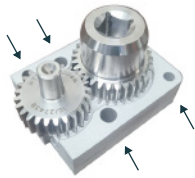




Case Study **Atlas Copco**

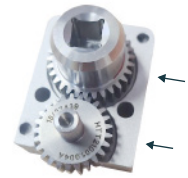
Aerospace | Defence | Space



Cast Holes



Cast Recessed Lettering



Machined Gears

Driving Production Benefits Through Conversion from Machining to Casting

When Atlas Copco approached Sylatech to investigate cost-down opportunities of some components, our engineers quickly stepped into solution exploration mode. Gaining a detailed understanding of the part's function and its operating environment was a crucial first step, as was interrogating the existing tolerances, and potential areas for design allowances.

Our Solution

Working with a Solidworks model, and through Sylatech's additive manufacturing suite, initial wax prototypes of the parts were created, which were subsequently cast as metal components in LM25. This was a conversion of the metal from 6082, and destruction tests were undertaken to demonstrate the strength of this aerospace grade aluminium. Key aspects of the casting process resulted in a successful conversion from machining to casting.

Key Features

- Maintaining the design without the need for draft angles or increased radii
- Replicating the overall shape dimensions, whilst maintaining the visual integrity of the part
- The solution was sampled and approved within 8 weeks, and production orders followed soon after
- The volume sweet spot for converting from machining to casting is typically sub 1,000 parts, and a minimum quantity of 50.

Key Benefits

- Integrating cast holes, and therefore removing the need for machining operations
- Including engraving in the tool, thus removing the need for laser etching
- Cost savings made of 54% were achieved, with the tooling and conversion costs met after 3 months.

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