

Portable Flow/Pressure Calibration Devices

Alicat portable gas flow calibration devices measure and display mass flow, volumetric flow, line pressure or barometric pressure, and gas temperature.

Portable gas flow meters make system checks, calibrations and audits fast and easy. All portable flow instruments offer laboratory-grade accuracy and multivariate readings that update 1000 times a second. Any make of Thermal Mass Flow Controller can be checked in situ without the need to remove it to a calibration lab/workshop or to send it offsite. The configurable engineering units within the Alicat ensure that all common flow measures such as L/min, SLPM or mass can be accommodated. Furthermore, because an Alicat device also measures volumetric flow it can double-check other flow technologies such as VA's/Rotameters and Pelton Wheels. Alicat devices do not require conversion factors, or k-factors, as the 98+ gases stored onboard ensure that the stated accuracy remains true and that 1 LPM remains as 1 LPM regardless of the gas type.

The **AFS** Series is a transfer standard that features the highest accuracy calibration, humidity compensation, averaged readings and onboard data logging. The **MB** series is suitable for most flow measurement applications, with models that can measure flow rates as high as 5000 slpm or as low as 0.0025 sccm. Choose an **MBQ** when your line pressures are high (145-305 psig). The **MWB** series is best for low pressure drop applications and for reducing pneumatic response time at flow rates of 50 sccm or less. Alicat's **PCU** is a portable transfer standard that combines up to three individual flow meters for a very wide usable range (1 million:1). Choose a PCU when the range of a single flow meter isn't enough for your calibration needs.

AFS—Portable Gas Flow Calibrators

A portable gas flow standard that is ready for anything.

When a calibration process requires the utmost accuracy, the AFS flow standard delivers. It features Alicat's most advanced calibration for optimal performance across changing temperatures, plus an on-board relative humidity sensor to maintain its accuracy all the way up to 100% RH (non-condensing). These advancements make possible a 0.75% of reading accuracy spec that requires no additional full-scale component. Low pressure drop allows calibration of volumetric flow rates with minimal impact. Averaged measurements and onboard data logging make it easy to gather multivariate flow data. The AFS flow standard is designed to be carried and can withstand drops should they occur. Process connections have SAE threads for superior leak prevention.

Available ranges: max 0-50 slpm, min 0-5 sccm

Turndown ratio: 200:1 when flowing air; 20:1 when flowing other gases or gas mixes

Flow accuracy: +/- 0.75% of the reading (NIST-traceable)

Typical measurement response time constant: 5-10 ms

No warm-up time required

Compatible gases: 98 pre-loaded selectable gas calibrations; additional mixtures definable with COMPOSER

MB—Portable Gas Mass Flow Meters

Laboratory-grade flow verification, anywhere you need it.

Alicat's portable flow calibrators make calibration or validation simpler and faster by reducing the downtime and disruption to a process. Instant-on and real-time readings for multiple gases across wide flow ranges ensure periodic checks can be completed within just a few minutes. Flows can be calibrated with NIST-traceable accuracy for a variety of gases down to 1/200th of full scale or user-created gas compositions can be defined via COMPOSER™.

Available ranges: max 0-5000 slpm, min 0-0.5 sccm/0-500 sμlm

Turndown ratio: 200:1 (standard gases) or 100:1 (corrosive gases)
Standard accuracy calibration, NIST-traceable: +/- (0.8% of the reading + 0.2% of the full-scale range)
Optional high-accuracy calibration, NIST-traceable: +/- (0.4% of the reading + 0.2% of the full-scale range)

MWB—Low Pressure Drop Portable Gas Mass Flow Meters

Measure flow with minimal system impact, anywhere you need it.

“Whisper” series portable flow meters with low pressure drop are the perfect calibration instruments for mass and volumetric flow rates. Low pressure drop minimizes system impact, enabling flow measurement at near-atmospheric pressures or when there is little available system pressure.

Available ranges: max 0-1000 slpm, min 0-0.5 sccm/0-500 μ lpm

All other specifications are as per the MB Series

PCU—Gas Flow Portable Calibration Unit

Portable flow calibration with a very wide dynamic range

When a single flow meter does not cover the full calibration range required, even with the standard high turn-down of an Alicat, then a portable calibration unit (PCU) becomes the ideal solution. Alicat’s PCU is a secondary calibration standard that combines up to 3 high-accuracy flow meters of varied ranges (max 1500 slpm), with totalizers, into a rugged industrial carrying case for go-anywhere portability. PCU’s can be powered by two 9-volt batteries or the included AC cable. A copy of Alicat’s Flow Vision SC™ software is included. Quickly calibrate multiple instruments across a combined turndown range of up to 1,000,000:1 (for example 1 sccm – 1000 slpm). PCU’s are also available with low pressure drop (PCUW series) and 316L configuration for use with corrosive gases (PCUS series).

Choose any 3 flow meters with ranges up to 1500 slpm (PCU and PCUS) or 250 slpm (PCUW)

All flow meters include a flow totalizer

Turndown ratio: up to 1,000,000:1 (combined turndown from 3 instruments)

High-accuracy calibration, NIST-traceable (standard on PCU’s): +/- (0.4% of the reading + 0.2% of the full-scale range)

Alicat portable calibration devices are available for gas flow, liquid flow and pressure calibration checks.

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Links :

AFS Series

<https://www.pctflow.com/our-products/flow-meters/mass-flow-meters/alicat-afs-portable-gas-flow-calibrator/>

MB Series

www.pctflow.com/our-products/flow-meters/mass-flow-meters/alicat-mb-series-portable-mass-flow-meter/

MBS Series

www.pctflow.com/our-products/flow-meters/mass-flow-meters/alicat-mbs-anti-corrosive-series-portable-mass-flow-meter/

MWB Series

www.pctflow.com/our-products/flow-meters/mass-flow-meters/alicat-mwb-whisper-series-portable-mass-flow-meter/

PCU Series

www.pctflow.com/our-products/flow-meters/mass-flow-meters/alicat-pcu-series-portable-calibration-mass-flow-meter/

FP-25

<https://www.pctflow.com/our-products/flow-meters/mass-flow-meters/alicat-fp-25-flow-calibrator-for-particulate-air-samplers/>

Videos :

Composer Software

www.youtube.com/watch?v=y518njHiam8

Fastest Way to Validate Flow Rates

www.youtube.com/watch?v=z_fmXO2PqKk

How Tough is an Alicat

www.youtube.com/watch?v=6zkaSfZI458

Weatherproof Calibrator

www.youtube.com/watch?v=afYsV0JbFOY