Your leading manufacturing partner for medical components.

CENDRES+ MÉTAUX

We are at your service.

Cendres+Métaux has been a development partner and manufacturer of high-quality medical technology implants for more than 135 years. With our core competence, the production of micromechanical precision parts, we support you in the realisation of demanding projects. Cendres+Métaux employs numerous specialists with many years of experience in the development and production of biocompatible precious metals suitable for long-term use in the human body. Our core business also includes the processing of titanium and titanium alloys. Due to the vertical integration of the processes, we can also perform a variety of secondary operations following mechanical processing.
We are proud to offer you a complete range of services from design through to logistics.

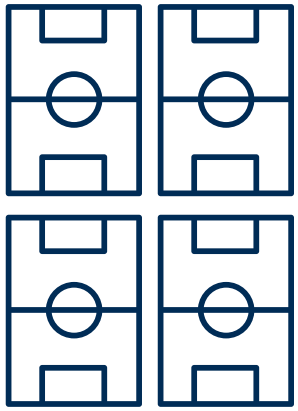
Facts and figures.

(Cendres+Métaux Group)

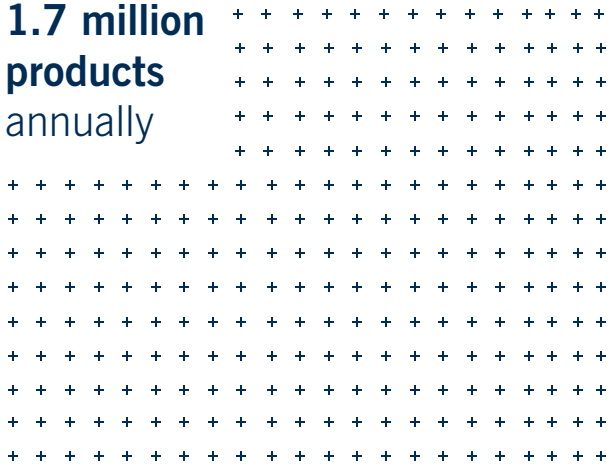
Over 135 years of experience

16 000 m² of production space

(corresponds to four football fields)

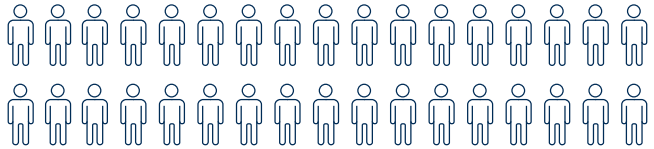


1.7 million products annually



Established **Swiss manufacturer** of medical technology products

Approximately 440 qualified employees



Our competencies.

Precision
We guarantee that our high-precision micromechanical components are manufactured in the best Swiss quality.

Integrated process chain for modular solutions
Thanks to our closed process chain across all production steps, we can provide all the services required by the customer, from design engineering to logistics solutions for the finished packaged product. This is performed individually or segmented as required in the form of modules, but always from a single source.

Validated processes
Through validated processes, we guarantee a consistently high product quality and meet all specifications.

