

# MOTOSense 3.0

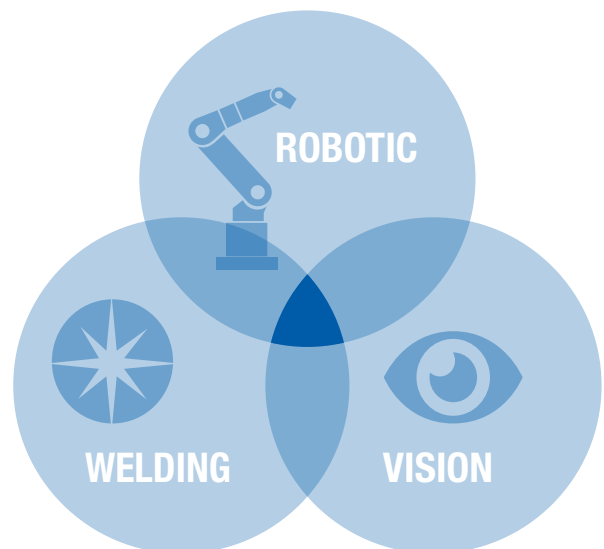
Machine vision system for adaptive robotic welding



MOTOSense 3.0 vision system gives YASKAWA robots a functionality to detect, scan or follow and weld along the actual trajectory in real time.

The system may be used in TIG, GMAW (MIG/MAG) processes. Moreover, it supports vision tasks for a wide range of materials such as stainless steel, aluminium, etc.

## Synergy in adaptive robot Welding



### KEY BENEFITS

- Reduced cost of jigs due to an absolute part positioning and repeatability is not required
- Unique solution for zero gap butt seam sensing
- Flexible solution for specific welding tasks
- Integrated solution for YASKAWA robot controllers

All prepared Macro jobs, vision parameterisation and supporting options make MOTOSense 3.0 system the right tool for adaptive robot welding application. It makes perfect welding results for the most difficult welding tasks.

The complete solution offers an extremely flexible platform, which consists of MOTOSense imaging module, Imaging Process Controller and interface connection to YASKAWA YRC 1000 controller.

### Optional features

**Camera module:**

- Automatic docking station for imaging module
- Servo adjustable camera module for changeable curves
- Different optic configuration (working area)

**Vision features:**

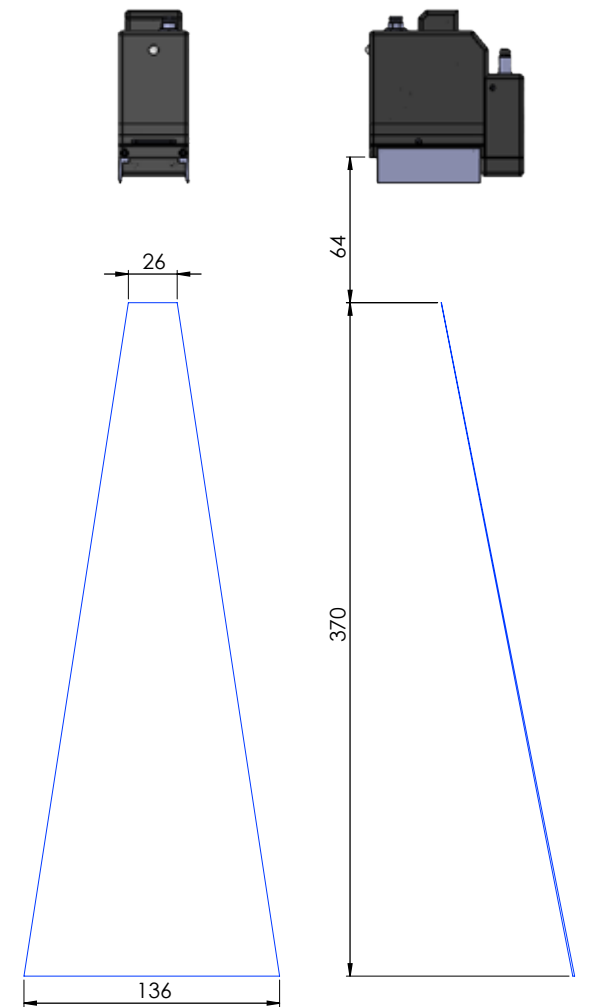
- Custom seam geometry algorithms
- Logging of image sequences during active sensor cycle (ON-OFF) for offline analysis/optimisation
- Applicable welding technologies: GMAW (MIG/MAG), TIG

