



ELECTRICAL RESISTANCE EQUIPMENT CATALOG

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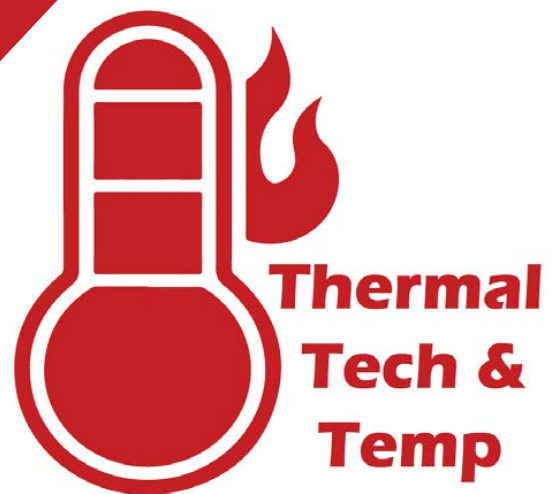
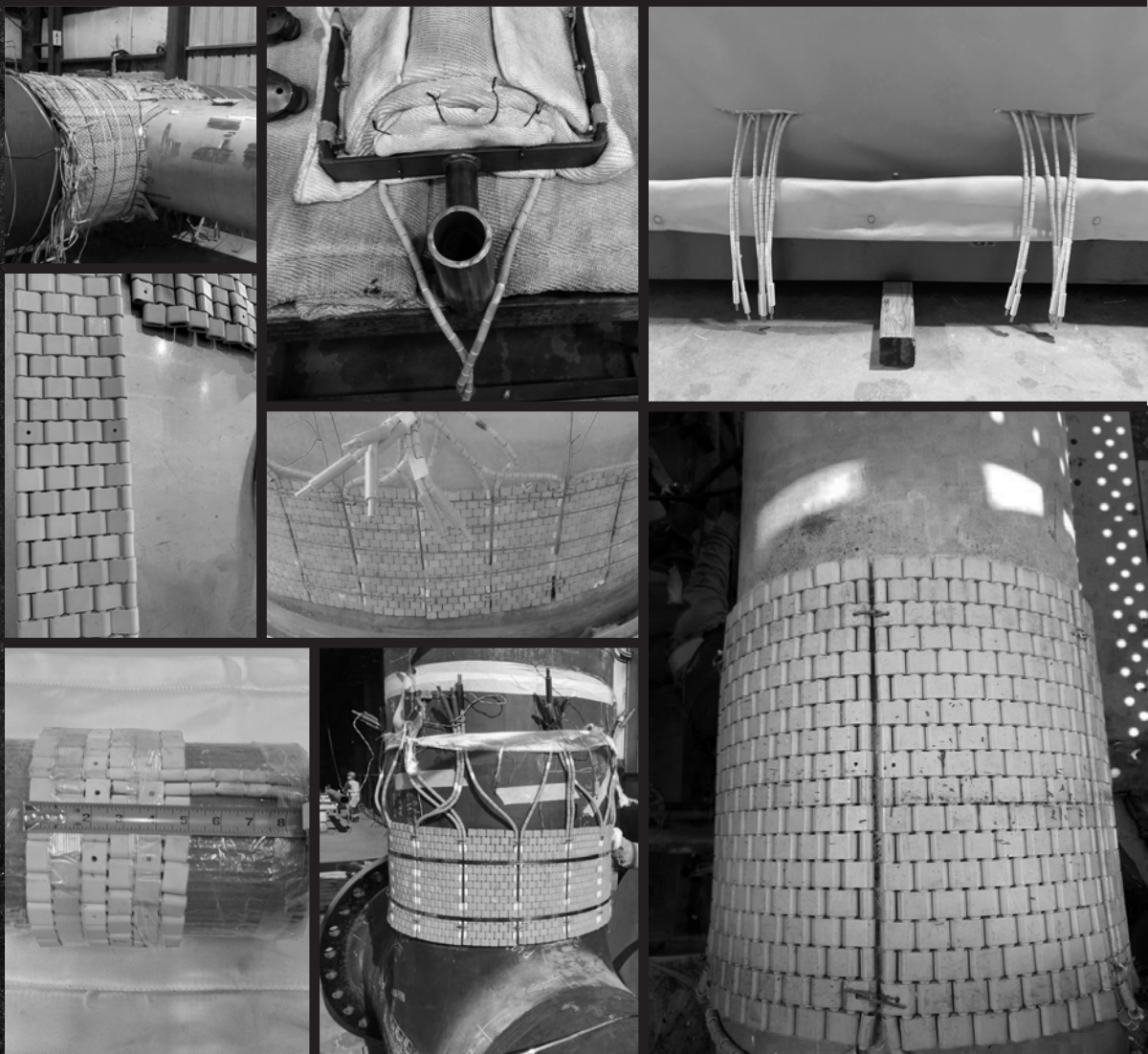


