



AIRGUIDE - VML - SUPPLY GRILLE PERFORMANCE DATA



Performance Notes for Supply Grilles and Registers

Throw, Spread and Drop

The isovel diagrams shown below, illustrate in plan view, the relationship of horizontal spread to throw for three standard vertical blade deflections and represent a typical high side wall supply outlet. The isovels (throw values) are for the cataloged terminal velocities of 150, 100 and 50 fpm.

Cataloged data, in accordance with the test code, is with the grille mounted 9" (229) below the ceiling and benefiting from the ceiling coanda effect under isothermal conditions. Throw values without ceiling effect (greater than 24" (610) from a surface parallel to the airflow) may be approximated by multiplying the cataloged throw by $\times 0.7$.

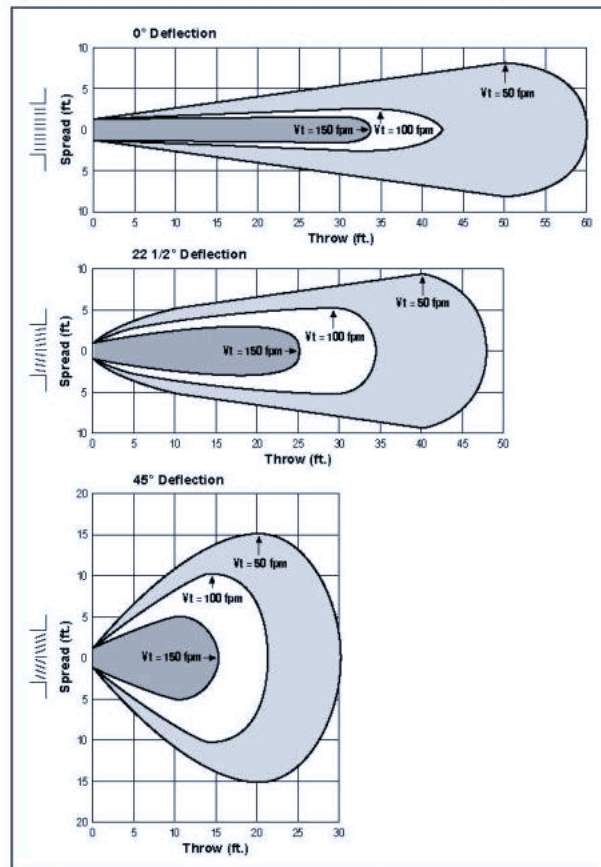
In order to offset potential draft problems caused by premature drop, it is recommended to set the blades with an upward deflection setting of 15 – 20° in free space conditions. The

angle of spread and temperature differential between the supply air and room air (ΔT) also effects the drop of the airstream.

Under constant conditions of temperature, volume and core velocity, the wider the spread, the smaller the drop. Typical cold supply air (20°F ΔT) reduces horizontal throw by approximately 30%. Warm air will increase throw by approximately 30% and reduce drop.

For a full explanation of the effects of spread, throw, temperature and drop, refer to the engineering guide at the back of the catalog.

Spread Characteristics With Three Deflection Settings



NC Corrections for Blade Deflection (add)

Model Type	Damper	Blade Deflection		
		0°	22 1/2°	45°
Double Deflection	With	0	+ 2	+ 7
	Without	- 4	- 2	+ 3
Single Deflection	With	- 4	- 1	+ 4
	Without	- 8	- 6	+ 1

Note: Damper corrections are for wide open damper.

TP Correction Factors for Grilles Without Damper (multiply)

Blade deflection	0°	22 1/2°	45°
Double Defl. Factor	$\times .80$	$\times .83$	$\times .89$
Single Defl. Factor	$\times .73$	$\times .76$	$\times .85$

NC Corrections for Throttling Damper (add)

Additional Pressure Drop (in. w.g.)	.05"	.15"	.25"
Approx. Damper Opening	75%	67%	50%
NC add	+ 6	+ 11	+ 18





