

# **Tee Filters** (**FT Series**)

Catalog 4130-FT Revised, May 2003



#### Introduction

Parker FT Series Tee Filters are designed for protection of instrumentation systems from undesirable materials. Component changes or repair and maintenance can admit dirt, chips, or other contaminants to the small bore tubing.

#### **Features**

- Filter element replacement achievable without removing filter from installation
- Compact, high strength forged body design with effective filtration areas of:
  - FT4 1.57 sq in (1013 sq mm)
  - FT8 2.53 sq in (1632 sq mm)
- Stainless steel and brass construction
- Standard sintered metal micron ratings: 1, 5, 10, 50, and 100
- Optional 250 and 450 micron wire cloth filter elements
- Optional bypass enables a continuous self cleaning flow around the element
- Port connections include male and female NPT, CPI<sup>™</sup>, A-LOK<sup>®</sup>, UltraSeal, and VacuSeal

## Specifications

• Pressure Ratings:

With Elastomeric and Metallic Seals: Stainless Steel – 6000 psig (414 bar) CWP Brass – 2000 psig (138 bar) CWP With PTFE Seals:

Stainless Steel – 4000 psig (276 bar) CWP Brass – 2000 psig (138 bar) CWP

## **Materials of Construction**

Item #	Part	Stainless Steel Filter Brass Filter					
1	Body	ASTM A 182	ASTM B 283				
		TYPE F316	Alloy C37700				
2	Washer	316 Stainless Steel					
3	Nut	ASTM A 479 TYPE 316	ASTM B 16 Alloy C36000				
4	Сар	ASTM A 479 TYPE 316	ASTM B 16 Alloy C36000				
5	Retainer Ring	PH 15-7 Mo S	Stainless Steel				
6	Spring	316 Stainless Steel					
7	Seal	Fluorocarbon Rubber*					
8	Element	316 Stair	less Steel				

\* Optional seal materials are available. See the How to Order section. Lubrication: Silicone base



Model Shown: 4Z-FT4-10-BN-SS

#### Pressure Rating and Tubing Selection:

For working pressures of A-LOK<sup>®</sup> and CPI<sup>™</sup> tube connections, please see the Instrument Tubing Selection Guide (Bulletin 4200-TS), found in the Technical Section of the Parker Instrumentation Process Control Binder, or the Parker Instrument Tube Fitting Installation Manual (Bulletin 4200-B4).

For working pressures of valves with external or internal pipe threads, please see Catalog 4260, Instrumentation Pipe Fittings.

## **Definitions**

*Filter Element* – The component within the filter which captures media contamination.

*Filtration Area* – The surface area of the filter element available to capture contamination.

*Micron* – A unit of measure used to indicate the mean pore diameter of the filter element or the mean particle diameter of media contamination.

One micron = 0.00004 inch or 0.0010 mm

#### Installation

Best installation practice is to orient the cap downward. This helps to prevent contaminants from entering the system during element change.



