

# 3D Mould break check – Software features (1)

The 3D mould break check system operates with a high-performance Panel PC. The mould break check software is customized and extendable with an integrated Cognex VisionPro image processing library. The software offers numerous features, some of which require additional hardware connected to the Panel PC.



## Data service / Client software

The mould break check interface has two data services, which can transmit different data to a client via a TCP connection. The mould break check system acts as the server system.

One of the data services transmits current results as and when they arrive. The other receives different queries and then delivers an image or a series of results.

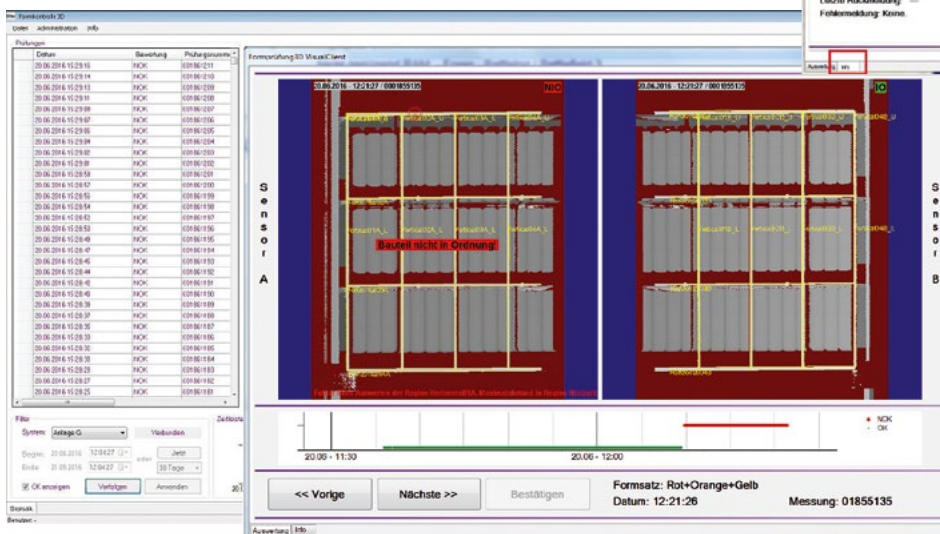
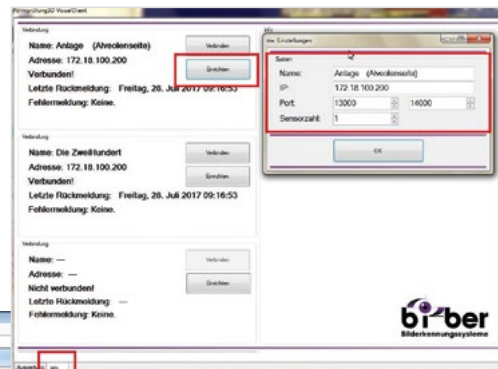
## Viewing results remotely

Based on both of these data services, two software components are available for viewing data, such as the last NOK result, by an operator from a more remote location in the plant. This can be useful in situations such as when a mould unstacker is located far from the actual testing location. The software can be run on a low-power PC.

The viewing software can be connected to several independently configurable testing systems to receive data emitted by them. The time bar indicates the results from the various systems using different colors. The images are named by the system. The client is easy to configure via a dialog box.

## Administration software

A second software program can manage several systems at once and display their results. The user can view the history of the last shift, last day or last week – from a workstation computer, for example – to analyze NOK evaluations. In addition to the straightforward view of a results window, the user can also call up a detailed 3D view.



