

Output 10,8 kW  
Weight 17 kg  
Mobility  
Reliability  
Flexibility

*Inverter source for industrial resistance heating.*



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.

*Future generation of heating sources.*



# INVERTER SOURCE

The powerful portable source DHC6510 for resistance heating is designed as a small, light-weight, and efficient three-phase digital source for industrial use. Its undeniable advantages include an integrated digital regulator with continuous regulation of heating power, a recorder, small dimensions, low weight, and high efficiency in comparison with standard sources, facilitating both handling and transport. Thanks to its small dimensions and low weight the source may be used for fast service applications or in places with difficult access.

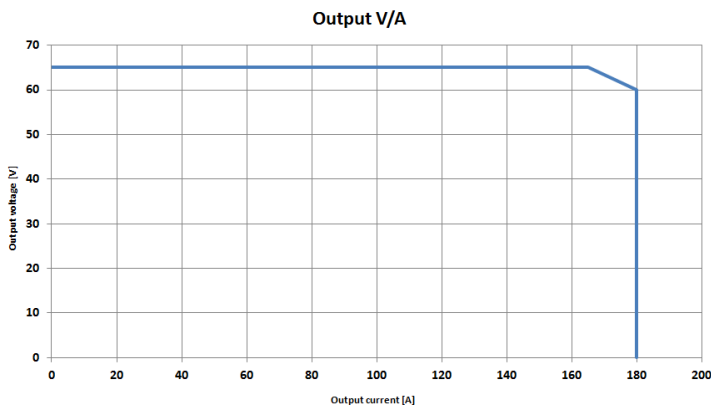
## Use

- Controlled preheating and cooling of welded materials
- Thermal annealing and tempering and other material thermal processing
- The DHC source is applicable in production, maintenance, and repairs activities.

## Specifications

- High output with small dimensions and low weight - 10 kW at 17 kg
- Possible connection of resistance elements from 24 to 65 V, 10.8 kW
- Simple handling and easy-to-read display
- Possible interconnection of more units of the master-slave type for gaining higher output
- Continuous regulation of input power (voltage)
- Complete set consisting of the source, regulator, and recorder
- Programmable temperature regulator -25 °C to 1,200 °C
- Saving up to 20 thermal profiles with max. 180 segments
- Control according to a set thermal profile or manually to required temperature or output
- Two settable alarms
- Integrated recorder of temperature and output with up to 64 hr of recording
- Possible connection of external recorder

## Output characteristics of the inverter



## Technical data of the inverter

<b>Output voltage/current</b>	0-65 V / 160 A, 0-65 V / 180 A, continuously regulated, CV/CC
<b>Load</b>	Resistance heating elements 24-65 V (30/60 V type)
<b>Supply voltage/current</b>	3~400 V, 50/60 Hz, 23 A
<b>Feed protection</b>	25 A
<b>Thermal sensor</b>	K-type thermocouple, galvanically insulated output
<b>Measuring/regulation range</b>	-40 °C to 1,350 °C / -25 °C to 1,200 °C
<b>Alarm</b>	2 settable (deviation SV/PV, reaching temperature, etc.)
<b>Failure detection</b>	Thermocouple disconnection, overloading, overheating, short-circuit on output, etc.
<b>Multizonal regulation</b>	Yes, master/slave type, max. 9 units
<b>Operating temperature / protection</b>	-20 °C to 40 °C (with limited output up to 50 °C)
<b>Dimensions and weight</b>	170x370x405 mm, 17 kg
<b>Certification</b>	CE



- 1 ON button to start / stop heating
- 2 PV, SV and MV displays
- 3 Control buttons for process programming and recording
- 4 SET selection button
- 5 + and - buttons for value selection
- 6 Connector for connecting a thermocouple
- 7 Connector for connecting another MASTER/SLAVE inverter and for downloading data from the recorder
- 8 Quick-couplers + and - for connecting elements

# INTEGRATED DIGITAL REGULATOR AND RECORDER

## Regulator and recorder

Temperature may be controlled with any of 20 user-settable thermal profiles/programmes with up to 180 segments, or directly to the user-set temperature which may be changed at any time. The user may set the heating/cooling temperature, time for which a set temperature is to be maintained, and target temperature, independently in each segment of the profile as well as in the temperature control manual mode. The heating power may be controlled also directly.

