

miniLDV™

A Miniature Laser Doppler Velocimeter

The miniLDV is ideal for industrial and research applications and takes less than 10 minutes to set up. MSE's miniLDV requires no alignment or calibration by the user, so no previous experience is necessary.

ADVANTAGES OF THE MINILDV:

- Self-contained
- No alignment needed
- Calibration done at the factory
- No water cooling required
- Makes 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
- Frequency shifting feature allows measurement of direction along with speed.

APPLICATIONS INCLUDE:

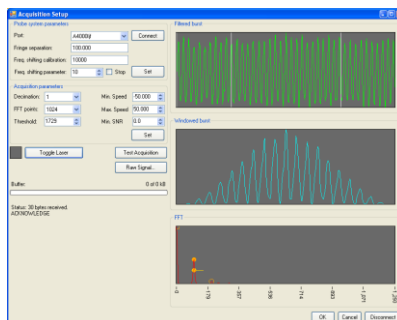
- Fluid mechanics, turbulence, oceanography, and atmosphere studies
- Micro channels
- Wind, water, oil tunnels and channels
- Surface speed measurements
- Refrigeration air curtain
- Drag reduction measurements
- Speed of boats, ships, sea bearing vessels



The miniLDV probe, the size of a small flashlight, is self contained and permanently aligned; no calibration required by the user. The probe contains a laser, miniature beam shaping optics, receiving and detection optics.



The miniLDV system includes a miniLDV probe, driver electronics, band-pass filter, and BP-miniLDV acquisition hardware and processing software (computer and traverses are optional).



The user-friendly interface of the Burst Processor software compliments the probe's ease of setup.

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

PROBE VOLUME	
PV dimensions (x by y by z)	Minimum: 30 x 60 x 200 μm **
Available Standoff distances	35, 50, 100, 150, 240, 400, 500 and 700 mm

PROBE SPECIFICATIONS	
Probe weight	250g
Dimensions	32 (dia) x 165 mm 1.3 (dia) x 6.5 inches

LASER SPECIFICATIONS	
Laser power	140 mW
Wavelength	658 nm
Laser type	Class IIIb

OPERATING PARAMETERS	
Temperature	0 to 55°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

One or more of the following U.S. Patents apply: No. 6,654,102, 6,580,503, 6,608,6668, 6,717,172, 6,956,230

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