

Breathable Compressed Air Purifier BAC-4015

Engineering Data Sheet



Description

The Parker domnick hunter BAC-4015 is a fully portable pneumatically controlled air purification system designed to provide breathing quality air to a higher level than specified in EN12021 for oil mist, vapour, odour and particulate removal. The BAC-4015 will also remove carbon monoxide (CO) and reduce carbon dioxide (CO₂) to fully meet EN12021 and other international specifications.

The BAC-4015 breathing air purifier utilises 5 separate stages of compressed air treatment, combined together in a compact and robust housing.

1st Stage - Grade AA - high efficiency coalescing filter for removal of oil/water aerosols and dirt particulate down to 0.01 micrometre, giving a maximum remaining oil content of 0.01 mg/m³.

2nd Stage - Grade AC - adsorption bed of activated carbon for removal of oil vapours and odours. The downstream air after this stage now has a maximum remaining oil content of 0.003 mg/m³ at a filtration temperature of 21°C.

3rd Stage - Adsorption Purifier regenerative adsorption bed of desiccant for removing water vapour and also reducing the CO₂ content prior to the catalyst stage. The desiccant purifier maintains a low dewpoint by utilising the heatless pressure swing adsorption principle. Cycle time is controlled by a pneumatic cam timer.

4th Stage - Grade HC - catalytic element for removal of carbon monoxide by oxidation to carbon dioxide 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 adsorption purifier (stage 3).

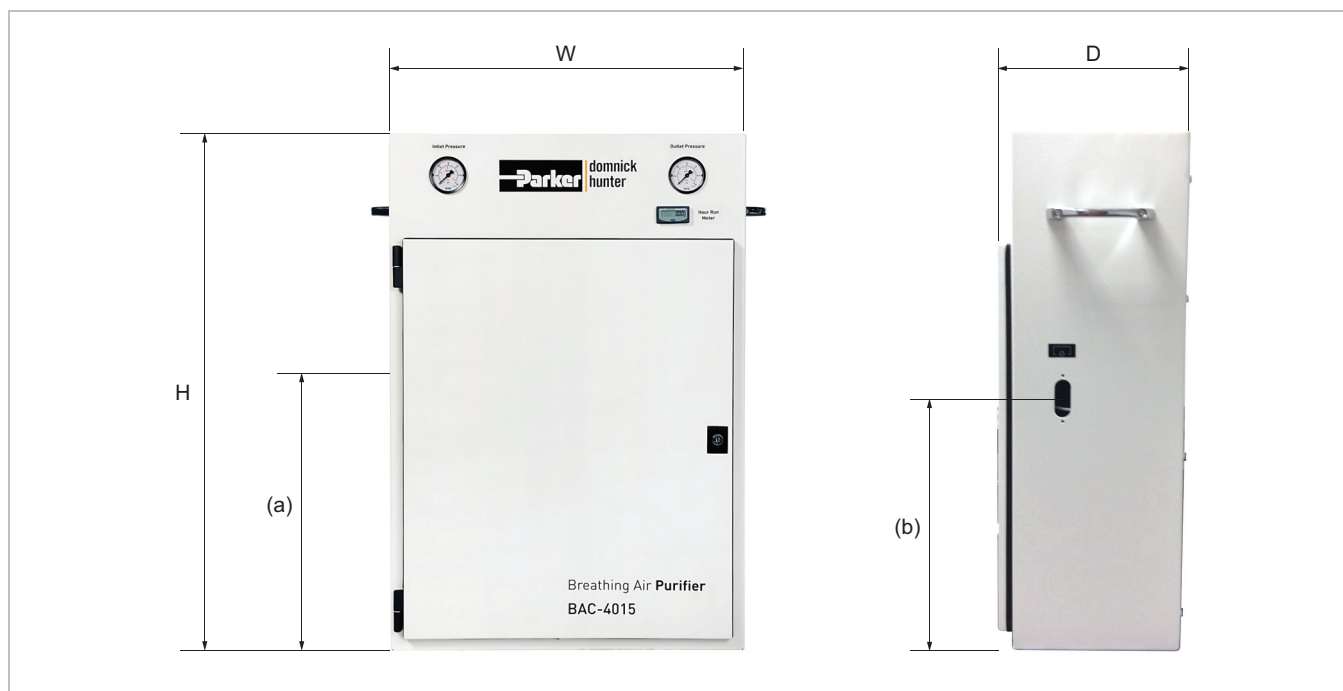
5th Stage - Grade AA - high efficiency coalescing filter for removal of oil/water aerosols and dirt particulate down to 0.01 micrometre, giving a maximum remaining oil content of 0.01 mg/m³.

