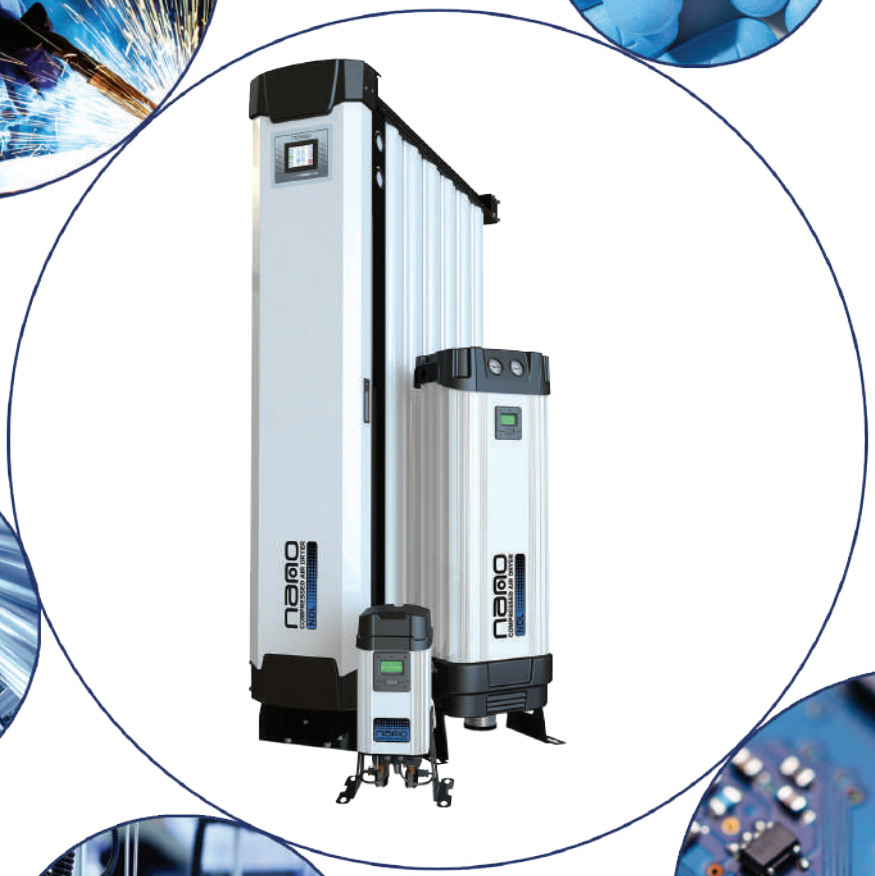
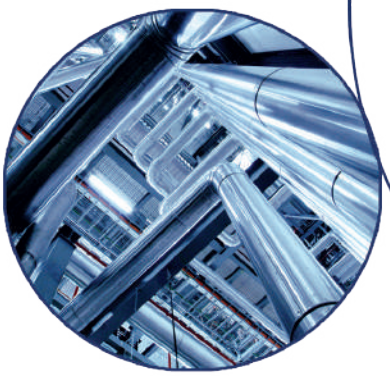
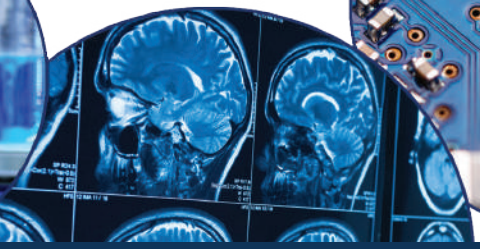
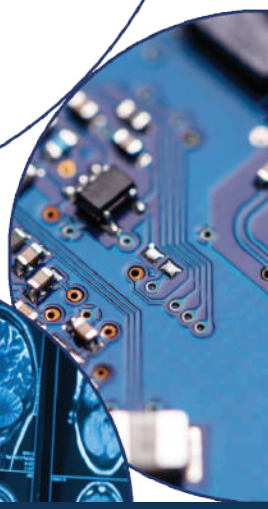








ultra-high purity modular desiccant air dryers

flow capacity: 3 to 1110 scfm (5 to 1900 Nm^3/hr)

