SY-KLONE® INTERNATIONAL

RESPA®-CFX2

CAB Air Quality System

Powered Recirculation Filtration

The Hidden Impact of Recirculation Filtration

Most recirculation filters are panel filters, which are prone to seal leakage which allows air to bypass the filter, are not effective at removing particulate at sizes that are harmful to human respiration, and provide little or no protection for your expensive HVAC components and cab electronics.

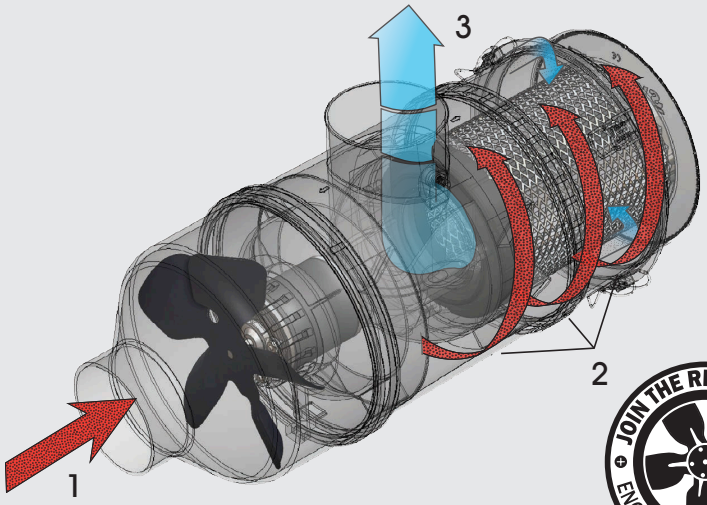
The revolutionary design of RESPA-CFX2 allows it to do what other recirculation filters cannot.

High-Efficiency Recirculation Filtration and Pressurization

RESPA-CFX2, the second component of a complete cab air quality system, provides powered, high-efficiency recirculation filtration with your choice of included MERV 16/F9 or HEPA/H13/ISO35H filter in standard and extended lengths.

Benefits

- Protects the operator by reducing respirable contaminants that can be re-entrained into the airflow
- Improves operator comfort by allowing HVAC to operate efficiently
- Reduces dust accumulation, protecting expensive HVAC and electronics
- In almost all cases, exposure reduced below PEL, facilitating regulatory compliance
- 100% seal integrity eliminates filter bypass
- Interchangeable filtration options
- Durable, compact, and customisable



How it Works:

1. Debris-laden air enters the unit where it is whipped into a vortex by the fan blades.
2. Particulate is flung to the outer walls as cleaner air is pushed through the filter.
3. Air passes through a high-efficiency radial-seal filter, allowing only clean air to enter the HVAC mixing plenum.

Why High-Efficiency Recirculation Filtration is Important

The majority of the airflow in the cab is provided by the recirculation system. Fresh air precleaning and filtration is just the first step. **Harmful particulate is also entering the cab airflow through other methods:**

- The door or window is opened
- Operator enters with dust on clothing and boots
- Dust built up in upholstery puffs out as operator moves on the seat
- Operator movements disturb dust that has settled in the cab

Without high-efficiency recirculation filtration that can't be bypassed, harmful dust can be quickly re-entrained into the airflow.

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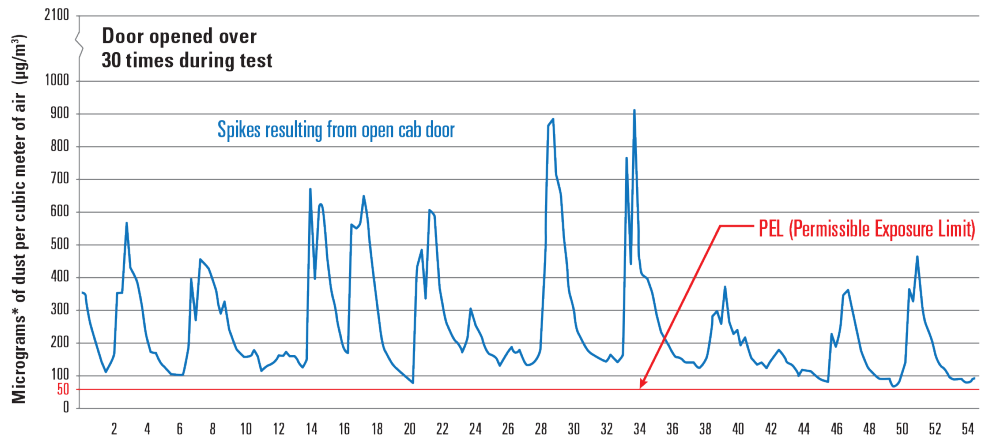
Before RESPA

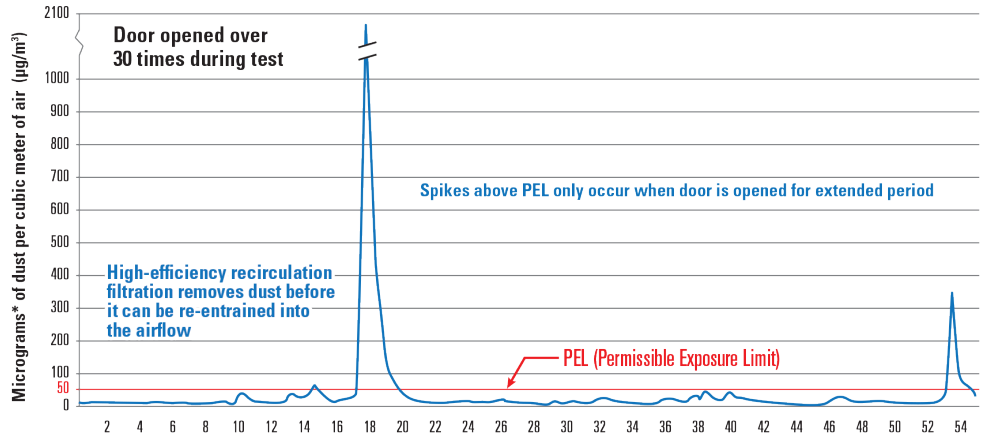
Dust concentrations in drill cab — Factory HVAC Filtration with Pressurizer/Blower installed



*A microgram is one millionth of a gram.

