

FRFDC

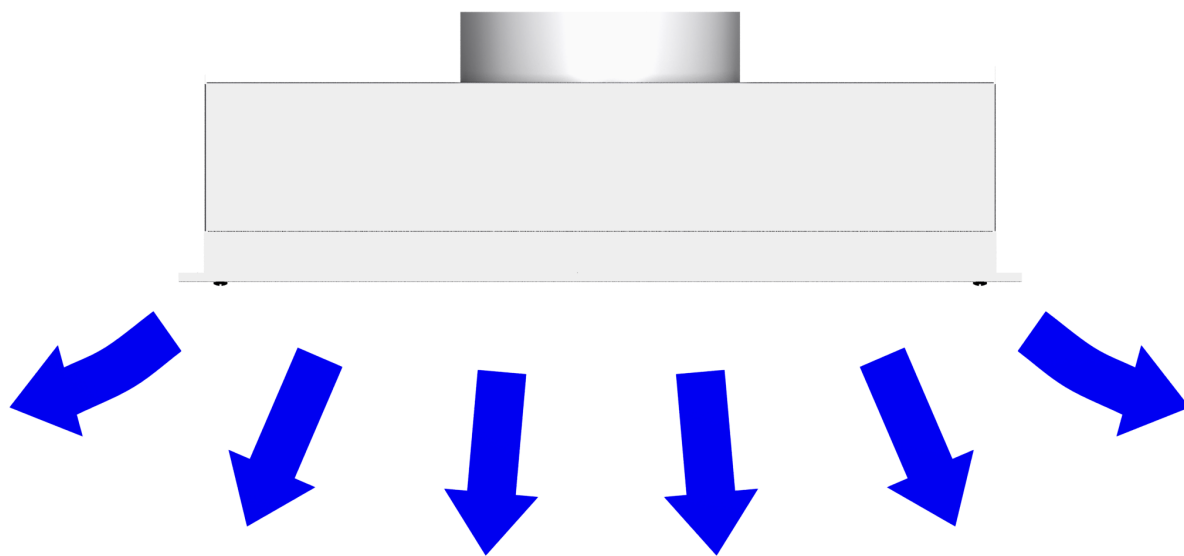
FLUSH FACE RADIAL FLOW DIFFUSER WITH HEPA FILTER



FRFDC

Flush Face Radial Flow Diffuser with HEPA Filter

The Flush Face Radial Flow Diffuser with HEPA filter (FRFDC) is designed to maximize comfort while handling large volumes of filtered air in confined spaces at low room air velocities. Typically mounted in the ceiling with a full radial air pattern, FRFDCs produce a low initial face velocity and minimizes entrainment of room air.



*FRFDC with perforated face and 2-way radial airflow pattern
(end view)*

FLUSH FACE

- + The flush face design prevents interference with ceiling equipment such as sprinklers, while maintaining a superior architectural appeal.

CLEANING & MAINTENANCE

- + FRFDC units satisfy all ASHRAE 170 requirements for diffuser cleaning and maintenance.
- + Powder coat paint finish is formulated for routine exposure to hospital grade cleaning solutions and disinfectants.
- + Stainless steel 1/4 turn fasteners and retainer cables provide straightforward and convenient access to the filter and knife-edge frame.
- + Filters are easily removable for full access to the diffuser plenum for cleaning.

ROOM-SIDE ADJUSTABLE INLET DAMPER

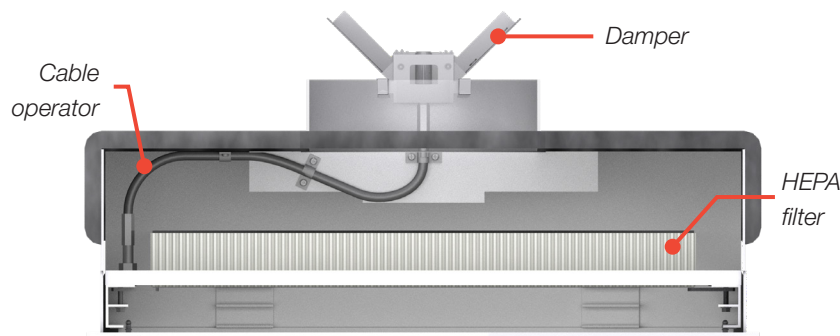
- + A remote cable operator allows adjustment of the damper with the filter in place using a standard screwdriver.
- + Locating the damper operator outside of the filter maximizes filter area, leading to a larger airflow capacity and less pressure drop.

