

# Micronic Filters for Aviation Fuel Handling

EI 1590, FO, FOW, DC, FOH, FI, HFS Series

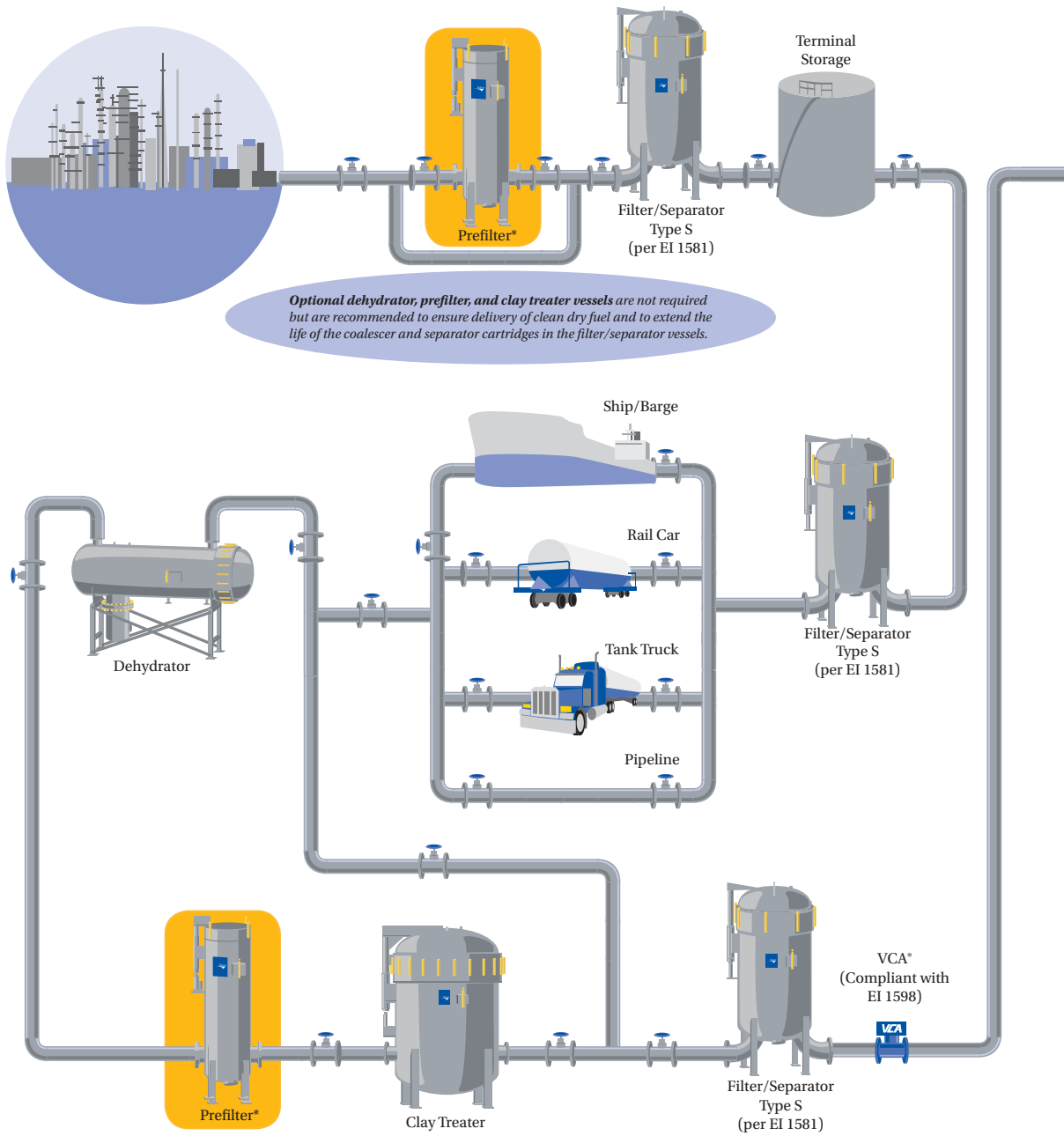
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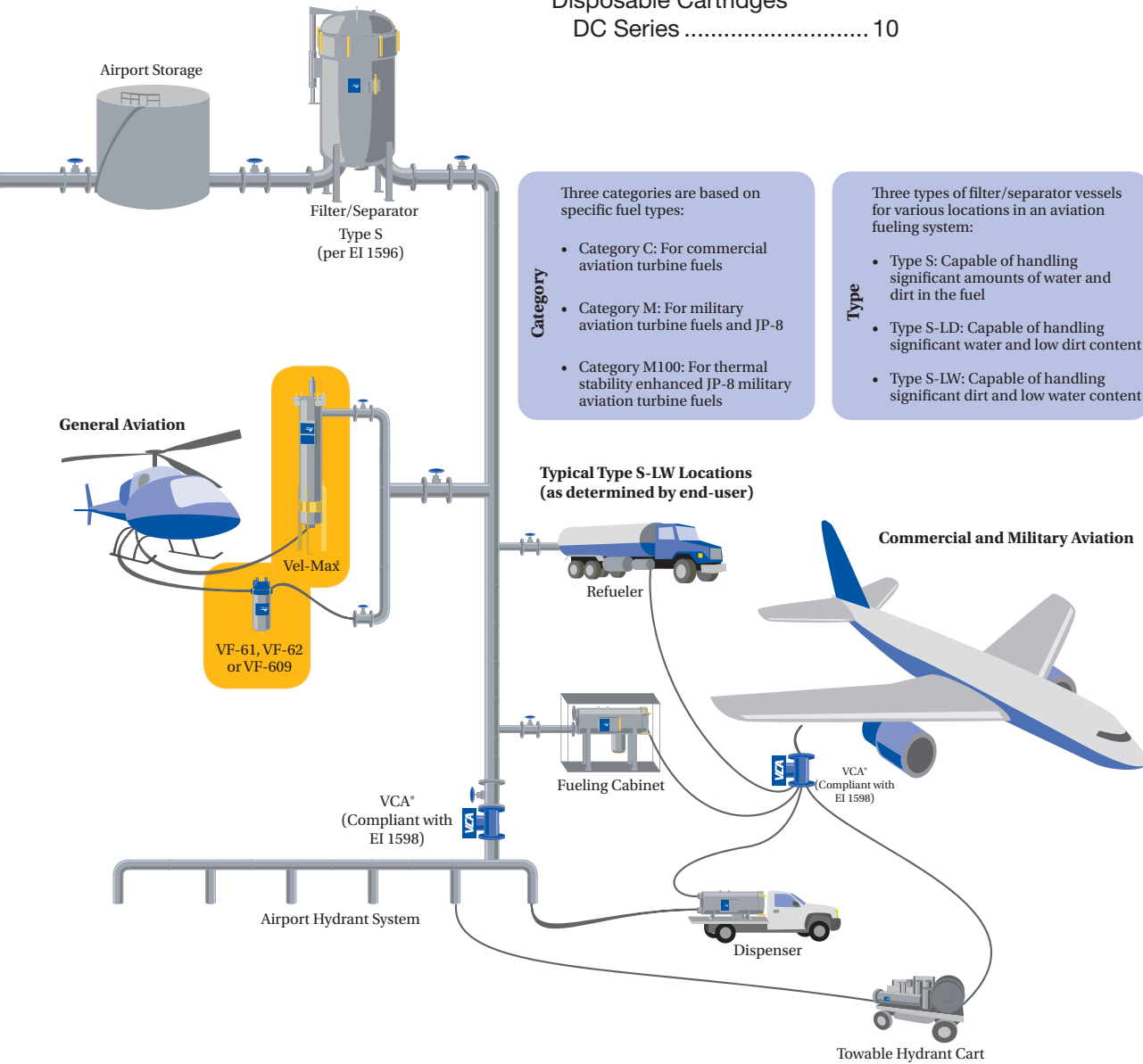
# Typical Distribution System for Clean Dry Aviation Fuel - Micronic Filters

