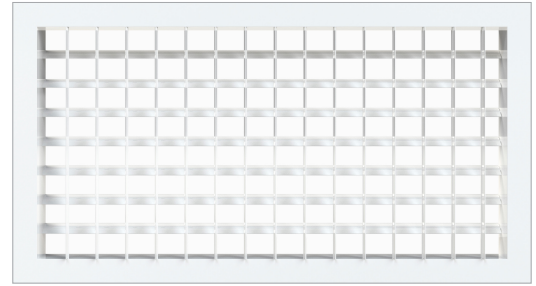


VHI-HVI-15 MODEL

SUPPLY GRILLES & REGISTERS INDUSTRIAL TYPE AERODYNAMIC BLADES. 1-1/2" BLADES SPACE



- VHI Model: vertical position blades in front and horizontal back.
- HVI Model: Horizontal position blades in front and vertical back.
- Individually adjustable blades for any deflection angle, allow an ideal air flow and keep the pattern distribution up to 2000 ft/min velocity.
- Designed and built specially for a high handler air distribution on installs where the temperature and humidity are main factor.

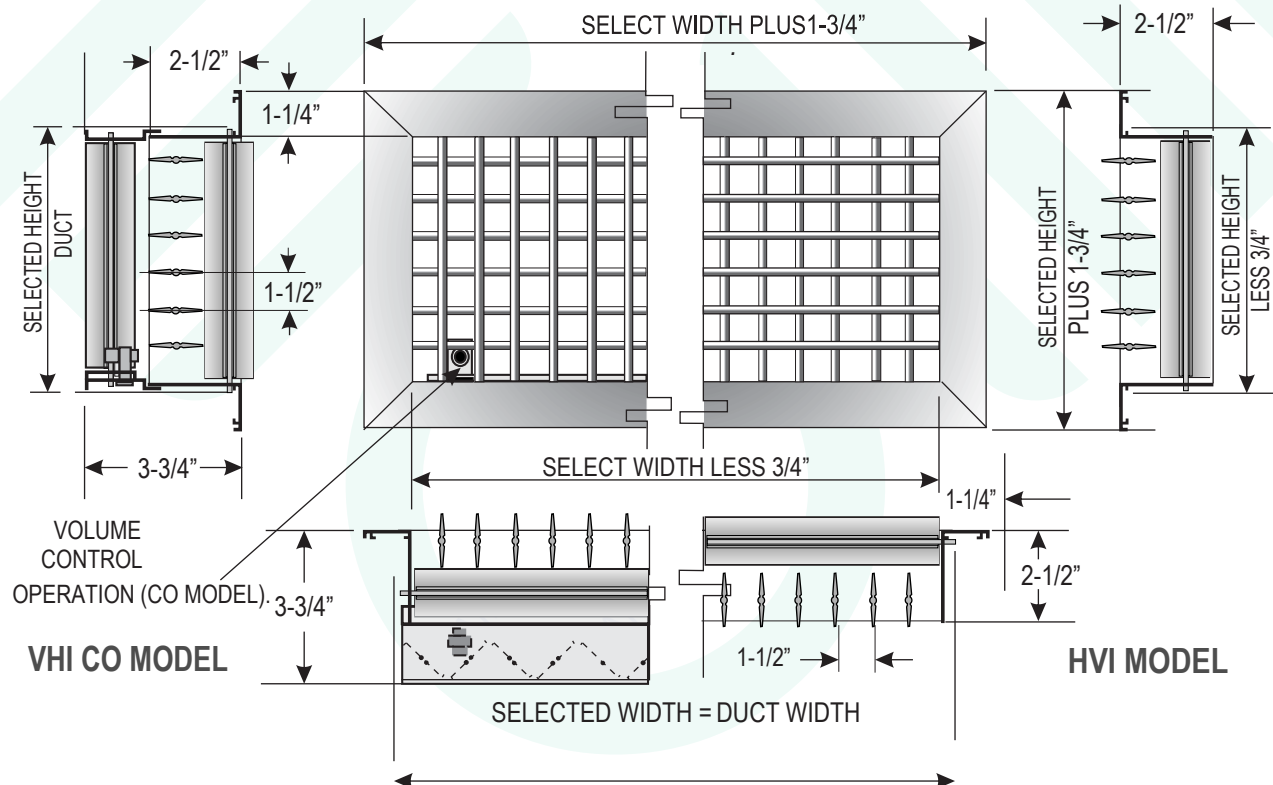
CONSTRUCTION: Extruded Aluminum

FINISH: Standard white Anodic acrylic paint.
Other colors available.

