

# INDUCTION HEATING EQUIPMENT CATALOG

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### **THE TTT STORY**

Thermal Tech & Temp Inc. has contributed to the heating industry for over 20 years. We specialize in custom making induction heating equipment, insulation materials and electrical resistance heating equipment. Some of our custom fabricated induction heating accessories include induction heat clamps, induction heat clam shells, and internal plugs. We take pride in the work we do by taking the time to meet our customers at 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!

#### THERMAL TECH & TEMP INC.

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### **OVENS/FURNACES**

Our unique manufacturing method of induction ovens and furnaces allows for a uniform preheat and stress relief of materials that you don't see in other induction ovens. This is especially beneficial for some metals, such as aluminum or stainless steel parts, that cannot be heat treated through direct induction.

#### **KEY FEATURES:**

- Quick heated up times
- · Easily moved
- Convenient preheat
- Convenient stress relief
- Durable steel liner
- · Controlled cool-down times
- $\cdot$  No fumes or venting
- $\cdot$  No open flames
- Cost-effective

- $\cdot$  Increased staff safety
- $\cdot$  Custom made for your application
- Powered by Miller ProHeat 35





**SIDE LOAD OVEN** (with two racks that pull out)



INSIDE DISPLAY (1350°F radiant uniform heat)



TABLE OVEN (with bottom shelf for slow-cool)



**TOP LOAD OVEN WITH MILLER PROHEAT** (great for heating small parts up to 1200°F)



**BATCH STYLE** (48 inch tall x 48 inch diameter with a 60 inch base)



LONG TOP LOAD OVEN (has 3 lids for separate heating areas)



SMALL HAND HELD OVEN (12 inch tall x 12 inch diameter for heating small drill bits)



LONG TOP LOAD OVEN (preheat oven for 600°F industrial parts)



60 INCH DIAMETER BATCH OVEN (post-weld heat treat oven)

### **INDUCTION BLANKETS**

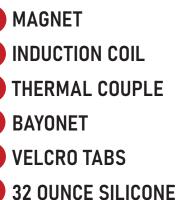
Thermal Tech & Temp's induction heating blankets are manufactured from durable hightemperature materials. Our flexible induction post-weld heat treatment (PWHT) blankets are designed to withstand the tough conditions in both industrial and construction applications. With our induction blankets, we create a safer welding environment for our customers. All of our induction blankets are also designed to have high tensile strength and come with high temp magnets. Along with easy set-up and flexibility, and the ability to temperature control, our blankets can be custom made to fit a wide variety of pipe diameters and plate lengths.



#### **KEY FEATURES:**

- · Custom made to fit your application
- · Able to be reconfigured without a pegboard
- Made with durable/high temp materials
- Improved welding environment
- $\cdot$  No exposure to open flame
- · No need for explosive glasses
- · Repetitive heating profiles
- · Fits various pipe diameters lengths
- · Quick and flexible set-up
- High-temperauture magnet





32 OUNCE SILICONE COATED FABRIC





HEAT SHRINK Blanket

(rapid heat up to 600°F to remove bearing)



DAISY-CHAINED BLANKETS (on large base plate for windmill)



DAISY-CHAINED BLANKET (equiped with switchable magnets)





DAISY-CHAINED INTERNAL HEATING BLANKETS

(pre-heat of large castings)



**CIRCULAR BLANKET** (84-inch diameter bullseye will allow you to adjust coils where needed)



LARGE HEATING BLANKET (5 foot wide by 10 foot long)



(6-inch diameter to 12-inch diameter)



**PRE-HEAT BLANKET** (allows blanket to contour to vessel)



MANWAY BLANKET (36-inch diameter manway)

### CLAMPS

Ideally, induction heat clamps are suited for large diameter rotation when using submerged arc or manual metal arc but are also suited to small diameters. Our induction heat clamps are fitted with four thermocouples that are designed to contour of the pipe to control the pre-heat temperature. As the pipe rotates around to the starting point, the thermocouples begin to pick up temperature readings to adjust the output of the 35 kilowatts to suit the target temperature that has been set. The spring that is positioned on the back of the heating clamp mounting is designed to allow the clamp to move in the vertical position which allows for any ovality in the pipe.







