

## SPAN LAB™ Complex Mixtures Generator



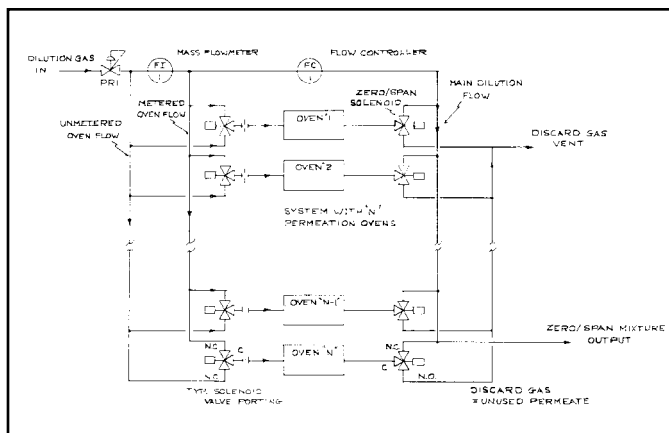
### APPLICATIONS

- ❖ Ambient air quality studies
- ❖ Contaminated atmosphere simulation
- ❖ Catalyst efficiency testing in the petrochemical industry
- ❖ Development of standardized analytical methods

### BENEFITS

- ❖ Documentable accuracy and reliability
- ❖ Standard simulates actual sample
- ❖ Mixture is always fresh

### Flow Diagram- Multi-Oven Calibration System for V.O.C.'s / Toxics



The **Span Lab™ Complex Mixtures Generator** calibration system designed for laboratories doing **EPA** analysis. The **Span Lab™ Complex Mixtures Generator** generates a flowing stream of calibration mixture which can be fed directly to an analysis system, or captured in small, low pressure cylinders for use in remote locations.

### DESCRIPTION

The **Span Lab™ Complex Mixtures Generator** is a group of up to 30 individually controlled permeation tube ovens. Each oven is self-regulating at a preset, fixed temperature. The carrier flow through each oven is individually controlled.

Permeation tubes in these ovens emit a small, precisely known flow of each component compound into a small carrier gas flow through each oven.

The output from each oven is selectively added to a controlled flow of dilution gas. The output from any combination of permeation ovens can be added. The composition of the calibration can be changed to meet varying demands.

The dilution flow is measured by an electronic mass flowmeter and digitally displayed. The indicated total dilution flow includes flow from the selected ovens. The standard total dilution flow is 0.25 to 5 l/min., with optional ranges to 50 l/min.

## TECHNICAL FEATURES

- Composition of mixtures easily varied.
  - Uses single step dilution for highest possible accuracy.
  - Each component source (permeation tube) can be traced to fundamental standards.
  - Provides a low cost flowing mixture for extended time periods.
  - Flowing stream eliminates mixture stability problems.
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## SPECIFICATIONS

**Up to 30 ovens, with up to 6 permeation tubes in each oven.**

**Size:** 36" wide x 72" long x 60" high

**Output Pressure:** Standard is atmospheric to 40 psig. (higher output pressures are available)

**Oven Flow:** Approximately 100 cc/min. over each oven.

**Total Dilution Flow:** Standard range 0.25 to 5 l/min. Alternate ranges to 50 l/min.  
Minimum flow available is 100 cc/min. for each oven, so total minimum flow is 3 l/min. with 30 ovens in use.

**Temperature Range:** Each oven supplied at preset temp. as dictated by the application. Temperature range available is 30°C to 150°C. Variable temperature ovens are adjustable in 0.1°C increments, from 30°C to 150°C.

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## OPTIONS AVAILABLE

- **Direct Dilution from Gas Cylinders.** This option allows a flow from a cylinder of premixed gas to be diluted into the Complex Mixture Generator's dilution gas stream.
- **Multiple Output Streams.** This option allows more than one output stream, simultaneously.
- **Variable Temperature Ovens.** This option allows the concentration of individual components (or sets) to be varied independently of the other components.
- **Humidification of the mixture.**