EI 1581 Specification, 5th Edition



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\* Prefilter elements compliance with EI 1590 and vessel compliance with EI 1596 is customer dependent. Optional EI 1583 Qualified Vessels/Absorbent Type Cartridges for jet fuel without anti-icing additive.

# EI 1590 Qualified Filter Cartridges

Long-lasting, High Capacity & Efficient Performance

Up to Three Times Greater Solids Capacity

FO-6xxA3, FOH-6xxA3, HFS Series

- Primarily designed to be used as prefilter (micronic) cartridges for use in jet fuel handling systems.
- Used to extend the life of coalescer cartridges in filter/separator vessels described in EI 1581.

## DESCRIPTION

Parker Velcon has qualified cellulose and microfiberglass media filter cartridges to EI Specification 1590, "Specifications and Qualification Procedures for Aviation Fuel Microfilters."

- UP TO THREE TIMES GREATER SOLIDS CAPACITY than regular pleated paper cartridges
- Large Surface Area – Allows high flow rate with low initial pressure drop and maximum contaminant holding capacity.
- Resin Impregnated Microfiberglass/Cellulose Media – Maintains strength, resists effects of water and heat.
- 75 psi Collapse Strength – Heavy gauge carbon steel endcaps and center tube give safety margin against pressure surges.
- Coated Steel Components – Resist corrosion from most industrial fluids.
- Corrugated Media – Prevents pleat pinch-off, assuring all filtration media is utilized.

- Buna-N Gaskets – The best general gasket material available assures positive seal in most fluids.
- Epoxy Bonding Material – Endcaps epoxy-bonded to media to prevent internal bypassing
- 98%+ Filtration Efficiency
- Threaded Base also available

## SPECIFICATIONS

- 75 psi Collapse strength
- 1,2, 3 & 5 micron efficiency (per EI 1590)
- 5 - 9 Operating pH range
- 250°F Maximum operating temperature

## APPLICATIONS

Parker Velcon pleated media cartridges are suitable for a broad range of polar and non-polar fluids.

Recommended for applications where the contaminant is granular & hard, allowing maximum utilization of the high surface area and depth media.



