



# **HiRPM<sup>®</sup>**

SYSTEM AND EQUIPMENT

## Hot Isostatic Resin Pressure Molding (HiRPM<sup>®</sup>)

### **An Ultra-Precision Closed Molding Process**

HiRPM<sup>®</sup> technology by Matrix Composites is breaking new ground in out-of-autoclave processes and tooling methods. Developed specifically for composite manufacturers of critical edges and control surfaces, HiRPM<sup>®</sup> exceeds the strictest dimensional requirements without expensive autoclave OML control devices. HiRPM<sup>®</sup> delivers an enabling technology for the most demanding applications.



# **HiRPM<sup>®</sup>**

SYSTEM AND EQUIPMENT



**Processing Control Unit**



**Pressurization Unit**



**Heat Transfer Unit**

## **System Design Overview**

- Ideal for high volume production where precision IML and OML profiles are required
- Tailored to fit specific fabrication requirements and manufacturing needs through modularity
- HiRPM<sup>®</sup> is not just an equipment solution, HiRPM<sup>®</sup> is a complete process solution

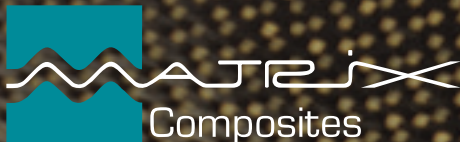
## **System Benefits**

- Provides automated pressurization and temperature control for the processing of closed molded parts using prepreg resins
- Creates a self-contained, plug-and-play workcell solution for the RTM process
- All aspects of process are controlled and monitored via a central access hub (Process Control Unit)
- Fully guided operator interaction segments of processing maintain repeatability and reliability
- Keeps process clean, utilizing water heating in lieu of other contaminating substances, conforming to continuously strict facility regulations

## **Design Specs and Features**

- PID controlled cure temperatures up to 400°F
- Resin pressurization of 450 psi for optimal volatile and moisture control
- Tool temperature tolerance of +/- .5°F
- Demonstrated part to part repeatability within .003"
- Multi-stage heating system for resin pre-processing and viscosity control
- Tools designed alongside system for complete processing solution
- Designed for modularity with the ability to process multiple parts simultaneously
- Self-contained data acquisition and report production in HiRPM<sup>®</sup> PLC controller software
- Process Control by ASC

**ISO9001:2015 and AS9100D  
Nadcap Accredited**



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