



ABOUT



Investment Casting • Mechanical Machining • Rapid Prototyping



Founded in 1981



100 % family owned



Turnover: ~ 12 Mio €



Export worldwide



~ 250 employees



MAGYARMET Kft.
Adószám: 25196159-2-07
D-U-N-S Szám: 401144456
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www.magyarmet.com

HISTORY

1981: MMG Automation Works starts a new investment foundry in Bicske with modern equipment and know-how

1993: Schmidt + Clemens acquires the foundry under the name MAGYARMET

2003: Schmidt + Clemens sells MAGYARMET to the Hungarian management

2008: MAGYARMET starts own machining shop

2014: Rapid Prototyping department

2015: Relocation and expansion of the wax workshop

2018: New manufacturing facility in Sárbogárd

2020: Capacity expansion at both locations

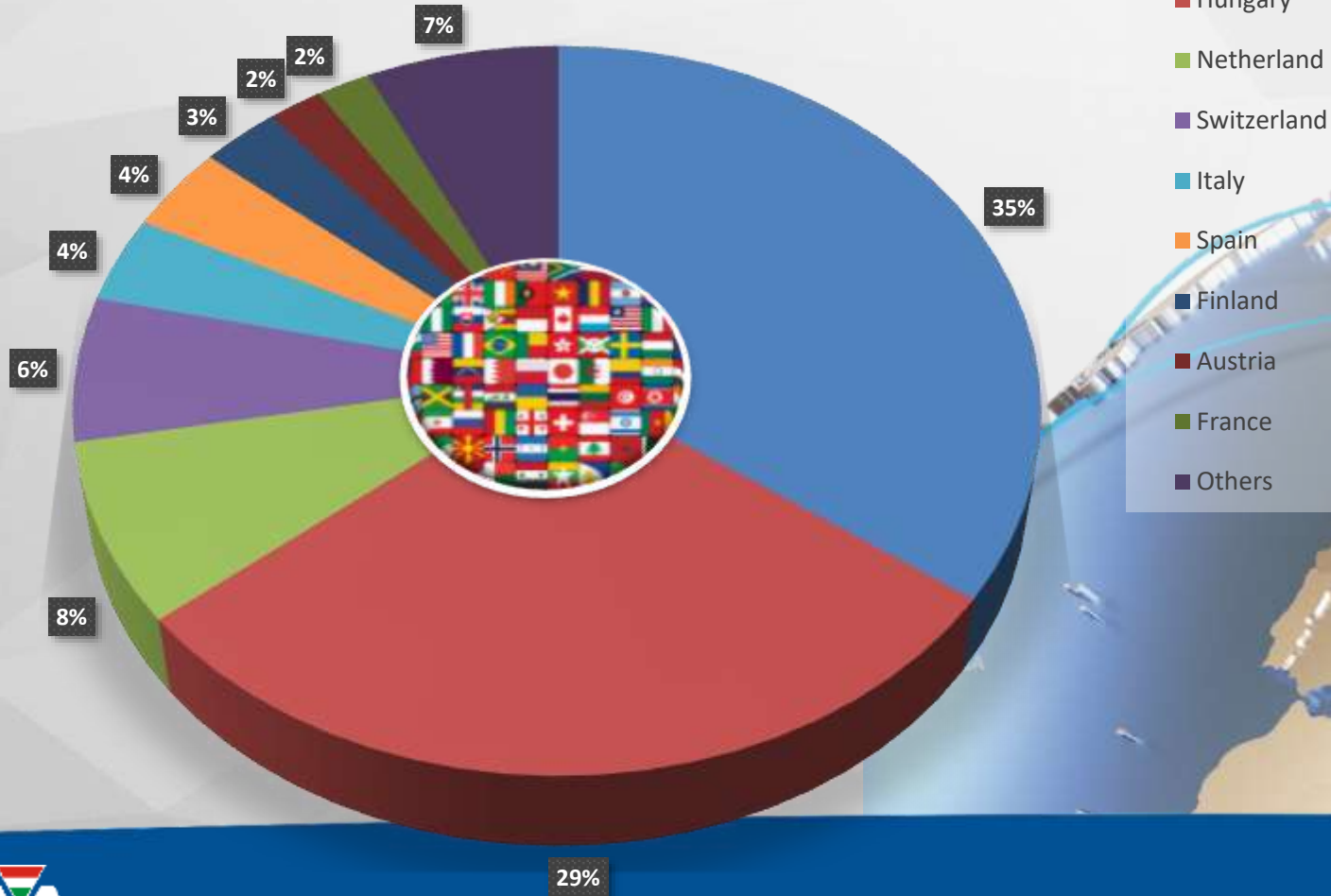


TURNOVER

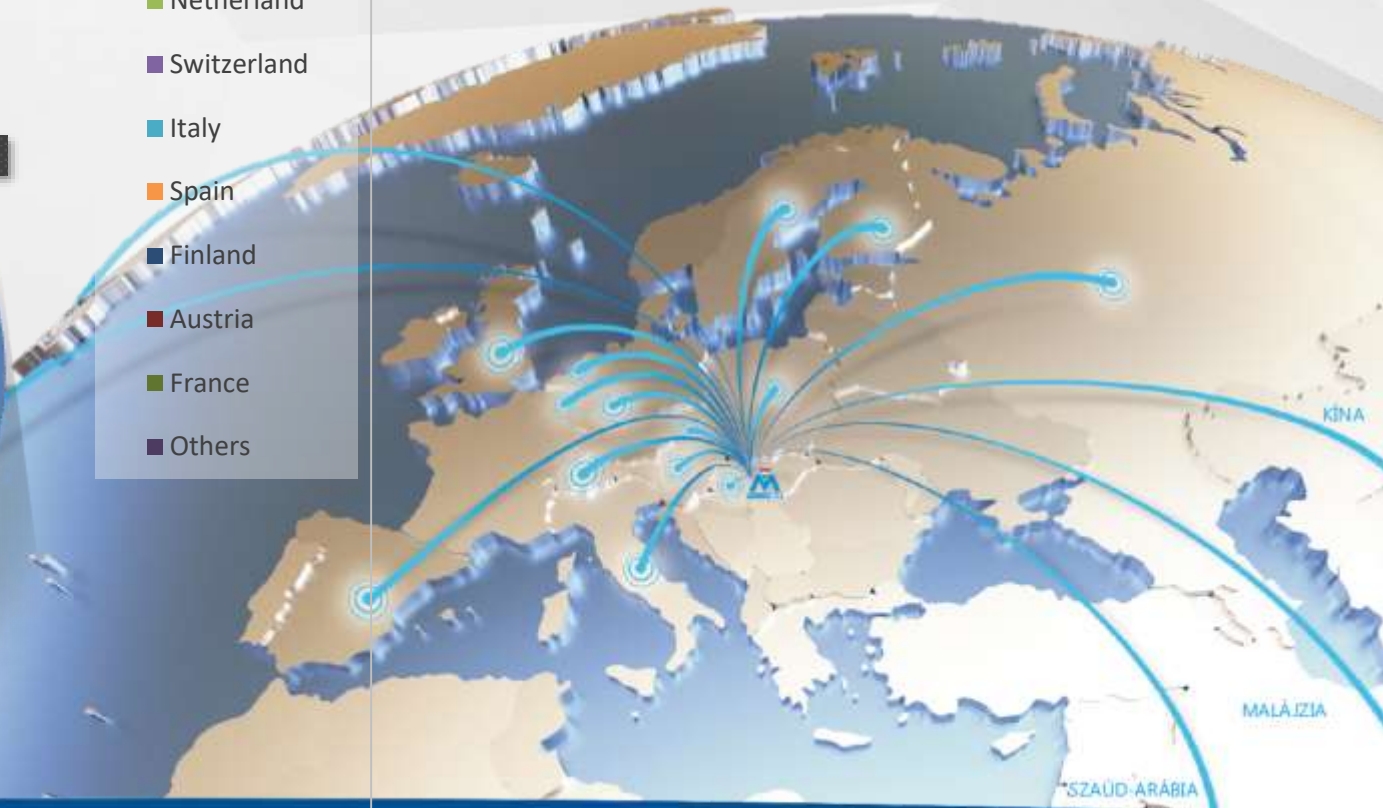


MARKETS

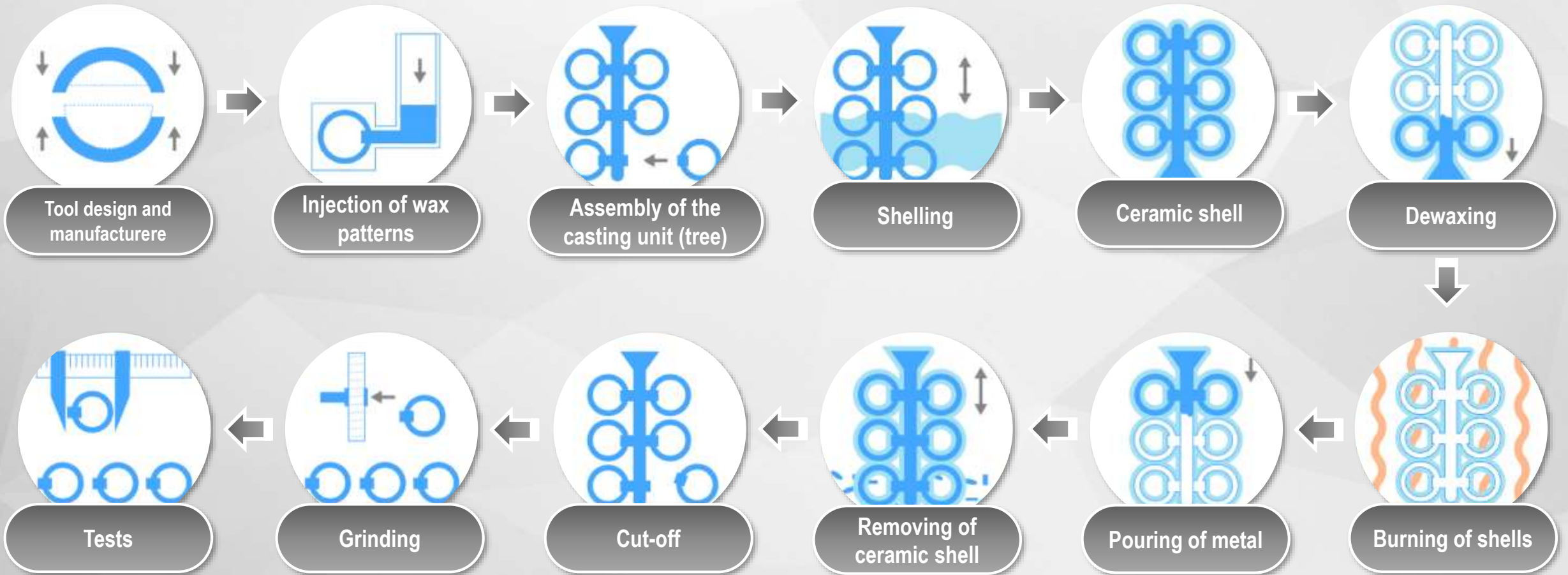
Turnover by countries (2023)



- Germany
- Hungary
- Netherland
- Switzerland
- Italy
- Spain
- Finland
- Austria
- France
- Others



LOST WAX PROCESS

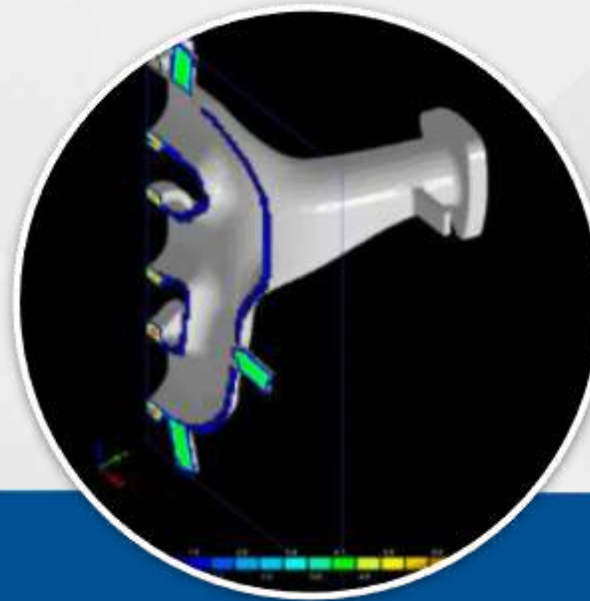


1. DESIGN AND SIMULATION

3D modell design (Creo 7.0)

Solidification simulation

Hotspot analysis, calculation of heat transfer and radiation



2. WAX PROCESS

Injection on automatic and semi-automatic wax injection presses

Control of patterns and assembly to trees

Soluble wax and ceramic cores for intricate cavities and undercuts



3. SHELLING

Dipping with robots

Controlled slurry viscosity

Controlled humidity, temperature and air flow



4. WAXING

Computer controlled dewaxing

Controlled time, pressure, temperature



5. BURNING OF SHELLS

Burn out of the remaining wax

Evaporation of water content

Sintering of the shells



6. POURING OF METAL

Induction furnaces: 2 x 160 kg • 2 x 60 kg • 1 x 250 kg

Molten metal blanketing by argon gas

Continuous temperature check

Quality approved materials (each heat)



