

LASER/TACTILE TRACKING, EDGE DETECTION

**AVP**

**TRACKING SYSTEMS**

# TRACKING SYSTEMS: LASER SEAM TRACKING



LASER TRACKING SENSOR



SOFTWARE



LASER TRACKING SENSOR

## DESCRIPTION:

Laser sensor is used for reliable automatic **seam tracking**. It is mounted in front of the torch, which moves according to the information from the sensor. Laser sensors are capable of detecting seam width, depth, and other parameters, with real-time tracking status and edge shape displayed via software.

Tracking assists the operator to ensure reliable seams. While welding, it corrects the welding path and height of the torch using motorized 2 axis slides. It is possible to combine both machine and tracking settings in the same HMI display.

Depending on application requirements, we will recommend the most suitable sensor type and brand.

## PROPERTIES:

- User friendly software,
- pre-saved joint types and optimized parameters,
- ethernet connection between computer and sensor, POE (power over Ethernet),
- no PC needed for certain sensors (only for changing and saving parameters).

# TRACKING SYSTEMS: MECHANICAL TRACKING



TRACKING CONTROLLER



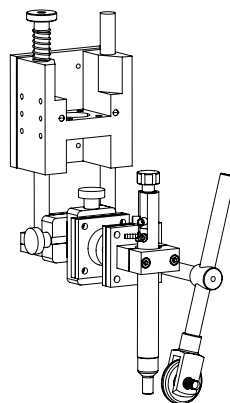
TRACKING PROBES

## TACTILE TRACKING (2 axis):

The **joint tracking** controller together with servo slides and a sensor unit forms a robust and easy to use joint tracking system for automatic welding.

The system minimizes repair welding and adjustments after welding thanks to that the arc is always in the optimal position. The general quality will be kept on an even level and the operator does not need to focus on the weld head and its position.

The system includes a motorized two axis servo slide for precise head movement, and a sensor informs the control system for optimal positioning without any programming required, allowing for fully automatic welding, even on curved details within the working range of the servo slides.



AVP MECHANICAL TRACKING

## AVP MECHANICAL TRACKING (single axis):

The AVP mechanical tracking solution is designed for applications on AVP machines. It operates **without the use of motors and tracks only in the vertical axis**. This system employs a spring and wheel mechanism to maintain consistent torch height with the workpiece height. Manual cross sleds with a 40mm stroke and tilting elements are included to position the torch before tracking.

## TRACKING SYSTEMS: AUTOMATIC START & STOP



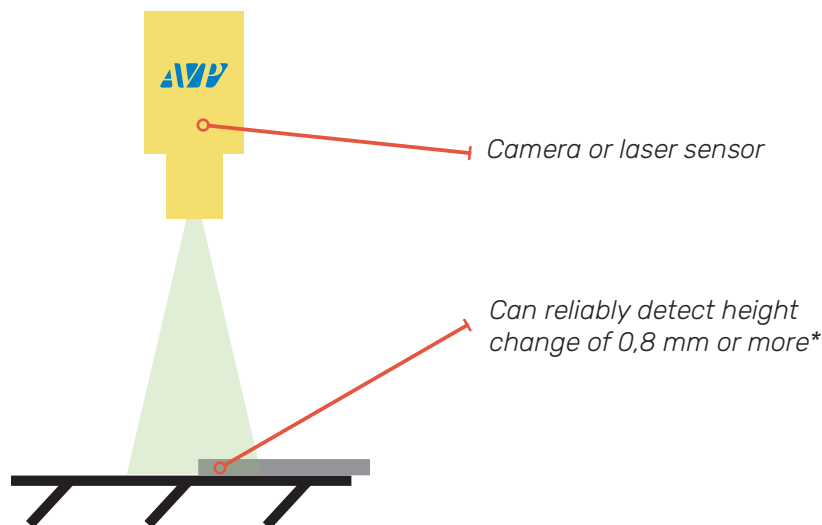
LASER SENSOR



MACHINE VISION CAMERA

We offer the installation of **edge detection** sensors on our VSV machines to further automate the welding process. Edge detection is used solely to **automatically locate the start and end** of the workpiece without the need for pre-scanning; detection occurs in real-time during welding. Edge detection can be achieved using either a machine vision camera or a laser distance detection sensor, both of which are **more cost-effective than laser tracking sensors**.

When using a machine vision camera, it's also possible to gather information about the gap width, providing enhanced control over the welding process.



*\*In the case of very thin sheet metal (0.4 - 0.8 mm), we recommend using a camera that not only detects changes in height but also changes in contrast and shadows. Due to multiple verification factors, it is more reliable.*