The regulator is equipped with a user lock in the menu for locking the PID values setting. The device is fitted with an integrated digital recorder of the heating process with 64 hr recording capacity. Data may be transmitted to a PC for further processing in order to document the heating process or its control. This provides the maximum complexity as well as simplicity of using the device the control of which is easy to learn.

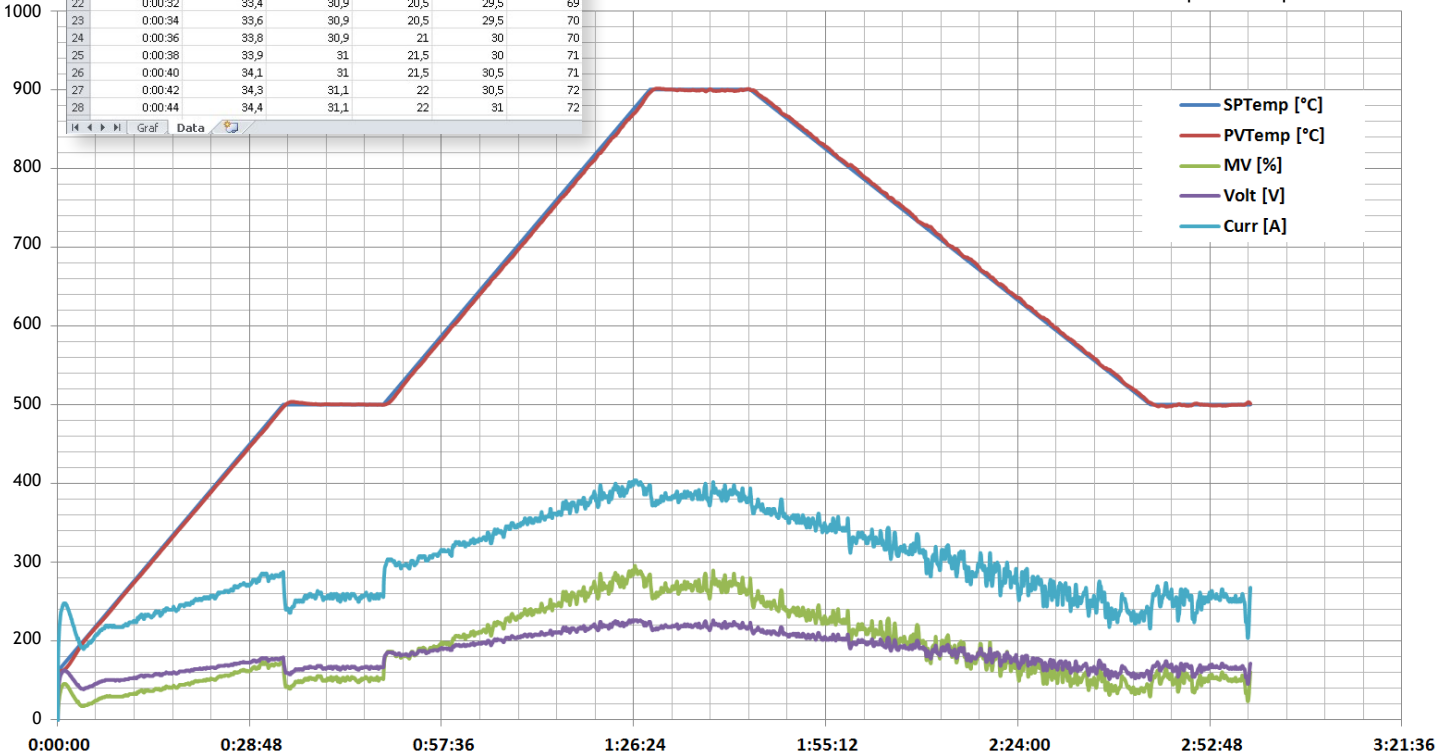
Table of measured data

4	A	B	C	D	E	F
5	File Name: 2011-11-07_CH01_F02					
6	ReTime [h:m:s]	SPTemp [°C]	PVTemp [°C]	MV [%]	Volt [V]	Curr [A]
7	0:00:02	30,9	30,8	3	0	0
8	0:00:04	31,1	30,8	6	16	36
9	0:00:06	31,3	30,8	8,5	19	44
10	0:00:08	31,4	30,8	10,5	21	49
11	0:00:10	31,6	30,8	12	22,5	52
12	0:00:12	31,8	30,8	13	23,5	55
13	0:00:14	31,9	30,8	14	24,5	58
14	0:00:16	32,1	30,8	15	25,5	60
15	0:00:18	32,3	30,8	16	26	61
16	0:00:20	32,4	30,8	17	27	63
17	0:00:22	32,6	30,8	17,5	27,5	64
18	0:00:24	32,8	30,8	18	28	66
19	0:00:26	32,9	30,8	19	28,5	67
20	0:00:28	33,1	30,8	19,5	29	68
21	0:00:30	33,3	30,8	20	29	69
22	0:00:32	33,4	30,9	20,5	29,5	69
23	0:00:34	33,6	30,9	20,5	29,5	70
24	0:00:36	33,8	30,9	21	30	70
25	0:00:38	33,9	31	21,5	30	71
26	0:00:40	34,1	31	21,5	30,5	71
27	0:00:42	34,3	31,1	22	30,5	72
28	0:00:44	34,4	31,1	22	31	72

Values written in the recorder

<b>SPTemp</b>	[°C]	Setting Value – required temperature
