



SYSTEMS3D

innovation in 3D solutions

Conformal Cooling

We offer a wide range of processes that are suitable for every commercial, industrial, and consumer - based application and all our equipment provides industrial grade accuracy.



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Conformal Cooling Information

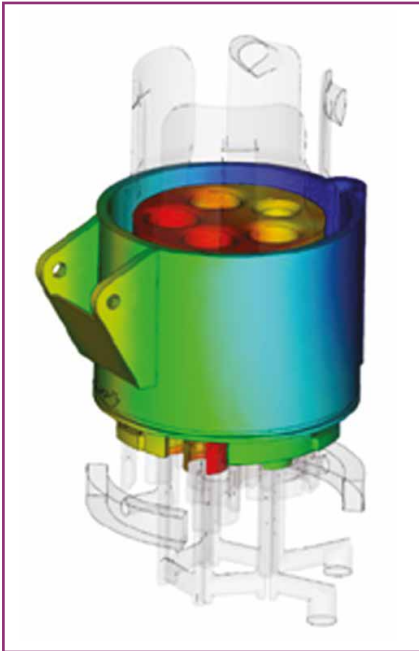
Injection Mould Inserts

Conformal Cooling is design strategy implemented when designing injection mould inserts and has been revolutionised by 3D Printing. Cooling Circuits within the insert closely follow the geometry of the insert reducing or eliminating cooling dead spots.

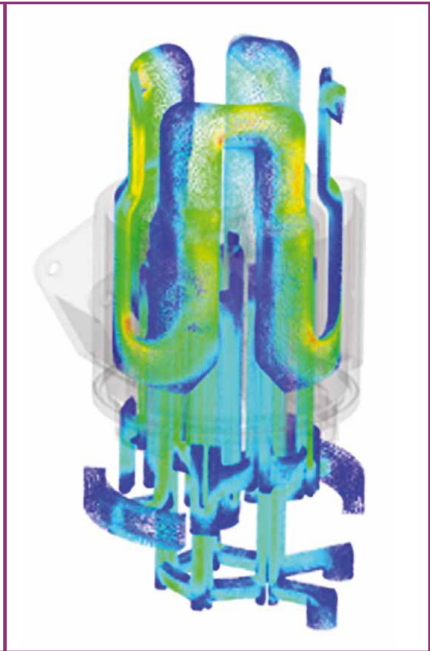


Benefits of Conformal Cooling

- Cost Savings
- Improve Product Quality
- Reduce Cycle Times
- Enhanced Product Offering
- Increased Customer Satisfaction



Simulation of the injection cavity filling

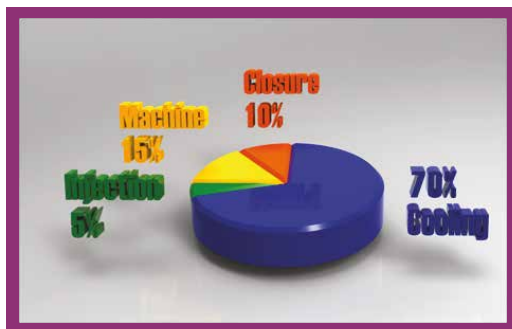


Coolant flow simulation

Save Money by Reducing Production Costs

Cooling Cycle

Injection Mould Process Cycle Time is comprised of 70% cooling time.



Conformal Cooling can reduce the cooling time by 40%.

Reduce Defects and fallout caused by :

| | | | | |
|---------------|--------------|----------------|----------------|--------------|
| • Flow Lines | • Sink Marks | • Vacuum Voids | • Delamination | • Weld Lines |
| • Short Shots | • Warping | • Burn Marks | • Jetting | • Flash |

Improve Quality

Conformal Cooling Improves quality by eliminating

| | | | |
|--------------|--------------|-----------|--------------|
| • Sink Marks | • Weld Lines | • Warpage | • Burn Marks |
|--------------|--------------|-----------|--------------|

Extended Cooling time or Improper Cooling leads to unnecessary and added production costs and these problems can be alleviated with Conformal Cooling.



Conformal cooling

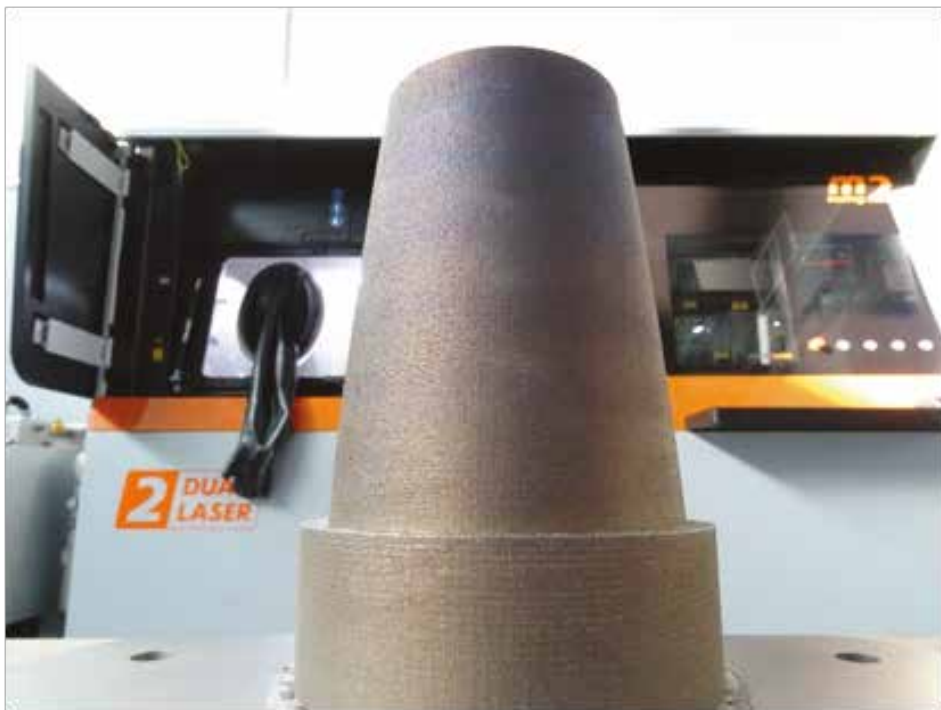


3D printed insert

Finished insert in a mould



The combination of our experienced design team and additive manufacturing capabilities allows us to effectively and successfully analyse your moulding processes and produce mould inserts that will greatly enhance your moulding processes and save your money.



Cost-Free Analysis

Let ME 3D Conduct an Injection Moulding Process and Economic Analysis.

Information Needed to Complete an Analysis

- 3D File of the plastic part in STP, STEP, IGES, or SLDPRT format.
- 3D File of complete mould STP, STEP, IGES, or SLDPRT format.
- Process chart for related injection moulding machine.
- Moulding Machine specifications.
- Production material specification.
- Current difficulties and concerns with moulding process.