#### **KEY FEATURES**:

- Quick set-up time
- Faster temp readings
- Fully controllable
- Uniform heating
- · Can be digitally recorded
- No hydrogen created
- Low running costs

### **CLAM SHELLS**

Our induction heat clams shells are custom made to fit any application. We also utilize a new style of induction coils (the electric heater) set up for the Miller ProHeat 35 Induction Heating System that focuses on pre-heating metal as it rotates. Also, our induction heat clam shells offer a pre-heat treatment of up to 1200°F. Internal thermocouples can also be added to monitor to produce the units of temperature during the rotation of the pipe or vessel. We also offer daisy-chained induction heat clam shells which allow you to preheat your application at 600°F for a sub-arc welding application.



### **INTERNAL PLUGS**

Our plugs allow for an even pre-heat and are powered by Miller ProHeat 35. Our induction internal plugs can be inserted into bearings, vessels, and large piping for induction heating. The temperature rating of these internal plugs can be up to 1100°F.









# **KEY FEATURES:**

 Custom made
 Allows even preheat
 Powered by Miller ProHeat 35

### TABS, GROMMETS, & MAGNETS

Coil tabs act as a harness to contain the induction coil on the blanket per the design of the heating arrangement. We utilize different size tabs for various blankets. Grommets are then added to the blanket to hold magnets, stud pins, or any other kind of hardware that can be added to the induction blanket. Thermal Tech & Temp's customfabricated tabs come in 2-inch by 7-inch, 3-inch by 6-inch, and 4-inch by 6-inch. Finally, our high-temperature magnets have different pull strengths based on the weight of the blanket. These magnets are installed in through the grommet and will simplify attaching the blanket to the workpiece.



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## KEY FEATURES: • Easy installment

Simple attachment
High temp resistant
Uniform heating
Repetitive heating



### **PROTECTIVE SLEEVES**

Thermal Tech & Temp's protective sleeves provide flexibility, durability, and thermal protection against grinding sparks, welding splatter, and other industrial hazards that may be associated with the welding process. Resistant to hydraulic fluids, lubricating oils, and fuels, our protective sleeves insulate the induction coils from such hazards. Our industrial sleeves are coated with a proprietary silicone rubber compound for increased durability and enhanced heat and flame protection.

#### **KEY FEATURES:**

- Lightweight
- Easily shapes to surfaces
- Abrasion resistant
- · Resistant to flames & moisture
- $\cdot$  Repels oil, sparks, and grease
- Freedom in shaping and cutting for induction coils (air or liquid-cooled)





### **INDUCTION COILS**

#### LIQUID-COOLED INDUCTION COILS

Liquid-cooled coils provide a highly versatile tool for preheating, stressrelieving, hydrogen bake out, and post-weld heat treats in a variety of pipe diameters. Liquid-cooled coils are great for preheating applications on geometric that prevent the use of air-cooled blankets. With liquidcooled coils, uniform heating is maintained along and through the heat zone by using induction to heat within the material.

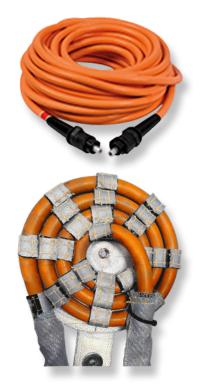




#### AIR-COOLED INDUCTION COILS

TWO WAYS TO HEAT

Air-cooled coils may be the right choice when the maximum preheat temperature is 400°F. Air-cooled coils provide the same flexibility as liquidcooled coils for preheating and can be utilized in applications where the part is an irregular, non-standard shape that needs theflexibility of wrapping the part.



