

APPLICATION

LFDW model is designed to be used in clean space environments such as medical facilities (pharmaceutical / biotechnology industry), research industries (semiconductors, aerospace industries), hospital operating and clean rooms.

LFDW have low aspiration characteristics resulting in rapid temperature and velocity equalization of air mass into the zone of occupancy.

FEATURED STANDARD CONSTRUCTION

- **OUTER FRAME**

- Constructed from 16 Ga galvanized steel sheets with continuously welded corners to eliminate leakage.

- **FACE**

- Constructed from 4 mm hole diameter perforated galvanized steel sheets.

- **FILTER FIXATION**

- Standard Steel Clamp.

- **SIZES**

- Available sizes are: $\left. \begin{matrix} 24" \times 24" \\ 36" \times 24" \\ 48" \times 24" \end{matrix} \right\}$ OR $\left. \begin{matrix} 600\text{mm} \times 600\text{mm} \\ 900\text{mm} \times 600\text{mm} \\ 1200\text{mm} \times 600\text{mm} \end{matrix} \right\}$

- **FINISH**

- RAL 9010 White Finish.



OPTIONS

- 16 Ga Galvanized Steel construction.
- 1.5 mm Stainless Steel 304 construction.
- 1.5 mm Stainless Steel 316 construction.
- 1.5 mm Aluminum construction.
- Aluminum, Stainless Steel 304 and Stainless Steel 316 perforated sheets for the face.
- 3 cm extruded Aluminum flange for Aluminum and Galvanized construction for T-bar mount.
- 3 cm Stainless Steel duct flange for Stainless Steel construction for T-bar mount.
- HEPA filter H13 (99.95% degree of arrestance) or H14 (99.995% degree of arrestance) grade.
- Stainless Steel handle for filter fixation.

N.B: A 0.5 cm clearance is deducted from your order size.

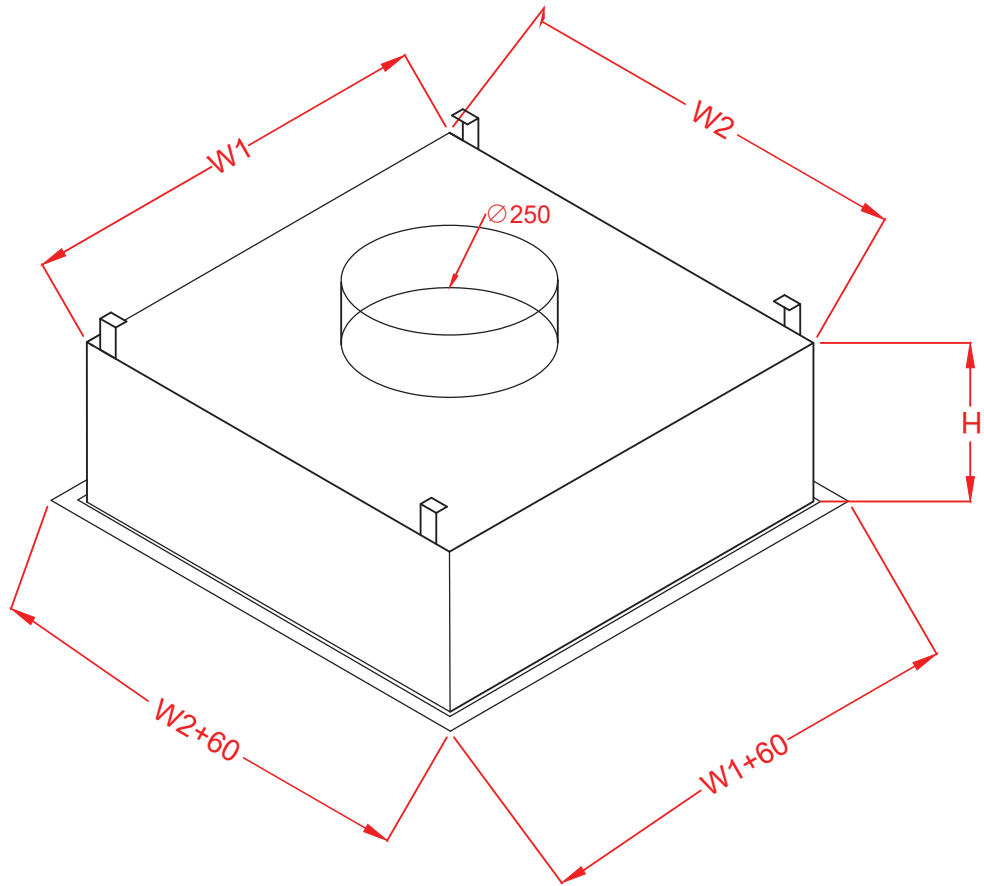
For more information please consult our engineers.

