WELDOTHERM

MADE IN GERMANY
40 YEARS OF EXPERIENCE

# Product Catalogue

2023

# Company profile

The brand name WELDOTHERM® not only stands for welding and heat treatment of welding joints of pipes and structures, but also for high-quality equipment, new developments, precise measurement and custom-designed solutions.

Since 1986, Weldotherm GmbH has been a global manufacturer of heat treatment systems, heating elements and measuring, control and programming devices for heat treatment processes.

Today, WELDOTHERM® presents itself as a universal manufacturer of thermal engineering systems and offers tailor-made solutions for almost every thermal engineering task.

TÜV SÜD ISO 9001

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# WELDOTHERM® Induction Heat Treatment Unit VAI, air-cooled

The air-cooled induction system VAI works according to the principle of inductive heating in the medium frequency range of 4 to 10 kHz. With this type of heat input, the heating energy is transferred to the workpiece by means of an inductor. The heat generation takes place in the component, so the workpiece is heated from the inside. For example, welding joints can be preheated within seconds. By using rigid or flexible inductors the heat in the component can be generated without contact. In this case, set-up times can be minimized because the attachment of induction cables or conventional heating mats on the component is eliminated.

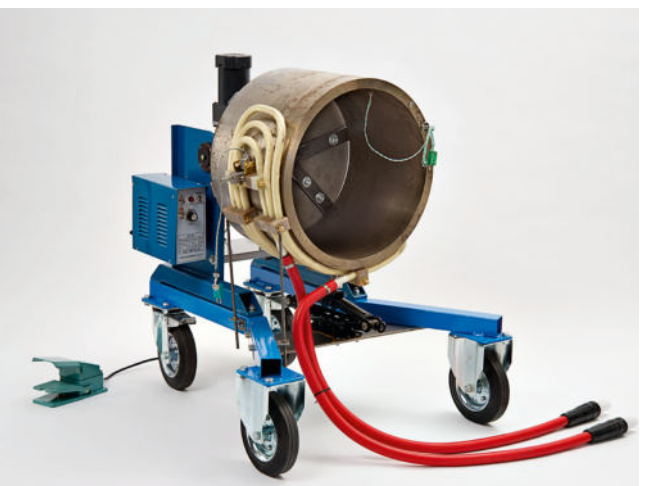
The TC 1000 program controller offers a temperature/time diagram as an indication on the display. These data are stored on a USB stick and can then be processed on the computer using Excel on any computer.




*VAI 80 air-cooled*



*Induction coil heater air-cooled*



*Rotating device with inductor*



*Positioniers with custom-designed inductor*

| Technical Data | 40 kW | 80 kW | 160 kW |
|---|---|---|---|
| Order No. | 102600 | 102601 | 102602 |
| Induction circuits | 1 | 1 | 1 |
| Input / Sensor | 4 x Type K | 4 x Type K | 4 x Type K |
| Power supply | 400V, 63A, 50/60Hz | 400V, 125A, 50/60Hz | 400V, 250A, 50/60Hz |
| Power | 40kVA | 80kVA | 160kVA |
| Max. tension to inductor | max. 500V | max. 1000V | max. 1000V |
| Frequency range | 5....18 kHz | 4....10 kHz | 3....8 kHz |
| Sound level | <70dB | <70dB | <70dB |
| Dim. (H x B x T) / Weight | 1500 x 560 x 750 mm<br>219 kg | 1500 x 560 x 750 mm<br>279 kg | 1690 x 750 x 970 mm<br>370 kg |
| Integrated controller | TC 1000-VAI | TC 1000-VAI | TC 1000-VAI |
| Temperature recording | Digital TC 1000 | Digital TC 1000 | Digital TC 1000 |

| Accessories For Induction Heat Treatment Unit VAI Air-Cooled | | | |
|---|---|---|---|
| **Power cable, 7,5m** | 1 pair<br>Order No. 102610 | 2 pairs<br>Order No. 102610 | 3 pairs<br>Order No. 102610 |
| | **other cable lengths on request** | | |
| **Compensating cable, 15m** | 4 each<br>Order No. 103202 | 4 each<br>Order No. 103202 | 4 each<br>Order No. 103202 |
| | **other cable lengths on request** | | |





# WELDOTHERM® Induction Heat Treatment Unit VAI, water-cooled

In rare cases, it can be mandatory to use water-cooled induction coils to bring in heat extremely quick or within a very limited area. For such applications, we recommend our water-cooled induction units.




*VAI 80 water-cooled*

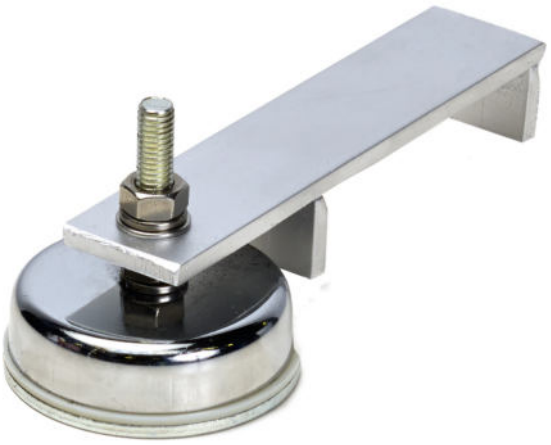
| Technical Data | 40 kW | 80 kW |
|---|---|---|
| Order No. | 102700 | 102701 |
| Induction circuits | 1 | 1 |
| Input / Sensor | 4 x Type K | 4 x Type K |
| Power supply | 400V, 63A, 50/60Hz | 400V, 125A, 50/60Hz |
| Power | 40kVA | 80kVA |
| Max. tension to inductor | max. 500V | max. 1000V |
| Secondary power | max. 400A | max. 700A |
| Frequency range | 5....18 kHz | 4....10 kHz |
| Sound level | <70dB | <70dB |
| Dim. (H x B x T) / Weight | 1690 x 560 x 750 mm<br>239 kg | 1690 x 560 x 750 mm<br>330 kg |
| Integrated controller | TC 1000-VAI | TC 1000-VAI |
| Temperature recording | Digital TC 1000 | Digital TC 1000 |

| Accessories For Induction Heat Treatment Unit VAI Water -Cooled | | |
|---|---|---|
| **Power Cable, 7,5m**<br> | 1 pair<br>Order No. 102710<br>**other cable lengths on request** | 2 pair<br>Order No. 102610 |
| **Compensating cable, 15m**<br> | 4 each<br>Order No. 103202<br>**other cable lengths on request** | 4 each<br>Order No. 103202 |

# Spare Parts for Induction Heat Treatment Units Air And Water-Cooled



*Induction coil heater air-cooled*



*Fixing bracket, single*



*Induction coil heater water-cooled*



*Fixing bracket, twin*



*Infrared thermocouple DM 201*

| Order No. | Item |
|---|---|
| 102621 | Induction coil heater air-cooled, 15 m |
| 102720 | Induction coil heater water-cooled, 10 m |
| 102721 | Induction coil heater water-cooled, 15 m |
| 102730 | Splitter cable, 2-way 1 pair, water-cooled, |
| 102800 | Custom-designed induction heater |
| 102904 | Infrared thermocouple DM 201 |
| 102905 | Fixing bracket, single |
| 102906 | Fixing bracket, twin |

# WELDOTHERM® Heat Treatment Unit Series STANDARD EUROPA (STE)

The STANDARD EUROPA series was developed to meet the needs of most customers who need to perform preheating and post weld heat treatment jobs with high precision but without having the requirement of complex program profiles.

These requirements led to the design of our STANDARD EUROPA unit, which unites the familiar WELDOTHERM® quality with a unique price/performance ratio.

The STE unit system is controlled by 6 or 12 fully automatic TC 80 program controllers, by standard; the TC 1000 touchscreen controller can be optionally selected as an advanced control system.

Both program controllers are very easy to program and have several memory locations in which programs can be saved for repeating at any time. The programs can be linked with one another so that even demanding heat treatments can be performed. Built-in ammeters serve to monitor the current of each control circuit.




*STANDARD EUROPA 82-6 with TC 80*



*STANDARD EUROPA 82-12 with TC 1000*

The STANDARD EUROPA heat treatment machines are equipped with the following safety features: Operating temperature monitoring of the transformer core with forced shutdown in the event of overheating, a two-stage forced fan cooling depending on the transformer core temperature with a separate power connection, emergency stop button, 300 mA FI tripping on the secondary voltage side, individual protection of each heating circuit via power fuses.

