

**TOTAL 6**  
**STACK MONITORS ~ GAS, PARTICULATE**  
**GROSS BETA-GAMMA ~ IODINE ~ TRITIUM ~ C-14**

烟道监测器 • 气体、粒子

总  $\beta$  -  $\gamma$  - 碘 - 氚 - 碳-14

Model Series TOTAL-6

系列型号 TOTAL-6

Model ~ TOTAL-6-TCI-H <sup>3</sup>	plus Inorganic C-14 (CO <sub>2</sub> )
Model ~ TOTAL-6-TCO-H <sup>3</sup>	plus Organic C-14
Model ~ TOTAL-6-TC	Multi-Nuclide System
Model ~ CAM-33	Multi-Nuclide System

**FEATURES: 特点**

- SIX CHANNEL SIMULTANEOUS MEASUREMENT
- 6通道同时测量
- SENSITIVE TO: 灵敏度:
  - H-3 10<sup>-7</sup>  $\mu$ Ci/cc
  - CO<sub>2</sub> 10<sup>-8</sup>  $\mu$ Ci/cc
  - Organic C-14 10<sup>-7</sup>  $\mu$ Ci/cc
- READS DIRECTLY IN  $\mu$ Ci/cc or Bq/l
- 直接读出单位 $\mu$ Ci/cc 或 Bq/l
- REAL TIME FLOW MEASUREMENT
- 实时流量测量
- DYNAMIC BACKGROUND COMPENSATION
- 动态本底补偿
- ALARM & CAN ACTUATE REMOTE CONTROLS
- 报警功能及遥控功能
- CAN OPERATE IN PRESENCE OF OTHER RADIOACTIVE GASES (See Chart)
- 可以在其它辐射气体出现情况下正常运行 (见表格)
- MICRO PROCESSOR OPERATION
- 微处理器操作
- DIGITAL ACCURACY
- 数字精确
- INCLUDES DATA, ANALYSIS, DATA ARCHIVE & DATA RETRIEVAL
- 包括数据、分析、数据存档与检索
- USB & ETHERNET PORTS
- USB&以太网接口
- RUGGED CABINET
- 结实机柜
- OPTIONAL: CASTER OR SKID MOUNTED CABINET
- 选项: 带轮或底座带轮

**PWR & BWR Produce Tritium**  
**10 Curie/Giga-Watts per Year**



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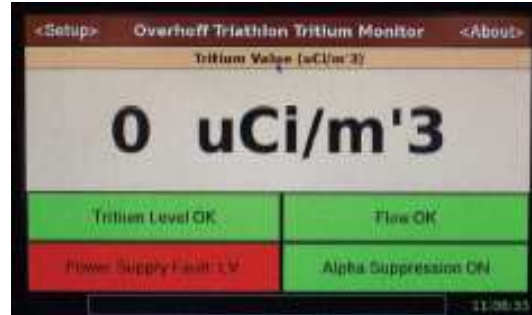
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**APPLICATION: 应用**

All six models, the TOTAL-6 Stack Monitors and the CAM-33 are good for Nuclear Power Plants, Stacks, Room Air, etc. They are sensitive, rugged stack or effluent monitors.

全部6个型号，TOTAL-6 烟道监测器和CAM-33均可用于核电站，烟道及室内空气等测量，这些设备为灵敏结实烟道型或流出物监测器。

- The TOTAL-6 series stresses Tritium and C-14 detection.
- TOTAL-6 系列 尤其用来检测氚和C-14
- The CAM-33 series stresses particulates, Iodine, and Nobel Gas.
- CAM-33 系列尤其用于测量粒子，碘和惰性气体
- The CAM-33-6 monitor has the most channels for 6 simultaneous measurements of Gross Beta/Gamma Particulates, Alpha Particulates, Noble Gas, Iodine, Tritium, & C-14.
- CAM-33-6 监测器多达6个通道同时测量总  $\beta/\gamma$  粒子， $\alpha$  粒子，惰性气体，碘，氚，碳14

