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Wise decisions for a green future.

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# Talum Castings

Kidričevo, October 2023



**Located in the middle of Europe.**  
Excellence in delivery timing and quality.



1947



Year of  
establishment

1954



Year of starting  
up production

Joint stock  
company



Organization

1.488  
Talum Castings  
450



Number of  
employees 2022

SDH – 86.25 %



Ownership

110 000 t



Total  
production 2022

450 mio EUR  
Talum Castings 52  
mio EUR



Neto  
sales  
revenues  
2022



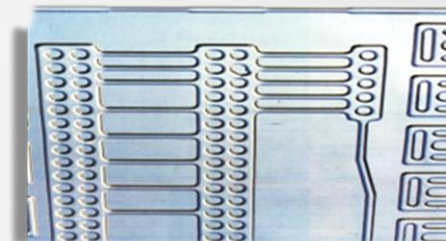
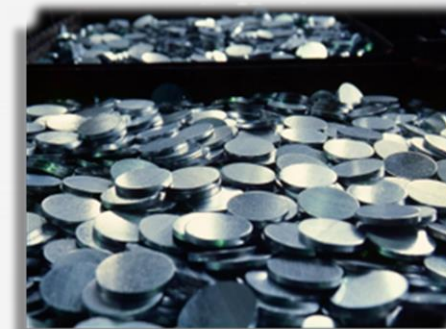
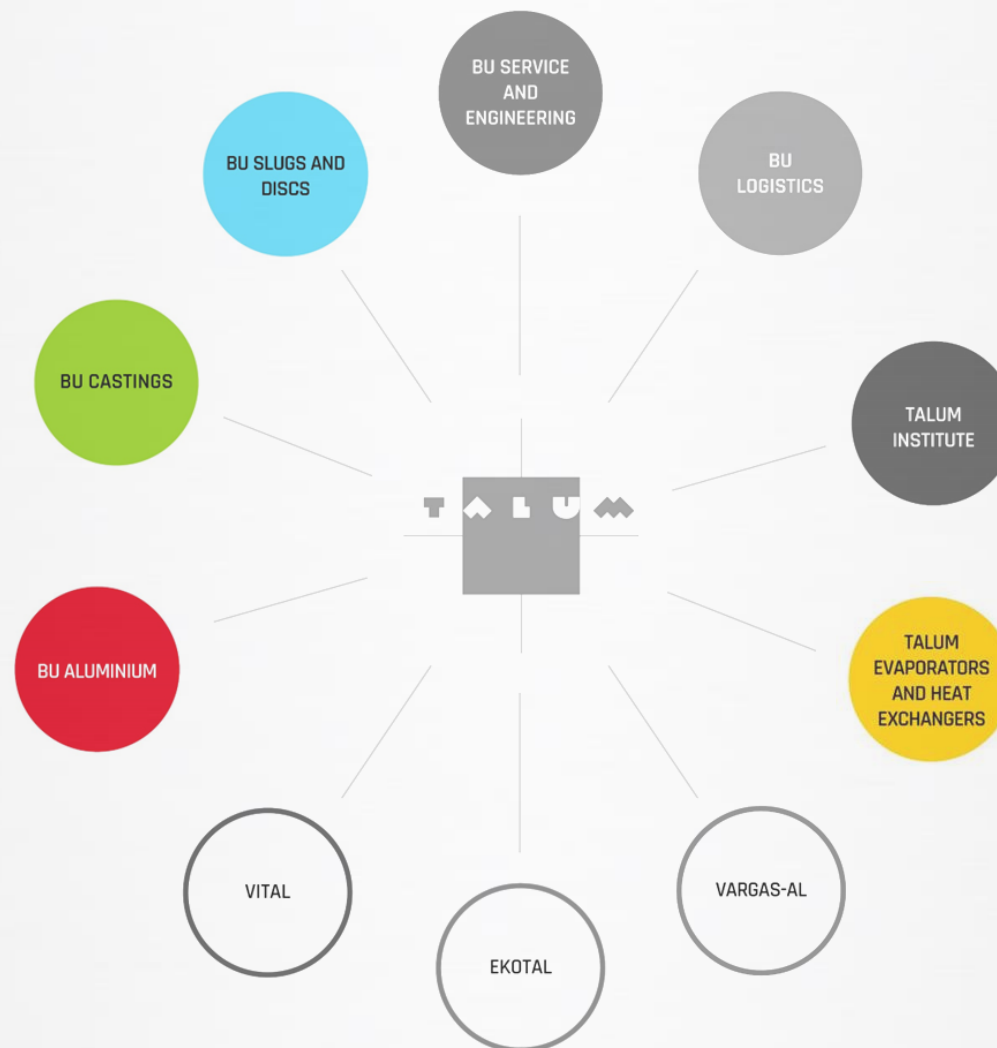


