

LTC
LIGHTWEIGHT TECHNOLOGY CENTER

LTC GmbH is the leading Magnesium-Thixomolding manufacturer in Europe

- We process magnesium - the lightest structural metal on earth
- We process a metal which is sufficiently present in the earth crust
- We process a metal which is 100 % recyclable
- Our process uses 30 % less energy than comparable die casting processes
- Our process results in a considerably reduced ecological footprint, compared to similar production processes



G-MAG Europe
Spin Off MAGNA
Two 650 t Thixomachines



Increase Machiningpark
1.000 t Thixomachine
650 t Thixomachine
500 t Thixomachine



Investorwechsel
Investment in
X-Ray
Magma Soft Mold Flow
Tumbling Process
Installation of
500 t Thixomachine

Production expansion
Increase CNC machining



2006

2010

2014

2017

2019

2022

2023

2024-2026

Reformation LTC GMBH
Private Investor



Acquisition of MTC GmbH
1.000 t Thixomachine
650 t Thixomachine
500 t Thixomachine
Investment in

- Washing procedures
- Vibratory finishing
- Mechanical processing

Ramp up
Installation
1.000 t Thixomachine
Improvement of
Automatisation
Certification

- IATF 16949
- ISO 14001

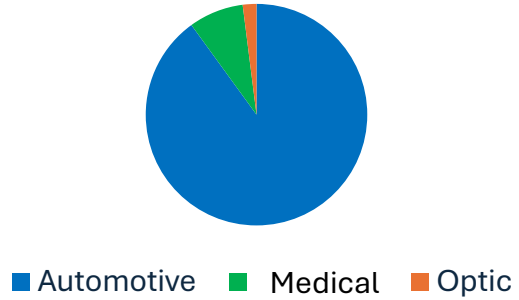
Expansion building

- New building
- Invest in new tumbling
- Increase automatisisation
- New Thixo's





Sales by Category

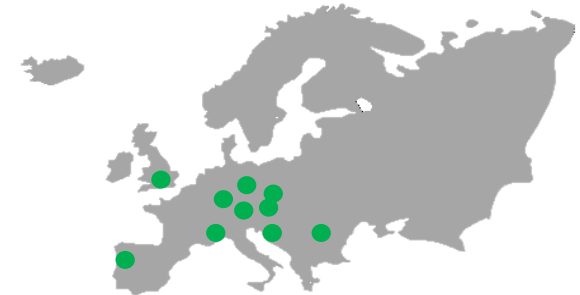


Sales 2024

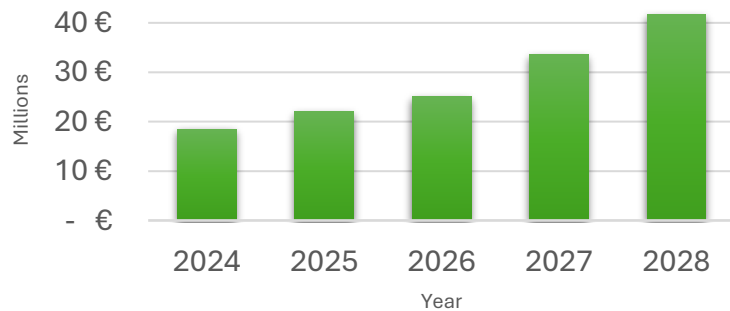


~17 € Mio.

