LV

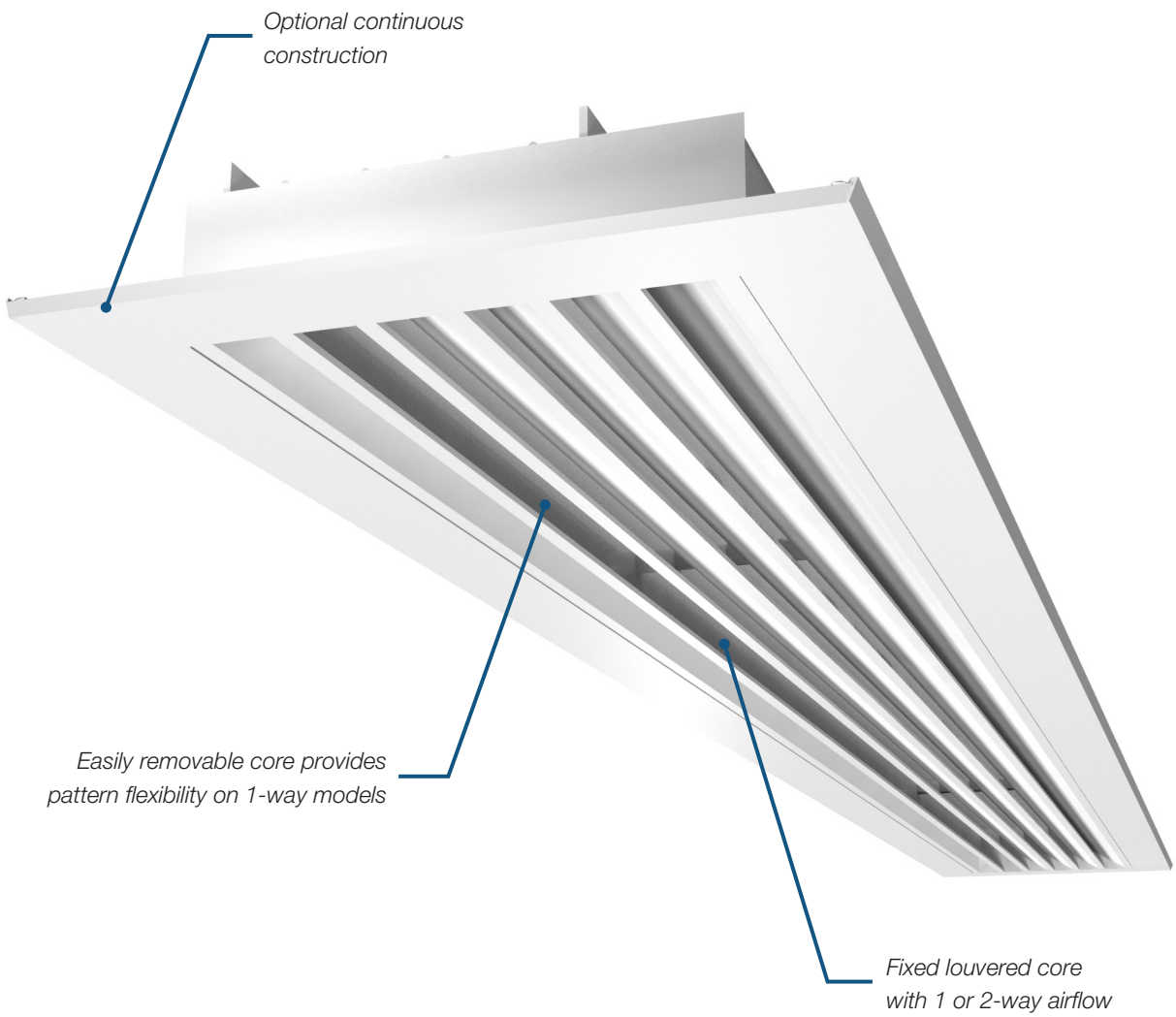
LINEAR VANE DIFFUSER



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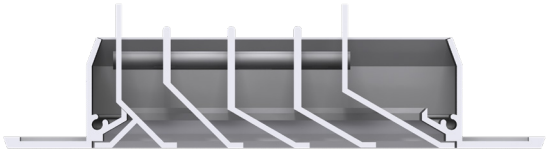
LV
Linear Vane Diffuser

The Linear Vane Diffuser (LV) features a removable louvered core with fixed 1 or 2-way airflow and is suitable for installation in ceilings and sidewalls. Optional continuous construction and anodized finishes make the LV ideal for architectural applications.