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Performance Data

Supply Grilles and Registers

MODELS: V, VOB, H, HOB, VME, VMEOB, HME, HMEOB, VH, VHOB, VHME, VHMEOB, HV, HVOB, HVME, HVMEOB, VML, VMLME, HML, HMLME

Listed Duct Size (inches)	Alternate Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity VP	300	400	500	600	700	800	1000	1200	1400	
					.006	.010	.016	.022	.031	.040	.062	.090	.122	
6 x 6	8 x 4 10 x 4	0.20	CFM NC	0°	.015	.026	.041	.059	.081	.106	.165	.238	.324	
				22 1/2°	.017	.030	.047	.068	.093	.122	.190	.274	.373	
				45°	.026	.046	.072	.103	.142	.186	.289	.417	.567	
				0°	60	80	100	120	140	160	200	240	280	
				22 1/2°	—	—	—	—	—	—	—	—	—	
				45°	—	—	—	—	—	—	—	—	—	
	8 x 6	10 x 5 12 x 4	0.27	CFM NC	0°	5-8-13	7-9-16	8-12-18	10-14-20	11-15-21	12-16-23	15-18-25	16-20-27	17-21-30
					22 1/2°	4-6-10	6-7-13	6-10-14	8-11-16	9-12-17	10-13-18	12-14-20	13-16-22	14-17-24
					45°	3-4-7	4-5-8	4-6-9	5-7-10	6-8-11	6-8-12	8-9-13	8-10-14	9-11-15
					0°	81	108	135	162	189	216	270	324	378
					22 1/2°	—	—	—	—	—	—	—	—	—
					45°	—	—	—	—	—	—	—	—	—
10 x 6		12 x 5 16 x 4	0.35	CFM NC	0°	5-8-15	8-12-18	10-14-20	11-16-23	13-18-25	15-19-27	17-21-30	18-23-32	19-24-35
					22 1/2°	4-6-12	6-10-14	8-11-16	9-13-18	10-14-20	12-15-22	14-17-24	14-18-26	15-19-28
					45°	3-4-8	4-6-9	5-7-10	6-8-12	7-9-13	8-10-14	9-11-15	9-12-16	10-12-18
					0°	105	140	175	210	245	280	350	420	490
					22 1/2°	—	—	—	—	—	—	—	—	—
					45°	—	—	—	—	—	—	—	—	—
	8 x 8	14 x 5	0.38	CFM NC	0°	6-9-18	9-13-21	10-16-24	12-19-26	15-20-28	17-21-30	20-23-33	21-25-36	22-27-39
					22 1/2°	5-7-14	7-10-17	8-13-19	10-15-21	12-16-22	14-17-24	16-18-26	17-20-29	18-22-31
					45°	3-5-9	5-7-11	5-8-12	6-10-13	8-10-14	9-11-15	10-12-17	11-13-18	11-14-20
					0°	114	152	190	228	266	304	380	456	532
					22 1/2°	—	—	—	—	—	—	—	—	—
					45°	—	—	—	—	—	—	—	—	—
12 x 6		18 x 4	0.42	CFM NC	0°	6-9-19	9-14-22	11-16-25	13-19-27	16-21-30	18-22-32	19-24-34	21-26-37	23-28-40
					22 1/2°	5-7-15	7-11-18	9-13-20	10-15-22	13-17-23	14-18-26	15-19-27	17-21-30	18-22-32
					45°	3-5-10	5-7-11	6-8-13	7-10-14	8-11-15	9-11-16	10-12-17	11-13-19	12-14-20
					0°	126	168	210	252	294	336	420	504	588
					22 1/2°	—	—	—	—	—	—	—	—	—
					45°	—	—	—	—	—	—	—	—	—
	14 x 6	10 x 8	0.50	CFM NC	0°	6-9-19	9-14-22	11-16-25	13-19-27	16-21-30	18-22-32	19-24-34	21-26-37	23-28-40
					22 1/2°	5-9-16	8-12-18	10-14-20	12-16-22	13-18-25	15-18-26	17-20-29	18-22-32	20-25-34
					45°	3-6-10	5-8-12	6-9-13	8-10-14	8-11-16	10-12-17	11-13-18	12-14-20	13-16-22
