NEXT-GENERATION PERFORMANCE
FOR THE EXTRUSION PROCESS

Nordson
MEASUREMENT & CONTROL

SMART TEMP
WIRE PREHEATERS

- Optional temperature measurement
- Easy setup with recipes
- Auto-range selection
- Multi-directional line heating

BETA LaserMike Products

Intelligence that transforms the world.

Intelligent Wire Preheating Begins with Smart Temp

Why Preheating Is Important

Uniform adhesion is not just a detail—it's a game-changer for signal integrity. When dealing with high-frequency signals, electricity travels along the exterior of the wire, making surface characteristics crucial.

Properly designed cables depend on effective insulation adhesion to maintain consistent impedance. For optimal performance, especially during peak signal currents when power is maximized, a reliable high-frequency preheater ensures uniform heating. Without uniform adhesion, variations in impedance can lead to significant signal loss, undermining communication quality.

This is why uniform adhesion is absolutely essential in wire and cable operations; it guarantees stable impedance and superior performance of your product.

Our new Smart Temp wire preheater makes your extrusion process faster and easier, improving product quality and productivity. With a host of features – including a touch-screen display, integrated temperature control, easy recipe setup, auto-range selection, multi-directional line heating, and more – the advantages are engineered in.

CE

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Intuitive Control

User-friendly screen navigation along with the Smart Temp's ease of operation simplifies complex training for operators.

Time Saving Range Selection

With the Smart Temp, range selection is done automatically, based on which product is selected on the display– resulting in faster product change outs.

Multi-Directional Line Heating

Smart Temp is suitable for production lines moving in either direction, left to right or right to left. This adaptability ensures that you can install the Smart Temp exactly how and where you need it

Optional Out-Going Wire Temperature Measurement: TempTrac Pro

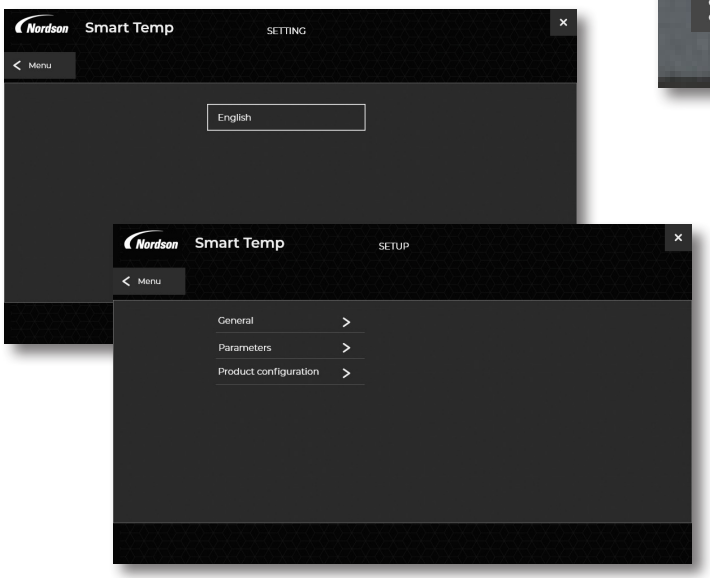
Delivering closed-loop control, an external measurement head and controller can be added to the system for out-going wire temperature monitoring.

Easily Setup and Monitor Preheating Performance

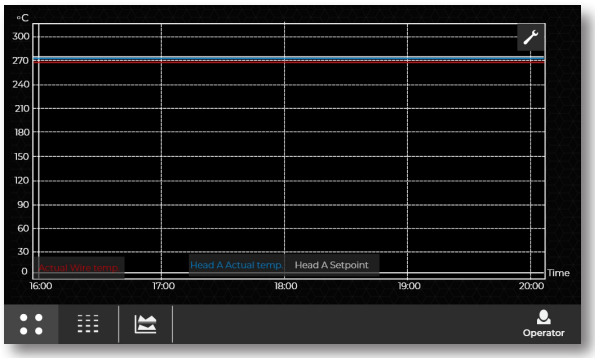
Easy touch-screen operation

The large 10-inch, touch-screen display makes setup and control easier than ever before. A clear user-friendly interface provides simple access to a selection of Smart Temp menus, functions and settings, so personnel can perform system setup, upload unique configurations and operate the system with ease.