**TRITIUM & <sup>14</sup>CO<sub>2</sub> MEASUREMENT DESCRIPTION: 氚和碳 14 测量说明**

- The subtractive balanced chamber electrometer circuit and optional Radon Rejection decreases background effects to negligible levels.
- 补偿电离室静电计电路和可选氡抑制功能将本底影响降低到可以忽略的水平
- The deionized and filtered intake reduces to negligible levels spuriousness based on smokes, dusts, and existing ionization in the air.
- 去离子及过滤进气将来自烟尘及空气中现存离子杂散影响降低到可以忽略的水平
- Inlet and outlet hoses provide return of monitored air to source: interiors of fume hoods and exhaust stacks, etc.
- 进气及出气管路允许将被测气体返回气源地：排风罩内或排烟道中。



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- All instruments are calibrated at the factory. Calibration check may be performed in the field with a license exempt μCurie level Beta source
- 所有仪器工厂标定，也可以使用豁免微居 β 源进行现场检测。

Measurement Ranges of Optional Detectors 探头测量范围	From 下限	4 Decade Model 4量级型号	6 Decade Model 6量级型号
Tritium	10 <sup>-7</sup>	10 <sup>-3</sup>	10 <sup>-1</sup> uCi/cc
Inorganic C-14	10 <sup>-8</sup>	10 <sup>-4</sup>	10 <sup>-2</sup> uCi/cc
Organic C-14	10 <sup>-9</sup>	10 <sup>-5</sup>	10 <sup>-3</sup> uCi/cc
Alpha particulate	5 x 10 <sup>-8</sup>	10 <sup>-4</sup>	uCi/cc

**TOTAL 6 SERIES – STACK MONITORS**

Airborne Activity	Model	TOTAL-6-TCI (1)	TOTAL-6-TCO (1)	TOTAL-6-TC	CAM-33	CAM-33-4	CAM-33-6
	Chemical Form						
Tritium H3	T <sub>2</sub> , HTO T <sub>2</sub> O	YES	YES	YES			YES
Carbon C-14: Inorganic Organic	CO <sub>2</sub> Various	YES —	— YES	YES OP			OP YES
Particulate	Alpha						
Particulate	Beta				YES	YES	YES
Iodine				OP	YES	YES	YES
Noble Gas: Gross/All Argon Xenon Radon				YES OP OP RX	YES	YES	YES OP OP RX- OP
		RX	RX				



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Number of Channels: 通道数量:

YES = Measures Separately

YES=单独测量

RX = Rejects

RX= 抑制

OP = Optional

OP=选择

**NOTE:** Models TOTAL-6-TCO & TOTAL-6-TCI work best if no other nuclides are present

**See Spec Sheet details for the CAM-33 series.**

注意: 在没有其它辐射核素出现情况下型号TOTAL-6-TCO & TOTAL-6-TCI使用最佳,

**CAM-33系列**详情请查看规格书

**SPECIFICATIONS: 规格**

See [CAM-33 series](#) Spec Sheet for Details

**ELECTRONICS:**

电子学

**Circuit:**

Electrometer circuit amplifies net difference between a 2 liter Tritium internal chamber & a background chamber of similar size & configuration.

**电路:**

静电计电路放大了2升氚电离室内室和同样容量及构造的本底室净差

**Calibration:**

Can be calibrated internally with Tritium (or HTO) & <sup>14</sup>CO<sub>2</sub> gas,  
**OR** on a Gamma calibration course;  
**OR** can be checked at a single point with an external (not provided) Beta source.  
Organic Carbon Channel can be calibrated with C-14 disk source.

