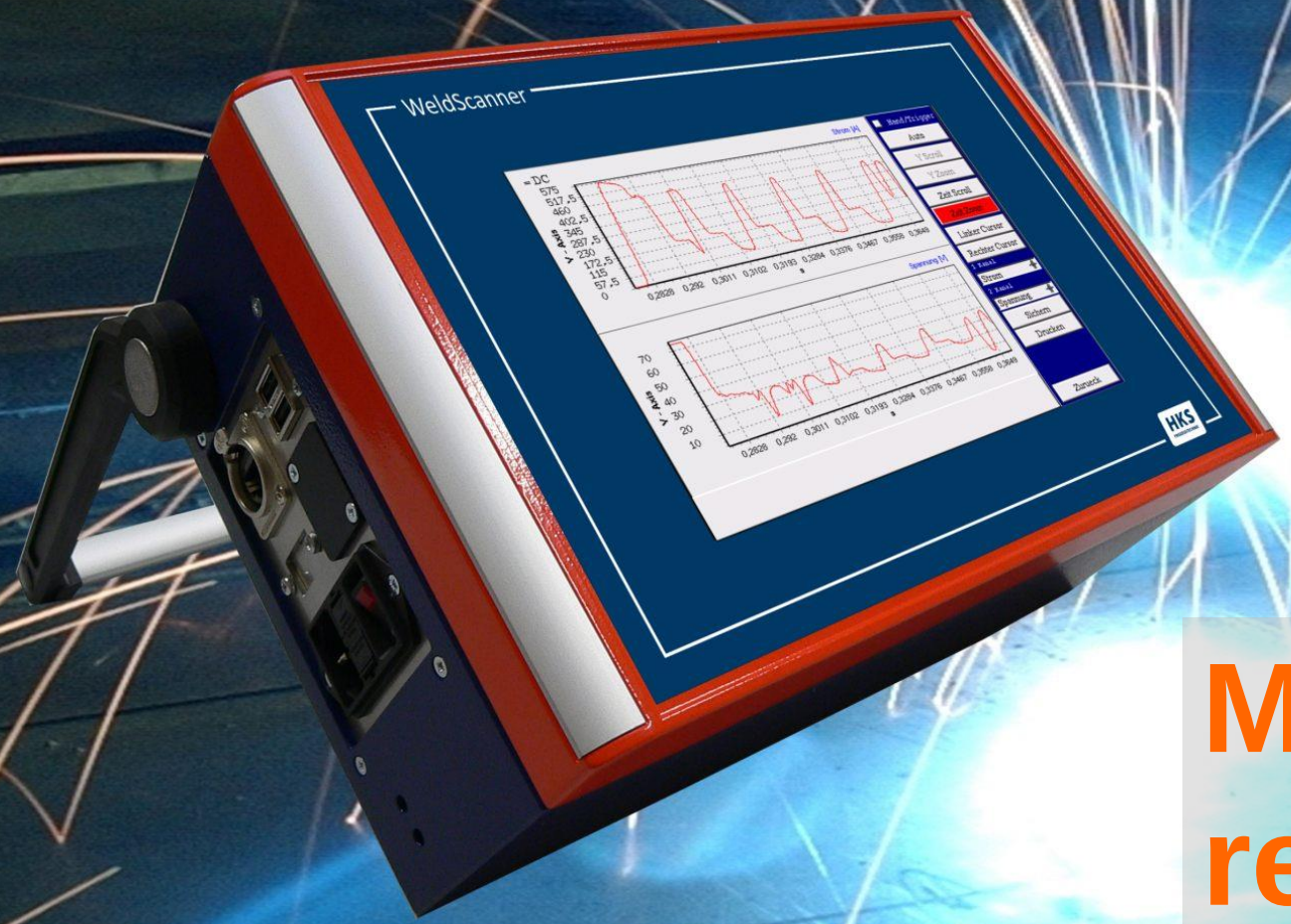
# WeldScanner




HKS PROZESSTECHNIK

AN ESAB® BRAND

## Multi talented recording device

# WeldScanner

*The allrounder for daily use*

- **Data logger**
- **Cooling time**
