CHIRON FZ08 MT

Seconds ahead on 3.1 m²
Multifunctional 6-sided complete machining with CHIRON MillTurn

- Compact footprint
- Highest precision
- Simultaneous turning and milling in one machine
- 6-sided complete machining from the bar
- New CHIRON swivel head for higher Präzision
- Fully-fledged rotation function by turning spindle
- Highly dynamic linear motors
- Automatic tool change
- Integrated finished part removal

The modular design of the FZ08 MT allows a customized configuration for various applications in numerous industries.

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Technical data

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Machining centres for the medical technology

Quality challenges for the manufacturers of medical implants

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Central tasks and customer benefits

- Joint development of products and continuing process development
- Development of a process and machining strategy
- Determining the demand on the machine and machine selection
- Professional test and sample part processing
- Cycle time determination
- Development and selection of clamping means and tests (hydraulic, pneumatic)
- Testing, comparisons and selection of tools
- Lubricant testing and recommendations
- Material behaviour (titanium, cobalt, chrome, gold, aluminium, stainless steel, Peek, polyethylene)
- Project support
- Customer training

Quality challenges for the manufacturers of medical implants

Machining centres for the medical technology

Every year, more than 400,000 artificial knee or hip joints (endoprostheses) are implanted in Germany. The tendency is rising – a growing business. In a worldwide comparison, this figure far exceeds the average, but other countries are also experiencing rising numbers.

The challenge for the manufacturer of prostheses and implants to deliver quality goods is getting bigger because of the traceability to the manufacturer that is now the rule. Goods of inferior quality can quickly lead to unpleasant consequences.

An artificial joint art lasts about 15 years

How long an artificial joint lasts depends on many factors. Doctors usually don’t dare to give a prognosis for individuals. But there are empirical values: according to statistics, an artificial joint art lasts about 15 years. In biomechanics laboratories such as that belonging to the University Hospital of Heidelberg, joint prostheses are stamped hundreds of times on metal trays and subjected to other stress tests. The durability and compatibility of the implants are tested. Dilapidated implants can often be found. The worst case, however, would be a prosthesis breaking – in the hip of a patient.

The challenges are increasing

To prevent this, the manufacturers of implants, which are to be regarded as long-term and surgically invasive and thus belong to risk classes illa or illb, are facing ever greater challenges.

In addition to product development and the appropriate material selection, the manufacturing process of high-quality and innovative implants comes increasingly into focus.

Medical & Precision Technology Center

CHIRON offers high-precision machining centres for medical technology. That alone, however, does not guarantee process reliability in production. CHIRON engineers and technicians with medical-technical backgrounds develop top products and processes in the in-house Medical Technology Center in cooperation with the customers.

Test processing, tests of clamping means and tools are daily routine, just as the tests of material behaviour. In this way, the quality of processes and products is already verified in advance. This adds security and saves costs.

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