

Meets all international
breathing air standards



domnick hunter

Breathe Safely | in Hazardous Working Environments



domnick hunter Breathing Air Purifiers provide air 1,000,000 times cleaner than the air we normally breathe

Increased realisation that many working environments are hazardous to health has led employers to seek efficient and effective respiratory protection for their workers placed 'at-risk'.

Respiratory protection is not only essential to the health and comfort of employees, it subsequently improves performance and ultimately productivity.

The use of compressed air as a source of breathable air in industry for hazardous and toxic environments is well established, being readily available and relatively cheap to produce.

For hazardous areas, into which air-fed breathing equipment cannot be taken, high pressure compressed air is utilised to fill self-contained breathing apparatus, thereby ensuring the safety of the user from hostile or airless environments.

Why must you treat compressed air?

Just because an air compressor compresses atmospheric air doesn't ensure that the air delivered is 'Breathable'. Unfortunately our atmosphere is not pure, it is actually loaded with contamination. For compressed air to be suitable for breathing, it must be properly purified to international standards.

Breathe easier with **domnick hunter**

Many applications exist, ranging from the life threatening environment of fire fighting, to the hazardous environments of shot blasting and paint spraying.

Whatever the application, the use of compressed breathing air is covered by stringent acts of legislation for example COSHH as well as comprehensive international standards specifying the purity of breathable air.

domnick hunter's breathing air purifiers are in constant use throughout the world, protecting lives in virtually every type of industry.

Renowned for high standards of design and manufacture, **domnick hunter** has many years of proven and practical experience worldwide, supported by a network of trained personnel.

Through its commitment to continuous research and development, **domnick hunter** provides a complete



range of air purification products that have been perfectly designed to match the specific needs inherent when breathing from compressed air.

All products exceed current worldwide technical specifications, ensuring user safety, comfort and increased productivity.

Some of the many applications requiring breathing air

- Spray Painting
- Shotblasting
- Tank Cleaning
- Pharmaceutical Manufacturing
- Diving Air
- Asbestos Removal
- Medical and Hospital Air
- Petrochemical Refineries
- Tunnelling
- Offshore/Marine

breathing air purifiers without CO or CO₂ removal

BA-2006

The **domnick hunter** BA-2006 is used as point of use 2 stage breathing air filtration. This combination unit combines stage 1 (Grade AA) in the lower housing and stage 2 (Grade AC) in the upper housing. Expected life of stage 1 is 6000 hours (1 year) while stage 2 life expectancy is approximately 1000 hours (change when odours and/or tastes are present). The pressure regulator allows adjustment of line air pressure to useable levels. This unit is supplied with mounting brackets.

- Provides high quality 'clean' air at point of use
- Wall mounted
- Integral pressure regulator and gauge



BA-2006
• Low pressure warning alarm available as an option



BA-4350

- Water separator pre-filter available as optional extra

BA-4350

The **domnick hunter** BA-4350 is a portable breathing air purifier, designed to provide high quality breathable air from a normal compressed air supply.

The unit utilises two high efficiency purification stages combined together in a compact, weather proof, impact resistant housing to meet international breathing air standards.

- No electrical supply required
- Tough impact and chemical resistant design
- Filter change indicator
- Integral pressure regulator and gauge
- Integrated condensate collection container
- Up to 4 man capacity

BA-1400B

with 'integral' CO monitor/alarm

The **domnick hunter** BA-1400B portable breathing air purifier was designed to provide high quality breathable air from any compressed air source. Housed in a chemical resistant polyethylene weatherproof case, this 2 stage filtration (Grade AA & ACS) with water separator system, can supply air to a maximum of 4 users.

- Use with any compressed air supply
- Integral carbon monoxide monitor
- Battery operated for 60 hours of use
- On/Off switch, test button, 95 dB (A) audible alarm and pressure relief valve
- Pop up indicator shows when to change filter elements
- Stable design, won't knock over
- Integral pressure regulator and gauge



BA-1400B

- Remote 110 Vac power supply option
- 220 Vac available on request



BAFP-064B & BAFP-170B
• 220 Vac available

BAFP-064B & BAFP-170B

For stationary units, **domnick hunter** offers two choices in breathing air filtration panels, BAFP-064B and BAFP-170B. These wall mounted panels use the same type of purification stages as the portable BA-1400B.

