

# MOVING FILTER AIR MONITOR

## ALPHA, BETA/GAMMA PARTICULATES, CHEMICALS, & GAS

移动式过滤器空气监测器  
 $\alpha$ ,  $\beta/\gamma$  粒子, 化学物和气体  
Model Series - SAAM-2HVM

### FEATURES: 特点

- ❖ MOVING AIR FILTER
- ❖ 移动式空气过滤器
- ❖ AIRBORNE ALPHA LESS RADON AND BETA/GAMMA PARTICULATES
- ❖ 气溶胶  $\alpha$  (氡抑制) 和  $\beta/\gamma$  粒子
- ❖ RUGGED, 100% DUTY CYCLE
- ❖ 坚固, 负载率100%
- ❖ SETTABLE ALARM
- ❖ 可设定报警
- ❖ HIGH THROUGH-PUT
- ❖ 高通量
- ❖ UNATTENDED OPERATION
- ❖ 无人自动操作达6周  
**Up to 6 WEEKS**
- ❖ PRINTED RECORD (Optional)
- ❖ 记录打印 (可选购)
- ❖ 2 CHANNEL AIR MONITOR –  
SAAM-1HVM  
2通道空气监测器-型号SAAM-1HVM
- ❖ 1 CHANNEL AIR MONITOR –  
SAAM-3  
1通道空气监测器-型号SAAM-3
- ❖ COUNTS SEPARATELY AND SIMULTANEOUSLY
- ❖ 独立、同时计数
- ❖ NETWORK READY ELECTRONICS
- ❖ 电子学联网功能
- ❖ USB and/or ETHERNET
- ❖ USB和/或以太网



Filter Paper



SAAM-2HVM



**TECHNICAL ASSOCIATES**  
**OVERHOFF TECHNOLOGY**

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818-883-7043 (Phone) 818-883-6103 (Fax)

[tagold@nwc.net](mailto:tagold@nwc.net)

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### APPLICATION: 应用

The SAAM Series Monitors are used for monitoring effluent from radioactivity utilizing or producing facilities either directly at the stack or other outlet or at the property boundary. The SAAM Series are designed to provide a **complete record of activity for up to 45 days of unattended operation**. This instrument automatically advances the filter. This avoids frequent manual filter replacement. Alarms are preset by user.

SAAM系列监测器用于监测来自使用或生产辐射材料的单位的排放物, 可直接监测烟道及其它出口, 也可以用于设施边界。此系列设计为45天无人操作情况下提供完整监测记录。此仪器自动进纸, 免去了人工更换滤纸的麻烦, 用户自动设定报警

### OPTIONS: 选购

1. Single Channel Analyzer window(s) specifically for Pu-239, and U-238 and/or other nuclides.  
专门用于Pu-239, U-238 和/或其它核素的带窗单道分析仪
2. Clock and calendar give date and time of each reading.  
每个读数带时间和日期
3. Helium Flush for Alpha Spectroscopy.  
氦介质  $\alpha$  能谱

### DESCRIPTION: 描述

The **SAAM-1HVM** is a two channel air monitor for simultaneous measuring of gross Alpha, Beta/Gamma particulates. The **SAAM-3** is a one channel monitor for Alpha emissions. **Both monitors see Alpha less Radon**. The **SAAM-3** has plug in capacity for one or more channels of specific radiation energies, e.g. Pu-239, U-238 etc.

Like all of the SAAM series, these are continuous duty, high capacity, rugged skid or caster-mounted systems.

**SAAM-1HVM**是一款2通道空气监测器, 同时测量总  $\alpha$ ,  $\beta/\gamma$  粒子和辐射气体; 型号**SAAM-3**是一款单道监测器, 监测  $\alpha$  发射物; 两款监测器都在测量  $\alpha$  时进行氦抑制; 型号**SAAM-3**带插卡式功能, 可根据具体辐射能量拓展通道, 如Pu-239, U-238等等。

和SAAM系列其它产品一样, 此机型连续作业, 高容量, 坚固托盘或轮装系统

**Electronics** are microprocessor with color LCD display. Also preamps etc. are plug-in modules allowing change or addition of function as needed and allowing rapid repair by substitution of modules in the field.

