

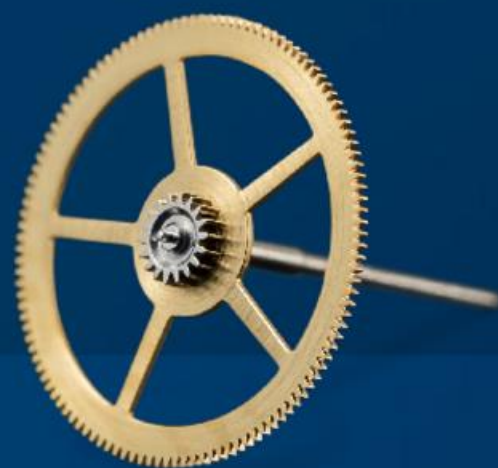
MPS Group Organisation

mps Group

- Located in Switzerland
- 426 employees
- US\$ 70 Mio

mps WATCH

- 134 employees
- 📍 Bonfol
- Watch bearings and gear wheels



mps MICROSYSTEMS

- 203 employees
- 📍 Bienne
- Microsystems, ball screws, linear bearings



mps PRECIMED

- 44 employees
- 📍 Bienne
- Orthopedic instruments



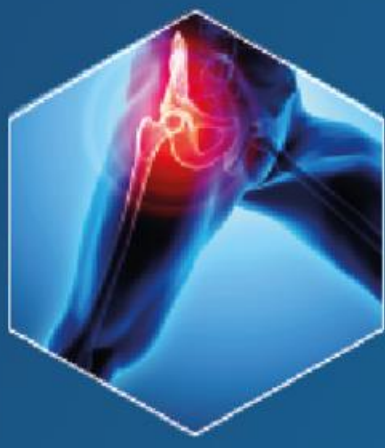
mps DECOLLETAGE

- 45 employees
- 📍 Court
- Precision Swiss turning parts



MPS Markets

Surgery & Traumatology



Optics & Photonics



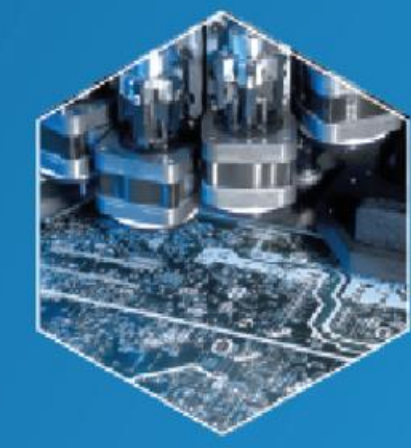
Aerospace & Defense



Medical



Automation



Watchmaking



Science



Connector technology



Industrial



MPS as part of the FAULHABER GROUP

- German Group
- Headquartered in Schönaich, Germany
- R&D and Production Locations in Europe and USA
- Sales & Service Locations on all continents
- 1,800 Employees
- US\$ 260 Mio Revenue



MPS Microsystems - Medical



Project Management

- Located in Biel, Switzerland
- 17'400 m² built in 2008
- ISO 9001 – ISO 14001 – ISO 13485

- Feasibility study
- Concept study
- Prototype development and manufacturing
- Components production
- System assembly

