Breathing Air Purification Systems

FLOW CAPACITY: 10 to 826 Nm³/h

“Our automotive manufacturer end-user needed a high-flow yet compact breathing air system. The nano NBA modular design really fit the bill.”

A nano Distributor - Southwestern US

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.

The air around us may look clean, but compressed air can contain hidden dangers such as carbon monoxide (CO), carbon dioxide (CO_2), oil vapour, moisture, and particulates that put workers at serious risk.

With nano’s range of NBA breathing air purification systems, workers and employers can trust they are delivering and receiving safe, high-quality air at all times.

Clean breathing air is not just a requirement, it is essential to worker survival and operational efficiency.

nano B[1] Breathing Air Purification Systems

- Clean, reliable and safe supply of breathable air that meets or exceeds global standards.
- Plug and play systems for multiple users
- Carbon monoxide (CO) and carbon dioxide (CO_2) reduction to applicable standards, because nothing matters more than the air you breathe.

Global Standards

When applied, operated and maintained correctly, the nano range of B[1] breathing air purification systems are guaranteed to meet and exceed global standards for breathing air quality.

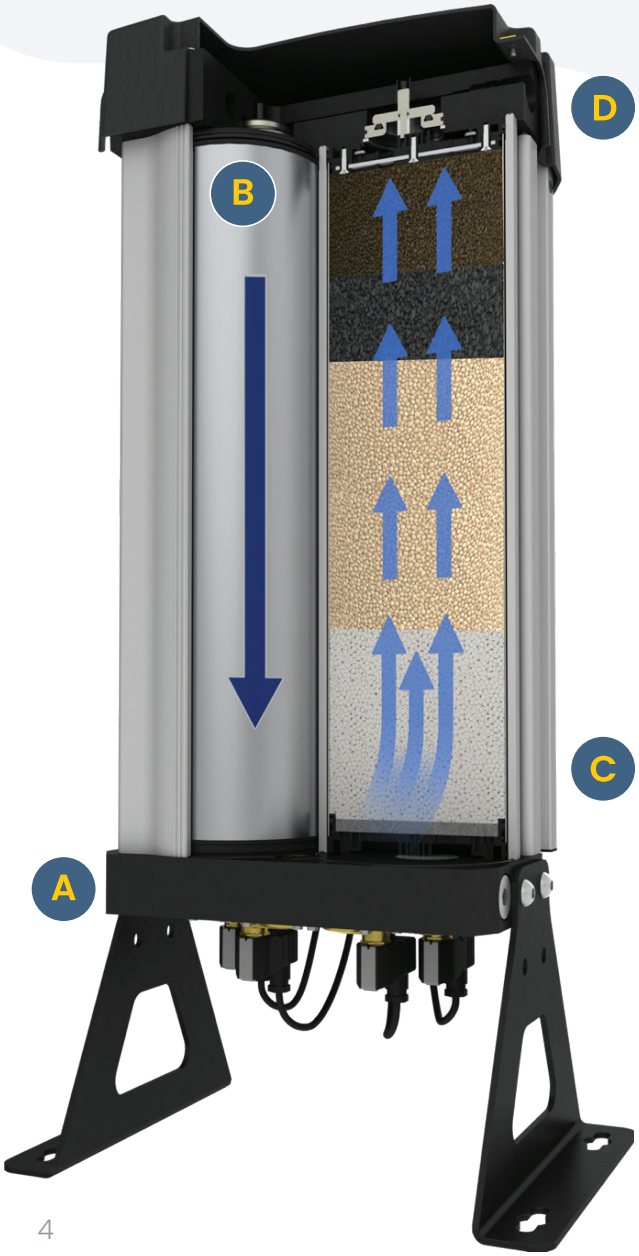
STANDARD	UK & EUROPE	UNITED STATES	CANADA
Standard	EN12021	CGA7.1 OSHA Grade D	CSA Z180.1-13
Maximum Dew Point	-31°C	Varies By Application	5°C Below Lowest System Temperature
Maximum Oil Content	0.01 mg/m^3	5 mg/m^3	1 mg/m^3
Odour & Taste	No Pronounced Odour	No Pronounced Odour	No Pronounced Odour
Allowable 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

How it works

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 (CO_2) 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 CO_2 in the air, it is imperative they are reduced to safe levels for breathing.

The nano modular breathing air purification systems are based on the tested and proven nano $D^1|D^2|D^3$ modular dryers but employ a unique split cartridge system to completely treat the air prior to respiration.



A Clean, filtered compressed air enters the inlet into NBA unit where the inlet valves direct the flow to either the left or right column sets.

B After passing through the inlet valve, the compressed air enters one side of the manifold under the extruded columns.

