

ARTECHservices^{LTD}

heat treatment equipment



product catalogue

welcome to artech services

With almost four decades and three generations of experience in the industry, Artech Services Ltd prides itself on being a well respected and established market leader, with a reputation for the manufacture and supply of high quality heat treatment equipment, spares and accessories, at the most competitive prices.

Located in Cannock, Staffordshire, our central UK base means we are ideally situated close to all major transport links and networks, allowing us to offer all of our customers a fast, reliable and economical delivery service.

As well as offering a full range of heat treatment equipment, spares and accessories, most of which are available ex-stock for immediate dispatch, we also provide a rapid, cost effective and comprehensive ceramic pad heater repair and refurbishment service for your existing equipment.

Artech Services has become synonymous with providing heat treatment products of the highest standard, manufactured using the highest specification products, at the most competitive prices. Simply, as our brand states - **quality, service, reliability, value** - meaning unrivalled customer service and satisfaction.

This edition of our catalogue is not definitive, so should you have a special design, specific requirement or question about a product or service that is not listed, please contact a member of our team who will be able to guide and advise on any enquiry you may have.

Roy Harris

Managing Director

find us



contact us

Artech Services LTD
Unit 9, South Staffs Business Park,
Hawkins Drive, Cannock,
Staffordshire, United Kingdom,
WS11 0XU

Tel: (+44) 01922 411770

Fax: (+44) 01922 411022

Email: sales@artechservices.co.uk

Website: www.artechservices.co.uk

contents



4-14 | ceramic heater elements



15-16 | thermocouple attachment units



17-18 | programmers



19-20 | recorders



21-22 | cable sets and splitter cables



23-27 | heat treatment units



28 | mains units



29 | insulation and mesh



30-36 | spares and accessories

range of ceramic heater elements



5-8 | ceramic pad heaters



9 | mains heaters



9 | channel heaters



10 | flexible insulated preheaters



11 | magnetised insulated preheaters



11 | preheating cassettes



12 | finger elements



12 | spreader mats



13 | rope heaters



13 | snake heaters



14 | tape heaters



14 | one and two line heaters

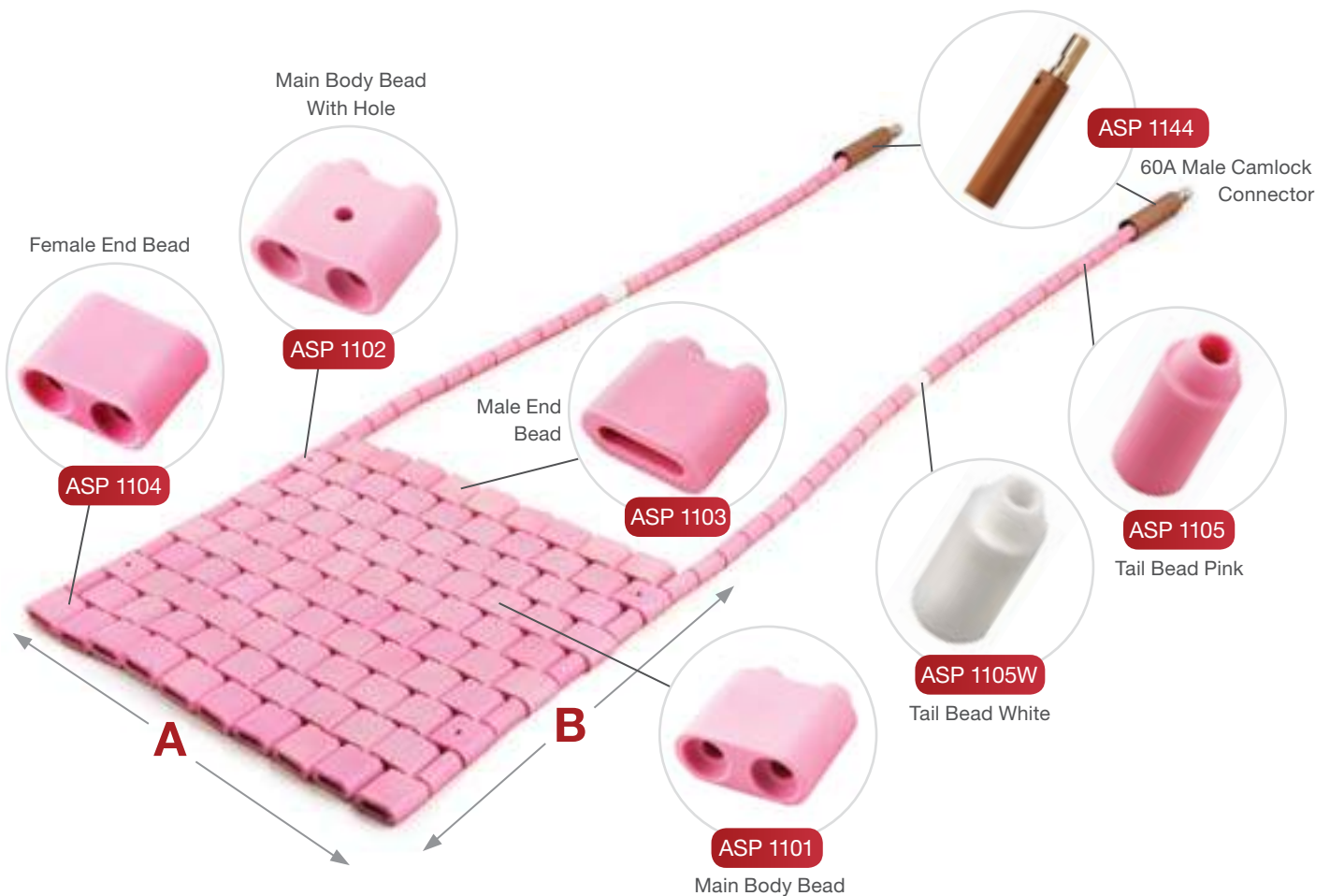
flexible ceramic pad heaters

Our flexible ceramic pad heaters, or FCP's, are manufactured using high grade nickel chrome (NiCr) 80/20 19 strand wire, and insulated using sintered alumina oxide beads, giving flexibility and increased high heat transfer capability. The choice of either camlock or dinse connector is used to terminate each tail.

Each cold tail is constructed from low resistance multi-strand 212 nickel and butt welded to the heater core wire as standard, eliminating junction failure often seen in lower quality heaters and giving complete reliability and trouble-free on-site service. For enhanced ease and end user safety, a white marker bead is used to indicate the start of the cold tail.

The FCP heater has a working temperature capability of up to 1050°C, although this can be increased if required, as many of our heaters can be manufactured using a higher temperature core wire upon request.

Designed for pre and post weld heat treatments, our range of ceramic pad heaters will function efficiently whether they are used as a curved or flat application and are available in an extensive list of sizes with voltages ranging from 30 volts through to 255 volts. If you require any special heating configuration, voltage or power rating, **we can provide you with a heating element custom built to meet your exact needs.**



- Heater is flexible across dimension 'A'
- When ordering or requesting information, please state dimension 'A' first
- Most sizes of ceramic pad heaters are also available in spreader mat version (see page 12)

30v ceramic pad heaters

The 30V ceramic pad heater is ideally suited to the pre and post heat treatment of fabrications, casting repair, thick wall pipe welds and longitudinal welds. They can be used in conjunction with another 30V heater to run at 60 volts.

