

FUEL PURIFICATION SKID ASSEMBLIES AND SYSTEMS

The Model FC systems are diesel fuel particulate filtration and water separation systems. The larger FC systems are designed for installation in high flow-rate fuel transfer lines, and the smaller FC systems are designed for fuel purification during fuel transfer operations or for circulation/purification of a diesel fuel tank. The FC systems are ruggedly designed for use in areas such as mining, marine, emergency back-up power, agriculture, construction, or anywhere diesel fuel is transferred and stored.



One-Pass™ Diesel Fuel Purification Systems

Keep Diesel Fuels Clean and Water-Free

#2 Diesel fuels, including those with additive packages and blended biodiesel up to B20

Kaydon FC Systems offer the capability to handle substantially higher flow rates than traditional fuel/water separators in the same size assembly.

Contamination begins from the moment diesel fuel #2 leaves the refinery and begins its journey to its destination. Dirt, water, and other debris finds its way into the fuel as it is transported and stored. If unchecked, contamination can lead to excessive wear, down-time, or even damage to expensive, diesel powered equipment.

Today's modern diesel engines require clean and dry fuel to run smoothly and reliably. High-pressure injectors and close tolerance components leave little toleration for contaminated fuels. The Kaydon Filtration fuel purification One-Pass™ Fuel Conditioning, (FC), systems give assurance that #2 diesel fuels, including those with additive packages and blended biodiesel up to B20, are clean, water-free, and exceed the latest ASTM D975 Diesel Fuel #2 Specification¹.

Kaydon Fuel Conditioning

In industrial applications like mining, construction, marine, power generation, agriculture, combustion turbine fuel forwarding, or anywhere diesel fuel is transferred or stored, the FC Series removes water and particulates from your diesel fuel. Placed in series with your fuel flow line or recirculating a fuel storage tank, the One-Pass FC multi-stage conditioning process removes dirt, debris, and water before the fuel is dispensed into diesel engine fuel tanks. Kaydon One-Pass FC systems offer the capability to handle substantially higher flow rates than traditional fuel/water separators in the same size assembly using Kaydon Filtration CI3510-P (p/n C220052) or CI3520-P (p/n C220049) coalescer elements. Kaydon coalescer elements can be used in diesel fuel #2 and biodiesel blends up to B20. (See CI35XXP series datasheet for full specifications and performance details.)

The Kaydon One-Pass FC systems are available with a wide array of options. Contact Kaydon Filtration technical support to discuss your specific requirements.

Applications

Diesel Fuel #2

Biodiesel Blends up to B20

Features

Pre filter

Coalescer / Separator Stage

Single skid mounting with forklift points

Benefits

Removes damaging particulate and debris from the fuel.

Water removal provides drier fuel to protect internal engine components and prevent water-related fuel issues and final polishing for additional particulate removal

Conveniently designed on a single skid for accessible system positioning; includes drip containment rim, drain port and mounting



FC1



FC2



FC9



FC5

One-Pass™ Diesel Fuel Purification Systems

Specifications and Details

System Flow (Maximum)	Model	gpm	lpm	
	FC-1	10	38	
	FC-2	20	75	
	FC-3	60	227	
	FC-5	100	378	
	FC-7	200	756	
	FC-9	320	1211	
Environmental Parameters	NEMA 4 Minimum Temperature: 32° F / 0° C Maximum Temperature: 104° F / 40° C			
Operating Voltage	460 VAC / 3 PH / 60 HZ			
Pump/Motor Assembly	Model	Pump	Motor	
	FC-1	Positive Displacement (gear)	1 HP / 0.75 KW	
	FC-2	Positive Displacement (gear)	2 HP / 1.49 KW	
	FC-3	Positive Displacement (gear)	5 HP / 3.73 KW	
	FC-5	Positive Displacement (gear)	15 HP / 11.19 KW	
	FC-7	Positive Displacement (gear)	20 HP / 14.19 KW	
	FC-9	Positive Displacement (gear)	30 HP / 22.37 KW	
Materials of Construction	Metals: Carbon Steel, Stainless Steel Seals: Fluoropolymer Paint: Epoxy			
Inlet/Outlet Connections	Type	Type	Inlet	Outlet
	FC-1	150# Raised Face ANSI Flange	1.5 inch / 38.1 mm	1 inch / 25.4 mm
	FC-2	150# Raised Face ANSI Flange	2 inch / 50.8 mm	1.5 inch / 38.1 mm
	FC-3	150# Raised Face ANSI Flange	2 inch / 50.8 mm	2 inch / 50.8 mm
	FC-5	150# Raised Face ANSI Flange	3 inch / 76.2 mm	3 inch / 76.2 mm
	FC-7	150# Raised Face ANSI Flange	4 inch / 101.6 mm	4 inch / 101.6 mm
	FC-9	150# Raised Face ANSI Flange	6 inch / 152.4 mm	6 inch / 152.4 mm
System Pressure (Maximum)	≤ 150 psig / 10.34 BAR			
Fluid Compatibility	#2 Diesel Fuel, Biodiesel Blends up to B20			
Performance	Particulate ²	ISO Cleanliness Code 16/14/12 Fluid @ 50° F / 10° C		
	Water ²	Removal to less than 130 ppm (Total Water) @ 72° F		
Dimensions (approximate) <small>(*FC-1 and FC-2 - includes pump/motor)</small>	Model	Inches (L x W x H)	mm (L x W x H)	
	FC-1*	36 x 28 x 41	120 x 686 x 2032	
	FC-2*	40 x 36 x 52	1016 x 914 x 1295	
	FC-3	74 x 31 x 65	1880 x 787 x 1651	
	FC-5	98 x 41 x 53	2489 x 1041 x 1336	
	FC-7	104 x 41 x 75	2642 x 1041 x 1905	
	FC-9	104 x 57 x 88	2640 x 1448 x 2235	
Weight (approximate)	Model	lbs.	kg	
	FC-1	790	358	
	FC-2	910	413	
	FC-3	900	410	
	FC-5	1230	560	
	FC-7	3190	1447	
	FC-9	3700	1680	

1. Limit = 0.050 maximum water and sediment, units = % volume (free and emulsified water only) - Test Method ASTM D 2709: Water and Sediment in Middle Distillate Fuels by Centrifuge

2. Influent : Particulate < ISO 22/19/17 and water <5000 ppm. Particulate measured with inline automatic particle monitor calibrated to ISO 11171. Total Water content (free, emulsified and dissolved) as measured by ASTM D6304-04 (Karl Fischer method).

All design specifications are subject to change without notice.