# Heat Treatment Unit Series STE with 6-Channels

| Technical Data | 45-6 | 70-6 | 82-6 | 100-6 | 130-6 |
|---|---|---|---|---|---|
| **Order No.** | 101100 | 101200 | 101300 | 101800 | 101400 |
| **Power at 100 % duty** | 45kW | 70kW | 82kW | 100kW | 130kW |
| **Primary input** | 400V, 63A<br>500V, 52A | 400V, 95A<br>500V, 75A | 400V, 119A<br>500V, 95A | 400V, 164A<br>500V, 95A | 400V, 188A<br>500V, 151A |
| **Control voltage** | standard<br>230V, 50Hz | standard<br>230V, 50Hz | standard<br>230V, 50Hz | standard<br>230V, 50Hz | standard<br>230V, 50Hz |
| **Primary connection** | cable 4 x 16 mm², CEE-plug 63 A | cable 4 x 35 mm², CEE-plug 125 A | cable 4 x 35 mm², CEE-plug 125 A | cable 4 x 50 mm², CEE-plug 125 A | direct connection contactor CEE-plug 125 A |
| **Program controller** | TC 80/ TC 1000 | TC 80/ TC 1000 | TC 80/ TC 1000 | TC 80/ TC 1000 | TC 80/ TC 1000 |
| **Number of control circuits** | 6 | 6 | 6 | 6 | 6 |
| **Switching current per control circuit** | 135A | 180A | 225A | 270A | 360 A |
| **Temperature recorder** | KH 60-6/RSG | KH 60-6/RSG | KH 60-6/RSG | KH 60-6/RSG | KH 60-6/RSG |
| **Dimensions WxHxD, mm** | 900x1300x800 | 900x1300x800 | 900x1300x800 | 1150x135 x900 | 1150x1350x900 |
| **Weight** | 380 kg | 410 kg | 450 kg | 500 kg | 590 kg |

| **Required cables for commissioning STE with 6-Channels (operating range 25m)** *other cable lengths on request* | | | | | |
|---|---|---|---|---|---|
| **Twin Cables, 25m** | 6 each, 2x25mm²<br>Order No.<br>150101 | 6 each, 2x35mm²<br>Order No.<br>150102 | 6 each, 2x50mm²<br>Order No.<br>150103 | 6 each, 2x70mm²<br>Order No.<br>150104 | 6 each, 2x95mm²<br>Order No.<br>150105 |
|  | | | | | |
| **Splitter Cables, 3m** | 12 each 3-way<br>Order No.<br>150201 | 12 each 4-way<br>Order No.<br>150202 | 12 each 5-way<br>Order No.<br>150203 | 12 each 6-way<br>Order No.<br>150204 | 12 each 7-way<br>Order No.<br>150205 |
|  | | | | | |
| **Compensation Cables, 25m** | 6 each<br>Order No.<br>150300 | 6 each<br>Order No.<br>150300 | 6 each<br>Order No.<br>150300 | 6 each<br>Order No.<br>150300 | 6 each<br>Order No.<br>150300 |
|  | | | | | |

# Heat Treatment Unit Series STE with 12-Channels

| Technical Data | 70-12 | 82-12 | 100-12 | 130-12 |
|---|---|---|---|---|
| Order No. | 101201 | 101301 | 101801 | 101401 |
| Power at 100 % duty | 70kW | 82kW | 100kW | 130W |
| Primary input | 400V, 95A<br>500V, 75A | 400V, 119A<br>500V, 95A | 400V, 145A<br>500V, 95A | 400V, 188A<br>500V, 151A |
| Control voltage | 230V, 50Hz | 230 V, 50 Hz | 230 V, 50 Hz | 230 V, 50 Hz |
| Primary connection | Cable 4 x 35 mm², CEE-plug 63 A | Cable 4 x 35 mm², CEE-plug 125 A | Cable 4 x 50 mm², CEE-plug 135 A | Direktanschluss, CEE-plug 125 A |
| Program controller | TC 80/ TC 1000 | TC 80/ TC 1000 | TC 80/ TC 1000 | TC 80/ TC 1000 |
| Number of control circuits | 12 | 12 | 12 | 12 |
| Switching current per control circuit | 90A | 6x135A, 6x90A | 135A | 180A |
| Temperature recorder | KH 60-12/RSG | KH 60-12/RSG | KH 60-12/RSG | KH 60-12/RSG |
| Dimensions WxHxD, mm | 900x1300x800 | 900x1300x800 | 1150x1350x900 | 1150x1350x900 |
| Weight | 445 kg | 490 kg | 600 kg | 640 kg |

| Required cables for commissioning STE with 12-Channels (operating range 25m) *other cable lengths on request* | | | | |
|---|---|---|---|---|
| Twin Cables, 25m | 12 each, 2x16mm²<br>Order No. 150101 | 12 each, 2x35mm²<br>Order No. 150101 | 12 each, 2x25mm²<br>Order No. 150101 | 12 each, 2x35mm²<br>Order No. 150102 |
|  | | | | |
| Splitter Cables, 3m | 24 each, 2-way<br>Order No. 150200 | 24 each:<br>12 each 2-way/<br>12 each 3-Way<br>Order No.<br>150200/150201 | 24 each, 3-way<br>Order No. 150201 | 24 each, 4-way<br>Order No. 150202 |
|  | | | | |
| Compensation Cables, 25m | 12 each<br>Order No. 150300 | 12 each<br>Order No. 150300 | 12 each<br>Order No. 150300 | 12 each<br>Order No. 150300 |
|  | | | | |

# WELDOTHERM® WELDOTHERM®Heat Treatment Unit Series VAS

WELDOTHERM manufactures fully automatic program-controlled heat treatment units in all output sizes as standard. The requirements for the accuracy of the temperature recording devices vary depending on the application. For this reason, you can choose 6- or 12-channel temperature recorders in accuracy classes 0.5 and 0.1 according to DIN 43710.



*VAS 130-12*

## Advantages of VAS units

➤ **DIGIT program controller**
A program consists of up to maximum of 7 sections
Example: 1st heating rate/ 2nd holding time/ 3rd cooling rate/ 4th holding time/ 5th heating rate/ 6th holding time/ 7th cooling rate

• The display always shows all important information at a glance.

• Up to 50 programs can be saved.

• Using the „master-slave function“ up to 12 controllers can be linked.

• The heating program only has to be entered on controller zone 1. Zones 2 to 12 take over the program automatically.

• Zones 2 to 12 take over the program automatically.

➤ **Audible alarm**
Very useful in case the technician is not standing in front of the machine.

➤ **Monitoring/control of the phases**
by means of control lamps on the front panel.

➤ **2 in 1 cover**
The front door covering the operating devices can also be used as a work table by the technicians.

| Technical Data | 45-6 | 82-6 | 82-12 | 100-12 | 130-12 |
|---|---|---|---|---|---|
| **Order No.** | 100100 | 100300 | 100301 | 100801 | 100401 |
| **Power at 100 % duty** | 45kW | 82kW | 82kW | 100kW | 130kW |
| **Primary input** | 400V, 63A<br>500V, 52A | 400V, 119A<br>500V, 95A | 400V, 119A<br>500V, 95A | 400V, 145A<br>500V, 150A | 400V, 188A<br>500V, 150A |
| **Control voltage** | 230V, 50Hz | 230 V, 50 Hz | 230 V, 50 Hz | 230 V, 50 Hz | 230 V, 50 Hz |
| **Primary connection** | Cable 4 x 16 mm², CEE-plug 63 A | Cable 4 x 35 mm², CEE-plug 125 A | Cable 4 x 35 mm², CEE-plug 125 A | Cable 4 x 50 mm² CEE-plug 125 A | direct connection contactor CEE-plug 125 A |
| **Program controller** | Digit 700 | Digit 700 | Digit 700 | Digit 700 | Digit 700 |
| **Number of control circuits** | 6 | 6 | 12 | 12 | 12 |
| **Switching current per control circuit** | 135A | 225A | 6x90A + 6x135A | 135A | 180A |
| **Temperature recorder** | KH 60-6/RSG | KH 60-6/RSG | KH 60-12/RSG | KH 60-12/RSG | KH 60-12/RSG |
| **Dimensions WxHxD, mm** | 900x1300x800 | 900x1300x800 | 1150x1350x900 | 1150x1350x900 | 1150x1350x900 |
| **Weight** | 390 kg | 490 kg | 590 kg | 670 kg | 680 kg |
| **Required cables for commissioning (operating range 25 m)** *other cable lengths on request* | | | | | |
| **Twin Cables, 25m Ordner No.** | 6 each<br>2 x 25 mm²<br>150101 | 6 each<br>2 x 50 mm²<br>150103 | 12 each<br>2 x 25 mm²<br>150101 | 12 each<br>2 x 25 mm²<br>150101 | 12 each<br>2 x 35 mm²<br>150102 |
|  | | | | | |
| **Splitter Cables, 3m Ordner No.** | 12 each<br>150201 | 12 each<br>150203 | 24 each:<br>12 each,2-way/<br>12 each 3-way<br>150200/150201 | 24 each<br>3-way, 3m<br>150201 | 24 each<br>4-way, 3m<br>150202 |
|  | | | | | |
| **Compendation Cables, 25m Ordner No.** | 6 each<br>150300 | 6 each<br>150300 | 12 each<br>150300 | 12 each<br>150300 | 12 each<br>150300 |
|  | | | | | |
| **Control Bridge Cables, 1m Ordner No.** | 6 each<br>150400 | 6 each<br>150400 | 12 each<br>150400 | 12 each<br>150400 | 12 each<br>150400 |
|  | | | | | |