100ha of factory yard, production buildings > 100.000m<sup>2</sup>





Group Talum





# Certificates

- **IATF 16949:2016** Automotive quality management systems
- **ISO 9001:2015** Quality management systems
- **ISO 14001:2015** Environmental management systems
- **ISO 45001:2018** Occupational health and safety management systems
- **ISO 50001:2018** Energy management systems
- **TISAX (VSA-ISA)** Information security assessment , AL 3
- **ISO 17025:2017** Accreditation certificate for laboratory testing
- **Quality Assurance System** Pressure Equipment Directive 2014/68/EU

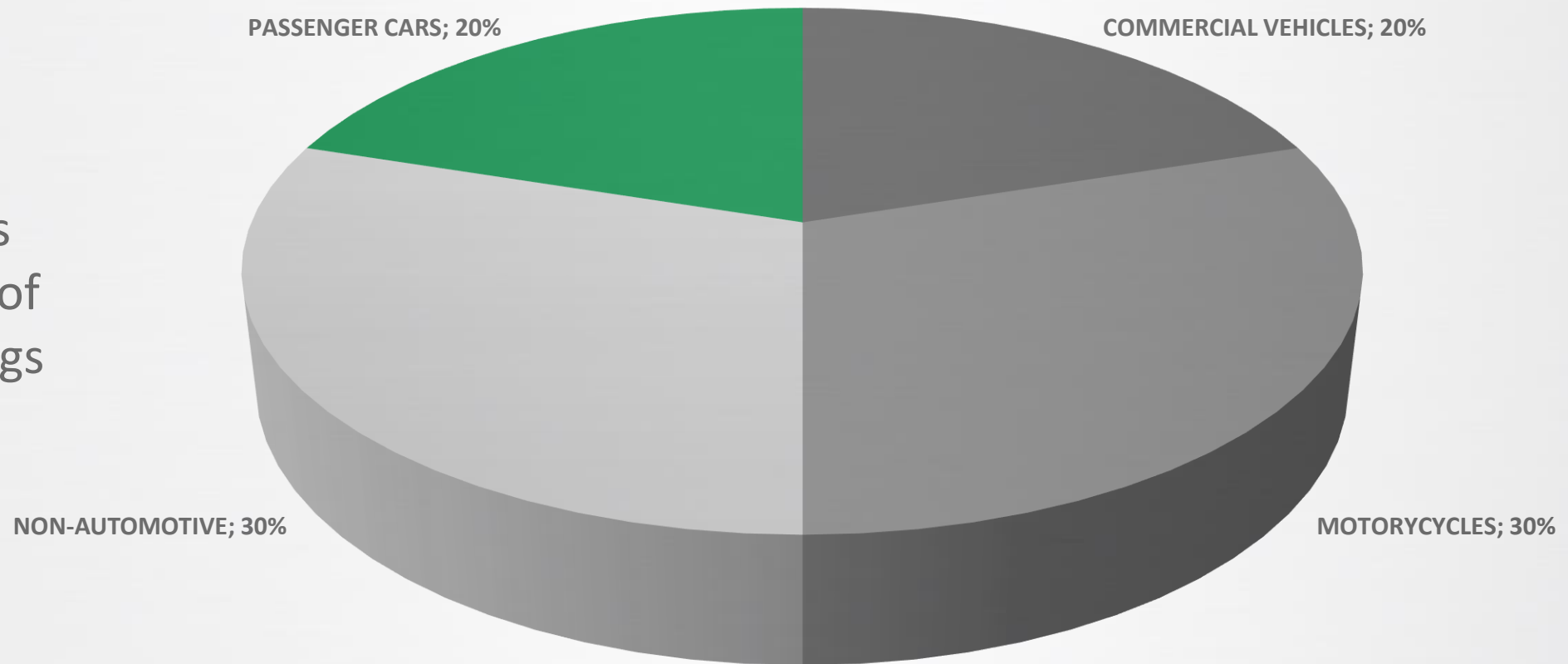


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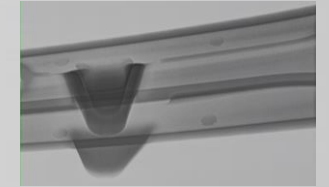
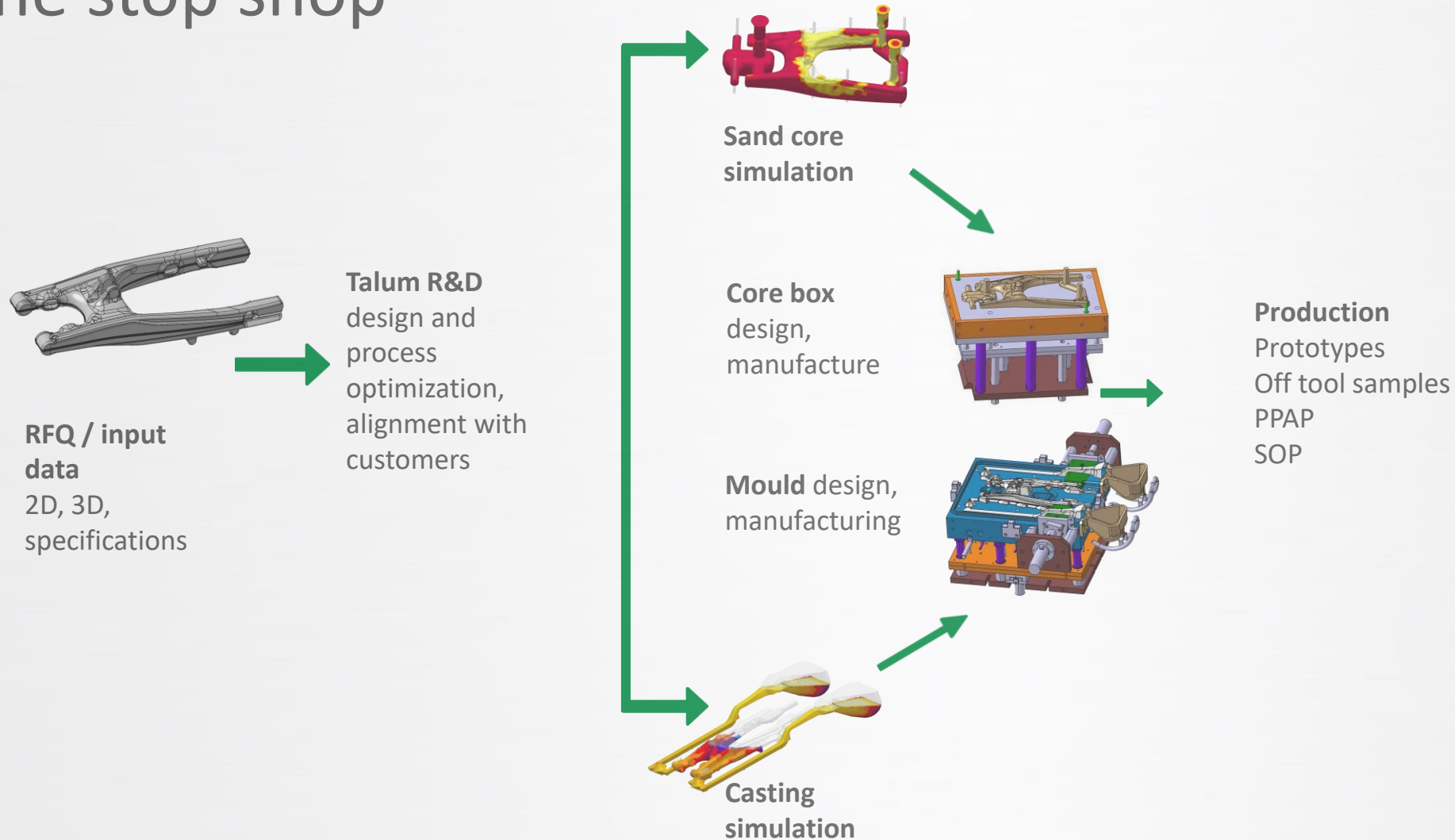


