

PRODUCTS

Heat Treatment Units

Induction Heat Treatment Units

Programmiers and Controllers

Heaters

Accessories and Consumables

API Furnace

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Heat Treatment Unit

Robust equipment for heavy-duty work in extreme conditions with temperature recorder attached to the control panel, can be applied in preheating for welding and localized heat treatment from small-sized piece up to high-thickness pieces.



Triple Cooling System

Forced cooling system with 100% operation time during operation with high-performance transformers and class H

- Increases power by 30%
- Increases equipment lifespan
- Allows continuous work without pauses
- Transforms high-power equipment into compact equipment
- Reduces energy consumption

Temperature recorder coupled with Paperless or Graphical Chart options

- Waterproof and dustproof
- Multi-functional panel keys
- Input types: DCV, TC, RTD, DI
- Verification interval: 1 s, 125 ms (fast sampling)
- Measurement accuracy: $\pm 0.05\%$ of reading (DCV), $\pm 0.15\%$ of reading (TC, RTD)
- CF cards up to 4 GB with adapter
- Large (400 MB) internal memory
- Intuitive, easy-to-operate display
- 5.7-inch, large-angle color TFT LCD display
- Reliable data storage
- Binary data storage
- Network allows for data redundancy



PRO75

Model	PR075
Code	M-PRO-75
Number of channels	06
Built-in	Digital recorder
Power	55-72 kVA Air Cooling
Cooling system	60/80V, 3 x 3.6 kW
Output	380/415/440V/480/575V
Input Voltage	109/100/94/87/72A
Input Current	Tripie Cooling System
Operational Safety	Complete
Dimensions	(L) 33.4" x (W) 33.4" x (H) 55"
Wight	1030 lbs
Color	Orange



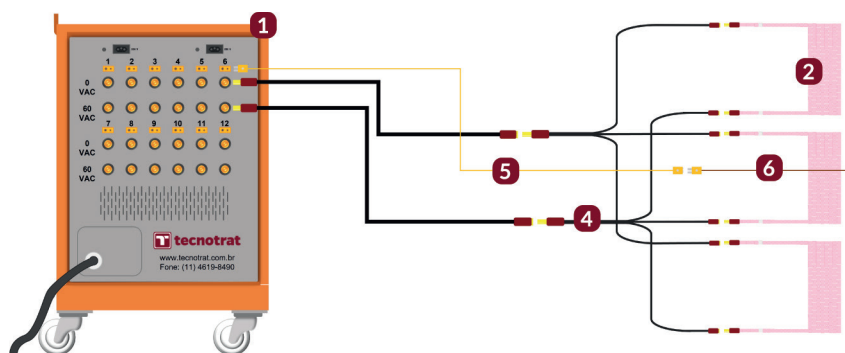
PRO150

Model	PR0150
Code	M-PRO-150
Number of channels	12
Built-in	Digital recorder
Power	110-144kVA Air Cooling
Cooling system	60/80V 3 x 3.6kW
Output	380/415/440V/480/575V
Input Voltage	219/200/189/173/145A
Input Current	Tripie Cooling System
Operational Safety	Complete
Dimensions	(L) 33.4" x (W) 33.4" x (H) 54.6"
Wight	1366.9 lbs
Color	Orange

Our Equipment Portfolio

	STANDARD			PLUS		PRO			
	STD 10	STD 50	STD 75	PLUS 75	PLUS 100	PRO 75	PRO 150	PRO 200	PRO300
Control Circuit	1	6	6	6	12	6	12	18	24
Built-in Recorder	Not included			Graphic Chart Recorder		Digital paperless recorder (chart paper recorder optional)			
Power	10kVA	50kVA	75kVA	75kVA	100kVA	55-72kVA Air Cooling	110-144kVA Air Cooling	165-214kVA Air Cooling	220-286kVA Air Cooling
Output	60V 3 x 2,7kW	60V 3 x 2,7kW	60V 3 x 2,7kW	60V 3 x 2,7kW	60V 3 x 2,7kW	60/80V 3 x 3,6kW	60/80V 3 x 3,6kW	60/80V 3 x 3,6kW	60/80V 3 x 3,6kW
Input Voltage	380/ 460V	380/415/ 440/480/ 575V	380/415/ 440/480/ 575V	380/415/ 440/480/ 575V	380/415/ 440/480/ 575V	380/415/ 440/480/ 575V	380/415/ 440/480/ 575V	440/480/ 575V	440/480/ 575V
Ventilation System	Standard			Standard		Triple Cooling System			
Operational Safety	Basic	Full	Full	Full	Full	Full	Full	Full	Full