- **Oscilloscope**

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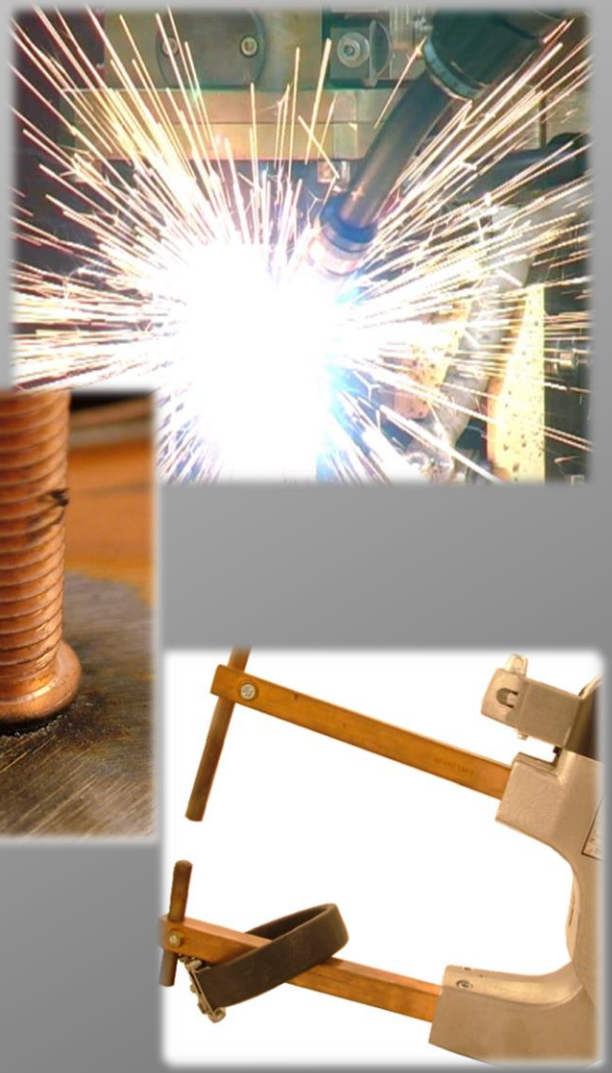
# Use for

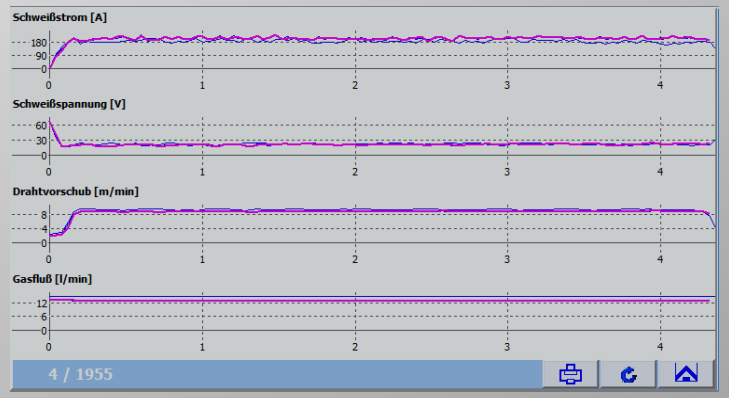
- Arc welding
- Stud welding
- Resistance welding