### **TEMPERATURE RECORDING**

#### WHAT WE OFFER:

#### SPRING LOADED THERMOCOUPLES

Fixed to the induction blanket to provide precise temperatures while heating

**24 POINT TYPE K THERMOCOUPLE RECORDER** Offer reliable, accurate measurements with a wide temperature range

**MALE & FEMALE THERMOCOUPLE PLUGS** Offer quick and easy clamp assembly

### PREMADE THERMOCOUPLE TYPE K

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

**THERMOCOUPLE EXTENSION LEAD** Plugs right into the Miller ProHeat 35

#### **12 POINT RECORDER** Connects right to the Miller ProHeat 35



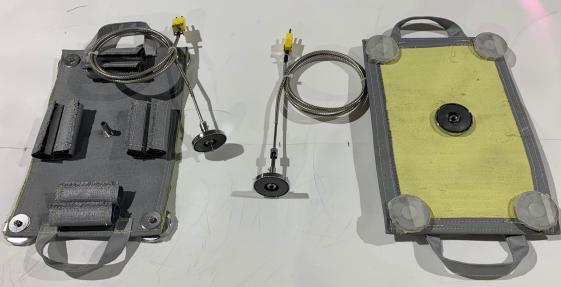




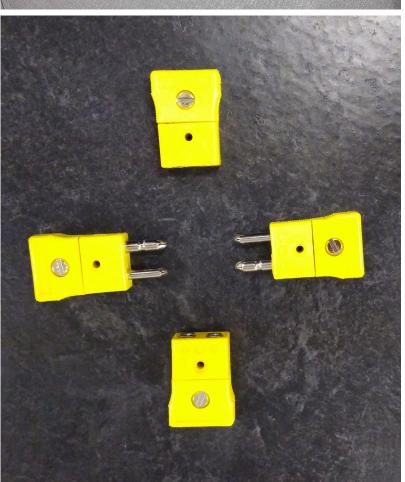
MALE AND FEMALE TC PLUGS SPRING LOADED THERMOCOUPLES THERMOCOUPLE EXTENSION LEAD















### WELDING & KNEELING PADS

When it comes to ergonomics in the welding industry, kneeling pads can be essential to industrial workers that put constant strain on their knees. Thermal Tech & Temp's high-temperature welding kneeling pads provide great protection from heat and more importantly sparks and slag from welding.

Our pads can be placed in tight, hard to reach spaces to offer maximum comfort while working. Manufactured from hightemperature resistant Kevlar and Thermal Tech & Temp Insulation up to 1200 degrees Fahrenheit. Our pads are offered in a variety of thicknesses and can be custom fabricated to any shape or size for your needed application.

#### **KEY FEATURES:**

- · Protects from heat, sparks and welding slag
- $\cdot$  Can be placed in tight/hard to reach spaces
- High-temperature resistant
- Protects up to 1200°F
- Offered in a variety of thicknesses
- $\cdot$  Custom fabricated to any shape or size

#### **WELDING CURTAINS**

Thermal Tech & Temp welding blankets and curtains aim to protect other applications and areas so weld splatter doesn't arc off and melt or heat something else. Our welding blankets and curtains are also made to order and can be cut to size right off the roll. Thermal Tech & Temp offers a variety of fabrics and styles for all types of welding applications. There are numerous fiberglass fabrics for light welding, grinding, and cutting as well as silica fabrics for heavy welding, slag, and spatter. Our blankets have the ability to withstand steady-state temperatures of 1200°F-1800°F and can be reused.



# KEY FEATURES:

Highly re-usable
Protects against sparks
Sheilds against splatter
Does not irritate skin
Heavy duty



### **ORDERING INFORMATION**

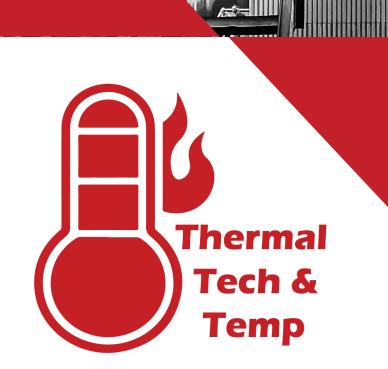
For placing an order with Thermal Tech & Temp, please email us at sales@thermaltechtemp.com. Feel free to call us at (1-800) 674-9284 with any questions you may have and we would be happy to assist you.