Assembly Diagram/Accessories



Item	Descrição
1	PWHT Unit
2	Heating Elements
3	Insulation Blanket
4	Connection Cable and Split Cable
5	Thermocouple Wire Extension Cable
6	Thermocouple Attached to the Piece

Control Panel

The equipment has 6 individual controllers, with the capacity to store up to 09 cycle programs for heat treatment, with a HOLD button (standby mode). Due to the secondary transformer for energizing the instrument panel, it is possible to program without the need to turn on the transformer.

Complete Line of Machines for Heat Treatment



ISO 9001:2015

Safety System



Exclusive on/off button on the panel. No need to turn on the main transformer of the equipment.

Exclusive on/off button for the main transformer. Allows the thermal cycle programming to be done safely before turning on the main transformer.

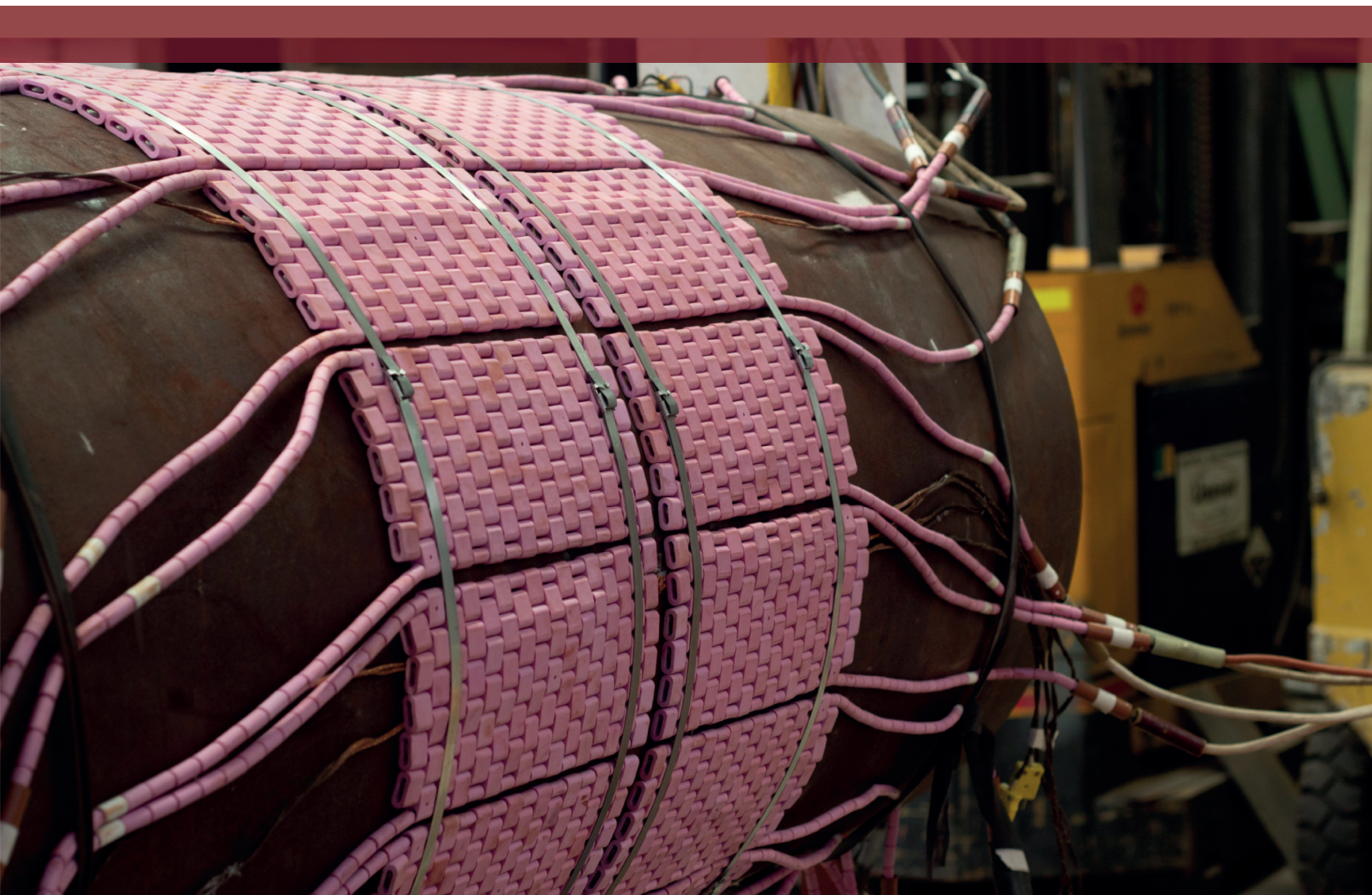
Transformer disarming light is automatically turned on in case the temperature goes above the set limit.

