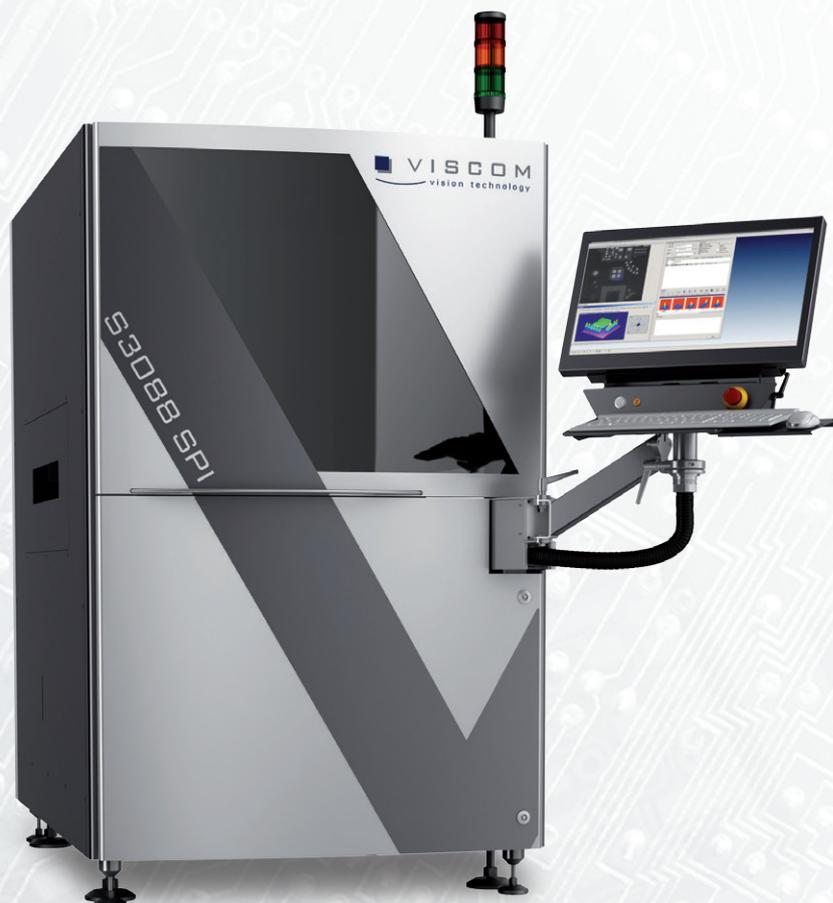


S3088 SPI

High performance
3D solder paste inspection
with Quality Uplink



3D SPI

DualView

Reliable 3D SPI with process control

Extremely fast and highly accurate in-line inspection

Extremely high throughput due to FastFlow Handling

High reproducibility

Very efficient and easy operation

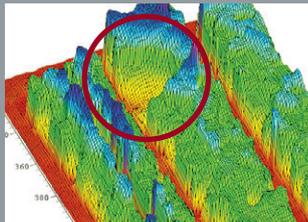
Fast program generation

Viscom Quality Uplink: simple verification and process optimization

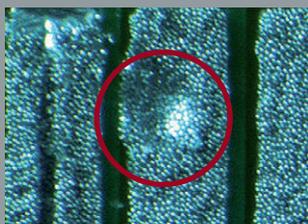
Less scrap – higher first pass yield

High speed inspection and high resolution camera technology

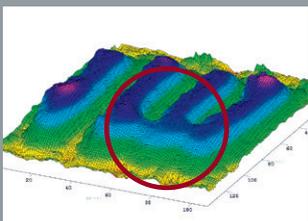
Add-on modules: verification, offline programming and SPC evaluation