All products below have :
Voltage - 30V / Current - 45 amps / Rating - 1.35kW

reference number	# of beads		size in mm	
	A	B	A	B
ART 0101	3	17	75	355
ART 0102	3	18	75	380
ART 0103	4	11	100	230
ART 0104	4	12	100	250
ART 0105	4	13	100	275
ART 0106	4	14	100	295
ART 0107	5	9	125	190
ART 0108	5	10	125	210
ART 0109	5	11	125	230
ART 0110	6	7	150	145
ART 0111	6	8	150	165
ART 0112	6	9	150	190
ART 0113	7	6	175	125
ART 0114	7	7	175	145
ART 0115	7	8	175	165
ART 0116	8	5	200	105
ART 0117	8	6	200	125
ART 0118	8	7	200	145
ART 0119	9	5	225	105
ART 0120	9	6	225	125
ART 0121	10	4	255	85
ART 0122	10	5	255	105
ART 0123	11	4	280	85
ART 0124	11	5	280	105
ART 0125	12	4	305	85
ART 0126	13	4	330	85
ART 0127	14	4	355	85
ART 0128	15	3	380	65
ART 0129	16	3	405	65
ART 0130	17	3	430	65
ART 0131	18	3	455	65
ART 0132	24	2	610	40



ART 0108



ART 0127

60v ceramic pad heaters

The 60V ceramic pad heater is our standard heater and is available in a wide variety of sizes.



For all ceramic bead spare parts please see page 30.

All products below have :
Voltage - 60V / Current - 45 amps / Rating - 2.7kW

reference number	# of beads		size in mm		
	A	B	A	B	
ART 0133	3	32	75	670	*
ART 0134	3	33	75	690	
ART 0135	3	34	75	710	
ART 0136	4	24	100	505	*
ART 0137	4	25	100	525	
ART 0138	4	26	100	545	
ART 0139	5	18	125	380	
ART 0140	5	20	125	420	
ART 0141	5	21	125	440	
ART 0142	5	22	125	460	
ART 0143	6	16	150	335	*
ART 0144	6	17	150	355	
ART 0145	6	18	150	380	
ART 0146	7	14	175	295	
ART 0147	7	15	175	315	
ART 0148	8	12	200	250	*
ART 0149	8	13	200	275	
ART 0150	9	11	225	230	
ART 0151	9	12	225	250	
ART 0152	10	10	255	210	*
ART 0153	10	11	255	230	
ART 0154	11	9	280	190	
ART 0155	11	10	280	210	
ART 0156	12	8	305	165	*
ART 0157	12	9	305	190	
ART 0158	13	7	330	145	
ART 0159	13	8	330	165	
ART 0160	14	7	355	145	
ART 0161	15	6	380	125	
ART 0162	15	7	380	145	*
ART 0163	16	6	405	125	*
ART 0164	17	5	430	105	
ART 0165	17	6	430	125	
ART 0166	18	5	455	105	
ART 0167	18	6	455	125	
ART 0168	19	5	480	105	
ART 0169	20	5	510	105	
ART 0170	21	4	535	85	

60v ceramic pad heaters (cont'd)

reference number	# of beads		size in mm		
	A	B	A	B	
ART 0171	21	5	535	105	*
ART 0172	22	4	560	85	
ART 0173	22	5	560	105	
ART 0174	23	4	585	85	
ART 0175	23	3	585	65	
ART 0176	24	3	610	65	
ART 0177	24	4	610	85	*
ART 0178	25	4	635	85	
ART 0179	26	3	665	65	
ART 0180	26	4	665	85	
ART 0181	27	3	690	65	
ART 0182	27	4	690	85	
ART 0183	28	3	715	65	
ART 0184	29	3	735	65	
ART 0185	30	3	760	65	
ART 0186	31	3	785	65	
ART 0187	32	3	815	65	
ART 0188	33	3	840	65	
ART 0189	48	2	1220	40	*



ART 0152

* Denotes standard pad heater stocked.

Most sizes are available in spreader mat version (see page 12).

If you would like to order or enquire about the spreader mat version please prefix 'S' to the ART reference number - e.g ART S 0101.

80v ceramic pad heaters

All products below have :
Voltage - 80V / Current - 45 amps / Rating - 3.6kW

reference number	# of beads		size in mm		
	A	B	A	B	
ART 0190	6	22	150	460	
ART 0191	8	17	205	355	
ART 0192	10	14	255	295	
ART 0193	12	11	305	230	*
ART 0194	15	9	380	190	*
ART 0195	17	8	430	165	*
ART 0196	21	7	535	145	*
ART 0197	33	4	835	85	



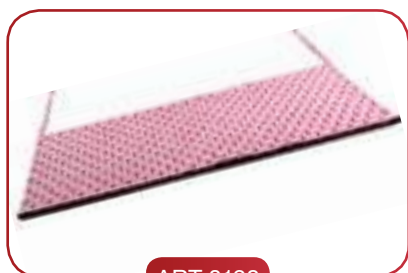
ART 0194

PLEASE NOTE: We offer a full repair and refurbishment service for all heaters.

mains heaters

For larger special applications 220V, 240V and 255V heating elements with a maximum operating temperature of 600°C can be supplied.

reference number	# of beads		size in mm		rating (kW)	current (amps)	voltage (V)
	A	B	A	B			
ART 0198	24	16	610	335	9.9	45	220
ART 0199	26	16	660	335	9.9	45	220
ART 0200	13	32	330	670	10.8	45	240
ART 0201	28	16	710	335	10.8	45	255



ART 0198



channel heaters

Channel heaters are designed for the pre and post weld heat treatment of large constructions, fabrications and vessels, where they can be used as a temporary furnace installation or attached directly to the work piece. They are usually manufactured using nickel chrome (NiCr) wire, but a higher working temperature can be achieved by using a high temperature wire as an alternative when required. A range of voltages are available and tails can be terminated with steel connector blocks or 60A male camlock connectors.

reference number	description	size in mm		rating (kW)	current (amps)	voltage (V)
		W	L			
ART 0202 A	Single Channel	70	720	3.3	55	60
ART 0202 B	Single Channel	70	940	4.4	55	80
ART 0203	2 Bank Channel	165	720	6.6	55	120
ART 0204	4 Bank Channel	360	720	12.1	55	220
ART 0205	4 Bank Channel	360	720	13.2	55	240
ART 0206	4 Bank Channel	360	720	14.0	55	254
ART 0207	4 Bank Channel	360	720	15.2	55	277



ART 0202



ART 0204



For all Channel Heater Spares please see page 30 and 34.

flexible insulated preheaters (FIP)

The FIP is ideally suited to pre-heating pipework, welded fabrications and vessels that have longitudinal or circumferential seams and can be used either flat or laid over curved surfaces. Identical in construction to the flexible ceramic pad heater, they additionally have a high grade ceramic fibre insulation mat encased in stainless steel mesh and the added protection of a stainless steel plate with clips for double magnet fastening.

These FIP's are used to preheat up to a temperature of 400°C and can also be manufactured using tank track beads in the same design with the choice of Camlock or Dinse termination.

All products below have :
Voltage - 60V / Current - 45 amps / Rating - 2.7kW

reference number	description	# of beads		size in mm [†]	
		A	B	A	B
ART 0208	CP3 FIP	3	32	75	670
ART 0209	CP4 FIP	4	25	100	500
ART 0210	Tank Track FIP	1	25	70	670

[†] size of actual ceramic element



ART 0208



ART 0210

FIP spares & accessories

reference number	description
ART 0211	CP3 (single ceramic element only)
ART 0212	CP4 (single ceramic element only)
ART 0213	Tank Track (single ceramic element only)
ASP 1193	CP3 Stainless Steel Plate with Clips
ASP 1194	CP4 Stainless Steel Plate with Clips
ASP 1195	CP3 Meshed Insulated Fibre Mat
ASP 1196	CP4 Meshed Insulated Fibre Mat
ASP 1234	Round Magnet Pair and Bar



ASP 1234



ASP 1193 / ASP 1195 / ART 0211



ASP 1119 / ASP 1120 / ASP 1121

For tank track bead spares please see page 30.

magnetised insulated preheaters (MIP)

These preheaters are used for the preheating of circumferential and longitudinal welds. Available in 3kW and 4kW ratings, each element has a high grade ceramic fibre insulation mat encased in stainless steel mesh, a stainless steel backing plate fitted with handles for easier application and three integrated high temperature resistant magnets for fixing. Termination of cold tails can be Camlock or Dinse connector.

reference number	description	size in mm [†]		rating (kW)	voltage (V)
		A	B		
ART 0214	3kW Magnetised Insulated Preheater	100	630	3.0	65
ART 0215	4kW Magnetised Insulated Preheater	100	800	4.0	84

[†] size of actual ceramic element

Replacement plates and mesh fibre mats also available separately (see page 34).