**电子学:** 带彩色LCD显示器的微处理器, 前置放大器等插卡式模块需要时允许功能改动或添加, 允许现场更换模块以达到快速维修目的。

TA 软件用于数据分析以得出更精确气溶胶浓度和总活度。

**Shields** are void free lead encased in welded steel and with stainless steel liners for a long, useful life and easy decontamination.

**屏蔽:** 无缝铅带不锈钢箱及不锈钢里衬以延长使用寿命并容易去污。

**Filters** are easily changed via quick disconnect, O-ring sealed filter holder. Shield can be opened for filter change or cleaning with minimum effort. All shield connections and openings are sealed against air



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**过滤器:** 通过快速断开O型密封托架非常容易更换, 屏蔽容易打开用于更换过滤纸或清洗, 所有屏蔽接口都密封防漏。

The **air moving system** is based on a high capacity air pump capable of delivering 4 cfm with **options** up to 30 cfm free air and a real time electronic flow meter. The flow meter feeds directly into the TAquire software data analysis for more accurate calculation of airborne concentration and total activity.

**气动系统**基于高性能泵流量为 4cfm, 可选购自由空气流量 30 cfm, 密封实时电子学流量计, 直接连接到 TA 软件用于数据分析以得出更精确气溶胶浓度和总活度。

The entire system is mounted in a self-contained rugged cabinet and comes complete with all cabling and connectors in place ready to operate. The standard unit is operated from 120 V single phase, 60 Hz; 220 V optional, 50 or 60 Hz.

整个系统安装在一个一体结实机柜中, 带全部所需缆线和连接件。标准仪器工作电压单项115V, 60 Hz; 可选购220 V, 50 或 60 Hz.

The modular system is covered by T/A's unique exchange warranty, in addition to the full one year warranty covering all T/A products.

除享受TA所有产品全年保修外, 此模块系统在TA独有的包换范围内

**SPECIFICATIONS: 规格: USER SETTABLE ENGINEERING UNITS 用户设定计量单位**

**ALARMS: Clear audio and visual alarms are provided. 报警: 清晰视听报警**

Channels: 通道	1	2
Physical Form: 存在形式	Particulates 粒子	Particulates 粒子
Activity Detected: 检测活度	Alpha less Radon 氡抑制 $\alpha$	Beta/Gamma $\beta/\gamma$
Detector Type: 探测器类型	Solid State 固体	Nal(Tl) Scintillator
Size: 尺寸	1" Diameter	2" Diameter
Model: 型号	SS-A1	PGS-3L16
Filters Media: 过滤媒介	Moving Filter 移动过滤器	Activated Charcoal Cartridge 活性炭滤芯
Size: 大小	75mm x 100 meters	2.5" Diameter



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<b>Construction:结构</b>	Standard or Glass Fiber 标准/玻璃纤维	Standard or Glass Fiber 标准/玻璃纤维
<b>Filter Type:过滤器类型</b>	Glass Fiber Filter 玻璃纤维过滤器	TEDA Activated Charcoal Cartridge 活性炭滤芯
<b>Standard Shielding: 标准屏蔽</b>	1/2" Steel	3" (Pb) Lead
<b>Optional Shielding: 可选屏蔽</b>		1" (Pb) Lead
<b>Sensitivity:灵敏度</b>	$2 \times 10^{-13}$ $\mu\text{Ci/ml}$	$2 \times 10^{-13}$ $\mu\text{Ci/ml}$

### SPECIFICATIONS (continued): 规格 (继续)

#### ELECTRONIC SYSTEM DESCRIPTION: 电子学系统描述

Micro-processor includes: 微处理包括:

CPU with data acquisition	Keyboard
CPU带数据采集	键盘
High resolution, color	Color LCD Monitor
高分辨率, 彩色	LCD彩色显示器
Mouse	Audio
鼠标	声音信号
Manuals	Onscreen Graphics (Built-in Printer Optional)
菜单	屏显图形 (可选内置打印机)