# Schematical Connection of one Control Zone of the VAS 130-12



*VAS 130-12*

# Spare Parts Heat Treatment Unit Series STE + VAS



*Zone contactor CWM 50*

| Order No. | Item |
|---|---|
| 109000 | Zone contactor CWM 50 |
| 109001 | Zone contactor CWM 64 |
| 109002 | Zone contactor CWM 95 |



*Main contactor CWM 150*

| Order No. | Item |
|---|---|
| 109003 | Main contactor CWM 150 |



*Fan complete*

| Order No. | Item |
|---|---|
| 109010 | Fan complete |



*Manual/automatic switch*

| Order No. | Item |
|---|---|
| 109021 | Manual/ automatic switch VAS/STE |
| 109022 | Manual/ automatic switch VAS/STE until 2019 |



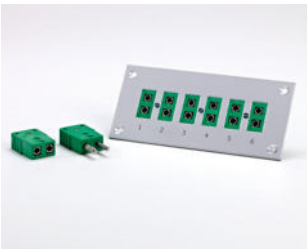
*Panel mounted sockets*

| Order No. | Item |
|---|---|
| 109031 | Panel mounted sockets K35-70 with hinged cover |
| 109032 | Panel mounted sockets Camlock |



*Emergency off switch*

| Order No. | Item |
|---|---|
| 109023 | Emergency off switch STE until 2019 |
| 109024 | Emergency off switch VAS until 2013 |
| 109025 | Emergency off switch VAS/STE 45kW |
| 109026 | Emergency off switch VAS/STE 70/82kW |
| 109027 | Emergency off switch VAS/STE 100kW |
| 109028 | Emergency off switch VAS/STE 130kW |
| 109045 | Energy actuator complete |



*Thermopaneel*

| Order No. | Item |
|---|---|
| 109040 | Single thermo-couple panel type K |
| 109041 | 6-way thermo-couple panel type K horizontal |
| 109042 | 6-way thermo-couple panel type K vertical |
| 490008 | Thermocouple plug |
| 490009 | Thermocouple socket |



*Energy actuator complete*

# WELDOTHERM® Heat Treatment Unit Inverter WR 10,5

The WELDOTHERM® inverter heat treatment unit WR 10.5 is a high performance 1-channel device with compact dimensions of the size of a pilot's case. With its low weight, it is easy to transport and thus perfectly suitable for minor repair and preheating jobs as well as postweld heat treatment at workplaces that are difficult to access. The output voltage is variable so that heating elements of different voltages can be connected.
Status messages are signalized, both optically and acoustically. The integrated data logger records the relevant data such as nominal value, actual value, output power, status messages, etc. and makes these available on any computer. The scope of supply includes a CD with software for data transfer to the PC, an adapter cable with USB connector and a printed manual.



*Inverter WR 10,5*



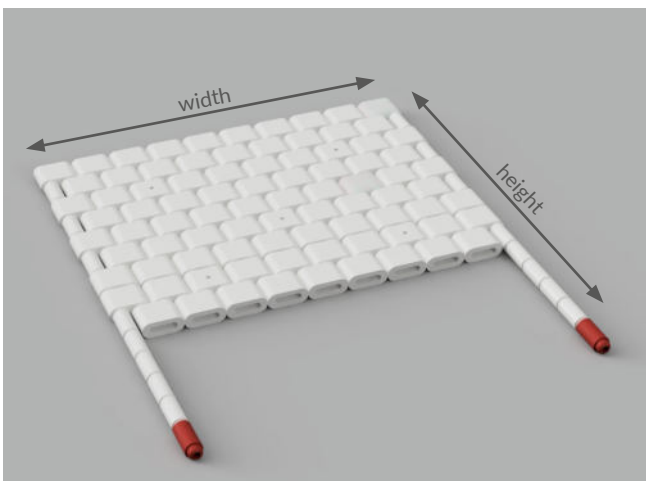
*Inverter in composite circuit*

| Technical Data | |
|---|---|
| **Number of control circuits** | 1 |
| **Output voltage** | Automatic operation:<br>24. 65 VDC<br>(adjustable in 1 V steps) |
| **Output current** | Maximum 180 A at 60 VDC,<br>Maximum 160 A at 65 VDC |
| **Output rating** | Max 10,8kVA |
| **Number of sensor inputs** | 1 x thermocouple Typ K<br>(NiCr-Ni) |
| **Program controller/Operation** | 1, integrated/6 keys on front |
| **Number of programs/<br>Segments** | 0 (Manual), 1 (Easy Prog),<br>2...49 with 49 segments each |
| **Displays** | 3 x 4-digit, 7 segment display for nominal value, actual value, parameter, 6 x LED, status displays and alarms |
| **Measuring range/<br>Control range** | - 40...1350°C/- 25...1200°C |
| **Accuracy** | ± 0,3 % of measuring range ± 1 digit |
| **Data logger** | Nominal value, actual value, output voltage, status |
| **Power switch/Cable** | On rear / 3m |
| **Primary connection values** | 3 PE, 400 V, 50 / 60 Hz, 23 A |
| **Fuses internal/external** | 25/ 32A |
| **Dimensions (H x W x D)/<br>Weight** | 370 mm x 170 mm x 405 mm<br>/ 17 kg |
| **Accessories** | CD with service instructions, software<br>for transmission of data to PC, adapter cable WR 10,5<br><-> USB interface PC |

| Order No. | Item |
|---|---|
| **103100** | Inverter Heat treatment unit WR 10,5 |
| **103200** | Twin cable 2 x 35 m2, 15 m |
| **103201** | 4-way splitter cable, 2 m |
| **103202** | Compensating cable, 15 m |
| **103902** | Multizone cable for 3 devices (Standard) |

# WELDOTHERM® Ceramic Pad Heater

WELDOTHERM® annealing and preheating elements are extremely robust and stable multipurpose heaters, which can be used for almost any applications. Heating tapes and snake heater can be used for very small pipe diameters, as well as for branch welds and pipe walls due to their maximum flexibility. The high quality of the aluminum oxide ceramics used (96%) and of the heating wire material NiCr 80/20 has proven itself in years of use on the toughest construction sites. WELDOTHERM® offers all heating elements with „DINSE“ and „Camlock“ connectors.




**Application range:** pipe and circumferential welds, flange welds, longitudinal welds, connecting piece welds
**Application limit:** 1050°C material temperature

| Ceramic pad heater 60V, 2,7kW, 45A | | | | |
|---|---|---|---|---|
| | Ceramic beads (qty.) | | dimensions (mm) | |
| Order No. | Width | height | Width | height |
| 200100 | 2 | 25 | 50 | 525 |
| 200101 | 2 | 26 | 50 | 546 |
| 200103 | 3 | 17 | 75 | 357 |
| 200105 | 4 | 11 | 100 | 231 |
| 200106 | 4 | 12 | 100 | 252 |
| 200107 | 4 | 13 | 100 | 273 |
| 200109 | 5 | 9 | 128 | 189 |
| 200110 | 5 | 10 | 125 | 210 |
| 200112 | 6 | 7 | 150 | 147 |
| 200113 | 6 | 8 | 150 | 168 |
| 200115 | 7 | 6 | 175 | 126 |
| 200116 | 7 | 7 | 175 | 147 |
| 200118 | 8 | 5 | 200 | 105 |
| 200119 | 8 | 6 | 200 | 126 |
| 200121 | 9 | 5 | 225 | 105 |
| 200123 | 10 | 4 | 250 | 84 |
| 200124 | 10 | 5 | 250 | 105 |
| 200125 | 11 | 4 | 275 | 84 |
| 200127 | 12 | 4 | 300 | 84 |
| 200128 | 13 | 4 | 325 | 84 |

| CeramiC pad heater 60 V; 2,7 kW; 45 A | | | | |
|---|---|---|---|---|
| | Ceramic beads (qty.) | | dimensions (mm) | |
| Order No. | Width | height | Width | height |
| 200206 | 3 | 35 | 75 | 714 |
| 200207 | 3 | 35 | 75 | 735 |
| 200208 | 3 | 36 | 75 | 756 |
| 200209 | 4 | 25 | 100 | 525 |
| 200210 | 4 | 26 | 100 | 546 |
| 200211 | 4 | 27 | 100 | 567 |
| 200212 | 5 | 20 | 125 | 420 |
| 200213 | 5 | 21 | 125 | 441 |
| 200214 | 5 | 22 | 125 | 462 |
| 200215 | 6 | 16 | 150 | 336 |
| 200216 | 6 | 17 | 150 | 357 |
| 200217 | 6 | 18 | 150 | 378 |
| 200218 | 7 | 14 | 175 | 294 |
| 200219 | 7 | 15 | 175 | 315 |
| 200220 | 8 | 12 | 200 | 252 |
| 200221 | 8 | 13 | 200 | 273 |
| 200222 | 9 | 11 | 225 | 231 |
| 200223 | 9 | 12 | 225 | 252 |
| 200224 | 10 | 10 | 250 | 210 |
| 200226 | 11 | 9 | 275 | 189 |
| 200228 | 12 | 8 | 300 | 168 |

