

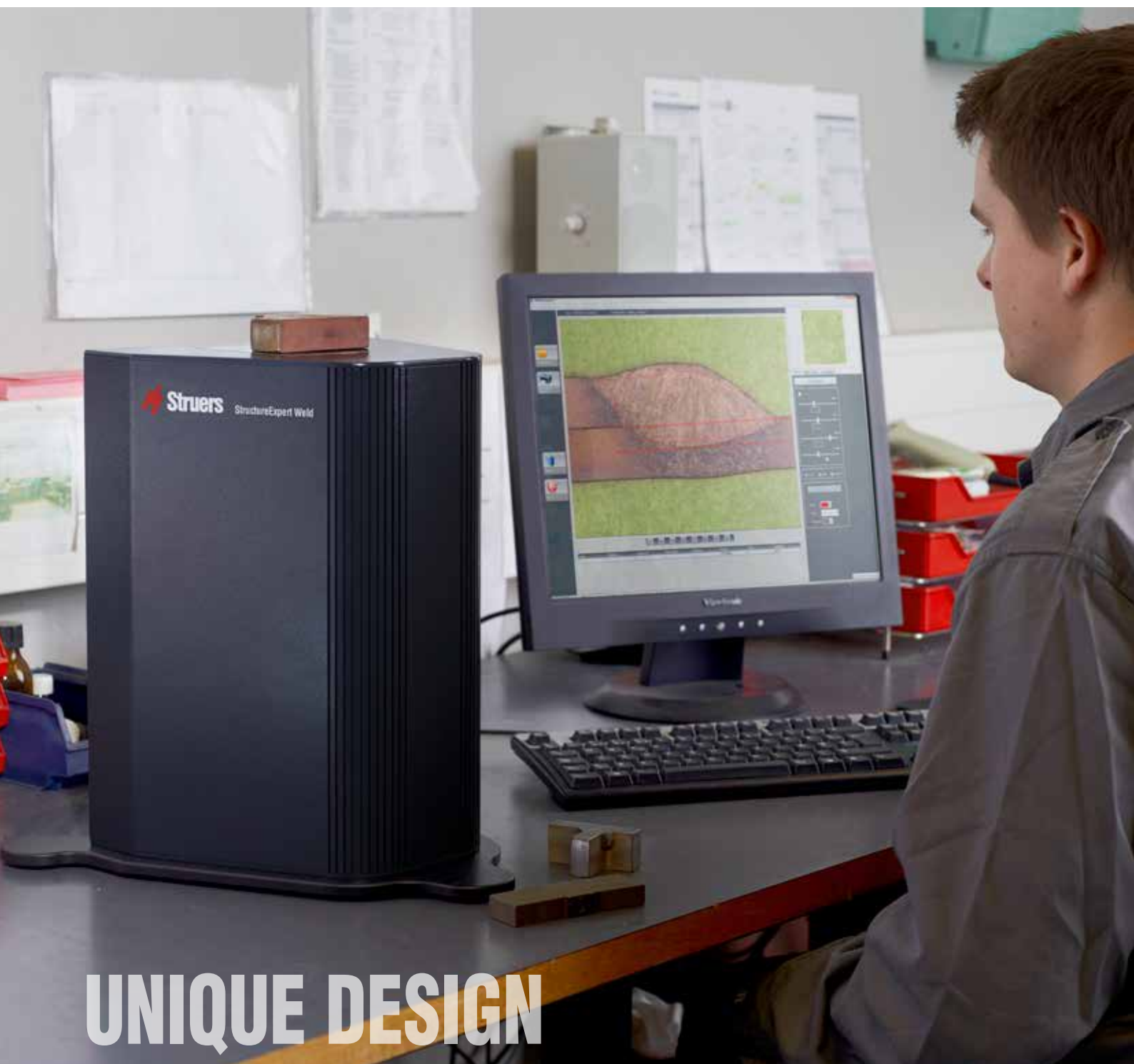
## Reliable Welding Control – Every Time



- Save time
- Ensure accuracy
- Achieve maximum weld bead control

# The simple way to precise weld bead inspection, measurement and control

Welding quality control is an important part of a production process. You need to ensure each inspection is accurate and meets your quality standards. But weld bead inspection can be tedious, time-consuming and costly – especially if you spend a lot of time manually calibrating and adjusting equipment and software that are not specifically designed for welding control.



## UNIQUE DESIGN

Now you can ensure maximum weld bead quality with StructureExpert Weld. StructureExpert Weld is the only stand-alone dedicated imaging tool that gives you a simple way to ensure precise and cost-efficient weld bead inspection, measurement and reporting – all in one solution.

