



## What is a Nephelometer?

It's a Real Time Dust Monitor for measuring Total Suspended Particulate (TSP). The Nephelometer is an analytical instrument used to measure the light-scattering coefficient of atmospheric and indoor aerosols. Depending on design, a Nephelometer inherently has different levels of sensitivity. The main uses of Nephelometers relate to air quality measurement for pollution monitoring, climate monitoring, and visibility.

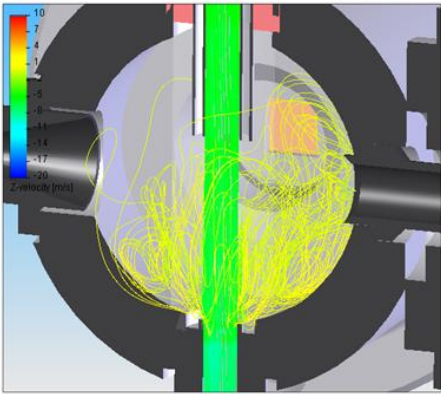
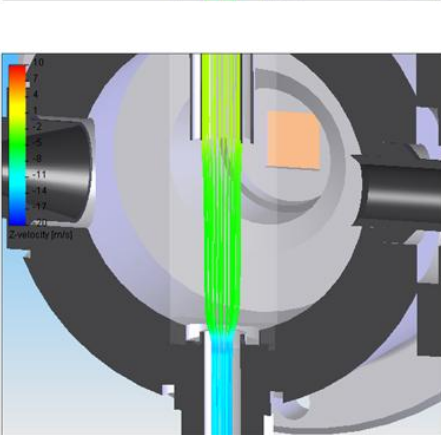
### About the Shawcity Nephelometer

The Shawcity Nephelometer from Sensidyne is an advanced real-time dust monitor accurately measuring dust concentrations using proven light scatter technology. This portable instrument accurately measures and records dust from 1-10,000  $\mu\text{g}/\text{m}^3$  with resolution to 1  $\mu\text{g}/\text{m}^3$ . Sample modes are selectable between 60 second sample, 15 minute STEL, or continuous sampling.

The Nephelometer has an internal pump drawing samples into the iso-kinetic sampling inlet where they meet **SHEATH AIR** that guides samples past the particle sensor. The sensor is a photo detector that measures laser light scattered by particulates in the sample stream. The instrument multiplies each measurement by a K-factor and displays the real-time reading on the display of the instrument. After each sample, the K-factor and Environmental Factor Name and STEL, maximum, minimum, and average readings record to the internal data log. When connected to a computer the instrument uploads up to 4,000 data-log records in spreadsheet format.

In addition to high sensitivity and ease-of-use the Nephelometer offers a low cost of ownership, automatic power save, long-life, data-logging, facility monitoring features, and user-replaceable filters.

## What is *SHEATH AIR* and how does it work?

<p><b><u>Without Sheath Air</u></b> Sampled dust particulate moves uncontained and deposit on internal parts.</p>		<p>Sheath air is clean filtered air that surrounds the aerosol stream to prevent particulates from circulating or depositing within the optic chamber. Sheath air prevents contamination caused by build-up and deposits, improves response time by containing the sample, and improves maintenance by keeping the optic chamber clean.</p>
<p><b><u>With Sheath Air</u></b> Sampled particulate is confined promoting more accurate samples and no contamination.</p>		

## Where does *SHEATH AIR* come from ?

The Nephelometer creates the sheath air by passing air through a zero filter before beginning the sample.

To summarise the Shawcity Nephelometer is a Real Time Dust Monitor for measuring Total Suspended Particulate (TSP) and gives you...



#### **Accurate Dust Concentration**

A Proprietary algorithm provides accurate dust concentration. The [sheath air](#) feature prevents internal contamination and improves accuracy.

#### **Reliability**

The unit has a temperature compensated durable housing and minimal moving parts ensure reliability.

#### **Highly Portability**

It's an All-in-one handheld instrument with long-life batteries that fully charge in less than 3 hours, an internal log-life pump, and one-hand operation.

#### **Facility Monitoring**

Easy to use software allows programming unique environmental profiles and recording sample data.

#### **UK SALES & SERVICE CENTRE**



Pioneer Road Faringdon Oxfordshire SN7 7BU  
Tel: 01367 246960 Fax: 01367 243200  
info@shawcity.co.uk www.shawcity.co.uk