<b>PVTemp</b>	[°C]	Process Value – actual measured temperature
<b>MV</b>	[%]	Manipulation Value – output power
<b>Volt</b>	[V]	Measured output voltage
<b>Curr</b>	[A]	Measured output current

Graphic data presentation



## Technical data of the regulator and recorder

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



# ACCESSORIES

## Basic accessories

- Instructions for use in English
- CD with software for downloading measured data from the recorder (only with DHC6510R)
- Connector with a cable for downloading measured data (only with DHC6510R)

## Other accessories

- Trolley with a handle for 3 and 6 sources
- Resistance ceramic elements
- Cable quick-couplers and reducers
- Insulation means

Instructions for use



CD with software



Connecting USB cable



Insulation sleeve



## TROL-DHC trolley use variations

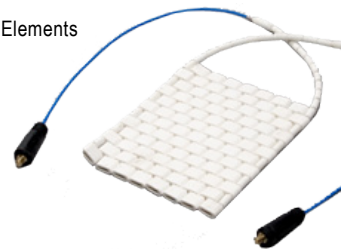


Complete model

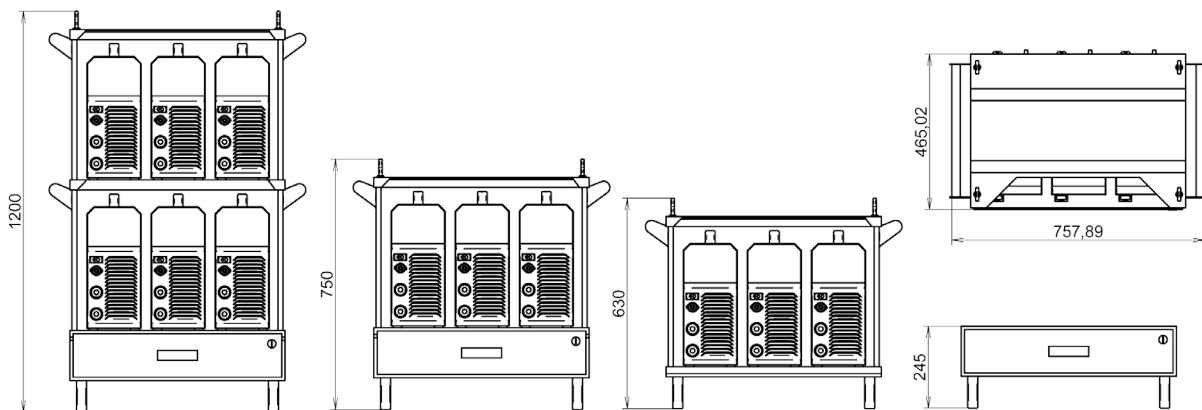


Top floor removed

Elements



## TROL-DHC trolley dimensions



## Order codes of devices and accessories

Model	Description
DHC6510	Heating unit (without recorder)
DHC6510R	Heating unit with recorder (incl. a cable for data downloading and software)
DHC-CABLE-X	Connecting cable for multizonal regulation, X = No. of units / zones
DHC-TROL-3/-6	Trolley for 3/6 units
DHC-ELEM	Elements
REC-CON	Connector for connecting external temperature recorder

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