ART 0215

preheating cassettes

Constructed in the same way as magnetised insulated preheaters, preheat cassettes are used for the preheating of straight seam welds and are backed by a strong box type stainless steel plate.

Quoted below are the three standard sizes, however should you have a special design or requirement, we are able to produce a cassette to meet your specific needs.

reference number	size in mm [†]		rating (kW)	voltage (V)
	A	B		
ART 0216	225	350	1 x 3.0	65
ART 0217	250	770	2 x 3.0	65
ART 0218	250	1070	2 x 4.0	84

[†] size of actual plate



Single Round Magnet available separately (please see page 36).

ART 1235



ART 0216

finger elements

Artech's finger elements are manufactured using NiCr wire through sintered alumina ring beads and have tails terminated with connector blocks for connection to the desired power source. Their hard-wearing and robust nature means they are able to withstand the harshest of on-site use as an established pre and post weld heater, with little or no maintenance required. Standard element maximum working temperature is 1050°C, with each finger being rated at 120 amps / 1.3 volts. A standard element will hold 46 fingers as shown below, but many other sizes up to 62 fingers are available, with the number of fingers required being calculated using the the following...

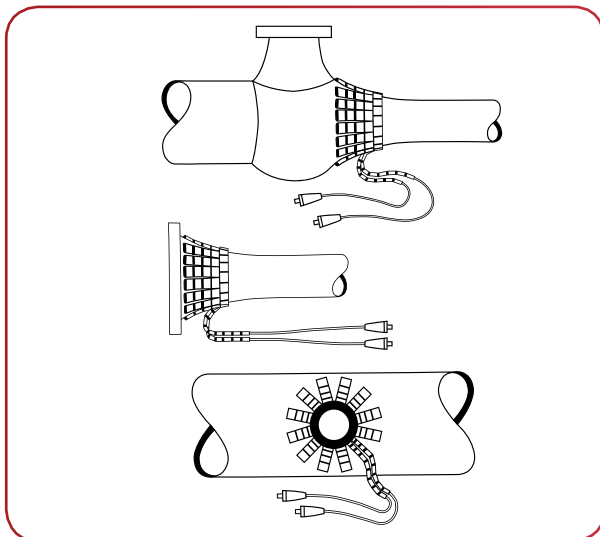
$$\frac{\text{total voltage}}{\text{individual finger voltage}} = \text{number of fingers required}$$

reference number	dimensions (mm)		rating (kW)	current (amps)	voltage (V)
	A	B			
ART 0219	46	5	2.7	120	60
ART 0220	62	5	3.2	120	80



spreader mats

Spreader mats are best suited to applications such as flange welds in containers, formed parts and conical and crowned work pieces, as the example shows below...



Spreader mats are available in most sizes quoted in our standard 30, 60 and 80V ceramic pad heater range. When enquiring or ordering please use the prefix 'S' against the appropriate ceramic pad heater reference number and size required, for example - *ART S 0171 (21 x 5 bead 60V ceramic pad heater, spreader version)*.

rope heaters

Rope heaters are suitable for the preheating of pipe work, bends and T-pieces. Ceramic beads are threaded onto NiCr wire and then protected with stainless steel braid.

reference number	length of body in mm (excluding cold tails)	rating (kW)	voltage (V)
ART 0221	2135	1.35	30
ART 0222	2975	2.0	42
ART 0223	4270	3.0	65
ART 0224	5950	4.0	84

Standard sizes are stated on this page, however non-standard sizes are available upon request to fit your specific requirements. Contact us today to enquire about bespoke sizes and designs.

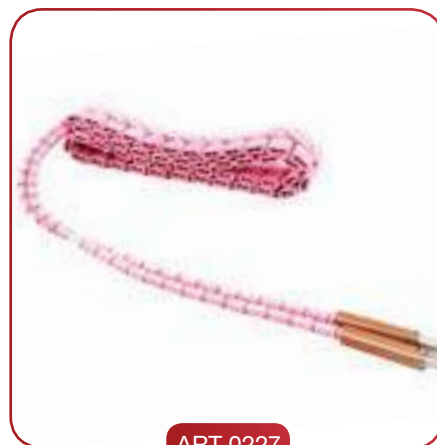


ART 0222

snake heaters

Used for the same applications as rope heaters, snake heaters are manufactured using standard alumina ceramic beads on NiCr wire.

reference number	dimensions (mm)	rating (kW)	voltage (V)
ART 0225	610 x 40	1.5	31
ART 0226	890 x 40	2.0	42
ART 0227	1220 x 40	3.0	65
ART 0228	1650 x 40	4.0	84
ART 0229	1780 x 40	4.0	84



ART 0227



ASP 1144



ASP 1166

For all Camlock and Dinse plug spares please see page 32.

tape heaters

A flexible alternative to the rope and snake heater, the tape heater is ideally suited to the preheating of pipe work.

reference number	dimensions (mm)	rating (kW)	voltage (V)
ART 0230	25 x 1150	1.5	31
ART 0231	25 x 1500	2.0	42
ART 0232	25 x 2200	3.0	65
ART 0233	25 x 3000	4.0	84



ART 0230

one & two line heaters

Other variants of the versatile tape heater are the one and two line heater, commonly known as one and two 'liners' again manufactured using ceramic beads over NiCr wire.

Below are the specifications of our one line heaters.

reference number	dimensions (mm)	rating (kW)	voltage (V)
ART 0234	10 x 2200	1.5	31
ART 0235	10 x 3000	2.0	42
ART 0236	10 x 4600	3.0	65
ART 0237	10 x 6000	4.0	84



ART 0234

A two line option of all sizes above is also available, giving a higher rated heater and double cold tails.

When ordering or enquiring about the two line version please prefix '2' to the ART reference number - e.g ART 2 0234.

Please note - a choice of either Camlock or Dinse Plug Termination is available on all models of heater.



ART 2 0235

thermocouple attachment units

Thermocouple attachment units, or TAU's, provide a positive attachment of the thermocouple wire to the chosen work piece surface by capacitor discharge. This operation is fast and reliable giving accurate temperature readings.



ART 0301

artech SW12V auto pin welding unit
Reference number : ART 0301

The SW12V is a battery and mains powered capacitance-discharge welding unit with up to 250 joules energy output. This makes possible the welding of pins, thick wires and thermocouple wires on-site without mains power supply (unit will work from the mains while recharging).

Features:

- Hands free operation with audible count into auto weld
- Battery and mains working - 110 or 230 VAC-IEC inlet with 2mm lead
- Strong cased floor standing unit with rubber feet
- Dinse style output connectors
- Two metre welding leads with large pot magnet and interchangeable pliers - long nose for low range fine wire welding and large pliers for thick/pin welding
- Auto switch off for battery conservation

Technical Details:

- Discharge energy: 30 to 60 watts per second, or 125 to 250 watts per second
- Supply voltage: 110 VAC or 230 VAC
- Dimensions (mm): 255 x 230 x 310
- Approx weight: 6.5kg



ART 0302

artech TW158 thermocouple welding unit
Reference number : ART 0302

Reference number : ART 0302

The TW158 is a compact and lightweight unit in a waterproof and lightweight padded carry case, including shoulder strap, belt loop and tool storage.