TABLE OF CONTENTS

TABLE OF CONTENTS

- 2** ABOUT US
- 3** 6-WAY POWER CONSOLE
- 4** CABLE SETS AND SPLITTERS
- 5** TWIN HEAT MODULE
- 6** FLEXIBLE CERAMIC PADS
- 7** TEMPERATURE RECORDING
- 9** USAGE AND APPLICATIONS
- 11** ORDERING INFORMATION
- 13** THERMAL DATA SHEETS



THE TTT STORY

Thermal Tech & Temp Inc. has contributed to the heating industry for over 20 years. We specialize in custom manufactured thermal protection for the heat treating industry, along with many other industrial markets. Some of our electrical resistance accessories flexible ceramic pads, 6-way power consoles, and twin heat modules. We take pride in our work by taking the time to meet our customers at their job sites and by carefully overseeing all operations to make sure we are always fitting our customer's needs.



Thermal Tech & Temp Inc. is committed to achieving total customer satisfaction by delivering high-quality, durable, and custom fabricated products 100% of the time!

You can find Thermal Tech & Temp Inc. on many different social media platforms. Follow our accounts on Facebook, Twitter, Instagram, LinkedIn, and Youtube to stay up to date with our latest products and news.

CONTACT US

We love connecting with our customers! Feel free to visit us during normal business hours, or reach out via phone or email, and make sure to stay up-to-date with Thermal Tech & Temp by following us on social media!

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6-WAY POWER CONSOLE

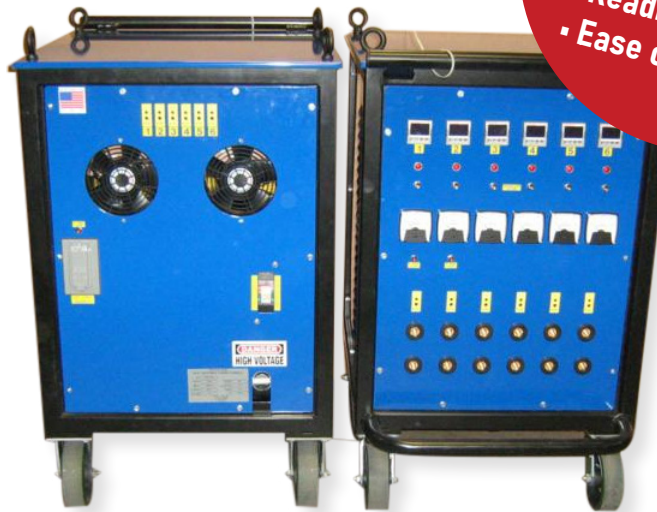
6-WAY POWER CONSOLE

Thermal Tech & Temp's electrical resistance equipment is designed for projects that require heat uniformity, accurate control, dependability, and safety. Our 6-way standard power console is extremely durable, dependable, and robust for even the most difficult of heat treatment applications. Incorporating a 1.5-inch tubular frame and a 1 1/4-inch tubed handle kick bar, the 6-way power console is fully welded, ground down, polished, and then powder coated black. The front and back panels of the machine are made of 14 gauge steel, while the side and roof panels are made from 16 gauge steel. Again, all powders are coated. Then, beneath the lid is a removable support system to prevent the lid from bending, and to also support a recorder.



KEY FEATURES

- Very affordable
- Made in the U.S.A.
- Readily available
- Ease of use



WHAT'S INCLUDED:

6 WAY WITH RAMP: (6) 3216 ramp controllers, (1) circuit breaker, (6) Albright contactors, (6) heater on lights, (3) thermocouple locations per circuit, (1) 6-inch instrument cooling fan, (2) 120-volt power outlets, (1) ammeter and 6-position switch console which will be pre-wired and tested.

