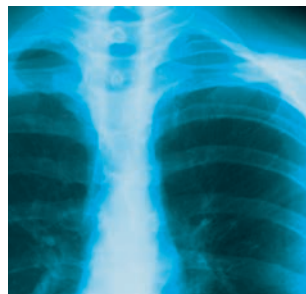




Breathable Compressed Air BAM10 ~ BAM70



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**
- **Micro-organisms**
- **Atmospheric dirt**
- **Water vapour**
- **Condensed liquid water**
- **Water aerosols**
- **Oil vapour**
- **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
- Shot blasting
- 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

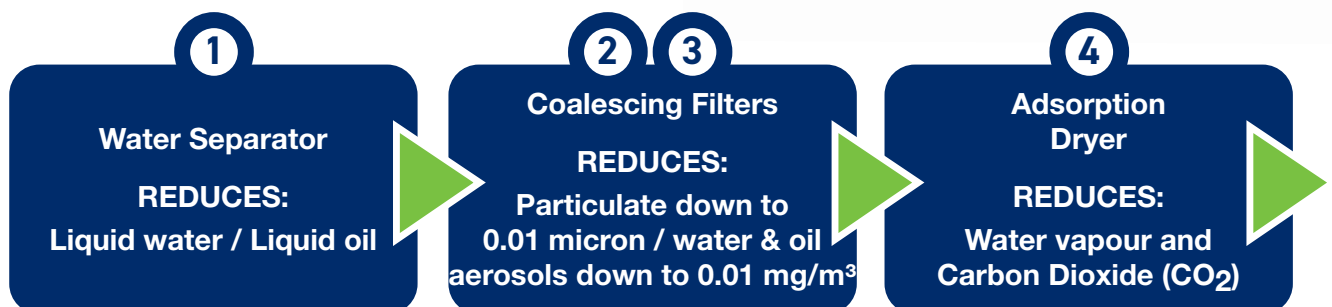
Contaminants	OSHA Grade D	CSA Z180.1	European Pharmacopoeia	Parker domnick hunter BA Purifier range
Water		Pressure dewpoint of 5°C below lowest system temperature	67 ppm (= -45°C atmospheric dewpoint)	14 ppm (= -58°C atmospheric dewpoint)
Oil / Lubricant	5 mg/m ³	< 1 mg/m ³	0.1 mg/m ³	0.003 mg/m ³
Carbon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

BAM

How it works



Parker BAM Breathing Air Purifiers consist of seven purification stages



Special Features

Safety

Built to exacting standards, the BAM series is engineered to meet or exceed global breathing air standards and is fitted as standard with a Carbon Monoxide monitor

Certified air quality

The air quality delivered downstream of a BAM breathing air purifier has been independently tested and verified by a 3rd party test facility.

