

Ideal Calibrations 58DAL-0414-24

Ideal Calibrations 4-Gas Calibration Blend Instruction Manual

For Industrial Scientific MX6, M40, and Ventis MX4 Gas Detection Monitors

PRODUCT OVERVIEW

This manual provides instructions for the safe and effective use of the Ideal Calibrations 4-Gas Calibration Blend. This product is a precision gas mixture designed for calibrating compatible gas detection monitors, ensuring accurate readings and reliable performance of your safety equipment.

The 58L Luxfer Special Gas Service aluminum cylinder contains a specific blend of gases essential for calibrating multi-gas detectors. It features a stainless steel C10 valve suitable for reactive gases.



Image 1: Ideal Calibrations 4-Gas Calibration Blend cylinder. This image shows the full cylinder with its label, detailing the brand, product name, gas concentrations, and safety warnings.

IMPORTANT SAFETY INFORMATION

WARNING: Read all precautions and safety data sheets before using this product. Failure to follow these

instructions may result in serious injury or property damage.

- **Contents under pressure.** Handle with care.
- **Do not use or store near or above open flames.** Keep away from ignition sources.
- **Do not expose to temperatures above 130°F (54°C).** High temperatures may cause contents to vent or the cylinder to burst.
- **Do not discard container into fire or incinerator.**
- **Oxygen Hazards:**
 - Mixtures containing in excess of 23.5% oxygen may vigorously accelerate combustion.
 - Mixtures containing less than 19.5% oxygen may cause suffocation.
- **Ventilation:** Use in areas with adequate ventilation to prevent accumulation of hazardous gases.
- **Equipment Compatibility:** Use only with equipment rated for the specific cylinder pressure and gas type.
- **Material Safety Data Sheets (MSDS):** Refer to appropriate Material Safety Data Sheets for additional detailed information.
- **First Aid (IF INHALED):** Remove affected individual to fresh air. If not breathing, administer artificial respiration. If breathing is difficult, provide oxygen. Seek immediate medical attention.
- **Refilling Prohibition:** Federal law prohibits transportation if refilled. Penalties for unauthorized refilling include fines up to \$500,000 and 5 years imprisonment (49 U.S.C. 5124).

SETUP

1. **Inspect Cylinder:** Before use, visually inspect the cylinder for any signs of damage, corrosion, or leaks. Do not use a damaged cylinder.
2. **Ensure Ventilation:** Perform calibration in a well-ventilated area to prevent the accumulation of calibration gases.
3. **Attach Regulator:** Carefully attach a compatible calibration gas regulator (e.g., a fixed-flow regulator) to the cylinder's C10 valve. Ensure a tight, leak-free connection. Do not overtighten.
4. **Connect to Monitor:** Connect the regulator's output hose to the calibration port of your gas detection monitor (e.g., Industrial Scientific MX6, M40, Ventis MX4).
5. **Leak Check:** After connecting, perform a leak check using an appropriate leak detection solution or by listening for hissing sounds.

OPERATING INSTRUCTIONS

This calibration blend is intended for use with compatible gas detection monitors. Always refer to your specific gas detector's instruction manual for detailed calibration procedures.

1. **Initiate Calibration Mode:** Turn on your gas detection monitor and navigate to its calibration menu. Select the "Calibration" or "Bump Test" option as required.
2. **Apply Gas:** Open the valve on the calibration gas regulator to allow the gas to flow to the monitor. Ensure the flow rate matches the monitor's specifications (typically 0.5 to 1.0 liters per minute).
3. **Monitor Readings:** Observe the monitor's display. The sensors should respond to the calibration gas concentrations.
4. **Complete Calibration:** Allow the gas to flow for the duration specified by your monitor's manufacturer (typically 60-120 seconds for calibration, or 10-30 seconds for a bump test). The monitor will usually

indicate when calibration is complete.

5. **Close Gas Flow:** Once calibration is complete, close the regulator valve and disconnect the hose from the monitor.
6. **Verify Calibration:** Confirm that the monitor displays successful calibration and that sensor readings are stable and accurate.

MAINTENANCE AND STORAGE

- **Storage:** Store the cylinder in a cool, dry, well-ventilated area, away from direct sunlight, heat sources, and incompatible materials. Ensure the cylinder cap is securely in place when not in use.
- **Temperature:** Maintain storage temperatures between 40°F (4°C) and 120°F (49°C).
- **Security:** Secure cylinders to prevent falling or rolling.
- **Disposal:** Dispose of empty cylinders according to local, state, and federal regulations. Do not refill this cylinder.
- **Shelf Life:** This calibration blend has a 24-month replacement warranty, indicating its expected shelf life under proper storage conditions.

TROUBLESHOOTING

If you encounter issues during calibration, consider the following:

- **No Gas Flow:**
 - Ensure the regulator is properly attached and the cylinder valve is fully open.
 - Check if the cylinder is empty.
 - Inspect the regulator and hose for blockages or damage.
- **Calibration Failure:**
 - Verify that the correct calibration gas is being used for your monitor.
 - Check for leaks in the connection between the cylinder, regulator, and monitor.
 - Ensure the monitor's calibration settings match the gas concentrations.
 - The monitor's sensors may require replacement if repeated calibration attempts fail.
- **Inaccurate Readings After Calibration:**
 - Re-perform the calibration procedure carefully.
 - Ensure the monitor is in a clean air environment before zeroing (if applicable).
 - Consider the environmental conditions (temperature, humidity) as they can affect sensor performance.

SPECIFICATIONS

Attribute	Detail
Product Name	4-Gas Calibration Blend
Brand	Ideal Calibrations
Model Number	58DAL-0414-24

Attribute	Detail
Cylinder Volume	58 Liters
Cylinder Type	Luxfer Special Gas Service Aluminum Cylinder with Stainless Steel C10 Valve
Gas Concentrations	H2S: 25 ppm (Hydrogen Sulfide) CO: 100 ppm (Carbon Monoxide) LEL: 25% Pentane Simulant O2: 18.0% (Oxygen) Balance: Nitrogen (N2)
Compatibility	Industrial Scientific MX6, Ventis Pro5, Ventis MX4, M40, iTX Series Gas Detectors
Dimensions	3"D x 3"W x 13"H
Item Weight	3 Pounds
Manufacturing Location	USA

WARRANTY INFORMATION

This Ideal Calibrations 4-Gas Calibration Blend cylinder comes with a **24 Month Replacement Warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use and storage conditions. Please retain your proof of purchase for warranty claims.

SUPPORT AND CONTACT

For technical assistance, product inquiries, or to re-order calibration gas, please contact Ideal Calibrations:

- **Website:** www.idealcalibrations.com
- **Phone:** (734) 956-0538
- **Address:** Melvindale, MI 48122, USA