# Heated Sprue Bushings

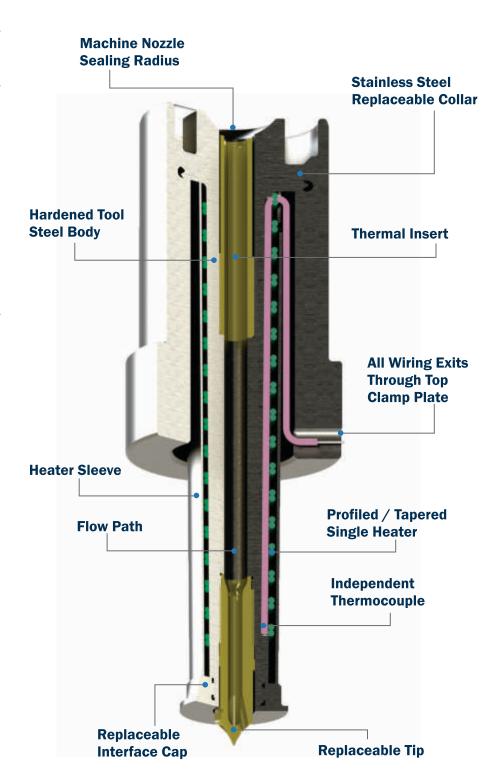


The performance and reliability of **Polyshot Heated Sprue Bushings** are legendary and have set the gold standard for over 20 years. With hundreds of installations world wide, Polyshot Heated Sprue Bushings have produced hundreds of millions of parts for the medical, consumer, automotive and recreation industries.

The Polyshot Heated Sprue Bushing was developed to address the precision injection molder's need to process both engineering and commodity resins. Polyshot's unique construction features a single heater, with a thermocouple sensing directly at the point of melt/freeze. This thermocouple response is so rapid, the controller will actually detect and display a rise in shear temperature as the resin exits the nozzle during injection.

The wound, profiled single heater and removable stainless steel sleeve are tapered. These fit over the nozzle body which is also tapered. When the interface cap is tightened, it forces the assembly together creating a very tight fit between the heater and nozzle body. This precise heater fit, adds to the long heater life and rapid nozzle response time.

The Polyshot Heated Sprue Bushing is available in nozzle fit diameters of .7500" and 1.0000" and is available as a direct replacement for a standard cold sprue bushing.



### Available Tip Styles: 7500" and 1.0000" diameters

#### **P-SERIES, PINPOINT**

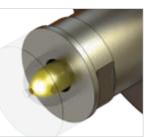
Direct gating with a minimum gate vestige.

The P-Series bushing is available with and without a gate interface cap.



#### **CONAN SERIES**

The Conan was designed to process highly engineered resins such as glass filled LCPs etc. It is used extensively in the injection molding of electrical connectors and medical devices. It can be direct gated into a part or runner with a resulting vestige that is approximately 1.5 times the gate diameter. The Conan Series bushing is available with and without a gate interface cap.



#### **G-SERIES, GENERAL PURPOSE**

Direct gating into a part or runner with a resulting sprue that is approximately 3/8" long and weights less than  $\frac{1}{2}$  of a gram.





## Firebox Single Zone Temperature Controller

The Firebox Temperature Controller is designed to interface with the Polyshot Heated Sprue Bushing. It is a "closed loop" system with provisions for manual or "open loop" control.

The 3601F Firebox features an Auto-Tuning PID function that precisely matches the controller's electronic algorithms to the thermal load of the Polyshot Heated Sprue Bushing. This is accomplished by operator engagement of the Auto-Tune function through the operator interface.

This operation then launches an electronic tuning sequence between the controller and the heated sprue bushing, heating and cooling the bushing through 3 thermal cycles, measuring its response during each cycle. Upon completion of these cycles, the Firebox reprograms its PID algorithms to precisely match the thermal load required by the bushing. When coupled with the Firebox burst fire relay system, the control of the bushing temperature is ultra precise and results in excellent control over the product gate quality.

#### **NORTH AMERICA SALES:**

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