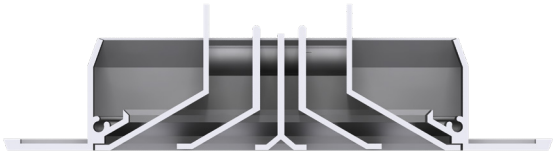


LOUVERED CORE

+ The fixed louvers of the LV provide either a 1-way or 2-way airflow pattern for various mounting and application types.
+ The removable core allows for easy installation and can be rotated to provide pattern direction flexibility on 1-way models.



1-way airflow



2-way airflow

CONSTRUCTION

+ Linear vane diffusers feature extruded aluminum construction with precise mitered corners.
+ Extruded aluminum construction allows for anodized and other architectural finishes to be used.
+ Multiple sections in continuous lengths are supplied with alignment pins so that sections butt closely together with no visible mullions or frames.

OPTIONAL ACCESSORIES

+ Linear vane diffusers are available with an assortment of accessories including:
+ Blank off sections for a continuous look without airflow.
+ Directional vanes to shorten throw and increase spread.
+ Dampers to adjust airflow volume.

TYPICAL APPLICATIONS

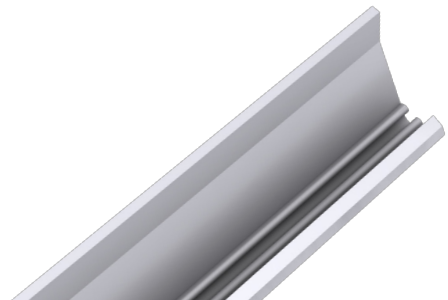
Linear Vane Diffusers provide linear styling in supply and return air distribution applications. Available in continuous lengths for a clean aesthetic these units can be mounted in ceilings or sidewalls dependent on desired airflow direction.

CONSTRUCTION

+ Air Pattern
  - 1-way (LV1)
  - 2-way (LV2)
+ Size
  - Single piece max. length 96 in.
+ Finish
  - White powder coat
  - Anodized finishes



Alignment pins



PERFORMANCE DATA

1-Way Deflection

Size	Static Pressure (in. w.g.)		0.010	0.022	0.040	0.063	0.089	0.121	0.159
3 1/2 in.	Flow Rate (cfm/ft)		21	32	42	53	64	74	85
	Sound (NC)		-	18	26	31	36	40	44
	Throw (ft.)	Ceiling	6-10-14	9-14-19	10-16-22	12-18-25	14-21-28	15-22-30	16-24-32
		Sidewall	3-8-13	7-12-17	9-14-19	11-16-21	13-18-23	14-19-24	16-20-25
4 1/4 in.	Flow Rate (cfm/ft)		30	46	61	76	91	106	122
	Sound (NC)		-	20	28	33	38	42	46
	Throw (ft.)	Ceiling	6-10-15	9-15-21	11-18-25	13-20-27	15-22-30	17-25-33	18-27-36
		Sidewall	3-8-13	7-12-17	9-14-19	11-16-21	13-18-23	14-19-24	16-20-25
5 in.	Flow Rate (cfm/ft)		40	61	81	101	121	142	162
	Sound (NC)		-	21	29	34	39	43	47
	Throw (ft.)	Ceiling	6-12-18	10-16-23	12-19-27	15-23-31	17-25-34	18-27-37	20-29-39
		Sidewall	3-8-13	7-12-17	9-14-19	11-16-21	13-18-23	15-20-25	16-21-26
5 3/4 in.	Flow Rate (cfm/ft)		52	79	105	131	157	183	210
	Sound (NC)		-	22	30	35	40	44	48
	Throw (ft.)	Ceiling	8-14-20	12-19-26	15-23-31	17-26-35	19-28-38	20-30-40	22-32-43
		Sidewall	4-9-14	8-13-18	11-16-21	13-18-23	15-20-25	16-21-26	17-22-28
6 1/2 in.	Flow Rate (cfm/ft)		67	100	133	167	200	234	267
	Sound (NC)		-	23	31	36	41	45	49
	Throw (ft.)	Ceiling	9-16-23	13-21-29	16-25-34	18-28-38	20-30-40	22-33-44	24-35-46
		Sidewall	5-10-16	9-14-20	13-17-22	15-20-25	16-21-26	17-22-28	18-23-29
8 in.	Flow Rate (cfm/ft)		90	135	180	225	265	315	355
	Sound (NC)		-	24	32	37	42	46	50
	Throw (ft.)	Ceiling	12-18-25	16-24-32	20-29-38	21-31-42	23-34-47	27-39-52	27-39-54
		Sidewall	6-11-19	10-15-23	14-18-25	17-21-28	17-22-29	18-23-31	19-24-32
9 1/2 in.	Flow Rate (cfm/ft)		115	170	230	290	350	410	460
	Sound (NC)		-	25	33	38	43	47	51
	Throw (ft.)	Ceiling	16-21-29	16-25-34	21-30-40	22-33-44	25-36-49	27-39-54	28-40-56
		Sidewall	7-12-19	11-16-23	15-19-25	18-22-29	18-23-30	19-24-32	20-25-33
11 3/4 in.	Flow Rate (cfm/ft)		160	235	315	400	470	550	690
	Sound (NC)		16	27	35	40	45	49	53
	Throw (ft.)	Ceiling	16-25-31	20-30-36	23-34-41	26-38-45	29-43-50	31-46-54	35-50-56
		Sidewall	8-13-21	12-17-25	16-20-27	19-23-31	19-24-32	20-25-34	21-26-35

