

J-Series Filters

5000 PSIG Pressure Filters

Why do high pressure systems need filtration?

High pressure compressors are used in a variety of applications. Many owners, operators and designers of high pressure compressed air or gas systems rely on Parker's Finite Filter Operation for high efficiency filters. End users of high pressure compressed air, such as scuba divers and fire rescue workers, depend on high quality breathable air.

Throughout the stages of compression many contaminants can enter into the system. Excessive amounts of liquid aerosols, primarily lubricant oil carryover and solid particulate contamination are common in high pressure systems. In addition, higher temperature levels are possible and may cause liquid oils to varnish. This contamination can lead to poor component performance and wear that may lead to unscheduled maintenance. Even submicronic contaminants in compressed air or gas systems can foul multistage compressors, increasing maintenance costs and impacting product quality.

Parker's Finite Filter Operation offers a variety of high pressure compressed air and gas filters. With our wide range of elements, we have a solution for every stage of compression, as well as at the point of use. Whether you are storing high pressure air or gas or using a continuous flow, count on Parker to protect your equipment from contamination. Parker Finite is the solution to ending high pressure contamination fouling.

Parker's Finite Filter Operation's J-Series Filters are designed to filter contaminants such as rust, pipe scale, compressor lubricant oil, and water from compressed gases. These filters are often used in high pressure compressed natural gas (CNG) systems, not only as inter-stage filters in the multi-stage compression of the gas, but also in the storage and delivery of the gas for CNG powered vehicles.



Compressed Natural Gas Dispensing

Parker's varied media choices remove up to 99.995% of both solid and liquid aerosols, and contaminants as small as 0.01 microns in size. An activated carbon media is also available which removes oil vapor. This stage of filtration is often used as the final filter before the storage of high pressure breathing air used by scuba divers, firefighters, and others who utilize portable breathing devices.

The filter housings and the replaceable elements used in this product line have an extremely robust construction, specially designed for use in system pressures up to 5,000 psig. Five housing sizes and two thread styles (NPT or SAE) are available with connections ranging from 1/4" to 2"; temperatures up to 350°F, and flows up to 26,000 SCFM at 5,000 PSIG.

High Pressure Breathing Air



J-Series filters are used in a number of applications, ranging from breathing air for scuba divers, to high-pressure hydraulic circuit testing, to a variety of uses in the alternative fuel industry.



Urban CNG-Powered Vehicles

J-Series High Pressure Filters

- CNG, alternative fuel and breathing air filters
- Pressures to 5000 PSIG
- Coalescing, particulate and adsorption filter elements available
- Spheroidal Graphite Cast Iron

Filter Element Features

Parker Finite offers six filter media grades ensuring that we have the correct media choice for nearly any application requirement.

Available are coalescing grades with 95% to 99.995% efficiency and pleated or UNI-CAST coalescing media designs. Additionally, a bulk liquid separator, a particulate removal and oil vapor removal choices are standard offerings.

Each element uses a retention clip design that ensures the element is seated and sealed properly. This built-in, fail-safe feature will virtually eliminate any possibility of contaminant by-pass and is unique amongst high pressure filters.

Each element is composed of internal and external plated carbon steel retainers which provide the element with a 75+ PSID burst rating. Each element also features a bore seal interface with the housing, an anti-vibration shoulder, and an integrated standoff which minimizes the likelihood of any movement of the element, even during severe system pulsations.

Element standoff lengths were designed for each housing size to allow an optimal volume of liquid contaminant to be collected in the filter's quiet zone, further minimizing any chance of contaminant carryover.



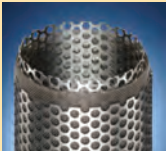




Filter Housing Features

- Robust, spheroidal graphite-cast iron offers higher mechanical strength, improved ductility, and increased shock resistance, assuring the user that this filter is built for the task at hand.
- Head to bowl bore seal ensures greater seal integrity.
- Threaded mounting holes on top of filter head allow each size to be easily panel mounted when line mounting is not an option.
- Engraved flow direction arrow in filter's head notifies the user of proper flow direction. One direction flow for all media choices reduces the possibility of a housing being installed improperly.
- The spheroidal graphite cast iron head and steel bowl are nickel plated for corrosion resistance. The completed assembly is finished with a UV stable epoxy powder paint that will allow the filter to stand-up to harsh outdoor conditions.
- An imprinted aluminum part number tag ensures that each unit's identifying information will be visible in the years ahead.
- SAE-6 steel drain plug with positive o-ring seal installed. This port also allows the easy installation of Finite's JDK5000H or JDK5000V high pressure drain kits which allow the safe removal of liquid contamination at system pressures.
- Bowls are designed to be easily tightened or loosened with a standard socket wrench.
- Bowls feature a slotted positional locator which enables the element to be positively retained, therefore having a low bowl removal clearance.



