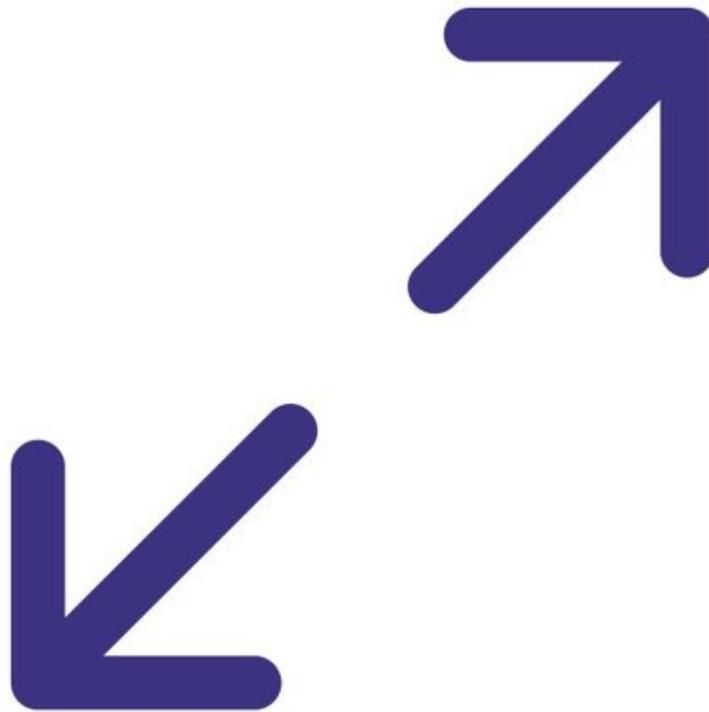




# Perform span calibration

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## INTRODUCTION

You can span calibrate Type 1 sensor heads\* using a Series 500 or Series 300 handheld monitor.

A span calibration involves delivering certified calibration gas of a known concentration to the monitor and monitoring the response to that concentration. An example might be delivering 10 ppm of carbon monoxide to the carbon monoxide sensor. The response of the monitor to the calibration gas is adjusted so the monitor reads exactly the concentration of the span gas being delivered.

All calibration gases should be purchased in a balance of air.

\*Note: Except ozone, ammonia, perchlorethylene and particulate sensor heads. These must be factory calibrated.

## Step 1 — Set up equipment



- [Click here to set up the calibration accessory.](#)
- ⓘ Make sure the sensor has warmed up for at least 30 minutes before performing a span calibration.

## Step 2 — Stabilize gas reading



- Check the tubing type is suitable for your type of span gas.
- Check the cylinder pressure to ensure there's enough gas to perform the calibration (10% of full pressure should be enough).
- Gently turn the regulator valve anticlockwise and flow the target gas at 0.5 l/min until the reading stabilizes (about 10 minutes).

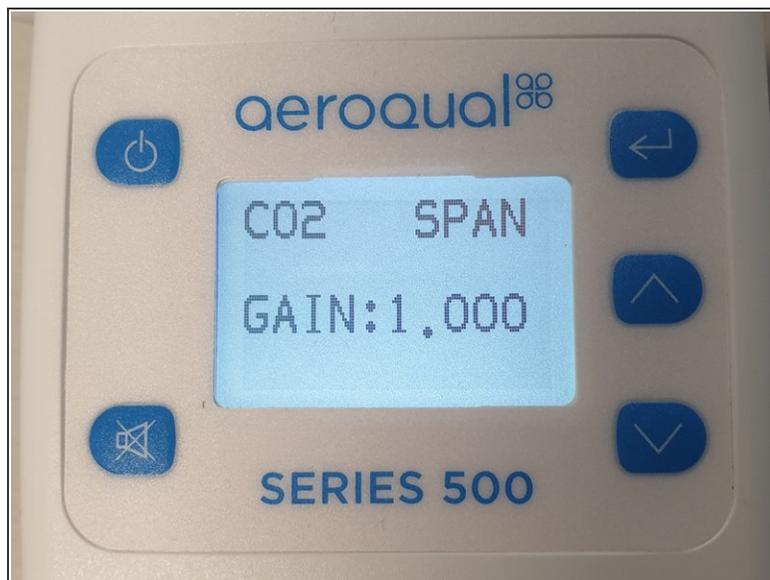
### Step 3 — Display current gain



- Select the **ENTER** button and select **CALIBRATE** from the main menu.
- Press the **MUTE** and **DOWN** buttons simultaneously for 2 seconds.
- Select **SPAN CAL** to display the current gain.

## Step 4 — Apply gain

*New gain = current gain x (span concentration / sensor reading)*



- Calculate the new gain using the equation shown.
- Use the **UP/DOWN** buttons to adjust the gain to your calculated value.
- Press **ENTER** and select **EXIT** from the main menu.
- Check that the sensor is reporting very close to the correct value.
- ⓘ Gas sensor gains are stored on the sensor.

## Step 5 — Pack up equipment



- When packing up your calibration equipment, remember to:
  - Remove the tubing from the regulator before removing the regulator from the cylinder.
  - Cut the tip off the tubing because it will have been stretched by the regulator barb.

## Step 6 — Video of steps



- For extra help, watch our video.

For further support, visit [Span calibration](#), [How to test your sensor head](#), [Sensors - VOC](#), or contact [Technical Support](#).