					0°	174	232	290	348	406	464	580	696	812
					22 1/2°	—	—	—	—	—	—	—	—	—
					45°	—	—	—	—	—	—	—	—	—
12 x 8		16 x 6 24 x 4	0.58	CFM NC	0°	7-11-21	10-15-24	12-19-27	15-21-30	17-23-32	20-24-34	22-27-38	24-30-42	26-32-45
					22 1/2°	6-9-17	8-12-19	10-15-22	12-17-24	14-18-26	16-19-27	18-22-30	19-24-34	21-26-36
					45°	4-6-11	5-8-12	6-10-14	8-11-15	9-12-16	10-12-17	11-14-19	12-15-21	13-16-23
					0°	183	244	305	366	427	488	610	732	854
					22 1/2°	—	—	—	—	—	—	—	—	—
					45°	—	—	—	—	—	—	—	—	—
	18 x 6	14 x 8 28 x 4 30 x 4	0.65	CFM NC	0°	7-11-21	10-16-24	13-19-28	16-21-30	17-23-32	20-24-35	23-28-39	24-30-43	27-32-46
					22 1/2°	6-9-17	8-13-19	10-15-22	13-17-24	14-18-26	16-19-28	18-22-31	19-24-34	22-26-37
					45°	4-6-11	5-8-12	7-10-14	8-11-15	9-12-16	10-12-18	12-14-20	12-15-22	14-16-23
					0°	195	260	325	390	455	520	650	780	910
					22 1/2°	—	—	—	—	—	—	—	—	—
					45°	—	—	—	—	—	—	—	—	—
12 x 10		20 x 6 24 x 5	0.74	CFM NC	0°	7-12-22	11-16-25	13-20-29	16-22-32	18-24-34	21-25-36	24-29-40	25-32-45	28-34-48
					22 1/2°	6-10-18	9-13-20	10-16-23	13-18-26	14-19-27	17-20-29	19-23-32	20-26-36	22-27-38
					45°	4-6-11	6-8-13	7-10-15	8-11-16	9-12-17	11-13-18	12-15-20	13-16-23	14-17-24
					0°	222	296	370	444	518	592	740	888	1036
					22 1/2°	—	—	—	—	—	—	—	—	—
					45°	—	—	—	—	—	—	—	—	—
	22 x 6	16 x 8 28 x 5 36 x 4	0.80	CFM NC	0°	8-13-25	11-18-28	15-22-32	18-25-35	20-27-38	23-28-41	26-32-45	28-35-50	31-38-53
					22 1/2°	6-10-20	9-14-22	12-18-26	14-20-28	16-22-30	18-22-33	21-26-36	22-28-40	25-30-42
					45°	4-7-13	6-9-14	8-11-16	9-13-18	10-14-19	12-14-21	13-16-23	14-18-25	16-19-27
					0°	240	320	400	480	560	640	800	960	1120
					22 1/2°	—	—	—	—	—	—	—	—	—
					45°	—	—	—	—	—	—	—	—	—
12 x 12		14 x 10 18 x 8 24 x 6 38 x 4	0.90	CFM NC	0°	8-13-25	11-18-28	15-22-32	18-25-35	20-27-38	23-28-41	26-32-45	28-35-50	31-38-53
					22 1/2°	6-10-20	9-14-22	12-18-26	14-20-28	16-22-30	18-22-33	21-26-36	22-28-40	25-30-42
					45°	4-7-13	6-9-14	8-11-16	9-13-18	10-14-19	12-14-21	13-16-23	14-18-25	16-19-27
					0°	270	360	450	540	630	720	900	1080	1260
					22 1/2°	—	—	—	—	—	—	—	—	—
					45°	—	—	—	—	—	—	—	—	—
	18 x 10	30 x 6	1.13	CFM NC	0°	9-14-26	12-18-29	15-23-33	18-26-36	21-27-39	24-29-42	27-32-47	29-36-51	32-39-56
					22 1/2°	7-11-21	10-14-23	12-18-26	14-21-29	17-22-31	19-23-34	22-26-38	23-29-41	26-31-45
					45°	5-7-13	6-9-15	8-12-17	9-13-18	11-14-20	12-15-21	14-17-24	15-18-26	17-20-28
					0°	339	452	565	678	791	904	1130	1356	1582
					22 1/2°	—	—	—	—	—	—	—	—	—
					45°	—	—	—	—	—	—	—	—	—





