ENGINEERING DATA

Noise Criteria Quick Reference

Noise Criteria (NC)										
Inlet Size	Max CFM	Min. Op. Pressure (in. wc)	DISCHARGE ΔP_s				RADIATED ΔP_s			
			0.5"	1.0"	1.5"	3.0"	0.5"	1.0"	1.5"	3.0"
04	45	0.021	-	-	-	15	-	-	-	17
	85	0.074	-	17	22	23	-	-	17	25
	150	0.230	-	18	25	33	-	16	23	28
	175	0.313	-	20	25	36	-	17	23	28
	260	0.690	*	23	28	38	*	21	26	33
05	70	0.016	-	-	-	-	-	-	-	-
	135	0.050	-	18	22	23	15	15	17	23
	205	0.110	-	20	26	32	-	20	25	27
	275	0.200	15	21	28	36	18	23	26	30
	410	0.410	20	27	31	37	20	27	32	33
06	100	0.010	-	-	-	17	-	-	-	20
	195	0.038	-	15	20	26	16	17	18	25
	295	0.087	-	21	26	33	17	25	26	27
	400	0.156	15	27	28	37	18	27	26	32
	590	0.349	18	26	30	40	17	28	32	38
07	135	0.010	-	-	16	17	-	-	-	-
	265	0.039	-	18	23	30	-	15	17	22
	400	0.088	-	26	28	36	-	21	22	30
	550	0.166	18	28	32	39	15	22	27	33
	800	0.352	21	30	35	40	18	23	30	38
08	175	0.010	-	-	17	23	-	-	-	20
	350	0.032	-	18	22	31	-	17	18	26
	525	0.086	15	25	27	33	-	22	25	30
	700	0.164	17	27	32	38	15	25	28	35
	1045	0.338	22	28	35	43	17	26	32	38
10	275	0.009	-	-	16	21	-	-	18	23
	545	0.035	-	16	21	31	-	17	20	27
	820	0.080	15	21	25	35	15	23	25	32
	1100	0.141	20	26	28	40	18	25	31	35
	1635	0.318	26	30	35	42	26	30	36	43
12	395	0.007	-	-	16	23	-	22	26	33
	785	0.029	-	17	20	28	-	20	27	38
	1180	0.065	17	25	25	36	16	23	28	37
	1600	0.116	20	27	30	37	22	27	32	38
	2355	0.260	27	31	37	43	31	34	36	42
14	535	0.010	-	15	18	30	-	-	16	22
	1070	0.048	-	17	23	36	-	-	20	28
	1605	0.100	15	22	27	36	15	22	25	32
	2100	0.160	20	27	31	37	21	26	30	36
	3205	0.370	30	33	37	43	28	32	33	43
16	700	0.008	-	15	20	30	-	-	-	20
	1395	0.032	-	20	25	33	-	17	18	26
	2095	0.074	21	26	30	36	-	22	25	30
	2800	0.130	25	31	33	40	15	25	28	35
	4190	0.288	31	37	39	45	17	26	32	38

Noise Criteria (NC) Notes:

1. A hyphen (-) indicates the NC is lower than 15.
2. An asterisk (*) indicates the minimum operating pressure exceeds the rating point pressure.
3. Noise Criteria (NC) were found using ARI Standard 885-98 Appendix E (2002 Addendum):
   a. Radiated NC were found using the type 3 ceiling (gypsum board) condition.
   b. Discharge NC were found using the large terminal condition due to the multitude of possible discharge duct sizes.
4. ARI Standard 885-98 Appendix E, Table E1.

Typical Sound Attenuation Values, dB.

OCTAVE BAND CENTER FREQUENCY (Hz)						
DISCHARGE	125	250	500	1000	2000	4000
Small Terminal	24	28	39	53	59	40
Medium Terminal	27	29	40	51	53	39
Large Terminal	29	30	41	51	52	39

OCTAVE BAND CENTER FREQUENCY (Hz)						
RADIATED	125	250	500	1000	2000	4000
Type 1 - Glass Fiber	19	19	21	25	29	35
Type 2 - Mineral Fiber	18	19	20	26	31	36
Type 3 - Gypsum Board	23	26	25	27	27	28

