

LFDCX

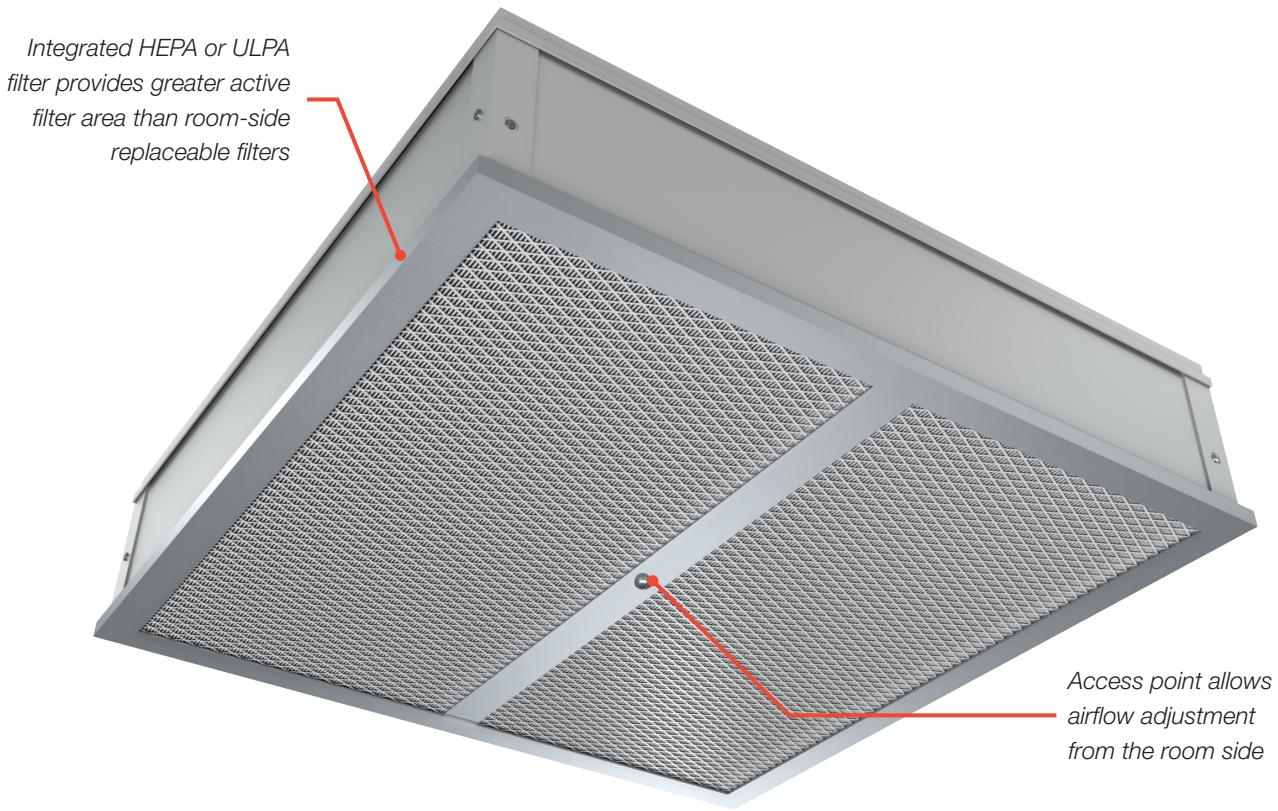
LAMINAR FLOW DIFFUSER WITH INTEGRATED HEPA FILTER



LFDCX

Laminar Flow Diffuser with Integrated HEPA Filter

The low profile Laminar Flow Diffuser with Integrated HEPA Filter (LFDCX) is designed to suit the critical requirements of modern cleanrooms. The LFDCX provides a means of controlling particle contamination within a room by providing unidirectional laminar airflow with low initial face velocity, supplying clean air to the space without entrainment of contaminated air from the occupied space. With a larger filter area, the LFDCX can achieve higher airflow capacities than a diffuser with a room-side replaceable filter.

