

# COOPERHEAT EQUIPMENT

LEADING INNOVATORS  
IN THERMAL TECHNOLOGY

CONSUMABLES, SPARES & ACCESSORIES CATALOGUE



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## **Stork Cooperheat designs, manufactures and supplies quality heat treatment equipment and furnaces, incorporating innovation, versatility and conformance.**

Heat treatment requirements are now more demanding than ever. This calls for consistently reliable, quality equipment and consumables, which the customer can be confident in using, every time.

With over 50 years experience in the field of heat treatment, our range of heat treatment consumables and spares caters for all requirements. Our reputation for expertise and excellence is renowned throughout the world; our products are recognised globally for their quality, and high standards of safety, durability and reliability.

Stork Cooperheat's equipment provides the user with the flexibility to heat treat a range of pipe welds at the same time. From simple butt welds to complex pipe work and vessel fabrications, the range can give you a solution tailored to your specifications. The range includes all necessary power control units, temperature control and recording instruments, cables, heating elements, insulation and accessories.

Our sales engineers are dedicated to providing the very best service to all our customers. Their extensive experience in the field of heat treatment ensures that they are fully qualified to discuss your requirements and provide an excellent after sales support.

### **Global presence... local support**

For sales and more information contact your local Stork Cooperheat Equipment specialist at your nearest regional office. Full contact details can be found at the back of this catalogue.

We look forward to working with you.

# SPARES



## Spare Advantage 3 programmer/controller

Replacement 'Advantage 3' linkable, programmer/controller. See 'Advantage 3' data sheet for full details and technical specification.

*Stock reference & description:*

548-055 - 'Advantage 3' linkable, programmer/controller



## Advantage 3 programmer/controller heat treatment unit upgrade kit

Contains the necessary parts and instructions required for upgrading any make or model of heat treatment unit to provide the additional functionality, user benefits and cost savings provided by the 'Advantage 3' linkable programmer/controller. See 'Advantage 3 upgrade kit' technical specification for full details.

*Stock reference & description:*

12300 - 'Advantage 3' linkable programmer/controller, heat treatment unit upgrade kit

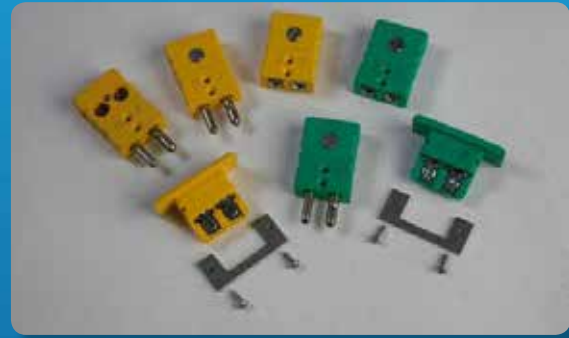


## Temperature controller

The CXT1000 temperature controller provides temperature control to a single output channel. The controller raises the temperature of the workpiece to the selected temperature and maintains it at that level. The unit displays both workpiece and set point temperatures.

*Stock reference & description:*

548-045 - CXT1000 temperature controller



## Thermocouple connectors

Type K plug and socket thermocouple connectors. We offer two types of thermocouple plugs, type 516-111 being the standard type normally used with compensating cable. Whereas type 516-115 'quick connection' plugs are ideally suited for use with thermocouple wire where regular connections are required. The 'quick connect' plug can be attached to thermocouple wire in seconds and reduces waste caused by the loss of terminal covers.

*Stock reference & description:*

516-111 - Type K, inline plug (standard connection)

516-112 - Type K, inline socket

516-115 - Type K, inline plug (quick connection)

516-125 - Type K, panel mounted socket

# SPARES



## 60A in-line connectors

Spare connectors for repair of splitters and heating elements.

*Stock reference & description:*

508-009 - 60A brass male connector

508-010 - 60A brass female connector

508-019 - 60A fibre male sleeve for use with 508-009

508-020 - 60A fibre female sleeve for use with 508-010

508-022 - 60A fibre pin for use with 508-019 and 508-020

508-040/M - 12.7mm wide copper shim (per metre) for use with 508-009 and 508-010



## 300A in-line connectors

Spare connectors for repair of triple cable sets and splitters.

*Stock reference & description:*

508-006 - 300A brass male connector

508-007 - 300A brass female connector

508-015 - 300A fibre male sleeve for use with 508-006

508-016 - 300A fibre female sleeve for use with 508-007

508-021 - 300A fibre pin for use with 508-015 and 508-016

508-041/M - 19mm wide copper shim (per metre) for use with 508-006 and 508-007



## 300A panel mounted connectors

Spare panel mounted connector sockets for repair of heat treatment modules and heat treatment units.