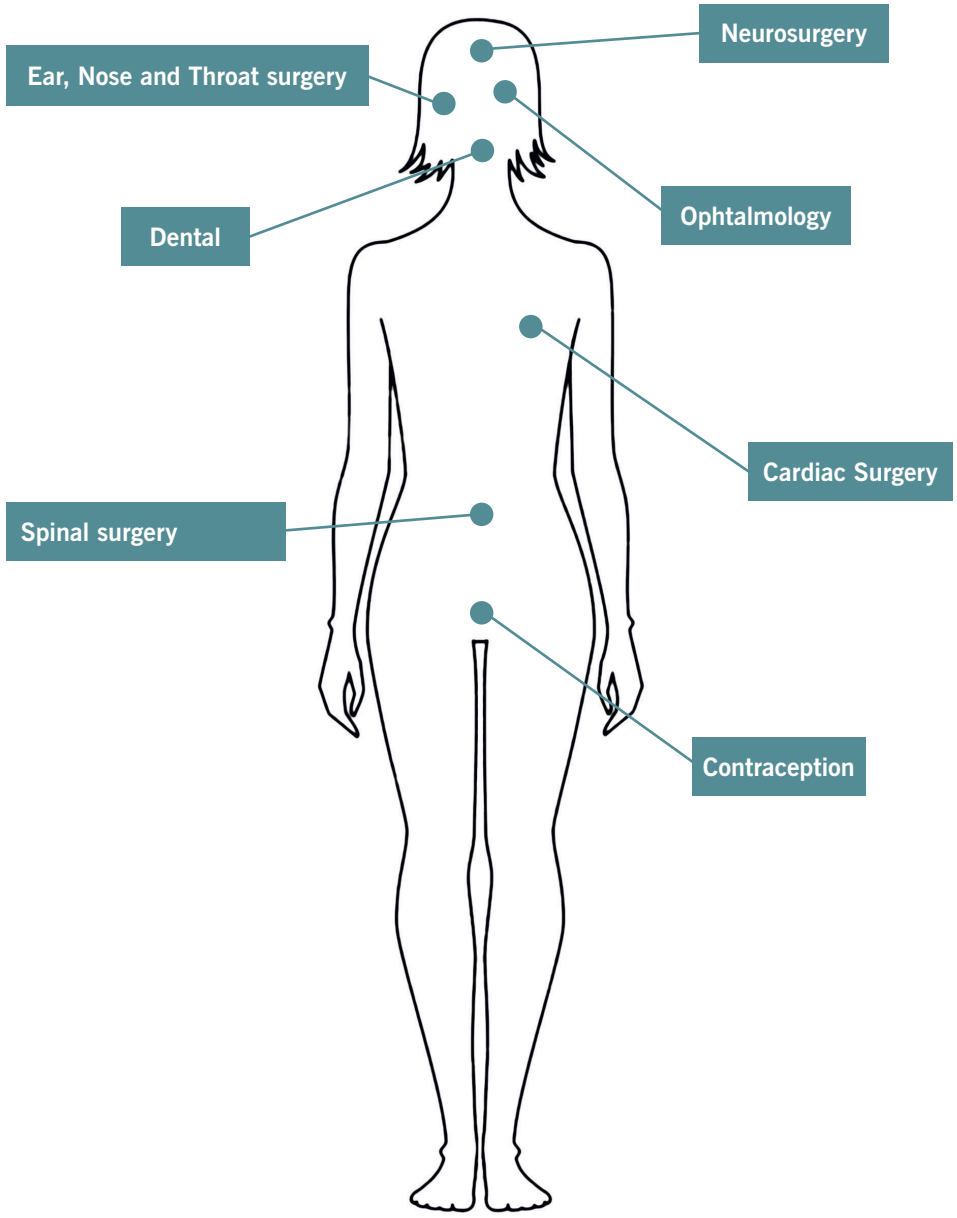
Certifications
In compliance with ISO 9001 / 13485 / 14001 also registered according to FDA and jPAL.

