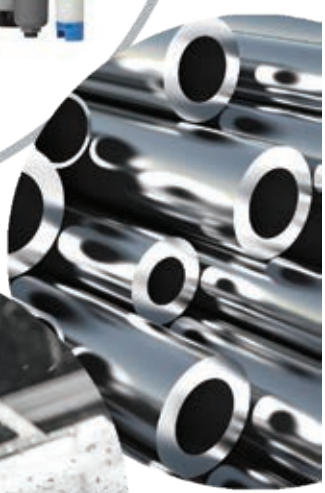
meets ISO 12500

nano



F[1] performance validated compressed air & gas filtration

performance validated compressed air & gas filtration

F1

flow capacity: 8 - 1500 scfm (13 - 2550 Nm^3/hr)

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.

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.

Tested to ISO 12500 standards, the nano filter range has been independently validated to guarantee the highest levels of air quality making the F^1 your premier filtration solution.

Advances in filter media provide enhanced filtration performance. These improvements mean reduced pressure loss, increased efficiency levels and lower energy costs.

nano F[1] compressed air & gas filtration

Clean and oil-free compressed air is easily achieved with the new range of F[1] performance validated compressed air and gas filters. nano F[1] filters provide:

- improved filtration for your compressor room or point of use application
- reliable and efficient liquid and particulate removal with low pressure drop
- space saving design - no tie rod allows easy bowl removal
- five element grades from 25 to 0.01 micron
- twenty-two models from 8 to 1500 scfm at 100 psig
- a comprehensive range of accessories for every application

reliability is built in... backed by a 1 year element warranty and a 10 year housing warranty!

design. performance. validation.

optimized design

optimized performance is assured through extensive Computer Aided Design technology, finite element analysis & computational fluid dynamics

•

1000 hour neutral salt spray test for corrosion resistance to ISO 9227:2006

•

burst pressure tested to a 5:1 safety factor

•

100% tested for pressure leaks

•

fine coalescing filters are 100% tested for aerosol integrity

performance standards

the nano F[1] filters are available in a complete range of contaminant removal grades designed to meet or exceed compressed air purity requirements throughout the industry

•

designed to exceed the ISO 8573-1 standards for compressed air purity & the ISO 12500 series international standard for compressed air filter testing

•

nano F[1] filters carry CRN (Canadian Registration Numbers) for approved use in every province of Canada

independent validation

filtration performance is validated & tested by independent laboratories in accordance with international filtration & safety standards

•

manufactured in ISO 9001 approved facilities

•

independently validated to ISO 12500 - see our validation brochure for full details and a copy of the test report at www.n-psi.com

F[1] compressed air & gas filters – in detail

filter element features

double element o-ring
prevents contaminant bypass

stainless steel cylinders
provide strength, rigidity & corrosion resistance

spiral wound inner coil
provides extra strength on larger elements

deep bed filter media
provides low differential pressure resulting in improved energy efficiency & long element life

hydrophobic & oleophobic
borosilicate glass microfiber media repels oil & water for improved coalescing performance

anti re-entrainment layer
optimizes liquid drainage & minimizes differential pressure

outer drainage layer
compatible with synthetic lubricants & prevents oil carry over

ultrasonic seam welded elements
ensures element strength & integrity

air distribution duct
provides uniform air flow, resulting in lower differential pressure & improved filtration & flow dynamics

drop-fit, self locating elements
no tie rod simplifies element change out & reduces access requirements for bowl removal

corrosion resistant endcaps
color coded to provide easy & accurate filtration grade identification

lower annular location ring
prevents element vibration, improves stability in reverse flow (dust removal) applications & improves drainage

filter housing features

extensive range
ports from ¼" to 3" in both NPT & BSP, & flow capacities up to 1500 scfm

compact design
allows installation in confined spaces

modular design
enables easy & compact installation of multiple filters

aluminum die cast housing
pressure die casting provides enhanced strength & long life

e-coat™ internal coating
advanced process provides exceptional corrosion resistance

powder coated exterior
provides a tough and abrasion resistant surface

secure bowl connection
three full turns ensure head is safely connected to bowl

high nitrile rubber seals
provide enhanced resistance in challenging environments & applications