Tests Conducted in accordance with ASHRAE Standard 70-2006 in ETL-ETS USA

Leakage tests were conducted in accordance with AMCA Standard 500-D-2012 entitled, "Laboratory Methods for Testing Dampers for Rating" ETL-ETS USA.

ILLUSTRATIONS

Fully-Welded



All Older Sizes	Number of Inlet	Round Neck (mm)	H (mm)	
			LFDW200	LFDW100
	1	250	200	150

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ILLUSTRATIONS

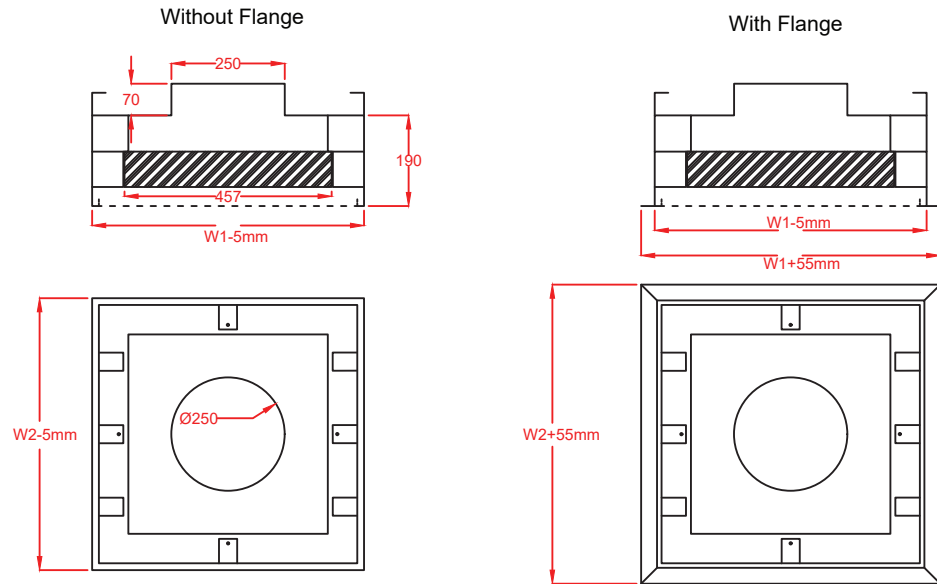
Fully-Welded

Order Size

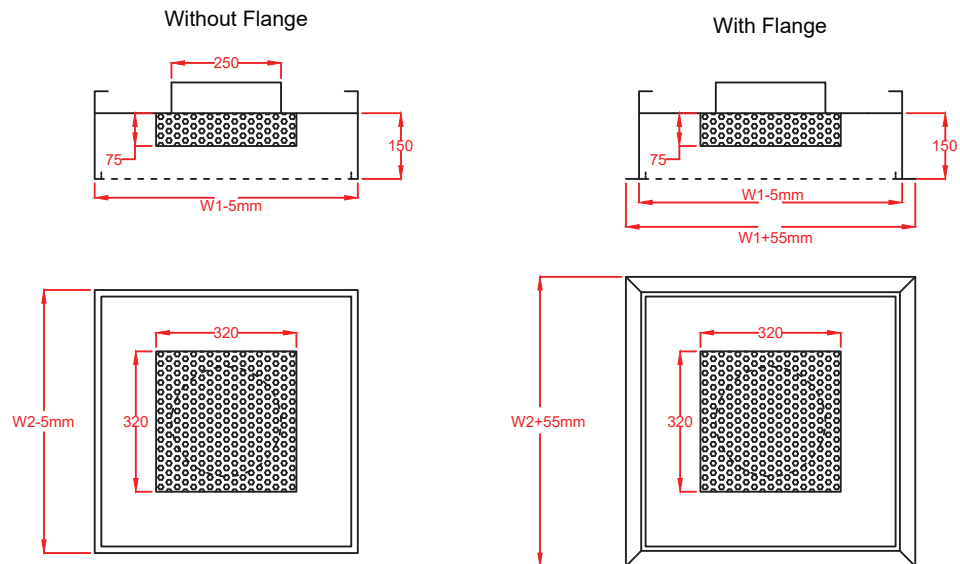
24"x24" or 600mm x 600mm

LFDW200 : Construction of LFD with filter support

Note: Fit for KBE proposed hepa filters only



LFDW100 : Construction of Diffuser without filter support



N.B: A 0.5 cm clearance is deducted from your order size.

For more information please consult our engineers.