“By installing multiple ND
able to better manage our fl
continuing to provide the r

Food manufacturing facility - Eastern Canada

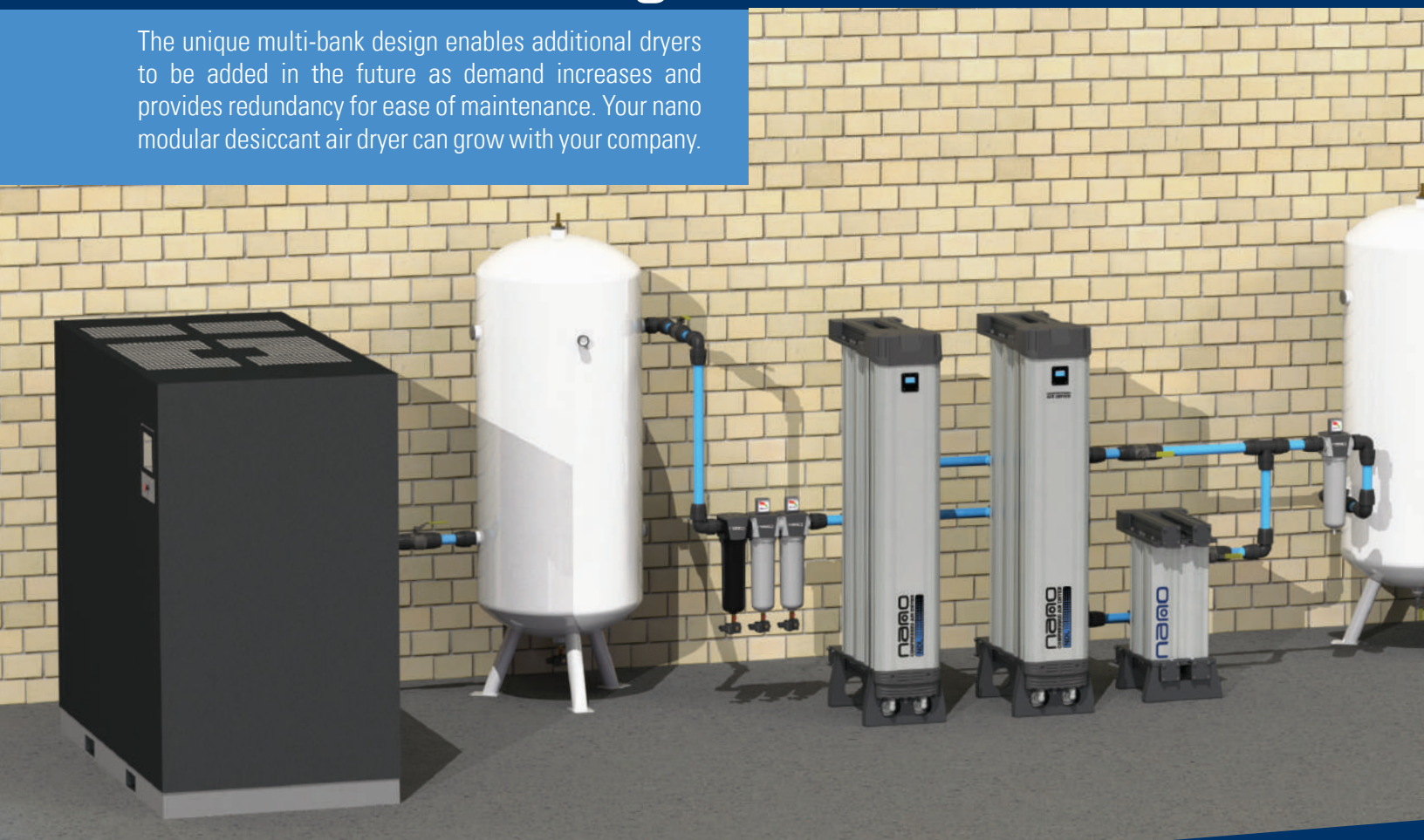
Clean, dry compressed air is essential in every efficient and profitable manufacturing operation worldwide.