Quality Management

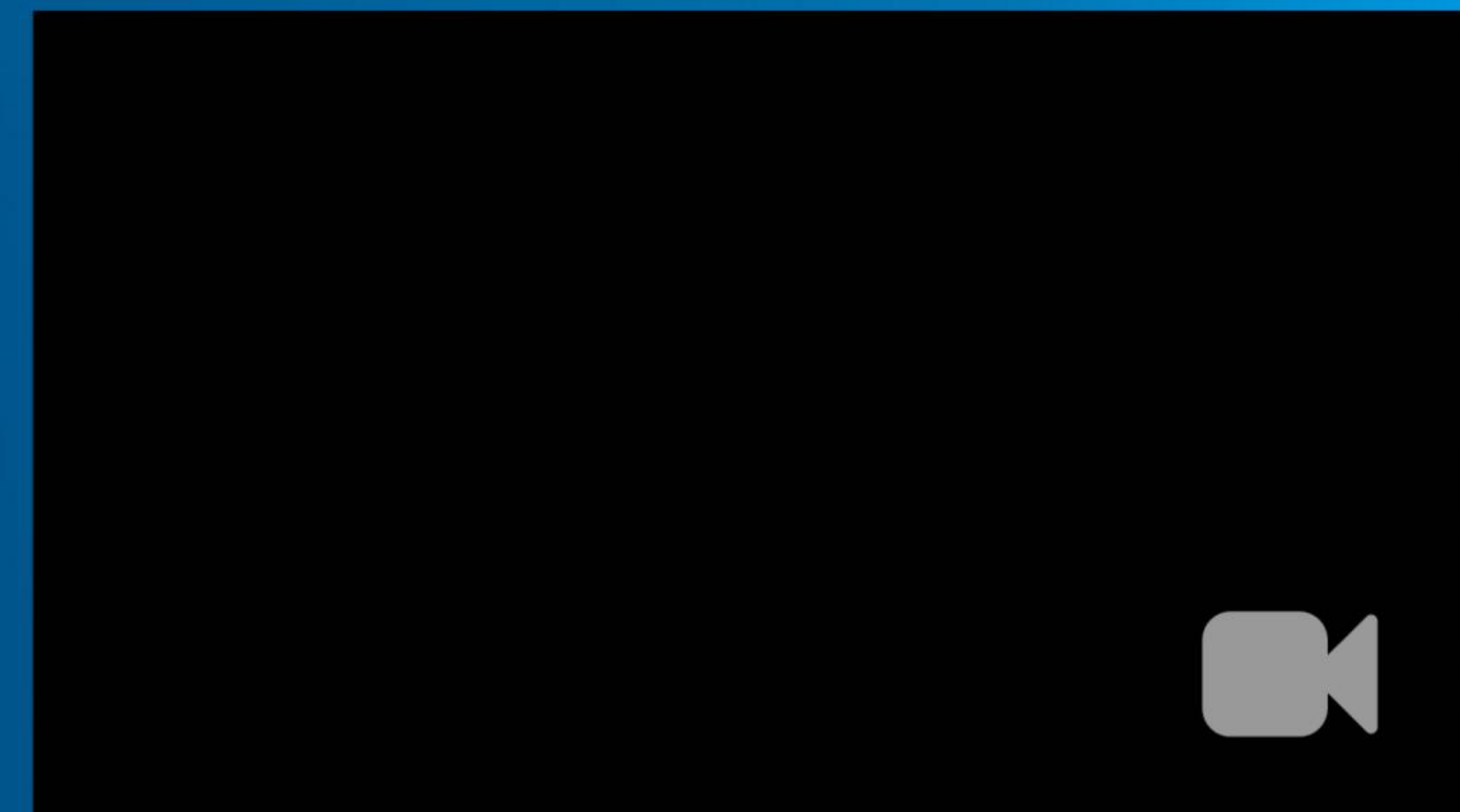
R&D Capabilities

- 14 development engineers + 2 lab engineers + 7 precision mechanics
- CAD (solidworks)
- Risk assessment (DFMEA)
- Design / Prototyping / Verification / Validation
- Rapid prototyping: Laser cutting, 3D printing,
- Prototyping of electronics



Testing methods / Equipments / Tooling

- Development and production of testing equipment
- Friction torque tests
- Load tests
- Lifetime tests
- Performance tests
- Environmental tests (Climate chamber)
- Cross sectional analysis



Strong process engineering team

- 10 process engineers
- Production process development
- Assembly process development
- Risk assessment processes
- Process validation
- Equipment qualification



