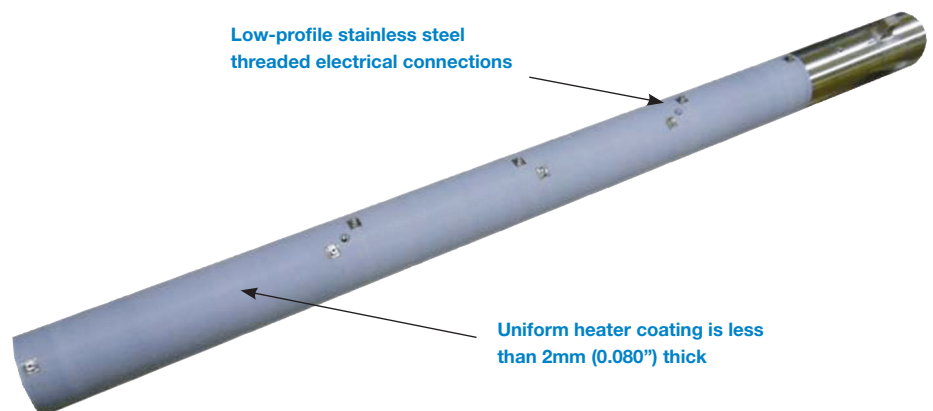


Xaloy® SmartHeat™ Coating

Optimize your process, performance and quality with an innovative integrated melt stream heating system from the field's leader in barrel, nozzle and melt pipe technology

Benefits

- Significantly reduce material defects and improve quality with a unique integrated heating technology that provides precise and rapid temperature control
- Increase energy savings by 30-60% compared to typical band heaters
- Reduce downtime by eliminating the need to replace or maintain typical band heater installations
- Greater operator safety with "cool-to-the-touch" feature



Low-profile stainless steel threaded electrical connections

Uniform heater coating is less than 2mm (0.080") thick

Features

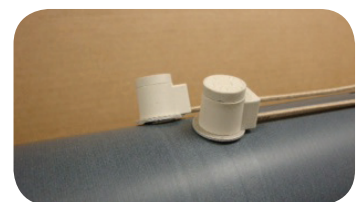
- Advanced thermal insulation provided with Xaloy SmartHeat™ Coating includes easy to use mounting system.
- Plasma-sprayed metallized-ceramic surface providing non-stick surfaces.
- Integrated heating system is part of barrel eliminating exposed wires.
- Use of standard thermocouple for easy installation.



Advanced thermal insulation

The Xaloy SmartHeat™ Coating for barrels, nozzles and melt pipes is Nordson's advanced new technology that virtually eliminates melt-stream energy losses. Xaloy SmartHeat™ Coating uses an exceptionally robust "heater coating" plasma-sprayed to the exterior surface of the barrel and an optional high efficiency thermal insulation, ensuring uniform heat end to end.

Xaloy SmartHeat™ Coating offers any processor superior advantages over conventional heater band technology.



Xaloy SmartHeat™ Coating designed with compact oxidation-resistant nickel-plated terminals and ceramic insulating caps provide lifetime reliability