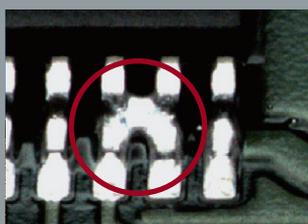
3D solder paste inspection



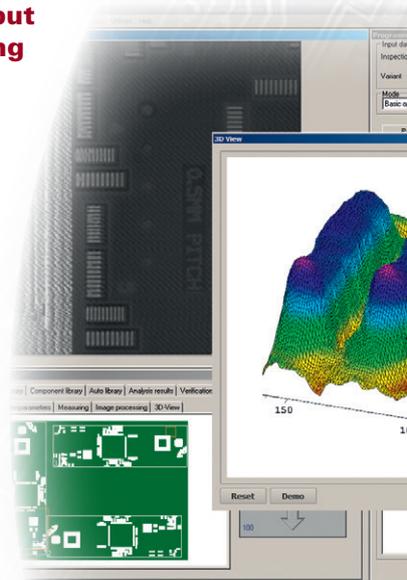
2D view of the solder paste



Paste bridge after printing



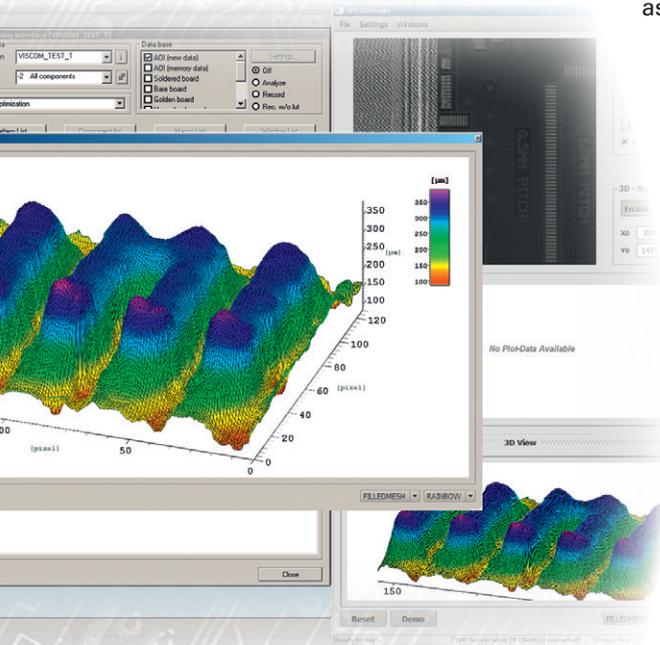
Paste bridge after soldering



In SMT electronic assembly production, 3D solder paste print inspection has established itself as the additional inspection gate to complement optical or X-ray inspection of electronic assemblies. The key task of the 3D SPI is detecting impermissible printed pads in terms of volume, form, smearing, paste bridges and offset. Yet the Viscom SPI offers far more than just defect detection: By evaluating the 3D measurement data and linking the results with the paste printer, placement systems, AOI and X-ray inspection, you have the possibility for effective process control. Furthermore, through the Viscom Quality Uplink, the measurement data can also be used in various ways during subsequent production steps.

Viscom Quality Uplink – increasing quality, not just measuring

The S3088 SPI combines the advantages of the market-leading AOI system with powerful 3D SPI sensor technology and inspects the solder paste deposits with the **highest** possible speed and **precision**. Even the most demanding assemblies with CSPs or micro BGAs and pad sizes of 01005 are reliably inspected. All essential 3D features such as **volume, height and form** are recorded and checked, as are **surface area, displacement and smearing**. **Viscom's FastFlow Handling** provides extremely high throughput. Electronic assemblies are fed in and out **synchronously at high speed**.



The 3D technology of the S3088 SPI requires **no calibration**. The robust sensor head uses the fringe projection method to work without moving parts. With its **high-speed camera technology**, the system can inspect up to 200 cm²/s. In the inspection depth area, the optional **high-resolution mode** excels even beyond the typical requirements.

In addition to the fast, reliable paste print inspection, the S3088 SPI system offers the unique **Viscom Quality Uplink**. This software feature enables e.g. the **Closed Loop connection** to the paste printer and placement system. This information delivers indications of process weaknesses and enables a **fast automatic optimization**, e.g. by adapting the screen cleaning cycle or correcting print displacement or placement offset.

Moreover, the communication with an AOI, AXI or MXI Viscom system is also possible. The advantages are evident. By linking the inspection data, the operator has all SPI and downstream inspection **information at a single glance**. The SPI additional images at the AOI or verification station simplify defect evaluation and help **prevent human errors** – that results in **less scrap** and a **higher first pass yield**. Furthermore, a complete end-to-end documentation of all measurement data and inspection results is assured.

Viscom 3D SPI with Viscom Quality Uplink provides easy **cost optimization**, the highest **process security** and sustainable **increase in product quality**.