Element Types and Media Grade Options

| Coalescers: Removes: Oil, water, liquids | Water Separators: Removes: Bulk liquids | Adsorber: Removes: Oil vapor (odor) | Particulate: Removes: Solid contaminants |
|--|---|--|---|
| <p>Coalescing elements are specially designed for the removal of liquid contaminants from gaseous flows. These media types flow from the inside of the element to the outside. Coalesced liquid collects in the bowl where it is drained, while clean air or gas exits the housing through the outlet port. Particulate contaminants are captured and held in the media.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Type C</p> <p>The Finite UNI-CAST coalescing elements are made of epoxy saturated borosilicate glass microfiber and includes a polyester drain layer. (1)(2)</p> </div> <div style="text-align: center;">  <p>Type 7CP</p> <p>This pleated coalescer is made of fluorocarbon saturated borosilicate glass microfiber and includes a polyester drain layer. (1)(2)</p> </div> </div> | <p>In this element, the gas or liquid flows from the inside of the element to the outside.</p> <div style="text-align: center;">  <p>Type WS</p> <p>The Finite water separator element is composed of wrapped stainless steel mesh. (1)(2)</p> </div> | <p>Adsorption elements are used to remove vapors (hydrocarbon) that are not removed by the coalescing filter. Hydrocarbon vapors collect in the element, while clean air exits the housing through the outlet port. In this element, the air or gas flows from the inside of the element to the outside.</p> <div style="text-align: center;">  <p>Type A</p> <p>Our Type A media is wrapped activated carbon. This element has a galvanized carbon steel inner retainer and a stainless steel perforated metal outer retaining layer. (2)</p> </div> | <p>Particulate filters in the J-Series flow from the inside of the element to the outside. Particles collect in the element, while the clean air exits through the outlet port.</p> <div style="text-align: center;">  <p>Type 3P</p> <p>This 3 micron absolute rated pleated element is made of cellulose. (1)(2)</p> </div> |

Notes:

- 1 Each element is retained internally and externally with galvanized carbon steel perforated metal. Not shown in some photos above.
- 2 Top and bottom end caps are made of glass filled nylon to ensure durability.

Media Grades and Specifications:

Finite media grades determine the filtration m. Capture efficiencies are available up to 99.995%. Micron ratings range from 0.01 to 3 micron. The columns on the right note both the wet and dry pressure drops.

| Grade Designation | Media Type | Removes... | Coalescing Efficiency | Max. Oil Carryover ppm ¹ | Micron Rating (µm) | Pressure Drop Media Dry (PSID) | Additional Pressure Drop Media Wet ² (PSID) |
|-------------------|----------------|----------------------|-----------------------|-------------------------------------|--------------------|--------------------------------|--|
| 4C | Coalescing | Liquid from Gas | 99.995% | 0.003 | 0.01 | 1.25 | 3-4 |
| 7CP | Coalescing | Liquid from Gas | 99.5% | 0.09 | 0.5 | 0.25 | 0.5-0.7 |
| 10C | Coalescing | Liquid from Gas | 95% | 0.85 | 1.0 | 0.5 | 0.5 |
| WS | Bulk Separator | Bulk Liquid from Gas | 99+ ³ | N.A. | 100 | <0.25 | <0.25 |
| 3P | Particulate | Solids from Gas | N.A. | N.A. | 3.0 | 0.25 | N.A. |
| A | Adsorber | Vapor from Gas | 99+ ⁴ | N.A. | 3.0 | 1.0 | N.A. |

¹Tested per ISO 12500-1 at 40 ppm inlet.

²Add dry + wet columns for total pressure drop.

³Bulk liquid removal efficiency..

⁴Oil vapor removal efficiency is given for A media.

High Pressure (HP) Filter Applications:

| Application: | Media Grade and Type: |
|----------------------------------|-----------------------------------|
| Test Air for HP Hydraulics | 10C / 7CP |
| Inter-stage HP Compressor | WS / 10C |
| CNG Compressor Outlet | 10C → 4C |
| CNG Storage Cascades | 10C → 4C |
| CNG Dispensers | 10C → 4C |
| Breathing Air / SCUBA | 10C → 4C → A |
| High Pressure "Ultra Pure Air" | 10C → 4C → 4C → A |
| Bulk Liquid contamination | WS → 7CP → 4C |
| Bulk Solid Contamination | 3P → 7CP → 4C |
| HP Air / Gas Dryer Protection | 10C / 7CP → 4C → Dryer → 7CP / 3P |
| Food Applications / Odor Removal | 10C / 7CP → 4C → A |

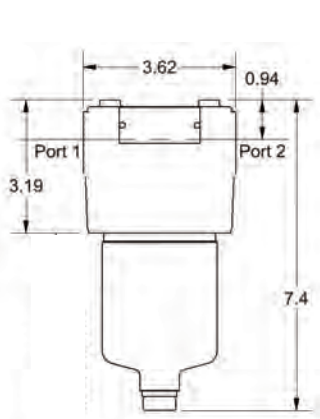


Flow Rates (SCFM):

