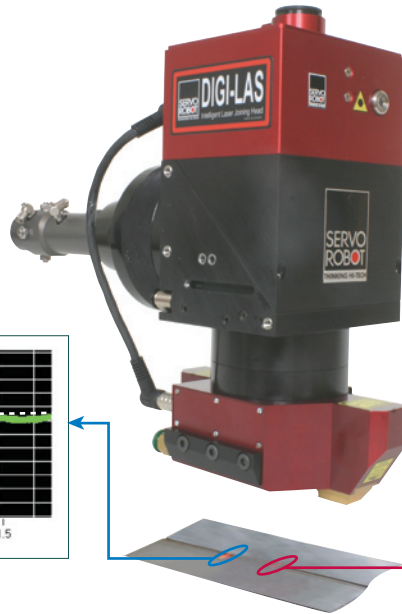
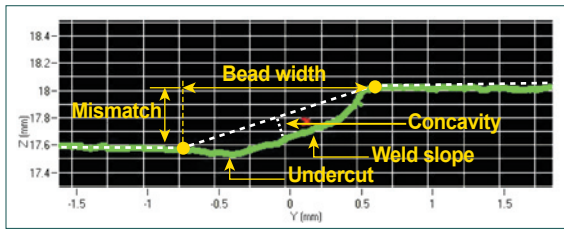


INTELLIGENT LASER JOINING HEAD WITH 3-D COAXIAL VISION

DESIGNED FOR LASER WELDED BLANKS AND GENERAL AUTOMOTIVE INDUSTRY

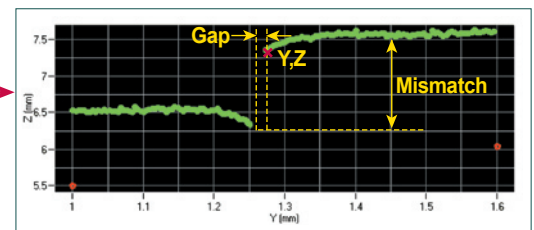
◆ WELD BEAD INSPECTION BY INTEGRATED TRAIL LASER VISION MODULE

Validation of weld quality and defect detection as welding operation is being done!



◆ 3-D JOINT TRACKING BY INTEGRATED LEAD LASER VISION MODULE

Allows for high-precision joint position measurement for joint tracking with external actuators.



INDUSTRIALLY PROVEN Nd:YAG LASER BEAM DELIVERY FOR WELDING

Welding head includes state of the art proven high power optics for beam delivery.

BENEFITS

1 CONTROL UNIT FOR 2 LASER CAMERA MODULES

- New generation of controller capable of performing both tracking and inspection functions.

CURVILINEAR WELDING

- Capability of welding curved joints and complex 3D parts with articulated robot.

MACHINE SET-UP AND CALIBRATION TIME DRASTICALLY MINIMIZED

- Optional automatic spot calibration system through vision channels.

FEATURES

COMPACT DESIGN

- Compact design for ease of access to work piece.
- Adaptable to any Nd:YAG or Ytterbium laser fiber.

ADAPTIVE CONTROL OF WELDING PARAMETERS

- Monitor joint fit-up and weld bead geometry (e.g. joint mismatch, gap) to control critical welding parameters in real time.

