We are FMI

Part of Dutch Technology Alliance

Ensuring Progress, Empowering Innovation

This is our **CIRCLE**

FMI AEVO EX ROBOTICS 21 Groep improvia VIVentris ROMMTECH METRICAL

Timeline

1962
Establishment FMI

1998
Establishment Elektra 21

2002
Management buy out FMI

2006
Establishment ImProvia. Acquisition FMI Manufacturing

2007
Establishment 21 Groep & FMI Engineering

2008
Acquisition FMI Instrumented

2009
Establishment ImProvia Polen, InduCon 21 & ÆVO

2012
Acquisition FMI Machining

2014
Establishment FMI Mechatronics

2016
Acquisition 21 Groep. Establishment FMI Additive

2017
Acquisition Irmato. Establishment ExRobotics & ProTect 21

2018
Establishment FMI Engineering Achen & Install 21

2020
Establishment FMI ImProvia Group

2021
Acquisition Metrical Metaal Bewerking

2022
Acquisition Rommtech & IBZ. Start Utilikko (FMI HTP)

2025
Demerger of FMI Improvia to Improvia and Viventris

Company facts

>350.000

Hours of engineering

>130 Million

Turnover 2024

25

Companies

>350.000

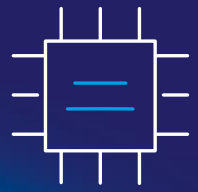
Hours of machine usage

>850

FTE

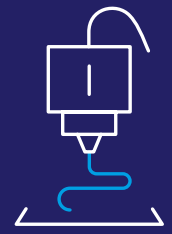
We work from different competences

Design



Engineering

Machining



3D-Printing

Assembly

Commissioning

Service

Technical services

Parts, Modules, Tooling & Packaging

First tier system supplier (cleanroom) assembly and production.

Mission & vision

MISSION

As an entrepreneurial and highly involved partner, we provide added value to the manufacturing industry and to our stakeholders.

VISION

By co-operating extensively and daring to be innovative, we aim to create the best solutions for the needs and demands of our customers.

