

Best-In-Class



Laparoscopic Surgery Instrument Aristo-Cast Inc., Almont, Mich.

Material: 316L stainless steel.

Process: Investment.

Weight: 2.4-34 grams.

Dimensions: 0.465 x 0.248 in.
(smallest part)

Application: Medical industry surgical equipment.

Converted from: Machined components.

- The seven tiny parts have wall thicknesses as low as 0.035 in. and slots of 0.04 in. The “stationary jaw” part has a 0.04-in. diameter hole through two interior walls and could not be machined.
- The customer was unable to find another metal component manufacturer who would produce the parts in the required size. Casting was determined to be the best process for meeting the detail and tolerance requirements of the parts.

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Fuel Filter Housing Bombardier Recreational Products Inc., Spruce Pine, N.C.

Material: 356 T-6 aluminum.

Process: Lost foam.

Weight: 17.7 lbs.

Dimensions: 10.5 x 7.5 x 10.5 in.

Application: Heavy truck fuel filter.

- A complex coring design produced seven independent passages that had to be tight to 2.5 cu. cm per minute at 6 bar units of pressure. The original design was simpler, but lost foam allowed the more complex coring to produce a better fuel route through the filtration system.
- As the initial design evolved, numerous features and passages were added to enhance the final product. The lost foam process allowed the design flexibility needed to consider and implement these iterations.