AVE

Discharge and Radiated (NC) Noise Criteria

Inlet Size (Inches)	CFM	Minimum Pressure Drop (Damper Full Open) Min. Δ P_S Basic Unit	Min. Δ P_t Basic Unit	Min. Δ P_S (Damper Full Open) Δ P_t	Disch. NC	Rad. NC	1.0" Δ P_S Δ P_t	Disch. NC	Rad. NC	1.5" Δ P_S Δ P_t	Disch. NC	Rad. NC	3.0" Δ P_S Δ P_t	Disch. NC	Rad. NC
5	75	.028	.048	.048	—	—	1.020	—	—	1.520	—	13	3.020	13	20
	100	.051	.086	.086	—	—	1.035	—	11	1.535	10	13	3.035	13	20
	200	.192	.334	.334	—	—	1.142	19	19	1.642	22	22	3.142	25	24
	300	.431	.750	.750	13	19	1.319	28	24	1.819	30	28	3.319	33	30
	350	.554	.989	.989	14	22	1.435	28	27	1.935	30	28	3.435	34	32
6	110	.020	.039	.039	—	—	1.019	—	13	1.519	—	17	3.020	14	24
	200	.071	.135	.135	—	—	1.064	16	19	1.564	18	19	3.064	21	25
	300	.149	.293	.293	—	—	1.144	20	22	1.644	24	24	3.144	30	26
	400	.272	.527	.527	—	13	1.256	22	22	1.756	24	26	3.256	34	31
	500	.395	.795	.795	15	19	1.400	26	27	1.939	27	28	3.400	35	33
7	140	.010	.027	.027	—	—	1.016	—	10	1.517	—	13	3.017	15	20
	200	.023	.057	.057	—	—	1.034	14	13	1.534	16	16	3.034	19	20
	400	.093	.229	.229	—	—	1.135	18	20	1.636	23	23	3.136	34	31
	600	.208	.514	.514	—	15	1.305	26	27	1.806	26	30	3.306	34	34
	700	.261	.676	.676	—	18	1.415	22	30	1.916	26	31	3.416	33	35
8	185	.009	.025	.025	—	—	1.016	10	14	1.515	11	15	3.018	17	20
	400	.039	.112	.112	—	—	1.073	17	19	1.573	21	24	3.073	27	31
	600	.083	.247	.247	—	—	1.164	19	23	1.664	25	27	3.164	35	36
	800	.138	.429	.429	—	13	1.292	22	25	1.791	27	30	3.291	36	37
	1000	.212	.668	.668	11	20	1.456	25	28	1.955	29	32	3.455	36	38
10	300	.008	.024	.024	—	—	1.016	15	20	1.516	16	22	3.016	21	25
	500	.013	.057	.057	—	—	1.045	17	21	1.544	24	27	3.045	28	34
	800	.024	.138	.138	—	—	1.114	17	23	1.614	23	27	3.114	34	38
	1200	.047	.304	.304	—	15	1.257	24	30	1.756	28	31	3.257	33	36
	1500	.069	.470	.470	10	22	1.401	28	31	1.901	31	35	3.401	36	39
12	430	.001	.016	.016	—	—	1.015	17	22	1.515	19	25	3.015	22	28
	800	.003	.056	.056	—	—	1.053	15	23	1.553	23	28	3.053	34	36
	1200	.005	.125	.125	—	—	1.119	18	24	1.619	22	28	3.119	34	36
	1800	.007	.276	.276	—	23	1.269	22	27	1.769	27	32	3.269	34	37
	2300	.009	.448	.448	14	31	1.439	25	30	1.939	29	33	3.439	36	40
14	600	.004	.021	.021	—	—	1.017	17	20	1.516	23	24	3.017	28	31
	1000	.006	.052	.052	—	—	1.046	17	22	1.546	24	27	3.046	35	35
	1600	.011	.128	.128	—	10	1.118	19	22	1.618	24	27	3.118	35	38
	2400	.024	.289	.289	10	25	1.265	27	30	1.765	28	35	3.265	35	39
	3100	.036	.478	.478	21	32	1.442	31	35	1.942	34	35	3.442	38	43
16	780	.005	.021	.021	—	—	1.015	16	21	1.516	19	25	3.018	23	28
	1600	.016	.082	.082	—	—	1.065	17	21	1.566	22	27	3.066	35	37
	2400	.041	.189	.189	—	19	1.147	22	28	1.648	25	31	3.148	35	36
	3600	.089	.422	.422	24	30	1.332	31	30	1.833	31	35	3.333	37	40
	4200	.120	.573	.573	25	35	1.452	35	36	1.953	37	36	3.453	41	43
18	1100	.001	.016	.016	—	—	1.015	16	22	1.514	19	24	3.014	25	32
	2300	.006	.069	.069	—	—	1.063	21	27	1.563	28	30	3.063	36	39
	3600	.024	.179	.179	16	35	1.155	25	31	1.654	30	35	3.155	38	41
	4500	.038	.280	.280	22	38	1.242	31	39	1.741	34	40	3.241	40	44
	5500	.056	.417	.417	31	42	1.361	36	41	1.861	38	43	3.361	42	48
24	1480	.000	.005	.005	—	—	1.010	21	32	1.511	27	37	3.011	30	46
	3200	.040	.038	.038	—	22	1.050	22	31	1.550	27	36	3.050	37	48
	4800	.090	.086	.086	21	38	1.112	28	35	1.613	30	37	3.112	38	45
	6000	.140	.138	.138	28	40	1.175	33	39	1.676	35	41	3.175	40	48
	7300	.200	.209	.209	37	47	1.259	36	41	1.760	40	46	3.260	44	48

