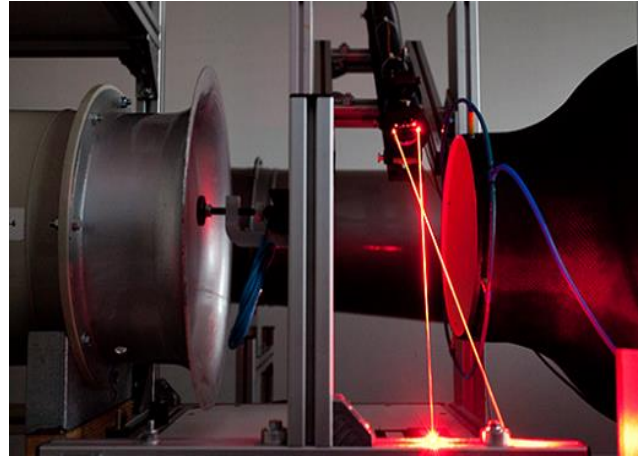


# WACS LDV System for Wind Tunnels and Flow Sensor Calibration

## Overview

WACS (Wind-Tunnel Automated Calibration Software) is a system for the calibration of instruments that measure flow velocity, for instance hot wire anemometer, propeller anemometer, cup anemometer etc. WACS controls the complete wind tunnel test station and records the necessary analogue signal data such as pressure, temperature and humidity that are essential for the calibration of the velocity measurement instrument.

WACS is modular and can be adapted to most test and calibration wind tunnels. The system integrates reference velocity measurements from the fp50-us LDV probe, analogue data acquisition and processing, and report generation in a single package. If an existing source of calibration data is already in place, only the data acquisition and reporting components are needed, with the option of wind tunnel control if needed.



## Applications

- Test and calibration of flow velocity instruments and sensors
- Small-scale aerodynamic experiments

## Main Features

- Highly accurate
- Robust
- Easy to install and operate
- Non-intrusive
- Approved by PTB (\*) for calibration purposes
- Automatic generation of test and calibration certificates
- Fits on an existing wind tunnel, or option to purchase the whole instrumented wind tunnel
- Low maintenance

(\*) The PTB (Physikalisch-Technische Bundesanstalt) is the German National Metrology Institute. One of the tasks of the PTB is to define accuracy and calibration standards for metrology equipment.

## Complete calibration facility

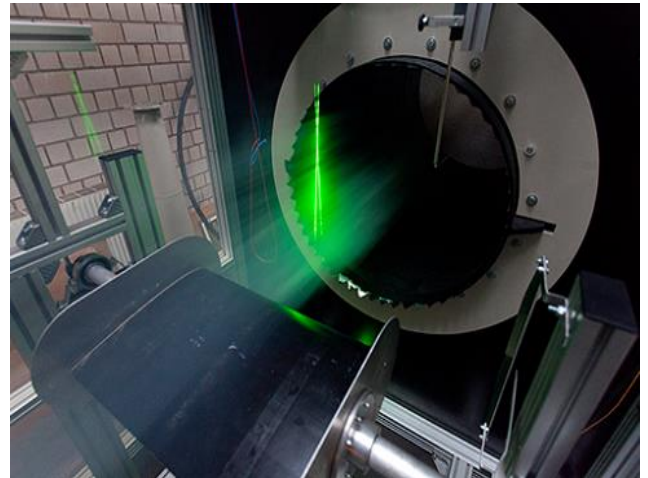
The components of the WACS LDV System can be either purchased together or individually.

We also sell complete turnkey calibration solutions, including the flow rig (wind tunnel) and instrumentation. Please consult us for more information

# Specifications

## LDV Probe

- Beam separation: 45mm
- Focal distance: 250mm or 400mm
- Laser source: Nd-YAG-Laser 75-500mW
- Receiver: photomultiplier via fiber optic coupling
- Velocity range: 0.05 to 200 m/s
- A/D bandwidth: 200MHz
- Operating system for application software: Windows7/10
- Power supply: 230V/110V, 50-60Hz
- Absolute accuracy: 0.2%



## Analogue Signal Inputs

- 16-bit A/D
- Signal connections: via termination panel and shielded
- Indio= 6 Analog Input/output 0-16V, 0-5V
- 6 Channel 4-20 mA current output, 6 digital Input, 6 digital Output

## Flow Controller/ indio interface

- 4-20mA differential pressure input
- RS422/485 communications
- Determination of regulation parameters for maximum stability
- Self-optimization possible
- Supplied in 19" rack enclosure
- Software WACS
- Acquisition and display of analogue signal sources
- Integration of LDV system or other source of primary calibration data
- Remote control of flow controller
- Automated calibration reports
- Load / Save probe-specific measurement programs including parameters such as
  - probe position and velocity resolution
  - Direct data display in Excel spreadsheets
- OPTIONS:
  - Traversing system, manual or automatic (software-controlled), up to 3 axes
  - PID controller