C The compressed air then flows up through the mixed bed cartridges where the air is dried to -40°C, existing CO_2 is scrubbed, taste and smell are removed and deadly CO is changed through a catalytic process to less hazardous CO_2.

D The clean, dry, breathable air flows through a final filter and exits through the outlet.

Features

All-In-One-Package

Includes a 4-layer, mixed bed to reduce CO and CO_2 and an integral 1 micron particulate after filter.

- Wide range of flow rates
- For multiple users
- Adjustable pressure regulators
- CO monitor (optional)
- Tower pressure gauges
- Dew point demand switching energy savings (optional)

Accessories & Options

Customise your breathing air system with upgrades including remote audible and visual alarms, free-standing CO monitors and test, calibration and service kits to keep your products working at their optimum level of performance.

Benefits

- Effectively reduces harmful carbon monoxide (CO) and carbon dioxide (CO_2) levels, protecting workers with safe, breathable air.
- All-in-one package including mixed bed NBA cartridges.
- Independently validated systems provide breathing air to meet or exceed stringent international standards for breathing air including EN12021 (EU & UK); OSHA Grade D (US) and CSA Z180.1-13 (Canada).

Product Specifications

MODEL	INLET & OUTLET	INLET FLOW	OUTLET FLOW	DIMENSIONS (mm)			APPROX. WEIGHT
	BSPP	Nm³/h	Nm³/h	A	B	C	kg
NBA 030	⅜" (1)	13	10	649	263	220	12
NBA 040	⅜" (1)	20	15	873	263	280	16
NBA 050	⅜" (1)	32	24	1193	263	280	20
NBA 070	1"	59	44	762	426	283	40
NBA 090	1"	93	70	914	426	283	54
NBA 110	1"	148	110	1245	426	283	78
NBA 120	1"	183	138	1499	426	283	95
NBA 2110	2"	292	219	1288	400	619	166
NBA 2120	2"	367	275	1538	400	619	200
NBA 3120	2"	550	413	1538	400	787	272
NBA 4120	2"	734	550	1538	400	955	363
NBA 6120	2"	1101	826	1538	400	1291	524

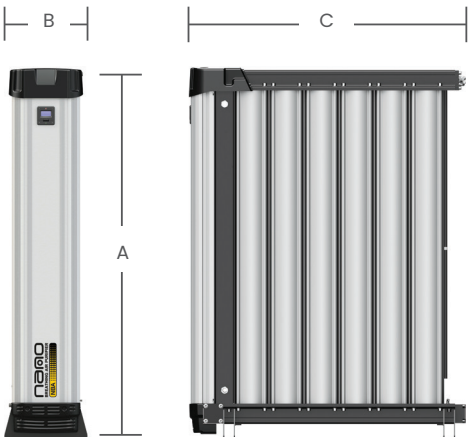
SPECIFICATIONS	NBA 030 to NBA 120	NBA 2110 to NBA 6120
Operating pressure range (barg)	6 to 16	6 to 10
Recommended operating temperature range (°C)	1.5 to 30	1.5 to 30
Recommended air inlet quality	class 2	class 2
Design operating temperature range (°C)	1.5 to 50	1.5 to 50
Power supply requirements	100 to 240 VAC, 50 or 60 Hz	100 to 240 VAC, 50 or 60 Hz
Power rating	25W (NBA 030 to NBA 050) 35W (NBA 070 to NBA 6120)	38W (NBA 2110 to NBA 6120)

PERFORMANCE (2)	NBA 030 to NBA 120	NBA 2110 to NBA 6120
Maximum water content (°C)	-31 (pdp)	-31 (pdp)
Maximum oil content (mg/m³)	0.01	0.01
Odour + taste	none	none
O_2 range	21% ± 1%	21% ± 1%
Maximum CO content (ppm)	<5	<5
Maximum CO_2 content (ppm)	<500	<500

(1) PTC = push to connect fittings

(2) Air quality to BS EN 12021.2014

NBA 030 to NBA 120



NBA 2110 to NBA 6120

Experience.
Customer.
Service.

nano-purification solutions
www.nano-purification.com

Headquarters

United States
Charlotte, North Carolina
Phone: +1 704 897 2182
E-mail: support@airandgassolutions.com

United States
Maryville, Tennessee
Phone: +1 704 897 2182
E-mail: support@airandgassolutions.com

Canada
St. Catharines, Ontario
Phone: +1 905 684 6266
E-mail: canadasupport@airandgassolutions.com

Singapore
Singapore
Phone: +65 6748 7988
E-mail: support.asia@nano-purification.com

United Kingdom
Gateshead, Tyne and Wear
Phone: +44 (0) 191 497 7700
E-mail: sales_uk@nano-purification.com

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