

# GAS FLOW COUNTER

Model # MGS-5AB

## FEATURES:

- EXCEPTIONAL PLATEAU AND HIGH EFFICIENCY
- PROPORTIONAL OR GEIGER OPERATION
- BUILT-IN HIGH SENSITIVITY PREAMPLIFIER
- (OPTIONAL) ULTRA-THIN MYLAR WINDOW
- STANDARD FM-5 MODULE
- 2" DIAMETER SAMPLE CAPACITY

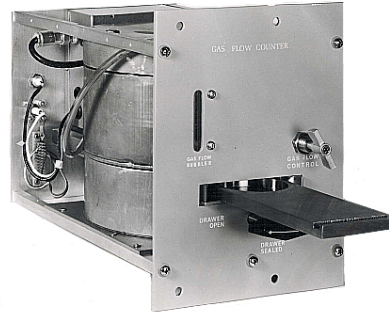


Figure 1: MGS-5AB

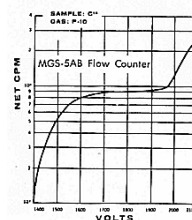


Figure 2: Graph CPM vs Volts

**APPLICATION:** The Model MGS-5AB Flow Counters are engineered to produce high counting efficiencies where extremely low levels of alpha or beta radioactivity are to be measured. It is ideal for applications in biological, physical, and chemical research, or in environmental sampling for health physics and public health services. The instrument includes a sample tray holder which accepts samples up to 2" in diameter. An optional window allows counting of volatile samples. Removal and disassembly of the chamber in event that decontamination becomes necessary is rapid and simple.

**GENERAL DESCRIPTION:** The combination of the full 2 pi hemisphere and the precision collector wire provide the key to the high counting efficiency of the MGS-5AB Flow Counter. Counting may be in window or windowless mode. In the latter case, 51% alpha geometry and 60-70% beta geometry (including backscatter) are normally realized. The built-in solid state preamplifier is coupled directly to the collector wire to eliminate loss of low amplitude signals. The preamplifier circuit is designed to operate with +12V which is supplied by most scalers and ratemeters. The MGS-5AB can be used as stand-alone detector system or as part of T/A's SFM-5V-3 or other system.

## SPECIFICATIONS:

<b>Sample Pans Accepted:</b>	Diameter to 2", depth to 1/4".
<b>Chamber:</b>	2-3/8" diameter, scrubbable nickel-plated aluminum hemisphere.
<b>Collector:</b>	1 mil stainless steel loop.
<b>Window:</b>	2-1/8" diameter, 90 - 125 mg/cm <sup>2</sup> thick. Use of window is optional.
<b>Shipping Weight:</b>	80 pounds.

**TA**

## TECHNICAL ASSOCIATES

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\$Revision: 1.1 \$

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## SPECIFICATION (Continued)

<b>Count Yield:</b>	Windowless: Alpha 51%, Beta of C <sup>14</sup> 60%. Window: Approximately 85% of windowless yield.
<b>Window:</b>	2 furnished. .00008" aluminized mylar.
<b>Shielding:</b>	1" lead shielding in all directions, 4 pi.
<b>Background:</b>	Typically alpha less than 0.1 cpm, Beta less than 20 cpm.
<b>Counting Gas Required:</b>	P-10 proportional or Geiger gas.
<b>Preamp Power Requirements:</b>	± 12V. Note: When used as part of a T/A instrument system, the preamplifier may be mounted in another nearby module.
<b>Front Panel Finish:</b>	Baked enamel on aluminum panel.
<b>Module Size:</b>	Double width module, 6-3/4" W x 8-3/4" H x 10-1/2" D.
<b>Standard Case Size:</b>	10-1/2" W x 8-3/4" H x 14-1/2" D.
<b>Weight:</b>	60 pounds.
<b>Shipping Weight:</b>	80 pounds.



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