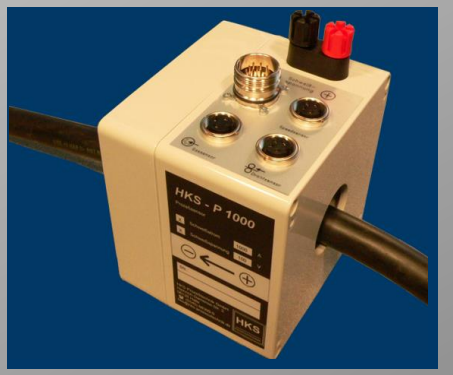
# Data acquisition sensors

**Welding current**

**Welding voltage**




https://youtu.be/o-ktuGazMuw



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# Data acquisition sensors

**Wire feed speed**

**Gas flow rate**

mobile

stationary

https://youtu.be/S4Q-1JpXXmg
https://youtu.be/R235AKa0EaQ

# WeldScanner

## Measurement - Recording - Calibration

Future function

WeldCloud™

**Processes:**

- GTAW
- SMAW
- GMAW
- SAW
- Resistance Welding
- Stud Welding

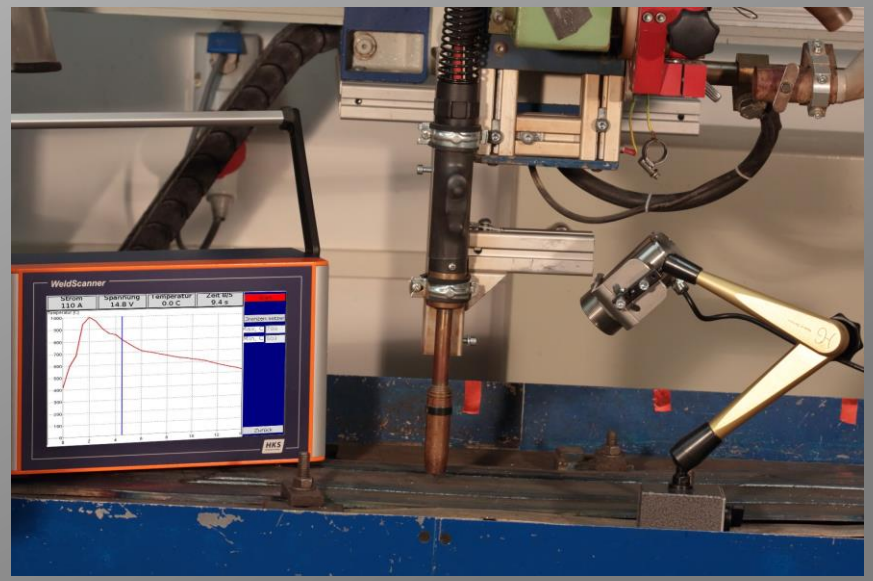
- Multipurpose – for all welding equipment
- For automated- and hand welding
- Simple handling, very robust

# WeldScanner - characteristics:

- Documentation of welding seams (process traceability)
- Possibility to find root cause of errors
- Cooling time measurement for T 8/5
- Convenient data export
- Interactive touch screen with curve progression that shows all welding parameters
- Rugged system made to withstand in rough conditions during daily use
- Easy to operate and simple to connect to any welding power source

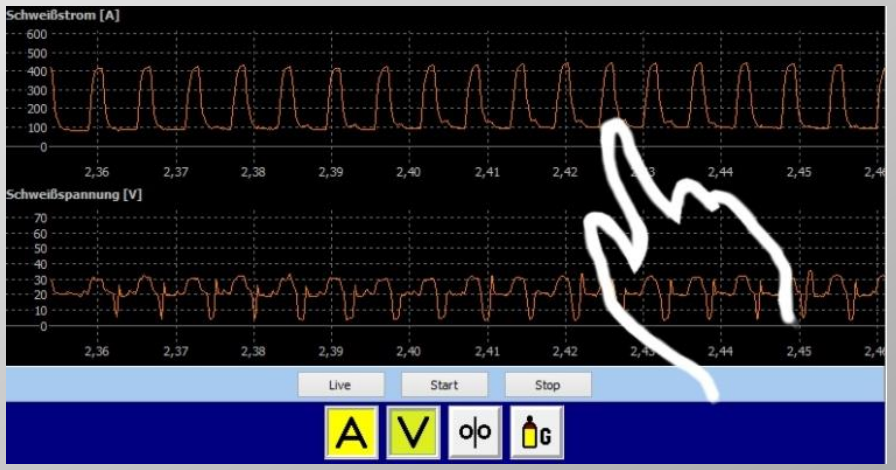
# WeldScanner – various applications:

- Automatic recording of weld time and consumption values (wire, gas and energy)
- Calculation of heat input by entering the seam length to the device
- Capable of measuring all welding arc types, True RMS measuring and Rectified Average Mean Value for square waves
- Production control assistance conforms to EN 1090
- Contactless cooling time measurement T 8/5
- Scope measurement up to 200 kHz