After RESPA

Dust concentrations in drill cab — Sy-Klone® RESPA® Complete Cab Air Quality System Installed



*A microgram is one millionth of a gram.

What is DECAY RATE?

When dust enters the cab, the length of TIME it takes for the air quality to return to the Permissible Exposure Limit (PEL) is called the decay rate.

Before:
In the first graph on the left, before installation of the RESPA high-efficiency recirculation filtration, the inefficient factory HVAC filtration system never allowed the dust concentration to fall below the Permissible Exposure Limit.

After:
The RESPA high-efficiency recirculation filtration reduced the decay rate so dramatically that dust concentrations stayed below the PEL except when the door was opened for an extended period.

RESPA-CFX2 High-Efficiency Recirculation Filtration Systems

Part Number	Voltage	Filter			Outer Diameter	
		Type (See Specs Below)	Part Number	Length	101.6 mm	76.2 mm
RCF2085	12	MERV 16/F9	FEFF111	STANDARD	•	
RCF2086	24					
RCF2093	12	HEPA/H13	FEFF110			
RCF2094	24					
RCF2087	12	MERV 16/F9	FEFF112	EXTENDED	•	
RCF2088	24					
RCF2095	12	HEPA/H13	FEFF113			
RCF2096	24					

RESPA-CFX2 High-Efficiency Recirculation Filtration Systems (continued...)

Part Number	Voltage	Filter			Outer Diameter	
		Type (See Specs Below)	Part Number	Length	101.6 mm	76.2 mm
RCF2089	12	MERV 16/F9	FEFF111	STANDARD		•
RCF2090	24					
RCF2097	12	HEPA/H13	FEFF110			
RCF2098	24					
RCF2091	12	MERV 16/F9	FEFF112	EXTENDED		•
RCF2092	24					
RCF2099	12	HEPA/H13	FEFF113			
RCF2100	24					

The RESPA-CFX2 offers two sizes to maximize your precleaning ability.

Standard Length Filter Housing

For longest filter life use extended-length system.

Extended Length Filter Housing

RadialSHIELD®

HIGH-EFFICIENCY FILTRATION

RESPA-CFX2 Interchangeable Filter Options

No Filter bypass! Radial seal provides 100% filter seal integrity!

MERV 16/F9:

Patented filter sheds dirt continuously; long-lasting and high efficiency, recommended for all uses unless HEPA level filtration required.

- Media rated **MERV 16** at 150 CFM (255 m³/h) airflow with 95% efficiency of 0.3 µm to 1.0 µm particle size;
- Rated **F9** under EN779 at 150 CFM (255 m³/h) airflow with 95% efficiency of 0.4 µm (Em) particle size.

HEPA/H13/ISO 35H:

Patented filter for the most demanding environments.

- Rated **H13** under EN1822-1 and **35H** under ISO 29463-1 at 100 CFM (170 m³/h) with initial efficiency ≥99.95% at MPPS (0.1 µm to 0.3 m particle size).0.4 µm (Em) particle size.

RESPA-CFX2 Specifications

For weights, dimensions, and restriction, see individual model pages.

Operating Range:

Ideal operation range: 0 CFM to 130 CFM (0 m³/min to 3.68 m³/min)

Extended operation range: Up to 250 CFM (7.08 m³/min)

Operation Temperature:

-40 °C to + 80 °C continuous; +100 °C short exposure

Construction: Glass-filled injection moulded polypropylene exterior

Brushless Motor Specifications

Amperage

12 V*: Startup: 20 A; Running: 12 A • **24 V***: Startup: 14 A; Running: 6A

Operating Temperatures: -40 °C to 80 °C

The brushless motors include over/under-voltage, overheating protection.

Mounting Orientation: Horizontal or vertical

Pressurization: Designed to promote cab pressurization when used in conjunction with the RESPA-CF2, even when A/C is off.

Warranty: Three (3) Years from date of purchase

*Amperage numbers above are averages; actual motor amp draw may vary.
**Expected motor life based on standard operating conditions.

Usage Considerations

Actual Cabin Air Quality: Air quality is measured at the point of the ACF outlet. Many factors, such as how well the cab is sealed, influence overall cabin air quality.

Cab Enclosure: Doors and windows must be kept closed during operation. These are leak points that no pressurizer can overcome.

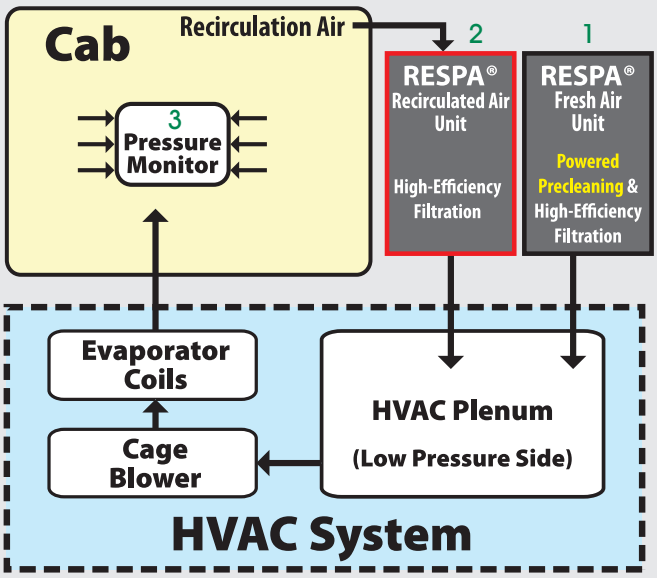
Seal/Gasket Wear: Seals and gaskets will wear over time, increasing cabin leakage and reducing cabin pressurization. Regular seal inspection and repair are required to maintain performance.