Sales by Country



Sales Forecast



Employee



~ 80





QUALITY MANAGEMENT
ISO 9001



QUALITY MANAGEMENT
IATF 16949



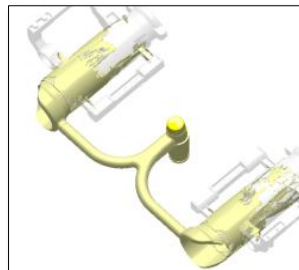
ENVIRONMENTAL MANAGEMENT
ISO 14001



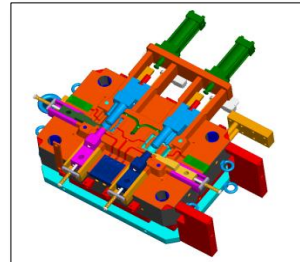
APQP project phase



Customer Order



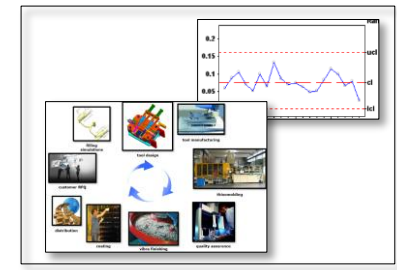
Flow-simulation



CAD

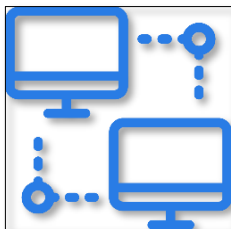


Tool manufacturing



APQP + R@R

Serial production



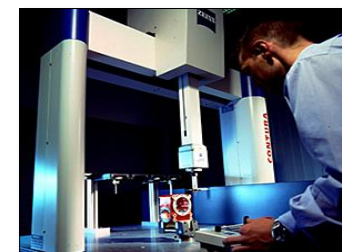
EDI transfer



Thixomolding and trimming



