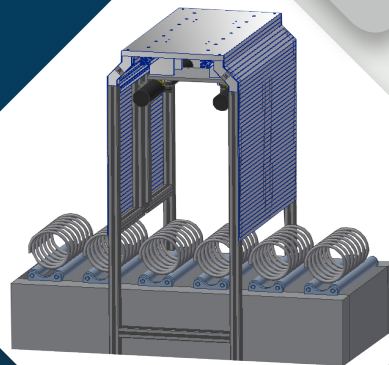
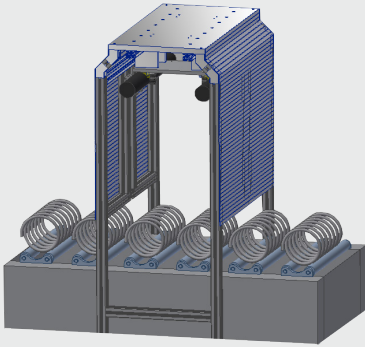


F510 smart

Colour Code Check
of Suspension Springs





Suspension springs are produced with various marks to allocate each spring to its respective type and load group as well as to document the production process. imess F510 smart supports the operator during system setup by checking the colour and textcode marks for several characteristics. Camera pictures which are subsequently evaluated by imess software are recorded while the springs are moving along the prism belt.

Colour Code Checking

Characteristics	
Colour Marks	Quantity
	Order
	Size
	Distance
	Hue
Text Code / Pictogramm	Present
	Correct
Matrix Code / Barcode	Present
	Correct
further characteristics on demand	

Explanation:

The test characteristics are recorded via non-contact measurement. The measurement cabin over the prism belt includes two colour cameras which records the pictures. The software then analyses at once with regard to the following characteristics:


Software Features:

- Test Plan Management
- Process Control
- Statistic
- Various graphical displays
- Fast and easy teach-in process for new springs
- Server connection optional


The measurement result is depicted numerically and graphically in the software. Each characteristic is listed and evaluated with regard to its tolerance limits.

Feder Position 1, Lastgruppe 2

Soll



Ist



Übereinstimmung: (≥ 65)

98

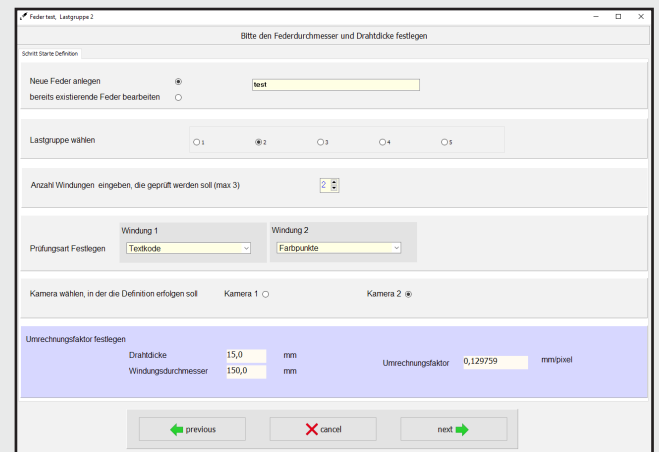
	Soll	Ist	Soll	Ist	Soll	Ist
Farbe	<div style="background-color: green; width: 20px; height: 15px;"></div>	<div style="background-color: green; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>
Helligkeit	<div style="background-color: green; width: 20px; height: 15px;"></div>	<div style="background-color: green; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>
Breite	<div style="background-color: green; width: 20px; height: 15px;"></div>	<div style="background-color: green; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>
Höhe	<div style="background-color: green; width: 20px; height: 15px;"></div>	<div style="background-color: green; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>
Fläche	<div style="background-color: green; width: 20px; height: 15px;"></div>	<div style="background-color: green; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>
Abstand	<div style="background-color: green; width: 20px; height: 15px;"></div>	<div style="background-color: green; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>	<div style="background-color: blue; width: 20px; height: 15px;"></div>

Depiction of results (screenshot)

The setup of springs is done fast and easily with the semi-automatic Teach-In-Process. The program guides the operator through the process and provides practical support from choosing the load group to defining the marks step by step.

The Basics

The first step defines the spring name and its respective load group. Furthermore the number of coils is set and the mark type has to be selected.



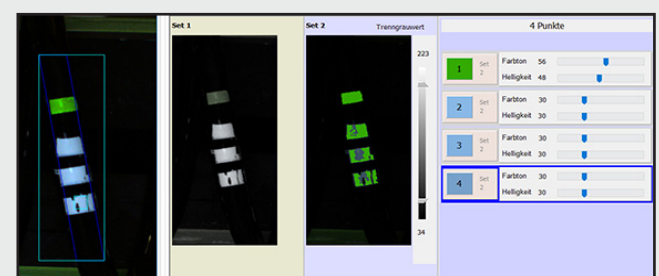
Define Model

The Teach-In provides a model to allot text code. The search region is drawn with either arrow keys or cursor directly within the camera picture. Once the code is completely visible, the detection can be tested.



Define Colour Dots

Several camera settings can be defined as a set unit which allows the secure detection of bright orange, brown etc dots. The software shows the defined search region in each set. Thus, each dot can be setup accurately. Its settings are tied to each spring and are used for each measurement of the selected basic type.



React smart

The software smartly reacts to spring movement and automatically adjusts the search region. Therefore, the automatic process is guaranteed despite slight changes of the spring position. It has to be set only whether the mark is expected on either the first or second coil. Subsequently, the teach-in process is finished.