Cooling time measurement T8/5

# WeldScanner – various applications:



# SCOPE MODE

**Measurement of dynamic processes with 20.000 samples / s**

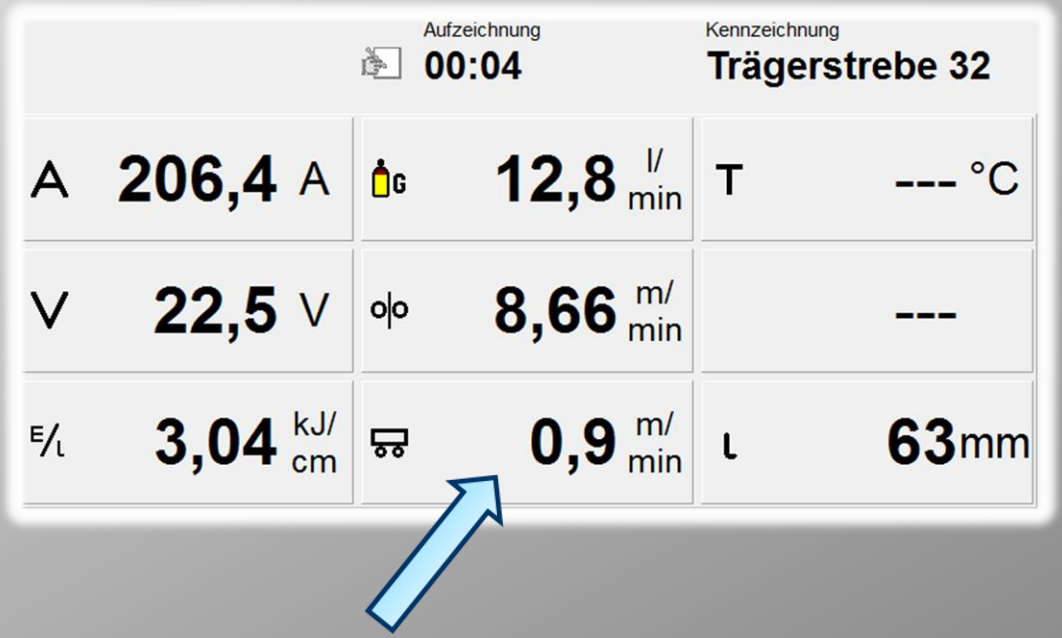
# WeldScanner – various applications:

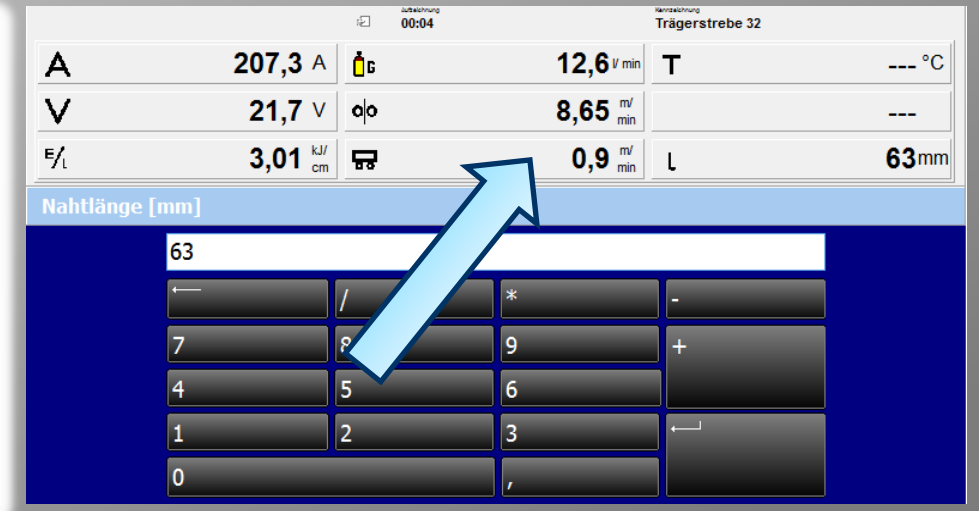
**Assistance to the production control conform to**

