

AVR

Discharge and Radiated (NC) Noise Criteria

Inlet Size (Inches)	CFM	Minimum Pressure Drop (Damper Full Open)
		Basic Unit
5	75	.05
	100	.06
	200	.11
	300	.15
	350	.17
6	110	.01
	200	.04
	300	.08
	400	.14
	500	.22
7	140	.01
	200	.02
	400	.08
	600	.18
	700	.25
8	185	.01
	400	.04
	600	.08
	800	.14
	1000	.21
10	300	.01
	500	.02
	800	.04
	1200	.09
	1500	.14
12	430	.01
	800	.03
	1200	.05
	1800	.09
	2300	.12
14	600	.00
	1000	.01
	1600	.02
	2400	.08
	3100	.13
16	780	.00
	1600	.02
	2400	.04
	3600	.08
	4200	.10

Min. ΔP_s (Damper Full Open)		1.0" ΔP_s		1.5" ΔP_s		3.0" ΔP_s	
Discharge NC	Rad. NC	Discharge NC	Rad. NC	Discharge NC	Rad. NC	Discharge NC	Rad. NC
Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit
—	—	—	11	11	13	19	16
—	—	—	13	12	15	20	19
—	—	15	19	18	21	23	24
—	—	19	24	22	24	27	27
—	10	22	27	24	28	29	30
—	—	—	—	—	—	16	12
—	—	12	12	15	13	20	18
—	—	17	18	19	19	25	22
—	—	21	23	24	24	29	27
—	11	24	27	27	28	33	32
—	—	—	—	—	10	16	14
—	—	10	10	12	13	19	16
—	—	18	19	22	22	28	24
—	12	24	27	28	30	34	32
—	15	27	31	30	32	35	36
—	—	—	—	—	—	14	12
—	—	11	11	15	14	21	19
—	—	17	20	19	22	24	26
—	11	19	27	22	28	27	31
—	15	22	31	25	33	30	36
—	—	—	—	13	10	20	14
—	—	12	12	16	14	23	19
—	—	15	15	19	19	26	22
—	13	19	23	23	24	28	28
—	18	22	27	25	30	30	32
—	—	—	14	13	16	19	22
—	—	13	18	16	21	23	25
—	11	15	20	19	23	25	28
—	21	18	26	21	27	28	31
—	26	20	30	23	31	29	35
—	—	11	12	16	14	23	19
—	—	14	15	18	19	25	23
—	10	17	20	21	22	28	26
—	20	21	23	23	26	30	30
—	26	23	27	27	30	31	33
—	—	—	16	13	19	19	24
—	—	15	21	17	23	24	28
—	15	19	23	22	25	28	31
10	26	23	26	27	28	33	33
15	31	25	28	29	30	34	35

- NOTES:**
1. ΔP_s static pressure difference from inlet to discharge.
 2. ΔP_s is the minimum pressure required to deliver CFM shown with the primary damper in wide open position.
 3. ΔP_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 ARI Standard 880-2008 and are calculated in accordance with ARI 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 ft³) 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 / ft³ - 3 foot plenum.
 - b) Environmental adjustment factor.

NC is not part of the ARI 880 Certification Program.

Sound Data (Sound Power by Octave Band)

