

M2 Spray Analyzer

Optical probe-based technique for accurate measurements of droplet size, droplet velocity and liquid fraction in dense sprays

M2 optical probe system suits a wide variety of applications, from fundamental research to industrial R&D and process control

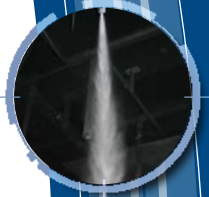
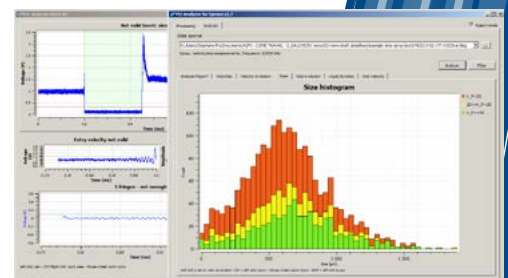
Key characteristics

- The probe can be operated in the heart of dense sprays, thanks to a miniaturized sensing part
- No transparency or optical access required
- Efficient optical micro-technology applicable to swirled sprays
- A broad range of sizes and velocities covered all at once enables direct and easy measurement in polydisperse flows
- Eye-safe equipment

Some use cases

- Spray nozzle for turbomachinery
- Atomization fundamental study
- Agricultural spraying
- Spray for fire safety
- Rain in climatic wind tunnel
- Spray drying
- High pressure cleaning
- Spray painting

M2 requires only minutes for getting up and running



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Performances & specifications

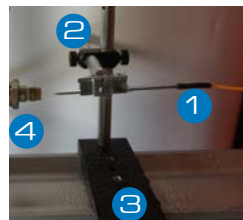
Performances & specifications

- Droplet size: from 5 μm to ∞ (one single range)
- Droplet velocity: 1 cm/s - 80 m/s (one single range)
The system can be operated above 80 m/s and up to 200 m/s at the cost of potential damage to the probe
- Liquid fraction: 0 - 100 %.
- Measurements independent of drop shape
- Tolerance between the probe and the flow direction: 45°
- Liquid fraction uncertainty: better than 5 %
- Velocity and size uncertainty: better than 10 %
- Standard operating temperature: 60°C – option: 150°C or 250°C
- Standard operating pressure: 8 bar – option: 100 bar
- External trigger available in option
- Laser safety: Class 1 laser product

M2 can also work great for bubbly or particle-liquid flows

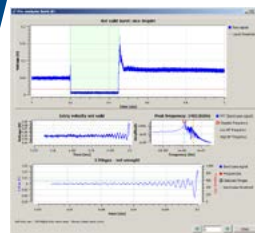
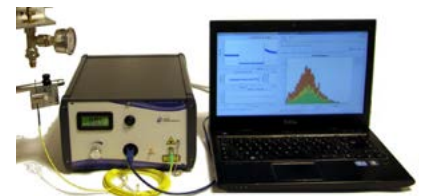
Easy set-up and operation

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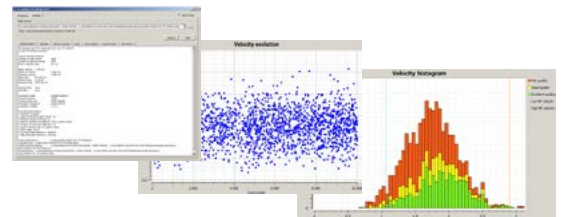
1 Attach the probe **1** to the probe holder **2**, fine-tune its position using a moving stage **3** and orient it toward the nozzle **4**.

2 Plug the probe to the optoelectronic module and connect the latter to your computer. The probe and the rest of the system can be several tens of meters away from one another.



3 Acquire data with a few clicks, then process it using the full automatic mode. If you wish full control on the processing parameters, you can switch to the expert mode that grants access to all settings as well as to the raw data.

4 Analyze the results using the M2A software, or export the processed data to perform your own analysis.



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