



HEAT TREATMENT EQUIPMENT & ACCESSORIES



Dear Customer,

ElectroHeat Sweden AB is an innovative company based in Gothenburg, Sweden, and has been operating since 1975. We manufacture industrial furnaces and heat treatment equipment to industrial companies all over the world.

We deliver to some of the largest companies in Sweden such as ABB, Siemens and Volvo but also equipment to research carried on at technical universities. A significant segment of our production is exported to Europe and the Middle East.

Our furnaces are fully adapted to our customers' needs and requirements, which make each heating system unique.

We make products with outstanding quality and we deliver fast!

Kimmo Ainassaari, CEO

Mobile Heat Treatment Center

Stress relieving means to slowly heat the work piece to a specific temperature, which is held constant for some time, followed by slow de-cooling. The temperature is elected between 550 and 800°C, depending on the material composition. Stress relieving is carried out to reduce internal tensions in welding areas, which reduces the risk for stress corrosion, and secondly to remove contained hydrogen from steel.

The mobile heat treatment centers are used for stress relieving and pre-heating for pipes and steel constructions. The cabinet is manufactured in stainless steel enabling it to be used in tough environments.

TF 4056 / 8056 / 80512



Control system

- Own-developed hardware and software for Windows CE Industrial PC
- No computer needed to get started
- Extremely user-friendly
- Multi-language support
- Fully automatic processing with alarm control
- Full master/slave programming flexibility
- T/C fault alarm
- Low effect alarm
- Alarm for faulty +/- connection on T/C
- Comprehensible display to show trends and SP/PV (set control and process value)

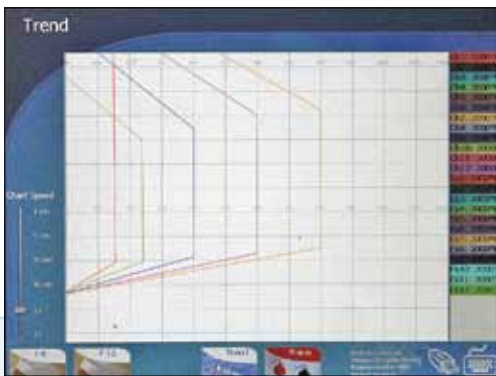
- 12" high resolution TFT touch screen
- Stainless steel chassis
- Easy to service and easy to change spare parts (relay, screen etc.)
- Provided with big bearing wheels, strong handles and lifting eyes for easy transportation
- Standard components (contactors etc.) to facilitate tracking of spare parts at local supplier
- Filter on all T/C inputs to avoid any disturbance
- Documentation can be written directly at the unit for further processing by computer





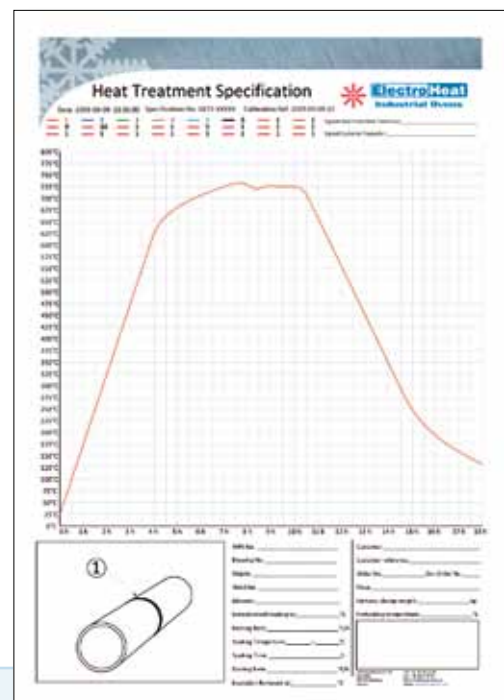
The main screen shows the overview information for all six channels. You can also see master/slave relations and the temperature on all channels. The user interface is easy to understand. To program a channel press on the desired channel.

In the channel control screen you program the parameters such as ramp, master/slave and the program is initiated from this screen.



This graph shows the temperature curves for all six channels in their respective colour. The graph displays the channel's performance for the entire duration of the heat treatment so you can follow the curve history and it is possible zoom in for details. Here is also where you can save data to a USB memory stick.