PERFORMANCE: Operating efficiency, ensures reliable use with temperature differentials from 20 ° F in cooling up to 50 ° F in heating.

Maximum measure of 1 piece: 72"x 12"
Minimum measure of 1 piece: 6"x 6"

Dimensional Data



VHI, HVI, SGI & GSI MODELS

AIRFOIL BLADES & INDUSTRIAL SUPPLY GRILLES & REGISTERS

TABLE 1 - SELECTION DATA

						NC 20			NC 30			NC 40																					
GRILLE SIZE (INCHES)	FACE VEL. (FT/MIN)	400			500			600			800			1000			1200			1400			1600			1800			2000				
	DEFLECTION	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°
Free Area = 0.54ft ² 10 x 10 12 x 8 16 x 6 18 x 6	CFM	215			270			325			430			540			645			750			860			970			1080				
	TP (INCHES H ₂ O)	0.009	0.013	0.018	0.010	0.021	0.028	0.024	0.030	0.038	0.042	0.049	0.066	0.066	0.078	0.107	0.092	0.107	0.140	0.123	0.158	0.196	0.161	0.207	0.256	0.203	0.262	0.325	0.250	0.327	0.408		
	THROW (FT.)	26	20	13	28	22	14	31	24	16	35	28	17	40	30	20	42	32	20	44	34	22	47	36	24	50	39	25	54	43	27		
Free Area = 0.68ft ² 12 x 10 16 x 8 20 x 6	CFM	275			340			410			545			680			815			950			1090			1225			1360				
	TP (INCHES H ₂ O)	0.009	0.016	0.018	0.010	0.023	0.028	0.024	0.030	0.036	0.042	0.049	0.066	0.066	0.086	0.107	0.092	0.123	0.158	0.123	0.167	0.196	0.161	0.218	0.256	0.203	0.276	0.325	0.250	0.337	0.407		
	THROW (FT.)	28	22	15	31	24	15	34	26	17	38	29	19	42	33	21	44	36	22	48	38	24	54	42	27	55	45	28	64	47	32		
Free Area = 0.81ft ² 12 x 12 14 x 10 18 x 8 24 x 6	CFM	325			405			485			650			810			970			1135			1300			1460			1620				
	TP (INCHES H ₂ O)	0.009	0.013	0.018	0.016	0.021	0.028	0.023	0.030	0.038	0.042	0.049	0.062	0.066	0.078	0.102	0.092	0.115	0.149	0.115	0.158	0.178	0.150	0.207	0.232	0.190	0.260	0.292	0.234	0.326	0.360		
	THROW (FT.)	31	24	15	34	26	17	37	28	18	41	32	21	45	37	23	48	38	24	51	40	25	58	46	29	62	50	31	66	52	33		
Free Area = 0.90ft ² 14 x 12 20 x 8 28 x 6	CFM	360			450			540			720			900			1080			1260			1440			1620			1800				
	TP (INCHES H ₂ O)	0.007	0.012	0.018	0.016	0.021	0.028	0.023	0.030	0.036	0.042	0.051	0.066	0.059	0.079	0.103	0.079	0.115	0.131	0.115	0.167	0.186	0.150	0.218	0.243	0.190	0.275	0.317	0.234	0.337	0.379		
	THROW (FT.)	33	25	16	36	27	18	38	29	19	43	32	22	48	38	24	51	40	26	55	44	27	62	48	31	65	52	33	68	56	34		
Free Area = 1.08ft ² 14 x 14 16 x 12 24 x 8 32 x 6	CFM	430			540			650			865			1080			1295			1510			1725			1940			2160				
	TP (INCHES H ₂ O)	0.009	0.016	0.021	0.016	0.021	0.028	0.024	0.030	0.038	0.042	0.054	0.066	0.066	0.086	0.103	0.085	0.115	0.140	0.123	0.167	0.210	0.161	0.219	0.273	0.203	0.277	0.342	0.250	0.340	0.433		
	THROW (FT.)	35	28	17	38	29	19	40	31	20	46	38	23	51	42	26	55	44	27	58	48	29	64	52	32	68	56	34	72	62	36		
Free Area = 1.33ft ² 16 x 14 18 x 12 22 x 10 28 x 8 36 x 6	CFM	530			665			800			1065			1330			1600			1860			2130			2395			2660				
	TP (INCHES H ₂ O)	0.012	0.016	0.021	0.021	0.024	0.033	0.028	0.036	0.044	0.046	0.060	0.079	0.072	0.092	0.123	0.107	0.131	0.178	0.140	0.178	0.242	0.184	0.232	0.315	0.232	0.292	0.395	0.284	0.362	0.476		
	THROW (FT.)	38	31	19	41	35	21	44	35	22	52	41	26	57	46	28	64	51	32	67	54	34	72	57	36	76	60	38	78	64	39		