large condensate reservoir
provides a quiet zone for bulk oil collection

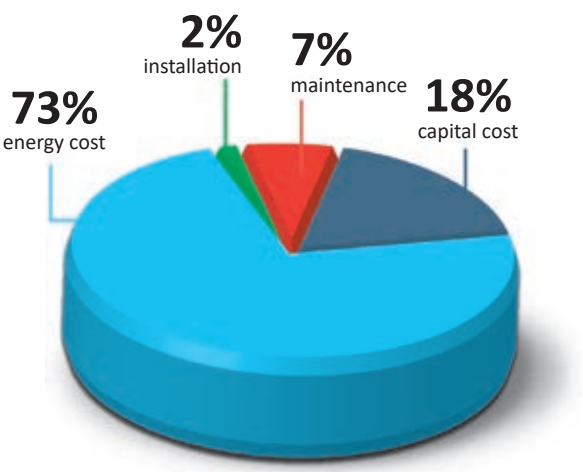
automatic drain standard
includes manual override for testing & depressurization

hexagon spanner locator
for simple bowl removal

no tie rod
for minimum maintenance access

chemically compatible design
for use with all oil flooded or oil-free compressors

energy efficiency



Having a well designed compressed air system with suitable air treatment and filtration is important, but so is monitoring and maintaining that system. Over the ten-year life of an air compressor the cost of energy to run the system far outweighs the capital investment. of buying it. Maintenance costs account for only 7% of the total costs yet this is a crucial activity for maximizing the energy efficiency of any compressed air system.

Repeated exposure to oil, vapor and particulate matter can, over time, cause the filter elements to become clogged. This creates an increase in pressure drop compromising not only performance but also resulting in an increase in energy cost.

optimized filtration

Every 10 psig of pressure drop represents a 5% increase in compressor energy costs. It is vital to observe a scheduled maintenance program which includes the replacement of filter elements.

We recommend that filter elements are replaced at least every 12 months (6 months for activated carbon). All filters and elements are supplied with an element change out label which adheres to the filter housing and shows when the next change should take place.