This is a printout after processing in the PC. You can see all the necessary information such as object information, sensor locations, client information, temperature curves etc. This information can be inserted before the heat treatment procedure as well as afterwards. You can choose whether you want to print information for one or more curves in the same printout.





TF 8036 / 80312

- Simple programming
- 6 + 6 channel program controllers
- Manage pre-heating and stress relieving
- Up to 4 elements per channel
- Program Controller FGH P256
- Graph writer for logging of temperature (0-1000°C)
- Stainless steel chassis
- Easy to service and easy to change spare parts (relay, contactors etc.)
- Provided with big bearing wheels, strong handles and lifting eyes for easy transportation
- Standard components (contactors etc.) to facilitate tracking of spare parts at local supplier





TF 4046

- Easy to program
- 6 separate channels
- Manage pre-heating and ramp/hold time
- Up to 2 elements per channel
- PID controller
- Graph writer for logging of temperature (0-1000°C)
- Switch for turning of diagram writer
- Stainless steel chassis
- Easy to service and easy to change spare parts (relay, contactors etc.)
- Provided with big bearing wheels, strong handles and lifting eyes for easy transportation.
- Standard components (contactors etc.) to facilitate tracking of spare parts at local supplier





TF 4013

- Easy to program
- 3 separate channels
- Specifically constructed for pre-heating
- Up to 4 elements per channel
- PID controller
- Stainless steel chassis
- Easy to service and easy to change spare parts (relay, contactors etc.)
- Provided with big bearing wheels, strong handles and lifting eyes for easy transportation
- Standard components (contactors etc.) to facilitate tracking of spare parts at local supplier





Specifications TF

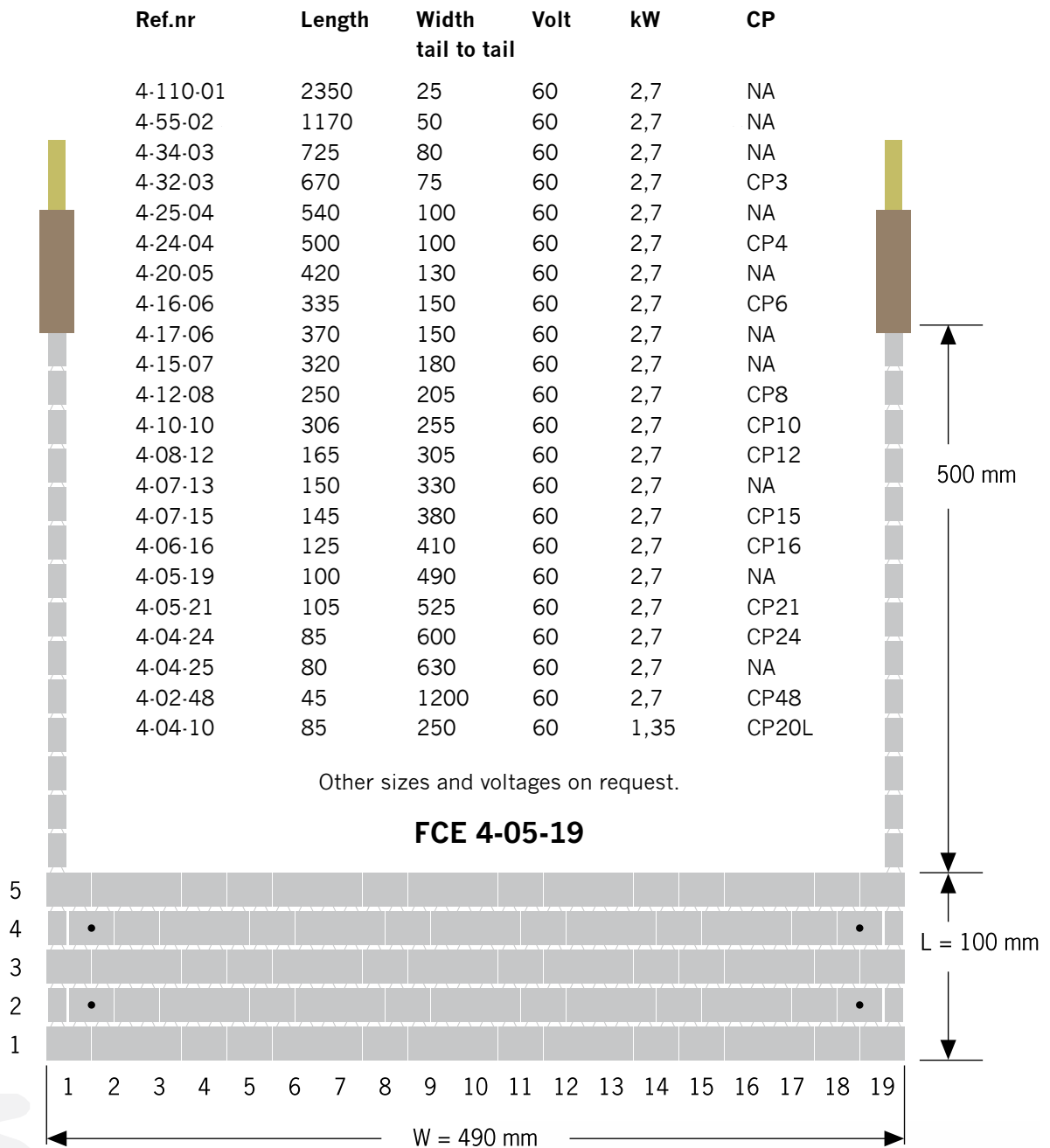
	TF 4013	TF 4046	TF 8036
Supply voltage	3x400V/440V 50Hz 63A*	3x400V/440V 50Hz 63A*	3x400V/440V 50Hz 63A*
Secondary current	220A	220A	440A
Secondary voltage	60V	0/30/60V	0/30/60V
Channels	3	6	6
Heater/channel	4	2	4
Total amount of heaters	12	12	24
Preheat treatment	Yes	Yes	Yes
Automatic Postheat treatment	No	Yes	Yes
Separate channels	Yes	Yes	Only when preheating
Master/Slave	No	No	Yes
Temperature recording	No	Analogue 100 mm	Analogue 100 mm
Communications	No	No	No
Touch screen interface	No	No	No
Controller	3 individual PID	6 individual PID	1 FGH P256
Automatic alarm notify/logg	No	No	No
USB connector for USB stick	No	No	No
SMS distance alarm notify	No	No	No
Internet dist. Temp. Measurm.	No	No	No
Internet emergency shutdown	No	No	No
Internet connection control	No	No	No
T/C Filter	No	Yes	Yes
Contactors	3 250A	6 250A	6 250A
Height	1100 mm	1100 mm	1100 mm
Depth	730 mm	730 mm	730 mm
Width	670 mm	670 mm	670 mm
Weight	250 Kg	255 Kg	265 Kg

