

OUT OF AUTOCLAVE CURE CYCLE

How Smart Tools enable autoclave level pressures & quality with a standard oven cure.

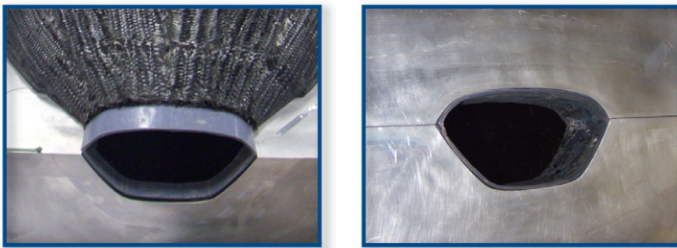


WHY OUT OF AUTOCLAVE?

Moving the cure cycle out of an autoclave to a standard oven has a lot of benefits, including reducing capital & operating expenses, as well as saving manufacturing space.

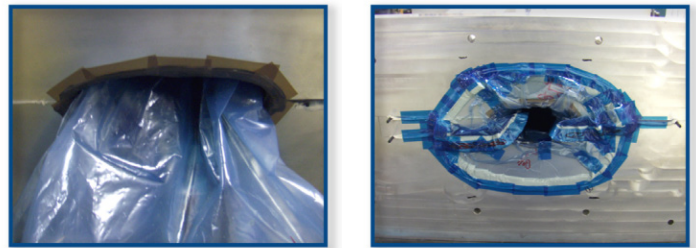
HOW IT WORKS

1 | TOOL ASSEMBLY & CLOSURE



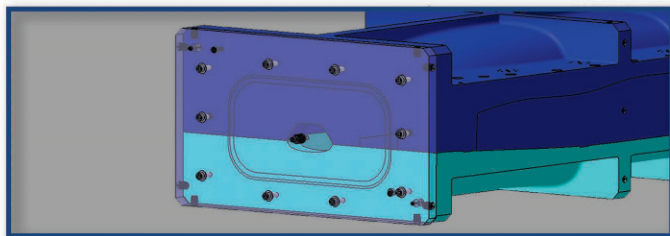
To begin, the Smart Tool with lay up is placed into the bottom of the clamshell mold and the top half is bolted into place.

2 | VACUUM BAGGING



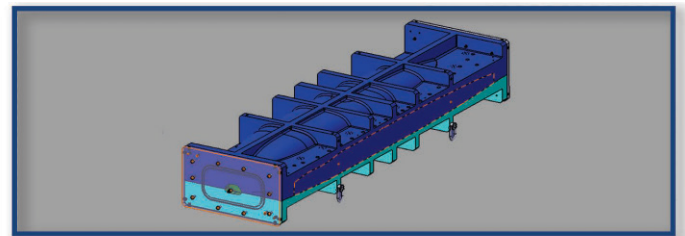
A custom vacuum bag is made, and is pulled through the Smart Tool and sealed to the mold face.

3 | ATTACH END PLATES



End plates are bolted to the ends of the clamshell mold. Each plate features an outside the bag seal area, creating a pressure seal which allows for pressurization of the bag up to mold rated pressures.

4 | CURE & PRESSURIZATION



The mold is placed inside a standard oven to begin cure. Once the Smart Tool is above activation temperature, appropriate pressure (typically 45 or 90 psi) is applied inside the vacuum bag and the Smart Tool expands outwards, providing compaction of the laminate and achieving equivalent results of an autoclave.