FULLY-AUTOMATIC: (1) 3216 master and (5) 3216 slave controllers.

CABLE SETS AND SPLITTERS

CABLE SETS AND SPLITTERS

Thermal Tech & Temp's cables and splitters are made with skilled craftsmanship ensuring that all of the CAM locks are attached with the proper technique to prevent burnout and breakdown of electrical connections.



TRIPLE CABLE SETS

Triple Cable Sets are made with heavy-duty #2 welding cable and shielded type "K" compensation lead.



SPLITTERS

Splitters made with #6 heavy-duty welding cable.



HEAVY-DUTY WELDING CABLES

Used for the construction of secondary electrical cables.

TWIN HEAT MODULES

TWIN HEAT MODULES

Our Twin Heat Module units will allow you to use a welder and the direct current from the welder for powering your electrical resistance heaters. In addition, our twin heat units will control the temperature and allow you to print a chart of your heat cycle for easy reference.



TWIN HEAT MODULE WITH RECORDER

Includes (2) EHS 3216 ramp controllers, (2) contactors, and (1) 6-point chino digital recorder.



TWIN HEAT MODULE WITHOUT RECORDER

Includes (2) EHS 3216 ramp controllers and (2) contactors. This machine is very easy to hook up to a welding machine!

FEATURES

STANDARD FEATURES:

Size: 10 inches high by 20 inches deep by 9 inches wide

Stainless steel case with carrying handle, 6-foot 120-volt power cord, neon power-on light, (2) 300 amp male and (2) 300 amp female twist locks, euro therm ramp controllers, connected switching with neon, indicators for each of the (2) channels, Albright 250 amp contactors, and heavy-duty rubber feet.

OPTIONAL FEATURES

Size: 17 inches high by 20 inches deep by 9 inches wide

Euro therm graphic or chino 6 point digital, recorder, fused 120-volt outlet, and (4) extra thermocouple locations.

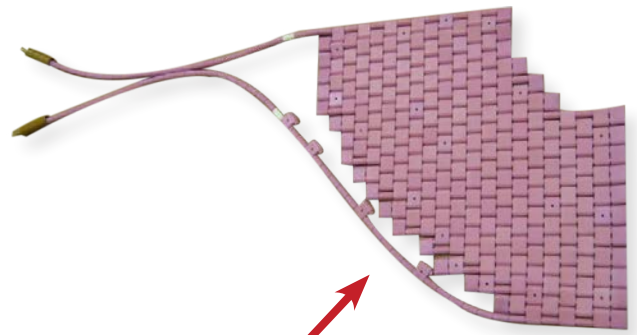
FLEXIBLE CERAMIC PADS

FLEXIBLE CERAMIC PADS

Our heaters have the production capability to manufacture up to four hundred types of flexible ceramic pads per day using their seven 24 foot stainless steel heater tables. The demand is high and we are ready to meet our customer's needs! Using only the highest grade 95% centered alumina ceramics and 80/20 nickel-chromium alloy wire provides the highest quality heaters in the industry. We manufacture ceramic mat heaters in a wide variety of voltages, sizes, and shapes. All of the following voltages are available for flexible ceramic pads: 25, 30, 40, 60, 70, 80, 120, 240, 277, 300, 330, 380, 400, 440, 480, 550, 575 and 600 volt.

KEY FEATURES

- Made in the U.S.A.
- Readily available
- High-quality alloy wire



ASK US ABOUT CUSTOM MODIFICATIONS, SUCH AS ADDING PIN HOLES TO THE HEATERS



TEMPERATURE RECORDING

TEMPERATURE RECORDING

From spring-loaded thermocouples to extension leads, Thermal Tech & Temp has something to fit all of your temperature recording needs. We offer all types of thermocouple accessories including QQ Thermocouple wire that can be spot-welded onto the piece to provide you with the most accurate temperature measurement of the part being heating, along with spring-loaded thermocouples that are mounted to our induction products.