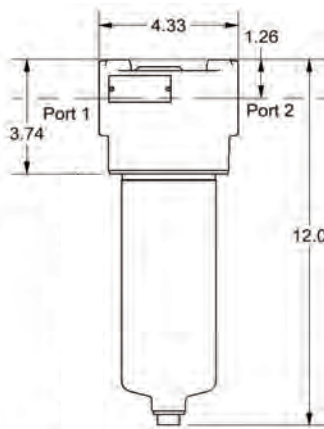
Choose Filter Size to find the corresponding flow rates.

| Model | Port | Filter Type | 100 PSIG | 1000 PSIG | 1500 PSIG | 2000 PSIG | 2500 PSIG | 3000 PSIG | 3500 PSIG | 4000 PSIG | 4500 PSIG | 5000 PSIG |
|-------|------------------|------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| J_1A | 1/4" or SAE-4 | 4C, A | 15 | 135 | 200 | 265 | 330 | 395 | 460 | 525 | 590 | 655 |
| | | 7CP, 10C, 3P, WS | 30 | 265 | 395 | 525 | 660 | 790 | 920 | 1050 | 1180 | 1310 |
| J_2A | 1/2" or SAE-8 | 4C, A | 25 | 220 | 330 | 440 | 550 | 655 | 765 | 875 | 985 | 1095 |
| | | 7CP, 10C, 3P, WS | 50 | 440 | 660 | 880 | 1095 | 1315 | 1530 | 1750 | 1970 | 2185 |
| J_2B | 1/2" or SAE-8 | 4C, A | 35 | 310 | 460 | 615 | 765 | 920 | 1070 | 1225 | 1380 | 1530 |
| | | 7CP, 10C, 3P, WS | 80 | 710 | 1055 | 1405 | 1755 | 2105 | 2450 | 2800 | 3150 | 3500 |
| J_3B | 3/4" or SAE-12 | 4C, A | 60 | 530 | 790 | 1055 | 1315 | 1575 | 1840 | 2100 | 2360 | 2525 |
| | | 7CP, 10C, 3P, WS | 130 | 1150 | 1715 | 2285 | 2850 | 3415 | 3985 | 4550 | 5115 | 5685 |
| J_4C | 1" or SAE-16 | 4C, A | 90 | 795 | 1190 | 1580 | 1975 | 2365 | 2760 | 3150 | 3540 | 3935 |
| | | 7CP, 10C, 3P, WS | 200 | 1770 | 2640 | 3515 | 4385 | 5255 | 6130 | 7000 | 7870 | 8745 |
| J_6D | 1-1/2" or SAE-24 | 4C, A | 180 | 1590 | 2375 | 3160 | 3945 | 4730 | 5515 | 6300 | 7085 | 7870 |
| | | 7CP, 10C, 3P, WS | 400 | 3540 | 5280 | 7025 | 8770 | 10515 | 12255 | 14000 | 15745 | 17490 |
| J_8E | 2" or SAE-32 | 4C, A | 275 | 2435 | 3630 | 4830 | 6030 | 7230 | 8425 | 9625 | 10825 | 12025 |
| | | 7CP, 10C, 3P, WS | 600 | 5310 | 7925 | 10540 | 13155 | 15770 | 18385 | 21000 | 23615 | 26230 |

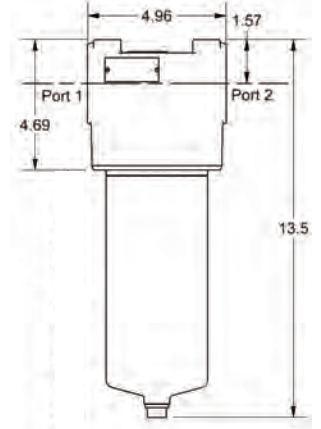
Note: These rates are based on compressed air flow. For CNG, these flows can be multiplied by a factor of 1.2.