Model Shown: 4Z-FT4-10-BN-SS

## Dimensions

Basic     End Connections     Inches (mm)       Part Number     Port 1     Port 2     At     Bt     C     D     E       2A:FT4     1/8' A-LOK®     1.14     1.14     1.14     1.14       22:FT4     1/8' CPI™     (29.0)     (29.0)     (29.0)     (29.0)       2F:FT4     1/8' Male NPT     1.00     1.00     (25.4)     (25.4)     (25.4)       2M-FT4     1/4' A-LOK®     1.23     1.23     1.23     (13.0)     (13.0)       4A:FT4     1/4' CPI™     (31.2)     (31.2)     (13.0)     (13.0)     (38.9)     (22.4)       4M-FT4     1/4' Male NPT     1.09     1.09     (10.9)     (10.9)     (30.9)     (22.4)       4Q-FT4     1/4' UltraSeal     1.09     1.09     (10.9)     (30.5)		Dimensions						
Part NumberPort 1Port 2AtBtCDE $2A+\Gamma14$ $1/8^{\circ} A+LOK^{\otimes}$ $1.14$ $1.00$ $1.00$ $(25.4)$	Basic	End Conn	ections			Inches (m	im)	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Part Number	Port 1	Port 2	A†	B†	C	D	E
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	2A-FT4	1/8"	A-LOK®	1.14	1.14			
2F-FT4     1/8" Female NPT     1.00     1.00       2M-FT4     1/8" Male NPT     1.00     (25.4)     (25.4)       4A-FT4     1/4" A-LOK®     1.23     1.23     1.23       4Z-FT4     1/4" CPI™     (31.2)     (31.2)     (31.2)       4F-FT4     1/4" Female NPT     1.06     1.06     (0.51     1.53     0.88       4Z-FT4     1/4" Male NPT     1.09     1.09     (1.09)     (1.09)     (38.9)     (22.4)       4M-FT4     1/4" UltraSeal     1.20     1.20     (30.5)     (30.5)     (30.5)       4Q-FT4     1/4" VacuSeal     1.20     1.20     (27.7)     (27.7)       4V-FT4     1/4" VacuSeal     1.20     1.20     (30.5)     (30.5)       M62-FT4     6mm A-LOK®     1.42     1.42     1.42     62.FT8     3/8" ALOK®     1.42     1.42       62-FT8     3/8" ALOK®     1.19     1.19     1.19     1.9     1.9       64-FT8     3/8" ALOK®     1.53     1.53     1.53     1.53     1.	2Z-FT4	1/8"	CPI™	(29.0)	(29.0)			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	2F-FT4	1/8" Fei	male NPT	1.00	1.00			
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$				(25.4)	(25.4)			
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	2M-FT4	1/8" N	lale NPT	1.00	1.00	1		
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$				(25.4)	(25.4)			
4Z-FT4     1/4" CPI™     (31.2)     (31.2)     (31.2)       4F-FT4     1/4" Female NPT     1.06     1.06     0.51     1.53     0.88       4M-FT4     1/4" Male NPT     1.09     1.09     (13.0)     (38.9)     (22.4)       4M-FT4     1/4" UltraSeal     1.09     1.09     (27.7)     (27.7)     (27.7)     (27.7)     (27.7)     (27.7)     (27.7)     (27.7)     (30.5)     (30.5)     (30.5)       M6A-FT4     6mm A-LOK®     1.23     1.23     1.23     1.23       M6Z-FT4     6mm CPI™     (31.2)     (31.2)     (31.2)     (31.2)       6A-FT8     3/8" A-LOK®     1.42     1.42     1.42       6Z-FT8     3/8" Male NPT     1.19     1.19     1.19       6M-FT8     1/2" A-LOK®     1.53     1.53     0.59     1.71     1.25       8A-FT8     1/2" A-LOK®     1.33     1.33     1.33     0.59     1.71     1.25       8W-FT8     1/2" VacuSeal     1.33     1.33     1.33     1.33	4A-FT4	1/4"	A-LOK®	1.23	1.23			
4F-FT4     1/4" Female NPT     1.06     1.06     0.51     1.53     0.88       4M-FT4     1/4" Male NPT     1.09     (26.9)     (26.9)     (13.0)     (38.9)     (22.4)       4M-FT4     1/4" UltraSeal     1.09     1.09     (27.7)     (27.7)     (27.7)       4Q-FT4     1/4" VacuSeal     1.20     1.20     (30.5)     (30.5)       M6A-FT4     6mm A-LOK <sup>®</sup> 1.23     1.23     (31.2)     (31.2)       6A-FT8     3/8" A-LOK <sup>®</sup> 1.42     1.42     (36.1)     (36.1)       6M-FT8     3/8" Male NPT     1.19     1.19     1.9       6M-FT8     3/8" Male NPT     1.53     1.53     1.53       8A-FT8     1/2" A-LOK <sup>®</sup> 1.53     1.53     1.53       8Z-FT8     1/2" Male NPT     1.38     1.38     0.59     1.71     1.25       8W-FT8     1/2" Male NPT     1.33     1.33     (33.8)     0.59     1.71     1.25       8W-FT8     1/2" VacuSeal     1.33     1.33     1.33 <td< td=""><td>4Z-FT4</td><td>1/4"</td><td>CPI™</td><td>(31.2)</td><td>(31.2)</td><td></td><td></td><td></td></td<>	4Z-FT4	1/4"	CPI™	(31.2)	(31.2)			