Supplied complete with fibre washer and lock nut.

*Stock reference & description:*

508-001 - 300A panel mounted sockets

508-002 - 300A panel mounted plugs

508-003 - 300A panel mounted connector plug with neoprene sleeve



# SPARES



## Energy regulator & aluminium knob

Energy regulator for 110V use, aluminium knob and replacement dial for use with 110V energy regulator.

*Stock reference & description:*

552-012 - Energy regulator

552-014 - Aluminium knob

552-015 - Replacement dial



## 110V 6 way control plug and socket

Spare in line plug and panel mounted socket, for repair of 110V control cables and control inputs and outputs.

*Stock reference & description:*

516-300 - 7 pin panel mounted male plug

516-301 - 7 pin in line female socket



## 110V supply plugs and sockets

Spare in-line plugs and panel mounted sockets for repair of 110V supply cables and supply outputs.

*Stock reference & description:*

516-040 - Large yellow, 110V, 16A, 3 round pin, Industrial (BS4343) panel mounting socket

516-040/1 - Yellow, 110V, 16A, 3 round pin, Industrial (BS4343) panel mounting socket

516-041 - Yellow, 110V, 16A, 3 round pin, industrial (BS4343) in-line plug



## 110V control plugs and sockets

Spare in-line XLR plugs and panel-mounted sockets for repair of 110V control cables and control inputs and outputs.

*Stock reference & description:*

516-100 - 3 pin XLR type panel mounting plug for 110V contactor control

516-101 - 3 pin XLR type panel mounting socket for 110V contactor control

516-102 - 3 pin XLR type in-line socket for 110V contactor control

516-103 - 3 pin XLR type in-line plug for 110V contactor control

# SPARES



## Heater repair kits

Heater repair kits provide a cost effective method of repairing burnt out nickel chrome heating elements by recycling heating element beads and connectors.

The repair kits include the necessary core wire with welded tails and the beads required to replace the few beads that need to be broken to repair. The heating element 'core wire with welded cold tail kits' only include the replacement core wire with welded cold tails.

### Stock reference & description:

29448 - 80V (60/16) Heater repair kit c/w beads (5 heaters)

29449 - 60V (60/16) Heater repair kit c/w beads (5 heaters)

29450 - 80V (80/20) Heater repair kit c/w beads (5 heaters)

29451 - 60V (60/16) Replacement heater wire c/w cold tails

29451/30 - 30V (60/16) Replacement heater wire c/w cold tails

29452 - 80V (60/16) Replacement heater wire c/w cold tails

29453 - 80V (80/20) Replacement heater wire c/w cold tails

29455 - 60V (80/20) Heater repair kit c/w beads (5 heaters)

29455/30 - 30V (80/20) Heater repair kit c/w beads (5 heaters)

29456 - 60V (80/20) Replacement heater wire c/w cold tails

29457 - 30V (80/20) Replacement heater wire c/w cold tails



## Heater beads

Ceramic, sintered alumina beads for repair and manufacture of ceramic pad heating elements.

### Stock reference & description:

500-003 - Main body beads

500-001 - Starter beads

500-002 - Finisher beads

500-004 - Main body hole beads

500-008 - Tail beads



## Heating element wire

Heating element core wire and cold tail wire for repair and manufacture of ceramic pad heating elements.

### Stock reference & description:

502-050 - 19 strand 80/20 nickel chrome core wire

502-003 - 19 strand nickel 212 cold tail wire

502-001 - 19 strand 60/16 nickel chrome core wire

# SPARES



## **Tubular, stainless steel sheathed thermocouples**

Commonly used for temperature measurement in small furnaces and ovens.

*Stock reference & description:*

42001 - 0.6m stainless steel sheathed type K thermocouple with fitted thermocouple plug

42002 - 1.8m stainless steel sheathed type K thermocouple with fitted thermocouple plug



## **Double pole contactors**

Replacement single pole contactors and contacts for 32.5-0-32.5V and 42.5-0-42.5V output, heat treatment modules and heat treatment units.

*Stock reference & description:*

526-059/SA - Double pole 250A contactor (assembled)

526-059/1 - Fixed contact for double pole contactor

526-059/2 - Moving contact for double pole contactor



## **Single pole contactors**

Replacement single pole contactors and contacts for 0-65V and 0-85V output heat treatment modules and units.