| CeramiC pad heater 60 V; 2,7 kW; 45 A | | | | |
|---|---|---|---|---|
| | Ceramic beads (qty.) | | dimensions (mm) | |
| Order No. | Width | height | Width | height |
| 200229 | 13 | 7 | 325 | 147 |
| 200230 | 13 | 7 | 325 | 147 |
| 200231 | 13 | 8 | 325 | 168 |
| 200232 | 14 | 7 | 350 | 147 |
| 200233 | 15 | 6 | 375 | 125 |
| 200234 | 15 | 7 | 375 | 147 |
| 200235 | 16 | 6 | 400 | 126 |
| 200236 | 17 | 5 | 425 | 105 |
| 200237 | 17 | 6 | 425 | 126 |
| 200238 | 18 | 5 | 450 | 105 |
| 200239 | 18 | 6 | 450 | 126 |
| 200240 | 19 | 5 | 475 | 105 |
| 200241 | 20 | 5 | 500 | 105 |
| 200242 | 21 | 4 | 525 | 84 |
| 200243 | 21 | 5 | 525 | 105 |
| 200244 | 22 | 4 | 550 | 84 |
| 200246 | 23 | 4 | 575 | 84 |
| 200248 | 24 | 4 | 600 | 84 |
| 200249 | 25 | 4 | 625 | 84 |
| 200251 | 26 | 4 | 650 | 84 |
| 200253 | 27 | 4 | 675 | 84 |



*Ceramic pad heater (long design)*



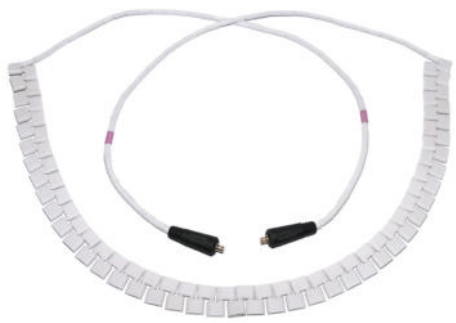
*Ceramic pad heater (lateral design)*

# WELDOTHERM® Heating tapes

| Heating tapes 30V / 60V | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | Ceramic beads (qty.) | | dimensions (mm) | |
| Order No. | rating (kW) | Voltage (V) | Current (A) | Width | height | Width | height |
| 200300 | 1,35 | 30 | 45 | 21 | 2 | 525 | 42 |
| 200301 | 1,35 | 30 | 45 | 22 | 2 | 550 | 42 |
| 200302 | 1,35 | 30 | 45 | 23 | 2 | 575 | 42 |
| 200303 | 2,7 | 60 | 45 | 38 | 2 | 950 | 42 |
| 200304 | 2,7 | 60 | 45 | 39 | 2 | 975 | 42 |
| 200305 | 2,7 | 60 | 45 | 40 | 2 | 1000 | 42 |
| 200306 | 2,7 | 60 | 45 | 41 | 2 | 1025 | 42 |
| 200307 | 2,7 | 60 | 45 | 42 | 2 | 1050 | 42 |

Other dimensions available on request

**Application range:** Circumferential welds on pipes, pipe walls, bends, elbows, welds with poor accessibility, heating of flanges and formed part connections
**Application limit:** 1050°C material temperature



*Heating tape*

# WELDOTHERM® Spreader mats 30V / 60 V

**Application range:** Circumferential welds on pipes, flange welds, fitting welds, connection piece welds in containers, conical and crowned workpieces, formed parts
**Anwendungsgrenze:** 1050°C material temperature



*Spreader mat*

| Spreader mats 30V / 60 V | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | Ceramic beads (qty.) | | dimensions (mm) | |
| Order No. | rating (kW) | Voltage (V) | Current (A) | Width | height | Width | height |
| 200400 | 1,35 | 30 | 45 | 7 | 7 | 175 | 147 |
| 200401 | 1,35 | 30 | 45 | 8 | 5 | 200 | 105 |
| 200402 | 1,35 | 30 | 45 | 8 | 6 | 200 | 126 |
| 200403 | 1,35 | 30 | 45 | 9 | 5 | 225 | 105 |
| 200404 | 1,35 | 30 | 45 | 10 | 5 | 250 | 105 |
| 200405 | 1,35 | 30 | 45 | 11 | 4 | 275 | 84 |
| 200406 | 1,35 | 30 | 45 | 12 | 4 | 300 | 84 |
| 200407 | 1,35 | 30 | 45 | 13 | 4 | 325 | 84 |
| 200408 | 2,7 | 60 | 45 | 14 | 7 | 350 | 147 |
| 200409 | 2,7 | 60 | 45 | 15 | 6 | 375 | 126 |
| 200410 | 2,7 | 60 | 45 | 16 | 6 | 400 | 126 |
| 200411 | 2,7 | 60 | 45 | 17 | 6 | 425 | 126 |
| 200412 | 2,7 | 60 | 45 | 18 | 5 | 450 | 105 |
| 200413 | 2,7 | 60 | 45 | 19 | 5 | 475 | 105 |
| 200414 | 2,7 | 60 | 45 | 20 | 5 | 500 | 105 |

Other dimension available on request

## WELDOTHERM® One-Line/Two-Line-Heating Cable

**Design:** Outer coating made of austenite wire mesh
**Application range:** Collector welds, flange connection welds, fittings and shaped part connection welds, super-heating pipes, boiler walls, small pipes, connecting piece welds
**Application limit:** 1050°C material temperature

| One-Line-Heating Cable | | | | |
|---|---|---|---|---|
| Order No. | rating (kW) | Voltage (V) | Current (A) | Dimensions (W x H mm) |
| 200500 | 1,35 | 30 | 45 | 2450 x 13 Ø |
| 200501 | 2,7 | 60 | 45 | 4550 x 13 Ø |
| 200502 | 2,7 | 60 | 45 | 5390 x 13 Ø |



*One-Line-Heating Cable*

| Two-Line-Heating Cable | | | | |
|---|---|---|---|---|
| Order No. | rating (kW) | Voltage (V) | Current (A) | Dimensions (W x H mm) |
| 200600 | 1,35 | 30 | 45 | 25 x 924 Ø |
| 200601 | 2,7 | 60 | 45 | 25 x 1953 Ø |
| 200602 | 2,7 | 60 | 45 | 25 x 2394 Ø |



*Two-Line Heating Cable*

## WELDOTHERM® Preheaters

**Design:** 1“-Back insulation made of 1“ ceramic fiber insulation in Inconel wire mesh, back protection made of stainless steel.
**Application range:** Circumferential tank welds, longitudinal tank welds, repair points
**Anwendungsgrenze:** 450°C material temperature



*Preheater*

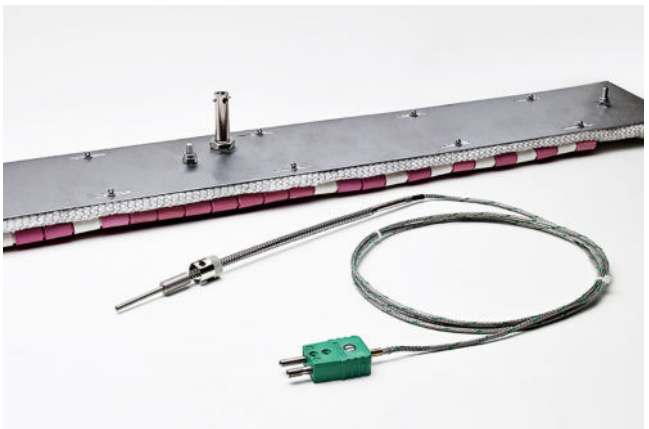
| Order No. | Item | Rating (kW) | Voltage (V) | Current (A) | Dimensions (W x L mm) |
|---|---|---|---|---|---|
| 200700 | Preheater long design 30 V | 0,9 - 1,05 | 30 | 30 - 35 | 100 x 500 |
| 200703 | Preheater long design 60 V | 1,8 – 2,1 | 60 | 30 - 35 | 100 x 900 |
| 200706 | Preheater lateral design 30 V | 0,9 - 1,05 | 30 | 30 - 35 | 500 x 100 |
| 200709 | Preheater lateral design 60 V | 1,8 – 2,1 | 60 | 30 - 35 | 900 x 100 |
| 200801 | Clamp with 2 magnets, max. 450 °C | | | | |

# WELDOTHERM® Preheater with Magnets

**Design:** Back insulation made of 1“ ceramic fiber insulation in Inconel wire mesh, back protection made of stainless steel, with magnetic clamps: 3 high temperature resistant special magnets
**Anwendungsbereiche:** Circumferential tank welds, longitudinal tank welds, repair points
**Application limit:** 450°C material temperature



