Coherix®

THE NEXT DIMENSION
OF PERFORMANCE

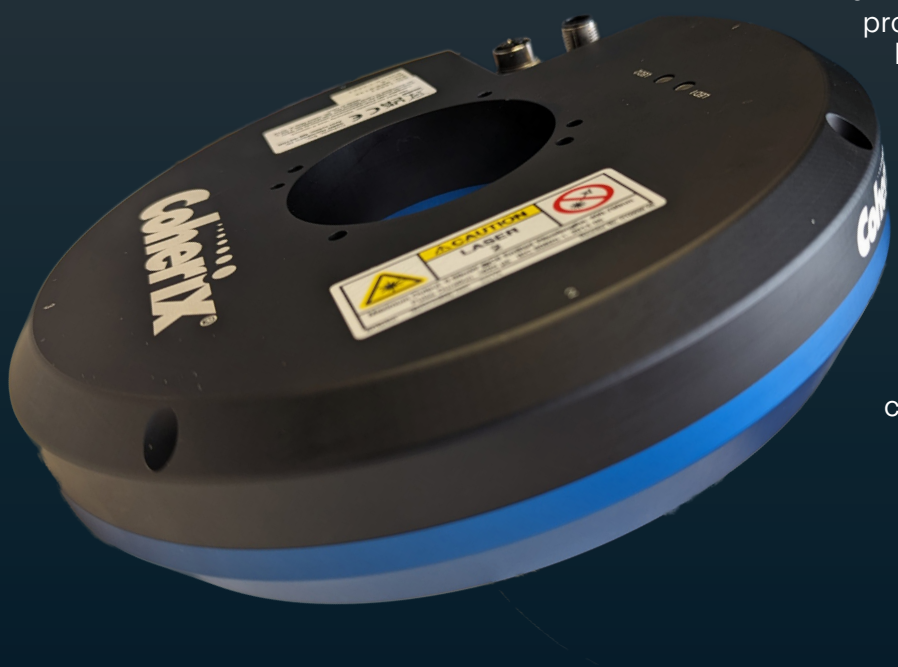
COHERIX 3D™

3rd Generation

3D INSPECTION & ADAPTIVE PROCESS CONTROL FOR AUTOMATED ADHESIVE & SEALANT BEAD DISPENSING

THE NEXT DIMENSION OF PERFORMANCE

In manufacturing today, application of adhesives and sealants must be precise to achieve full performance and power. Coherix 3D ensures that the proper bead volume is applied in the specified location in-line, during the dispensing process, guaranteeing bead quality without slowing down production.



THE OPTIMAL RESULT

The highest quality of bead in the manufacturing process can ensure structural rigidity, prevent leakage, protect from corrosion and help meet stringent industry safety standards. In the 3rd Generation Coherix 3D measures height, width, volume and location, providing the vital data needed to optimize the dispensing process. Coherix 3D bead inspection, mounted around the dispensing nozzle, is equipped with four high-speed 3D sensors, providing a 360° view of the bead in any dispensing direction with no added complexity to robot programming.

THE POWER OF 3D

Coherix 3D bead inspection is not affected by part color or ambient light changes, providing robust operation even in “black-on-black“ or “gray-on-gray“ situations.

IT SEES.

With 3D laser sensors that monitor the applied adhesive, control the nozzle position, and sense any imperfection at line speed

IT LEARNS.

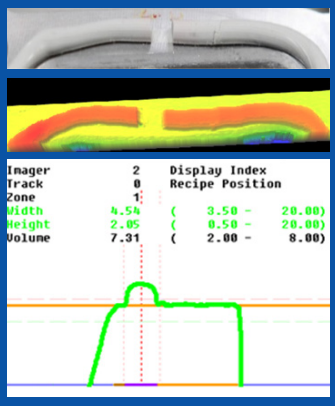
Using a constant stream of data, our software analyzes manufacturer specs, seeking out imperfections in width, height, volume, and placement.

IT ADAPTS.

With Adaptive Process Control, Coherix 3D communicates with the system to adapt and adjust on-the-fly - preventing errors in real time.

HARDWARE + SOFTWARE = THE PERFECT TEAM

Embedded with Coherix proprietary solution software, Coherix 3D bead inspection provides real-time 3D information on bead width, height, volume, location and detects skips, gaps or neck-downs with no external computer needed. Acquiring and processing 400 samples per second per sensor, Coherix 3D has the industry-leading acquisition speed avoiding production slow-downs.