FOH-644A1K

HFS-14605

## CARTRIDGE INFORMATION

Parker Velcon MODEL NUMBER	DIMENSIONS	OUTER WRAP	EI MICRON EFFICIENCY	MAXIMUM FLOW RATE
FO-614A3	6" x 14 $\frac{1}{2}$ " x 3 $\frac{1}{2}$ " ID	NO	3	53
FO-614A3TB	6" x 14 $\frac{1}{2}$ " x 3 $\frac{1}{2}$ " ID	NO	3	47
FO-629A3	6" x 29" x 3 $\frac{1}{2}$ " ID	YES	3	111
FO-629A3TB	6" x 29" x 3 $\frac{1}{2}$ " ID	YES	3	105
FO-644A3	6" x 44" x 3 $\frac{1}{2}$ " ID	YES	3	171
FO-644A3TB	6" x 44" x 3 $\frac{1}{2}$ " ID	YES	3	165
FO-656A3	6" x 56" x 3 $\frac{1}{2}$ " ID	YES	3	219
FO-656A3TB	6" x 56" x 3 $\frac{1}{2}$ " ID	YES	3	213
HFS-14601	6" x 14" x 3 $\frac{1}{2}$ " ID	NO	1	60
HFS-14601-S	6" x 14" x 3 $\frac{1}{2}$ " ID	NO	1	60
HFS-14601-TB	6" x 14" x 3 $\frac{1}{2}$ " ID	NO	1	60
HFS-14605	6" x 14" x 3 $\frac{1}{2}$ " ID	NO	5	60
HFS-14605-S	6" x 14" x 3 $\frac{1}{2}$ " ID	NO	5	60
HFS-14605-TB	6" x 14" x 3 $\frac{1}{2}$ " ID	NO	5	60
HFS-28601	6" x 28" x 3 $\frac{1}{2}$ " ID	NO	1	125
HFS-28601-S	6" x 28" x 3 $\frac{1}{2}$ " ID	NO	1	125
HFS-28601-TB	6" x 28" x 3 $\frac{1}{2}$ " ID	NO	1	125
HFS-28605	6" x 28" x 3 $\frac{1}{2}$ " ID	NO	5	125
HFS-28605-S	6" x 28" x 3 $\frac{1}{2}$ " ID	NO	5	125
HFS-28605-TB	6" x 28" x 3 $\frac{1}{2}$ " ID	NO	5	125
HFS-43601	6" x 43" x 3 $\frac{1}{2}$ " ID	NO	1	195
HFS-43601-S	6" x 43" x 3 $\frac{1}{2}$ " ID	NO	1	195
HFS-43601-TB	6" x 43"	NO	1	191
HFS-43605	6" x 43" x 3 $\frac{1}{2}$ " ID	NO	5	195
HFS-43605-S	6" x 43" x 3 $\frac{1}{2}$ " ID	NO	5	195
HFS-43605-TB	6" x 43" x 3 $\frac{1}{2}$ " ID	NO	5	195

# Pleated Media Filter Cartridges

High Efficiency, Long Life Cartridges for Aviation Fuel  
FO Series

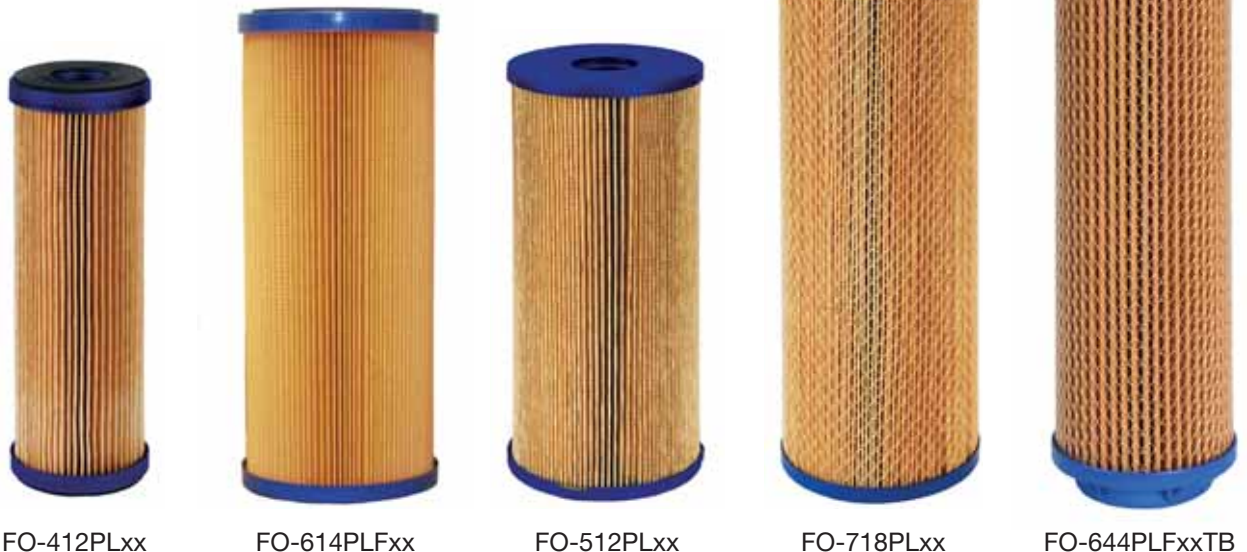
- Large Surface Area – Allows high flow rate with low initial pressure drop and maximum contaminant holding capacity.
- Resin Impregnated Media – Maintains strength, resists effects of water and heat.
- 75 psi Collapse Strength – Heavy gauge carbon steel endcaps and center tube give safety margin against pressure surges.
- Coated Steel Components – Resist corrosion from most industrial fluids.
- Corrugated Media – Prevents pleat pinch-off, assuring all filtration media is utilized.
- Buna-N Gaskets – The best general gasket material available assures positive seal in most fluids.
- Thermoset Bonding Material – Durable endcap-to-media bond prevents internal bypassing.
- Threaded base filter elements – Available for easier installation.