**Deburring processes
and part cleaning**



Inspection



Dispatch



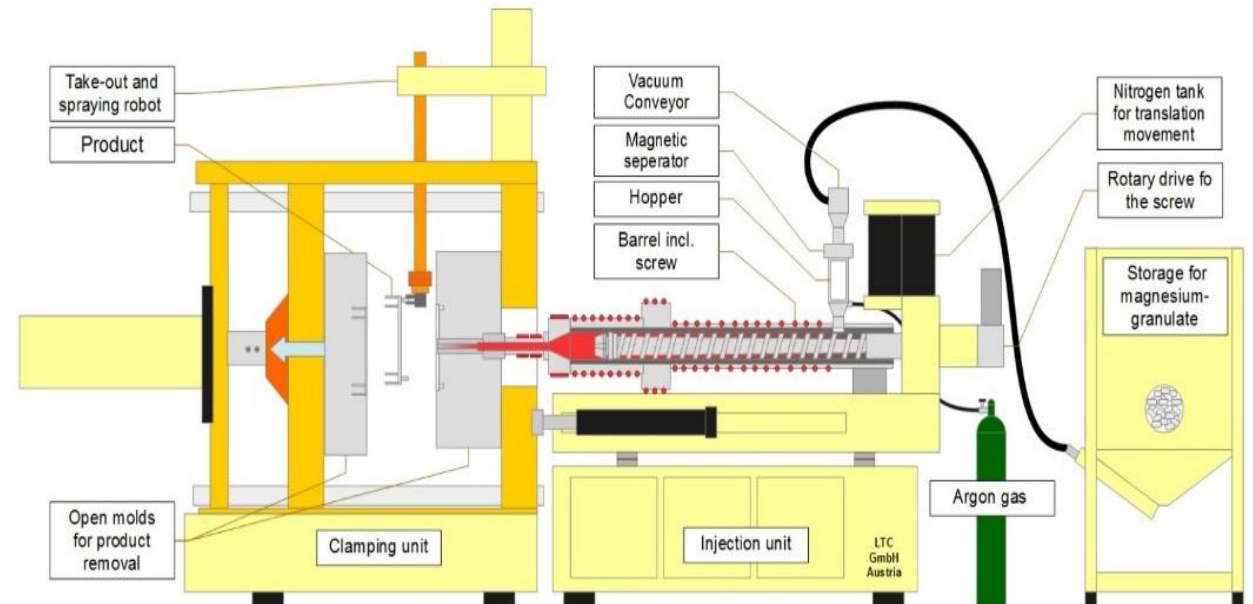
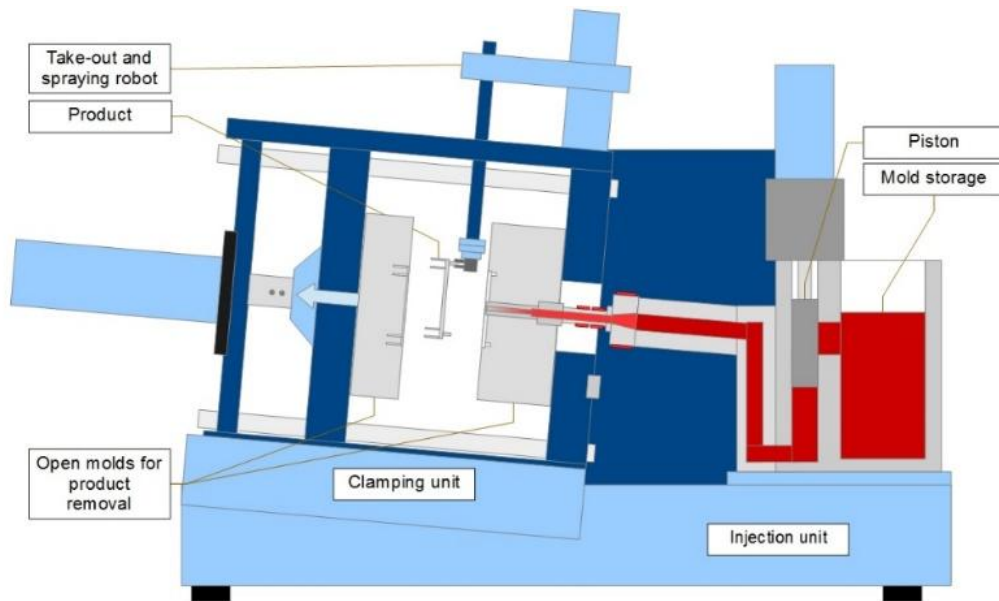
- It is possible to run the LTC Thixomolding production with 100 % green energy
- LTC is recycling at Austrian facility all runners and overflows and produces Thixomolding chips again
- Current percentage of recycled material in product mix is 30 – 40 % of part
- LTC constantly reviews value stream to improve production to save resources
- LTC has successfully installed 5 Thixomolding cells over the past 5 years