Features:

- Manual and auto (hands free) operation
- Variable energy level from 20 to 50 watts per second
- Runs on 4 x AA alkaline batteries (over 400 welds at 30 joules)
- Low battery LED indicator
- Auto switch off after 30 minutes to conserve battery
- Extra flexible cables for easy tool storage

Technical Details:

- Discharge energy: 20 to 50 watts per second
- Supply voltage: 100-130 VAC
- Dimensions (mm): 220 x 90 x 220
- Approx weight: 1.2kg



ART 0303

artech TW163V automatic variable thermocouple welding unit

Reference number : ART 0303

To weld a wire to a steel body, the magnet is used to make a return contact. Strip back thermocouple wire and grip this wire using the pliers approximately 25mm from the cut end. The charge button is pushed then released. After a short interval the LEDS change from charging to ready. Hold the thermocouple wire firmly against the steel surface and push the weld button. This welds the wire to the steel body (auto mode: weld is made automatically 1.5 seconds after contact). The energy setting knob is used to set the required energy for different wire diameters.

Features:

- Mains LED shows when battery is on charge
- Recharging necessity shown by low battery LED
- Built in tool storage
- Supplied with magnet, pliers and mains charging lead
- Manual and auto (hands free) operation
- Strong stainless steel casing

Technical Details:

- Discharge energy: 20 to 50 watts per second
- Supply voltage: 100-130 VAC
- Dimensions (mm): 220 x 90 x 220
- Approx weight: 4.5kg



thermocouple attachment unit spares

reference number	description
ART 0304	Tau Magnet
ART 0305	Tau Battery
ART 0306	Tau Pliers
ART 0307	Tau Large Pliers



ART 0306

programmers

Accurate and efficient temperature control during the heat treatment process is vital and this can be achieved with the use of our versatile programmers.



artech P167

Reference number : ART 0401

Encased in a robust stainless steel casing, the P167 is easy to use and portable with a fitted carry handle.

Features:

- Micro Controller based for accuracy
- 6 Controllers, thermocouple inputs electrically isolated
- Digital indication of points and time
- Digital 6 channel temperature display
- Ramp hold feature
- Temperature up and down settings
- Battery back up in case of mains failure
- Rear thermocouple and contactor connectors
- Control lead with 7 pin multi socket
- Available in panel mount version

Technical Details:

- Temperature settings: 1-1200°C in 1°C intervals
- Rate of rise/fall settings: 1-999°C in 1°C intervals
- Time settings: 0-100 hours in 1 min steps
- Thermocouple: NiCi/NiAl type k
- Mains supply: 230V/115V, 50/60 H2
- Dimensions (mm): 270 x 150 x 425
- Approx weight: 9.15kg



artech P159CF

Reference number : ART 0402

Depending on the number of channels in a power source unit, the P159CF is usually used as part of a set of 6 or 12. It is a single channel ramp generator and panel mounted unit.

Features:

- Ramp up and ramp down program
- Digital indication of load temperature or set point temperature
- Elapsed time shown during soak
- Programme can be altered during cycle
- Switchable °c / f from front panel
- Energy regulator mode (0 to 100% output cycle)
- Digital proportional plus integral control for best accuracy

Technical Details:

- Temperature settings: 0-1200°C in 1°C intervals
- Up/ down ramp settings: 0-999°C per hour
- Time setting: 0-99 hours 59 minutes
- Thermocouple: Type K, NiCi/NiAl
- Mains supply: 115V or 230V AC (50/60 H2)
- Dimensions (mm): 96 x 48 x 127
- Approx weight: 350g



ART 0403

P256

Reference number : ART 0403

The P256 is a digital programmer, housed in a steel case with intergrated carry handles.

Features:

- Micro controller based for accuracy
- Digital indication of set point and time
- 6 Controllers, thermocouple inputs electrically isolated
- Digital 6 channel actual temperature display
- Ramp hold feature
- Temperature up and down settings
- Battery back up in case of mains failure
- Rear thermocouple and contactor connectors
- Automatic hold feature
- Ability to link other P256 units in a chain
- Control lead with 7 pin multi socket
- Available in panel mounted version

Technical Details:

- Temperature settings: 0-1200°C in 1°C intervals
- Rate of rise/fall settings: 1-000°C in 1°C intervals
- Time setting: 0-100 hours in 1 min steps
- Thermocouple: NiCi/NiAl type K
- Mains supply: 230V/115V, 50/60Hz
- Dimensions (mm): 260 x 280 x 200
- Approx weight: 5.5kg

programmer accessories

reference number	description
ART 0404	Adaptor Lead from Bulgin 7 Pin Plug to 6 x In Line Cannon Sockets
ART 0405	Stainless Steel Protective Handles
ASP 1173	240V In Line Plug
ASP 1177	In Line Cannon Connector Socket
ASP 1179	Bulgin 7 Pin Socket



ART 1179



ART 1173

recorders

Accurate temperature recording is the most integral part of any pre heat and post weld heat treatment process. A reliable, efficient and hard-wearing recorder is a pre-requisite to ensure accurate temperature readings.



ART 0501

chino EH 3000 series

Reference number : ART 0501

The EH 3000 series is a dot printing type analogue recorder with 180mm width chart. Recording points are 5 kinds, 1 point to 12 points and clear recording of temperature, pressure, flow and level.

Features:

- Standard 12 Channel
- Temperature range 0-1200 °c
- Type K sockets
- 6 Chart speeds (switchable as standard)
- Chart and Scale illumination
- Panel mounting

Technical Details:

- Chart width: 180mm
- Min thermocouple: NiCr/NiAl type k
- Mains: 110V/240V (50/60 H2)
- Dimensions (mm): 288 x 288 x 220
- Approx weight: 8kg

Also available - AL 4000 series 100mm multi point hybrid memory recorder.

Artech Ref No: ART 0503



ART 0502

chino AH 4000 series

Reference number : ART 0502

The AH 4000 Series is a hybrid recorder with a bright and clear easy to view LCD Display. Measuring value is prepared as 1 point display, multi point simultaneous display and digital and bar display.

Features:

- Standard 12 channel (6 + 24 also available)
- Type K sockets
- Simultaneous or sequential display options
- Chart and scale illumination
- Panel mounting
- Universal input of 58 ranges of 10 DC voltage, 36 thermocouple ranges, 12 resistance thermometer ranges, all programmed from each channel
- All data can be processed and managed through a pc using compatible software
- Wire dot type 6 colour ribbon system

Technical Details:

- Chart width: 180mm
- Min thermocouple: NiCr/NiAl type K
- Mains: 110V / 240V (50/60 H2)
- Dimensions (mm): 288 x 288 x 195
- Approx weight: 8kg

fugi PHA digital temperature recorder

Reference number : **ART 0504**

The Fugi PHA series digital recorder is able to record a maximum of 12 channels of DC voltage, mA, thermocouples and resistance bulbs. An ink jet system makes it possible to record measured data in analogue trace mode or to print in digital mode at high speed.

Features:

- Compact and lightweight
- 6 and 12 channel continuous trace
- Digital printing in 6 different colours
- Multi range printouts
- Print out functions include: print out dates, chart speed, measurement ranges, tag numbers, daily reports and integrated totals
- Cartridge recording for easy replacement
- Shortage of ink and end of paper alarm

Technical Details:

- Chart width: 180mm
- 12 kinds of thermocouples (B, R, S, K, E, J, T, N, W, L, U, PN) and resistance bulbs (PT 100) can be set for each channel
- Mains supply: 110V/240V
- Dimensions (mm): 288 x 288 x 199
- Approx weight: 6kg (without steel case)



ART 0504

Full specification and technical datasheets are available for all of our recorders upon request.

spares

reference number	description
ART 0505	Fuji Chart Roll-BL1000-B (PHA Series)
ART 0506	Fuji Printer Head PHZH1002 (PHA Series)
ART 0507	Chino Non Linear Chart Roll-ET201, 0-1200°C (EH Series)
ART 0508	Chino Linear Chart Roll-EH05035, 0-1200°C (3000 Series)
ART 0509	Chino Cassette Ribbon (AH4000 Series)
ART 0510	Chino Fluorescent Tube (EH100)
ART 0511	Chino Dotting Wheel (EH Series)
ART 0512	Chino Inks (12 Colours for Chino Dotting Wheel)



cable sets & splitter cables

triple cable sets

When used in conjunction with splitter cables, the triple cable set provides a feed and return from the source of power to the ceramic pad heaters being used on the application.