INDUCTION OVEN & FURNACE		
PART NUMBER	DESCRIPTION	
TTT-INDO-24-24	Cylinder Induction Oven, 24" diameter x 24" tall with 50 ft liquid cooled coil	
TTT-INDO-36-36	Cylinder Induction Oven, 36" diameter x 36" tall with 80 ft liquid cooled coil	
TTT-INDO-48-48	Cylinder Induction Oven, 48" diameter x 48" tall with 140 ft liquid cooled coil	
TTT-INDO-60-60	Cylinder Induction Oven, 60" diameter x 60" tall with 160 ft liquid cooled coil	
TTT-INDO-60-60-60	Rectangle Induction Oven, 60" wide x 60" tall x 60" long with 140 ft liquid cooled coil	
TTT-INDO-48-48-96	Rectangle Induction Oven, 48 wide x 48" tall x 96" long with 160 ft liquid cooled coil	
INDUCTION BLANKET		
PART NUMBER	DESCRIPTION	
TTT-INDB-6-240	Induction Blanket, 6" wide x 240" long with 80 ft coil, 4 TCs, handles, magnets & grommets	
TTT-INDB-12-144	Induction Blanket, 12" wide x 144" long with 80 ft coil, 4 TCs, handles, magnets & grommets	
TTT-INDB-16-120	Induction Blanket, 16" wide x 120" long with 80 ft coil, 4 TCs, handles, magnets & grommets	
TTT-INDB-24-48	Induction Blanket, 24" wide x 48" long with 80 ft coil, 4 TCs, handles, magnets & grommets	
TTT-INDB-24-96	Induction Blanket, 24" wide x 96" long with 140 ft coil, 4 TCs, handles, magnets & grommets	
TTT-INDB-36-36	Induction Blanket, 36" wide x 36" long with 80 ft coil, 4 TCs, handles, magnets & grommets	
INDUCTION HEAT CLAMP		
PART NUMBER	DESCRIPTION	
TTT-IHCLAMP-12	Induction Heat Clamp, 12" diameter with 30 ft liquid cooled coil, lifting stand & 4 TCs	
TTT-IHCLAMP-20	Induction Heat Clamp, 20" diameter with 50 ft liquid cooled coil, lifting stand & 4 TCs	
TTT-IHCLAMP-36	Induction Heat Clamp, 36" diameter with 50 ft liquid cooled coil, lifting stand & 4 TCs $$	
TTT-IHCLAMP-48	Induction Heat Clamp, 48" diameter with 80 ft liquid cooled coil, lifting stand & 4 TCs $$	
TTT-IHCLAMP-60	Induction Heat Clamp, 60" diameter with 80 ft liquid cooled coil, lifting stand $\&$ 4 TCs	
INDUCTION HEAT CLAM SHELL		
PART NUMBER	DESCRIPTION	
TTT-IHCS-12	Induction Heat Clam shell, 12" diameter with 30 ft liquid cooled coil. lifting stand & 4 TCs	
TTT-IHCS-20	Induction Heat Clam shell, 20" diameter with 50 ft liquid cooled coil. lifting stand & 4 TCs	
TTT-IHCS-36	Induction Heat Clam shell, 36" diameter with 80 ft liquid cooled coil. lifting stand & 4 TCs	
INDUCTION INTERNAL PLUGS		
PART NUMBER	DESCRIPTION	
TTT-PLUG-12	Induction Internal Plugs, 12" diameter x 24" long with lifting handles & protective sleeve	
TTT-PLUG-24	Induction Internal Plugs, 24" diameter x 36" long with lifting handles & protective sleeve	
TTT-PLUG-36	Induction Internal Plugs, 36" diameter x 36" long with lifting handles & protective sleeve	
TTT-PLUG-48	Induction Internal Plugs, 48" diameter x 36" long with lifting handles & protective sleeve	

