emco



BUSINESS UNIT MEDICAL



BUSINESS UNIT MEDICAL: HIGH-PRECISION SOLUTIONS FOR TOMORROW'S MEDICAL TECHNOLOGY!

Welcome to the EMCO WORLD!

As an international mechanical engineering company, we specialise in developing and implementing state-of-the-art manufacturing technologies for medical technology. With innovative strength, technical excellence and many years of experience, we create precise and reliable solutions for a highly regulated and dynamic market.

Over 1,000 successfully completed projects – across all risk classes (I to III) – demonstrate our comprehensive expertise and in-depth industry knowledge.

OUR MISSION

We support our customers in turning their ideas and visions into reality through tailor-made technologies, maximum precision and partnership-based cooperation. Our goal: to increase efficiency and safety in the production of medical components at the highest technical level.

OUR SERVICES

From the initial idea to the turnkey solution: we support you in all phases of your project. Our interdisciplinary teams of engineers, designers, medical technology experts work closely together in an efficient, solution-oriented manner and in accordance with the highest quality standards.

You can also benefit from our strong network within the industry.

YOUR ADVANTAGES WITH EMCO MEDICAL:

/ **Experience:** over 1,000 successfully completed projects
/ **Expertise:** know-how across all risk classes (I – III)
/ **Technology:** continuous development of our machines and components
/ **Partnership:** personal support and tailored solutions
/ **References:** numerous customer testimonials confirm our quality

Get to know our Medical Business Unit – and join us in developing the future of medical technology.

Visit us online –
just scan the QR code!

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SPECIFIC SOLUTIONS FROM THE MACHINE TO TURNKEY SOLUTIONS

AND BEYOND . . .

EVERY STEP COUNTS. AND EVERYONE IS ON BOARD.

- Material
- Machine type
- Technology
- Cooling
- Clamping technology
- Automation
- Process (pre-/post)
- Tool management



WE CONNECT WORLDS – MECHANICAL ENGINEERING AND MEDICINE FOR A BETTER LIFE!

- Support with IQ/OQ validations
- Technology workshops – including trial processing with customer components
- Implementation support – including Green Button Approved
- Processing of challenging materials
- Feasibility studies for your components



SIX AREAS OF EXPERTISE – ONE STRONG UNITY.



MEDICAL TECHNOLOGY

Whether computer tomography, X-ray or MRI – medical technology devices consist of highly complex assemblies that require precision manufacturing at the highest level.
A wide variety of materials and geometries meet the tightest tolerances and highest requirements for dimensional accuracy, surface quality and reproducibility. With decades of experience and a broad machine portfolio, EMCO offers the right solution for the most challenging manufacturing processes.



PROSTHESES AND ORTHESES

From custom-made single pieces to efficient series production: our machines in the HYPERTURN and MAXXTURN series enable both the flexible manufacture of individual prostheses and orthoses and the economical production of complex standard components – with high repeat accuracy and complete machining.



DENTAL

In the field of dental technology, precision and surface quality are key. Complex geometries, delicate components and minimal tolerances – for example in dental turbines – require powerful, compact machines. Our EMCOTURN, MAXXTURN and HYPERTURN series are particularly popular here and meet the highest standards of accuracy and flexibility while taking up minimal space.



IMPLANTS

Whether hip or knee implants, dental or jaw implants, or bone screws – the manufacture of these sensitive components requires maximum precision and material expertise.
EMCO machines reliably machine high-strength metals and non-metallic materials, right through to ceramics – economically, reliably and reproducibly.



PHARMACEUTICAL

Pharmaceutical production places the highest demands on process reliability and repeatability. EMCO machines are used reliably in the manufacture of pharmaceutical components – by contract manufacturers and specialised system suppliers alike.
Our customised and standardised automation solutions offer maximum process reliability, cost-effectiveness and efficiency – all from a single source.



MEDICAL INSTRUMENTS

Scissors, forceps, scalpels, clamps or needles: the manufacture of medical instruments requires specific expertise, especially when it comes to complex geometries and demanding clamping arrangements.
Our turning/milling centres and 5-axis machining centres are the ideal solution for the cost-effective production of high-precision instruments with the highest demands on quality and process stability.

ROOTS IN EUROPE. STANDARDS FOR THE WORLD.

MEDICAL TECHNOLOGY



YOUR BENEFITS WITH EMCO:

Anyone who manufactures components for medical devices must meet the highest standards of precision, process stability and surface quality – often with changing batch sizes and different materials.

With EMCO, you can be sure of machines that are precisely tailored to these challenges:

- Process reliability that meets regulatory standards
- Flexible machine concepts for a wide range of materials and geometries
- Maximum dimensional accuracy and repeatability for safety-relevant components
- Complete machining from a single setup to minimise time and sources of error
- Scalable manufacturing solutions – from prototype machining to series production

The result: reduced scrap, stable processes, maximum quality – and thus a clear market advantage.

