

# Performance Data

## FDV with Low Profile Construction (FDVLP) - AHRI Certification Rating Points

Unit Size	(1) Primary Airflow		(2) Fan Airflow		(3) Power Input	(4) Minimum Operating Pressure		Discharge Sound Power Level, dB											
								(5) Fan only					(6) 100% Primary air Valve Flow at 1.5 in. w.g. [375 Pa]						
	L/s	cfm	L/s	cfm	Watts	Pa	in. Water	Octave Band					Octave Band						
							2	3	4	5	6	7	2	3	4	5	6	7	
<b>2006</b>	189	400	236	500	240	17	0.07	71	64	58	58	50	47	71	68	57	54	47	43
<b>2008</b>	330	700	236	500	240	12	0.05	71	64	58	58	50	47	75	70	62	59	52	47
<b>30 14x8</b>	732	1550	425	900	450	57	0.23	76	65	64	64	57	54	76	70	65	62	55	48
<b>40 14x10</b>	908	1925	661	1400	650	37	0.15	79	69	70	71	66	63	77	71	66	63	56	51

Unit Size	(1) Primary Airflow		(2) Fan Airflow		(3) Power Input	(4) Minimum Operating Pressure		Radiated Sound Power Level, dB											
								(5) Fan only					(6) 100% Primary air Valve Flow at 1.5 in. w.g. [375 Pa]						
	L/s	cfm	L/s	cfm	Watts	Pa	in. Water	Octave Band					Octave Band						
							2	3	4	5	6	7	2	3	4	5	6	7	
<b>2006</b>	189	400	236	500	240	17	0.07	65	60	63	62	55	45	60	52	49	44	37	31
<b>2008</b>	330	700	236	500	240	12	0.05	65	60	63	62	55	45	62	55	51	46	39	33
<b>30 14x8</b>	732	1550	425	900	450	57	0.23	71	67	65	64	58	49	69	64	60	56	48	42
<b>40 14x10</b>	908	1925	661	1400	650	37	0.15	71	69	69	65	53	49	69	63	58	53	46	39

### Performance Notes:

1. Primary cfm is the standard rated air volume for the inlet size listed.
2. Fan cfm is maximum rated fan volume at 0.25 in. downstream static pressure.
3. Input watts is the maximum electrical power input at the maximum rated fan volume.
4. Min. operating pressure inlet is the minimum operating pressure requirement of the primary air valve at the rated primary cfm.
5. Fan only sound power levels are at the maximum rated fan volume.
6. 100% primary sound power levels at rated primary cfm with fan off.
7. Sound power levels include duct end corrections per AHRI Standard 880-2011. Please refer to the Engineering Guide for more details.

# Performance Data

## FDV with Low Profile Construction (FDVLP) - Typical Selection Guide

### Cooling Cycle - 100% Primary

Unit Size	Airflow		Min. ΔPs Across Basic Unit		Min. ΔPt. Basic Unit		Discharge NC Basic Unit ΔPs Across Unit			Radiated NC Basic Unit ΔPs Across Unit		
							0.5 in. w.g.	1.0 in. w.g.	1.5 in. w.g.	0.5 in. w.g.	1.0 in. w.g.	1.5 in. w.g.
	cfm	L/s	in.w.g	Pa	in.w.g	Pa	125Pa	1250Pa	375Pa	125Pa	1250Pa	375Pa
2006	200	94	0.02	5	0.08	20	--	--	--	--	--	--
	300	142	0.04	10	0.18	44	--	--	22	--	--	--
	400	189	0.07	17	0.32	78	20	24	27	--	20	23
	500	236	0.10	25	0.48	120	24	28	31	20	24	26
2008	400	189	0.02	5	0.09	22	--	--	21	--	--	--
	500	236	0.03	7	0.14	34	--	22	24	--	--	22
	600	283	0.04	10	0.19	48	--	25	27	--	20	24
	700	330	0.05	12	0.26	64	22	27	30	--	22	26
30 14x8	800	378	0.06	15	0.33	82	22	27	30	--	24	27
	900	425	0.09	22	0.13	32	--	--	23	21	26	29
	1200	566	0.15	37	0.22	55	--	22	26	24	29	32
	1550	732	0.23	57	0.35	86	--	25	29	27	32	35
	1800	850	0.29	72	0.45	111	21	27	31	28	34	37
40 14x10	2100	991	0.38	95	0.59	147	22	29	33	30	35	39
	1500	708	0.09	22	0.18	46	--	24	27	22	27	31
	1800	850	0.13	32	0.27	66	--	26	30	24	29	33
	1925	908	0.15	37	0.30	76	20	27	31	25	30	34
	2400	1133	0.20	50	0.44	110	23	29	33	28	33	37
	2700	1274	0.25	62	0.55	138	24	31	35	29	35	39