History

1962 — Establishment FMI

2006 — Acquisition FMI Manufacturing

2008 — Acquisition FMI Instrumed

2012 — Acquisition FMI Machining

2014 — Establishment FMI Mechatronics

2016 — Establishment FMI Additive

2020 — Establishment FMI Improvia

2021 — Establishment DTA

2022 — Establishment High Tech Packaging

Facts & figures

7

Companies

250

FTE

> 35.000

Production capacity

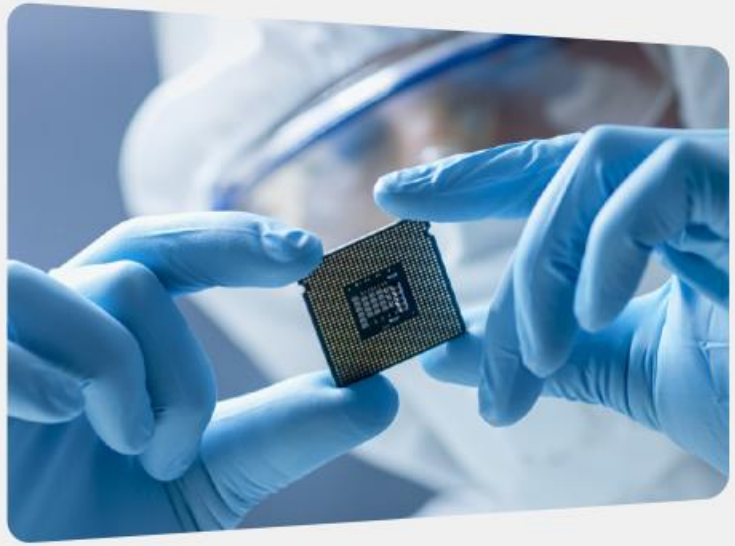
> 70 million

Turnover in ‘24

Value strategy FMI

- Operational excellence
- Continuous improvement

Focus markets



Semiconductor

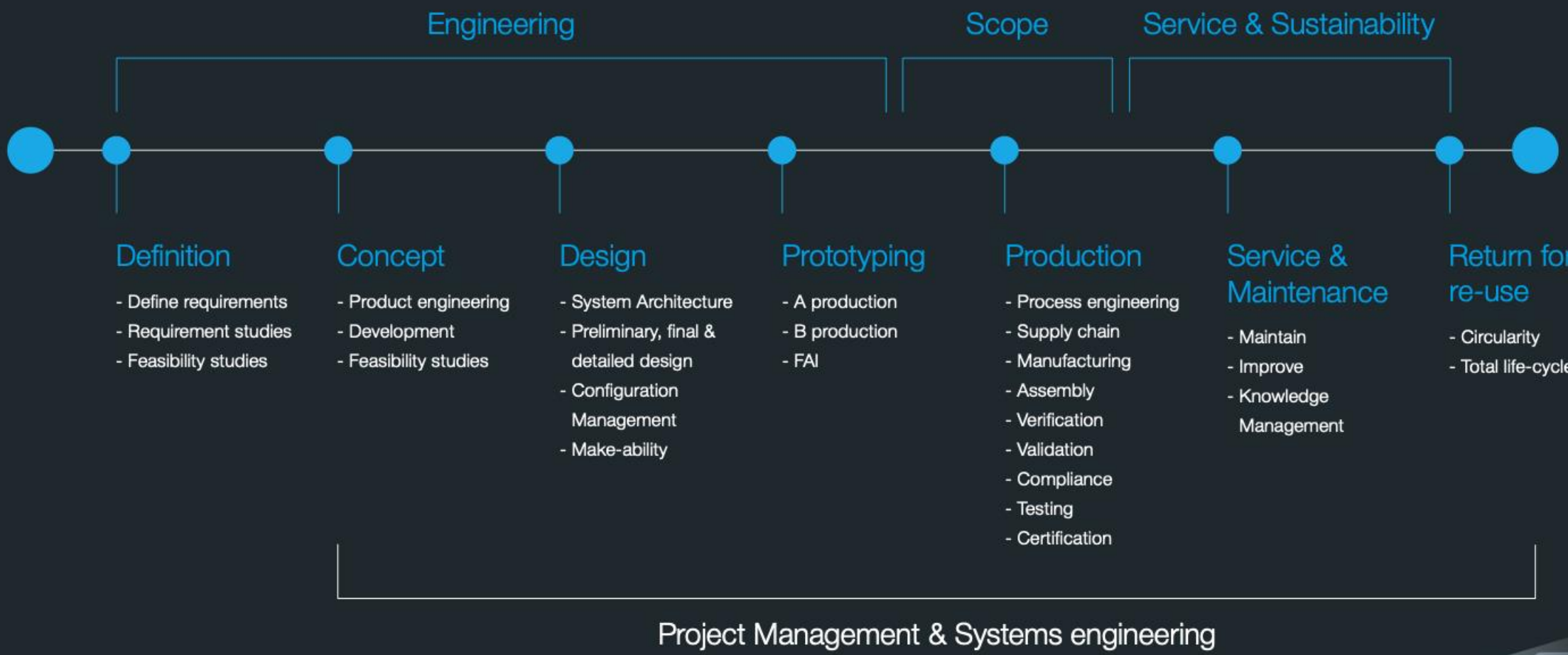
Analytical

Medical

What makes us different?

- Combination Tooling & Packaging
- 3D printing and post-processing
- Engineering to realisation & service

