

STRESSTECH CAPABILITIES

MACTECH HEAT TREATING SOLUTIONS



STRESSTECH

HEAT TREATING

A Division of Mactech

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STRESS RELIEVING CONSOLES

STRESSTECH manufactures three portable stress relieving consoles to choose from; the **QZ-500-4**, the **QZ-1000-6** and the **QZ-1500-8**. These consoles are capable of providing anywhere from one to eight independent zones of control, depending on the model. Each individual zone is capable of providing up to 300 AMPs of 80 Volt DC for use in conjunction with our resistance heating pads. Total output of our machines ranges from 500 to 1500 AMPs and all our machines are 100% Duty Cycle rated. Each zone is independently controlled by its own ramping temperature controller, enabling the operator to run various profiles simultaneously. All temperature controls and timers are mounted in the control drawer, allowing easy removal for calibration or necessary maintenance. The power output is controlled with contactors, assuring positive, fast and easy connections. Two thermocouple jack strips are conveniently located on the unit's side, which permits connection to type "K" thermocouples for control and recording. All transformers and zones of control are individually fused to ensure safety, longevity and minimal downtime.

Increase Productivity

The operator is able to begin heating cycles at any time without waiting for earlier cycles to finish. Our controllers are easy to operate and required training is minimal.



Operators only need to enter the "SOAK" temperature and the controller will automatically ramp from current temperature to setpoint at the specified ramp rate. The controllers can also be operated manually by disabling the ramping function and using the percentage timer.

Easy Maintenance

All top temperature controllers and percentage timers are solid state devices. They do not contain relays or other moving parts that wear out. The 300 AMP contactors can easily be accessed and serviced via the cover panel.

Operator Friendly

Operators can easily operate these machines using indicator lights to view the energized zones. A 500 DC ammeter with selector switch allows monitor-

ing of the load on each independent zone, while a 1000 AMP (or 1500 AMP on the QZ 1500 8) ammeter and a 100 volt DC voltmeter allow the operator to check the total load on the machine at the same time.



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STRESS RELIEVING CONSOLE SPECIFICATIONS

QZ-500-4 ZONE

Width: 20"
Height: 38"
Depth: 32"
Weight: 500 lbs.
Output: 500 ADC, 80 VDC
100% Duty
Input: 480 VAC Stock,
240/380 VAC 3
Phase Available

QZ-1000-6 ZONE

Width: 27"
Height: 36"
Depth: 40"
Weight: 900 lbs.
Output: 1000 ADC, 80 VDC
100% Duty
Input: 480/575 VAC Stock,
240/380 VAC 3
Phase Available

QZ-1500-8 ZONE

Width: 27"
Height: 36"
Depth: 40"
Weight: 1060 lbs.
Output: 1500 ADC, 80 VDC
100% Duty
Input: 480/575 VAC Stock,
240/380 VAC 3
Phase Available



TZ 600 and LCS 300

The **STRESSTECH TZ 600** is a twin zone temperature controller which can be operated automatically (auto ramping up and down), semi-automatically (manual ramping, hold at temperature), or manually (percentage output, no TC required). Each of the ramping controllers operate independently of each other enabling the operator to begin heating cycles at two different times

Each zone has a 300 AMP contactor controlled by a 0-2000 degree temperature controller, and a percentage timer to control the rate of rise and cooling, if desired. The 0-300 AMP meter has a selection and polarity switch for use on either zone, straight or reverse polarity. Camlok connectors for power inlet and outlet, as well as type "K" thermocouple jack strips are located on rear

of the unit. This unit is very portable at only 29 lbs. and measuring only 15" x 15" x 8".

The **STRESSTECH LCS 300** controller is a single zone temperature controller that can be operated automatically (auto ramping up and down), semi-automatically (manual ramping, hold at temperature), or manually (percentage output, not TC required). It contains a 300 AMP contactor controlled by a 0-2000 degree temperature controller, and a percentage timer to control the rate of heating and cooling, if desired. The Camlok connectors for the power inlet and outlet, as well as type "K" thermocouple jack strips, are located on the rear of the cabinet. This unit is very portable at only 16 lbs. and measures only 8" x 15" x 15".

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TEMPERATURE RECORDERS

STRESSTECH Temperature Recorders are calibrated from 0-2000 degrees F. They can also be set to any other desired range. The LED provides easy viewing of each point's temperature. An internal light illuminates the chart recording at all times and the chart speed can be set to any desired rate. Each thermocouple is individualized by a six-color ink ribbon, which facilitates easier reading. Our recorders can be programmed with alarm settings to record the time and date it reaches or drops below the desired temperature setting. All recorders are mounted in an aluminum housing with rubber feet and a carrying handle. Thermocouple jack strips are located in the rear panel, providing easy connection of the type "K" thermocouple leads. All models of our Temperature Recorders are portable, lightweight, and easy to ship.

STRESSTECH stocks chart paper, colored ribbons, ink pads, and print wheels for all major brand recorders. We also clean, adjust, repair, and calibrate all temperature recorders supplying Certificates of Calibration traceable to NIST.

Available Recorders:

6 Point 100mm Recorder
12 Point 180mm Recorder
24 Point 180mm Recorder

We do have paperless recorders available.