*Stock reference & description:*

526-054/SA - Single pole 250A contactor (assembled)

526-056 - Fixed contact for single pole contactor

526-057 - Moving contact for single pole contactor

526-070 - Single pole contactor for use with units 11000 and 11100



## **Circuit breakers**

Replacement mains circuit breaker for heat treatment modules and heat treatment units.

*Stock reference & description:*

522-050 - 125A circuit breaker for 50kVA heat treatment modules and heat treatment units

522-051 - 160A circuit breaker for 70kVA heat treatment modules and heat treatment units

522-065 - 160A circuit breaker for use with 11000 unit

522-066 - 100A circuit breaker for use with 11000 unit



# SPARES



## Recorder spares

Replacement parts for temperature chart recorders.

*Stock reference & description (Chino):*

542-230 - 0-1200°C Chart fan fold ET-201

542-231 - Ink (12 Colours)

542-232 - Ink pad 12pt

542-233 - Drive cord 12pt

542-234 - Ink pad case

542-235 - Dotting mechanism

542-236 - Input selector

542-237 - Chart light

542-238 - Choke coil

542-239 - Servo mechanism

542-240 - Paper feed motor

542-242 - Range unit

542-242/1 - Pre amp 12pt 0-1200°C

542-243 - Servo amplifier 12pt

542-244 - Servo motor 12pt

542-245 - Fuse

542-251 - Print mechanism c/w flexi cord

542-259 - Chino scale plate 0-1200°C

542-263 - Fluorescent lamp c/w ballast & starter assembly

542-264 - Door for 12pt Chino recorder

*Stock reference & description (Fuji):*

542-266 - Chart paper for 12 point Fuji temperature chart recorder

542-277 - Recorder print head cartridge for 12 point Fuji temperature chart recorder

542-278 - Carriage motor for 12 point Fuji temperature chart recorder

542-279 - Chart motor for 12 point Fuji temperature chart recorder

542-280 - Timing belt for 12 point Fuji temperature chart recorder

542-281 - Drive cable for 12 point Fuji temperature chart recorder



## TAU spares

Replacement parts for Thermocouple Attachment Units (TAUs).

*Stock reference & description:*

558-027 - TAU rechargeable battery, 3 Amp hour, 12V d.c

536-128 - Pliers and magnet set for TAU

536-058 - Replacement TAU shoulder strap and clip



## Fuses - various

Various fuses and holders available as spares for our equipment. Common parts detailed below.

*Stock reference & description:*

530-001 - Panel mounting fuseholder 1.25"

530-023 - 200A SIBA flat fuse

530-032 - 200A semiconductor fuse T350

530-053 - 5A glass fuse 1.25"

530-054 - 10A glass fuse 1.25"

530-080 - DIN rail mounting fuseholder



# SPARES



## Electrical fittings - various

All wiring and cable accessories as used in our equipment are available for purchase. The more common parts detailed below.

*Stock reference & description:*

558-001 - Large cable ties

558-002 - Small cable ties

558-003 - Large stick on bases

558-004 - Small stick on bases

520-018 - 35 x 8mm copper cable lugs

520-019 - 35 x 10mm copper cable lugs

520-013 - 25 x 8mm copper cable lugs

520-030 - 70 x 10mm copper cable lugs

520-069 - 6.3mm insulated red receptacles

520-070/1 - 6.3mm insulated blue receptacles

## FIP magnets

Pair of powerful limpet magnets with cross bar used to quickly clamp Flexible Insulated Preheaters (FIPs) to the workpiece being preheated.

*Stock reference & description:*

29269 - Assembled pair of limpet magnets with cross bar

536-001 - Replacement, single, limpet magnet



## SCU plaque and gasket set

Replacement parts for repair of Surface Combustion Units (SCU).

*Stock reference & description:*

6262/P/15 - Replacement set of 6 SCU plaques & gaskets

# CONSUMABLES



## Thermocouple wire

Type K nickel chrome/nickel aluminium thermocouple wire, insulated with high temperature glass braid. Recommended maximum temperature 800°C. A consumable item, which is used to convert the thermal energy at the hot junction of the thermocouple to an electrical mV signal which can then be used by temperature control and recording instruments to accurately control and record the temperature of the item being heat treated.