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	4F-FT4	1/4" Fei	male NPT	1.06	1.06	0.51	1.53	0.88
4M-FT4 $1/4^*$ Male NPT $1.09$ (27.7) $1.09$ (27.7)4Q-FT4 $1/4^*$ UltraSeal $1.09$ (27.7) $1.09$ (27.7)4V-FT4 $1/4^*$ VacuSeal $1.20$ (30.5) $1.20$ (30.5)M6A-FT46mm A-LOK® $1.23$ (31.2) $1.23$ (31.2)6A-FT8 $3/8^*$ A-LOK® $1.42$ (36.1) $1.42$ (36.1)6A-FT8 $3/8^*$ Male NPT $1.19$ (30.2) $1.19$ (30.2)6A-FT8 $1/2^*$ A-LOK® $1.53$ (36.1) $1.53$ (35.1)6A-FT8 $1/2^*$ A-LOK® $1.53$ (38.9) $1.53$ (38.9)8A-FT8 $1/2^*$ A-LOK® $1.53$ (35.1) $1.53$ (35.1)8M-FT8 $1/2^*$ Female NPT (35.1) $1.48$ (35.1) $0.59$ (33.8)8W-FT8 $1/2^*$ VacuSeal (33.8) $1.33$ (33.8) $0.59$ (33.8)M8A-FT8 $8mm$ A-LOK® 1.44 $1.44$ 1.44M8Z-FT8 $10mm$ A-LOK® 1.54 $1.44$ 1.44M102-FT8 $10mm$ A-LOK® 1.54 $1.54$ 1.54M12A-FT8 $12mm$ A-LOK® 1.54 $1.54$ 1.54				(26.9)	(26.9)	(13.0)	(38.9)	(22.4)
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	4M-FT4	1/4" N	lale NPT	1.09	1.09			
4Q-FT4   1/4" UltraSeal   1.09   1.09   1.09     4V-FT4   1/4" VacuSeal   1.20   1.20     (30.5)   (30.5)   (30.5)     M6A-FT4   6mm A-LOK®   1.23   1.23     M6Z-FT4   6mm CPI™   (31.2)   (31.2)     6A-FT8   3/8" A-LOK®   1.42   1.42     6Z-FT8   3/8" CPI™   (36.1)   (36.1)     6M-FT8   3/8" CPI™   (36.1)   (36.1)     6M-FT8   3/8" CPI™   (30.2)   (30.2)     8A-FT8   1/2" A-LOK®   1.53   1.53     8Z-FT8   1/2" CPI™   (38.9)   (38.9)     8F-FT8   1/2" Male NPT   1.38   1.38     (37.6)   (37.6)   (37.6)     8M-FT8   1/2" VacuSeal   1.33   1.33     (38.9)   (38.9)   (33.8)   (33.8)     8V-FT8   1/2" VacuSeal   1.33   1.33     (30.2)   (36.6)   (36.6)   (43.4)     M8A-FT8   8mm A-LOK®   1.44   1.44     M102-FT8   10mm A-LOK®   1.54   1.54 </td <td></td> <td></td> <td></td> <td>(27.7)</td> <td>(27.7)</td> <td></td> <td></td> <td></td>				(27.7)	(27.7)			
Q27.7)     Q27.7)       4V-FT4     1/4" VacuSeal     1.20       (30.5)     (30.5)       M6A-FT4     6mm A-LOK®     1.23       M6Z-FT4     6mm CPI™     (31.2)       6A-FT8     3/8" A-LOK®     1.42       6Z-FT8     3/8" CPI™     (36.1)       6M-FT8     1/2" A-LOK®     1.53       8Z-FT8     1/2" A-LOK®     1.53       8Z-FT8     1/2" Female NPT     1.48       (37.6)     (37.6)       8M-FT8     1/2" VacuSeal     1.33       (33.8)     (33.8)       (33.8)     (33.8)       8V-FT8     1/2" VacuSeal     1.33       1/2" VacuSeal     1.33       (33.8)     (33.8)       (33.8)     (33.8)       MB2-FT8     8mm CPI™	4Q-FT4	1/4" U	IltraSeal	1.09	1.09			
4V-FT4   1/4" VacuSeal   1.20   1.20     (30.5)   (30.5)   (30.5)     M6A-FT4   6mm A-LOK®   1.23   1.23     M6Z-FT4   6mm CPI™   (31.2)   (31.2)     6A-FT8   3/8" A-LOK®   1.42   1.42     6Z-FT8   3/8" A-LOK®   1.42   1.42     6Z-FT8   3/8" Male NPT   1.19   (36.1)     6M-FT8   3/8" Male NPT   1.19   1.19     6M-FT8   3/8" CPI™   (30.2)   (30.2)     8A-FT8   1/2" A-LOK®   1.53   1.53     8Z-FT8   1/2" CPI™   (38.9)   (38.9)     8F-FT8   1/2" Male NPT   1.48   1.48     (37.6)   (37.6)   (37.6)     8M-FT8   1/2" Male NPT   1.33   1.33     (35.1)   (35.1)   (43.4)   (43.4)     8V-FT8   1/2" VacuSeal   1.33   1.33     (38.8)   (33.8)   (33.8)   (43.4)     M82-FT8   8mm A-LOK®   1.44   1.44     M102-FT8   10mm A-LOK®   1.44   1.44 <tr< td=""><td></td><td></td><td></td><td>(27.7)</td><td>(27.7)</td><td></td><td></td><td></td></tr<>				(27.7)	(27.7)			
