

## Performance Data Explanation

### Sound Power Levels vs. NC Levels

The **Nailor 35N Series** parallel fan powered terminal unit performance data is presented in two forms.

The laboratory obtained discharge and radiated sound power levels in octave bands 2 through 7 (125 through 4000 Hz) center frequency for each unit size at various flow rates and inlet static pressures is presented. This data is derived in accordance with ANSI/ASHRAE Standard 130-1996 and ARI Standard 880-98. This data is "raw" with no attenuation deductions and includes ARI Certification standard rating points.

Nailor also provides an "NC Level" table as an application aid in terminal selection, which include attenuation allowances as explained below. The suggested attenuation allowances are typical and are not representative of specific job site conditions. It is recommended that the sound power level data be used and a detailed NC calculation be performed using the procedures outlined in ARI 885-98 for accurate space sound levels.

### Explanation of NC Levels

Tabulated NC levels are based on attenuation values as outlined in ARI Standard 885-98 "Procedure for Estimating Occupied Space Sound Levels in the Application of Air Terminals and Air Outlets". ARI Standard 885-98, Appendix E provides typical sound attenuation values for air terminal discharge sound and air terminal radiated sound.

As stated in ARI-885-98, Appendix E, "These values can be used as a quick method of estimating space sound levels when a detailed evaluation is not available. The typical attenuation values are recommended for use by manufacturers to estimate application sound levels. In product catalogs, the end use environments are not known and the following factors are provided as typical attenuation values. Use of these values will allow better comparison between manufacturers and give the end user a value which will be expected to be applicable for many types of space."

Please refer to the Performance Data Caveat on page 33 of the VAV Terminal Unit catalog.

### Radiated Sound

Table E1 of Appendix E provides typical radiated sound attenuation values for three types of ceiling: Type 1 – Glass Fiber; Type 2 – Mineral Fiber; Type 3 – Solid Gypsum Board.

Since Mineral Fiber tile ceilings are the most common construction used in commercial buildings, these values have been used to tabulate Radiated NC levels.

The following table provides the calculation method for the radiated sound total attenuation values based on ARI Standard 885-98.

	Octave Band					
	2	3	4	5	6	7
Environmental Effect	2	1	0	0	0	0
Ceiling/Space Effect	16	18	20	26	31	36
<b>Total Attenuation Deduction</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>26</b>	<b>31</b>	<b>36</b>

The ceiling/space effect assumes the following conditions:

1. 5/8" (16) tile, 20 lb/ft<sup>3</sup> (313 kg/m<sup>3</sup>) density.
2. The plenum is at least 3 feet (914) deep.
3. The plenum space is either wide (over 30 feet [9 m]) or lined with insulation.
4. The ceiling has no significant penetration directly under the unit.

### Discharge Sound

Table E1 of Appendix E provides typical discharge sound attenuation values for three sizes of terminal unit.

1. Small box; Less than 300 cfm (142 l/s)  
(Discharge Duct 8" x 8" [203 x 203]).
2. Medium box; 300 – 700 cfm (142 – 330 l/s)  
(Discharge Duct 12" x 12" [305 x 305]).
3. Large box; Greater than 700 cfm (330 l/s)  
(Discharge Duct 15" x 15" [381 x 381]).

These attenuation values have been used to tabulate Discharge NC levels applied against the terminal airflow volume and not terminal unit size.

The following tables provide the calculation method for the discharge sound total attenuation values based on ARI Standard 885-98.

Small Box < 300 cfm	Octave Band					
	2	3	4	5	6	7
Environmental Effect	2	1	0	0	0	0
5 ft. (1.5 m) 1" (25) Duct Lining	2	6	12	25	29	18
Branch Power Division (1 outlet)	0	0	0	0	0	0
5 ft. (1.5 m), 8 in. dia. (200) Flex Duct	6	10	18	20	21	12
End Reflection	9	5	2	0	0	0
Space Effect	5	6	7	8	9	10
<b>Total Attenuation Deduction</b>	<b>24</b>	<b>28</b>	<b>39</b>	<b>53</b>	<b>59</b>	<b>40</b>

Medium Box 300 – 700 cfm	Octave Band					
	2	3	4	5	6	7
Environmental Effect	2	1	0	0	0	0
5 ft. (1.5 m) 1" (25) Duct Lining	2	4	10	20	20	14
Branch Power Division (2 outlets)	3	3	3	3	3	3
5 ft. (1.5 m), 8 in. dia. (200) Flex Duct	6	10	18	20	21	12
End Reflection	9	5	2	0	0	0
Space Effect	5	6	7	8	9	10
<b>Total Attenuation Deduction</b>	<b>27</b>	<b>29</b>	<b>40</b>	<b>51</b>	<b>53</b>	<b>39</b>

Large Box >700 cfm	Octave Band					
	2	3	4	5	6	7
Environmental Effect	2	1	0	0	0	0
5 ft. (1.5 m) 1" (25) Duct Lining	2	3	9	18	17	12
Branch Power Division (3 outlets)	5	5	5	5	5	5
5 ft. (1.5 m), 8 in. dia. (200) Flex Duct	6	10	18	20	21	12
End Reflection	9	5	2	0	0	0
Space Effect	5	6	7	8	9	10
<b>Total Attenuation Deduction</b>	<b>29</b>	<b>30</b>	<b>41</b>	<b>51</b>	<b>52</b>	<b>39</b>

1. Flexible duct is non-metallic with 1" (25) insulation.
2. Space effect (room size and receiver location) 2500 ft.<sup>3</sup> (69 m<sup>3</sup>) and 5 ft. (1.5 m) distance from source.

For a complete explanation of the attenuation factors and the procedures for calculating room NC levels, please refer to the acoustical engineering guidelines in the VAV Terminal Unit catalog and ARI Standard 885-98.

