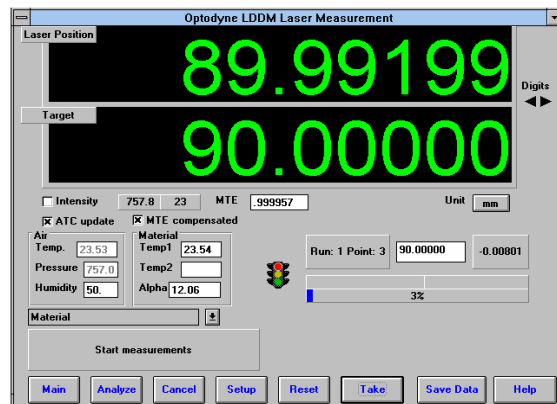


Laser Doppler Displacement Meter

MCV-500



Linear Machine Calibration

[OPTODYNE'S MCV-500 Compact Linear Machine Calibration System](#), calibrates CNC machine tools, CMM's (Coordinate Measuring Machines), and other precision measuring machines and stages.

This new compact calibration system, based on the patented Laser Doppler Displacement Meter (LDDMT™) technology, is designed for easy setup and operation. The basic system, including Windows™ software, automatic compensation, (compensates for air temperature, barometric pressure, and material thermal expansion) and accessories are packaged at an extremely affordable price. The system is very compact and fits in one small carrying case.

The Windows™ software, running on any IBM compatible computer, is user friendly and is designed to collect and analyze data in accordance with a variety of industry standards, such as NMTBA, VDI, ISO and ASME B5.54. The laser system is calibrated and traceable to NIST.

[MAJOR FEATURES AND BENEFITS](#)

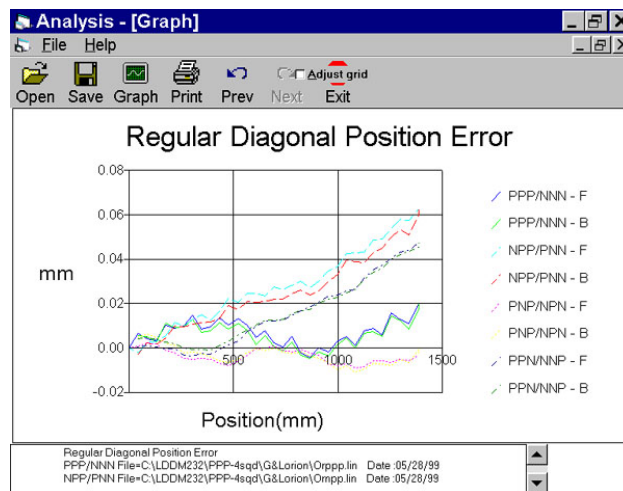
- Compact and light-weight
- Easy to setup and operate
- Automatic data collection
- NIST traceable laser accuracy
- No tripod and no interferometer
- Windows™ software
- RS-232 interface
- Automatic environmental compensation
- Supports NMTBA, VDI, ISO and ASME B5.54 standards

[MAJOR APPLICATIONS](#)

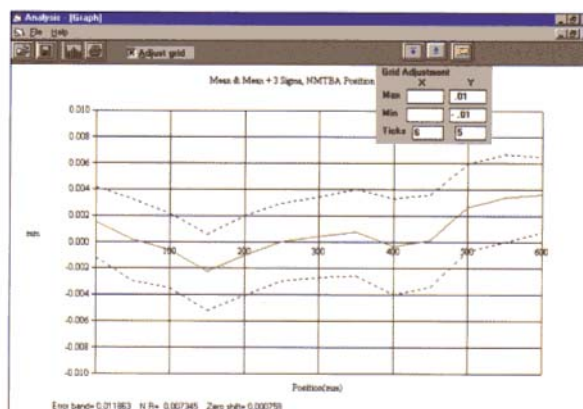
- Linear calibration of CNC machine tools, CMM's, Leadscrews, and DRO's
- Quality control maintenance
- Ultra precision positioning

Specifications

The MCV-500 Machine Calibration System features environmental compensation sensors. These devices automatically adjust the collected data for air temperature, barometric pressure, and thermal expansion of the axis being calibrated. With the "Automatic Data Collection", the operator programs the table into position, the system automatically senses the table movement and data is collected after a user defined interval.



Average error plot from OPTODYNE's Metrology Software run in accordance with NMTBA standards. (VDI 3441. ISO and ASME B5.54 standards are also available)



A typical data plot by the Windows automatic data collection software.

MCV-500

Configuration:

Single aperture laser head	L-109
Processor module w/RS-232 Interface	P-108D
½ " Diameter Retro-reflector	R-102
Metrology/Analysis Program	W-500
90 degree beam bender	LD-37S
Magnetic Base	LD-03
Adapter platform	LD-14A
12 ft. cable set	LD-21L
Carrying case	LD-20D
Automatic Temperature Compensation	IATCP
Notebook Computer (not included)	LTC

Capability:

Laser Stability	0.1 ppm
System Accuracy	1.0 ppm
Resolution	1 microinch (0.01 μm)
Range	50 feet (15 meters)
Slew Rate	144 ips (3.6 m/s)

Power:

90 to 230 VAC, 50 to 60 Hz