Minimum Pressure Requirement

Inlet Size	CFM	P_s (in. wc)
04	45	0.021
	85	0.074
	150	0.230
	175	0.313
	260	0.690
05	70	0.016
	135	0.050
	205	0.110
	275	0.200
	410	0.410
06	100	0.010
	195	0.038
	295	0.087
	400	0.156
	590	0.349
07	135	0.010
	265	0.039
	400	0.088
	550	0.166
	800	0.352
08	175	0.010
	350	0.032
	525	0.086
	700	0.164
	1045	0.338

Inlet Size	CFM	P_s (in. wc)
10	275	0.009
	545	0.035
	820	0.080
	1100	0.141
	1635	0.318
12	395	0.007
	785	0.029
	1180	0.065
	1600	0.116
	2355	0.260
14	535	0.010
	1070	0.048
	1605	0.100
	2100	0.160
	3205	0.370
16	700	0.008
	1395	0.032
	2095	0.074
	2800	0.130
	4190	0.288

ENGINEERING DATA

DDV Discharge & Radiated Sound

Minimum Inlet Static Pressure

Inlet Size	CFM	Min. Op. Pressure (in. wc)	DISCHARGE Octave Bands						NC Levels	RADIATED Octave Bands						NC Levels
			2	3	4	5	6	7		2	3	4	5	6	7	
04	45	0.021	*	*	*	*	*	*	-	*	*	*	*	*	*	-
	85	0.074	42	31	27	24	*	*	-	*	29	25	22	*	*	-
	150	0.230	54	47	40	39	35	31	-	48	40	37	31	30	*	-
	175	0.313	57	49	45	43	38	35	-	50	45	40	36	34	26	-
	260	0.690	66	58	56	53	49	47	18	58	53	49	44	43	41	17
05	70	0.016	*	*	*	*	*	*	-	*	*	*	23	*	*	-
	135	0.050	43	*	25	*	*	*	-	*	*	30	*	*	*	-
	205	0.110	47	43	36	33	26	*	-	45	40	29	24	23	*	-
	275	0.200	55	49	44	42	35	32	-	51	46	37	31	31	*	-
	410	0.410	62	56	54	54	45	43	-	58	53	45	41	38	33	-
06	100	0.010	*	*	*	*	*	*	-	*	*	*	22	*	*	-
	195	0.038	43	*	*	24	*	*	-	*	*	*	19	*	*	-
	295	0.087	53	45	39	38	29	26	-	46	39	30	27	21	*	-
	400	0.156	55	49	44	45	36	35	-	53	45	36	33	28	22	-
	590	0.349	63	60	56	59	48	47	18	59	53	47	46	38	32	17
07	135	0.010	*	*	*	*	*	*	-	*	*	*	*	*	*	-
	265	0.039	38	30	26	30	*	*	-	*	*	*	*	*	*	-
	400	0.088	49	41	38	43	30	26	-	42	35	29	26	*	*	-
	550	0.166	56	49	45	52	39	37	-	48	43	36	35	24	*	-
	800	0.352	63	58	54	64	50	48	16	56	50	45	46	35	29	17
08	175	0.010	*	*	*	*	*	*	-	*	*	*	*	*	*	-
	350	0.032	43	*	29	30	*	*	-	34	*	*	*	*	*	-
	525	0.086	52	41	41	43	31	27	-	42	35	28	26	*	*	-
	700	0.164	58	48	50	52	40	37	-	47	42	36	35	22	*	-
	1045	0.338	64	60	60	63	51	49	18	55	52	47	46	34	26	17
10	275	0.009	*	*	*	*	*	*	-	*	*	*	*	*	*	-
	545	0.035	46	*	35	27	*	*	-	*	*	*	*	*	*	-
	820	0.080	49	41	47	41	32	28	-	*	36	36	27	*	*	-
	1100	0.141	56	49	57	49	41	39	-	50	42	45	36	28	*	-
	1635	0.318	63	58	66	61	53	52	22	56	53	55	47	39	31	24
12	395	0.007	*	*	*	*	*	*	-	*	*	*	*	*	*	-
	785	0.029	*	*	37	*	*	*	-	38	31	29	*	*	*	-
	1180	0.065	53	42	50	40	35	29	-	47	42	41	28	21	*	-
	1600	0.116	57	51	49	50	44	40	-	55	50	50	37	30	24	18
	2355	0.260	66	60	69	62	57	52	25	66	61	61	49	42	36	31
14	535	0.010	*	*	*	*	*	*	-	*	*	*	*	*	*	-
	1070	0.048	41	*	37	28	22	*	-	36	28	28	*	*	*	-
	1605	0.100	50	43	51	42	38	33	-	43	39	39	26	*	*	-
	2100	0.160	55	51	58	50	46	42	-	49	45	46	34	25	*	-
	3205	0.370	66	62	70	63	60	56	26	60	56	57	45	37	30	26
16	700	0.008	*	*	*	*	*	*	-	*	*	*	*	*	*	-
	1395	0.032	40	35	38	29	25	*	-	39	32	32	22	*	*	-
	2095	0.074	53	48	52	43	41	36	-	47	44	45	34	29	*	-
	2800	0.130	59	56	59	52	49	46	-	53	51	51	40	36	29	-
	4190	0.288	69	67	72	64	61	59	28	63	61	64	50	47	41	17