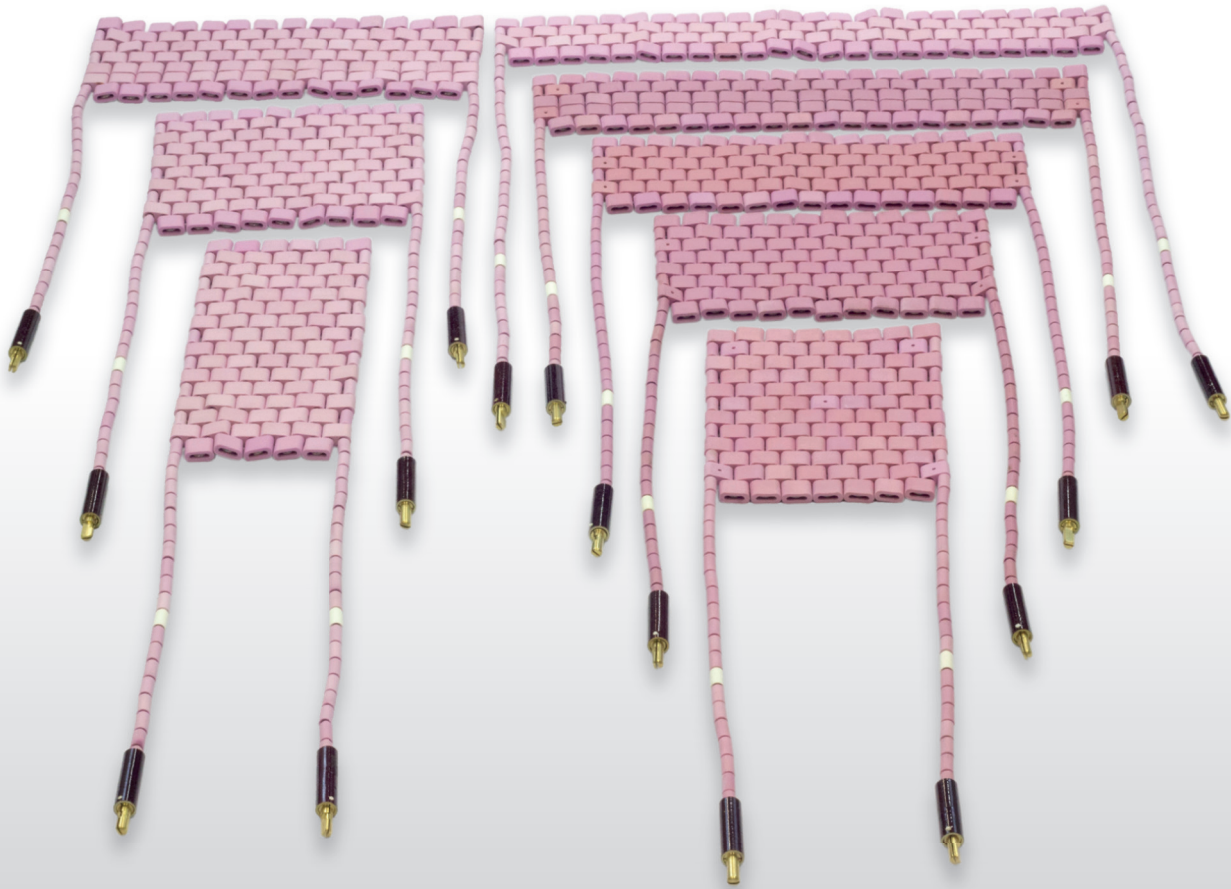
Emergency punch button. Stops the equipment in case of emergency.