MALE AND FEMALE THERMOCOUPLE PLUGS

Fixed to the induction blanket to provide precise temperatures while heating



TYPE K SPRING-LOADED THERMOCOUPLES

Offer reliable, accurate measurements with a wide temperature range



THERMOCOUPLE AND MAGNET COMBO

Custom made combo that can be easily attached to the area you are working on and adjusted to fit your temperature needs



PREMADE THERMOCOUPLES TYPE K

Can be made in custom lengths and can withstand temperatures of up to 2000°F



MAGNETIC THERMOCOUPLE

Provides precise high-temperature measurements and comes with fiberglass insulated cable made of stainless steel



INSULATED EXTENSION LEAD

Thermocouple extension lead insulated with 1/2-inch thick e-glass insulation covered with 22.0-ounce kevlar fabric



ROLLING THERMOCOUPLE

Able to move with the rotation of the piece you are working with rather than being limited to a single position for temperature recording



INDIVIDUAL THERMOCOUPLE EXTENSION LEAD

Custom made to offer more specific plug-in options than the standard extension lead



BLOCK THERMOCOUPLE EXTENSION LEAD

Can either be produced in a standard 6 block setup or manufactured in custom lengths with (1) loom and (6) plugs



BROWN QQ THERMOCOUPLE WIRE

Can be easily tack welded to the workpiece for precise temperature control



12 AND 24 POINT DIGITAL RECORDERS

Connect to the Proheat 35 for accurate measurements with a wide range of temperatures



THERMOCOUPLE ATTACHMENT UNIT

Capacitor discharge unit with a battery that allows you to spot weld thermocouples to the workpiece



EUROTHERM 12-POINT DIGITAL RECORDER

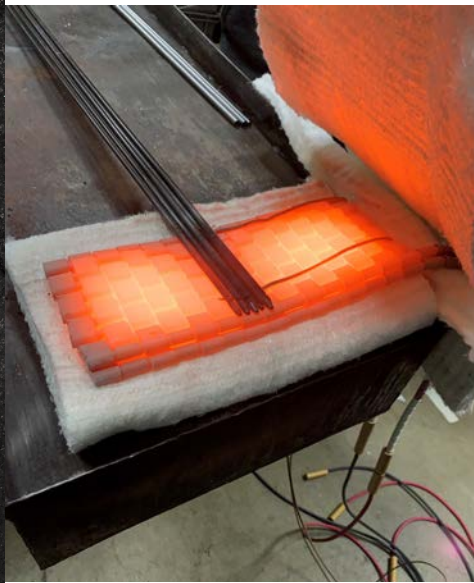
Connects directly to a Proheat 35 for accurate temperature measurement

USAGE AND APPLICATIONS

USAGE AND APPLICATIONS

Electrical resistance offers a great solution for applications that require individualized control over the zones being heat treated. For example, having multiple controlling heat zones allows you to heat one section without overheating other sections. In addition to this, electrical resistance equipment is extremely cost-effective, very durable, and readily available. With heaters that can withstand temperatures of up to 2000°F, this allows for a very effective and controlled uniform heating process.

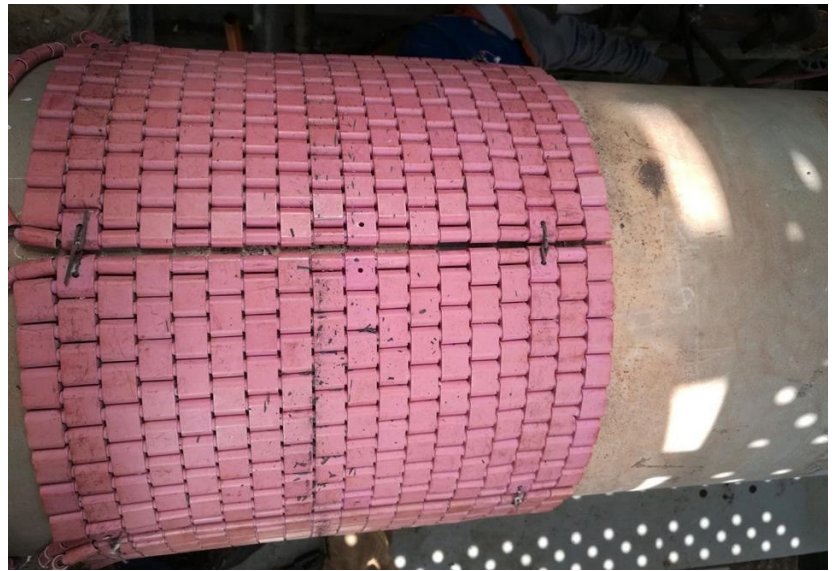
**FLEXIBLE CERAMIC PAD ON
THERMASIL NEEDED MAT**



**ELECTRICAL
RESISTANCE
CLAM SHELL**



**ELECTRICAL
RESISTANCE
OVEN**



**FLEXIBLE CERAMIC
PADS BEING USED
TO HEAT PIPES**



**INSULATED
FLEXIBLE
CERAMIC PADS**



ORDERING INFORMATION

For placing an order with Thermal Tech & Temp, please email us at sales@thermaltechtemp.com. Feel free to call us at (1-800) 674-9284 with any questions you may have and we would be happy to assist you.