OUR RECOMMENDATION FOR MAXIMUM PERFORMANCE:

HYPERTURN 100 POWERMILL turning/milling centre for the complete machining of large, complex workpieces



CENTRIFUGE ROTOR

- 316 L



PROSTHESES AND ORTHESES

YOUR BENEFITS WITH EMCO:

Every prosthesis is as unique as the person wearing it – yet production processes must be efficient, safe and scalable.

EMCO machines enable both:

- Flexibility for single-part and small-batch production – for example, through fast set-up processes
- Complete machining of complex geometries in a single operation
- High repeat accuracy in series production of standard components
- Scalable automation for growing order volumes
- Flexibility for single-part and small-batch production – for example, through fast set-up processes

With EMCO, you can manufacture reliably, efficiently and with a focus on the patient – today and tomorrow.

OUR RECOMMENDATION FOR MAXIMUM PERFORMANCE:

High-performance turning/milling centre HYPERTURN 65 POWERMILL for complete machining of complex workpieces from bar or as insert parts







PROSTHETIC HEAD

- High-strength aluminium

DENTAL



YOUR BENEFITS WITH EMCO:

In dental technology, every micrometre counts. Whether milled parts for dental turbines, clamping devices for scanners or retaining elements – the smallest components must be manufactured with maximum precision and flawless surface quality. At the same time, space is often limited in dental production environments.

EMCO offers compact, powerful machines that are specially designed for delicate components and demanding materials. With high dynamics, a minimal footprint and excellent machining quality, our machines enable cost-effective production – even with complex geometries and changing batch sizes.

- Compact machine solution – ideal for laboratories and confined production areas
- Maximum precision for the smallest workpieces
- Perfect surface finishes for sensitive dental applications
- High dynamics & short cycle times
- Complete machining for greater efficiency and process reliability

The result: maximum precision in the smallest of spaces – for a confident smile in application.

OUR RECOMMENDATION FOR MAXIMUM PERFORMANCE:

Compact HYPERTURN 50 turning centre with milling turrets for complete machining



ANGLE PIECE

- 316 L



IMPLANTS

YOUR BENEFITS WITH EMCO:

Implants are among the most demanding components in medical technology. Dimensional accuracy, biocompatibility and traceable quality are non-negotiable. Whether joint implants, dental implants or osteosynthetic screws – any deviation can be safety-relevant.

With EMCO machines, you can manufacture reliably and reproducibly – even under difficult material conditions. Thanks to powerful drive technology, intelligent tool management and customisable automation solutions, every machining step becomes a controlled process.

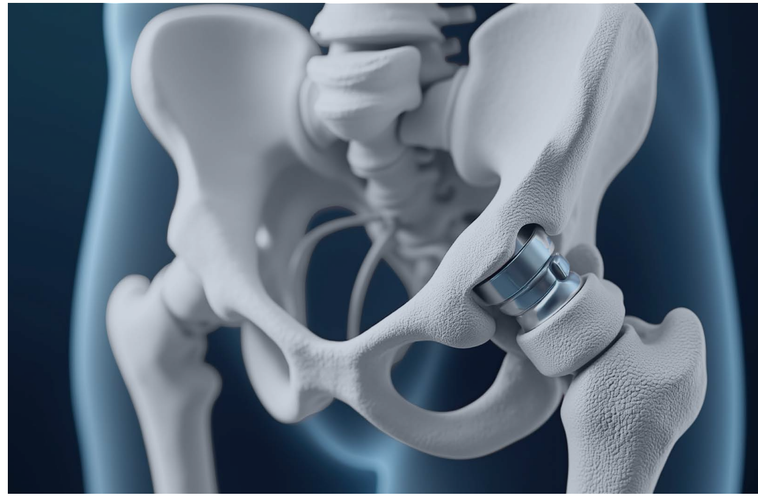
- Precise machining of titanium, stainless steel, ceramics and more
- Reproducible quality across all production batches
- Automated processes with comprehensive documentation
- High dimensional accuracy for complex geometries, best system solutions
- Process reliability – even under the strictest regulatory requirements

The result: reliable processes, perfect components and documented quality – at every level.