When to change the HVAC filter:

HVAC filter changes will be less frequent. Only change when the filter becomes restricted/loaded to the point where it can no longer provide enough airflow to sustain cabin pressurization.

Universal Adaptation Kit for RESPA-CFX2

Part number GK015: Kit includes 4-inch elbow, flange adapters, 4-inch flex-hose, clamps, 4 to 3-inch rubber reducer, mounting plate, M10 bolts, washers, nuts, and sealant. Adaptation parts are also available individually, including metal pipe for more streamlined and less restrictive plumbing solutions.



How RESPA-CFX2 fits into a Complete Cab Air Quality System

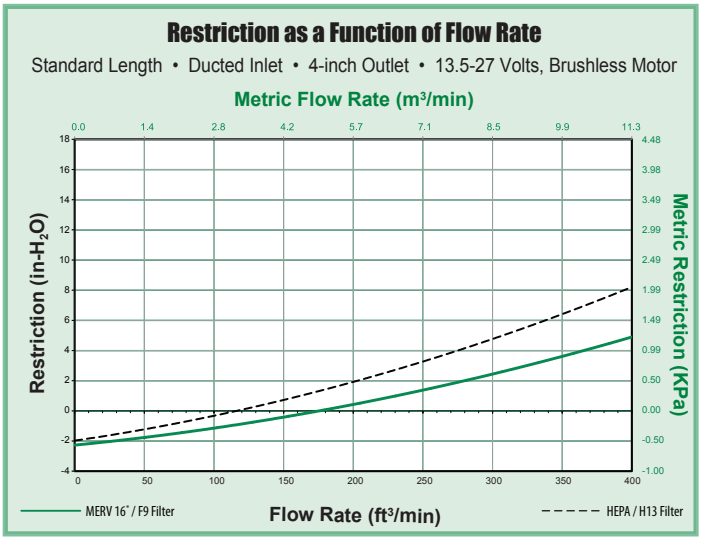
1. **Fresh Air Unit:**
   Powered precleaner removes most particulate prior to the air passing through the integrated high-efficiency filter. Only clean air reaches the cab's HVAC System.
2. **Recirculated Air Unit (RESPA-CFX2):**
   Quickly restores air quality after particulate is introduced when door or window opens or dust is brushed off clothes or upholstery. Prevents build-up of dust that can be re-entrained into the airflow.
3. **Pressure Monitor:**
   Alerts operator to loss of pressure. If door and window seals are intact and alerts continue, this lets operator know it's time to change the filter.

The majority of airflow in the cab is recirculated; high-efficiency recirculation filtration is critical.

RESPA-CFX2 System • 4-inch Outlet, Standard Length Filter, Brushless Motor

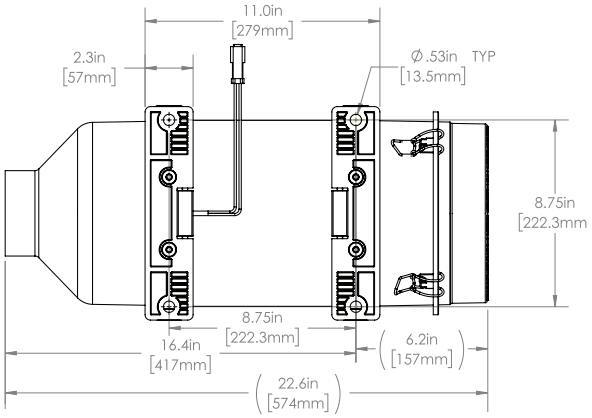
Part Number	Voltage	Filter			Outer Diameter	Weight	Dimensions		
		Type	Part Number	Length			Length	Width	Height
RCF2085	12	MERV 16/F9[1]	FEFF111	STANDARD	101.6 mm	5 kg	574 mm	254 mm	286 mm
RCF2086	24								
RCF2093	12	HEPA/H13[2]	FEFF110			5 kg			
RCF2084	24								

[1] Media Rated at MERV 16. F9 under EN779. [2] Rated H13 under EN1822-1.

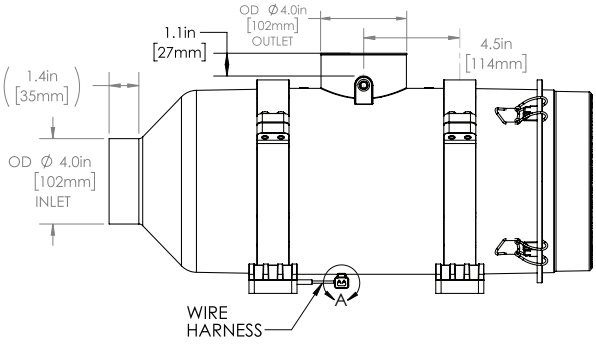


Units include 4-inch ducted inlet, base mount with clamp brackets, and high-efficiency filter.

