

# nano



meet & exceed  
ISO compressed air quality standards

# OUR PRODUCTS



## industrial filters

centrifugal water separators  
performance validated filters  
duplex filters  
medical sterile filters  
vacuum pump protection filters  
medical vacuum filters  
high capacity flanged filters  
high temperature dust filters  
mid pressure aluminum filters  
high pressure stainless steel filters  
mist eliminators



## process filters

stainless steel industrial filters  
sterile air depth filters  
sterile air membrane filters  
culinary steam filters



## compressed air dryers

heatless modular desiccant dryers  
pneumatic heatless modular desiccant dryers  
high pressure compact desiccant dryers  
high pressure twin tower desiccant dryers  
heatless twin tower desiccant dryers  
externally heated twin tower desiccant dryers  
blower purge twin tower desiccant dryers  
rental twin tower desiccant dryers  
cycling refrigerated dryers  
direct expansion refrigerated dryers  
high temperature cycling refrigerated dryers  
high temperature direct expansion refrigerated dryers  
variable speed refrigerated dryers  
membrane dryers



## process chillers

ferrous and non-ferrous chillers  
high efficiency "free-cooling" chillers

## CO<sub>2</sub> removal dryers

## nitrogen generators

nitrogen generators (up to 98% purity)  
ultra-high purity nitrogen generators (up to 99.999% purity)  
membrane nitrogen generators  
nitrogen generators for wine industry



## breathing air purifiers

breathing air purifiers (portable & stationary)  
breathing air purifier modules

## oil vapor removal systems

## condensate treatment systems

## condensate drains

timed solenoid drains  
zero air loss condensate drains



## aftercoolers

# ISO AIR QUALITY

The ISO 8573 group of international standards is used for the classification of compressed air purity. The standard provides the test methods and analytical techniques for each type of contaminant. ISO 12500-1:2007 specifies the test layout and test procedures required for testing coalescing filters used in compressed air systems to determine their effectiveness in removing oil aerosols. Our filter element performance has been tested to international ISO 12500 to provide filtered compressed air to ISO 8573-1. The table below summarizes the maximum contaminant levels specified in ISO 8573.1: 2010 for the various compressed air quality classes. Each compressed air classification can be achieved by installing a specific selection of nano products depending upon the required performance.

