![Zumbach]

SWISS PRIME MEASURING SINCE 1957

SIMAC® 40/70

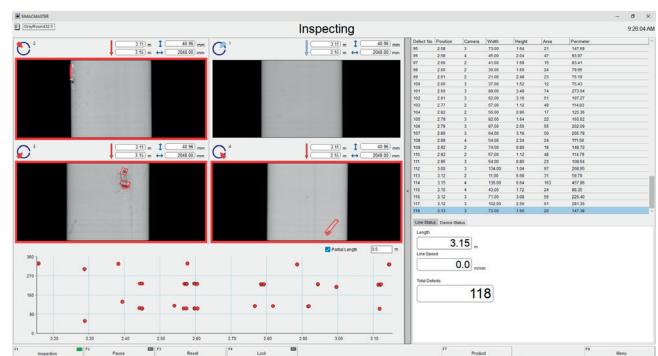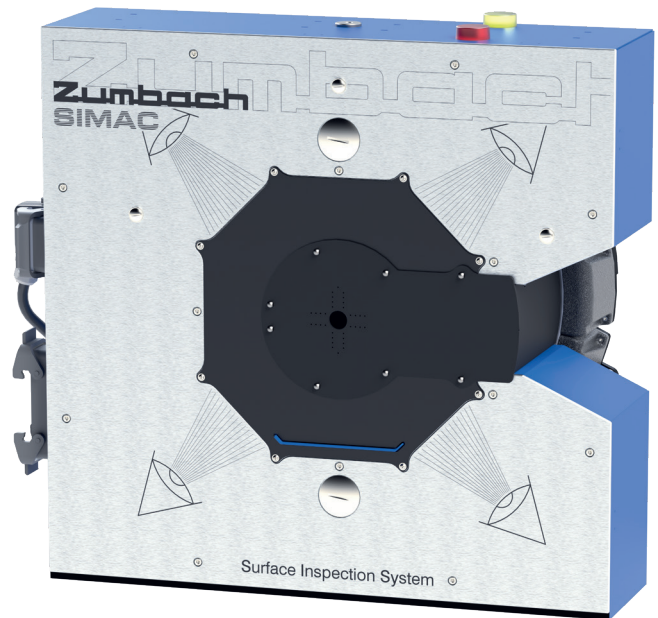## Continuous surface inspection for all kind of products

ZUMBACH's all-new SIMAC 40/70 is fulfilling today's needs for in-line surface inspection of extruded products like pipes, cables and hoses with the consistent implementation of machine vision and machine learning.
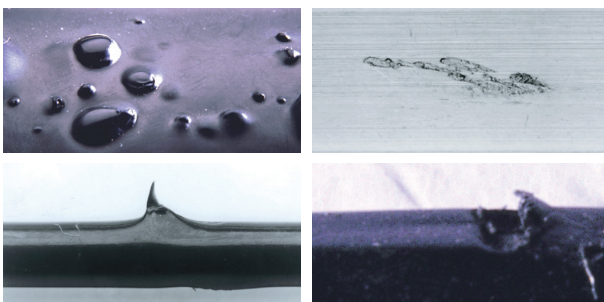
Defect detection

The SIMAC detects anomalies and material defects that are difficult to detect, such as compounds that are not fully crystallised, burnt material inclusions, missing coatings, scratches, ridges, colour defects, bubbles, cracks, holes, etc.
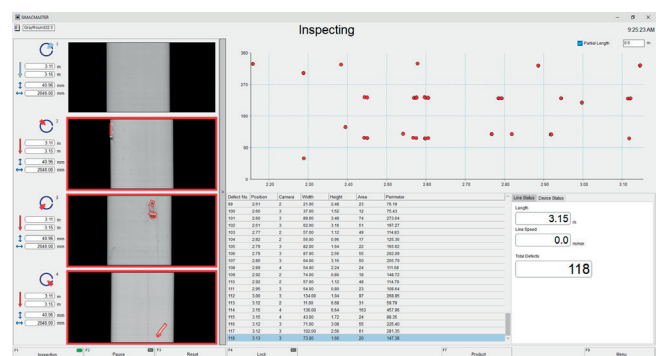