**Performance Data • NC Level Application Guide**

**35N Series • Parallel Flow • 100% Primary Air • Cooling Cycle**

Unit Size	Inlet Size	Airflow cfm /s	Min. inlet ΔPs "w.g. Pa	NC Levels @ Inlet pressure (ΔPs) shown									
				DISCHARGE					RADIATED				
				Min. ΔPs	0.5" w.g. (125 Pa)	1.0" w.g. (250 Pa)	1.5" w.g. (375 Pa)	2.0" w.g. (500 Pa)	Min. ΔPs	0.5" w.g. (125 Pa)	1.0" w.g. (250 Pa)	1.5" w.g. (375 Pa)	2.0" w.g. (500 Pa)
2	6	500 236	0.49 122	-	23	30	34	35	-	-	23	29	34
		400 189	0.32 80	-	20	28	33	33	-	-	20	29	32
		300 142	0.18 45	-	-	24	29	31	-	-	-	25	30
		200 94	0.08 20	-	-	21	27	30	-	-	-	22	24
		100 47	0.02 5	-	-	20	24	25	-	-	-	-	-
	8	875 413	0.30 75	-	-	29	32	35	-	-	23	28	34
		700 330	0.20 48	-	-	27	32	34	-	-	23	29	32
		525 248	0.11 27	-	-	23	29	32	-	-	20	27	30
		350 165	0.05 12	-	-	20	27	31	-	-	-	22	24
		175 83	0.01 3	-	-	22	27	27	-	-	-	-	-
	10	1375 649	0.40 99	21	24	29	34	37	-	-	23	30	34
		1100 520	0.05 12	-	20	27	33	36	-	-	22	28	30
		825 389	0.15 36	-	-	25	30	34	-	-	-	24	27
		550 260	0.06 16	-	-	22	27	30	-	-	-	21	23
		275 130	0.02 4	-	-	20	24	27	-	-	-	-	-
	12	2000 944	0.45 112	32	32	35	35	36	-	-	23	29	34
		1600 755	0.30 75	27	29	28	32	34	-	-	23	29	32
		1200 566	0.18 44	-	-	24	29	32	-	-	22	25	28
		800 378	0.08 20	-	-	20	22	25	-	-	-	22	23
		400 189	0.02 5	-	-	-	21	24	-	-	-	-	-
3	8	875 413	0.24 58	-	-	24	29	32	20	21	30	33	36
		700 330	0.02 4	-	-	23	29	30	-	20	28	33	34
		525 248	0.08 20	-	-	20	24	28	-	-	22	27	30
		350 165	0.04 9	-	-	-	22	22	-	-	-	23	28
		175 83	0.01 2	-	-	-	-	-	-	-	-	20	23
	10	1375 649	0.25 62	-	-	23	28	33	-	22	28	32	35
		1100 519	0.16 40	-	-	22	27	29	-	20	25	32	34
		825 389	0.09 22	-	-	-	24	28	-	-	23	29	31
		550 260	0.04 10	-	-	-	23	23	-	-	22	27	30
		275 130	0.01 2	-	-	-	-	-	-	-	-	-	22
	12	2000 944	0.34 83	-	-	24	29	34	-	23	29	32	36
		1600 755	0.22 55	-	-	22	29	32	-	-	25	33	35
		1200 566	0.12 30	-	-	20	25	27	-	-	25	29	33
		800 378	0.05 13	-	-	-	22	25	-	-	21	24	27
		400 189	0.01 3	-	-	-	20	21	-	-	-	20	23
	14	2625 1239	0.39 97	-	-	25	30	34	22	23	30	33	36
		2100 991	0.25 61	-	-	23	28	30	-	20	27	32	34
		1575 743	0.14 35	-	-	20	24	27	-	-	22	29	32
		1050 495	0.06 15	-	-	-	22	25	-	-	21	27	29
		525 248	0.02 4	-	-	-	-	23	-	-	-	22	24

**Performance Notes:**

1. NC levels are calculated from the published raw data and based on procedures outlined in Appendix E, ARI 885-98.
2. Discharge sound attenuation deductions are based on environmental effect, duct lining, branch power division, insulated flex duct, end reflection and space effect and are as follows:

Discharge attenuation	Octave Band					
	2	3	4	5	6	7
< 300 cfm	24	28	39	53	58	40
300 – 700 cfm	27	29	40	51	53	39
> 700 cfm	29	30	41	51	52	39

3. Radiated sound attenuation deductions are based on a mineral tile ceiling and environmental effect and are as follows:

Radiated attenuation	Octave Band					
	2	3	4	5	6	7
Total dB reduction	18	19	20	26	31	36

4. Min. inlet ΔPs is the minimum static pressure required to achieve rated airflow (damper full open).
5. Dash (-) in space denotes an NC level of less than 20.
6. For a complete explanation and details on NC calculations, refer to page 35NPDSL-1 and the engineering section of the VAV Terminal Units catalog.

## Performance Data • NC Level Application Guide

### 35N Series • Parallel Flow • 100% Primary Air • Cooling Cycle

Unit Size	Inlet Size	Airflow		Min. inlet ΔPs		NC Levels @ Inlet pressure (ΔPs) shown									
						DISCHARGE					RADIATED				
						Min. ΔPs	0.5" w.g. (125 Pa)	1.0" w.g. (250 Pa)	1.5" w.g. (375 Pa)	2.0" w.g. (500 Pa)	Min. ΔPs	0.5" w.g. (125 Pa)	1.0" w.g. (250 Pa)	1.5" w.g. (375 Pa)	2.0" w.g. (500 Pa)
5	10	1375	649	0.26	65	-	-	27	29	34	-	22	27	33	35
		1100	519	0.17	41	-	-	22	28	30	-	24	27	32	34
		825	389	0.11	28	-	-	20	25	28	-	-	23	27	29
		550	260	0.04	9	-	-	-	23	27	-	-	-	24	27
		275	130	0.01	2	-	-	-	-	20	-	-	-	-	21
	12	2000	944	0.24	59	-	-	27	32	34	20	23	29	33	36
		1600	755	0.15	37	-	-	24	30	30	-	-	28	33	33
		1200	566	0.08	20	-	-	23	27	29	-	-	24	28	31
		800	378	0.03	8	-	-	-	23	25	-	-	23	24	28
		400	189	0.01	2	-	-	-	20	23	-	-	-	21	23
	14	2625	1239	0.30	75	-	-	24	29	32	20	22	28	32	34
		2100	991	0.19	46	-	-	22	26	27	-	-	24	28	31
1575		743	0.10	25	-	-	-	23	26	-	-	22	25	28	
1050		495	0.04	10	-	-	-	21	24	-	-	-	22	25	
525		248	0.01	2	-	-	-	-	22	-	-	-	-	23	
6	12	2000	944	0.21	52	-	-	24	29	32	-	20	29	33	35
		1600	755	0.13	32	-	-	22	28	25	-	-	28	30	30
		1200	566	0.07	18	-	-	-	23	24	-	20	22	24	29
		800	378	0.04	10	-	-	-	21	22	-	-	-	21	24
		400	189	0.01	2	-	-	-	-	22	-	-	-	-	20
	14	2625	1239	0.22	53	-	-	24	28	30	22	22	28	30	36
		2100	991	0.14	34	-	-	20	24	26	-	-	27	29	30
		1575	743	0.07	18	-	-	-	22	25	-	-	20	23	27
		1050	495	0.03	8	-	-	-	20	23	-	-	-	21	23
		525	248	0.01	2	-	-	-	-	21	-	-	-	-	21
	16	3425	1616	0.25	61	24	24	27	29	33	25	27	30	32	34
		2750	1298	0.16	39	-	-	22	27	29	-	23	25	29	31
2050		967	0.08	20	-	-	20	25	28	-	-	23	27	28	
1375		649	0.04	9	-	-	-	23	26	-	22	20	22	24	
700		330	0.01	2	-	-	-	-	22	-	-	-	-	21	

