

# ADVANCED

## Advanced Heat Solutions Inc.

### Standard Heat Treating Equipment Product Catalogue

January 2017

**Preheat & Post Weld Heat Treatment Equipment Sales, Rentals, Leasing, Calibration,  
Service & Repair, Scheduled Maintenance, Training and Instructional Services**

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Advanced Heat Solutions Inc.  
2350 - 24 St, P.O. Box 46169  
Edmonton, Alberta, T6T 0K8  
780-288-2469

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## Basic 6 Way Heat Treatment Machine



### Standard Features are:

- 75 KVA (3 phase) isolated copper wound power transformer: Primary Voltage: 380/415/440/480/575, 50/60 Hz Secondary Voltage 65/85 with thermal trips per phase to prevent overload.
- Six digital temperature controllers (°C or °F) with ramp rate in degrees/hr to set point and capable of performing up to six different processes at a time (1/16 DIN)
- Digital amp meter (0-200 amps) with six-channel selector switch and six current transformers.
- Stainless steel cabinet with swivel wheels (900 lb capacity each with brake) and two lifting lugs. \*\*Wheels or SS mounting brackets available upon request.
- One 420 CFM cooling fan.
- Dual 110 volt auxiliary plug.
- 100 amp - 3 phase circuit breaker with 120 volt uv release.
- Six 200 amp **ALBRIGHT** contactors.
- Six 110 volt neon and six two way on off on switches.
- Instrument wiring tinned copper to prevent corrosion and down time.

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## Options for the above basic unit

- Amp gauges for each channel
- Built in 12 or 24 point recorder with digital interface
- Programmable controllers
- Fully automatic set point ramp



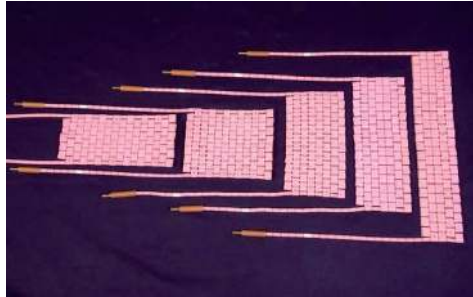
2 zone or 3 zone control units use's welding machines for power source. With or without a built in recorder. Uses welding machine as power source



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## Heaters:



Flexible ceramic pad (FCP) heaters are manufactured by weaving multi-stranded 80/20 Ni/chrome electric resistance heating wire through passages within interlocking ceramic beads. The beads are molded from sintered 95% Alumina ceramics, more than 3/8-inch thick. The Alumina has excellent high-temperature dielectric properties which combined with the interlocking bead design provide FCP heaters with exceptional electrical insulating qualities.

### 80 volt FCP heaters

FCP size and part number	Width (tail to tail)		Length of heater body		Volts	Amps
	mm	inches	mm	inches		
80FCP3	76	3	990	39	80	45
80FCP4	102	4	737	29	80	45
80FCP6	152	6	508	20	80	45
80FCP8	203	8	381	15	80	45
80FCP10	254	10	305	12	80	45
80FCP12	305	12	254	10	80	45
80FCP15	381	15	203	8	80	45
80FCP18	457	18	178	7	80	45
80FCP21	533	21	152	6	80	45
80FCP24	610	24	127	5	80	45
80FCP29	737	29	102	4	80	45
80FCP36	915	36	89	3.5	80	45
80FCP70	1778	70	45	1.75	80	45

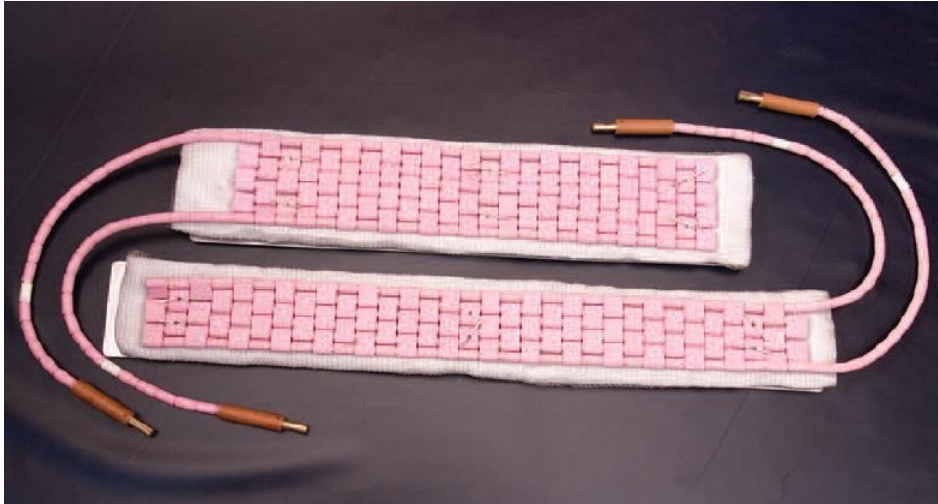
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## 60 volt FCP heaters

FCP size and part number	Width (tail to tail)		Length of heater body		Volts	Amps
	mm	inches	mm	inches		
60FCP3	76	3	737	29	60	45
60FCP4	102	4	533	21	60	45
60FCP6	152	6	381	15	60	45
60FCP8	203	8	279	11	60	45
60FCP10	254	10	229	9	60	45
60FCP12	305	12	179	7	60	45
60FCP15	381	15	152	6	60	45
60FCP18	457	18	127	5	60	45
60FCP21	533	21	102	4	60	45
60FCP26	660	26	89	3.5	60	45
60FCP50	1270	50	45	1.75	60	45

Custom build heaters are available in 30 or 40 volt

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Flexible insulated preheaters (FIP's) can be used either flat or laid over curved surfaces. They are equally suitable for preheating pipework, fabrications and vessels either longitudinally or circumferentially.