#### Performance Notes:

- NCs are derived from sound power levels, which are obtained in accordance with AHRI Standard 880-2011 and ASHRAE Standard 130-2008.
- NCs are derived from sound power levels which include duct end corrections per AHRI Standard 880 -2011. Please refer to the Engineering Guide for more details.
- Blank spaces (-) indicate NCs less than 20.
- Airflow is given in L/s and cfm.
- ΔPs is the difference in static pressure from inlet to discharge of the unit.
- ΔPt is the difference in total pressure from inlet to discharge of the unit.
- Min. ΔPs is the minimum static pressure required to achieve rated airflow.
- Pressure is given in Pa and in. w.g.
- Fan external static pressure is 63 Pa (0.25 in.w.g) in all cases.
- NC values are calculated based on typical attenuation values outlined in Appendix E, AHRI Standard 885-2008, "A Procedure for Estimating Occupied Space Sound Levels in the Application of Air Terminals and Air Outlets."

#### Typical Attenuation Values: Radiated Sound

Total Deduction	Octave Band Mid Frequency, Hz.					
	125	250	500	1000	2000	4000
All Sizes	18	19	20	26	31	36

#### Discharge Sound

Total Deduction	Octave Band Mid Frequency, Hz.					
	125	250	500	1000	2000	4000
< 300 cfm	24	28	39	53	59	40
300 – 700 cfm	27	29	40	51	53	39
> 700 cfm	29	30	41	51	52	39

### Heating Cycle - Fan Only

Unit Size	Airflow		Discharge NC	Radiated NC
	L/s	cfm		
20	94	200	--	35
	142	300	--	36
	189	400	23	37
	236	500	26	38
30	142	300	--	34
	189	400	21	35
	236	500	24	37
	283	600	26	38
	330	700	28	39
	378	800	27	40
	425	900	29	40
40	283	600	23	33
	330	700	25	35
	378	800	24	37
	425	900	26	39
	472	1000	27	40
	519	1100	29	41
	566	1200	30	43
	614	1300	31	44
661	1400	32	45	

#### Performance Notes:

- NCs are derived from sound power levels, which are obtained in accordance with AHRI Standard 880-2011 and ASHRAE Standard 130-2008.
- NCs are derived from sound power levels which include duct end corrections per AHRI Standard 880 -2011. Please refer to the Engineering Guide for more details.
- Blank spaces (-) indicate NCs less than 20.
- Fan external static pressure is 63 Pa (0.25 in.w.g) in all cases.
- NC values are calculated based on typical attenuation values outlined in Appendix E, AHRI Standard 885-2008, "A Procedure for Estimating Occupied Space Sound Levels in the Application of Air Terminals and Air Outlets."

#### Typical Attenuation Values: Radiated Sound

Total Deduction	Octave Band Mid Frequency, Hz.					
	125	250	500	1000	2000	4000
All Sizes	18	19	20	26	31	36

#### Discharge Sound

Total Deduction	Octave Band Mid Frequency, Hz.					
	125	250	500	1000	2000	4000
< 300 cfm	24	28	39	53	59	40
300 – 700 cfm	27	29	40	51	53	39
> 700 cfm	29	30	41	51	52	39