# DIN EN 1090

# WeldScanner – various applications:

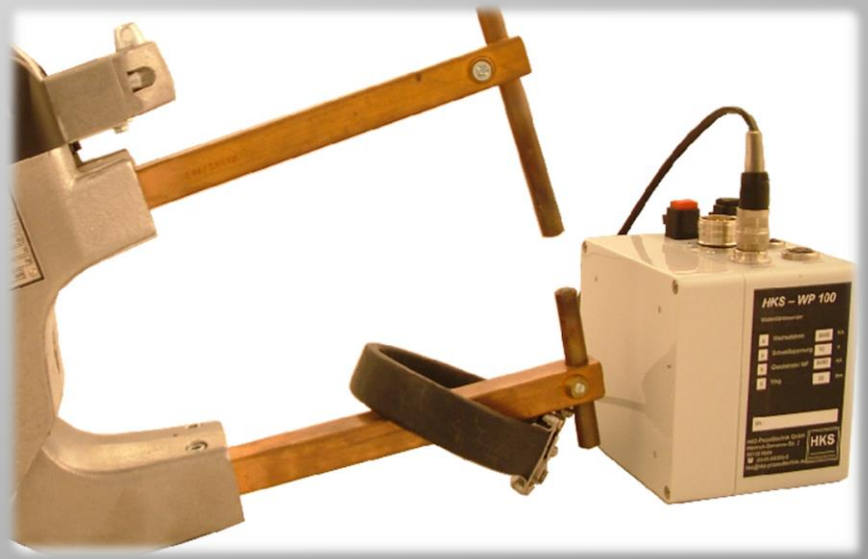
## Calculation of the energy per section by entering the seam length