## SPECIFICATIONS

- 75 psi Collapse strength
- 5 - 9 Operating pH range
- Micron ratings from ¼ to 75
- 98%+ Nominal filtration efficiency
- 250°F Maximum operating temperature
- Recommended changeout differential pressure - 15 psid for Aviation applications
- Multi-pass (Beta Ratio) data available on request

*For information about Flow Ratings with various viscosity fluids, refer to Form #1532*

*Please note - The outer wrap of a cartridge can be either nylon jacket, beaming paper, or PVC-coated screen wrap. Actual cartridges may not look exactly like those shown in photo.*



## CARTRIDGE INFORMATION

The following table lists a few of the broad range of available Parker Velcon cartridges. Your local Parker Velcon representative can provide more complete information.



Model	Dim.	Nominal Micron Rating	Protective Outer Wrap	
FO-412PL2	4" x 12¼" x 1¾" ID	2	No	
FO-412PL5		5	No	
FO-418PL5	4" x 18" x 1¾" ID	5	No	
FO-418PL15		15	No	
FO-512PL1/2	For VF-61 Housing	½	No	
FO-512PL05		5	No	
FO-512PL25		25	No	
FO-614PLF½	6" x 14½" x 3½" ID	½	No	
FO-614PLF1		1	No	
FO-614PLF2		2	No	
FO-614PLF5		5	No	
FO-614PLF5M		5	Yes	
FO-614PLF10		10	No	
FO-614PLF15		15	No	
FO-614PLF15M		15	Yes	
FO-614PLF25		25	No	
FO-614PLF75		75	No	
FO-629PLF1/4		6" x 29" x 3½" ID	¼	Yes
FO-629PLF1/2			½	Yes
FO-629PLF1			1	Yes
FO-629PLF2			2	Yes
FO-629PLF5			5	Yes
FO-629PLF10	10		Yes	
FO-629PLF25	25		Yes	
FO-629PLF1/2TB	6" x 29" Threaded Base		½	Yes
FO-629PLF1TB			1	Yes
FO-629PLF2TB		2	Yes	
FO-629PLF5TB		5	Yes	
FO-629PLF25TB		25	Yes	
FO-644PLF1/2		6" x 44" x 3½" ID	½	No
FO-644PLF1M	1		Yes	
FO-644PLF2M	2		Yes	
FO-644PLF5M	5		Yes	
FO-644PLF10M	10		Yes	
FO-644PLF15M	15		Yes	
FO-644PLF25M	25		Yes	

Model	Dim.	Nominal Micron Rating	Protective Outer Wrap
FO-644PLF1/4TB	6" x 44" Threaded Base	¼	Yes
FO-644PLF1/2TB		½	Yes
FO-644PLF1TB		1	Yes
FO-644PLF2TB		2	Yes
FO-644PLF5TB		5	Yes
FO-644PLF10TB		10	Yes
FO-644PLF25TB		25	Yes
FO-656PLF1M		6" x 56" x 3½" ID	1
FO-656PLF1/2TB	6" x 56" Threaded Base	½	Yes
FO-656PLF1TB		1	Yes
FO-656PLF2TB		2	Yes
FO-656PLF5TB		5	Yes
FO-656PLF25TB		25	Yes
FO-718PLP3	6¼" x 18" x 2 9/16" ID	0.3	No
FO-718PL1/2		½	No
FO-718PL01		1	Yes
FO-718PL02		2	Yes
FO-718PL05		5	Yes
FO-718PL10		10	Yes
FO-718PL15		15	Yes
FO-718PL25		25	Yes
FO-718PL50		50	Yes
FO-736PLP3		6¼" x 36" 2 9/16" ID	0.3
FO-736PL1/2	½		No
FO-736PL05	5		Yes
FO-736PL15	15		Yes
FO-822PLP3	8" x 22 1/8" x 2" ID	0.3	No
FO-822PL1/2		½	No
FO-822PL05		5	No
FO-829PL05	8" x 29 ½" 2" ID	5	No
<b>FOH</b>			
FOH-644PLF1	6" x 44" x 3½" ID	1	Yes
FOH-644PLF1/2	6" x 44" x 3½" ID	0.5	Yes
FOH-644PLF1TB	6" x 44" Threaded Base	1	Yes
FOH-644PLF2TB		2	Yes
FOH-644PLF2	6" x 44" x 3½" ID	2	Yes
FOH-644PLF5	6" x 44" x 3½" ID	5	Yes

# Fuel Filter

## FOW Series for Solids Removal Only. Provide Protection Against Solids in Pre-mixed Fuel Containing Anti-Icing Additive

### FEATURES

- CONDUCTIVE END CAPS and end cap adhesive reduce static charge within the vessel.
- O-RING SEAL minimizes the possibility of bypassing contaminated fuel.
- RUGGED CONSTRUCTION provides collapse strength exceeding 175 psi differential pressure.
- Recommended changeout: 25 psid
- One-half (1/2) micron filtration rating
- Can be used in fuels containing anti-icing additives (DiEGME, FSII, Prist®)

### DESCRIPTION

The Parker Velcon FOW cartridges are designed to provide superior performance and reliability in standard fuel filter housings through a unique combination of media that removes solids that may be present in the fuel, and provides for reduced static charge.