NC
50

NOTES:

- FOR STRAIGHT BLADES MODELS (SGI & GSI) THE SAME SELECTION DATA ARE AVAILABLE EXCEPT THE TOTAL PRESSURE DATA, WHICH INCREASE UP TO 43% ONLY ON VERY LARGE DIMENSION GRILLES
- INDICATED THROWS ARE FOR 50 FPM TERMINAL VELOCITY. - FOR 100 & 150 FPM TERMINAL VELOCITIES MULTIPLY TABULATED VALUES BY 0.70 & 0.53 RESPECTIVELY.
- REFER TO EQUIVALENT SIZES TABLE TO CHOOSE ALTERNATIVE SIZE.

VHI, HVI, SGI & GSI MODELS

AIRFOIL BLADES INDUSTRIAL SUPPLY GRILLES & REGISTERS

TABLE 2 - SELECTION DATA

GRILLE SIZE (INCHES)	FACE VEL. (FT/MIN)	NC 20				NC 30				NC 40				NC 50																											
		400	500	600	800	1000	1200	1400	1600	1800	2000																														
DEFLECTION		0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°	0° 22½° 45°																										
Free Area = 1.60 ft ² 16 x 16 18 x 14 20 x 12 32 x 8 42 x 6	CFM	640				800				960				1280				1600				1920				2240				2560				2880				3200			
	TP (INCHES H ₂ O)	0.013	0.018	0.024	0.023	0.028	0.036	0.033	0.042	0.054	0.049	0.070	0.107	0.086	0.107	0.180	0.123	0.158	0.207	0.167	0.186	0.275	0.218	0.244	0.360	0.275	0.317	0.451	0.337	0.379	0.508										
	THROW (FT.)	42	34	21	45	38	23	49	40	25	57	45	28	62	50	31	70	57	35	74	58	37	78	61	39	82	64	41	87	68	43										
Free Area = 1.78 ft ² 20 x 14 24 x 12 30 x 10 36 x 8	CFM	712				890				1070				1425				1780				2140				2490				2850				3205				3560			
	TP (INCHES H ₂ O)	0.011	0.015	0.028	0.017	0.023	0.030	0.024	0.030	0.042	0.044	0.054	0.078	0.062	0.078	0.115	0.102	0.123	0.186	0.134	0.178	0.240	0.175	0.232	0.316	0.230	0.292	0.395	0.272	0.362	0.478										
	THROW (FT.)	46	36	23	49	40	25	52	41	27	61	48	30	67	53	34	74	61	37	78	64	40	82	67	42	86	71	43	90	75	46										
Free Area = 2.06 ft ² 18 x 18 24 x 14 28 x 12 42 x 8	CFM	825				1030				1240				1650				2060				2470				2885				3300				3710				4120			
	TP (INCHES H ₂ O)	0.013	0.016	0.021	0.021	0.024	0.030	0.028	0.036	0.044	0.049	0.054	0.083	0.078	0.092	0.131	0.115	0.131	0.178	0.140	0.178	0.229	0.183	0.232	0.296	0.232	0.292	0.378	0.284	0.362	0.463										
	THROW (FT.)	50	38	25	51	42	26	56	43	29	64	51	32	73	57	37	82	64	41	87	69	44	92	73	46	97	77	48	102	81	51										
Free Area = 2.44 ft ² 20 x 20 24 x 16 28 x 14 40 x 10	CFM	975				1220				1465				1950				2440				2930				3420				3900				4390				4880			
	TP (INCHES H ₂ O)	0.015	0.017	0.021	0.023	0.028	0.036	0.030	0.042	0.054	0.054	0.066	0.092	0.086	0.107	0.140	0.123	0.158	0.186	0.167	0.218	0.275	0.218	0.282	0.356	0.275	0.360	0.450	0.336	0.442	0.509										
	THROW (FT.)	52	41	27	55	46	28	60	47	30	70	55	35	78	62	39	86	67	43	92	72	46	98	77	49	104	82	52	110	87	55										
Free Area = 2.78 ft ² 22 x 20 24 x 18 30 x 14 44 x 10	CFM	1100				1390				1670				2225				2780				3340				3890				4450				5005				5560			
	TP (INCHES H ₂ O)	0.013	0.015	0.019	0.021	0.023	0.033	0.029	0.030	0.042	0.049	0.058	0.078	0.078	0.086	0.110	0.110	0.125	0.158	0.151	0.178	0.218	0.198	0.232	0.284	0.250	0.292	0.360	0.316	0.362	0.442										
	THROW (FT.)	53	43	26	60	50	30	66	51	33	79	64	39	86	69	44	92	73	46	100	80	51	106	85	53	112	90	56	119	96	60										
Free Area = 3.10 ft ² 24 x 20 30 x 16 40 x 12 48 x 10	CFM	1240				1550				1860				2480				3100				3720				4340				4960				5580				6200			
	TP (INCHES H ₂ O)	0.012	0.018	0.023	0.018	0.030	0.036	0.028	0.042	0.049	0.040	0.072	0.086	0.074	0.114	0.134	0.107	0.167	0.190	0.147	0.229	0.260	0.190	0.297	0.336	0.241	0.378	0.433	0.300	0.463	0.493										
	THROW (FT.)	57	45	29	64	50	32	70	56	35	82	64	41	89	71	45	99	79	49	107	84	53	112	88	56	118	92	59	122	96	61										

