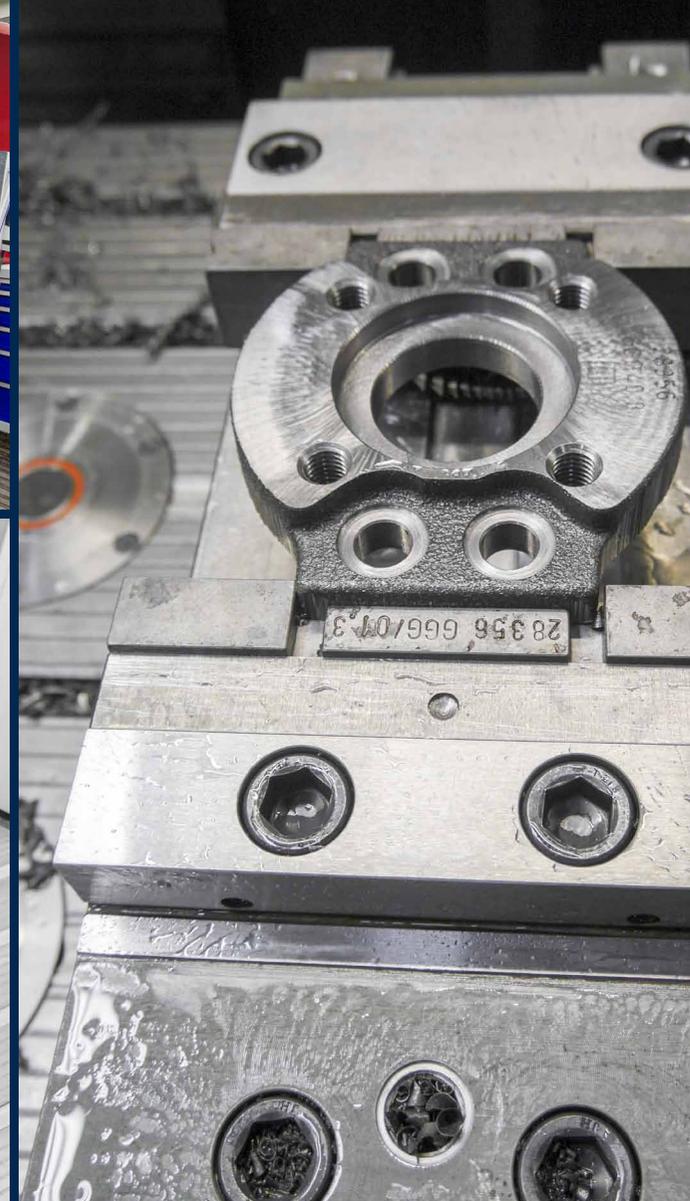


Head of Manufacturing  
Harald Piechnick (right) and  
his foreman Dirk Korrat are  
pleased with the possibilities  
offered by the T7 3200 with  
Siemens controls.



The T7 3200 by HEDELIUS mills various pieces, including aluminium moulds for pump parts.



Smaller, recurring pump parts can be manufactured just as cost effectively as larger individual parts on the T7.

## “Almost every pump is unique”

**WERNERT-PUMPEN in Mülheim an der Ruhr has been successfully manufacturing pumps since 1920. Today the company is one of the leading producers of non-metallic centrifugal pumps. It uses a machining centre by HEDELIUS to ensure the efficient processing of pump casings.**

At WERNERT-PUMPEN GmbH, which specialises in the production of special fluids, the average batch size is between 1 and 100. In mechanical production, a HEDELIUS Tiltenta 7 3200 with a large clamping surface, portable working area partition, standby magazine and zero-point clamping system provides optimal conditions for flexible yet productive processing of pump components of different sizes, quantities and materials.

WERNERT-PUMPEN has been a pioneer in the non-metallic pumps sector from the very outset. The world's first plastic acid centrifugal pump was developed here, together with the patented bag bellows seal. Today the family business, which is in the hands of the fourth generation, has 135 employees and is one of the market leaders in its sector, with a broad customer base. Its array of products

ranges from horizontal standardised chemical pumps and process pumps to vertical chemical pumps for wet and dry chamber installation. “Our broad range of goods is our great strength,” explains Dr Klaus Etscheidt, who heads up the company as Technical Manager, together with the two Managing Directors, Corinna and Ursula Hackenberg. “Almost every pump is unique.” The engineer is alluding to one of the challenges that the company has to tackle. Every customer has different requirements when it comes to durability, delivery head and flow rate. WERNERT PUMPEN has an impressive way of responding to these diverse demands: every customer gets precisely the pump that it needs.