Business  
portfolio of  
BU Castings

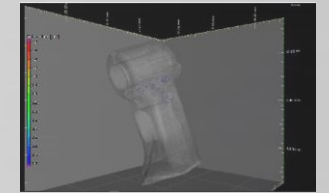




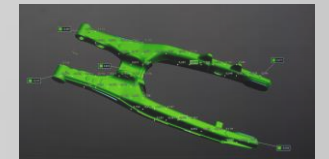
# One stop shop



X-ray



Computer  
tomography



3D scan



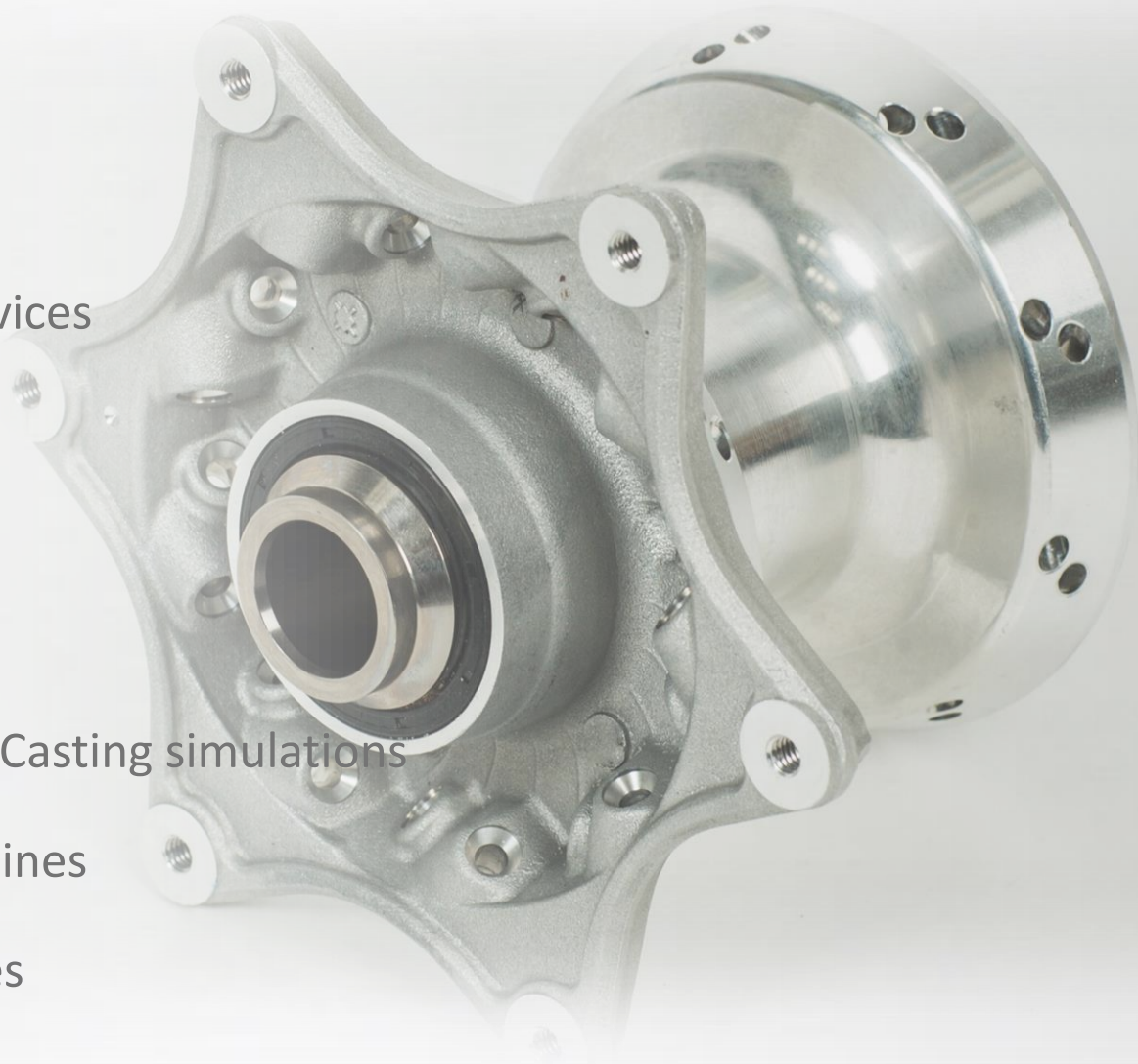
30 mm





# Development competences

- **CATIA V5-6:** Design of dies, clamping devices
- **AutoCAD:** Design of layouts
- **VX Elements, Geomagic:** 3D Scan
- **Volume Graphics:** Analysis of CT Data
- **MagmaSoft:** Core shooting simulations, Casting simulations
- **MasterCAM:** Programming of CNC machines
- **Calypso:** Programming of CMM machines





## Casting technologies

- HPDC - high pressure die casting
- LPDC - low pressure die casting
- GTC - gravity tilt casting

## Heat treatment (T5, T6)

- 40% of castings are heat treated

## CNC machining and assembly

- 80% of castings are CNC-machined
- 20% of castings are assembled (bearings, bushes,... )

## Other technologies

- Cracks control
- Passivation
- Powder coating, Anodization



Melting

Tilt gravity



Low pressure



High pressure die casting



Casting



Machining/Assembly





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## Automotive – passenger cars