Conforms to:

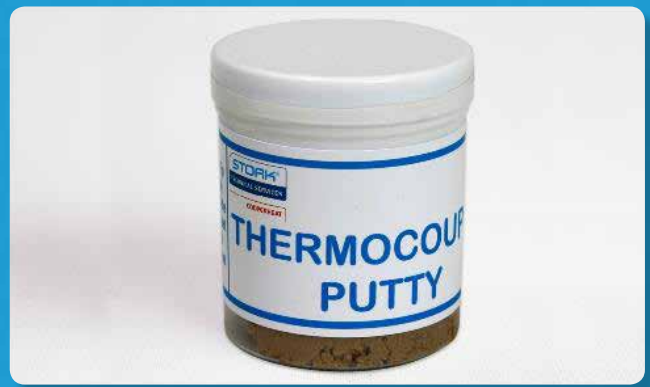
BS EN 60584-1 : 1996 part 4

BS EN 60584-2 : 1993 class 1 and ANSI-MC96

The thermocouple wire is attached directly to the work piece using the 'thermocouple attachment unit' stock reference: 41756 (115V unit) or 41757 (230V unit).

*Stock reference & description:*

*43000 - 100m roll of type K thermocouple wire*



## High temperature putty

A small portion of the soft putty is fixed over the hot junction of the thermocouple, which is attached to the item being heat treated. Once the putty dries, after 20 minutes, it hardens to protect the hot junction and helps avoid possible short circuit of the thermocouple wires which would result in temperature control and recording errors.

*Stock reference & description:*

*43007 - Jar of high temperature putty*



## Tie wire

For heating element bands of less than 4 heating elements, soft iron wire is adequate to fix the heating elements and insulation around the workpiece.

*Stock reference & description:*

*29266 - Soft iron wire (25kg roll)*

# CONSUMABLES



## **Banding tape**

For bands of more than 4 heating elements, Cooperheat recommends that steel banding and banding clips are used to ensure the heaters remain in full contact with the pipe.

For temperatures in excess of 650°C we recommend using stainless steel banding and clips.

Please note that mild steel banding should not be used on Chrome Molybdenum post weld heat treatments.

*Stock reference & description:*

29257 - Mild steel banding (30m roll)

29259 - Stainless steel banding (30m roll)



## **Banding clips**

Mild and stainless steel clips for fastening mild and stainless steel banding.

*Stock reference & description:*

29258 - Mild steel banding clips (box of 100)

29260 - Stainless steel banding clips (box of 100)



## **Cramp strapping**

20 x 1.5mm cramp strapping used for the fixing of insulation to spheres, vessels, tanks and other large diameter vessels. A 150mm spike folds out from the strapping every 300mm for the insulation blanket to be pushed onto and held in place.

*Stock reference & description:*

29300 - 20 x 1.5mm mild steel cramp strapping per meter



# CABLES



## **Compensating cable link cables**

To link controller/programmer thermocouple input to the recorder input.

*Stock reference & description:*

*34013 - 3m 'jumper' compensating lead fitted with two type K thermocouple plugs*



## **Programmer/contactator control leads**

To connect separate, external controller/programmer units output to power source control input.

*Stock reference & description:*

*33009 - 3m, 3-core, programmer/contactator control lead*



## **Thermocouple compensating cable**

Suitable for use with type K thermocouples where monitoring thermocouples, in addition to the control thermocouples, are required for temperature monitoring purposes. Available in 30m lengths complete with type K thermocouple plug and socket or in 100m rolls without plug and socket (plugs and sockets can be supplied separately as required).

*Stock reference & description:*

*34000 - 30m compensating cable c/w type K thermocouple plug and socket*

*504-062 - 100m roll of compensating cable without thermocouple plug or socket*

# CABLES



## Splitter cables

For use with triple cable sets. Splitters are used where the operator needs to connect multiple heating elements, in parallel, to triple cable sets to enable the control of multiple heating elements. This enables the heating elements to be grouped to a single control output from a heat treatment unit to allow accurate zonal temperature control.

### Stock reference & description:

- 32001 - 2 Way splitter
- 32002 - 3 Way splitter
- 32003 - 4 Way splitter
- 32004 - 5 Way splitter



## Triple cable sets

For use with heat treatment units controlling 30V, 40V, 60V and 80V heating elements. Includes two double insulated cables for power feed and return, fitted with 300A male and female connectors and one compensating cable fitted with type K thermocouple plug and socket.