*Preheater with magnets, long design*



*Preheater with bayonet sleeve and thermocouple*

| Order No. | Item | Rating (kW) | Voltage (V) | Current (A) | Dimensions (W x L mm) |
|---|---|---|---|---|---|
| 200900 | Preheater with magnets long design 30 V | 1,35 | 30 | 45 | 100 x 500 |
| 200901 | Preheater with magnets long design 30 V with bayonet sleeve | 1,35 | 30 | 45 | 100 x 500 |
| 200902 | Preheater with magnets long design 30 V with bayonet sleeve and thermocouple element | 1,35 | 30 | 45 | 100 x 500 |
| 200903 | Preheater with magnets long design 60 V | 2,7 | 60 | 45 | 100 x 900 |
| 200904 | Preheater with magnets long design 60 V with bayonet sleeve | 2,7 | 60 | 45 | 100 x 900 |
| 200905 | Preheater with magnets long design 60 V with bayonet sleeve and thermocouple element | 2,7 | 60 | 45 | 100 x 900 |
| 200906 | Preheater with magnets lateral design 30 V | 1,35 | 30 | 45 | 100 x 500 |
| 200907 | Preheater with magnets lateral design 30 V with bayonet sleeve | 1,35 | 30 | 45 | 100 x 500 |
| 200908 | Preheater with magnets lateral design 30 V with bayonet sleeve and thermocouple element | 1,35 | 30 | 45 | 100 x 500 |
| 200909 | Preheater with magnets lateral design 60 V | 2,7 | 60 | 45 | 100 x 900 |
| 200910 | Preheater with magnets lateral design 60 V with bayonet sleeve | 2,7 | 60 | 45 | 100 x 900 |
| 200911 | Preheater with magnets lateral design 60 V with bayonet sleeve and thermocouple element | 2,7 | 60 | 45 | 100 x 900 |

## WELDOTHERM® Heating Box with Magnets

**Design:** Back insulation made of 1“ ceramic fiber insulation in Inconel wire mesh, back protection made of stainless steel equipped with attached handholds for easy use, magnetic clamps: 3 high temperature resistant special magnets.
**Application range:** Circumferential tank welds, longitudinal tank welds, repair points
**Application limit:** 450°C material temperature



*Heating box with magnets*

| Order No. | Item | Rating (kW) | Voltage (V) | Current (A) | Dimensions (W x L mm) |
|---|---|---|---|---|---|
| 201000 | Magnetheizkassetten 60 V, längs | 2,7 | 60 | 45 | 155 x 865 |
| 201001 | Magnetheizkassetten 60 V mit Bajonett-Thermoelement, längs | 2,7 | 60 | 45 | 155 x 865 |
| 201002 | Magnetheizkassetten 60 V, quer | 2,7 | 60 | 45 | 305 x 495 |
| 201003 | Magnetheizkassetten 60 V mit Bajonett-Thermoelement, quer | 2,7 | 60 | 45 | 305 x 495 |

## WELDOTHERM® Channel Heater

**Design:** built in sturdy stainless steel metal boxes
**Application range:** Annealing of collector floor welds and large circumferential welds, heating of temporary and stationary furnaces
**Application limit:** 850°C material temperature



*Kastenelement 60 V*

| Order No. | Item | Rating (kW) | Voltage (V) | Current (A) | Abmessung (W x L x H mm) |
|---|---|---|---|---|---|
| 201101 | Channel heater 30 V | 1,65 | 30 | 55 | 70 x 380 x 35 |
| 201100 | Channel heater 60 V | 3,3 | 60 | 57 | 70 x 725 x 35 |
| 201200 | 4-bank channel heater 220 V | 12 | 220 | 55 | 350 x 725 x 35 |

# WELDOTHERM® Wraparound Heater

Just check your set-up times! If you frequently preheat and postheat pipes of the same diameter, you save time and money using our wraparounds. Individually manufactured for the required diameter you are able to reduce your set-up times to a third and you save the costs for insulation materials.

**Design:** Outer jacket made of stainless steel sheet, handles facilitate transport and assembly, adjustable stainless steel turnbuckles, heating mats made of high temperature resistant 96 % aluminium oxide ceramic, ceramic fiber insulation with Inconel wire mesh
**Application range:** Preheating and Post heat treatment of circumferential joints

**Application limit:** 950°C material temperature; wraparound heater with bayonet-thermocouple element max. 800°C
**A hint for people in hurry:** annealing wraparound heater with built-in bayonet thermocouples are closed by springs firmly pressed onto the work-surface!



*Wraparound Heater*

| Order No | Item | Voltage (V) | Outer Ø (mm) | Heater width (mm) | Power (kW) |
|---|---|---|---|---|---|
| **201300** | Wraparound Heater 2“ | 30 | 60,3 | 126 | 1,35 |
| **201301** | Wraparound Heater 3“ | 60 | 88,9 | 168 | 2,7 |
| **201302** | Wraparound Heater 4“ | 60 | 114,3 | 147 | 2,7 |
| **201303** | Wraparound Heater 5“ | 60 | 141,3 | 126 | 2,7 |
| **201304** | Wraparound Heater 6“ | 60 | 168,3 | 189 | 5,4 |
| **201306** | Wraparound Heater 8“ | 60 | 219,1 | 147 | 5,4 |
| **201308** | Wraparound Heater 10“ | 60 | 273,0 | 189 | 8,1 |
| **201310** | Wraparound Heater 12“ | 60 | 323,8 | 189 | 10,8 |
| **201312** | Wraparound Heater 14“ | 60 | 355,6 | 189 | 10,8 |
| **201314** | Wraparound Heater 16“ | 60 | 406,4 | 168 | 10,8 |
| **201316** | Wraparound Heater 18“ | 60 | 457,2 | 189 | 13,5 |
| **201318** | Wraparound Heater 20“ | 60 | 508,0 | 168 | 13,5 |
| **201320** | Wraparound Heater 22“ | 60 | 558,8 | 189 | 16,2 |
| **201322** | Wraparound Heater 24“ | 60 | 609,6 | 189 | 18,9 |
| **201325** | Wraparound Heater 36“ | 60 | 914,4 | 168 | 24,3 |
| **201328** | Wraparound Heater 48“ | 60 | 1220,0 | 168 | 32,4 |
| **201350** | Spring-loaded thermocouple up to 800°C, built-in | | | | |

# WELDOTHERM® Spare parts for heating Elements

| Order No. | Item |
|---|---|
| 290000 | End bead male, bale = 100 pieces |
| 290001 | End bead female, bale = 100 pieces |
| 290002 | Main body bead, bale = 100 pieces |
| 290003 | Main body bead with hole, bale = 100 pieces |
| 290004 | Single hole bead, bale = 100 pieces |
| 290005 | Junction bead, bale = 100 pieces |
| 290006 | Olive bead, bale = 100 pieces |
| 290007 | Ceramic bead for one-line-heating cables, bale = 100 pcs |
| 290008 | Nickel-Connector, per piece |
| 290009 | Safety bead, bale = 100 pieces |
| 290010 | Teflon cable, per 1 m |
| 290011 | NiCr heating wire, per 1 m |
| 290013 | Pot Magnet for Preheaters with Magnetic Clamps |
| 290014 | Nickel 212 cold tail wire, per meter |
| 290015 | Bayonet - Thermocouple Element until 800°C |
| 290016 | Special-Notching Pliers for Nickel-Connectors |
| 290017 | Heater connection tail complete, welded and ceramic insulated, per pair = 2 pieces |