Manufacturing processes

Turning: \varnothing 0.5 - 42 mm

Surface grinding

Honing / Polishing

Wire-cut EDM / Die sinking

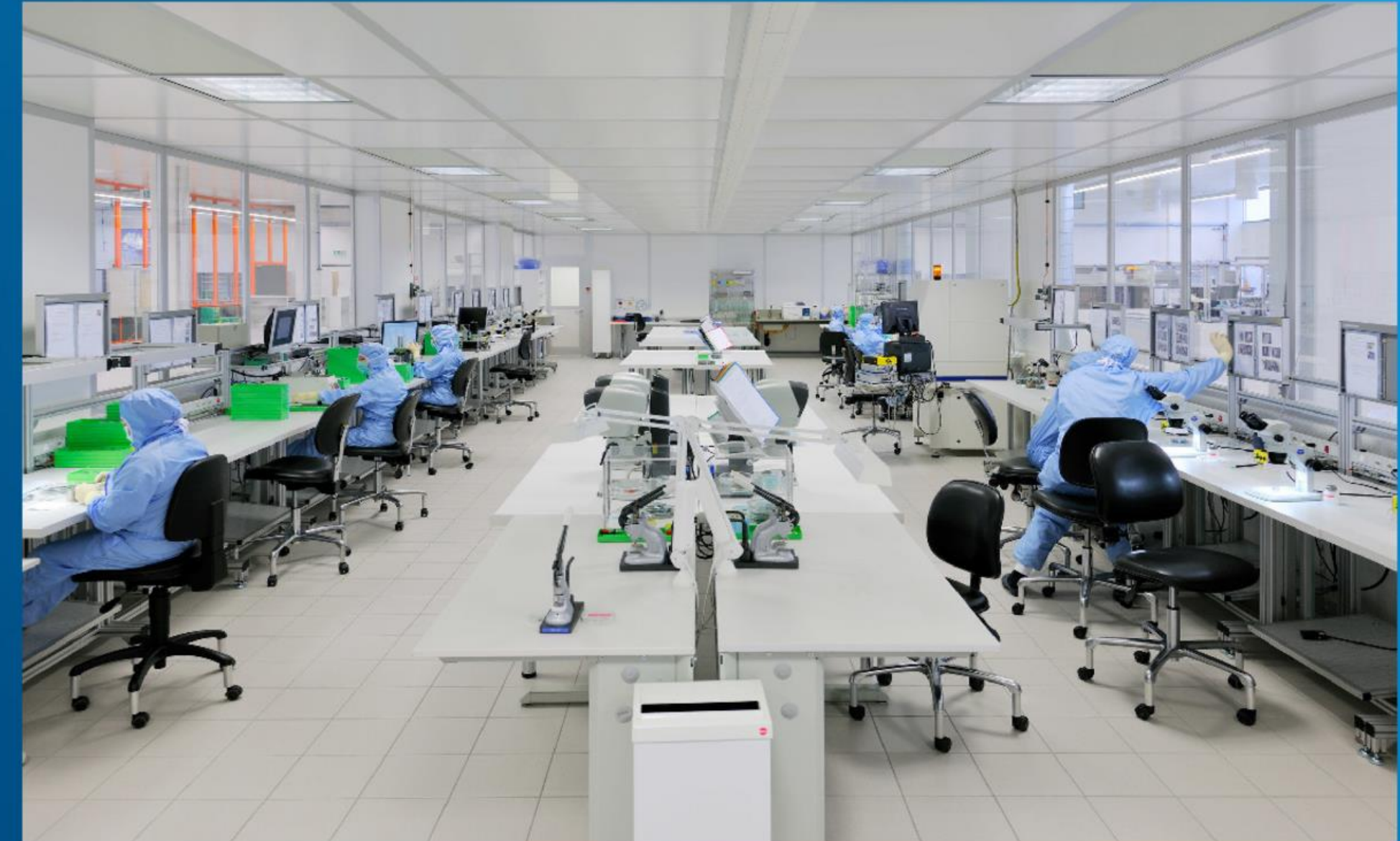
Milling: 5 axes CNC

Ball manufacturing (\varnothing 0.15 - 1.5 mm)