**标定:**

可以用氚 & <sup>14</sup>CO<sub>2</sub> 气体进行内部标定, 或用  $\gamma$  源标定, 或用外部  $\beta$  源单点检测 (不提供)。有机碳通道可用C-14圆盘放射源

**Alarm:**

High Level: Red flashing light plus warbling sound  
System Fault Alarm: White steady light

**报警:**

上限: 红灯闪烁加颤音

**Remote Alarm:**

3 Relays provided for operators use

**远程报警:**

3个继电器可供 操作者使用



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**Output:** USB Port & ethernet port  
Optional 0-5 volt or 4-20 mA.

**输出:** USB接口和以太网接口, 可选0-5 volt 或 4-20 mA.

**On-Board Computer:** Data Archive & Data Retrieval

**机载电脑:** 数据存档与检索

**Background:** Essentially eliminated by subtractive balanced chambers.  
**Optional - Radon Rejection**

**本底:** 补偿室基本上消除本底影响。**可选-氡抑制功能**

**Smoke, Dust & Ion Elimination:** Filter and deionizer reduce effects to negligible levels.

**烟尘和 粒子消除:** 过滤器和去离子器将影响减少到可以忽略的水平。

**WEIGHT & DIMENSIONS: 重量和尺寸:**

**Dimensions:** 23"W x 66"H x 36"D

**尺寸:**

**Shipping Weight:** 635 lbs.

**邮寄重量:**

**OPTIONAL: 选项**

<ul style="list-style-type: none"> <li>Interconnection to / from port of other gas or particulate monitors</li> <li>与其它气体或粒子监测器连接</li> </ul>	<ul style="list-style-type: none"> <li>Remote Alarm (audio &amp; visual)</li> <li>远程报警 (视听)</li> </ul> <p>(Model RDX-8) includes 25" of cable. Can be used to 500 feet. (型号RDX-8) 包括25"长缆线, 可延长到500英尺</p>
<ul style="list-style-type: none"> <li>Serial Printer</li> <li>串口打印机</li> </ul>	<ul style="list-style-type: none"> <li>Casters or Skid Mounted</li> <li>带轮或底座带轮</li> </ul>
<ul style="list-style-type: none"> <li>Higher Tritium Count Rate using Both Proportional Detectors for Tritium Measurement</li> <li>使用正比计数探头进行氚测量氚计数率更高</li> </ul>	<ul style="list-style-type: none"> <li>Additional Lead Shielding for Greater Gamma Rejection</li> <li>额外铅屏可提供 <math>\gamma</math> 抑制</li> </ul>
	<ul style="list-style-type: none"> <li>4-20 mA for computer.</li> <li>电脑接口4-20 mA</li> </ul>



