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Sweet Precision: TUTCO Band Heaters in Candy Extruding

INSIDE
THIS
ISSUE

ENGINEERING INSIGHT
Heating the Innovation
Behind Royal Metals'
Sealed Register Box
[READ THE STORY](#)

THINKING OUTSIDE THE BOX
TUTCO Farnam:
Where Our Standard
is Custom
[READ THE STORY](#)

FEATURE APPLICATION
Keeping Data
Centers Warm
[READ THE STORY](#)

FEATURE VIDEO
The Evolution of
TUTCO Industrial
Control Panels
[WATCH THE VIDEO](#)

Sweet Precision: TUTCO Band Heaters in Candy Extruding

When it comes to candy production, precision heating makes the difference between a perfectly smooth confection and a batch destined for the scrap bin. In extrusion lines, where sugar, syrups, and flavors are transformed into ropes, bars, and filled centers, TUTCO band heaters provide the thermal backbone that keeps the process running consistently.

Candy extrusion isn't easy on equipment. The mixture is sticky, highly viscous, and sensitive to even minor temperature swings. If the barrel runs too cool, material flow slows and blockages form; if it runs too hot, sugars can scorch, caramelize, or crystallize. This balance requires heaters that deliver uniform, controllable heat across multiple zones of the extruder—barrel, die, and nozzle. TUTCO band heaters are engineered with exactly this in mind, providing the performance and reliability confectionery manufacturers depend on.

Along the extruder barrel, TUTCO HT Mica Band Heaters and MI Better Band Heaters ensure the candy mixture maintains the right viscosity for processing. Their tight clamping and uniform watt density create even heating that prevents hot and cold spots. At the die collar and nozzle, Permaheat Band Heaters provide rapid response and excellent thermal transfer, helping candy retain its shape while avoiding crystallization at the exit point. For plants that demand maximum durability under continuous duty, Ultima Band Heaters withstand the rigors of thermal cycling, sugar vapors, and cleaning agents without premature failure.

One of the biggest advantages TUTCO offers candy manufacturers is customization. Extruders often require heaters with cutouts, holes, or special terminations to fit around thermocouples, feed ports, or tight clearances. This flexibility makes it possible to tailor solutions to the unique challenges of every extrusion line.

The result is a heating system that does more than just keep candy warm—it ensures consistency, efficiency, and food safety. Faster startups, fewer defects, and longer service life translate into lower operating costs and higher product quality. For confectionery producers, that means more reliable output and happier customers.

At TUTCO, we believe heaters shouldn't be "off-the-shelf" compromises—they should be engineered to fit the process perfectly. That's why our band heater families are built to thrive in applications like candy extrusion, where thermal precision isn't just important, it's essential.

[Read more on Band Heaters](#)

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Heating the Innovation Behind Royal Metals' Sealed Register Box

By Jeremy Golden, TUTCO Farnam Custom Products

This project started out in our company's innovation group and eventually I got introduced. While it was a pretty straightforward heating and controls application for TUTCO Farnam – it was one of those jobs that other companies would find challenging. Our experience with custom heat and airflow systems really made the difference. It's what we do.

Royal Metals was developing a new automated line to produce their 535 Sealed Register Box – an HVAC component designed to improve energy efficiency and simplify installation. The product itself is unique: a metal register box encapsulated in closed-cell polyurethane foam. That foam acts as both insulation and an air seal, and the design includes a clever patent-pending feature that allows the duct to press and seal directly to the box without any tapes or mastics. It's a really clean, efficient idea.



Our role at TUTCO Farnam was to design and build the heaters and control units used for the heaters in the foam molding process on their production line. The process involves mixing two chemicals that react to form the expanding polyurethane foam.

This is just the kind of application where TUTCO Farnam excels. Our heaters provide efficient, even heat to the materials and the molds, ensuring the foam expands uniformly and bonds properly. In this application, both temperature and airflow are critical. If either one fluctuates too much, the foam won't meet spec. To ensure proper airflow, the system uses a VFD (variable frequency drive) to precisely manage the power to the blower. Fine-tuning that flow and velocity in real time lets us maintain consistency through every cycle.

For this line, we used one of our standard Flow Torch™ 400 heaters, modified to fit the customer's setup. Along with the heater, we built a completely custom control panel that incorporated Royal Metals' specific communication protocols. That kind of integration is routine for us, but it only works well when the customer shares as much detail as possible about their process upfront.

In this case, there was one detail that came to light later – the way the heaters were mounted. Royal Metals ended clamping flanges onto the units after delivery. If we'd known that earlier, we could've designed those flanges into the heaters and saved a step. We've already corrected that in the next production batch, so they'll be ready to drop right into place. That's a perfect example of why early collaboration between sales, engineering, and the customer makes all the difference. The more we know, the better we can tailor the solution.

The control logic on the system includes a start button that engages the blower first, then delays heater activation. This protects the heater and avoids temperature overshoot – a common issue when heaters ramp up before sufficient airflow is established. In the end, our custom heater and control system helped Royal Metals achieve the consistent foam quality they needed to launch the new 535 Sealed Register Box. The results spoke for themselves – the process runs smoothly, the product meets spec.

