



JOSY by SmartRay

3D INLINE WELD INSPECTION

SmartRay 

www.smartray.com

ABICOR
BINZEL[®] 
ROBOTIC SYSTEMS

www.binzel-abicor.com

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SmartRay JOSY

Introduction

SmartRay **JO**ining **SY**stem named **JOSY** offers an all-in-one solution for non-contact visual 3D inspections. **JOSY** offers exceptional quality, accuracy and reliability, suited to all joining technologies and meets precise QA demands of automotive production.

JOSY is the preferred weld inspection solution for the world's leading automotive brands.

By combining SmartRay's pre-calibrated 3D sensors with advanced algorithm processing, **JOSY**'s high accuracy weld inspection meets international measurement standards.



THE COMPLETE **3D** INLINE
WELD INSPECTION SOLUTION

SmartRay JOSY

The JOSY Advantage

Choice of Laser Class	2 3R
Installation Time	2h
True Inline Inspection	Up to 100% 24/7/365
High Speed Scanning	Up to 8 kHz Up to 400 mm/s
Objective and Compliant with Industrial Standards	ISO 5817 ISO 10042
Pore Detection	Up to 0.1mm
Compact and Robust Sensors with Superior Image Quality	180g IP65

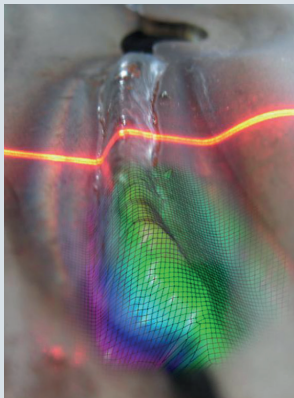
SmartRay JOSY Sensor



Sensor performance is essential to the accuracy of a weld inspection system. The **JOSY** turnkey weld inspection solution relies on SmartRay's advanced 3D metrology sensor technology. Compact, agile and accurate, **JOSY**'s sensors are pre-calibrated for reliable, repeatable results, enabling **JOSY** to be configured in the best way for each application.

INSPECTED WELD DIMENSIONS

- Length
- Width
- Throat thickness
- Cross sectional area
- Toe
- Position
- Asymmetry & Leg length
- Concavity, Convexity



Benefits

- Most compact 3D metrology sensor available
- Accesses hard-to-reach areas to cover more weld points
- Enables inspection of wider range of parts across the production process