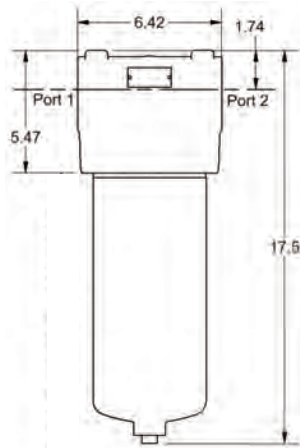
J_A Series



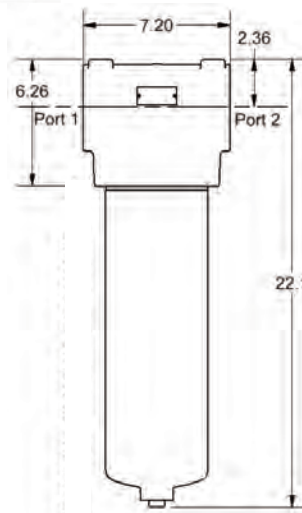
J_B Series



J_C Series



J_D Series



J_E Series

Specifications:

| Model | J_1A | J_2A | J_2B | J_3B | J_4C | J_6D | J_8E |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Port Size (N=NPT) | 1/4" NPT | 1/2" NPT | 1/2" NPT | 3/4" NPT | 1" NPT | 1-1/2" NPT | 2" NPT |
| Port Size (S=SAE) | SAE-4 | SAE-8 | SAE-8 | SAE-12 | SAE-16 | SAE-24 | SAE-32 |
| Max. Pressure | 5000 PSIG | 5000 PSIG | 5000 PSIG | 5000 PSIG | 5000 PSIG | 5000 PSIG | 5000 PSIG |
| Max. Temperature ¹ | 350°F | 350°F | 350°F | 350°F | 350°F | 350°F | 350°F |
| Head | SG Iron* | SG Iron* | SG Iron* | SG Iron* | SG Iron* | SG Iron* | SG Iron* |
| Bowl | Steel | Steel | Steel | Steel | Steel | Steel | Steel |
| Seals | Fluorocarbon | Fluorocarbon | Fluorocarbon | Fluorocarbon | Fluorocarbon | Fluorocarbon | Fluorocarbon |
| Backing Ring | Nitrile | Nitrile | Nitrile | Nitrile | Nitrile | Nitrile | Nitrile |
| Sump Volume | 50 mL | 50 mL | 180 mL | 180 mL | 230 mL | 500 mL | 500 mL |
| Weight | 9.0 lbs | 9.0 lbs | 13.0 lbs | 13.0 lbs | 21.0 lbs | 45.0 lbs | 67.0 lbs |
| Port to Port | 3.62" | 3.62" | 4.33" | 4.33" | 4.96" | 6.42" | 7.2" |
| Height | 7.4" | 7.4" | 12.0" | 12.0" | 13.5" | 17.5" | 22.1" |
| Clearance | 2.0" | 2.0" | 2.25" | 2.25" | 2.25" | 3.0" | 3.0" |
| Drain Port | SAE-6 | SAE-6 | SAE-6 | SAE-6 | SAE-6 | SAE-6 | SAE-6 |
| Socket / Bowl Removal | 1-1/16" HEX | 1-1/16" HEX | 1-1/16" HEX | 1-1/16" HEX | 1-1/16" HEX | 1-1/2" HEX | 1-1/2" HEX |
| Head / Bowl Torque | 15-20 ft-lbs | 15-20 ft-lbs | 25-30 ft-lbs | 25-30 ft-lbs | 25-30 ft-lbs | 60-70 ft-lbs | 60-70 ft-lbs |

Note: SG Iron is an abbreviation for Spheroidal Graphite Cast Iron.

High Pressure Drains and Gauge:

| Model Number | Description |
|--------------|---|
| JDK5000H | Horizontal Drain Kit 5000 psig |
| JDK5000V | Vertical Drain Kit 5000 psig |
| BDPI-25 | Differential Pressure Gauge and Bracket |



How to Order:

Use the steps below to build your own part number. For any permutation not mentioned below, please consult factory at 1-800-343-4048.

| J | N | 2 | A | — | 4C | N |
|-------------|------------|------------|--------------|---|-------------|--------------------|
| Series Name | Port | Port Size | Housing Size | | Media Grade | Accessories |
| J | N – NPT | 1 (1/4") | A | — | 4C | N = None Available |
| | | 2 (1/2") | A | | 10C | |
| | | 2 (1/2") | B | | 7CP | |
| | | 3 (3/4") | B | | WS | |
| | | 4 (1") | C | | 3P | |
| | | 6 (1-1/2") | D | | A | |
| | | 8 (2") | E | | | |
| | | S – SAE | 1 (SAE-4) | | A | |
| | | | 2 (SAE-8) | | A | |
| | 2 (SAE-8) | | B | | | |
| | 3 (SAE-12) | | B | | | |
| | 4 (SAE-16) | | C | | | |
| | 8 (SAE-32) | | E | | | |



Examples: JN2A-4CN, JS6D-WSN, JN3B-3PN

Replacement Element Part Numbers:

| 4C | J | A | K |
|-------------|-------------|--------------|------|
| Media Grade | Series Name | Housing Size | Port |
| 4C | J | A | K |
| 10C | | B | |
| 7CP | | C | |
| WS | | D | |
| 3P | | E | |
| A | | | |

Examples: 4CJAK, WSJDK, 3PJBK

Note: Replacement element supplied with replacement head/ bowl seals and lubricant.