# Performance Data



## FDV with Low Profile Construction (FDVLP) - Discharge Sound Data

### Cooling Cycle - 100% Primary

Unit Size	Airflow		Sound Power Levels Lw dB re 10 <sup>-12</sup> Watts																	
			0.5 in. w.g. [125 Pa]					1.0 in. w.g. [250 Pa]					1.5 in. w.g. [375 Pa]							
			Octave Band					Octave Band					Octave Band							
L/s	cfm	2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7	
2006	94	200	55	52	40	39	32	25	59	55	45	44	38	32	61	57	48	48	41	37
	142	300	61	58	45	42	35	28	65	61	50	48	41	36	67	63	53	51	45	40
	189	400	65	62	49	45	38	31	69	66	54	50	44	39	71	68	57	54	47	43
	236	500	68	65	52	47	40	33	72	69	57	52	46	41	74	71	59	56	49	45
2008	189	400	62	55	46	44	37	31	65	59	52	50	43	38	68	61	55	54	47	42
	236	500	65	58	49	46	40	33	68	62	54	52	45	40	71	65	58	56	49	44
	283	600	67	61	51	48	42	35	71	65	57	54	47	42	73	67	60	57	51	46
	330	700	69	63	53	49	43	37	73	67	59	55	49	43	75	70	62	59	52	47
	378	800	71	65	55	51	45	38	75	69	60	57	50	45	77	72	63	60	54	49
30 14x8	425	900	63	56	51	46	41	32	68	62	57	53	47	39	71	65	60	57	51	43
	566	1200	66	59	54	49	43	34	71	65	59	56	49	41	74	68	63	59	53	45
	732	1550	68	61	56	52	45	36	73	67	61	58	51	43	76	70	65	62	55	48
	850	1800	70	62	57	53	46	38	75	68	63	59	53	45	78	72	66	63	56	49
	991	2100	71	64	58	55	47	39	76	70	64	61	54	46	79	73	67	65	58	50
40 14x10	708	1500	67	61	55	51	44	39	72	66	60	57	50	45	75	69	63	60	53	49
	850	1800	69	62	57	53	46	41	74	68	62	59	52	47	77	71	65	62	55	51
	909	1925	69	63	58	54	47	41	74	68	63	59	52	48	77	71	66	63	56	51
	1133	2400	71	65	60	56	49	44	77	70	65	62	55	50	80	74	68	65	58	54
	1274	2700	73	66	61	58	50	45	78	72	66	63	56	51	81	75	69	67	59	55

#### Performance Notes:

- Test data obtained in accordance with AHRI Standard 880-2011 and ASHRAE Standard 130-2008.
- Sound power levels include duct end corrections per AHRI Standard 880-2011. Please refer to the Engineering Guide for more details.
- Airflow given in L/s and cfm.
- Pressure is given in Pa and in.w.g.
- Fan external static pressure is 63 Pa (0.25 in.w.g.) in all cases.
- AHRI certified data is highlighted in blue. All other data are application ratings.
- Application ratings are outside the scope of the AHRI 880 Certification Program.

## FDV with Low Profile Construction (FDVLP) - Radiated Sound Data

### Cooling Cycle - 100% Primary

Unit Size	Airflow		Sound Power Levels Lw dB re 10 <sup>-12</sup> Watts																	
			0.5 in. w.g. [125 Pa]					1.0 in. w.g. [250 Pa]					1.5 in. w.g. [375 Pa]							
			Octave Band					Octave Band					Octave Band							
L/s	cfm	2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7	
2006	94	200	46	37	34	29	21	17	49	40	39	34	27	23	51	42	41	37	31	26
	142	300	52	43	39	33	25	18	54	46	43	38	31	25	56	48	46	41	34	29
	189	400	55	47	42	36	28	20	58	50	46	41	34	27	60	52	49	44	37	31
	236	500	58	50	44	38	30	22	61	53	49	43	36	28	63	55	51	46	39	32
2008	189	400	49	40	37	32	25	17	52	45	43	37	30	25	55	47	46	40	34	29
	236	500	52	43	39	34	27	19	55	48	45	39	32	26	57	50	48	43	36	30
	283	600	54	45	41	35	29	20	58	50	47	41	34	27	60	53	50	44	37	32
	330	700	56	47	42	37	30	21	60	52	48	42	35	28	62	55	51	46	39	33
	378	800	58	49	44	38	31	22	62	54	49	44	37	29	64	57	53	47	40	34
30 14x8	425	900	55	51	47	41	34	27	60	56	52	47	41	35	63	59	54	51	45	39
	566	1200	58	53	50	44	36	29	63	59	55	50	42	37	66	62	57	54	46	41
	732	1550	61	55	52	46	37	30	66	61	57	53	44	38	69	64	60	56	48	42
	850	1800	62	57	54	48	38	31	67	62	59	54	45	39	70	65	62	58	49	43
	991	2100	64	58	56	49	39	32	69	63	60	55	45	40	72	67	63	59	49	44
40 14x10	708	1500	58	51	48	41	34	25	64	57	53	47	40	33	67	60	55	50	44	37
	850	1800	60	53	50	42	36	27	65	59	55	48	42	34	69	62	57	52	45	39
	909	1925	61	54	51	43	36	27	66	59	55	49	42	35	69	63	58	53	46	39
	1133	2400	63	57	53	45	38	29	68	62	58	51	44	37	71	65	60	55	48	41
	1274	2700	64	58	55	47	39	30	70	63	59	52	45	38	73	66	62	56	49	42