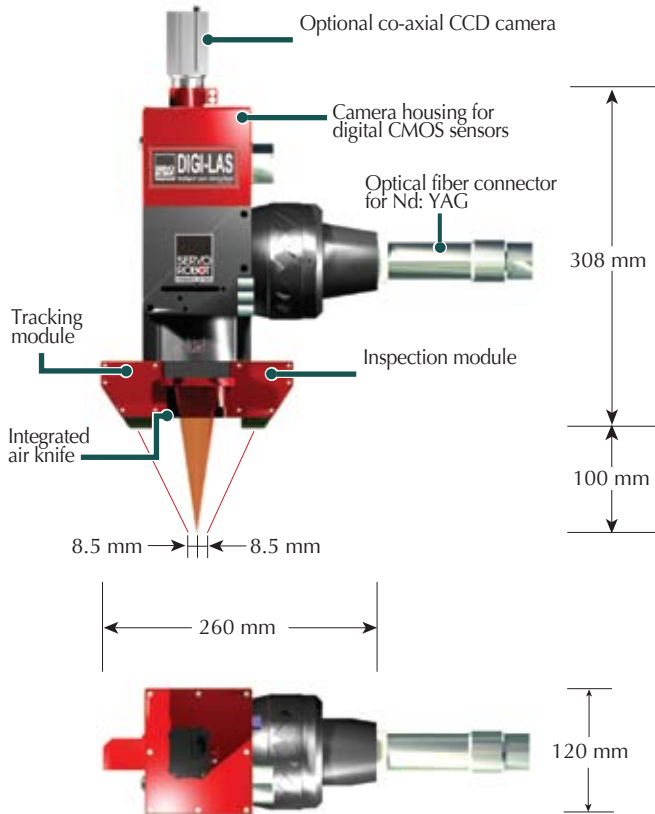
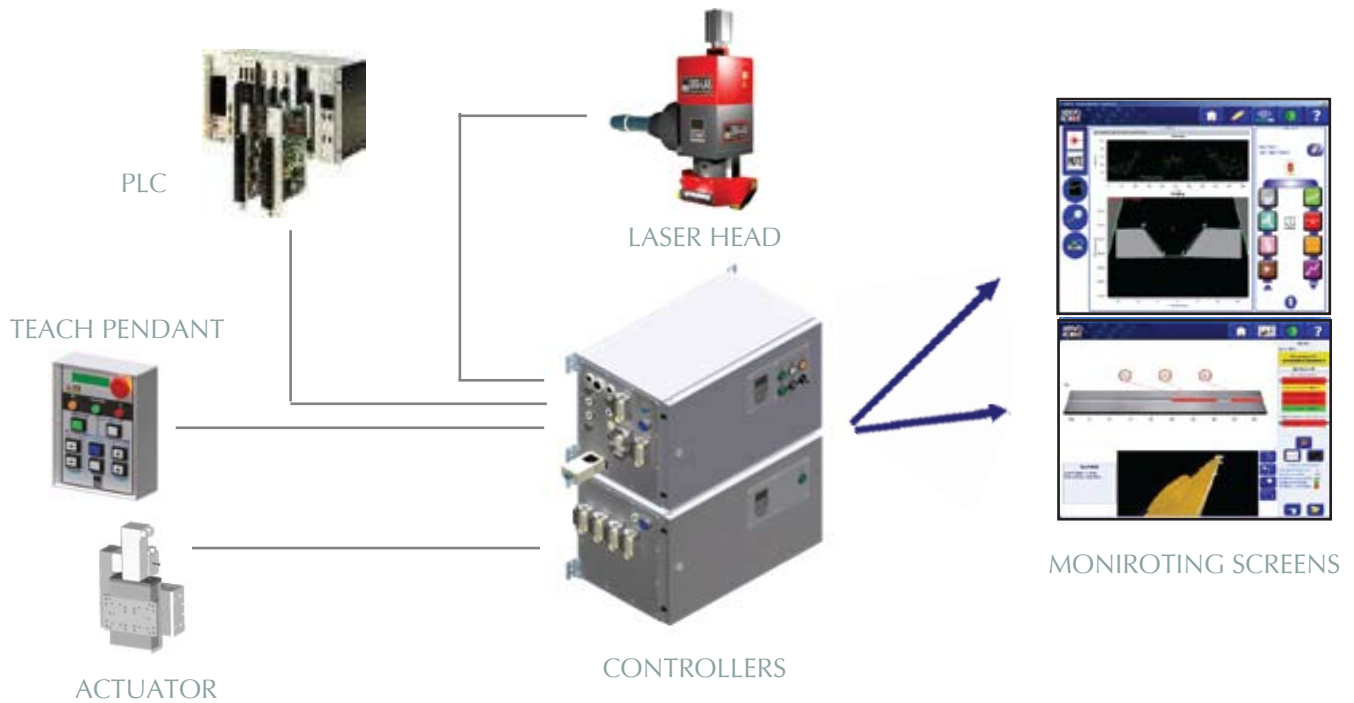
FACTORY PROVEN

- Very rugged design; ideal for harsh environments.
- Easily exchangeable protective window cartridge.
- Integrated air knife to prolong life of protective window.

HIGH SPEED ACTUATORS

- Optional high speed and high precision actuators to compensate lateral and vertical deviations from programmed TCP path or direct communication with robot controller.

SYSTEM DESCRIPTION



TECHNICAL SPECIFICATIONS

FOR INTEGRATED TRACKING/INSPECTION

Depth of Field (DOF)	6 mm
Field of View (FOV)	8,2 mm
Z resolution	7 μ m
Y resolution	8,5 μ m
Sampling rate/channel	100,000 pixels/second

FOR HIGH POWER LASER AND OPTICS

Dimensions (without fiber connector)	308 mm x 120 mm x 260 mm
Nd:YAG or Yb fiber laser	Adaptable according to customer requirements
Collimation length	100mm to 170mm
Focal length	170mm and 200mm



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