(30.5)     (30.5)       M6A-FT4     6mm A-LOK®     1.23     1.23       M6Z-FT4     6mm CPI™     (31.2)     (31.2)       6A-FT8     3/8" A-LOK®     1.42     1.42       6Z-FT8     3/8" CPI™     (36.1)     (36.1)       6M-FT8     3/8" Male NPT     1.19     1.19       6M-FT8     3/8" Male NPT     1.53     1.53       8A-FT8     1/2" A-LOK®     1.53     1.53       8Z-FT8     1/2" CPI™     (38.9)     (38.9)       8F-FT8     1/2" Female NPT     1.48     1.48       (37.6)     (37.6)     (37.6)       8M-FT8     1/2" VacuSeal     1.33     1.33       (38.9)     (38.9)     (33.8)     (43.4)     (31.8)       8V-FT8     1/2" VacuSeal     1.33     1.33     (33.8)       M8A-FT8     8mm A-LOK®     1.44     1.44     1.44       M02-FT8     10mm CPI™     (36.6)     (36.6)     (36.6)       M10A-FT8     10mm CPI™     (36.6)     (36.6)     (36.6)	4V-FT4	1/4" V	acuSeal	1.20	1.20			
M6A-FT4     6mm A-LOK®     1.23     1.23       M6Z-FT4     6mm CPI™     (31.2)     (31.2)       6A-FT8     3/8" A-LOK®     1.42     1.42       6Z-FT8     3/8" CPI™     (36.1)     (36.1)       6M-FT8     3/8" Male NPT     1.19     1.19       6M-FT8     3/8" Male NPT     1.19     1.19       6M-FT8     3/8" A-LOK®     1.53     1.53       8A-FT8     1/2" A-LOK®     1.53     1.53       8Z-FT8     1/2" CPI™     (38.9)     (38.9)       8F-FT8     1/2" Male NPT     1.48     1.48       (37.6)     (37.6)     (37.6)       8M-FT8     1/2" Male NPT     1.38     1.38       (35.1)     (35.1)     (35.1)     (15.0)       8V-FT8     1/2" VacuSeal     1.33     1.33       (33.8)     (33.8)     (33.8)     (33.8)       M8A-FT8     8mm A-LOK®     1.44     1.44       M8Z-FT8     10mm A-LOK®     1.44     1.44       M10Z-FT8     10mm CPI™     (36.6)<				(30.5)	(30.5)			
M6Z-FT4     6mm CPI™     (31.2)     (31.2)       6A-FT8     3/8" A-LOK®     1.42     1.42       6Z-FT8     3/8" CPI™     (36.1)     (36.1)       6M-FT8     3/8" Male NPT     1.19     1.19       6M-FT8     3/8" Male NPT     1.19     1.19       6M-FT8     3/8" A-LOK®     1.53     1.53       8Z-FT8     1/2" A-LOK®     1.53     1.53       8Z-FT8     1/2" CPI™     (38.9)     (38.9)       8F-FT8     1/2" Female NPT     1.48     1.48       (37.6)     (37.6)     (37.6)       8M-FT8     1/2" WacuSeal     1.33     1.33       (33.8)     (33.8)     (33.8)     (33.8)       8V-FT8     1/2" VacuSeal     1.33     1.33       (36.6)     (36.6)     (36.6)     (36.6)       M8A-FT8     8mm A-LOK®     1.44     1.44       M8Z-FT8     10mm A-LOK®     1.44     1.44       M10Z-FT8     10mm A-LOK®     1.54     1.54       M12A-FT8     12mm A-LOK®     1	M6A-FT4	6mm	A-LOK®	1.23	1.23			
$6A-FT8$ $3/8" A-LOK^{\textcircled{o}}$ $1.42$ $1.42$ $1.42$ $1.42$ $6Z-FT8$ $3/8" CPI^{TM}$ $(36.1)$ $(36.1)$ $(36.1)$ $6M-FT8$ $3/8" Male NPT$ $1.19$ $1.19$ $(30.2)$ $(30.2)$ $8A-FT8$ $1/2" A-LOK^{\textcircled{o}}$ $1.53$ $1.53$ $1.53$ $8Z-FT8$ $1/2" CPI^{TM}$ $(38.9)$ $(38.9)$ $(38.9)$ $8F-FT8$ $1/2" Female NPT$ $1.48$ $1.48$ $(37.6)$ $8M-FT8$ $1/2" Male NPT$ $1.38$ $1.38$ $0.59$ $1.71$ $8V-FT8$ $1/2" VacuSeal$ $1.33$ $1.33$ $(33.8)$ $M8A-FT8$ $8mm A-LOK^{\textcircled{o}}$ $1.44$ $1.44$ $1.44$ $M0Z-FT8$ $10mm CPI^{TM}$ $(36.6)$ $(36.6)$ $M10A-FT8$ $10mm CPI^{TM}$ $(36.6)$ $(36.6)$ $M12A-FT8$ $12mm A-LOK^{\textcircled{o}}$ $1.54$ $1.54$ $M12Z-FT8$ $12mm CPI^{TM}$ $(39.1)$ $(39.1)$	M6Z-FT4	6mm	ו CPI™	(31.2)	(31.2)			
6Z-FT8     3/8" CPI™     (36.1)     (36.1)       6M-FT8     3/8" Male NPT     1.19     1.19       (30.2)     (30.2)     (30.2)       8A-FT8     1/2" A-LOK®     1.53     1.53       8Z-FT8     1/2" CPI™     (38.9)     (38.9)       8F-FT8     1/2" Female NPT     1.48     1.48       (37.6)     (37.6)     (37.6)       8M-FT8     1/2" Male NPT     1.38     1.38       8V-FT8     1/2" VacuSeal     (35.1)     (35.1)       (38.9)     (38.9)     (15.0)     (43.4)       8V-FT8     1/2" VacuSeal     1.33     1.33       (32.1)     (35.1)     (35.1)     (15.0)     (43.4)       8W-FT8     8mm A-LOK®     1.44     1.44       M82-FT8     8mm CPI™     (36.6)     (36.6)       M10A-FT8     10mm A-LOK®     1.44     1.44       M10Z-FT8     10mm CPI™     (36.6)     (36.6)       M12A-FT8     12mm A-LOK®     1.54     1.54       M12Z-FT8     12mm CPI™	6A-FT8	3/8"	A-LOK®	1.42	1.42			