<b>Data Storage:</b>	Non-volatile memory 1 year. Data stored every 2 minutes all year.
数据存储:	永久储存1年, 全年数据每2分钟存储
<b>1 terabyte hard drive:</b>	Stores programs, plus room to add additional new software functions in the future.
1TB硬盘:	存储程序, 加上将来新软件功能拓展空间
<b>Energy Analyzer:</b>	Fully adjustable single channel analyzer with independent High Voltage power supply.
能量分析仪:	独立高压电源供应, 可独立调整单道分析仪
<b>Power Supply:</b>	1 ea. MVR-5R
电源:	MVR-5R一个
<b>High Voltage Supply:</b>	Separately variable for each detector from 0 to 1500V. Standard FM-5 modular series.
高压电源:	每个探头0 - 1500V之间可变, 标准FM-5模块系列



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Model Series - SAAM-2HVM

**Display Monitor:** Showing both real time concentration and accumulated dose for each channels.  
显示屏: 每个通道实时显示浓度和累积剂量

**Accuracy:**  $\pm 10\%$  except for resolution loss and statistical variation.  
精度:  $\pm 10\%$ , 分辨率损失与统计偏差除外

### SPECIALIZED AIR MONITOR SOFTWARE. 专用空气监测器软件

- ❖ User settable Engineering Units.
- ❖ 用户设定计量单位
- ❖ Calibration feature allows readout directly in Ci/cc or cps/m or other units.
- ❖ 校准允许直接读出Ci/cc、cps/m或其它单位
- ❖ Integrates results over an eight hour, or 24 hour interval.
- ❖ 8小时或24小时时段显示累计剂量

**MENU OPTIONS:**

菜单选择:	1. Modify shift length 修改值班时长	2. Change filter 更换过滤纸
	3. Configure energies 调整能量窗	4. Set alarms 设定报警
	5. Start shift 开始值班	6. Calibration 刻度

**ALARMS:** Alarms pre-settable to any trigger level.

**报警:** 预设报警, 任何触发点

**Low Level Alarm:** Automatic Reset

下限报警: 自动重设

**High Level Alarm:** High level alarm remains activated until RESET is pushed.

上限报警: 启动RESET按钮之前, 上限报警持续激活。

**Alarm Indication:** Red-High Level, Amber-Low Level

报警指示: 红-高限, 琥珀色-低限

**Audio:** 1000 Hz, greater than 80 db. Also see **Safety Features** below.

声音信号: 1000 Hz, 优于80 db. 请看以下安全特性

### AIR MOVING SYSTEM: 气动系统

**Air pump:** Extremely rugged continuous high capacity duty Positive displacement pumping system.  
Ultra Low Noise Pump

气泵: 极其坚固大容量正排量泵系统, 极低噪音



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**Pump Drive Motor:** 1 HP, 50/60 Hz, capacitor start, induction run.  
 泵电机 1 HP, 50/60 Hz 电容启动, 异步运行

**Flow Rate:** Electronic mass flow meter continuously informs analysis system.  
 流量: 电子质量流量计连续通报分析系统

**Inlet and Outlet:** 20 foot 3/4" hose inlet: 20 foot 1" hose outlet. Length may be extended.  
 进气与出气: 20英尺3/4"进气软管, 20英尺1"出气软管, 长度可延伸。

**CONTROLS:** **控制**

**System:** ON-OFF  
 系统: 开-关

**Air:** ON-OFF  
 空气: 开-关

**Alarms:** (each channel) **High Level Alarm:** Set  
 报警: (每个通道) 上限报警 设定

(each channel) **High Level Alarm:** Reset  
 (每个通道) 上限报警 重设

(each channel) **Low Level Alarm:** Set  
 (每个通道) 下限报警 设定

(each detector) **Voltage:** Set  
 (每个探头) 电压 设定

(each detector) **Energy Threshold/Window:** Set  
 (每个探头) 能量窗 设定

### STANDARD SPECIFICATIONS: 标准规格

**High Voltage Supply:** Separately variable from 0 to 1,5000 VDC at 200  $\mu$ a on scintillation or proportional channels.  
 高压电源: 独立电压, 0 - 1,5000 范围可变, 液闪或正比通道使用直流电 200  $\mu$ a

