

# Metalyss AG

Casting – Hot Forging – CNC Processing

*What we do, we do well!*

# The Company



Metalys AG is your specialist for aluminum sand- and die-casting and for forgings made of aluminum and brass. We can also process mechanically the blanks in-house and deliver ready-to-install parts or assemblies.

Founding year	1899
Employees	60
Factory area	6,500 m <sup>2</sup>
Annual turnover	CHF 12 – 15 Mio.

Competences / Products	Aluminum sand casting
	Die-cast aluminum
	Aluminum and brass forgings
	3D printing technology for sand molds
	Development/process simulation
	Heat treatment
	Mechanical machining

Product range	from 10 g to 250 kg
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# Aluminum Sandcasting



## Sandcasting

- Suitable for complex geometries
- Ideal for prototypes, small to large series
- Close to finished shape: little effort required for finishing
- Large range of material: optimal choice of material
- Environmental friendly: Material fully recyclable

Automated molding lines

2

Melting furnace capacity

1.5 t/h

Rapid prototyping

3D printing technology for sand molds

Unit weights

from 100 g to 250 kg

Batch sizes

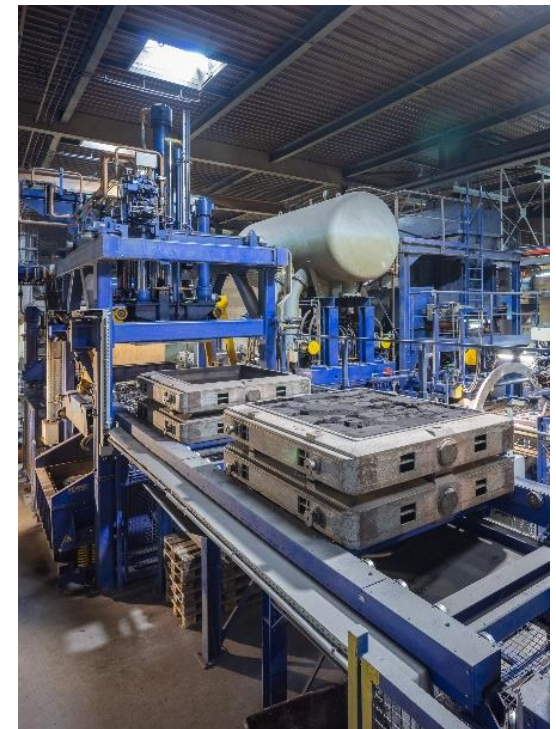
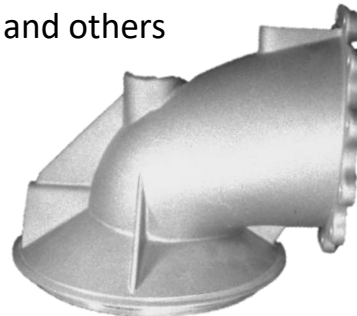
from 1 piece

Max. part dimensions

1,600 x 1,250 x 800 mm

Alloys

EN 1706 – AC 42100, AC 43300, AC 46200,  
44000 AC, 21100 AC, 51100 AC, 48000 AC,  
AC 21200 and others



# Aluminium die casting



## Die casting

- Thin wall thickness
- Fine surfaces
- Complex components can be produced in one process step
- No or very little post-processing effort
- Environmental friendly: Material fully recyclable

Unit weights

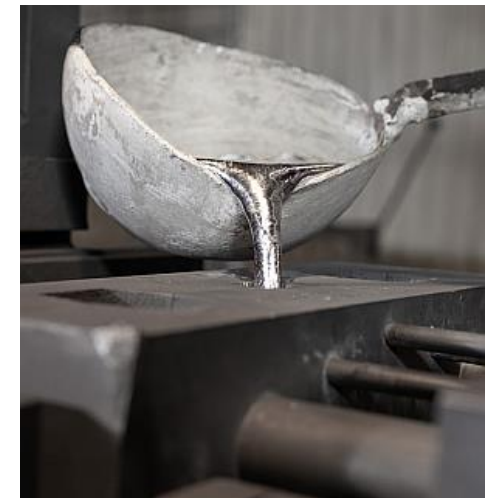
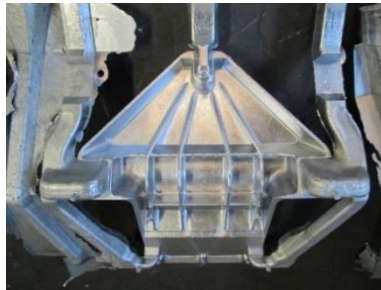
from 100 g to 8 kg