Manufactured from two lengths of HOFR (Heat, Oil and Flame Retardent) double insulated copper cable, they are completed with two 300 amp female camlock connectors and compensating cable into an inline female thermocouple socket on one end and two 300 amp male camlock connectors and inline male thermocouple plug on the other.



ART 0701

Standard lengths stocked are 15m and 30m in 16mm² and 25mm² copper cable.

reference number	description	cable (mm)	length (M)	rating (amps)
ART 0701	Triple Cable Set	16	30	135
ART 0702	Triple Cable Set	16	15	135
ART 0703	Triple Cable Set	25	30	180
ART 0704	Triple Cable Set	25	15	180
ART 0705	Triple Cable Set	35	30	225
ART 0706	Triple Cable Set	35	15	225

quad cable sets

Quad cable sets are used to connect mains units (see page 27) to ceramic heaters or channel elements. Three 60 amp female camlock connectors and one 300 amp male connector are connected on one end, and attached to the other is a five pin 415V plug. A star point connector can be used to enable three heating elements to be connected in 'star' for each channel.



ART 0707

reference number	description	cable (mm)	length (M)	rating (amps)
ART 0707	Quad Cable (3 X 60A Female Camlock Connectors, 1 X 300 Male Camlock, 5 Pin 415V Plug)	16	30	135
ART 0708	Star Point Connector (1 X 300A Female Camlock Connector, 3 X 60A Female Camlocks)	16	1	73

splitter cables

Splitter cables are made from one metre lengths of 16mm² copper cable, with a 300 amp male camlock connector on one end, to attach to the source of power and three 60 amp female camlock connectors on the other, allowing the connection of ceramic heaters.

Stocked in 2, 3 and 4 way variations as standard, they are also available in both black or orange sheathing.



ART 0711



ART 0713

reference number	description	cable (mm)	length (M)
ART 0709	2 Way Splitter Cable (Black) 1 X 300A Male Camlock + 2 X 60A Female Camlocks	16	1
ART 0710	2 Way Splitter Cable (Orange) 1 X 300A Male Camlock + 2 X 60A Female Camlocks	16	1
ART 0711	3 Way Splitter Cable (Black) 1 X 300A Male Camlock + 3 X 60A Female Camlocks	16	1
ART 0712	3 Way Splitter Cable (Orange) 1 X 300A Male Camlock + 3 X 60A Female Camlocks	16	1
ART 0713	4 Way Splitter Cable (Black) 1 X 300A Male Camlock + 4 X 60A Female Camlocks	16	1
ART 0714	4 Way Splitter Cable (Orange) 1 X 300A Male Camlock + 4 X 60A Female Camlocks	16	1
ART 0715	5 Way Splitter Cable (Black) 1 X 300A Male Camlock + 5 X 60A Female Camlocks	10	1
ART 0716	5 Way Splitter Cable (Orange) 1 X 300A Male Camlock + 5 X 60A Female Camlocks	10	1



60 AMP



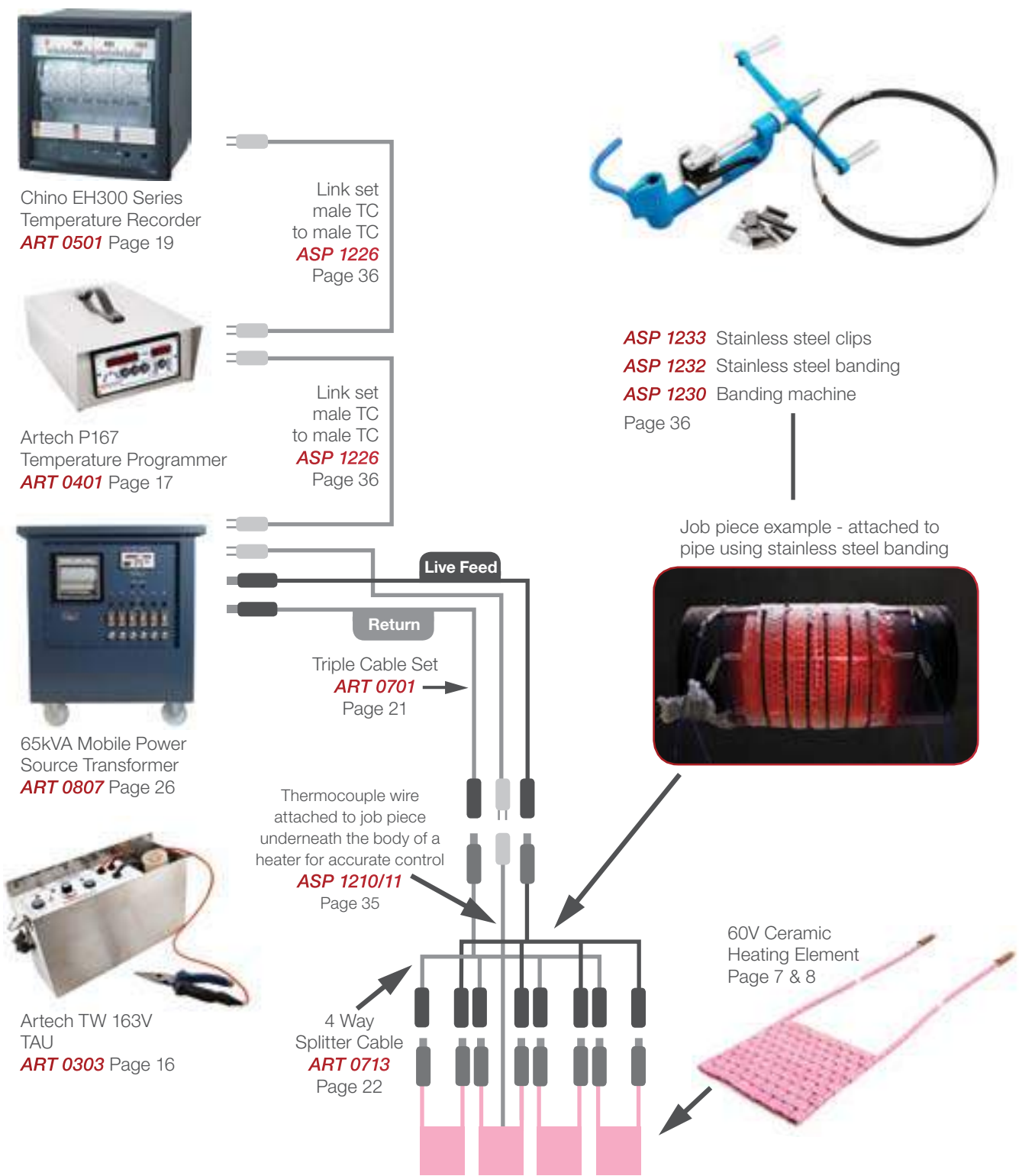
300 AMP

For all 60 amp and 300 amp Camlock spares please see page 32.

heat treatment units

mobile transformers

Transformers are mobile power sources designed for flexibility and ease of movement in workshop or on-site conditions and provide reliable and comprehensive temperature control and recording for any heat treatment operation.



50kVA mobile power source transformer

The 50 kVA transformer is well finished and compact, built into a manageable and mobile unit and because of its reliable design, has a long on-site and workshop life expectancy.

The unit has a front panel with mini controllers and energy regulators which are used to perform pre and post weld heat treatment. An external automatic temperature programmer may also be used with the feature of an auto/manual switch.

