



# Compressed Air & Gas Filtration Products

Finite Filtration Capabilities Guide



ENGINEERING YOUR SUCCESS.

# Basics of Coalescing Filtration

## Q. What is coalescing filtration?

A. A steady state process whereby aerosols are caused to agglomerate (come together) into even larger droplets as they pass through the filter elements' fiber matrix, eventually becoming large enough to be gravitationally drained away.

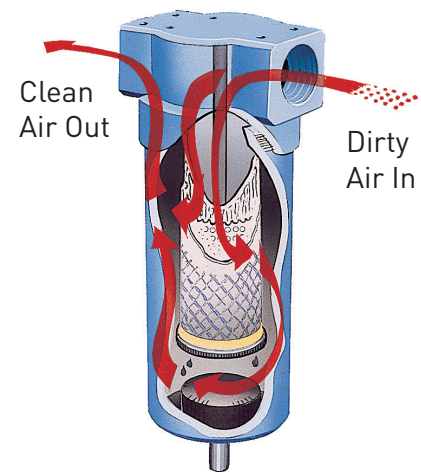
## Q. Why filter compressed air?

A. Submicronic contaminants in compressed air systems can:

- Plug orifices of sensitive pneumatic instrumentation
- Wear out seals
- Erode system components
- Reduce the absorptive capacity of desiccant air/gas dehydrators
- Foul heat transfer surfaces
  - Reduce air tool efficiency resulting in:
    - Product rejects
    - Lost production time
    - Increased maintenance costs

For example, trace amounts of submicronic oil can cause serious fish eye blemishing in automotive finishing operations. Water left in air lines can freeze during exposure to cold, blocking flow or rupturing pipes.

Compressor lubricant not captured in a coalescing filter will eventually collect in pneumatic components, causing premature component repair or replacement. Environmental concerns will be raised if oily, compressed air is continually discharged into the atmosphere through a pneumatic muffler.



This filter housing cutaway depicts the coalescing process.

Air enters the housing and flows through the filter media passing from the inside element surface to the outside.

Coalesced liquid collects in the housing where it is drained, and clean air exits the housing through the outlet port.





# What Separates Finite Filters from the Competition?

## Superior Design and Construction

Our UNI-CAST glass microfiber filters, formed with a proprietary vacuum process, combine surface (edge) filtration with enhanced depth filtration. UNI-CAST pore construction traps larger pore-clogging particles on the surface while allowing access to the element's internal fiber matrix for coalescing and submicron particulate removal. The result is lower pressure drop and less frequent change-outs, saving you time and money.

## OEM Capabilities

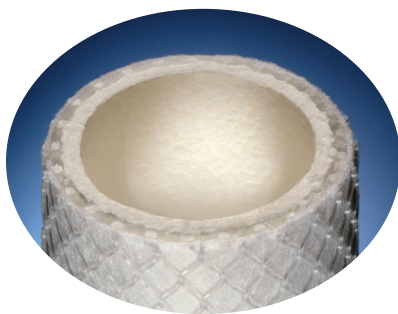
Finite filter experts are ready to work with you. Our team will tailor a configuration to meet your special need from the wide variety of filter media available. With LEAN manufacturing, special product capabilities allow enhanced performance to your product and continued support of aftermarket replacement elements.

## Value-Added Services

In addition to our broad selection of quality filters, we offer value-added services including:

- Custom branding
- Kitting
- Local Parker stores
- Compressed air analysis
- In-house training
- Competitor interchange elements

## Finite Filters & Accessories



- Compressed air/gas filters
- Par-Fit™ conversion elements
- Instrumentation and gas sampling filters
- CNG/Alternative fuel filters
- Steam and vacuum exhaust filters
- Air dryers
- Drains, gauges, and other accessories

Finite offers a full line of low to high pressure gauges, brackets, and drains.

# Compressed Air & Gas Treatment Filtration Products

Finite coalescing, particulate, absorption, and water separating elements assure that clean compressed air is always available for unique industrial applications. These media types are available across Finite product families to ensure your application functions at maximum performance.

## Applications

- Spray painting
- Powder coating
- Blow molding
- Printing
- Packaging
- Pneumatic conveying
- Air gauging
- Air bearings

## Filters-Regulators-Lubricators

- Two- and three-unit combos
- Metal and polycarbonate bowls available
- Pressures to 250 PSIG
- Connections from 1/8" to 1 1/2" NPT



## Water Separators

- Remove bulk water from your application
- Connections from 1/4" to 3" NPT
- Pressures to 230 PSIG
- Flows from 25-17,000 SCFM
- Temperatures up to 175° F



## Par-Fit™ Conversion Elements

- Coalescing, particulate and adsorption elements
- Offer UNI-CAST Finite advantage
- Over 2500 interchanges available



## ASME Coded Vessels

- Coalescing, particulate, and adsorption
- Pressures to 185 PSIG
- Temperatures up to 450° F
- Connections from 3" NPT to 16" flange
- Flows up to 37,000 SCFM
- Custom designs available
- Available with a variety of filtration media
- Captures .01 - 100 micron



## H-Series

Finite's H-Series compressed air filters are the most widely used filter. Our standard grade 6 element captures 99.97% of particulate, oil, and water contamination.