Visual and audible alarm when the real temperature exceeds the set temperature.

Ceramic Pad Heating Element

Our company offers a complete line of electric resistances with a wide variety of dimensions, shapes, and electric powers that allow precise and appropriate use in each situation or project. Our electric resistances are manufactured with high-quality ceramic insulators based on alumina with a high concentration (above 90%) pressed and sintered at high temperatures, providing high resistance to abrasion and wear associated with excellent electrical insulation and excellent thermal conductivity, allowing for high thermal efficiency. The heating element is a high-purity type 80/20 Nickel Chrome alloy that, together with high alumina ceramic, ensures unparalleled thermal and electrical performance with power up to 28W/sq.in. The electric resistances manufactured by us have a cool tip, which prevents burns, fire hazards, cable burning, and also allows for safe handling by workers involved in handling the electric resistance without the risk of burns and electric shocks.





The electric resistors have a differently colored ceramic to indicate the start of the cold tail. The connectors are easy to connect with a quick twistlock connection and are protected with a high-temperature-resistant fiberglass insulating cover in case of involuntary contact with the heated part. Another point to highlight is the flexibility of the conveyor-type electric resistors, which can be used on flat or curved surfaces, with a wide variety of shapes, sizes, and powers available that allows for the choice of the most suitable type of electric resistor for each heat treatment.

The power of the resistors of 1.3kW, 2.7kW, and 3.6kW can be connected individually or in a standard parallel connection of up to 3 resistors per channel, and it is important to remember that the choice of the power of the electric resistor must be compatible with the output electrical voltage of the heat treatment machine. Special models of electric resistors and various geometries can also be manufactured upon technical consultation.

FIP Preheaters

Flexible Insulated Preheaters (FIP's)

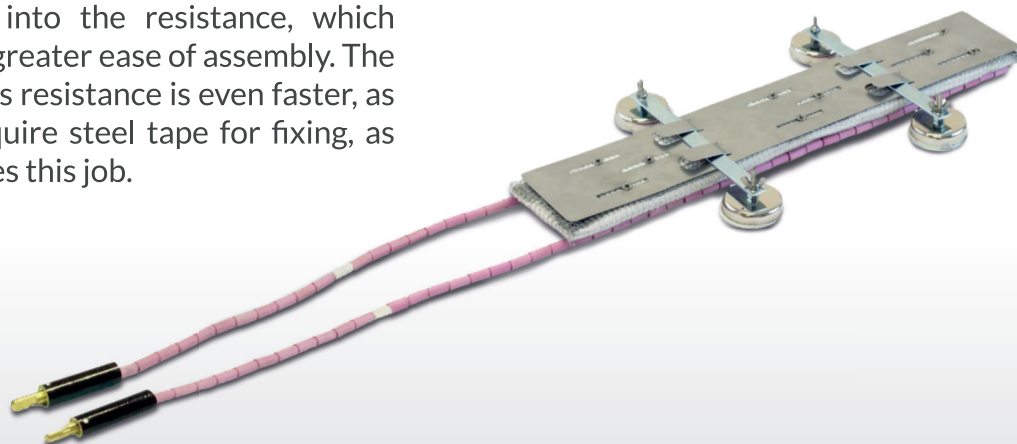
For preheating services, the FIP Flexible Insulated Preheaters is ideal for those seeking agility and productivity in assembly. The resistance part is identical to a PAD Resistance, but it comes already assembled with a ceramic fiber blanket and stainless steel mesh, fixed with a stainless steel plate with easy-to-fix handles.



