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## Walter Formenbau trusts in MAPAL's expertise

**"If autonomous driving is possible, then surely so too is autonomous manufacturing", says Dr Jens Buchert, owner of Karl Walter Formen- und Kokillenbau GmbH & Co. KG. His goal is to achieve fully networked production. And he's got MAPAL on board to make this happen – not only as a tool specialist, but as a complete provider. Including services covering process optimisation and networking.**

Karl Walter Formen- und Kokillenbau GmbH & Co. KG (Walter) is located in the industrial area of Ursenwang, a suburb of Göppingen in the Filstal region. On a site covering approx. 3,000 square metres, the company manufactures moulds and dies for aluminium wheels and other cast parts and is regarded as one of the leading manufacturers in this field. The company was founded in 1960 and the mould maker today employs 32 staff.

Dr Jens Buchert took the reins of the company in 2016 and has big plans for the future – he wants to introduce end-to-end digital production. That is his aim. Nothing less will suffice. Because: "If autonomous driving is possible, then surely so too is autonomous manufacturing." It should even be much easier: "There are no other drivers involved in the manufacturing process, there are no kids running on the road. If everything is planned properly, there can be few surprises", says Buchert. Yet at the same time introducing fully end-to-end networking and automated manufacturing into an existing company is not an easy task.

## First steps have been taken

"We're gradually digitising and networking, and working hard towards achieving optimum manufacturing", explains Dr Jens Buchert. To this end, the entire process from the incoming order to delivery of the finished moulds must be considered. This also includes the machining work itself and all associated processes. "I've been looking for a partner with expertise in both these areas, a partner that takes a

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complete overview of matters." And in MAPAL he's found that partner: "MAPAL is the only tool manufacturer that can map the entire process chain. Covering the tool itself, clamping technology, tool management, tool presetting and with c-Com even the networking of the machinery."

### **Quality and performance impress**

Today, Walter procures 80 % of its chucks and tools from MAPAL. "It's not just the quality and performance of MAPAL products that impress-es me. The chucks and tools come from a single source – meaning that both components are perfectly matched to one another", says Dr Jens Buchert. In addition, the fact that MAPAL displays expertise and flexibility in this specialist area is a huge plus for him: "If we need special geometries, for example, for ball-nose cutters made of solid carbide, MAPAL manufactures these tools for us quickly and without any fuss."

In addition to the products, MAPAL is also supporting the mould maker in its goal of achieving networked manufacturing. One issue has been the complexity involved in tracing tool data. "We spent 1.5 man-years searching for and compiling tool information", admits Dr Buchert. UNIBASE software provided the solution.

### **Dispensing system for order and transparency**

"We integrated the data from the CAM system into the software and installed two UNIBASE-M dispensing systems", explains Stephan Köstler, Mechatronic Systems Engineering Manager at MAPAL. "Köstler's team also connected some of our existing cabinets to the system", adds Buchert. The software now contains accurate information on existing tools and available dimensions and where they are located. If an employee takes a tool out of the UNIBASE-M system, this is registered by the software.

### **c-Connect for networking and automation**

In order to maximise automation, Dr Buchert also made the networking of his machines a top priority. However, this proved to be a difficult task for the mould

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maker due to the variety and diversity of machinery. "Here too, we provide the optimum solution", explains Stephan Köstler. As a pilot project, Buchert completely automated two of his machines, even the loading tasks being performed by a robot. MAPAL experts connected a c-Connect box to both machines. c-Connect is a product from MAPAL subsidiary c-Com.

The machines are connected to the open cloud platform c-Com via the c-Connect boxes. This platform is in turn also connected to the setting fixture UNISSET-C, which is integrated into Walter's CAM system. This allows the setting fixture operator to directly display and start the measurement programme for the respective tool from the CAM system. The measurement data calculated in this way is fed back into the machine directly by the UNISSET-C via c-Com and the c-Connect box.

## Networking further expanded

c-Connect offers further benefits for Walter in addition to the transfer of data. For example, tool life data is recorded and requirements are registered. And: Walter uses an additional function of the c-Connect box – machine monitoring. The box records the status of the respective machine traffic light using sensors. This provides Dr Buchert with an evaluation of the OEE (overall equipment effectiveness) quickly and easily. "As soon as these two pilot machines work autonomously without any issues, then we'll start adding further machines", says Buchert.

It's not simply the individual components that define the cooperation between Walter and MAPAL. It's more about the bigger picture and mutual learning. "Through close cooperation, we've really got to know the die & mould sector", confirms Alfred Baur. Dr Jens Buchert emphasises: "MAPAL's flexibility has really impressed me. The fact that we can get everything from a single source from one single expert point of contact is a big plus from my perspective".

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Captions:



Prepared tools waiting to be used in the machine. Clearly identifiable via a barcode.

Walter Formenbau purchases 80 per cent of its tools and chucks from MAPAL.



Alfred Baur provides support in production on all questions relating to tools, machining and the processes relating to tools. Here in conversation with David Frommhold, left, from Walter Formenbau.

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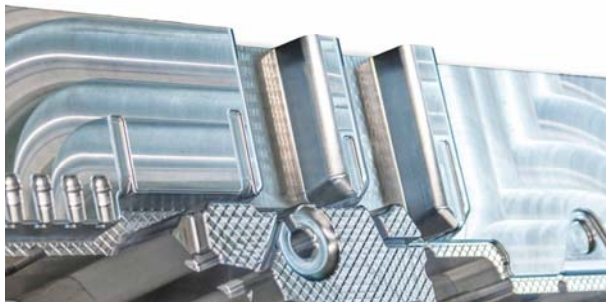
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Moulds for wheels like these are manufactured at Walter Formenbau.



Complex clearance surfaces characterise the moulds at Walter Formenbau. Here using the example of a mould for a battery tray of an electric vehicle.



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Walter has two UNIBASE-M dispensing systems from MAPAL in production. This saves a lot of time that was previously spent searching for tools.

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On the UNISET-C tool setting device, David Frommhold prepares the tool system for production use. He receives the measuring program directly from the CAM system. The measurement protocol is transferred to the machine via c-Com and the c-Connect Box.



Working together in collaboration. From the right: Dr Jens Buchert, owner and managing director of Karl Walter Formen- und Kokillenbau GmbH & Co. KG, and Alfred Baur, MAPAL sales representative.

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A c-Connect Box is connected to two machines at Walter. This is used to transfer the measurement data from the tools to the machine.

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Walter uses another advantage of the c-Connect Box – the status of the machine traffic lights is monitored via sensors.

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Dr Jens Buchert at one of his autonomously working machines. He has set himself the goal of achieving completely networked manufacturing.

If published, please send a voucher copy  
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