

#### Refilco® Products for Hydrocarbon & Lube



#### PL Series Pleated Cellulose Filters ......6-9

Reliable Protection for Critical Fluid System Components

The PL Series cartridge is designed and manufactured to provide superior performance as compared to more costly OEM filter cartridges. Refilco® replacement cartridges are available for over 80 global manufacturers. We also provide custom designed cartridges to meet your exact needs.



#### PLH Series Pleated Synthetic Media Filters ...... 10-11

Protect your investment with genuine Refilco® multi-layer synthetic media cartridges.

The PLH series cartridge is designed to provide superior filtration in a wide range of fluid applications. Utilizing advanced synthetic media pleated with epoxy coated wire backing, PLH series cartridges can withstand long-term use without softening or deterioration, especially in the presence of water.



#### PLG Series Pleated Microglass Filters......12-13

Superior design, strength, and performance provides absolute protection for critical lube/oil applications.

The superior design, strength, on-stream life and retention performance is what the PLG series offers. The heart of the filter is the pleated micro glass that gives the PLG series absolute protection, broader range of applications and unmatched performance. Each pleat is supported by epoxy coated wire mesh combined with corrosion resistant metal core and end caps. The coating provides corrosion protection necessary for even the harshest environments.



#### **Applications**

#### **Applications**

- · Insulating Oil
- Hydraulic Oil
- Gear Oil
- Fuel
- Fuel Oil
- Lubricants
- Machine Cutting Fluids

#### **Quality Replacements for**

- Filtration Group (Fram, Facet)
- Parker Hannifin (Purolator, Kaydon, Velcon)
- Hilco (Hilliard)
- Schroeder

#### **Features**

- Ultra Protection Media (½ & 1  $\mu m)$  Multi-layer pleated construction
- Critical Services Media (1 to 3 μm) Single layer fine cellulose fiber impregnated and corrugated filter media
- Industrial Grade Media (5 to 40 μm)
   Single layer heavy duty cellulose
   fiber impregnated with resin
   providing high flow rates, low
   pressure drop and longer service life

#### **Applications**

- Turbine Lube Oil
- · Compressor Lube Oil and Seal Oil
- · High Water Based Fluid
- Hydraulic Oil
- · Cutting Coolants
- Fuels
- Hydraulic Oils
- · Rolling Mill Oil
- Chemicals
- Glycols and Amines

#### **Designed** for

- Demanding filtration applications
- Synthetic media design provides higher flow rates
- Longer on-stream life than paper media types
- Superior performance for models
- · Various micron ratings available
- Longer life reduces downtime and requires lower maintenance

#### **Features**

- Multi-layer synthetic media with rigid wire backing
- · High flow rates per unit area
- Long-term resistance to deterioration caused by water
- Superior particle separation efficiencies
- Wide range of chemical compatibility

#### **Applications**

- Compressors
- Gas turbines
- · Industrial machines

#### **Designed for**

- Challenging applications
- High dirt loading
- · Low pressure drop
- · Unmatched on-stream life

#### **Features**

- Long life and increased dirt holding capacity with densely packed micro fibers
- Constructed with strong adhesive to eliminate contaminated fluid bypass
- · Absolute protection
- · Heavy duty construction

<sup>\*</sup> Contact FAA Filters to assure compatibility for chemicals not listed.

#### FAA Filters History of Excellence - Refilco®

#### **FAA Filters**

FAA Filters products are in service providing quality filtration worldwide. Our filters are used to clean up liquid fuels, lubricating and hydraulic oils, processing liquids, solvents and coolants by either removing harmful solid particulates or by absorbing soluble contaminants from the fluid stream. Refilco® technologies provide reliable protection from damage to mechanical elements—bearings, valves, seals, pistons, injectors—or any other critical fluid system components. Confident and secure, that's how people feel when they have Refilco® in their plant.

### **Experience — Performance — Solutions — Service**

#### **FAA Filters LLC**

74,000 sqft Headquarters, Engineering, Design and Manufacturing in Newark, NY USA

FAA Filters is located in Newark, New York. Since inception, our designs are based on the principle of superior filtration with the introduction of several patented filter products and offering our customers significant filtration advantages. FAA Filters has continued its strong tradition of innovation with its continuing aggressive research and development activity and has several additional patents in place.