These air purification stages are installed in an epoxy painted steel cabinet with lifting handles and a lockable door. Inlet and outlet pressure gauges are mounted on the upper fascia panel. The outlet pressure can be set as desired using the pressure regulator.

Technical Specification

BAC-4014		
Connections	Inlet	G 1/2 BSPP female
	Outlet	G 1/4 BSPP female (x3)
Maximum Inlet Flow Rate		11 L/sec @ 7 bar g (23 scfm @ 102 psi g)
Maximum Outlet Flow Rate		9 L/sec @ 7 bar g (18 scfm @102 psi g)
Maximum Inlet Pressure		10 bar g (145 psi g)
Minimum Inlet Pressure		4 bar g (58 psi g)
Maximum Operating Temperature		30°C (86°F)
Minimum Operating Temperature		1.5°C (35°F)








Weights and Dimensions



BAC-4015		
H		752mm (29.6")
W		515mm (20.3")
D		272mm (10.7")
(a)		430mm (16.9")
(b)		394mm (15.5")
Weight		40Kgs (88.2lbs)

Preventative Maintenance Kits

Service Intervals

Description of Service Required		Service recommended every:			
Component	Operation	Week	Monthly	3-month	12-month
Complete Assembly	Check for air leaks.				
Filtration	Check the pressure gauges during purging for excessive back pressure.				
Filtration	Replace the adsorption filter elements - Activated Carbon ⁽¹⁾ Recommended Service	See Note (1)			
					
Filtration	Replace the adsorption filter elements - Hopcolite ⁽²⁾ Recommended Service	See Note (2)			
					
Filtration	Replace the coalescing filter elements and automatic drains Recommended Service				

(1) Unlike oil aerosol removal filters which are changed annually to guarantee compressed air quality, the lifetime of an oil vapour removal filter can be attributed to various factors and require more frequent changes. Factors affecting the lifetime of adsorption filters are:

Oil vapour concentration - The higher the inlet concentration of oil vapour, the faster the activated carbon capacity will expire.

Bulk oil - Adsorption filters are designed to remove oil vapour and odours, not liquid oil or aerosols. Poorly maintained or non-existent pre-filtration will cause the OVR filter capacity to quickly expire.

Temperature - Oil vapour content increases exponentially to inlet temperature, reducing element life. Additionally, as temperature increases, the adsorption capacity decreases, again reducing element life.

Relative Humidity or Dewpoint - Wet air reduces the adsorptive capacity of the carbon.

Compressor oil changes - When compressor oil is changed, the new lubricant burns off "light ends" which increases the oil vapour content for hours or even weeks afterwards. This increase in oil vapour content is adsorbed by the OVR filter, significantly reducing its adsorptive life.

ACS / AC Element performance is based upon a maximum oil vapour inlet concentration of 0.018mg/m³, with compressed air at 21°C and a pressure dewpoint of -40°C PDP.

These elements should be replaced upon detection of vapour, odour or taste.

(2) Under normal operating conditions the HC cartridge should be replaced every 12 months. If an oil vapour incident occurs then we recommend that the AC and HC stages are replaced at the same time

Key:

	Check		Replace
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Preventative Maintenance Kits

Recommended upon detection of vapour, odour or taste - Maximum of 12 months



Description	Catalogue No.	Contents	Order Qty
015AC	015AC	AC cartridge	1
015HC	015HC	HC cartridge	1

Recommended every 12 months



Description	Catalogue No.	Contents	Order Qty
Exhaust Silencer	608200337	1/2" Silencers	1

Note. One kit is required for each dryer.



Description	Catalogue No.	Contents	Order Qty
015AA	015AA	AA element	2
K003AA	K003AA	AA element	1



Description	Catalogue No.	Contents	Order Qty
EF1 Auto Drain Kit	601181060	Auto drain	2

Recommended every 36 months

Description	Catalogue Number	Contents
Kit: Valve Overhaul	608233690	Inlet Valve Kit (Catalogue No.608233671)
		Outlet Valve Kit (Catalogue No.608233674)
		Exhaust Valve Kit (Catalogue No.608233677)
		Control Valve Kit (Catalogue No.608233680)

Inlet Valve Kit



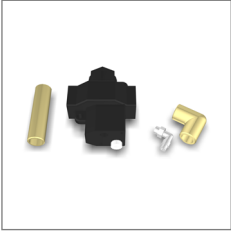
Description	Catalogue Number	Contents
Kit: Inlet Valve	608233671	ISO 2 Control Valve
		Fixing screws