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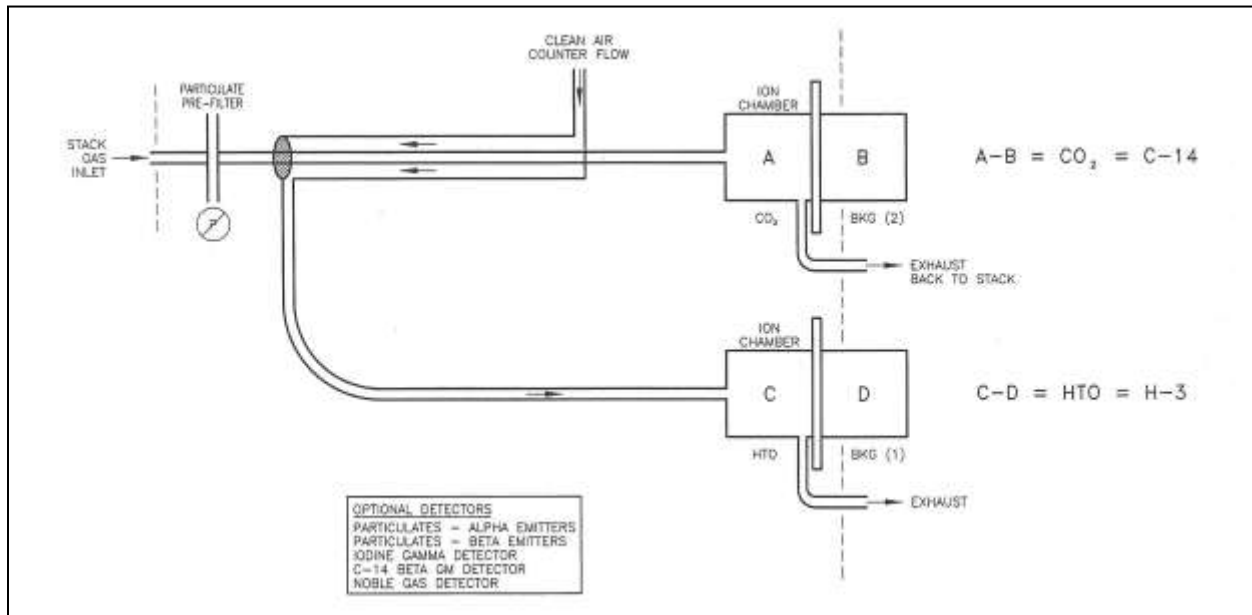
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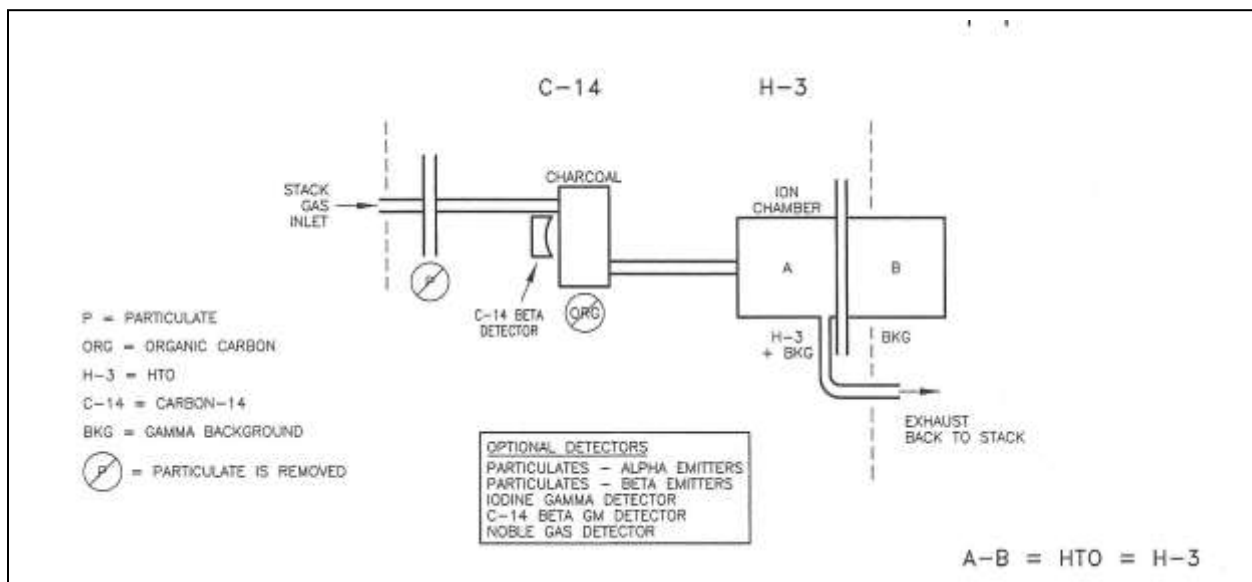
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- Model ~ CAM-33              Multi-Nuclide System