Source: Carbon Trust

pop up differential pressure indicator

automatic drain with manual override

a variety of filter mounting accessories

dual sided differential pressure gauge

element replacement reminder label

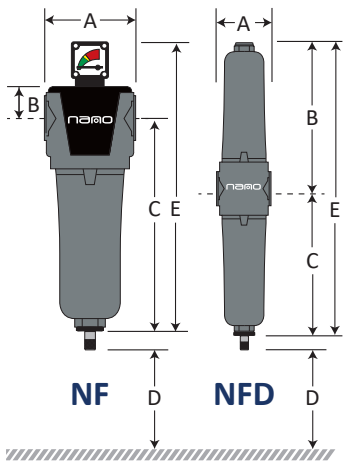
sizing & specifications

filter model	inlet & outlet	rated flow [1]		dimensions (inches)					approx. weight	replacement element
	NPT	scfm	Nm^3/h	A	B	C	D	E	lbs	part no.
NF - coalescing, particulate or activated carbon										
NF 0008 (grade)	¼"	8	13	1.93	0.73	5.27	3.00	6.00	0.7	E 0008 (grade)
NF 0015 (grade)	¼"	15	25	1.93	0.73	5.27	3.00	6.00	0.7	E 0015 (grade)
NF 0025 (grade)	¼"	25	42	2.76	0.98	6.52	3.00	9.14	1.3	E 0025 (grade)
NF 0030 (grade)	½"	30	48	2.76	0.98	6.52	3.00	9.14	1.3	E 0030 (grade)
NF 0035 (grade)	⅜"	35	59	2.76	0.98	6.52	3.00	9.14	1.3	E 0035 (grade)
NF 0050 (grade)	½"	50	85	2.76	0.98	8.13	3.00	10.75	1.5	E 0050 (grade)
NF 0070 (grade)	½"	70	119	3.94	1.34	9.49	3.00	13.64	3.5	E 0090 (grade)
NF 0085 (grade)	¾"	85	144	3.94	1.34	9.49	3.00	13.64	3.5	E 0090 (grade)
NF 0090 (grade)	1"	90	153	3.94	1.34	9.49	3.00	13.64	3.5	E 0090 (grade)
NF 0125 (grade)	¾"	125	212	3.94	1.34	14.21	3.00	18.36	4.4	E 0135 (grade)
NF 0135 (grade)	1"	135	229	3.94	1.34	14.21	3.00	18.36	4.4	E 0135 (grade)
NF 0175 (grade)	1"	175	297	3.94	1.34	14.21	3.00	18.36	4.4	E 0175 (grade)
NF 0280 (grade)	1¼"	280	476	4.80	1.65	16.42	3.00	20.88	6.2	E 0325 (grade)
NF 0290 (grade)	1½"	290	493	4.80	1.65	16.42	3.00	20.88	6.2	E 0325 (grade)
NF 0325 (grade)	1½"	325	550	4.80	1.65	16.42	3.00	20.88	6.2	E 0325 (grade)
NF 0400 (grade)	1½"	400	680	5.75	2.05	16.89	3.00	21.75	9.2	E 0450 (grade)
NF 0450 (grade)	2"	450	765	5.75	2.05	16.89	3.00	21.75	9.2	E 0450 (grade)
NF 0700 (grade)	2"	700	1190	5.75	2.05	28.82	3.00	33.68	13.9	E 0700 (grade)
NF 0850 (grade)	2½"	850	1445	8.27	2.62	20.73	3.00	26.16	18.7	E 1000 (grade)
NF 1000 (grade)	3"	1000	1700	8.27	2.62	20.73	3.00	26.16	18.7	E 1000 (grade)
NF 1250 (grade)	3"	1250	2125	8.27	2.62	29.51	3.00	34.94	23.1	E 1250 (grade)
NF 1500 (grade)	3"	1500	2550	8.27	2.62	35.69	3.00	41.12	26.4	E 1500 (grade)
NFD (duplex) - 0.01 micron coalescing & activated carbon										
NFD 25	¼"	25	42	2.76	6.42	6.26	3.00	12.68	2.0	E 0025 M01DAC
NFD 35	⅜"	35	59	2.76	6.42	6.26	3.00	12.68	2.0	E 0035 M01DAC
NFD 50	½"	50	85	2.76	8.03	7.87	3.00	15.90	2.2	E 0050 M01DAC
NFD 70	½"	70	119	3.94	9.45	9.29	3.00	18.74	5.1	E 0085 M01DAC
NFD 85	¾"	85	144	3.94	9.45	9.29	3.00	18.74	5.1	E 0085 M01DAC
NFD 125	¾"	125	212	3.94	14.17	14.02	3.00	28.19	6.8	E 0135 M01DAC
NFD 135	1"	135	229	3.94	14.17	14.02	3.00	28.19	6.8	E 0135 M01DAC
NFD 175	1"	175	297	3.94	14.17	14.02	3.00	28.19	7.0	E 0175 M01DAC

specifications	NF 0008 to 0015	NF 0025 to 0050	NF 0070 to 1500
design operating pressure range	0 - 232 psig	0 - 232 psig	22 - 232 psig [2]
automatic float drain	NDK 0050	NDK 0050	NDK 1500
differential pressure indicator / gauge	-	NDP 0050	NDP 1500

element performance	M25	M5	M1	M01	AC
maximum particle size (ISO class) [3]	-	3	2	1	-
maximum oil content (ISO class) [3]	-	4	2	1	1
particle removal (microns)	25	5	1	0.01	-
max oil carry over at 68°F (ppm or mg/m^3)	10	5	0.1	0.01	0.003
recommended operating temp range (°F)	35 - 176	35 - 176	35 - 176	35 - 176	35 - 77
design operating temperature range (°F)	35 - 176	35 - 176	35 - 176	35 - 176	35 - 122

pressure correction factors									
operating pressure (psig)	58	72	87	100	115	145	174	203	232
correction factor	0.76	0.84	0.92	1.00	1.07	1.19	1.31	1.41	1.51



(1) at 100 psig. For all other pressures refer to the pressure correction factor table above
(2) for pressures below 22 psig order with an NDK 0050 condensate drain
(3) per ISO 8573.1:2001 (E)

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10 YEAR WARRANTY

nano PURIFICATION SOLUTIONS