Ruskin’s AMP series probes are designed to provide accurate flow monitoring at all times. The anodized aluminum step sensor is fastened to a 20 gage galvanized steel mounting plate. Brass fittings are used to connect the high and low pressure chambers of the sensor to a high performance glass on silicone pressure transducer through 1/4” (6) O.D. polyethylene tubing. All performance data is based on three duct areas tested to AMCA 610-93 (figures one and two), providing the most comprehensive testing in the industry (refer to page 2).

**STANDARD CONSTRUCTION**

**AMP MOUNTING PLATES**
20 ga. G60 galvanized steel.

**STEP SENSOR EXTRUSION**
6063T5 Extruded aluminum, clear anodized finish.

**SENSOR PORT FITTINGS**
1/4” Brass barbed union.

**PRESSURE TUBING**
Plenum Rated Polyethylene.

**PRESSURE TRANSDUCER:**
RU-274-R2-VDC, 0-5 or 0-10 VDC output (field selectable). Output signal is proportional to CFM.

**POWER REQUIREMENTS**
12-40 VDC or 12-35 VAC.

**MINIMUM SIZE**
6”w x 6”h (152 x 152) Duct.

**MAXIMUM SIZE**
60”w x 42”h (1524 x 1067) Duct.

**VELOCITY REQUIREMENTS**
Product Range - 400 to 5000 FPM.
Operating Range - 250 to 2,000 FPM.
Standard units with RU274-R2-VDC.
Operating Range - 250 to 5,000 FPM.
Units with high pressure transducer.

**OPERATING TEMPERATURE**
-22°F to +140°F standard.

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Ruskin Company certifies that the AMP Series Air Measuring Probes shown herein are licensed to bear the AMCA Certified Rating Seal - Airflow Measurement Station Performance. The ratings shown are based on tests and procedures performed in accordance with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to airflow measurement performance only.

**VARIATIONS**

AMS series kits are available with several optional variations to fit your specific application.
- RU-274-R2-MA (4-20mA transducer)
- RU274-R3-VDC High pressure transducer (units over 2,000 FPM)
- Pressure Sensors with LCD Display
- Step sensing probe only

**NOTES:**
1. Dimensions shown in parenthesis ( ) indicate millimeters.
2. Refer to installation details for additional details.
3. Probe is furnished 1/4” (6) smaller than given “A” dimension.
AMP001 Single Probe Applications from 6" to 60" A-Width x 6" to 12" B-Height

AMP002 Two Probe Applications from 6" to 60" A-Width x 12" to 24" B-Height

AMP003 Three Probe Applications from 6" to 60" A-Width x 24" to 42" B-Height
AIR PERFORMANCE ± 5% Measurement Accuracy

Ruskin test data is based on multiple sizes and AMCA test setup configurations. Compare data to other manufacturers that claim lower accuracy and you will find that their data is based on one size in the most favorable test configuration. Some manufacturers do not even test to AMCA standards. You can trust Ruskin to have the most comprehensive test data in the industry so you can use our products with confidence.

<table>
<thead>
<tr>
<th>AMCA TEST SETUP FIGURE 1 (Straight Duct)</th>
<th>AMCA TEST SETUP FIGURE 2 (After Elbow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEST SIZE</td>
<td>TEST RUN</td>
</tr>
<tr>
<td>3 0.020</td>
<td>427</td>
</tr>
<tr>
<td>4 0.105</td>
<td>1045</td>
</tr>
<tr>
<td>5 0.445</td>
<td>2255</td>
</tr>
<tr>
<td>6 0.990</td>
<td>3553</td>
</tr>
<tr>
<td>7 1.620</td>
<td>4662</td>
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<tr>
<td>2 0.010</td>
<td>1173</td>
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<tr>
<td>3 0.030</td>
<td>2005</td>
</tr>
<tr>
<td>4 0.120</td>
<td>4071</td>
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<tr>
<td>5 0.450</td>
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<tr>
<td>6 0.790</td>
<td>9970</td>
</tr>
<tr>
<td>7 1.250</td>
<td>13188</td>
</tr>
<tr>
<td>8 1.760</td>
<td>16220</td>
</tr>
<tr>
<td>2 0.010</td>
<td>3229</td>
</tr>
<tr>
<td>3 0.050</td>
<td>6136</td>
</tr>
<tr>
<td>4 0.090</td>
<td>8062</td>
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<tr>
<td>5 0.480</td>
<td>17895</td>
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<tr>
<td>6 1.100</td>
<td>27799</td>
</tr>
<tr>
<td>7 1.760</td>
<td>36618</td>
</tr>
</tbody>
</table>