FAA Filters management team brings decades of filtration manufacturing experience including R&D, manufacturing, operational and continuous improvements, quality and safety and lean manufacturing.

#### RESEARCH and DEVELOPMENT

FAA Filters is committed to innovative thinking to give customers a competitive edge in the marketplace. We realize the key to our success is having a research and development team that can work with customers to develop new filters exclusively designed for their application as well as re-engineer existing products. FAA Filters has the ability to provide you with fluid contaminant testing and particle profiling, air filter testing for pressure drop, dirt holding and particle efficiency, Frazier testing, bubble point testing and microscopic analysis.

#### **ENGINEERING**

We have the design and engineering ingenuity to meet virtually any industrial filtration need. Our modern solid modeling CAD design engineering system ensures a quick turnaround of proposals for design and formal order documents.

#### **PRESSURE VESSELS**

FAA Filters has the ability to supply pressure vessels for air, gases and liquids, to globally recognized standards including:

ASME SEC VII DIV I United States	CODAP/SDM France	<b>BS550</b> United Kingdom
AD2000 Germany	<b>CRN</b> Canada	PED (97/23/EC) United Kingdom & European Economic Areas



#### **Manufacturing & Engineering Capabilities**

- Filter Cartridge Design, Engineering, Testing and Manufacturing
- Application Assistance
- Filter Housing Design, Engineering and Manufacturing
- Multiple pleaters technologies
- · Semi-automated assembly
- · Metal fabrication and filter assembly
- · Laboratory testing facilities

#### **Metal Forming**

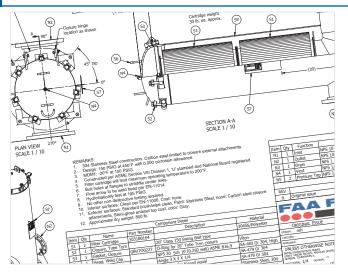
- Slitting
- · Forming
- Rolling
- Welding

#### **Pleating**

- Media:
  - cellulose
  - synthetic
  - microglass
  - fiberglass
  - wirebacked
  - membranes
- Pleat height range: 1/4 to 12 in., single to multi-layers
- Multiple pleating technologies available

#### Adhesive dispensing

- Metered mixing and dispensing units for
  - Ероху
  - Polyurethane
  - Self-adhering adhesives
  - Moldable plastisols





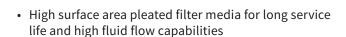


#### PL Series Pleated Cellulose Filter

## Reliable Protection for Critical Fluid System Components

Industry's Choice for Performance, Quality & Value

The right cartridge to handle tough industrial fluid applications



- Designed and built to eliminate contaminated fluid bypass for absolute protection
- Heavy gauge metal end caps providing unequalled cartridge sealing integrity
- Many gasket, bonding and metal component materials are available for specific fluid compatibility requirements
- Multiple cartridge size and filter media for flexible design options to satisfy your specific filtration requirement
- Performance backed by over 80 years experience in design, testing and manufacturing of liquid filter cartridges



#### Versatility

The **PL Series** cartridge is designed and manufactured to provide superior performance as compared to more costly OEM filter cartridges. Refilco® replacement cartridges are available for over 80 global manufacturers. We also provide custom design cartridges to meet you exact needs.

#### **Performance**

Cartridges are available in multiple micron ratings from ½ to 40 micron nominal. Extensive R&D has led to high performance and unparalleled reliability in inventory and allows us to select the proper micron rating and material for optimum system performance.



#### PL Series Pleated Cellulose Filter

#### Features & Applications

Illtra protection.	1/2 & 1 Micron Nominal
<ul> <li>Ultra protection:</li> <li>Insulating Oils</li> <li>Servo Valve Protection</li> <li>High Pressure Hydraulics</li> <li>Speed Rotating Components</li> <li>Fluid Test Stand</li> <li>Final Filtration</li> </ul>	Multi-layer pleated construction featuring Refilco® ½ micron glass fiber media carefully laminated on both sides with strong cellulose fiber paper providing prefiltration and media pleat integrity.
Critical service:  Seal Oil Hydraulic Oil Diesel Fuel Injection Terminal Storage Gear Oil Lubricating Oil Final Filtration	1 to 3 Micron Nominal Single layer fine cellulose fiber impregnated and corrugated filter media are processed by FAA Filter's unique computer controlled pleat curing equipment.
<ul> <li>Industrial grade:</li> <li>Lubricating Oil</li> <li>Cutting fluid</li> <li>Solvents</li> <li>Distillate Fuel</li> <li>Fuel Oil</li> <li>Low Press Hydraulics</li> </ul>	5 to 40 Micron Nominal Single layer heavy duty cellulose fiber impregnated with resin providing high flow rates, low pressure drop and long service life.