CABLES AND SPLITTERS

PART NUMBER	DESCRIPTION
TTT-TRCS-25	Triple Cable Set, 25 ft long
TTT-TRCS-50	Triple Cable Set, 50 ft long
TTT-TRCS-70	Triple Cable Set, 70 ft long
TTT-TRCS-100	Triple Cable Set, 100 ft long
TTT-TRCS-150	Triple Cable Set, 150 ft long
TTT-SPLIT-2	2-Way Splitter
TTT-SPLIT-3	3-Way Splitter
TTT-SPLIT-4	4-Way Splitter
TTT-HDWC-2-BLACK	Heavy Duty Welding Cable, #2 black
TTT-HDWC-2-RED	Heavy Duty Welding Cable, #2 red
TTT-HDWC-3-BLACK	Heavy Duty Welding Cable, #3 black
TTT-HDWC-3-RED	Heavy Duty Welding Cable, #3 red
TTT-HDWC-4-BLACK	Heavy Duty Welding Cable, #4 black
TTT-HDWC-4-RED	Heavy Duty Welding Cable, #4 red
TTT-HDWC-6-BLACK	Heavy Duty Welding Cable, #6 black
TTT-HDWC-6-RED	Heavy Duty Welding Cable, #6 red

THERMOCOUPLES AND MORE

PART NUMBER	DESCRIPTION
TTT-TCK-60	Type K Spring-Loaded Thermocouple, 60 inches long with male thermocouple plug
TTT-TCK-120	Type K Spring-Loaded Thermocouple, 120 inches long with male thermocouple plug
TTT-TCK-300	Type K Spring-Loaded Thermocouple, 300 inches long with male thermocouple plug
TTT-PRMD-TCK-25	Premade Type K Thermocouple, 25 feet long
TTT-MALE-TC	Male Thermocouple Plug
TTT-FEMALE-TC	Female Thermocouple Plug
TTT-INDV-EXT-25	Thermocouple Extension Lead, 1 loom with individual cables, 25 feet long
TTT-INDV-EXT-50	Thermocouple Extension Lead, 1 loom with individual cables, 50 feet long
TTT-INDV-EXT-100	Thermocouple Extension Lead, 1 loom with individual cables, 100 feet long
TTT-BLOCK-EXT-25	Thermocouple Extension Lead, 1 loom with standard block setup, 25 feet long
TTT-BLOCK-EXT-50	Thermocouple Extension Lead, 1 loom with standard block setup, 50 feet long
TTT-BLOCK-EXT-100	Thermocouple Extension Lead, 1 loom with standard block setup, 100 feet long
TTT-INS-EXT-25	Insulated Extension Lead, 1 cable, 25 feet long
TTT-INS-EXT-50	Insulated Extension Lead, 1 cable, 50 feet long
TTT-TC-60-MAG-40	Thermocouple and Magnet Combo, 60 inches long thermocouple with 40 lb pull magnet
TTT-MAGTC-RED	Magnetic Thermocouple, red with insulated stainless steel cable
TTT-ROLL-TC	Rolling Thermocouple
TTT-QQ-TCWIRE-500	Brown QQ Thermocouple Wire, 500 feet of thermocouple wire per spool
TTT-REC-12	12-Point Digital Recorder
TTT-REC-24	24-Point Digital Recorder
TTT-EUROREC-12	12-Point Eurotherm Digital Recorder for Miller Proheat 35
TTT-TAU-UNIT	Thermocouple Attachment Unit, with battery and 110 volt plug to re-charge