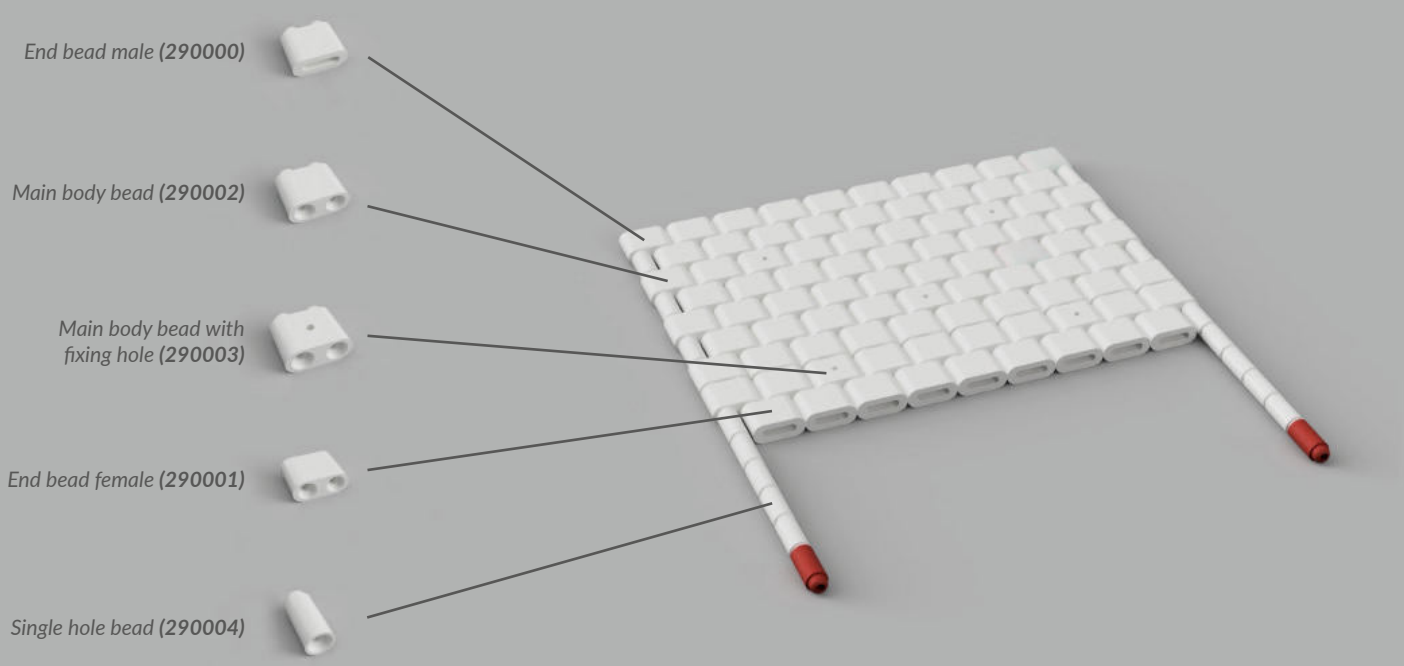
| Order No. | Item |
|---|---|
| 190000 | Plug K 35-50 type DINSE |
| 190002 | Plug K 70-95 type DINSE |
| 190003 | Plug K 10-25 type DINSE |
| 190004 | Socket K 10-25 type DINSE |
| 190005 | Socket K 35-50 type DINSE |
| 190007 | Socket K 70-95 type DINSE |
| 190008 | Camlock Pluge 60A |
| 190009 | Camlock Socket 60 A |
| 190010 | Camlock Plug 300 A |
| 190011 | Camlock Socket 300 A |



*Plug and socket K 25 Socket K 95 type DINSE*



*Plug and socket 60 A type CAMLOCK*



## WELDOTHERM® Program Controller DIGIT 700

The program controller DIGIT 700 constitutes a consistent enhancement of the DIGIT series and has been specially opti- mised for the requirements in annealing technology. The pro- ven ten-digit keyboard enables a convenient input of program parameters. Five additional function keys facilitate operation and program input. The graphic display indicates at a glance all the important information such as target value, actual value, graphic program sequence, switching status of the out- puts, etc. at any time. The DIGIT 700 offers the possibility of controlling three channels with one program. If more control channels are required, there is a possibility of establishing a master / slave link for several DIGIT 700 controllers.




*DIGIT 700*

| Technical specifications | |
|---|---|
| **Order No.** | 400000 |
| **Program input/operation** | Ten-digit keyboard and 5 function keys |
| **Display** | LCD, 256 colours 320 x 240 dots |
| **No. of sensor inputs** | 3 (configurable) |
| **No. of relay outputs** | 3 (configurable) |
| **No. of analogue outputs (option)** | max. 3 (configurable |
| **No. of programs** | 50 |
| **No. of sections per program** | 7 + lead time |
| **Dimensions (W x H x D)** | 96 x 96 x 205 mm incl. plug-in terminals |
| **Weight** | 0,7 kg |

## WELDOTHERM® Program Controller TC 80

The program controller TC 80 is the enhancement of the controller TC 60.
Programming and operation are effected via 5 function keys and can be checked via two easy to read 7-segment dis- plays. During program input, the display shows the entered parameters and during the program sequence the actual value and the target value as well as the remaining holding time.
The program sequence is in addition depicted schematically. 6 different programs can be saved and linked with each other if required.




*TC 80*

| Technical specifications | |
|---|---|
| **Order No.** | 400100 |
| **Program input/operation** | 5 keys |
| **Display actual value** | 7-segment displays, red |
| **Display target value** | 7-segment displays, green |
| **Display program sequence** | 4 LEDs, green |
| **Display technical units** | 3 LEDs, green |
| **No. of sensor inputs** | 1 x model K |
| **No. of relay outputs** | 1 |
| **No. of programs** | 3 + lead time |
| **No. of sections per program** | 0,7 kg |
| **Dimensions (W x H x D)** | 70 x 130 x 75 mm incl. plug-in terminal |
| **Weight** | 0,21 kg |

# WELDOTHERM® Temperature Recorder Type KH 60-6/12 + KL 60-6

The temperature recorder KH 60 is an electronical hybrid printer equipped with a digital display showing the measuring point numbers and the current temperature, appropriate to measure all established input values. It is equipped with a large and well readable digital display for the actual measured value and for the related channel number. The registration width of 180 mm allows a precise analysis of the recorded figures. The print out of the actual time, paper feed etc. can be switched on if required. For customers who intend to store all heat treatment parameters in a personal computer, WELDOTHERM® offers temperature recorders with memory card or interface. We also offer you the WELDOTHERM® temperature recorder KL 60-6 which possesses the same technical characteristics as the KH 60, but has an installation dimension of only 144 x 144 mm.




*KH 60-6*



*KH 60-6 built into site housing*

| Technical Data | |
|---|---|
| **Measuring range** | 0-1200 °C |
| **Number of measuring points** | 6 oder 12 (24 channels on request) |
| **Accuracy** | Registrierung analog: ±0,3 % vom Messbereich |
| **Paper feed** | Programmable |
| **Measuring value transmitter** | Thermocouple element NiCr-Ni, type “K” |
| **Recording width** | 180 mm folded paper (KH 60-6/12)<br>100 mm folded paper (KL 60-6) |
| **Dimensions** | W 288 x H 288 x D 195 mm (KH 60-6/12)<br>W 144 x H 144 x D 195 mm (KL 60-6) |
| **Weight** | approx. 7 kg (KH 60-6/12)<br>approx. 2,5 kg (KL 60-6) |
| **Ambient temperature** | 0...50 °C |
| **Humidity** | 20...80 % rF |

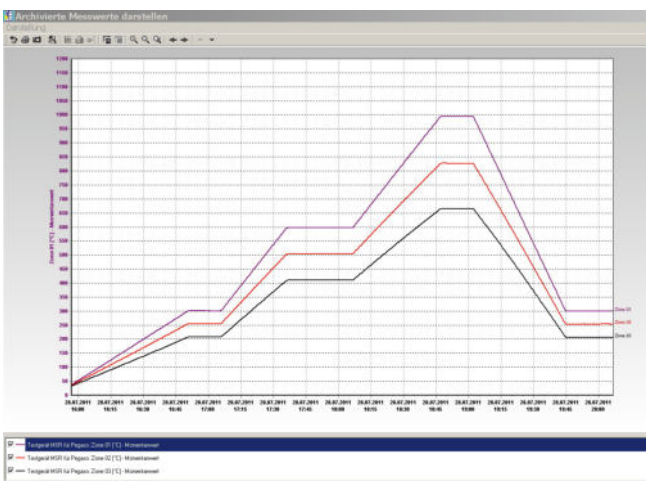
| Order No. | Item |
|---|---|
| 400200 | WELDOTHERM® KH 60-6, 6-channel recorder, as described above, built-in type |
| 400201 | WELDOTHERM ® KH 60-12, 12-channel recorder, as described above, built-in type |
| 400202 | WELDOTHERM ® KL 60-6, 6-channel recorder, as described above, built-in type |
| 400300 | WELDOTHERM® KH 60-6, built into steel site-housing, with handholds, rubber feet, connection cable 3 m long, input NiCr-Ni, type “K” thermocouple panels |
| 400301 | WELDOTHERM® KH 60-12, built into steel site-housing, with handholds, rubber feet, connection cable 3 m long, input NiCr-Ni, type “K” thermocouple panels |
| 490000 | Folded paper for KH 60-6/12, bale = 16 m |
| 490001 | Folding paper for KL 60-6, bale = 16 m |
| 490002 | Cartridge for KH recorder |
| 490004 | Cartridge for KL Recorder |
| 490005 | Compensating cable 2 x 1,5 mm, 100 m |
| 490006 | Compensating cable 2 x 1,5 mm, plug-coupling, 25 m |
| 490007 | Connection clamp ceramic 2-poles |
| 490008 | Thermocouple plug male |
| 490009 | Thermocouple plug female |

# WELDOTHERM® Electronic Temperature Recorder RSG 35

he electronic screen recorder RSG 35 is a good alternative or a good addition to our traditional chart recorder KH 60 or KL 60. The RSG 35 is capable to record 4, 8 or 12 thermocouples. The RSG 35 has multi-lingual operator guidance available, data storage on Compact Flash cards up to 1 GB, visualization software, RS232/ RS485 inter-faces and with an accuracy of ±0,1 % these recorder are very precise measuring devices.




