

nano



breathing air purification systems

flow capacity: 10 - 826 Nm³/h (6 - 486 scfm)

B¹

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Leading edge technology and hundreds of years of **experience**...nano-purification solutions, your world-class provider of state-of-the-art compressed air and gas solutions to industry.

Our commitment at nano is to work alongside our **customers** and provide unique solutions with the highest quality products to solve your specific challenges.

A wealth of experience and leading edge products are only part of the equation. nano recognise that world-class customer **service** is the most important component to any successful business.

Experience. Customer. Service...**nano**



clean and safe

Many commercial and industrial processes can introduce contaminants into the air which threaten the health and safety of employees. It is important to choose a breathing air system that is safe, reliable, and high quality - yet cost effective to own and operate.

nano recognise the importance of meeting international breathing air quality standards and protecting employees from hazardous environments. We have developed the B1 breathing air systems to meet and exceed global standards for breathing air quality in a comprehensive package with reliable performance.



design

Our experienced team of design engineers are always looking for new and unique technologies and products to bring you the highest level of performance and lowest overall operating cost.



research & development

Our R&D team endeavour to provide solutions that go beyond developing an existing product. They are continually researching new technologies which can provide unique advantages over competitive offerings.



manufacture

Always reliable, nano B¹ breathing air systems are manufactured in our state of the art facility to the highest standards of build quality to ensure reliability and high levels of performance.

nano B¹ breathing air purification systems

In industry, there is perhaps no more critical use of compressed air than for breathing. Whether blasting with fine abrasives, cleaning tanks in hazardous locations or applying finishes to consumer products, high quality breathable compressed air is an absolute necessity to ensure the safety of the user.

If the compressed air is of sufficiently high quality and free of harmful gases, a filtration system to remove particulate, oil, odour and taste may be used in conjunction with a carbon monoxide (CO) monitor. These systems are available at a lower initial investment and meet many breathing air standards. If however, gases such as CO₂ or CO may be present in dangerous levels, both filtration and purification are required.

nano-purification solutions is a leading manufacturer of breathing air products and has the experience to recommend, provide and support your breathing air system, whether you need a portable case, wall mounted panel or a complete modular purification system.

The nano B¹ breathing air systems use the latest technology to provide clean, reliable and safe breathing air that meets or exceeds global standards. Contact us today and let our technical support department help you choose the breathing air system that best fits your needs.

independently validated performance

To ensure the conformance of the nano B¹ breathing air purifiers to BS EN12021.2014 and European Pharmacopoeia 5.0 - Monograph 01/2005:1238, independent third party testing confirmed compliance of air quality to both standards. For further details of the test report and certification, please contact sales@n-psi.co.uk.

global breathing air quality standards



When applied, operated and maintained correctly, the nano range of B¹ breathing air cases, panels and purifier systems are guaranteed to meet and exceed global standards for breathing air quality.



	UK & Europe	United States	Canada
standard	EN12021	CGA7.1 OSHA Grade D	CAN3-Z180.1-M85
maximum dew point	-31°C (-23°F)	varies by application	5°C below lowest system temperature
maximum oil content	0.01 mg/m ³	5 mg/m ³	1mg/m ³
odour & taste	no pronounced odour	no pronounced odour	no pronounced odour
allowable O ₂ range	21% ± 1%	19.5 to 23.5%	20 to 22%
maximum CO level	< 5 ppm	10 ppm	< 5 ppm
maximum CO ₂ level	< 500 ppm	1000 ppm	< 600 ppm

if there is a known presence of harmful gases, please consult n-psi prior to selecting a breathing air product

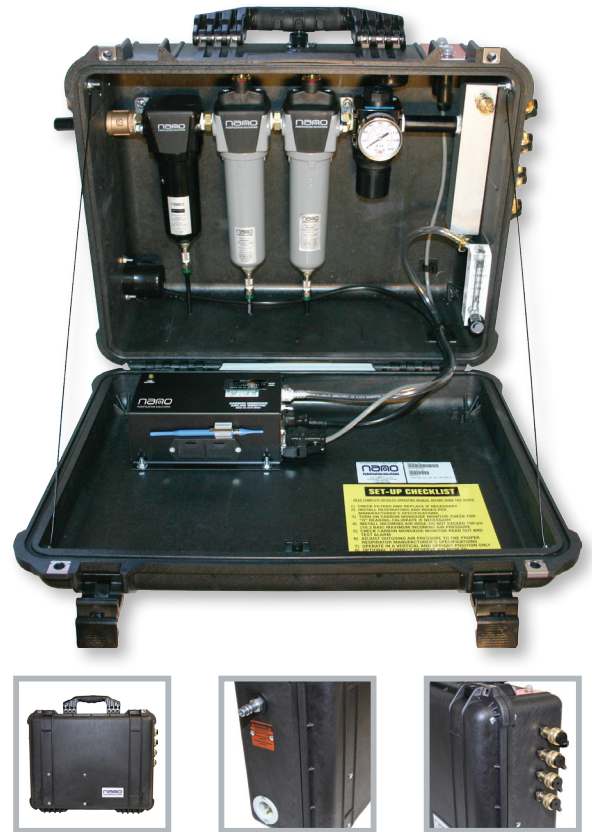
portable breathing air cases

The nano BAC portable breathing air case is the solution for one or multiple users who need a robust, go anywhere breathable air filtration system.