#### **Quality Replacements for:**

- Filtration Group (Facet, Kaydon, Purolator)
- Parker Hannifin (Velcon, Racor, Baldwin)
- Hilco (Hillard)
- Schroeder

#### PL Series Replacement Liquid Filter Cartridges

#### **Cartridge Construction**

	Cartridge Component				
	Gasket (A)	Filter Media	Inner/Outer Body (C)	End Caps (D)	Bonding (E)
Material Options	<ul> <li>Buna N*</li> <li>Cork**</li> <li>Fiberboard**</li> <li>Neoprene**</li> <li>Silicone**</li> <li>Viton®**</li> </ul>	Resin impregnated cellulose fiber	<ul> <li>Corrosion resistant plated steel*</li> <li>Stainless steel**</li> </ul>	<ul> <li>Corrosion resistant plated steel*</li> <li>Stainless steel**</li> </ul>	<ul><li>Plastisol*</li><li>Urethane**</li><li>Silicone**</li><li>Epoxy**</li></ul>

<sup>\*</sup>standard

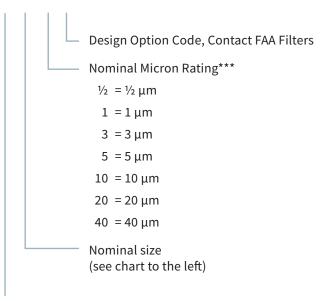
<sup>\*\*</sup> option

PL Series Product Line				
Series	OD (in.)	OAL (in.)	Replaces	
PL 310	2 5/8	9 3/4	Hilco	
PL 330	2 5/8	29 5/8	Hilco	
PL 418	4	18 1/4	Purolator	
PL 424	4 1/2	24 1/8	Purolator	
PL 512	4 1/2	12	Purolator	
PL 518	6	17 7/8	Kaydon	
PL 607	6	7 1/2	Purolator	
PL 608	6	8	Purolator	
PL 614	6	14 1/2	Facet, Fram, Velcon	
PL 618	6	18	Facet, Velcon	
PL 629	6	29	Facet, Velcon	
PL 636	6	36	Facet, Velcon	
PL 644	6	44	Facet, Velcon	
PL 656	6	56	Facet, Velcon	
PL 718	6	18	Hilco, Facet	
PL 736	6	36	Hilco, Facet	

The table above represents only a portion of the many different size PL cartridges manufactured. Please contact FAA Filters for detail on our complete product line.

#### **Cartridge Part Numbering**

PL 614 - 5 10



Media Type: PL = Pleated Cellulose

(Other media types available)

#### **Operational Limits**

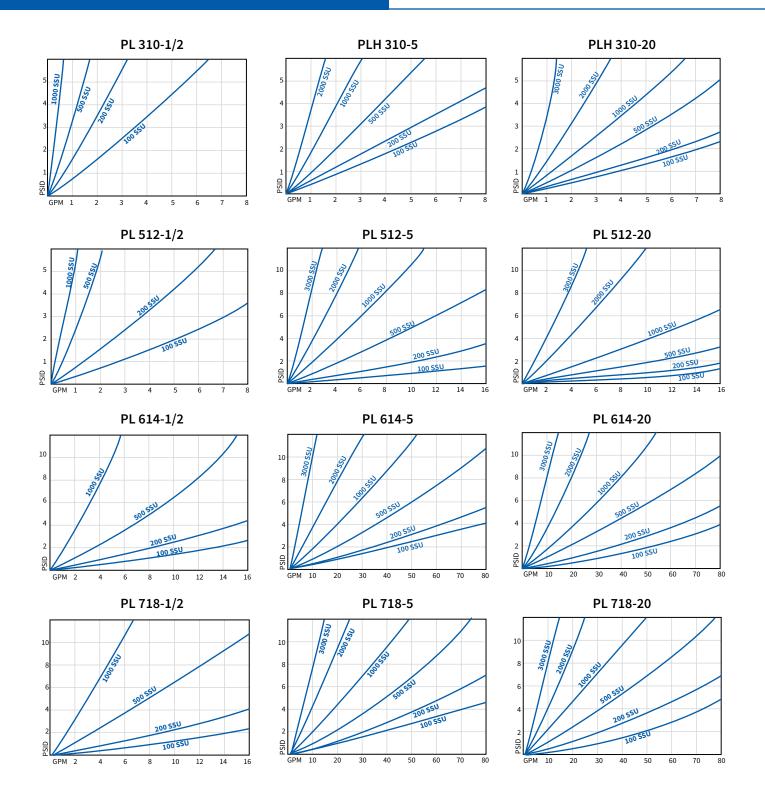
Max. Temperature: 250 °F / 121 °C
 Min. Temperature: -20 °F / -7 °C
 Std. Collapse Rating: 70 PSID / 482 kPA
 Recommended Change Out: 25 PSID / 172 kPA