6M-FT8   3/8" Male NPT   1.19   1.19     (30.2)   (30.2)   (30.2)     8A-FT8   1/2" A-LOK®   1.53   1.53     8Z-FT8   1/2" CPI™   (38.9)   (38.9)     8F-FT8   1/2" Female NPT   1.48   1.48     (37.6)   (37.6)   (37.6)     8M-FT8   1/2" Male NPT   1.38   1.38     8V-FT8   1/2" VacuSeal   1.33   1.33     (32.1)   (35.1)   (35.1)   (15.0)     8W-FT8   1/2" VacuSeal   1.33   1.33     (32.8)   (33.8)   (33.8)     M8A-FT8   8mm A-LOK®   1.44   1.44     M8Z-FT8   10mm CPI™   (36.6)   (36.6)     M10A-FT8   10mm CPI™   (36.6)   (36.6)     M102-FT8   10mm CPI™   (36.6)   (36.6)     M122-FT8   12mm A-LOK®   1.54   1.54     M122-FT8   12mm CPI™   (39.1)   (39.1)	6Z-FT8	3/8"	CPI™	(36.1)	(36.1)			
(30.2)     (30.2)     (30.2)       8A-FT8     1/2" A-LOK®     1.53     1.53       8Z-FT8     1/2" CPI™     (38.9)     (38.9)       8F-FT8     1/2" Female NPT     1.48     1.48       8W-FT8     1/2" Male NPT     1.38     1.38       8W-FT8     1/2" VacuSeal     (35.1)     (35.1)       8V-FT8     1/2" VacuSeal     1.33     1.33       (33.8)     (33.8)     (33.8)     (33.8)       M8A-FT8     8mm A-LOK®     1.44     1.44       M8Z-FT8     10mm CPI™     (36.6)     (36.6)       M10A-FT8     10mm CPI™     (36.6)     (36.6)       M102-FT8     10mm CPI™     (36.6)     (36.6)       M12A-FT8     12mm A-LOK®     1.54     1.54       M122-FT8     12mm CPI™     (39.1)     (39.1)	6M-FT8	3/8" N	lale NPT	1.19	1.19			
8A-FT8     1/2" A-LOK®     1.53     1.53       8Z-FT8     1/2" CPI™     (38.9)     (38.9)       8F-FT8     1/2" Female NPT     1.48     1.48       (37.6)     (37.6)     (37.6)       8M-FT8     1/2" Male NPT     1.38     1.38       8V-FT8     1/2" VacuSeal     (35.1)     (15.0)       8W-FT8     1/2" VacuSeal     1.33     1.33       (33.8)     (33.8)     (33.8)       M8A-FT8     8mm A-LOK®     1.44     1.44       M8Z-FT8     10mm CPI™     (36.6)     (36.6)       M10A-FT8     10mm CPI™     (36.6)     (36.6)       M102-FT8     10mm CPI™     (36.6)     (36.6)       M12A-FT8     12mm A-LOK®     1.54     1.54       M12Z-FT8     12mm CPI™     (39.1)     (39.1)				(30.2)	(30.2)			
8Z-FT8     1/2" CPI™     (38.9)     (38.9)       8F-FT8     1/2" Female NPT     1.48     1.48       (37.6)     (37.6)     (37.6)       8M-FT8     1/2" Male NPT     1.38     1.38     0.59     1.71     1.25       8W-FT8     1/2" VacuSeal     1.33     1.33     (35.1)     (15.0)     (43.4)     (31.8)       8V-FT8     1/2" VacuSeal     1.44     1.44     (36.6)     (36.6)       M8A-FT8     8mm A-LOK®     1.44     1.44     1.44       M8Z-FT8     10mm CPI™     (36.6)     (36.6)     (36.6)       M10A-FT8     10mm CPI™     (36.6)     (36.6)     (36.6)       M10Z-FT8     10mm CPI™     (36.6)     (36.6)     (36.6)       M12A-FT8     12mm A-LOK®     1.54     1.54     1.54       M12Z-FT8     12mm CPI™     (39.1)     (39.1)     (39.1)	8A-FT8	1/2"	A-LOK®	1.53	1.53	]		
8F-FT8   1/2" Female NPT   1.48   1.48     (37.6)   (37.6)     8M-FT8   1/2" Male NPT   1.38   1.38   0.59   1.71   1.25     8V-FT8   1/2" VacuSeal   (35.1)   (35.1)   (15.0)   (43.4)   (31.8)     8V-FT8   1/2" VacuSeal   1.33   1.33   (33.8)   (33.8)   (33.8)     M8A-FT8   8mm A-LOK®   1.44   1.44   1.44   1.44     M8Z-FT8   8mm CPI™   (36.6)   (36.6)   (36.6)   (36.6)     M10A-FT8   10mm CPI™   (36.6)   (36.6)   (36.6)   (36.6)     M102-FT8   10mm CPI™   (36.6)   (36.6)   (36.6)   (36.6)     M12A-FT8   12mm A-LOK®   1.54   1.54   1.54     M12Z-FT8   12mm CPI™   (39.1)   (39.1)   (39.1)	8Z-FT8	1/2"	CPI™	(38.9)	(38.9)			
