RadialSHIELD® RESPA® Filtration Program





Three Steps to Selecting a Cab Air Quality Filter for Your Jobsite

1. SELECT HVAC APPLICATION:

FRESH AIR Page 2-3



RECIRCULATED AIR P



* In addition, High-Efficiency Cab HVAC Panel Filter Kits are available for specific machines

2. SELECT FILTRATION TYPE

- For job sites with heavy dust and debris, a MERV 16 filter will substantially improve cab air quality.
- For ISO 23875 Cab Air Quality compliance, an **EPA** filter provides near HEPA-level protection with restriction almost as low as a MERV 16 filter.
- For job sites with harmful dust, such as asbestos, coal dust, etc., or where required by regulatory concerns, upgrade to HEPA filters.
- Where odor is a concern but toxic gases are not present, use standard-length **Odor+HEPA** filters.
- Where gas is an issue, use extended-length Gas+HEPA or Ammonia+HEPA filters.

3. SELECT FILTER SIZE

- Standard: For use in standardsize Sy-Klone RESPA systems, providing advanced precleaning, pressurization, and filtration in the smallest footprint possible.
 Odor+HEPA is standard-length only.
- Extended: For use in extended RESPA systems, providing increased filter life on jobsites.
 Gas+HEPA and Ammonia+HEPA are extended-length only.



RECIRCULATION FILTRATION ALTERNATIVE:

High-Efficiency Cab HVAC Filter Kits

- Easy to install; no wiring or plumbing required.
- Customized for specific machine models.
- Significantly more protection than factory recirculation filters.



HEPA AND EPA MEET ISO 23875 REQUIREMENTS





Model	Powered	MERV 16	EPA	HEPA	Odor+HEPA	Gas+HEPA	Ammonia+HEPA
RESPA CF2 Standard	•	•	•	•	•		
RESPA CF2 Extended	•	•	•	•		•	•



For RESPA CF2, CF Type and Length	Sy-Klone Part No.	Filter Test Method, Classification	Minimum Average Efficiency	Nominal Airflow	Effective Against	Applications
MERV 16 EXTENDED FEFF209	FEFF208 Ejective filter cap	ASHRAE 52.2, ISO 11155-1 MERV 16	≥95% @ 0.3 µm to 1.0 µm particle size	≤ 150 CFM	All 0.3 µm to 1.0 µm particulate, including: • Bacteria • Diesel particulate matter (DPM) • Droplet nuclei (sneeze)	 Agricultural, meets EN15695 Category 2 cab filter requirement Construction Demolition Forestry, logging, mulching
STANDARD FEFF208 LOWEST RESTRICTION, GOOD PROTECTION	FEFF209 Ejective filter cap	EN779:2002 F9	≥95% @ 0.4 µm particle size	(255 m³/h)	 Most tobacco smoke Respirable crystalline silica (RCS) Other respirable particulate within the size range 	Mining Rail maintenance of way Waste and indoor recycling All applications where respirable dust is present
EPA EXTENDED FEFF241	FEFF240 Ejective filter cap	ISO 23875:2021 Ammendment 1, ASHRAE 52.0, ISO 11155-1	>99.6%	≤ 100 CFM (170 m³/h)	All MERV 16 contaminants, plus: • All combustion smoke • Carbon dust	ISO 23875 compliant filter Agricultural, meets EN15695 Category 2 cab filter requirement Demolition Fire fighting Industrial processing of cement, rock, aggregate,
STANDARD FEFF240 LOW RESTRICTION EVCELLENT PROTECTION	FEFF241 Ejective filter cap	EPA Meets ISO 23875 Requirements	@ 0.16 μm	Pressure ΔP 0.2 kPa	Sea salt dustCarcinogenic materialsFriable asbestos	man-made stone Mining Rail maintenance of way Maste and indoor recycling Any applications where harmful particulate or ultra-fine aerosols are present
HEPA EXTENDED FEFF219	FEFF218 Ejective filter cap	ISO 23875:2021 Amd. 1 EN1822-5, ISO 29463-5 ASHRAE 52.2, ISO 11155-1	99.99% @ 0.3 μm	≤ 100 CFM (170 m³/h)	All MERV 16 and EPA contaminants, plus all 0.06 µm to 1.0 µm particulate, including: • Carcinogenic materials • Sub-100 nanometer particulate,	ISO 23875 compliant filter Agricultural, meets EN15695 Category 3 cab filter requirement Demolition Fire fighting Industrial processing of cement, rock, aggregate,
STANDARD FEFF218 MODE DESTRICTION, DEST PROTECTION	FEFF219 Ejective filter cap Meets ISO 23875 Requirements	Initial Efficiency ≥99.95% @ MPPS (0.063 µm)	Pressure ΔP 0.4 kPa	such as: • Viruses (COVID-19 is 60nm - 100nm) • Respiratory droplet nuclei • Ultra fine aerosols	man-made stone Mining Rail maintenance of way Waste and indoor recycling Any applications where harmful particulate or ultra fine aerosols are of concern, or required by regulations	