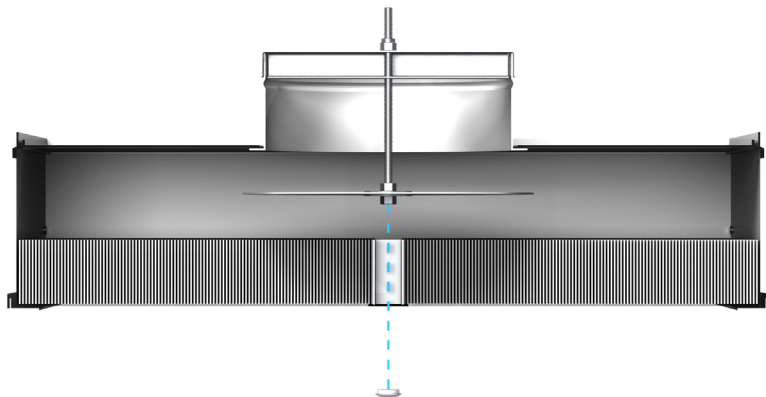


INTEGRATED FILTER

- + The integrated full-size HEPA or ULPA filter provides greater active filter area and airflow capacity than laminar flow diffusers with room-side removable filters.
- + The protective screen prevents damage to the filter media during installation and operation.

CENTER ACCESS CHANNEL

- + The anodized extruded aluminum center divider provides access to the distribution plate and damper for room-side airflow adjustment and also allows for static pressure measurement and upstream aerosol challenge verification.



FACTORY LEAK TESTING AND CERTIFICATION

- + Every LFDCX is factory tested to ensure leak-free construction.

TYPICAL APPLICATIONS

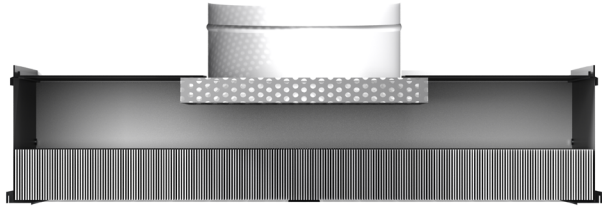
The LFDCX is typically used in applications that require clean, low velocity supply air for critical processes requiring minimal turbulence or induction of room air. These applications include cleanrooms for aerospace and semiconductor manufacturing.

CONSTRUCTION

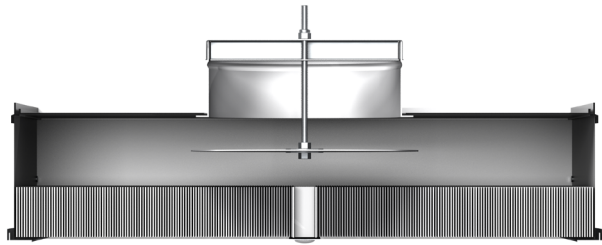
- + Damper
 - Fixed distribution plate
 - Adjustable distribution plate
 - Butterfly damper
- + Filter Media
 - HEPA
 - ULPA
- + Filter depth
 - 2 in.
 - 4 in.
- + Options
 - Exterior insulation

ROOM-SIDE ADJUSTABLE AIRFLOW

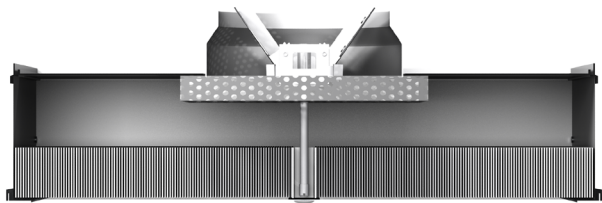
- + Three airflow control options:
 - **Fixed distribution plate** - providing even dispersion of supply airflow across the filter.
 - **Adjustable distribution plate** - providing even dispersion of supply airflow across the filter with limited room-side adjustment of airflow.
 - **Butterfly damper with fixed distribution plate** - providing even dispersion of supply airflow across the filter with full room-side adjustment of airflow.