#### Performance Notes:

1. NC levels are calculated from the published raw data and based on procedures outlined in Appendix E, ARI 885-98.
2. Discharge sound attenuation deductions are based on environmental effect, duct lining, branch power division, insulated flex duct, end reflection and space effect and are as follows:

Discharge attenuation	Octave Band						
	2	3	4	5	6	7	
< 300 cfm	24	28	39	53	58	40	
300 – 700 cfm	27	29	40	51	53	39	
> 700 cfm	29	30	41	51	52	39	

3. Radiated sound attenuation deductions are based on a mineral tile ceiling and environmental effect and are as follows:

Radiated attenuation	Octave Band						
	2	3	4	5	6	7	
Total dB reduction	18	19	20	26	31	36	

4. Min. inlet ΔPs is the minimum static pressure required to achieve rated airflow (damper full open).
5. Dash (-) in space denotes an NC level of less than 20.
6. For a complete explanation and details on NC calculations, refer to page 35NPDSL-1 and the engineering section of the VAV Terminal Units catalog.

**Performance Data • NC Level Application Guide  
35N Series • Parallel Flow • Fan Only • Heating Cycle**

Unit Size	Inlet Size	Airflow cfm I/s		Discharge ΔPs "w.g. Pa	NC Levels		
					Discharge	Radiated	
2	ALL	750	354	0.25	62	-	34
		600	283	0.25	62	-	30
		500	236	0.25	62	-	27
		400	189	0.25	62	-	23
		300	142	0.25	62	-	20
3	ALL	1000	472	0.25	62	-	37
		850	401	0.25	62	-	36
		700	330	0.25	62	-	33
		550	260	0.25	62	-	30
5	ALL	1850	873	0.25	62	-	42
		1600	755	0.25	62	-	40
		1400	661	0.25	62	-	38
		1200	566	0.25	62	-	35
		1000	472	0.25	62	-	32
		800	378	0.25	62	-	29
6	ALL	2100	991	0.25	62	28	42
		1900	897	0.25	62	25	40
		1700	802	0.25	62	24	38
		1500	708	0.25	62	-	37
		1200	566	0.25	62	-	35

**Performance Notes:**

1. NC levels are calculated from the published raw data and based on procedures outlined in Appendix E, ARI 885-98.
2. Discharge sound attenuation deductions are based on environmental effect, duct lining, branch power division, insulated flex duct, end reflection and space effect and are as follows:

Discharge attenuation	Octave Band						
	2	3	4	5	6	7	
< 300 cfm	24	28	39	53	58	40	
300 – 700 cfm	27	29	40	51	53	39	
> 700 cfm	29	30	41	51	52	39	

3. Radiated sound attenuation deductions are based on a mineral tile ceiling and environmental effect and are as follows:

Radiated attenuation	Octave Band						
	2	3	4	5	6	7	
Total dB reduction	18	19	20	26	31	36	

4. Min. inlet ΔPs is the minimum static pressure required to achieve rated airflow (damper full open).

5. Dash (–) in space denotes an NC level of less than 20.
6. Discharge (external) static pressure is 0.25" w.g. (63 Pa) in all cases.
7. For a complete explanation and details on NC calculations, refer to page 35NPDSL-1 and the engineering section of the VAV Terminal Units catalog.

## Performance Data • Parallel Flow (Variable Volume)

### 35N Series • Discharge Sound Power Levels • 100% Primary Air • Cooling Cycle

Unit Size	Inlet Size	Airflow cfm /s	Min. inlet ΔPs "w.g. Pa	Primary Air Only – Sound Power Octave Bands @ Inlet pressure shown																																																													
				Minimum ΔPs							0.5" wg (125Pa) ΔPs							1.0" wg (250Pa) ΔPs							1.5" wg (375Pa) ΔPs							2.0" wg (500Pa) ΔPs																																	
				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	6	7																																
2	6	500 236	0.49 122	54 55 51 47 44 46	54 56 52 48 45 47	68 64 59 54 50 53	72 69 63 57 53 57	74 73 66 58 55 60	8	875 413	0.30 75	51 52 49 48 45 45	57 58 53 52 49 49	66 65 60 57 53 55	72 69 64 59 56 60	74 74 68 61 58 63	10	1375 649	0.40 99	55 56 54 50 50 49	57 59 56 51 51 51	64 65 63 55 55 57	70 71 68 59 58 62	71 74 70 60 59 64	12	2000 944	0.45 112	57 57 54 52 50 51	57 57 54 52 50 51	63 65 62 57 56 58	69 71 66 59 59 62	71 74 70 62 61 65	3	8	875 413	0.24 58	54 53 50 48 46 46	59 57 53 52 49 50	67 66 61 57 55 57	71 70 64 59 57 61	70 72 66 59 58 63	10	1375 649	0.25 62	53 53 53 48 47 46	57 59 58 51 51 50	63 65 61 54 55 56	66 69 65 57 58 61	67 73 68 59 59 63	12	2000 944	0.34 83	57 57 58 51 50 50	59 60 59 52 52 53	65 67 64 55 57 59	68 70 67 58 59 63	70 74 70 60 61 66	14	2625 1239	0.39 97	61 62 60 55 52 50	62 62 61 55 54 53	67 67 64 58 58 60	69 71 66 60 60 63	70 74 70 62 62 66