With maximum flow rates of either 60 Nm³/h, the impact and water resistant case houses a nano F¹ NWS water separator, an M01 0.01 micron coalescing filter with automatic condensate drains and an AC activated carbon adsorber to remove moisture, oil aerosols, odours and taste to 0.003 ppm all in one simple, portable package.

All BAC cases include an adjustable pressure regulator with a carbon monoxide (CO) monitor* as an option to ensure safe and reliable operation.

- portable, impact and water resistant case
- 85 or 170 Nm³/h maximum flow rates
- four outlet connections for multiple users
- adjustable pressure regulator
- optional CO monitor*



wall mounted breathing air panels

The nano BAP breathing air panel is the optimum solution for one or more users who require a convenient, high quality breathable air filtration system but don't require the portability of a case. This easy to install panel can be mounted to a wall, skid or any location that requires breathing air on a regular basis, such as a blasting or paint booth, a confined space, a hazardous area or a tank cleaning location.

As with the portable case, the BAP panels include a nano F¹ NWS water separator, an M01 0.01 micron coalescing filter with automatic condensate drains and an AC activated carbon adsorber to remove moisture, oil aerosols, odours and taste to 0.003 ppm.

- wall or skid mountable
- 85, 170 or 297 Nm³/h flow rates available
- multiple outlet connections for multiple users
- adjustable pressure regulator
- optional CO monitor*



* does not remove CO, only monitors it

modular breathing air purifier systems



While many breathing air applications may require only the removal of particulate, oil, odour and taste, others may also require the removal of hazardous gases.

Carbon dioxide (CO₂) and carbon monoxide (CO) are odourless, tasteless gases that can be harmful or even lethal if inhaled - especially in high concentrations. If there is the potential for high levels of CO or CO₂ in the air, it is imperative they are reduced to safe levels for breathing.

These critical applications call for the nano modular NBA breathing air purifier. The NBA purifiers start by filtering the air using an M1 1 micron pre-filter and an M01 0.01 micron high-efficiency coalescing pre-filter. However, the NBA then also removes water, hydrocarbons, SO_x, NO_x, odour, CO and CO₂ using a 4-layer, mixed bed cartridge in aluminum extruded vessels.

The new B¹ breathing air purifier systems are based on the tested and proven nano D Series modular dryers but employ a unique split cartridge system to completely treat the air prior to respiration.

The first stage of the cartridge removes water vapor to -40°F/C pressure dew point and polishes CO₂ using a novel activated alumina and 13X molecular sieve mix. The second stage utilizes activated carbon to remove hydrocarbons, odour and taste. Finally, the last stage of the cartridge employs a catalyst to convert CO to CO₂. All materials are kept in place with an integrated 1 micron particulate after filter so the delivered air is free of any harmful gases, odours or particulate. These innovative cartridges are quick and easy to replace minimizing maintenance requirements.

The nano NBA is on the leading edge of breathing air technology, meeting and exceeding the most stringent global breathing air standards in a simple, reliable and cost effective design. It has been independently validated to verify its compliance to European Pharmacopoeia and EN12021 standards.

accessories & options

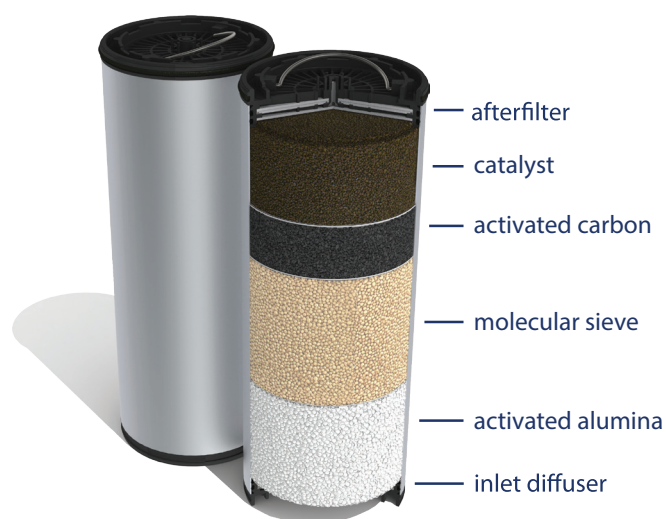
nano-purification solutions has a wide range of options and upgrades to customise your B¹ breathing air system including remote audible and visual alarms, free-standing CO monitors and all of the test kits, calibration kits and service kits you need to keep your B¹ products working at their optimum level of performance.