NOTES:

- FOR STRAIGHT BLADES MODELS (SGI & GSI) THE SAME SELECTION DATA ARE AVAILABLE EXCEPT THE TOTAL PRESSURE DATA, WHICH INCREASE UP TO 43% ONLY ON VERY LARGE DIMENSION GRILLES
- INDICATED THROWS ARE FOR 50 FPM TERMINAL VELOCITY. - FOR 100 & 150 FPM TERMINAL VELOCITIES MULTIPLY TABULATED VALUES BY 0.70 & 0.53 RESPECTIVELY.
- REFER TO EQUIVALENT SIZES TABLE TO CHOOSE ALTERNATIVE SIZE.

VHI, HVI, SGI & GSI MODELS

AIRFOIL BLADES INDUSTRIAL SUPPLY GRILLES & REGISTERS

TABLE 3 - SELECTION DATA

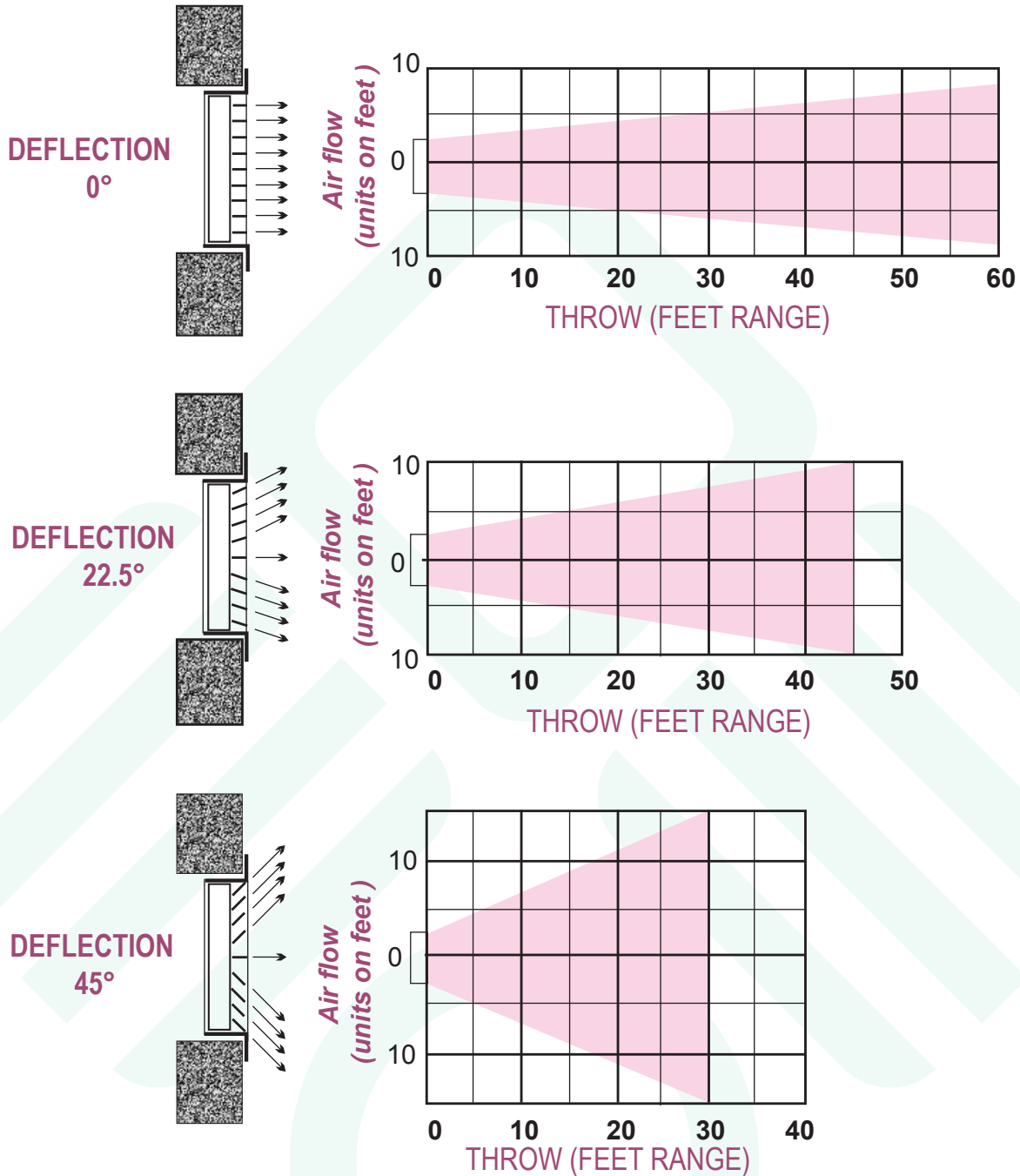
		NC 20			NC 30			NC 40			NC 50																							
GRILLE SIZE (INCHES)	FACE VEL. (FT/MIN)	400			500			600			800			1000			1200			1400			1600			1800			2000					
	DEFLECTION	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°	0°	22½°	45°
Free Area = 3.60 ft ²	24 x 24	CFM			1440			1800			2160			2880			3600			4320			5040			5760			6480			7200		
	28 x 20	TP (INCHES H ₂ O)	0.011	0.016	0.019	0.017	0.023	0.030	0.020	0.032	0.044	0.044	0.058	0.080	0.068	0.092	0.124	0.100	0.132	0.179	0.135	0.180	0.242	0.176	0.235	0.317	0.223	0.294	0.395	0.275	0.363	0.479		
	32 x 18	THROW (FT.)	61	49	31	68	55	34	75	60	37	86	70	43	97	78	48	105	83	53	114	92	57	126	101	63	134	107	67	140	114	71		
	36 x 16																																	
Free Area = 4.28 ft ²	28 x 24	CFM			1710			2140			2565			3420			4280			5135			5990			6840			7700			8560		
	32 x 20	TP (INCHES H ₂ O)	0.011	0.016	0.019	0.018	0.024	0.030	0.023	0.035	0.044	0.042	0.061	0.077	0.066	0.100	0.122	0.092	0.138	0.176	0.110	0.190	0.242	0.165	0.247	0.314	0.208	0.313	0.394	0.258	0.387	0.479		
	36 x 18	THROW (FT.)	68	54	34	76	60	38	83	67	42	97	78	48	108	86	54	119	95	60	128	103	64	137	109	69	145	116	72	149	121	75		
	40 x 16																																	
Free Area = 4.64 ft ²	30 x 24	CFM			1855			2320			2785			3710			4640			5570			6495			7425			8350			9280		