*RSG 35*



*Screenshot visualization software*

| Technical Data | |
|---|---|
| **Measuring range:** | 0-1200 °C (Thermoelement Typ K) |
| **Measuring points** | 4, 8 oder 12 |
| **Thermocouples** | K, J, T, N, L, D, C, B, S, R |
| **LC- Colour-Display** | 4,7 inch |
| **Accuracy** | ± 0,1 % of measuring range |
| **Interfaces** | USB, RS232, RS485, Ethernet |
| **Voltage** | 115...230 V AC (50/60Hz) |
| **Dimension** | 144 x 144 x 180 mm |
| **Weight** | apporox. 0,7 kg |
| **Available languages** | German, Englisch, French, Spanish, Italian, Dutch, Polish, Russian, Czech, Slovakian, Portuguese, Japanese, Chinese |

| Order No. | Item |
|---|---|
| 400350 | WELDOTHERM® RSG 35 built-in type incl. visualization software on CD and 1,5 m USB cable |
| 400351 | WELDOTHERM® RSG 35 in site housing, complete with handholds, rubber feet, connection cable 3 m long, input<br>NiCr-Ni, type „K“ thermocouple panels incl. visualization software on CD and 1,5 m USB cable |

## WELDOTHERM® Measuring Device MK 1300

WELDOTHERM® MK 1300 is a handy, quick and precise temperature measuring device. This can also be used as a precision voltage transmitter for the measuring range of NiCr-Ni 0 – 1200 °C. The device is equipped with a comparison measuring point! The accuracy is ± 0,15 % of the measuring range! In combination with a surface sensor the MK 1300 can be used for measuring surface temperatures.



*MK 1300*

| Technical Data | |
|---|---|
| **Display temperature** | 7 segments, red |
| **Display operating mode** | |
| **Calibrating/measuring** | 1 x LED, blue |
| **Display battery status** | 1 x LED, red |
| **Dimensions (W x H x D)** | 180 x 80 x 180 mm |
| **Weight** | 3,1 kg |

| Order No. | Item |
|---|---|
| **400400** | WELDOTHERM®-MK 1300, NiCr-Ni |
| **400401** | Spare charging cable |
| **400402** | Hard-top case |
| **400403** | Multi-Quick-Plug for presetting of 6 measuring points during temperature recorder calibration |
| **400404** | Surface Temperature Sensor NiCr-Ni, 300 mm long, handhold, 1 m connection cable, thermocouple plug |

## WELDOTHERM® Measuring Device OF 305

WELDOTHERM® OF 305 is a portable compact sized digital surface temperature measuring device for application with NiCr-Ni thermocouple elements. The temperature indication corresponds to IEC 584 temperature/voltage tables for NiCr-Ni thermocouple elements.



*OF 305*

| Technical Data | |
|---|---|
| **Display** | 3 1/2 digits LCD |
| **Dimensions (W x H x D)** | 70 x 147 x 39 mm |
| **Weight** | 0,35 kg |

| Order No. | Item |
|---|---|
| **400600** | OF 305, completely with surface sensor max. 400°C, carrying strap, battery |
| **400601** | Spare surface touch sensor, max. 400°C |
| **400602** | Spare surface touch sensor, max. 900°C |
| **400603** | Battery IEC type 6 F 22, 9 V |

## WELDOTHERM® Welding Unit WELDOTHERM®TP 2 N

For secure and fast attachment of thermocouples with 0 0.5 to 1 mm. Precise measuring results by firm connection between workpiece surface and thermocouple element are guaranteed by the use of the WELDOTHERM®-TP 2 N.



*TP 2 N*

| Technical Data | |
|---|---|
| **Charging current** | 90...264 V AC/47...63 Hz |
| **Battery operating voltage** | 12 V DC |
| **Battery capacity** | 3,0 Ah |
| **Possible pointing sequence** | 4 seconds automatically |
| **Charge condition display** | LED-Anzeige |
| **Dimensions** | W 180 x H 80 x D 180 mm |
| **Weight** | approx. 3,2 kg/<br>7 kg with accessories |

| Order No. | Item |
|---|---|
| 500000 | Thermocouple Welding Unit TP 2 N for 0 0,5 mm to 1 mm, complete with hard-top case, pliers, pole magnet and cable set |
| 500002 | Complete spare set with pliers and pole magnet |
| 500003 | Spare cable set with plug, without pliers and pole magnet |
| 500004 | Spare pliers complete with plug set |
| 500005 | Spare pole magnet |
| 500006 | Spare charging cable |

## WELDOTHERM® Welding Unit WELDOTHERM®TP 2 S

For secure and fast attachment of thermocouples continuous adjustable for diameters 0 0,1 up to 1,8 mm.



*TP 2 S*

| Technical Data | |
|---|---|
| **Charge current** | 90...264 V AC/47...63 Hz |
| **Adjustable** | 20...99 V DC |
| **Battery operating voltage** | 12 V DC |
| **Battery capacity** | 3,0 Ah |
| **Possible pointing sequence** | 4 seconds, automatically |
| **Charge condition display** | LED-Anzeige |
| **Dimensions** | W 180 x H 70 x D 180 mm |
| **Weight** | approx. 3,2 kg/<br>8 kg with accessories |

| Order No. | Item |
|---|---|
| 500100 | Thermocouple Welding Unit TP 2 S, complete with hard-top case, foot actuating switch, cable set with pole magnet and 2 pliers |
| 500101 | Complete spare set with pliers and pole magnet |
| 500102 | Spare Cable set with plug, without pliers and pole magnet |
| 500103 | Spare pliers complete with plug set |
| 500104 | Spare pole magnet |
| 500105 | Spare charging cable |
| 500106 | Spare foot actuating switch |

## WELDOTHERM® Fine Point Attachement Unit TP 2.2 Duo

Suitable for fast, safe and gentle attachment of thermal wires. Precise measurement results thanks to the fixed connection between the workpiece and the thermal wire. Triggered by a pressure switch in the handle. Operating status display by built-in LEDs.



*TP2.2 Duo*

| Technical Data | |
|---|---|
| **Suitable cross section** | von 0,2 mm bis 1,0 mm |
| **Suitable metal foils** | von 0,05 mm bis 0,1 mm |
| **Max. penetration depth** | 0,0 when resistant pressure welding<br>0,2 mm when top ignition |
| **Max. heat penetration depth** | 0,1 mm when resistant pressure welding<br>0,3 mm when top ignition |
| **Charging voltage** | 90...264 V AC, 50/60Hz |
| **Battery operation voltage** | 12 V DC |
| **Battery capacity** | 3,6 Ah |
| **Charge level indicator** | LED-display |
| **Dimension/Weight** | H 180 x B 180 x T 80 mm / 3,5 kg |

| Order No. | Item |
|---|---|
| 500150 | Fine point attachement unit TP2.2 Duo compl. With hard-top case, Handle with hard copper tip, pole magnet and cable set |

## WELDOTHERM® Stud Welding Machine TP 3

The ideal stud welding machine for fast welding of insulation pins and bolts of diameter 0 2 – 8 mm made of steel and stainless steel by a positioning welding pistol. If, for example, heating mats, preheaters, insulation cannot be fixed by tight- ening strap band because the materials geometry does not allow so or if magnets do not adhere, then fast attachment by using insulating pins and clips help.




*TP 3*

| Technical Data | |
|---|---|
| **Working range** | 2 mm Ø |
| **Material** | Steel, V2A, aluminium and brass |
| **Welding sequence** | 20 – 30 pins/min. |
| **Charging capacity** | 27 000 µF |
| **Charging voltage** | 100 V |
| **Mains supply** | 230 Volt - 50 Hz, protection 6.3 A |
| **Dimensions** | B 180 X H 150 x T 330 mm |
| **Weight** | 7,4 kg |

| Order No. | Item |
|---|---|
| 500200 | Stud Welding Machine TP 3<br>for insulating pins 2 mm |

## WELDOTHERM® Tightening and Cutting Device RONDOFIX

The tightening and cutting device RONDOFIX 1 is a special tool for cutting and tightening steel strap band and is extremely easy to use. With this durable tool also the cap locks can be securely closed.

| Order No. | Item |
|---|---|
| 500300 | Universal tightening and cutting device RONDOFIX |



*RONDOFIX*

## WELDOTHERM® Banding and Cutting Machine Band-it

The banding machine Band-it is a simple and safe tool for banding and cutting steel strap bands. This device has a tensioning length of approx. 120 mm. Therefore it is suitable especially for fasten heating elements to smaller circumfer- ential joints.

| Order No. | Item |
|---|---|
| 500400 | Banding machine Band-It |



*Band-It*

## WELDOTHERM® Carriage for Tightening Strap Band

Tightening straps can easily be transported and easily reeled off to the end in the strap band carriage. The straps are protected and cannot get entangled. This strap band carriage saves strap band and thus finally money.

| Order No. | Item |
|---|---|
| 500500 | Carriage for strap band |



*Spannbandwagen*

## WELDOTHERM® Special Rockwool Scissors

The special rockwool scissors is the ideal cutting tool with convolution cut for fast cutting of rockwool in galvanized wire mesh.

| Order No. | Item |
|---|---|
| 500600 | Special rockwool scissors |



*Special rockwool scissors*

## WELDOTHERM® Ceramic Fiber Mats

In modern furnace technology ceramic fiber mats are essen- tial for lining the interior of all types of industrial furnaces.
They are also particularly suitable for the insulation of local heat treatment spots. With a thickness of 13 mm they protect the heating elements against sintering rockwool as first cover beneath the rockwool.