### Stock reference & description:

- 35020 - 15m Triple cable set 135A
- 35024 - 30m Triple cable set 135A
- 35032 - 30m Triple cable set 180A
- 35033 - 30m Triple cable set 280A

# ACCESSORIES



## Thermocouple calibration unit

The hand held VA710 thermocouple calibration unit is an accurate measurement and millivolt source instrument, which is used to calibrate thermocouple instrumentation. It can measure or simulate 8 different thermocouple types and be used as a millivolt source.

The instrument comes with 2 miniature type K thermocouple plugs, 6 x AAA 1.5V batteries, a user's manual and a calibration certificate.

*Stock reference & description:*

41511 - VA710 thermocouple calibration unit



## Clamp meter

The HHM59 is an AC multifunction clamp meter capable of measuring a.c or d.c voltage to 600V, a.c current upto 1000A, resistance upto 2M $\Omega$  and temperature upto 750 $^{\circ}$ C using a type K thermocouple. Supplied with 1 x 9V battery and a 1m type K thermocouple. Dimensions are 229(H) x 69(W) x 38(D) mm and weight is 0.31 kg.

*Stock reference & description:*

44007 - HHM59 clamp meter / digital thermometer



## Banding machines

For tightening, cutting off and clipping mild and stainless steel banding.

*Stock reference & description:*

29256 - Winder banding machine

29255 - Ratchet banding machine



# ACCESSORIES



## **Elastic straps**

Used to temporarily hold ceramic pad heating elements in place whilst they are correctly positioned and spaced prior to fixing in place with tie wire or banding.

*Stock reference & description:*

*29253 - Elastic, 850mm strap with hooks*



## **Personal Protective Equipment**

We are able to supply a comprehensive range of Personal Protective Equipment (PPE). An example list of the items available is detailed below. (For applicable items please state sizes required when ordering).

*Safety boots*

*Coveralls*

*Hi-Viz vests and jackets*

*Navy polo shirt*

*Green lined welding gauntlets*

*Safety glasses*

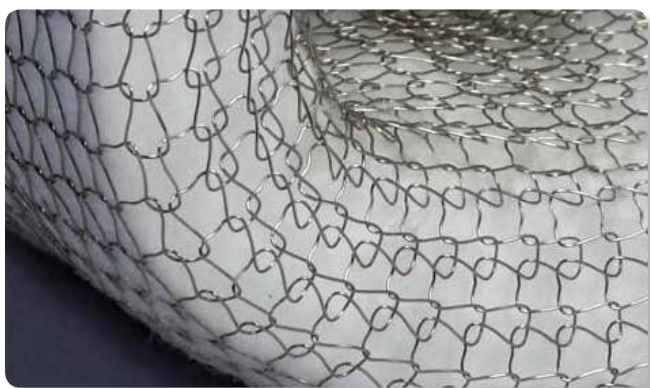
*Safety helmet*

*Disposable dust mask*

*Rigger gloves*

*Ear defenders*

# INSULATION



## Superwool Insulation

Superwool is a high temperature insulating fibre blanket manufactured from Calcium Magnesium Silicate. This material has a thermal performance equivalent to refractory ceramic fibre up to 1200°C. However, unlike ceramic fibre, Superwool is body soluble and has a larger needle particle size. These qualities mean that Superwool represents a lower respiratory hazard than ceramic fibre, although, as with all high temperature insulating fibre, normal respiratory protection in the form of an appropriate dust mask should be worn during handling. Superwool is available in a range of mat sizes, protected by a stainless steel mesh to extend the working life of the insulation. Alternatively, Superwool is also supplied in unmeshed rolls.

*Stock reference & description:*

*96kg per m<sup>3</sup> / 128kg per m<sup>3</sup>*

*29800 / 29900 - 25mm thick s/s meshed mat 300mm x 300mm*

*29801 / 29901 - 25mm thick s/s meshed mat 300mm x 600mm*

*29802 / 29902 - 25mm thick s/s meshed mat 300mm x 900mm*

*29803 / 29903 - 25mm thick s/s meshed mat 600mm x 600mm*

*29804 / 29904 - 25mm thick s/s meshed mat 600mm x 900mm*

*29805 / 29905 - 25mm thick s/s meshed mat 600mm x 1200mm*

*29806 / 29906 - 25mm thick s/s meshed mat 600mm x 1800mm*

*29807 / 29907 - 25mm thick s/s meshed mat 300mm x 1800mm*

*29608 / 29611 - 25mm thick unmeshed roll 7320mm x 600mm*

*Density: 96kg or 128kg per metre cubed. Material Safety Data*

*Sheet available upon request.*

# INSULATION



## Cooperknit insulation

Cooperknit insulation is a cost effective knitted, silica fibre with many user benefits including reusability, long life and low risk to user health and safety and minimal skin irritation compared with most other high temperature insulating fibres.

