

PROCESS SIMULATION SOFTWARE

# RAVEN

Thermochemical and heat transfer analysis without FEA expertise



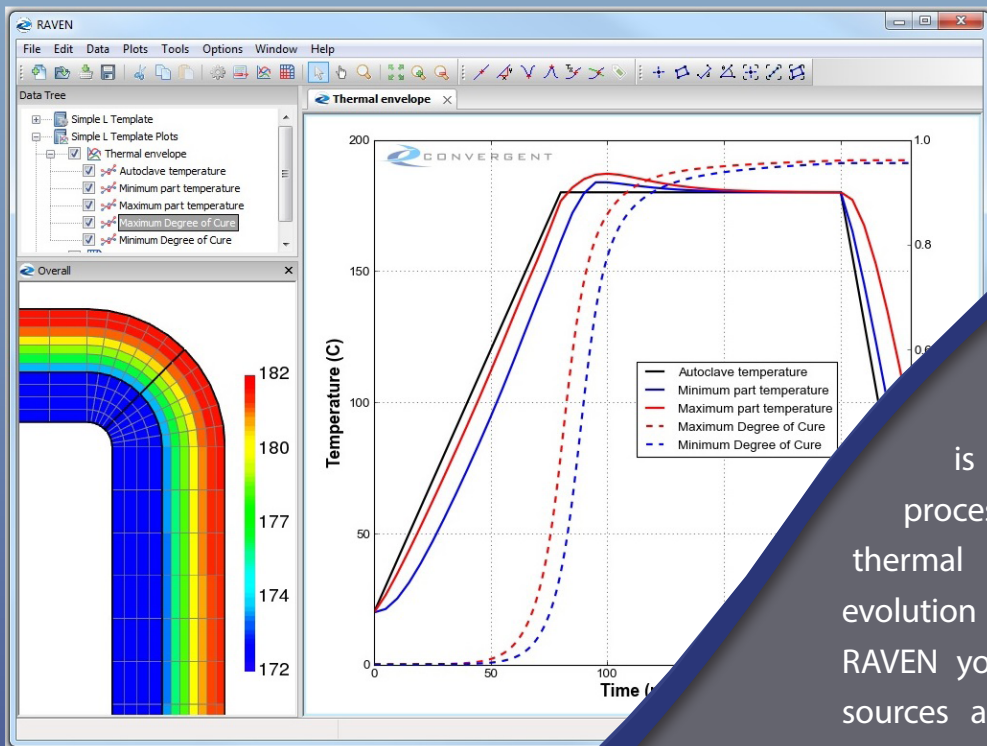
CONVERGENT  
MANUFACTURING TECHNOLOGIES

- ✓ Cure cycle optimization
- ✓ Thermal profiling
- ✓ Troubleshooting

**Evaluate** temperature and material property evolution of composite laminates on tools quickly

**Shorten** cycle time and design more robust cure cycles

**Reduce** cycle time through design of efficient tooling with low thermal mass and exotherm control



**RAVEN** simulation software is designed for quick and easy process analysis. It allows you to perform thermal analyses and study property evolution at points and drill-throughs. With RAVEN you can import data from external sources and it provides powerful plotting and inspection tools to make analysis simple.

# RAVEN Requirements

Required Input	0D Analysis	1D Analysis	Comments
Material Data Set - curing materials	✓	✓	Some open and generic material data sets included with software. Convergent develops material data sets on demand as a service.
Temperature Cycle	✓	✓	User specified or imported from experimental data.
Material Properties - non-curing materials		✓	Thermo-physical properties for common tooling and other materials included with software. Convergent develops material data sets on demand as a service.
Part and Tool Thickness		✓	User specified.
Heat Transfer Characteristics		✓	User specified. Guidelines for typical convective heat transfer coefficients in autoclaves and ovens with software.