

CoreClave

TECHNICAL DATASHEET

Description

A turn-key ready production setup for manufacturing composites using one sided tools with added pressure of up to 12 bar. No need for presses or autoclaves, this compact setup can produce parts with a cycle time of 5 minutes, with exceptional quality.



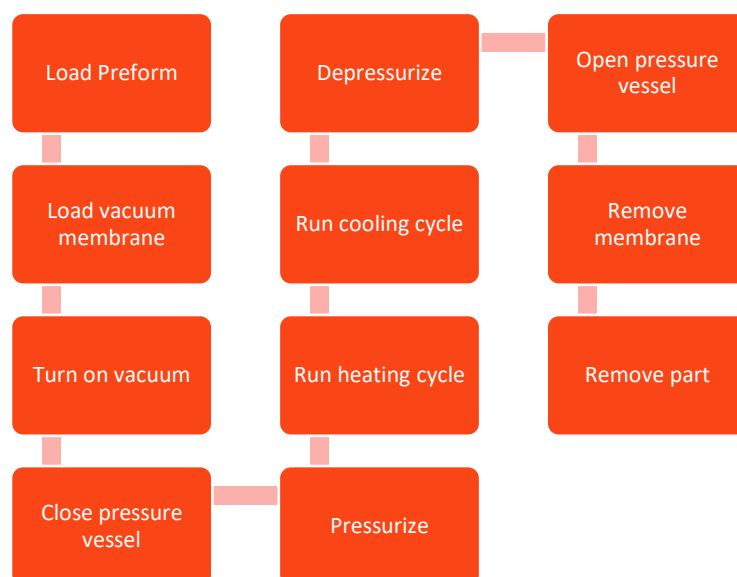
Overview

- **Temperature Range:** Up to 250 °C
- **Pressure:** 12 bar
- **Cycle time:** < 5 minutes
- **Heat Rate:** Up to 150° C / min
- **Mold Material:** Steel, invar, nickel, aluminum
- **Part Materials:** Ideal for thermoplastic composites with PA, PP, SAN matrix materials.
- **Machine size:** Custom
- **Cooling:** Water spray
- **Automation:** Fully automated

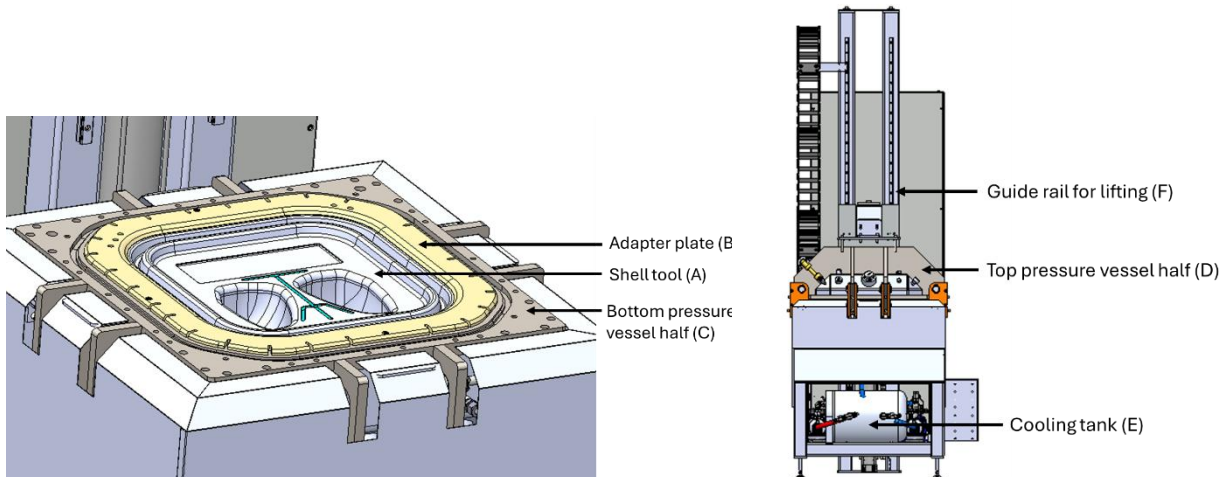
Product function

The standalone production setup is designed to replace an autoclave or a press when processing composites at high rate.

The typical process flow is illustrated below.

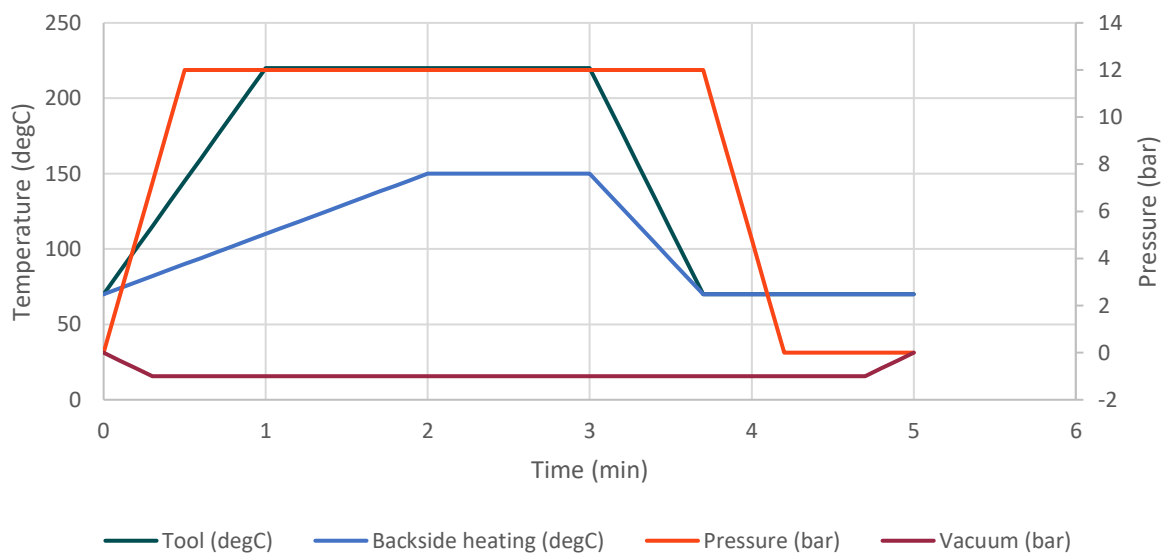


Scan the QR-code to download a digital version of this technical datasheet.
It is also available for download at <https://corebon.com/our-solutions/coreclave>



- A molded silicone membrane seals over the material and the tool (A).
- The tool is a thin shell tool made of steel, nickel, invar or aluminum with an attached inductor.
- The induction heated tool is controlled via Corebon's separate CorePower system.
- The tool is sealed and mounted onto an adapter plate (B) for rapid tool changes.
- Once the material and membrane are in place, vacuum is applied, and the machine closes.
- The internal volume is pressurized with compressed air or nitrogen.
- The heating cycle begins, raising the tool temperature to a short dwell.
- The tool is then cooled using water until a suitable demolding temperature is reached.
- The process is completed, and the finished product is removed.

Example of CF&PA12 processing



CoreClave

Specification and requirements

Heating power	Depending on tool size
Pressure	Up to 12 bar
Maximum temperature	250 °C
Heat rate	Up to 150 °C/min
Cooling rate	180 °C/min
Coolant	Distilled water with antibacterial additive
Mold material	Steel, nickel, invar, aluminum
Infrastructure for CorePower system	
Power supply	Frequency
	Voltage
	Phase
	50 – 60 Hz
	380 – 480 V
	3 Ø