	36 x 20	TP (INCHES H ₂ O)	0.009	0.016	0.023	0.016	0.023	0.033	0.022	0.033	0.046	0.038	0.059	0.085	0.059	0.092	0.131	0.087	0.134	0.184	0.118	0.181	0.255	0.155	0.237	0.335	0.196	0.299	0.429	0.242	0.368	0.494		
	42 x 18	THROW (FT.)	71	57	35	80	64	39	87	70	44	100	81	50	113	90	56	124	99	61	134	107	67	143	115	71	151	120	75	156	125	78		
	48 x 16																																	
Free Area = 5.56 ft ²	36 x 24	CFM			2225			2780			3335			4450			5560			6670			7785			8900			10,010			11,120		
	42 x 20	TP (INCHES H ₂ O)	0.012	0.015	0.019	0.018	0.023	0.028	0.026	0.032	0.038	0.047	0.057	0.068	0.073	0.090	0.107	0.107	0.130	0.158	0.144	0.177	0.213	0.187	0.230	0.278	0.237	0.293	0.354	0.293	0.365	0.441		
	48 x 18	THROW (FT.)	78	62	39	87	70	44	95	76	47	112	90	56	124	99	61	136	108	68	147	119	73	157	126	78	165	128	82	168	130	85		
	54 x 16																																	
Free Area = 6.25 ft ²	30 x 30	CFM			2500			3125			3750			5000			6250			7500			8750			10,000			11,250			12,500		
	36 x 28	TP (INCHES H ₂ O)	0.012	0.016	0.022	0.018	0.024	0.034	0.026	0.036	0.048	0.048	0.066	0.086	0.071	0.102	0.138	0.092	0.148	0.196	0.138	0.196	0.262	0.182	0.256	0.340	0.231	0.325	0.437	0.285	0.407	0.505		
	40 x 24	THROW (FT.)	82	66	41	92	73	46	94	75	47	117	93	58	131	104	66	143	115	71	155	124	78	165	128	82	176	140	88	179	143	89		
	48 x 20																																	
Free Area = 6.80 ft ²	36 x 32	CFM			2720			3400			4080			5440			6800			8160			9520			10,880			12,240			13,600		
	38 x 30	TP (INCHES H ₂ O)	0.012	0.016	0.019	0.017	0.020	0.030	0.024	0.033	0.044	0.044	0.060	0.078	0.069	0.096	0.122	0.098	0.138	0.176	0.137	0.186	0.238	0.178	0.242	0.313	0.025	0.318	0.394	0.277	0.385	0.476		
	40 x 28	THROW (FT.)	87	71	43	96	77	48	99	79	49	124	98	61	138	110	70	148	120	74	158	129	79	168	134	84	179	142	90	183	145	92		
	48 x 24																																	