See Page 18 for notes on performance testing.

0.5" Inlet Static Pressure

Inlet Size	Max CFM	Min. Op. Pressure (in. wc)	DISCHARGE Octave Bands						NC Levels	RADIATED Octave Bands						NC Levels
			2	3	4	5	6	7		2	3	4	5	6	7	
04	45	0.021	55	47	40	37	28	23	-	49	41	32	25	24	*	-
	85	0.074	60	51	42	39	33	30	-	57	45	34	27	26	*	-
	150	0.230	61	53	46	44	38	35	-	54	47	38	34	33	27	-
	175	0.313	62	53	48	46	41	37	-	56	48	40	35	34	31	-
	260	0.690	Σ	Σ	Σ	Σ	Σ	Σ	*	Σ	Σ	Σ	Σ	Σ	Σ	*
05	70	0.016	50	45	40	38	29	*	-	50	40	31	25	*	*	-
	135	0.050	60	50	44	40	31	29	-	59	45	34	28	22	*	15
	205	0.110	61	53	47	43	33	31	-	58	51	38	29	23	*	-
	275	0.200	63	56	51	48	39	37	15	62	53	41	34	30	*	18
	410	0.410	67	58	56	56	47	45	20	63	57	49	43	39	33	20
06	100	0.010	52	42	39	40	31	25	-	48	49	30	25	*	*	-
	195	0.038	61	49	44	42	33	29	-	60	45	35	29	21	*	16
	295	0.087	62	54	48	47	37	34	-	61	50	39	35	28	*	17
	400	0.156	63	57	51	51	40	37	15	62	52	41	39	33	23	18
	590	0.349	65	60	57	61	49	48	18	59	54	47	46	38	32	17
07	135	0.010	53	45	43	42	36	30	-	46	38	29	23	*	*	-
	265	0.039	59	50	45	44	37	33	-	54	44	34	28	20	*	-
	400	0.088	62	56	50	49	39	36	-	57	49	38	31	22	*	-
	550	0.166	66	60	55	57	45	44	18	59	54	43	39	28	*	15
	800	0.352	67	62	61	66	53	51	21	62	56	49	47	37	30	18
08	175	0.010	53	46	43	42	37	31	-	50	41	28	23	*	*	-
	350	0.032	60	52	48	45	40	35	-	56	48	35	27	*	*	-
	525	0.086	63	56	53	50	41	40	15	58	51	39	32	22	*	-
	700	0.164	65	59	57	55	45	44	17	59	55	42	36	26	*	15
	1045	0.338	68	63	65	67	54	53	22	61	57	48	46	35	28	17
10	275	0.009	55	46	46	41	38	31	-	50	42	37	26	*	*	-
	545	0.035	58	50	51	45	40	35	-	55	48	40	30	*	*	-
	820	0.080	63	56	57	49	44	42	15	59	52	45	28	26	*	15
	1100	0.141	57	60	60	52	46	45	20	61	55	50	39	31	*	18
	1635	0.318	70	64	70	63	56	54	26	62	56	57	48	40	32	26
12	395	0.007	53	47	48	42	37	31	-	58	49	39	28	23	*	-
	785	0.029	59	52	53	46	42	38	-	57	51	42	31	26	*	-
	1180	0.065	65	57	58	51	46	43	17	60	56	47	36	29	*	16
	1600	0.116	67	60	62	54	50	47	20	62	59	53	40	33	29	22
	2355	0.260	70	64	71	64	59	54	27	66	61	61	49	42	36	31
14	535	0.010	54	47	47	42	39	31	-	48	42	35	25	*	*	-
	1070	0.048	58	53	53	46	43	38	-	53	48	40	29	21	*	-
	1605	0.100	62	57	58	51	47	45	15	59	53	46	33	25	*	15
	2100	0.160	65	61	63	55	52	49	20	62	56	52	38	30	24	21
	3205	0.370	70	67	73	64	61	58	30	63	58	59	46	37	31	28
16	700	0.008	52	50	47	43	38	32	-	47	43	36	26	*	*	-
	1395	0.032	58	56	54	48	43	38	-	55	48	41	34	28	*	-
	2095	0.074	64	62	60	53	49	46	21	60	53	48	37	33	26	-
	2800	0.130	67	65	65	49	54	52	25	62	57	53	42	37	31	15
	4190	0.288	73	70	73	65	63	61	31	67	61	60	48	45	40	17

