



## ***J-Series***

**High Pressure (to 5,000 PSIG)  
Compressed Gas Filters**

*Bulletin 1300-200/USA*



Compressed Gas  
CNG/Alt. Fuels

# **Finite®**

# Finite's High Pressure J-Series Filters

## HIGH PRESSURE SYSTEMS NEED FILTRATION PROTECTION

High pressure compressed gas systems pose difficult problems that require special filtration attention. Excessive amounts of liquid aerosols and solid particulate contamination are common. In addition, higher temperature levels are possible and may cause the liquid oils to varnish.

Varnishing contributes to poor component performance and wear that may lead to unscheduled maintenance. Finite's J Series high pressure filters are an extremely effective way to reduce or eliminate those problems.

## REMOVING LIQUID AEROSOLS

Finite's Grade 4 media will remove 99.995% of liquid aerosols in the .3 to .6 micron range. For most systems the Grade 4 coalescing media is recommended. But for systems with high liquid concentration (+ 50 ppm of oil or + 25 ppm of water), precoalescing is required.

Precoalescing involves two stage filtration. A Finite J Series filter with grade 10 media is used to remove gross aerosols. Then a second J Series filter with Grade 4 media is placed after the grade 10 filter to clean up the remaining aerosols.

## FILTERING SOLID PARTICULATES

Particulate contamination problems are controlled and often eliminated with Finite's 3P pleated cellulose media. The pleated element exposes a larger surface area that significantly increases filter life.

Particulate filter elements like the 3P are often used upstream of coalescing filters. By first removing particulate contamination, such as pipe scale, rust and dirt first, the life of the coalescing filter is greatly extended.

## COMPRESSED NATURAL GAS SOLUTIONS

- Robust filter element construction
- Threaded head to bowl design
- Temperatures to 350°F
- Available in SAE and NPT connections
- Pressures to 5000 PSIG



High-efficiency coalescing filters upstream of the CNG dispenser protect sensitive vehicle components from damage occurring when the solid contaminants, water and oil are generated with the gas delivery system.

## Typical Applications

### *Coalescing (Oil Removal)*

- Dryer protection
- Breathing air
- Compressed air system protection

### *Interceptor (Particulate Removal)*

- Desiccant dryer afterfilter
- Prefilter for coalescer
- Systems with high particulate concentration
- Particulate protection for non-lubricated systems

### *Adsorber (Vapor Removal)*

- Odor removal
- High purity laboratory gases
- Last trace oil vapors/hydrocarbon

# Specifications



At high pressures, excessive amounts of oil aerosols may be present. Precoalescing with Grade 10 may be necessary before final coalescing.



Grade 4 (not Grade 6 as in other Finite filter series) is used as the standard coalescer media in the J Series. High pressure systems reduce the effectiveness of filter media, requiring the upgrade to Grade 4 as the standard.



Flow direction:  
Coalescers (Grade 10 or 4)  
Interceptors ("3P" Particulate)  
Adsorbers ("A" Charcoal adsorber)

Replacement Elements:



Coalescing filters and particulate interceptors should be replaced a minimum of one time per year with a maximum 10 psid pressure drop. Adsorber elements should be replaced every six months, or as necessary. For example, in a breathing air application, adsorbers should be replaced when hydrocarbon vapor is detected as an odor.



Mount these filters in a vertical position.



Do not service these filters under pressure! The system pressure must be reduced to atmospheric levels before changing elements, draining bowls, or performing any other maintenance activity on or near these filters.