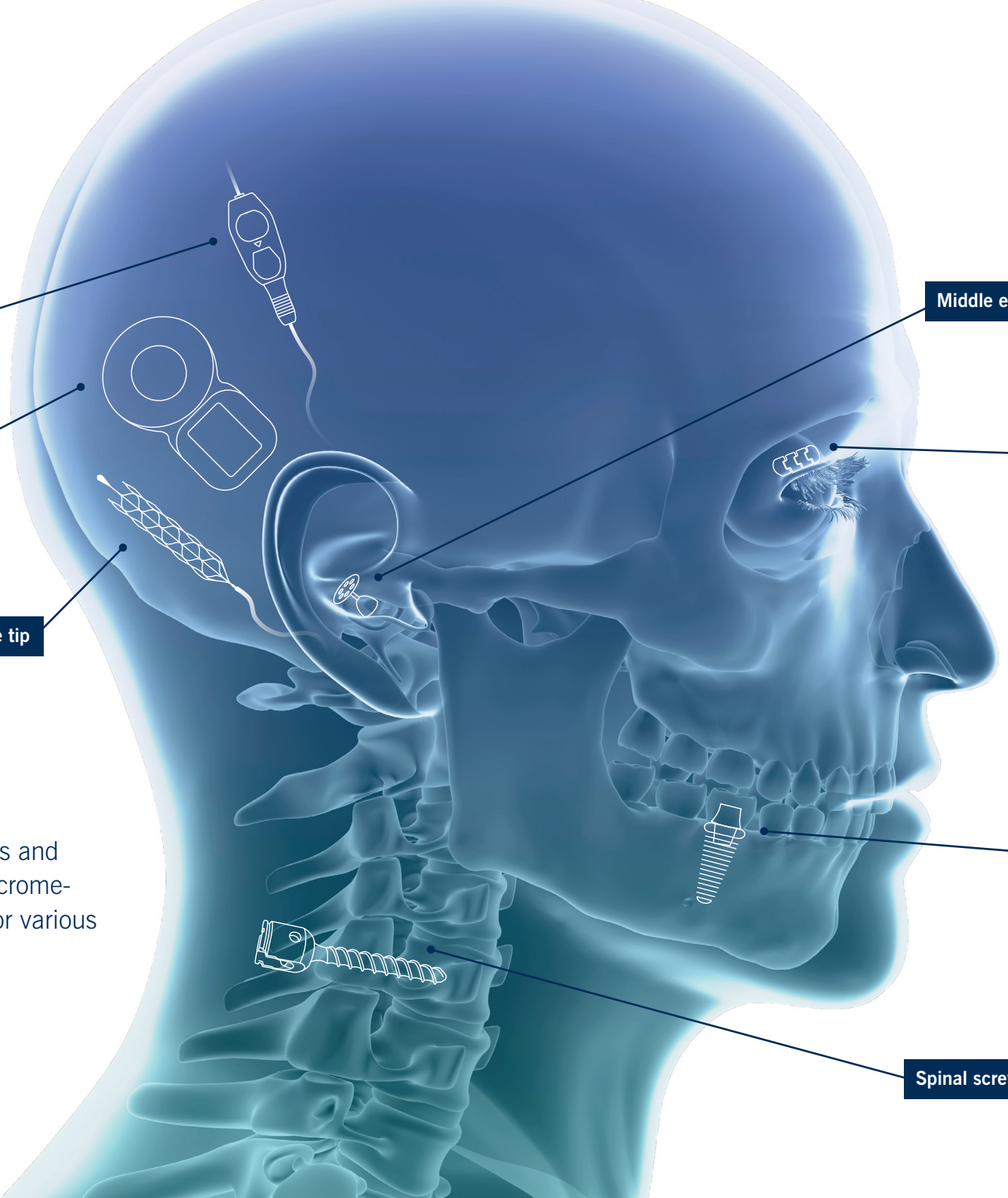
In-house material testing
We have our own ISO/IEC 17025 accredited laboratories for metallurgical and analytical testing.

Traceability
We guarantee complete traceability of products, materials used and processes.

Tailor-made advice
Our expert advice is provided specific to customer requirements and on a partnership basis.