Lot sizes

from 100 pieces

Alloys

EN 1706 – AC 42100, AC 43300, AC 46200,  
44000 AC, 21100 AC, 51100 AC, 48000 AC,  
AC 21200 and others





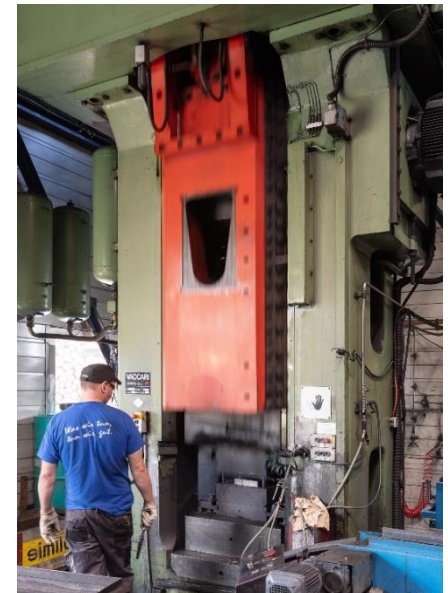
# Hot forged parts



## Forged parts

- Homogeneous structure (pressure and gas tight)
- High tensile strength, hardness and elongation at break thanks to optimized fiber flow
- Fine surface, suitable for decorative electroplating
- Precise deformation, therefore only little rework
- Economical utilization of the raw material

3 press units	1,100 t friction press, semi-automatic 200 t friction press, fully automatic 140 t friction press, fully automatic
Unit weights	100 g to 20 kg
Batch sizes	from 100 pieces
Alloys	AW-5083, AW-6060, AW-6082, AW-7075, Cu and other alloys

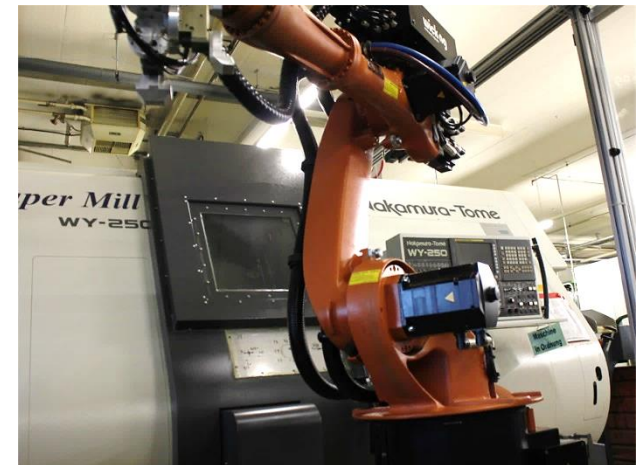


# Mechanical processing



## Maschine park

- 2 CNC turning/milling centres  
Max. Dimension  $\varnothing 215$  mm  
9 + 12 axes, 2 + 3 turrets, 24 + 36 driven tools, loading by robot
- 4 CNC milling centres  
3 to 5 axes, with and without pallet changer
- 2 CNC lathes  
Max. Dimension  $\varnothing 220$  mm  
With driven tools, with and without pallets



# Quality management



## Material

- Spectral analysis
- Density test
- Tensile strength
- Yield strength
- Elongation at break
- Hardness measurement

## Dimension + others

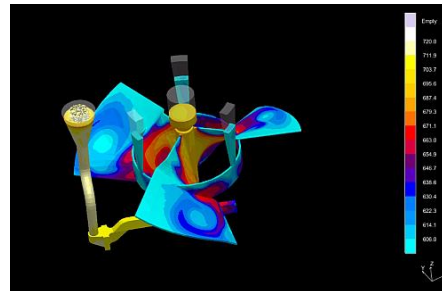
- Pressure test (max. 2 bar in water)
- Measurement report (+/- 0.005)
- Residual dirt analysis
- X-Ray



# Other services



- Co-engineering for cast and forged parts
- Delivery of blanks to ready-to-install components, machined and surface-finished
- Assembly and pre-assembly of components
- Competent advice along the entire process chain from prototype to series-production readiness
- Heat treatment: O, T1, T4, T5, T6 and T7, numerous others on request.
- Network:





The Swiss foundry  
that can also forge!

## Contact

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