

# AIR MONITOR 空气监测器

## MULTI-USE RADIATION MONITOR 多用途辐射监测器

Model # AIR-TBM 型号 AIR-TBM

Air Monitor • Survey Meter • Wipe Counter • also Chem or Bio Aerosols

空气监测器 • 探测仪 • Wipe 计数器 • 生物/化学气溶胶

### FEATURES: 产品特点

- ALPHA, BETA-GAMMA 阿尔法  $\alpha$ , 贝塔  $\beta$ , 伽马  $\gamma$
- IDEAL FOR FIRST RESPONDERS 理想的第一反应

### • QUADRUPLE USE: 四种用途

- AIR MONITOR- RADIATION 空气辐射监测
- WIPE COUNTER Wipe 计数器
- SURFACE MONITOR 表面监测器
- PERSONAL AIR SAMPLER 个人空气采样器

- REAL TIME 实时

- PORTABLE 便携

- INTEGRATED EXPOSURE 综合曝光

- STANDARD TBM-3D RATEMETER 标准 TBM-3D 率表

- DRAWS AIR FROM ROOM 从室内抽取空气

- EASY CHANGE FILTER 易于更换滤网

- SLIDE-ON WIPE-HOLDER 滑动式 wipe 卡托

- BATTERY POWERED SYSTEM, AC OPERATION OPTIONAL

电池供电系统, AC 电源可选购



TBM-3D WITH DC PUMP

AIR PUMP AP-5020E

### PRINCIPLE OF OPERATION: 操作原理

Air is pulled thru charcoal impregnated filter paper by a pump. This filter is constantly observed by a 2" diameter thin window GM tube and ratemeter.

气泵将空气透过炭浸渍滤纸抽入, 通过 GM 管上直径 2" 的薄窗和率表可持续观测过滤器。

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### DESCRIPTION: 说明

The AIR-TBM uses standard 57-70 mm filters in T/A's easy change, no leak filter, to trap any airborne radioactivity. The filter is under constant surveillance via pancake GM tube. Air is drawn through the system by a continuous duty pump. The unit is completely self-contained and portable. Room air is drawn in through the charcoal impregnated filter paper. Then through the pump and its 3 ft. exhaust hose that can be extended. Wipe holder WH-15 accepts wipes from 1" diameter up to 2" diameter.

AIR-TBM 使用标准 57-70 mm 滤网捕获任意气溶胶辐射，易更换。通过扁平型 GM 管，过滤器被持续监测。空气被一个连续工作的泵抽进系统。此仪器完全一体，便携，空气被透过炭浸渍滤纸抽进，然后进入泵和其 3 英尺长的排风管中，管子可延长，Wipe 托架 WH-15 接受直径 1"--2" 擦拭纸。

A unique "groove and track" system allows the air sampler (Model# **MINI-AIR-15**) and wipe holder (Model# **WH-15**) to be separated from the detector/ratemeter (Model# **TBM-3D**). The **TBM-3D** is itself a compact surface monitor and survey meter. The **MINI-AIR-15** can be left with the pump turned on, so collection of air pollutants is not interrupted.

一款独特的“沟槽”系统允许空气取样器 ( 型号 **MINI-AIR-15**) 和 wipe 托架 ( 型号 **WH-15**) 与探头/率表 ( 型号 **TBM-3D**) 分离开来，Model# **TBM-3D** 本身是一款紧致的表面监测器和检测仪。**MINI-AIR-15** 机型的泵可以一直开着，以便空气污染物收集不受影响。

### SPECIFICATIONS: 规格

• **Measures:** Airborne radioactivity including aerosol, particulate and gases - but excluding the noble gases. 1

测量：气溶胶辐射污染包括气溶胶，粒子，气体。但不包括惰性气体。

• **Sensitivity:** Limit of sensitivity (99% confidence level) one nanoCi collected on filter paper (as beta over 0.1 MeV). This is the integrated content of entire amount of air drawn through the system. This corresponds to  $2 \times 10^{-11}$   $\mu\text{Ci/cc}$  after 5 days with pump running or  $1 \times 10^{-10}$   $\mu\text{Ci/cc}$  after 24 hours or  $3 \times 10^{-9}$   $\mu\text{Ci/cc}$  after pump runs for 1 hour. This level is below 2/10th of the California Safety Code Title 17 (and NRC Title 10) limit for 40 Hr. exposure to most hazardous beta and/or gamma emitter in absence of AC 227.

灵敏度：收集到滤纸上检测物灵敏限 ( 置信度 99% ) 为 1 nanoCi，这是被抽进系统的全部空气累积量。相当于泵运转 5 天后结果为  $2 \times 10^{-11}$   $\mu\text{Ci/cc}$ ，或 24 小时后的  $1 \times 10^{-10}$   $\mu\text{Ci/cc}$ ，或泵运行一小时后的  $3 \times 10^{-9}$   $\mu\text{Ci/cc}$ 。这个水平低于加州安全法则 17 条 ( 和 NRC 第 10 条 ) 限值的五分之一，即 40 小时暴露在最有利的  $\beta$  或  $\gamma$  放射物下辐射量，不含 AC227

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• **Detector:** 探头

2" diameter. Thin window 1-3/4" x 1.5-2 mg/cm<sup>2</sup> pancake GM detector, Model T-1190  
直径 2" , 带 1.75" x 1.5" 薄窗, 2 mg/cm<sup>2</sup> , 扁平型 GM 探头 , 型号 T-1190

• **Background:** 本底

Typically 25 cpm 典型 25 cpm

• **Flow Rate:** 流量

Calibrated at factory. See chart. Positive displacement pump.  
工厂校准, 见图, 容积式泵

• **Filters:** 滤网

Includes package of fifty filters, charcoal impregnated #41, 70mm. Or 1" dia. filters optional. Can use membrane, paper or glass fiber filters.

包含一组 50 只滤网, 炭浸渍 #41, 直径 70mm 或 1"。滤网可选购薄膜, 纸膜或玻璃纤维。

• **Case:** 外箱

Electronics housed in instrument-case, carrying handle included.

电子元件装在仪器箱内, 包括提手

• **Dimensions:** 尺寸

Excluding Pump: 3" W x 5" H x 6"D

3" 宽 x 5" 高 x 6" 长, 不含泵

• **Shipping Weight:** 装船重量

Depends on pump ordered. 视是否包含泵而定

• **Electronics:** 电子学

TBM-3D Digital Ratemeter. TBM-3D 数字率表



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• **Ranges:** 测量范围

0.01 to 100 mR/hr.

• **Meter Response Time:** 率表反应时间

2 seconds 2 秒

• **Pump Power:** 泵电源

6 AA batteries- standard- AC optional. 115V, 50-60 Hz (230 V optional)

6 节 AA 电池/标准 AC 选择 , 115V, 50-60 Hz(230 V 可选)

**Options:** 可选购

Flow regulator 流量调节器

Serial output 串行输出

High alarm 高报警

Flow meter 流量表

- Extended Life Pump 寿命延长泵

- Unit fitted with inlet hose to allow monitoring of hoods

适配进气软管的零件 , 以便监测排风管。

Pump	Model #	Flow Rate	Weight
Battery Operated	STANDARD MINI-AIR-15	4 ft <sup>3</sup> /hour (2 lpm)	1 lb
AC Operated	AP-5020E	0.5 ft <sup>3</sup> /minute	6 lb
AC Operated	AP-5030E	1 ft <sup>3</sup> /minute	12 lb
AC Operated	AP-5040E	2 ft <sup>3</sup> /minute	14 lb

Additional pumps available, please call with specifications.

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