

## Specifications

### StructureExpert Standard

Dedicated imaging system for verification of microstructures and dimensional measurements. Based on a workflow oriented user interface for easy and repeatable operation. Includes software for basic manual measurements and reporting. Dedicated application oriented modules are ordered separately (CLSTR040-081). Consists of compact housing, LED lighting system and motorized zoom camera. With auto-focus and automatic illumination adjustment. Field of view 6.24 mm to 294 µm, equivalent to 25x - 500x magnification. Measurement resolution 0.11 µm. Includes manual xy-stage capable of supporting 3 kg, e.g. large specimen holders. Includes calibration plate (CLCAL003) and necessary cables. Accredited certificate (CLUKA002) for calibration plate is optional. PC and monitor are required, but not included. See CLSTR030.

## Accessories

### StructureExpert Grain

StructureExpert module for grain size analysis of metals, steels as well as largest grain (ALA). Conforms to standards ASTM E1382, ASTM E112, ASTM E930, EN ISO 643. Only works in combination with CLSTR002

### StructureExpert Cast Iron

Module for analysis of graphite in cast iron, including nodularity evaluation and ferrite/pearlite ratio. Conforms to standards ASTM A247, EN ISO 945. Only works in combination with CLSTR002.

### StructureExpert Coating

Module for measurement of metal and oxide coatings. Conforms to standards ASTM B487, EN ISO 1463. Only works in combination with CLSTR002.

### StructureExpert Decarb

Module for decarburisation depth measurement of steels. Conforms to standards ASTM E1077, EN ISO 3887. Only works in combination with CLSTR002.

### StructureExpert Phase

Module for volume fraction and phase percent measurement. Conforms to standards ASTM E562. Only works in combination with CLSTR002.

### StructureExpert Measure

Module for dimensional measurements and checks. Based on freely definable measurement templates, typically based on an internal inspection standard. With 3 sets of min-max limits (quality levels) and G-NG warnings in green-red. Includes all measurement tools, e.g. length, free-hand, parallel, perpendicular, circular, radius, angle etc. Only works in combination with CLSTR002.

### Report editor for StructureExpert

Software module for creation and editing of Excel report templates. Only works in combination with CLSTR002.

### UKAS Certificate for Calibration Plate

Accredited certificate (UKAS) for calibration plate CLCAL003. Can only be ordered in combination with CLCAL003 or CLSTR002.

### All-in-one PC system with 23" touch screen monitor

Compact PC system with full HD multi touch screen monitor. Windows 8. Ordered software pre-installed.

## Cat. no:

CLSTR002

## Cat. no:

CLSTR040

CLSTR050

CLSTR071

CLSTR072

CLSTR081

CLSTR060

CLSTR090

CLUKA002

CLSTR030

## General Data

### Field of View (FOV)

0.294 - 6.24 mm

### Optical magnification

Comparable to 25x-500x on regular microscopes

### Camera resolution

18 MP CMOS

### XY Stage

XY stage, with a completely flat surface, supplied both with glass plate and holed metal plate. Capable of supporting at least 3 kg and a Ø160 mm dia. Struers specimen holder.

### Approximate dimensions

Height 300 x Width 200 x Depth 500 mm

### Minimum PC specifications

Windows 8 / Windows 10, 64 bit  
Intel Core i7 - 4 x 2.5 GHz CPU / 8 GB RAM  
1 x USB 3.0, 3 x USB 2.0  
Graphic card 1920 x 1080  
Screen resolution 1920 x 1080 (full HD)  
20" LCD monitor  
Excel Pro 2007 or higher

### Conforms to standards

Grain sizing: ASTM E1382, ASTM E112, ASTM E930, EN ISO 643  
Cast iron analysis: ASTM A247, EN ISO 945  
Coating thickness: ASTM B487, EN ISO 1463  
Decarburisation depth: ASTM E1077, EN ISO 3887  
Phase analysis: ASTM E562

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.

**Structure verification in 30 seconds?  
See for yourself at  
[www.StructureExpert.com](http://www.StructureExpert.com)**