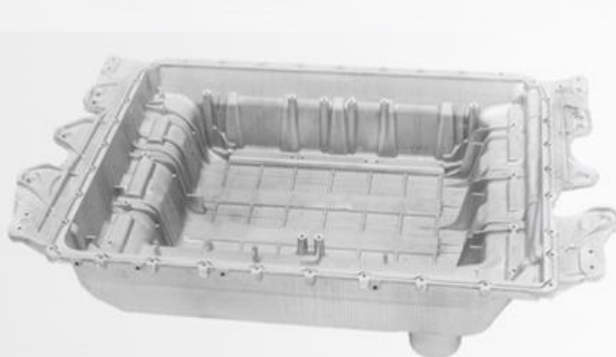
ENGINE PART - HOUSING



E-MOBILITY - STABILIZATOR

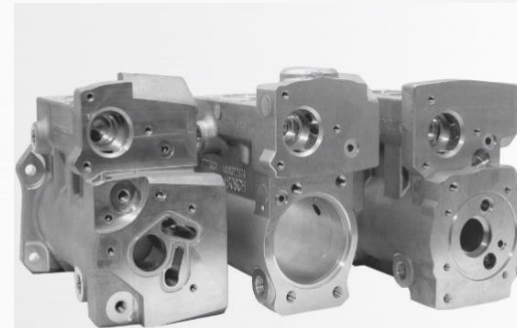


SUSPENSION BRACKET

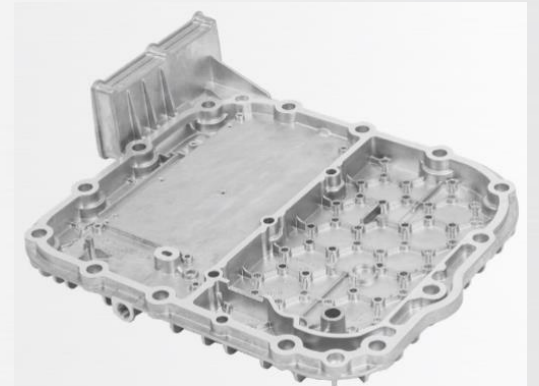


E-MOBILITY - BATTERY HOUSING

## Automotive – commercial vehicles



PUMP HOUSING



TRANSMISSION - ELECTRONIC



ENGINE PART



CAB BRACKET





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## Motorcycles



SWING ARM



AXLE HOUSING



HUB

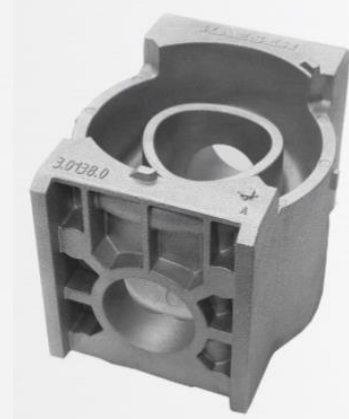


OIL SUMP

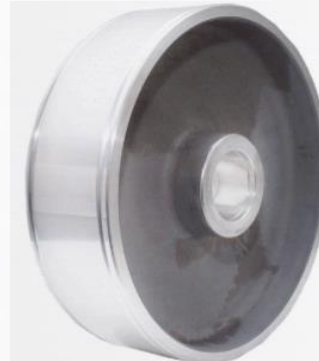
## Non - Automotive



HEAT EXCHANGER



FILTER HOUSING



ROPEWAY WHEEL



ELECTRIC SWITCHER BRACKET



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# Production equipment

## Melting

- ZPF
- MARCONI
- Hindenlang

## Melt preparation (degassing with Ar):

- Foseco

## Secondary alloys:

- AlSi8Cu3 (226A)
- AlSi9Cu3 (226D)
- AlSi12Cu1 (231)

## Primary alloys:

- AlSi7Mg0,3
- AlSi10Mg (239 A)
- AlSi10MnMg







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# Sand Core production

ColdBox technology,  
max. volume 65dm<sup>3</sup>

- Laempe (L20-65)







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# Gravity tilt casting

**Robotized pouring of metal  
and extracting of parts,  
automatic heating of dies**

16 machines

- Senator (KM 4-8)
- Talum (KM6)







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# Low pressure die casting

8 machines

- LPM (single, shuttle system)
- Röperwerk (single)







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# High pressure die casting

- 3 machines
- Bühler 105 Carat, closing force 1050 tons
- Bühler 140 Carat, closing force 1400 tons
- Bühler 180 Carat, closing force 1800 tons