- Coalescing, particulate, and adsorption elements
- Pressures to 500 PSIG
- Temperatures up to 450° F
- .01 - 100 micron
- Connections from 1/4" to 3" NPT, BSPF, & BSPT
- Flows from 10 to 1600 SCFM
- Available with a variety of filtration media



## HX Series Filters

- 1/4" - 3" NPT
- 15-1,300 SCFM
- 290 PSIG
- Temperatures up to 212° F
- .01 - 100 micron



## Membrane Dryers

- Compressed air hollow fiber membrane dryers
- Pressure dewpoints down to -40° F
- Connections from 1/4" to 1/2" NPT
- Flows up to 40 SCFM



## SN3L & SN4L Stainless Steel Filters for Harsh Environments

- 3/4" - 1" NPT
- 80-170 SCFM
- Pressures up to 250 PSIG
- Temperatures up to 450° F
- .01 - 100 micron



## FDD Desiccant Dryers

- For point-of-use and OEM applications
- Pressure dewpoints down to -40° F
- Connections from 1/4" to 1" NPT
- Ideal for intermittent flows



## Accessories

- Differential pressure gauges
- Float, solenoid, and zero-air-loss drains
- Mounting brackets and adapter kits



# Alternative Fuel & High Pressure Filtration Products

From the gas well to the dispenser, Parker offers a full line of compressed natural gas filters.

High pressures encountered in CNG (Compressed Natural Gas) and other alternative fuel systems add another dimension to filter performance and magnify the problems of preventing contamination. Excessive amounts of liquid aerosols and solid particulate contamination lead to poor component performance, wear, and unscheduled maintenance. Finite offers a variety of high-pressure compressed air and gas filters for every stage of compression.

## Applications

- CNG refueling stations
- CNG on-board vehicle
- Hydrogen refueling stations
- Hydrogen on-board vehicle
- Natural gas processing
- Landfill methane filtration
- Off-shore oil drilling
- Process/chemical plants
- High pressure (SCUBA) breathing air
- Hydraulic test systems
- Plastic bottle blow molding

## H-Series

Finite's H-Series compressed air filters are the most widely used filter. Our standard grade 6 element captures 99.97% of particulate, oil, and water contamination.

- Coalescing, particulate, and adsorption elements
- Pressures to 500 PSIG
- Temperatures up to 450° F
- .01 - 100 micron
- Connections from 1/4" to 3" NPT, BSPF, & BSPT
- Flows from 10 to 1600 SCFM
- Available with a variety of filtration media



## Medium Pressure Filters, M-Series

- Pressures to 800 PSIG
- Connections from 1/4" to 2" NPT, BSPT & BSPF
- Use with specialty gases
- Variety of filter elements available
- Flows from 6-590 SCFM
- Temperatures up to 175°F
- Captures .01-100 micron



## High Pressure Filters, J-Series

- CNG, alternative fuel and breathing air filters
- Pressures to 5000 PSIG
- Ductile iron and nodular cast iron
- Coalescing, particulate, and adsorption filter elements available
- 1/4"-2" NPT
- Flows from 15-26, 230 SCFM
- Temperatures up to 350°F
- Captures from .01-100 micron



# Stainless Steel Filters

## High Pressure Stainless Steel Filters, SJ-Series

- Compatible with high pressure specialty gases
- Pressures to 6000 PSIG
- Variety of filter elements available
- Temperatures up to 350°F
- Captures .01 to 3 micron



## SN3L & SN4L Stainless Steel Filters for Harsh Environments

- Used in the most demanding environments
- Pressures from 250 PSIG
- Connections from 3/4" to 1" NPT
- Flows up to 170 SCFM



## High Flow Stainless Steel Filters, SNS8

- 2" NPT
- Pressures to 500 PSIG
- Temperatures up to 175°F
- Variety of filter elements available



## High Pressure Drains

- Safely drain condensate under pressure
- Pressures to 6000 PSIG
- Directly connect to J-Series and SJ-Series
- Horizontal or vertical mounting



## Replaceable Liquid Propane Filters (LPGR-200)

- 1/2" NPT, SAE-8
- Flows from 1-1.5 and 4-10 GPM
- Pressures up to 800 PSIG
- Temperatures up to 250°F
- Captures 1-5 micron



## ASME Coded Vessels

- Coalescing, particulate and adsorption
- Pressures to 185 PSIG
- Connections from 3" NPT to 16" flange
- Flows up to 37,000 SCFM
- Available with a variety of filtration media



