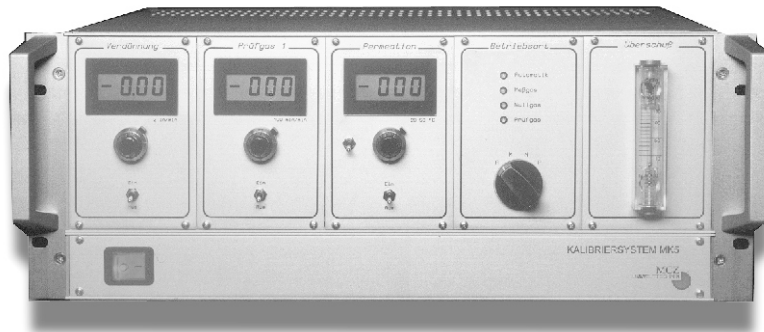


Multi-Gas Calibration System



Calibrator MK5 with options

The calibrating systems of the MK series allow us to provide a custom-built unit, which consists of a variety of tried and tested basic modules. This unit will be tailored specifically to your application.

Calibration System Series MK10 Series MK5

- Multi-Component Gas Mixer

Optionally preparation an of calibration gas by:

- Saturation Method
- Continuous Injection
- Ozone Generator
- Gas Phase Titration
- Permeation Method

The systems find their field of operation in the calibration of immission and emission measuring devices and gas chromatographs of the environmental measuring technology and process analyzing industry. The calibrating systems of the MK series can be equipped with these basic modules. Other modules such as remote controls for automatic measuring nets, integrated span gas dredging pumps for pressure-free span gas pre-mixtures, extra modules for moistening the span gas, or operation mode switchers for 'sample / zero /span' complement the diverse accessory palette and make it possible to fit the system to your specific needs.

Umwelttechnik MCZ GmbH
Dieselstrasse 20a
61239 Ober-Moerlen
Tel. +49(0)6002 1711
Fax. +49(0)6002 1713

..... <http://www.mcz.de> E-mail: info@mcz.de

Calibration System Series MK10 Series MK5



Calibrator Mk10 with options

The Basis

The basis of the modular calibration system in the case of the MK5 series is a 19" case with 4 HE (unit of height) and in the case of the MK10 series a 19" case with 7 HE. The case can be delivered either as a table or rack unit. Also included in this basic system are the connections necessary to install the various modules, the dilution MFC and the power supply.

Your Advantage

The calibrating systems of the MK5 / MK10 series do not consist of a limited number of functionally restricted devices but of two (differing in size) basic systems, which can be equipped with different calibration modules according to your choice. Your advantage is clearly obvious: Compilation of the modules according to the required function volume, optimal adaptation of the device to your calibration tasks, no new construction or tinkering around when finding a solution for your personal application case but instead a modular system made up from tested and proven successful basic components.

The Modules

Gas Mix System

Used to dilute and mix external span gas pre-mixtures to the desired concentration. The adjusting of the span and dilution gas flows is effected via thermal mass flow controllers.

Ozone Generator

Used for the production of ozone span gas from zero gas. The UV chamber used for this purpose achieves an above average level of UV ray stability due to the special regulatory and control unit.

Gas Phase Titration

This module allows for an externally supplied span gas pre-mixture (e.g., NO) to be oxidized in an adjustable ratio with the supply of the internally produced ozone gas (result NO + NO₂).

Permeation

The temperature variable permeation furnaces can be equipped with all standard permeation tubes. Special components and switch technologies allow for a climatizing of the permeation furnaces ranging from below the environmental temperature (with option cooling) up to more than 100°C with a stability of $\pm 0.1^\circ\text{C}$.

Vapor Pressure Saturation

Used for the continuous production of a span gas with the vaporizing of a liquid component from a storage container in the calibration system. The concentration adjustment is effected with a diluting gas flow.

Continuous Injection

In the case of the injection method, a liquid component is injected into a base gas flow from an automatic, external injection device via a vaporizer. The base gas flow can be adjusted using a mass flow controller.

Further information, data sheets, and application documents for the MK5 / MK10 calibrating systems can be obtained from your representative or directly by contacting MCZ GmbH.