

nano



CO₂ adsorption dryers

flow capacity: 1.5 - 120 l/m

L¹

CO₂ removal adsorption dryer

L¹

Leading edge technology and hundreds of years of **experience**...nano-purification solutions, your world-class manufacturer 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 dry

Clean and dry compressed air is essential in every efficient and profitable manufacturing and process operation worldwide. nano's vast experience includes food, beverage, chemical, laboratory, medical and natural gas applications.

Nano understand your needs and has created the nano range of high-performance, energy-saving compressed air and gas purification products to provide clean and dry compressed air and gases at an affordable price with unrivaled reliability.



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

The reliable and energy saving nano L¹ range of CO₂ removal adsorption dryers are manufactured in our state of the art facility to the highest standards of build quality to ensure equipment reliability and high levels of performance.

CO₂ removal system

Why buy purge gas in a high pressure cylinder when you can generate your own, more easily, reliably and cost effectively using a CO₂ adsorption dryer?

The nano L¹ range of CO₂ adsorption dryers are small, simple and can be wall mounted right in your laboratory. Connect them to your existing compressed air system to deliver a continuous supply of clean, dry and CO₂ free purge gas without any of the hassle of traditional cylinders. Ideal for laboratory applications including FTIR purge, TOC purge, NMR, GC flame gas and laser purging, these systems eliminate the interruptions, recalibrations and safety concerns associated with high pressure oxygen and nitrogen cylinders.

Developed with the laboratory in mind, nano L¹ dryers require no bench space and the innovative exhaust silencing system ensures incredibly quiet operation. Using proven pressure swing adsorption (PSA) technology, the units feature automatic regeneration and advanced purification cartridges with integral pre and post filtration providing totally clean, dry air with a CO₂ level of less than 1 ppm.

It's time to bring your purge gas supply into the 21st century. There is no better solution for your laboratory purge gas needs.

benefits - CO₂ free



mount on the floor or the wall



PLC controller with clear text display



performance validated nano F¹ filtration



guaranteed performance

- nano CO₂ adsorption dryers provide the highest standard of performance, backed up with a 2 year warranty.
- 100% function and performance tested.

increased efficiency

- A constant supply of high air purity eliminates interruption of analyses (to change cylinders) and reduces the amount of instrument re-calibration required.

lower running costs

- Producing CO₂-free air from an existing compressed air supply is significantly cheaper than using cylinder supplies.

simple installation

- CO₂ adsorption dryers can be installed in the laboratory, eliminating the need for long gas lines from cylinders.

quiet operation

- Novel exhaust air silencer significantly reduces noise levels (<60dBa).

easy to maintain

- Less than 15 minutes required for maintenance.
- Unique factory built filtration and adsorption cartridge makes servicing simple.

sizing & specifications

model	recommended filtration	inlet & outlet	inlet air flow ⁽¹⁾		outlet gas flow ⁽¹⁾		dimensions (mm)			approx. weight
	part number	BSPP ⁽⁴⁾	ft ³ /h	l/m	ft ³ /h	l/m	A	B	C	kg
NDC 015	NFDB 25DAC	8 mm PTC	5.3	2.5	3.2	1.5	432	229	254	9.0
NDC 050	NFDB 25DAC	8 mm PTC	17.6	8.3	10.6	5.0	432	229	254	9.0
NDC 140	NFDB 25DAC	8 mm PTC	53	25	32	15	432	229	254	9.0
NDC 300	NFDB 25DAC	8 mm PTC	106	50	64	30	635	229	254	13.5
NDC 600	NFDB 25DAC	12 mm PTC	212	100	127	60	1092	229	330	25.5
NDC 900	NFDB 50DAC	1"	318	150	191	90	743	426	283	47.0
NDC 1200	NFDB 50DAC	1"	424	200	254	120	743	426	283	47.0

specifications

design operating pressure range	4 to 12 barg
recommended operating temperature range	1.5 to 20°C
power supply requirements	100 to 240 VAC, 50 or 60 Hz
maximum noise level (during depressurization)	60 dBa
manufacturing quality standards	ISO 9001.2015 & CE

outlet gas quality	standard	optional
maximum CO ₂ content	1 ppm	-
maximum pressure dew point	-70°C	-
maximum particulate size	1 micron	0.01 micron ⁽²⁾
maximum oil content	-	0.0003 ppm ⁽³⁾

pressure correction factors ⁽⁵⁾

inlet air pressure (barg)	4	5	6	7	8	9	10	11	12
correction factor	0.63	0.75	0.88	1	1.13	1.25	1.38	1.50	1.63

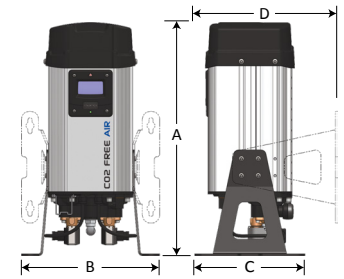
temperature correction factors ⁽⁵⁾

inlet air temperature (°C)	25	35	40	45	50
correction factor	1	1	0.97	0.88	0.73

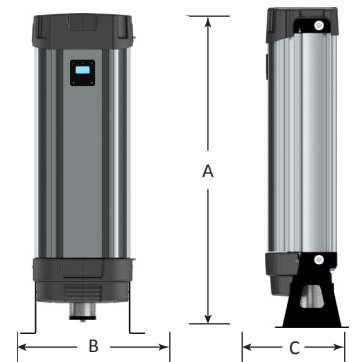
- (1) at inlet conditions of 7 barg and 20°C and up to 375 ppm CO₂. For all other conditions contact sales@n-psi.co.uk for sizing assistance
- (2) requires addition of a nano M01 particulate after filter at the outlet
- (3) requires addition of a nano M01 coalescing pre filter and an AC activated carbon filter at the inlet. Recommended for compressed air systems using an oil flooded compressor
- (4) NDC 015 to NDC 600 have push to connect fittings on the inlet and outlet. All other models have BSPP threaded connections
- (5) to be used as a rough guide only. All applications should be confirmed by n-psi. Contact sales@n-psi.co.uk for further assistance.
- (6) NDC 900 to NDC 1200 - noise level is 80 dBa

service guidelines

- desiccant cartridges should be changed every 2 years
- valves should be changed every 4 years
- refer to user guide for full service details



NDC 015 to 600



NDC 900 & 1200

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