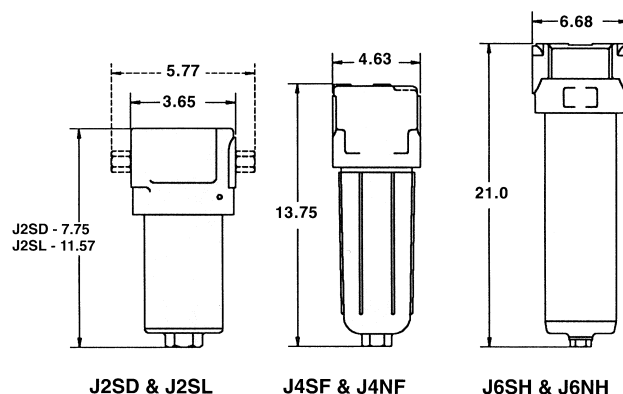
Compressed Gas  
CNG/Alt. Fuels

| Housing Model                                                          | J2SD                                                                               | J2SL  | J4SF                                                                                                           | J4NF   | J6SH                                                                                        | J6NH        |
|------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------|----------------------------------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------|-------------|
| Port Size                                                              | SAE-8 (Std)<br>Adaptor Busings Provided<br>for 1/2" NPT Female                     |       | SAE-16                                                                                                         | 1" NPT | SAE-24                                                                                      | 1 1/2 " NPT |
| Pressure (PSIG) Max.                                                   | 5000                                                                               |       | 5000                                                                                                           |        | 5000                                                                                        |             |
| Temperature (°F), Max                                                  | 350°                                                                               |       | 350°                                                                                                           |        | 350°                                                                                        |             |
| Sump Capacity (ml)                                                     | 60ml                                                                               | 220ml | 210 ml                                                                                                         |        | 637 ml                                                                                      |             |
| Assembly Weight (lbs)                                                  | 9.2                                                                                | 13.1  | 22.1                                                                                                           |        | 52.5                                                                                        |             |
| Major Materials of Construction<br>(with coalescing element installed) | Ductile iron, fluorocarbon seals, aluminum, fiberglass, carbon steel, epoxy, rayon |       | Nodular cast iron, carbon steel, fluorocarbon seals, fiberglass, epoxy, rayon, aluminum and engineered plastic |        | Nodular cast iron, carbon steel, fluorocarbon seals, fiberglass, epoxy, rayon, and aluminum |             |
| Drain Port Size                                                        | SAE-6                                                                              |       | SAE-6                                                                                                          |        | SAE-6                                                                                       |             |

## Flow Rates [SCFM @ indicated system pressures]

|                 | Media   | J2SD & J2SL | J4SF & J4NF | J6SH & J6NH |
|-----------------|---------|-------------|-------------|-------------|
| Flow @100 PSIG  | 4C, A   | 30          | 75          | 225         |
|                 | 10C, 3P | 60          | 150         | 450         |
| Flow @1500 PSIG | 4C, A   | 400         | 1000        | 3000        |
|                 | 10C, 3P | 800         | 2000        | 6000        |
| Flow @3000 PSIG | 4C, A   | 800         | 2000        | 6000        |
|                 | 10C, 3P | 1600        | 4000        | 12000       |
| Flow @4500 PSIG | 4C, A   | 1200        | 3000        | 9000        |
|                 | 10C, 3P | 2400        | 6000        | 18000       |

# Dimensions (In Inches)



## How to Order

Use the steps below to build your own part number. The J-Series How to Order is broken into three connection sizes. First choose your connection size, then build your part number. For any permutation not mentioned below, please consult factory at 1-800-521-4357.

### For a 1/2" connection size

| J      | 2          | S           | D                        | 10C                                                                                                                                                                         | WC                   | 11-035       |     |    |    |    |   |    |     |    |  |        |
|--------|------------|-------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------|-----|----|----|----|---|----|-----|----|--|--------|
| Series | Connection | Bowl Thread | Media Bowl               | Media Type                                                                                                                                                                  | Element Construction | Element Size |     |    |    |    |   |    |     |    |  |        |
| J      | 2 = 1/2"   | S (SAE)     | D (Standard)<br>L (Long) | <table><tr><td>4C</td><td>WC</td></tr><tr><td>10C</td><td>WC</td></tr><tr><td>3P</td><td>WC</td></tr><tr><td>A</td><td>WC</td></tr><tr><td>100</td><td>WS</td></tr></table> | 4C                   | WC           | 10C | WC | 3P | WC | A | WC | 100 | WS |  | 11-035 |
| 4C     | WC         |             |                          |                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |  |        |
| 10C    | WC         |             |                          |                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |  |        |
| 3P     | WC         |             |                          |                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |  |        |
| A      | WC         |             |                          |                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |  |        |
| 100    | WS         |             |                          |                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |  |        |

