

PRECISION AT ALL LEVELS



Uzbekistan machine and equipment manufacturers are using numerous KNUTH machine tools.

The JSC “Uzbekchimmash” plant has been producing machines and equipment for the oil, gas, and chemical industries for more than 70 years, and today is one of the largest suppliers in that sector in Uzbekistan. Around 1800 employees in the city of Chirchik are manufacturing heat exchange equipment, evaporators, food processing machines, filters, centrifuges, and pumps, as well as drilling equipment and replacement parts for chemical, food-processing, and mining companies. The JSC “Uzbekchimmash” plant primarily supplies customers in Uzbekistan, but it also delivers to companies in the USA, Israel, France, and Lithuania. This international business is expected to increase.

Custom solutions requested

Special adaptations or custom developments requested by customers are no problem for their specialists. "Our many years of experience allow us to design and adapt even complex equipment," says Vitalij Sagwojskij, CNC specialist at the JSC "Uzbekchimmash" plant. Their services also include complete maintenance and repairs for the equipment they supply. The company manufactures many components itself for its custom production machines, for which it uses a conventional milling machine and other equipment. "Because we want to work more accurately and efficiently in this field, we



Photo shows machine with Fanuc Oi-MF

wish to invest in a new machine with CNC control," states Vitalij Sagwojskij. The company hit paydirt with KNUTH Machine Tools. Since a machine tool trade fair in 2016, the two companies have stayed in regular contact. They are currently discussing the exact technical requirements for the new CNC milling machine.

Lupus 420L offered

"For high efficiency and precision in the smallest possible space, we suggested the Lupus 420L from our STAHLWERK Premium Line," reports Irina Gerdt, KNUTH's head of sales in the CIS countries. Equipped with an optional 4th axis, the compact, vertically aligned CNC machining center can produce complex forms and work simultaneously in multiple axes.

LUPUS 420 L

Premium 3-Axis Machining Center

With Siemens Sinumerik 828D control

- » Rapid feed on X/Y axes at 36,000 mm/min
- » Spindle speed of 8,000 rpm
- » X/Y/Z-axis travel 795/420/510 mm

For detailed information on the complete Lupus series, please visit www.stahlwerk-cnc.com



Renishaw OMP60 measuring probe with optical signal transfer

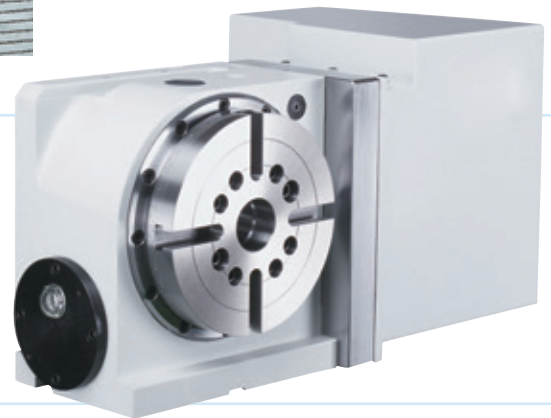
The OMP60 is a compact 3D measuring probe with touch switching and optical signal transfer, used for workpiece setup and testing on many different medium and large machining centers. It offers the user up to 90% shorter setup times as well as reduced waste and chucking costs.

Renishaw TS27R contact measuring probe for tool measurement

Compact 3D contact tool measuring probes with wired signal transfer for tool breakage control and rapid measurement of tool lengths and diameters on many different tools.

Detron GX170 CNC rotary table

Compact, high-precision rotary table.
Exclusive patented dual-pneumatic piston braking system.
High rotation speed.



Optimized manufacturing processes for complex workpieces

The machining center is equipped with the high-performance Siemens Sinumerik 828D CNC control, a matching transformer, and the 4th axis with tailstock, Detron 170 mm rotary table, and 3-jaw chuck. The Uzbeks also chose the TS 27R tool measuring system and the OMP 60 tool gauge from Renishaw, which optimize the manufacturing processes for complex workpieces. "The Lupus, as a premium model, has an exceptionally low center of gravity due to its heavily reinforced machine stand and therefore operates with low vibration," says Irina Gerdt. Added to those advantages are the linear guides in X, Y, and Z, which guarantee high precision and better dynamics due to low static friction. 40 mm ball screws allow for stable table guidance and high torque with the digital drive package. In X/Y-axis rapid feed, the LUPUS 420L machining center achieves up to 36,000 mm/min on a 765 mm travel path on the X axis. It comes standard with a 11/15-kW

main spindle at 8,000 rpm, which can be increased to a spindle rotation speed of up to 12,000 rpm. The optionally available double-arm tool changer allows the use of up to 40 stations with tools. Even with those options, the Lupus is still compact and provides added value in the smallest amount of space.



With the additional 4th axis, the LUPUS 420L produces complex forms and can run multiple axes at the same time. The compact, vertically aligned machining center gives companies added value in the smallest amount of space.

Additional KNUTH machines ordered

Due to the extreme climate at its location, the KNUTH STAHLWERK team is building something special for the JSC “Uzbekchimmash” plant. “Because temperatures can go up to 52 degrees Celsius in the summer in Uzbekistan, we put an air conditioner in the switch cabinet,” explains Irina Gerdt. It went into operation immediately after start-up in the summer of 2018. At the same time, KNUTH also delivered an R 80V radial drilling press, a Plasma-Jet 2060 HPR 130 XD plasma cutter system, and an HFS 60150 surface-grinding machine to the JSC “Uzbekchimmash” plant. “Start-up was fast and trouble-free,” reports Vitalij Sagwojskij, “and although our machine operators and engineers are familiar with CNC machines, it was good that a KNUTH technician spent a full day explaining the details of the Lupus.” The free training also included possible uses of the delivered tools, holders, vises, and dividing heads.

Expectations fully met

The Lupus has been in use for several months now and is producing special parts such as grips for universal machine keys, bodies and wheels for a single-stage pump, and keys for ball valves and die plates. It is accurately and efficiently milling alloy and carbon steels and alloys, low-alloy steels, cast steel, gray cast iron and alloy cast iron, titanium alloys, and welded materials with excellent precision. “With the Lupus we can now machine complex parts faster and more accurately,

saving both personnel and material costs,” Vitalij Sagwojskij happily reports. “We are delighted with the quality and service that KNUTH delivered.” The German company was also given the opportunity to bid on a laser system with a working range of 3000 x 1500 mm and a 1.5-kW light source.

JSC “Oil, Gas and Chemical Machinery” Plant
Tashkent Region
11708 Chirchik town • Republic of Uzbekistan
Tel. +998 70)715-34-26
<http://ogcm.uz>