

# RAM 4021 AutoCal<sup>®</sup>

## Respiratory air monitors

OX



- Meets OSHA requirements for 'grade D' breathing air
- Continuous monitoring of supplied breathing air
- CO, CO + O<sub>2</sub>, CO + dew point monitoring
- AutoCal<sup>®</sup> automatic calibration
- Three-stage filtering option for up to 8 users

# The Best Safeguard for Quality Breathing Air

The RAM 4021 AutoCal series is the unit of choice where specific and accurate measurement of carbon monoxide, oxygen or dew-point levels are required. Designed to meet OSHA requirements for monitoring Grade D respirable air, this unit is equipped with a reliable electrochemical sensor that accurately indicates the level of carbon monoxide on an illuminated liquid crystal display. Adding versatility, this unit offers optional oxygen or dewpoint sensors for applications where detection or measurement is needed.

Calibration and maintenance are simple with our innovative AutoCal system. Additional features including alarm relay contacts, user adjustable alarm point, low flow alarm indicator and many more make this unit an intelligent choice. The RAM 4021 is available in three models, the 4021 (CO), 4021-1 (CO and O<sub>2</sub>) and 4021-DPX (CO and dewpoint levels). All models may be purchased with or without air line filter systems.

## Respiratory air specifications

All GfG-Instrumentation RAM Instruments satisfy the requirements of OSHA rule 29 CFR 1910.134 (d) (2) (ii) for carbon monoxide monitoring. They will also monitor Grade E air, generally specified for breathing air in cylinders (SCBA).

### OSHA Regulations (Standard - 29 CFR) Respiratory Protection - 1910.134

(i)(6)  
For compressors that are not oil-lubricated, the employer shall ensure that carbon monoxide levels in the breathing air do not exceed 10 ppm.

(i)(7)  
For oil-lubricated compressors, the employer shall use a high-temperature or carbon monoxide alarm, or both, to monitor carbon monoxide levels. If only high-temperature alarms are used, the air supply shall be monitored at intervals sufficient to prevent carbon monoxide in the breathing air from exceeding 10 ppm.



## Wall mounted filter panel option

**8025 (25 CFM), 8050 (50 CFM) and 8100 (100 CFM)**

The 25, 50 or 100 CFM panels filter out dangerous toxins from supplied air sources and ensure clean, breathable air. The three-stage filter system efficiently removes particulates, oil vapors, and hydrocarbons from an air supply. After filtration, the regulator sets the pressure for the respiratory equipment and the manifold assembly provides multiple outlets for air line hose quick connections. The model 8025 panel includes two user female quick connect outlets, the 8050 four, and the 8100 eight. A 1/2" FPT connection is standard on all 50 and 100 CFM panels, a 3/8" FPT on all 25 CFM panels.

## RAM 4021 series

### Cases

Carbon monoxide  
Oxygen  
Dew point

### Detection ranges

CO	0 to 100 ppm
O <sub>2</sub>	0 to 25% volume
DPH	+10 °F to +70 °F (-12 °C to 21 °C)
DPL	-40 °F to +15 °F (-40 °C to 9 °C)
DPX	+112 °F to +68 °F (-76 °C to +20 °C)

### Air temperature

+32 °F to +149 °F (0 °C to 65 °C)

### Detection principles (sensor)

Electrochemical cell – CO specific  
Solid state hydrosensor – DPL/DPH  
Thin film technology – DPX

### Display

Digital LCD

### Expected sensor life

O<sub>2</sub>, CO >2 years  
Dew point >2 years

### Adjustable alarm points

CO 5 ppm CO and 10 ppm  
O<sub>2</sub> 19.5% volume and 23.5% volume  
Dew point 39 °F (4 °C)

### Alarms

Visual – LEDs  
Audible – case mounted horn  
Relays – two dry contact

### Air line input

1/8" feed – standard pressure 70 to 150 psi  
1/2" FPT – 50 to 100 CFM panels (wall mount)  
3/8" – 25 CFM panels (wall mount)

### Available relay contacts and ratings

1 alarm (red) NO/NC  
1 warning (yellow) NO/NC

### Sample flow rate

0.5 cubic feet of air per hour (scfh)

### Power source

110 V AC or 12 V DC

### Temperature range

32 °F to 105 °F (0 to 40 °C)

### Dimensions (monitor only)

7.3 x 5.9 x 4 inches (L x W x D)  
(185 x 150 x 101 mm)

### Available models

4021 carbon monoxide  
4021-1 carbon monoxide and oxygen  
4021-DPL, -DPH, -DPX  
carbon monoxide and dew point

### Available filter panel options

8025 wall mounted 25 CFM panel (2 ports)  
8050 wall mounted 50 CFM panel (4 ports)  
8100 wall mounted 100 CFM panel (8 ports)

# Technical Data

Specifications subject to change without notification

Distributed by:



**GfG Instrumentation**

Tel: (800) 959-0329  
Fax: (734) 769-1888  
E-mail: info@gfg-inc.com  
Website: www.gfg-inc.com