The cartridges have injection molded endcaps that are bonded to the media with an O-ring seal on the mounting nozzle.

As the cartridge removes dirt from the influent fuel there will be an increase in the differential pressure along with a decrease in flow rate. These changes are the result of flow restriction caused by dirt accumulation within the media. Cartridge changeout frequency will depend on the

volume of solid contaminants present.

The FOW Series Cartridges incorporate features that quickly dissipate electrostatic charge across the cartridge. This is in response to the new requirement by industry to reduce static charge within the filter monitor.





## SPECIFICATIONS AND TECHNICAL INFORMATION

- 175 psid (12 bar) collapse strength
- 160°F maximum operating temperature
- Recommended changeout differential pressure: 25 psid
- Daily draining of monitor vessel and of water bottoms upstream of the elements is IMPERATIVE.
- For service life information, please refer to Operating Procedures or consult your company fuel handling procedures.

## ORDERING INFORMATION

- Specify Parker Velcon Model Number from table below.
- Cartridges are packaged 20 per carton.



## CARTRIDGE SELECTION TABLE - FOW SERIES

Cartridge Flow Rate (USGPM)	Parker Velcon Model Number	Overall Length (Inches)	Dimensional Replacements for:			
			Parker Velcon CDF® (E, K, N or P Series)	Facet Model Number	Racor Model Number	Faudi Model Number
5	FOW-205	5 <sup>13</sup> /16	CDF-205	FG-205 (-3, -4, or -6) GNG-205	RMO-205-4-E —	M.2-134 (/4, /E or /6)
10	FOW-210	10 <sup>13</sup> /16	CDF-210	FG-210 (-3, -4, or -6) GNG-210	FMI-10203 FM-10202 RMO-210-4-E	M.2-261 (/4, /E or /6)
15	FOW-215	15 <sup>13</sup> /16	CDF-215	FG-215 (-3, -4, or -6) GNG-215	FMI-15203 FM-15202 RMO-215-4-E	M.2-387 (/4, /E or /6)
20	FOW-220	20 <sup>13</sup> /16	CDF-220	FG-220 (-3, -4, or -6) GNG-220	FMI-20203 FM-20202 RMO-220-4-E	M.2-515 (/4, /E or /6)
25	FOW-225	25 <sup>13</sup> /16	CDF-225	FG-225 (-3, -4, or -6) GNG-225	FMI-25203 FM-25202 RMO-225-4-E	M.2-642 (/4, /E or /6)
30	FOW-230	30 <sup>13</sup> /16	CDF-230	FG-230 (-3, -4, or -6) GNG-230	FMI-30203 FM-30202 RMO-230-4-E	M.2-770 (/4, /E or /6)

# Disposable Cartridges

DC Series & Permanent Filter Core Kits

CK-1479, CK-1480, CK-1481, CK-1482

High Efficiency, Long Life Cartridges for Aviation Fuel

## BENEFITS

- Disposable, Crushable and Incinerable
- Provides a convenient, cost-efficient method to recycle
- Lightweight, easy handling during installation and change-outs
- Dispose in accordance to Federal, State or Provincial, and Local regulations

## FEATURES

- Large Surface Area – allows high flow rate with low initial pressure drop and maximum contaminant holding capacity
- Resin Impregnated Media – maintains strength, resists effects of water and heat
- Aluminum Components – resists corrosion from most fluids
- Corrugated Media – prevents pleat pinch-off, assuring all filtration media is utilized
- Buna-N Gaskets – the best general gasket material available assures positive seal in most fluids
- Thermoset Adhesive Bonding Material – durable endcap-to-media bond prevents internal bypassing
- 98% Filtration Efficiency with Micron Ratings 1 and 5 microns

## LOWER COSTS

Savings are realized by reducing

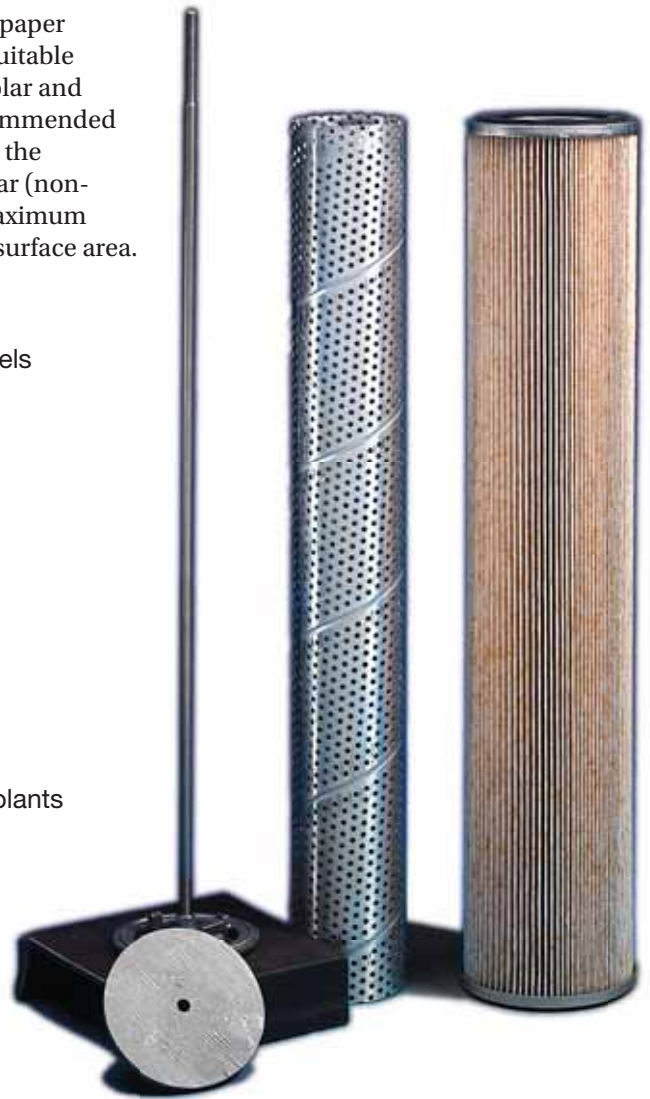
the volume of material you send to hazardous waste disposal facilities and by minimizing the time you spend on regulatory compliance record keeping, reporting and tracking.