(37.6)     (35.7)     (35.1)     (15.0)     (43.4)     (31.8)     (33.8)     (33.8)     (33.8)     (33.8)     (33.8)     (33.8)     (33.8)     (33.8)     (33.8)     (33.8)     (33.8)     (33.8)     (33.8)     (33.8)     (33.8)     (34.4)     (36.6)     (36.7)     (37.1)     (37.1)     (37.1)     (37.1)     (37.1)     (37.1)     (37.1)     (37.1)     (37.1)     (37.1)     (37.1)	8F-FT8	1/2" Fei	male NPT	1.48	1.48			
8M-FT8     1/2" Male NPT     1.38     1.38     0.59     1.71     1.25       (35.1)     (35.1)     (35.1)     (35.1)     (15.0)     (43.4)     (31.8)       8V-FT8     1/2" VacuSeal     1.33     1.33     (33.8)     (33.8)     (15.0)     (43.4)     (31.8)       M8A-FT8     8mm A-LOK®     1.44     1.44     1.44       M8Z-FT8     8mm CPI™     (36.6)     (36.6)     (36.6)       M10A-FT8     10mm A-LOK®     1.44     1.44     1.44       M10Z-FT8     10mm CPI™     (36.6)     (36.6)     (36.6)       M12A-FT8     12mm A-LOK®     1.54     1.54     1.54       M12Z-FT8     12mm CPI™     (39.1)     (39.1)     (39.1)				(37.6)	(37.6)			
(35.1)     (35.1)     (15.0)     (43.4)     (31.8)       8V-FT8     1/2" VacuSeal     1.33     1.33     (33.8)     (33.8)     (33.8)       M8A-FT8     8mm A-LOK®     1.44     1.44     (36.6)     (36.6)       M10A-FT8     10mm A-LOK®     1.44     1.44     1.44       M102-FT8     10mm CPI™     (36.6)     (36.6)     (36.6)       M102-FT8     10mm CPI™     (36.6)     (36.6)     (36.6)       M12A-FT8     12mm A-LOK®     1.54     1.54     1.54       M12Z-FT8     12mm CPI™     (39.1)     (39.1)     (39.1)	8M-FT8	1/2" N	lale NPT	1.38	1.38	0.59	1.71	1.25
8V-FT8     1/2" VacuSeal     1.33     1.33       (33.8)     (33.8)     (33.8)       M8A-FT8     8mm A-LOK®     1.44     1.44       M8Z-FT8     8mm CPI™     (36.6)     (36.6)       M10A-FT8     10mm A-LOK®     1.44     1.44       M10Z-FT8     10mm CPI™     (36.6)     (36.6)       M10Z-FT8     10mm CPI™     (36.6)     (36.6)       M12A-FT8     12mm A-LOK®     1.54     1.54       M12Z-FT8     12mm CPI™     (39.1)     (39.1)				(35.1)	(35.1)	(15.0)	(43.4)	(31.8)
(33.8)     (33.8)       M8A-FT8     8mm A-LOK®     1.44     1.44       M8Z-FT8     8mm CPI™     (36.6)     (36.6)       M10A-FT8     10mm A-LOK®     1.44     1.44       M10Z-FT8     10mm CPI™     (36.6)     (36.6)       M12A-FT8     10mm CPI™     (36.6)     (36.6)       M12Z-FT8     12mm A-LOK®     1.54     1.54       M12Z-FT8     12mm CPI™     (39.1)     (39.1)	8V-FT8	1/2" V	acuSeal	1.33	1.33			
M8A-FT8     8mm A-LOK®     1.44     1.44       M8Z-FT8     8mm CPI™     (36.6)     (36.6)       M10A-FT8     10mm A-LOK®     1.44     1.44       M10Z-FT8     10mm CPI™     (36.6)     (36.6)       M12A-FT8     12mm A-LOK®     1.54     1.54       M12Z-FT8     12mm CPI™     (39.1)     (39.1)				(33.8)	(33.8)			
M8Z-FT8     8mm CPI™     (36.6)     (36.6)       M10A-FT8     10mm A-LOK®     1.44     1.44       M10Z-FT8     10mm CPI™     (36.6)     (36.6)       M12A-FT8     12mm A-LOK®     1.54     1.54       M12Z-FT8     12mm CPI™     (39.1)     (39.1)	M8A-FT8	8mm	A-LOK®	1.44	1.44			
M10A-FT8     10mm A-LOK®     1.44     1.44       M10Z-FT8     10mm CPI™     (36.6)     (36.6)       M12A-FT8     12mm A-LOK®     1.54     1.54       M12Z-FT8     12mm CPI™     (39.1)     (39.1)	M8Z-FT8	8mm	ו CPI™	(36.6)	(36.6)			
M10Z-FT8     10mm CPI™     (36.6)     (36.6)       M12A-FT8     12mm A-LOK®     1.54     1.54       M12Z-FT8     12mm CPI™     (39.1)     (39.1)	M10A-FT8	10mm	A-LOK®	1.44	1.44			
M12A-FT8     12mm A-LOK <sup>®</sup> 1.54     1.54       M12Z-FT8     12mm CPI™     (39.1)     (39.1)	M10Z-FT8	10mr	n CPI™	(36.6)	(36.6)			
M12Z-FT8 12mm CPI™ (39.1) (39.1)	M12A-FT8	12mm	A-LOK®	1.54	1.54			
	M12Z-FT8	12mr	n CPI™	(39.1)	(39.1)			