#### ARI Certification Rating Points

Unit Size	Inlet Size	Pri. cfm	Min. ΔPs	Sound Power @ 1.5" w.g. ΔPs						
				2	3	4	5	6	7	
2	6	400	.32	71	69	62	55	53	56	
	8	700	.20	69	70	64	56	56	59	
	10	1100	.24	67	69	66	57	57	61	
	12	1600	.30	67	70	65	58	58	61	
3	8	700	.15	68	69	62	56	56	59	
	10	1100	.16	64	68	63	55	57	59	
	12	1600	.22	66	70	65	56	59	62	
	14	2100	.25	65	69	64	57	59	62	

#### Performance Notes:

1. Sound levels are primary air only with fan turned off – cooling cycle.
2. Discharge sound power is the noise emitted from the unit discharge into the downstream duct.
3. Sound power levels are in decibels, dB re 10<sup>-12</sup> watts.
4. All sound data listed by octave bands is raw data without any corrections for room absorption or duct attenuation.  
Dash (-) in space indicates sound power level is less than 20 dB.

5. Min. inlet ΔPs is the minimum operating pressure of the primary air valve section.

6. Data derived from independent tests conducted in accordance with ANSI/ASHRAE Std 130-1996 and ARI Standard 880-98.



A Participating Corporation in the ARI 880 Certification program.

Performance Data • Parallel Flow (Variable Volume)

35N Series • Discharge Sound Power Levels • 100% Primary Air • Cooling Cycle

Unit Size	Inlet Size	Airflow cfm /s	Min. inlet ΔPs "w.g. Pa	Primary Air Only – Sound Power Octave Bands @ Inlet pressure shown																																																																																																																																																																																																																					
				Minimum ΔPs							0.5" wg (125Pa) ΔPs							1.0" wg (250Pa) ΔPs							1.5" wg (375Pa) ΔPs							2.0" wg (500Pa) ΔPs																																																																																																																																																																																									
				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	6	7																																																																																																																																																																																								
5	10	1375 649	0.26 65	55 54 55 50 49 49	61 60 59 52 52 53	67 68 64 56 56 59	69 71 66 57 58 61	68 74 70 59 60 64	1100 519	0.17 41	49 48 48 43 41 39	58 57 55 48 49 49	65 65 61 52 54 56	67 69 65 56 57 61	68 71 68 57 59 63	825 389	0.11 28	46 42 42 36 34 29	57 55 52 45 47 46	62 63 58 50 53 54	63 67 62 53 56 59	65 69 66 56 58 62	550 260	0.04 9	- 36 32 27 - -	54 52 48 43 45 43	59 61 57 49 52 53	59 64 61 51 54 57	62 67 65 54 57 61	275 130	0.01 2	- - - - - -	47 48 46 40 41 40	49 53 53 45 48 48	51 57 57 50 52 54	52 59 60 53 54 57	12	2000 944	0.24 59	55 55 55 49 49 48	59 60 58 52 53 53	66 68 65 56 58 60	67 72 67 59 60 63	68 74 70 61 61 66	1600 755	0.15 37	51 50 49 44 43 40	58 58 56 50 51 50	64 67 62 54 56 58	66 71 66 57 59 63	67 71 68 59 61 65	1200 566	0.08 20	45 43 41 37 34 29	55 55 52 47 49 46	61 65 61 52 55 57	62 68 64 55 57 60	64 70 68 58 60 54	800 378	0.03 8	- 35 32 28 - -	51 52 49 44 46 44	57 62 59 50 53 54	58 64 63 53 56 59	60 65 64 56 58 62	400 189	0.01 2	- - 29 22 - -	47 51 48 43 41 43	51 56 55 48 51 51	53 58 59 52 54 56	60 60 61 55 56 59	14	2625 1239	0.30 75	59 58 56 51 49 50	61 60 58 53 52 52	67 66 62 56 56 59	67 70 66 58 59 63	69 72 69 61 61 65	2100 991	0.19 46	54 51 50 45 43 41	59 57 55 49 50 51	64 64 58 54 55 57	65 67 64 57 58 62	67 68 66 59 59 63	1575 743	0.10 25	47 44 42 37 34 30	54 51 49 45 46 44	60 60 58 51 53 55	61 63 62 55 56 59	64 65 64 58 58 62	1050 495	0.04 10	- 35 31 27 20 -	49 50 48 43 45 44	56 56 55 49 51 53	57 59 58 52 54 57	59 61 61 56 56 60	525 248	0.01 2	- - 23 - - -	44 45 44 40 41 40	49 54 53 48 50 52	51 55 56 51 52 56	52 57 58 53 54 58	6	12	2000 944	0.21 52	59 55 54 49 49 47	61 60 59 52 53 52	66 66 62 55 56 57	68 70 66 58 59 61	69 72 69 60 61 64	1600 755	0.13 32	53 49 49 43 43 39	59 