

# RADIUS ENGINEERING, INC.

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## Radius 2100cc Pneumatic RTM Injector with Data Acquisition

The Radius 2100cc Pneumatic RTM injector is a pressure controlled system, designed to inject single component or pre mixed multi-component resin systems. The injector's resin cylinder, which holds heated resin, contains an internal piston. The piston assembly actuates through a pneumatic cylinder that uses an in house compressed air system. Heated material is transferred through an injection line connected to a tool. All surfaces that come in contact with resin system are made of aluminum, which has been plated for durability.

The 2100cc Pneumatic RTM Injector can function as a "Stand Alone" unit eliminating the need for computer interface, or it can be integrated with Radius Floware™ software data acquisition for the display and recording of injection parameters. Injector is mounted on roll-around stand with swivel locking castors.



Radius control circuitry includes:

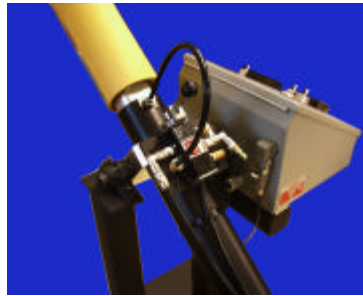
*Resin pressure control:* resin injection pressure (up to 225psi) can be controlled by the operator.

*Optional Data acquisition:* Radius Floware™ data acquisition software for monitoring and recording process parameters.

## **RADIUS ENGINEERING, INC 2100cc PNEUMATIC RTM INJECTOR**



Enclosure control panel for display of temperature and volume remaining



Pneumatic cylinder actuation via toggle lever valve with injector mounted for easy pivoting action



Easily retracted and removable piston for ease in cleaning and seal replacement

### **System Features:**

- ☞☞ Positive-displacement piston actuated by a pneumatic cylinder
- ☞☞ Aluminum piston with two polyseals for vacuum and pressure integrity
- ☞☞ Controls for “power on/off” and “heat” indication
- ☞☞ Type “J” thermocouples for temperature control
- ☞☞ Pressure control for injection and hydrostatic pressure
- ☞☞ Pivot action for different angles of injection
- ☞☞ Ease in cleaning of resin cylinder
- ☞☞ Locking swivel casters on easy roll-around stand
- ☞☞ Display of resin volume remaining
- ☞☞ Display of process temperatures
- ☞☞ Resin cylinder heater jacket and line heater sleeving

### **Optional Features:**

- ☞☞ Vacuum pumping system for applying vacuum to tool
- ☞☞ Independent degassing system for initial degas and heating of resin system
- ☞☞ Data acquisition for computer display and recording of process parameters

### **Specifications:**

#### **Application:**

Low resin volume  
Low pressure

#### **Capacity:**

2100cc with additional  
20% volume for degassing

#### **Pressure:**

225psi maximum injection  
and hydrostatic

#### **Flow Rate:**

500cc/min maximum

#### **Temperature:**

350°F maximum

#### **Heating:**

Resin cylinder – Insulated  
silicone pad heater  
Injection Line – 48” heated  
hose sleeving

#### **Process Control:**

PID temperature control  
Pressure control

#### **Dimensions:**

Horizontal – 28”x63”x 49”  
Vertical – 28”x28”x 70”

#### **Power Requirements:**

120 VAC, 15 Amp max