NOTES:

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- INDICATED THROWS ARE FOR 50 FPM TERMINAL VELOCITY. - FOR 100 & 150 FPM TERMINAL VELOCITIES MULTIPLY TABULATED VALUES BY 0.70 & 0.53 RESPECTIVELY.
- REFER TO EQUIVALENT SIZES TABLE TO CHOOSE ALTERNATIVE SIZE.

WALL MOUNT GRILLES & REGISTERS.

GRAPHICS SHOWING THE AIR DISTRIBUTION PATTERN THROUGH A GRILLE WITH ITS ADJUSTABLE BLADES IN THREE DEVIATION POSITIONS.



When selecting grilles and supply registers, determine the appropriate deflection for each. For long throws and narrow deployment use the Selection Data corresponding to the zero-degree (0 °) deflection graph. For intermediate shots and deployments, use the selection data that corresponds to the 22-1/2-degree (22.5°) deflection graph. For short throws and wide deployment use the selection data corresponding to the 45-degree (45 °) deflection graph.

NOTE: The maximum range or shot shown in each of the graphs corresponds to a terminal speed of 50 feet / min.

WALL MOUNT GRILLES & REGISTERS.

VELOCITY LIMITATIONS: AN IMPORTANT FACTOR, IN THE SELECTION OF THE PERFORATED DIFFUSERS, IS THE VELOCITY OF AIR THAT PASSES THROUGH THESE IF VELOCITY IS INCREASED VALUES GREATER THAN THE RECOMMENDED, WILL ALSO INCREASE THE NOISE LEVEL AND WILL RESULTS ON A DISTURBANCE.