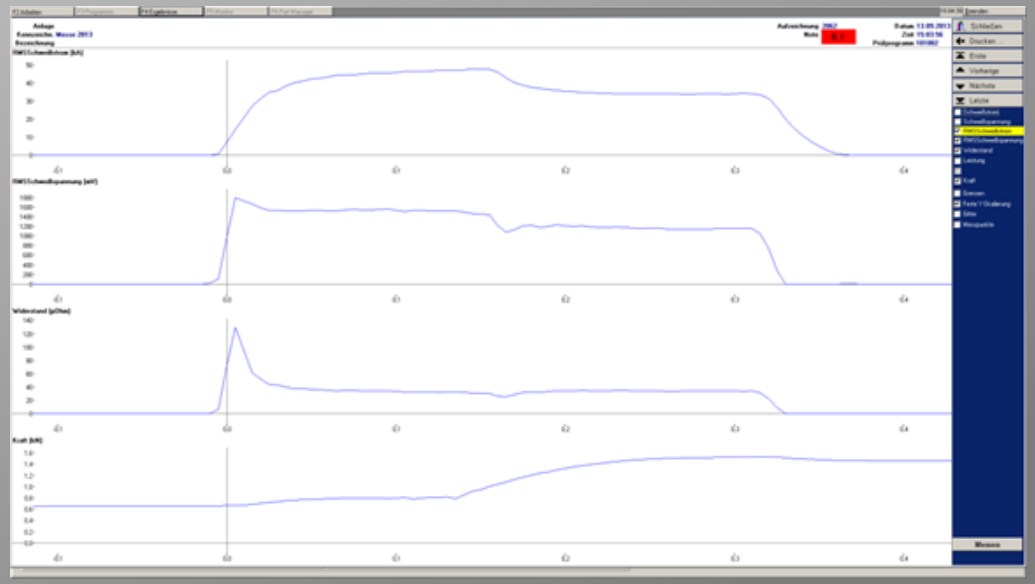


# WeldScanner – various applications:

## RMS-value calculation of the energy during resistance welding conform to DVS 2942-3



# WeldScanner – various applications:

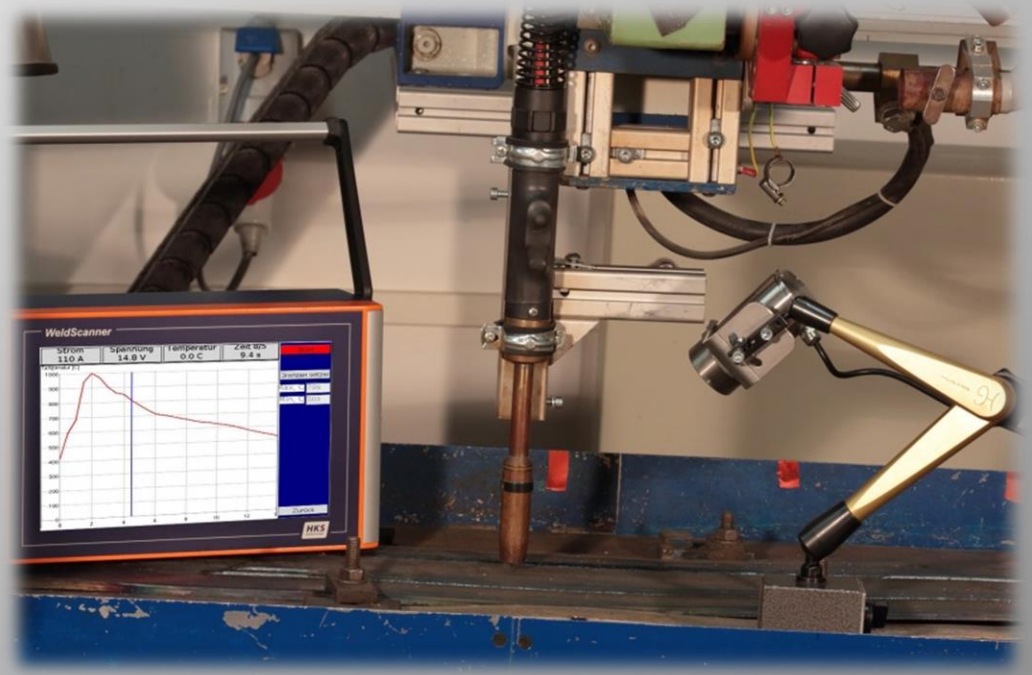
## Automatic recording of welding time and consumption values

| Sel. | - Datum | - Zeit | Nr. | A-Dauer | Bezeichnung | Strom | Spannung | Draht |
|---|---|---|---|---|---|---|---|---|
| ☐ | 13.09.2013 | 15:10:10 | 7724 | $t_{REG}$ 4,3 s | | 186,9 A | 23,7 V | 9,25 m/mi |
| ☐ | 13.09.2013 | 15:10:03 | 7723 | $t_{REG}$ 4,3 s | | 206,5 A | 22,5 V | 8,66 m/mi |
| ☐ | 13.09.2013 | 15:09:56 | 7722 | $t_{REG}$ 4,3 s | | 186,9 A | 23,7 V | 9,25 m/mi |
| ☑ | 13.09.2013 | 15:09:49 | 7721 | $t_{REG}$ 4,3 s | | 206,4 A | 22,5 V | 8,66 m/mi |
| ☑ | 13.09.2013 | 15:09:42 | 7720 | $t_{REG}$ 4,3 s | | 186,9 A | 23,7 V | 9,26 m/mi |
| ☑ | 13.09.2013 | 15:09:35 | 7719 | $t_{REG}$ 4,3 s | | 206,5 A | 22,4 V | 8,68 m/mi |
| ☐ | 13.09.2013 | 15:09:28 | 7718 | $t_{REG}$ 4,3 s | | 186,9 A | 23,7 V | 9,25 m/mi |
| ☐ | 13.09.2013 | 15:09:21 | 7717 | $t_{REG}$ 4,3 s | | 206,4 A | 22,5 V | 8,68 m/mi |
| ☐ | 13.09.2013 | 15:09:15 | 7716 | $t_{REG}$ 4,3 s | | 186,9 A | 23,7 V | 9,25 m/mi |
| ☑ | 13.09.2013 | 15:09:08 | 7715 | $t_{REG}$ 4,3 s | | 206,4 A | 22,5 V | 8,66 m/mi |
| ☐ | 13.09.2013 | 15:09:01 | 7714 | $t_{REG}$ 4,3 s | | 186,9 A | 23,7 V | 9,25 m/mi |
| ☐ | 13.09.2013 | 15:08:54 | 7713 | $t_{REG}$ 4,3 s | | 206,4 A | 22,5 V | 8,66 m/mi |
| ☐ | 13.09.2013 | 15:08:47 | 7712 | $t_{REG}$ 4,3 s | | 187,9 A | 23,0 V | 9,22 m/mi |
| ☐ | 13.09.2013 | 15:08:40 | 7711 | $t_{REG}$ 4,3 s | | 206,5 A | 22,4 V | 8,68 m/mi |