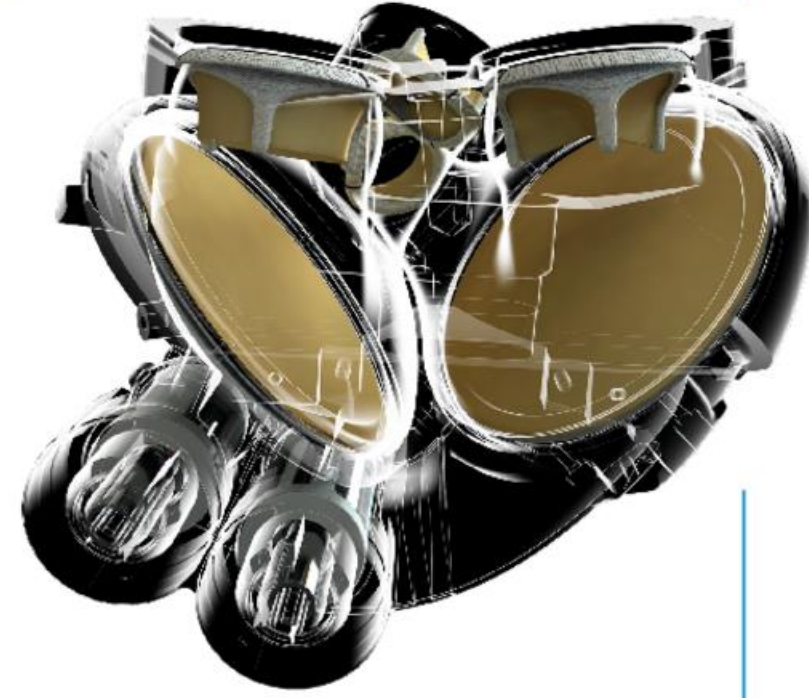


Assembly Technologies

- Clean room class 7
- Assembly in laminar flow box ISO class 6 possible
- Pairing in 0.25 μm steps
- Riveting
- Pressing
- Bonding (UV, anaerobic)
- Precision lubrication
- Laserwelding
- Balancing
- Customer specific testing and measuring



