



# **WESTCAM TECHNOLOGIES**

## Crack Detection & Analysis



# YOUR ADVANTAGES

## The BVS-R Systems

### Confident and reliable according to YOUR quality standards

*Developed for YOUR Image Processing and Crack Detection tasks ...*



*... at YOUR test benches in R&D, QA and more ...*

- ❑ **Automation** of test runs without interruptions for inspections
- ❑ **Increase** of the test bench utilization by night and weekend operation (24/7)
- ❑ **Improved** efficiency by reduced test run time and reduced costs

#### **Autonomous monitoring**

- ❑ **Online** and **remote monitoring** of crack development
- ❑ **Percentage-precise** evaluation of the test sequence and crack development (online and postscript)
- ❑ **High quality** in the documentation and evaluation of the test results

# TECHNICAL SPECIFICATIONS

## Our know-how in image processing

### For YOUR Know-WOW

#### BVS-R systems consist of

- **Evaluation unit** built in a mobile test cabinet
  - optional with cooling / heating system for the climate chamber
- 1 to 6 **camera modules** with lightning unit
  - optional with focusing lens, climate control housing and shaker housing
- **Evaluation computer** with software package
- **Software license** according to your application

#### Values to image section [HxV] in mm

| Operating distance | BVS-R 12 mm | BVS-R 16 mm | BVS-R/F 16 mm; m~0,3 | BVS-R/F/S 16 mm; m~0,3 | BVS-R/F/S/C 16 mm; m~0,3 |
|--------------------|-------------|-------------|----------------------|------------------------|--------------------------|
| 100 mm             | 36 x 27     | -           |                      | 37 x 28                |                          |
| 200 mm             | 60 x 45     | 56 x 42     |                      | 67 x 50                |                          |
| 300 mm             | -           | 86 x 64     |                      | 106 x 80               |                          |

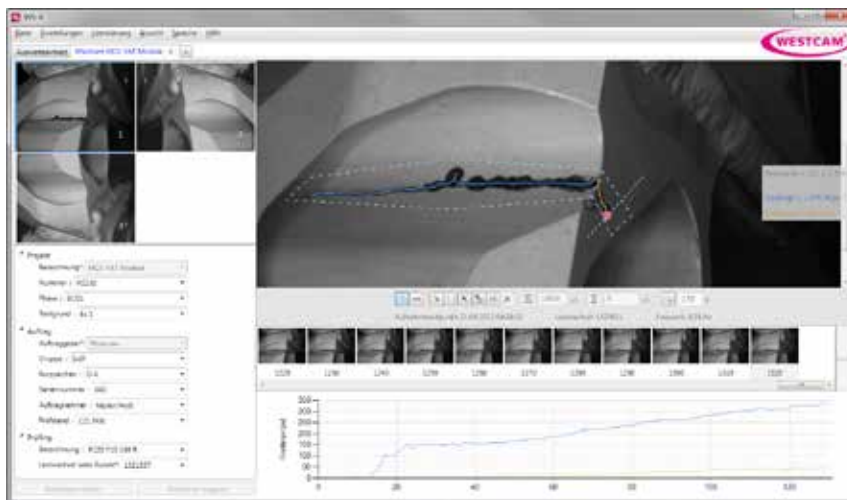
#### Temperature range and und relative humidity

| module   | Temperature range | relative humidity (non-condensing) |
|--|-------------------|------------------------------------|
| <b>BVS-R, BVS-R/F/S</b><br>(operation: indoor climate) | +10°C to +45°C    | 45% to 80%                         |
|  | +1°C to +10°C     | 10% to 45%                         |
|  | -8°C to +1°C      | 0% to 10%                          |
| <b>BVS-R/F/S/C</b><br>(operation: climate chamber)     | +30°C to +85°C    | 0% to 100%                         |
|  | +1°C to +30°C     | 0% to 40%                          |
|  | -15°C to +1°C     | 0% to 25%                          |
|  | -45°C to -15°C    | 0% to 5%                           |

## Image Processing and Crack Detection Software

**Scalable and licensable according to YOUR application areas**

*Online crack detection with crack development chart*



- ❑ **Clear graphical user interface** for configuration of the test parameters and image evaluation
- ❑ **Simultaneous execution** and analysis of several test projects for up to 6 test benches in parallel
- ❑ Individually adjustable test fields for inspection of the relevant test specimen sections
- ❑ Freely selectable test windows for simultaneous data recording of up to 6 cameras
- ❑ **Synchronized** image recording with up to 6 different trigger signals from the test bench (load cycle, BLNV or time intervals)
- ❑ **ONLINE** automatic crack detection and monitoring of crack development
- ❑ **Crack length** measured in pixels (optional: metric measurement)
- ❑ Test data in the picture stamp such as time, load change, km, picture number
- ❑ Test bench switch-off signals based on crack length or other events
- ❑ **retrospective crack evaluation** with additional office license
- ❑ **Export** of the crack evaluation with the crack development diagram as image series or video
- ❑ **Multilingual** user interface
- ❑ Runs on Windows operating system

# PRODUCT FAMILY

## The BVS-R product family

### Individual and versatile as YOUR testing requirements

- **BVS-R** is our standard crack detection system
- **BVS-R/F** with easy image adjustment by remote focus lens
- **BVS-R/F/S** for load application on vibratory plates and high g-forces
- **BVS-R/F/S/C** and our climate expert for the climate chamber use

**STB** All **SingleTestBench (STB)** systems can be **equipped with 1 to 6 camera modules**

**MTB** Complex tasks are solved with our **MultiTestBench (MTB)** version for the use of **up to 6 test benches** in parallel operation

## Additional image processing solutions needed?

For example:

- Automation solutions for your test benches
- Automation solutions for your QA requirements
- Etc.

We are pleased to offer you tailor-made solutions for your individual requirements.

# HOW YOU FIND US

## Sensor & Image Processing (SnIP)

**Your benefit from our WESTCAM Know-WOW:  
Integrate YOUR testing requirements with our  
core competences in image processing.**

- Efficient and short development cycles
- Complete solutions – one partner
- From development to prototyping to competitive serial production

## Your direct contact to WESTCAM SnIP

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