Independent tests on Cooperknit have shown that no respirable fibres were found in any samples after exposure to 1000°C for 24 hours.

Cooperknit can be used repeatedly at continuous operating temperatures up to 950°C without loss of thermal or mechanical properties.

Cooperknit is available in a range of standard mat sizes detailed below, we are also able to supply special mat sizes or configurations to meet your exact requirements. Alternatively, Cooperknit is also supplied in 7.5m long rolls.

### *Stock reference & description:*

29700 - 10mm thick mat 300mm x 600mm

29701 - 10mm thick mat 600mm x 600mm

29702 - 10mm thick mat 900mm x 600mm

29703 - 10mm thick mat 1200mm x 600mm

29704 - 10mm thick mat 1800mm x 600mm

29699 - 10mm thick roll 7500mm x 600mm



# CERAMIC PAD HEATING ELEMENTS

We incorporate the highest quality materials available in the construction of our Flexible Ceramic Pad (FCP) heating elements. These materials make the heating elements highly durable, which extends the usable life of Cooperheat heating elements beyond that normally expected.

This extended life, high durability and reliability combine to save you money by:

- Reducing reworks and lost time due to heating element failures.
- Reducing your annual costs for replacing or repairing failed or damaged heating elements.

Cooperheat ceramic heating elements are constructed from high grade sintered alumina ceramic beads, nickel chrome core wire and nickel cold tail wire. The construction allows the heating element to be flexible and provides high heat transfer efficiency.

We insist on using high quality, ceramic beads, with a high resistance to thermal and physical shock, in the construction of FCP ceramic heating elements.

The important physical properties, which make these beads superior to other beads used in the heat treatment industry, are detailed in the ceramic bead physical properties table below (all dimensions are nominal):

Alumina content - 95%

Bulk density fired - 3.7 Mg/m<sup>3</sup>

Grain size - 6µm

Vickers hardness - 12.5

Rockwell hardness - 78 (R45N)

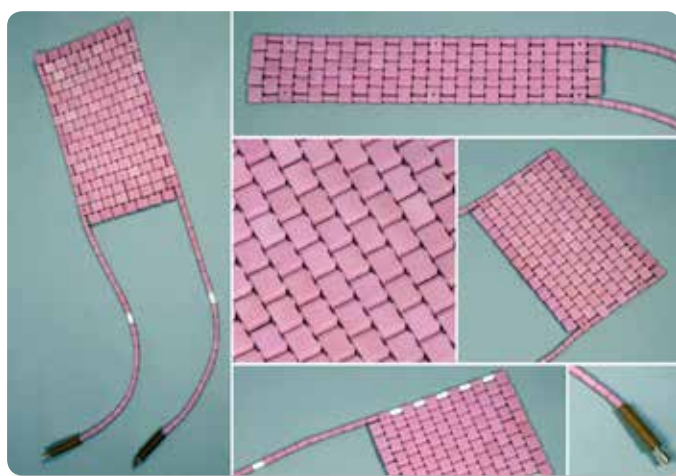
Compressive strength - 2000 MPa

Flexural strength - 320MPa (ASTM C1161, 3 point)

Young's modulus - 325 Gpa

Thermal conductivity - 21W/m<sup>3</sup>

These beads are supplied to us by one of the leading specialist ceramic manufacturers in the ceramic industry.



The cold tails of Cooperheat ceramic heating elements are butt welded to the heater core wire which eliminates the cold tail/core wire junction failures often seen with low quality heaters which use steel ferrules.

By selection, from the extensive range of Cooperheat FCP heating elements, any pipe size or pipe configuration can be covered so that the correct amount of heating power can be applied to successfully heat treat the pipe weld or other fabrication.

Cooperheat FCP heating elements are manufactured with a range of power ratings for use with a selection of standard voltages.

If you require any special heating element configuration, voltage or power rating, we will use our heat treatment engineering expertise to provide you with a heating element custom built to meet your exact needs.

Cooperheat FCP heating elements can, if handled correctly, be used approximately fifty times at temperatures up to 1050°C (1922°F).

We can provide higher temperature heating elements if required which can be used repeatedly at temperatures up to 1200°C (2192°F).

## Heating Element selection guide:

(For heat treatment cycles up to 800°C)

To be used as a guide only. Reference should always be made to specific code or specification heated width requirements.