- Use with any compressed air supply
- Carbon monoxide monitor
- 110 Vac power supply standard (220 Vac option)
- Integral pressure regulator and gauge
- 95 dB(A) audible alarm
- Pop up indicator shows when to change element

breathing air purifiers incorporating CO and CO₂ removal

For hazardous applications requiring uninterrupted service when the possibility of higher levels of carbon monoxide are present, these models provide the protection you need. Through a catalytic conversion, the catalyst converts deadly carbon monoxide (CO) by oxidation to breathable levels of carbon dioxide (CO₂) through chemisorption and catalysis. The catalyst is kept active by maintaining a low dewpoint prior to the catalytic bed. This is achieved by the integral desiccant dryer unit.

BA-2010

The BA-2010 is used when the possibility higher levels of CO are present in applications, for example when the user must enter a confined space. This portable unit is designed for field service, being completely pneumatically operated and incorporating 5 purification stages.

- Full protection against CO and CO₂
- Durable transportable design
- Standby/Air Sample port
- Integral air pressure regulator and gauges
- Hours run meter
- Audible low pressure warning



BA-2010
• CO monitor/alarm is available as an optional extra (see accessories)



BA-2025 & BA2030
• CO monitor/alarm is available as an optional extra (see accessories)

BA-2025 & BA-2030

domnick hunter has larger flow breathing air systems available, similar in operation to the BA-2010. These units are stationary in design to provide a continuous supply of breathable air. Five stages of treatment provide compressed air one million times cleaner than we normally breathe. Stage 1 is Grade AA, followed by stage 2, an absorption bed of activated carbon (AC), stage 3 is a twin tower heatless regenerative air dryer, stage 4 is a catalyst and stage 5 is a final filter (AR) for "polishing" the air.

- CO and CO₂ removal
- Visual warning of system failure
- Low pressure alarm contacts
- Flow limiting control device prevents overflowing unit with too much air
- Hours run meter
- System pressure gauge

Larger flow breathing air purifiers are available as standard packages or can be designed to suit specific requirements - please ask for details. Skid and trailer mounted kits are also available.

mobile breathing air purifier incorporating CO and CO₂ removal

For total ease of portability, **domnick hunter** offers the trolley breathing air purifier. Pneumatically operated the BAP-2010 trolley offers the same purification stages as the BA-2010.

- CO and CO₂ removal
- Pneumatic operation (excluding CO monitor/alarm)
- Fully portable design
- Integral pressure regulator and gauges
- Visual warning of system failure
- Integral CO monitor/alarm
- Hours run meter

BAP-2010 Trolley

- Stand-by provision for HP bottle back-up
- HP and LP automatic diverter valve
 - CO monitor requires 115-1-50/60 Vac supply



high pressure breathing air purifiers

HPBA-05, HPBA-10, HPBA-20, HPBA-40,

The **domnick hunter** range of high pressure breathing air purifiers (HPBAP) can be used with most high-pressure compressed air systems up to 350 bar g (5075 psi g).

Purification requirements of high pressure breathing air are basically the same as those for low pressure although the need to dry air down to very low dewpoints is essential to prevent freezing of valves and other downstream equipment.

The **domnick hunter** range of high pressure breathing air purifiers offers complete protection against carbon monoxide (CO) and carbon dioxide (CO₂). All purifiers in the range are designed for easy installation, operation and maintenance with simple in-line connections. Integral safety devices are standard and provision is made for air quality sampling.

These purifiers utilise two main stages of air treatment each with specific functions: Stage 1 Grade AA - High efficiency coalescing filter; Stage 2 is a composite cartridge, which has five individual processes.