### For a 1" connection size

| J      | 4          | N                  | F            | 3P                                                                                                                                                                                                                                          | WC                   | 15-070       |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
|--------|------------|--------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------|-----|----|----|----|---|----|-----|----|-----|----|-----|----|--|--------|
| Series | Connection | Bowl Thread        | Media Bowl   | Media Type                                                                                                                                                                                                                                  | Element Construction | Element Size |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
| J      | 4 = 1"     | S (SAE)<br>N (NPT) | F (Standard) | <table><tr><td>4C</td><td>WC</td></tr><tr><td>10C</td><td>WC</td></tr><tr><td>3P</td><td>WC</td></tr><tr><td>A</td><td>WC</td></tr><tr><td>100</td><td>WS</td></tr><tr><td>10J</td><td>WM</td></tr><tr><td>10J</td><td>WA</td></tr></table> | 4C                   | WC           | 10C | WC | 3P | WC | A | WC | 100 | WS | 10J | WM | 10J | WA |  | 15-070 |
| 4C     | WC         |                    |              |                                                                                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
| 10C    | WC         |                    |              |                                                                                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
| 3P     | WC         |                    |              |                                                                                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
| A      | WC         |                    |              |                                                                                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
| 100    | WS         |                    |              |                                                                                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
| 10J    | WM         |                    |              |                                                                                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
| 10J    | WA         |                    |              |                                                                                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |     |    |     |    |  |        |

### For a 1 1/2" connection size

| J      | 6          | S                  | H            | 10J                                                                                                                                                                                                                                         | WM                   | 23-130       |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
|--------|------------|--------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------|-----|----|----|----|---|----|-----|----|-----|----|-----|----|--|--------|
| Series | Connection | Bowl Thread        | Media Bowl   | Media Type                                                                                                                                                                                                                                  | Element Construction | Element Size |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
| J      | 6 = 1 1/2" | S (SAE)<br>N (NPT) | H (Standard) | <table><tr><td>4C</td><td>WC</td></tr><tr><td>10C</td><td>WC</td></tr><tr><td>3P</td><td>WC</td></tr><tr><td>A</td><td>WC</td></tr><tr><td>100</td><td>WS</td></tr><tr><td>10J</td><td>WM</td></tr><tr><td>10J</td><td>WA</td></tr></table> | 4C                   | WC           | 10C | WC | 3P | WC | A | WC | 100 | WS | 10J | WM | 10J | WA |  | 23-130 |
| 4C     | WC         |                    |              |                                                                                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
| 10C    | WC         |                    |              |                                                                                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
| 3P     | WC         |                    |              |                                                                                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
| A      | WC         |                    |              |                                                                                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
| 100    | WS         |                    |              |                                                                                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
| 10J    | WM         |                    |              |                                                                                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |     |    |     |    |  |        |
| 10J    | WA         |                    |              |                                                                                                                                                                                                                                             |                      |              |     |    |    |    |   |    |     |    |     |    |     |    |  |        |

### Application Notes:

For Media Types:  
 4C (coalescer) = 99.995% efficiency  
 10C (coalescer) = 95% efficiency  
 3P = 3 micron particulate filter  
 A = Hydrocarbon vapor removal  
 100WS = 100 micron liquid removal  
 10JWM = desiccant dryer with molecular sieve  
 10JWA = desiccant dryer with activated aluminum

Element Construction:  
 WC = Metal retainers, bonded on end caps with positive O-ring seal.

Replacement Elements:  
 Start with the whole part number, but for the replacement element, drop the series name, thread connection and thread type. For example if you started with a J2SD-4CWC15-070, and you needed a replacement element, the element part number would be 4CWC15-070.

Examples (Housing and Element): J2SD-10CWC11-035  
 J4NF-3PWC15-070  
 J6SH-10JWM23-130

Replacement Elements: 10CWC11-035  
 3PWC15-070  
 10JWM23-130