

# SYRINGE HEATER

## Drug Delivery/Syringe Heaters Reduce Temperature Variation and Deliver Reliable Results

Watlow's new syringe heaters produce consistent results by reducing temperature and viscosity variations. These heaters provide a heated fluid and drug delivery solution that maximizes patient comfort while reducing risk.

The versatile Watlow heater system was developed for the unique needs of medical injection applications. Heater configurations include silicone/wire or polycarbonate/foil configurations to deliver flexibility and convenience. Both heater forms are designed to "snap" on to the syringe with one hand and hold firmly during the procedure.

Constructed utilizing a clear polycarbonate laminate, this design allows technicians to view fluid levels and monitor for air bubbles. Smooth outer surfaces and a radius on all inside corners facilitate cleaning. The syringe heaters also house an overmold containing an electronic controller and/or sensor to deliver years of accurate, trouble free service and warm solutions to precise specifications. Redundant controller may also be incorporated if required.

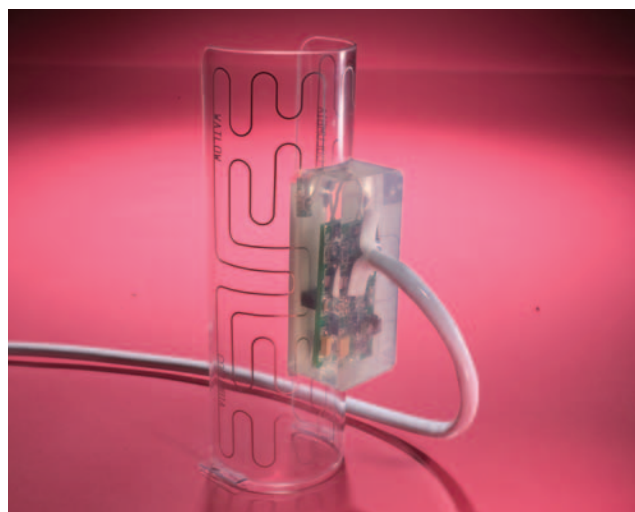
Precise fluid temperatures greatly increase patient's comfort levels. Body temperature injections are more easily introduced to patients and have reduced viscosity. Heated contrast media minimizes patient risk and is particularly beneficial for patients in a frail or distressed condition.

### Specifications

#### Silicone/Wire and Polycarbonate/Foil

- Length: 127 mm (5 in.) maximum
- Formed heater diameter: Formed to fit syringe. Typical diameter is 50 mm (2 in.) to 150 mm (6 in.)\*
- Voltage: Dependent on application. Over 48 volts may impact agency approvals
- Control accuracy:  $\pm 3^{\circ}\text{C}$  ( $5.4^{\circ}\text{F}$ )
- Maximum operating surface temperature  $85^{\circ}\text{C}$  ( $185^{\circ}\text{F}$ )
- Approximate control pod dimensions: 25 x 25 x 70 mm (1 x 1 x 2.75 in.)\*
- Cord pull strength: Up to 20 lbs\*

\* Dependent on design requirements.



### Features and Benefits

#### Long operational life

- Improves system reliability
- Reduces equipment down time—minimizes the need to reschedule procedures

#### Two heater configurations provide flexibility and adaptability

- Silicone/wire—Maximum flexibility to accommodate various syringe sizes
- Polycarbonate/foil—High tech look and functionality

#### Customizable to most OEM requirements

- Over-mold can be modified and color matched for a seamless, integrated appearance

#### Optional precise, repeatable temperature sensing control

- Maximizes patient comfort
- Minimizes patient risk
- Increases the consistency of test results by eliminating temperature and viscosity variations
- Improved product life versus bimetal thermostats



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