- 1) A molecular sieve for the adsorption of water vapour and carbon dioxide (CO₂).
- 2) A bed of activated carbon for the adsorption of oil vapour and odours.
- 3) A catalyst bed for the oxidation of carbon monoxide (CO) to carbon dioxide (CO₂) by chemisorption and catalysis.
- 4) A further molecular sieve for the removal of water vapour and reduction of carbon dioxide levels.
- 5) A dust retention stage incorporating stainless steel support grids to ensure cartridge integrity.

- Full CO and CO₂ Protection
- Long life filter cartridges
- Integral safety devices
- Provision for air quality sampling



HPBA-05, HPBA-10, HPBA-20, HPBA-40,

- HP air quality test kit available as accessory

breathing air solutions

In addition to the standard breathing air purifiers available from **domnick hunter**, units can also be designed and manufactured for specific requirements or applications.

Self-contained packaged skid units, large breathing air systems and mobile breathing air units are regularly specified for use in hazardous and often isolated areas of operation.

All breathing air units provide breathable air to better than the levels specified in international standards.

domnick hunter Companies and their worldwide distributors have vast experience in the engineering of breathing air solutions for numerous industries including offshore applications and other hazardous areas.



This skid mounted breathing air system can supply up to 27 air stations with breathable air for full protective suits and hoods.

It is used in a petrochemical refinery, but it would be equally applicable to any other hazardous environment requiring large volumes of breathable air.

To ensure the highest quality air, the unit consists of **domnick hunter** high-efficiency purification stages. A CO monitor is fitted to detect the contamination levels above pre-set values and is directly linked to a main control room. As a back-up, the unit also contains a reserve system of bottled air for 10 minutes emergency use.



Another typical application for a skid mounted breathing air purifier, is for a pharmaceutical company.

Up to 25 men in protective suits can work safely during the production of drugs and other pharmaceutical products. Equipment consists of high efficiency filtration and drying equipment. Also included are activated carbon and catalytic purification stages with a final dust filter and CO monitor.



Portable, self-contained breathing air purifiers are used extensively in isolated areas for applications such as tank cleaning where full protection is required.

Complete with compressor and all purification stages, this unit provides high quality breathing air.

Visible and audible warning alarms are also fitted.

Emergency bottled air provides reserve capacity for 6 men of 20 minutes each.

This fully pneumatic breathing air skid unit was designed to provide breathable air for a maximum outlet capacity of 240m³/hr (135cfm) of breathable air for 15 men - in addition, air for a maximum outlet capacity of 960m³/hr (540cfm) of tool quality compressed air is provided from the high efficiency filtration to 15 outlet connections.



breathing air purifiers options and accessories

CO Monitor

The Analox 3050 CO (carbon monoxide) monitor utilises an electro-chemical cell, to continuously sample compressed air to detect CO. This wall or panel mountable instrument operates on 115/1/50-60 Vac as standard but is also available as 220/1/50-60 Vac.

- High intensity 95dB(A) alarm
- Simple calibration
- Remote alarm contacts
- Adjustable alarm settings (factory set at 10ppm)
- Clear digital read out in ppm
- IP65/NEMA4 enclosure



Air Purity Test Kit

The **domnick hunter** air purity test kit is for convenient 'on the spot' indication of compressed air quality. This comprehensive test kit is compact, easy to operate and offers a very fast and effective method of assessing the performance of filtration and drying equipment. In addition, the test kit can be used to quantify the level of contamination upstream and downstream of purification equipment.

- Lightweight and portable kit in a robust carrying case
- Allows simultaneous testing of upstream and downstream air purity
- Testing quality of breathing air to National and International Standards
- Can be used with compressed air pressure up to 10.5 bar g (150 psi g)
- Factory set for use with 'Gastec Ltd' gas detection tubes

Supplied with oil and water test tubes; ¼" & ½" connections; and flexible tube (suitable for Dräger Ltd gas detection tubes only after factory re-calibration). CO/CO₂/O₂ test tubes are available on request.