 $\dagger$  For CPI\* and A-LOK\*, dimensions are measured with nuts in the finger tight position.

## Maximum Pressure Differential Across Clean Filters at 70 °F (21 °C)

	1 micron	5 micron	10 micron	50 micron	100 micron	250 micron	450 micron
psig	2250	1950	1750	1150	1000	1000	1000
bar	155	134	120	79	69	69	69



A-Two ferrule A-LOK<sup>®</sup> compression port



Z-Single ferrule CPI<sup>™</sup> compression port



M-ANSI/ASME B1.20.1 External pipe threads



F-ANSI/ASME B1.20.1 Internal pipe threads



Q-UltraSeal face seal port



V-VacuSeal face seal port





#### How to Order

The correct part number is easily derived by following the circled number sequence. The six product characteristics required are coded as shown below. \*Note: If both the inlet and outlet ports are the same, eliminate the outlet port designator.

Example:	<u>4M</u>	* -	<u>FT4</u>	- <u>5</u>	- <u>BN</u> -	- <u>B</u>
-	(1)	(2)	3	(4)	(5)	6
	Inlet	Outlet	Valve	Micron	Seal	Body
	Port	Port	Series	Rating	Material	Material

Describes an FT Series Filter with 1/4" male NPT inlet and outlet ports, a 5 micron element, Buna-N seal and brass body construction.

1 Inlet Port	2 Outlet Port	3 Valve Series	4 Nominal Micron Rating	<b>5</b> Seal Material	6 Body Material
2A, 2F, 2 4A, 4F, 4M, 40 M6A,	2M, 2Z, ), 4V, 4W, 4Z, M6Z	FT4	<b>1</b> - 1 Micron <b>5</b> - 5 Micron	<b>Blank -</b> Fluorocarbon Rubber <b>BN -</b> Buna-N Rubber <b>EPR -</b> Ethylene	<b>SS</b> - Stainless
6A, 6M, 8A, 8M, 8V, 8Z,		FT8	10 - 10 Micron 50 - 50 Micron 100 - 100 Micron	Propylene Rubber <b>NE</b> - Neoprene Rubber <b>KZ</b> - Highly Fluorinated	Steel <b>B</b> - Brass
M8A, M8Z, N M12A,	110A, M10Z, M12Z		<b>250</b> - 250 Micron <b>450</b> - 450 Micron	Fluorocarbon Rubber HT - Silver Plated Nickel Alloy C-Ring T - PTFE	

#### **Options**

Oxygen Cleaning – Add the suffix–C3 to the end of the part number to receive filters cleaned and assembled for oxygen service in accordance with Parker specification ES8003. **Example:** 4A-FT4-10-V-SS-C3 **Special Cleaning** – All face seal ended filters are cleaned in accordance with Parker Specification ES8001. This is an option for all filters by adding the suffix–C1 to the end of the part number. **Example:** M6A-FT8-50-NE-SS-C1. **Bypass** – Add the suffix–PB to the end of the part number to receive a 1/8" –27 FNPT tapped Cap for sampling. **Example:** 2M-FT4-5-V-SS-PB

Integral Compression Ported Bypass Option – Add the suffix–PBA (A-LOK<sup>®</sup>) or–PBZ (CPI<sup>™</sup>) to the end of the part number to receive a 4Z/4A (FT4) or 6A/6Z (FT8) compression ported Cap. Example: 2M-FT4-5-V-SS-PBZ

## **Kit Information**

To order repair kits for the FT Series Filters, simply fill in the designators from the chart below.

Size	Micron Rating	Seal Material	Examples: KIT-FT4-10-V
	1	V - Fluorocarbon Rybber	KIT-FT8-100-BN
	5	BN - Buna-N Rubber	
FT4	10	EPR - Ethylene Propylene Rubber	Filter Kits Contain: Seals, Filter Element, Spring and
	50	NE - Neoprene Rubber	Maintenance Instructions.
FT8	100	KZ - Highly Fluorinated Fluorocarbon	
	250	Rubber	Caution: When interchanging sintered metal elements
	450	HT - Silver Plated Nickel Alloy C-Ring	with wire cloth filter elements, the flow direction is

#### 

FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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Note: To determine MPa, multiply bar by 0.1

**Note:** This Pressure versus Temperature chart reflects the maximum temperature range of indicated body materials.

The temperature rating of the seal becomes the limiting factor on temperature range.