Bottom View

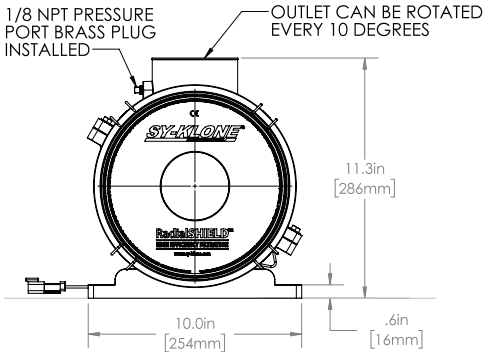


Side View



Replacement Filters
FEFF111 - MERV 16/F9
FEFF110 - HEPA/H13

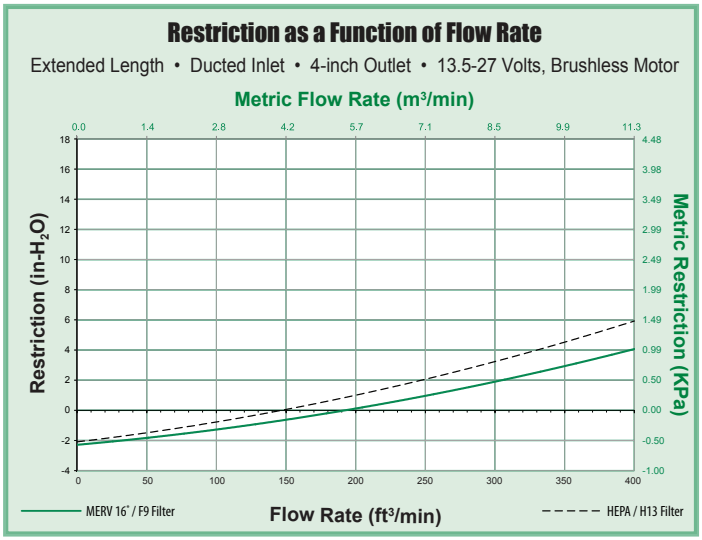
End View



RESPA-CFX2 System • 4-inch Outlet, Extended Length Filter, Brushless Motor

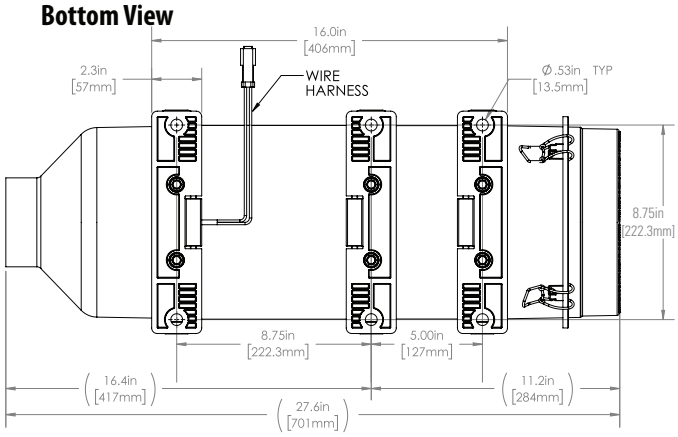
Part Number	Voltage	Filter			Outer Diameter	Weight	Dimensions		
		Type	Part Number	Length			Length	Width	Height
RCF2087	12	MERV 16/F9[1]	FEFF112	EXTENDED	101.6 mm	6.1 kg	701 mm	254 mm	286 mm
RCF2088	24								
RCF2095	12	HEPA/H13[2]	FEFF113			6.3 kg			
RCF2096	24								

[1] Media Rated at MERV 16. F9 under EN779. [2] Rated H13 under EN1822-

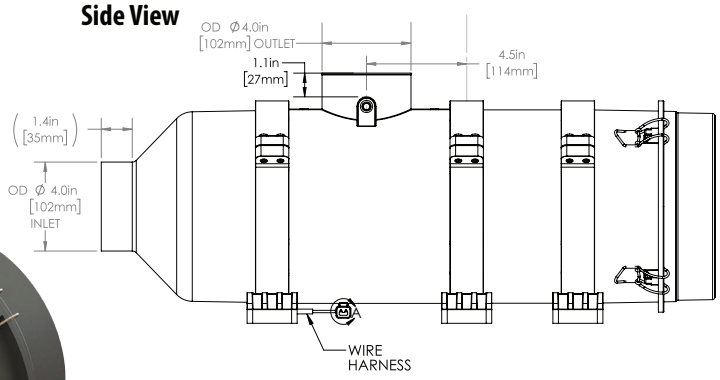


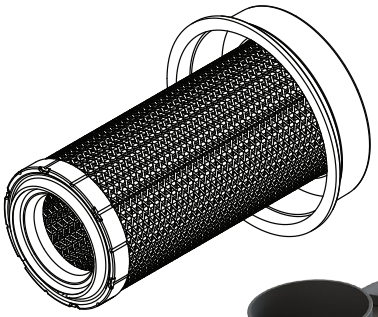
Units include 4-inch ducted inlet, base mount with clamp brackets, and high-efficiency filter.

