

Industry 4.0

The present historical change of business models require continuously attention to the best and efficient organization choices in all company departments that needs to face the present 4th Industrial Revolution. Carniaflex since many years introduced and currently implement **Digitalization Solutions** and properly **Lean Manufacturing Enterprise** trasformation in all company aspects.

Lean Manufacturing implementation with **5S** methodology (Sort, Set in order, Shine, Standardize, Sustain), Rapid Tool Setting (**RTS**) and Single Digit Exchange of Die (**SMED**) to improve flexibility, lead times and costs reduction.

Environment care - Safety

The attention to the environmental impact is certified by ISO 14001. The company act with the reduction of energy consumption with investments towards "Nearly Zero Energy Buildings" and latest low consumption machines technology. Clean, efficient environment, reduction of waste are continuously updated targets. ISO 45001 help the organization to improve employees safety, reduce workplace risks and create better safe working conditions.

Our Philosophy

- Continuous improvements throughout our company structure.
- Improve quality, ISO 13485 and ISO 9001 certified manufacturing process.
- Reduce time to market
- Reduce lead time (production time) with high production flexibility
- Reduce cost and waste
- Proactive customer oriented approach
- Usa always the latest technology available and state-of-the-art machines
- Full production traceability (30 years)
- Add value to contract manufacturing and engineering services
- Digital Oriented Enterprise in «Industry 4.0» concept



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MEDITECH GROUP
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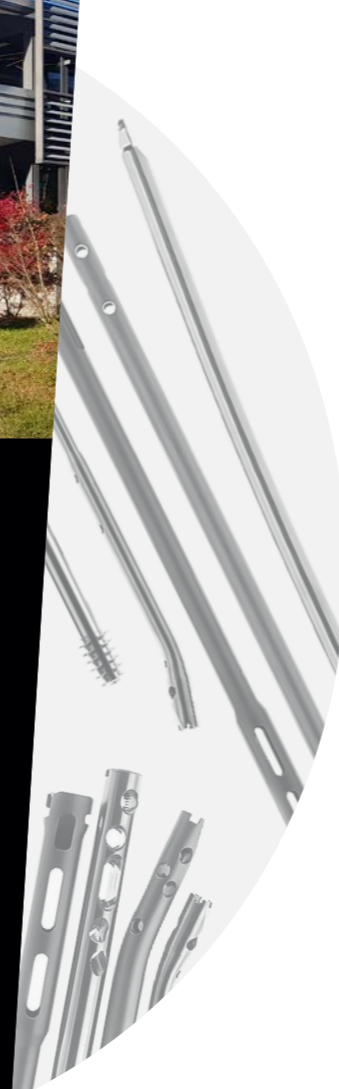
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carniaflex  **Hi-MEC**

Manufacturing solutions
for the medical industry



Orthopedics
Trauma & Spine
surgery



Dental
implantology



Mis & Medical
Instruments



Implantable
Port systems



ED. 11.2022



ISO 9001
ISO 13485



ISO 14001
ISO 45001

Introduction

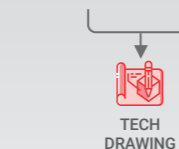
Since 2000 Carniaflex manufactures on client's design, tiny high precision and complex mechanical parts, in Titanium (and other metals) mainly addressed to implantable non-active Medical Devices.

The products, manufactured on customer's project, are parts of implant system and accessories, components and parts for fractures locking systems, intramedullary nails and screws, cortical, cancellous and cannulated screws, polyaxial head screws, micro components for maxillofacial surgery, multi threaded dental implants and angled abutments with complex geometries, surgical instruments, implantable venous vascular access system, flexible biopsy forceps and retrievers, etc.

Design and product engineering

- Product design and development
- Feasibility check
- 2D technical drawing
- 3D Modelling
- CAM development
- Prototyping
- Design improvement
- Production set up

CUSTOMER REQUIREMENTS



FEASIBILITY CHECK
DESIGN IMPROVEMENT
3D MODELLING

CUSTOMER ACCEPTANCE

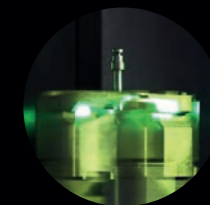
Machining and Assembling

- **CNC High-Precision Turning:**
 - 10-axis Swiss machines with single-spindle, high-pressure drilling systems and internal/external thread milling devices
 - From $\varnothing 0.5\text{mm}$ up to $\varnothing 32\text{mm}$
 - Max lenght: 500mm
- **CNC High-Precision Milling/Turning:**
 - 5-axis simultaneous machining centers
 - 3D complex parts
 - Micromachining to $\varnothing 0.5\text{mm}$
- **CNC Milling:**
 - 4-axis vertical machining centers
 - High-rigidity/precision milling
 - Max length/width: 500/500mm
 - Fast set-up
- **Deep Hole Drilling:**
 - High performance gun drill bits
 - Temperature controlled cutting oil
 - Up to 500mm hole lenght, up to 150 x hole diameter
 - Cannulation of all grade titanium stainless steels and other hard materials
- Accurate **Assembling** of orthopedic, medical instruments, implantable port system
- **Micro-Assembling** of accessories for endoscopic-laparoscopic applications: biopsy forceps, foreign retrievers
- High level craftsmanship with long experience to provide outstanding quality at competitive price



Quality

- Material certification
- Full dimensional check at production start, report available upon request
- In-production continuous critical dimensional check and surface finish visual inspection to provide quality early warning
- Final random dimensional check and 100% visual quality inspection
- Custom inspections and reports available upon request
- High precision gauge systems: Computer assisted Optical Systems, profile-measurement projectors
- Product documentation traceability available for 30 years



Finishing and packaging

- In-house and through external long term qualified partners
- Polishing and electropolishing
- Sand blasting
- Surface treatments
- Passivation
- Decontamination
- Color and type II (for AMS 2488) titanium anodization
- Laser welding and Marking
- Vacuum ultrasonic washing
- Clean room class 10.000 / ISO 7 packaging