See Page 18 for notes on performance testing.

ENGINEERING DATA

DDV Discharge & Radiated Sound

1.0” Inlet Static Pressure

Inlet Size	CFM	Min. Op. Pressure (in. wc)	DISCHARGE Octave Bands						NC Levels	RADIATED Octave Bands						NC Levels
			2	3	4	5	6	7		2	3	4	5	6	7	
04	45	0.021	55	53	50	46	37	33	-	47	47	39	34	32	29	-
	85	0.074	65	59	51	47	40	40	17	58	51	41	35	32	31	-
	150	0.230	66	60	53	49	43	41	18	60	55	44	38	36	35	16
	175	0.313	67	60	55	51	44	43	20	61	56	47	39	38	36	17
	260	0.690	70	61	58	56	51	49	23	64	56	50	45	43	41	21
05	70	0.016	51	51	48	45	38	35	-	46	45	38	30	24	*	-
	135	0.050	66	58	51	47	39	38	18	59	53	41	32	24	*	15
	205	0.110	67	60	53	49	41	40	20	63	56	44	34	26	*	20
	275	0.200	68	62	56	52	43	41	21	66	56	46	37	30	*	23
	410	0.410	73	64	60	58	49	46	27	69	63	51	44	39	33	27
06	100	0.010	53	51	46	45	41	37	-	50	46	36	29	25	*	-
	195	0.038	62	57	49	48	40	37	15	61	52	39	33	27	*	17
	295	0.087	68	62	53	52	42	39	21	67	56	44	38	32	23	25
	400	0.156	73	63	56	55	45	42	27	69	59	47	41	35	27	27
	590	0.349	71	66	62	63	52	50	26	70	63	52	49	42	34	28
07	135	0.010	57	54	49	49	44	40	-	50	45	36	30	26	*	-
	265	0.039	66	59	53	52	45	43	18	59	52	40	34	30	25	15
	400	0.088	72	64	55	54	47	44	26	64	56	43	36	31	26	21
	550	0.166	74	67	59	58	49	46	28	65	59	47	40	33	29	22
	800	0.352	75	68	66	68	56	52	30	66	61	53	48	39	34	23
08	175	0.010	58	53	50	49	45	41	-	54	48	35	28	23	*	-
	350	0.032	66	58	53	52	47	43	18	61	53	40	32	24	*	17
	525	0.086	71	63	58	56	49	46	25	65	58	44	37	28	*	22
	700	0.164	73	65	61	59	50	48	27	67	60	47	40	31	24	25
	1045	0.338	74	68	68	67	56	53	28	68	62	53	48	37	31	26
10	275	0.009	59	53	51	49	44	41	-	58	49	42	33	25	*	-
	545	0.035	64	57	56	52	47	44	16	61	52	45	36	27	*	17
	820	0.080	68	60	60	55	50	47	21	66	57	49	39	31	*	23
	1100	0.141	71	66	65	58	53	50	26	67	59	53	42	34	*	25
	1635	0.318	73	69	72	65	58	56	30	71	62	60	49	41	33	30
12	395	0.007	60	53	54	51	45	40	-	62	61	49	38	33	25	22
	785	0.029	65	57	58	53	48	43	17	61	59	50	40	35	27	20
	1180	0.065	71	63	63	57	52	50	25	66	61	54	43	37	31	23
	1600	0.116	73	65	66	59	54	51	27	69	64	57	46	40	34	27
	2355	0.260	76	70	73	65	60	57	31	72	67	64	51	45	40	34
14	535	0.010	63	56	54	51	47	43	15	57	50	41	34	29	23	-
	1070	0.048	65	59	58	54	50	47	17	58	54	45	36	30	24	-
	1605	0.100	68	63	63	57	53	50	22	65	59	50	39	31	27	22
	2100	0.160	71	67	67	61	56	54	27	68	62	53	42	34	28	26
	3205	0.370	76	72	75	67	63	60	33	69	66	62	49	40	34	32
16	700	0.008	59	57	55	51	47	43	15	54	47	41	33	28	*	-
	1395	0.032	63	61	60	55	50	46	20	61	53	47	40	39	31	17
	2095	0.074	68	66	64	59	54	50	26	64	58	51	43	41	34	22
	2800	0.130	71	70	69	63	58	55	31	67	62	56	49	44	41	25
	4190	0.288	77	75	76	70	66	64	37	74	67	63	53	48	43	26