Conventional Die Casting

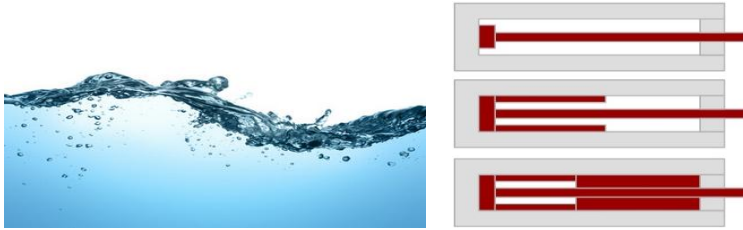
VS.

Thixomolding



Conventional Die Casting

Melt temperature 670 °C



Energy: 850 kJ/kg

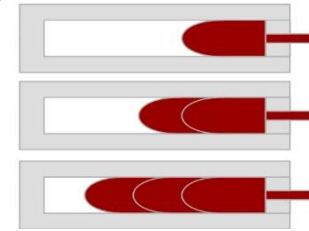
Protection gas : SF6, HCF-134a

vs.

Thixomolding

Melt temperature 585 °C

→ Semi-solid process



30% less energy



Argon gas

No greenhouse gases

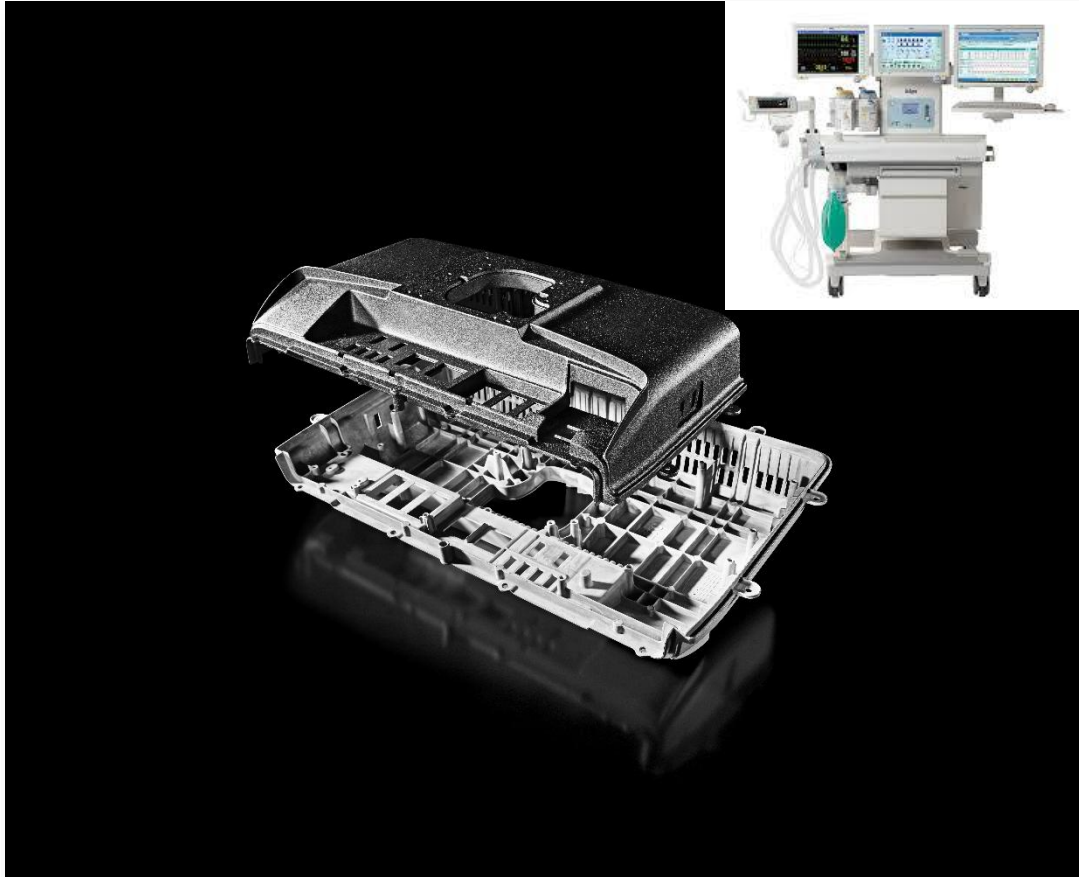
- + Close tolerances due to reduced temperature
- + Higher tool yield rate; 300 000 shots per tool
- + More cost effective due to minimization of machine



- **Lightweight:** Magnesium alloys are lighter than many other metals, making Thixomolding ideal for applications where weight savings are necessary, such as aerospace, automotive, and electronics.
- **Good Strength Properties:** Thixomolding allows the production of parts with high strength and stiffness, which is important for many engineering applications.
- **Excellent Surface Quality:** Thixomolding produces parts with smooth surfaces and tight tolerances, reducing or even eliminating the need for post-processing steps.
- **Low Porosity:** Porosity in Thixomolding parts is low compared to other casting methods, leading to improved sealing and corrosion resistance.
- **Formability of Complex Geometries:** Thixomolding enables the manufacture of complex components with thin wall thicknesses and intricate shapes that would be challenging or costly to produce using other manufacturing methods.
- **Energy Efficiency:** The Thixomolding process requires less energy compared to other casting methods as it operates at lower temperatures and pressures.
- **Environmentally Friendly:** Magnesium is a recyclable material, and Thixomolding can help reduce material usage, thereby minimizing environmental impacts.
- **Reduced Post-processing:** Thixomolding parts typically require less post-processing since they are manufactured with tight tolerances and good surface quality.