## APPLICATIONS

Parker Velcon pleated paper media cartridges are suitable for a broad range of polar and non-polar fluids. Recommended for applications where the contaminant is granular (non-colloidal), allowing maximum utilization of the high surface area.

## SUITABLE FOR:

- All hydro-carbon fuels
- Toluol
- Cutting oils
- Lube oils
- Glycols
- Synthetic oils
- Degreasing fluids
- Ethyl alcohol
- Insulating oils
- Hydraulic oils
- Water emulsion coolants
- Naptha



CK-1480 with DC Series cartridge and cover plate

## CARTRIDGES - DC SERIES

All DC Series cartridges are 6" outside diameter and are offered in four lengths: 14", 29", 44" and 58".

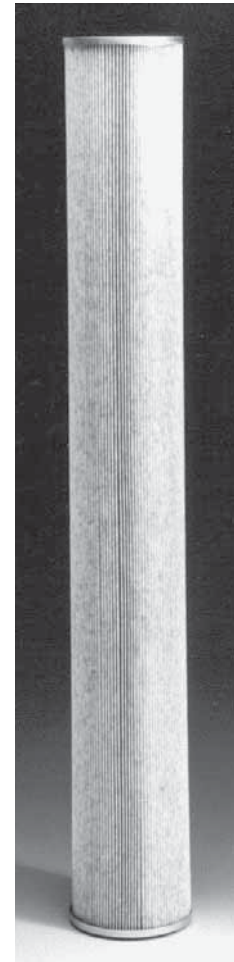
### SPECIFICATIONS

- Micron Ratings 1 and 5 microns
- 98% + Nominal Filtration Efficiency
- 5 - 9 Operating pH range
- 200° F Maximum Operating Temp

*Interchangeable with Facet CIF Disposable Cartridges - to use the Parker Velcon Disposable Cartridges, DC-Series, you must first have an Installation Kit installed.*

### FILTER CROSS- TABLE - DC SERIES

Parker Velcon P/N	Facet P/N	Length	Micron Rating	Parker Velcon Kit	Replaces Facet Kit
DC-614PLF1	CIF 1	14	1	CK-1479	CIF1KIT (14" KIT)
DC-629PLF1	CIF 1 x 2	29	1	CK-1480	CIF2KIT (29" KIT)
DC-644PLF1	CIF 1 x 3	44	1	CK-1481	CIF3KIT (44" KIT)
DC-658PLF1	CIF 1 x 4	58	1	CK-1482	CIF4KIT (58" KIT)
DC-614PLF5	CIF 5	14	5	CK-1479	CIF1KIT (14" KIT)
DC-629PLF5	CIF 5 x 2	29	5	CK-1480	CIF2KIT (29" KIT)
DC-644PLF5	CIF 5 x 3	44	5	CK-1481	CIF3KIT (44" KIT)
DC-658PLF5	CIF 5 x 4	58	5	CK-1482	CIF4KIT (58" KIT)



### PERMANENT FILTER CORE KITS - CK-1479, CK-1480, CK-1481, & CK-1482

Parker Velcon's permanent filter core kits mount easily into filter vessels to provide support for DC Series disposable cartridges. The core is a simple one-piece design that can be installed directly into the vessel, unlike the complicated multi-piece plastic designs. Parker Velcon's permanent cores have high quality, all aluminum construction and achieve 175 psi collapse strength. The one-piece design and smooth outer surface allow for easy installation and removal of the DC Series cartridges. Kits are available in 14", 29", 44" and 58" lengths.

Each kit includes the tube assembly, nuts and washers. Filters and additional hardware should be ordered separately.

NOTE: The Parker Velcon Permanent Support Tube Kits are designed for use only with standard 3/2" filter mounting adapters and appropriate length tie rods. The kit will not work with threaded base adapters.

The Parker Velcon Permanent Support Tube Kits are designed for use with either the Parker Velcon "DC" disposable cartridges or Facet CIF Series cartridges of appropriate length.

The Parker Velcon Permanent Support Tube Kits are designed to replace the Facet CIF Series Center Tube Kits.