NOTES: µm = micrometer. Mishandling can result in loss of efficiency rating. Change filter based on cabin pressure. Hazardous gas or particulate environments require additional monitoring. For latest information, see sy-klone.com

¹MPPS = Most Penetrating Particle Size. Each filter passes breach test at time of manufacture. ²Fits RESPA-CF requires Odor Filter Retrofit Kit. ³Additional steps should be taken to monitor gas exposure. Use appropriate replacement interval.

FRESH AIR RESPA® RadialSHIELD® SPECIALTY FILTERS



RESPA CF2 STANDARD LENGTH

- HEPA, EPA, and MERV 16 filters
- Odor filters



RESPA CF2 EXTENDED LENGTH

- HEPA, EPA, and MERV 16 filters
- Gas+HEPA filters
- Ammonia+HEPA filters





Designed to eject debris as part of the precleaning process and selfcleaning capability.

SY-KLONE

For RESPA-CF2, CF Type and Length	-		Filter Test Method, Classification Minimum Average Efficiency		Effective Against	Applications	
Odor+HEPA STANDARD OF131	OF131 ² Ejective filter cap (Replaces FEFF131)	ISO 23875:2021 Amd. 1 EN1822-5, ISO 29463-5 ASHRAE 52.2, ISO 11155-1 HEPA and ISO 11155-2 Odor Retention Meets ISO 23875 Requirements	99.99% @ 0.3 µm Initial Efficiency ≥99.95% @ MPPS (0.063 µm)	≤ 50 CFM (85 m³/h) Pressure ∆P 0.2 kPa	General odors caused by particulate and non-toxic gas contaminants Particulate as listed on page 2 for HEPA filters	 Applications that involve non-toxic odors ISO 23875 compliant filter Agricultural, meets EN15695 Category 3 cab filter requirement Farming and agricultural spraying equipment Waste and indoor recycling Applications as listed on page 2 for HEPA filters 	
ABEK Gas+HEPA EXTENDED GF130	GF130 ³ <i>RESPA-CF2 only</i> Ejective filter cap (Replaces FEFF130)	ISO 23875:2021 Amd. 1 EN1822-5, ISO 29463-5 ASHRAE 52.2, ISO 11155-1 HEPA and EN12941:1998 + A1:2004 + A2:2008 Gas ABEK1 Meets ISO 23875 Requirements	99.99% @ 0.3 µm Initial Efficiency ≥99.95% @ MPPS (0.1 µm)	≤ 50 CFM (85 m³/h) Pressure ∆P 0.2 kPa	Ammonia gases Inorganic gases Sulfur gases Volatile organic compounds (VOC) Particulate as listed on page 2 for HEPA filters	 For use in known toxic gas environments³ ISO 23875 compliant filter Agricultural, meets EN15695 Category 4 cab filter requirement Agricultural spraying equipment Industrial processing, ore processing Waste and indoor recycling Applications as listed on page 2 for HEPA filters 	
Ammonia+HEPA EXTENDED GF132	GF132 ³ <i>RESPA-CF2 only</i> Ejective filter cap	ISO 23875:2021 Amd. 1 EN1822-5, ISO 29463-5 ASHRAE 52.2, ISO 11155-1 HEPA and EN12941:1998 + A1:2004 + A2:2008 Gas K2 Meets ISO 23875 Requirements	99.99% @ 0.3 µm Initial Efficiency ≥99.95% @ MPPS (0.1 µm)	≤ 50 CFM (85 m³/h) Pressure ∆P 0.2 kPa	Ammonia gases Particulate as listed on page 2 for HEPA filters	 For use in ammonia gas environments³ ISO 23875 compliant filter Agricultural, meets EN15695 Category 4 cab filter requirement Waste and indoor recycling Applications as listed on page 2 for HEPA filters 	

NOTES: µm = micrometer or micron. Mishandling can result in loss of efficiency rating. Change filter based on cabin pressure. Hazardous gas or particulate environments require additional monitoring. For latest information, see sy-klone.com
¹MPPS = Most Penetrating Particle Size. Each filter passes breach test at time of manufacture. ²Fits RESPA-CF; RESPA-CF requires Odor Filter Retrofit Kit. ³Additional steps should be taken to monitor gas exposure. Use appropriate replacement interval.