## Other equipment

- Dosing furnace : Striko
- Spraying: Wollin
- Robot: Kuka
- Trimming: Weko, Diesse Presse
- Thermocast: Robamat







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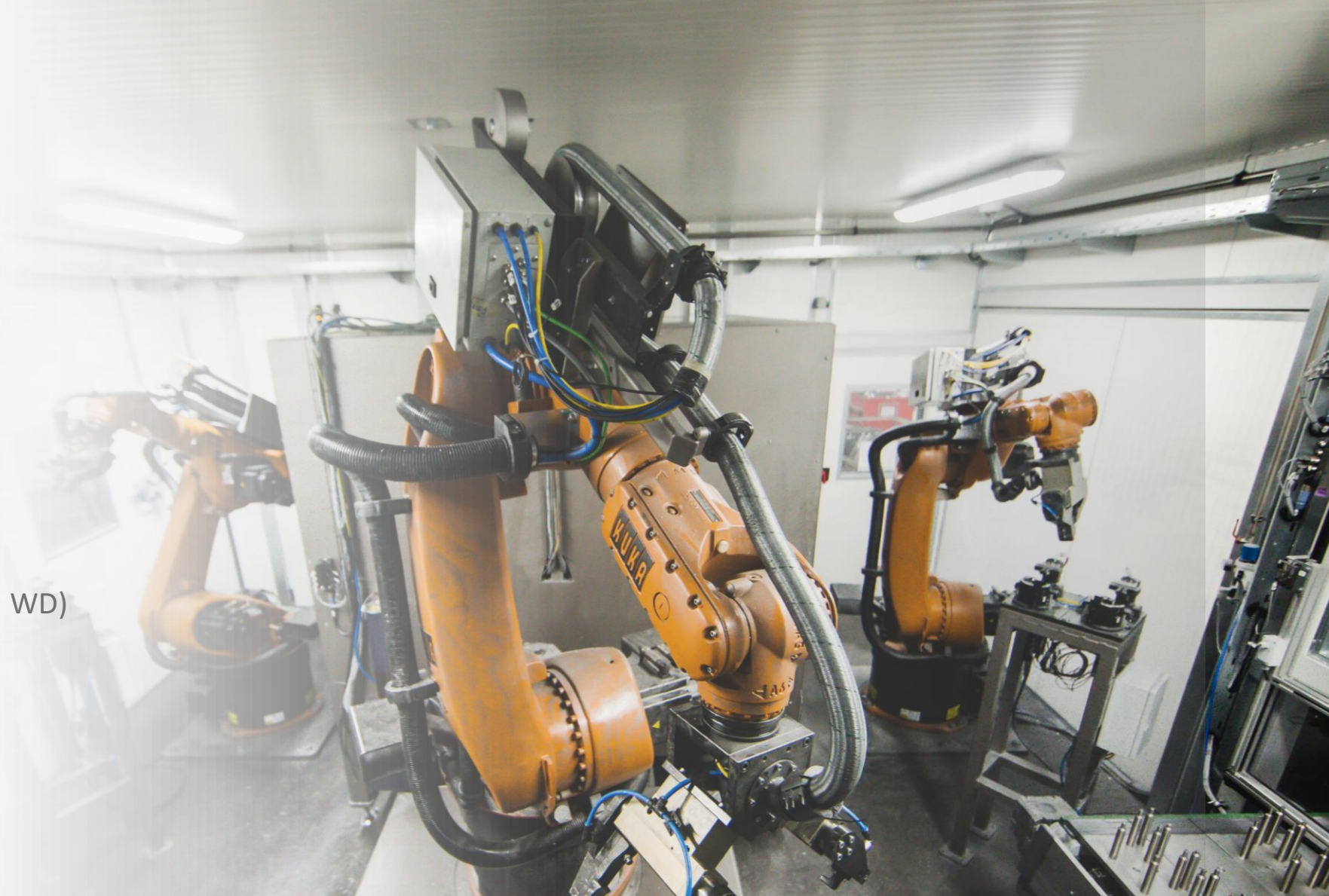
# Feeder cutting and deburring

## High volume solutions:

- Robotic cells; 2÷4 robots (Pakman, Talum)

## Mid and low volume solutions:

- CNC Milling 3 or 4 axes (Wemas, WD)
- CNC Sawing-milling machines 5 axes (Koyama)
- Manual sawing and grinding