Bottom View

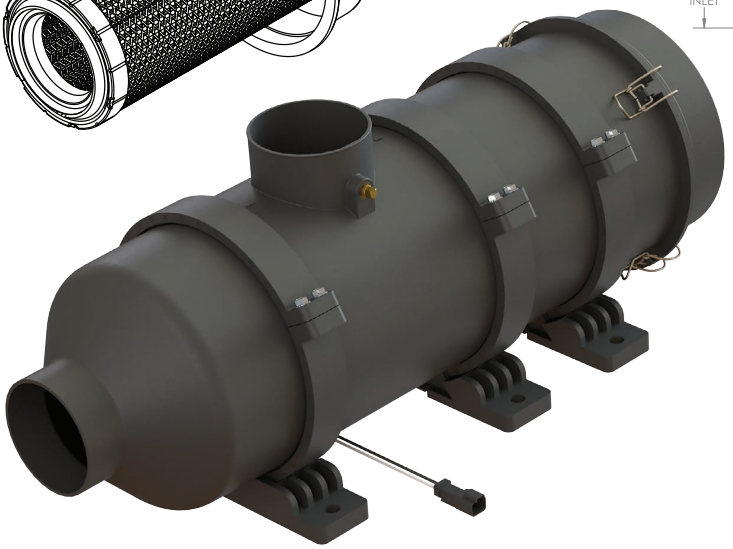


Side View

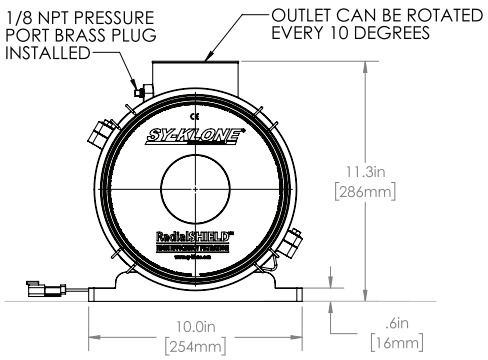




Replacement Filters
FEFF112 - MERV 16/F9
FEFF113 - HEPA/H13



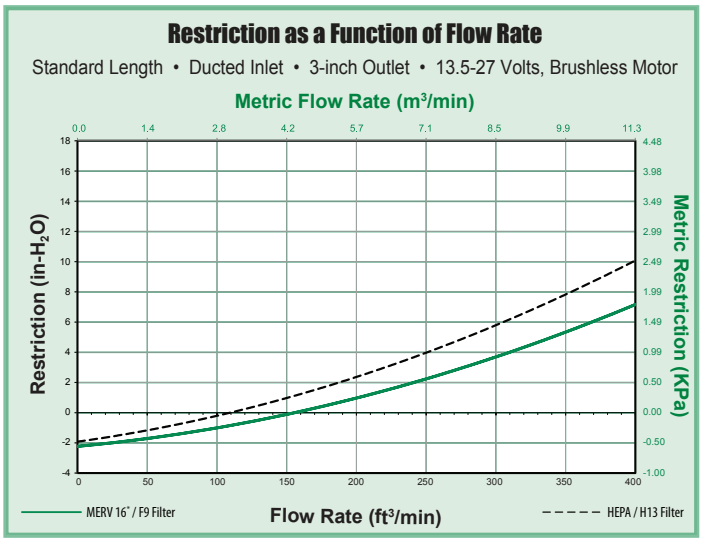
End View



RESPA-CFX2 System • 3-inch Outlet, Standard Length Filter, Brushless Motor

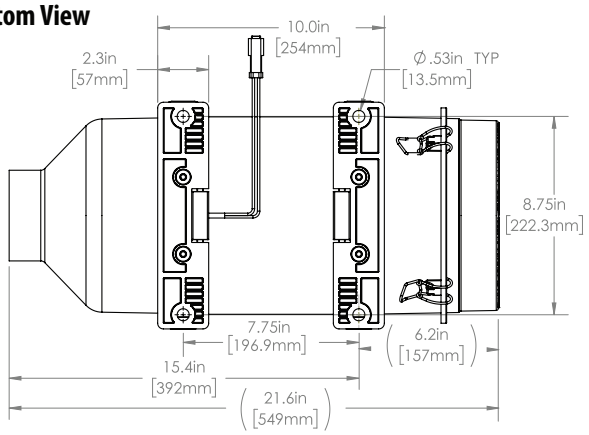
Part Number	Voltage	Filter			Outer Diameter	Weight	Dimensions		
		Type	Part Number	Length			Length	Width	Height
RCF2089	12	MERV 16/F9[1]	FEFF111	STANDARD	76.2 mm	5 kg	549 mm	254 mm	286 mm
RCF2090	24								
RCF2097	12	HEPA/H13[2]	FEFF110			5.1 kg			
RCF2098	24								

[1] Media Rated at MERV 16. F9 under EN779. [2] Rated H13 under EN1822-1.

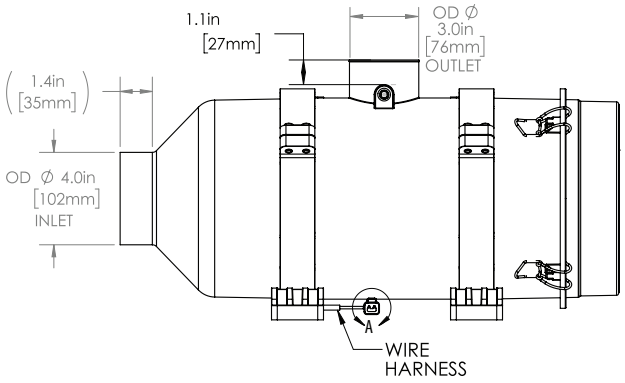


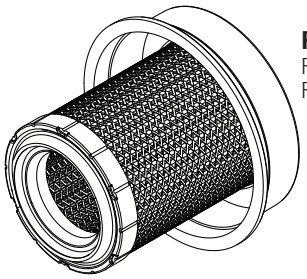
Units include 3-inch ducted inlet, base mount with clamp brackets, and high-efficiency filter.