Configuration menu

Administration software screenshot (left) and unstacker software screenshot (right)

# 3D Mould break check – Software features (2)

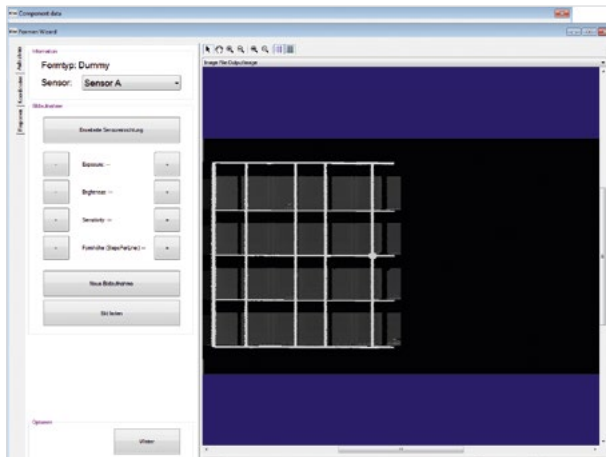
## Set-up wizard for new mould types

Mould types can be selected either automatically through a main controller, or directly by the user in the Vision System. A user-friendly dialog box is used to assign program numbers and create new mould types.

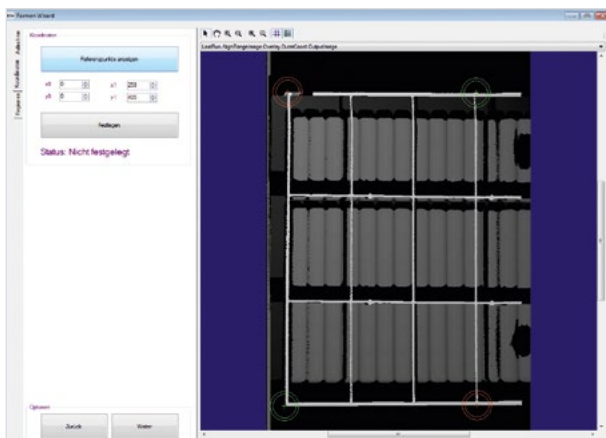
The set-up wizard enables trained users to enter new moulds and layouts easily. The wizard **automatically guides the user through this process in three successive steps**.

### Step 1:

Only the essential sensor image exposure parameters are displayed: brightness, detection sensitivity and image size. However, the user can still access all the advanced settings if required for specific cases.



Step 1: Image exposure screen wizard



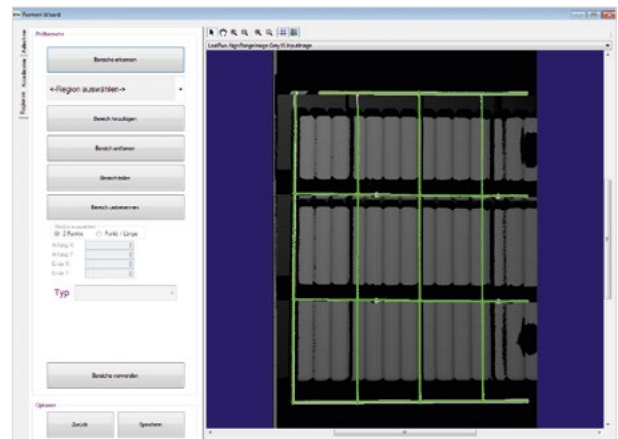
Step 2: Reference screen

### Step 2:

Next, the dimensions and outer edges of the mould layout are specified to enable the mould type to be defined in metric units, e.g., based on a given drawing.

### Step 3:

The **inspection zones are automatically set**. The defined zones can be adjusted using the input mask. Specific actions, such as dividing, creating or deleting zones, can be performed using buttons.



Step 3: Detect screen

## RFID Function

As a rule, each verification is assigned a unique number to enable the different data in the system to be cataloged. Image data, log entries and results can all easily be called up on the system with this number.



An add-on for this functionality offers users the possibility of reading mould-integrated RFID chips. The information contained in the RFID chips offer the bonus of **correlating the physical mould and the data saved under the verification number**. The user can also call up repeats and **mould history** from the database.

The system reads tags thanks to a system developed by Turck, which for each mould break inspection system consists of a PLC, a gateway and two read/write heads. The two systems communicate via a Modbus/TCP connection.

## Bi-Ber GmbH & Co. Engineering KG

An der Wuhlheide 232B · D-12459 Berlin

Tel.: +49 (0)30 - 8103 222 60

Fax: +49 (0)30 - 8103 222 61

info@bilderkennung.de · www.bilderkennung.de