The main advantage of this product is the quick assembly of the resistances for preheating and the economy of using thermal blanket. Normally, this type of resistance is used in models of resistances typically used in preheating.


Magnetic Attachment

Furthermore, this resistance model has the option of an additional magnet either loose or embedded into the resistance, which provides even greater ease of assembly. The assembly of this resistance is even faster, as it does not require steel tape for fixing, as the magnet does this job.



Electric Collar Heaters

Electric collar type heaters are ideal for increasing productivity when performing preheating and/or heat treatment in a continuous production line of pipes with the same diameter. It is possible to reduce assembly time by 1/3 and save on the cost of thermal insulation (blanket) and steel tape and seal for fixation.

 The cylindrical design of the Collar-type Electric Resistance Heater is made of steel sheet with handles that facilitate handling and quick locking fasteners, but it already comes mounted on a cushion made of ceramic fiber blanket and a protective cover of high temperature fabric or stainless steel mesh. The Collar-type Electric Resistance Heater adjusts perfectly to the tubing and can withstand temperatures of up to 1742°F.



Bank Heaters

The bank Heater has an ideal design to perform preheating and/or heat treatment procedures such as weld annealing, heating of large circumferential welds, heating of pressure vessels, heating of temporary and fixed ovens, and coating cures. Made of sturdy steel box, it allows reaching temperatures of up to 1562°F.



Heat Treatment Accessories

Thermocouple

The Type K Thermocouple Wire is made of Chromel (Ni-Cr) and Alumel (Ni-Al) alloys.

Roll of Thermocouple 20 AWG with double fiberglass insulation



Mineral Thermocouple

Mineral Thermocouple of 1 meter Length U: 1000 mm (39.37 inches) Sheath Stainless Steel 310 06.0mm (0.24 inches) with type K plug.

Socket Type K

Male plug or female socket Type K. ANSI color code.



TAU

The Thermocouple Attachment Unit (TAU) is a portable capacitance discharge welding machine used for fixing thermocouples to a workpiece. This process is easy, fast, and essential for high-quality temperature measurement.



Graphic Chart Recorder



Paperless Recorder



Induction Heat Treatment Unit



Accessories for Induction Heating



Blanket-type
Inductor



Inductor



Inductor
C-type



Inductor
Plate-Type

Services

- Post Weld Heat Treatment
 - Heating by electrical resistances,
 - Induction Heating
- Preheating for welding
 - Heating by electrical resistances,
 - Induction Heating
- Annealing heat treatment
- Global stress relieve with convective method
- Temporary and modular furnace
- Thermal comfort
- Epoxy and resins cure
- Refractories dry-out
- Engineering and Consulting Services
- Maintenance and Technical Assistance
- Manpower training

Products

- Automatic heat treatment machines for field welds
 - Heating by electrical resistances,
 - Induction Heating,
 - Preheating for welding.
- Electrical resistances
- Interconnection Cables
- Quick twisted connectors
- Instrumentation cables
- Temperature Recorders
- TAU - Thermocouple Attachment Unit
- Thermocouples
- Other materials for heating
- Modular Furnaces



We were a pioneer company in using automatic heat treatment machines in Brazil and have made constant investments in the capacity of the manpower and manufacturing, we also have our own factory and business units in various parts of Brazil and currently we have units abroad in Paraguay and the United States, so are prepared to meet the demands of our area of operation quickly.



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