Ambient air contains high levels of moisture, dust, hydrocarbons and other contaminants and, when left untreated, the results are corrosion, bacteria, mold growth and freezing within your compressed air lines. This contamination can cause damage to downstream equipment and lead to increased maintenance, downtime and product spoilage.

While compressed air filters will remove solid particulate, liquids and aerosols, they cannot remove the moisture that remains in the form of vapor. This vapor can condense into liquid water throughout your compressed air system as the pressure and temperature of the compressed air changes.

Multi-Bank Design

The unique multi-bank design enables additional dryers to be added in the future as demand increases and provides redundancy for ease of maintenance. Your nano modular desiccant air dryer can grow with your company.



L dryer modules, we were uctuations in demand, while required dew point.”

nano D[1|2|3] modular desiccant compressed air dryers

- removal of water vapor by lowering the pressure dew point of your compressed air stream to -40°F/-94°F optional) to ensure a continuous supply of dry air
- low pressure drop and consistent dew point performance
- modular design allows installation in spaces too small for a traditional dryer
- premium controller option
- ease of service with patented, pre-assembled snowstorm filled desiccant and built in after filter cartridges on D^1 and D^2 ranges
- low noise during the exhaust and regeneration cycle
- energy saving option available
- many other options available to suit your installation

www.nano-purification.com

BENEFITS

complete range to suit any requirement

- 20 models available with flow rates from 3 to 1100 scfm
- designed for use in compressor room, point of application or integrated into original equipment

guaranteed performance

- in accordance with ISO 8573.1:2010, Class 2 dirt (1 micron) and Class 2 water (-40°F pressure dew point). Class 1 water (-94°F) as an option

simplicity of service

- patented, pre-assembled snowstorm filled desiccant and built in after filter cartridges (D^1 & D^2) can be serviced in less than 15 minutes.
- snowstorm filled columns with a built in 1 micron after filter (D^3)

high quality construction

- 100% tested for leaks, proper operation and dew point performance

warranty

- back by a 5 year product warranty with addition of Energy Saving Dew Point Control (-ES)

easy to install space saving design

- the compact design allows installation in spaces too small for a traditional design
- easy to install & ready for use, the D^2 packages include mounting brackets for either floor or wall mounting (option for D^2)

HOW IT WORKS

The nano $D^{1|2|3}$ modular desiccant air dryers use the pressure swing adsorption principle to efficiently dry compressed air. They use a heatless twin tower configuration housed in a modular design. Each column contains a unique (and patented) desiccant cartridge which incorporates an inlet water separator (D^1 only) and outlet filtration.

- **A** 0.01 micron pre-filter removes all particulate, liquid water and oil aerosols to 0.01 ppm.
- **B** clean, saturated air enters the dryer is a directed into column A
- **C** compressed air travels through tower A for 2 minutes and moisture vapor is adsorbed to -40°F pdp or better
- **D** a final built-in filter removes particulate to 1.0 micron or better
- **E** ~20% purge air expands through an orifice and regenerates tower B
- **F** after 30 seconds, the purge exhaust valve closes and tower B repressurizes and is ready for adsorption to begin
- **G** at the 2-minute mark (fixed cycle), tower A exhaust valve opens to regenerate. A PLC controls all operations
- **H** compressed air is expensive but nano dryers can be fitted with an energy savings device to save air and save money. By measuring actual pressure dew point, the PLC will extend the dryer cycle reducing compressor energy, wasted purge air and valve wear and tear