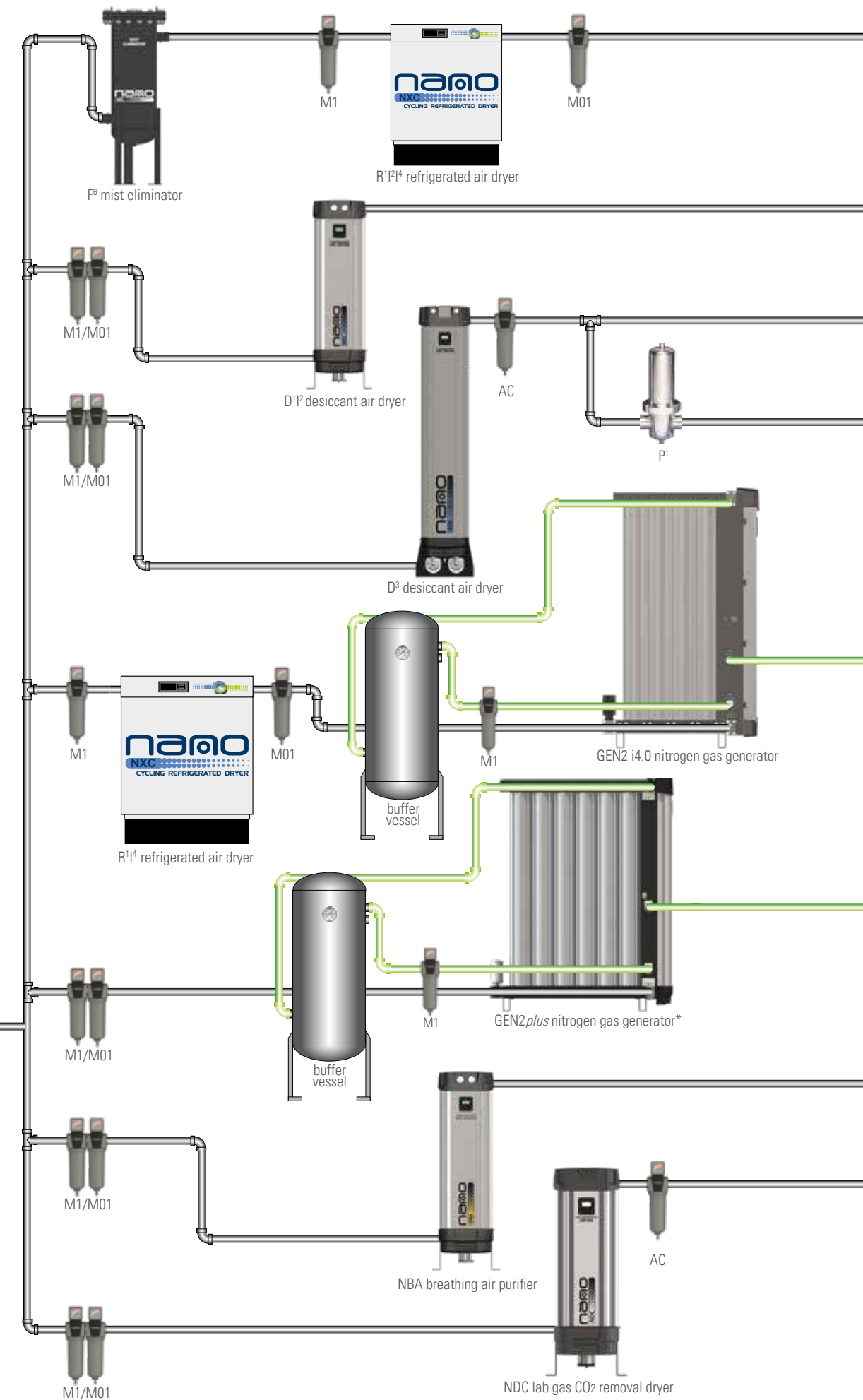
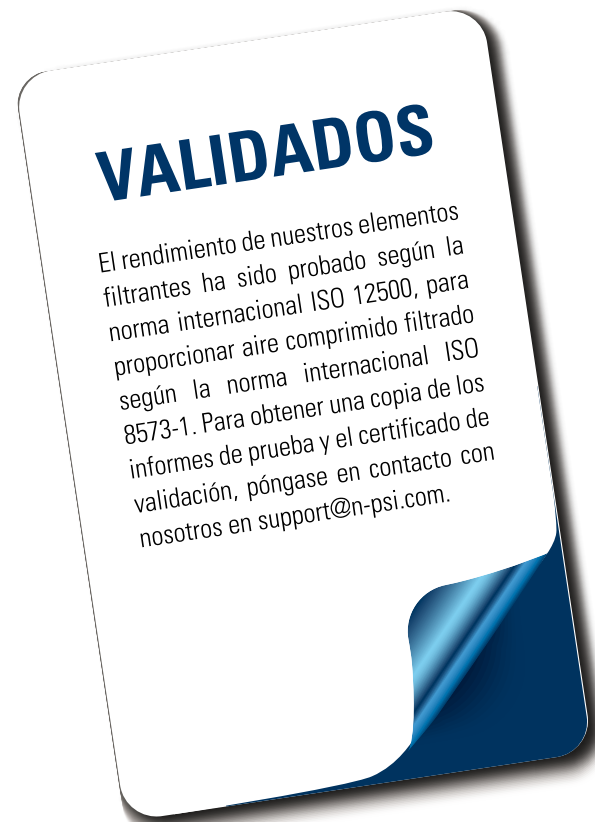
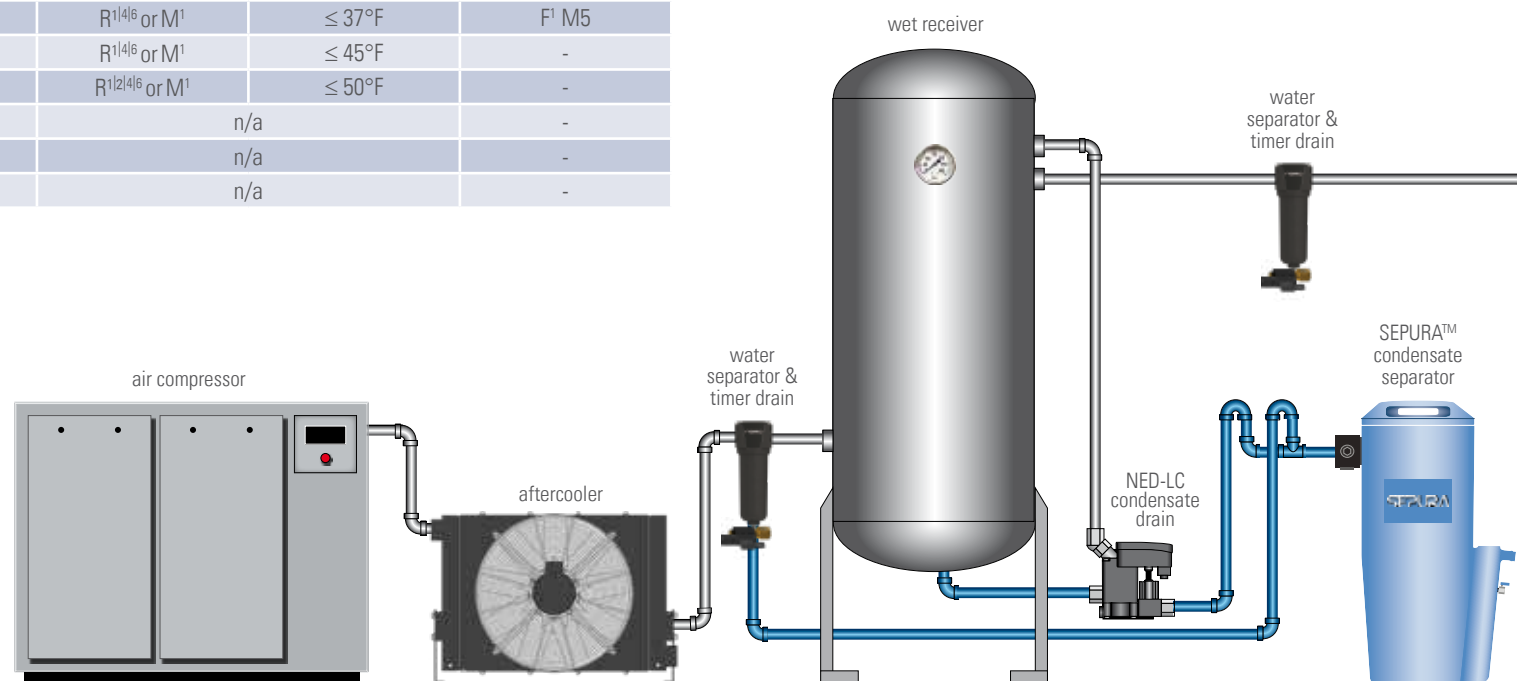
## specifications