* Also available in other voltages

TF 80512	TF 4056	TF 8056	TF 80512
3x400V/440V 50Hz 63A*	3x400V/440V 50Hz 63A*	3x400V/440V 50Hz 125A*	3x400V/440V 50Hz 125A*
440A	220A	440A	440A
0/30/60V	0/30/60V	0/30/60V	0/30/60V
12	6	6	12
2	2	4	2
24	12	24	24
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
No	Yes	Yes	12
Analogue 100 mm	Digital	Digital	Digital
No	Yes, Ethernet	Yes, Ethernet	Yes, Ethernet
No	Yes, TFT 12"	Yes, TFT 12"	Yes, TFT 12"
1 FGH P256	IND.PC	IND.PC	IND.PC
No	Yes	Yes	Yes
No	Yes	Yes	Yes
No	Option	Option	Option
No	Option	Option	Option
No	Option	Option	Option
No	Option	Option	Option
Yes	Yes	Yes	Yes
12 250A	6 250A	6 250A	12 250A
1100 mm	1100 mm	1500 mm	1500 mm
730 mm	730 mm	730 mm	750 mm
670 mm	670 mm	870 mm	870 mm
255 Kg	265 Kg	Approx. 415 Kg	Approx. 435 Kg



Flexible Ceramic Elements (FCE)



Flexible Ceramic Elements (FCE)

For preheating and stress relieving of pipes, pressure vessels etc. The elements consist of multistrand nickel-chrome resistance wires which run through small "two-hole" ceramic insulators. The insulators together with the resistance wires are very flexible and give a good heat radiation and effective heat transmission. The cold nickel tails and resistance wire are welded together. It is designed to provide a temperature up to 1000°C.





