# CASTFLOW

## Computer-aided Runner and gating design technology for pressure die casting

CASTFLOW is a software package which assists the designer to quickly develop a runner and gating system that matches the metal pumping capacity of a die casting machine with the metal flow pressure and speed requirements of the pressure die casting die. The CASTFLOW design approach is significantly different to other traditional methods and eliminates the guesswork from runner and gating design.

CASTFLOW is the culmination of more than 15 years of research in the pressure die casting process by CSIRO - Australia's largest research organisation. The CASTFLOW runner and gating design technology has become internationally recognised and is now in use world wide. Castec Australia Pty. Ltd. is committed to research and development in order to update the CASTFLOW technology and to market it worldwide.

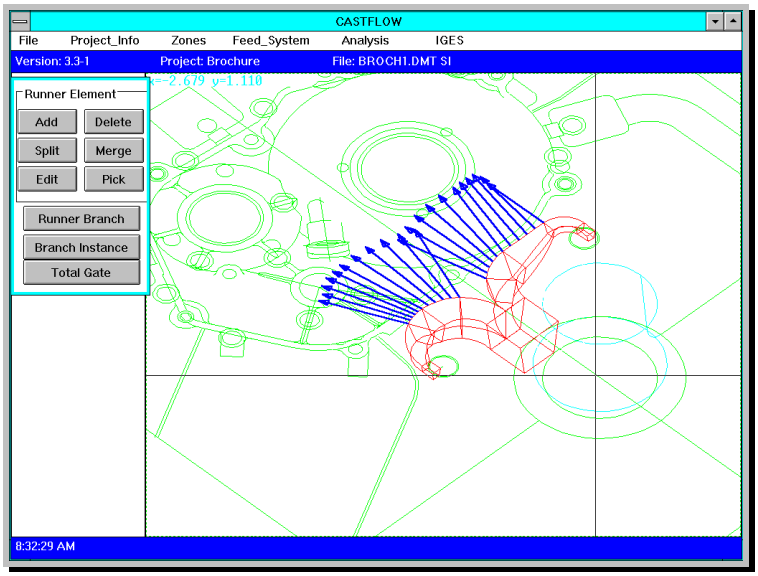
## Benefits of CASTFLOW

Application of CASTFLOW technology to runner and gating design has demonstrated the following benefits:

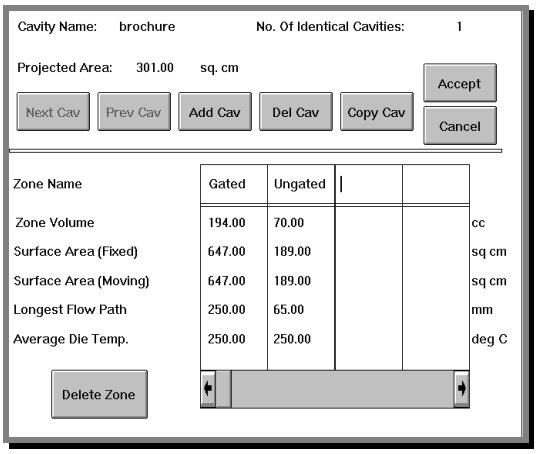
⇒ reduced porosity and cold flow
⇒ thinner-walled castings
⇒ reduced die trial and error
⇒ reduced die erosion and soldering leading to decreased die maintenance costs and machine down-time
⇒ better efficiency in the die design and manufacturing process due to the integrated CAD/CAM approach to runner and gating design

# CASTFLOW is Microsoft Windows compatible and provides user-friendly menu driven features:

CASTFLOW's runner geometric modeller simplifies the creation of three-dimensional runner geometry. The resulting geometry can be transferred to other CAD/CAM systems via IGES file transfer facilities, to generate the cutter path for NC milling of the runner.

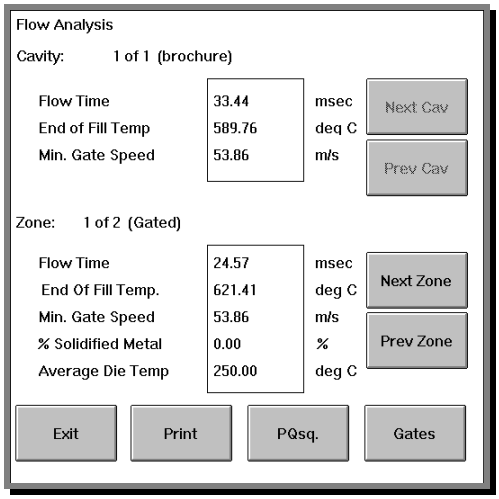



The "Zone of fill" analysis is a unique feature implemented in CASTFLOW which facilitates a practical means of describing and analysing the cavity fill pattern without the need for specifying the casting geometry in detail. This saves a considerable time.




The gate velocity vectors as displayed on the screen verifies that the metal flow out of the gate achieves the desired cavity fill pattern.

CASTFLOW's flow analysis module displays the resulting gate speed, metal temperature loss and the percentage of solidification during the filling of each "zone of fill". The calculated flow time helps ensure that the runner and gating system fills all cavities at the same time; a condition necessary to ensure that each cavity is compressed at the same pressure.




## Why CASTFLOW?

⇒ Using CASTFLOW, a runner and gating system can be designed and optimised within a few hours.

⇒ The CASTFLOW runner and gating design approach is easy to learn making it an excellent training tool to new and experienced die designers.

⇒ CASTFLOW is a well proven technology and is used to design several hundreds of dies yearly.

For further information contact:

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