international breathing air standards

Item	United Kingdom		European-Draft	Germany	Holland	USA	Canada	AUS/NZ	domnick hunter Breathing Air Purifiers
	BS 4275 1997	BCAS GS901031: 1990	prEN 12021 1997	DIN 3188 1984	P112-1 1985	ANSI/CGA G-7-1 1989 OSHA Grade D	Z180-1 -M85 1985	AS/NZS 1715:1994	
Nitrogen		Not Specified				19.5-23.5%	Not Specified		
Oxygen	20-23%	18-24%	21 ± 1%	20-21%	20-21%	approx. 21.5%	19.5-22.5%	19.5-22%	
Carbon Dioxide	500ppm	<500ppm	500ppm	1000ppm	1000ppm	1000ppm	500ppm	<800mg/m ³	300ppm
Carbon Monoxide	5ppm	<5ppm	<15ppm	30ppm	5ppm	10ppm	5ppm	10ppm	<5ppm
Oil Mist	0.5mg/m ³	<0.5ppm	0.5ppm	Not Specified	0.1mg/m ³	5mg/m ³	1mg/m ³	1mg/m ³	0.003mg/m ³
Pressure Dewpoint	5°C below lowest temp.	At least 5°C below minimum temp.	At least 5°C below minimum temp.	-51°C pdp	-51°C pdp	10°F below. lowest temp	pdp at 5°C below system	100mg/m ³	-40°C pdp
Halogenated Hydrocarbons	<10% OEL	<10% LTEL	<10% LTEL	Not Specified	Not Specified	Not Specified	5ppm	Not Specified	Not Specified
Solid Particles	<10% OEL	<LTEL Respirable Dust	<LTEL	Not Specified	Not Specified	Not Specified	1mg/m ³	Not Specified	0.01mg/m ³
Odours	None	None	None	None	Not Specified	No pronounced odour	None	No nauseous odour	None
Nitrous Oxide Nitrogen Dioxide Sulphur Dioxide	<10% OEL	<10% LTEL	<10% LTEL	Not Specified	Not Specified	Not Specified	<10% TLV	Not Specified	<10% LTEL

technical specifications

Maximum Operating Pressure	10 bar g (145 psi g)
Minimum Operating Pressure	4 bar g (58 psi g)

Maximum Recommended Operating Temperature	30°C (86°F)
Minimum Recommended Operating Temperature	1.5°C (35°F)

Breathing Air Purifiers without CO and CO₂ removal

CODE NO.	PIPE SIZE		FLOW RATES @ 7 bar g				DIMENSIONS mm					WEIGHT (approx.)	
	INLET	OUTLET	inlet		outlet		A	B	C	D	E	kg	lbs
			L/s	cfm	L/s	cfm							
BA-2006	G $\frac{1}{2}$	G $\frac{1}{2}$	6	13	6	13	275	150	114	N/A	N/A	1.2	2.6
BA-4350	G $\frac{1}{2}$	4 x G $\frac{1}{2}$	23	50	23	50	415	465	245	N/A	N/A	8	18
BA-1400B*	G $\frac{1}{2}$	4 x G $\frac{1}{2}$	23	50	23	50	470	600	300	N/A	N/A	10	22
BAFP-064B*	G $\frac{1}{2}$	4 x G $\frac{1}{2}$	30	64	30	64	650	490	170	N/A	N/A	21	46
BAFP-170B*	G $\frac{1}{2}$	8 x G $\frac{1}{2}$	80	170	80	170	851	605	180	N/A	N/A	30	65

Breathing Air Purifiers incorporating CO and CO₂ removal

CODE NO.	PIPE SIZE		FLOW RATES @ 7 bar g				DIMENSIONS mm					WEIGHT (approx.)	
	INLET	OUTLET	inlet		outlet		A	B	C	D	E	kg	lbs
			L/s	cfm	L/s	cfm							
BA-2010**	G $\frac{1}{2}$	3 x G $\frac{1}{2}$	11	23	9	18	610	450	270	N/A	N/A	37	82
BA-2025**	G $\frac{1}{2}$	G $\frac{1}{2}$	29	60	24	51	1700	380	400	200	1050	58	128
BA-2030**	G $\frac{1}{2}$	G $\frac{1}{2}$	38	80	32	64	1950	380	400	200	1300	66	146
BAP-2010*	G $\frac{1}{2}$	3 x G $\frac{1}{2}$	11	23	9	18	993	305	406	416	N/A	50	110

