



# Analysis Quotation Requirements (AQR)

Flow, Pack, Cool, & Warpage

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## 1 Customer Information

Company	Date
Contact	Project Name
Phone	<b>Process:</b>
Direct	<input type="checkbox"/> Injection <input type="checkbox"/> 3-Shot
Cell	<input type="checkbox"/> Co-Injection <input type="checkbox"/> Injection Compression
E-mail	<input type="checkbox"/> 2-shot <input type="checkbox"/> Gas

## 2 Delivery Requirements

Flow & Pack	Preliminary Due Date:	Final Report:
Cool & Warp	Project Name:	Final Report:

## 3 Data Transfer

**For files up to 6MB please forward to DaveS@caeservices.com**

- Files larger than 6MB must be posted on our FTP site.
- Please contact Dave Stinson at 630.761.9898 ext. 27 for instructions

## 4 Part Data

<input type="checkbox"/> Cadkey Solid	<input type="checkbox"/> Iges (trimmed surfaces)	<input type="checkbox"/> Pro/Engineer part file (prt.1.)
<input type="checkbox"/> Catia (.exp)	<input type="checkbox"/> Parasolid (.x_t)	<input type="checkbox"/> Step (.stp)
<input type="checkbox"/> Catia (.model)	<input type="checkbox"/> Solidworks (.sldprt)	<input type="checkbox"/> Unigraphics (.prt)

## 5 Indicate Material Data

	Supplier/Grade	Type	C.R.I.M.S.
Primary:			<input type="checkbox"/> Yes <input type="checkbox"/> No
Secondary:			<input type="checkbox"/> Yes <input type="checkbox"/> No

## 6 Mold Builder / Tooling Source Information

Company:	Phone:
Contact:	Cell:
Position:	E-mail:

## 7 Mold Specifications

Mold Status:	Mold Type:	Gate Type:	Runner Type:
<input type="checkbox"/> Existing Mold	<input type="checkbox"/> 2 Plate	<input type="checkbox"/> Cashew	<input type="checkbox"/> Cold
<input type="checkbox"/> New Mold	<input type="checkbox"/> Inserts	<input type="checkbox"/> Direct gate	<input type="checkbox"/> Hot Manifold
# of Cavities: _____	<input type="checkbox"/> Family	<input type="checkbox"/> Edge	# of Drops : _____
	<input type="checkbox"/> Stack	<input type="checkbox"/> Fan	<b>Sequential V.G.</b>
		<input type="checkbox"/> Sprue	<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Sub	
		<input type="checkbox"/> Valve	

## 8 Indicate Manifold Supplier

<input type="checkbox"/> DME	<input type="checkbox"/> Husky	<input type="checkbox"/> Osco	<input type="checkbox"/> Yudo
<input type="checkbox"/> Ewikon	<input type="checkbox"/> INCOE	<input type="checkbox"/> PSG	<input type="checkbox"/> Other _____
<input type="checkbox"/> HRS	<input type="checkbox"/> MoldMaster	<input type="checkbox"/> Synventive	

**9 Primary analysis objectives & potential concerns**

**10 Part Design**

Is the design frozen? \_\_\_\_\_  
When will final data be available? \_\_\_\_\_  
Can CAE modify part design to improve moldability? \_\_\_\_\_

**11 Moldflow Analysis Objectives**

<input type="checkbox"/> Uniformity of Fill	<input type="checkbox"/> Hot-to-cold	<input type="checkbox"/> Flow induced shear stress
<input type="checkbox"/> Determine gate locations(s)	<input type="checkbox"/> Bore diameter sizing	<input type="checkbox"/> Part temperature
<input type="checkbox"/> Determine gate size	<input type="checkbox"/> Sequential valve gating	<input type="checkbox"/> Weld line prediction
<input type="checkbox"/> Determine fill time	<input type="checkbox"/> Valve gate timing sequence	<input type="checkbox"/> Air trap prediction
<input type="checkbox"/> Cold runner size & balance	<input type="checkbox"/> Evaluate filling pattern	<input type="checkbox"/> Fiber alignment
<input type="checkbox"/> Evaluate hot runner	<input type="checkbox"/> Pressure to fill	<input type="checkbox"/> Processing conditions

**12 Packing Analysis Objectives**

<input type="checkbox"/> Gate freeze time	<input type="checkbox"/> Volumetric shrinkage	<input type="checkbox"/> Clamp tonnage/machine sizing
<input type="checkbox"/> Packing pressure profile	<input type="checkbox"/> Sink location	

**13 Cooling Analysis Objectives**

<input type="checkbox"/> Evaluate part temperature uniformity*	<input type="checkbox"/> Coolant temperature
<input type="checkbox"/> Evaluate cooling channel size & type	<input type="checkbox"/> Calculate flow rate to ensure turbulence
<input type="checkbox"/> Evaluate various steel types or inserts	<input type="checkbox"/> Cycle time prediction, ejection temperature required
<input type="checkbox"/> Evaluate proper cooling channel locations	<i>*based on submitted design</i>

**14 Warpage Analysis Objectives**

<input type="checkbox"/> Magnitude of warpage	<input type="checkbox"/> Warpage tolerance _____	<input type="checkbox"/> Un-corrected
<input type="checkbox"/> Identify main cause of warpage	<input type="checkbox"/> Predict warpage trends	<input type="checkbox"/> Corrected

**15 Mesh Type**

<input type="checkbox"/> Fusion	<input type="checkbox"/> Midplane	<input type="checkbox"/> 3D
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**16 Processing Information**

**For existing molds or typical conditions**

Melt temperature _____	Fill Pressure _____	Cooling time _____
Mold temperature _____	Pack time _____	Coolant temperature _____
Fill time _____	Pack pressure _____	Cycle time _____