

# 2D miniLDV™

## Integrated 2D miniature laser Doppler velocimeter

The 2D miniLDV incorporates two 1D probes with frequency shifting into a single unit with permanently co-located probe volumes. It is ideal for research and commercial applications. Setting up takes less than one hour because MSE's miniLDV probes require no alignment or calibration by the user.

### ADVANTAGES OF THE 2D MINILDV:

- Self-contained
- Factory sealed
- Co-located probe volumes
- No alignment needed
- Calibration done at the factory
- Frequency shifting on both components
- No water cooling required
- Accurate measurement of fluids of varying temperature, pressure, and density
- Computer controlled 1, 2, and 3-axis traversing system
- 2D and 3D automated profile measurement
- Battery operated option
- Waterproof and temperature resistant housing option

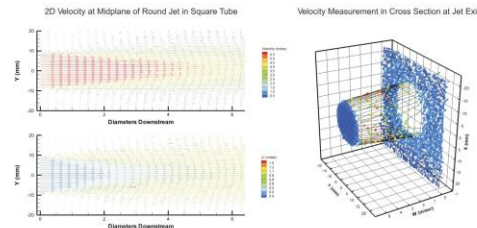
### APPLICATIONS INCLUDE:

- Fluid mechanics, aerodynamics, turbulence, oceanography, and atmosphere studies
- Wind, water, oil tunnels and channels

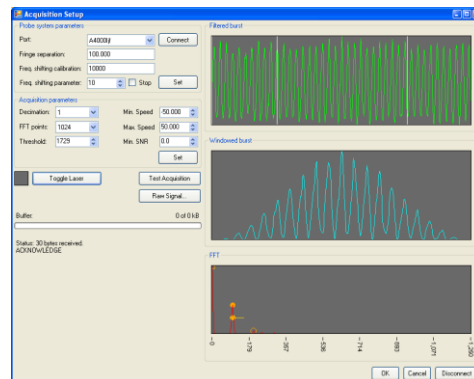


The 2D miniLDV System with 50 to 240 mm standoff is extremely compact, self contained, and permanently aligned; no calibration or alignment by the user is required. The probe contains two high power diode lasers, miniature beam shaping optics, and receiving and detection optics.

### 2D Flow Mapping with miniLDV™



The 2D miniLDV System includes the 2D miniLDV probe, dual Processing Engines, and a multidimensional version of MSE's Burst Processor Acquisition Manager software. With the optional computerized traverses, setting up a flow-mapping experiment for unattended acquisition is a matter of minutes, not hours.



The interface of the acquisition software complements the probe's ease of use.

MEASUREMENT SPECIFICATIONS	
Velocity range	-50 to 600 m/sec*
Repeatability	99.9%
Accuracy	99.7% or better

PROBE VOLUME	
PV dimensions (x by y by z)	Typical: 150 x 300 x 1200 μm**
Available standoff distances	50 mm, 100 mm, 150 mm and 240 mm

PROBE SPECIFICATIONS	
Probe weight	2 lbs (1kg)
Dimensions	51 x 76 x 150 mm 2 x 3 x 6 inches

LASER SPECIFICATIONS	
Laser power	2 x 130 mW
Wavelengths	658 and 785 nm
Laser type	Class IIIb

OPERATING PARAMETERS	
Temperature	5 to 35°C ***
Pressure	Atmospheric
PC requirements	Laptop or PC

OPTIONAL FEATURES	
Water proof, high pressure, and high temperature housing	
Traversing stage for profile measurements	
1-D, 2-D, and 3-D traversing systems	

POWER SUPPLY	
12 VDC Universal	

\* Velocity range is a function of the fringe separation and the dynamic range. Please specify your required velocity range.

\*\* Probe volume dimension is a function of the standoff distance

\*\*\*Higher operating temps available

One or more of the following U.S. Patents apply: No. 6,654,102, 6,580,503, 6,608,668, 6,717,172, 6,956,230

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MEASUREMENT  
SCIENCE  
ENTERPRISE, INC.

123 W. Bellevue Dr., Suite 1  
Pasadena, CA 91105  
USA

Info@MeasurementSci.com  
Phone: +1 (626) 577 0566  
Fax: +1 (626) 577 0565