Rear Cover Medical

Material:	AZ91D
Dimensions:	390/225/73
Weight:	550 g
Customer:	Kontron
Application:	Display-carrier (medical)
Parts / year:	6.000 pcs.
Feature:	Powder-coating Total weight saving to aluminim on all components over 1,5 kg





Large CID-Housing with full class A surface

Material:	AZ91D
Dimensions:	750/150/100
Weight:	600 g
Customer:	German T1
Car brand:	German OEM
Application:	Housing for Central Interface Display
Parts / year:	200.000 – 300.000 pcs.
Features:	High accuracy casting with Powder Coating



CID-Housing

Material: AZ91D

Dimensions: 218/121/13

Weight: 60 g

Customer: Valeo

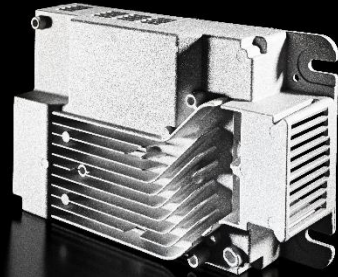
Car brand: PSA

Application: Housing for Central Interface Display

Parts / year: 500.000 – 600.000 pcs.

Features: KTL-coating





Housing

Material:	AZ91D
Dimensions:	217/120/52
Weight:	250 g
Customer:	Harman
Car brand:	BMW
Application:	Housing for control box
Parts / year:	600.000 pcs.

