KIN-TEK Analytical, Inc.

Gas Standard Generators / Permeation Systems

Permeate to Calibrate!

The Calibration Specialists...

KIN-TEK Gas Standard Generators (Permeation Systems) use Trace Source™ Permeation Tubes to generate accurate, on-line calibration standards. Gain the convenience of on-line validation, plus the assurance of NIST traceability.

There are permeation tubes for over 550 chemical compounds, including Toxic Air Pollutants, VOC's, Acid Gases, Amines, Sulfurs and Hydrides. The permeation tubes can be used in any KIN-TEK permeation oven.

FlexStream™ Gas Standard Generator

The FlexStream™ Base Module is the core module of KIN-TEK's flagship FlexStream™ calibration gas standard system. The FlexStream™ is a fully automated, expandable, full capability permeation tube system for generating precision calibration gas mixtures. The Base Module utilizes a Mass Flow Controller and PID Temperature Controller for precise measurements. It can be used as a computer controlled, standalone permeation system, or combined with other FlexStream™ modules to create complex ppm, ppb, or pptr gas mixtures. The FlexStream™ Base Module incorporates a PC computer or local color touchscreen to control the system. FlexLink™ software is provided with the FlexStream™ Base Module.

FlexStream™ PM
Auxiliary Permeation Module

Auxiliary permeation modules are additional permeation ovens that allow multi-component mixtures when permeation tubes must operate at different temperatures, LFH high rate tubes are required, or components must be individually selected for addition to the mixture. Each PM module keeps its permeation tubes ready for instant use. The PM module is controlled from the Base Module touchscreen.

FlexStream™ PM/GF
Gas Feed Permeation Module

Some component compounds (e.g., oxygen or methane) have vapor pressures too high for typical permeation tubes. Gas-Fed permeation tubes allow the user to add component compound to the tube as a gas under controlled pressure, thus allowing tubes for previously unavailable compounds. The PM/GF provides the special controls required for these tubes. The PM/GF module is controlled from the Base Module touchscreen.

FlexStream™ SD
Secondary Dilution Module

The SD module extends the concentration range from any permeation tube by providing an additional stage of dilution. The SD module can also give variable concentration into a fixed output flow. The SD module is operated from the Base Module touchscreen.

Each FlexStream™ System Cabinet can accommodate the FlexStream™ Base Module with two optional modules.

Multiple cabinets may be used to accommodate additional modules for the most complex applications.

* Shown in expanded 3-module cabinet.

FlexStream™ HG
Humidification Module

Many applications require the calibration gas standard to simulate "real world" conditions including the presence of humidity. The FlexStream™ HG is used to add that humidity. The computer system automatically adjusts flows to maintain %RH at varying total flows, or adjusts to change %RH as required. The trace concentration mixture does not contact liquid water. The HG module is operated from the Base Module touchscreen.

FlexStream™ IM
Interface Module

The Interface Module is designed to match the conditions under which calibration gas is delivered to the requirements of that application. This is a "passive" module and can be used with any FlexStream™ system. The IM is manually controlled.

491Flex™ Gas Standard Generator

The 491Flex™ is a manually operated, expandable, full capability permeation tube system for generating precision calibration gas mixtures. Mixtures are produced by diluting the small flow from Trace Source™ permeation (or diffusion) tubes with a larger precisely controlled flow of matrix gas, typically nitrogen or zero air. The system integrates with other 491Flex™ modules, and continues to offer Zero and Standby functions. The 491Flex™ is ideally suited for generating trace concentration – ppm, ppb, and pptr – mixtures. Mixtures contact only inert materials.

EcoFlex™ Gas Standard Generator

The EcoFlex™ Perm Tube System is a simplified standalone system designed for creating trace concentration gas mixtures. Mixtures are produced by diluting the small flow of vapor emitted by Trace Source™ permeation (or diffusion) tubes with a larger precisely controlled flow of inert matrix gas, typically nitrogen or zero air. The EcoFlex™ is ideally suited for generating trace concentration – ppm, ppb, and pptr – mixtures. Mixtures contact only inert materials.

