



aerospace  
climate control  
electromechanical  
**filtration**  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding



## Breathable Compressed Air



ENGINEERING YOUR SUCCESS.



## Typical Hazardous Substances

- **Biological agents** – bacteria and other micro-organisms
- **Dusts** – with high concentration levels (produced during grinding, sanding or milling)
- **Noble gases** – e.g. argon and helium (not directly hazardous but can cause oxygen deficiency)
- **Processed substances** – such as pesticides, medicines, chemicals and cosmetics
- **Fumes** – often created during welding, smelting and pouring molten metals
- **Mists** – liquid droplets formed by atomisation and condensation processes. Mists can be created by plating, spraying, mixing and cleaning operations
- **Asbestos** – used extensively in buildings from the 1940's to 1960's. Exposure to asbestos fibres can cause asbestosis, lung cancer or mesothelioma
- **Lead poisoning** – lead poisoning is likely to build up slowly over time and can pose serious risks including, brain, nerve and kidney damage

## The problem

In compressed air fed systems, ambient air is drawn into the compressor, therefore any contaminants present in the ambient air plus those introduced by the compressor itself will be present unless removed by a purification system. Contaminants present can include:

- **Carbon monoxide**
- **Carbon dioxide**
- **Water vapour**
- **Micro-organisms**
- **Atmospheric dirt**
- **Oil vapour**
- **Water aerosols**
- **Condensed liquid water**
- **Liquid oil**
- **Oil aerosols**
- **Rust**
- **Pipescale**



**Health & Safety Legislation**

Compressed air used for breathing must comply with local legislation. In Europe the maximum levels of contamination permissible are outlined in EN 12021 and recommendations for selection, care and maintenance can be found in EN 529. It is essential that all items of RPE are tested for compliance at suitable intervals not exceeding one month.

Only approved equipment should be used and employers must take advice from equipment suppliers on correct use to prevent respiratory health problems.

### Applications and Industries

Hazardous vapours, gases and fumes can be released at various stages within manufacturing applications. Whether the risk is from noxious fumes, particulate or contamination from a compressed air system, effective respiratory protection for the user is essential.

#### Application

- Tank cleaning
- Spray painting
- Asbestos removal
- Shotblasting
- Tunnelling
- Confined spaces
- Welding
- Demolition

#### Industries

- Agriculture
- Aviation
- Chemical
- Construction
- Electrical Utilities
- Fire Service
- Food & Beverage Production
- Gas Utilities
- Hazmat
- Iron / Steel Production
- Manufacturing
- Marine / Shipyard
- Mining
- Nuclear
- Oil & Gas Production
- Petrochemical
- Pulp & Paper
- Pharmaceutical & Labs
- Public Works
- Water Treatment
- Welding

### International breathing air standards

Contaminants	OSHA Grade D	CSA Z180.1	European Pharmacopoeia	Parker domnick hunter BA-DME/BAM range*
Water		Pressure dewpoint of 5°C below lowest system temperature	67 ppm (= -45°C atmospheric dewpoint)	14 ppm (= -58°C atmospheric dewpoint)
Oil / Lubricant	5 mg/m <sup>3</sup>	< 1 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup>	0.003 mg/m <sup>3</sup>
Carbon Dioxide (CO <sub>2</sub> )	< 1000 ppm	< 500 ppm	< 500 ppm	< 500 ppm
Carbon Monoxide (CO)	< 10 ppm	< 5 ppm	< 5 ppm	< 5 ppm
Nitrogen Oxides (NO + NO <sub>2</sub> )			< 2 ppm	< 2 ppm
Sulphur Dioxide (SO <sub>2</sub> )			< 1 ppm	< 1 ppm

# Breathing Air Purifiers without CO / CO<sub>2</sub> reduction are supplied with 12 months guaranteed air quality

To reduce the following contaminants

<b>Solid Particles</b>	✓	<b>Water Aerosols</b>	✓
<b>Oil Aerosols</b>	✓	<b>Water Vapour</b>	×
<b>Oil Vapour</b>	✓	<b>Carbon Monoxide</b>	×
<b>Odours &amp; Fumes</b>	✓	<b>Carbon Dioxide</b>	×



## BAS-3015

The Parker domnick hunter BAS-3015 is a portable breathing air purifier housed in a compact, weatherproof, impact resistant case. Consisting of a general purpose pre-filter, a high efficiency coalescing filter and an activated carbon filter to remove oil vapour and odours, this purifier includes a pressure regulator/ gauge and can facilitate up to five users simultaneously. The BAS-3015 is also available with an optional CO monitor.