UPGRADE

energy saving dew point control option

- with this option, a dew point sensor is incorporated into the dryer providing the ultimate in energy and power savings
- outlet dew point is constantly monitored allowing the cycle time to be adjusted depending on the actual moisture load saving valuable purge air on all styles of dryers
- easily field retrofit; includes dew point display
- the -ES option reduces valve actuation, increases service life and includes an extended 5-year valve warranty

other options include

- 232 psig (MAWP) for higher pressure applications
- pneumatic controls for safe operation in any classified operation are necessary, or remote locations where power is either limited or unavailable (available in D^2 and D^3 ranges)

FEATURES

reliable high performance valves

- inlet, exhaust and outlet air are controlled using coaxial flow valves (D^3) integrated into the upper and lower manifolds provide unrestricted flow capacity and designed for durability, ease of maintenance and long service life
- NDL 010 to NDL 050 use integrated check valves and two pilot operated solenoid valves for proven performance and reliability
- NDL 060 to NDL 130 use four pilot operated solenoid valves

patented combined filter & desiccant cartridges

- high density snowstorm filled desiccant provides maximum adsorption capacity and built in inlet water separator (D^2) only eliminates the cost and pressure drop of installing a separate inlet filter in small oil-free compressor applications
- built in outlet filtration to eliminate the cost, pressure drop and maintenance associated with a separate after filter
- easy to replace cartridges simplify maintenance requirements (models NDL 010 to NDL 130)

PLC controlled

- operated by a robust and reliable PLC control system offering valuable features including 'power on', 'hours run' and 'service required' indicators memory retention built into the PLC enables the controller to pick up where it left off in the drying cycle, ensuring consistently clean, dry air downstream

floor or wall mounted

- can be floor or wall mounted - simply by rotating the feet 90 (standard on D^1, optional on D^2)

unique exhaust air silencers

- significantly reduces noise level during depressurization and purge cycles

constant flow and pressure

- pressure is equalized before switching columns to ensure uninterrupted compressed air and consistent air pressure. equalization also ensures long desiccant life due to minimized desiccant attrition

tower gauges

- standard on models NDL 060 and larger

performance validated filtration

- separate GF 0.01 micron pre filter (shipped loose) and a built in 1.0 micron after filter included as standard

maximum corrosion protection

- high tensile aluminum columns are alocrom protected then externally powder coated to provide maximum protection for corrosive environments

SPECIFICATIONS

dryer model	inlet & outlet [1]	rated flow [2]		dimensions (inches)			approx. weight	filtration [3]	
	NPT (F)	scfm	Nm^3/h	A	B	C	lbs	pre filter	after filter
NDL 010	3/8"	3	5.1	17.3	10.4	8.7	19.8	GF 0006 M01	integrated
NDL 020	3/8"	5	8.5	17.3	10.4	8.7	19.8	GF 0006 M01	integrated
NDL 030	3/8"	10	17	25.6	10.4	8.7	29.8	GF 0015 M01	integrated
NDL 040	3/8"	15	25.5	35.0	10.4	13.0	40.8	GF 0015 M01	integrated
NDL 050	½"	20	34	46.8	10.4	13.0	56.2	GF 0025 M01	integrated
NDL 060	1"	34	58	29.2	16.8	11.1	88	GF 0105 M01	integrated
NDL 070	1"	41	70	29.2	16.8	11.1	88	GF 0105 M01	integrated
NDL 080	1"	53	90	36.3	16.8	11.1	119	GF 0105 M01	integrated
NDL 090	1"	66	112	36.3	16.8	11.1	119	GF 0105 M01	integrated
NDL 100	1"	88	150	43.2	16.8	11.1	141	GF 0105 M01	integrated
NDL 110	1"	106	180	49.1	16.8	11.1	167	GF 0175 M01	integrated
NDL 120	1"	132	224	58.9	16.8	11.1	200	GF 0175 M01	integrated
NDL 130	1"	177	301	72.7	16.8	11.1	247	GF 0175 M01	integrated
NDL 2110	2"	212	360	50.5	15.7	26.8	214	GF 0450 M01	integrated
NDL 2120	2"	276	469	60.4	15.7	26.8	394	GF 0450 M01	integrated
NDL 2130	2"	400	680	74.1	15.7	26.8	575	GF 0450 M01	integrated
NDL 3130	2"	560	951	74.1	15.7	33.4	548	GF 0700 M01	integrated
NDL 4130	2 ½"	750	1274	74.1	15.7	40.0	729	GF 0850 M01	integrated
NDL 6120	2 ½"	828	1407	60.4	15.7	53.2	967	GF 0850 M01	integrated
NDL 6130	2 ½"	1110	1886	73.7	15.7	53.3	1373	GF 1250 M01	integrated

