

# Smart Laser Probe



## Laser Seam Tracking System for Welding Automation

Smart Laser Probe (SLPr) is a non contact weld seam tracking system for welding machine applications. By mounting the Smart Laser Sensor (SLS) to look ahead of the welding torch, the SLPr controls the position of the welding head to keep the welding wire positioned correctly in the joint. Smart Laser Probe provides major benefits in quality and productivity.

Smart Laser Probe is a completely new approach to laser seam tracking. By exploiting the latest advances in electronics and computing, SLPr takes seam tracking to a new level of performance for a standard system.

## Typical Applications:

Smart Laser Probe is the tracking system of choice for machine welding applications such as:

- Welding lathes for air, water and all types of cylindrical tanks
- Linear machines, such as side beam, travel carriage and seam welders
- Gantry welders, such as railway wagon side and roof welders
- Simple column & boom applications
- TIG welded tube mills

**Smart Laser Probe is suitable for all the main welding processes**

## Key features of SLPr include:

- Very high quality, high resolution image generation by exploiting several novel and unique design features
- Fully digital system incorporating a completely up to date control structure
- User friendly operator interface
- Wide range of standard sensors and interface options for different applications



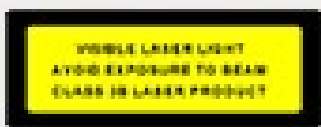
## SLPr Tracking System for Welding Automation

Main components of an SLPr system are:

- SLS Laser Sensor
- Operator Pendant
- SLPr Control Cabinet, including:
  - Colour Touchscreen
  - Slide Motor Drives and Interface Electronics
- Welding Slides

### SLS Sensor Models:

Model	Field of View (mm)	Stand-off
SLS-025-H1	25	standard
SLS-025-V1	25	standard
SLS-050-V1	50	standard
SLS-050-V1LR	50	long range
SLS-100-V1LR	100	long range



### System Overview:

Smart Laser Probe is unique in combining high resolution full frame image processing and weld seam tracking within the sensor head itself. This enables a modern system architecture with a fast digital Ethernet backbone all the way from the sensor head to the motion control electronics.

Smart Laser Probe uses Meta's latest family of Smart Laser Sensors (SLS). Each SLS incorporates a MegaPixel camera, unique auto laser control and special optics to produce weld joint profiles of unsurpassed quality and reliability from a laser stripe sensor.

Dedicated digital image processing hardware and software in the sensor head is closely coupled to the imager to provide reliable high speed image processing and weld joint tracking.

Easy installation and setup, simple operation and fast diagnostics are the result of careful design of the operator interface combining an informative colour touchscreen and operator pendant with multicolour status LEDs on all buttons.

# Smart Laser Probe



#### European Office

Meta Vision Systems Ltd  
Oakfield House  
Oakfield Industrial Estate  
Eynsham  
Oxfordshire OX29 4TH  
UK

Tel: +44 1865 887 900  
Fax: +44 1865 887 901  
sales@meta-mvs.com  
meta-mvs.com

#### North American Office

Meta Vision Systems Inc  
8084 Trans Canada Highway  
Ville St Laurent Qc  
H4S 1M5 Canada

Tel: +1 514 333 0140  
Fax: +1 514 333 8636