FAA Filters can custom design to meet your exact specifications.

<sup>\*\*\*</sup> Contact FAA Filters for absolute efficiencies specific to your applications.



#### Flow vs. Differential Pressure



#### PLH Series Synthetic Media Filter

# Protect your investment with genuine Refilco® multi-layer synthetic media cartridges



Refilco® PLH Series cartridge is designed to provide superior filtration in a wide range for fluid applications. Utilizing advanced synthetic media pleated with epoxy coated wire backing. PLH Series cartridges can withstand long-term use without softening or deterioration, especially in the presence of water.

The combination of the multi-layer microglass and polyester media pleated with the rigid wire backing, optimizes filtration and flow capacities. The synthetic fiber matrix design increases pore volume per unit of area providing for high flow rates and precise filtration efficiencies.

The **PLH series** is available in a wide range of micron ratings to meet the demands for filtration of mineral oils, synthetic fluids, non-potable water, water based fluids and chemicals.

#### **Features**

- · Multi-layer synthetic media with rigid wire backing
- · Higher flow rates per unit area
- · Long-term resistance to deterioration caused by water
- · Superior particle separation efficiencies
- · Wide range of chemical compatibility
- High dirt holding capacity reducing maintenance cost
- Directly interchangeable with standard pleated paper cartridges



#### PLH Series Synthetic Media Filter

Pe	rtn	ırm	าลท	$\boldsymbol{c}$
			u	

Nominal\*\* **Efficiency Rating** 0.5 μm 1.0 μm  $3.0 \mu m$ 5.0 µm  $10.0 \, \mu m$ 20.0 μm 40.0 μm Max. Operating Temperature: 250 °F / 121 °C Min. Operating Temperature: -20 °F / -7 °C Collapse Pressure: 75 PSID / 517 kPa Recommended Change-out: 25 PSID / 172 kPa

#### **Applications**

**PLH Series** cartridges are recommended for a wide range of industrial applications where increased structural integrity and performance are demanded.

- Turbine Lube Oil
- · Compressor Lube and Seal Oil
- High Water Based Fluids
- · Cutting Coolants
- Fuels
  - Diesel\*
  - Terminal Storage
  - Backup Generator
  - Gasoline
  - Duel Fuel Engine Turbine Lube
- Hydraulic Oils
- Rolling Mill Oil
- Chemicals
- Glycols and Amines

<sup>\*</sup> See FAUDI Diesel literature for more details

<sup>\*\*</sup> Contact FAA Filters for absolute efficiencies for your specific applications.

#### PLH Series Synthetic Media Filter

#### **Cartridge Construction**

	Cartridge Component				
	Gasket (A)	Filter Media	Inner/Outer Body (C)	End Caps (D)	Bonding (E)
Material Options	<ul> <li>Buna N*</li> <li>Cork**</li> <li>Fiberboard**</li> <li>Neoprene**</li> <li>Silicone**</li> <li>Viton®**</li> </ul>	• Pleated synthetic	<ul> <li>Corrosion resistant plated steel*</li> <li>Stainless steel**</li> </ul>	<ul> <li>Corrosion resistant plated steel*</li> <li>Stainless steel**</li> </ul>	<ul><li>Plastisol*</li><li>Urethane**</li><li>Silicone**</li><li>Epoxy**</li></ul>

