[Measurement Technology

The following describes the advantages of various measurement methods.

capture hoods

technology	advantages	suggested product
general—supply or return air volume is captured by the hood and channeled across an averaging manifold	• reads air volume flow directly • quick measurements • various hood sizes available	
capture hoods using electronic manometers	• high resolution • multi-purpose meter • detachable manometer	• EBT721
capture hoods using swinging vane meters	• no batteries or power required • analog readout detects trends	• Balometer Jr. • Standard Balometer

hydronic manometers

technology	advantages	suggested product
general—pressure sensors designed for liquid media are used to measure hydronic system pressures	• more accurate than single sensor instruments • differential, high and low side pressures displayed simultaneously	• HM670/680

thermo-anemometers

technology	advantages	suggested product
general—air velocity is measured by the cooling effect of an airstream on a heated element	• sensors can measure very low velocity • small obstruction to stream • fast response to changes	
digital meter	• data storage and/or statistics • solid state, high reliability • easy-to-read LCDs • adjustable time constants	• CF8570/8571 • CF8585/8586

rotating vane anemometers

technology	advantages	suggested product
general—air movement causes a fan to rotate; velocity is determined by counting blade revolutions per unit time	• gives a good spatial average • may reduce the effect of turbulence • reads true air velocity	
mechanical with electronic sensing	• low cost • reading recall and average	• RVA+

swinging vane anemometers

technology

air impacts a low-mass vane which moves in a tunnel; needle is connected directly to a moving vane and velocity is read on a calibrated scale

advantages

- no batteries required
- no heated element—safe in explosive environments
- analog readout shows trends
- can be scaled by constricting flow

suggested product

- 6000AP Velometer
- 8100 series Velometer

micromanometers

technology

general—digital electronic manometer—usually a piezo-resistive sensor which generates a voltage based on diaphragm deflection

advantages

- position-insensitive
- fine resolution
- compact, lightweight
- measures positive and negative pressure with same hose hook-up
- uses standard pitot probes

suggested product

- EBT720
- AXD540
- AXD560

carbon dioxide meters

technology

general—a dual detector NDIR (non-dispersive infrared) sensor detects CO_2 concentration

advantages

- good resolution
- stable readings with low drift
- data storage and statistics
- easy-to-read LCDs

suggested product

- CF8650

combustion analyzers

technology

general—electrochemical gas sensor technology and thermistor stack temperature sensor used to monitor and service combustion systems to ensure safe, efficient operation of combustion systems

advantages

- real-time measurements
- measure O_2, CO, NO, NO_2, SO_2, draft pressure, temperature
- calculate efficiency, loss, excess air, air-fuel ratio, CO_2, NOx and emission rates.

suggested product

- CGA-801, series CGA-810, CGA-823

Ordering Information

We welcome your application or product questions. Please call 800.424.7427 or 651.490.2811 for more information on any instrument in this catalog.

Each Alnor brand instrument is calibrated using standards that are traceable to the National Institute of Standards & Technology (NIST) within the limits of the Institute's calibration service. A calibration data sheet is included with all Alnor products.

Warranty

All mechanical or analog products carry a one-year limited warranty. All electronic instruments feature a two-year warranty except where noted. More information on each product's warranty can be found in the Owner's Manual.

Calibration & Repair

To maintain the integrity of your instrument, we suggest that you calibrate it at least annually. This will ensure the accuracy of your measurements and guarantee compliance with industry standards.