Fixed distribution plate



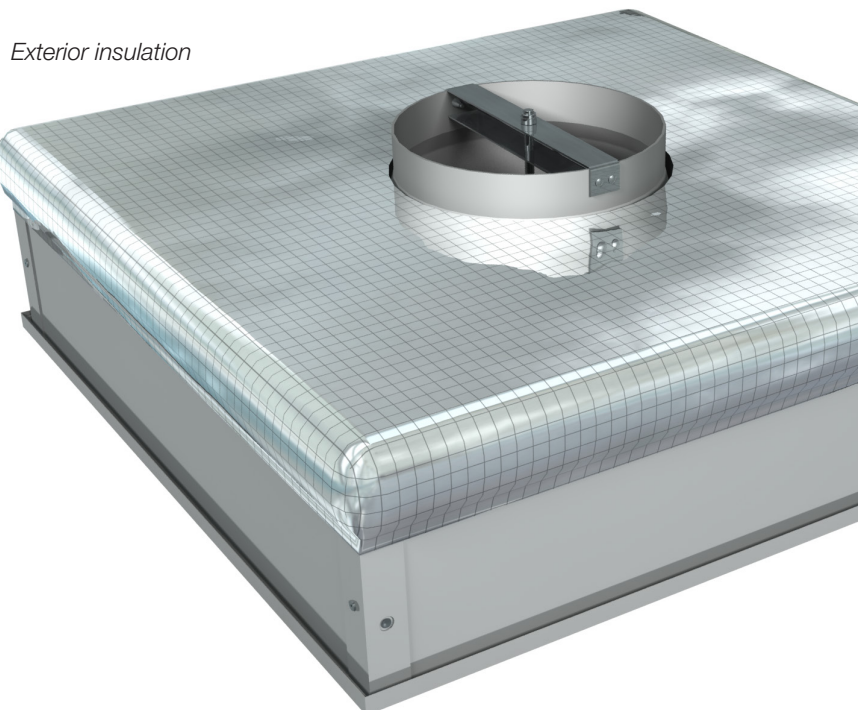
Adjustable distribution plate



Butterfly damper

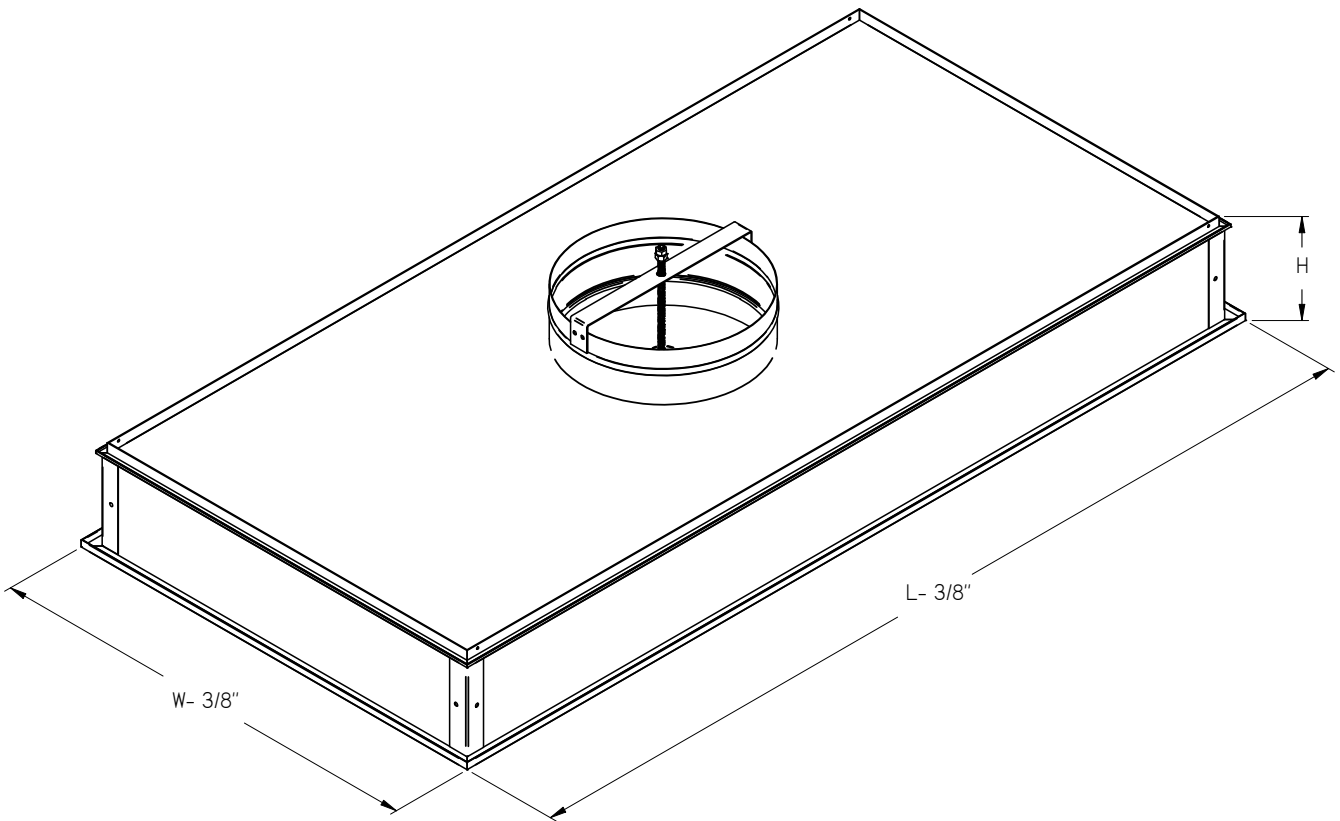
FACTORY INSTALLED INSULATION

- + Ensures quality application and minimizes field labor
- + Eliminates condensation risk associated with unconditioned plenum air exposure to cold diffuser surfaces
- + Reduced thermal gain for improved energy savings
- + Meets ASTM E84 and UL723 requirements



Exterior insulation

DIMENSIONAL DATA



Nominal Size	
W x L	Inlet Sizes
24 in. x 24 in.	8,10,12,14
24 in. x 36 in.	
24 in. x 42 in.	
24 in. x 48 in.	

Nominal Filter Depth	Unit Height (H)
2 in. Dimple Pleat	5.531 in.
4 in. Dimple Pleat	7.188 in.

PERFORMANCE DATA

Unit Size (in.)	Airflow (cfm)	Filter	Static Pressure (in. w.g.)
24 x 24	220	HEPA 99.99% (.3µm) 2" Pack Depth	0.42
	285		0.52
	315		0.57
	220	HEPA 99.99% (.3µm) 4" Pack Depth	0.28
	285		0.37
	315		0.4
	220	ULPA 99.9995% (.12µm) 2" Pack Depth	0.48
	285		0.61
	315		0.68
	220	ULPA 99.9995% (.12µm) 4" Pack Depth	0.32