Discharge Sound Power

Inlet Size (Inches)	CFM	Minimum ΔP_s							1.0" ΔP_s							1.5" ΔP_s							3.0" ΔP_s							
		ΔP_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						
			(2)	(3)	(4)	(5)	(6)	(7)	(2)	(3)	(4)	(5)	(6)	(7)	(2)	(3)	(4)	(5)	(6)	(7)	(2)	(3)	(4)	(5)	(6)	(7)	(2)	(3)	(4)	(5)
5	75	.05	37	23	19	19	18	18	46	46	47	49	45	43	48	48	49	52	49	48	51	52	53	58	56	56	56	56	56	
	100	.06	38	28	24	23	22	20	50	50	49	50	47	44	52	52	51	53	51	49	55	55	55	59	58	57	57	57	57	
	200	.11	43	38	35	32	32	26	60	57	54	54	50	47	61	60	57	57	54	52	64	63	61	63	61	60	60	60	60	
	300	.20	45	44	42	37	38	30	65	62	57	56	52	49	67	64	60	60	56	54	70	68	64	65	63	62	62	62	62	
	350	.26	46	46	45	39	40	31	67	64	59	57	53	49	69	66	61	60	57	54	72	70	65	66	64	63	63	63	63	
6	110	.02	35	22	15	13	12	14	48	48	48	49	45	41	50	50	51	53	49	45	54	54	56	58	56	53	53	53	53	
	200	.06	39	33	28	25	25	22	56	55	53	53	50	46	58	57	56	56	54	50	62	61	60	62	60	57	57	57	57	
	300	.10	43	40	36	33	34	28	61	60	56	56	53	49	63	62	59	59	57	53	67	66	63	65	63	61	61	61	61	
	400	.16	45	45	43	38	40	32	65	63	58	58	55	51	67	66	61	61	59	55	71	70	65	67	65	63	63	63	63	63
	500	.23	47	49	47	43	45	35	68	66	60	59	57	53	70	68	62	62	60	57	74	73	67	68	67	65	65	65	65	65
7	140	.01	36	20	13	13	—	12	48	48	48	49	46	42	50	51	51	52	50	46	55	56	57	57	56	53	53	53	53	
	200	.02	39	26	20	20	17	17	53	53	51	52	49	45	55	55	54	55	52	49	60	60	59	60	58	56	56	56	56	
	400	.08	43	39	36	34	33	29	62	61	57	57	53	49	65	64	60	60	57	53	69	69	65	65	63	60	60	60	60	
	600	.18	46	47	45	42	42	36	68	66	60	60	56	52	70	69	63	62	60	56	75	74	68	67	66	63	63	63	63	63
	700	.25	47	50	48	45	46	38	70	68	61	61	57	53	72	71	64	64	61	57	77	75	70	68	67	64	64	64	64	64
8	185	.01	34	17	11	11	—	12	45	47	48	47	44	40	46	49	51	50	47	44	49	53	56	55	53	51	51	51	51	
	400	.04	42	33	29	28	27	25	57	55	53	53	50	46	59	58	56	56	54	50	62	62	61	61	59	57	57	57	57	
	600	.08	46	42	38	37	36	31	63	60	56	56	53	50	65	62	59	59	57	54	68	66	64	64	63	60	60	60	60	60
	800	.14	49	48	45	43	43	36	68	63	58	59	56	52	70	65	61	62	59	56	73	69	66	67	65	63	63	63	63	63