TYPICAL APPLICATIONS

FRFDC flush face radial flow diffusers are commonly used in laboratories and airborne infectious isolation rooms where short throw and high capacity, filtered airflow are required. These diffusers provide a high level of dilution while maintaining occupant comfort with a minimal number of diffusers. The FRFDC is a combination of ASHRAE group A and group E diffusers and meets ASHRAE 170 requirements for ventilation of healthcare facilities.

CONSTRUCTION

- + Material
 - Aluminum (AFRFDC)
 - Stainless steel (FRFDCSS)
- + Options
 - External insulation

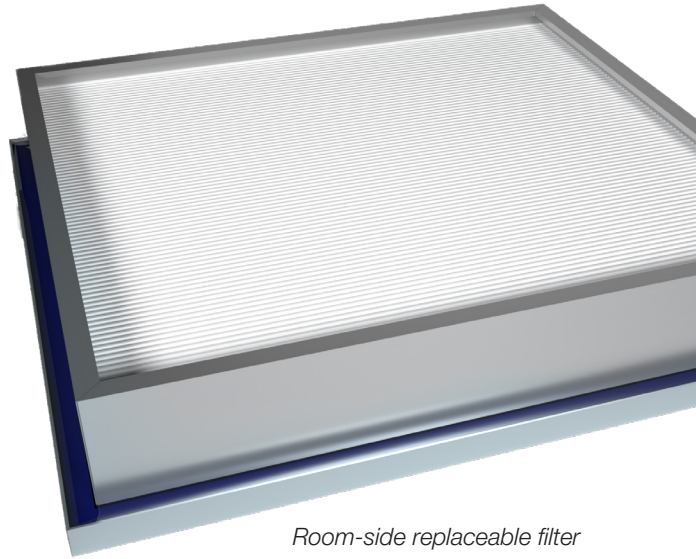


Room-side adjustable damper cross sectional view



ROOM-SIDE REPLACEABLE FILTER

- + Convenient access from the room-side for periodic filter replacement.
- + Gel seal filter frame and diffuser “knife edge” flange create a reliable seal to prevent filter bypass.
- + Compatible with factory supplied HEPA and ULPA rated filters.



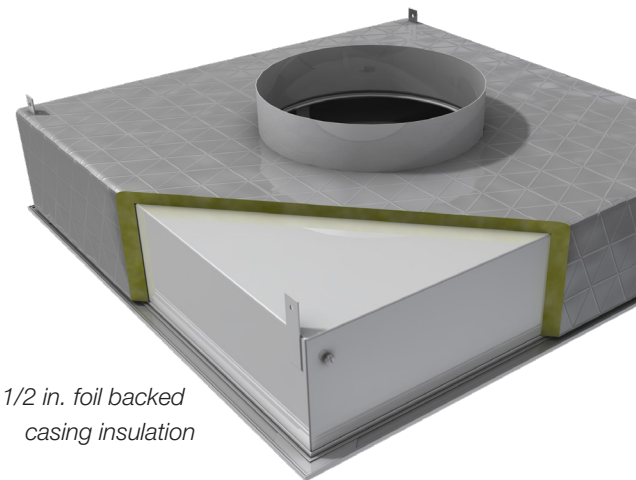
*Room-side replaceable filter
with integral gel seal*

FACTORY LEAK TESTING AND CERTIFICATION

- + Every FRFDC is factory tested and certified leak-free in accordance with IEST-RP-CC034.

AEROSOL SAMPLE & STATIC PRESSURE PORT

- + Used for room-side field measurement of static pressure and challenge aerosol concentrations upstream of the filter during the commissioning process.