The company's customers come predominantly from the chemical industry, but these Mülheim-manufactured pumps are also used for desulphurising flue gas, desalination of sea water and in the foodstuffs industry. “Our pumps support process liquids and gases at temperatures from -150°C to +165°C, allowing us to surpass delivery heads of up to 110 m,” explains Harald Piechnick, Head of Mechanical Manufacturing at WERNERT.

### Flexibility is key

WERNERT pumps are exposed to extreme conditions and have to carry aggressive, corrosive and highly abrasive liquids. In order to satisfy these specific requirements, the pumps are made of plastics such as polyethylene, polyvinylidene or polytetrafluorethylene. The casings are mainly made of spheroidal graphite iron or mineral casting. Metal parts such as suspension tubes are also installed. Flexibility is required in order to manufacture customised pumps in a cost-effective way. A Tiltenta 7 3200 from HEDELIUS was chosen for the mechanical manufacture for this very reason. “We have to be able to respond flexibly to customers' requests. Sometimes a pump or replacement part is needed at short notice, and we have to manufacture it specially,” says Piechnick. This kind of flexibility is guaranteed with the T7 by HEDELIUS. Originally, a smaller machine had to be purchased in order to replace an old boring mill. However, it was soon found that the T7 3200 offers many more options for addressing the manifold processing tasks and increasing productivity. The large X-travel distance of 3,200 mm

**WERNERT-PUMPEN**



## WERNERT-PUMPEN GmbH

### Process technology

Established: 1920

Company headquarters: Mülheim an der Ruhr

Employees: 135

HEDELIUS T7 3200

and the use of a work area partition allow the manufacture of long parts and smaller components alike. “We often use the T7 for finishing pump parts made of mineral casting and plastic,” explains Piechnick. “However, longer suspension tubes are also processed at the front. On rare occasions, moulds are milled from aluminium, which takes two days”. Manufacture thus presents a wide range of challenges for these Mülheim-based specialists. On average, processing takes about 20–30 minutes per component. Essentially, throughput times are a key focus for WERNERT-PUMPEN, as shorter throughput times mean lower costs. Those at the Mülheim-based company know that it is vital to optimise setup times.

## **Minimising throughput times**

From the very outset, the HEDELIUS machining centre has been set up in such a way as to minimise setup times, with a work area partition, a standby work magazine and a zero-point clamping system. “Some pump parts are manufactured once as a whole batch, and may have to be produced a second time after a few years. The programs for this are still available. We

simply have to clamp the components to the zero-point clamping system, and away we go,” says Harald Piechnick, explaining one of the reasons for having a table-integrated clamping system. Batch sizes at WERNERT-PUMPEN tend to be between one and one hundred. Workpieces are frequently clamped in and then removed. The same rationale is behind the decision to have a work area partition and standby magazine. These help to reduce setup times. By using the partition, the T7 3200 can be set up as a 3- and 5-axle workspace that allows components to be set up simultaneously. The partition is easy to remove, allowing long pieces to be manufactured within a short space of time. Up to 180 tools fit into the storage chamber of the standby magazine and are always to hand for use in the different machining processes. “Having the magazine means that tool presetting is no longer required, so it’s really paid off,” says Piechnick of the magazine solution.

## **Made in Germany and service points**

Alongside these economic reasons, a number of other factors led the company to opt for the T7 3200 by HEDELIUS.

Managing Director Klaus Etscheidt explains: “We were looking for a German supplier, ideally one from the local area, so that we would have a service provider nearby.” They found just this partner in the form of North German machine manufacturers HEDELIUS. They also opted for a German control system from Siemens, which has proven most satisfactory for the Mülheim-based company. “As far as we’re concerned, this is the best control system for programming machines,” explains Harald Piechnick. Another plus point for the HEDELIUS machining centre was the machine’s compact design. The production hall dates from the early 20th century, and space is rather restricted due to the pillars and little doorways down the sides. “We simply wouldn’t have been able to get a bigger machine in here,” says Piechnick. He grins: “As it is, we had to carry the machine over the neighbour’s garden and down into the hall on a crane.”