Highest Performance in Hazardous Situations
Global Player Minimax manufactures extinguishing and fire protection technology products with Roturn 400 C CNC inclined-bed lathes from KNUTH Machine Tools.

Minimax customized extinguishing and fire protection technology products are used worldwide wherever fire hazards exist: in automotive plants, factories, logistics centers, office and residential buildings, data centers, and on ships. After the installation is completed, the company offers its international customers full service, so that even after many years of waiting in readiness without being used, their fire protection systems function flawlessly and are up to date with the latest technology.
From Northern Germany around the globe

In 1902, the company’s founder, Wilhelm Graff, put the legendary conical bags on the market as handy extinguishing devices. Since then, the German company has continued to grow and build its competencies and product lines in the areas of extinguishing and fire protection technologies. Today’s Minimax Viking Group has more than 8,800 employees on all continents and annual sales of over 1.6 billion euros. Minimax is the worldwide second largest fire extinguishing and fire protection equipment manufacturer and maintains its headquarters plus several R&D facilities and manufacturing plants in Bad Oldesloe, located in Germany’s most northern state Schlweswig/Holstein. Minimax is also building a new production line for dry sprinkler systems, with which its United States sister company Viking has already been very successful. “Dry sprinkler systems are used where temperatures are below freezing, in space or in large freezers,” explains Dieter Donner, mechanical manufacturing foreman. “The extinguishing water isn’t released into the system unless the air leaves the pipes.”

Roturn 400 C in action at Minimax

Roturn 400 C turns with consistent high quality

The pipes for these systems are coated steel pipes that have to be threaded on both sides. When looking for a lathe that could produce them quickly and with consistent good quality, one of the companies Donner contacted was KNUTH Machine Tools. “We are already using lots of KNUTH circular saws, lathes, and a drill press and are very satisfied with the quality,” says Donner.

Roturn 400 C
CNC Inclined Bed Lathe

With Siemens 828D Basic Control

» 62 mm spindle bore
» Turning diameter over bed: 400 mm
» Workpiece length: 430 mm

For detailed information on this series, please visit www.knuth-machinetools.com
Andreas Hendrich, responsible for KNUTH’s sales in northern Germany, responded to Minimax’s requirements directly on site: “We knew that we wanted to provide Minimax with an optimal production solution and at the same time with precision latheing to ensure the reliability and safety of the end customers’ systems.”

Hendrich recommended the Roturn 400 C CNC inclined bed lathe, whose heavy-duty inclined bed lathe frame guarantees high rigidity and good chip removal. In addition, the precise linear guides in the X and Z axes ensure high stability and accuracy even under high loads. “It guarantees high process reliability, especially for this sensitive part production,” says Hendrich.

With its 15-kW main shaft motor, the Roturn 400 C is capable of high torque in all speed ranges, and the Siemens 828 D basic control meets all current control technology requirements.

Minimax does the prep work with a KHK 350 semi-automatic circular saw with pneumatic workpiece clamping, also from KNUTH. It cuts the steel pipes to the right length with millimetric precision.

The Roturn 400 C cuts 1,000 threads per layer. The spindle was lengthened so that pipes up to 120 cm long could be processed.
Maximum accuracy is needed when turning the threads. The steel pipes must then fit precisely when connected to lines for dry sprinkler systems.

Foreman Dieter Donner (left) is satisfied with both the performance of the Roturn 400 C and the service provided by KNUTH Machine Tools. Andreas Hendrich, KNUTH sales, appreciates the trust and cooperation with Minimax.

Cost-effective solution for multi-shift operation

Together with his supervisor, Donner evaluated the advantages of the machine-tool at the KNUTH headquarters in Wasbek. “The spacious area is a real plus,” Donner approves, “in addition to the good price-performance ratio and how quickly the machine could be made available.” KNUTH quickly equipped the Roturn 400 C with a longer shaft, allowing it to cut pipes up to 120 cm long.

KNUTH provided intensive training to two Minimax employees on the machine and its various adjustment capabilities. They then passed their knowledge on to many of their colleagues in the production department. Now 1,000 threads per shift are being cut in single-shift operation. The Roturn 400 C is a great choice for its process reliability and high-quality output, and also as a cost-effective lathe for multi-shift operation, which is already planned for production at Minimax. Donner has only good things to say about working with the people at Wasbek: “To buy a new machine, I will always turn to KNUTH.”