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Listed Duct Size (inches)	Alternate Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity VP	300	400	500	600	700	800	1000	1200	1400	
					.006	.010	.016	.022	.031	.040	.062	.090	.122	
14 x 14	16 x 12 20 x 10 24 x 8 34 x 6	1.24	84 73 64	CFM	372	496	620	744	868	992	1240	1488	1736	
				NC	—	10	17	22	27	31	37	43	48	
				T	0°	11-18-33	16-25-39	20-29-42	24-33-47	27-36-51	31-39-54	35-42-60	39-47-66	41-51-71
					22 1/2°	9-14-26	13-20-31	16-23-34	19-26-38	22-29-41	25-31-43	28-34-48	31-38-53	33-41-57
					45°	6-9-17	8-13-20	10-15-21	12-17-24	14-18-26	16-20-27	18-21-30	20-24-33	21-26-36
					45°	—	—	—	—	—	—	—	—	—
18 x 12	16 x 14 22 x 10 28 x 8 38 x 6	1.37	93 81 71	CFM	411	548	685	822	959	1096	1370	1644	1918	
				NC	—	11	18	23	28	32	38	44	49	
				T	0°	11-18-33	16-25-39	20-30-43	24-33-47	28-36-51	32-39-54	35-43-61	39-47-67	41-51-72
					22 1/2°	9-14-26	13-20-31	16-24-34	19-26-38	22-29-41	26-31-43	28-34-49	31-38-54	33-41-58
					45°	6-9-17	8-13-20	10-15-22	12-17-24	14-18-26	16-20-27	18-22-31	20-24-34	21-26-38
					45°	—	—	—	—	—	—	—	—	—
24 x 10	20 x 12 30 x 8	1.52	1.03 90 78	CFM	456	608	760	912	1064	1216	1520	1824	2128	
				NC	—	11	18	23	28	32	38	44	49	
				T	0°	12-19-35	16-25-41	21-32-45	25-35-50	29-38-53	34-41-57	37-45-64	41-50-70	43-53-76
					22 1/2°	10-15-28	13-20-33	17-26-36	20-28-40	23-30-42	27-33-46	30-36-51	33-40-56	34-42-61
					45°	6-10-18	8-13-21	11-16-23	13-18-25	15-19-27	17-21-29	19-23-32	21-25-35	22-27-38
					45°	—	—	—	—	—	—	—	—	—
16 x 16	18 x 14 22 x 12 30 x 8	1.64	1.12 97 84	CFM	492	656	820	984	1148	1312	1640	1968	2296	
				NC	—	11	18	23	28	32	38	44	49	
				T	0°	12-20-37	17-26-42	22-32-47	26-37-51	31-40-56	35-42-59	39-47-67	42-51-73	46-56-79
					22 1/2°	10-16-30	14-21-34	18-26-38	21-30-41	25-32-45	28-34-47	31-38-54	34-41-58	37-45-63
					45°	6-10-19	9-13-21	11-16-24	13-19-26	16-20-28	18-21-30	20-24-34	21-26-37	23-28-40
					45°	—	—	—	—	—	—	—	—	—
24 x 12	18 x 16 20 x 14 30 x 10 36 x 8	1.85	1.26 1.09 95	CFM	515	740	925	1110	1295	1480	1850	2220	2590	
				NC	—	12	19	24	29	33	39	45	50	
				T	0°	12-20-38	18-27-44	22-33-48	27-38-54	32-40-58	36-44-62	40-48-69	44-54-76	48-58-82
					22 1/2°	10-16-30	14-22-35	18-26-38	22-30-43	26-32-46	29-35-50	32-38-55	35-43-61	38-46-66
					45°	6-10-19	9-14-22	11-17-24	14-19-27	16-20-29	18-22-31	20-24-35	22-27-38	24-29-41
					45°	—	—	—	—	—	—	—	—	—
18 x 18	20 x 16 24 x 14 28 x 12 32 x 10	2.10	1.43 1.24 1.08	CFM	630	840	1050	1260	1470	1680	2100	2520	2940	
				NC	—	12	19	24	29	33	39	45	50	
				T	0°	13-21-40	19-29-47	24-36-52	29-40-57	33-43-62	38-47-66	42-52-74	47-57-81	50-62-87
					22 1/2°	10-17-32	15-23-38	19-29-42	23-32-46	26-34-50	30-38-53	34-42-59	38-46-65	40-50-70
					45°	7-11-20	10-15-24	12-18-26	15-20-29	17-22-31	19-24-33	21-26-37	24-29-41	25-31-44
					45°	—	—	—	—	—	—	—	—	—
30 x 12	20 x 18 22 x 16 26 x 14 36 x 10	2.32	1.58 1.37 1.19	CFM	696	928	1160	1392	1624	1856	2320	2784	3248	