#### INDUCTION COIL

PART NUMBER	DESCRIPTION	
TTT-LIQC-30	Liquid Cooled Induction Coil, 30 ft long	
TTT-LIQC-50	Liquid Cooled Induction Coil, 50 ft long	
TTT-LIQC-80	Liquid Cooled Induction Coil, 80 ft long	
TTT-LIQC-140	Liquid Cooled Induction Coil, 140 ft long	
TTT-LIQC-160	Liquid Cooled Induction Coil, 160 ft long	
TTT-AIRC-30	Air Cooled Induction Coil, 30 ft long	
TTT-AIRC-50	Air Cooled Induction Coil, 50 ft long	
TTT-AIRC-80	Air Cooled Induction Coil, 80 ft long	
PROTECTIVE SLEEVE		
PART NUMBER	DESCRIPTION	
TTT-TUFSLV-30	Protective Sleeve made of TuffCoat material, 30 ft long	
TTT-TUFSLV-50	Protective Sleeve made of TuffCoat material, 50 ft long	
TTT-TUFSLV-80	Protective Sleeve made of TuffCoat material, 80 ft long	
TTT-TUFSLV-140	Protective Sleeve made of TuffCoat material, 140 ft long	
TTT-TUFSLV-160	Protective Sleeve made of TuffCoat material, 160 ft long	
GROMMETS & MAGNETS		
PART NUMBER	DESCRIPTION	
TTT-GROM-4	Nickel Plated #4 Grommet	
TTT-MAG-40	40 Pound Pull Magnet, 400°F temperature rating	
TTT-MAG-60	60 Pound Pull Magnet, 400°F temperature rating	
TEMPERATURE RECORDING		
PART NUMBER	DESCRIPTION	
TTT-TCK-60	Type K Spring Loaded Thermocouple, 60" with TC plug	
TTT-PRMD-TCK-25	Premade Type K Thermocouple, 25 ft long	
TTT-MALE-TC	Male Thermocouple Plug	
TTT-FEMALE-TC	Female Thermocouple Plug	
TTT-EXT-25-6	Thermocouple Extension Lead, 25 ft long with 6 cables & 1 loom	
TTT-EXT-25-12	Thermocouple Extension Lead, 25 ft long with 12 cables & 1 loom	
TTT-REC-12	12 Point Type K Thermocouple Recorder	
TTT-REC-24	24 Point Type K Thermocouple Recorder	
WELDING & KNEELING PAD		
PART NUMBER	DESCRIPTION	
TTT-WKP-24-48	Welding & Kneeling Pad, 2" thick x 24" wide x 48" long made from 22.0 oz kevlar fabric	
TTT-WKP-36-48	Welding & Kneeling Pad, 2" thick x 36" wide x 48" long made from 22.0 oz kevlar fabric	
TTT-WKP-24-24	Welding & Kneeling Pad, 2" thick x 24" wide x 24" long made from 22.0 oz kevlar fabric	
TTT-WKP-48-48	Welding & Kneeling Pad, 2" thick x 48" wide x 48" long made from 22.0 oz kevlar fabric	
WELDING CURTAIN		
PART NUMBER	NESCRIPTION	

PART NUMBER	DESCRIPTION
TTT-WC-48-48	Welding Curtain, 48" wide x 48" long made of 36.0 oz silica fabric with grommets
TTT-WC-48-72	Welding Curtain, 48" wide x 72" long made of 36.0 oz silica fabric with grommets
TTT-WC-48-96	Welding Curtain, 48" wide x 96" long made of 36.0 oz silica fabric with grommets
TTT-WC-48-120	Welding Curtain, 48" wide x 120" long made of 36.0 oz silica fabric with grommets



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