

PERFORMANCE DATA:

SUPPLY • CONTINUOUS PRESSURIZED PLENUM

Model 5050 • 1/2" (13) Slot

LINEAR DIFFUSERS AND BAR GRILLES

No. of Slots	Total Pressure, Horizontal	.005	.020	.041	.074	.120	.173	.230	.310
	Total Pressure, Vertical	.003	.014	.027	.051	.083	.116	.158	.215
1	Airflow, CFM/FT.	5	10	15	20	25	30	35	40
	Throw, Horizontal	1-1-6	3-6-12	6-10-14	8-12-18	10-14-18	12-14-20	12-14-20	14-16-24
	Throw, Vertical	2	6	9	11	12	13	14	15
	Noise Criteria	–	–	17	21	26	31	35	38
2	Airflow, CFM/FT.	10	20	30	40	50	60	70	80
	Throw, Horizontal	1-3-9	4-9-16	6-12-20	10-16-22	14-18-24	16-20-28	18-20-30	18-22-32
	Throw, Vertical	3	7	12	14	15	17	18	20
	Noise Criteria	–	15	20	24	28	34	38	41
3	Airflow, CFM/FT.	15	30	45	60	75	90	105	120
	Throw, Horizontal	2-4-10	6-12-20	10-16-24	14-20-28	18-20-30	20-24-38	20-24-40	22-28-44
	Throw, Vertical	4	10	15	18	21	22	25	23
	Noise Criteria	–	16	21	26	31	36	40	43
4	Airflow, CFM/FT.	20	40	60	80	100	120	140	160
	Throw, Horizontal	3-5-12	8-12-22	12-18-28	16-22-32	20-24-40	22-28-44	24-30-48	26-32-52
	Throw, Vertical	6	11	16	20	22	24	26	29
	Noise Criteria	–	17	22	27	32	37	41	44
5	Airflow, CFM/FT.	25	50	75	100	125	150	175	200
	Throw, Horizontal	3-6-14	8-14-24	14-20-30	18-24-40	22-28-46	26-32-50	28-40-52	30-40-58
	Throw, Vertical	6	12	20	26	27	30	30	33
	Noise Criteria	–	18	23	28	33	38	42	45
6	Airflow, CFM/FT.	30	60	90	120	150	180	210	240
	Throw, Horizontal	4-7-16	10-16-28	14-20-38	20-28-44	24-32-50	28-40-54	30-42-58	32-46-64
	Throw, Vertical	6	14	20	25	27	30	33	34
	Noise Criteria	–	19	24	29	34	39	43	46
7	Airflow, CFM/FT.	35	70	105	140	175	210	245	280
	Throw, Horizontal	5-8-18	12-18-30	16-24-42	22-30-48	26-36-54	30-42-58	38-46-64	40-48-68
	Throw, Vertical	6	14	22	27	30	32	36	38
	Noise Criteria	–	19	24	29	34	39	43	46
8	Airflow, CFM/FT.	40	80	120	160	200	240	280	320
	Throw, Horizontal	6-10-20	14-20-32	18-30-44	24-36-52	28-40-58	32-46-64	40-48-68	42-52-72
	Throw, Vertical	7	15	24	29	33	36	39	40
	Noise Criteria	–	20	25	30	35	40	44	47

Noise Criteria Correction Factors for Various Lengths

Length (ft.)	2	4	6	8	9	10	15
Supply	-3	0	+2	+3	+4	+5	+8
Return	0	+3	+4	+6	+7	+8	+10

Throw Correction Factors for Various Lengths

Length (ft.)	2	4	6	8	10	12
Multiplier	0.70	1.0	1.25	1.40	1.55	1.70

Performance Notes:

- Data is based upon pressurized plenum application (non ducted) with no plenum effect for pressure or sound. Plenums should be sized to achieve equal velocity along the slot length. Keep duct inlet velocities below 700 fpm in order to maintain cataloged performance.
- All pressures are in inches w.g..
- Horizontal throws are given at 150, 100 and 50 fpm terminal velocities. Vertical throws are given at 50 fpm terminal velocity. Both under isothermal conditions.
- Throw data are based on active sections 4 ft. long. For other lengths, use the correction factor table above.

- Noise criteria [NC] values are based on 10 dB room absorption, re 10⁻¹² watts, for a 4 ft. section. For other lengths, use the correction factor table above. For vertical throw, deduct 10 NC.
- Throw values are for a 1-way air pattern. For divided airflow, deduce the airflow in each direction according to the number of slots, with the total airflow apportioned between the slots. Look up throw for the airflow in each direction according to the number of slots in that direction.
- Dash (–) in space indicates an Noise Criteria level of less than 15.

- Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70-2006.

Number of Slots	Ak Factor per foot	
	Supply	Return
1	.018	.033
2	.035	.066
3	.053	.099
4	.070	.132
5	.088	.165
6	.105	.198
7	.123	.231
8	.140	.264