NOTES:

1. *Δ P_S static pressure difference from inlet to discharge.*
2. *Δ P_S is the minimum pressure required to deliver CFM shown with the primary damper in wide open position.*
3. *Δ P_t is the total pressure difference from inlet to discharge.*
4. *Dash (—) indicates NC level less than 10.*

NC levels are derived from tests conducted in accordance with AHRI Standard 880-2008 and are calculated in accordance with AHRI Standard 885-2008 as application data based on the following:

Discharge NC levels are based on —

a) 5 foot rectangular duct lined with 1" fiberglass insulation.
b) 5 foot lined flex duct (8" diameter).
c) Flow division.
d) Space effect factor (2400 ft^3) at 5 feet from outlet.
e) End reflection.
f) Environmental adjustment factor.

Radiated NC levels are based on—

a) Plenum / ceiling effect - 5/8" mineral fiber tile, 35 lb / ft^3
- 3 foot plenum.
b) Environmental adjustment factor.

NC is not part of the AHRI 880 Certification Program.

Sound Data (Sound Power by Octave Band)

Discharge Sound Power

Inlet Size (Inches)	CFM	Minimum Δ P_S							1.0" Δ P_S						1.5" Δ P_S						3.0" Δ P_S					
			Sound Power (db) by Octave Band						Sound Power (db) by Octave Band						Sound Power (db) by Octave Band						Sound Power (db) by Octave Band					
		Δ P_S	(2) 125	(3) 250	(4) 500	(5) 1000	(6) 2000	(7) 4000	(2) 125	(3) 250	(4) 500	(5) 1000	(6) 2000	(7) 4000	(2) 125	(3) 250	(4) 500	(5) 1000	(6) 2000	(7) 4000	(2) 125	(3) 250	(4) 500	(5) 1000	(6) 2000	(7) 4000
5	75	.028	35	23	17	17	16	17	51	47	44	42	40	37	51	48	46	45	44	42	51	51	49	50	52	50
	100	.051	35	27	19	17	16	17	54	50	46	43	41	38	56	53	50	47	45	43	55	55	52	52	53	50
	200	.192	49	44	39	36	31	21	64	60	52	48	45	39	65	63	56	51	49	45	67	66	61	57	55	52
	300	.431	59	54	50	46	44	35	71	63	56	51	49	43	72	67	60	55	53	47	75	72	67	60	58	54
	350	.554	62	57	53	50	48	39	74	65	58	53	51	44	75	67	61	56	54	48	76	74	68	62	59	55
6	110	.020	36	26	19	16	16	18	51	48	46	43	40	37	53	52	49	47	45	42	55	54	52	53	53	51
	200	.071	40	36	30	22	18	18	61	58	51	46	42	41	61	60	54	51	46	45	61	62	59	58	54	52
	300	.149	47	45	40	35	28	21	65	60	53	50	44	42	65	65	58	53	48	47	66	70	65	60	56	54
	400	.272	54	51	47	44	37	30	69	63	57	53	47	43	68	66	60	56	52	48	73	74	70	62	59	55
	500	.395	59	58	53	51	45	38	72	66	59	55	49	45	71	68	63	58	53	49	74	75	70	64	58	56
7	140	.010	35	23	17	17	16	17	50	50	49	47	41	37	52	52	52	52	46	43	53	56	55	58	54	52
	200	.023	35	26	19	17	16	17	57	56	51	48	42	39	57	58	56	53	47	44	57	61	59	60	55	52
	400	.093	48	42	37	37	24	20	66	60	54	53	46	42	65	65	59	56	50	47	67	74	68	63	57	54
	600	.208	58	52	49	50	39	33	72	64	60	57	48	45	72	66	62	60	52	49	73	74	70	66	59	57
	700	.261	59	54	51	54	43	37	71	65	61	59	50	46	72	68	64	61	54	50	74	74	69	66	60	57
8	185	.009	36	23	18	19	18	18	52	53	53	51	43	38	55	54	56	56	49	44	58	59	57	61	57	53