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# Shot blasting

Stainless steel balls

- Cogeim
- Gostol

# Heat treatment T5, T6

- Otto Junker
- Rade Koncar
- Talum







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# CNC Machining

- CNC Milling; Double spindles;  
4 and 5 axes (Chiron, Licon)
- CNC Milling; Single spindle;  
4 and 5 axes  
Horizontal (Mori Seiki, Makino,  
Toyota, Unior) and Vertical (Doosan)
- CNC Milling; Transfer machine;  
6 stages (Gozio)
- CNC Turning; (Doosan)
- Part washer machines  
(Karl Roll, Hein Hesso, Nerkon)

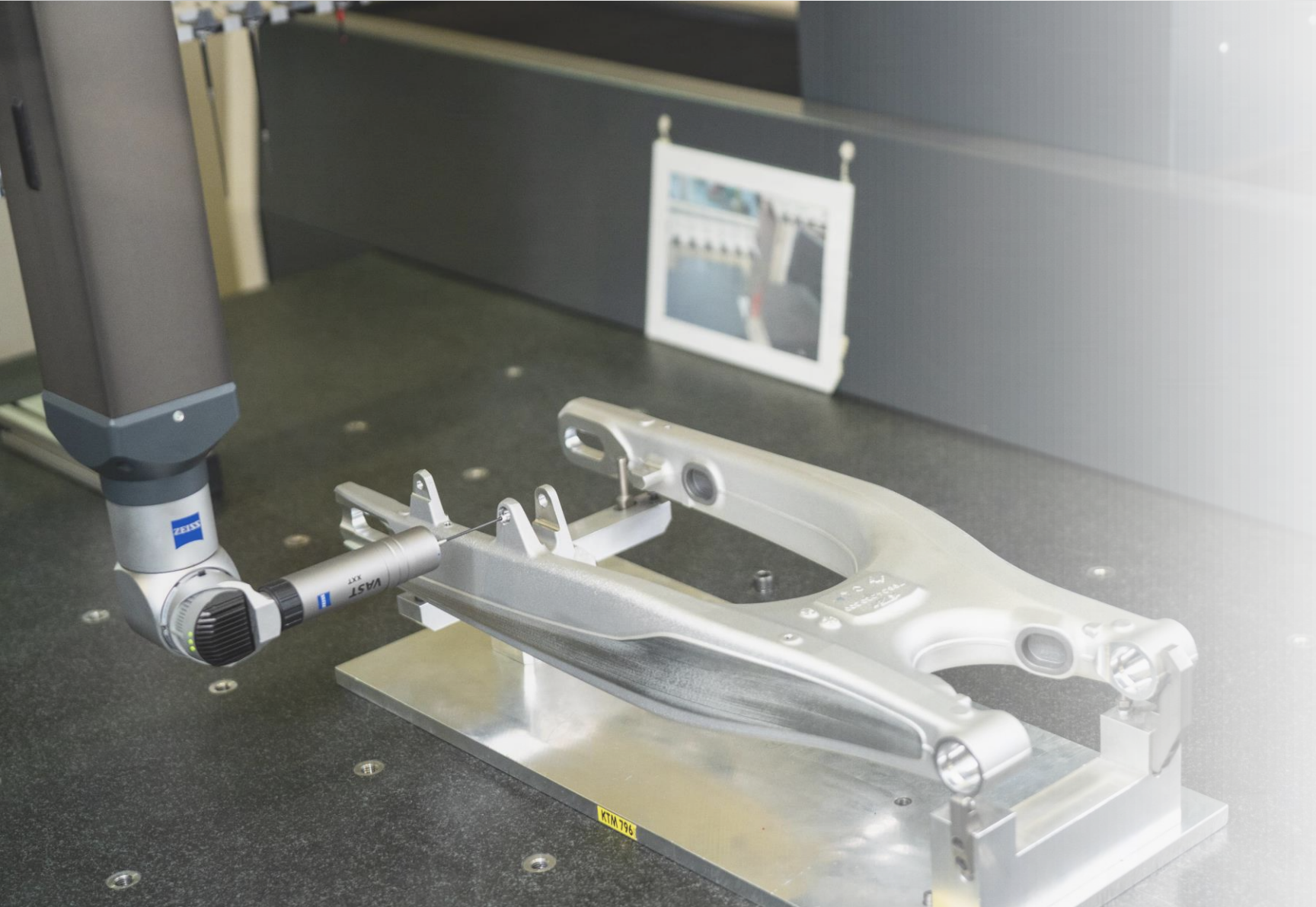






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## Laboratory, control equipment

- Spectrometry (ARL)
- Thermo analyze (Ideco)
- Vacuum test (UDIP)
- Microscopy (Leica)
- X Ray , Computer tomography (GE Seifert, Bosselo)
- CMM measurements (Carl Zeiss, Dea)
- Mechanical properties (Zwick)
- Surface roughness, contour-graph, profile projector (MAR)
- Leak test devices