Nominal Bore		Pipe wall thickness inches / (mm)					
Inches	mm	0 - 0.8 / (0 - 20)	0.8 - 0.9 / (20 - 23)	0.9 - 1.1 / (23 - 28)	1.1 - 1.4 / (28 - 36)	1.4 - 1.8 / (36 - 46)	1.8 - 2.4 / (46 - 61)
1.00	25	1 x CP48	N/A	N/A	N/A	N/A	N/A
2.00	51	1 x CP8	N/A	N/A	N/A	N/A	N/A
3.00	76	1 x CP12	N/A	N/A	N/A	N/A	N/A
4.00	102	1 x CP15	N/A	N/A	N/A	N/A	N/A
6.00	152	2 x CP12	2 x CP12	N/A	N/A	N/A	N/A
8.00	205	2 x CP15	2 x CP10	2000	N/A	N/A	N/A
10.00	254	3 x CP12	4 x CP8	2001	N/A	N/A	N/A
12.00	305	4 x CP10	4 x CP10	4 x CP10	2 x 4 x CP10	N/A	N/A
14.00	356	3 x CP15	4 x CP12	6 x CP8	6 x CP8	2 x 4 x CP12	N/A
16.00	406	2 x 4 x CP12	2 x 4 x CP12	2 x 4 x CP12	2 x 5 x CP10	2 x 5 x CP10	N/A
18.00	457	2 x 4 x CP15	2 x 4 x CP15	2 x 4 x CP15	2 x 5 x CP12	2 x 5 x CP12	N/A
20.00	508	2 x 5 x CP12	2 x 5 x CP12	2 x 5 x CP12	2 x 5 x CP12	2 x 6 x CP10	2 x 6 x CP10
22.00	559	7 x CP10	7 x CP10	8 x CP10	N/A	N/A	N/A
24.00	610	2 x 5 x CP15	2 x 5 x CP15	2 x 6 x CP12	2 x 6 x CP12	2 x 6 x CP12	2 x 7 x CP10
47.00	1194	2 x 12 x CP12	2 x 12 x CP12	2 x 12 x CP12	3 x 12 x CP12	3 x 12 x CP12	3 x 12 x CP12
63.00	1600	2 x 15 x CP12	2 x 15 x CP12	2 x 15 x CP12	2 x 15 x CP12	2 x 15 x CP12	3 x 15 x CP12

Example: 2 x 12 x CP12 = Two bands of twelve CP12 FCP heating elements.

# CERAMIC PAD HEATING ELEMENTS

## Specifications (80/20 Core Wire):

(All dimensions are nominal)

Stock Reference	Type Reference	Width (tail to tail)		Length (of heater body)		Volts v	Power kw
		mm	inch	mm	inch		
20030	CP3	75	3.00	670	26.50	60	2.70
20031	CP4	100	4.00	505	19.50	60	2.70
20032	CP6	150	6.00	335	13.00	60	2.70
20033	CP8	205	8.00	250	9.75	60	2.70
20034	CP10	255	10.00	210	8.00	60	2.70
20035	CP12	305	12.00	165	6.50	60	2.70
20036	CP15	380	15.00	145	5.75	60	2.70
20037	CP16	410	16.25	125	5.00	60	2.70
20038	CP21	535	20.50	105	4.00	60	2.70
20039	CP24	610	23.50	85	3.25	60	2.70
20040	CP10L	250	10.00	85	3.25	30	1.35
20041	CP48	1220	47.25	45	1.75	60	2.70
20042	CP20L	500	19.50	45	1.75	30	1.35
26260	CT78	25	1.00	1950	77.00	60	2.70
26261	CT36L	25	1.00	915	36.00	30	1.35
21030	CP3H	75	3.00	925	35.50	80	3.60
21031	CP4H	100	4.00	690	27.00	80	3.60
21032	CP6H	150	6.00	465	18.25	80	3.60
21033	CP8H	205	8.00	360	14.25	80	3.60
21034	CP10H	255	10.00	295	11.25	80	3.60
21035	CP12H	305	12.00	230	9.00	80	3.60
21036	CP15H	380	15.00	190	7.50	80	3.60
21037	CP17H	420	16.50	165	6.50	80	3.60
21038	CP21H	535	21.00	145	5.75	80	3.60
21039	CP33H	840	33.00	85	3.25	80	3.60
21041	CP66H	1680	66.00	45	1.75	80	3.60
21042	CP30L	760	30.00	45	1.75	40	1.80
22005	CP24H	610	24.00	335	13.00	220	9.90
22006	CP26H	660	26.00	335	13.00	240	10.80

1) Stock References: 22005 and 22006 are for use up to a maximum temperature of 600°C.