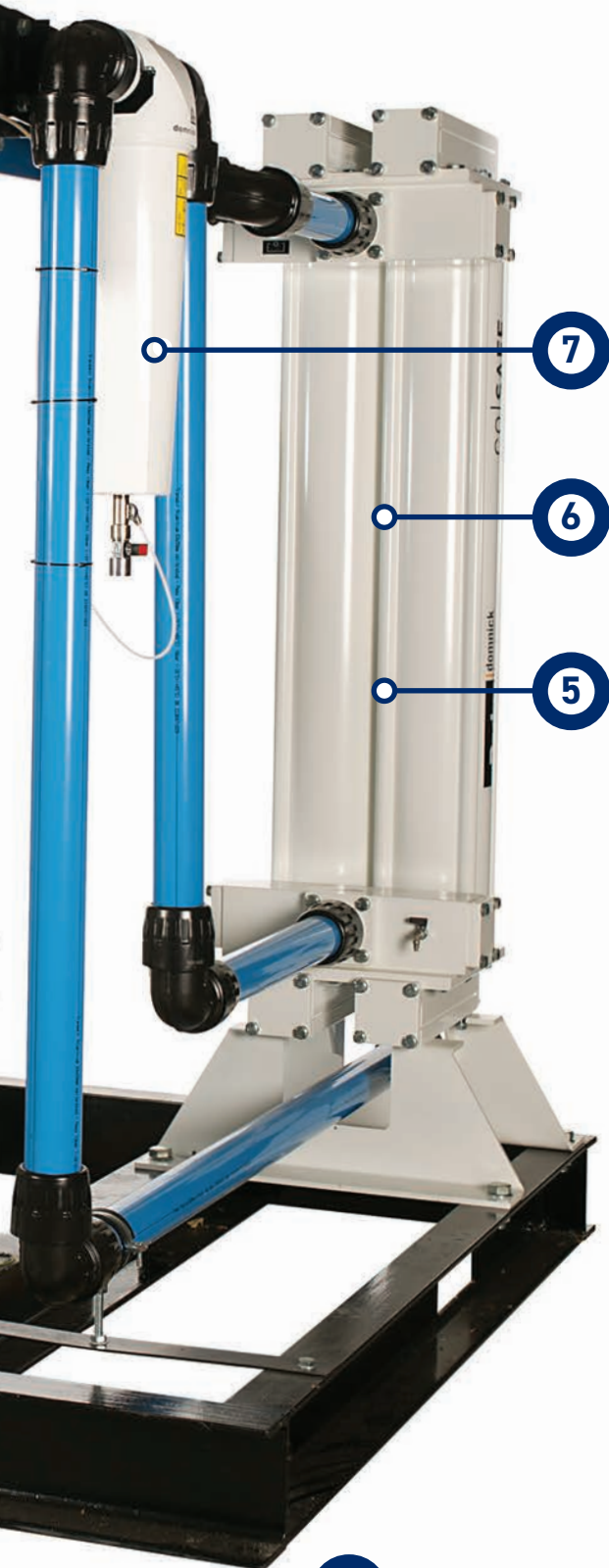
The delivered air quality is better than the European Pharmacopoeia standard, assuring performance and reliability at all times.

Compact operation

Designed for large flow applications, the BAM series has a modular space saving footprint making it one of the most compact breathing air purifiers on the market.

Ease of installation

The BAM series can be used with a general compressed air supply, and with most suitably rated compressors.



5

Activated Carbon Filter

REDUCES:

Oil vapour and odours
down to 0.003 mg/m³

6

Catalyst Filter

REDUCES:

Carbon Monoxide (CO)
by conversion into
Carbon Dioxide (CO₂)

7

Dry Particulate Filter

REDUCES:

Particulates & Micro-
organisms with an efficiency
of 99.9999%

BAM Performance

BA Purifier Models	Dewpoint (Standard)		ISO8573-1:2010 Classification (Standard)
	°C	°F	
BAM	-40	-40	Class 1.2.1

Technical Data

BA Purifier Models	Minimum Operating Pressure		Maximum Operating Pressure		Minimum Operating Temperature		Maximum Operating Temperature		Maximum Ambient Temperature		Electrical Supply (Standard)	Thread Type	Noise Level
	bar g	psi g	bar g	psi g	°C	°F	°C	°F	°C	°F			dB(A)
BAM10 ~ BAM70	4	58	13	190	5	41	35	95	55	131	85 - 265V 1ph 50/60Hz	BSPP or NPT	<75

Flow Rates

Model	Pipe Size	Inlet Flow Rate				Regeneration Air Requirement			
		L/s	m³/min	m³/hr	cfm	L/s	m³/min	m³/hr	cfm
BAM10	2"	113	6.81	408	240	22.6	1.36	82	48
BAM20	2"	170	10.22	612	360	34.0	2.04	122	72
BAM30	2"	213	12.75	765	450	42.6	2.60	159	90
BAM40	2"	283	17	1020	600	56.6	3.40	204	120
BAM50	2 ½"	354	21	1275	750	70.8	4.20	255	150
BAM70	2 ½"	496	30	1785	1050	99.2	6.00	357	210

Stated flows are for operation at 7 bar (g) (102 psi g) with reference to 20°C, 1 bar (a), 0% relative water vapour pressure. For flows at other conditions, apply the correction factors shown below.

Product Selection & Correction Factors

For correct operation, breathing air purifiers must be sized using for the maximum (summer) inlet temperature, minimum inlet pressure and maximum flow rate of the installation.

To select a breathing air purifier, first calculate the MPC (Minimum Purification Capacity) using the formula below then select a breathing air purifier from the flow rate table above with a flow rate equal to or above the MPC.