Test Criteria

Model: AMP001, AMP002 & AMP003

Method: Differential Pressure

Duct Sizes Tested: 12" x 12", 24" x 24", 36" x 36"

Rated Duct Sized: Rectangular duct with cross-sectional areas between 0.5 and 18 square feet.

Test Setup: AMCA Standard 610, Figures 1 and 2

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CALCULATIONS

\[
\text{CFM} = (K \times \text{Area}) \text{ DP}^{0.5}
\]

Where:

- \( K \) = Proprietary constant value based on test data
- \( \text{Area} \) = Duct width times duct height over 144
- \( \text{DP} \) = Differential Pressure

Single Probe Applications (AMP001): \( K = 3400 \)

Two Probe Applications (AMP002): \( K = 2650 \)

Three Probe Applications (AMP003): \( K = 3100 \)
### ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMP001</td>
<td>Single Probe Kit</td>
</tr>
<tr>
<td>AMP002</td>
<td>Two Probe Kit</td>
</tr>
<tr>
<td>AMP003</td>
<td>Three Probe Kit</td>
</tr>
</tbody>
</table>

#### AMP001 Probe Kit Contents
- Step Sensor Probe
- 2 Brass "T" Fittings (factory installed)
- 2 Rubber Brass Fitting Caps
- 12" Long High & Low Pressure Tubing
- RU-274-R2-VDC Pressure Transducer Installation Instructions

#### AMP002 Probe Kit Contents
- 2 Step Sensor Probes
- 4 Brass "T" Fittings (factory installed)
- 2 Rubber Brass Fitting Caps
- 2 12" Long High & Low Pressure Tubing
- 2 15" Long Interconnecting Tubing
- RU-274-R2-VDC Pressure Transducer Installation Instructions

#### AMP003 Probe Kit Contents
- 3 Step Sensor Probes
- 6 Brass "T" Fittings (factory installed)
- 2 Rubber Brass Fitting Caps
- 2 12" Long High & Low Pressure Tubing
- 4 15" Long Interconnecting Tubing
- RU-274-R2-VDC Pressure Transducer Installation Instructions

#### Ordering Instructions:
1. Specify quantity, model, option suffix and "A" duct/probe width
2. Refer to Installation Details for probe placement.

#### Examples:
- (2) 24" AMP001 (2) 24" kits as pictured on page 1
- (7) 32" AMP002B (7) 32" two-probe kits with high pressure transducer

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* "Probe is furnished 1/4" (6) shorter than given "A" duct width.

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### SPECIFICATION

Furnish and install, at locations shown on plans or as in accordance with schedules, an air measuring probe system piped to a high performance pressure transducer. Kit shall be capable of measuring a range from 250 to 5,000 feet per minute. The Air measuring kit shall consist of 6063T5 extruded aluminum step sensing blade(s) with anodized finish, plenum rated polyethylene pressure tubing, brass barbed pressure fittings, mounting hardware and a glass-on-silicone GL-Si capacitance sensor pressure transducer capable of measuring up to six field selectable pressure ranges up to 1" water column. The transducer shall be accurate to ±1% of full scale and be contained in a NEMA 4 (IP-65) painted steel enclosure. Transducer shall be factory mounted and piped to high and low brass pressure fittings from the sensor averaging ports. All sensor tubing shall terminate in solid brass barbed fittings. Air Measuring Probe kits shall be, in all respects, equivalent to Ruskin Model AMP001, AMP002 or AMP003.