Recording devices, thermocouple attachment units and recorders can also be integrated with the three 110V auxiliary sockets and charge points on the rear of the unit. The rear panel also features a ventilation fan, main circuit breaker, and both multi plug and single channel connections, for use with external programmers.



ART 0801

Artech Ref ART 0801 A	50kVA Mobile Transformer
Transformer	50 kVA Air Natural Class H
Primary Input	380 / 415 / 440V
6 Channels	Each channel with Energy Regulator, Mini Controller, auto / manual Selector Switch and Neon Indicator
Protection	Fitted with Over Temperature Trip Circuit in each Winding and 3 phase MCB Shunt Trip
Switching	Albright Contactors fitted to each channel
Output	65V
Capacity	18 X 2.7Kw Standard Ceramic Heater Elements (Max 3 per channel)
Auxiliary Sockets	3 X 110V
Primary Supply	5m 4 Core Sy 16mm ² Flexible Armoured Cable
Wheels	150mm Nylon – 2 Locking / 2 Fixed
Dimensions	110cm X 60cm X 90cm
Weight	385kg

A 65 kVA version of the 50 kVA unit is also available, as above, but with the increased capacity of 24 x 2.7kW ceramic heater elements and weight of 470kg.

Artech Reference
ART 0801 B



ART 0701



ART 0707

For all Transformer cable sets please see pages 21 & 22.

6 and 12 way mobile heat treatment centres

The 6 and 12 way centres are complete heat treatment units, with transformer, temperature recorder, temperature programmer, and either 6 or 12 channels incorporated into a strong mild or stainless steel frame on four sturdy nylon castor wheels for ease of transportation.

The unit features a control panel of mini controllers, energy regulators and automatic programmer with an auto/manual mode switch and the heat treatment process is measured on an inbuilt temperature recorder.

The main circuit breaker is located on the rear panel, together with two 110V auxiliary sockets designed for thermocouple attachment unit charge points, or other auxiliary equipment.



ART 0804

specifications	
Primary Input	380 / 415 / 440V
Protection	Fitted with Over Temperature Trip Circuit in each Winding and 3 Phase MCB with Shunt Trip
Switching	Albright Contactors fitted to each channel output – neon indicators on front panel indicate when channel is on
Temperature Recorder	Chino EH100 - 12
Programmer	P256 OR PTC 160
Secondary Output	65V
Auxiliary Sockets	2 X 110V
Primary Supply	5m 4 Core SY Flexible Armoured



ART 0806 Stainless Steel



ASP 1220 / 1221 / 1214 / 1223

For all Transformer spares please see page 35.

6 and 12 way mobile heat treatment centres

reference number	coil size	N° of channels	auto programmer	mini controllers & energy regulators	primary cable	capacity of 2.7kw ceramic heater elements
ART 0802	50kVA	6	P256	N/A	16mm ² 4 Core SY	18
ART 0803	50kVA	6	P256	6 X Mini Controllers & Energy Regulator	16mm ² 4 Core SY	18
ART 0804	50kVA	6	PTC160	6 X Mini Controllers & Energy Regulator	16mm ² 4 Core SY	18
ART 0805	65kVA	6	P256	N/A	25mm ² 4 Core SY	24
ART 0806	65kVA	6	P256	6 X Mini Controllers & Energy Regulator	25mm ² 4 Core SY	24
ART 0807	65kVA	6	PTC160	6 X Mini Controllers & Energy Regulator	25mm ² 4 Core SY	24
ART 0808	100kVA	12	2 X P256	N/A	50mm ² 4 Core SY	36
ART 0809	100kVA	12	2 X P256	12 X Mini Controllers & Energy Regulator	50mm ² 4 Core SY	36
ART 0810	100kVA	12	2 X PTC160	12 X Mini Controllers & Energy Regulator	50mm ² 4 Core SY	36
ART 0811	130kVA	12	2 X P256	N/A	70mm ² 4 Core SY	48
ART 0812	130kVA	12	2 X P256	12 X Mini Controllers & Energy Regulator	70mm ² 4 Core SY	48
ART 0813	130kVA	12	2 X PTC160	12 X Mini Controllers & Energy Regulator	70mm ² 4 Core SY	48



ART 0808



ART 0810

artech heat treatment inverter

Designed for smaller applications, our new 10.8kW, lightweight 17kg inverter is the future generation of compact heat treatment power sources, and offers the technician mobility, flexibility and reliability in any environment.



ART 0814

Output power 10.8kW
Weight 17kg - mobility
Flexibility and reliability

- Integrated regulator and digital recorder
- Possible to connect up to 4 elements
- Controlled preheating and cooling of welded materials
- Thermal annealing and tempering of materials
- Multizonal regulation for using more units
- Simple use, 20 thermal profiles, integrated recorder

Basic accessories:



Instructions for use



CD with software



Connecting USB cable

Technical Data of the Inverter

Output voltage/current	0-65V/160A, continuously regulated, CV/CC
Load	Resistance heating elements 24-65V (30/60V type)
Supply voltage/current	3-400V, 50/60Hz, 23A
Feed protection	25A
Thermal sensor	K-type thermocouple, galvanically insulated output
Measuring/regulation range	-40 °c to 1,350 °c / -25 °c to 1,200 °c
Alarm	2 settable (deviation SV/PV, reaching temperature, etc.)
Failure detection	Thermocouple disconnection, overloading, overheating, short-circuit on output, etc
Multizonal regulation	Yes, master/slave types, max. 9 units
Operating temperature/protection	-20 °c to 40 °c (with limited output up to 50°c)
Dimensions and weight	170 X 370 X 450mm, 17kg
Certification	CE

Technical Data of the Regulator and Recorder

Control	Temperature regulation acc. to set a thermal programme Regulation to a set temperature Regulation of heating (output) power
Thermal profiles	20 settable profiles with 9 segments each, max. 180 segments
Profiles lining/cycling	Yes/Yes
Segment parameters	Ramp OFF/1...999 °c/hr Set -25 °c...1,200 °c Hold time OFF...9,999 min
Regulator	Digital PID, user-settable
Recorder	64 hr of recording, saving PV/SP/MV and error conditions
Data Download	With 485/USB to a PC into a text editor (direct import to excel)



Trolley - optional

ART 0815

mains units

For use on larger applications where the use of lower voltage power sources and elements may be uneconomical, our mains unit has added ease of mobility meaning the increased flexibility to be used either on site or in workshop conditions.

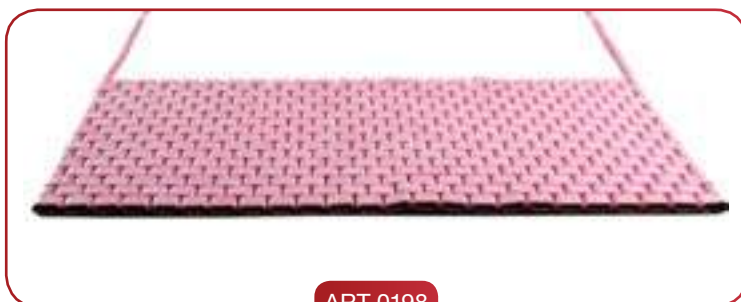
Connected to a three phase 380V or 440V supply, and split into six controlled channels, the unit uses quad cables for connection to heating elements which can be 240V flat ceramic pad heaters or 240V four bank channel heaters, connected in 'star'. Each heater can then be isolated independently with the use of 3 x 63 amp circuit breakers.

A 400amp 3 phase incoming isolator and 500Va transformer are fitted within the unit providing 2 x 110V auxiliary power to remote temperature recorders, programmer units or thermocouple attachment units.

