so that the status of each machine is immediately recognisable to everybody.

The site at Speyer with a complex architecture of workshops and twists and turns in the layout posed no challenge for the wireless transmission efficiency of the WERMA system: since each slave simultaneously acts as a repeater one slave to another a perfect network and transmission integrity was guaranteed from the very start.



VISUAL DISPLAYS ON THE PC SCREEN

'It was very important to us to integrate all employees into the project,' explains Donner. 'That's why we put a huge screen at a central location in the company'. This shows the status of all machines connected to the network at a glance. Donner adds: 'The screen and the clear display also attract enormous attention from external visitors. Above all, our customers and auditors are enthusiastic and happy that we have our processes under control and manage our production so objectively – it makes a great impression!'

IDENTIFYING FREE CAPACITY

Following the launch of SmartMONITOR, VETEC very quickly identified a need for further optimisation: The analysis and evaluation of the data showed a large number of available unused capacity on many machines. Thanks to the software, this could then be re-assigned to other projects or orders.

Donner says: 'It was simply great to see in black and white where we had unused capacity and to be able to make it available to external partners. For example, we now make our eroding machine available for external contract manufacturing and also take on work in our painting facility for the parent company or subsidiaries.

ADDITION OF THE BLUE LIGHT

Sven Donner was so enthusiastic about the initial success of SmartMONITOR that he started

looking for further possibilities for optimisation. He found improvement potential in the area of internal processes, some of which were not clearly distinguished from each other. 'Our aim was for every employee to pursue their original activity and thus carry out a value-adding activity at all times – but unfortunately that had not been the case up until then,' says Donner.

So employees were having to leave their workstation after completing a job to prepare the goods for the next step as per the production order. This had to be stopped in order to keep unproductive and non-value-adding activities to a minimum'.

SmartMONITOR was also used for this and provided a simple and cost-effective solution for VETEC: Each signal tower has been fitted with a blue light element which indicates that the internal transport system (ITRANS) can be called up. Now every employee can request the ITRANS as soon as a job is nearly complete by means of a simple rotary switch, which has been mounted on, for example, the workbench. They no longer need to leave their workstation but can immediately start working on the next job whilst the finished goods are collected by ITRANS.

SMARTPHONE NOTIFICATION

In the logistics area the ITRANS employee has another robust mobile 'phone which will receive an automatic e-mail from another area of the operation calling for finished goods or material

to be collected from that point. That call-for-action, having been initiated by the rotary switch described above, simultaneously despatches to the ITRANS operator the e-mail via the WERMA monitoring software. Sven Donner grins: 'This new feature is like the call button at your bedside in hospital – if a staff member needs assistance, they press the button and the requested help arrives without the employee needing to leave their workstation'.

For Donner, another advantage here is that accurate analyses and reports are easy to generate: 'We can see from the software exactly how much time passed between when the request was made and the logistical support was given. Since we have set ourselves the goal of reacting within 20 minutes, the software enables us to quickly assess whether staff may be required'.

FURTHER ROLL-OUT AT OTHER FACILITIES

The production manager concludes: 'We are very happy with SmartMONITOR and share our enthusiasm with our subsidiaries'. The production manager presented the system as part of the SAMSON production network and in the meantime the system has been installed with the help of WERMA to another site in North Württemberg. 'I think this clearly shows how enthusiastic we are about the WERMA solution,' says Donner. 'Simplicity is successful,' concludes the Speyer production manager.



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Interview partner Sven Donner
is production manager at VETEC
who successfully introduced the
monitoring system