

German Automaker

Achieve Faster Castings with Lower Costs

Premier auto manufacturer saved over 50% in costs and gained flexibility for casting design changes.



Customer Challenge

Automotive manufacturer needed a way to quickly and economically produce complex prototypes.

The Solution

Printed sand parts to form a complete package for creating castings.

ExOne Competitive Advantage

Additive manufacturing offers shorter lead times, accommodates changes in design rapidly and enables product design improvements at a reduced cost.

Conclusion

ExOne's digital printing process offered significant time and cost advantages over both conventional and other additive technologies for castings.

About ExOne

ExOne digital part materialization uses three-dimensional printing to create complex molds and cores directly from CAD data for a variety of industries, with accuracies of ± 0.011 in. or ± 0.3 mm. The ExOne process achieves geometric complexity and scale unmatched using conventional casting techniques. The process produces accurate, uniform cores and molds rapidly, significantly reducing lead times.

ExOne operates facilities across the Americas, Europe and Asia.

Specifications

Part: Formula 1 Transmission Housing

Batch Size: 5 pieces

Material Cast: Aluminum alloy 356

Material Printed: Silica sand with furan binder system

Printed Volume: 200 L for complete mold package

Traditional Method

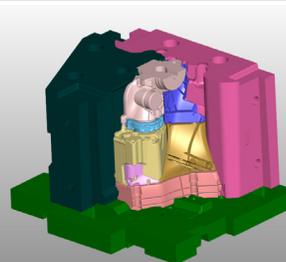
Patterns and tools for sand core forming, lost foam model parts.

Cost per Lot: 15,000-20,000 €

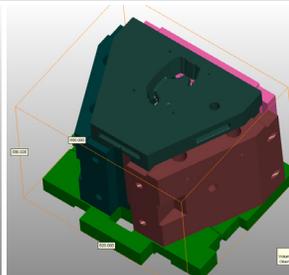
ExOne® Sand Printing Method

Production Time: 4 hours

Cost per Part: 1,500 €



CAD Rendering



CAD Rendering

To learn more, contact: www.exone.com