58 56 49 51 50	63 64 60 53 55 56	66 69 65 56 59 61	67 69 67 58 60 63	1200 566	0.07 18	46 43 41 36 34 30	57 54 51 46 48 45	60 62 58 51 54 55	62 65 62 54 57 59	63 64 64 56 58 61	800 378	0.04 10	- 34 31 28 22 -	52 50 48 44 45 42	54 57 56 49 52 44	57 59 59 52 55 57	59 61 62 55 57 60	400 189	0.01 2	- 32 28 23 - -	45 46 46 41 43 40	48 51 53 47 49 19	51 55 57 51 53 54	52 56 59 54 55 58	14	2625 1239	0.22 53	61 56 55 50 49 48	63 59 57 53 52 52	66 66 62 56 56 58	67 69 65 58 58 61	70 71 67 60 60 64	2100 991	0.14 34	56 50 49 44 43 39	60 55 53 48 49 48	63 63 60 54 55 56	65 66 63 56 58 60	66 67 65 59 59 62	1575 743	0.07 18	49 43 41 36 33 29	55 52 49 45 47 44	59 59 56 51 53 53	60 62 60 54 56 58	63 63 62 57 58 61	1050 495	0.03 8	- 34 29 25 - -	50 49 46 43 44 41	52 54 53 48 51 51	56 56 57 52 54 56	58 59 59 56 56 59	525 248	0.01 2	- - - - - -	44 43 44 40 40 38	48 49 50 47 48 49	51 53 54 52 52 54	52 55 57 55 54 57	16	3425 1616	0.25 61	69 66 63 60 57 55	70 66 64 60 58 57	70 68 65 61 60 60	72 70 67 62 62 64	73 73 70 64 63 67	2750 1298	0.16 39	64 60 57 53 51 47	64 61 58 54 54 52	67 64 61 57 58 58	69 69 65 60 60 63	69 69 67 61 62 65	2050 967	0.08 20	57 53 48 44 42 37	59 57 54 50 50 48	62 61 58 53 56 56	63 64 62 57 59 61	66 65 64 59 60 64	1375 649	0.04 9	49 41 36 33 30 27	51 48 46 44 46 41	57 56 55 51 54 54	58 60 59 55 57 59	60 62 62 58 59 62	700 330	0.01 2	- - 27 23 - -	47 47 46 44 45 42	49 52 52 49 52 52	53 56 57 54 55 58	53 58 59 57 57 62
		6	12	2000 944	0.21 52	59 55 54 49 49 47	61 60 59 52 53 52	66 66 62 55 56 57	68 70 66 58 59 61	69 72 69 60 61 64	1600 755	0.13 32	53 49 49 43 43 39	59 58 56 49 51 50	63 64 60 53 55 56	66 69 65 56 59 61	67 69 67 58 60 63	1200 566	0.07 18	46 43 41 36 34 30	57 54 51 46 48 45	60 62 58 51 54 55	62 65 62 54 57 59	63 64 64 56 58 61	800 378	0.04 10	- 34 31 28 22 -	52 50 48 44 45 42	54 57 56 49 52 44	57 59 59 52 55 57	59 61 62 55 57 60	400 189	0.01 2	- 32 28 23 - -	45 46 46 41 43 40	48 51 53 47 49 19		51 55 57 51 53 54	52 56 59 54 55 58	14	2625 1239	0.22 53	61 56 55 50 49 48	63 59 57 53 52 52	66 66 62 56 56 58	67 69 65 58 58 61	70 71 67 60 60 64	2100 991	0.14 34	56 50 49 44 43 39	60 55 53 48 49 48	63 63 60 54 55 56	65 66 63 56 58 60	66 67 65 59 59 62	1575 743	0.07 18	49 43 41 36 33 29	55 52 49 45 47 44	59 59 56 51 53 53	60 62 60 54 56 58	63 63 62 57 58 61	1050 495	0.03 8	- 34 29 25 - -	50 49 46 43 44 41	52 54 53 48 51 51	56 56 57 52 54 56	58 59 59 56 56 59	525 248	0.01 2	- - - - - -	44 43 44 40 40 38		48 49 50 47 48 49	51 53 54 52 52 54	52 55 57 55 54 57	16	3425 1616	0.25 61	69 66 63 60 57 55	70 66 64 60 58 57	70 68 65 61 60 60	72 70 67 62 62 64	73 73 70 64 63 67	2750 1298	0.16 39	64 60 57 53 51 47	64 61 58 54 54 52	67 64 61 57 58 58	69 69 65 60 60 63	69 69 67 61 62 65	2050 967	0.08 20	57 53 48 44 42 37	59 57 54 50 50 48	62 61 58 53 56 56	63 64 62 57 59 61	66 65 64 59 60 64	1375 649	0.04 9	49 41 36 33 30 27	51 48 46 44 46 41	57 56 55 51 54 54	58 60 59 55 57 59	60 62 62 58 59 62	700 330	0.01 2	- - 27 23 - -			47 47 46 44 45 42	49 52 52 49 52 52	53 56 57 54 55 58	53 58 59 57 57 62																																																																																																							
				16	3425 1616	0.25 61	69 66 63 60 57 55	70 66 64 60 58 57	70 68 65 61 60 60	72 70 67 62 62 64	73 73 70 64 63 67	2750 1298	0.16 39	64 60 57 53 51 47	64 61 58 54 54 52	67 64 61 57 58 58	69 69 65 60 60 63	69 69 67 61 62 65	2050 967	0.08 20	57 53 48 44 42 37	59 57 54 50 50 48	62 61 58 53 56 56	63 64 62 57 59 61	66 65 64 59 60 64	1375 649	0.04 9	49 41 36 33 30 27	51 48 46 44 46 41	57 56 55 51 54 54	58 60 59 55 57 59	60 62 62 58 59 62	700 330	0.01 2	- - 27 23 - -	47 47 46 44 45 42		49 52 52 49 52 52	53 56 57 54 55 58		53 58 59 57 57 62																																																																																																																																																																																