Sensor Certifications

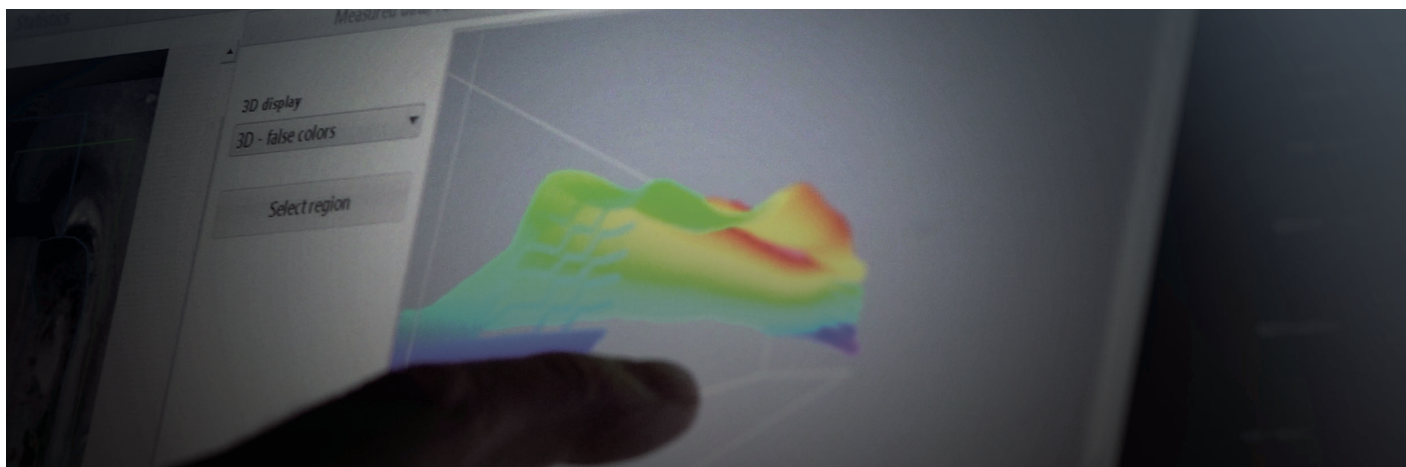
ISO	ISO	VDA	IP65
10042	5817	5	Enclosure

Sensor Details

- 20+ Different Sensor Models
- Up to 8 kHz
- Up to 400 mm/s
- Resolution (z-Axis) down to 0.5 μ
- Resolution (y-Axis) down to 6 μ
- Variable Field of View
- Compact Size
- IP65 Protection
- HDR Acquisition Mode
- Advanced Reflection Filter



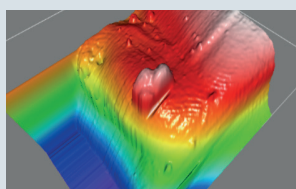
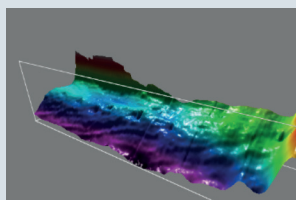
SmartRay JOSY Software



SmartRay's intelligent, analytical software tools meet the productivity challenges of automobile production, measurably increasing efficiency and output. **JOSY's** acclaimed manual rework tools transform the efficiency and potential of the rework process: intuitive software that enables users to undertake efficient, rework. Users are able to log and analyse statistical data more effectively, opening new diagnostic capabilities to allow identification of systematic issues in the production process.

INSPECTED WELD DEFECTS

- Pores
 - Macro Pores
 - Micro Pores
 - Porosity (Pore Nests)
- Holes
- Undercuts
- Incompletely filled groove
- Incomplete welds
- Spatter

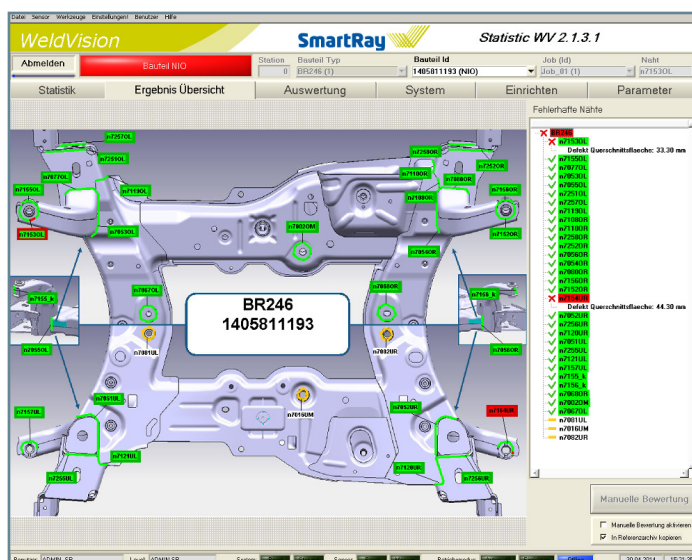


Benefits

- Industry-leading rework reduction
- Continuous process optimization
- Uptime maximized by indentifying preventative maintenance needs

High Speed Scanning

8	400
KHz	mm/s



Software Details

- Ease of use - intuitive status monitoring and rework guidance
- Comprehensive software for inspection, metrology and statistics
- Multiple user levels
- Embedded database - weld process monitoring & documentation
- Template based default settings for objective, standard compliant inspection

SmartRay JOSY Service



Using our flexibility and agility to determine the right solution with our customers, we transform results together, building a long lasting partnership for productivity. Our reliable and planned installation process includes pre-commissioning, with technical and organisational coordination, and commissioning with pre-configured and tested hardware. We deliver a full, customised after-sales service that ensures your staff are trained to the appropriate level, and your **JOSY** system remains optimised and maintained. This ensures **JOSY** continues to provide the accurate, repeatable results your process demands, year after year.