DISCOVER



Artificial heart

Orthopedic



DISCOVER

Urology



DISCOVER



Micro robot

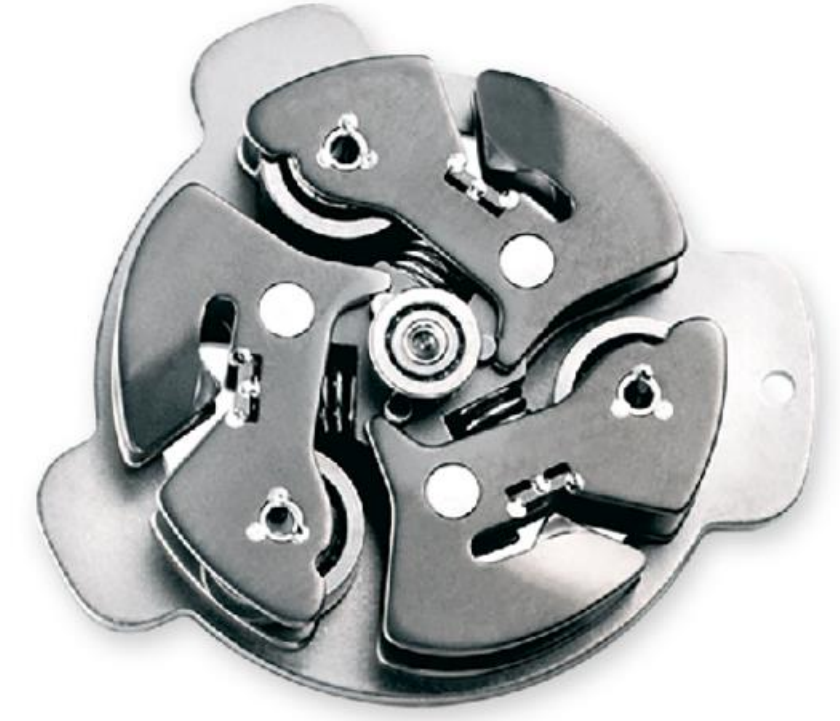
DISCOVER

Heart surgery



DISCOVER

DISCOVER



Drug pump

Coordination of multidisciplinary project team

- R&D engineers
- Process engineers
- Quality engineers
- Purchasing
- Suppliers

Single point of contact with customer

Secure trustful relationship with all stakeholders

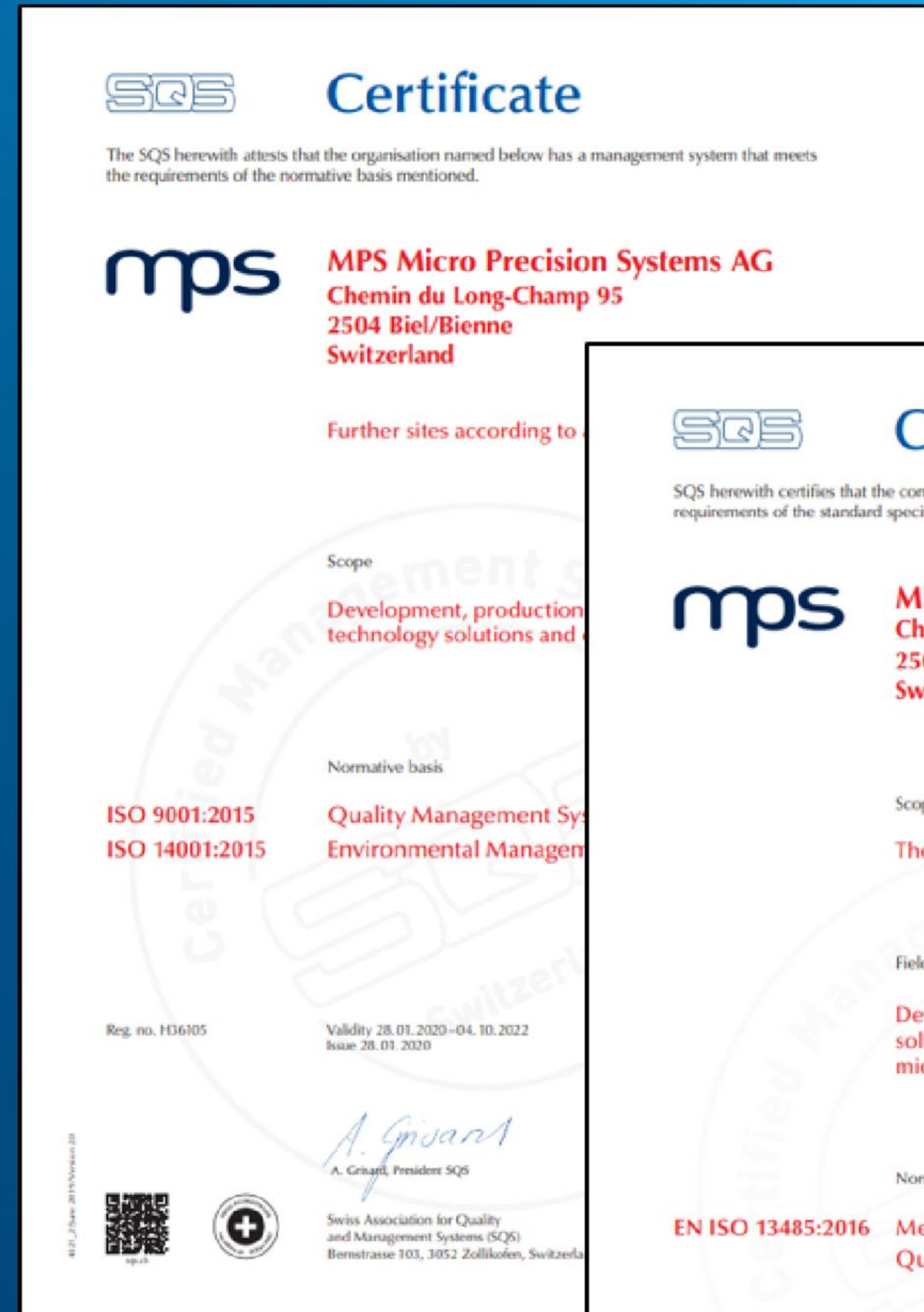
Organise regular and appropriate communication with customers

Experienced in international projects with different ethnicities and languages



Certification

- ISO 9001:2015
- ISO 14001:2015
- EN ISO 13485:2016



Assembly of artificial heart



Thank you
for your attention