1952 records / 4 new  Abbrechen  Exit

# WeldScanner – various applications:

## Cooling time – T8/5



***Non contact measurement***

# WeldScanner Validator

## Validation of welding equipment

**The EN 50504 Validation Tool**

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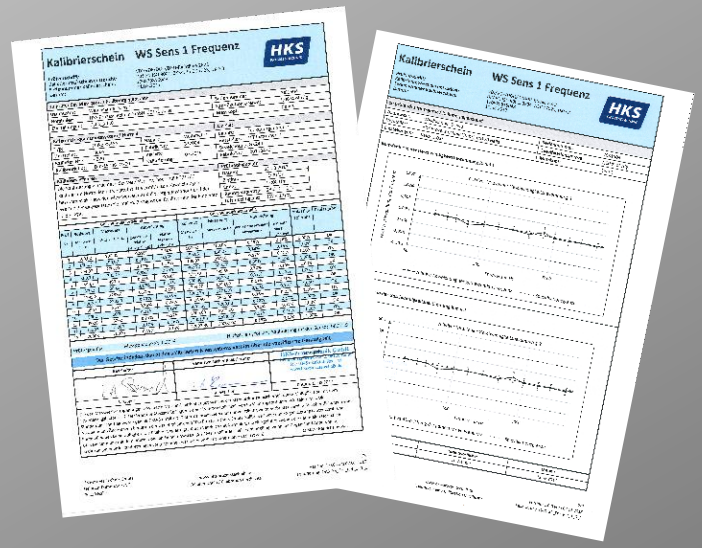
# WeldScanner Validator – various applications:

- Validation for all types and brands of arc welding equipment
- Automatic creation of Validation certificates
- Complies with EN 50504 – Validation of Arc Welding Equipment
- Capable of measuring all welding arc types, True RMS measuring and Rectified Average Mean Value for square waves
- High Frequency proof
- Measuring all values, amperage, voltage, wire feed speed, travel speed
- Validation on Standard Class and Precision Class




Validation certificates

# WeldScanner Validator - characteristics:

- Touch screen or keyboard operated
- HF proof - can safely test TIG equipment
- Used for welding process variables such as current, voltage, gas flow rate, wire feed speed, etc.
- Measuring reports for validation available as PDF file
- Memory of customer and installed base information
- Easy to operate and simple to connect
- Available for arc welding up to 1000A DC / 750A AC and up to 3000A DC / 1500A AC
- Correct measurement of all types of square wave arcs
- Can work with all load resistors, but has been pre-programmed with settings for RC500 and Checkmaster

# WeldScanner Validator

Easy to connect to any welding power source

## Processes:

- GTAW
- SMAW
- GMAW
- SAW

WeldScanner

Load resistor (RC500)

Process sensor P1000

Power source (any)

# WeldScanner Validator

- The WeldScanner Validator can validate all brands of welding equipment in accordance with the European Standard EN 50504 - Validation of Arc Welding Equipment. It also offers the same full level of functionality as the WeldScanner.
- The device ensures precise measurement for welding voltage, welding current, wire feed speed and the gas flow rate. There are also two additional free measuring channels which can be used for measuring travel speed and an additional gas flow sensor.
- The WeldScanner Validator is delivered as a calibrated system and should be calibrated on an annual basis, e.g. in our laboratory, to ensure compliance with the standards also providing traceability to national standards.

