

nano F¹ compressed air & gas filtration

Clean and oil-free compressed air is easily achieved with the new range of F¹ performance validated compressed air and gas filters. nano F¹ 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
- four element grades from 1 to 0.01 micron, activated carbon and reverse flow dust filtration
- twenty-one models from 13 to 2550 Nm³/h (8 to 1500 scfm) at 7 barg
- 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.

optimised design

- optimised 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 F¹ 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 F¹ 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 accredited facilities
- independently validated to ISO 12500 - see our validation brochure for full details and a copy of the test report



sizing & specifications

filter model	inlet & outlet		rated flow		dimensions (mm)				approx. weight	replacement element
	BSP	Nm ³ /h	scfm	A	B	C	D	kgs	part no.	
NFB - coalescing, particulate or activated carbon										
NFB 0008 (grade)	¼"	13	8	49	18	157	60	0.3	E 0008 (grade)	
NFB 0015 (grade)	¼"	25	15	49	18	157	60	0.3	E 0015 (grade)	
NFB 0025 (grade)	¼"	42	25	70	25	195	70	0.6	E 0025 (grade)	
NFB 0035 (grade)	¾"	59	35	70	25	195	70	0.6	E 0035 (grade)	
NFB 0050 (grade)	½"	85	50	70	25	236	70	0.7	E 0050 (grade)	
NFB 0070 (grade)	½"	119	70	100	34	275	80	1.6	E 0090 (grade)	
NFB 0085 (grade)	¾"	144	85	100	34	275	80	1.6	E 0090 (grade)	
NFB 0090 (grade)	1"	153	90	100	34	275	80	1.6	E 0090 (grade)	
NFB 0125 (grade)	¾"	212	125	100	34	395	80	2.0	E 0135 (grade)	
NFB 0135 (grade)	1"	229	135	100	34	395	80	2.0	E 0135 (grade)	
NFB 0175 (grade)	1"	297	175	100	34	395	80	2.0	E 0175 (grade)	
NFB 0280 (grade)	1½"	476	280	122	42	459	80	2.8	E 0325 (grade)	
NFB 0290 (grade)	1½"	493	290	122	42	459	80	2.8	E 0325 (grade)	
NFB 0325 (grade)	1½"	550	325	122	42	459	80	2.8	E 0325 (grade)	
NFB 0400 (grade)	1½"	680	400	146	52	481	100	4.2	E 0450 (grade)	
NFB 0450 (grade)	2"	765	450	146	52	481	100	4.2	E 0450 (grade)	
NFB 0700 (grade)	2"	1190	700	146	52	784	100	6.3	E 0700 (grade)	
NFB 0850 (grade)	2½"	1445	850	210	67	593	100	8.5	E 1000 (grade)	
NFB 1000 (grade)	3"	1700	1000	210	67	593	100	8.5	E 1000 (grade)	
NFB 1250 (grade)	3"	2125	1250	210	67	815	100	10.5	E 1250 (grade)	
NFB 1500 (grade)	3"	2550	1500	210	67	972	100	12.0	E 1500 (grade)	

NFDB (duplex) - 0.01 micron coalescing & activated carbon

NFDB 25	¼"	42	25	70	163	159	70	0.9	E 0025 DAC
NFDB 35	¾"	59	35	70	163	159	70	0.9	E 0035 DAC
NFDB 50	½"	85	50	70	204	200	70	1.0	E 0050 DAC
NFDB 70	½"	119	70	100	240	236	80	2.3	E 0070 DAC
NFDB 85	¾"	144	85	100	240	236	80	2.3	E 0085 DAC
NFDB 125	¾"	212	125	100	360	356	80	3.1	E 0125 DAC
NFDB 135	1"	229	135	100	360	356	80	3.1	E 0135 DAC
NFDB 175	1"	297	175	100	360	356	80	3.2	E 0175 DAC

specifications

	NFB 0008 to 0015	NFB 0025 to 0050	NFB 0070 to 1500
design operating pressure range	0 - 16 barg	0 - 16 barg	2 - 16 barg ⁽²⁾
automatic float drain	NDK 0050	NDK 0050	NDK 1500
differential pressure indicator / gauge	-	NDP 0050	NDPG 1500

element performance

	M1	RM1 ⁽⁴⁾	M01	AC
maximum particle size (ISO class) ⁽³⁾	2	2	1	-
maximum oil content (ISO class) ⁽³⁾	2	2	1	1
particle removal (microns)	1	1	0.01	-
max oil carry over at 20°C (ppm or mg/m ³)	0.1	-	0.01	0.003
recommended operating temp range (°C)	2-50	2-50	2-50	2-25
design operating temperature range (°C)	2-80	2-80	2-80	2-50

pressure correction factors

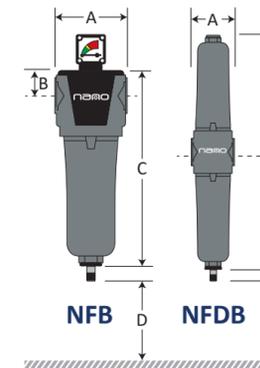
operating pressure (barg)	4	5	6	7	8	10	12	14	16
correction factor	0.76	0.84	0.92	1.00	1.07	1.19	1.31	1.41	1.51

(1) at 7 barg. For all other pressures refer to the pressure correction factor table above

(2) for pressures below 2 barg order with an NDK 0050 condensate drain

(3) per ISO 8573.1:2001 (E)

(4) RM1 filters are reverse flow and are supplied with manual drain valve (MDV) without differential pressure indicator



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10
YEAR
WARRANTY

nano
PURIFICATION SOLUTIONS

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performance validated compressed air & gas filtration

flow capacity: 13 - 2,550 Nm³/h (8 - 1,500 scfm)

F¹

performance validated compressed air & gas filtration

flow capacity: 13 - 2550 Nm³/h (8 - 1500 scfm)

F¹

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.



Tested to ISO 12500 standards, the nano filter range has been independently validated to guarantee the highest levels of air quality making the F¹ 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.

F¹ 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
optimises liquid drainage & minimises 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 1/4" to 3" in both BSPP & NPT, flow capacities up to 2,550 Nm³/h

compact design
allows installation in confined spaces

modular design
enables easy & compact installation of multiple filters

aluminium 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 & depressurisation

hexagon spanner locator
for simple bowl removal

no tie rod
for minimum maintenance access

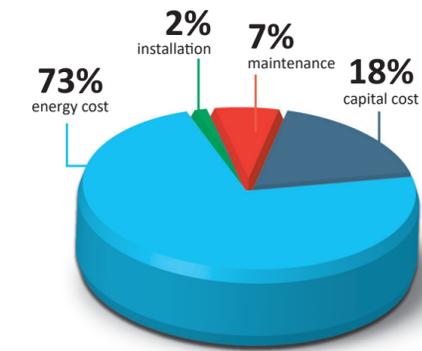
chemically compatible design
for use with all oil flooded or oil-free compressors

system performance

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 maximising the energy efficiency of any compressed air system.

Repeated exposure to oil, vapour 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.



optimised filtration

Every 700 mbar 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