				NC	—	13	20	25	30	34	40	46	51	
				T	0°	14-23-43	21-31-50	26-39-56	31-43-61	36-47-67	41-50-71	46-56-79	50-61-86	54-67-94
					22 1/2°	11-18-34	17-25-40	21-31-45	25-34-49	29-38-54	33-40-57	37-45-63	40-49-69	43-54-75
					45°	7-12-22	11-16-25	13-20-28	16-22-31	18-24-34	21-25-36	23-28-40	25-31-43	27-34-47
					45°	—	—	—	—	—	—	—	—	—
24 x 16	32 x 12	2.50	1.70 1.48 1.29	CFM	750	1000	1250	1500	1750	2000	2500	3000	3500	
				NC	—	13	20	25	30	34	40	46	51	
				T	0°	14-24-45	22-32-52	27-40-58	32-45-64	37-49-68	43-52-74	48-58-82	52-64-90	56-68-97
					22 1/2°	11-19-36	18-26-42	22-32-46	26-36-51	30-39-54	34-42-59	38-46-66	42-51-72	45-54-78
					45°	7-12-23	11-16-26	14-20-29	16-23-32	19-25-34	22-26-37	24-29-41	26-32-45	28-34-48
					45°	—	—	—	—	—	—	—	—	—
20 x 20	22 x 18	2.61	1.77 1.54 1.34	CFM	783	1044	1305	1566	1827	2088	2610	3132	3654	
				NC	—	13	20	25	30	34	40	46	51	
				T	0°	15-24-46	22-32-53	27-41-59	32-46-65	38-50-70	44-53-75	49-59-84	53-65-92	58-70-99
					22 1/2°	12-19-37	18-26-42	22-33-47	26-37-52	30-40-56	35-42-60	39-47-67	42-52-74	46-56-79
					45°	8-12-23	11-16-27	14-21-30	16-23-33	19-25-35	22-27-39	25-30-42	27-33-46	29-35-50
					45°	—	—	—	—	—	—	—	—	—
36 x 12	22 x 20 24 x 18 26 x 16 30 x 14	2.79	1.90 1.65 1.44	CFM	837	1116	1395	1674	1953	2232	2790	3348	3906	
				NC	—	13	20	25	30	34	40	46	51	
				T	0°	15-25-48	23-34-55	28-42-61	34-48-68	4-51-73	45-55-77	50-61-86	55-68-95	59-73-103
					22 1/2°	12-20-38	18-27-44	22-34-49	27-38-54	32-41-58	36-44-62	40-49-69	44-54-76	47-58-82
					45°	8-13-24	12-17-28	14-21-31	17-24-34	20-26-37	23-28-40	25-31-43	28-34-48	30-37-42
					45°	—	—	—	—	—	—	—	—	—
22 x 22	24 x 20 26 x 18 30 x 16 40 x 12	3.17	2.16 1.87 1.63	CFM	951	1268	1585	1902	2219	2536	3170	3804	4438	
				NC	—	14	21	26	31	35	41	47	52	
				T	0°	17-27-50	24-36-58	29-45-65	36-50-71	42-54-77	47-58-82	53-65-92	58-71-101	62-77-109
					22 1/2°	14-22-42	19-29-46	23-36-52	29-40-57	34-43-62	38-46-66	42-52-74	46-57-81	50-62-87
					45°	9-14-25	12-18-29	15-23-32	18-25-36	21-27-39	24-29-41	27-33-46	29-36-51	31-39-55
					45°	—	—	—	—	—	—	—	—	—
42 x 12	36 x 14	3.27	2.22 1.93 1.68	CFM	981	1308	1635	1962	2289	2616	3270	3924	4578	
				NC	—	14	21	26	31	35	41	47	52	
				T	0°	17-27-51	24-36-59	30-45-66	36-51-72	42-55-77	48-59-83	53-66-93	59-72-101	63-77-109
					22 1/2°	14-22-41	19-29-47	24-36-53	29-41-58	34-44-62	38-47-66	42-53-74	47-58-81	50-62-87
					45°	9-14-26	12-18-30	15-23-33	18-26-36	21-28-39	24-30-42	27-33-47	3-36-51	32-39-55
					45°	—	—	—	—	—	—	—	—	—
30 x 18	24 x 22 34 x 16 40 x 14	3.54	2.41 2.09 1.82	CFM	1062	1416	1770	2124	2478	2832	3540	4248	4956	
				NC	—	14	21	26	31	35	41	47	52	
				T	0°	18-28-53	25-37-61	31-47-69	37-53-75	44-57-81	50-61-86	56-69-97	61-75-106	66-81-115
					22 1/2°	14-22-42	20-30-49	25-38-55	30-42-60	35-46-65	40-49-69	45-55-78	49-60-85	53-65-92
					45°	9-14-27	13-19-31	16-24-35	19-27-38	22-29-41	25-31-43	28-35-49	31-38-53	33-41-58
					45°	—	—	—	—	—	—	—	—	—