#### Performance Notes:

- Test data obtained in accordance with AHRI Standard 880-2011 and ASHRAE Standard 130-2008.
- Sound power levels include duct end corrections per AHRI Standard 880-2011. Please refer to the Engineering Guide for more details.
- Airflow given in L/s and cfm.
- Pressure is given in Pa and in.w.g.
- Fan external static pressure is 63 Pa (0.25 in.w.g.) in all cases.
- AHRI certified data is highlighted in blue. All other data are application ratings.
- Application ratings are outside the scope of the AHRI 880 Certification Program.

# Performance Data



## FDV with Low Profile Construction (FDVLP) - Discharge & Radiated Sound Power Levels

### Heating Cycle – Fan Only

Unit Size	Airflow		Sound Power Levels Lw dB re 10 <sup>-12</sup> Watts											
			Discharge Sound Data						Radiated Sound Data					
			Octave Band						Octave Band					
			L/s	cfm	2	3	4	5	6	7	2	3	4	5
2006	94	200	63	57	49	48	39	31	59	57	60	57	50	37
	142	300	67	60	53	53	44	38	62	58	61	59	52	40
	189	400	69	62	56	56	47	43	63	59	62	61	54	43
	236	500	71	64	58	58	50	47	65	60	63	62	55	45
2008	94	200	63	57	49	48	39	31	59	57	60	57	50	37
	142	300	67	60	53	53	44	38	62	58	61	59	52	40
	189	400	69	62	56	56	47	43	63	59	62	61	54	43
	236	500	71	64	58	58	50	47	65	60	63	62	55	45
30 14x8	142	300	65	55	53	52	45	36	60	59	59	54	47	36
	189	400	68	58	56	55	48	41	63	61	60	57	50	40
	236	500	70	60	58	57	51	44	66	63	62	59	52	42
	283	600	72	61	60	59	53	47	67	64	63	60	54	45
	330	700	73	63	62	61	54	50	69	65	63	61	56	46
	378	800	75	64	63	62	56	52	70	66	64	63	57	48
	425	900	76	65	64	64	57	54	71	67	65	64	58	49
40 14x10	283	600	69	57	58	57	49	43	59	60	58	49	40	35
	330	700	71	59	60	60	53	46	61	61	60	52	42	38
	378	800	72	61	62	62	55	50	63	63	62	54	44	40
	425	900	74	63	64	64	58	52	65	64	63	57	46	42
	472	1000	75	64	65	66	60	55	66	65	65	59	48	43
	519	1100	76	65	67	67	62	57	68	66	66	60	49	45
	566	1200	77	67	68	69	63	59	69	67	67	62	50	47
614	1300	78	68	69	70	65	61	70	68	68	63	52	48	
661	1400	79	69	70	71	66	63	71	69	69	65	53	49	

#### Performance Notes:

1. Test data obtained in accordance with AHRI Standard 880-2011 and ASHRAE Standard 130-2008.
2. Sound power levels include duct end corrections per AHRI Standard 880-2011. Please refer to the Engineering Guide for more details.
3. Airflow given in L/s and cfm.
4. Pressure is given in Pa and in.w.g.
5. Fan external static pressure is 63 Pa (0.25 in.w.g.) in all cases.
6. AHRI certified data is highlighted in blue. All other data are application ratings.
7. Application ratings are outside the scope of the AHRI 880 Certification Program.