Main Features

- Continuous in-line surface inspection
- The 4 cameras ensure 100% coverage even for small product thanks to overlapping zones.
- Advanced algorithms search in the image for defects based on pre-trained examples.
- Quick and easy introduction into production lines with the opening on the side
- Compact design allows easy maintenance
- Works with all surfaces and colors
- Data recording for later analysis and defect detector training.
- Storage of defects in the data base
- Ultra-bright LED panels allow the detection of defects on darkest surfaces
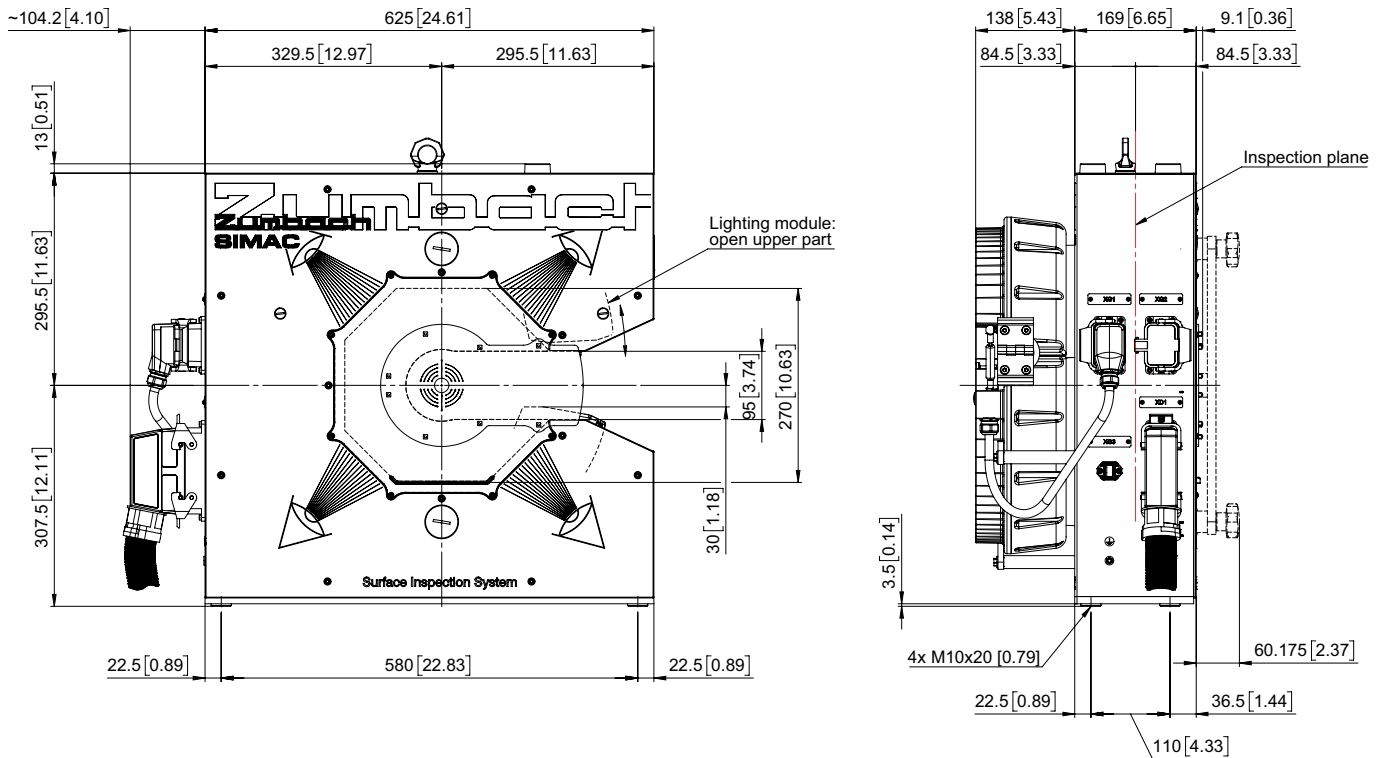

SIMACMASTER main screen

The optical system detects all kinds of surface variations, categorizing them as defects on the most diverse, continuously produced products.

SIMACMASTER screen with typical defects

Dimensions

~104.2 [4.10]   625 [24.61]
329.5 [12.97]   295.5 [11.63]
13 [0.51]
295.5 [11.63]
307.5 [12.11]
95 [3.74]
270 [10.63]
30 [1.18]
22.5 [0.89]   580 [22.83]   22.5 [0.89]

Lighting module:
open upper part

Surface Inspection System

138 [5.43]   169 [6.65]   9.1 [0.36]
84.5 [3.33]   84.5 [3.33]

Inspection plane

3.5 [0.14]
4x M10x20 [0.79]
22.5 [0.89]
110 [4.33]
60.175 [2.37]
36.5 [1.44]

Dimensions in mm (inch)

Technical data

Model SIMAC	40	70
Product shapes	Round	
Measuring field	ø 40 mm (1.57 in.)	ø 70 mm (2.76 in.)
Min. product dimension	2 mm (.079 in.)	14 mm (.55 in.)
Max. product dimension	36 mm (1.42 in.)	63 mm (2.48 in.)
Min. detectable defect size	0.1 mm (.0039 in.)	0.2 mm (.0079 in.)
Max. scan rate	140'000 1/s	
Light source	LED white	
Number of cameras	4	
Max. line speed	500 m/min	200 m/min
Type of protection	IP 54	
Weight	approx. 48 kg (105.82 lbs.)	

Processor and display unit

– Graphical user interface with data base, remote access, I/O's
– Industrial PC with touch screen

Data acquisition and processing system	
Operating system	Windows™
Display	High resolution wide screen display
Network interface	2 x Ethernet (1 x customer / 1 x Local)
Communication interface	Digital in-/outputs, relay output, Webserver, OPC UA

™ Windows is a trademark of Microsoft Corporation

Measuring unit

Local processing unit with a touch
screen monitor on a swivel arm

* Technical specifications are subject to change without notice