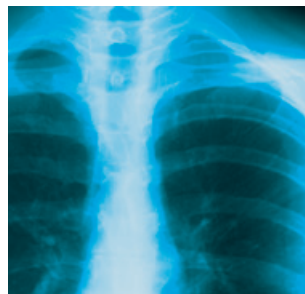




Breathable Compressed Air BAC-4015



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

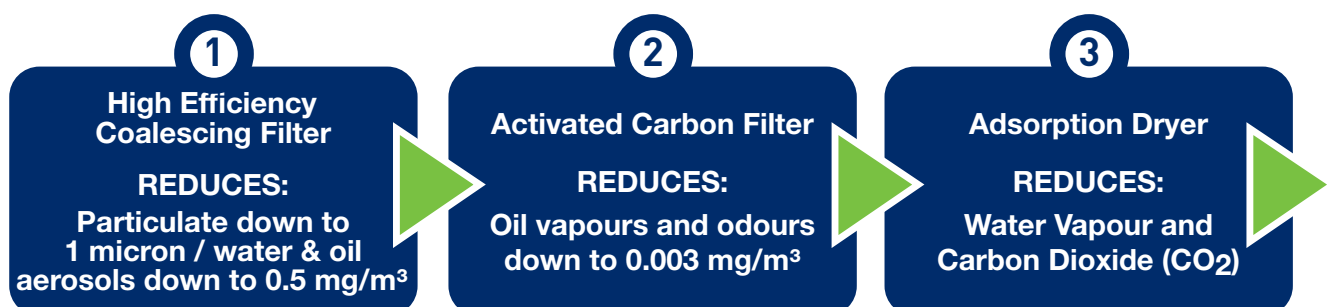
Contaminants	OSHA Grade D	CSA Z180.1	European Pharmacopoeia	Parker BA Purifier range
Water		Pressure dewpoint of 5°C below lowest system temperature	67 ppm (= -45°C atmospheric dewpoint)	14 ppm (= -58°C atmospheric dewpoint)
Oil / Lubricant	5 mg/m ³	< 1 mg/m ³	0.1 mg/m ³	0.003 mg/m ³
Carbon Dioxide (CO 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

BAC-4015

How it works



Parker BAC-4015 Breathing Air Purifier consists of five purification stages



Special Features

The Parker BAC-4015 is a fully pneumatic, portable Breathing Air Purifier designed to provide complete protection for up to three personnel (depending upon air requirements of the breathing air mask / hood / suit being supplied).

Five purification stages will ensure the highest quality air that has been treated to reduce particulate, oil and water aerosols, oil and water vapour, odours, carbon dioxide (CO₂) and carbon monoxide (CO) to acceptable levels.

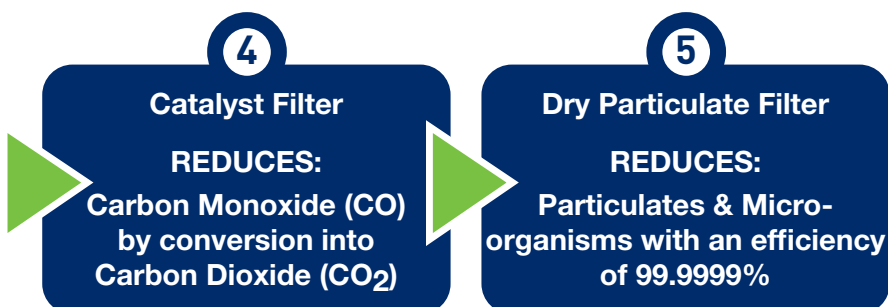
The flow rate is easily adjustable from a pressure regulator and monitored by inlet/outlet pressure gauges on the front facia.

The BAC-4015 is housed in an extremely strong and robust lockable case for total security.



Special Features

- 5 Purification stages
- Integral pressure regulator
- Portable
- Hours run meter
- Pneumatic control
- Use with any compressed air supply



BAC-4015 Performance

BA Purifier Model	Dewpoint (Standard)		ISO8573-1:2010 Classification (Standard)
	°C	°F	
BAC-4015	-40	-40	Class 1.2.1

Technical Data

BA Purifier Model	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)
BAC-4015	4	58	8,5	123	5	41	30	86	55	131	Fully Pneumatic	BSPP	<75

Flow Rates

Model	Pipe Size		Inlet Flow Rate				Regeneration Air Requirement			
	Inlet	Outlet	L/s	m³/min	m³/hr	cfm	L/s	m³/min	m³/hr	cfm
BAC-4015	G ½	G ¼	11	0.68	41	24	2.36	0.14	8.5	5

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 Purification Capacity = System Flow x CFMIT x CFMIP

CFMIT - Correction Factor Maximum Inlet Temperature

Maximum Inlet Temperature	°C	25	30
	°F	77	86
Correction Factor		1.00	1.20

CFMIP - Correction Factor Minimum Inlet Pressure

Minimum Inlet Pressure	bar g	4	5	6	7	8	8,5
	psi g	58	73	87	100	116	123
Correction Factor		1.60	1.33	1.14	1.00	0.89	0.84