Bottom View



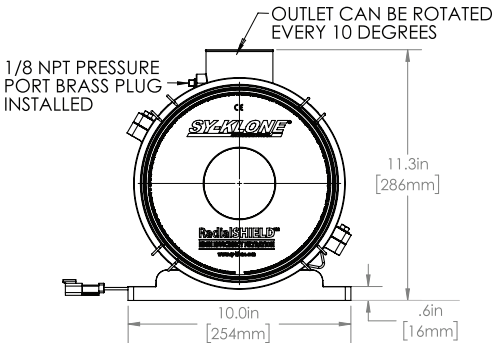
Side View





Replacement Filters
FEFF111 - MERV 16/F9
FEFF110 - HEPA/H13

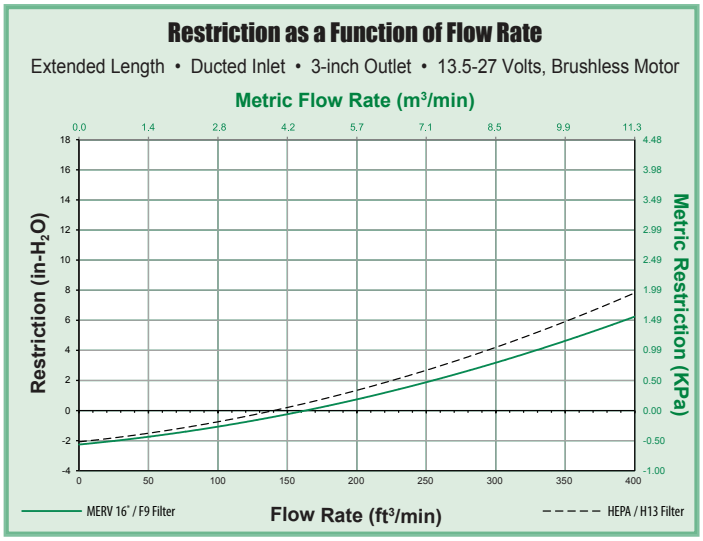
End View



RESPA-CFX2 System • 3-inch Outlet, Extended Length Filter, Brushless Motor

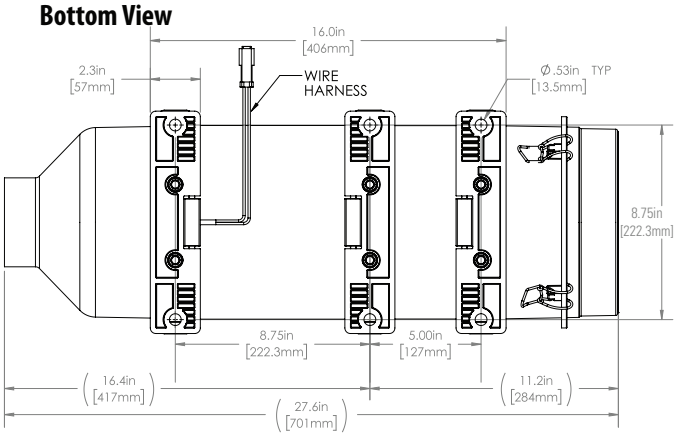
Part Number	Voltage	Filter			Outer Diameter	Weight	Dimensions		
		Type	Part Number	Length			Length	Width	Height
RCF2091	12	MERV 16/F9[1]	FEFF112	EXTENDED	76.2 mm	6.2 kg	676 mm	254 mm	286 mm
RCF2092	24								
RCF2099	12	HEPA/H13[2]	FEFF113			6.3 kg			
RCF2199	24								

[1] Media Rated at MERV 16. F9 under EN779. [2] Rated H13 under EN1822-1

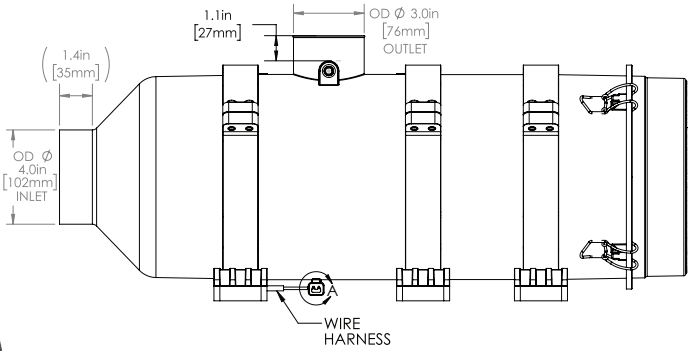


Units include 3-inch ducted inlet, base mount with clamp brackets, and high-efficiency filter.