*Ceramic fiber*

| Order No. | Item | Thickness mm | Width mm | Length mm | Bale $m^2$ | Raw Density $kg/m^3$ | Application Limit °C |
|---|---|---|---|---|---|---|---|
| 600000 | Ceramic fiber mat | 13 | 610 | 14640 | 8,92 | 128 | 1200 |
| 600001 | Ceramic fiber mat | 25 | 610 | 7320 | 4,46 | 128 | 1200 |
| 600002 | Ceramic fiber mat | 50 | 610 | 3660 | 2,23 | 128 | 1200 |

## WELDOTHERM® Ceramic Fiber in Wire Mesh

Ceramic fiber in wire mesh is a high-temperature resistant ceramic fiber mat, which is made from calcium magnesium silicate and exhibits similar insulation properties as fire-proof ceramic fiber up to 1200°C.

Ceramic fiber in wire mesh is available in different mat sizes and is protected by a stainless steel wire mesh to increase the insulation mats‘ service life.

| Order No. | Item |
|---|---|
| 600060 | Ceramic fiber in wire mesh, 128 $kg/m^3$, 25 mm, 300 x 600 mm |
| 600061 | Ceramic fiber in wire mesh, 128 $kg/m^3$, 25 mm, 300 x 900 mm |
| 600062 | Ceramic fiber in wire mesh, 128 $kg/m^3$, 25 mm, 600 x 600 mm |
| 600063 | Ceramic fiber in wire mesh, 128 $kg/m^3$, 25 mm, 600 x 900 mm |
| 600064 | Ceramic fiber in wire mesh, 128 $kg/m^3$, 25 mm, 600 x 1200 mm |
| 600065 | Ceramic fiber in wire mesh, 128 $kg/m^3$, 25 mm, 600 x 1800 mm |



*Ceramic fiber in wire mesh*

## WELDOTHERM® Rockwool

Rockwool in galvanized wire mesh is the standard type of insulation for local heat treatment. In combination with ceramic fiber mats which cover the heating elements it can be used several times.

The galvanized wire mesh ensures easy clamping for tight- ness and compactness when using the mat hooks. Cutting
to required dimensions is simplified by the rockwool scissors.



*Rockwool*

| Order No. | Item | Thickness mm | Width mm | Length mm | Bale $m^2$ | Raw Density $kg/m^3$ | Application Limit °C |
|---|---|---|---|---|---|---|---|
| **600200** | **Rockwool in wire mesh** | 50 | 500 | 5000 | 2,5 | 100 | 750 |
| **600201** | **Rockwool in wire mesh** | 100 | 500 | 2500 | 1,25 | 100 | 750 |

## WELDOTHERM® TYGASIL

The ideal alternative to ceramic fiber mats and rock- wool! TYGASIL is suitable as sole insulation during preheating and annealing processes on pipelines, apparatus, fittings, etc.
It is mounted by wrapping it around the workpiece in required insulation thickness and fixed against slipping by heat resist- ant strap bands. In opposite to ceramic fiber and rockwool TYGASIL can be used many times and provides user-friendly handling.



*TYGASIL*

| Order No. | Item |
|---|---|
| **600100** | TYGASIL 300 x 610 mm |
| **600101** | TYGASIL 600 x 610 mm |
| **600102** | TYGASIL 900 x 610 mm |
| **600103** | TYGASIL 1200 x 610 mm |
| **600104** | TYGASIL 1500 x 610 mm |
| **600105** | TYGASIL 1800 x 610 mm |
| **600106** | TYGASIL 2500 x 610 mm |
| **600107** | TYGASIL 3000 x 610 mm |
| **600108** | TYGASIL 3500 x 610 mm |

| Order No. | Item |
|---|---|
| **600109** | TYGASIL 4000 x 610 mm |
| **600110** | TYGASIL 4500 x 610 mm |
| **600111** | TYGASIL 5000 x 610 mm |
| **600112** | TYGASIL 5500 x 610 mm |
| **600113** | TYGASIL 6000 x 610 mm |
| **600114** | TYGASIL 6500 x 610 mm |
| **600115** | TYGASIL 7000 x 610 mm |
| **600116** | TYGASIL 7500 x 610 mm |
| **600150** | Strap bands for TYGASIL |

## WELDOTHERM® Glass Fiber Cloth

Temperature stable glass fiber cloth is mainly used during inductive heating for covering the workpiece to protect the heat sensitive heating cables from heat of the workpiece.
It can also be used for preheating with flexible heating mats when these are covered by ceramic fiber. First it prevents fraying of the ceramic mats by working motions of the welder and second it prevents the contact of welding slag and swarf to the heating elements and therefore any failure is excluded.

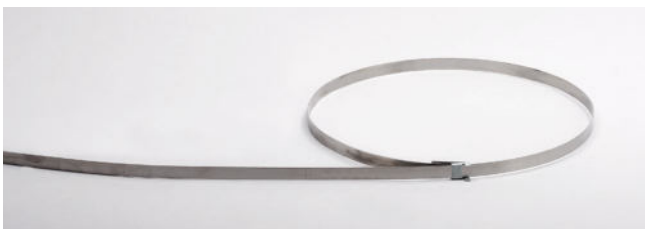


*Glass fiber cloth*

| Order No. | Item | Thickness mm | Width mm | Length mm | Bale m² | Application Limit °C |
|---|---|---|---|---|---|---|
| 600300 | Glass fiber cloth | 2 | 1000 | 50000 | 50 | 750 |

## WELDOTHERM® Tightening Strap Band and Locks

Quality tightening strap band has been found to be the safest and fastest method of fixing heating elements and insulation. In connection with an universal tightening tool and locks there is no cheaper solution. For annealing processes in high temperature ranges we alternatively offer our stainless steel strap band.



*Tightening strap band*

| Order No. | Item |
|---|---|
| 600500 | Tightening strap band 16 x 0,5 mm complete with cap locks, 1 lock/m, bale = 400 m |
| 600501 | Cap locks, bale = 100 pieces |
| 600502 | Stainless steel strap band 3/8", bale = 30 m |
| 600503 | Stainless steel strap band 1/2", bale = 30 m |
| 600504 | Stainless steel cap locks, bale = 100 pieces |



*Locks*

## WELDOTHERM® Mat Hooks

When using rockwool in wire mesh mat hooks are required for economical use, either for connecting single rockwool layers, for tight clamping of sagging rockwool on large workpieces or simply for safe support of heating element connections.



*Mat hooks*

| Order No. | Item |
|---|---|
| 600600 | Mat hooks, bale = 100 pieces |

## WELDOTHERM® Glass Fiber Cord

Glass fiber cord can be used in many ways, e.g. supporting thermal cables and connections as strain relief as well as for fixing of ceramic fiber mats, glass fiber cloth and one-line- heating cables.

| Order No. | Item |
|---|---|
| 600400 | Glass fiber cord 3 mm, per m |



*Glass fiber cord*

## WELDOTHERM® Thermocouple Wire

WELDOTHERM® offers thermocouple wires of highest quality and of established diameters 0,5 mm, 0,711 mm and 1,0 mm.

| Order No. | Item |
|---|---|
| 600700 | Thermocouple wire, glass fiber insulated, 2 x 0,5 mm², bale = 100 m |
| 600701 | Thermocouple wire, glass fiber insulated, 2 x 0,711 mm², bale = 100 m |
| 600702 | Thermocouple wire, glass fiber insulated, 2 x 1,0 mm², bale = 100 m |



*Thermocouple wire*

## WELDOTHERM® Thermocouple Putty

For fixing and protecting thermocouples.

| Order No. | Item |
|---|---|
| 600750 | Thermocouple putty, bale = 0,5 kg |




*Thermocouple putty*

## WELDOTHERM® Insulating Pins and Clips

For the fastening of heating elements and insulation materials at vertical and overhead walls WELDOTHERM® offers insulating pins and clips.

| Order No. | Item |
|---|---|
| 600800 | Insulating pins, bale = 100 pieces |
| 600801 | Clips for insulating pins, bale = 100 pieces |



*Insulation pins and clips*




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