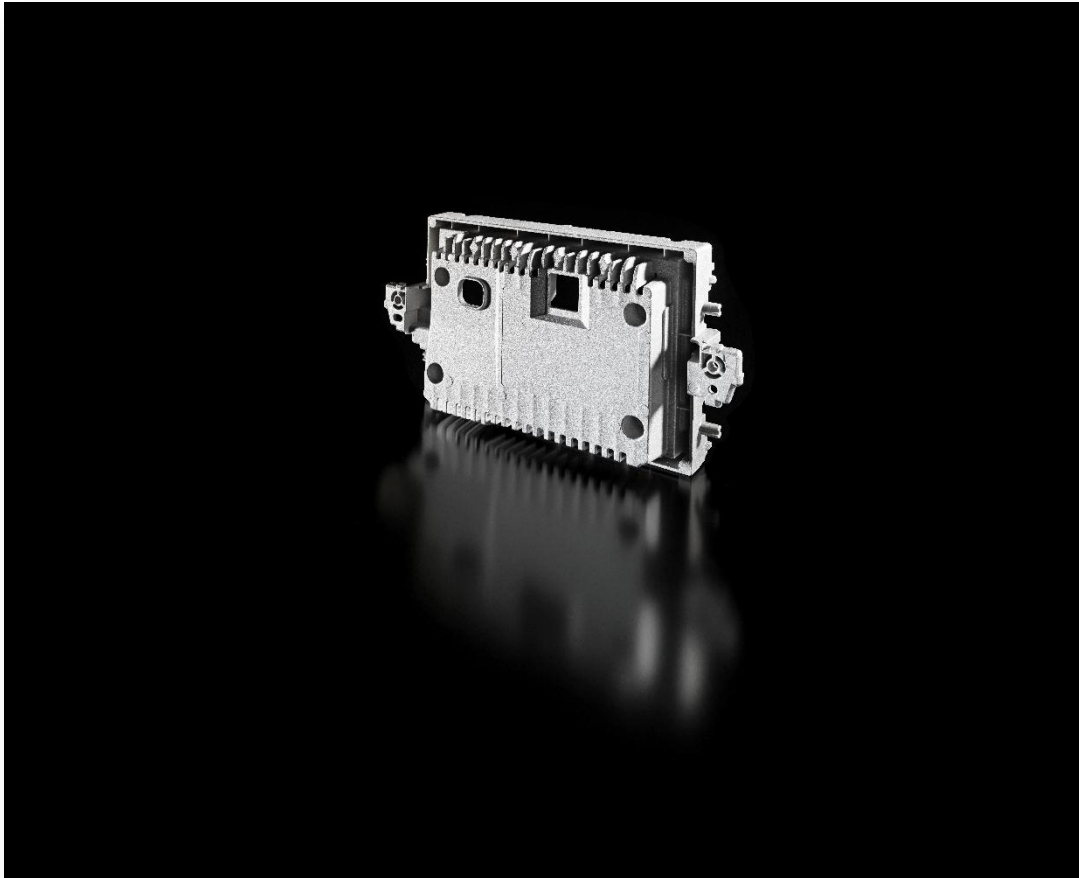




CID-Housing

Material:	AZ91D
Dimensions:	200/133/35
Weight:	200 g
Customer:	Visteon
Car brand:	Nissan
Application:	Housing for Central Interface Display
Parts / year:	300.000 pcs.





CID-Housing

Material:	AZ91D
Dimensions:	220/155/46
Weight:	230 g
Customer:	Visteon
Car brand:	Daimler E-Class
Application:	Housing for Central Interface Display
Parts / year:	50.000 – 70.000 pcs.





Seat frame

Material:	AM60B
Dimensions:	590/397/95
Weight:	1575 g
Customer:	Lear
Car brand:	Aston Martin
Parts / year:	10.000 – 15.000 pcs.

