



491Flex™ Interface Module

491Flex™ IM

The 491Flex™ Interface Module (IM) includes an integrated set of tools for solving interfacing problems associated with a wide range of applications. Many of the problems encountered in calibrating gas analyzers can be traced to improper techniques for introducing calibration gas to the analyzer. The problem is compounded when using permeation tubes due to flow requirements and any need for delivery under pressure. Many applications require a fixed input flow rate at a fixed pressure.

The 491Flex™ IM contains interface components needed to assure constant analyzer input conditions independent of variations in flow from the 491Flex™ Permeation system. The 491Flex™ IM is a manually operated “passive” module that is used with the 491Flex™ Permeation system such as a 491Flex™ Base Module, to deliver a steady concentration in a continuous flowing gas stream.

Features

- Mechanical controls, no power required
- Analog gauge (PSIG)
- Three output ports; 2 toggle switches, and 1 syringe port.
- Provides output pressure to analyzer, up to 40 psi (depending on application)
- 100 cc internal manifold allows gas mixing before delivery
- Back-pressure knob control
- Improves delivery method of standard to analyzer
- Allows easy filling of gas bags or canisters
- Single Module Dimensions: 7” (18 cm) Width x 13.5” (34 cm) Height x 20” (51 cm) Depth with portable carrying case. All dimensions are approximate.
- Weight: Approximately 11 lbs

Operation

When an analytical instrument uses an internal (or downstream) pump for sample introduction, as in ambient air analyzers, the mode select valve of the 491Flex™ IM is set to the atmospheric (“ATM”) position to allow sampling conditions. However, if a sample is normally forced into the system (e.g. A GC with a gas sample valve), then the valve is set to the positive pressure (“Press”) position and the internal manifold pressure is adjusted using the back-pressure control knob and pressure gauge.

The design of the 491Flex™ IM allows the span gas mixture to enter one end of the bypass manifold, and depending on analyzer input requirements, provides user control of span gas delivery pressure. Two outlet ports along the manifold, each with a toggle valve shut off, direct outputs so that the span mixture can be used simultaneously in two separate applications. A third outlet is a septum syringe port from which samples can be drawn into a gas tight syringe. The internal manifold provides a ~100 cc of internal volume which serves as a surge volume. The 491Flex™ IM is ideal for applications where flow capacity of end use is limited (e.g. filling gas bags) or when back pressure is required to introduce the sample to the analyzer. Adding the 491Flex™ IM as the final module of any 491Flex™ series of instruments solves interfacing problems associated with calibration gas delivery to an analyzer or sampling system.



The KIN-TEK Analytical, Inc. Quality Management System is registered by Intertek as conforming to the requirements of ISO 9001:2015.

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

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