Outlet Valve Kit



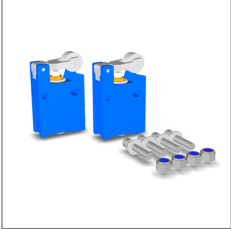
Description	Catalogue Number	Contents
Kit: Outlet Valve	608233674	Check valves Valve seats and guides Circlips Associated seals

Exhaust Valve Kit



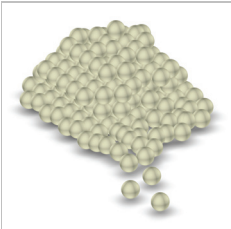
Description	Catalogue Number	Contents
Kit: Exhaust Valve DM012 - 040	608233677	2/2 Isolator valve Exhaust barrel nipple 90° elbow 1/8" - 4mm swivel elbow

Control Valve Kit



Description	Catalogue Number	Contents
Kit: Control Valve DM012 - 080	608233680	Pilot Valves Fixing screws

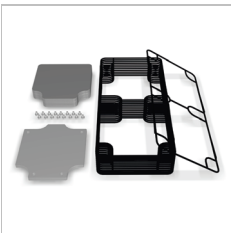
Desiccant



Description	Catalogue Number	Contents
Kit: Desiccant AA	608203661	11 Litre Container of AA

Note. Ensure that the dryer is filled using a Snowstorm filler and replace the column seals.

Column Seal Kits



Description	Catalogue Number	Contents
Kit: Column Seals MIDI	608203733	Moulded gaskets Support screens Column pads Fixing screws

Note. One kit is required for each dryer.

Snowstorm Filler



Description	Catalogue Number	Contents
Snowstorm Filler	608200622	Maxi / Midi Snowstorm Filler



ELEMENTS

Parker filters are designed to produce clean compressed air, gas and liquid to the highest industry standards. To maintain impeccable results, Elements within the filter must be replaced annually.

Choosing the Parker brand means you can be assured that Elements are readily available, affordable and the most energy efficient product of its kind on the market. The elements are also supplied in 100% recyclable packaging. An additional advantage of purchasing Parker Elements is that you will reduce your company's carbon footprint by 190kg. This is the equivalent of a 700 mile flight from Edinburgh to Berlin!

Parker Filter Elements also prove to be highly efficient when used in any leading competitor's filters.



PARTS

Parker Kits make everyday maintenance easy. They are available for all of our products and are simply value-for money. The Parts within the kits support our customers' varied maintenance, repair and overhaul activities.

Additionally, Preventative Maintenance Kits can be purchased for dryers and gas generators. These kits mean our customers dryer's and generator's can be serviced easily to ensure optimum performance.

An extensive range of durable Parker Parts can be obtained within 24 hours to any European, Middle East or African destination.



SPECIALISED SERVICES

Parker Specialist Service Engineers test on-site efficiency measuring many variables including airflow, pressure, temperature, dewpoint and power consumption.

Our team of highly trained experts are the best in the industry. They take into account a range of environmental factors that could affect your system's performance. The results from this Specialist Service are extremely accurate and produce invaluable information.

Importantly, Parker informed recommendations lead to significant savings for our customers, which mean they return time and time again for our advice and products.



M.R.O

Maintenance Repair & Overhaul - Parker Technicians are the industry's finest. Their skills and qualifications are annually approved to keep their product and legislation knowledge fresh and expertise relevant.

With this in mind, Parker offers onsite and on demand servicing to meet customers' unique requirements in a timely and efficient manner.

Parker MRO service ranges from a basic maintenance check covered under product warranty right through to a comprehensive programme, which even puts the onsite application under the microscope.

With customers at the heart of everything Parker does, the MRO service is no exception to this.

Parker Filter Elements also prove to be highly efficient when used in any leading competitor's filters



SUPPORT SERVICES

Parker Support Services are the first port of call for customers in need of help or guidance.

The fact that this team is responsible for the production of User Guides and Manuals gives you an insight into the level and detail of their parts and product knowledge.

Over-the-phone support is just one way in which Parker's extremely knowledgeable team, quickly reduces downtime or resolves product queries.

On some occasions engineers need to be on site to carry out a repair. In these cases, the local engineer will be quickly dispatched to ensure our customers can return to production as soon as possible.

One-to-one training can also be provided by our Support Services team. This has enabled hundreds of Parker distributors to gain an in-depth understanding. Training will also ensure distributors can make timely repairs and easily maintain their customers' products.



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