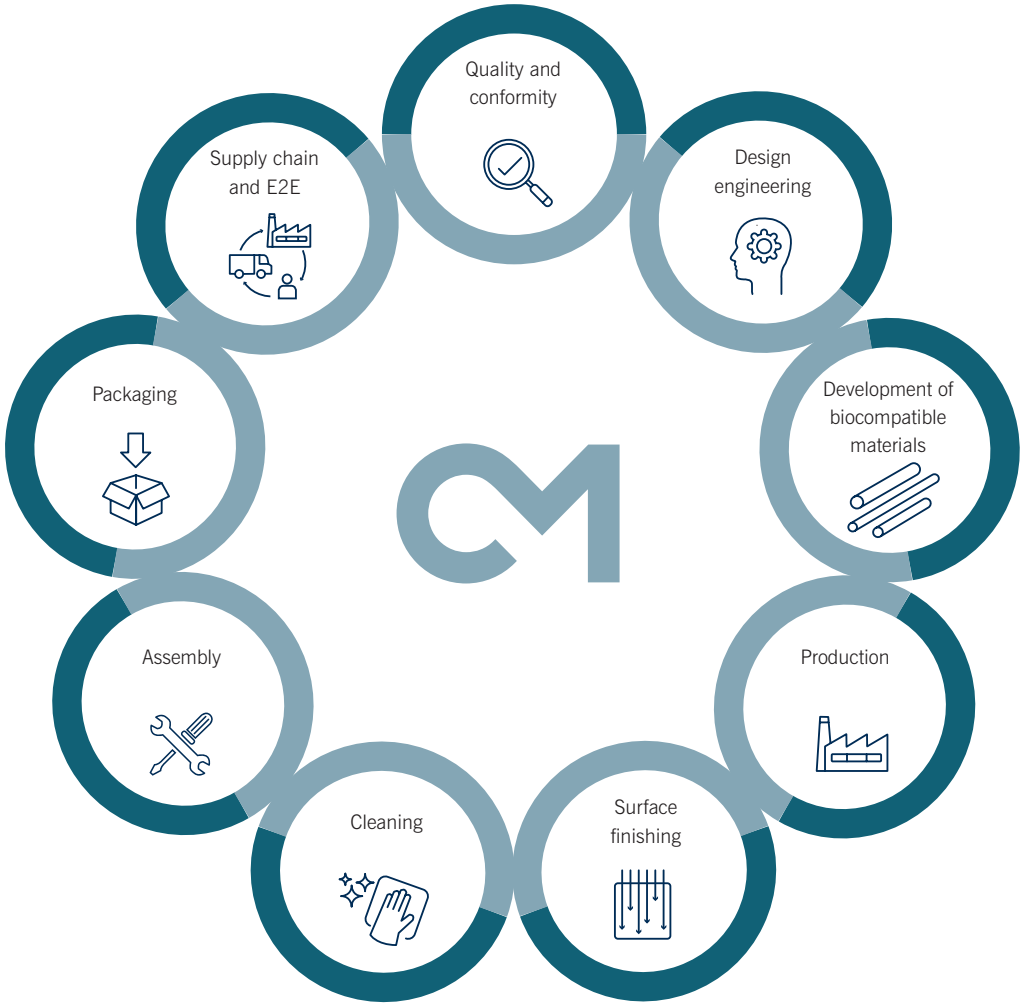
Medical fields.





Cendres+Métaux develops and produces implantable, microme-chanical precision parts for various medical fields.

Our range at a glance.



Modular range
Our service portfolio is based on modules. We tailor individual services as well as package solutions to your individual needs, with the aim of providing the best possible service.

Quality and conformity.

In the field of medical technology products, quality regulations are particularly strict. This applies to all processes, including the means of production used and their environment. Cendres+Métaux has in-depth knowledge of the applicable regulations.
Our processing systems and equipment have all the necessary qualifications, including cleaning technology for cleanliness from level 1 (free from operating residues) up to level 4 (with micro-biological requirements) and for clean rooms (ISO class 7). We are regularly certified (MDD 93/42/EEC, ISO 13485 / 14001 / 9001) as well as registered as a subcontractor with the FDA and jPAL. Furthermore, additional customer-specific procedures can also be agreed and integrated.