Performance Notes

Tested in accordance with ASHRAE Standard 70 – 2023 "Method of Testing for Rating the Performance of Air Outlets and Inlets."

1. Pressure
   Airflow is in cubic feet per minute [cfm].
2. Throw data is given in feet [ft] to terminal velocities of 150 fpm (minimum), 100 fpm (middle), 50 fpm (maximum).
   These throw values are based on a 4 ft active section of vane with a cooling temperature differential of 20°F. The multiplier factors listed in the table below are applicable for other lengths.

Throw Correction for Length (Multiply)

	Terminal Velocity		
Active Length	150 fpm	100 fpm	50 fpm
1 ft	0.5	0.6	0.7
10 ft or Continuous	1.6	1.4	1.2

3. Sound
   NC, sound pressure levels, are based on a room absorption of 10 dB re 10-12 Watts and a 10 ft active section. The NC correction values for other lengths are listed in the table below.

NC Correction for Length

Active Length, ft	1	2	4	6	8	10	15	20	25	30
Correction	-10	-7	-4	-2	-1	0	+2	+3	+4	+5

4. Return Air Applications
   When used as a return air intake, the NC value given in the performance table will be increased by 4.
   For return air application, the negative static pressure will be 0.8 times the static pressure value as shown in the performance table.
5. Blanks "-" indicate an NC level below 15.

PERFORMANCE DATA

Linear Vane Diffuser – 2-Way Deflection

Size	Static Pressure		0.010	0.022	0.040	0.063	0.089	0.121	0.159
6 1/4 in.	Flow Rate (cfm/ft)		41	62	82	103	124	144	165
	Sound (NC)		-	21	29	34	39	43	47
	Throw (ft.)	Ceiling	5-9-14	8-13-18	10-15-21	12-18-24	13-20-27	14-21-28	16-23-31
7 3/4 in.	Flow Rate (cfm/ft)		62	94	125	156	187	218	250
	Sound (NC)		-	23	31	36	41	45	49
	Throw (ft.)	Ceiling	5-10-16	8-14-21	10-17-25	12-20-28	14-22-31	15-24-34	17-26-36
9 1/4 in.	Flow Rate (cfm/ft)		84	126	168	210	252	294	336
	Sound (NC)		-	24	32	37	42	46	50
	Throw (ft.)	Ceiling	6-12-18	9-16-24	12-19-27	15-23-31	17-25-34	18-28-38	19-29-40
10 3/4 in.	Flow Rate (cfm/ft)		107	160	214	267	320	374	427
	Sound (NC)		-	25	33	38	43	47	51
	Throw (ft.)	Ceiling	6-13-20	11-18-25	14-22-30	17-25-33	18-27-37	20-30-41	21-32-44
12 1/4 in.	Flow Rate (cfm/ft)		131	197	262	328	394	459	525
	Sound (NC)		-	26	34	39	44	48	52
	Throw (ft.)	Ceiling	7-14-22	12-19-27	15-23-32	18-27-36	19-29-40	20-31-43	21-33-46

Performance Notes

Tested in accordance with ASHRAE Standard 70 – 2023 "Method of Testing for Rating the Performance of Air Outlets and Inlets."

1. Pressure
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2. Throw data is given in feet [ft] to terminal velocities of 150 fpm (minimum), 100 fpm (middle), 50 fpm (maximum).
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NC Correction for Length

Active Length, ft	1	2	4	6	8	10	15	20	25	30
Correction	-10	-7	-4	-2	-1	0	+2	+3	+4	+5

4. Return Air Applications
   When used as a return air intake, the NC value given in the performance table will be increased by 4.
   For return air application, the negative static pressure will be 0.8 times the static pressure value as shown in the performance table.
5. Blanks "-" indicate an NC level below 15.

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