* Includes CO Monitor. ** CO Monitor supplied for field installation (Apply correction factor to listed inlet flow from above to establish connected capacity of purifier, example BA-2030: 38L/s x 0.85 (5 bar g) = 32 corrected L/s. The model BA-2030 has a corrected inlet capacity of 32 L/s).

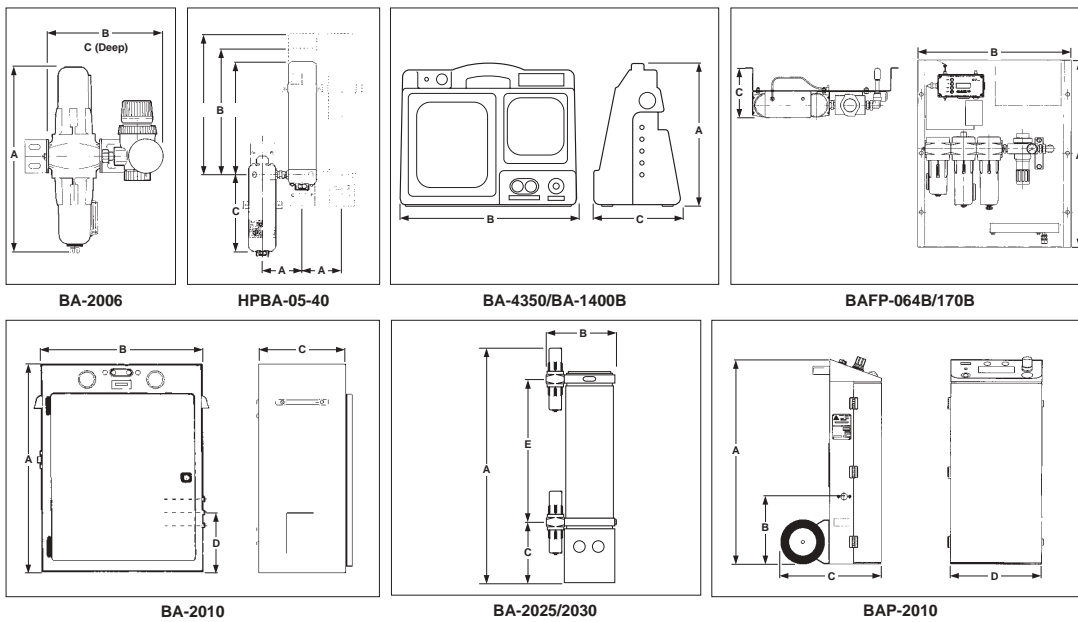
Line Pressure	psi g	58	73	87	102	116	131	145
	bar g	4	5	6	7	8	9	10
Correction Factor		0.76	0.85	0.93	1.0	1.07	1.13	1.19

High Pressure Breathing Air Purifiers

Maximum Operating Pressure	350 bar g (5075psi g)
Minimum Operating Pressure	100 bar g (1450 psi g)

Maximum Recommended Operating Temperature	30°C (86°F)
Minimum Recommended Operating Temperature	5°C (40°F)

CODE NO.	PIPE CONNS. BSPP	MAXIMUM RECOMMENDED FLOW RATE AT MAX. OPERATING PRESSURE		DIMENSIONS mm			WEIGHT (approx.)	
		cfm	L/s	A	B	C	kg	lbs
HPBA-05	G $\frac{1}{2}$	10	5	130	378	252	11	24.3
HPBA-10	G $\frac{1}{2}$	20	10	130	610	252	13	28.7
HPBA-20	G $\frac{1}{2}$	40	19	130	1100	252	16	35.3
HPBA-40	G $\frac{1}{2}$	80	38	130	1100	252	28	61.7




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