



# ULTRAPROBE AMPS

## Airflow Measuring Probe Stations



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Ultratech Industries certifies that the ULTRAPROBE AMPS Airflow Measuring Probe Station shown herein is licensed to bear the AMCA Certified Ratings Seal—Airflow Measurement Station Performance. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 611 and comply with the requirements of the AMCA Certified Ratings Program.

Performance ratings include the effect of an integral air equalizer-straightener cell in the AMPS.

Test Results—AMPS 911-36 X 36

AMPS (CFM)	REF (CFM)	REF (FPM)	Accuracy (%)	Pressure Drop
36875	37212	4135	0.91	.222
31033	31379	3487	1.10	.162
26617	26877	2986	0.97	.125
17856	18028	2003	0.95	.052
9266	9161	1018	-1.16	.017

### Test Data

Model: AMPS  
 Type: Differential Pressure  
 Effective Area: 8.17 square feet  
 Conversion Formula:  $(CFM/Effective\ Area/4005)^2$

Size & Shape Tested: 36" x 36" Rectangular  
 Applicable Sizes Rated: Rectangular stations with cross-sectional areas between 4.5 and 18.0 square feet.  
 Test Setup: AMCA Standard 610, Figure 1  
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## APPLICATIONS

ULTRATECH ULTRAPROBE Airflow Measuring Probe Stations provide accurate, repeatable measurement of air movement through ducts and piping. Lightweight, rugged construction coupled with ease of installation and economical pricing make these devices particularly applicable to the HVAC trade. Durable, quality construction ensures long term, trouble-free operation. ULTRAC Airflow Measuring Probe Stations are compatible with manometers, differential pressure gauges, and differential pressure transmitters used for airflow indication and control.

## DESCRIPTION

ULTRAPROBE Airflow Measuring Probe Stations are designed per standard duct traverse requirements. These probes are designed to match the balancer's industry standard Pitot tube, including the method of static pressure measurement and distance between the total pressure and static pressure sensing holes.

ULTRAPROBE Airflow Measuring Probe Stations use multiple averaging Pitots to determine total velocity and static pressure measurements. ULTRAPROBE's unique AMPS construction eliminates nonessential hardware that can cause buildup of dirt and foreign matter on the measuring assembly.

ULTRAPROBE Airflow Measuring Probe Stations are available in round, rectangular and oval configurations. All configurations feature a sensor assembly that allows for duct expansion and contraction. The 12-inch flanged steel casing has an aluminum, hexagon-celled straightening vane section that is mechanically fastened to the inlet. This eliminates turbulence and corrects flow direction, thereby improving the velocity profile.

Various casing designs are available, as are most type of proprietary duct connecting systems. Contact ULTRATECH about these options.

# SPECIFICATIONS

Airflow measuring stations shall be of the multiple averaging Pitot/static sensor type, with sensors distributed for equal-area averaging of flows. They shall be of unitary (spool-piece) construction, of not less than 16-gauge sheet steel with flanged duct connections. Flow-straightening vanes shall be incorporated into the structure. Internal Pitot/static sensors shall be constructed of aluminum with hard anodized finish. Instrument connections shall be 1/4" NPT Female. Mounting hardware shall not penetrate the sensor assembly.

The airflow measuring probe stations shall be ULTRAPROBE AMPS, as manufactured by ULTRATECH INDUSTRIES, INC., Garner, NC, U.S.A.

## SPECIFICATIONS FOR STANDARD UNITS

ACCURACY: +/- 2% to 6000 feet per minute  
 TEMPERATURE: Maximum operating 400°F  
 PRESSURE: Maximum operating, 6-in. w.c.  
 PRESSURE DROP: Less than 0.13 in. w.c. at 2000 feet per minute with 3/8" cell  
 FLOW STRAIGHTENING VANES: 3/8" aluminum hexagon cell  
 MAXIMUM DESIGN FLOW: 6000 fpm  
 CASING: 16-gauge galvanized sheet metal  
 Length: 12-in. overall  
 PITOT/STATIC SENSORS: Aluminum with hard anodized finish  
 PROCESS CONNECTIONS: 1/4-in. NPT Female

# ORDERING INFORMATION

**ULTRAC AMPS** \_\_\_\_\_ - \_\_\_\_\_ x \_\_\_\_\_ (- \_\_\_\_\_)

**CASING DESIGN** \_\_\_\_\_

- 3 - Rectangular with no flanges
- 4 - Flat oval with no flanges
- 5 - Round with no flanges
- 6 - Rectangular with angle flanges
- 7 - Flat oval with angle flanges
- 8 - Round with angle flanges
- 9 - Rectangular with sheet metal flanges

**MATERIALS** \_\_\_\_\_

- 1 - Standard - 16-ga. galv. casing, aluminum straightening vanes, aluminum probes
- 3 - Stainless steel casing
- 4 - Stainless steel straightening vanes
- 6 - Stainless steel casing and straightening vanes
- 9 - Coated (specify)
- Z - Special

**STRAIGHTENING VANE DESIGN** \_\_\_\_\_

- 1 - Standard - 3/8" straightening vanes
- 2 - 3/4" straightening vanes (produces approx. 50% of specified pressure drop)
- Z - Special

**DIMENSIONS:** long side x short side or diameter \_\_\_\_\_

**OPTIONS** \_\_\_\_\_

- B - Bolt holes in flanges (specify)
- C - Special instrument connections (specify)
- D - Damper with actuator (specify)
- H - Above standard process air pressure (specify)
- W - All welded construction
- Z - Special