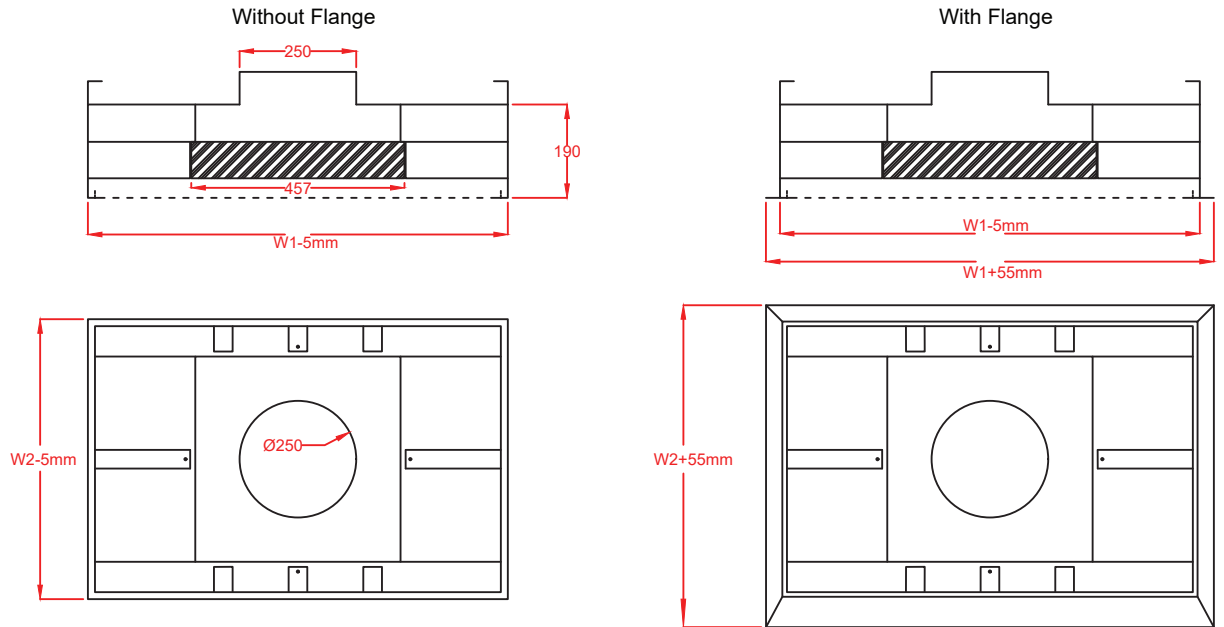
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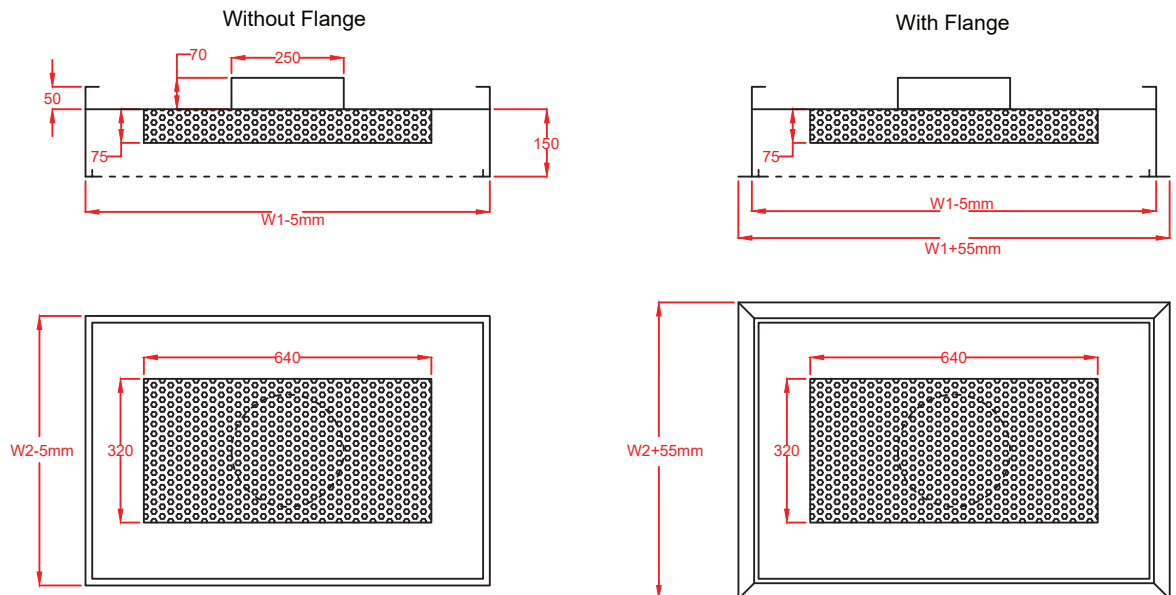
ILLUSTRATIONS

Fully-Welded

Order Size:
36"x24" or 900mm x 600mm
LFDW200: Construction of LFD with filter support
 Note: Fit for KBE proposed hepa filters only



LFDW100: Construction of Diffuser without filter support



N.B: A 0.5 cm clearance is deducted from your order size.

For more information please consult our engineers.