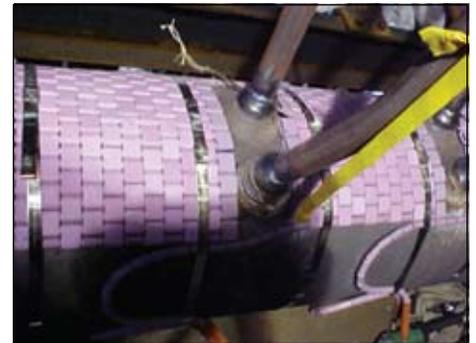
STRESSFLEX Pads



STRESSFLEX Pads are equally rated 50 AMPS at 80 Volts and are available in many stocked sizes and can be custom built for specialty jobs. Our stocked sizes will preheat or stress relieve almost any job imaginable. They are used in refineries, power plants, construction, and fabrication applications, just to name a few. They can be used in any combination while maintaining the same watts per square inch of power.

Flexibility

Stranded 80/20 nichrome wire and socketed twin hole insulators provide mechanical strength and flexibility to conform to varied and complex contours. Our tail design combines all of the durability benefits of "hot tail construction (no weld joint or mechanical crimp to create a weak spot) with the cold tail benefit



of keeping the electrical connector cooler, which prevents breakdown of the insulating sleeve on the camlok.

Stock Sizes

- 14" x 7"
- 7" x 14"
- 1" x 120"
- 10" x 10"
- 17" x 6"
- 20" x 5"
- 28" x 3 1/4"

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STRESSTECH CABLE PRODUCTS

Power Cables are constructed from welding cable with a tough exterior formed over very flexible stranded copper wire. We have 2/0 available in lengths of 25', 50' and 100'.

Triple Cable Sets consist of two power leads attached to a type "K" thermocouple lead and have all connectors. This keeps the cords organized and enables quick and simple connections in the field. We have 2/0 and 1/0 available in 50' and 100' lengths.

Splitter Cables are used to allow one zone to control up to six heating elements. They are made from #6 welding cable in a standard length of 6', they have camlok connectors with high temperature sleeves to provide a fast and positive connection to elements and lead cables. They come in 2, 3, 4, 5 and 6 way splitter configurations.

We stock cable in #6, #4, #2, 1/0, 2/0, and 4/0 - **CALL US WITH YOUR CUSTOM NEEDS.**

We stock all sizes of CAMLOKS & CONNECTORS that are standard for the heat-treating industry. Their solid brass construction and double cam tooling provide clean, positive contact.

STRESSTECH THERMOCOUPLES are designed to provide accurate temperature readings in pre and post heats of weldments and piping. All thermocouples are for use with resistance, induction and gas fired methods and are tested for dependable accuracy at temperatures up to 1900° F. Certificates of compliance are available upon request. We have thermocouple **WIRE & LEADS** and **PLUGS & JACKS** available. Contact us for more information on our thermocouples and associated products.

ZAP GUN

The **STRESSTECH Zap Gun** is used to attach thermocouple wire to the workpiece. Its variable energy provides 5 to 50 watts/second of power for fast attachment of thermocouples by means of a capacitor discharge procedure. Weighing only 10 lbs. the Zap Gun is portable and is easy to use. It will not significantly mar the external surface of the work piece. Wires are easily removed by light filing. The Zap Gun's internal battery can also be recharged on site from a 110-Volt power supply.

RECYCLING

STRESSTECH heating elements can be recycled by replacing all broken ceramic insulators and rewiring with new 80/20 nichrome wire. Our charge for recycling your pads is 60% of the cost of a new element, which saves 40% of the cost of replacement. We repair all elements, regardless of original manufacturer. For more information on converting elements into different sizes and configurations, repairing, or special size elements please call our toll free number (1-800-328-1488).



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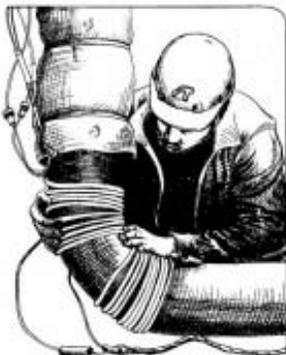
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ACCESSORIES

BANDING is used for securing heating elements and/or insulation onto piping for preheating or stress-relieving. Our banding is non-magnetic stainless steel ½" wide x 200' long. Stainless steel **BANDING CLIPS** are reinforced for extra strength, quantity is 100 per box. The **BANDING TOOL** used in conjunction with the banding products ensures the tightest possible grip, this tool also trims and cuts banding.

STRESSTEMP THERMOCOUPLE PUTTY is used to prevent heat transfer from heating elements to thermocouples during pre and post heat. It protects thermocouples from weld splatter. Putty is available in 10 lb. tubs or in syringes. Our dispensing syringes make dispensing putty quicker and cleaner while reducing waste. Approximately 25 applications per syringe.

We also have tie wire and strapping tape available as means to attach Stressflex elements to your workpiece.



INSULATING BLANKETS

STRESSTECH ceramic fiber insulation blankets are made from 1" thick, 6# density ceramic fiber insulation. It is rated at an operating temperature of 2400° F. We enclose them in stainless steel woven wire mesh, which allows for repetitive use. This keeps the blanket intact during rough handling and makes it the toughest blanket available on the market. For situations when reusable blankets are not practical, blanket insulation is available without the stainless mesh in 1" thick x 2' wide x 25' long rolls.

STRESS-SAFE insulation blankets are "ceramic free". They are made of 98% pure silica fibers. The insulating value is equal to or greater than ceramic fiber of the same thickness. This insulation is manufactured from amorphous silica fibers and causes little to no irritation and is non-resperable during use. It is stocked in 1" thick x 3' wide x 33' long rolls.

Ceramic Fiber and Stress-Safe reusable Mesh Blankets are stocked in 1' and 2' widths up to 12' lengths. Special sizes are available upon request.

MACTECH
ON-SITE MACHINING SOLUTIONS

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