7. REMOVING OF CERAMIC SHELL

Removing of ceramic shell

Blasting

Cut off

Grinding



8. HEAT TREATMENT

Several heat treatment procedures (soft-annealing, hardening and tempering, solution heat treatment, normalizing, nitro-cementation, ageing)

Small and medium sized charges

Adjustable C-potential

Registered data



9. MACHINING

Wide machining range: More than 25 CNC turning and milling machines (3/4/3+2/5-axes)

NC controlled key seating machine and other conventional machine

High flexibility

Over 65 % of parts machined

Esprit CAM



QUALITY

Chemical composition test

Mechanical tests

Crack detection

3D coordinates measuring

Radioscopic test

Metallographic test

ISO 9001 • ISO 14001 • AS 9100D • 2014/68/EU • ISO 3834-2

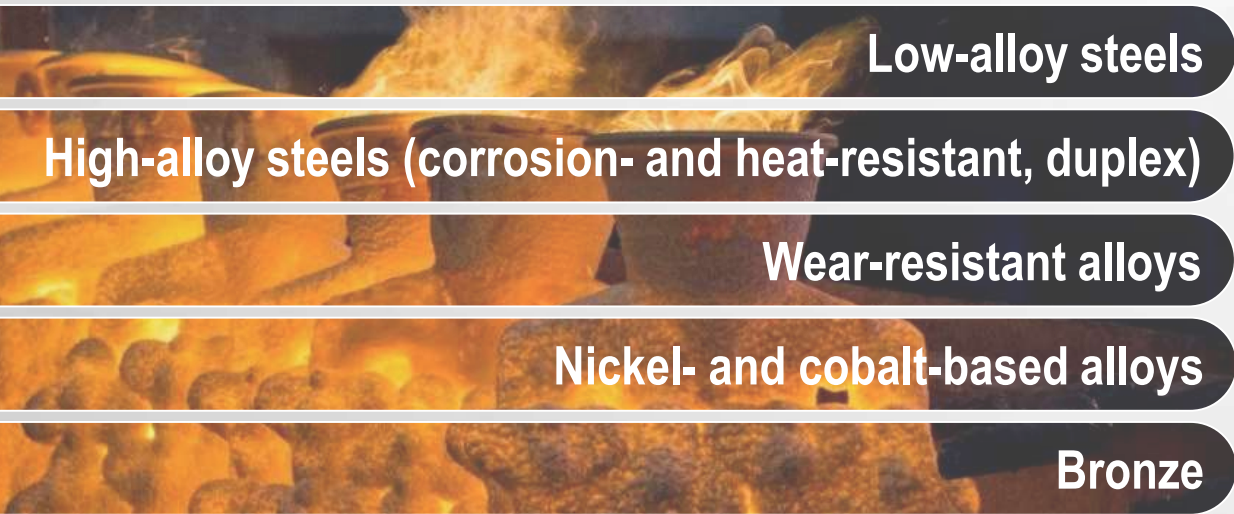


COOPERATIONS:



www.magyarmet.com

ALLOYS



PRODUCTS

Ready-to-assemble parts

Weight per piece: 0,005 – 45 kg (80 kg)

Max dimensions: 500 x 500 x 400 mm



APPLICATIONS



REFERENCES:



www.magyarmet.com

RAPID PROTOTYPING

SLS

EOS

Polystyrene models with 3D laser printing technology

Design and production with additive technology

Prototype parts

Spare parts

Small batch quantities

Design, fitting and function check



RAPID PROTOTYPING

Material: polystyrene powder

Layer thickness: 0,15 mm

Dimensions: 340 x 340 x 620 mm

Weight up to 80 kg

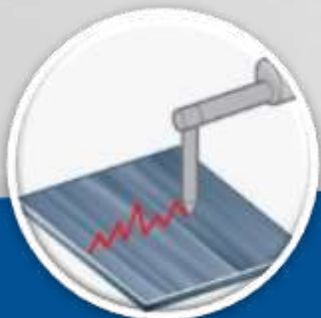
Printing time: 1-2 days

Ready-to-assemble parts within 15-20 working days

Ra 3.2 – 6.3

CNC 5 - Axis

15-20 days





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