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ILLUSTRATIONS

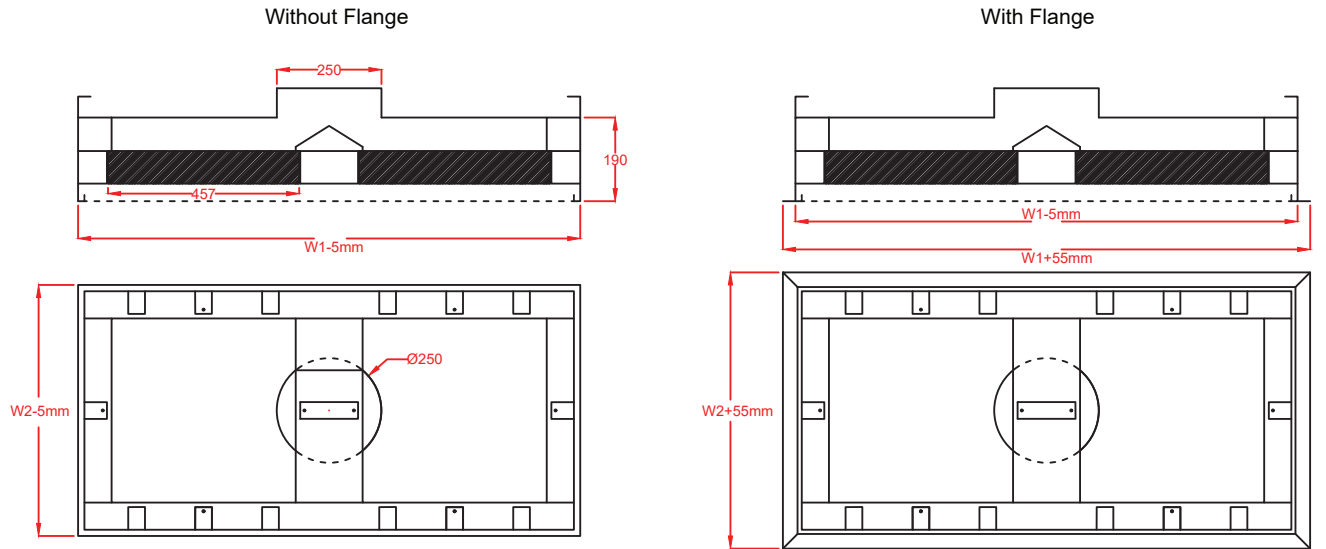
Fully-Welded

Order Size

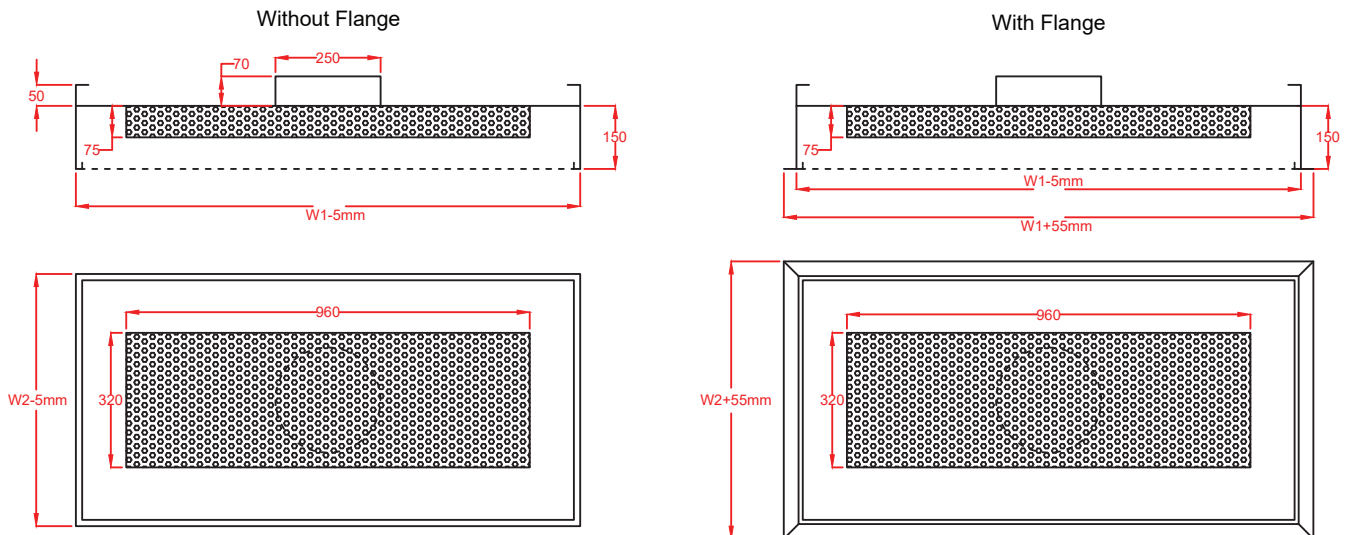
48"x24" or 1200mm x 600mm

LFDW200 : Construction of LFD with filter support

Note: Fit for KBE proposed hepa filters only



LFDW100 : Construction of Diffuser without filter support



N.B: A 0.5 cm clearance is deducted from your order size.