See Page 18 for notes on performance testing.

1.5” Inlet Static Pressure

Inlet Size	CFM	Min. Op. Pressure (in. wc)	DISCHARGE Octave Bands 2	3	4	5	6	7	NC Levels	RADIATED Octave Bands 2	3	4	5	6	7	NC Levels
04	45	0.021	53	54	55	51	44	40	-	46	43	44	38	36	35	-
	85	0.074	64	63	57	52	45	43	22	60	57	49	41	37	36	17
	150	0.230	70	65	59	54	48	46	25	66	60	52	42	40	39	23
	175	0.313	70	65	59	55	49	46	25	66	60	53	43	40	40	23
	260	0.690	74	66	61	58	53	51	28	68	60	54	46	44	43	26
05	70	0.016	52	52	51	48	43	41	-	42	44	40	32	29	*	-
	135	0.050	61	63	56	51	44	43	22	57	57	46	35	29	*	17
	205	0.110	69	66	59	53	45	44	26	64	63	48	37	30	*	25
	275	0.200	72	68	60	55	47	45	28	68	61	50	39	32	28	26
	410	0.410	76	69	64	60	50	48	31	73	64	54	46	40	35	32
06	100	0.010	54	55	52	48	43	39	-	51	49	42	32	27	23	-
	195	0.038	63	61	54	52	46	42	20	62	35	47	43	38	30	18
	295	0.087	58	66	58	54	47	44	26	68	62	50	40	35	27	26
	400	0.156	74	68	60	58	49	46	28	68	64	52	43	38	31	26
	590	0.349	75	69	65	65	54	51	30	73	65	56	49	42	36	32
07	135	0.010	58	58	54	52	48	46	16	49	49	39	34	32	30	-
	265	0.039	69	64	58	56	50	49	23	61	56	44	38	35	32	17
	400	0.088	74	68	59	58	51	49	28	65	59	47	40	36	32	22
	550	0.166	75	71	62	61	53	50	32	69	62	50	43	38	34	27
	800	0.352	78	73	68	68	57	54	35	71	65	558	50	41	38	30
08	175	0.010	61	59	55	52	48	46	17	54	52	42	33	29	25	-
	350	0.032	67	63	59	56	51	50	22	62	58	45	36	31	26	18
	525	0.086	73	67	62	58	52	49	27	67	62	49	40	32	28	25
	700	0.164	77	69	65	62	54	52	32	70	65	52	43	35	29	28
	1045	0.338	79	72	71	69	58	55	35	73	66	56	49	40	34	32
10	275	0.009	60	58	56	53	49	46	16	62	51	45	36	29	*	18
	545	0.035	67	62	59	56	51	48	21	63	57	50	40	32	*	20
	820	0.080	71	63	63	58	54	50	25	67	60	52	42	34	29	25
	1100	0.141	74	68	67	61	57	53	28	72	64	56	45	37	32	31
	1635	0.318	77	73	73	67	61	58	35	76	69	62	50	42	35	36
12	395	0.007	60	58	57	56	51	48	16	63	64	55	43	38	30	26
	785	0.029	66	61	61	58	52	47	20	67	65	56	44	40	33	27
	1180	0.065	70	65	65	60	55	52	25	69	66	57	47	41	34	28
	1600	0.116	74	69	68	63	57	52	30	73	67	61	50	43	37	32
	2355	0.260	81	73	74	68	63	60	37	75	71	66	54	47	42	36
14	535	0.010	65	60	58	56	52	50	18	58	56	44	38	33	28	16
	1070	0.048	70	64	61	59	55	52	23	63	57	48	40	33	29	20
	1605	0.100	73	67	65	61	57	54	27	67	61	52	42	35	31	25
	2100	0.160	75	70	70	64	60	57	31	71	66	56	45	37	33	30
	3205	0.370	81	75	75	70	65	62	37	74	70	63	51	43	37	33
16	700	0.008	63	61	58	56	52	48	20	59	54	45	38	36	31	-
	1395	0.032	67	65	63	59	55	51	25	63	56	50	44	44	39	18
	2095	0.074	70	69	67	62	58	53	30	67	61	54	46	47	41	25
	2800	0.130	75	72	71	66	61	57	33	71	64	57	50	49	43	28
	4190	0.288	79	77	77	72	68	64	39	75	70	65	54	49	45	32