ORDERING INFORMATION

FLEXIBLE CERAMIC PADS

PART NUMBER	DESCRIPTION
TTT-FCP-3-80	Standard 80 Volt Flexible Ceramic Pad, 3 inches wide by 39 inches long
TTT-FCP-4-80	Standard 80 Volt Flexible Ceramic Pad, 4 inches wide by 29 inches long
TTT-FCP-6-80	Standard 80 Volt Flexible Ceramic Pad, 6 inches wide by 19.5 inches long
TTT-FCP-8-80	Standard 80 Volt Flexible Ceramic Pad, 8 inches wide by 14.5 inches long
TTT-FCP-10-80	Standard 80 Volt Flexible Ceramic Pad, 10 inches wide by 12.25 inches long
TTT-FCP-12-80	Standard 80 Volt Flexible Ceramic Pad, 12 inches wide by 9.75 inches long
TTT-FCP-15-80	Standard 80 Volt Flexible Ceramic Pad, 15 inches wide by 8 inches long
TTT-FCP-18-80	Standard 80 Volt Flexible Ceramic Pad, 18 inches wide by 6.5 inches long
TTT-FCP-21-80	Standard 80 Volt Flexible Ceramic Pad, 21 inches wide by 5.75 inches long
TTT-FCP-24-80	Standard 80 Volt Flexible Ceramic Pad, 24 inches wide by 5 inches long
TTT-FCP-29-80	Standard 80 Volt Flexible Ceramic Pad, 29 inches wide by 4 inches long
TTT-FCP-36-80	Standard 80 Volt Flexible Ceramic Pad, 36 inches wide by 3.25 inches long
TTT-FCP-72-80	Standard 80 Volt Flexible Ceramic Pad, 72 inches wide by 1.75 inches long
TTT-FCP-1-80	Standard 80 Volt Flexible Ceramic Pad, 1 inches wide by 120 inches long
TTT-FCP-3-60	Standard 60 Volt Flexible Ceramic Pad, 3 inches wide by 28 inches long
TTT-FCP-4-60	Standard 60 Volt Flexible Ceramic Pad, 4 inches wide by 21 inches long
TTT-FCP-6-60	Standard 60 Volt Flexible Ceramic Pad, 6 inches wide by 14.5 inches long
TTT-FCP-8-60	Standard 60 Volt Flexible Ceramic Pad, 8 inches wide by 10.5 inches long
TTT-FCP-10-60	Standard 60 Volt Flexible Ceramic Pad, 10 inches wide by 9 inches long
TTT-FCP-12-60	Standard 60 Volt Flexible Ceramic Pad, 12 inches wide by 7.25 inches long
TTT-FCP-15-60	Standard 60 Volt Flexible Ceramic Pad, 15 inches wide by 5.75 inches long
TTT-FCP-18-60	Standard 60 Volt Flexible Ceramic Pad, 18 inches wide by 5 inches long
TTT-FCP-21-60	Standard 60 Volt Flexible Ceramic Pad, 21 inches wide by 4 inches long
TTT-FCP-26-60	Standard 60 Volt Flexible Ceramic Pad, 26 inches wide by 3.25 inches long
TTT-FCP-52-60	Standard 60 Volt Flexible Ceramic Pad, 52 inches wide by 1.75 inches long
TTT-FCP-1-60	Standard 60 Volt Flexible Ceramic Pad, 1 inches wide by 84 inches long

STANDARD 6-WAY POWER CONSOLE

PART NUMBER	DESCRIPTION
TTT-6WAY-RAMP	Standard 6-Way Power Console with Ramp
TTT-6WAY-AUTO	Fully Automatic Standard 6-Way Power Console

TWIN HEAT MODULES

PART NUMBER	DESCRIPTION
TTT-THM-REC	Twin Heat Module with Recorder
TTT-THM-NOREC	Twin Heat Module Without Recorder

INSULATION MATERIAL

PART NUMBER	DESCRIPTION
TTT-ENM-12-60-100	E-Glass Needled Mat, 1/2-thick by 60 inches wide by 100 feet long
TTT-ENM-25-60-45	E-Glass Needled Mat, 1-thick by 60 inches wide by 45 feet long
TTT-TSM-12-36-75	Thermasil Needled Mat, 1/2-thick by 36 inches wide by 75 feet long
TTT-TSM-12-60-75	Thermasil Needled Mat, 1/2-thick by 60 inches wide by 75 feet long
TTT-TSM-25-36-33	Thermasil Needled Mat, 1-thick by 36 inches wide by 33 1/3 feet long
TTT-TSM-25-60-33	Thermasil Needled Mat, 1-thick by 60 inches wide by 33 1/3 feet long
TTT-SOLF-12-24-50	Soluble Fiber, 1/2-thick by 24 inches wide by 50 feet long
TTT-SOLF-25-24-25	Soluble Fiber, 1-thick by 24 inches wide by 25 feet long

TTT-TSM-25 DATA

1

DESCRIPTION

TTT-TSM-25 is lightweight, high-temperature insulation composed of 100% amorphous silica fiber that has been specially treated during the manufacturing process to reduce residual shrinkage at elevated temperatures.