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Supply Grilles and Registers

MODELS: V, VOB, H, HOB, VME, VMEOB, HME, HMEOB, VH, VHOB, VHME, VHMEOB, HV, HVOB, HVME, HVMEOB, VML, VMLME, HML, HMLME

Listed Duct Size (inches)	Alternate Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity VP	300	400	500	600	700	800	1000	1200	1400
					.006	.010	.016	.022	.031	.040	.062	.090	.122
24 x 24	26 x 22 28 x 20 32 x 18 36 x 16	3.79	CFM NC	0° 22 1/2° 45°	1137	1516	1895	2274	2653	3032	3790	4548	5306
					14	21	26	31	35	41	47	52	
					18-29-55	26-39-62	33-48-70	39-55-77	45-59-83	51-62-89	57-70-99	62-77-108	68-83-117
					14-23-44	21-31-50	26-38-56	31-44-62	36-47-66	41-50-71	46-56-79	50-62-86	54-66-94
					9-15-28	13-20-31	17-24-35	20-28-39	23-30-42	26-31-45	29-35-50	31-39-54	34-42-59
					2.58	1.95	2.92	2.53	2.21	1.95	1.71	1.53	1.38
36 x 18	32 x 20 40 x 16 46 x 14	4.29	CFM NC	0° 22 1/2° 45°	1287	1716	2145	2574	3003	3432	4290	5148	6006
					15	22	27	32	36	42	48	53	
					19-31-58	28-42-68	35-52-75	42-58-83	48-63-89	55-68-95	61-75-106	68-83-117	73-89-125
					15-25-46	22-34-54	28-42-60	34-46-66	38-50-71	44-54-76	49-60-85	54-66-94	58-71-100
					10-16-29	14-21-34	18-26-38	21-29-42	24-32-45	28-34-48	31-38-53	34-42-59	37-45-63
					2.92	2.53	2.21	1.95	1.71	1.53	1.38	1.25	1.13
26 x 26	28 x 24 48 x 14	4.47	CFM NC	0° 22 1/2° 45°	1341	1788	2235	2682	3129	3576	4470	5364	6258
					15	22	27	32	36	42	48	53	
					19-32-59	28-43-69	35-53-77	43-59-85	49-65-91	56-69-98	63-77-109	69-85-120	75-91-129
					15-26-47	22-34-55	28-42-62	34-47-68	39-52-73	45-55-78	50-62-87	55-68-96	60-73-103
					10-16-30	14-22-35	18-27-39	22-30-43	25-33-46	28-35-49	32-39-55	35-43-60	38-46-65
					3.04	2.64	2.30	2.07	1.84	1.64	1.46	1.30	1.16
30 x 24	32 x 22 36 x 20 40 x 18	4.77	CFM NC	0° 22 1/2° 45°	1431	1908	2385	2862	3339	3816	4770	5724	6678
					15	22	27	32	36	42	48	53	
					20-33-61	29-44-71	36-54-79	44-61-87	51-67-94	58-71-101	65-79-112	71-87-123	77-94-133
					16-26-49	23-35-57	29-43-63	35-49-70	41-54-75	46-57-81	52-63-90	57-70-98	62-75-106
					10-17-31	15-22-36	18-27-40	22-31-44	26-34-47	29-36-51	33-40-56	36-44-62	39-47-67
					3.24	2.81	2.46	2.14	1.87	1.64	1.44	1.27	1.13
42 x 18	28 x 26	4.99	CFM NC	0° 22 1/2° 45°	1497	1996	2495	2994	3493	3992	4990	5988	6986
					16	23	28	33	37	43	49	54	
					20-33-62	30-44-72	37-55-80	44-62-88	52-67-95	59-72-102	66-80-114	72-88-125	77-95-135
					16-26-50	24-35-58	30-44-64	35-50-70	42-54-76	47-58-82	53-64-91	58-70-100	62-76-108
					10-17-31	15-22-36	18-28-40	22-31-44	26-34-48	30-38-51	33-40-57	36-44-63	39-48-68
					3.39	2.94	2.57	2.24	1.96	1.71	1.49	1.30	1.15
28 x 28	30 x 26 36 x 22 40 x 20	5.20	CFM NC	0° 22 1/2° 45°	1560	2080	2600	3120	3640	4160	5200	6240	7280
					16	23	28	33	37	43	49	54	
					21-34-63	30-45-74	38-56-82	45-63-90	53-69-97	60-74-104	67-82-116	74-90-128	79-97-137
					17-27-50	24-36-59	30-45-66	36-50-72	42-55-78	48-59-83	54-66-93	59-72-102	63-78-110
					11-17-32	15-23-37	19-28-41	23-28-45	27-35-49	30-37-52	34-41-58	37-45-64	40-49-69
					3.54	3.07	2.68	2.31	2.00	1.74	1.51	1.31	1.14