#### • Temperature Ratings:

PTFE

Buna-N Rubber -40 °F to 275 °F (-40 °C to 135 °C) Highly Fluorinated Fluorocarbon Rubber -20 °F to 500 °F (-29 °C to 260 °C) Ethylene Propylene Rubber -70 °F to 300 °F (-57 °C to 149 °C) Fluorocarbon Rubber -40 °F to 400 °F (-40 °C to 204 °C) Neoprene Rubber -65 °F to 300 °F (-54 °C to 149 °C) Silver Plated Nickel Alloy Gasket (C-ring) -100 °F to 900 °F (-73 °C to 482 °C)

-70 °F to 400 °F (-56 °C to 204 °C)

## Flow Calculations with 100 psig (7 bar) Inlet Pressure

Pressure			F	T4		FT8				
Dro	p ∆P	Water GPM at 60 °F	Water m³/hr at 60 °F	Air SCFM at 60 °F	Air m³/hr at 60 °F	Water GPM at 60 °F	Water m³/hr at 60 °F	Air SCFM at 60 °F	Air m³/hr at 60 °F	
psig	bar	(16 °C)	(16 °C)	(16 °C)	(16 °C)	(16 °C)	(16 °C)	(16 °C)	(16 °C)	
			1 M	icron			1 Mic	cron		
5	0.35	0.16	0.04	1.69	2.68	0.28	0.06	2.89	4.58	
10	0.69	0.23	0.05	2.35	3.72	0.39	0.09	4.02	6.36	
50	3.45	0.51	0.12	4.63	7.18	0.87	0.20	7.91	12.26	
5 Micron						5 Mic	cron			
5	0.35	0.35	0.08	3.68	5.84	0.77	0.17	8.05	12.76	
10	0.69	0.50	0.11	5.13	8.12	1.08	0.25	11.21	17.74	
50	3.45	1.11	0.25	10.10	15.65	2.43	0.55	22.07	34.19	
	-	10 Micron 10 Micron					cron			
5	0.35	0.44	0.10	4.57	7.26	0.94	0.21	9.90	15.70	
10	0.69	0.62	0.14	6.37	10.09	1.33	0.30	13.79	21.83	
50	3.45	1.38	0.31	12.55	19.44	2.98	0.68	27.15	42.07	
			50 M	icron		50 Micron				
5	0.35	0.52	0.12	5.42	8.59	0.99	0.23	10.42	16.52	
10	0.69	0.73	0.17	7.55	11.95	1.40	0.32	14.51	22.97	
50	3.45	1.63	0.37	14.86	23.03	3.14	0.71	28.57	44.26	
			100 N	/licron		100 Micron				
5	0.35	0.65	0.15	6.78	10.75	1.64	0.37	17.22	27.31	
10	0.69	0.91	0.21	9.45	14.95	2.32	0.53	23.99	37.97	
50	3.45	2.04	0.46	18.60	28.81	5.19	1.18	47.23	73.17	
			250 N	licron			250 N	licron		
5	0.35	1.14	0.26	11.94	18.92	1.74	0.40	18.22	28.88	
10	0.69	1.62	0.37	16.56	26.17	2.47	0.56	25.28	39.95	
50	3.45	3.61	0.82	31.30	48.07	5.52	1.25	47.78	73.37	
			450 M	icron			450 N	licron		
5	0.35	1.23	0.28	12.84	20.35	1.88	0.43	19.64	31.13	
10	0.69	1.74	0.39	17.82	28.17	2.66	0.60	27.27	43.10	
50	3.45	3.88	0.88	33.92	52.16	5.94	1.35	51.89	79.81	

#### Flow / Filtration Data

				C <sub>v</sub> †							
Filter	Filter Effective		1	5	10	50	100	250	450		
Series	Filtratio	n Area	micron	micron	micron	micron	micron	micron	micron		
			Micron Range	<b>Micron Range</b>	<b>Micron Range</b>	Micron Range	<b>Micron Range</b>	Micron Range	Micron Range		
	sq in	sq mm	.5 to 3	5 to 10	10 to 20	40 to 50	100 to 150	225 to 275	400 to 500		
FT4	1.57	1012	0.072	0.157	0.195	0.231	0.289	0.511	0.549		
FT8	2.53	1632	0.123	0.343	0.422	0.444	0.734	0.780	0.840		

†Tested in accordance with ISA S75.02. Gas flow will be choked when  $P_1 - P_2 / P_1 = x_T$ .

 $x_r$ =1.0 for micron sizes 1 through 100; 0.78 for the 250 micron size, and 0.81 for the 450 micron size.



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