**LCD Color Monitor:** 17" Monitor shows both real time concentration & accumulated dose for all Channels  
 LCD 彩屏: 17" 显示器同时实时显示全通道浓度和累计剂量

**Accuracy:** +/- 10% except for resolution loss and statistical variation  
 精度 +/- 10% 不含分辨率损失和统计偏差

**Alarms:** Alarms are pre-settable to any trigger level  
 报警: 用户预设任何触发点报警



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<b>Low Level Alarm:</b> 低限报警:	Automatic Reset 自动重设
<b>High Level Alarm:</b> 高限报警:	High level alarm remains activated until RESET button is pushed RESET (重设) 按钮按下前, 高限报警持续激活
<b>Alarm Indication Lights:</b> 报警指示灯:	6 Lights Red-high level; Amber-low level count for each channel, plus more indicators shown on LCD Monitor. 6 个指示灯, 红色-高限, 琥珀色-每个通道低计数率, LCD 显示器上设有更多指示灯
<b>Audio:</b> 声音报警:	1,000 Hz, greater than 80 db 1,000 Hz, 优于 80 db
<b>Outputs:</b> 输出:	<b>Alarm Condition Outputs:</b> 报警状况输出 <ol style="list-style-type: none"><li>1. Logic Level Signal 逻辑水平信号</li><li>2. Contact Closure or Opening 继电器闭合</li></ol> Ethernet 以太网 USB
<b>Standard Installation:</b> 标准安装:	Cabinet: heavy gauge steel. Skid or caster mounted Five inch ball bearing casters (4 each). Two of these are full 360 degree swiveling. 机柜: 重型钢, 托盘或轮车安装; 5 英寸球轴承脚轮 (4 个), 其中两个 360 度旋转
<b>Special Safety:</b> 特别安全措施:	Loss of system vacuum air flow alarm with relay switch closure. Loss of signal alarm. All system circuits fused. 系统无气流报警继电器关闭, 信号丢失报警, 所有系统电路带保险
<b>Power:</b> 电源:	120 VAC – 220 VAC; optional 50/60 Hz
<b>OPTIONAL:</b> 可选:	Thermal protection on motor. 带过热保护电机

### OPTIONS: 选购:

- ❖ 3 Channel 4-20mA Chart Recorder Drive
- ❖ 可选 3 通道道 4-20mA 图形录入器驱动
- ❖ Skid Mount
- ❖ 轮装
- ❖ Grab Sample Port



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- ❖ 抓斗采样口
- ❖ Available without air mover or with alternate air movers.
- ❖ 可选鼓风机或其它
- ❖ Broader range 12 decades.
- ❖ 更宽量程 12 个量级
- ❖ Different detector types.
- ❖ 不同探测器类型
- ❖ Positive displacement of Roots Blower.
- ❖ 正排量式鼓风机
- ❖ Three push-button Detect & Test sources (License exempt quantities) of the three channels.
- ❖ 每个通道带按钮检测&测试源 (免执照量)
- ❖ Flow rate can be increased to 30 cfm with larger pump and minor changes in the plumbing
- ❖ 管路稍作改动, 大容量泵流量可达 30cfm
- ❖ Lighter SAAM-1HVM system with less Shielding eg: 1" thick.
- ❖ 选择 1 英寸厚铅 SAAM-1HVM 系统更轻

### WEIGHT, DEMENSION, SHIPPING: 重量, 体积, 装运

#### SAAM-1HVM

<b>Dimensions:</b>	29" wide x 31" deep x 41" high - exclusive of casters.
尺寸:	不含轮子部分 29"宽 x 31" 深 x 41" 高
<b>Weight:</b>	1600 lbs.
重量:	
<b>Shipping Weight:</b>	1750 lbs.
装运重量:	

#### SAAM-3

<b>Dimensions:</b>	24" wide x 36" deep x 41" high - exclusive of casters.
尺寸:	不含轮子部分 24"宽 x 36" 深 x 41" 高
<b>Weight:</b>	175 lbs.
重量:	
<b>Shipping Weight:</b>	250 lbs.
邮寄重量:	



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