Unique design and features enable you to ensure accuracy, efficiency and control of after-weld quality assurance processes.

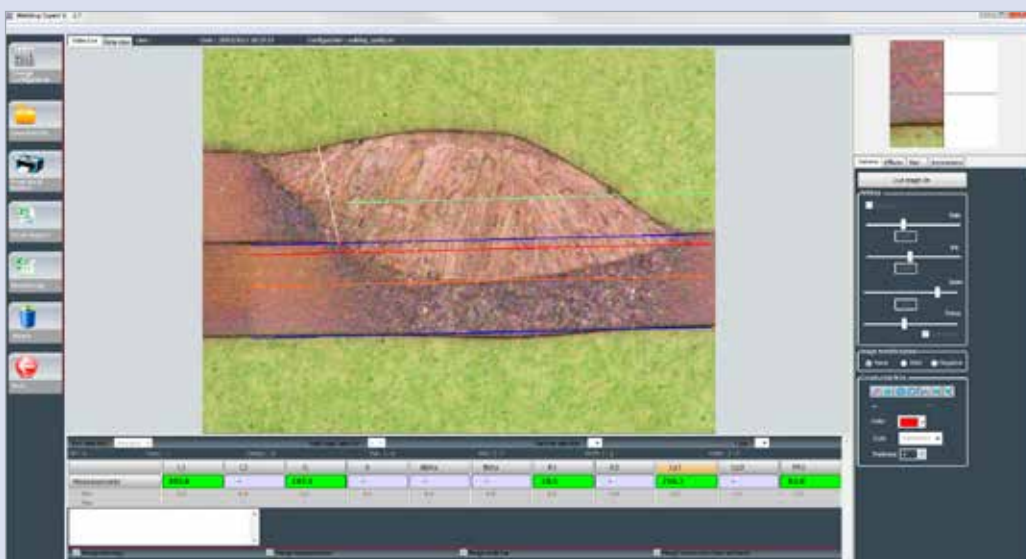
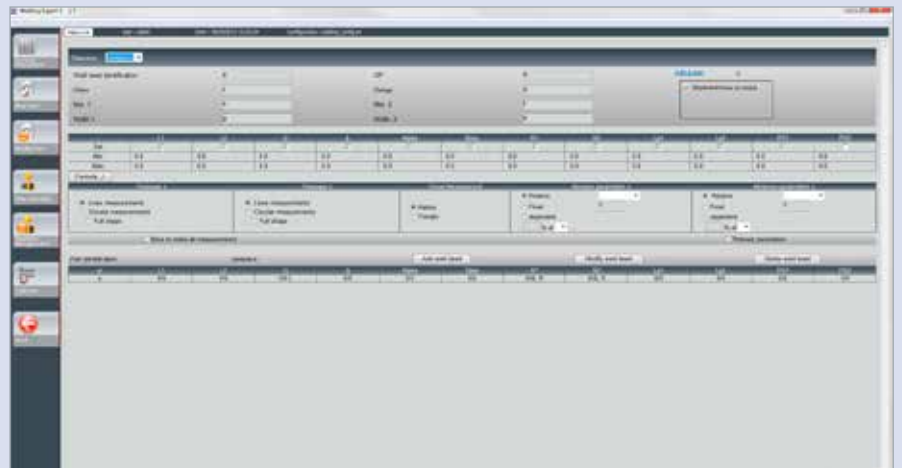
### Save time

StructureExpert Weld is designed for easy, precise placement of your prepared sample. The unique inverted optical system ensures that the sample surface always has

the same distance to the camera, making continuous height adjustments and calibrations unnecessary. Simply place your sample on the glass surface and the built-in digital camera and an autofocus zoom lens will give you maximum flexibility in selecting a perfect field of view for all measurements. And with just one click you have the information you need for your check.