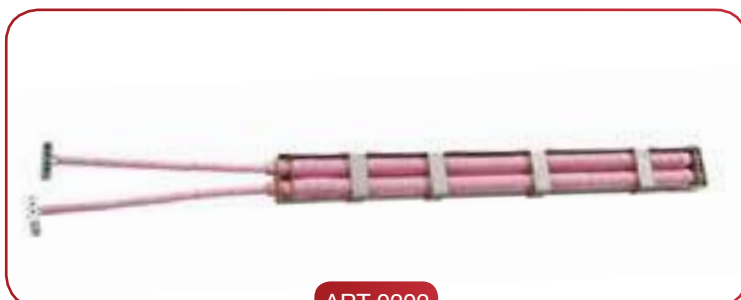
Artech Ref ART 0901	Artech Mains Units
Primary Input	380V - 440V
6 Channels	Each channel with Energy Regulator, Controller, auto / manual Select Switch and Neon Indicator
Protection	Each channel phase with 63 amp Circuit Breaker
Switching	IMO Contactor fitted to each channel output
Output	220V - 225V Connection in star
Capacity	18 X 240V, 13kW 4 Bank Heaters/22 X 240V 10.8kW Flat Ceramic Pad Heaters
Auxiliary Sockets	2 X 110V



ART 0901



ART 0198



ART 0202

For all Mains and Channel Heaters please see page 9.



ART 0204

insulation

meshed fibre mats

Meshed ceramic fibre mats are ceramic fibre encased within a stainless steel wire mesh, giving extra durability and longevity of working life. Suitable for insulating heating elements, pressure vessels and pipework, they are available in an extensive range of sizes, from 300mm x 300mm to 600mm x 1800mm, however non standard sizes designed to your specific requirements are also available upon request.



ART 0601

300mm X 300mm Meshed Fibre Mat
Artech Reference Number: **0601**

ceramic fibre

Ceramic fibre is available in two standard size rolls, as below:

reference number	description	thickness (mm)	density (kg/M ²)	length (M)
ART 0602	Superwool 607 Ceramic Fibre Roll	13	128	14.64
ART 0603	Superwool 607 Ceramic Fibre Roll	25	128	7.32



ART 0602

mesh

Mesh for fibre mats can be purchased in rolls, by the kilogram. Standard 10kg rolls are stocked as below, however various other width sizes are available and can be cut to any desired non-standard length.

reference number	description	width (inches)	approx length (M)	Roll kg
ART 0604	Stainless Steel Mesh	4"	127	10
ART 0605	Stainless Steel Mesh	5"	120	10
ART 0606	Stainless Steel Mesh	13"	64	10
ART 0607	Stainless Steel Mesh	25"	35	10



1. ART 0606
2. ART 0605

spares & accessories

standard ceramic beads

reference number	description
ASP 1101	Main Body Bead
ASP 1102	Main Body Head with hole
ASP 1103	Male End Bead
ASP 1104	Female End Bead
ASP 1105	Tail Bead Pink
ASP 1105 W	Tail Bead White
ASP 1106	Olive Bead



channel beads

reference number	description
ASP 1107	Channel Bead Main Body L 19mm OD 30mm
ASP 1108	Channel Bead L 4.75mm OD 30mm
ASP 1109	Channel Bead Pink L 42mm OD 30mm
ASP 1110	Channel Bead White L 42mm OD 30mm
ASP 1111	Channel Bead L 10mm OD 30mm
ASP 1112	Castle Bead Straight Edge
ASP 1113	Castle Bead Curved Edge
ASP 1114	Stepped Bead L 25mm OD 25mm To 19mm
ASP 1115	Twin Hole Bead
ASP 1116	Tube Bead Pink L 30mm OD 13mm
ASP 1117	Tube Bead White L 30mm OD 13mm
ASP 1118	Tube Bead L 22mm OD 10mm



standard tank track beads

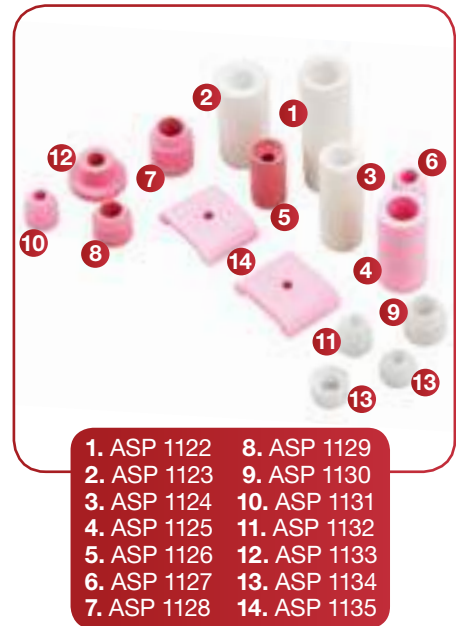
reference number	description
ASP 1119	Main Tank Track Bead
ASP 1120	Main Bead with 1 Hole
ASP 1121	Main Bead with 2 Holes

Other size tank track beads are also available upon request.



miscellaneous beads

reference number	description
ASP 1122	White Tube Bead L 42mm Od 10mm ID 9mm
ASP 1123	White Tube Bead L 30mm OD 16mm ID 7.5mm
ASP 1124	White Tube Bead L 32mm OD 13mm ID 7.0mm
ASP 1125	Pink Tube Bead L 27mm OD 15mm ID 9mm
ASP 1126	Pink Tube Bead L 19.5mm OD 11mm ID 4mm
ASP 1127	Pink Tube Bead L 15mm OD 11mm ID 5mm
ASP 1128	Pink 1 / 2 Liner Bead L 19mm OD 14mm ID 7.5mm
ASP 1129	Pink 1 / 2 Liner Bead L 10mm OD 12mm ID 6mm
ASP 1130	White 1 / 2 Liner Bead L 10mm OD 12mm ID 6mm
ASP 1131	Pink 1 / 2 Liner Bead L 11mm OD 10mm ID 4mm
ASP 1132	White 1 / 2 Liner Bead L 11mm OD 10mm ID 4mm
ASP 1133	Pink Step Bead L 10mm OD 21mm To 11mm ID 4.5mm
ASP 1134	White Ball And Socket Beads
ASP 1135	Half Main Body Bead With Hole



wire kits

reference number	description
ASP 1136	1.35m NiCr 80/20 19 Strand + Cold Tails
ASP 1137	1.65m NiCr 80/20 19 Strand + Cold Tails
ASP 1138	2.25m NiCr 80/20 19 Strand + Cold Tails
ASP 1139	3.70m NiCr 80/20 19 Strand + Cold Tails
ASP 1140	4.65m NiCr 80/20 19 Strand + Cold Tails
ASP 1141	5.20m NiCr 80/20 19 Strand + Cold Tails
ASP 1142	6.00m NiCr 80/20 19 Strand + Cold Tails
ASP 1143	6.30m NiCr 80/20 19 Strand + Cold Tails



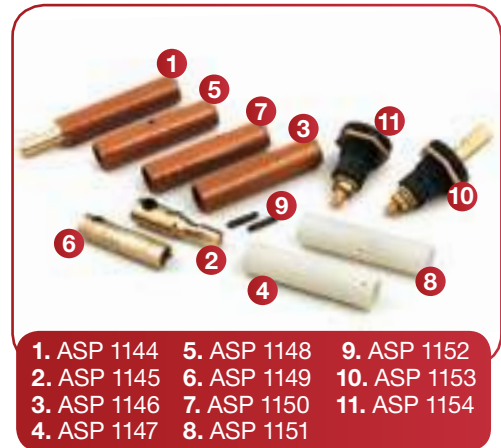
Listed above are our standard length kits, however please note we are able to manufacture any size wire kits to your specific core wire and cold tail length requirements. All kits are also available manufactured in 60/16 NiCr 19 strand core wire. Please specify 80/20 or 60/16 core wire when enquiring or ordering.