A feature of this heater is the holding magnets for fast adhesion to their work piece.

FIP size and part number	Width (tail to tail)		Length of heater body		Volts	Amps
	mm	inches	mm	inches		
80FIP3	76	3	990	39	80	45
80FIP4	102	4	737	29	80	45



Part number FIPMAG  
Magnet bar assembly for above FIP heater

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## Fasteners and Insulation:



Part number EAG12GA

Pin welding system attaches pins to the component for proper placement of heaters and insulation. Pins are 12 gauge X 3.5" copper jacketed or 304/316 stainless steel



EAG12CHK

Replacement chucks for pin welder gun



EAG12STP

Replacement stops for pin welder gun



MS12PIN

12 gauge copper coated stud pins 2 1/2" length

(Also available in 3" length, blunt tipped or optional 304SS, 316SS)



MS12CLP

1 1/4" X 1 1/4"

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Stainless Steel mesh insulation blanket. Made with 1" thick, 6 or 8 lb density non-ceramic fiber material.

Choose Sizes from:

1'X1' to 1'X25'

OR

2'X1' to 2'X25'



Superwool non-ceramic fiber insulation available in 8 lb density.

Roll 2' wide X 25' in length



## TYGLAS

Combining the features of woven silica with improved flexibility and high insulation properties, this knitted product contains no respirable fibres. Assuring high standards of worker safety and comfort, it provides an efficient and cost effective replacement for refractory ceramic fibres (RCF's) in industrial insulation and heat treatment operations. (Product also known as Cooperknit) 2'w X 25'l



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## Thermocouples & Temperature Measurement:

Temperatures are monitored at strategic points of the heated zone by means of QQ 20 A.W.G. type K thermocouple wire attached directly to the work piece by the capacitance discharge method. This method, regardless of heater radiation will detect and measure the "true" temperature as the hot junction is made at the metal surface.

The thermocouples are certified to ANSI MC96.1 Standard Limits of error (+/- .75% of reading).



TCPLUG

Thermocouple male jack and female plugs



TCJACK

Thermocouple male jack and female plugs



TCQQ

QQ fiberglass type K thermocouple wire.



TCCEFIR

High temperature Cefir type K thermocouple wire.

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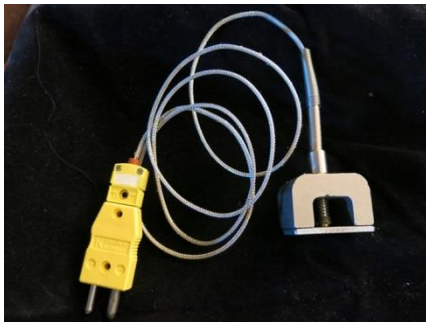
## TAU

Thermocouple Attachment Unit for attachment of QQ or Cefir TC wire to the work piece



## TCSS2

Stainless steel type K thermocouple. Standard length is 2 ft or custom length and design are available



## TCMAG

Magnetic thermocouple ideal for using on plate steel or quick connection

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Chino or Yokogawa recorders can be either mounted in heat treatment machine or assembled in stainless steel enclosure.

Choose from 3, 12 or 24 points of monitor.



**Chart Paper + Memory Card**



## LOOM4

Male to male jack extension loom for link between 6 way HTM and recorder. Standard length is 4 ft and comes in 6 leads per assembly

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## Cable Sets:



TCS25 Triple cable set, 25 ft  
TCS50 Triple cable set, 50 ft  
TCS100 Triple cable set, 100 ft

Triple cable set consists of feed and return #2 copper cables with PVC jacketed type K thermocouple extension wire. Custom lengths also available



SP3WAY  
SP4WAY

3 or 4 way splitter cable to complete parallel circuit from triple cable set to FCP's or FIP's. Made from #6 copper cable. Standard length is 3' but custom lengths are available



TCEXTPVC

PVC jacketed, shielded type K thermocouple extension

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## Connectors:



65SLF Female 65 amp cover sleeve



65SLM, Male 65 amp cover sleeve



300SLF, Female 300 amp cover sleeve



300SLM, Male 300 amp cover sleeve



65PIN, Retaining pin for 65 amp sleeve

300PIN, Retaining pin for 300 amp sleeve

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65COMPF

65 amp complete female twist lock set with brass sleeve and retaining pin.



65COMP M

65 amp complete male twist lock set with brass sleeve and retaining pin.



300COMPF

300 amp complete female twist lock set with brass, sleeve and retaining pin.



300COMP M

300 amp complete male twist lock set with brass, sleeve and retaining pin.

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## **Propad Heater:**

The Propad heater blanket is capable of providing temperatures up to 400°F and operates on 120 or 240 volt.

Can be used for welding preheat or as freeze protection on tanks or piping



Ideal for use on tanks, vessels, hoppers, silos, conveyers, vats, plate steel, piping or any fabricated steel