	400	.039	36	35	31	31	18	18	62	60	55	53	44	42	63	63	60	57	49	46	64	68	67	65	59	54
	600	.083	49	44	41	44	30	23	67	62	58	56	47	45	69	67	62	60	51	49	70	75	71	67	59	56
	800	.138	53	50	48	52	39	34	69	65	62	60	51	48	70	69	64	62	53	51	75	77	72	68	60	57
	1000	.212	58	56	54	59	46	42	71	68	64	63	53	51	72	71	67	65	56	54	76	77	72	70	62	59
10	300	.008	37	24	17	18	17	17	55	57	58	54	45	41	57	58	61	59	51	46	59	62	64	66	60	55
	500	.013	37	31	25	24	18	17	59	60	58	54	46	43	61	66	64	61	51	48	62	69	72	70	61	56
	800	.024	43	41	38	39	24	19	63	61	59	56	48	45	66	66	63	60	52	49	68	75	74	71	61	57
	1200	.047	51	50	50	51	39	32	71	67	63	60	52	48	72	70	66	63	55	51	74	74	72	71	62	59
	1500	.069	56	55	56	58	47	41	71	70	67	63	55	51	73	73	68	65	58	54	75	77	74	72	64	60
12	430	.001	34	24	20	19	18	18	57	60	58	46	46	43	57	62	63	61	52	49	60	64	65	66	61	57
	800	.003	38	30	32	22	18	18	61	59	59	55	46	45	64	66	64	61	52	50	67	75	74	71	62	58
	1200	.005	43	41	43	36	29	21	64	62	60	55	48	46	67	65	64	61	52	50	70	75	74	71	62	58
	1800	.007	51	49	56	49	43	37	69	65	65	57	51	48	72	69	68	62	55	52	76	75	74	71	63	59
	2300	.009	56	54	62	56	51	45	70	68	67	60	55	51	73	71	70	64	58	54	77	77	75	71	65	61
14	600	.004	38	30	22	24	24	21	61	60	59	56	48	44	66	65	63	61	53	50	65	69	67	66	61	59
	1000	.006	39	32	31	24	22	20	61	61	61	56	49	45	66	67	67	62	53	50	69	76	74	73	64	59
	1600	.011	44	42	45	35	32	23	65	63	61	56	51	47	68	67	67	62	56	53	72	76	74	72	64	59
	2400	.024	50	51	58	48	45	37	70	69	64	59	53	49	74	70	68	68	62	57	78	76	74	70	65	61
	3100	.036	56	57	68	56	53	45	71	73	70	63	57	52	75	75	71	65	60	56	80	79	76	71	67	62
16	780	.005	43	32	25	29	28	23	61	60	59	57	50	44	64	63	63	61	55	51	65	66	65	64	61	59
	1600	.016	46	39	39	30	29	24	63	61	60	57	50	44	68	65	65	62	55	50	74	76	74	71	66	60
	2400	.041	52	48	52	42	38	30	70	65	61	57	52	47	72	68	66	62	57	52	76	76	74	71	66	61
	3600	.089	59	57	71	54	51	44	73	73	66	60	56	51	78	73	68	64	60	56	81	78	74	71	67	63
	4200	.120	64	61	72	59	56	49	73	76	71	63	59	54	77	78	71	65	61	57	82	81	75	71	68	64
18	1100	.001	40	32	25	21	20	20	61	60	57	58	51	47	62	63	61	61	55	52	65	68	66	66	61	59
	2300	.006	57	51	46	39	36	33	67	64	59	58	50	48	71	70	63	61	55	53	73	77	73	70	66	61
	3600	.024	64	60	59	50	45	37	72	68	63	59	54	51	75	72	65	62	57	54	79	79	74	70	66	62
	4500	.038	69	65	69	57	52	45	78	73	66	62	58	54	79	75	69	65	60	57	81	80	75	70	66	62
	5500	.056	74	70	77	62	57	52	82	77	70	65	61	57	82	79	71	67	63	59	83	82	76	72	67	64
24	1480	.000	43	36	31	27	25	22	66	64	61	60	51	49	68	69	65	65	57	54	68	72	71	70	64	62
	3200	.040	58	53	52	43	35	28	68	65	63	60	52	51	71	69	67	65	57	56	76	78	76	74	68	65
	4800	.090	69	64	64	55	49	43	74	70	66	62	56	54	76	72	69	65	59	59	80	79	76	74	68	66
	6000	.140	74	70	72	62	56	52	79	74	68	65	59	57	80	76	71	67	62	60	82	80	78	74	69	67
	7300	.200	77	74	83	67	59	53	80	77	72	67	62	58	85	79	74	74	65	61	86	84	86	76	74	69