2) For heating elements for use at temperatures up to 1200°C add the prefix 'K' to the stock reference.



### Specifications (60/16 Core Wire):

(All dimensions are nominal)

Stock Reference	Type Reference	Width (tail to tail)		Length (of heater body)		Volts v	Power kw
		mm	inch	mm	inch		
20230	CP3	75	3.00	670	26.50	60	2.70
20231	CP4	100	4.00	505	20.00	60	2.70
20232	CP6	150	6.00	335	13.25	60	2.70
20233	CP8	205	8.00	250	10.00	60	2.70
20234	CP10	255	10.00	210	8.25	60	2.70
20235	CP12	305	12.00	165	6.50	60	2.70
20236	CP15	380	15.00	145	5.75	60	2.70
20237	CP16	410	16.25	125	5.00	60	2.70
20238	CP21	535	21.00	105	4.25	60	2.70
20239	CP24	610	24.00	85	3.25	60	2.70
20240	CP48	1220	48.00	45	1.75	60	2.70
21230	CP3H	75	3.00	925	36.50	80	3.60
21231	CP4H	100	4.00	690	27.25	80	3.60
21232	CP6H	150	6.00	465	18.25	80	3.60
21233	CP8H	205	8.00	360	14.25	80	3.60
21234	CP10H	255	10.00	295	11.50	80	3.60
21235	CP12H	305	12.00	230	9.00	80	3.60
21235	CP15H	380	15.00	190	7.50	80	3.60
21236	CP17H	430	17.00	165	6.50	80	3.60
21237	CP21H	535	21.00	145	5.75	80	3.60
21238	CP39H	835	33.00	85	3.25	80	3.60
21239	CP40H	1675	66.00	45	1.75	80	3.60
21240	CP24H	610	24.00	330	13.00	220	9.90

# CERAMIC PAD HEATING ELEMENTS

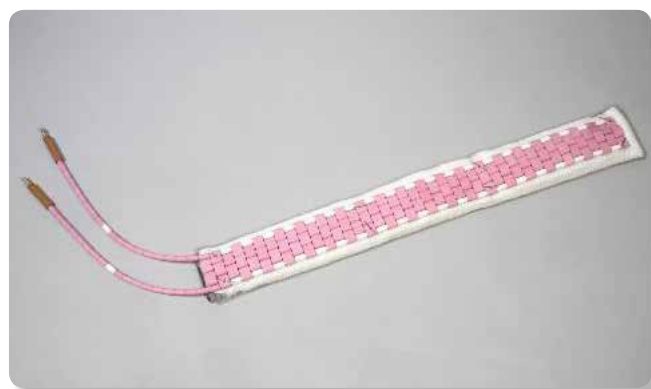
## Flexible Insulated Preheaters (FIP's)

### Application

FIP's are ideal for preheating welds on vessels, fabrications and large diameter pipework.

### Specification

The FIP is constructed using a standard FCP heating element, insulated by a silica fibre mat protected by a stainless steel backing. To hold the FIP onto the workpiece high performance magnets can be supplied either as separate items, or built into the FIP.



## 80/20 Core Wire FIP Heaters:

(All dimensions are nominal)

Stock Reference	Type Reference	Width (tail to tail)		Length (of heater body)		Volts v	Power kw
		mm	inch	mm	inch		
22062	-	125	5.00	810	32.00	60	2.70
22063	-	125	5.00	940	37.00	80	3.60
22070	FIP 295	100	4.00	750	29.50	60	2.70
22071	FIP 235	125	5.00	585	23.00	60	2.70
22072	FIP 395	100	4.00	1000	39.50	80	3.60
22073	FIP 305	125	5.00	775	30.50	80	3.60
22075	-	930	36.50	110	4.25	80	3.60

## 60/16 Core Wire FIP Heaters:

(All dimensions are nominal)

Stock Reference	Type Reference	Width (tail to tail)		Length (of heater body)		Volts v	Power kw
		mm	inch	mm	inch		
22163	-	125	5.00	750	29.50	80	3.60
22170	-	100	4.00	750	29.50	60	2.70
22171	-	125	5.00	585	23.00	60	2.70

### User Benefits

- Optional magnetic attachment for fast, low cost installation;
- Protection from weld splatter;
- Operates on low voltage for operator safety;
- Is constructed from high strength materials for on-site reliability.

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