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## Cleanliness laboratory

- cabinet Pall
- microscope Leica
- cleanliness inspection  
acc. to VDA 19.1 / ISO 16232



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## References







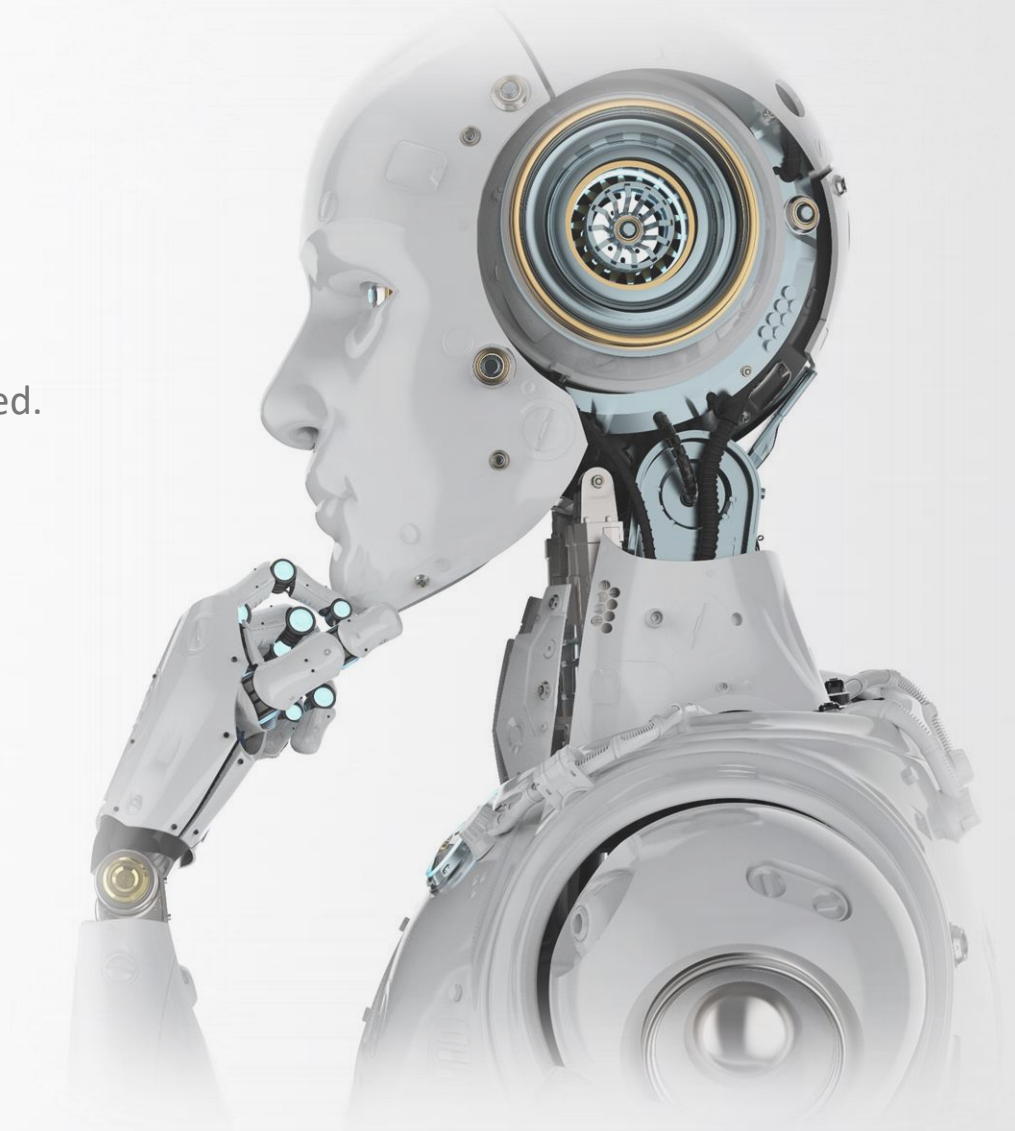
# Our strategy and strengths

## Strategy

- Intensive growth of castings production with implementation of automation, robotisation and digitalisation.
- R&D and Industrialisation of products with higher complexity and value added.
- „Zero defect“ strategy
- Green transformation

## Strengths

- Long tradition, expert knowledge, highly engaged employees.
- Intensive R&D work in co-operation with external research institutions.
- Good geographical location, reliable and long-term partnerships, outstanding list of international references.
- Access to financial resources for new investments.





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# Thank you for your attention

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