
Coherix
THE NEXT DIMENSION
OF PERFORMANCE
COHERIX 3D INLINE
MASTIC DOT INSPECTION
HIGH PROFILE DOT INSPECTION AND
ADAPTIVE PROCESS CONTROL

THE NEXT DIMENSION OF PERFORMANCE

Coherix 3D Inline Mastic Dot Inspection provides a robust real-time 3D inspection and adaptive process control solution for the mastic dot dispensing process. It reduces process variation, minimizes production down time caused by robot re-programming, improves product quality and increases throughput.

THE OPTIMAL RESULT

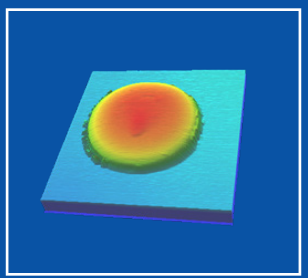
Coherix 3D Inline Mastic Dot Inspection is specialized Coherix 3D software that inspects mastic dots and other unique shapes up to 38 mm in diameter. It ensures the width, height and area of the dispensed dot is within user-defined tolerances.

Mastic dots are critical to ensuring anti-flutter between panels; in automotive manufacturing they are used to bond the inner and outer panels of hoods, doors, decklids, etc.

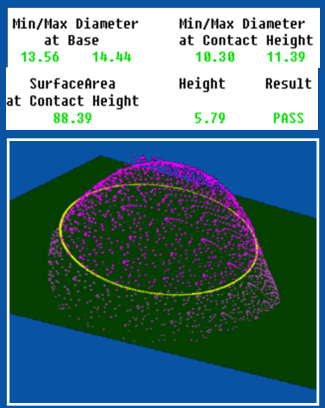
The sensor is not affected by part color or ambient lighting changes, providing robust operation even in “black-on-black” or “gray-on-gray” situations where 2D techniques fail. Coherix 3D Inline Mastic Dot Inspection is mounted around the dispensing nozzle and equipped with four high-speed 3D sensors, providing 360° 3D view of mastic dots in any dispensing direction with no added complexity to robot programming.

HARDWARE + SOFTWARE = THE PERFECT TEAM

Coherix 3D Inline Mastic Dot Inspection incorporates Coherix proprietary solution software that provides in-line, real-time 3D information on mastic dot height and width, with no external computer needed. Acquiring and processing 400 samples per second per sensor, Coherix 3D has the industry-leading acquisition speed avoiding production slowdowns while providing 100% part traceability.



3D view of mastic dot



Measurement results at user-specified height

SOFTWARE OPTIONS

LocationMaster™

Locates a part in 3D space and sends offset to the robot to alter the dispensing path accordingly.

Z-Tracking™

Dynamically adapts to each part's individual variations to maintain acceptable tip to part distance, preventing broken nozzles and scrapped parts.

BENEFITS

ONCE AND DONE

Single-pass 3D bead profile inspection is accomplished using four high-speed laser sensors surrounding the dispensing nozzle to verify the dot in any direction without blind corners. Acquiring and processing 400 samples per second, per sensor. Coherix3D Inline Mastic Dot Inspection has the industry-leading acquisition speed, avoiding production slow-downs.

PROVEN

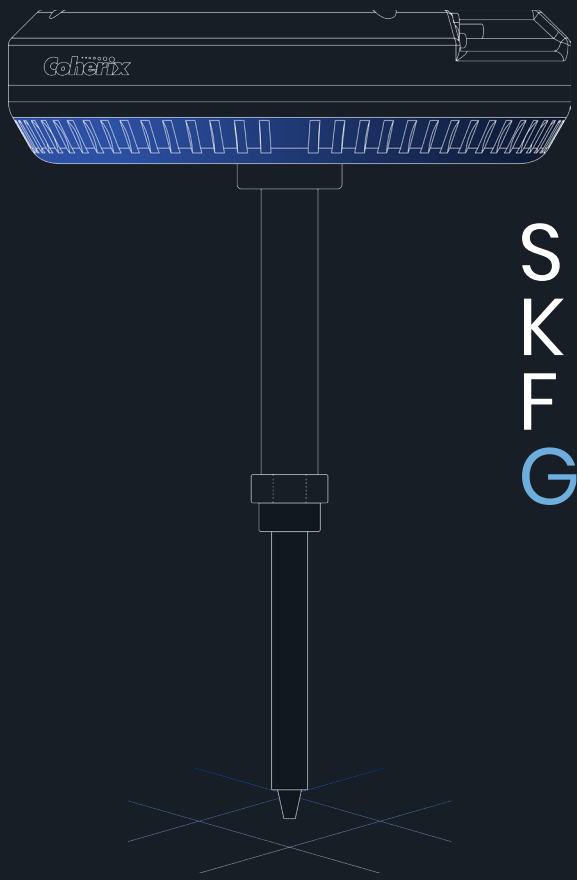
Coherix 3D Inline Mastic Dot Inspection leverages Coherix Shark™ 3D high-speed image processing platform which has proven reliability, inspecting millions of customer parts to date. In addition, Coherix 3D technology has been widely deployed for bead inspection for numerous applications including powertrain RTV, body shop and closure panel structural adhesive and sealants, final assembly urethane glass and battery thermal paste and sealants with OEM and Tier suppliers globally.

EASY TO INTEGRATE

Coherix 3D Inline Mastic Dot Inspection mounts around the dispenser nozzle. It communicates easily with whatever protocol your dispenser or robot uses. Coherix 3D Inline Mastic Dot Inspection does not add complexity to robot programming. There are no time-consuming setup changes required for robot speed changes commonly necessary on other systems.

RUGGED

The Coherix 3D Inline Mastic Dot Inspection sensor is built with a solid aluminum frame to withstand impacts along with IP67 sealed housing that protects the unit in a production environment. There are no moving parts.



SEE.
KNOW.
FIX.
GO.

Coherix creates 3D-enabled Adaptive Process Control that sees, understands, and adjusts, automating perfection and unleashing predictable success. We're helping advanced manufacturers solve complex adhesive dispensing applications for unstoppable success.

TECHNICAL DATA

Model	Standoff	Sensor Head Weight	Typical Height Standard Uncertainty	Typical Width Standard Uncertainty	Maximum Dot Diameter	Maximum Dot Height
P3D50S-FOV50	50 mm	1.0 kg	<250 µm*	<350 µm*	38 mm	13 mm

- >15G Shock
- 100/1000Base-T Ethernet M12 connector
- <40 watt power consumption with 24VDC M12 connector
- Laser class 2

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