ARI Certification Rating Points

Unit Size	Inlet Size	Pri. cfm	Min. ΔPs	Sound Power @ 1.5" w.g. ΔPs						
				2	3	4	5	6	7	
5	10	1100	.17	67	69	65	56	57	61	
	12	1600	.15	66	71	66	57	59	63	
	14	2100	.19	65	67	64	57	58	62	
6	12	1600	.13	66	69	65	56	59	61	
	14	2100	.14	65	66	63	56	58	60	
	16	2750	.16	69	69	65	60	60	63	

Performance Notes:

1. Sound levels are primary air only with fan turned off – cooling cycle.
  2. Discharge sound power is the noise emitted from the unit discharge into the downstream duct.
  3. Sound power levels are in decibels, dB re 10<sup>-12</sup> watts.
  4. All sound data listed by octave bands is raw data without any corrections for room absorption or duct attenuation.
- Dash (-) in space indicates sound power level is less than 20 dB.

5. Min. inlet ΔPs is the minimum operating pressure of the primary air valve section.

6. Data derived from independent tests conducted in accordance with ANSI/ASHRAE Std 130-1996 and ARI Standard 880-98.



A Participating Corporation in the ARI 880 Certification program.

## Performance Data • Parallel Flow (Variable Volume)

### 35N Series • Radiated Sound Power Levels • 100% Primary Air • Cooling Cycle

Unit Size	Inlet Size	Airflow cfm l/s	Min. inlet ΔPs "w.g. Pa	Primary Air Only – Sound Power Octave Bands @ Inlet pressure shown																																		
				Minimum ΔPs							0.5" wg (125Pa) ΔPs							1.0" wg (250Pa) ΔPs							1.5" wg (375Pa) ΔPs							2.0" wg (500Pa) ΔPs						
				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	6	7					
2	6	500 236	0.49	122	54	49	44	39	36	33	60	52	49	39	37	35	66	58	53	43	40	39	69	62	57	45	42	42	70	64	59	48	45	44				
		400 189	0.32	80	48	41	37	33	30	26	58	49	45	36	34	31	64	55	51	39	38	36	68	60	55	43	41	40	68	62	58	46	43	43				
		300 142	0.18	45	44	35	31	28	23	-	55	45	41	32	30	26	61	52	49	36	35	33	64	58	54	41	39	38	64	60	56	43	41	41				
		200 94	0.08	20	-	-	-	-	-	-	52	44	40	30	30	25	57	50	47	34	34	31	56	53	52	38	37	35	54	55	55	41	39	39				
		100 47	0.02	5	-	-	-	-	-	-	46	39	36	38	26	-	47	45	46	33	32	29	46	47	50	37	35	33	46	48	51	39	37	35				
	8	875 413	0.30	75	50	46	41	36	32	29	55	50	45	40	35	32	65	57	52	42	39	38	67	61	56	45	43	42	67	64	59	45	44	44				
		700 330	0.20	48	49	43	37	32	29	24	54	49	43	36	33	29	62	57	51	39	38	36	65	61	57	42	41	41	66	63	59	44	43	43				
		525 248	0.11	27	-	36	31	27	-	-	53	48	41	33	32	29	58	54	49	36	37	35	61	58	55	39	39	39	61	61	57	42	41	41				
		350 165	0.05	12	-	35	28	24	-	-	51	45	39	30	30	26	53	51	46	33	35	33	55	55	52	37	38	37	53	58	56	40	40	40				
		175 83	0.01	3	-	-	-	-	-	-	45	41	36	28	27	22	46	50	48	33	33	31	45	49	52	36	36	33	45	48	53	39	38	36				
	10	1375 649	0.40	99	56	51	47	39	37	36	57	53	50	41	39	38	64	58	54	43	42	43	67	63	58	46	44	47	69	66	61	48	46	49				
		1100 519	0.24	60	51	46	42	34	32	30	54	50	46	36	35	33	61	56	52	40	40	40	64	62	56	43	43	45	66	64	61	46	45	48				
825 389		0.15	36	46	39	34	28	26	21	53	47	43	33	33	32	59	55	51	37	38	39	59	59	55	41	41	44	61	61	59	44	44	48					
550 260		0.06	16	-	34	26	-	-	-	51	45	39	30	31	29	53	53	49	35	37	37	54	53	52	39	40	42	56	56	55	42	42	46					
275 130		0.02	4	-	-	-	-	-	-	45	42	38	28	29	25	47	48	46	34	35	35	47	49	50	37	38	39	47	50	52	41	41	42					
12	2000 944	0.45	112	62	59	57	49	42	38	62	59	57	49	42	38	68	63	60	49	43	40	69	64	60	49	45	44	69	66	61	50	47	47					
	1600 755	0.30	75	59	55	52	43	35	30	60	57	54	43	36	31	64	58	53	43	41	38	65	61	56	46	44	43	66	63	59	49	47	46					
	1200 566	0.18	44	52	48	45	35	27	-	55	49	44	34	32	26	59	54	50	40	39	35	60	58	54	43	43	42	62	60	57	45	44	45					
	800 378	0.08	20	44	38	33	22	-	-	50	44	38	32	32	26	52	49	46	36	38	35	54	50	48	38	40	41	56	53	51	42	42	46					
	400 189	0.02	5	42	34	26	-	-	-	41	37	34	28	30	21	46	44	44	34	37	34	47	46	47	37	39	41	48	48	50	40	41	48					
3	8	875 413	0.24	58	49	49	46	42	40	38	55	51	47	43	40	38	63	60	55	47	45	45	65	62	57	48	46	47	67	65	60	50	48	50				
		700 330	0.15	37	48	43	41	37	34	31	53	49	46	41	38	36	62	58	52	45	43	42	65	62	57	48	46	47	65	63	59	49	47	49				
		525 248	0.08	20	-	35	32	27	-	-	50	46	41	35	33	30	56	53	48	39	39	38	57	56	52	42	41	42	58	59	55	45	43	46				
		350 165	0.04	9	-	34	23	-	-	-	47	42	36	31	29	27	52	50	45	37	36	36	52	53	49	40	39	40	53	56	53	44	42	44				
		175 83	0.01	2	-	-	-	-	-	-	45	40	36	29	28	25	46	46	45	35	33	33	46	47	46	36	36	36	47	49	49	41	39	41				
	10	1375 649	0.25	62	55	47	44	38	35	31	55	50	48	41	38	36	64	57	53	44	42	42	66	61	56	47	44	45	68	64	59	48	46	48				
		1100 519	0.16	40	48	43	40	35	31	27	55	49	46	39	36	34	61	56	51	42	40	40	64	61	55	45	43	45	64	63	58	47	45	47				
		825 389	0.09	22	45	37	34	29	25	-	53	48	42	35	34	31	58	54	49	39	39	38	60	59	54	42	42	43	59	60	56	45	44	46				
		550 260	0.04	10	-	34	25	-	-	-	49	44	36	31	31	29	54	53	47	37	37	37	56	56	52	41	41	42	57	58	55	44	43	45				
		275 130	0.01	2	-	-	-	-	-	-	45	41	37	29	30	28	46	44	42	34	35	34	46	46	45	37	38	38	47	50	48	41	41	43				
	12	2000 944	0.34	83	53	49	45	40	38	34	54	53	49	43	40	38	60	58	54	45	44	44	64	62	57	48	48	48	65	65	60	50	50	51				
		1600 755	0.22	55	48	44	41	35	32	27	51	49	44	38	36	32	59	56	51	43	44	42	62	62	56	47	47	48	63	64	59	48	48	49				
1200 566		0.12	30	42	37	33	27	21	-	52	48	43	37	37	33	56	56	49	41	42	41	58	59	54	44	45	45	59	61	58	47	47	48					
800 378		0.05	13	-	-	23	-	-	-	48	44	37	33	33	28	51	50	47	38	40	38	53	53	50	41	43	43	52	54	52	44	45	46					
400 189		0.01	3	-	-	-	-	-	-	43	40	35	30	31	27	45	45	43	36	38	37	47	47	46	40	41	42	50	50	49	43	44	45					
14	2625 1239	0.39	97	55	51	48	42	38	34	55	52	49	44	39	36	63	59	55	46	44	44	64	62	57	48	47	48	66	66	61	51	49	51					
	2100 991	0.25	61	51	46	43	36	32	27	54	50	46	38	37	33	60	58	52	43	43	43	62	61	56	46	46	47	64	62	59	48	48	50					
	1575 743	0.14	35	46	40	35	28	22	-	52	46	42	35	35	31	56	53	48	40	41	40	60	58	54	44	45	46	61	59	57	47	48	47					
	1050 496	0.06	15	-	-	22	-	-	-	49	43	39	33	34	30	52	51	47	39	40	40	55	54	52	43	44	45	57	55	54	45	46	48					
	525 248	0.02	4	-	-	-	-	-	-	-	40	38	32	34	34	47	46	44	37	39	40	50	50	49	41	43	44	49	51	50	43	45	45					