<sup>\*</sup>standard

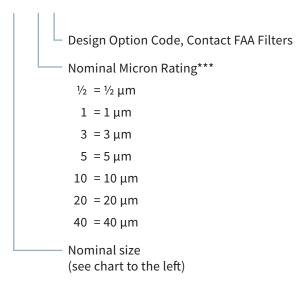
<sup>\*\*</sup> option

PLH Series Product Line				
Series	OD (in.)	OAL (in.)	Replaces	
PLH 310	2 5/8	9 3/4	Hilco	
PLH 330	2 5/8	29 5/8	Hilco	
PLH 418	4	18 1/4	Purolator	
PLH 424	4 1/2	24 1/8	Purolator	
PLH 512	4 1/2	12	Purolator	
PLH 518	6	17 7/8	Kaydon	
PLH 607	6	7 1/2	Purolator	
PLH 608	6	8	Purolator	
PLH 614	6	14 1/2	Facet, Fram, Velcon	
PLH 618	6	18	Facet, Velcon	
PLH 629	6	29	Facet, Velcon	
PLH 636	6	36	Facet, Velcon	
PLH 644	6	44	Facet, Velcon	
PLH 656	6	56	Facet, Velcon	
PLH 718	6	18	Hilco, Facet	
PLH 736	6	36	Hilco, Facet	

The table above represents only a portion of the many different size PLH cartridges manufactured. Please contact FAA Filters for detail on our complete product line.

#### **Cartridge Part Numbering**

PLH 614 - 5 10



Media Type: PLH = Pleated Synthetic

(Other media types available)

#### **Operational Limits**

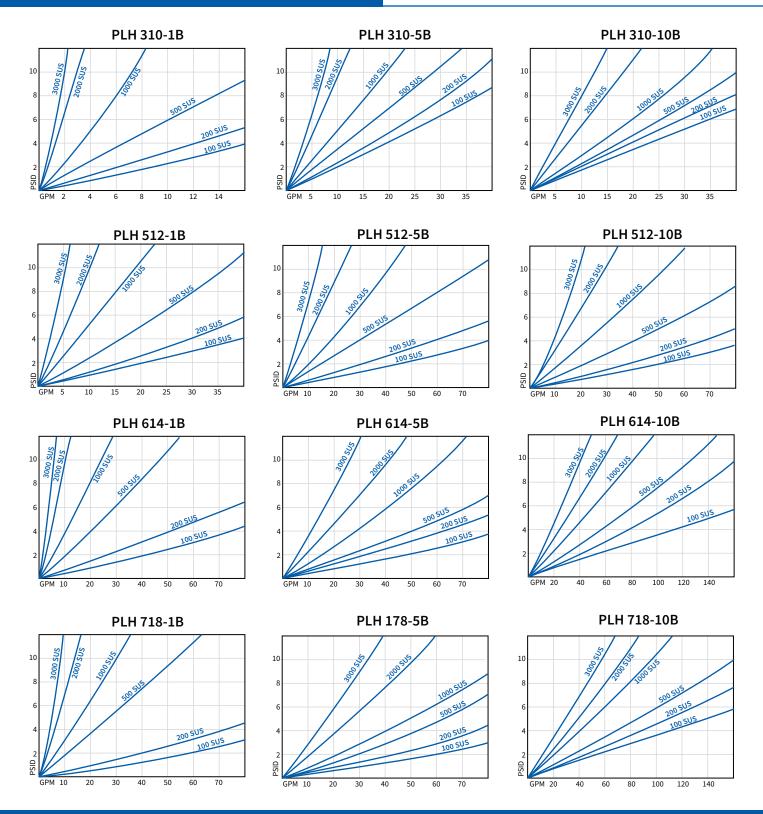
Max. Temperature: 250 °F / 121 °C
 Min. Temperature: -20 °F / -7 °C
 Std. Collapse Rating: 70 PSID / 482 kPA
 Recommended Change Out: 25 PSID / 172 kPA

FAA Filters can custom design to meet your exact specifications.

<sup>\*\*\*</sup> Contact FAA Filters for absolute efficiencies specific to your applications.



