

FLOW-3D CAST MODEL DESCRIPTION
2009-01-01 Flow Science Inc.

BASIC	EXTENDED	ADVANCED
Multi-block meshing (up to 5 mesh blocks) One incompressible fluid Newtonian viscosity Turbulence models Surface defects Heat transfer & solidification Non-inertial reference frame (for centrifugal casting and tilt pour casting) Mass & momentum sources Mass & marker particles Solidification/shrinkage porosity Micro-porosity Air entrainment Natural convection Heat sources/sinks (obstacles with given temperature or heat power)	Everything available with the Basic Edition, <i>plus</i> : Unlimited mesh blocks General bubble models Surface tension Thermal die cycling Moving pistons Trapped gas with gas vents Lost foam casting (including lost foam defect tracking) Filters (baffles, porous obstacles) <i>After implementation in_</i> FLOW-3D: <ul style="list-style-type: none"> - Thermal stress evaluation (FEM) - Core gas generation - Sand core blowing 	Everything available with the Extended Edition, <i>plus</i> : Two incompressible fluids Non-Newtonian viscosity Cavitation potential Compressible flow General moving objects Highly viscous flows Shear thinning/thickening Thixotropic flow Viscous heating Fluid heat sources <i>(Note: This version encompasses the full FLOW-3D solver)</i>