42 x 20	30 x 28	5.57	CFM NC	0° 22 1/2° 45°	1671	2228	2785	3342	3899	4456	5570	6684	7798
					16	23	28	33	37	43	49	54	
					22-35-66	31-47-76	39-58-84	47-66-93	55-71-100	62-76-107	70-84-120	76-83-131	82-100-142
					18-28-53	25-38-61	31-46-67	38-53-74	44-57-80	50-61-86	56-67-96	61-74-105	66-80-114
					11-18-33	16-24-38	20-29-42	24-33-47	28-36-50	31-38-54	35-42-60	38-47-66	41-50-71
					3.79	3.29	2.87	2.46	2.14	1.87	1.61	1.39	1.20
36 x 24	40 x 22 44 x 20	5.74	CFM NC	0° 22 1/2° 45°	1722	2296	2870	3444	4018	4592	5740	6888	8036
					16	23	28	33	37	43	49	54	
					23-36-88	32-49-78	41-60-88	49-68-96	57-74-104	64-78-112	72-88-124	78-96-137	85-104-148
					18-29-54	26-39-62	33-48-70	39-54-77	46-59-83	51-62-90	58-70-99	62-77-110	68-83-118
					12-18-34	16-25-39	21-30-44	25-34-48	29-37-52	32-39-56	36-44-62	39-48-69	43-52-74
					3.90	3.39	2.96	2.53	2.19	1.89	1.63	1.39	1.19
30 x 30	34 x 26 38 x 24 48 x 20	5.99	CFM NC	0° 22 1/2° 45°	1797	2396	2995	3594	4193	4792	5990	7188	8386
					16	23	28	33	37	43	49	54	
					23-36-89	33-49-80	41-61-89	49-69-98	57-75-106	65-80-113	73-89-126	80-98-138	86-106-150
					18-29-55	26-39-64	33-49-71	39-55-78	46-60-85	52-64-90	58-71-101	64-78-110	69-85-120
					12-18-35	17-25-40	21-31-45	25-35-49	29-38-53	33-40-57	37-45-63	40-49-69	43-53-75
					4.07	3.53	3.08	2.61	2.24	1.93	1.65	1.39	1.17
42 x 24	36 x 28 42 x 24 46 x 22	6.72	CFM NC	0° 22 1/2° 45°	2016	2688	3360	4032	4704	5376	6720	8064	9408
					17	24	29	34	38	44	50	55	
					24-39-72	34-51-84	43-64-93	51-72-102	60-78-111	68-84-118	77-93-132	84-102-144	90-111-157
					19-31-58	27-41-67	34-51-74	41-58-82	48-62-89	54-67-94	62-74-106	67-82-115	72-89-126
					12-20-36	17-26-42	22-32-47	26-36-51	30-39-56	34-42-59	39-47-66	42-51-72	45-56-79
					4.57	3.96	3.46	2.91	2.46	2.07	1.76	1.47	1.21
32 x 32	40 x 26	6.84	CFM NC	0° 22 1/2° 45°	2052	2736	3420	4104	4788	5472	6840	8208	9576
					17	24	29	34	38	44	50	55	
					24-39-73	34-52-84	43-65-94	52-73-103	61-79-112	69-84-119	77-94-133	84-103-146	91-112-158
					19-31-58	27-42-67	34-52-75	42-58-82	49-63-90	55-67-95	62-75-106	67-82-117	73-90-126
					12-20-37	17-26-42	22-33-47	26-37-52	31-40-56	35-42-60	39-47-67	42-52-73	46-56-79
					4.65	4.04	3.52	2.95	2.46	2.07	1.74	1.44	1.17
36 x 30	38 x 28	7.22	CFM NC	0° 22 1/2° 45°	2166	2888	3610	4332	5054	5776	7220	8664	10108
					17	24	29	34	38	44	50	55	
					25-40-76	36-54-87	45-68-98	54-76-108	63-82-116	71-87-124	80-98-139	87-108-151	94-116-164
					20-32-61	29-43-70	36-54-78	43-61-86	50-66-93	57-70-99	64-78-111	70-96-121	75-92-131
					13-20-38	18-27-44	23-34-49	27-38-54	32-41-58	36-41-62	40-48-70	44-54-76	47-58-82
					4.91	4.26	3.72	3.11	2.56	2.07	1.71	1.39	1.11
48 x 24	34 x 34 36 x 32 38 x 30 42 x 28	7.69	CFM NC	0° 22 1/2° 45°	2307	3076	3845	4614	5383	6152	7690	9228	10766
					18	25	30	35	39	45	51	56	
					28-41-77	37-55-90	46-69-100	55-77-109	64-84-118	73-90-127	82-100-142	90-109-155	97-118-167
					21-33-62	30-44-72	37-55-80	44-62-87	51-67-94	58-72-102	66-80-114	72-87-124	78-94-134
					13-22-39	19-28-45	23-34-50	28-39-55	32-42-59	37-45-64	41-50-71	45-55-78	49-59-84
					5.23	4.54	3.96	3.27	2.64	2.11	1.71	1.34	1.03