For more information please consult our engineers.

Tests Conducted in accordance with ASHRAE Standard 70-2006 in ETL-ETS USA

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LAMINAR FLOW DIFFUSER

LFD/LFDW Series

PERFORMANCE DATA

Unit Size (In.)	Ak Factor (Ft ²)	Velocity (Cfm/ft ²)	Page 1/8 SAP REV: 30 2025 Date: 27/03/2025						
			20	30	40	50	60	70	80
24x 24 Neck Size Diam 10''	2.03	Airflow	80	120	160	200	240	280	320
		SP.	0.001	0.003	0.005	0.008	0.012	0.016	0.021
		NC	<15	<15	<15	<15	<15	<15	<15
		A.V (Fpm)	30	44	58	71	82	92	101
36 x 24 Neck Size Diam 10''	2.95	Airflow	120	180	240	300	360	420	480
		SP.	0.002	0.005	0.008	0.013	0.019	0.026	0.034
		NC	<15	<15	<15	<15	<15	16	22
		A.V (Fpm)	31	42	56	68	79	88	99
48 x 24 Neck Size Diam 10''	3.45	Airflow	160	240	320	400	480	560	640
		SP.	0.003	0.007	0.012	0.018	0.028	0.036	0.047
		NC	<15	<15	<15	<15	20	24	31
		A.V (Fpm)	31	43	56	65	78	87	97

Notes:

- 1- Leakage tests were conducted in accordance with AMCA Standard 500-D-2012 entitled, "Laboratory Methods for Testing Dampers for Rating" ETL-ETS USA.
- 2- Tests Conducted in accordance with ASHREA Standard 70-2006 (sound tests are conducted at Isothermal conditions).
- 3- Ak: Free area in ft²
- 4- Airflow in Cfm
- 5- S.P: Static pressure is in Inch of Water. SP was measured at 1.5 duct diameters upstream of the inlet of the Diffuser.
- 6- Cfm/Ft²: Airflow rate through diffuser per square foot of overall face area.
- 7- NC: Noise Criteria is based on a 10db room attenuation.
- 8- A.V: Average Velocity at 6 feet below ceiling.
- 9- Test data shown is for a temperature difference DT of 5°F between the supply air temperature and the average room air temperature.
- 10- Test Room Dimensions: 18'x24'x9'



LAMINAR FLOW DIFFUSER

LFD/LFDW Series

LEAKAGE DATA

The purpose of test was to define the leakage of the Filter gasket and the Laminar casing when filter is block by Dust. The perimeter seal and casing around the filter was the leakage component.

Leakage tests were conducted in accordance with AMCA Standard 500-D-2012 entitled, "Laboratory Methods for Testing Dampers for Rating". The test samples were not dampers but filters with the outlet side blocked with cardboard and taped. Air Volume was measured employing metering stations containing appropriately sized orifice plates.