Benefits

- Support in production line planning
- Reliable, planned commissioning
- Customized after-sales support



Partnering for Integration

- We have a strong partnership with our customers
- Together we unlock new ways to solve inspection and measurement challenges
- We develop process-specific solutions in close consultation with every customer
- Our approach combines metrology expertise with the right sensor - for the best result

SmartRay ECCO

3D Sensors



SmartRay's **3D** sensor technology forms the core of our **JOSY** solution for weld inspection. Our **ECCO** range has revolutionised the **3D** sensor market, providing high performance and exceptional value.

Named for their **E**conomic and **C**ompact qualities, **ECCO** sensors improve product quality, guide automation and reduce production costs for automotive, electronic, industrial and consumer applications.

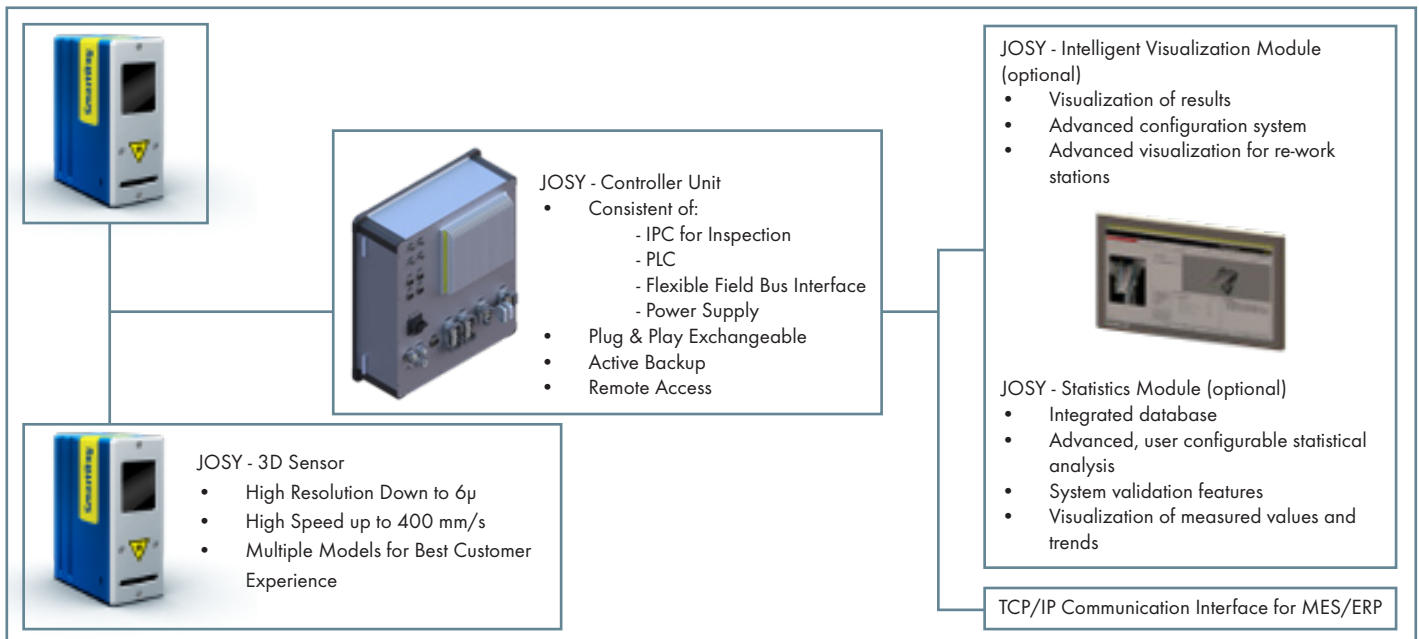
Combining laser triangulation with innovative image formation technology, they deliver accurate inspection and precise measurement.

Benefits

- Superior 3D image quality
- Ultra-high resolution
- Smallest, most economic 3D sensor in its class

See the **ECCO** range of **3D** sensors at - smartray.com

System Concept (Two Sensors)



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