**TOTAL-6-TCI-H<sup>3</sup>**



**TECHNI** TOTAL-6-TCO-H<sup>3</sup>

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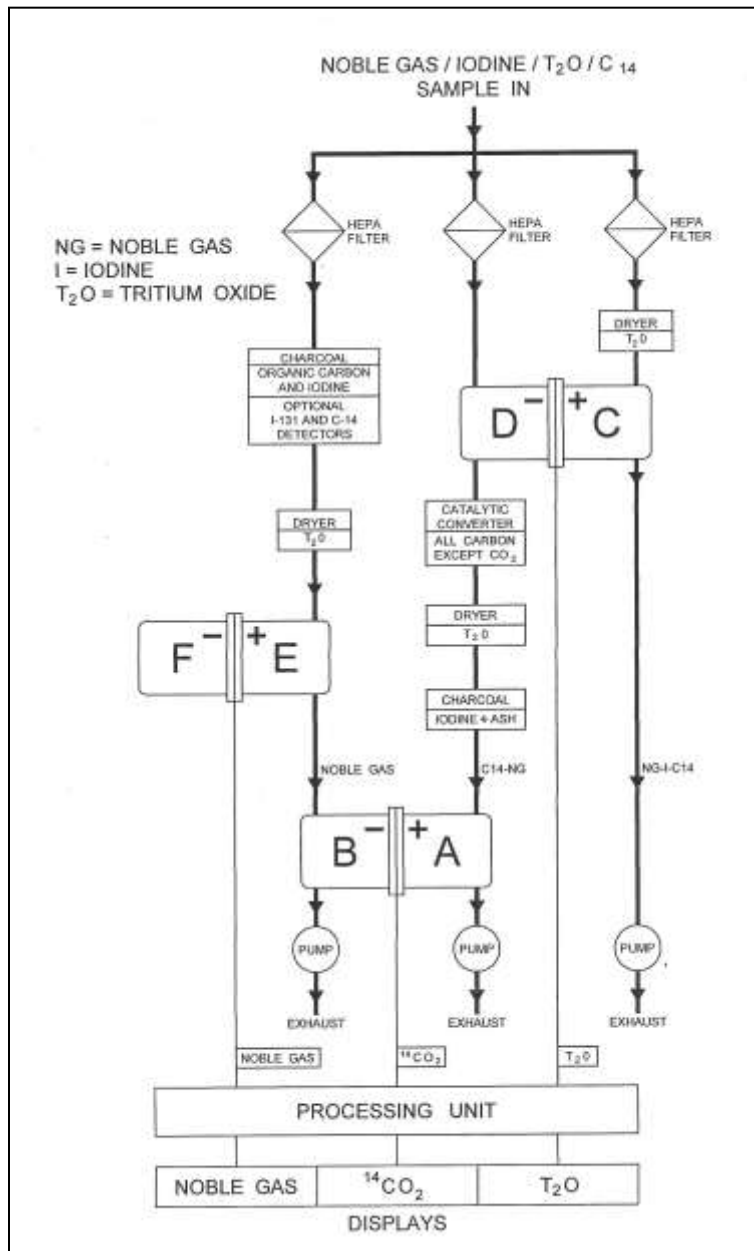
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**TECHNICAL TOTAL-6-TC**  
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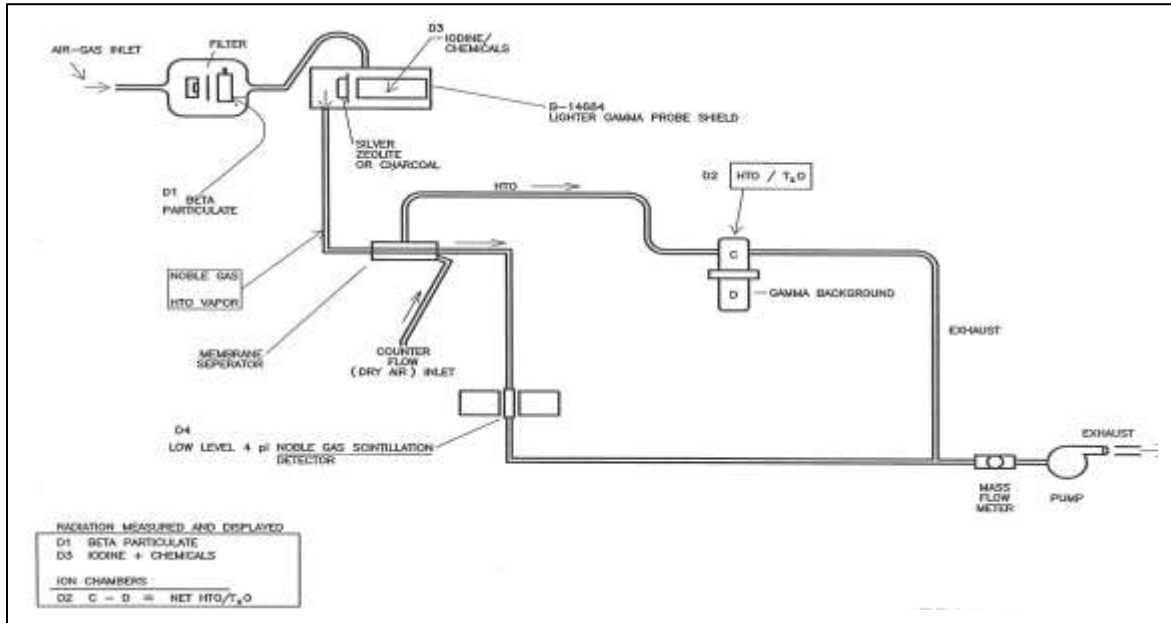
