

# We must be able to rely on the tool

Olsbergs Hydraulics





*Olsbergs Hydraulics is very unlike a traditional metal-working company. Bright clean floors and a low-noise advanced robot-controlled production plant are some of the things that characterise the company, which was established as a foundry in 1906.*

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**Olsbergs has over a hundred years' experience in choosing the right solutions**

One of Sweden's most illustrious industrial companies, Olsbergs Hydraulics in Eksjö, has many years' experience of producing industrial components – from the industrial burners of earlier times, to present-day refined and demanding valve bodies for controlling mobile hydraulic units, such as construction machinery.

The latter example makes extreme demands on precision when machining workpieces to ensure that even big hydraulic machines can perform their operations with "catlike" precision.

This means that there are extremely high demands made on the casting process, as well as the tools used to machine the workpieces.

## **As clean as a hospital**

Olsbergs' premises are nothing like those you often see in an industrial metal-working company. When you cross the bright clean floors and go through the wide well-lit halls with their crystal chandeliers hanging from the ceiling, you really do almost feel as though you are in a newly appointed hospital.

But of course there are no doctors or nurses working here. Here there is a mixture of well-trained labour, advanced robots, and bang up-to-date CNC centres, performing operations that can be just as complicated as any in a hospital.

But the "patients" are a bit more robust, being manufactured from cast iron. Olsbergs even has full control over the casting process, carried out in the company's foundry, which has, until autumn 2008, been located a few kilometres from Eksjö.

To maintain and increase the productivity required as well as the correct work flow, the foundry is being relocated, so that in future it will be on the same site as the rest of the production process. The aim is to establish a

foundry that will be the most modern in Sweden and among the most modern in Europe.

## **Important production**

In one of the large production halls is one of Olsbergs' most advanced production lines. Here an industrial robot feeds three CNC centres with the components that they machine 24 hours a day.

"Some of our operations are unmanned, and so we must be able to rely completely on the



*Production engineer Henrik Bokstedt, along with optimisation experts from Unimerco AB, has found the right tool solution for the company's large production runs of hydraulic valves.*



*A cast valve body workpiece prior to processing with the Unimerco tool.*

tools that the machines use,” says production engineer Henrik Bokstedt. One of the operations running today involves valve bodies for the Hiab crane plant. They are a further development of the valves that Göran Henriksson, the great-grandson of the company’s founder, invented at the start of the 1960s.

With weekly production of around 250 fully assembled valve bodies, it is one of the components produced in large quantities by the company. This means that ensuring continuous operation and high quality plays a central role.

#### **Better quality – new customers**

For a time, Olsbergs Hydraulics had problems with vibrations occurring during thread-cutting. This resulted in a surface that did not meet the quality standards of the company. To optimise production and enhance quality, Henrik

Bokstedt was given carte blanche for a project to identify improvements in the production process.

Along with optimisation experts from Unimerco, he defined a series of points in the process for manufacturing valve bodies where greater speed and therefore improvements could be achieved.

*“Some of our operations are unmanned, and so we must be able to rely completely on the tools that the machines use.”*

*Henrik Bokstedt,  
production engineer  
Olsbergs Hydraulics*



*One of Olsbergs Hydraulics’ hallmarks is high quality, not just in production, but in the factory layout and working environment as well. There are not many companies with crystal chandeliers in the production hall.*

Among other things, Unimerco pointed out a solution involving damping of the holder, which eliminated vibrations. This gave Olsbergs the high surface quality vital for the proper functioning of the valve body, since the quality of the outer surface is very important in getting a tight fit for the O-rings. The expertise that the company is building up with the process can also be transferred for use on other workpieces. It therefore has both short and long-term application with regard to other and possibly new customers.

#### **Ongoing optimisation**

In the advanced production process that operates unmanned at night, it is exactly the service life and quality of the tools that are important parameters in ensuring continuity of production. To ensure this, Olsbergs is always on the look out for ways of improving the production process. Among other things, Unimerco has developed a wide range of special tools, including a reaming tool, which means that Olsbergs has been able to eliminate a number of processes and thereby reduce the number of tools.

Olsbergs has found that production was increased by around 30 percent, even though achieving quicker throughput was not the main aim of the exercise. This part of the process is



*Rickard Ruther performing final assembly of the machined valve bodies that are then supplied, for instance, to crane manufacturers.*

not directly a bottleneck in itself. But with the relocation of the company’s foundry, Henrik Bokstedt expects there to be an increase in production via this part of the company, and that means that optimisation in all areas is an increasingly important issue.

Henrik Bokstedt is enthusiastic about the great efforts made by Unimerco on a daily basis in identifying the solutions that were needed. Unimerco appointed two optimisation experts who spent a whole day at the company during production start-up.

“On top of that, since then we have got help with whatever we needed,” he says. When time permits in terms of production, more processes will be reviewed together with Unimerco to identify further areas for optimisation. ■

**Facts:** *Olsbergs Hydraulics in Eksjö was founded by Emil Henriksson in 1906 as a foundry manufacturing industrial burners, water troughs and pumps. His great-grandson Göran Henriksson assumed direction of the company in 1960 at the age of 23, thus becoming the fourth generation of the family to manage it.*

*As a newly qualified engineer, he saw the need for other production and developed the hydraulic valve that has become the keystone of the company that is Olsbergs today. The company is therefore a supplier to some of the world’s largest crane manufacturers. The company controls the entire process by manufacturing the valve bodies and the electronic components used in the controls of a wide range of mobile construction machines. Today Olsbergs supplies companies in 50 countries.*



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