# Inside-Out-Flow Filter

## FI Series - Specialized Filters for Use in Filter/Separator Vessels

The Parker Velcon FI Series of Inside-to-Out flow filter cartridges are specially designed to replace the coalescer elements in filter-separator vessels. The FI filter cartridges are excellent choices to reduce filtration costs when flushing new systems, or when a filter/separator vessel is used to remove particulate matter only and not water. (Many surplus F/S vessels in the field have been used as pre-filter/micronic vessels.)

The FG suffix, all fiberglass filter elements (e.g., FI-644FG5), are intended for colloidal or slimy type matter; whereas the PL suffix, pleated paper filter elements (e.g., FI-644PLF5), are intended for normal particulate matter.

- **98% filtration efficiency** with micron ratings from 1/2 and higher
- **Thermoset Adhesive Material** – Durable endcap-to-media bond prevents internal bypassing
- **Buna-N Gaskets** – The best general gasket material available, assures positive seals
- **Coated Steel Components** – Resist corrosion from most industrial fluids
- **75 psi Burst Strength** – Heavy gauge carbon steel endcaps and outer reinforcing give safety margin against pressure surges

### APPLICATIONS

- All Hydrocarbon Fuels
- Glycols
- Water Emulsion Coolants
- Toluol
- Insulating Oils
- Synthetic Oils
- Cutting Oils
- Degreasing Fluids
- Naphtha
- Ethyl Alcohol
- Lube Oils
- Hydraulic Oils

### SPECIFICATIONS

- 75 psi Burst Strength
- 98% Nominal Filtration Efficiency
- 5 - 9 Operating pH range
- 160°F Maximum operating temperature
- Micron Ratings from 0.5
- Inside-to-Out Flow
- Change out at 15 psid for Aviation applications



FI-644FG10TB



FI-644PL1/2TB

*Please note: Cartridges may not look exactly like those shown in photo.*

## CARTRIDGE INFORMATION

The following table lists the sizes and features of the available FI Series cartridges. Your local Parker Velcon Representative can provide more complete information.

Model	Dimensions	Nominal Micron Rating	Type of Filter Material	Features
FI-431FG10T	3.75" OD x 31.63" OAL	10	Fiberglass	Threaded Base
FI-431FG5T	3.75" OD x 31.63" OAL	5	Fiberglass	Threaded Base
FI-633FG10TB	6.0" x 33.0" OAL	10	Fiberglass	Threaded Base
FI-633PLF5	6.0" x 3.5" ID x 33.0" OAL	5	Pleated Paper	Open Ends
FI-638FG10TB	6.0" x 38.0" OAL	10	Fiberglass	Threaded Base
FI-638PL15	6.0" x 38.0" OAL	15	Pleated Paper	Open Ends
FI-644FG10	6.0" x 3.5" ID x 44.0" OAL	10	Fiberglass	Open Ends
FI-644FG10TB	6.0" x 44.0" OAL	10	Fiberglass	Threaded Base
FI-644FG5	6.0" x 3.5" ID x 44.0" OAL	5	Fiberglass	Open Ends
FI-644PL1/2TB	6.0" x 44.0" OAL	0.5	Pleated Paper	Threaded Base
FI-644PLF1/2	6.0" x 3.5" ID x 44.0" OAL	0.5	Pleated Paper	Open Ends
FI-644PLF5	6.0" x 3.5" ID x 44.0" OAL	5	Pleated Paper	Open Ends
FI-644PLF5TB	6.0" x 44.0" OAL	5	Pleated Paper	Threaded Base
FI-644PL25TB	6.0" x 44.0" OAL	25	Pleated Paper	Threaded Base
FI-644PLF25	6.0" x 3.5" ID x 44.0" OAL	25	Pleated Paper	Open Ends
FI-656PLF1	6.0" x 3.5" ID x 57.0" OAL	1	Pleated Paper	Open Ends
FI-656PL1/2TB	6.0" x 56.0" OAL	0.5	Pleated Paper	Threaded Base
FI-656PLF1TB	6.0" x 56.0" OAL	1	Pleated Paper	Threaded Base
FI-656PLF2	6.0" x 3.5" ID x 57.0" OAL	2	Pleated Paper	Open Ends
FI-656PLF2TB	6.0" x 56.0" OAL	2	Pleated Paper	Threaded Base
FI-656PLF5	6.0" x 3.5" ID x 56.0" OAL	5	Pleated Paper	Open Ends
FI-656PLF10TB	6.0" x 56.0" OAL	10	Pleated Paper	Threaded Base