Flexible Preheater Elements (FPE)

For preheating of pipes, pressure vessels etc. The elements are supplied with Superwool blanket enclosed in mesh. The blanket is attached to a stainless steel plate which protects from weld splatter. The plate is provided with hooks where magnets can be fixated, which make elements easy to attach. Banding of element is also possible. The FPE can be used on flat surfaces as well as curved. It is designed to provide preheating up to 700°C.

ref. nr.	Dimensions	Volt	kW
5-25-04	600x100x30	60	2,7
5-34-03	800x100x30	60	2,7

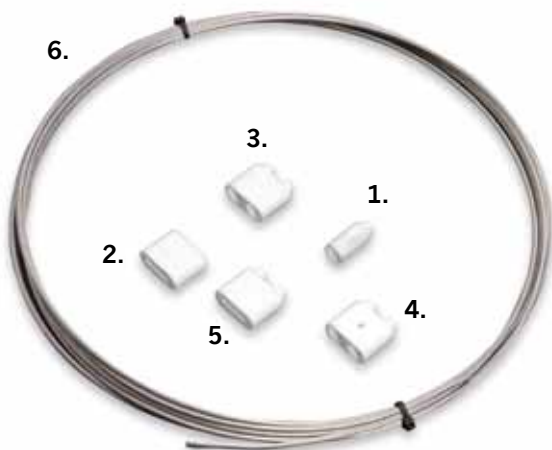
Channel Elements

Used in temporary or stationary ovens and special heating devices. Can be used for preheating or stress relieving. The coiled resistance wire is double inside the element and ceramic insulated. Multi wired tails reduces the resistance and lowers the heat at the connection points. The elements are supported in an inconel stainless steel tray. A working temperature of 950°C can be achieved.

Suitable for a wide range of heat treatment applications.



ref. nr.	Dimensions	Volt	kW
3-41-34	700x60x35	60	3,4
3-42-17	350x60x35	30	1,7



Spare parts for heating elements

1. Tail beads
 2. Finisher beads
 3. Main body beads
 4. Main body hole beads
 5. Starter beads
 6. 19 strand 80/20 core wire
 6. 19 strand nickel 212 cold tail wire
- Spare wire with cold tail 2.7 kW 60V

- ref.nr 6-501
 ref.nr 6-502
 ref.nr 6-503
 ref.nr 6-504
 ref.nr 6-505
 ref.nr 6-510
 ref.nr 6-520
 ref.nr 6-530





Magnet

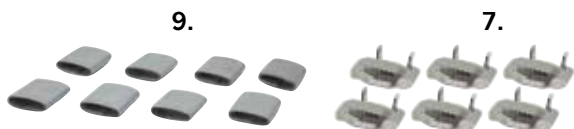
For quick and reliable fastening of preheat elements.

ref.nr 6-131-1

Banding tools

For simple and stable mounting of heating elements and thermal insulation.

- | | |
|------------------------------|-----------------|
| 1. Complete set | ref.nr 6-107 |
| 2. ACME C1204 Banding tool | ref.nr 6-107-10 |
| 3. ACME C2A5 Sealer | ref.nr 6-107-20 |
| 4. BAND-IT C001 Banding tool | ref.nr 6-108-10 |
| 5. BAND-IT C075 Bantam tool | ref.nr 6-108-20 |
| 6. BAND-IT Band Boxed 201 SS | ref.nr 6-108-30 |
| 7. BAND-IT Buckles 201 SS | ref.nr 6-108-40 |
| 8. Mild Steel Band | ref.nr 6-108-50 |
| 9. Mild Steel Buckles | ref.nr 6-108-60 |



Superwool Blankets

1. Sold in rolls with dimension 7300x600x25 mm Superwool, max 1250°C ref.nr 6-117-7

2. Blanket wrapped in wire mesh made of:

Stainless steel	ref.nr 6-SS-lengthxwidth
Inconel	ref.nr 6-IN-lengthxwidth

max 850°C

max 1100°C



Splitter cable

Cables for connection of more than one heating element parallel to the secondary power cable.

2-way splitter	ref.nr 6-122-2
3-way splitter	ref.nr 6-122-3
4-way splitter	ref.nr 6-122-4
6-way splitter	ref.nr 6-122-6

Secondary cable

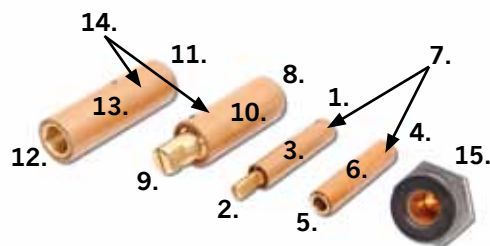
From transformer to splitter cable. Complete with 300A plug and socket connectors, compensating cable and thermocouple connectors.