**Others:**

- Additional communication protocols (Profibus, Profinet, IO communication)
- Remote support/optimisation possible (via Ethernet)

MOTOSense 3.0 packages	MOTOSense 3.0 Lite	MOTOSense 3.0 Ultimate
Seam finding	•	•
Seam tracking	•	•
Zero gap seam finding & tracking		•
Adaptive welding parameter control		•
3D Scan detection		•

Technical data	
Start /end of distance measurement	64/434 mm
Field of view	26/136 mm
Accuracy	0.05 mm
Dimensions	84 x 63 x 37 mm
Weight	475 g

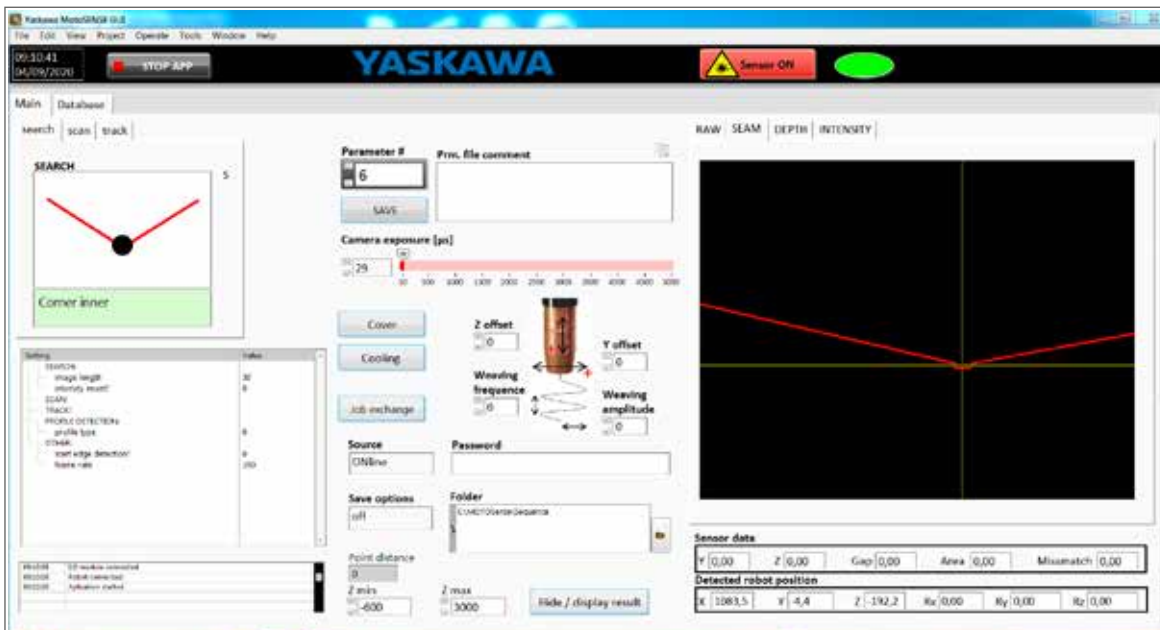


- Robot
- MOTOSense 3.0
- Welding equipment



**Components of adaptive robotic welding cell:**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li><span style="color: blue;">●</span> 1 Robot</li> <li><span style="color: blue;">●</span> 2 Robot controller</li> <li><span style="color: blue;">●</span> 3 Robot programming pendant (PP)</li> </ul> | <ul style="list-style-type: none"> <li><span style="color: red;">●</span> 4 MOTOSense 3.0 display and user interface</li> <li><span style="color: red;">●</span> 5 Welding torch</li> <li><span style="color: green;">●</span> 6 MOTOSense 3.0 imaging module</li> <li><span style="color: green;">●</span> 7 Welding source</li> </ul> |
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