2

APPLICATIONS

TTT-TSM-25 is intended for use in glass furnace crown insulation repair, nuclear insulation applications, acoustic insulation, insulating pads, and blankets, high temperature and acid resistant gaskets, exhaust manifold insulation, stress-relieving pads, high-temperature pipe and valve insulation, welding protection, thermal, and acoustic insulation for steam and gas turbines, expansion joints and more.

3

ADVANTAGES

The unique properties of TTT-TSM-25 make it binder-free, highly resilient, non-respirable, fireproof, and, cost-effective. TTT-TSM-25 also has outstanding chemical resistance, has excellent sound absorption, and low shrinkage.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Thickness	ASTM-D-1777	1" +/- 10%	25.4 mm +/- 10%
Density		10.5 to 12.0 lbs/ft ³	168 to 192 kg/cc
Temperature Resistance	N/A	Intermittent: 2200°F Continuous: 2000°F Melting: 3100°F	Intermittent: 1200°C Continuous: 1100°C Melting: 1700°C
Linear Shrinkage	24 hrs at 1000°F (540°C) 24 hrs at 1200°F (990°C) 24 hrs at 1400°F (820°C) 24 hrs at 1600°F (1000°C) 24 hrs at 1800°F (1100°C) 24 hrs at 2000°F (1200°C)	0.05% 0.06% 0.06% 0.10% 0.30% 0.70%	
Thermal Conductivity	500°F (260°C) 1000°F (540°C) 1500°F (820°C) 1800°F (1000°C)	0.45 Btu-in/hr.ft 0.78 Btu-in/hr.ft 1.39 Btu-in/hr.ft 1.93 Btu-in/hr.ft	0.054 Kcal-m/hr.m ²⁰ C 0.094 Kcal-m/hr.m ²⁰ C 0.166 Kcal-m/hr.m ²⁰ C 0.231 Kcal-m/hr.m ²⁰ C
Color:	N/A	White	

***All values are nominal unless otherwise specified. All statements herein are expressions of opinion that we believe to be accurate and reliable but are presented without guaranty or responsibility on our part. Statements concerning the possible use of our products are not intended as recommendations for their use alone or in combination with any materials or elements to infringe any patents. No patent warranty of any kind, express or implied, is made or intended.

TTT-SOLF-25 DATA

1

DESCRIPTION

TTT-SOLF-25 is a high-temperature body low bio-persistence fiber that utilizes a unique spinning technology to create a special fiber with superior thermal and mechanical properties. This fiber is made from a blend of calcium, silica, and magnesium and can be exposed to temperatures up to 2192°F.

2

APPLICATIONS

TTT-SOLF-25 is intended for use in removable insulation, cable trays, batteries, expansion joints, ovens, process furnace linings, structural steel fire protection, fire barriers, and more.

3

ADVANTAGES

The unique properties of TTT-SOLF-25 make it flexible, lightweight, inorganic, thermal shock, chemical attack, and corrosion resistant with a low level of thermal conductivity and high tensile strength for low heat storage. TTT-SOLF-25 is also a cost-effective alternative to refractory ceramic fiber for applications to 2200°F. TTT-SOLF-25 also has excellent sound absorption, is high heat-reflective, and is easy to fabricate and install.

4

PROPERTY DATA

Characteristics:	Method:	English Values:	Metric Values:
Thickness	ASTM-D-1777	1" +/- 10%	25.4 mm +/- 10%
Temperature Resistance	N/A	Max: 2200°F Operating: 2000°F	Max: 1200°C Operating: 1100°C
Linear Shrinkage	2000°F/24 hrs	0-1.5%	
Specific Heat	(Btu/lbs/F)	0.27	
Color:	N/A	White	

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