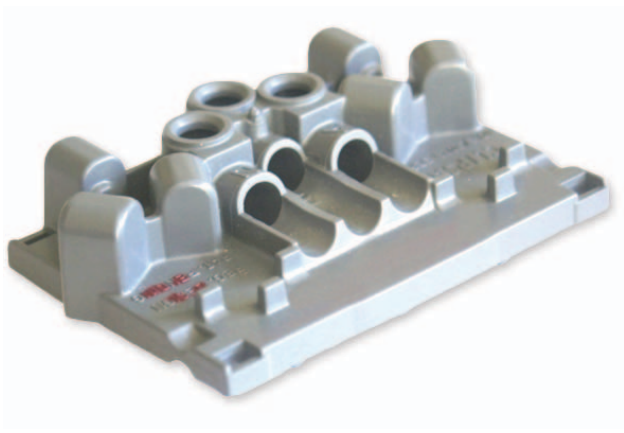


Technical

Ritemp advances in-mould cooling for both simple and complex part geometries. This improves cycle times, crystallization and dimensional stability of each part in single and multi-impession moulds. Shot-to-shot repeatability and reduced in-mould stress, improves product quality, which improves yield for assembly processes.

Less mould maintenance is required, water hoses are reduced, and investment in external water heaters is not required.



challenge

To create good cooling in a 4-cavity mould with small inserts and 9 ejector pins. Reduce cycle time and provide consistent part supply to post automation assembly line 24hr 6 days/week

conventional mould

Limited cooling due to real estate restrictions forced excessive curing time.

part details

Weight:15.0 g (total 60g)

Nominal Thickness:1.50mm

Size:90x60x15mm

Material:Noryl

evaluation

1. Part analysis used to determine optimal curing time
2. Mould design analysis to determine cooling design that covers 100% of part geometry
3. Projected cooling time savings of 50%

Ritemp™ benefits



30% faster cycle time



Halved cooling time



One external cooling in/out let per mould half



Still in production after making 48 mil parts

challenge

For post moulding automation the parts required to have improved flatness and dimensional tolerances.

current mould / part characteristics

Conventional:16 cavity

Current Cycle Time:24 sec

part details

Weight:4 g

Nominal Thickness:2.3mm

Max Thickness:2.8mm

Material:15%GF PETG

Flatness achieved with 16 cavity mould 0.18mm

evaluation

1. Part analysis used to determine optimal cycle
2. Projected cycle time reduction secondary to improved flatness and tolerances
3. Cooling chamber etc

Ritemp™ benefits



Cycle for 32 Cavity mould 22 sec



Water/Energy savings



Flatness improved to 0.055mm



Standardization of A&B plates across the range of moulds



substantial reduction in reject rate in post moulding assembly



High tolerance consistency across all cavities