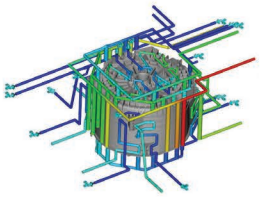
"Get it Right the 1st Time!"

CONSULTING LCC SIMULATION MOLD-VAC SOFTWARE TRAINING

Our Consulting Levels

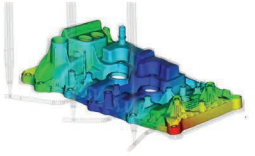
AUTODESK. Reseller



Appliances

Bronze LCC

Not concerned with cycle times or warpage? Our budget conscious Bronze LCC level is a perfect fit for those who understand the "real" costs associated with "trial & error." Simply send part data, material info and let our LCC group do the rest! We'll evaluate gate size & weld line locations and provide clamp tonnage results within days. Reduce mold start-up costs with our simple and cost effective LCC Simulation approach to Moldflow analysis.



Automotive

Bronze Plus

Truth be told not all part designs have stringent warpage tolerance objectives or require warpage optimization, a "Just to be Sure" review of the part & mold design is often sufficient. So if your part design is frozen and an "Expert Certified" analyst is required to evaluate gate size, drop locations, bore diameter sizing, SVG, clamp tonnage, Cooling & Warpage results to minimize risk then consider our Bronze Plus Level.

Electronics

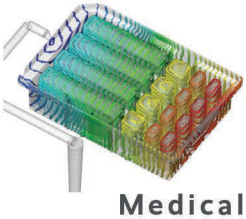
Silver

Save time & money by evaluating your part design prior to sourcing to your mold builder. Our staff will recommend part design changes to optimize your processing window so that there are no surprises during mold sampling. Silver level results include; gate sizing, drop locations, bore diameter sizing, SVG timing sequencing, identifying weld line locations, calculate shear rate, volumetric shrinkage, clamp tonnage, and Isothermal warpage trends. Unlimited gating iterations are provided @ no additional cost. Cooling analysis is available at the Gold Level.

Furniture

Gold

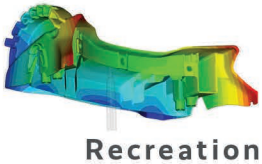
Need Warpage optimization? Our solution based Gold level provides unlimited part design and tooling recommendations necessary to identify potential problems. After receipt of your part data, we'll optimize gating & drop locations and upon receipt of the mold design, we'll predict and determine the primary cause of warpage. Our Expert Certified staff will then recommend the part or tool design changes required to minimize warpage and improve the processing window. Our Gold level is an absolute "must have" if warpage is a concern.



Medical

Platinum

Your part design is frozen, can't change the material or gate location. Now what? Developed for "Part to Print" or tight tolerance applications, and for processors who want to reduce the costs & timing associated with numerous "tuning loops." Our Platinum level is a method of biasing the mold cavity in the opposite direction (windage) to the measured warpage in order to have the part warp into its intended shape. If you have experienced "part to print" issues in the past and want to save time and money in the future, then consider our Platinum process.



Recreation

Titanium

Specialty Services, i.e. Gas Assist, Injection/Compression, Encapsulation, Co-Injection, 2/3 Shot and MuCell. Have a challenging application or require an experienced team of Expert Certified Moldflow analysts? Call us @ 630.761.9898

Flow	CAE International LLC moldflow Simulation	BRONZE	SILVER	GOLD	GOLD PLUS
Gate size & location		♦	●	■	❖
Gating Iterations	*(3)*	*4-5*	*As Required*	*Unlimited*	*Unlimited*
Fill time & Pattern	❖	♦	●	■	❖
Pressure to fill	❖	♦	●	■	❖
Cold runner sizing / balancing	❖	♦	●	■	❖
Hot runner drop locations, bore diameter sizing, VG		♦	●	■	❖
Sequential valve-gating		♦	●	■	❖
Shear rate / Residual stress	❖	♦	●	■	❖
Fiber alignment	❖	♦	●	■	❖
Weld/ meld line locations / air trap prediction	❖	♦	●	■	❖
Sink location	❖	♦	●	■	❖
Overmold / Inserts			●	■	❖
Pack					
Gate freeze time (gate sizing)	❖	♦	●	■	❖
Packing pressure profile (shrinkage uniformity)	❖	♦	●	■	❖
Volumetric shrinkage	❖	♦	●	■	❖
Clamp tonnage recommendation	❖	♦	●	■	❖
Isothermal Warpage					
Fill/Pack inputs only (no cooling)	❖		●	■	❖
Warpage trends	❖		●	■	❖
Cooling Analysis					
Cavity / core surface temperatures				■	❖
Cavity core surface temperature differential				■	❖
Cycle time based on average part temperature				■	❖
Evaluate proper cooling channel sizing & locations				■	❖
Coolant temperature rise (circuiting analysis)				■	❖
Insure turbulent flow rates (GPM), evaluate processing conditions				■	❖
Evaluate various steel types or inserts				■	❖
Conformal cooling				■	❖
Warpage Analysis (cooling based)					
Fill/Pack/Cool				■	❖
Warpage magnitude (CRIMS data is required)				■	❖
Determine primary cause of warpage (solution-based)				■	❖
Part design recommendations to reduce warpage				■	❖
Windage					
Determine windage shape & scale factor					❖
Provided morphed CAD solid for tooling, stitched & draft-corrected (CATIA)					❖
Part Design					
Revisions, updates		*Optional*	*Optional*	*(2)*	*Included*
Process Optimization				*Optional*	*Included*
Deliverables					
MFR files only	❖				
On-Line reviews	*Optional*	♦	●	■	❖
Final report summary	❖	♦	●	■	❖

PLATINUM
Gas Assist
2/3 Shot & Overmold
Injection/Compression & Co-Injection
MuCell
Thermoset

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