WeldScanner validator – case with sensors

# WeldScanner Validator - data acquisition sensors

## Sensor package basic

- Process sensor P1000
- Wire feed sensor mobile
- Gas flow sensor

## Sensor package SAW

- Process sensor P1500
- Wire feed sensor SAW

# Easy to connect

1. Put the welding cable through the opening of the process sensor

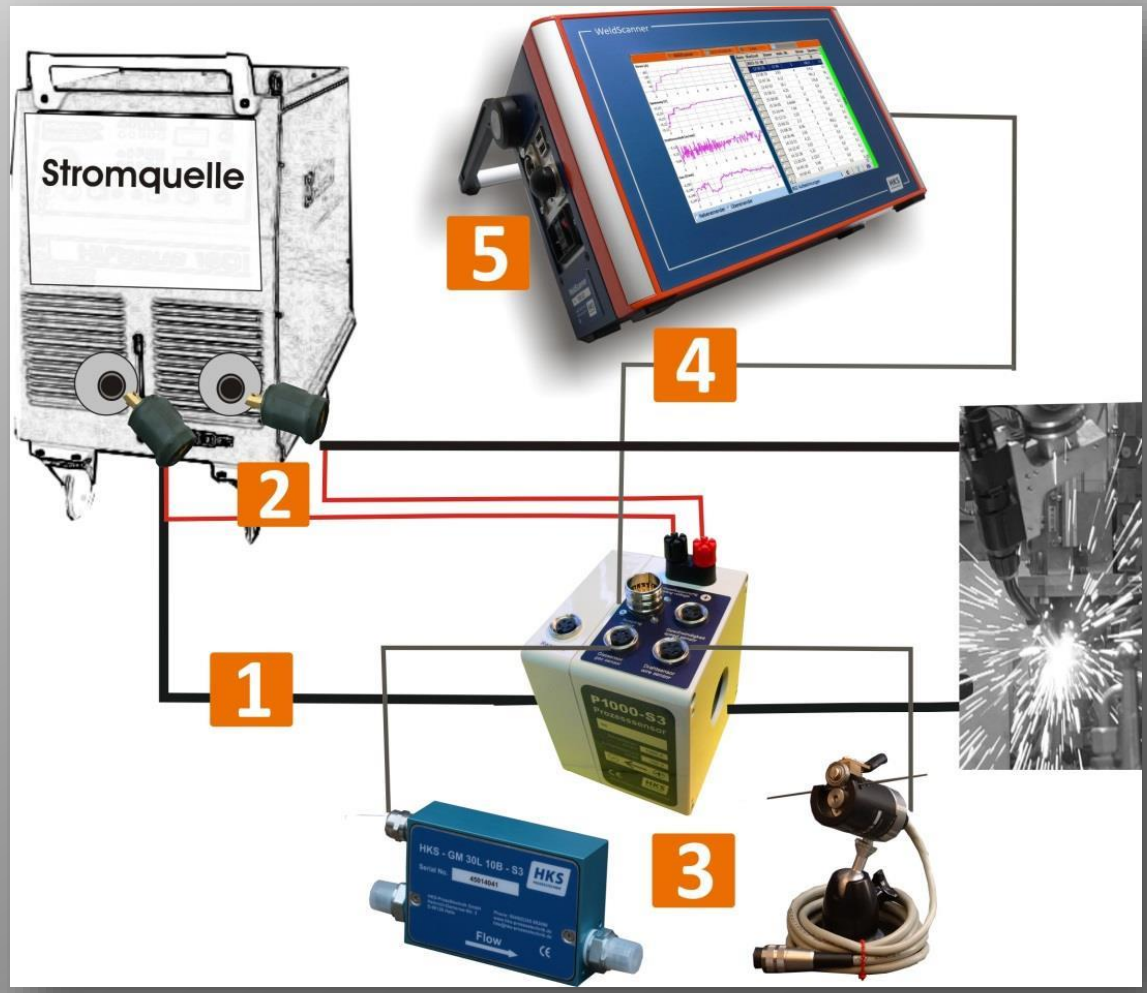
2. Connection of the welding voltage over the enclosed adapters to the sockets of the current source and the red measuring cables with the process sensor

3. Optional: Connect wire and gas sensor

4. Connect the process sensor to the WeldScanner with the interface cable

5. Connect the WeldScanner to the power supply and switch on.

**The start of the welding process is recognized automatically.**



# WeldScanner

- ✓ Multipurpose
- ✓ For automatic- and manual welding
- ✓ Simple handling, very robust

*Many thanks for your interest !*

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