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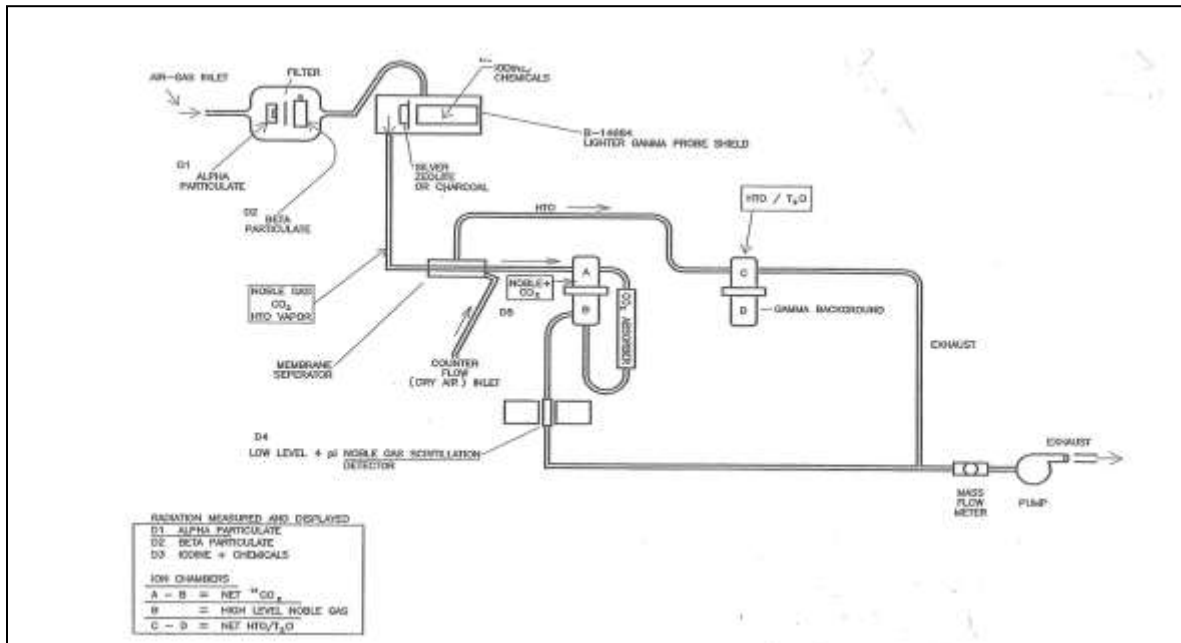
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**CAM-33-4**



**TECHNICAL ASSOCIATES CAM-33-6**  
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