# Filter Sizing Information – F0 Series Filters

## CARTRIDGE FLOW RATE (USGPM) VS. VISCOSITY DATA FOR 2 PSI AND 5 PSI INITIAL PRESSURE DROPS

Cartridge	33 SUS 2 CS		39 SUS 4 CS		46 SUS 6 CS		59 SUS 10 CS		98 SUS 20 CS		142 SUS 30 CS		187 SUS 40 CS	
	2 psi	5 psi	2 psi	5 psi	2 psi	5 psi	2 psi	5 psi	2 psi	5 psi	2 psi	5 psi	2 psi	5 psi
FO-614PLF1/2	68	68	50	66	33	65	20	50	10	25	7	17	5	12
FO-614PLF1	68	68	50	66	33	65	20	50	10	25	7	17	5	12
FO-614PLF2	68	68	66	66	65	65	52	64	26	63	18	44	13	33
FO-614PLF5	68	68	66	66	65	65	64	64	63	63	53	62	40	61
FO-614PLF25	68	68	66	66	65	65	64	64	63	63	62	62	61	61
FO-614PLF75	68	68	66	66	65	65	64	64	63	63	62	62	61	61
FO-718PL1/2	50	50	50	50	38	50	23	50	12	29	8	19	6	15
FO-718PL01	50	50	50	50	38	50	23	50	12	29	8	19	6	15
FO-718PL02	50	50	50	50	50	50	50	50	31	50	21	50	16	39
FO-718PL05	50	50	50	50	50	50	50	50	50	50	50	50	50	50
FO-718PL15	50	50	50	50	50	50	50	50	50	50	50	50	50	50
FO-718PL50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
FO-618FGA5	68	68	66	66	42	65	25	60	13	31	8	21	6	16
FO-618FGA10	68	68	66	66	50	65	30	64	15	38	10	25	8	19
FO-618FGA25	68	68	66	66	50	65	30	64	15	38	10	25	8	19

Cartridge	233 SUS 50 CS		348 SUS 75 CS		463 SUS 100 CS		927 SUS 200 CS		1390 SUS 300 CS		1853 SUS 400 CS		2316 SUS 500 CS	
	2 psi	5 psi	2 psi	5 psi	2 psi	5 psi	2 psi	5 psi	2 psi	5 psi	2 psi	5 psi	2 psi	5 psi
FO-614PLF1/2	4	10	3	7	2	5	1	3	1	2	–	1	–	1
FO-614PLF1	4	10	3	7	2	5	1	3	1	2	–	1	–	1
FO-614PLF2	10	26	7	18	5	13	3	7	2	4	1	3	1	3
FO-614PLF5	32	60	22	55	16	40	8	20	5	13	4	10	3	8
FO-614PLF25	60	60	59	59	45	58	22	55	15	50	11	28	9	23
FO-614PLF75	60	60	59	59	58	58	45	57	30	56	22	55	18	45
FO-718PL1/2	5	12	3	8	2	6	1	3	1	2	1	2	–	1
FO-718PL01	5	12	3	8	2	6	1	3	1	2	1	2	–	1
FO-718PL02	12	31	8	21	6	16	3	8	2	5	2	4	1	3
FO-718PL05	41	50	27	50	20	50	10	25	7	17	5	13	4	10
FO-718PL15	50	50	50	50	42	50	21	50	14	35	10	26	8	21
FO-718PL50	50	50	50	50	50	50	30	50	20	50	15	38	12	30
FO-618FGA5	5	13	3	8	2	6	1	3	1	2	1	2	1	1
FO-618FGA10	6	15	4	10	3	8	1	4	1	3	1	2	1	2
FO-618FGA25	6	15	4	10	3	8	1	4	1	3	1	2	1	2

**NOTE:** Figures in table are flow rates (US GPM) that will cause a pressure drop of 2 or 5 psi across the cartridge.

# Housing Selection Guidelines

## FILTER SIZING

1. Select the desired filter cartridge type and micrometer (micron) rating.
2. Determine the viscosity at the operating temperature for the fluid being filtered. See Bulletin 1533.
3. From the cartridge flow rate data estimate the flow rate that will result in a 2 psi differential pressure.
4. Divide the total desired flow rate by the flow rate determined in 3, above. This will give the required number of cartridges.
5. Select a filter housing that will hold the required number of cartridges.

## NOTES:

- a) For double and triple length cartridges find the flow rate for the equivalent single length cartridge and multiply by 2 or 3, as appropriate. For example, the triple length five micron rated FO-644PLF5M would have 3 times the flow rate of the single length five micron rated FO-614PLF5.
- b) For recirculating lube and hydraulic oil systems where contaminant generation will be slight, it is common practice to size for a 5 psi initial pressure drop.

## CONTAMINANT CAPACITY

Parker Velcon recommends filter cartridges be changed when they reach 25 psi differential or in accordance with your company's fuel handling procedures. The amount of contaminant a cartridge will hold before that point depends on many factors, the key one being the nature of the contaminant itself. A hard, particulate contaminant has very different filtration characteristics than a soft, gel-like contaminant.

Accurately estimating the life of a cartridge in a given application, therefore, is extremely difficult. However, when a cartridge has been sized for an initial pressure drop of 2 psi, the following rule of thumb is often employed for particulate contaminants: A 1 or 2 micrometer cartridge will hold up to 3 pounds of contaminant, and a 5 micrometer or greater cartridge will hold up to 5 pounds.

## REDUCED FLOW RATE EFFECTS

The filter sizing above is based on a 2 psi initial pressure differential which is a widely accepted industry standard. However, where heavy contaminant loads are anticipated, a substantial savings in operating costs for cartridges and filter change labor can be achieved by over-sizing the filter. **Reducing the flow rate per cartridge in half will increase the contaminant capacity of each cartridge by 30 to 50 percent. This means that doubling the size of the filter will increase the total throughput between cartridge changeouts by as much as three times.**

# Mission

Parker Velcon is committed to being the world's preferred company for the expert solutions we deliver to our customers.

# Values

Superior customer service

Profitable growth

Meet or exceed customer expectations

Accountability

Integrity

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