Our services

- Certified according to MDD 93/42/EEC, ISO 13485 / 14001 / 9001
- FDA-registered supplier according to 21CFR820
- Registered certification according to jPAL
- Accredited as a testing laboratory according to ISO/IEC 17025
- Qualification & auditing of suppliers
- Traceability across products, materials used and processes
- Testing and process integration:
  - Process development & validation (IQ, OQ, PQ)
  - First Article Inspection (FAI)
  - Statistical Process Control (SPC)
  - Management of sterilisation validation

Design engineering.

We help you turn your idea into an optimised and marketable product. In addition to a high level of expertise, our specialists have extensive experience of the procedures and regulations that must be followed during the development and approval of medical devices. Especially in the early stages of project development, a thorough feasibility assessment and the selection of the most appropriate process often play a decisive role. This means that the earlier we are involved in the development project, the better the chances of success. That is how we can contribute our knowledge of the properties of biocompatible materials and the feasibility and limits of the production processes used.

Our services

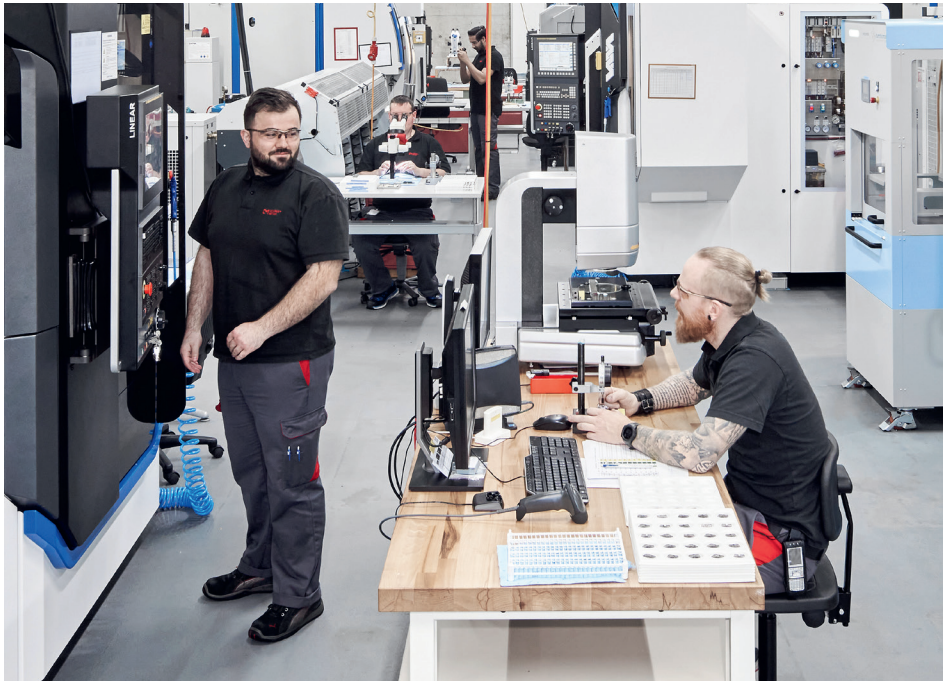
- Support in the further development of your product ideas
- Technical advice concerning design and feasibility
- Design For Manufacturability (DFM)
- Re-engineering and cost optimisation
- Prototyping & First Article Inspection (FAI)
- Consulting for mechanical testing procedures and functional tests
- Tolerance analysis and 3D animations
- Cross-functional project management

Development of biocompatible materials.

The original activity of our company consisted more than 135 years ago in collecting and reprocessing machining chips and production residues containing precious metals from the local watch and jewellery industry in order to extract its precious constituents. The expertise thus acquired on metallurgy and the properties of precious metals laid the foundations for the development of biocompatible materials for implants. This is complemented by in-depth skills in the various manufacturing and processing methods. This know-how also includes a fully equipped laboratory for analytical and mechanical testing of metallic components, which is certified according to ISO/IEC 17025.

Our services

- Development of customer-specific special alloys
- Production of biocompatible precious metal alloys for medical technology applications
- Further processing from continuous casting or ingots into semi-finished products
- Accredited testing laboratory



Production.