NOTES:
1. *Based on tests conducted in accordance with AHRI Standard 880-2008.*
2. *Δ P_S static pressure difference from inlet to discharge.*
3. *Δ P_S is the minimum pressure required to deliver CFM shown with primary damper in wide open position.*
4. *Dash (—) indicates db level less than 10.*

A Participating Member in the AHRI 880 Certification Program

Sound Data (Sound Power by Octave Band)

Radiated Sound Power

Inlet Size (Inches)	CFM	Minimum Δ P_S							1.0" Δ P_S						1.5" Δ P_S						3.0" Δ P_S					
			Sound Power (db) by Octave Band						Sound Power (db) by Octave Band						Sound Power (db) by Octave Band						Sound Power (db) by Octave Band					
		Δ P_S	(2) 125	(3) 250	(4) 500	(5) 1000	(6) 2000	(7) 4000	(2) 125	(3) 250	(4) 500	(5) 1000	(6) 2000	(7) 4000	(2) 125	(3) 250	(4) 500	(5) 1000	(6) 2000	(7) 4000	(2) 125	(3) 250	(4) 500	(5) 1000	(6) 2000	(7) 4000
5	75	.028	39	31	23	21	21	21	53	49	48	44	43	41	54	55	52	48	48	47	56	57	55	55	55	56
	100	.051	41	30	25	21	21	21	55	50	49	44	43	41	57	55	53	48	48	47	59	62	59	56	56	56
	200	.192	42	36	36	28	23	22	61	52	50	45	44	42	64	56	54	49	48	47	67	66	62	56	55	56
	300	.431	45	45	49	38	34	26	63	55	53	47	46	43	67	58	55	51	50	48	71	63	60	57	56	56
	350	.554	52	49	56	44	42	34	65	57	55	49	47	45	69	61	58	52	51	49	74	67	63	59	57	56
6	110	.020	40	29	20	19	20	21	45	42	39	41	43	40	46	43	41	45	47	45	45	45	42	49	54	54
	200	.071	39	34	24	22	20	20	53	51	43	43	44	40	54	52	45	46	48	46	53	52	47	50	55	54
	300	.149	43	39	33	30	27	23	58	55	46	44	46	42	60	56	48	47	50	47	60	57	52	52	55	55
	400	.272	48	44	41	40	37	28	60	55	47	46	47	43	63	58	52	48	50	47	64	61	56	53	56	56
	500	.395	52	50	45	45	43	37	64	56	50	47	48	44	65	59	52	49	51	49	67	63	58	54	56	57
7	140	.010	41	32	23	22	23	22	45	39	37	35	35	34	47	40	39	41	41	40	46	44	43	47	50	49
	200	.023	41	30	23	22	21	22	50	44	40	37	38	35	52	46	43	41	42	41	51	48	46	48	50	49
	400	.093	44	33	30	28	24	22	59	51	45	42	41	38	61	54	49	45	44	43	63	59	56	50	50	49
	600	.208	50	42	42	39	33	27	64	53	49	45	43	41	66	56	52	48	47	45	68	62	59	53	53	51
	700	.261	54	45	44	42	38	31	66	56	50	45	44	42	67	58	53	48	47	45	70	63	59	54	54	52
8	185	.009	39	27	18	17	20	21	50	43	41	36	39	36	50	44	42	40	43	41	52	49	46	46	48	49
	400	.039	39	28	23	20	20	21	57	51	45	38	37	35	58	55	50	43	41	40	60	57	56	50	48	49
	600	.083	43	34	32	29	25	22	60	53	49	42	40	36	62	58	53	44	43	40	64	62	61	53	49	49
	800	.138	48	42	41	39	33	27	62	55	51	45	43	38	64	59	55	47	46	42	67	65	62	54	51	49
	1000	.212	52	46	46	43	40	34	65	57	53	47	45	40	67	60	57	50	48	44	71	66	63	56	53	50
10	300	.008	38	28	22	18	20	22	53	50	46	40	40	39	54	51	49	44	44	44	58	54	51	50	52	52
	500	.013	37	29	24	18	19	22	56	51	47	41	41	40	59	56	51	44	44	44	61	60	59	52	52	52