## Disposable Liquid Propane Filters (LPGD-200)

- 1/2" SAE
- Flows from 1-1.5 and 4-10 GPM
- Pressures up to 500 PSIG
- Temperatures up to 250°F
- Captures 1-5 micron



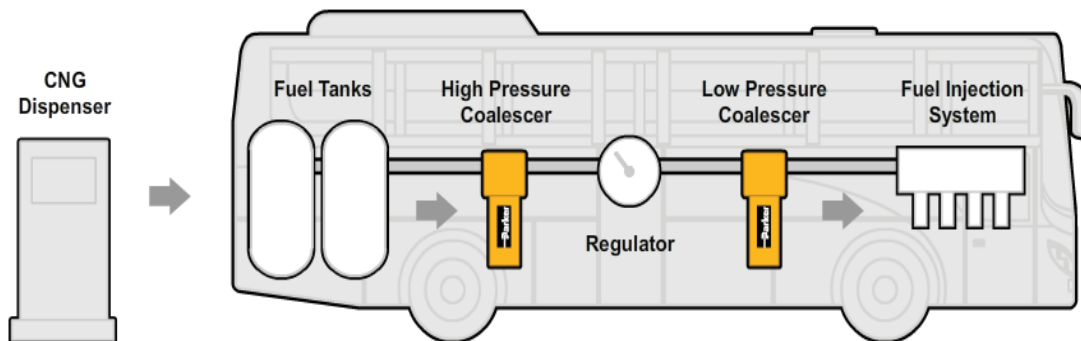
# On-Board CNG Filtration

Compressed Natural Gas, or CNG, is a leading alternative to traditional fuel for the automotive industry. CNG is used in passenger vehicles, pickup trucks, in transit and on school buses. It can be less expensive than gasoline, and is more environmentally friendly – it reduces the amount of carbon monoxide, carbon dioxide and hydrocarbon vehicle exhaust emissions.

Natural gas is gathered from a pipeline and travels to a connecting compressor station. The gas is elevated to pressures ranging from 2000 PSIG up to 5000 PSIG and the resultant CNG is stored in large tanks. The CNG then makes its way to a gas dispenser where it is ready for use in natural gas vehicles.

Contaminants can enter into the gas at any stage of this processing. Filters are critical at each stage to ensure clean gas as a final product. Contamination that collects during handling, water that condenses in tanks and compressors that leak oil into the fuel stream are all problems that could shorten the life of expensive equipment, create unnecessary downtime and increase maintenance costs.

From pipeline to engine, Finite filters provide the critical filtration required for most alternative fuel systems.



## FFC-110

- 1/4"-1/2" NPT
- 6-590 SCFM
- Pressures up to 800 PSIG
- Temperatures up to 221° F



## FFC-112

- 1/4" NPT
- 12-576 SCFM
- Pressures up to 3,600 PSIG
- Temperatures up to 221° F



## FFC-113

- 1/2" NPT
- 34-1,922 SCFM
- Pressures up to 3,600 PSIG
- Temperatures up to 221° F





# Gas Sampling & Specialty Filtration

Protect your products and your working environment

Finite filters eliminate overall contamination, taste differences, and odors in food products and facilitate sterilization in hospitals and pharmaceutical processing facilities. Finite filters provide absolute rated filtration for contaminants as small as 0.01µm to assure contamination-free processing in semiconductor, pharmaceutical, food and beverage applications.



*Parker offers kitting for system applications. This assembly is used to provide breathable air for five people.*

## Applications

- Food, beverage sanitization, and cooking
- Dairy and meat packing sanitation
- Air conveying of dry food products
- Compressed air bakery mixing
- Pharmaceutical manufacturing
- Hospital sterilization
- Respirator air purification
- Laboratory gas sampling
- Industrial breathing air

## Analytical Gas Sampling Filters

- Gas analyzer protection
- Pressures to 6000 PSIG
- Stainless steel and aluminum housings
- Variety of filter elements available
- 1/8" - 1/4" NPT
- Flows from 2-45 SCFM (aluminum)
- Flows from 2-437 SCFM (stainless steel)
- Pressures up to 1000 PSIG (aluminum)
- Pressures up to 5000 PSIG (stainless steel)
- Temperatures up to 225°F (aluminum)
- Temperatures up to 400°F (stainless steel)
- Captures .01-100 micron



## Low Flow Instrumentation Filters

- Stainless steel, aluminum, and plastic housings
- Clear bowls available
- Connections from 1/8" to 2" NPT
- Pressures to 5000 PSIG



## Specialty Filter Elements - Par-Fit Series

- Coalescing, particulate and adsorption filter media
- Filter media ranging from stainless steel mesh to PTFE membrane
- Compatible with a variety of gases, including refrigerant



## Disposable Gas Sampling Filters

- Pressures up to 100 PSIG
- Connections from 1/8" - 1/4"
- Flows from .8-5.3 SCFM
- Temperatures up to 125°F
- Captures from .01-44 micron



# Parker Filtration Group

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