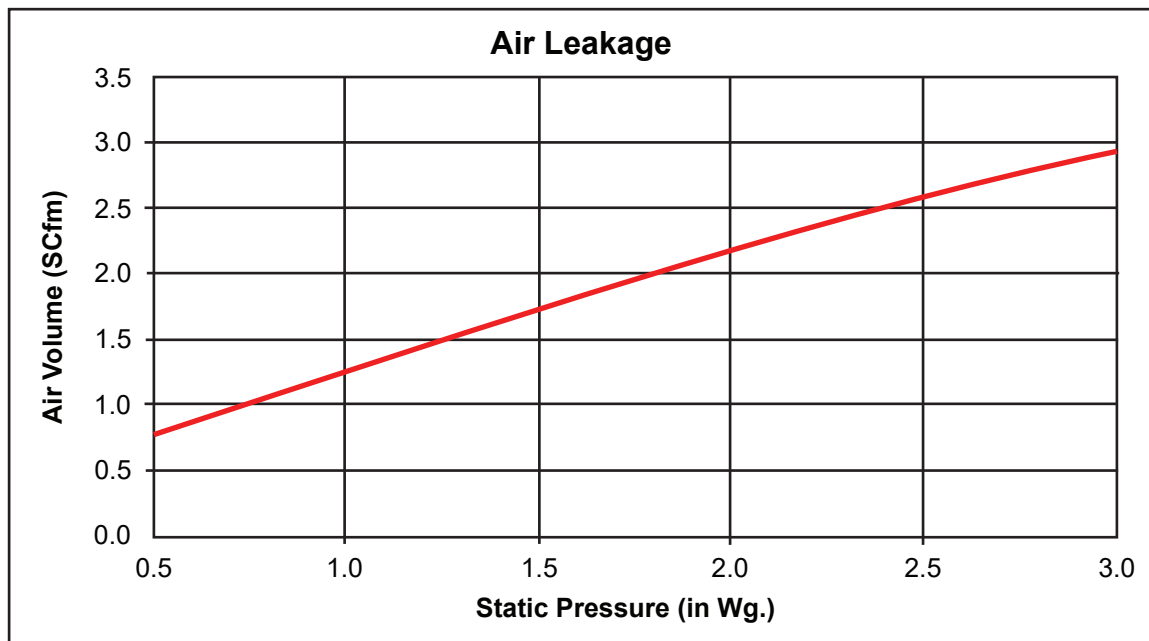
Test conducted at Intertek Lab under report No. 103197431.

AIR LEAKAGE RESULT:

MODEL LFD200-24x24, HEPA Filter H14

Pressure Drop Across Blocked Sample		Air Volume	
<u>in. Wg.</u>	<u>kPa</u>	<u>SCFM</u>	<u>L/s</u>
0.5	0.124	0.8	0.4
1.0	0.249	1.3	0.6
1.5	0.373	1.8	0.8
2.0	0.498	2.2	1.0
2.5	0.622	2.6	1.2
3.0	0.747	2.9	1.4

GRAPHICAL TEST RESULTS



ORDER INFORMATION

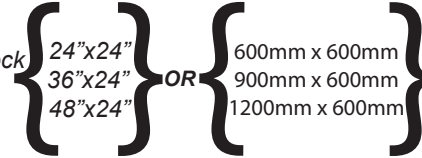
MODEL BOX PERFORATED FLANGE FILTER FIXATION ORDER SIZE



↑
 -LFDW200: Construction of LFD with filter support.
 -LFDW100: Construction of Diffuser without filter support

↑
 --: Galvanized (available for Galvanized construction only)
 SCP: Stainless Steel 304
 16SCP: Stainless Steel 316
 ALP: Aluminum (available for Galvanized & Aluminum construction)

↑
 --: Standard Clamp
 SSH: Stainless Steel lock



↑
 --: 16 Ga Galvanized Steel (STD)
 SC15: 1.5 mm Stainless Steel 304
 16SC15: 1.5 mm Stainless Steel 316
 AL15: 1.5 mm Aluminum

↑
 --: No Flange (STD)
 F : with 3 cm extruded aluminum flange for AL and GI construction
OR 3 cm stainless steel duct flange for SS construction

N.B: A 0.5 cm clearance is deducted from width and height order size.
 For more information, please check the submittal sheet.

Tests Conducted in accordance with ASHRAE Standard 70-2006 in ETL-ETS USA
 Leakage tests were conducted in accordance with AMCA Standard 500-D-2012 entitled, "Laboratory Methods for Testing Dampers for Rating" ETL-ETS USA.