Process Flow



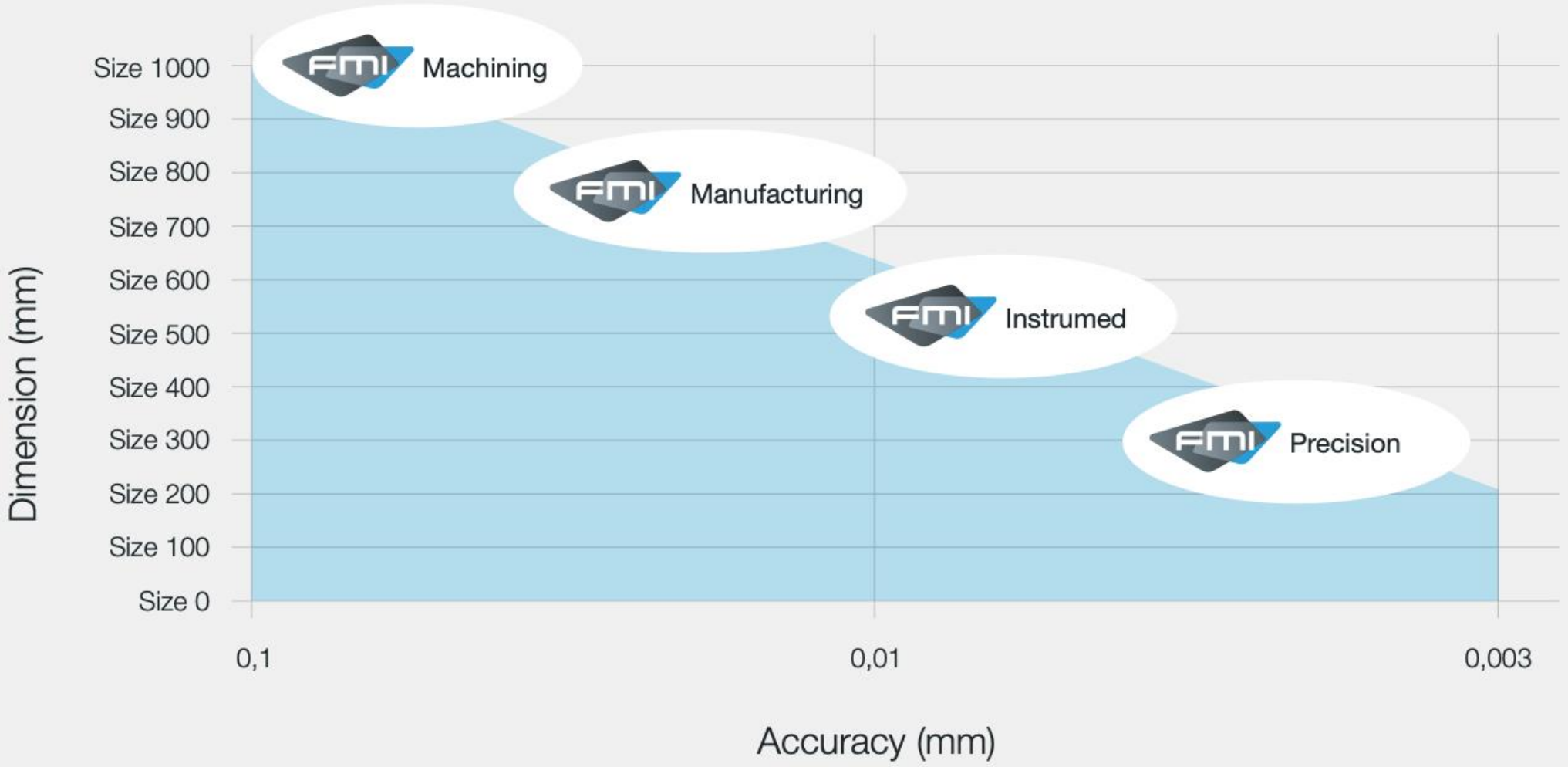
FMI Insight

ISO13485

ISO9001

ISO14001

Production Range



Solutions

Precision parts

Modules

Tooling

High Tech Packaging

Orthopeadic Implants

Solutions

Precision parts

Modules

Tooling

High Tech Packaging

Orthopeadic Implants

Precision parts

Materials

Aluminium, brass, bronze, duplex, hard metal, harden able steels, mu metals, inconel, invar 36/49, peek, stainless steel, titanium

Machining

- Milling 3-4-5 Axis, maximum dimensions 1200x1200x800mm
- Turning multitask and Swiss-type, maximum dimensions Ø600x1200m
- Additive Manufacturing: SLM and EBM maximum dimensions 400x400x250mm
- Other: grinding, lapping, deburring, welding, wire erosion, laser engraving

Measuring

- 5 axis coordinate measuring machines, up to 0,28+0,1L/100 µm accuracy
- Optical, hardness, roughness, contourograph

Precision part

Challenge

Manufacturing of a high precision mechanical part.
Contamination free of copper.