Actual part

3D rendering

Inspection results and cross-section of adhesive

SOFTWARE OPTIONS

AutoRepair™

Automatically repairs gaps, bubbles and neck downs with no human intervention.

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.

Lateral Tracking™

Dynamically adapts to each part's individual variations to maintain acceptable bead-to-edge distance, preventing scrapped parts and unwanted squeeze-out.

VAC®

Detects instantaneous volume variation and automatically adapts the bead volume, ensuring a high-quality bead of the specified volume is dispensed.

TCP Locator™

Provides a robust, automated solution to bent or misaligned dispensing nozzles by measuring the actual position of the dispensing nozzle and recalibrating the robot's Tool Center Point (TCP) in real-time.

RELIABLE SOLUTION

PROVEN

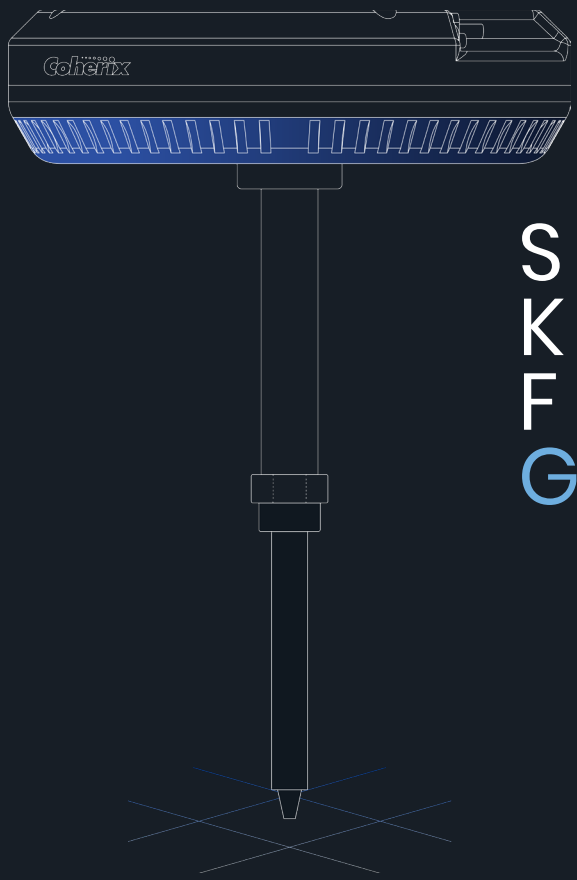
Coherix 3D leverages Coherix Shark™ 3D high-speed imaging and processing platform which has proven reliability, inspecting millions of customer parts to date. In addition, Coherix 3D technology has been widely deployed for bead inspection in numerous applications with OEM and Tier suppliers globally.

EASY TO INTEGRATE

Coherix 3D easily communicates with whatever protocol your dispenser or robot uses. The Coherix system does not add complexity to robot programming and there is no time-consuming setup required for robot speed changes commonly necessary on other systems.

RUGGED

Coherix 3D is built with a solid aluminum frame without any moving parts to withstand impacts. Its' IP67 sealed housing protects the unit in any production environment.



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.

Standoff	Sensor Head Weight (A/X), kg	Max. Inspectable Bead Width*, Orthogonal Motion[1], mm	Max. Inspectable Bead Width*, Omnidirectional Motion[2], mm	Sensor ID mm (A/X), mm	Sensor OD mm (A/X), mm
60 mm	1.35/-	35/-	13/-	46	190
80 mm	1.35/1.5	37/46	13/18	46/70	190/215
110 mm	1.35/1.5	35/49	13/18	46/70	190/215
145 mm	1.35/1.5	38/46	13/18	46/70	190/215
185 mm	1.35/1.5	33/49	13/18	46/70	190/215

80, 110, 145 and 185 mm standoffs are available in two different models A and X. The ID and OD are the only difference between A and X models.

* At nominal standoff, under typical conditions
* Specifications subject to change without prior notice
[1] Sensor must rotate to keep the trailing laser perpendicular to the bead
[2] Sensor does not rotate. Trailing laser automatically switches and can cross the bead at any angle

Common Specifications
- <40 watt power consumption with 24VDC M12 connector
- 1000BASE-T Ethernet M12 connector
- >15G Shock
- Class 2 laser

by Coherix 5 year warranty

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