#### ARI Certification Rating Points

Unit Size	Inlet Size	Pri. cfm	Min. ΔPs	Sound Power @ 1.5" w.g. ΔPs						
				2	3	4	5	6	7	
2	6	400	.32	68	60	55	43	41	40	
	8	700	.20	65	61	57	42	41	41	
	10	1100	.24	64	62	56	43	43	45	
	12	1600	.30	65	61	56	46	44	43	
3	8	700	.15	65	62	57	48	46	47	
	10	1100	.16	64	61	55	45	43	45	
	12	1600	.22	62	62	56	47	47	48	
	14	2100	.25	62	61	56	46	46	47	

#### Performance Notes:

1. Sound levels are primary air only with fan turned off – cooling cycle.
  2. Radiated sound power is the breakout noise transmitted through the unit casing walls.
  3. Sound power levels are in decibels, dB re 10<sup>-12</sup> watts.
  4. All sound data listed by octave bands is raw data without any corrections for room absorption or duct attenuation.
- Dash (-) in space indicates sound power level is less than 20 dB.

5. Min. inlet ΔPs is the minimum operating pressure of the primary air valve section.

6. Data derived from independent tests conducted in accordance with ANSI/ASHRAE Std 130-1996 and ARI Standard 880-98.



A Participating Corporation in the ARI 880 Certification program.

**Performance Data • Parallel Flow (Variable Volume)**

**35N Series • Radiated Sound Power Levels • 100% Primary Air • Cooling Cycle**

Unit Size	Inlet Size	Airflow cfm /s	Min. inlet ΔPs "w.g. Pa	Primary Air Only – Sound Power Octave Bands @ Inlet pressure shown																																		
				Minimum ΔPs							0.5" wg (125Pa) ΔPs							1.0" wg (250Pa) ΔPs							1.5" wg (375Pa) ΔPs							2.0" wg (500Pa) ΔPs						
				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	6	7					
5	10	1375 649	0.26	65	49	43	42	39	38	34	55	52	48	42	41	40	62	57	51	44	43	43	65	62	55	46	45	48	63	64	58	48	47	49				
		1100 519	0.17	41	45	40	39	36	34	29	59	54	50	43	39	37	60	57	50	42	42	42	61	61	54	44	44	47	63	63	57	46	46	49				
		825 389	0.11	28	45	36	33	30	26	-	51	47	39	33	33	31	56	54	47	39	40	40	58	57	51	41	42	44	57	59	54	44	43	46				
		550 260	0.04	9	-	33	28	21	-	-	48	44	37	31	31	30	52	50	44	36	37	37	56	56	50	40	41	43	55	56	52	42	42	45				
	275 130	0.01	2	-	-	-	-	-	-	-	40	35	28	29	28	-	43	42	33	35	35	-	44	45	37	38	39	45	47	47	40	41	42					
	12	2000 944	0.24	59	53	49	46	40	37	34	56	53	49	43	40	38	61	59	54	46	44	44	63	62	57	48	46	47	65	65	59	49	48	49				
		1600 755	0.15	37	48	43	40	34	31	27	52	48	44	37	36	33	60	58	51	43	43	42	62	62	56	46	46	47	63	62	58	48	47	49				
		1200 566	0.08	20	44	37	33	28	22	-	53	48	43	36	35	32	57	55	48	40	41	39	58	58	53	43	44	44	60	59	57	46	46	47				
		800 378	0.03	8	-	-	27	-	-	-	48	44	37	32	32	28	53	54	49	39	40	39	55	53	50	41	42	42	55	55	53	44	44	46				
	400 189	0.01	2	-	-	21	-	-	-	44	42	35	30	31	28	52	47	43	35	37	35	51	48	47	39	40	39	50	50	49	42	43	43					
	14	2625 1239	0.30	75	55	49	46	40	38	36	57	52	48	42	39	38	62	58	52	45	44	44	63	61	55	47	46	47	65	63	58	49	48	50				
		2100 991	0.19	46	50	44	40	34	32	28	55	49	45	38	37	35	59	56	50	42	41	41	61	58	53	45	45	46	63	59	56	47	46	48				
1575 743		0.10	25	45	39	33	27	23	-	52	47	41	34	35	33	56	53	48	40	41	42	58	55	51	43	43	45	60	57	53	46	46	48					
1050 495		0.04	10	-	38	24	-	-	-	49	44	38	32	33	31	51	48	44	37	39	39	54	52	48	41	43	44	56	54	51	44	45	47					
525 248	0.01	2	-	-	-	-	-	-	-	40	34	29	31	29	47	46	42	36	38	39	48	48	45	39	41	43	51	50	49	42	45	47						
6	12	2000 944	0.21	52	54	47	44	39	38	34	58	51	46	41	40	37	62	59	51	44	44	43	64	62	55	47	46	46	65	64	56	48	47	49				
		1600 755	0.13	32	50	42	39	34	32	28	56	49	43	37	37	34	62	58	51	43	43	41	62	60	53	44	45	45	63	60	55	46	47	48				
		1200 566	0.07	18	49	38	34	29	26	-	57	50	46	38	34	31	57	53	46	39	41	39	59	55	50	42	43	43	62	57	54	45	46	47				
		800 378	0.04	10	44	36	29	-	-	-	49	44	36	32	33	30	53	48	44	37	39	38	55	49	47	40	42	41	57	52	50	43	44	45				
	400 189	0.01	2	-	-	28	-	-	-	44	39	34	29	30	28	48	43	41	35	36	35	49	45	44	38	40	39	48	46	46	41	43	43					
	14	2625 1239	0.22	53	54	49	48	43	40	39	56	51	48	43	41	39	61	58	53	46	45	46	62	60	55	48	47	48	67	64	60	63	50	51				
		2100 991	0.14	34	51	44	43	36	32	30	54	48	44	39	37	35	60	56	52	44	43	44	61	58	54	46	46	48	63	58	55	47	48	50				
		1575 743	0.07	18	45	39	35	28	25	-	52	46	41	35	35	34	55	52	46	39	41	41	56	54	49	42	44	46	59	55	52	45	46	48				
		1050 495	0.03	8	-	33	29	24	-	-	48	42	37	32	33	31	52	48	45	39	41	42	54	49	47	41	43	45	54	51	49	44	45	47				
	525 248	0.01	2	-	-	29	-	-	-	44	38	36	31	33	32	45	42	40	35	37	38	49	45	44	39	41	42	50	48	47	43	44	46					
	16	3425 1616	0.25	61	62	53	49	44	41	38	63	54	50	45	42	39	66	59	54	48	47	46	66	61	56	49	49	49	67	64	58	51	48	52				
		2750 1298	0.16	39	56	49	45	38	34	31	60	52	47	41	40	36	62	55	50	43	44	43	63	59	54	47	47	48	64	60	56	48	48	50				
2050 967		0.08	20	51	41	37	30	26	-	55	47	42	36	37	33	58	53	49	41	43	42	60	55	52	44	46	46	62	57	53	46	48	50					
1375 649		0.04	9	44	35	29	-	-	-	56	50	48	41	37	32	53	49	46	39	42	41	56	51	48	42	44	45	57	53	50	45	47	48					
700 330	0.01	2	45	34	28	-	-	-	47	39	35	31	33	29	48	44	41	37	40	40	50	48	45	41	43	46	52	49	47	43	45	49						