OUR RECOMMENDATION FOR MAXIMUM PERFORMANCE:

High-performance HYPERTURN 65 TRIPLETURN turning centre with milling turrets for economical series production in large quantities



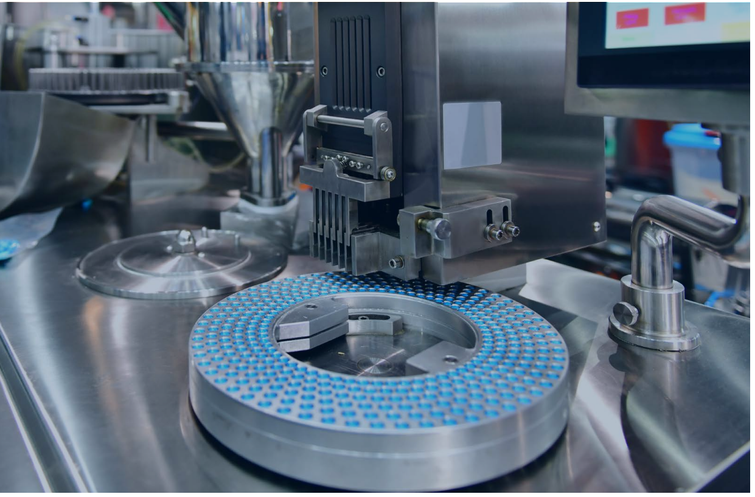




HIP FAN INLAY HIP HEAD

- CoCrMo
- Polyethylene

PHARMACEUTICAL



YOUR BENEFITS WITH EMCO:

Absolute process reliability is essential in pharmaceutical production. Components for filling systems, dosing systems and testing devices must be manufactured with extreme precision – often under tight deadlines and with changing order situations.

EMCO machines offer precisely this combination of reliability and flexibility. They can be quickly converted, process a wide variety of materials efficiently and integrate seamlessly into automated production environments.

- Absolute process reliability even under strict requirements
- Quick conversion for varying batch sizes
- Precise machining of a wide variety of materials
- End-to-end automation for high efficiency
- Technology that meets regulatory standards

The result: a reliable, future-proof manufacturing solution for an industry where compromise is not an option.

OUR RECOMMENDATION FOR MAXIMUM PERFORMANCE:

MAXXMILL 750 vertical machining centre for 5-sided machining



PUNCH OF A TABLET PRESS

- 316 L



MEDICAL INTRUMENTS

YOUR BENEFITS WITH EMCO:

Surgical instruments such as scalpels, clamps and forceps not only have to meet the highest standards of precision and dimensional accuracy – they are also manufactured in large quantities. Every production step must therefore be efficient, reproducible and reliable.

EMCO turning/milling centres and 5-axis machining centres enable the complete machining of even complex geometries in a single operation – with short set-up times and a high degree of automation.

- Maximum precision for complex and delicate components
- Efficient complete machining in a single clamping
- Short set-up times for frequent product changes
- Consistent quality with high quantities
- Economical series production with potential for automation

The result: high-precision instruments in reproducible quality – manufactured with maximum efficiency and technological excellence.

OUR RECOMMENDATION FOR MAXIMUM PERFORMANCE:

UMILL 630 universal machining centre for 5-axis simultaneous machining







DENTAL PLIERS

- 1.4404

/ WHICH MACHINE FOR WHICH APPLICATION AREA?

Machines	Implants					Instruments	Prostheses	Devices	Formed parts
	Knee	Hip	Plates	Spine	Dental				
UMILL 630	+++	0	+++	+++	0	+++	++	+++	+++
UMILL 1000	+	0	+	0	0	+	0	+++	+++
MMV series	0	0	0	0	0	0	0	+++	+++
EM 350	0	0	0	0	0	++	0	0	0
HT series	+++	+++	0	+++	+++	+++	+++	0	0
HT-PM series	++	++	0	++	0	++	+++	+	0

/ **+++ · Very well suited**

This machine is our first choice for this area of application. It offers maximum efficiency, precision and productivity with optimum cost-effectiveness.

/ **++ · Well suited**

Well suited for this application. The machine reliably and efficiently meets all requirements.

/ **+ · Suitable**

Basically suitable for this area of application. The machine meets the requirements to a sufficient degree and represents a solid solution for the given application profile.

/ **0 · Not suitable**

Although the machine delivers excellent results in many applications, it is not suitable for the area of application under consideration here.













/ SHAPING THE MEDICAL TECHNOLOGY OF TOMORROW TOGETHER.

The demands placed on medical technology are constantly growing – and with them the expectations for precision, reliability and flexibility in manufacturing. Today's manufacturers must not only meet the highest quality standards, but also be able to respond to changing markets, regulatory frameworks and individual customer requirements.

With its Medical Business Unit, EMCO offers a comprehensive service promise: machine expertise, industry knowledge and tailor-made solutions from a single source. Whether in single-part production, automated series processes or complex assemblies – our technologies are designed to simplify your everyday manufacturing and open up new potential at the same time.

We see ourselves as a partner on equal terms. From the initial idea to the finished solution, we support you with technical expertise, application experience and a clear goal: to manufacture your medical technology products as efficiently, precisely and economically as possible.

Put your trust in a partner who understands manufacturing – and who works with you to make innovation possible.

We look forward to working with you on your projects!



'We have relied on EMCO CNC turning machines for many years. They stand for precision, efficiency and reliability – qualities that characterise our production and offer our customers real added value.'

/ Thomas Gloor
Operations Manager, Amsler & Frey AG



EMCO

beyond standard

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