C-LOK
Instrument Valve Co., Ltd.

# FITLERS

C-LOK the high quality instrumentation valves & fittings specialized production manufacture

## Filters

F1, F2, F3 and F4 Series

## Filtration Definitions

1. Sintered element: metal powder(alloys are available) is pressed in a die at sufficient pressure that the powder particles adhere at their contact points;
2. Strainer element: the strainer is cup-shaped and includes an inner cup-shaped support structure having staggered perforations extending through the surfaces thereof,an outer cup-shaped strainer structure of wire mesh is closely received over the support structure;
3. Element nominal pore size: the elment nominal pore size is normally calculated from the pressure required to cause air to bubble from the largest pore in the filter element when submerged in a test liquid.

## Features

**Tee-type filters**
**F1 Series**

1. Filter element replaceable without removing body from system;
2. Union bonnet design;
3. Nominal pore sizes for sintered element: 0.5, 2, 7, 15, 40, 60 and 80 um;
4. Nominal pore sizes for sintered element: 100, 150, 250 and 450 um;
5. Maximum working pressure: 6000 psig (414 bar);
6. Working temperature:-20℉ to 900℉(-29℃ to 482℃);
7. Body materials: 316 SS, 316L SS, 304 SS, 304L SS and Brass;
8. Variety of end connections available.

## Bypass Filters

**F2 Series**

1. Bypass port at filter bottom for the ease of sampling purging;
2. Union bonnet design;
3. Nominal pore sizes for sintered element: 0.5, 2, 7, 15, 40, 60 and 80 um;
4. Nominal pore sizes for sintered element: 100, 150, 250 and 450 um;
5. Maximum working pressure: 6000 psig (414 bar);
6. Working temperature:-20℉ to 900℉(-29℃ to 482℃);
7. Body materials: 316 SS, 316L SS, 304 SS, 304L SS and Brass;
8. Variety of end connections available.

## In-line Filters

**F3 Series**

1. Compact and space-saving design;
2. Nominal pore sizes for sintered element: 0.5, 2, 7, 15, 40, 60 and 80 um;
4. Nominal pore sizes for sintered element: 100, 150, 250 and 450 um;
5. Maximum working pressure: 3000 psig (207 bar);
6. Working temperature:-20℉ to 900℉(-29℃ to 482℃);
7. Body materials: 316 SS, 316L SS, 304 SS, 304L SS and Brass;
8. Variety of end connections available.

## Filters

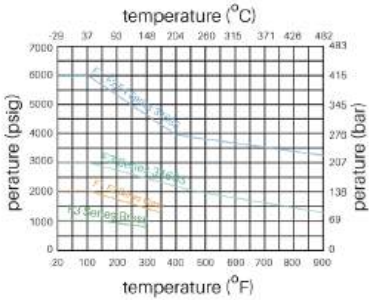
F1, F2, F3 and F4 Series

## All-welded In-line Filters

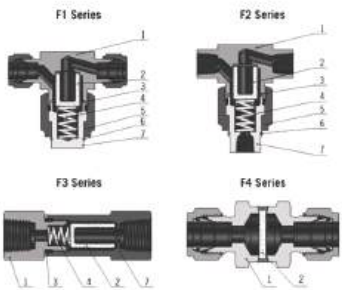
### F4 Series

1. Large filtration area and high flow coefficient;
2. All-welded construction for elimination of leakage;
3. Easy cleaning of filters by backflushing;
4. Full-penetration weld between body and element;
5. Nominal pore sizes for sintered element: 0.5, 2, 7, 15, 40, 60 and 80 um;
6. Maximum working pressure: 6000 psig (414 bar);
7. Working temperature:-20℉ to 900℉(-29℃ to 482℃);
8. Body materials: 316 SS, 316L SS, 304 SS, 304L SS and Brass;
9. Variety of end connections available.

## Pressure VS.temperature




Contact the authorized representative or C-LOK for curve graph of other materials.



## Filters

F1, F2, F3 and F4 Series

## Standard Materal of Constraction

| Component | | Material Grade/ASTM Specification | |
|---|---|---|---|
| | | 316SS | Brass |
| 1 | Body | 316SS/A479 | Brass/B16 |
| 2 | Element | Sintered 316SS or strainer 316SS | Sintered 316SS or strainer 316SS |
| 3 | Gasket | PTFE/D1710 or silver-plated 316SS/A240 | PTFE/D1710 or aluminum/B209 |
| 4 | Spring | 302SS/A313 | 302SS/A313 |
| 5 | Bonnet Nut | 316SS/A479 | Brass/B16 |
| 6 | Backup Ring | 316SS/A276 | |
| 7 | Bonnet | 316SS/A479 | Brass/B16 |

1. F4 Series filters not available in bass
2. Lubricants: molybdenum disulfide-based and silicone-based

## Maximum Differential Pressure Clean Filter at 70°F (20°C)

| Series | Maximum Differential Pressure psig (bar) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.5 Micron | 2 Micron | 7 Micron | 15 Micron | 40 Micron | 60 Micron | 80 Micron | 100 Micron | 150 Micron | 250 Micron | 450 Micron |
| F1, F2, F3 | 2250 (155.2) | 2250 (155.2) | 1950 (134.2) | 1750 (120.3) | 1150 (79.3) | 1150 (79.3) | 1000 (68.9) | 1000 (68.9) | 1000 (68.9) | 1000 (68.9) | 1000 (68.9) |
| F4 | 600 (41.4) | 100 (6.9) | 100 (6.9) | 100 (6.9) | – | – | – | – | – | – | – |

## Elements

| Nominal Pore Sizes um | Pore Sizes Range um | Elements Type |
|---|---|---|
| 0.5 | 0.5 to 2 | Sintered |
| 2 | 1 to 4 | |
| 7 | 5 to 10 | |
| 15 | 11 to 25 | |
| 40 | 35 to 53 | |
| 60 | 50 to 75 | |
| 80 | 70 to 95 | |
| 100 | — | Strainer |
| 150 | — | |
| 250 | — | |
| 450 | — | |