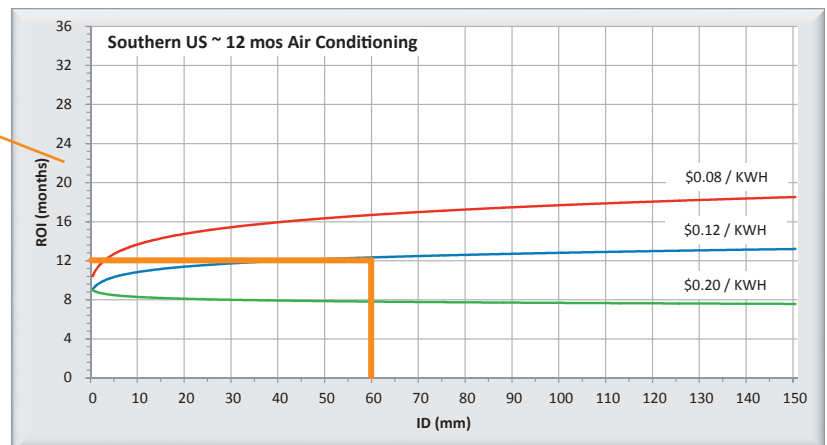
Xaloy® SmartHeat™ Coating

Case Study

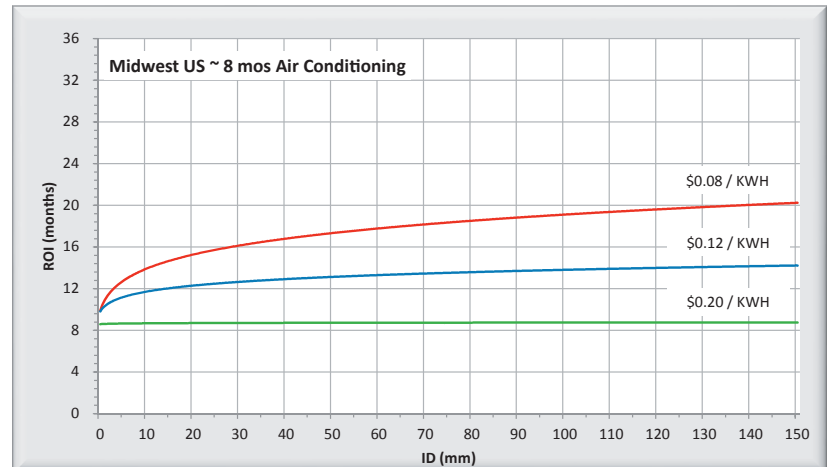
While benefits from Xaloy SmartHeat™ Coating will vary with each application, in a commercial-scale trial run at a processor in Texas working with Nordson, the Xaloy SmartHeat™ Coating helped them achieve increased energy savings and improved quality, making possible energy savings that paid for the Xaloy SmartHeat™ Coating within 12 months. While using this same benchmark data ROI results are shown for the Midwest and Northern USA.

Customer: Processor in Texas
Machine: 60mm Engel machine
Utility Cost: \$ 0.12 / kWh
ROI: about 12 months

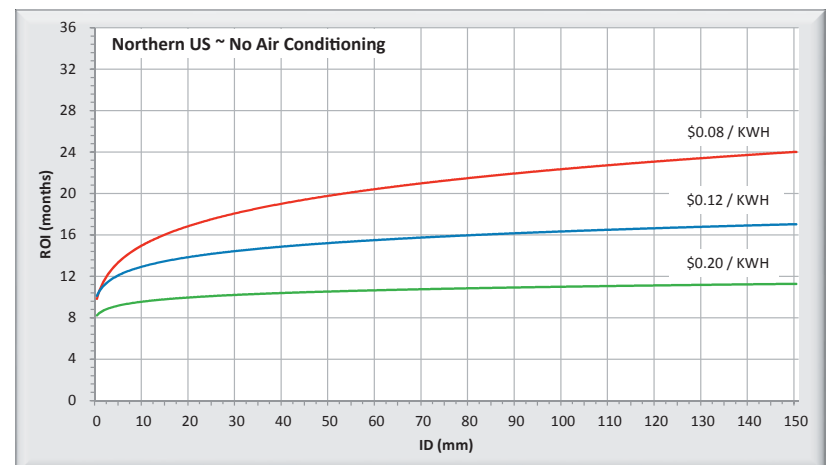
Southern USA
(FL, TX, GA, AL, MS)
about 12 months air conditioning



Midwestern USA
(OH, MO, IN, CA)
about 8 months air conditioning



Northern USA
(MI, MN, WI, MA)
no air conditioning



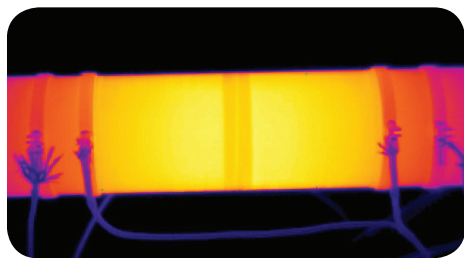
Xaloy® SmartHeat™ Coating

Xaloy SmartHeat™ Coating

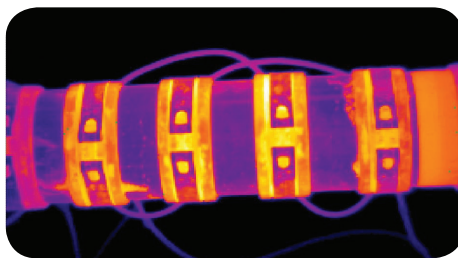
- 98% efficient with Xaloy SmartHeat™ Coating thermal insulation
- Heat generated directly in coating
- Thermal inertia is virtually eliminated
- Heat applied uniformly
- Heater performance stays constant
- Heater temperature barely exceeds the process temperature, maximizing efficiency, safety and reliability