See Page 18 for notes on performance testing.

ENGINEERING DATA

DDV Discharge & Radiated Sound

3.0" Inlet Static Pressure

Inlet Size	CFM	Min. Op. Pressure (in. wc)	DISCHARGE Octave Bands						NC Levels	RADIATED Octave Bands						NC Levels
			2	3	4	5	6	7		2	3	4	5	6	7	
04	45	0.021	53	55	60	58	54	50	15	*	38	45	45	43	42	17
	85	0.074	61	64	67	60	52	51	23	54	53	56	47	43	43	25
	150	0.230	71	72	69	62	55	54	33	66	63	59	47	40	39	28
	175	0.313	72	74	69	63	56	54	36	69	65	59	49	45	44	28
	260	0.690	76	76	70	65	58	55	38	72	66	63	51	47	47	33
05	70	0.016	53	48	53	51	50	50	-	43	39	36	35	34	34	-
	135	0.050	63	64	67	60	52	51	23	58	56	54	43	36	34	23
	205	0.110	70	71	70	61	54	52	32	66	63	58	45	37	34	27
	275	0.200	73	74	70	63	55	52	36	68	67	60	47	41	36	30
	410	0.410	75	75	71	65	56	54	37	71	70	61	50	43	39	33
06	100	0.010	55	56	62	57	48	48	17	52	48	51	40	33	32	20
	195	0.038	64	66	65	59	53	49	26	63	58	56	43	36	32	25
	295	0.087	69	72	67	61	55	63	33	69	65	58	45	39	33	27
	400	0.156	75	75	70	63	56	53	37	69	69	61	47	41	35	32
	590	0.349	78	78	72	67	59	56	40	76	74	64	52	45	40	38
07	135	0.010	58	59	60	58	57	53	17	50	50	46	39	39	38	-
	265	0.039	69	69	66	62	58	54	30	60	61	53	44	41	39	22
	400	0.088	73	74	68	64	60	56	36	66	67	56	45	42	39	30
	550	0.166	78	77	70	67	60	57	39	71	70	58	48	42	39	33
	800	0.352	81	78	72	70	63	58	40	75	74	60	52	49	47	38
08	175	0.010	60	64	66	59	55	54	23	55	57	51	40	36	38	20
	350	0.032	70	70	68	62	58	55	31	63	64	53	42	38	38	26
	525	0.086	74	72	69	65	60	56	33	68	67	57	45	40	39	30
	700	0.164	78	76	72	67	61	58	38	71	71	59	48	41	39	35
	1045	0.338	84	81	77	73	65	61	43	78	73	63	54	45	42	38
10	275	0.009	63	62	62	58	57	54	21	61	60	54	43	39	36	23
	545	0.035	70	70	66	62	60	56	31	66	64	58	47	41	38	27
	820	0.080	74	73	69	64	62	58	35	73	68	60	49	43	39	32
	1100	0.141	83	75	71	66	63	59	40	75	71	62	52	45	42	35
	1635	0.318	84	80	77	71	67	63	42	82	75	67	56	48	44	43
12	395	0.007	64	64	64	61	59	55	23	61	65	63	52	46	39	33
	785	0.029	72	68	66	64	62	57	28	69	69	68	54	48	43	38
	1180	0.065	80	71	70	66	62	56	36	73	70	67	55	49	44	37
	1600	0.116	81	74	72	69	65	59	37	77	71	68	55	50	44	38
	2355	0.260	86	78	78	72	68	63	43	81	76	70	59	53	47	42
14	535	0.010	68	69	66	62	62	59	30	61	61	52	43	38	33	22
	1070	0.048	76	74	68	66	63	59	36	69	66	55	47	40	35	28
	1605	0.100	79	74	71	68	65	61	36	73	68	57	49	43	39	32
	2100	0.160	81	75	72	70	67	62	37	76	71	60	51	44	40	36
	3205	0.370	86	80	79	74	71	67	43	82	78	67	56	48	43	43
16	700	0.008	65	69	66	65	62	58	30	59	61	56	47	45	43	20
	1395	0.032	72	72	68	67	63	58	33	68	66	57	49	50	48	26
	2095	0.074	76	74	71	69	65	60	36	74	67	58	52	51	50	30
	2800	0.130	80	78	74	71	67	62	40	78	70	61	53	53	51	35
	4190	0.288	85	82	80	76	71	67	45	82	76	66	57	55	52	38