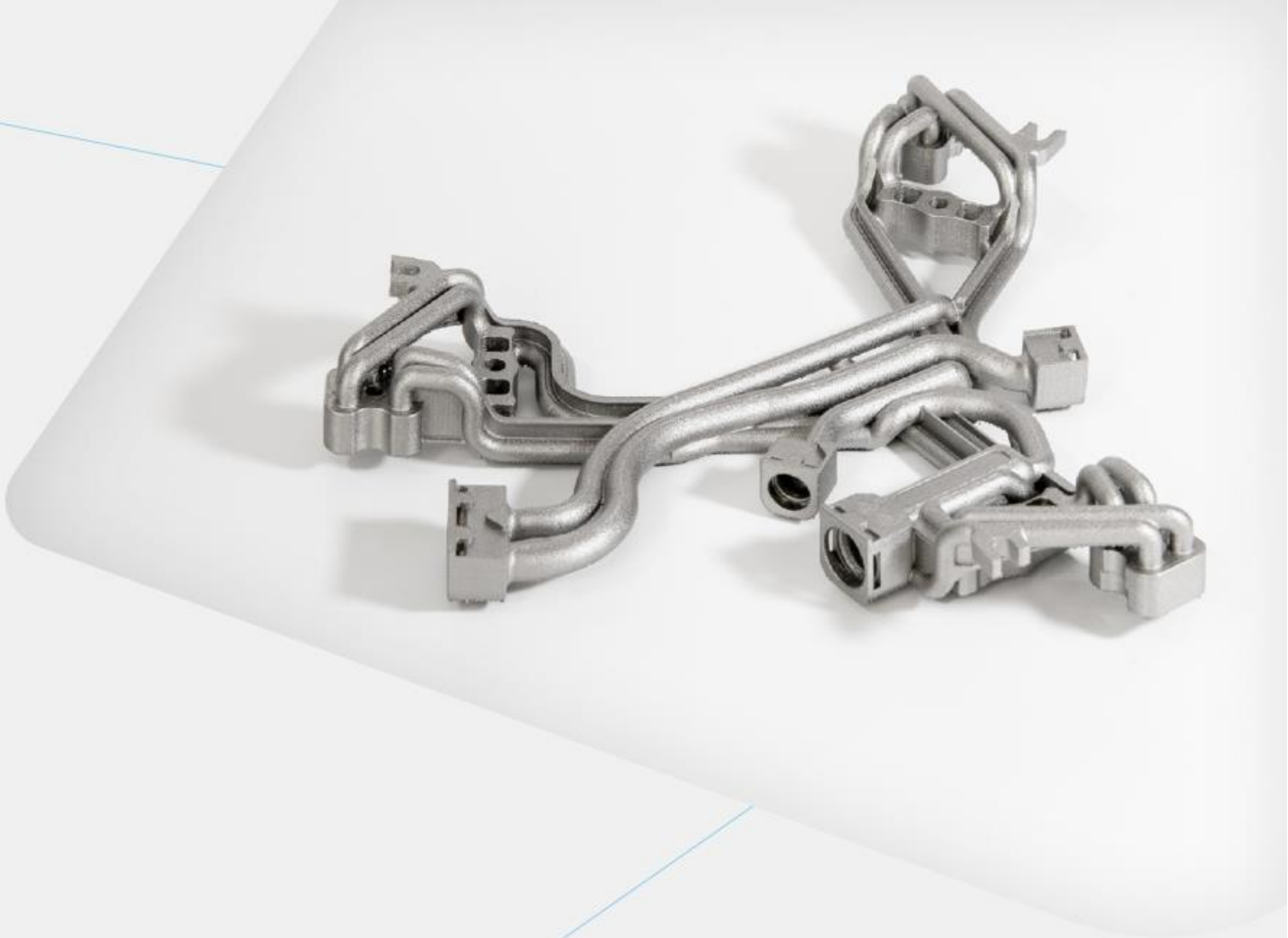
Solution

Production by different processes. Like milling and wire EDM.
With special wire to avoid contamination.