specifications	standard	optional
maximum particle size (ISO class) [4]	class 2 (1 micron)	class 1 (0.01 micron) [5]
maximum water content (ISO class) [4]	class 2 (-40°F pdp)	class 1 (-94°F pdp)
minimum operating pressure	58 psig	-
maximum operating pressure	NDL 010 to 130 are 232 psig (MAWP) as standard NDL 2110 to 6130 are 145 psig (MAWP) as standard	232 psig (MAWP) for NDL 2110 to 6130
recommended operating temperature range	34 to 100°F	-
design operating temperature range	34 to 122°F	-
power supply requirements	85 to 264V AC 50/60 Hz	24 VDC

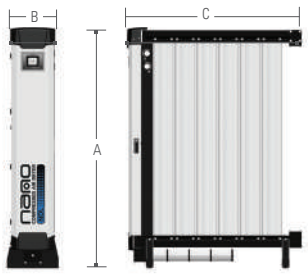
pressure correction factors [6]												
operating pressure (psig)	60	75	90	100	115	130	145	160	175	190	205	232
correction factor	0.63	0.75	0.88	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.13

temperature correction factors [6]						
inlet temperature (°F)	77	86	95	104	113	122
correction factor	1.00	0.98	0.95	0.9	0.8	0.7

pressure dew point correction factors [6]		
pressure dew point (°F)	-40	-94
correction factor	1.00	0.70

(1) NDL 010 to NDL 050 have push to connect fittings on the inlet and outlet. All other models have NPT(F) threaded connections
(2) at inlet conditions of 100 psig and 100°F and a -40°F outlet pressure dew point. For all other conditions refer to the correction factors above
(3 dryer includes a separate M01 grade pre filter (shipped loose) and a built in 1 micron after filter
(4) per ISO 8573:1:2010 (E)
(5) with separate M01 grade after filter
(6) to be used as a rough guide only. All applications should be confirmed by nano. Contact support@nano-purification.com
(8) technical specifications subject to change without notice. Direct inquiries to support@nano-purification.com or contact 704.897.2182

NDL 010 to NDL 130



NDL 2110 to NDL 6130

EXPERIENCE. CUSTOMER. SERVICE.

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.

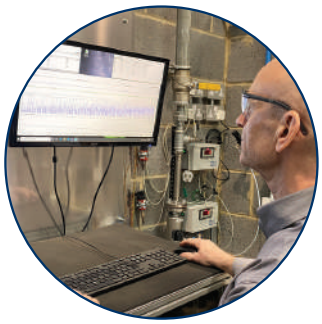
A wealth of experience and leading edge products are only part of the equation. nano recognize that world-class customer *service* is the most important component to any successful business.

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 endeavor 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 product range of modular desiccant air 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.

ENVIRONMENTALLY FRIENDLY

Through both product development and manufacturing, we strive to produce high quality products compliant to both local and global environmental legislation. Reduction of carbon footprint through energy saving products and use of environmentally friendly components are our commitment to you.

MEMBER OF CAGI Compressed Air & Gas Institute

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