See Page 18 for notes on performance testing.

ARI CERTIFICATION DATA

Model or Size	ARI Ref #	Primary CFM	Min. Operating Pressure (in wc)	Radiated 0.125	0.25	0.50	1	2	4
DDV 04	24748	150	0.230	66	60	52	42	40	39
DDV 05	24749	205	0.110	64	63	48	37	30	*
DDV 06	24750	295	0.087	68	62	50	40	35	27
DDV 07	24751	400	0.088	65	59	47	40	36	32
DDV 08	24752	525	0.086	67	62	49	40	32	28
DDV 10	24753	820	0.035	67	60	52	42	34	29
DDV 12	24754	1180	0.065	69	66	57	47	41	34
DDV 14	24755	1605	0.100	67	61	52	42	35	31
DDV 16	24756	2095	0.074	67	61	54	46	47	41

Model or Size	ARI Ref #	Primary CFM	Min. Operating Pressure (in wc)	Discharge 0.125	0.25	0.50	1	2	4
DDV 04	24748	150	0.230	70	65	59	54	48	46
DDV 05	24749	250	0.110	69	66	59	53	45	44
DDV 06	24750	400	0.087	68	66	58	54	47	44
DDV 07	24751	550	0.088	74	68	59	58	51	49
DDV 08	24752	700	0.086	73	67	62	58	52	49
DDV 10	24753	1100	0.035	71	63	63	58	54	50
DDV 12	24754	1600	0.065	70	65	65	60	55	52
DDV 14	24755	2100	0.100	73	67	65	61	57	54
DDV 16	24756	2800	0.074	70	69	67	62	58	53

ENGINEERING DATA

DDV Sound Data Notes

Performance Data Notes:

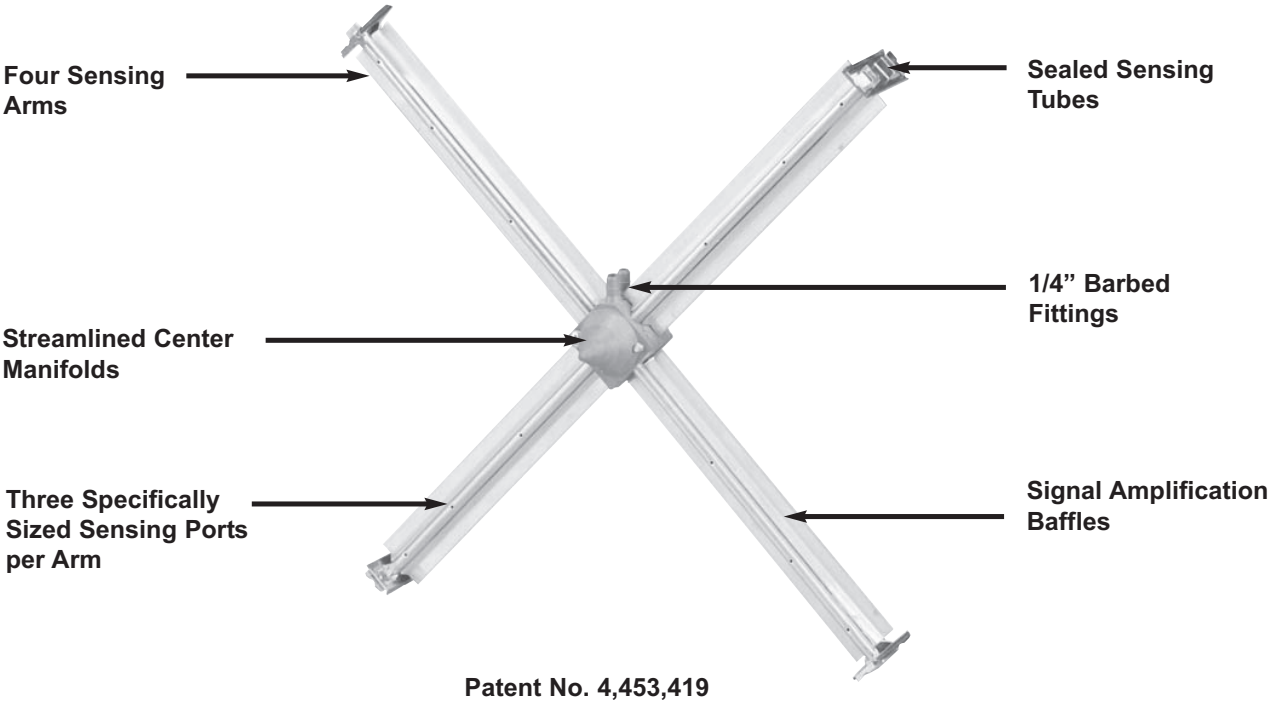
1. Test were conducted in accordance with ARI Standard 880-94 & ANSI S12.31 - 1990, unless otherwise noted.
2. (Σ) - Indicates minimum operating pressure exceeds rating point pressure.

