

SWISS FLEXIBLE AUTOMATION SOLUTION

 available in  
**CELL** version



**DEEP LEARNING**  
INSIDE

## **Self-learning device for visual inspection of micro-technical parts**

### DESCRIPTION

Designed to perform automatic visual inspection of micro-technical parts, the **Microparts inspector** desktop machine is capable of self-learning and operates based on artificial intelligence and neuronal networks. This quality-control device can

replace and supplant human inspection. The inspection model (workspace) is easily generated from a catalogue of accepted and rejected parts. The machine can be used to inspect parts positioned flat in a tray with a surface area of 300 x 200 mm.

### ADVANTAGES



#### Turnkey

It is no longer necessary to develop a complicated code for performing visual inspection.



#### Easy to use

The parts are simply placed in a tray. It is not necessary to position precisely the dials for inspection.



#### Flexibility

The device can inspect parts with varying geometries from 1 to 40 mm in diameter.



#### Performance

The inspection is superior to the best quality inspector.



#### Reproducibility

The inspection criteria remain consistent.



#### Speed

The inspection cycle time is optimised.



#### Traceability

The device saves all the inspections performed.



#### Service

Assistance via remote maintenance and diagnostic.

APPLICATION EXAMPLES

**1** Functional and aesthetic defects

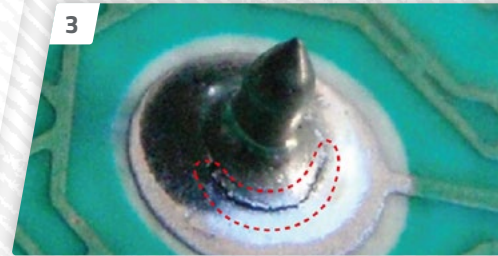
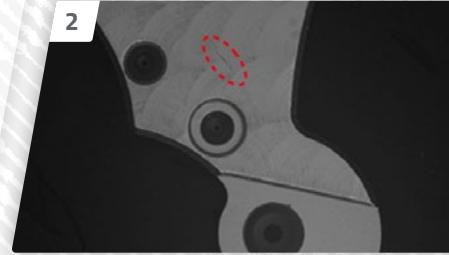
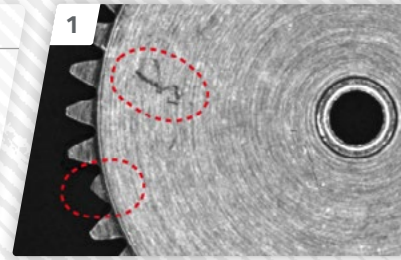
Detection of functional defects such as deformation of a gear tooth or the presence of swarf on mechanical parts (e.g. toothed wheels, moving wheels, pinions, etc.).

**2** Aesthetic defects

Detection of aesthetic defects such as scratches, cuts and imperfections on polished or decorated surfaces of watch parts (e.g. bridges, main plates, bearings, etc.).

**3** Functional defects

Detection of functional defects such as defective weld beads, insufficient bonding or lubrication on various materials (e.g. plastic, metal, leather, etc.).



TECHNICAL FEATURES

Cycle time	3 s / inspection
Inspection surface (LxD)	300 mm x 200 mm
Average operator training time	~ 2 h
Machine self-learning time	~ 1 h / recipe
Machine user	non-specialised operator
Weight	80 kg
Power consumption	220 V / 50 Hz 10 A
Protective cover (safety)	included (not shown in the images)
Lighting	coaxial / ring light

TECHNICAL DRAWING