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
BA-DME	Not Applicable - Fully Pneumatic Operation							

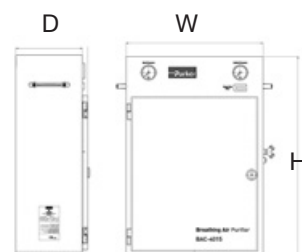
Included Filtration

Model	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
BAC-4015		•	•		•

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 AA	AC	-	Grade AA
Filtration Type	-	Coalescing	Adsorption	-	Coalescing
Particle Reduction (inc water & oil aerosols)	-	Down to 0.01 micron	N/A	-	Down to 0.01 micron
Maximum Remaining Oil Aerosol Content at 21°C	-	≤0.01 mg/m ³ (≤0.01 ppm(w))	N/A	-	N/A
Maximum Remaining Oil Vapour Content at System Temperature	-	N/A	≤0.003 mg/m ³ (≤0.003 ppm(w))	-	N/A
Filtration Efficiency	-	99.9999%	N/A	-	99.9999%

Weights & Dimensions

Model	Pipe Size BSPP		Dimensions						Weight	
			Height (H)		Width (W)		Depth (D)			
	Inlet	Outlet	mm	ins	mm	ins	mm	ins	kg	lbs
BAC-4015	G ½	G ¼	752	29.6	515	20.3	272	10.7	40	88.2



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	

Parker Worldwide

Europe, Middle East, Africa

AE – United Arab Emirates,

Dubai

Tel: +971 4 8127100

AT – Austria, St. Florian

Tel: +43 (0)7224 66201

AZ – Azerbaijan, Baku

Tel: +994 50 2233 458

BE/NL/LU – Benelux,

Hendrik Ido Ambacht

Tel: +31 (0)541 585 000

BY – Belarus, Minsk

Tel: +48 (0)22 573 24 00

CH – Switzerland, Etoy

Tel: +41 (0)21 821 87 00

CZ – Czech Republic,

Prague

Tel: +420 284 083 111

DE – Germany, Kaarst

Tel: +49 (0)2131 4016 0

DK – Denmark, Ballerup

Tel: +45 43 56 04 00

ES – Spain, Madrid

Tel: +34 902 330 001

FI – Finland, Vantaa

Tel: +358 (0)20 753 2500

FR – France, Contamine s/Arve

Tel: +33 (0)4 50 25 80 25

GR – Greece

Tel: +30 69 44 52 78 25

HU – Hungary, Budaörs

Tel: +36 23 885 470

IE – Ireland, Dublin

Tel: +353 (0)1 466 6370

IL – Israel

Tel: +39 02 45 19 21

IT – Italy, Corsico (MI)

Tel: +39 02 45 19 21

KZ – Kazakhstan, Almaty

Tel: +7 7273 561 000

NO – Norway, Asker

Tel: +47 66 75 34 00

PL – Poland, Warsaw

Tel: +48 (0)22 573 24 00

PT – Portugal

Tel: +351 22 999 7360

RO – Romania, Bucharest

Tel: +40 21 252 1382

RU – Russia, Moscow

Tel: +7 495 645-2156

SE – Sweden, Borås

Tel: +46 (0)8 59 79 50 00

SL – Slovenia, Novo Mesto

Tel: +386 7 337 6650

TR – Turkey, Istanbul

Tel: +90 216 4997081

UK – United Kingdom, Warwick

Tel: +44 (0)1926 317 878

ZA – South Africa, Kempton Park

Tel: +27 (0)11 961 0700

North America

CA – Canada, Milton, Ontario

Tel: +1 905 693 3000

US – USA, Cleveland

Tel: +1 216 896 3000

Asia Pacific

AU – Australia, Castle Hill

Tel: +61 (0)2-9634 7777

CN – China, Shanghai

Tel: +86 21 2899 5000

HK – Hong Kong

Tel: +852 2428 8008

IN – India, Mumbai

Tel: +91 22 6513 7081-85

JP – Japan, Tokyo

Tel: +81 (0)3 6408 3901

KR – South Korea, Seoul

Tel: +82 2 559 0400

MY – Malaysia, Shah Alam

Tel: +60 3 7849 0800

NZ – New Zealand, Mt Wellington

Tel: +64 9 574 1744

SG – Singapore

Tel: +65 6887 6300

TH – Thailand, Bangkok

Tel: +662 186 7000

TW – Taiwan, Taipei

Tel: +886 2 2298 8987

South America

AR – Argentina, Buenos Aires

Tel: +54 3327 44 4129

BR – Brazil, Sao Jose dos Campos

Tel: +55 080 0727 5374

CL – Chile, Santiago

Tel: +56 22 303 9640

MX – Mexico, Toluca

Tel: +52 72 2275 4200

EMEA Product Information Centre

Free phone: 00 800 27 27 5374

(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL, IS, IT, LU, MT, NL, NO, PL, PT, RU, SE, SK, UK, ZA)

US Product Information Centre

Toll-free number: 1-800-27 27 537

www.parker.com/gsf