Noise Criteria (NC) Notes:

1. A hyphen (-) indicates the NC is lower than 15
2. An asterisk (*) indicates the minimum operating pressure exceeds the rating point pressure
3. Noise Criteria (NC) were found using ARI Standard 885-98 Appendix E (2002 Addendum):
   a. Radiated NC were found using the type 3 ceiling (gypsum board) condition.
   b. Discharge NC were found using the large terminal condition due to the multitude of possible discharge duct sizes.
4. ARI Standard 885-98 Appendix E, Table E1. Typical Sound Attenuation Values, dB.

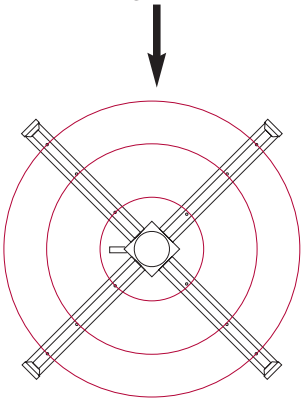
OCTAVE BAND CENTER FREQUENCY (Hz)						
DISCHARGE	125	250	500	1000	2000	4000
Small Terminal	24	28	39	53	59	40
Medium Terminal	27	29	40	51	53	39
Large Terminal	29	30	41	51	52	39

OCTAVE BAND CENTER FREQUENCY (Hz)						
RADIATED	125	250	500	1000	2000	4000
Type 1 - Glass Fiber	19	19	21	25	29	35
Type 2 - Mineral Fiber	18	19	20	26	31	36
Type 3 - Gypsum Board	23	26	25	27	27	28



Patent No. 4,453,419

Upstream and Downstream Concentric Ring Sensing Port Configuration



- Patented Flo-Cross® (Patent No. 4,453,419) is accurate to ±5% throughout the cataloged operating range
- Sensing arms sample the inlet cross section mitigating turbulent flow effects
- Barbed fittings positively lock plastic tubing
- 24 total sensing ports provide a differential pressure (ΔP) output proportional to the average duct velocity
- Amplification baffles strengthen ΔP signals to levels three times higher than standard Pitot tube readings
- Center manifolds average velocity profiles and reduce pulsations from dynamic ΔP signals
- Sensing tube constructions eliminates signal loss due to leakage
- Concentric ring sensing port configuration imitates major flow testing standards by locating them at the center of equal areas
- Corrosion resistant aluminum construction

Flo-Cross® Sensor Performance Parameters/Formulas

Size	Area (ft^2)	Cv	K*
4	0.0819	209	2.8
5	0.1296	315	3
6	0.1883	462	2.9
7	0.2578	612	9
8	0.3382	817	2.9
10	0.5319	1250	3
12	0.7691	1792	3
14	1.05	2474	3
16	1.3745	3235	3

*"K" is the amplification factor
Cv=flow coefficient

- Flow (CFM) = $C_v \times \sqrt{\Delta P}$
- ΔP (Inches W.G.) = K x $\left(\frac{FPM}{4005}\right)^2$
- FPM = $\frac{CFM}{Area\ (sq.ft)}$
- 500 to 3000 FPM Nominal Velocity Range

DD