Cendres+Métaux has comprehensive and modern equipment for processing biocompatible metals such as titanium, precious metals or precious metal alloys. Concerning precious metals, the starting point consists of casting processes to produce suitable blanks. This is followed by processing methods such as rolling, drawing, punching, bending or forming, some of which may be punctuated by heat treatments. A variety of equipment is available for the further processing of all biocompatible materials. The machining range for turning and milling operations covers diameters from 0.5 to 42 mm.

Cendres+Métaux offers the following secondary processing steps:

- Various finishing processes
- Laser marking
- Assembly
- Clean room assembly
- Cleaning
- Packaging

Our services

- Expertise in the processing of biocompatible titanium and precious metal alloys
- Processing by rolling, drawing, bending, forming or punching
- State-of-the-art equipment: turning and milling in the diameter range between 0.5 and 42 mm
- Vertically integrated manufacturing with numerous secondary processes

Surface finishing.

In the use of biocompatible implants, the surface condition often plays a key role, since contact with human cell tissue is decisive for the success or failure of long-term integration. Here Cendres+Métaux can draw on many years of experience in the optimal preparation and structuring of surfaces of various biocompatible materials and their components. Depending on the material and the area of application – for example for the osseointegration of implants – different technologies are used, each of which is perfectly suited to the task.

Our services

- Wet chemical etching processes (pickling & etching)
- Anodising of titanium
- Blasting with various media
- Passivating
- Polishing
- Laser marking
- Vibratory grinding, tumbling
- Deburring (mechanical and/or chemical)

Cleaning.

Cendres+Métaux offers the full range of cleaning processes and equipment required in the medical technology sector. This applies to production and assembly areas as well as to packaging. Depending on the requirements, we have different cleaning levels available, ranging from level 1 (free from operating residues) to level 4 (with microbiological requirements). Production, assembly and packaging can be carried out under clean room conditions up to ISO class 7, GMP class C. In addition, customer-specific specifications and processes can be designed, implemented and certified.

Our services

- Cleaning according to requirements: cleanliness level 1 (free from operating residues) up to level 4 (with microbiological requirements)
- Alcohol-based degreasing (with vacuum and ultrasound)
- Water-based cleaning systems (multiple cells with ultrasound)

Assembly.

We have extensive experience and technical equipment enabling us to carry out a wide variety of assembly work as well as inspection and testing equipment to guarantee the quality of the products manufactured. These activities can also take place and if requested in accordance with microbiological requirements in clean room.

Our services

- Tailor-made assembly solutions
- Clean room ISO Class 7, GMP Class C
- Component assembly on request under consideration of microbiological requirements
- Traceability across products, materials used and processes.

Packaging.

The packaging of medical products in accordance with requirements necessitates the consideration of numerous regulations as well as high performance equipment such as clean rooms. Often, assembly and packaging must be carried out as an integrated concept. In this area too, we have extensive experience and knowledge of the applicable regulations and can offer you tailor-made concepts.

Our services

- Clean room ISO Class 7, GMP Class C
- Packaging concepts with standard solutions or according to individual requirements (pouches, blisters, clean trays)
- Packaging services upon request considering microbiological requirements
- Regulatory support and quality management
- UDI consultancy
- Labelling
- Management of sterilisation validation

Supply chain and E2E.

Today, fast and appropriate logistics is an essential factor for the successful commercialsation of medical products. We support you in this process with a range of sophisticated logistics solutions to reduce your own storage capacities to a minimum. This also includes shipping to third-party customers or directly to your premises. Shorter shipping routes enable faster delivery to your customers or to your subsequent manufacturing processes, while reducing costs.

Our services

- Component & raw material procurement
- VMI (Vendor Managed Inventory) solutions with continuous inventory control
- Customer stocks for on-demand deliveries
- Integration and management of provided parts for assembly orders
- Precious metal management for customer orders and their recycling

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