For all wire and cable please see page 35.

plugs and sockets

reference number	description
ASP 1144	60 amp Male Camlock Complete
ASP 1145	60 amp Male Brass
ASP 1146	60 amp Male Sleeve
ASP 1147	60 amp Male High Temperature Sleeve
ASP 1148	60 amp Female Camlock Complete
ASP 1149	60 amp Female Brass
ASP 1150	60 amp Female Sleeve
ASP 1151	60 amp Female High Temperature Sleeve
ASP 1152	60 amp Pin
ASP 1153	60 amp Male Panel Mounted Camlock
ASP 1154	60 amp Female Panel Mounted Camlock



reference number	description
ASP 1155	300 amp Male Camlock Complete
ASP 1156	300 amp Male Brass
ASP 1157	300 amp Male Sleeve
ASP 1158	300 amp Male High Temperature Sleeve
ASP 1159	300 amp Female Camlock Complete
ASP 1160	300 amp Female Brass
ASP 1161	300 amp Female Sleeve
ASP 1162	300 amp Female High Temperature Sleeve
ASP 1163	300 amp Pin
ASP 1164	300 amp Male Panel Mounted Camlock
ASP 1165	300 amp Female Panel Mounted Camlock



reference number	description
ASP 1166	Male Dinse Plug 10/25
ASP 1167	Female Dinse Socket 10/25
ASP 1168	Male Dinse Plug 35/50
ASP 1169	Female Dinse Socket 35/50
ASP 1170	Panel Mounted Dinse Socket 35/50



plugs and sockets

reference number	description
ASP 1171	110V In Line Plug
ASP 1172	110V In Line Socket
ASP 1173	240V In Line Plug
ASP 1174	240V In Line Socket
ASP 1175	110V Panel Mounted Socket
ASP 1176	240V Panel Mounted Socket



ASP 1173 / ASP 1174

ASP 1177	In Line Cannon Connector Socket
ASP 1178	Panel Mounted Cannon Plug



ASP 1177

ASP 1179	Bulgin Socket
ASP 1180	Bulgin Panel Mounted Plug + Cap



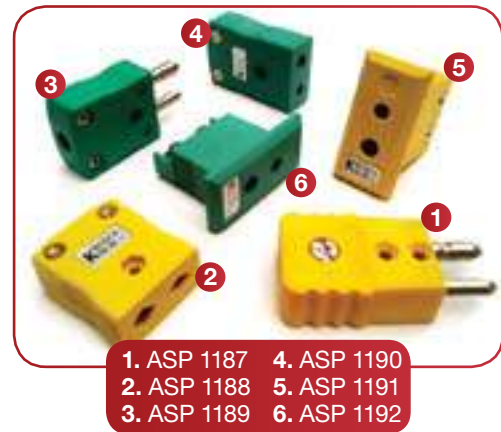
ASP 1179 / ASP 1180

ASP 1181	4 Pin In Line Plug 63A 415V
ASP 1182	4 Pin In Line Socket 63A 415V
ASP 1183	4 Pin Panel Mounted Socket 63A 415V
ASP 1184	5 Pin In Line Plug 63A 415V
ASP 1185	5 Pin In Line Socket 63A 415V
ASP 1186	5 Pin Panel Mounted Socket 63A 415V



ASP 1184

reference number	description
ASP 1187	Thermocouple Plug Type K Hollow Pin (Yellow)
ASP 1188	Thermocouple Socket Type K (Yellow)
ASP 1189	Thermocouple Plug Type K Solid Pin (Green)
ASP 1190	Thermocouple Socket Type K (Green)
ASP 1191	Panel Mounted Thermocouple Socket Type K (Yellow)
ASP 1192	Panel Mounted Thermocouple Socket Type K (Green)



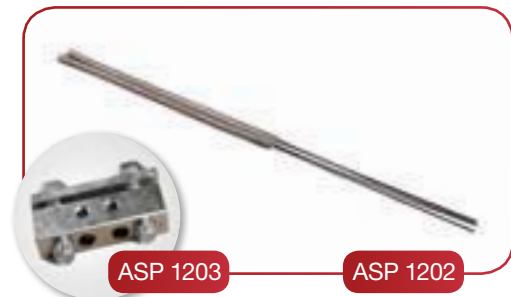
preheater spares

reference number	description
ASP 1193	CP 3 (FIP 3 X 32) Stainless Steel Plate with Clips
ASP 1194	CP 4 (FIP 4 X 24) Stainless Steel Plate with Clips
ASP 1195	CP 3 Meshed Insulated Fibre Mat
ASP 1196	CP4 Meshed Insulated Fibre Mat
ASP 1197	3kW Magnetised Insulated Preheater Plate with handles
ASP 1198	3kW Magnetised Insulated Preheater Meshed Fibre Mat
ASP 1199	4kW Magnetised Insulated Preheater Plate with Handles
ASP 1200	4kW Magnetised Insulated Preheater Meshed Fibre Mat



channel heater spares

reference number	description
ASP 1201 A	Channel Heater Tray And Retaining Clips 70mm x 720mm
ASP 1201 B	Channel Heater Tray And Retaining Clips 70mm x 940mm
ASP 1202	Channel Heater Spiral Core
ASP 1203	Steel Connector Block



wire and cable

reference number	description
ASP 1204	NiCr 80/20 19 Strand Wire (500m Reel)
ASP 1205	NiCr 80/20 37 Strand Wire (500m Reel)
ASP 1206	NiCr 60/16 19 Strand Wire (500m Reel)
ASP 1207	Nickel 212 19 Strand Wire (100m Reel)
ASP 1208	Nickel 212 19 Strand Wire (500m Reel)
ASP 1209	High Temperature Wire - up to 1300°C (500m Reel)



ASP 1210	Thermocouple Wire Type K 0.711mm DBL INS Red/Yellow (100m)
ASP 1211	Thermocouple Wire Type K 0.711mm DBL INS Green/White (100m)
ASP 1212	Compensating Cable 13/0.2mm PVC (Red) 100m Reel
ASP 1213	Compensating Cable 13/0.2mm PVC (Green) 100m Reel



transformer spares

reference number	description
ASP 1214	Albright Contactor 200A 110V SW200 N
ASP 1215	Albright Contactor 200A 240V SW200 N
ASP 1216	Albright Spare Contactor For SW200 N
ASP 1217	Neon Indicator 110V
ASP 1218	Neon Indicator 240V
ASP 1219	Capacitor 8 UF
ASP 1220	P159 Digital Mini Controller
ASP 1221	Energy Regulator 110V
ASP 1222	Energy Regulator 240V
ASP 1223	Diamond Knob for Energy Regulator
ASP 1224	Ammeter 0-200 amp



For all transformer plug and socket spares please see page 33.

miscellaneous spares

reference number	description
ASP 1225	Thermocouple Putty (500g tub)
ASP 1226	Link Set (Programmer and Recorder to Transformer)
ASP 1227	PVC tape (red, blue, yellow, white, black, grey or green and yellow)
ASP 1228	Stainless Steel Crimps
ASP 1229	Infrared + Contact Probe Type K Thermometer



1. ASP 1225
2. ASP 1226
3. ASP 1227

ASP 1230	Banding Machine
ASP 1231	Ratchet Banding Machine
ASP 1232	Stainless Steel Band ½" (13mm) 30m
ASP 1233	Stainless Steel Banding Clips (100)
ASP 1234	Round Magnet Pair (including bar)
ASP 1235	Single Round Magnet
ASP 1236	Square Magnet Pair (including bar)
ASP 1237	Single Square Magnet



1. ASP 1230
2. ASP 1232
3. ASP 1233



ASP 1234



ASP 1235



ASP 1236



ASP 1237



contact us

Artech Services LTD
Unit 9, South Staffs Business Park,
Hawkins Drive, Cannock,
Staffordshire, United Kingdom,
WS11 0XU

Tel: (+44) 01922 411770

Fax: (+44) 01922 411022

Email: sales@artechservices.co.uk

Website: www.artechservices.co.uk



Artech Services LTD, Unit 9, South Staffs Business Park,
Hawkins Drive, Cannock, Staffordshire, United Kingdom, WS11 0XU