Specialties

- Tolerances up to 0,002mm
- Stainless steel
- Dimensions 80x20x20mm

3D printing



Challenge

Producing this manifold is not possible by traditional production processes.

Solution

By 3D printing these complex geometric parts can be produced.

Specialties

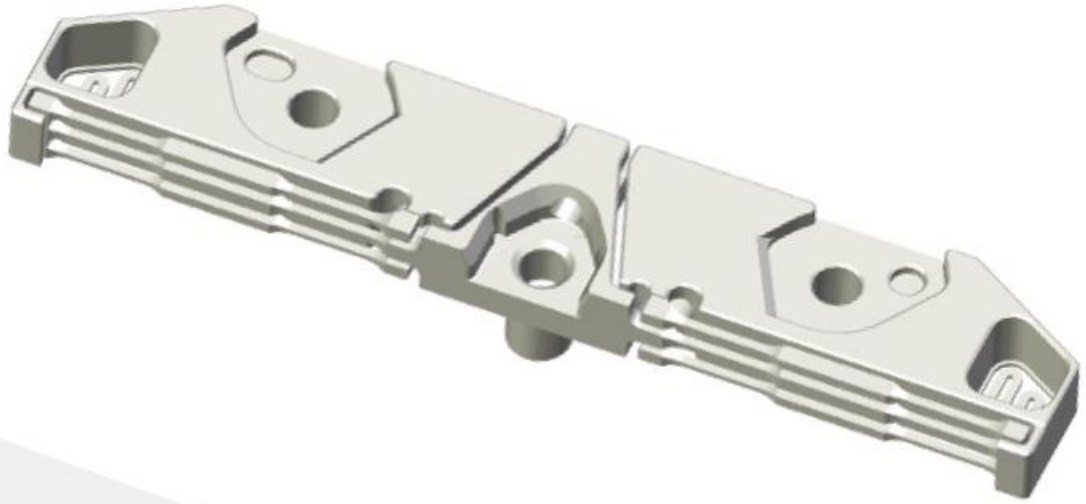
Titanium Grade 5

Precision part

Specifications

- Tolerances up to 0,002mm
- Material: invar 36
- Nickel plated
- Dimension: 12x8x7mm

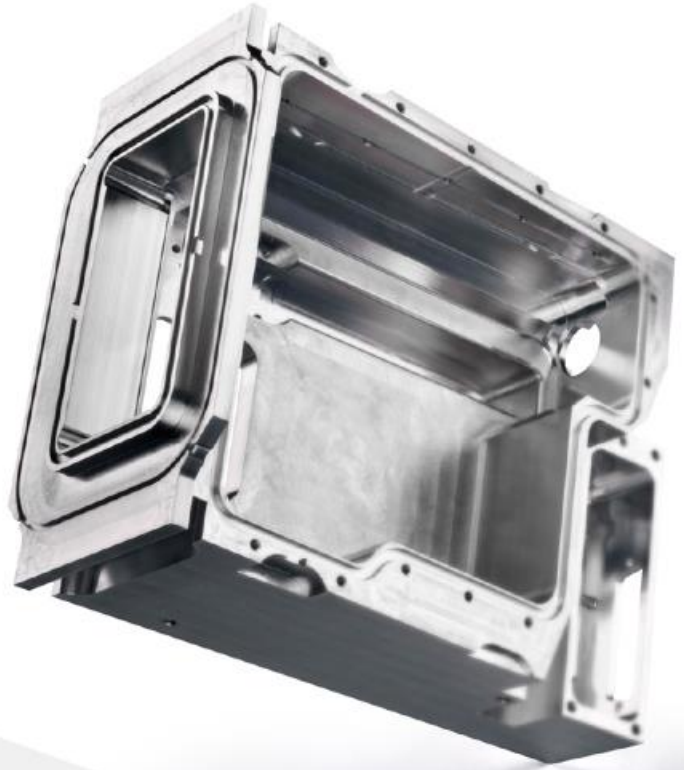
Precision part



Specifications

- Tolerances up to 0,005mm
- Material: inconel 718
- Copper & zinc contamination-free wire erosion
- Dimension: 100x20x20mm