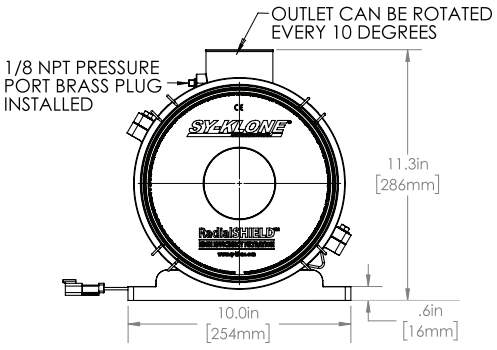
Bottom View

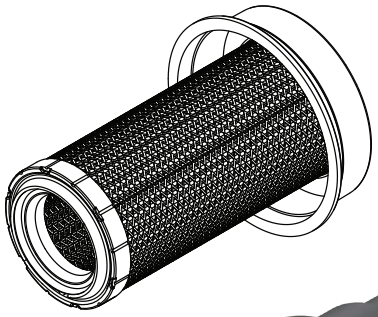


Side View

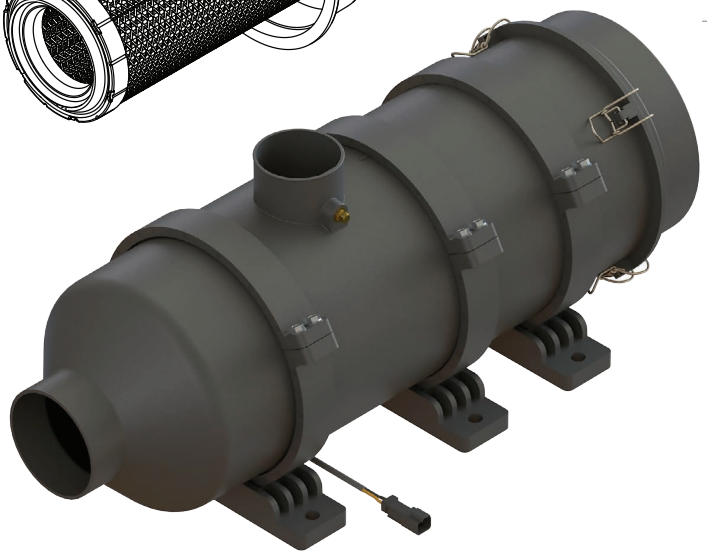


End View



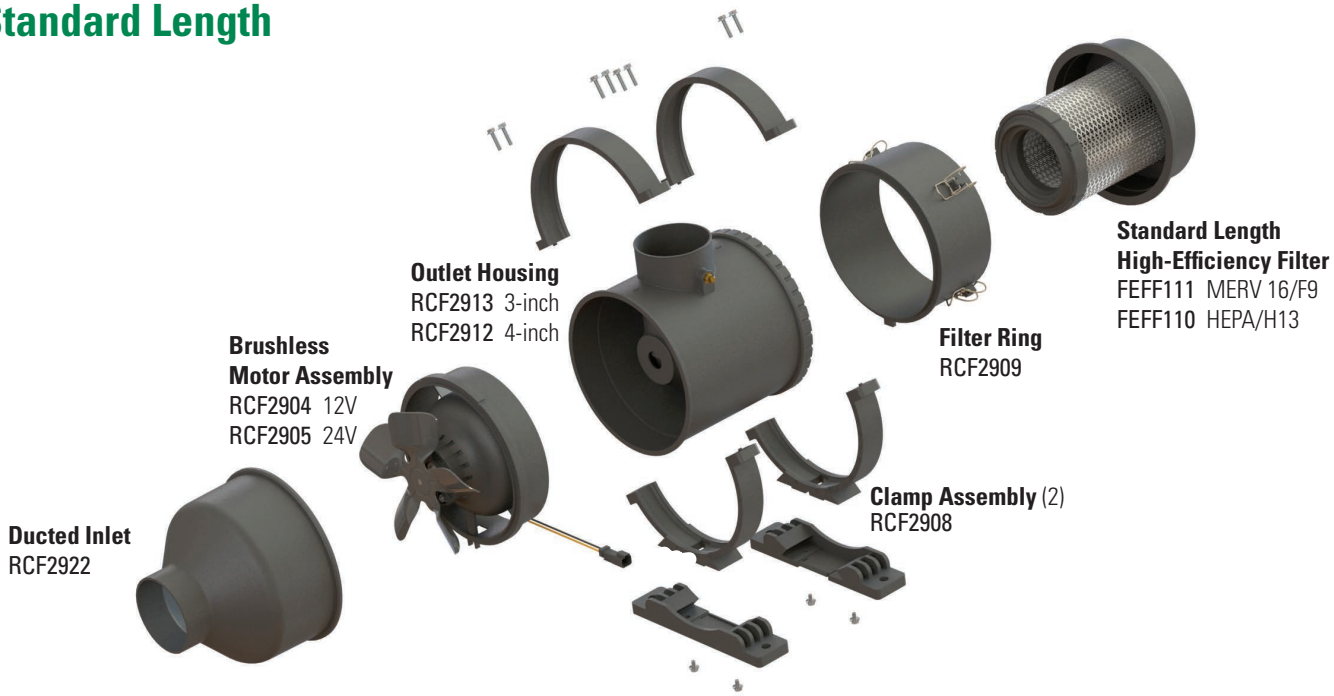


Replacement Filters
FEFF112 - MERV 16/F9