Length	Max Current	Dinse	Camlock 300A
20m	135A	ref.nr 6-130-20	ref.nr 6-140-20
30m	135A	ref.nr 6-131-30	ref.nr 6-141-30
20m	180A	ref.nr 6-132-20	ref.nr 6-142-20
30m	180A	ref.nr 6-133-30	ref.nr 6-143-30
20m	280A	ref.nr 6-134-20	ref.nr 6-144-20
30m	280A	ref.nr 6-135-30	ref.nr 6-145-30

Other lengths on request.

Camlock connectors 60A

1. Plug Complete	ref.nr 6-122-70
2. Plug Brass	ref.nr 6-122-71
3. Plug Sleeve	ref.nr 6-122-72
4. Socket Complete	ref.nr 6-122-80
5. Socket	ref.nr 6-122-81
6. Socket sleeve	ref.nr 6-122-82
7. Pin	ref.nr 6-122-85



Camlock connectors 300A

8. Plug Complete	ref.nr 6-122-91
9. Plug Brass	ref.nr 6-122-92
10. Plug Sleeve	ref.nr 6-122-101
11. Socket Complete	ref.nr 6-122-102
12. Socket Brass	ref.nr 6-122-105
13. Socket Sleeve	ref.nr 6-122-110
14. Pin	ref.nr 6-122-110
15. Panel socket	ref.nr 6-122-110



Dinse connectors

16. Plug	ref.nr 6-123
17. Socket	ref.nr 6-124
18. Panel socket	ref.nr 6-125



Contactors

Cotactor for 0-60V heat treatment units ref.nr 6-250





1.

Recorders

1. CHINO EH 180mm paper width 0-1200°C 12 channels
ref.nr 6-710-1200

CHINO EH 180mm paper width 0-1200°C 12 channels
Enclosed in stainless steel casing with thermocouple
panel sockets ref.nr 6-720-1200

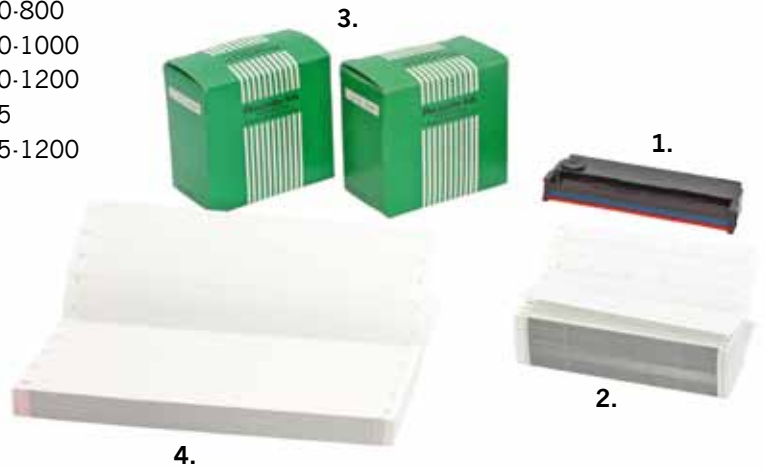
2. CR06 100mm with casing ref.nr 6-910-XXXX



2.

Recorder Accessories

- | | |
|----------------------------|-------------------|
| 1. CR06 Ribbon cassette | ref.nr 6-825 |
| 2. CR06 0-400 | ref.nr 6-820-400 |
| CR06 0-600 | ref.nr 6-820-600 |
| CR06 0-800 | ref.nr 6-820-800 |
| CR06 0-1000 | ref.nr 6-820-1000 |
| CR06 0-1200 | ref.nr 6-820-1200 |
| 3. CHINO Recorder ink | ref.nr 6-725 |
| 4. CHINO Chart paper 180mm | ref.nr 6-725-1200 |