Precision part



Specifications

- Tolerances up to 0,01mm
- Material: RVS 316
- Vacuum chamber with milled cylindrical surfaces
- Dimension: 160x140x80mm

Precision part

Specifications

- Tolerances up to 0,015mm
- Material: RVS 316
- Deep drilling, turning, milling and micro tig welding, electrolytic polish
- Dimension: Ø90x900mm

Solutions

Precision parts

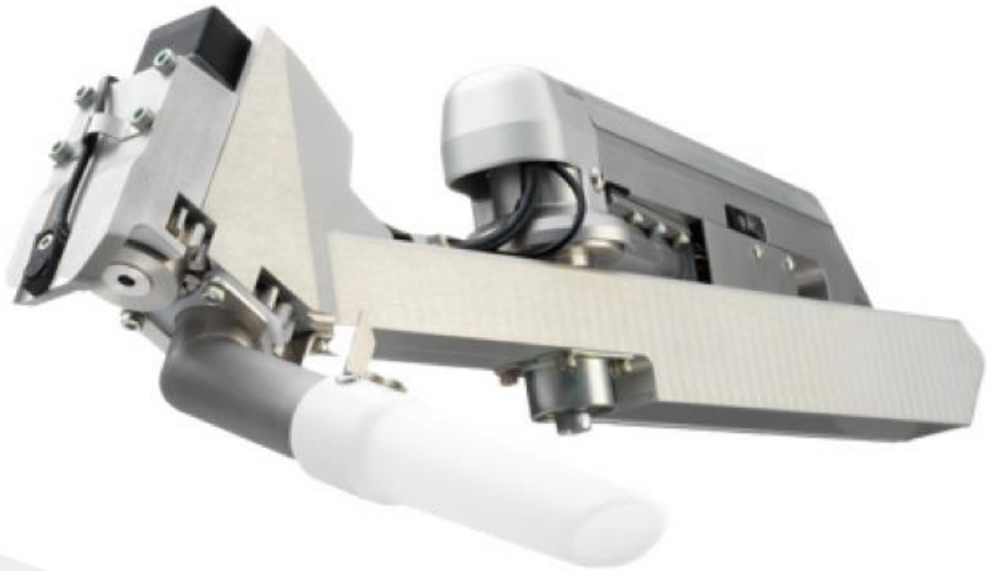
Modules

Tooling

High Tech Packaging

Orthopeadic Implants

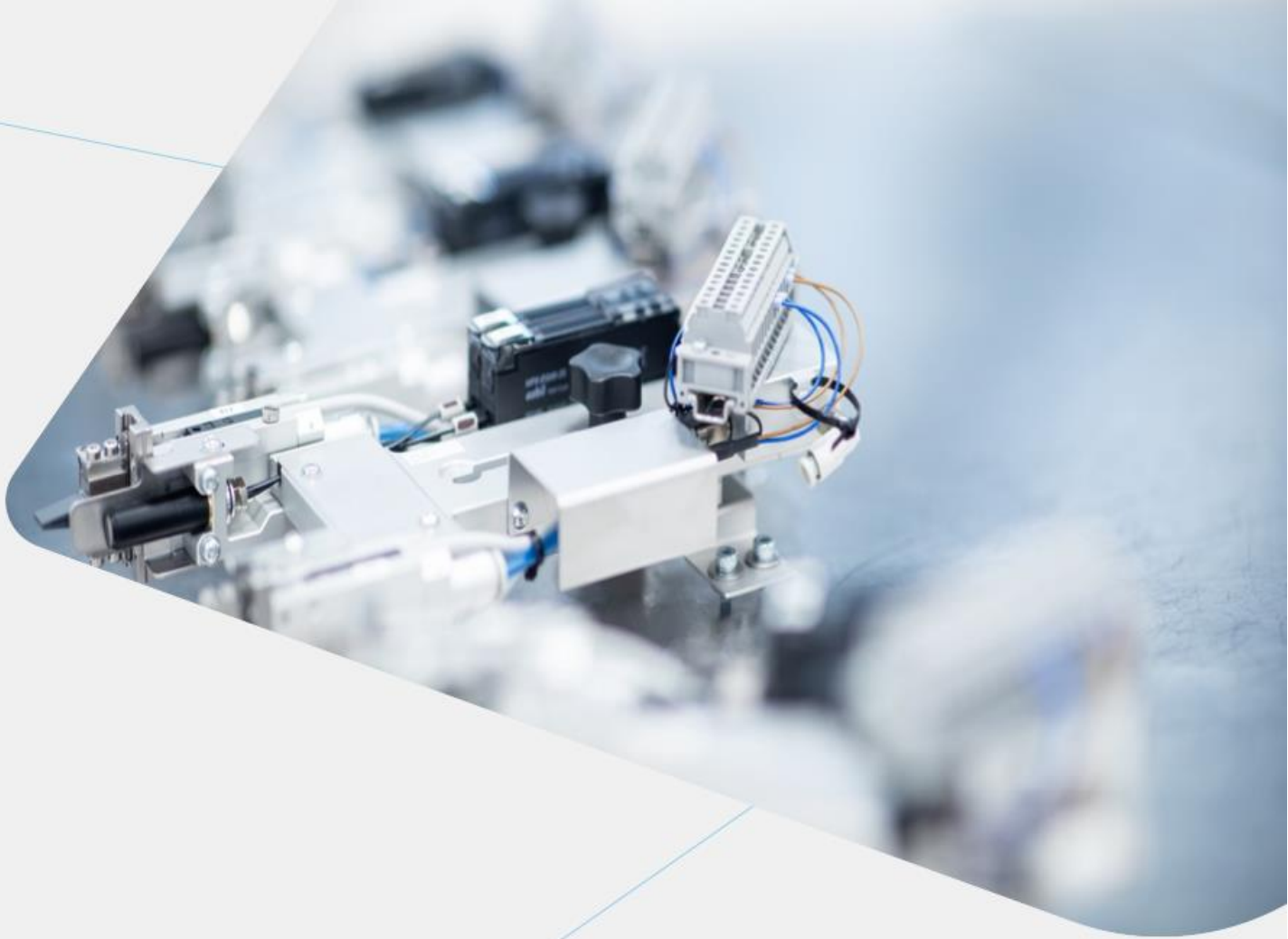
Modules



Repetitive production and assembly of mechanical and mechatronic modules

- Cleanroom assembly ISO 7 and ISO 6
- Helium leak testing
- Pressure drop testing
- Particle counter
- Specialized employee adhesive connections
- Co-development with our customers for optimized production flow

Modules



Challenge

Organise complete supply chain from mechanical production, electrical components, pcb’s and functional testing.

Solution

FMI combines own production locations with external supply chain.