ISO purity class	solid particles				water		oil
	maximum no. of particles per m <sup>3</sup>			concentration	vapor	liquid	total oil <sup>(1)</sup>
	0.1 - 0.5 micron	0.5 - 1 micron	1 - 5 micron	mg/m <sup>3</sup>	pressure dew point	g/m <sup>3</sup>	mg/m <sup>3</sup>
0	as specified by the equipment user or supplier						
1	≤ 20,000	≤ 400	≤ 10	-	≤ -94°F	-	≤ 0.01
2	≤ 400,000	≤ 6,000	≤ 100	-	≤ -40°F	-	≤ 0.1
3	-	≤ 90,000	≤ 1,000	-	≤ -4°F	-	≤ 1
4	-	-	≤ 10,000	-	≤ 37°F	-	≤ 5
5	-	-	≤ 100,000	-	≤ 45°F	-	-
6	-	-	-	≤ 5	≤ 50°F	-	-
7	-	-	-	5 - 10	-	≤ 0.5	-
8	-	-	-	-	-	0.5 - 5	-
9	-	-	-	-	-	5 - 10	-

(1) all forms of oil including liquids, aerosols and vapor

## nano product selection

ISO purity class	solid particles	water	oil
0	as agreed by the customer and nano		
1	F <sup>1</sup> WS + M1 + M01	D <sup>12 3 4 5</sup>	F <sup>1</sup> AC - NVR
2	F <sup>1</sup> WS + M1	D <sup>12 3 4 5</sup>	F <sup>1</sup> M01
3	F <sup>1</sup> WS + M1	D <sup>12 3 4</sup> or M <sup>1</sup>	F <sup>1</sup> M1
4	F <sup>1</sup> WS + M1	R <sup>14 6</sup> or M <sup>1</sup>	F <sup>1</sup> M5
5	F <sup>1</sup> WS + M1	R <sup>14 6</sup> or M <sup>1</sup>	-
6	F <sup>1</sup> WS + M5	R <sup>12 4 6</sup> or M <sup>1</sup>	-
7	F <sup>1</sup> WS + M25	n/a	-
8	F <sup>1</sup> WS	n/a	-
9	F <sup>1</sup> WS	n/a	-



**ISO Class 1.4.2|1.5.2|1.6.2**  
**General Purpose**

- main ring air treatment
- woodworking
- temperature control system
- instrumentation
- pneumatic tools
- abrasives blasting

**ISO Class 1.2.2|1.3.2**  
**High Purity Air**

- medical dental air
- pipeline purging
- lasers
- optics
- food packaging

**ISO Class 1.2.1|1.1.1**  
**Ultra High Purity Air**

- semiconductor
- dairies
- biotech
- pharmaceutical

\*SQF (Safe Quality Food specification)

**N2 Supply (<99%)**

- chemical transfer
- blanketing
- inerting

**N2 Supply (>99%)**

- food packaging
- soil remediation
- wave soldering
- UHP lab gases
- laser cutting

\*with integrated dryer

**ISO Class 1.2.1**  
**Breathable Air**

- breathable air
- CO elimination

**Lab Gas LC/MS CO<sub>2</sub> Free Air**



# 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

Our products are manufactured and tested 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.



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united states

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united states

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