	285		0.4
	315		0.45
24 x 36	345	HEPA 99.99% (.3µm) 2" Pack Depth	0.42
	445		0.52
	495		0.57
	345	HEPA 99.99% (.3µm) 4" Pack Depth	0.28
	445		0.37
	495		0.4
	345	ULPA 99.9995% (.12µm) 2" Pack Depth	0.48
	445		0.61
	495		0.68
	345	ULPA 99.9995% (.12µm) 4" Pack Depth	0.32
	445		0.4
	495		0.45
24 x 42	410	HEPA 99.99% (.3µm) 2" Pack Depth	0.42
	525		0.52
	585		0.57
	410	HEPA 99.99% (.3µm) 4" Pack Depth	0.28
	525		0.37
	585		0.4
	410	ULPA 99.9995% (.12µm) 2" Pack Depth	0.48
	525		0.61
	585		0.68
	410	ULPA 99.9995% (.12µm) 4" Pack Depth	0.32
	525		0.4
	585		0.45
24 x 48	475	HEPA 99.99% (.3µm) 2" Pack Depth	0.42
	610		0.52
	680		0.57
	475	HEPA 99.99% (.3µm) 4" Pack Depth	0.28
	610		0.37
	680		0.4
	475	ULPA 99.9995% (.12µm) 2" Pack Depth	0.48
	610		0.61
	680		0.68
	475	ULPA 99.9995% (.12µm) 4" Pack Depth	0.32
	610		0.4
	680		0.45

Performance Notes:

1. Static Pressure, in. w.g., required at inlet for the listed cfm.
2. Air flow in cubic feet per minute, cfm.



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