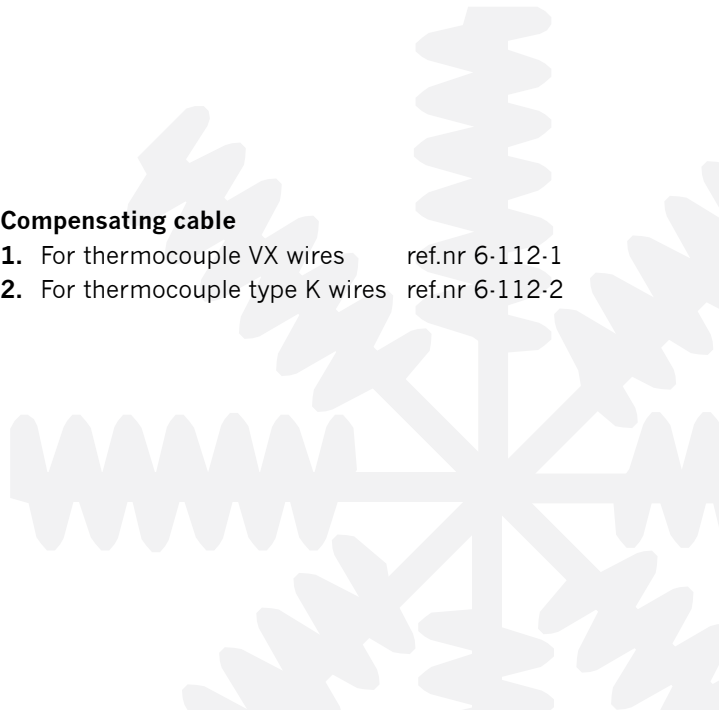


1.

2.

Compensating cable

- | | |
|----------------------------------|----------------|
| 1. For thermocouple VX wires | ref.nr 6-112-1 |
| 2. For thermocouple type K wires | ref.nr 6-112-2 |





1. **Digital surface temperature meter for Type K**
ref.nr 6-101-1
2. **High temperature surface measurement probe for Type K**
ref.nr 6-101-2
3. **Calibration device**
Simulates and measures temperature.
ref.nr 6-101-3

Thermocouple connectors

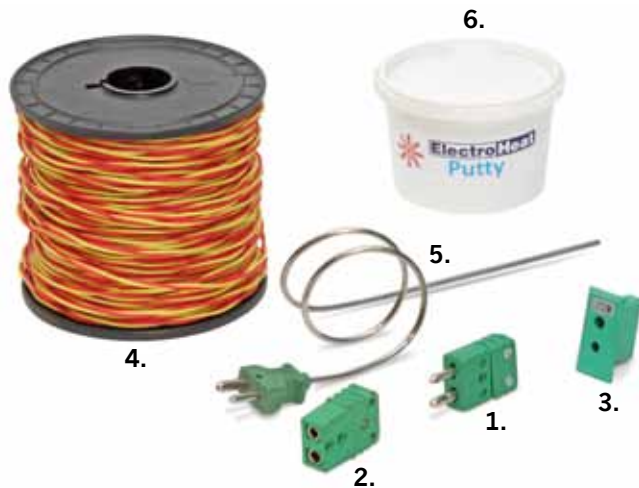
1. Plug ref.nr 6-112-3
2. Socket ref.nr 6-112-4
3. Socket Panel ref.nr 6-112-4

4. Thermocouple wire type K

Insulated with high temperature glass braid (100m).
ref.nr 6-112-5

5. Inconel sheathed thermocouple probe

With standard connector \varnothing 3.0- \varnothing 4.5.
Max temperature 1150°C.
ref.nr 6-150- \varnothing -length mm



Other types and dimensions on request.

6. Putty

For protection of thermocouple from thermal radiation from elements.



Thermocouple welding unit TW-10

Convenient auto mode; when holding wire towards material, welding is automatically executed, when the device is fully charged. The unit loads automatically for welding of the next wire. Requires 4 rechargeable AA batteries (standard AA batteries are also ok). Capacity of 500 welds before battery charge. Light weight. Robust with waterproof fabric case. Standard charger included.

- ref. nr TW-10
 - ref. nr TW-10-01
 - ref. nr TW-10-02
- pliers
magnet



ElectroHeat – Innovation, Design and Production

- Furnaces and industrial ovens
- Heat treatment services for pipes - and steel constructions
- Mobile heat treatment equipment
- Ovens for heating or drying of welding rods
- Standard ovens
- High temperature fan units with recirculation
- Design and construction of control cabinets
- Climate chambers with cooling/heating/humidity



ElectroHeat
Industrial Ovens

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