Solutions

Precision parts

Modules

Tooling

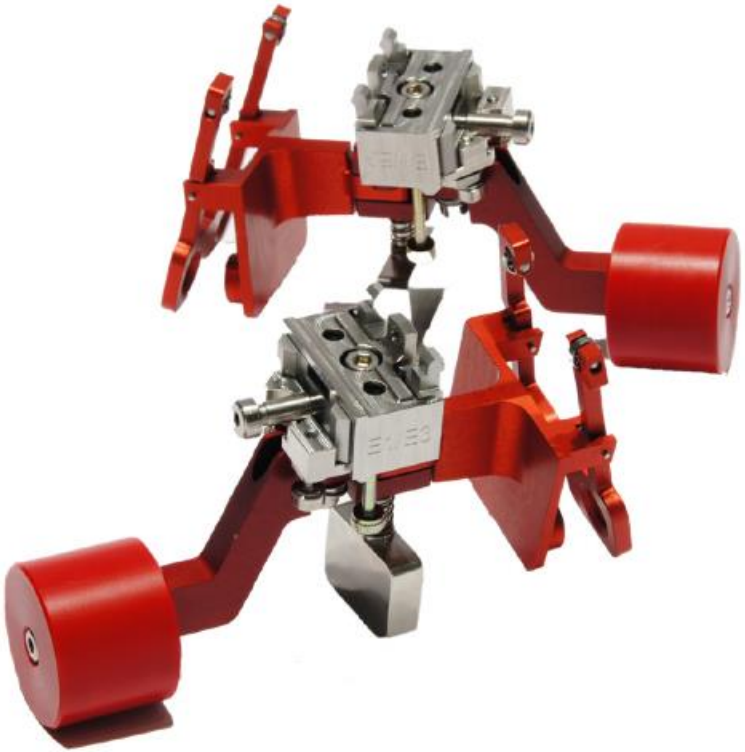
High Tech Packaging

Orthopeadic Implants

Tooling

Competences

- Development, realization, service and return 4 re-use
- Focus on mechanical tooling incl. wiring, sensors, motors and measuring systems
- Low volume, high mix and one offs
- Maximum size approximately 2000x1200x1200mm



Tooling

Calibration Tooling

Tool calibration is used to maintain instrument accuracy.

Test Tooling

Tooling developed to test automatic systems.

Installation Tooling

Design and development of installation tools to build machines and product lines.

Qualification Tooling

Qualification tooling for verification of parts, modules and tooling.

Tooling

Customer specifications

Precisely positioning, assembling, and manoeuvring a highly accurate and heavy module, without the use of electronics or motors.

Solution

Development of mechanical lifting, transport and positioning tool to place the modules into their position.

Specifications

- Position accuracy 0,05mm
- Material: stainless steel 316
- CE approved with annual recalibration
- Dimension: 2000x1300x800mm

Solutions

Precision parts

Modules

Tooling

High Tech Packaging

Orthopeadic Implants

High Tech Packaging

Challenge

Development, realization, service and return 4 re-use

High Tech Transport assy's

- Shock absorbing
- Temperature & humidity control
- Closed containers with helium or Co2 pressure systems
- Welded – glued plastic transport containers
- Corner protection
- Internal fixations
- Foam interiors
- Stackable

High Tech Packaging

Challenge

Development, realization, service and return 4 re-use

High Tech Transport assy's

- Isolated
- Temperature control
- Humidity control
- Shock absorbing

High Tech Packaging

Challenge

Development, realization, service and return 4 re-use

High Tech Transport assy's

- Plywood or trespa outside
- Internal fixations or inlays
- Buffering systems
- Foam interiors

High Tech Packaging

Challenge

Development, realization, service and return 4 re-use

Flight Cases

- Plywood or trespa
- Corner protection
- Internal fixations
- Foam interiors

Solutions

Precision parts

Modules

Tooling

High Tech Packaging

Orthopeadic Implants

Medical Competences

Competences

- Full-service contract manufacturer
- ISO 9001 and ISO 13485
- Surgical instruments
- Consumables like needles
- Implants: serial production, high mix, low volumes
- In-house 3D printing, SLM and EBM
- Extended Swiss type turning capabilities

Special processes

- Passivating
- Electro-polishing
- Blasting
- Tumbling
- Cleaning
- Packaging and blistering

Orthopaedic implant

Specifications

- Additive manufacturing, both SLM and EBM
- Ti-6Al-4V
- Open structures for bone ingrowth
- Rough structures for bone adhesion
- Post processing
  - CNC milling, including robot handling
  - Laser-engraving
  - Cleaning
  - Packaging

Cleaning Capabilities

Multi-bath cleaning line

- Ultrasonic bath 1: water + detergent, overflow skimming
- Ultrasonic bath 2: low mineral water
- Ultrasonic bath 3: demineralised water
- High-flow dryer: temperature approx. 120°C
- Dimensions: 350x350x300mm
- Cleanliness up to ISO 6 Grade 2 surface

Cleanroom

400m2	ISO 7 > Grade 4
250m2	ISO 6 > Grade 2
Downflow cabinet	ISO 5

We are ready when you are!

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