compar ✕

excellence in machine vision & robotics

OPTICAL PRINT INSPECTION

Optical print inspection of Compar lower manufacturing costs and provide flawless end user products.
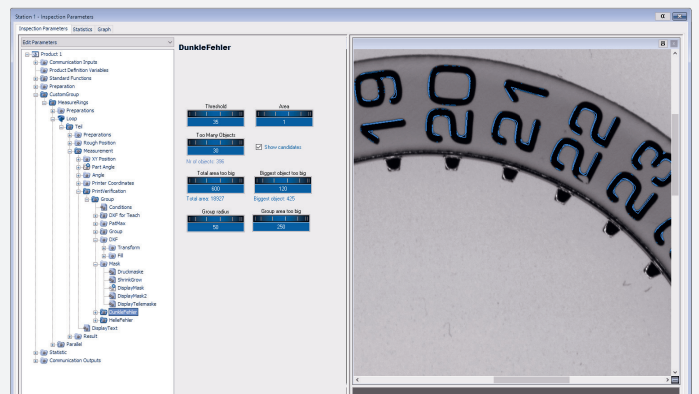
FLAWLESS PRINT QUALITY

Robust test algorithms. Detection of small defects from just 3 pixels in diameter
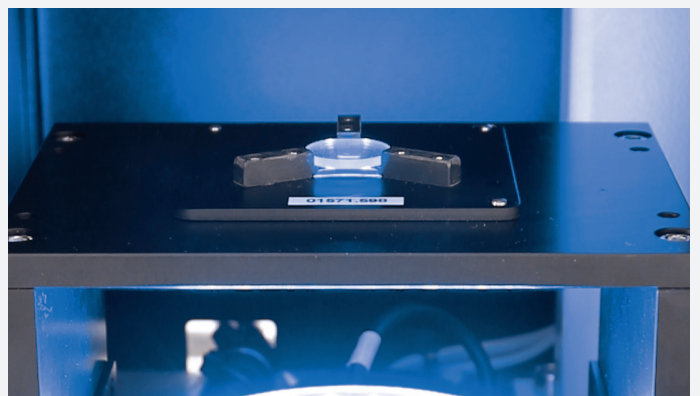

EASY OF USE

Quick and simple in-production teaching routines for new products. Short changeover times between different products

FLEXIBILITY GUARANTEED

Print inspection taught from golden templates, predefined geometries, or CAD template drawings, applied to flat and sculpted parts or continuously printed material

Compar optical print inspection systems
lower manufacturing costs and provide flawless end user products

Print inspection by Compar adapts to the test specimen requirements for the quality of the print image. Area scan cameras are suited to inspection at discrete positions, whereas inspection of cylindrical parts or continuous foils may require line scan cameras. Parts can be inspected "on the fly" or in a stationary position.

The main task is the processing of the images, and is carried out by comparing the camera image to a predefined template. The target image template can be generated from known good samples, which can be learned and, if necessary, be stored with additional criteria such as pattern deformation tolerances. Print image templates can also be created from CAD files, which specify the target shapes without any need for teaching.

Criteria / models	Print inspection from single-part drawing	Print inspection from learned part geometry	Print inspection from CAD template
Print image	b/w, color	b/w, color	b/w, color
Camera types	Area camera	Area & linescan camera	Area & linescan camera
Camera resolution	from 0.005 mm / px	from 0.001 mm / px	from 0.001 mm / px
Part size	from 2mm up to 500mm (other parts on request)		
Defect sizes	from 3 pixels in diameter		
Cycle time (1)	from 0.2 sec / part	from 0.1 sec / part up to 60 meter / min.	from 0.1 sec / part up to 60 meter / min.
System design	VISION**expert**® PC based machine vision software		
Machine vision highlights	Teach-in mode for new products, post-teaching in production mode, integrated product management, production statistics, expandable with additional tests such as OCR / OCV		
Inspection tasks	Identification, print inspection, OCR / OCV		

Options	
	» Multi camera system
	» Combination inspections eg. (Print, surface, and code verification)
	» Special solutions are also possible (on request)

(1) Time depends largely on the error size, the print image size as well as the transport speed and possible exposure time.

REALIZED APPLICATIONS / EXAMPLES / MARKETS

watch making	packaging	medtech	automotive	pharma	non industrial