## Features

- 3 Purification stages
- Integral pressure regulator
- Portable
- Use with any compressed air supply
- Integrated CO Monitor (optional)
- Pressure gauge



## BAF010 – BAF015

The Parker domnick hunter BAF010 and BAF015 two stage point of use breathing air filter sets combine high efficiency coalescing pre-filtration with activated carbon oil odour and vapour removal filtration. These filter sets include a pressure regulator/gauge to allow airline pressure adjustment to users' requirements and mounting brackets for ease of installation.

## Features

- 2 Purification stages
- Portable
- Use with any compressed air supply
- Pressure gauge



## BAP015

To facilitate breathing air applications for three personnel, the Parker domnick hunter BAP015 is a portable breathable air purification package consisting of a high efficiency coalescing filter and an activated carbon filter to remove oil vapour and odours. These sets include a pressure regulator/gauge, all mounted in a lightweight, stable framework.

## Features

- 2 Purification stages
- Integral pressure regulator
- Portable
- Use with any compressed air supply
- Pressure gauge



## BAS-2010

The Parker domnick hunter BAS-2010 is a very robust and weatherproof portable breathing air purifier. Consisting of a high efficiency coalescing filter and an activated carbon filter to remove oil vapour and odours, this purifier includes a pressure regulator / gauge and can facilitate up to four users simultaneously.

## Features

- 2 Purification stages
- Integral pressure regulator
- Portable
- Use with any compressed air supply
- Pressure gauge

**WARNING: THESE PRODUCTS WILL NOT REMOVE CARBON MONOXIDE OR CARBON DIOXIDE**

# Breathing Air Purifiers without CO /CO<sub>2</sub> reduction

Model shown BAS-3015

**GRADE WS (OPTIONAL)  
Water Separator**

**REDUCES:**  
Liquid water and oil in heavily contaminated compressed air systems



**1**

**GRADE AO  
General Purpose Coalescing Filter**

**REDUCES:**  
Particulate down to 1 micron, including water and oil aerosols

**2**

**GRADE AA  
Coalescing Filter**

**REDUCES:**  
Particulate down to 0.01 micron, including water and oil aerosols

**3**

**GRADE ACS  
Oil Vapour Removal  
Activated Carbon Filter**

**REDUCES:**  
Oil vapour and odours down to 0.003 mg/m<sup>3</sup>

## Technical Specifications

		BAF010, BAF015, BAS3015, BAS2010, BAP015	
Operation Pressure	Maximum	10 bar g (145 psi g)	
	Minimum	4 bar g (58 psi g)	
Recommended Operating Temperature	Maximum	30°C (86°F)	
	Minimum	1.5°C (35°F)	

For flow rates at other pressures, apply the factor shown

Line Pressure	bar g	4	5	6	7	8	9	10
	psi g	58	73	87	100	116	131	145
Correction Factor		1.60	1.33	1.14	1	0.89	0.80	0.73

Product code	Connections		Flowrate @ 7 bar g (100 psi g)		Dimensions						Weight (approx.)	
	Inlet	Outlet	Inlet		Height		Width		Depth		kg	lbs
			l/s	cfm	mm	ins	mm	ins	mm	ins		
BAF010	1/4	3/8	6	13	343	13.5	207	8.15	136	5.35	1.4	3.1
BAF015	3/8	3/8	13	27	436	17.2	224	8.82	144	5.67	1.9	4.2
BAS2010*	1/2" Hose safety coupler	4x G1/4	10	21	410	16.2	460	18.1	246	9.7	8	18
BAS3015*	1/2" Hose safety coupler	5x G1/4	20	42	470	18.5	600	11.8	300	23.6	10	22
BAP015*	1/2" Hose safety coupler	3x 3/8	20	42	380	15	380	15	272	10.7	5.45	12