

CLOSED MOLD INFUSION/RTM EQUIPMENT

Patriot™ Innovator Injection Systems

Power, versatility, automation and unprecedented precision in two compact systems.



Description	Specifications	Options
<ul style="list-style-type: none"> Highly accurate Patriot™ mix/meter technology Powered and operated solely through pneumatics Resin Gel Alarm (RGA) Mold Pressure Guard (MPG) Increased efficiency Unique control panel Easy to operate <p>The Patriot™ Innovator Injection Systems were designed for injecting polyester, vinylester and methacrylate resins and catalyst at controlled pressures. The material mixing is done on demand at the injection head, and the catalyst ratio can be adjusted from 0.75% to 2.5%.</p> <p>The fully pneumatic automated controls, controlling the number of strokes during injections, recirculation, and more makes the process easier and more efficient.</p>	<p>PATRIOT™ PRO INNOVATOR SYSTEM</p> <p>Output Capabilities: Up to 7.5 lbs./min. (3.4 kg/min.) depending on materials & application</p> <p>Catalyst Pressure: 0.75% to 2.5% by volume</p> <p>Air Consumption: 18 CFM</p> <p>Pump Ratio: 7:1</p> <p>Max Air Input Pressure: 100 psi (7 bar, 0.7 MPa)</p> <p>PATRIOT™ MEGAJECT INNOVATOR</p> <p>Output Capabilities: Up to 7.5 lbs./min. (3.4 kg/min.) depending on materials & application</p> <p>Catalyst Pressure: 0.75% to 2.5% by volume with PAT-CP-0980, 1% - 3% with PAT-CP-1530</p> <p>Air Consumption: 18 CFM/150 ltrs</p> <p>Pump Ratio: 7:1</p> <p>Max Air Input Pressure: 100 psi (7 bar, 0.7 MPa)</p> <p>PATRIOT™ INNOVATOR HIGH VOLUME SYSTEM</p> <p>Output Capabilities: 7lb-30lbs/min (1.5kg-6.7kg/min)</p> <p>Catalyst %: 0.8%-3.8% with PAT-CP-3000</p> <p>Air Consumption: 43 CFM</p> <p>Max Air Input Pressure: 100 psi (7 bar)</p>	<ul style="list-style-type: none"> Pneumatic PV Sensor Heater Control CE Guard CFH-4000 Series Heater Turbo Auto Sprue Patriot™ Innovator Plus PLC Option

MKVI Injection System

The MkVI Injection System comes in three configurations, Polyester, Phenolic, and Epoxy Resins. This unit is ideal for Advanced Closed Molding applications. These systems come with multiple pump options based on the material used.



Description	Specifications	Options
<ul style="list-style-type: none"> Suitable for mixing and injecting Polyester, Vinylester, Methacrylate and Epoxy resin systems Catalyst ratio can be infinitely adjusted from 1.0% to 50% Head auto valves include valve position indicators Built in pneumatic interlocks on both auto head valves Internal interlocks on both auto head valves. Resin Gel Alarm system (RGA) Pre-determined counter (PDC), with a count rate of every 100cc Mould Pressure Guard (MPG) Full instrumentation and control panel Gel timer with alarm and alarm volume control Emergency stop, air failure machine shutdown with safe automatic restart on reset Designed to connect to and control multiple ancillaries 	<p>Machine specification for manual head polyester, epoxy and phenolic:</p> <ul style="list-style-type: none"> Complete 2 stream mixing head with standard static mixer element Manual Resin and Catalyst re-circulation at head with manual valve interlocks Heavy-duty ratio arms 100cc Primary Resin Pump with inlet hose and filter suitable for a 200kdrum. Full instrumentation and control panel, housed in steel lockable cabinet. MPG, Mould Pressure Guard. RGA, Resin Gel Alarm Timed solvent flush of machine head (cancels RGA). <p>Designed to connect to and control:</p> <ul style="list-style-type: none"> Turbo Auto Sprue - Automatic injection valve. IVx3 - 3-Position Injection Valve Pneumatic PV Sensor (PPVS) - For precise mold pressure control 	<ul style="list-style-type: none"> Pneumatic PV Sensor Heater Control CFH-4000 Series Heater Turbo Auto Sprue Patriot™ Innovator Plus PLC Option

CLOSED MOLD INFUSION/RTM EQUIPMENT

Patriot™ Innovator Plus Injection Systems

Unprecedented precision part-to-part, and the ability to automate production in one system.



Description	Specifications	Options
<ul style="list-style-type: none"> • Highly accurate Patriot™ mix/meter technology • PLC/Touchscreen combination • Ability to store up to 500 unique recipes • Rugged construction • Flow-based hardener alarm • Automatic/Manual recirculation control • Easy to operate <p>The Patriot™ Innovator Plus Injection System brings automation to closed molding. With configurations to process polyesters, vinylesters, epoxies and phenolics, and multiple options to automate the process, this system is the one stop total package for your injection needs.</p>	<p>PATRIOT™ INNOVATOR PLUS SYSTEM</p> <p>Output Capabilities: Up to 7.5 lbs./min. (3.4 kg/min.) depending on materials & application</p> <p>Catalyst Pressure: 0.75% to 2.5% by volume</p> <p>Pump Ratio: 7:1</p> <p>Displacement: 2.45 in.³ (40.15 cc)/stroke or 4.90 in.³ (80.3 cc)/cycle</p> <p>Maximum Fluid Outlet Pressure: 1500 psi (76 bar, 7.6 MPa)</p> <p>Maximum Air Input Pressure: 100 psi (7 bar, 0.7 MPa)</p>	<ul style="list-style-type: none"> • Pneumatic PV Sensor • Heater Control • CE Guard • CFH-4000 Series Heater • Turbo Auto Sprue • Patriot™ Innovator Plus PLC Option

Hypaject Injection System

The Hypaject III is a versatile package for either batch production or research and development.



Description	Specifications	Options
<p>Using the pressure pot principle, pre-mixed resin systems are drawn into the Hypaject MkIII under vacuum, are actively degassed, then dispensed under pressure into the mold cavity. This heated system was developed for the processing requirements of single part epoxy materials, complete with higher levels of control and monitoring.</p>	<ul style="list-style-type: none"> • 6 Litre frame mounted homogeniser with 2 removable seals • Frame mounted control cabinet • Venturi vacuum load/degas system • Regulated pressure inject system • Actuated load valve • Actuated injection valve • 3/8" load and injection pipe • Turbo Auto Sprue open/close switch • Mould Vacuum Service • External Pressure Source • External Vacuum Source 	<ul style="list-style-type: none"> • Standard Spares Kit (PN 2074-HTD) • Weight Transducer with readout (PN 2117) • Pressure Transducer with readout (PN 2124)

High Volume Duo Injection System

Specifically Designed to Mix and Dispense High Volumes of Resin in a Closed Mold Application.



Description	Specifications	Options
<p>The High Volume Duo System features precise, proven metering technology, reliable high-volume flow, automatic Pro Gun for consistent internal mix delivery, the lowest mix/meter percentage at plus/minus 0.01%.</p>	<p>Output capabilities: approx. 60lbs./min. (6 gal/min or 22 litre/min)</p> <p>Air Consumption: 18 CFM</p> <p>Pump Ratio: 10:1</p> <p>Maximum Air input Pressure: 100 psi</p>	<ul style="list-style-type: none"> • Manual or Auto High-Volume Gun options • CFH-4000 Series Heater • Auto-level control • Pneumatic PV Sensor • Heater Control • CE Guard • HV Turbo Auto Sprue • Patriot™ Innovator Plus PLC Option