[More Engineering Insights](#)

TUTCO Farnam: Where Our Standard is Custom

by Jeff Elrod

As I start my new adventure with Farnam, I must adapt during this journey to support a new product offering. At TUTCO, we do electric heat, but not all electric heat is the same. Appliance is a completely different type of heater than residential HVAC which is different than Commercial HVAC. Once you get into our Industrial Offering, both the Conductive groups and the Wattco groups offer a very specialized electric heat offering that only that specific

division can offer. While there is a small amount of overlap between Farnam Custom Products and Sure Heat, they are still unique in their own ways with both specializing in certain things which makes them both have a place in the markets and industries that use this type of industrial process heat.



As I was training with Farnam, I was told that we do not like to say "No". There are always instances where a

company has to say no, or sometimes it does make sense not to say no given the situation and of course you always say no if the application with our heater is not safe but generally speaking, we do not say no if we can help it. Sometimes the answer is passing it on to one of our sister companies that already has the capabilities, sometimes we will propose one of our standard products to see if the customer can modify their design some and use the standard product to get the outcome needed for the process at hand. The other option is to "Think Outside the Box" and come up with a unique custom solution which will work for the given application. Of any company or division I have worked with in the last three decades, Farnam by far has the most diversity in customer industries and applications.

We supply heaters in the HVAC, dehumidification, medical and life science, packaging, plastics, thermal transfer, printing, 3D printers, pollution abatement, energy storage, and the list goes on and on. Then add in the addition of supplying UL508A Industrial Control Panels for electric heat applications but also for most any application requiring a UL508A control panel. While heat may be our main product at this time, we want to expand into other UL508A Industrial Control Panel markets whatever they may be.

We don't shy away from a challenge – we take it head on. Like all TUTCO divisions, we strive to be more than just your supplier; we aim to be your partner and solutions provider. For decades, TUTCO has shared its deep engineering expertise in electric heat – and now industrial control panels – to help customers get exactly what they need for their processes. Let TUTCO Farnam Custom Products "Think Outside the Box" for your electric heat and industrial control panel needs.

[Read More on Custom Solutions](#)



FEATURE APPLICATION

Data Centers

Keeping Data Centers Warm and Running Smoothly

In the world of hyperscale data centers, TUTCO products are playing a critical role in keeping them running smoothly. At the heart of our work is electric heating—more than just a component, it's a key part of keeping vital facilities stable, reliable, and compliant. From planning airflow and thermal management to helping clients implement year-round environmental control, we make sure every heater we install has a purpose.

Our solutions touch every corner of a data center. Underfloor plenum heaters prevent cold air pooling in raised-floor designs, while rack-level and cabinet heaters protect empty or low-density zones from condensation and thermal fluctuations. Battery rooms rely on precise heating to keep VRLA and lithium-ion systems within their narrow temperature range, ensuring long life and consistent performance. Even spaces for staff—NOC rooms, staging areas, and remote monitoring stations—benefit from supplemental heat to maintain comfort and operational readiness.

We also support a wide range of specialized applications. Electric heaters paired with dehumidifiers prevent corrosion on sensitive electronics, snow-melt systems keep rooftop and outdoor vents clear, and heat tracing protects pipes and drains from freezing. Redundant heating, raised-floor edge heaters, and dedicated room heaters all play a part in maintaining a stable environment, even during maintenance or partial HVAC failures.

Our heating systems come in many forms to match the needs of each facility. Circulation heaters warm fluids for hydronic or liquid cooling loops, in-line heaters maintain precise temperatures in real time, and skid-mounted systems provide modular, plug-and-play solutions for large-scale deployments. No matter the application, every heater is carefully engineered to ensure reliable operation, compliance with ASHRAE and ANSI standards, and peace of mind for operators.

Electric heating is no longer an afterthought in hyperscale data center architecture—it is a strategic element of thermal risk management. Whether deployed for condensation control, sub-zero resilience, or cabinet-level microclimate correction, engineered electric heat systems must be specified with the same rigor as any mission-critical infrastructure. When integrated intelligently, they improve uptime, extend equipment life, and align with both compliance mandates and environmental objectives. Whether you are planning a greenfield facility or retrofitting an aging data hall, our precision heating solutions ensure operational excellence from day one, TUTCO has a heating solution for every need. [More Industries and Applications](#)

[Read More on Data Centers](#)

[Contact Us for a Quote](#)



FEATURE VIDEO

The Evolution of TUTCO Control Panels

TUTCO Farnam engineers Logan Hedrick and Gage Kosnik take you behind the scenes to discuss the evolution of our industrial control panels and how they evolved over recent years. What began as simple, dependable systems designed to operate our heaters has grown into a sophisticated line of control solutions engineered for precision, reliability, and flexibility. Today, we offer both standard control panels that integrate seamlessly with TUTCO process heaters and fully customized systems tailored to meet specific customer requirements – from temperature management and safety interlocks to advanced interface options. [More on Control Panels](#)

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