### Metrology System Administration

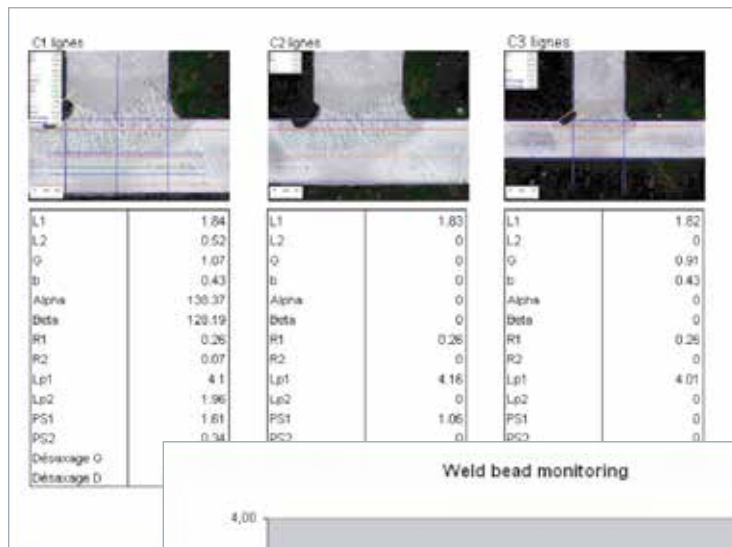
A complete description of the welding part and the weld bead acceptance criteria are registered and protected by password. All parameters are automatically loaded and processed during measurements achieved by operators.



### Measurement

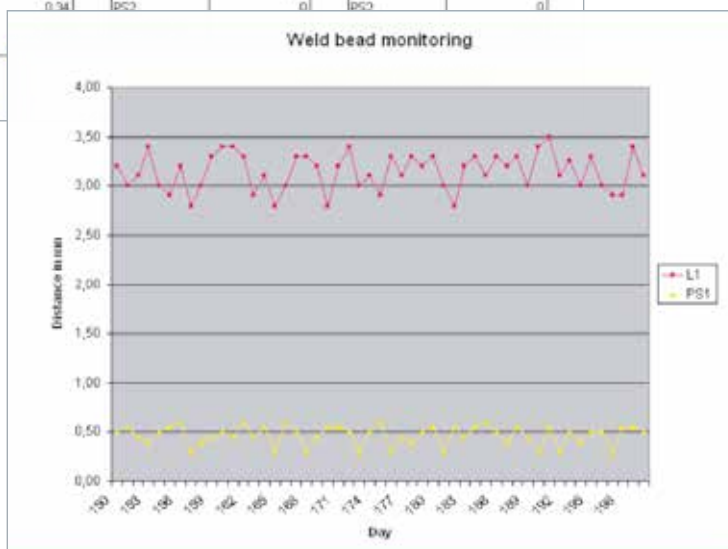
StructureExpert Weld allows measurement of samples ranging from 80 mm to 0.7 mm, with accuracy down to 0.5 µm. Red or green colours quickly indicate whether you are in or outside tolerances. Measurement results can be saved into Excel spreadsheets.

# DEDICATED SOFTWARE



### Reports

For single as well as multiple weld bead measurements a report can be created.



### Statistics

StructureExpert Weld includes a software module for the qualitative monitoring of weld beads and parts and statistical tools are provided to ensure a complete tracking of the welding process.

### Minimize mistakes and errors

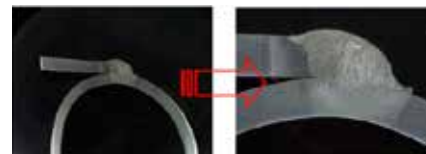
StructureExpert Weld helps to minimize mistakes and errors due to manual adjustment. The built-in digital camera and software-controlled magnification adjustment make it easy to find the best field of view. The calibration is loaded automatically with the set magnification – ensuring maximum accuracy and reproducibility. The dedicated internal LED ring light provides bright, uniform illumination for crisp, high image contrast and precise measurements.

### Manage welding control processes efficiently

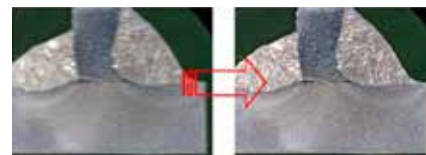
StructureExpert Weld helps you boost welding quality. Dedicated weld control software with specific measurement tools ensure that weld bead measurement and analysis processes are performed accurately. Through easy-to-customize report templates and data tracking possibilities you can both speed up your processes and ensure full traceability of them.



Built-in digital camera and internal LED ring light



Motorized zoom function and automatic illumination adjustment



Autofocus

## Specifications

### StructureExpert Weld-5

Dedicated imaging system for weld bead measurement. Consists of compact housing, LED lighting system, digital camera with motorized zoom and dedicated software for measurement and reporting. Field of view from 80 to 4.5 mm (3.1" to 0.2"), equivalent to 2.5x - 50x magnification. Includes 5 glass windows (CLSET001), 2 protection covers, calibration plate (CLCAL001) and necessary cables.

Additional software modules (CLOUT002, CLOUT003, CLDAT002) are ordered separately. UKAS certificate (CLUKA001) for calibration plate and Plastic covers (CLSET002) are optional. PC and monitor are required, but not included.