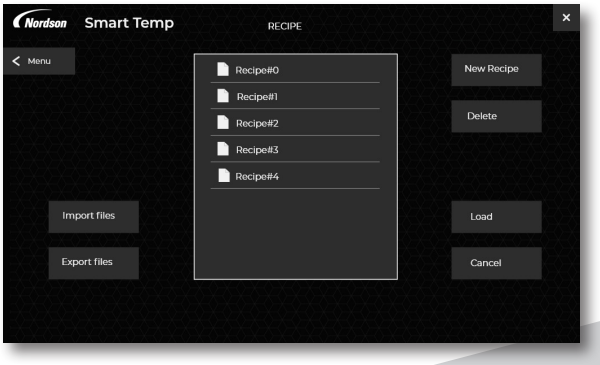
Main Menu



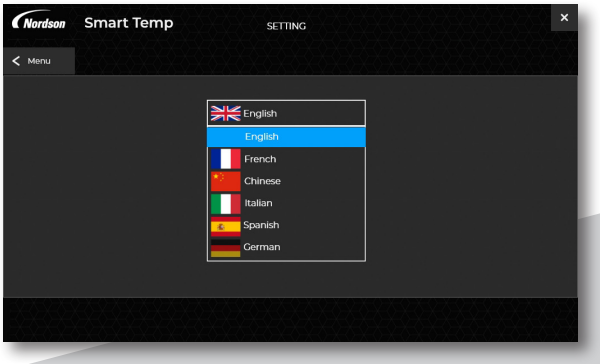
System Settings



Temperature Measurement



Recipes



Multi-Language

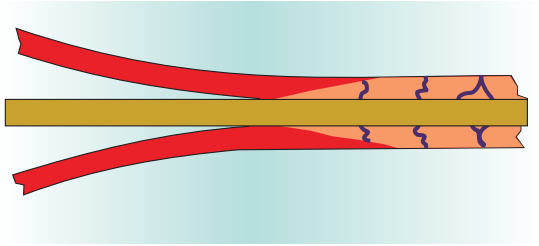
The Smart Temp Advantage

The temperature of the metal core is key to cable insulation properties. If hot plastic is extruded onto a cold wire, thermal shock can occur, creating cracks in the insulation which reduce the electrical and mechanical performance of the wire.

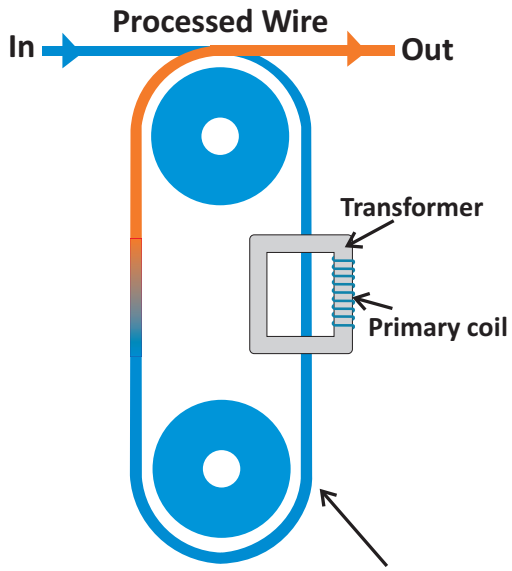
If the wire is too hot, however, the insulation will not flow around it correctly, and will not adhere to its surface.

These issues can adversely affect the line tension as the wire is pulled through the extruder, and will influence the electrical performance of the product, especially the capacitance.

Smart Temp produces a large current to preheat the wire, creating a uniform increase in temperature, delivering optimum performance and high-quality cable.



Improper preheating creates cracks in insulation



Wire passing through Preheater

The TempTrac Pro Advantage

To achieve precise open-loop control, operators need detailed product information. Simply guessing can result in temperature discrepancies or inconsistencies. With the smart temperature controller, campanies can use closed-loop control.

Closed-loop control not only enhances accuracy but also eliminates operator errors when adjusting settings or changing wiring, ensuring consistent results. This system doesn't need constant operator intervention as the preheater can operate independently.

Technical Data	
Wire Diameter Range	0.40 - 3.00 mm (0.015 - 0.118 in)
Temperature Range	10° - 350° C (50° - 572° F)
Maximum Line Speed	Up to: 2500 m/min (8202 ft/min)
Voltage	110/230 VAC, 50/60 Hz (Range: 85-264 VAC, 47-63 Hz)
Average Power Consumption	During Operation: 50-200 W
Maximum Power Consumption	During Operation: 1.000 W
Slotted Gauge Head	Equipped with 8 sensors
Interfaces	Profibus, Ethernet (TCP/IP), Serial (RS422), Analog, USB

Product Specifications

Model	SMART TEMP 280
Wire size	0.45-2.8 mm (0.02 - 0.11 in.) 25-9 AWG Stranded wire up to 6 mm^2
Max. line speed	2500 m/min. (8200 ft./min.)
Max. wire temperature	350°C (662°F)
Pulley size	2 x 280 mm (2 x 11 in.)
Power output	16 KVA
Max. loop volt	40 V
Communications	Telnet, UBS, RS-232, Profibus, Profinet, Ethernet/IP
Supply	380-480 VAC 50/60Hz 3ø
Enclosure	IP53 protection
Operating temperature	5-45°C (41- 113°F) Ambient Storage Temperature -40°C to 50°C (-40°F to 122°F) Max Relative Humidity 75% for temperatures up to 31°C or 88°F (decreasing linearly by 3% per °C up to 45°C or 113°F)
Volt fluctuations	±10v of nominal voltage
Noise	Max. 75db
Maximum line speed irrespective of power or voltage considerations	2500 m/min (8200 feet/min)
Maximum recommended line tension for a bearing life <18,000 hours	Smart Temp 280 = 200 N (approx 45 lb) at 2500 m/min & 270 N (approx 60 lb) at 1000 m/min (3280 ft/min)
Maximum recommended wire temperature for standard pulleys	Smart Temp 280 = 350°C (662°F)

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