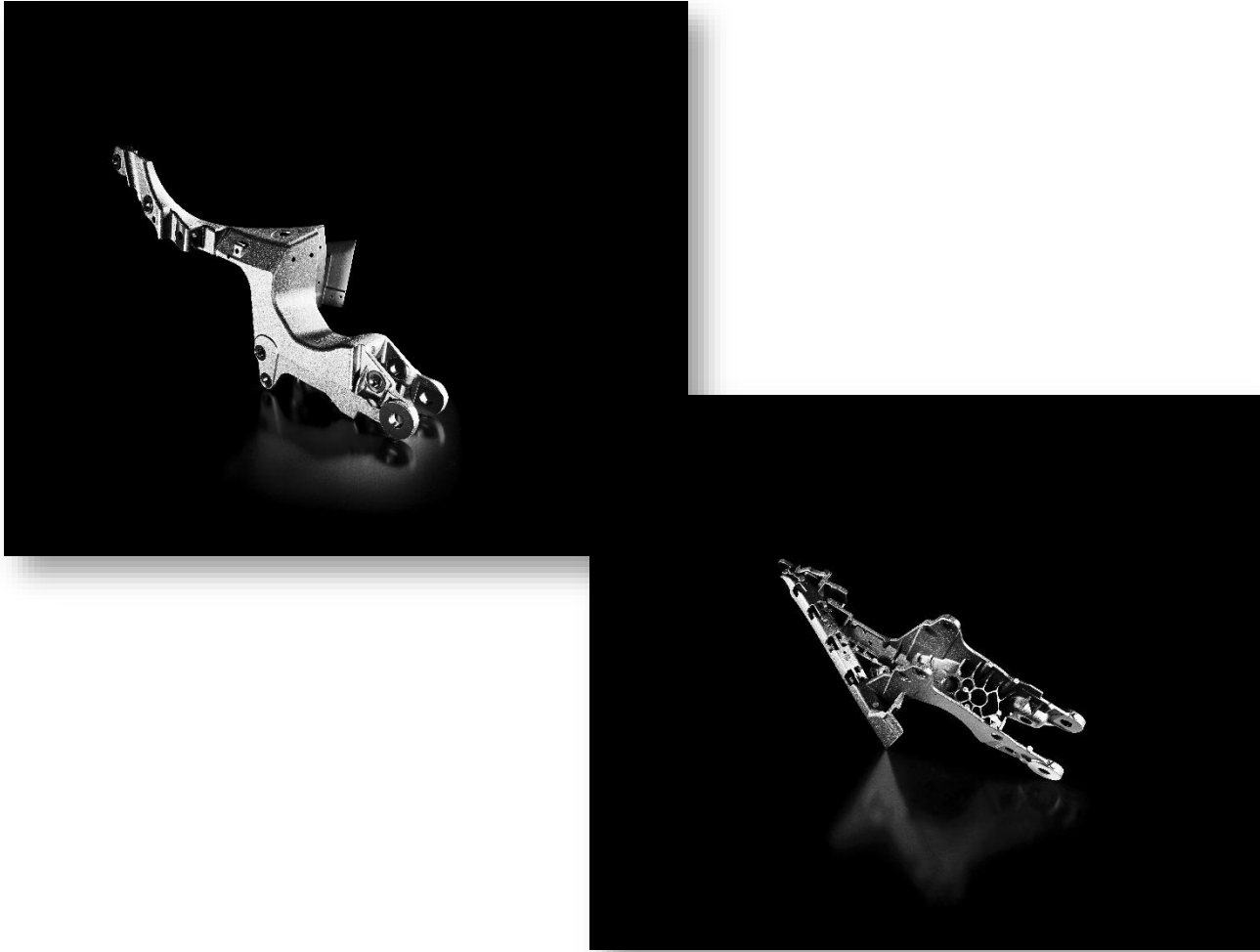




Roof fixation for convertible

Material:	AZ91D
Dimensions:	640/210/100
Weight:	1100 g
Customer:	Webasto
Car brand:	Audi
Parts / year:	10.000 – 15.000 pcs.
Features:	Powder-coating





Main column

Material:	AZ91D
Dimensions:	460/248/179
Weight:	1000 g
Customer:	Webasto
Car brand:	Audi R8
Parts / year:	1.000 pcs.
Features:	Powder coating

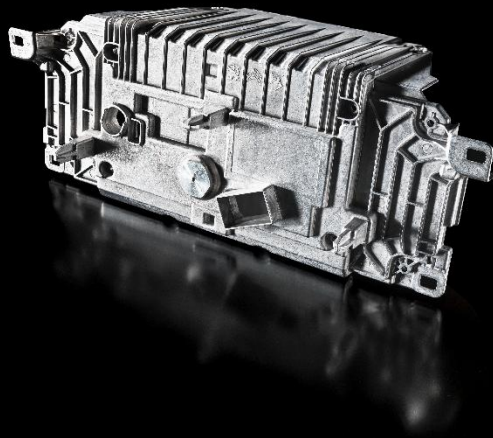




Carrier Frame

Material:	AZ91D
Dimensions:	160/148/95
Weight:	145 g
Customer:	Hella
Car brand:	Scania
Application:	Carrier for head lights
Parts / year:	60.000 pcs.





Rear Cover P2Q

Material:	AZ91D
Dimensions:	348/134/134
Weight:	280 g
Customer:	Visteon
Car brand:	PSA Group / Peugeot
Application:	Cockpit
Parts / year:	400.000 pcs.





Moveable arm (top part)

Material: AZ91D

Dimensions: 230/93/16

Weight: 200g

Customer: Paragon

Car brand: Mercedes

Application: Folding table (at rear seat)

Parts / year: 3.000 pcs.

Features: liquid coating/ visible component class A





Moveable arm (top part)

Material: AZ91D

Dimensions: 226/116/22

Weight: 160 g

Customer: Paragon

Car brand: Mercedes

Application: Folding table (at rear seat)

Parts / year: 3.000 pcs.

Features: liquid coating / visible component class A





Camera-housing (side part)

Material:	AZ91D
Dimensions:	262 x 139 x 28 mm
Weight:	184 g
Customer:	Arri
Application:	Movie camera
Parts / year:	200 pcs.
Features:	Powder-coating





Binocular Housing

Material:	AZ91D
Dimensions:	262 x 139 x 28 mm
Weight:	184 g
Customer:	Swarovski Optik
Application:	Binocular
Parts / year:	7.000 pcs.
Features:	Class A surface casting



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WIR MACHEN DIE WELT LEICHTER
LET'S CREATE A LIGHTER WORLD