Cat. no:

CLWEL019

### StructureExpert Weld-11

Dedicated imaging system for weld bead measurement. Consists of compact housing, LED lighting system, digital camera with motorized zoom and dedicated software for measurement and reporting. Field of view from 8.27 to 0.68 mm (0.33" to 0.03"), equivalent to 20x - 240x magnification. Includes 5 glass windows (CLSET001), 2 protection covers, calibration plate (CLCAL003) and necessary cables.

Additional software modules (CLOUT002, CLOUT003, CLDAT002) are ordered separately. UKAS certificate (CLUKA002) for calibration plate and Plastic covers (CLSET002) are optional. PC and monitor are required, but not included.

CLSYS011

## Accessories

### Glass Window

Glass windows for StructureExpert Weld, 5 pcs.

Cat. no:

CLSET001

### Glass Window, hardened

Hardened glass windows for StructureExpert Weld, 5 pcs.

CLWEL003

### Process Tracking Module

Software module for process tracking of measurement evolution over a specific time period.

CLOUT002

### Data View Module

Software module for extended display of old measurement data and for edition of old measurement results.

CLDAT002

### Min & Max Action Limit Module

Software module for definition of additional min./max. action limits (in addition to the standard min./max. acceptance criteria limits.) Includes additional report templates.

CLOUT003

### Report Generator Module

Software module for creation and editing of Excel report templates.

CLREPO02

### Plastic Covers

Plastic covers for prevention of water and dirt entering the camera chamber. With mounting bracket. 100 pcs.

CLSET002

### Calibration Plate

Calibration plate for calibration of StructureExpert Weld-5 measurement software. 50 mm. Including accredited certificate CLUKA001

CLCAL001  
CLCAL001C

### Calibration Plate

Calibration plate for calibration of StructureExpert Weld-11 measurement software. 50 mm. Including accredited certificate CLUKA002

CLCAL003  
CLCAL003C

### UKAS Certificate for Calibration Plate

Accredited certificate (UKAS) for calibration plate CLCAL001. 10 points calibration. Can only be ordered in combination with CLWEL019.

CLUKA001

### UKAS Certificate for Calibration Plate

Accredited certificate (UKAS) for calibration plate CLCAL003. 10 points calibration. Can only be ordered in combination with CLSYS011.

CLUKA002

### Coaxial illumination for StructureExpert Weld-11

Illumination system for improved structural analysis. For StructureExpert Weld-11

CLWE0020

## General Data

### StructureExpert Weld-5

H x W x D: 35 x 24.5 x 22 cm (13.8 x 9.6 x 8.7")  
4 Kg / 9 lbs

### StructureExpert Weld-11

H x W x D: 42.5 x 24.8 x 22 cm (16.7 x 9.8 x 8.7")  
6 Kg / 13 lbs

### Power supply

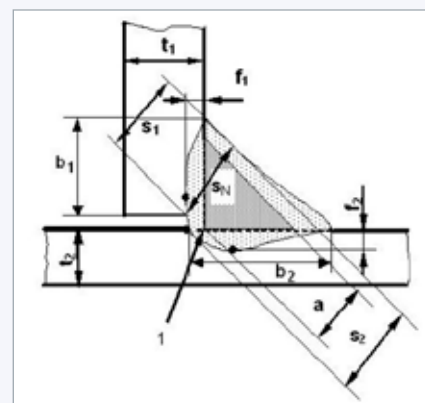
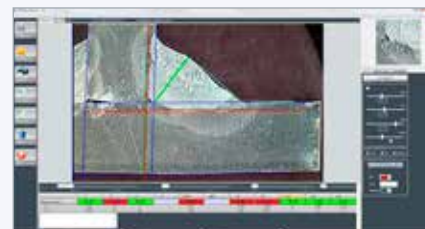
1 x 110-220 V / 50-60 Hz

### PC recommendations

Windows XP Pro SP3 / Windows Vista /  
Windows 7 / Windows 8 / Windows 10, 32 & 64 bits  
2 Ghz Processor / 2 GB RAM /  
1280x1024 graphic card (min.)  
Excel 2003 Pro Edition or higher  
Min. 2 x USB 2.0 ports (camera + dongle)  
19" LCD monitor

*Struers' equipment is in conformity with the provisions of the applicable International Directives and their appurtenant Standards. (Please contact your local supplier for details)*

*Struers' products are subject to constant product development. Therefore, we reserve the right to introduce changes in our products without notice.*



### Measurement

*Measurements are easily performed according to individual standards and acceptance criterias. Red or green colours quickly indicate whether you are in or outside tolerances.*

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