

S3099 EndoSpect

Robust inspection strategies using the Viscom standard library

Full member of the Viscom family of solutions

VMC user interface, flexible for various applications

Variable machine designs for individual adaption to customer requirements

Optional integration into existing production cells

Component identification possible using data carrier, barcode, DMC

Minimum conversion costs for product type change



Cylinder interior: Quality control of a seal

The Robust Solution for Automatic Optical Interior Inspection

In **production and assembly technology**, high demands are placed on the quality of the components produced. Inspection following each individual production step has become absolutely necessary to **ensure product quality**. Many characteristics can be reliably detected and evaluated optically, without physical contact.

Among the important requirements facing inspection machines for such applications are **high flexibility** in terms of adaption to specific production conditions and simple conversion to other product types.

**Flexible interlinkage
with customer's own
transport systems**

**Can be combined with
HARAN VMC verification
and repair station**

**Cycle time comparable to
typical assembly machines**



Cylinder interior: Lammellae
with defect

Can be calibrated

**Worldwide competent
service: on-site, hotline
and remote support**

Internet support



Cylinder interior: Surface
defect

Viscom offers a comprehensive product line for the automatic optical inspection of electronic assemblies, allowing reliable and efficient realization of various applications. The product line also includes the system concept **S3099 EndoSpect for the interior inspection of cylindrical drill holes**. Defects, such as surface damage, cavities, missing or incorrect components as well as chips, can be detected in quickly, reproducibly and positively.

The assemblies are usually transported into the inspection machine on a parts carrier. A moveable endoscope module, installed on the Z-axis, is inserted into the drill hole to be inspected. In the drill hole, the endoscope either **analyzes the complete wall surface or inspects only the relevant positions** to see if the desired structures are really present.

To accomplish this, an image acquisition unit with a **360° panoramic endoscope** with a camera module, which uploads images and transfers them to the evaluation computer, is employed. **Thanks to the different camera types, various resolutions can be realized**. The interior is lit by reflected LED light for inspection.

Evaluation is based on the **established Viscom inspection algorithms using the flexible VMC user interface**. Special applications and requirements can be realized as needed, at any time, simply by developing additional inspection algorithms. Naturally these systems can also be seamlessly combined with the **Viscom HARAN VMC verification and repair station**. Of course documentation of the inspection results on the basis of the individual assemblies is possible. An important prerequisite for this is **easy integration of data carrier systems, bar code or data matrix readers**.

Moreover, the system concept is based on a modular design. This allows simple **integration of customer transport systems, operation of high resolution or color cameras, customer-specific motion paths for the positioning unit** and much more. A **remote maintenance concept** as well as comprehensive **training and support** complete the Viscom offer for automatic optical inspection.

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