RECIRCULATED AIR RESPA® RadialSHIELD® PARTICULATE FILTERS

System Type	Model	Powered	MERV 16	EPA	HEPA
	RESPA CFX2 (Std. & Ext.)	•	•	•	•
Recirculated Air	RESPA FFX2 (Std. only)		•	•	•
	RESPA PFX (Std. only)	•	•	•	•



Alternate Recirculation Filtration Option:
High-Efficiency Cab HVAC
Filter Kits

For RESPA-CFX2, FFX2, PFX Type and Length	Sy-Klone Part No.	Filter Test Method, Classification	Min. Average Efficiency	Nominal Airflow	Effective Against	Applications
MERV 16 STANDARD FEFF211 EXTENDED FEFF212 LOWEST RESTRICTION, GOOD PROTECTION	FEFF211 Closed filter cap FEFF220 FFX2, PFX only Louvered filter cap FEFF212 Closed filter cap	ASHRAE 52.2, ISO 11155-1 MERV 16 EN779:2002 F9	≥95% @ 0.3 µm to 1.0 µm particle size ≥95% @ 0.4 µm particle size	≤ 150 CFM (255 m³/h)	All 0.3 µm to 1.0 µm particulate, including: • Bacteria • Diesel particulate matter (DPM) • Droplet nuclei (sneeze) • Most tobacco smoke • Respirable crystalline silica (RCS) • Other respirable particulate within the size range	Agricultural, meets EN15695 Category 2 cab filter requirement Construction Demolition Forestry, logging, mulching Mining Rail maintenance of way Waste and indoor recycling All applications where respirable dust is present
EPA STANDARD FEFF243 EXTENDED FEFF244 LOW RESTRICTION, EXCELLENT PROTECTION	FEFF243 Closed filter cap FEFF242 FFX2, PFX only Louvered filter cap FEFF244 Closed filter cap	ISO 23875:2021 Ammendment 1, ASHRAE 52.0, ISO 11155-1 EPA Meets ISO 23875 Requirements	99.6% @ 1.6 µm	≤ 100 CFM (170 m³/h) Pressure ∆P 0.2 kPa	All MERV 16 contaminants, plus: • All combustion smoke • Carbon dust • Sea salt dust • Carcinogenic materials • Friable asbestos	ISO 23875 compliant filter Agricultural, meets EN15695 Category 2 cab filter requirement Demolition Fire fighting Industrial processing of cement, rock, aggregate, man-made stone Mining Rail maintenance of way Waste and indoor recycling Any applications where harmful particulate or ultra-fine aerosols are present
HEPA STANDARD FEFF210 FEFF222 EXTENDED FEFF213 MORE RESTRICTION, BEST PROTECTION	FEFF210 Closed filter cap FEFF222 FFX2, PFX only Louvered filter cap FEFF213 Closed filter cap	ISO 23875:2021 Ammendment 1, EN1822-5, ISO 29463-5 ASHRAE 52.2, ISO 11155-1 HEPA Meets ISO 23875 Requirements	99.99% @ 0.3 µm Initial Efficiency ≥99.95% @ MPPS (0.063 µm)	≤ 100 CFM (170 m³/h) Pressure ∆P 0.4 kPa	All MERV 16 contaminants, plus all 0.06 µm to 1.0 µm particulate, including: • All combustion smoke • Carbon dust, sea salt dust • Carcinogenic materials • Friable asbestos • Sub-100 nanometer particulate, such as: • Viruses (COVID-19 is 60nm - 100nm) • Respiratory droplet nuclei • Ultra fine aerosols	ISO 23875 compliant filter Agricultural, meets EN15695 Category 3 cab filter requirement Demolition Fire fighting Industrial processing of cement, rock, aggregate, man-made stone Mining Rail maintenance of way Waste and indoor recycling Any applications where harmful particulate or ultra fine aerosols are of concern, or required by regulations

NOTES: µm = micrometer. Mishandling can result in loss of efficiency rating. Change filter based on cabin pressure. Hazardous gas or particulate environments require additional monitoring. For latest information, see sy-klone.com ¹MPPS = Most Penetrating Particle Size. Each filter passes breach test at time of manufacture.