Band Heaters

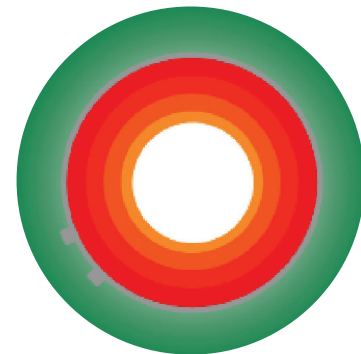
- Typically 30-70% efficient
- Heat must conduct across contact resistance
- Heater mass adds thermal inertia
- Heat not applied uniformly
- Heater performance degrades
- Heater operates at elevated temperature, compromising efficiency, safety and reliability



IR Camera - Xaloy SmartHeat™ Coating
Uniform, Responsive Heating

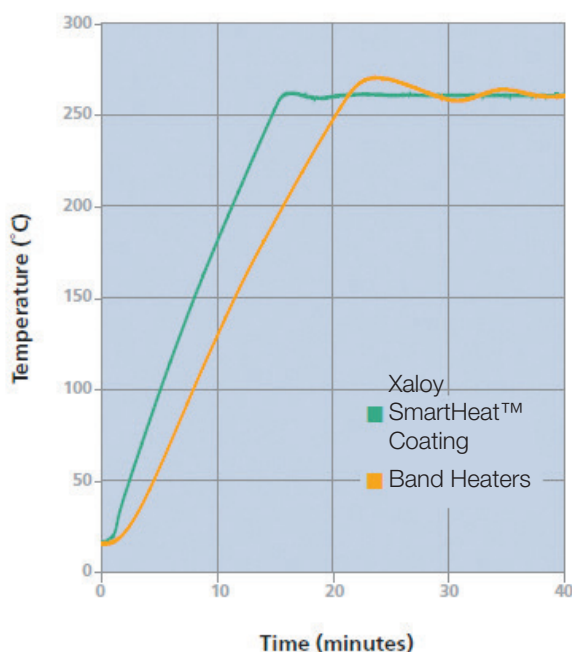
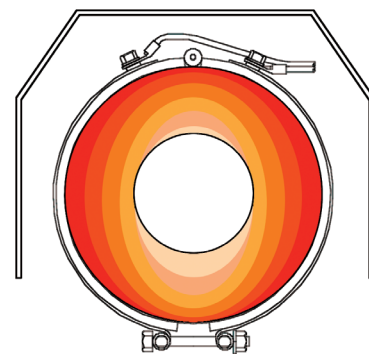


IR Camera - Band Heaters
Non-uniform, Sluggish Heating



Uniform, efficient heating
with Xaloy SmartHeat™
Coating

Non-uniform, wasteful
heating with band-heaters



Typical Performance Comparison

- Xaloy SmartHeat™ Coating is 30% faster using 23% less power
- Superior temperature stability

Xaloy® SmartHeat™ Coating

Xaloy SmartHeat™ Coating on Melt Pipes

- Uniform plasma coating applied to the melt pipe surface
- Integrated heating system with Xaloy SmartHeat™ Coating as part of the melt pipe
- Elimination of band heaters and the typical maintenance associated with them
- Non-stick coating

Benefits

- Tight process control that leads to improved product quality
- Increase productivity due to reduced heater maintenance and easy to clean surfaces
- Maximize operator safety with elimination of exposed wiring.
- Improve ROI by minimizing energy consumption

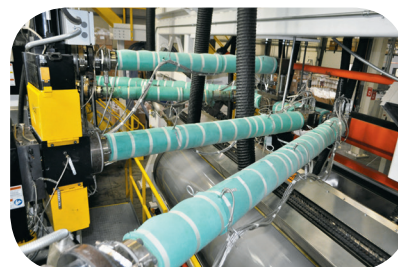


Photo Courtesy of Paragon Films

Factory Installation



Xaloy SmartHeat™ Coating on Nozzles

- Plasma-sprayed metallized-ceramic heater coating around the entire nozzle
- Integrated heating system with Xaloy SmartHeat™ Coating as part of the nozzle
- Non-stick surface

Benefits

- Increase your yield through uniform heating of polymer.
- Create a safer, cleaner work-environment with reduced exposed wiring
- Minimize downtime when Xaloy SmartHeat™ Coating is an integrated part of the nozzle
- Improve operator safety with easy-to-clean surfaces



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