	1000	.21	52	52	50	48	48	39	71	65	60	60	58	54	73	68	63	63	61	58	76	72	68	68	67	65	65	65	65	65
10	300	.01	37	21	13	13	11	13	47	50	49	48	48	45	49	52	52	51	51	49	53	56	57	57	57	56	56	56	56	
	500	.02	40	29	24	24	22	20	55	55	54	51	51	48	57	57	56	54	55	52	60	61	61	60	60	59	59	59	59	
	800	.04	43	37	34	35	32	28	61	59	57	54	54	50	63	62	60	57	58	55	67	66	65	63	63	62	62	62	62	
	1200	.09	45	44	43	44	41	34	67	63	61	57	57	53	69	66	64	60	60	57	72	70	68	66	64	64	64	64	64	64
	1500	.14	47	48	48	49	46	37	70	65	63	58	58	54	72	68	65	62	62	58	76	72	70	67	67	65	65	65	65	65
12	430	.01	38	19	14	15	14	14	49	47	49	49	48	45	50	50	52	52	49	54	54	56	58	57	55	55	55	55	55	
	800	.03	42	29	27	29	25	22	57	53	54	53	52	49	59	56	57	56	56	52	62	60	61	62	61	59	59	59	59	
	1200	.05	45	36	36	38	33	26	62	57	57	55	55	51	64	60	60	58	58	55	67	64	65	64	64	61	61	61	61	
	1800	.09	48	43	45	47	40	31	67	61	61	57	58	54	69	64	63	61	61	57	73	68	68	67	67	64	64	64	64	64
	2300	.12	49	47	50	53	45	34	70	63	63	58	59	55	72	66	65	62	63	59	76	70	70	68	68	65	65	65	65	65
14	600	.01	32	21	14	16	12	13	49	50	48	45	49	47	51	53	51	49	53	52	55	58	56	55	59	59	59	59	59	
	1000	.02	38	30	27	27	24	21	55	55	53	50	52	50	57	58	56	54	56	54	61	63	61	60	62	61	61	61	61	
	1600	.04	44	39	39	38	34	29	60	60	57	55	55	53	63	62	60	59	58	57	67	67	65	65	65	64	64	64	64	64
	2400	.08	48	46	49	47	43	36	65	64	61	59	57	55	67	66	64	63	61	59	71	71	69	69	67	66	66	66	66	66
	3100	.13	51	50	55	53	49	40	68	66	63	61	59	56	70	69	66	65	62	60	74	73	71	72	68	67	67	67	67	67
16	780	.00	35	24	16	17	16	14	50	52	48	50	50	45	53	55	51	53	49	57	59	55	59	60	55	55	55	55	55	
	1600	.02	44	38	36	33	31	25	59	59	55	55	54	50	61	61	57	58	58	53	65	66	62	63	64	60	60	60	60	60
	2400	.04	50	45	47	43	39	32	63	63	59	58	56	52	66	65	61	61	60	56	70	70	66	66	66	63	63	63	63	63
	3600	.08	55	53	58	52	47	38	68	66	63	61	59	55	70	69	65	64	63	59	75	74	70	69	69	65	65	65	65	65
	4200	.10	57	56	63	55	50	41	70	68	64	62	60	56	72	71	67	65	64	60	76	75	71	70	70	66	66	66	66	66