dewpoint energy saving (ES)



stand alone CO monitor



4-layer mixed bed cartridge

sizing & specifications

model	inlet connection			outlet connection(s)			flow (Nm ³ /h)		dimensions (mm)			approx. weight
	size	type	qty	size	type	qty	inlet	outlet	A	B	C	kg
breathing air panels												
BAP 050 CP N	½"	BSPP	1	⅜"	BSPP	4	85	85	584	559	203	13
BAP 050 CP H	½"	BSPP	1	¼"	Hansen ⁽¹⁾	4	85	85	584	559	203	13
BAP 050 CP S	½"	BSPP	1	¼"	Schrader ⁽¹⁾	4	85	85	584	559	203	13
BAP 100 CP N	¾"	BSPP	1	⅜"	BSPP	4	170	170	584	559	203	18
BAP 100 CP H	¾"	BSPP	1	¼"	Hansen ⁽¹⁾	4	170	170	584	559	203	18
BAP 100 CP S	¾"	BSPP	1	¼"	Schrader ⁽¹⁾	4	170	170	584	559	203	18
BAP 175 CP N	¾"	BSPP	1	⅜"	BSPP	6	297	297	584	559	203	21
BAP 175 CP H	¾"	BSPP	1	¼"	Hansen ⁽¹⁾	6	297	297	584	559	203	21
BAP 175 CP S	¾"	BSPP	1	¼"	Schrader ⁽¹⁾	6	297	297	584	559	203	21
portable breathing air cases												
BAC 035 CP N	½"	BSPP	1	⅜"	BSPP	4	60	60	432	610	216	13
BAC 035 CP H	½"	BSPP	1	¼"	Hansen ⁽¹⁾	4	60	60	432	610	216	13
BAC 035 CP S	½"	BSPP	1	¼"	Schrader ⁽¹⁾	4	60	60	432	610	216	13
modular breathing air purifier systems												
NBA 030	⅜"	PTC ⁽²⁾	1	⅜"	PTC ⁽²⁾	1	14	10	635	305	330	13
NBA 040	⅜"	PTC ⁽²⁾	1	⅜"	PTC ⁽²⁾	1	20	15	889	305	330	16
NBA 050	⅜"	PTC ⁽²⁾	1	⅜"	PTC ⁽²⁾	1	32	24	1092	229	330	20
NBA 070	1"	BSPP	1	1"	BSPP	1	59	44	762	432	330	40
NBA 090	1"	BSPP	1	1"	BSPP	1	93	70	914	432	330	54
NBA 110	1"	BSPP	1	1"	BSPP	1	148	110	1245	432	330	78
NBA 120	1"	BSPP	1	1"	BSPP	1	183	138	1499	432	330	95
NBA 2110	2"	BSPP	1	2"	BSPP	1	292	236	1219	305	686	166
NBA 2120	2"	BSPP	1	2"	BSPP	1	367	275	1473	305	686	200
NBA 3120	2"	BSPP	1	2"	BSPP	1	550	413	1473	305	784	272
NBA 4120	2 ½"	BSPP	1	2 ½"	BSPP	1	734	550	1473	305	940	363
NBA 6120	2 ½"	BSPP	1	2 ½"	BSPP	1	1101	826	1473	305	1295	524

specifications	BAP Panels	BAC Cases	NBA 050 to 120	NBA 2110 to 6120
operating pressure range	1 - 10 Barg	1 - 10 Barg	4 - 16 Barg	4 - 10 Barg
recommended operating temp range	1.5 - 30°C	1.5 - 30°C	1.5 - 30°C	1.5 - 30°C
recommended air inlet quality	-	-	class 3	class 3

performance ⁽⁴⁾			
maximum water content	-40°C (pdp)	-	-
maximum oil content	0.01 mg/m ³	-	-
odour + taste	none	-	-
O ₂ range	21% ± 1%	-	-
maximum CO content	< 5 ppm	-	-
maximum CO ₂ content	<500 ppm	-	-

- (1) female style coupling
(2) PTC - push to connect fittings
(3) contact sales@n-psi.co.uk for higher pressures or flows
(4) air quality to BS EN 12021:2014 for NBA range only

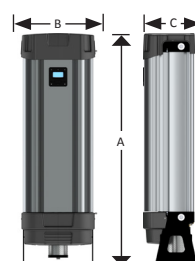
- contact sales@n-psi.co.uk for intrinsically safe, integrated CO & O₂ monitoring or any options or equipment not listed
- quick-disconnect fittings for use in compressed breathing air systems shall be selected to prevent accidental connection to other sources of compressed gases



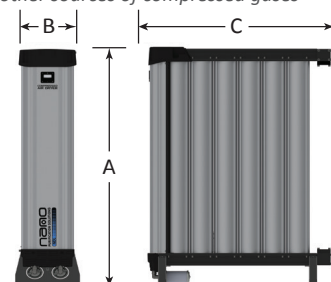
BAP 050 - 175 CP



BAC 050 - 100 CP



NBA 030 - 120



NBA 2110 - 6120

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