



ULTRAPROBE AMP

Airflow Measuring Probes

APPLICATIONS

ULTRATECH ULTRAPROBE Airflow Measuring Probes provide accurate, repeatable measurement of air movement through fan inlets (FIAMP), exhaust stacks, 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 Probes are compatible with manometers, differential pressure gauges, and differential pressure transmitters used for airflow indication and control.



ULTRAPROBE AMP

Designed for complete installation from outside the fan or duct, this insertion-type sensor is more economical than measuring stations which feature a flanged section of duct. The probe is also ideal for fan-inlet airflow measurement (FIAMP). The sensor

is effective at measuring gas and air flow, particularly dirt-filled, sooty or solid-bearing flows when installed with ULTRATECH's purge-type flow or pressure transmitter systems.

Gas velocities often vary significantly across a fan-inlet, stack or duct. Because single-point flow measuring devices read the velocity at one point only, errors in flow measurement are common. The AMP has total and static pressure measuring points which are distributed for equal-area averaging of flows, resulting in improved accuracy and reliability.



Ultratech Industries certifies that the ULTRAPROBE AMP 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 birdscreen plate.

Test Results-AMP 9-24 X 24

AMP (CFM)	REF (CFM)	REF (FPM)	Accuracy (%)	Pressure Drop
15966	16016	4004	-0.31	0.230
13944	13968	3492	-0.17	0.174
9969	9976	2494	-0.07	0.087
7915	7949	1987	-0.43	0.056
5970	5971	1493	-0.01	0.031
3889	3915	979	-0.66	0.015

Test Data

Model: AMP
 Type: Differential Pressure
 Effective Area: 3.67 square feet
 Conversion Formula: (CFM/Effective Area/4005)²
 Size & Shape Tested: 24" x 24" Rectangular
 Applicable Sizes Rated: Rectangular stations with cross-sectional areas between 2 and 8.0 square feet.
 Test Setup: AMCA Standard 610, Figure 1
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DESCRIPTION

ULTRAPROBE Airflow Measuring Probes 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.

DESCRIPTION (CONTINUED)

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

ULTRAPROBE Airflow Measuring Probes are available for fan inlets, round, rectangular and oval duct configurations. All configurations feature a sensor assembly that allows for duct expansion and contraction.

SPECIFICATIONS FOR STANDARD UNITS

ACCURACY: +/- 2% with recommended quantity of sensors
 TEMPERATURE: Maximum operating 400°F
 MINIMUM DESIGN FLOW: 400 fpm
 MAXIMUM DESIGN FLOW: 12000 fpm
 PITOT/STATIC SENSORS: Aluminum with hard anodized finish
 STRAIGHT RUN REQUIREMENT:
 5 diameters or longest side dimensions
 PROCESS CONNECTIONS: 1/4-in. barb

SUGGESTED SPECIFICATIONS

Airflow measuring probes shall be of the multiple averaging Pitot/static sensor type, with sensors distributed for equal-area averaging of flows. They shall be installed for a total Pitot traverse of fan inlet or duct. Internal Pitot/static sensors shall be constructed of aluminum with hard anodized finish. Instrument connections shall be 1/4" barb.

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

FOR FLAT OVAL, ROUND AND RECTANGULAR DUCTS select the series then use the diameter or longest side to determine the length. The following quantities are recommended based upon the diameter or smaller dimension of rectangular duct:

DUCT DIAMETER	<12	12 - 23	24 - 35	36 - 59	60 - 89	>89
	1	2	3	4	5	6

ORDERING INFORMATION

ULTRAC AMP - - -

SERIES _____

 7 - Flat oval
 8 - Round
 9 - Rectangular

LENGTH _____

CONSTRUCTION SPECIFIERS _____

 C - Compression fittings for process connections
 Z - Special (specify)