RECOMMENDED VELOCITY AND NOISE LEVELS.

AREA TYPE	Recommended outlet velocity (ft/min)		Variation Range of Noise Criteria Curves (NC)		Approx value of reading on the A equivalent scale (dBA)	
	Supply	Return	MIN.	MAX.	MIN.	MAX.
AUDITORIUMS AND CONCERT HALLS						
Concert and Opera Rooms	250-350	200-300	15	20	22	27
Theaters	350-500	250-350	20	30	27	37
Cinemas	500-600	300-450	30	35	37	42
Amphitheatres	400-500	300-400	25	30	32	37
Reading Rooms	350-500	250-400	20	30	27	37
Auditorium Lobbies	600-800	500-700	35	45	42	52
TV studio auditoriums	500-600	400-500	30	35	37	42
SCHOOL'S AND CHURCHS						
Sanctuaries	350-500	250-400	20	30	27	37
Schools and Classrooms	450-600	300-450	30	40	38	47
Recreation Rooms	700-1000	550-800	40	50	47	57
Kitchens	800-1000	600-800	45	50	52	57
Libraries	350-500	200-350	20	30	27	27
Laboratories	600-700	450-600	35	40	42	47
Rooms and halls	600-700	450-600	35	40	42	47
HOSPITALS AND CLINICS						
Private Rooms	400-600	250-450	25	35	32	42
Day care centers	500-700	350-500	30	40	37	47
Laboratories	600-800	450-600	35	45	42	52
Operating rooms	500-700	350-500	30	40	37	47
Lobbies and Waiting Rooms	600-700	450-600	35	40	42	47
Rooms and halls	600-700	450-600	35	40	42	47
ROOF SPORTS						
Stadiums	800-1200	600-900	45	55	52	62
Gyms and Bowling	600-800	450-700	35	45	42	52
Roofed pools	600-700	450-600	40	50	47	57
INDUSTRIAL AREAS						
Headquarters Offices	600-800	450-600	35	45	42	52
Maintenance	700-1200	550-900	40	50	47	57
Assembly Lines	1000-2000	800-1500	50	65	57	72
Light Manufactures	1000-2000	800-1500	50	70	57	77
Workshops	1200-2500	900-1800	55	75	62	82
RETAIL STORES						
Department stores	700-1000	550-750	40	50	47	57
Supermarkets	1000-1200	750-900	50	55	57	62
Clothes shops	600-800	450-650	35	45	42	52
Small Commerce	700-1000	600-800	40	50	47	57
RESIDENCES						
Residences (Rural and Sub-Urban)	350-500	250-400	20	30	27	37
Residences (Urban)	400-600	300-500	25	35	32	42
Apartments (Units of 2 and 3 families)	500-700	350-600	30	40	37	47
OFFICES						
Private Offices	400-500	300-400	25	30	32	37
General Office / Drawing Room	600-800	450-700	35	45	42	52
Council Rooms	300-400	250-300	20	30	27	37
Computer Rooms	800-1200	600-900	40	50	47	57
Conference Rooms	400-500	300-400	25	30	32	38
Lobby, etc.	600-800	450-600	35	45	42	52
PUBLIC BUILDINGS						
Public Libraries	350-500	250-400	20	30	27	37
Museums	350-500	250-400	20	30	27	37
Post Offices	600-700	450-550	35	40	42	47
Banks	700-800	500-700	40	45	47	52
courthouse	600-700	450-600	35	40	42	47
Resty, etc.	600-700	450-600	35	40	42	47
RESTAURANTS AND CAFETERIA						
Restaurants	600-800	500-700	35	45	42	52
Coffee shops	600-800	500-700	35	45	42	52
Night clubs	700-1000	500-800	40	50	47	57
Social Clubs	500-700	400-500	30	40	37	47
Banquet Rooms	700-1000	600-800	40	50	47	57
HOTELS						
Private Rooms and Suites	500-600	400-500	30	35	37	42
Banquet Rooms	700-1000	600-800	40	50	47	57
Ballrooms	700-1000	600-800	40	50	47	57
Kitchens and Laundries	700-1200	500-900	40	55	47	62
Hallways	600-700	450-600	35	40	42	47
Halls	600-700	450-600	35	40	42	47
TRANSPORTS (Trains, Buses, Planes)						
Ticket Sales Offices	500-700	400-500	30	40	37	47
Waiting room	600-800	450-600	35	45	42	52
Towers and Control Rooms	800-1200	600-900	40	50	47	57
Commercial stores	600-800	450-600	35	45	42	52
Restaurant Bar	800-1200	600-900	40	50	47	57
MISCELLANY						
Reception Rooms	600-700	450-600	35	40	42	47
Sanitary Services	600-800	450-600	35	45	42	52
Recording studios	200-300	150-200	15	20	22	27
Other studies	500-600	300-450	30	35	38	42