AIRGUIDE - VH - SUPPLY GRILLE PERFORMANCE DATA



Performance Data

Supply Grilles and Registers

MODELS: V, VOB, H, HOB, VME, VMEOB, HME, HMEOB, VH, VHOB, VHME, VHMEOB, HV, HVOB, HVME, HVMEOB, VML, VMLME, HML, HMLME

Listed Duct Size (inches)	Alternate Size (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity VP	300	400	500	600	700	800	1000	1200	1400	
					.006	.010	.016	.022	.031	.040	.062	.090	.122	
36 x 34	38 x 32 40 x 30 48 x 26	8.20	5.58 4.84 4.22	CFM	2460	3280	4100	4920	5740	6560	8200	9840	11480	
				NC	—	18	25	30	35	45	51	56		
				T	0°	28-42-79	37-57-91	47-70-102	57-79-111	65-85-121	75-91-129	84-102-144	91-111-158	98-121-171
				TP	22 1/2°	21-34-63	30-46-73	38-56-82	46-63-89	52-68-97	60-73-103	67-82-115	73-89-126	78-97-137
36 x 36	38 x 34 42 x 30 46 x 28	8.69	5.91 5.13 4.48	CFM	2607	3476	4345	5214	6083	6952	8690	10428	12166	
				NC	—	18	25	30	35	45	51	56		
				T	0°	28-45-84	39-60-96	49-74-108	60-84-117	69-90-127	78-96-136	88-108-152	96-117-166	104-127-180
				TP	22 1/2°	22-36-67	31-48-77	39-59-86	48-67-94	55-72-102	62-77-109	70-86-122	77-94-133	83-102-144
38 x 38	42 x 34	9.70	6.60 5.72 5.00	CFM	2910	3880	4850	5820	6790	7760	9700	11640	13580	
				NC	10	19	26	31	36	40	46	52	57	
				T	0°	28-47-88	42-62-101	53-76-114	62-88-125	73-95-134	83-101-143	93-114-161	101-125-176	109-134-190
				TP	22 1/2°	22-38-72	34-50-81	42-62-91	50-70-100	58-76-107	66-81-114	74-91-129	81-100-141	87-107-152
42 x 36	44 x 34 48 x 30	10.16	6.91 5.99 5.23	CFM	3048	4064	5080	6096	7112	8128	10160	12192	14224	
				NC	10	19	26	31	36	40	46	52	57	
				T	0°	29-48-90	43-64-104	53-80-117	64-90-127	75-97-138	85-104-147	95-117-165	104-127-180	112-138-195
				TP	22 1/2°	23-38-72	34-51-83	42-64-94	51-72-102	60-78-110	68-83-118	76-94-132	83-102-144	90-110-156
40 x 40	42 x 38 46 x 34 48 x 32	10.77	7.32 6.35 5.55	CFM	3231	4308	5385	6462	7539	8616	10770	12924	15078	
				NC	10	19	26	31	36	40	46	52	57	
				T	0°	31-50-94	44-67-108	56-84-121	67-94-132	77-102-143	88-108-153	99-121-171	108-132-187	117-143-203
				TP	22 1/2°	25-40-75	35-54-86	45-67-97	54-75-106	62-82-114	70-86-122	79-97-137	86-106-150	94-114-162
42 x 42	44 x 40 46 x 38 48 x 36	11.89	8.09 7.02 6.12	CFM	3567	4756	5945	7134	8323	9512	11890	14268	16646	
				NC	11	20	27	32	37	41	47	53	58	
				T	0°	32-52-97	46-69-112	58-86-125	69-97-138	81-105-149	92-112-159	102-125-178	112-138-195	122-149-210
				TP	22 1/2°	26-42-78	37-55-90	46-69-100	55-78-110	65-84-119	74-90-127	82-100-142	90-110-156	98-119-168
44 x 44	46 x 42	13.07	8.89 7.71 6.73	CFM	3921	5228	6535	7842	9149	10456	13070	15684	18298	
				NC	11	20	27	32	37	41	47	53	58	
				T	0°	34-55-104	49-74-120	61-82-133	74-104-146	86-112-158	97-120-168	109-133-189	120-146-207	129-158-223
				TP	22 1/2°	27-44-83	39-59-96	49-74-106	59-83-117	69-90-126	78-96-134	87-106-151	96-117-166	103-126-178
46 x 46	48 x 46	14.30	9.72 8.44 7.36	CFM	4290	5720	7150	8580	10010	11440	14300	17160	20020	
				NC	11	20	27	32	37	41	47	53	58	
				T	0°	35-57-107	51-76-124	63-95-138	76-107-151	89-116-163	101-124-174	113-138-195	124-151-214	134-163-231
				TP	22 1/2°	28-46-86	41-61-99	50-76-110	61-86-121	71-93-130	81-99-139	90-110-156	99-121-171	107-130-185
48 x 48	48 x 48	15.59	10.60 9.20 8.03	CFM	4677	6236	7795	9354	10913	12472	15590	18708	21826	
				NC	12	21	28	33	38	42	48	54	59	
				T	0°	37-60-113	53-80-131	67-100-146	80-113-159	94-122-173	106-131-185	119-146-206	131-159-226	140-173-244
				TP	22 1/2°	30-48-90	42-64-105	54-80-117	64-90-127	75-98-138	85-105-148	95-117-165	105-127-181	112-138-195

CFM - cubic feet per minute
 TP - total pressure - inches w.g.
 VP - velocity pressure - inches w.g.
 T - throw in feet
 NC - Noise Criteria (values) based on 10 dB room absorption, re 10⁻¹² watts @ 0° deflection.
 Core velocity is in feet per minute.

Performance Notes:
 1. Performance data is based on double deflection grille with opposed blade damper (register).
 2. 0°, 22 1/2° and 45° represent vertical blade deflection angles and horizontal spread.
 3. Throw values are given for terminal velocities of 150, 100 and 50 fpm under isothermal conditions.
 4. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 - 2006.