	800	.024	42	33	31	26	22	21	60	53	49	44	42	40	64	58	54	45	45	45	64	64	63	55	52	51
	1200	.047	50	42	42	39	31	25	66	57	52	48	46	42	67	59	55	50	50	46	69	65	61	57	54	52
	1500	.069	52	47	48	45	39	32	67	60	55	49	47	43	69	65	57	51	51	47	73	66	62	59	57	53
12	430	.001	39	31	23	21	21	21	52	49	48	44	43	41	53	54	51	48	48	47	55	55	54	55	55	56
	800	.003	41	31	26	22	20	21	56	50	49	44	43	41	59	55	53	48	48	47	61	63	60	56	56	56
	1200	.005	42	35	34	27	24	22	60	52	50	45	44	42	63	56	54	49	48	47	66	65	62	56	56	56
	1800	.007	45	45	50	38	34	26	64	55	53	47	46	43	68	58	55	51	50	48	72	63	61	57	56	57
	2300	.009	52	49	56	44	42	34	65	57	55	49	47	45	69	61	58	52	51	49	74	66	63	59	57	58
14	600	.004	38	24	17	17	20	21	54	51	46	39	33	32	57	54	50	44	38	37	61	59	56	49	46	46
	1000	.006	38	28	23	17	19	20	55	51	47	41	38	34	58	56	52	46	41	39	63	63	61	54	49	47
	1600	.011	39	37	36	25	23	22	60	53	49	44	40	36	63	57	54	47	45	42	67	65	62	57	51	49
	2400	.024	45	51	52	38	34	28	66	57	53	46	42	38	70	60	55	49	47	43	73	66	61	56	53	51
	3100	.036	52	56	57	44	42	36	66	62	60	49	45	42	70	64	59	51	47	45	76	69	63	57	54	51
16	780	.005	41	31	24	21	20	22	54	52	47	39	30	28	57	55	51	43	36	35	60	58	54	47	44	44
	1600	.016	42	38	31	22	21	21	59	53	47	41	33	30	62	57	53	45	37	35	67	66	61	54	46	45
	2400	.041	45	48	42	29	25	23	64	55	49	43	36	33	67	59	54	47	40	37	71	67	62	56	47	45
	3600	.089	54	58	57	42	36	29	67	61	55	46	40	36	70	61	56	49	44	41	74	67	60	55	50	47
	4200	.120	57	56	59	46	41	35	66	65	61	48	42	38	70	65	61	50	45	41	76	70	62	56	51	49
18	1100	.001	44	31	26	22	20	20	58	50	47	50	48	42	59	53	50	49	47	46	62	57	57	56	53	52
	2300	.006	47	44	33	22	20	21	63	54	48	43	40	37	66	58	53	48	45	44	70	66	64	59	56	53
	3600	.024	55	60	51	33	26	24	68	57	51	44	41	38	71	61	55	48	44	42	75	68	64	59	54	52
	4500	.038	61	66	62	41	31	26	72	60	55	48	44	40	73	63	56	50	46	43	77	69	63	59	52	52
	5500	.056	63	63	66	45	37	31	75	66	59	50	46	42	76	66	60	52	50	46	80	70	64	58	53	52
24	1480	.000	42	30	21	19	20	21	62	58	57	56	54	53	63	63	62	60	60	59	68	71	70	67	69	67
	3200	.040	50	54	42	31	23	23	66	59	56	53	53	51	69	64	61	58	59	57	73	72	72	68	69	66
	4800	.090	60	67	55	42	35	34	70	62	57	53	52	50	72	65	61	58	57	56	77	73	70	67	67	65
	6000	.140	65	70	63	49	42	40	73	65	59	54	52	50	75	67	63	58	56	54	80	74	69	66	65	64
	7300	.200	65	66	71	53	43	40	75	68	61	54	51	47	79	71	65	58	55	52	80	74	72	65	63	62

NOTES:
1. *Based on tests conducted in accordance with AHRI Standard 880-2008.*
2. *Δ P_S static pressure difference from inlet to discharge.*
3. *Δ P_S is the minimum pressure required to deliver CFM shown with primary damper in wide open position.*
4. *Dash (—) indicates db level less than 10.*

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