DYNACALIBRATOR® MODEL 505 CALIBRATION GAS GENERATOR

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DESCRIPTION

The Dynacalibrator® Model 505 enables calibrations traceable to NIST standards for almost any gas analyzer in the lab or in the field. They are ideal for verifying the accuracy of analytical data from air pollution monitoring, industrial hygiene surveys, odor survey programs, and other instruments measuing gas concentration.

The design takes full advantage of all the conveniences inherent in our Dynacal permeation devices to generate and deliver precise concentrations ranging from PPB to high PPM for hundreds of different compounds. The innovative Model 505 features total touchscreen programming and monitoring of two separate permeation chambers with independent temperature control systems. The chambers can be used independently, or together to combine concentrations of trace components. Separate solenoid valves allow the carrier flows to be switched from the dilution from to a vent port.

ADVANTAGES OVER BOTTLED STANDARDS

Calibration devices from VICI® Metronics offer several key advantages over cylinder-supplied gas calibration standards.

Economy is always a major consideration; customers who have done the arithmetic, factoring in the cost of cylinder purchase, shipment, and disposal, typically discover that the purchase of a Dynacalibrator and a supply of permeation devices will start to save them money in the second year of use.

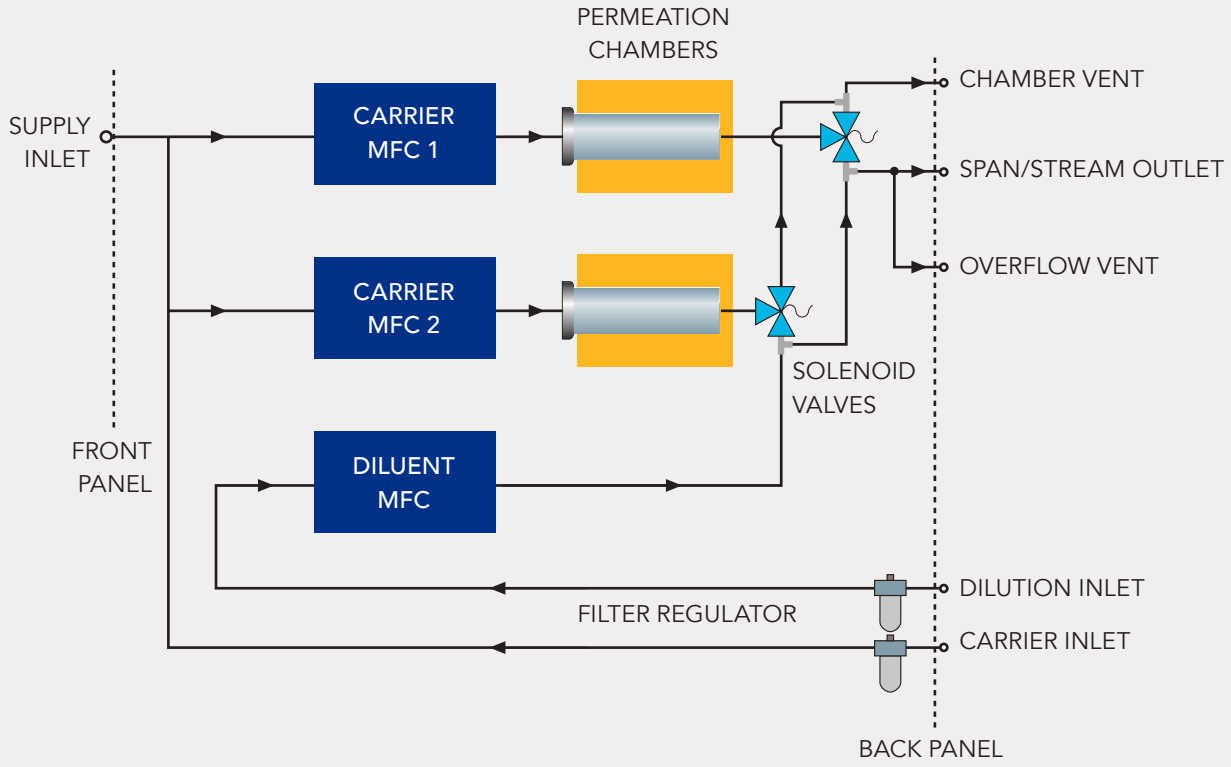
Multicomponent mixtures can be easily generated with a Dynacalibrator and the appropriate combination of permeation devices. This technique also allows the removal of a single component from a gas mixture by simply removing the appropriate permeation device. Alternative methods require expensive custom mixtures or a large number of gas cylinders, which consume valuable lab space as well.

Bottled standards can also have problems arising from degradation of the standard within the cylinder, from changes in the concentration levels as the cylinder pressure changes, and from interaction of calibration components and surfaces.

BENEFITS

Touch screen control | PPB to high PPM range | Switchable carrier flow – dilution or vent | Two separate permeation chambers with independent temperature control

OPERATING DIAGRAM



SPECIFICATIONS: OPERATIONAL

FLOW CONTROLS	
Output Concentration Range	Fractional PPB to hundreds of PPM
Carrier Flow Rate (nominal)	100 sccm
Dilution Flow Rate Range (nominal)	1 to 20 SLPM (depending on model)
Dilution Flow Accuracy	+/- 1% of setpoint from 20% to 100% of full scale, +/- 0.2% of full scale between 2% to 20% of range
Operating Temperature Range	10°C to 50°C (50°F to 122°F)

PERMEATION CHAMBERS	
Temperature Range	30°C to 110°C (must be at least 2°C above ambient)
Temperature Setpoint Accuracy	+/- 0.05°C (NIST - Traceable) from 30°C to 110°C
Temperature Setpoint Repeatability	+/- 0.01°C at any fixed ambient temperature
Temperature Equilibrium Time	1.5 hours for highly dynamic changes
Chamber Size	Accepts deices up to 23.5 cm x 1.6 cm diameter
Modes	Span Out (auto or manual)
Operating Duty Cycle	Continuous

SPECIFICATIONS: ENVIRONMENTAL

Operating Noise Emission	45 to 50 dBA
Ambient Operating Temp	20°C to 35°C
Operating Humidity	0 to 95% relative humidity
Storage Temperature	10°C to 40°C
Storage Humidity	0 to 50% relative humidity

SPECIFICATIONS: POWER REQUIREMENTS

Voltage	100-240 VAC
Frequency	50/60 Hz
Power	150 W maximum