CO395Flex™ Certification Oven

The CO395Flex™ Certification Oven is a stand alone version of the permeation tube oven used in the KIN-TEK 491Flex™ Modular Gas Standard Generating System. The CO395Flex™ is a compact, economical unit designed to maintain permeation tubes in a constantly equilibrated state, ready for immediate use in each application. This feature is especially useful where the weight loss of the tube(s) is continually monitored to ensure accuracy, or when permeation tubes are needed to trouble shoot an analyzer providing pre-heated tubes ready for immediate use.

Span Pac™ H_2O H_2O Gas Standard Generator

The Span Pac™ H_2O series is used for calibration of trace moisture monitors. These units are designed to exclude atmospheric moisture and deliver very trace quantities of H_2O. The basic system provides the 100 ppb to 100 ppm range. A special welded system can be used to provide 10 ppb to 100 ppm range, and the Span Pac™ H_2O-SD system can be used for very wide ranges from <1 ppb to >1000 ppm. Span Pac™ H_2O systems are manually operated. They feature electro polished, passivated piping throughout, VCR input/output fittings, and use high purity components.

Span Pac™ I Industrial Gas Standard Generator

The Span Pac™ I Industrial Gas Standard Generator is used for calibration of on-line process analyzers and continuous emissions monitors. The Span Pac™ I accepts any Trace Source™ permeation tube to produce standards over the range from ppb to over 1000 ppm. It is mounted in a rugged, NEMA 4, wall mounted cabinet and can be supplied with Type X or Z purge for service in hazardous atmospheres.

Span Chek™ 2400 Portable Gas Standard Calibrator

The Span Chek™ 2400 (or SC2400) is a portable permeation system designed for field calibration of air quality analyzers, toxic gas analyzers, area gas monitors, and other gas sensing devices. It may be used with passive sensors as well as instruments that have a built-in sample pump. Interhangeable Trace Source™ disposable permeation tubes provide a stable output of pure analyte gas that mixes with a larger controlled flow of filtered ambient air to form a calibration gas standard.

Gas Standard Generators

KIN-TEK Analytical, Inc. is a leader in providing Trace Concentration Calibration Gas Standards. We manufacture permeation devices and instruments that are used for dynamically creating and dispensing high quality gas mixtures used as calibration gas standards. Our product line includes the FlexStream™ System, an automated system including a full range of Calibration Gas Standard Generators and other instruments and devices to solve our customers' most complex calibration challenges. A KIN-TEK permeation tube used within a KIN-TEK gas standard generator provides the best scenario for calibration.

Trace Source™ Permeation Tubes

Trace Source™ Disposable Permeation Tubes

Trace Source™ Disposable Tubes are short lengths of Teflon® tubing with the liquid phase of the compound sealed inside. Several versions are offered to satisfy special applications. The SRT and HRT tubes are made of different types of Teflon®. EL versions have a non-permeable reservoir that extends the operating life of the tube, and "Wafer" tubes have very small permeation areas for low rates. Disposable tubes can be used for many calibrations but cannot be refilled when exhausted.

Trace Source™ Refillable Tubes

Trace Source™ Refillable Tubes are small stainless steel cylinders with a membrane sealed inside. In Refillable Permeation Tubes, the component compound surrounds the membrane and permeates to the inside, where it mixes with the dilution gas. Refillable Permeation Tubes are designed to be refilled without disturbing the permeation membrane.

KIN-TEK designs and builds calibration gas systems. KIN-TEK is committed to providing calibration gas standards that meet or exceed the expectations of our customers.

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KIN-TEK products are manufactured in a facility whose Quality Management System is certified as being in conformity with ISO 9001:2015 by Intertek.

For more information: https://kin-tek.com/kin-tek-quality

2026/02 Rev. 0011