

- ★MODEL AS-1, AS-2 AIR FLOW INDICATOR IS DESIGNED FOR CHECKING AIR FLOW WITH No. 301 AIR FLOW INDICATOR TUBE AT PLACE SUCH AS HAZARDOUS (HARMFUL GASES POSSIBLY EXIST) AND INACCESSIBLE.
- ★NEVER USE THE MODEL AS-1 AND AS-2 AIR FLOW INDICATOR FOR ANY PURPOSE OTHER THAN STATED USE.
- ★READ CAREFULLY THIS INSTRUCTION MANUAL AND THE INSTRUCTIONS OF THE AIR FLOW INDICATOR TUBE (No.301) PRIOR TO USE OF THIS PRODUCT.
- ★ENSURE THAT THIS INSTRUCTION MANUAL IS STORED IN A CONVENIENT LOCATION SO THAT YOU CAN REFER AT ANYTIME.

1. PREFACE

Available for checking air flow near ventilation hood, the indoor air flow, etc. Air flow Indicator (Aerosol ejector) Model AS-1 is used for spot or intermittent checking and Model AS-2 for continuous operation. These Air Flow Indicators develop smoke without combustion.

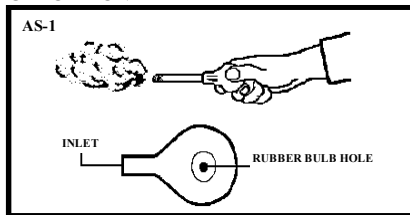
▲CAUTION

1. AIR FLOW INDICATOR TUBE CONTAINS CORROSIVE REAGENTS (TIN TETRACHLORIDE).
2. DO NOT TOUCH THESE REAGENTS DIRECTLY ONCE TUBES WERE BROKEN.
3. KEEP THE TUBES OUT OF THE REACH OF CHILDREN.

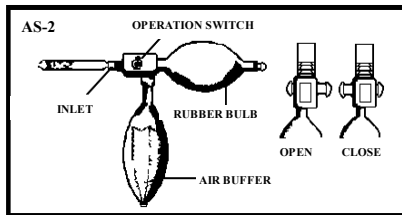
NOTICE

1. USE ONLY WITH AIR FLOW INDICATOR TUBE (No. 301).
2. PRIOR TO USE, READ CAREFULLY ITEM 8. USER RESPONSIBILITY.

2. SPECIFICATION



AS-1



AS-2

Fig.1

3. OPERATION

1. Break both ends of the air flow indicator tube, and insert the tube into the inlet of the Air Flow Indicator, Model AS-1 or AS-2.

▲CAUTION

SAFETY GLASSES AND GLOVES SHOULD BE WORN TO PREVENT INJURY FROM SPLINTERING GLASS.

2. Squeeze the rubber bulb and a white aerosol comes out.
 - (1)AS-1: Put the thumb on the rubber bulb hole and squeeze it.
 - (2)AS-2: Close the operation switch and squeeze the rubber bulb repeatedly. After the air-buffer was swollen, open the switch to blow out white aerosol continuously. 10 times of squeeze of the rubber bulb gives white aerosol for about 1 minute.
3. In case of stopping smoke, remove the tube off and cap the both ends tightly with caps of accessories. Air Flow Indicator tube can be used repeatedly.

※ See descriptions of the instruction manual of the Air Flow Indicator Tube (No. 301).

▲CAUTION

AFTER USE OF AIR FLOW INDICATOR, STORE IT AFTER REMOVING THE AIR FLOW INDICATOR TUBE FROM THE AIR FLOW INDICATOR (AS-1, AS-2). IF SMOKE IS LEFT IN RUBBER BULB OF AS-1 AND AS-2, IT MAY CAUSE TROUBLE.

4. MEASUREMENT OF AIR FLOW RATE:

An air flow rate V (m / sec.) is obtained with a flowing distance of white aerosol L (m) divided by a time period (sec.) as shown in the following equation.

$$\text{Flow rate } V \text{ (m / sec.)} = L / t$$

5. CALCULATION OF VENTILATION VOLUME

A ventilation volume Q (m³ / sec.) is calculated with a cross section of a ventilation hood A (m²) multiplied by a flow rate V (m / sec.) as shown in the following equation.

$$\text{Ventilation volume } Q \text{ (m}^3 \text{ / sec.)} = A \times V$$

⚠ CAUTION
GENERATED SMOKE FROM THE AIR FLOW INDICATOR CONTAINS HYDROGEN CHLORIDE WHICH IS TOXIC. PAY ATTENTION TO THE FOLLOWING.

1. Do not breathe the smoke. The smoke may irritate the eyes, nose, throat, etc. When the smoke touched on the skin, wash it out with water. When you breathed it, gargle well.
2. The smoke corrodes metals. Do not use it near the precision instrument, etc.
3. Do not use it in confined room. When used by some reasons, ventilate there well after the use.
4. Take care that the tube is not to be broken. When broken, wear safety gloves and put them in a like plastic bucket filled with water, then throw it away; Do not touch by the hand directly.
5. A thing such as a white film may exist in the Air Flow Indicator tube, but it does not affect usage.

6. DISPOSAL OF PRODUCT:

USED TUBES AND AIR FLOW INDICATOR SHOULD BE DISPOSED CAREFULLY ACCORDING TO RELEVANT REGULATIONS, IF ANY.

7. USAGE WITH THE MODEL AS-3 EXTENSION AIR FLOW INDICATOR (Sold separately)

AS-3 Extension Air Flow Indicator is suitable to check the air flow near ventilation fan or hood which was installed in a high place. With switching on the pump, air flow check continuously or intermittently up to 2 metres is possible. Refer to the instruction manual of Model AS-3 Extension Air Flow Indicator for it usage.

8. USER RESPONSIBILITY:

It is the sole responsibility of the user of this equipment to ensure that the equipment is operated, maintained and repaired in strict accordance with these instructions and the instructions provided with Air Flow Indicator Tube (No.301).

The Manufacturer and Manufacturer's Distributors shall not be otherwise liable for any incorrect measurement or any damages, whether damages result from negligence or otherwise.