#### PLH Series - Flow vs Pressure Differential



#### PLG Series™ Pleated Microglass Filtration

# Superior design, strength, and performance provides absolute protection for critical lube/oil applications

The superior design, strength, and performance is what the PLG Series™ offers. The heart of the filter is the pleated depth fiberglass, giving the PLG Series™ absolute protection, broader range of applications and unmatched performance.

Each pleat is supported by epoxy coated wire mesh combined with corrosion resistant plated steel coating core to provide protection necessary for even the harshest environments.

#### **Benefits & Features**

#### • Dirt Holding Capacity

Filter media in the PLG Series™ consists of densely packed micro fibers thats create increased surface area. More surface area in a single filter means longer life and increased dirt loading for challenging filtration applications.

#### Absolute Protection

Concerns about particles bypass and lube/oil protection has reached a new level as heavy industrial equipment internals requires tighter tolerances. 98.6% efficient (Beta 75)\* protection proven by independent multi-pass lab testing to ISO16889 standards.

Optimal protection = Extended service life

#### Adhesives

Each PLG Series™ filter is constructed with superior adhesives, eliminating contaminated fluid bypass.



#### **Applications**

- Compressors
- Gas Turbines
- Industrial Machines
- · Rolling Mill Oil
- High Contamination

#### Performance

• Efficiency: 10, 15, 30 μm\*\*\*

Max. Temperature: 250 °F
 Collapse Strength: 75 PSID
 Recommended Change: 25 PSID

#### **Specification**

Media: Microglass Fiber

Outer Support,

inner core, end caps: Corrosion Resistant Plated Steel



#### PLG Series™ Cost Savings

#### **Cartridge Construction**

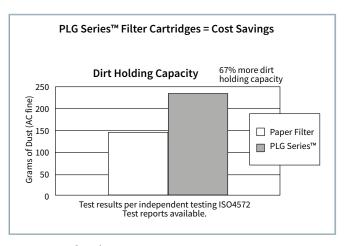
	Cartridge Component				
	Gasket (A)	Filter Media	Inner/Outer Body (C)	End Caps (D)	Bonding (E)
Material Options	<ul> <li>Buna N*</li> <li>Cork**</li> <li>Fiberboard**</li> <li>Neoprene**</li> <li>Silicone**</li> <li>Viton®**</li> </ul>	Pleated depth microglass	<ul> <li>Corrosion resistant plated steel*</li> <li>Stainless steel**</li> </ul>	<ul> <li>Corrosion resistant plated steel*</li> <li>Stainless steel**</li> </ul>	<ul><li>Plastisol*</li><li>Urethane**</li><li>Silicone**</li><li>Epoxy**</li></ul>

<sup>\*</sup>standard

<sup>\*\*</sup> option

PLG Series Product Line				
Series	OD (in.)	OAL (in.)		
PLG 310	2 5/8	9 3/4		
PLG 330	2 5/8	29 5/8		
PLG 418	4	18 1/4		
PLG 424	4 1/2	24 1/8		
PLG 512	4 1/2	12		
PLG 518	6	17 7/8		
PLG 607	6	7 1/2		
PLG 608	6	8		
PLG 614	6	14 1/2		
PLG 618	6	18		
PLG 629	6	29		
PLG 636	6	36		
PLG 644	6	44		
PLG 656	6	56		
PLG 718	6	18		
PLG 736	6	36		

The table above represents only a portion of the many different size PLG cartridges manufactured. Please contact your local FAA Filters distributor for detail on our complete product line.



#### **Part Numbering**

#### PLG 515 - 10 10

Design Option Code. Contact FAA Filters.

Micron Rating (nominal)\*\*\*

1 = 1 μm

10 = 10 μm

40 = 40 μm

Nominal sizes
(See table on the left)

Media Type: PLG = Pleated Microglass

<sup>\*\*\*</sup> Contact FAA Filters for absolute efficiencies specific to your applications.



#### If You Need a Filter to Make It, We Make a Filter for It





- Quality Replacement Lube/Oil Filters
- Hydraulic Filters
- Synthetic Lube/Oil Filters
- Fuel Filters





- Air & Gas Pressure Filters
- Air Intake Filters
- Panel Filters
- Pressure Vessels



FAA Filters headquarters in Newark, New York.

FAA Filters can custom design a filter solution for your specific application. Please call +001 (800) 265-8943 and ask to speak to an application engineer.

FAA Filters reserve the right to change design and/or specification without notice.

FAAF006 0623