DEFINITIONS:

Sound Power (W) - The equivalent of the Power source converted to sound in Watts unit.

Sound Power Level (Lw) - The logarithmic comparison between the Output Performance of the Sound Power exerted by a source and the Sound of a reference source, W_0 (10⁻¹² watt).

$$Lw = 10 \log_{10}(W/W_0) \text{ dB}$$

Sound Pressure (P) - The pressure associated with the Output Performance of the Sound Power of a source. The human ear reacts to this Sound Pressure.

Sound Pressure Level (LP) - The logarithmic comparison between the Output Performance of the Sound Pressure exerted by a -5 source and the Sound of a reference source, P_0 (2x10⁻⁵Pa).

$$Lp = 20 \log_{10}(P/P_0) \text{ dB}$$

Even if the Sound Power Level and Sound Pressure Level are expressed in decibels (dB) **NO CONVERSION FACTOR EXISTS BETWEEN THEM.**

NOTE: When specifying the Sound Criteria for **HVAC** equipment, refer to the **Sound Power Level**, and not the Sound Pressure Level.

AIRFOIL BLADES INDUSTRIAL SUPPLY GRILLES & REGISTERS.

EQUIVALENT SIZES.

Free Area = 0.54 ft ²	Free Area = 0.68 ft ²	Free Area = 0.81 ft ²	Free Area = 0.90 ft ²	Free Area = 1.08 ft ²	Free Area = 1.33 ft ²
10 X 10 12 X 8 16 X 6 18 X 6	12 X 10 14 X 8 16 X 8 20 X 6	12 X 12 14 X 10 24 X 6 18 X 8	14 X 12 20 X 8 28 X 6	14 X 14 16 X 12 30 X 6 32 X 6 24 X 8	16 X 14 20 X 10 22 X 10 28 X 8 36 X 6 40 X 6

Free Area = 1.60 ft ²	Free Area = 1.78 ft ²	Free Area = 2.06 ft ²	Free Area = 2.44 ft ²	Free Area = 2.78 ft ²	Free Area = 3.10 ft ²
16 X 16 18 X 14 20 X 12 32 X 8 42 X 6	18 X 16 20 X 14 22 X 14 30 X 10 36 X 8 48 X 6	18 X 18 20 X 16 24 X 14 28 X 12 42 X 8 54 X 6	20 X 20 20 X 18 22 X 18 24 X 16 26 X 14 30 X 12 40 X 10 60 X 6	22 X 20 26 X 16 30 X 14 32 X 14 36 X 12 44 X 10 56 X 8 72 X 6	24 X 20 26 X 18 34 X 14 48 X 10

Free Area = 3.60 ft ²	Free Area = 4.28 ft ²	Free Area = 4.64 ft ²	Free Area = 5.56 ft ²	Free Area = 6.25 ft ²	Free Area = 6.80 ft ²
24 X 24 28 X 20 30 X 18 32 X 18 40 X 14 44 X 12 48 X 12 56 X 10	28 X 24 30 X 20 36 X 18 40 X 16 48 X 14 56 X 12 60 X 10	30 X 24 36 X 20 48 X 16 54 X 14	36 X 24 42 X 20 54 X 16 60 X 14	30 X 30 36 X 28 40 X 24 48 X 20 56 X 18	36 X 32 36 X 30 48 X 24 54 X 20 60 X 18

NOTE: ALL SIZES IN INCHES. POPULAR SIZES IN COLOR MAY BE FOUND ON PERFORMANCE DATATABLES.