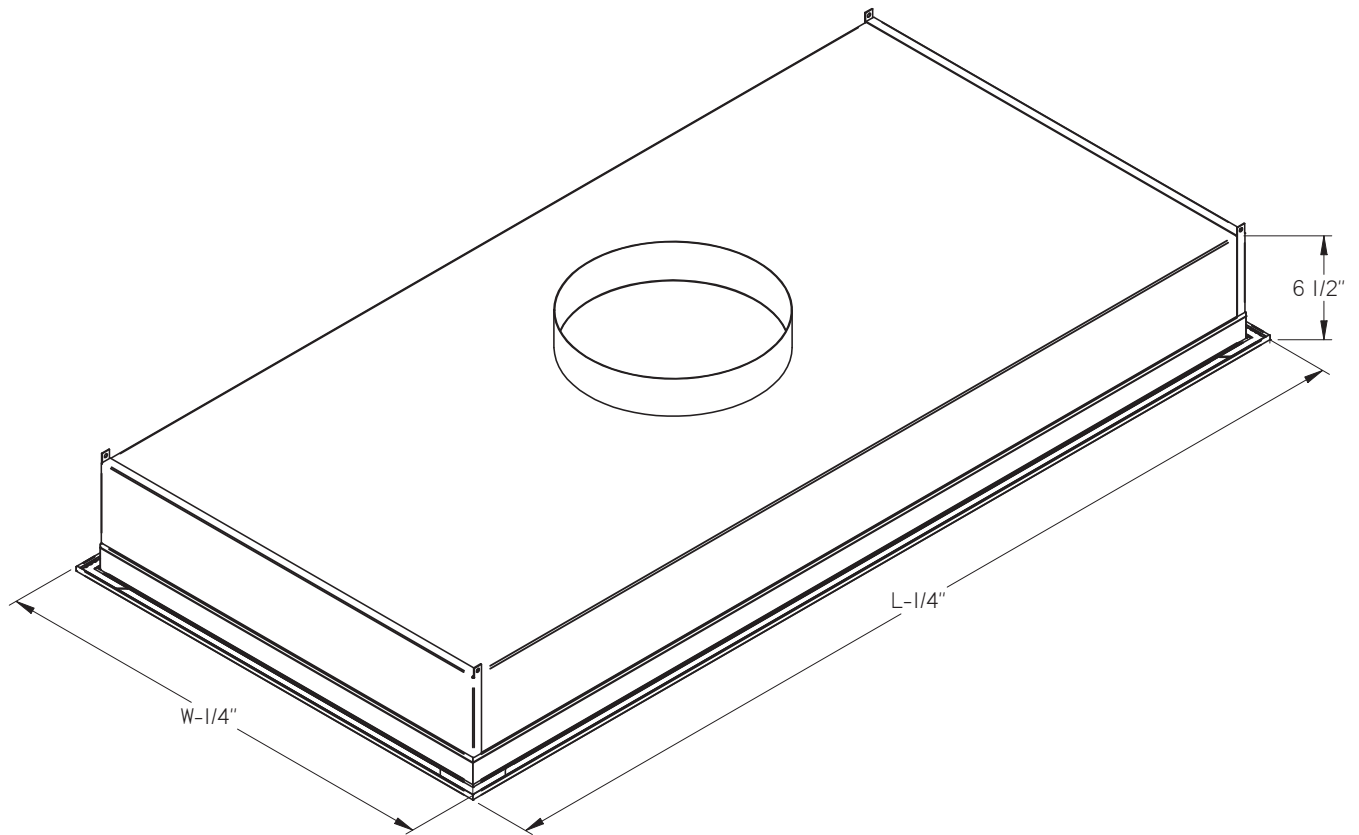


*1/2 in. foil backed
casing insulation*

FACTORY INSTALLED INSULATION

- + Ensures quality application and minimizes field labor with factory installed insulation.
- + Eliminates condensation risk associated with unconditioned plenum air exposure to cold diffuser surfaces.
- + Reduced thermal gain improves energy savings.
- + Insulation meets ASTM E84 and UL723 requirements.

DIMENSIONAL DATA



Nominal Sizes	
W x L	Inlet Sizes
24 in. x 24 in.	10
24 in. x 48 in.	12

PERFORMANCE DATA

2 Way Radial Pattern

Unit Size (in.)	Inlet Size (in.)	Air Flow (cfm)	Static Pressure (in. w.g.)	Total Pressure (in. w.g.)	Sound (NC)	Throw (ft.) 100 - 75 - 50 fpm					
						Vertical			Horizontal		
						5 °F	10 °F	15 °F	5 °F	10 °F	15 °F
24 x 24	10	150	0.220	0.225	-	1-2-3	1-3-4	2-4-5	1-1-2	1-2-2	2-2-2
		200	0.320	0.328	-	1-3-5	1-3-5	2-3-5	1-2-3	1-2-3	2-2-2
		300	0.550	0.569	-	2-3-5	3-4-5	4-5-6	3-4-5	3-4-5	3-3-4
24 x 48	12	500	0.485	0.510	22	3-4-6	5-6-7	2-4-8	2-2-2	1-1-2	1-1-2
		600	0.607	0.643	29	3-4-7	3-5-7	4-6-8	2-2-3	2-2-3	2-2-2
		700	0.729	0.778	32	5-6-8	4-6-8	5-6-8	3-3-4	2-3-3	2-2-3

Performance Notes:

1. Units are tested in accordance with ASHRAE Standard 70-2006.
2. Air flow is in cubic feet per minute, cfm.
3. All pressures are in in. of water.
4. The NC values, sound pressure level, are based on a room absorption of 10 dB re 10⁻¹² watts and one diffuser.
5. Blanks "-" indicate an NC value below 20.
6. Performance is based on diffuser with HEPA filter.



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