Technical Specifications

S3088 SPI

S3088 SPI DualView

Application

3D solder paste inspection

Camera technology

Measurement method	Fringe projection process
Pixel size	15 µm

Software

User interface	Viscom vVision/EasyPro
SPC	Viscom SPC (statistical process control), open interface (optional)
Verification station	Viscom vVerify/HARAN
Remote diagnosis	Viscom SRC (optional)
Programming station	Viscom PST34 (optional)

System computer

Operating system	Windows®
Processor	Intel® Core™ i7

Performance data

Measurement specifications

Repeatability height evaluation	< 1 % @ 3 σ (on certification target)	<< 1 % @ 3 σ (on certification target)
Repeatability volume evaluation	< 3 % @ 3 σ (on paste)	<< 3 % @ 3 σ (on paste)
Gage R&R volume evaluation	<< 10 % @ 6 σ (on paste)	<< 5 % @ 6 σ (on paste)
	<< 5 % @ 6 σ (on certification target)	<< 2 % @ 6 σ (on certification target)
Height measurement accuracy	2 µm (on certification target)	

Paste

Paste area min.	150 µm x 150 µm	100 µm x 100 µm
Paste area max.	15 mm x 15 mm (0.6" x 0.6")	
Paste height min./max.	50 µm/500 µm	

PCB handling

PCB dimensions max.	508 mm x 508 mm (20" x 20")	450 mm x 508 mm (17.7" x 20") (L x W)
PCB dimensions min.	50 x 50 mm (2" x 2")	
PCB support	Optional	
Transport height	850 - 950 mm ± 20 mm (33.5" - 37.4")	
Width adjustment	Automatic	
Transport concept	Single track transport	
PCB clamping	Pneumatic	
Upper transport clearance	35 mm (1.1")	
Lower transport clearance	50 mm (2"), up to 85 mm (3.4") (optional), 40 mm (1.6") with PCB support	

Inspection speed (Standard)

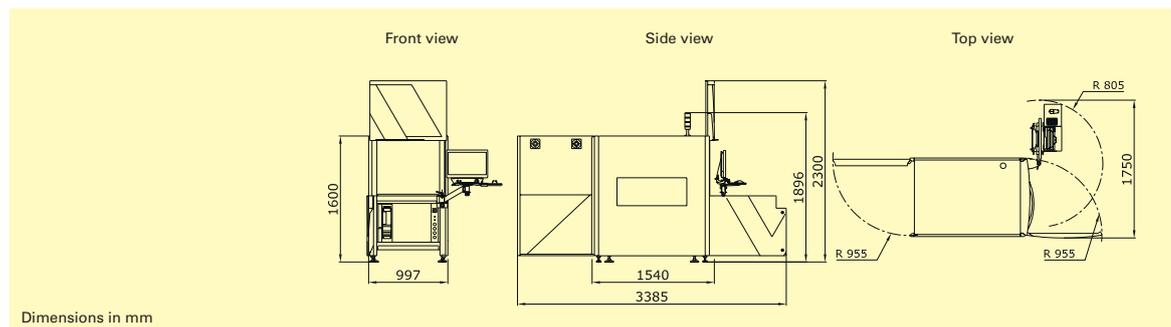
Up to 80 cm²/s (HighRes 15 µm)
Up to 200 cm²/s (HighSpeed 30 µm)

Inspection Speed (DualView)

-	Up to 40 cm ² /s (HighRes 15 µm)
-	Up to 80 cm ² /s (HighSpeed 30 µm)

Other system data

Positioning/handling unit	Synchronous linear motors
Interfaces	SMEMA, SV70
Power requirements	400 V (other voltages on request), 3P/N/PE, 8 A, 4 - 6 bar working pressure
System dimensions	997 mm x 1600 mm x 1540 mm (39.3" x 63" x 60.6") (W x H x D)
Weight max.	750 kg (1653 lbs)



Headquarters:

Viscom AG
Carl-Buderus-Straße 9 - 15 - 30455 Hanover · Germany
Tel.: +49 511 94996-0 · Fax: +49 511 94996-900
info@viscom.com · www.viscom.com

Visit our website to find international subsidiaries and representatives in Europe, USA and Asia:

www.viscom.com