Pump Manufacturer

Save Significant Time and Cost in Spare Part Production

Leading pump manufacturer saved over 75% in costs and significantly reduced time for product development.

Customer Challenge
The manufacturer needed to quickly and economically create complex prototypes and spare parts to meet tight production schedules.

The Solution
Printed sand components were assembled to form a complete package, creating various pump designs for multiple pump applications (chemical, water, mining, oil submersibles, etc.).

ExOne Competitive Advantage
Additive manufacturing offers shorter lead times and drastically reduced costs, without patterns, maintenance or storage space requirements.

Conclusion
With ExOne’s digital printing process, superior results were achieved for both time and cost compared to conventional as well as 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 ± 0.3mm. 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**: Various pumps
- **Batch Size**: up to 5 pieces
- **Part Size**: 400 x 400 x 400 mm to 1000 x 1000 x 2500 mm
- **Material Cast**: Various steel casting alloys for multiple pump applications

Traditional Method
Several patterns, tools and models for mold and core making.

- **Time**: Several weeks for manufacturing
- **Cost per Lot**: 8,000 - 40,000 € based on size & complexity

ExOne® Sand Printing Method

- **Production Time**: 30 min-48 hrs
- **Cost per Part**: 240 - 10,000 €