

What is Grade-D Air Quality?


Breathing air quality standards have been developed by ANSI/Compressed Gas Association (CGA) G-7.1 - 1989, and adopted by OSHA under their respiratory standard 29 CFR, 1910.134.

Air Quality Must Meet or Exceed The Following Requirements:

- Oxygen: 19.5%-23.5% (20%-22% Canada)
- Hydrocarbon (condensed oil) 5 mg/m³ maximum (<1Mg/m³ in Canada)
- Carbon Monoxide (CO): 10ppm maximum (5 ppm in Canada)
- Carbon Dioxide (CO₂): 1000ppm maximum (500 ppm in Canada)
- Odor: No noticeable tastes or smells
- Water Content:
 - High pressure cylinder air** must have a dew point of at least -50°F (-45.6°C) at 1 atmosphere (14.7psi).
 - Low pressure breathing air** must have a dew point of at least 10°F (5.56°C) below the ambient temperature at 1 atmosphere (14.7 psi)
- **Canada:** 5° C below lowest temperature, 27 ppm maximum water vapor
- Total Volatile Hydrocarbons (Canada): 5 ppm maximum



Air Systems' Grade-D Filtration Specifications:

- **1ST Stage Filter** - Filter Change Indicator, Automatic Drain, Removes Liquids and Particulate to 5.0 micron Particle Size
- **2ND Stage Filter** - Filter Change Indicator, Automatic Drain, Provides Oil Coalescing and Ultra-fine Particulate Filtration to .01 micron Particle Size
- **3RD Stage Filter** - Filter Change Indicator, Manual Drain, Charcoal Removes Organic Vapors and Objectionable Odors
- In-Line Carbon Monoxide (CO) Monitor. Optional CO/O₂ Monitor
- All portable and fixed units are available with  approved intrinsically safe monitor for work in hazardous locations
- 2-year Warranty on Sensor and Entire CO Monitor
- Filter Change Indicator provided on all 3 filters (BB15-CO series has indicator installed on second stage only)
- Three Standard Power Options: Dual 9-Volt Battery, 8-16 VDC and/or 115 Volt AC, 60Hz (50Hz Optional)
- Safety Relief Valve set at 125 psi on outlet pressure
- Solid Aluminum Block Manifold with manual drain
- 0-160 psi Pressure Gauge
- Visual Flowmeter to Verify Air Flow to Monitor, adjustable flow rate, 50 -100cc
- External Mounted CO Warning LED Lights and Audible Alarm
- Remote DC Alarm Jack with Cover Cap are standard on portable units (Optional on Model BB15-CO Series). AC output supplied on all panel mount units
- Maximum Inlet Pressure - 150 psi
- All respirator couplings provided with safety lock feature
- All portable Air Systems' Breather Box™ filtration units are designed to be used in the closed position to prevent internal contamination

Did You KNOW?

Our breathing air compressors and filtration systems meet all of the following specifications when used and serviced in accordance with our instruction manuals.

- Federal OSHA 29 CFR, 1910.134 "Compressor Operations for Breathing Air"
- CSA Z180.1-00 "Compressed Breathing Air and Systems"
- British Standard BS-EN 12021:1999 "Respiratory Protective Devices"

Air Systems' is so confident that you will be pleased with your portable or fixed breathing air filtration system, we will provide, at NO CHARGE, your first lab certified air quality test of your new Air Systems' breathing air filtration device or compressor system. Contact Customer Service for details.

What is Grade-E Air Quality?

Grade-E air quality is specified by ANSI/Compressed Gas Association (CGA) G-7.1 1997 for all compressed air stored in air cylinders, e.g., SCBA tanks or large breathing air cylinders.

Grade-E air quality is the same as Grade-D with the following differences:

- Oxygen content - 20%-22%
- Total Volatile Hydrocarbons - 25 ppm maximum
- Water Content - High pressure cylinder air must have a dew point of at least -50°F (-45.6°C) and a water vapor content of 67 ppm maximum. NFPA 1500 regulations for Fire Department use may vary from OSHA requirements
- Canadian standards for cylinder air may vary. Contact CSA for details