**ARI Certification Rating Points**

Unit Size	Inlet Size	Pri. cfm	Min. ΔPs	Sound Power @ 1.5" w.g. ΔPs						
				2	3	4	5	6	7	
5	10	1100	.17	61	61	54	44	44	47	
	12	1600	.15	62	62	56	46	46	47	
	14	2100	.19	61	58	53	45	45	46	
6	12	1600	.13	62	60	53	44	45	45	
	14	2100	.14	61	58	54	46	46	48	
	16	2750	.16	63	59	54	47	47	48	

**Performance Notes:**

1. Sound levels are primary air only with fan turned off – cooling cycle.
  2. Radiated sound power is the breakout noise transmitted through the unit casing walls.
  3. Sound power levels are in decibels, dB re 10<sup>-12</sup> watts.
  4. All sound data listed by octave bands is raw data without any corrections for room absorption or duct attenuation.
- Dash (-) in space indicates sound power level is less than 20 dB.

5. Min. inlet ΔPs is the minimum operating pressure of the primary air valve section.

6. Data derived from independent tests conducted in accordance with ANSI/ASHRAE Std 130-1996 and ARI Standard 880-98.



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## Performance Data • Parallel Flow (Variable Volume)

### 35N Series • Sound Power Levels • Fan Only • Heating Cycle

Unit Size	Unit Size	Airflow cfm l/s		Discharge $\Delta$ Ps "w.g. Pa		Discharge							Radiated						
						Sound Power Octave Bands							Sound Power Octave Bands						
						2	3	4	5	6	7	2	3	4	5	6	7		
2	ALL	750	354	0.25	62	62	59	61	57	54	53	60	58	59	54	48	47		
		600	283	0.25	62	60	56	57	58	53	48	56	54	55	50	43	41		
		500	236	0.25	62	56	47	51	46	43	40	53	52	52	47	39	36		
		400	189	0.25	62	54	44	47	42	38	33	50	49	49	42	34	30		
		300	142	0.25	62	49	39	40	35	31	26	48	45	46	39	30	26		
3	ALL	1000	472	0.25	62	63	61	63	60	55	53	65	62	62	60	57	54		
		850	401	0.25	62	61	58	61	57	53	50	64	61	61	58	54	52		
		700	330	0.25	62	56	53	56	51	46	42	61	58	58	54	50	46		
		550	260	0.25	62	55	51	54	49	44	39	58	55	55	50	45	40		
5	ALL	1850	873	0.25	62	64	64	65	65	62	62	74	68	66	63	60	59		
		1600	755	0.25	62	62	62	63	63	60	59	72	66	65	60	57	56		
		1400	661	0.25	62	60	59	61	60	56	55	70	64	63	58	54	53		
		1200	566	0.25	62	57	57	58	56	53	51	67	61	60	56	51	49		
		1000	472	0.25	62	54	52	54	52	48	45	64	57	57	52	47	44		
800	378	0.25	62	54	52	54	52	48	45	61	55	54	48	43	39				
6	ALL	2100	991	0.25	62	68	69	68	68	64	64	73	67	66	64	62	60		
		1900	897	0.25	62	66	67	66	66	62	61	72	66	65	63	60	59		
		1700	802	0.25	62	64	66	65	64	60	60	70	64	63	61	58	57		
		1500	708	0.25	62	61	62	62	61	57	55	67	62	62	58	55	53		
		1200	566	0.25	62	59	58	60	57	54	51	66	58	60	56	52	49		

#### ARI Certification Rating Points

Unit Size	Fan cfm	Fan Watts	Discharge $\Delta$ Ps "w.g.	Discharge Octave Band							Radiated Octave Band						
				2	3	4	5	6	7	2	3	4	5	6	7		
2	600	254	.25	60	56	57	58	53	48	56	54	55	50	43	41		
3	1000	385	.25	63	61	63	60	55	53	65	62	62	60	57	54		
5	1850	995	.25	64	64	65	65	62	62	74	68	66	63	60	59		
6	2100	814	.25	68	69	68	68	64	64	73	67	66	64	62	60		

#### Performance Notes:

1. Sound levels are 100% recirculated air only with fan on – heating cycle.
2. Discharge (external) static pressure is the difference ( $\Delta$ Ps) in static pressure from terminal discharge to the room.
3. Radiated sound power is the break-out noise transmitted through the unit casing walls.
4. Discharge sound power is the noise emitted from the unit discharge into the downstream duct.
5. Sound power levels are in decibels, dB re  $10^{-12}$  watts.
6. All sound data listed by octave bands is raw data without any corrections for room absorption or duct attenuation.
7. Data derived from independent tests conducted in accordance with ANSI/ASHRAE Std 130-1996 and ARI Standard 880-98.



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