Minimum Drying Capacity = System Flow x CFMIT x CFMIP

CFIT - Correction Factor Maximum Inlet Temperature

Maximum Inlet Temperature	°C	25	30	35
	°F	77	86	95
Correction Factor		1.00	1.00	1.00

CFMIP - Correction Factor Minimum Inlet Pressure

Minimum Inlet Pressure	bar g	4	5	6	7	8	9	10	11	12	13
	psi g	58	73	87	100	116	131	145	160	174	189
Correction Factor		1.60	1.33	1.14	1.00	0.89	0.80	0.73	0.67	0.62	0.57

Controller Functions

BA Purifier	Controller Function							
	Power On Indication	Visual Fault Indication	Dewpoint Display	Energy Saving Technology	Filter Service Indicator	Dryer Service Indicator	Fault Relay: Power Loss Dewpoint Alarm Sensor Failure	4-20mA Dewpoint Re-transmission
BAM	•	•				•	•	

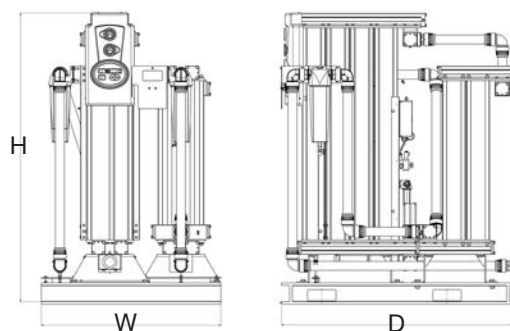
Included Filtration

Model	Pipe Size BSPP or NPT	Dryer Inlet		Dryer Outlet		
		General Purpose Pre-filter	High Efficiency Filter	Oil Vapour Reduction Filter	General Purpose Dry Particulate Filter	High Efficiency Dry Particulate Filter
BAM10 ~ BAM70	2"	•	•	•	•	•

Filtration Performance	General Purpose Pre-filter	High Efficiency Filter	Oil Vapour Reduction Filter	General Purpose Dry Particulate Filter	High Efficiency Dry Particulate Filter
Filtration Grade	Grade AO	Grade AA	OVF	Grade AO	Grade AA
Filtration Type	Coalescing	Coalescing	Adsorption	Dry Particulate	Coalescing
Particle Reduction (inc water & oil aerosols)	Down to 1 micron	Down to 0.01 micron	N/A	Down to 1 micron	Down to 0.01 micron
Maximum Remaining Oil Aerosol Content at 21°C	≤0.5 mg/m ³ (≤0.5 ppm(w))	≤0.01 mg/m ³ (≤0.01 ppm(w))	N/A	N/A	N/A
Maximum Remaining Oil Vapour Content at System Temperature	N/A	N/A	≤0.003 mg/m ³ (≤0.003 ppm(w))	N/A	N/A
Filtration Efficiency	99.925%	99.9999%	N/A	99.925%	99.9999%

Weights & Dimensions

Model	Pipe Size BSPP	Dimensions						Weight	
		Height (H)		Width (W)		Depth (D)			
		mm	ins	mm	ins	mm	ins	kg	lbs
BAM10	2"	1797	70.7	1260	49.6	1655	65.2	600	1322
BAM20	2"	1797	70.7	1260	49.6	1655	65.2	700	1543
BAM30	2"	2042	80.4	1260	49.6	1655	65.2	800	1763
BAM40	2 ½"	2042	80.4	1260	49.6	1655	65.2	900	1984
BAM50	2 ½"	2042	80.4	1260	49.6	1950	76.8	1100	2425
BAM70	2 ½"	2042	80.4	1260	49.6	1950	76.8	1400	3086



Quality Assurance / IP Rating / Pressure Vessel Approvals

Development / Manufacture	ISO 9001 / ISO 14001
Ingress Protection Rating	IP55 Indoor Use Only
EU	Pressure vessel approved for fluid group 2 in accordance with the Pressure Equipment Directive 2014/68/EU
USA	Approval to ASME VIII Div. 1 not required
AUS	Approval to AS1210 not required
GUS	TR (formerly GOST-R)
For use with Compressed Air Only	

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