FEFF113 - HEPA/H13

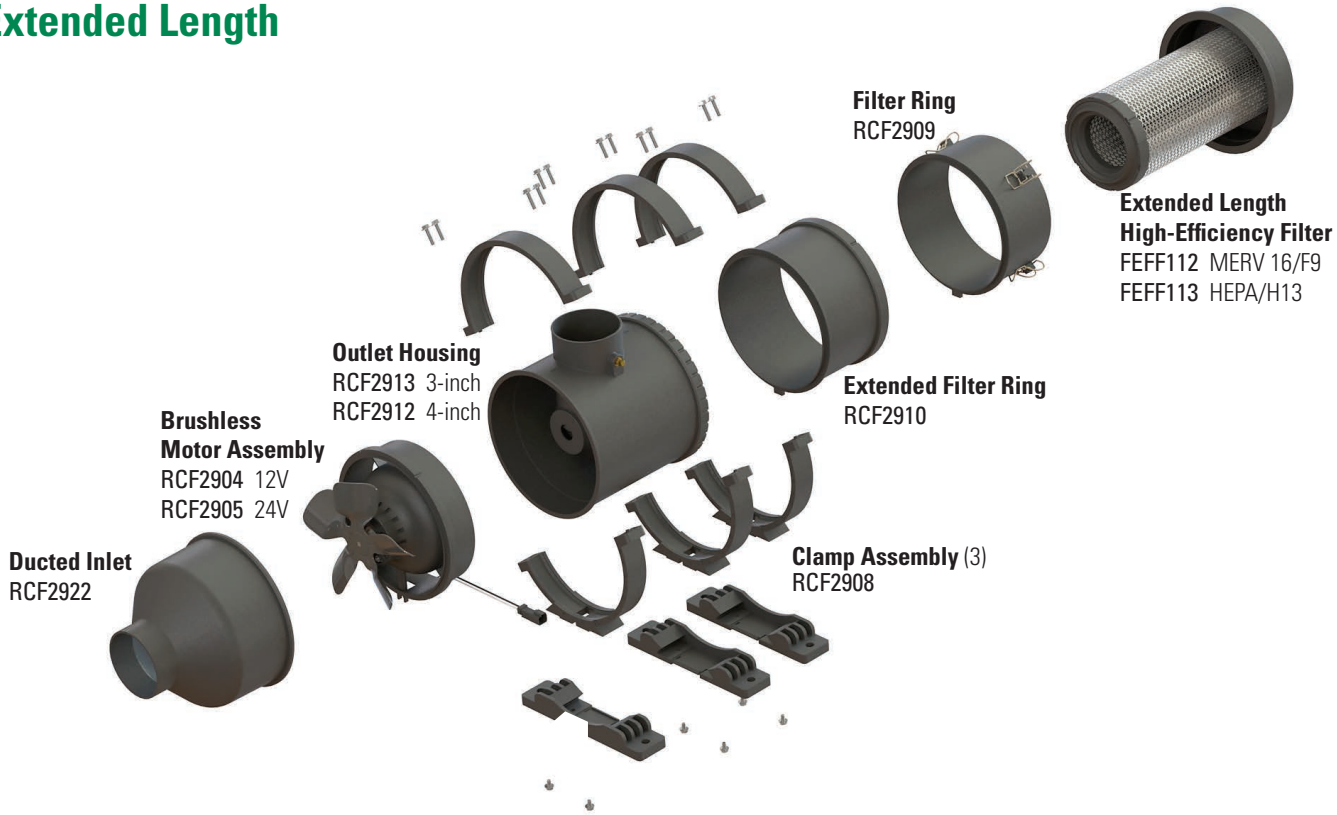


RESPA-CFX2 Service Parts

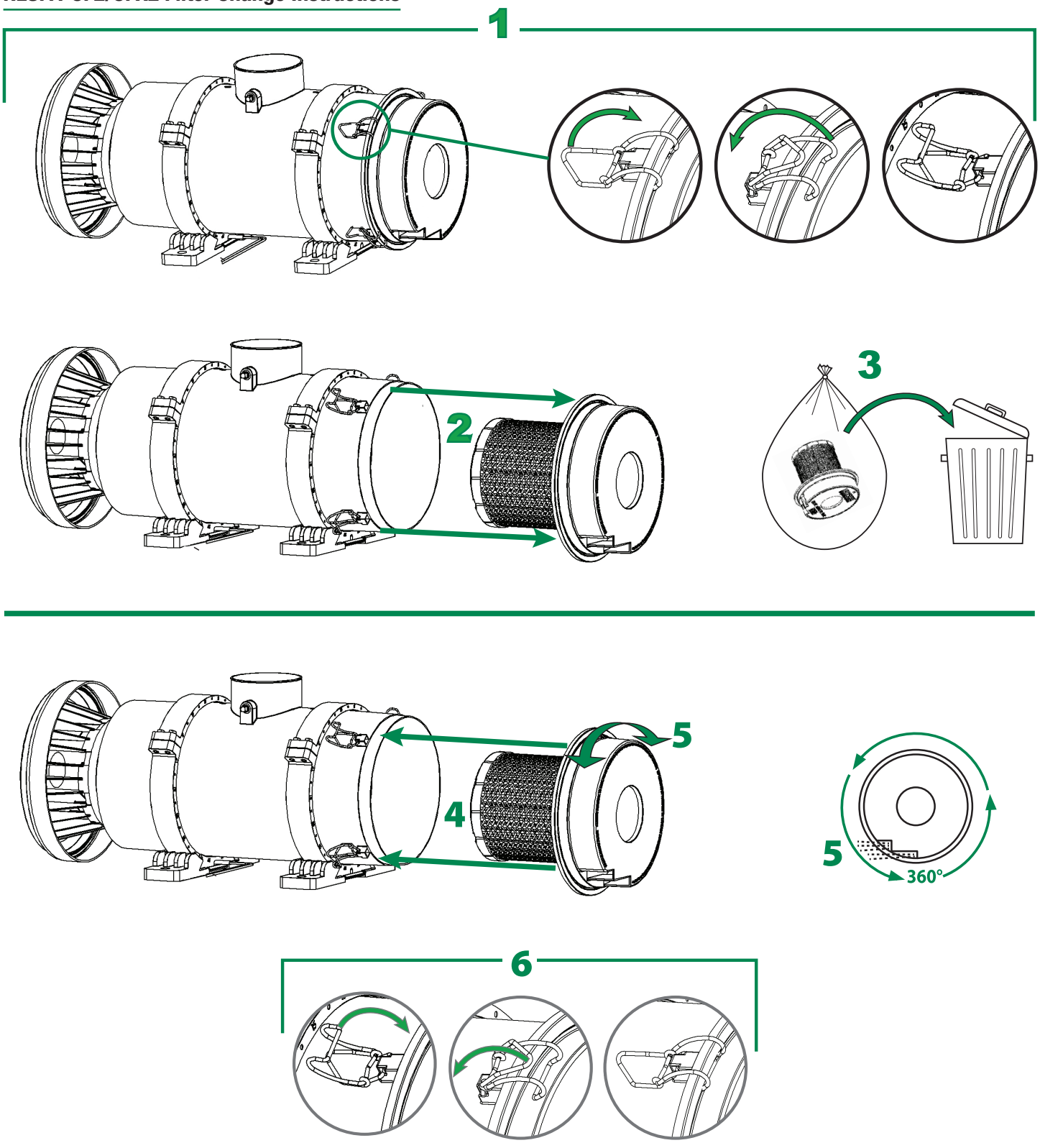
Standard Length



Extended Length



RESPA-CF2/CFX2 Filter Change Instructions



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