- NOTES:**
1. Based on tests conducted in accordance with ARI Standard 880-2008.
 2. ΔP_s static pressure difference from inlet to discharge.
 3. ΔP_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.

Sound Data (Sound Power by Octave Band)

Radiated Sound Power

Inlet Size (Inches)	CFM	Minimum ΔP_s							1.0" ΔP_s							1.5" ΔP_s							3.0" ΔP_s							
		ΔP_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						
			(2)	(3)	(4)	(5)	(6)	(7)	(2)	(3)	(4)	(5)	(6)	(7)	(2)	(3)	(4)	(5)	(6)	(7)	(2)	(3)	(4)	(5)	(6)	(7)	(2)	(3)	(4)	(5)
5	75	.05	22	29	24	16	15	17	42	35	38	34	32	26	42	37	40	37	36	31	44	40	43	42	43	40				
	100	.06	27	31	26	19	16	17	46	39	40	36	33	27	47	40	42	39	37	32	48	43	45	44	44	41				
	200	.11	40	36	32	25	18	17	56	46	45	40	35	29	57	48	47	43	39	34	58	51	50	48	47	43				
	300	.20	48	40	35	28	20	18	62	51	48	43	36	30	62	52	50	46	41	35	64	55	52	51	48	44				
	350	.26	51	41	36	29	20	18	64	52	49	44	37	31	65	54	51	47	41	36	66	57	54	51	49	44				
6	110	.02	38	23	15	13	13	17	42	34	34	28	27	24	43	36	35	31	32	28	45	40	39	35	39	36				
	200	.06	39	31	24	21	17	17	51	42	39	33	31	26	52	44	40	36	35	31	54	48	44	40	42	39				
	300	.10	40	35	30	26	20	18	57	47	42	37	33	28	58	50	44	39	37	32	60	54	47	43	44	40				
	400	.16	41	39	34	30	22	18	61	51	44	39	34	29	62	54	46	42	38	34	64	57	50	46	46	42				
	500	.23	41	41	38	33	23	18	64	54	46	41	35	30	65	57	48	43	40	34	68	60	51	48	47	43				
7	140	.01	33	17	11	—	11	16	42	35	35	30	28	25	43	37	37	32	32	30	46	42	41	37	39	38				
	200	.02	36	22	18	15	14	17	48	40	37	32	30	26	49	42	40	35	34	31	51	47	43	39	41	39				
	400	.08	41	33	31	27	21	18	58	49	42	37	33	29	60	52	45	39	37	33	62	56	48	44	44	41				
	600	.18	44	39	39	33	24	19	64	54	45	39	35	30	66	57	48	42	39	35	68	62	51	46	46	42				
	700	.25	45	41	42	36	26	20	67	56	46	40	36	30	68	59	49	43	40	35	71	64	53	47	47	43				
8	185	.01	39	24	13	10	10	15	44	36	34	30	30	29	46	39	36	33	34	33	49	43	41	38	41	41				
	400	.04	44	33	26	22	19	19	53	43	38	34	33	30	54	45	41	37	37	35	57	49	45	42	44	43				
	600	.08	47	37	33	29	24	20	57	46	40	36	34	31	59	48	43	39	39	36	62	53	47	44	46	44				
	800	.14	48	40	38	33	27	22	60	48	42	37	35	32	62	51	44	40	40	36	65	55	49	45	47	45				
	1000	.21	50	43	42	37	30	23	63	50	43	39	36	32	64	52	45	41	40	37	67	57	50	47	47	45				
10	300	.01	33	21	13	12	11	15	41	36	35	33	31	29	43	38	37	36	35	33	46	41	41	41	41	40				
	500	.02	38	27	23	19	17	18	48	41	39	37	35	32	50	43	41	40	39	36	53	46	45	45	45	43				
	800	.04	42	32	32	26	22	20	55	46	42	39	38	34	57	48	45	42	42	38	60	51	48	48	48	46				
	1200	.09	46	37	40	33	26	22	61	50	46	42	41	36	62	52	48	45	45	40	65	55	51	50	51	48				
	1500	.14	48	40	44	36	29	23	64	52	47	43	43	37	66	54	49	46	47	42	68	58	53	51	53	49				
12	430	.01	38	21	15	12	12	15	44	39	41	38	34	31	46	42	43	42	39	35	49	47	48	47	46	43				
	800	.03	42	29	29	21	18	18	52	43	44	41	37	34	54	46	47	45	41	39	57	52	51	50	49	46				
	1200	.05	44	34	38	27	23	20	57	46	46	43	39	36	59	49	49	47	43	41	62	55	54	52	51	48				
	1800	.09	47	39	47	33	27	21	63	49	48	46	41	38	64	52	51	49	45	43	67	58	56	54	52	50				
	2300	.12	49	42	52	36	29	22	66	51	50	47	42	40	67	54	52	50	46	44	70	59	57	56	54	52				
14	600	.01	39	24	15	10	10	14	43	38	39	39	36	32	45	40	41	42	40	36	48	45	45	47	46	43				
	1000	.02	42	30	26	19	17	18	50	42	42	42	38	34	51	45	45	45	42	39	55	49	49	50	49	45				
	1600	.04	46	36	37	27	23	21	56	46	46	45	40	37	57	49	48	48	44	41	61	53	52	52	51	48				
	2400	.08	49	42	46	33	28	23	61	50	48	47	42	38	63	52	50	50	46	42	66	57	54	55	52	49				
	3100	.13	51	45	52	37	31	25	64	52	50	48	43	39	66	55	52	51	47	44	69	59	56	56	54	50				
16	780	.00	14	21	12	10	—	14	43	42	43	40	34	29	45	45	43	37	33	48	49	50	48	43	39					
	1600	.02	34	33	31	23	20	19	52	47	47	44	38	33	54	50	49	47	42	37	57	54	54	52	48	44				
	2400	.04	45	40	42	30	26	22	57	50	49	46	41	36	59	52	51	49	44	40	62	57	56	54	50	46				
	3600	.08	56	46	52	37	32	25	63	52	51	48	43	38	64	55	54	51	47	42	68	60	58	56	53	49				
	4200	.10	60	49	56	40	34	26	65	53	52	49	44	39	66	56	54	52	48	43	70	61	59	57	54	50				

- NOTES:**
1. Based on tests conducted in accordance with ARI Standard 880-2008.
 2. ΔP_s static pressure difference from inlet to discharge.
 3. ΔP_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.