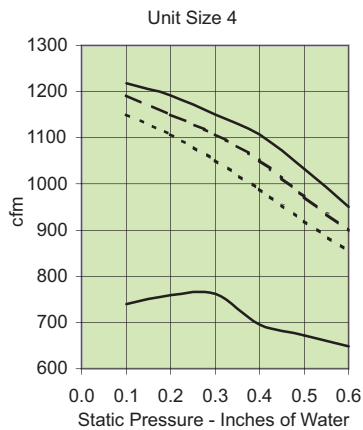
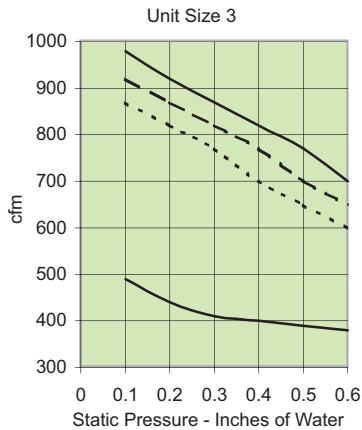
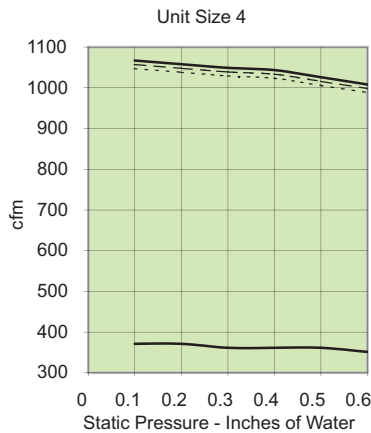
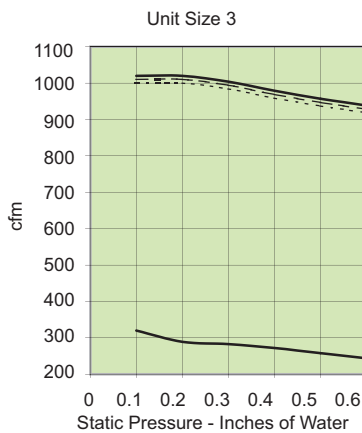


LHK FAN CURVES



No Coil or with Electric Coil ———
 1-Row Water Coil - - - - -
 2-Row Water Coil ·····

LHK ECM FAN CURVES



WATER COIL HEATING CAPACITY (MBH)

Unit Size	Rows	gpm	Head Loss	Airflow, cfm						
				380	450	520	660	730	800	870
3	One-Row	0.5	0.05	10.1	10.6	11.0	11.6	11.9	12.1	12.3
		1.0	0.15	13.5	14.5	15.3	16.6	17.2	17.7	18.1
		2.0	0.47	15.3	16.6	17.7	19.6	20.4	21.1	21.8
		4.0	1.76	16.3	17.8	19.1	21.4	22.3	23.2	24.1
		Airside ΔPs		0.02	0.03	0.03	0.05	0.06	0.07	0.07
	Two-Row	1.0	0.11	15.7	16.5	17.1	18.0	18.4	18.7	18.9
		2.0	0.30	21.8	23.6	25.1	27.4	28.4	29.3	30.0
		3.0	0.90	25.4	28.0	30.3	34.1	35.8	37.3	38.6
		4.0	3.29	27.5	30.6	33.4	38.2	40.4	42.3	44.2
		Airside ΔPs		0.04	0.05	0.06	0.09	0.11	0.13	0.15

- Hot Water capacities are in MBH
- Data based on 180°F entering water and 65°F entering air
- Head loss is in feet of water
- Air temperature rise = 927 x MBH / cfm
- Water temperature drop = 2.04 x MBH / gpm

Unit Size	Rows	gpm	Head Loss	Airflow, cfm						
				660	730	800	870	950	1010	1100
4	One-Row	0.5	0.05	11.6	11.9	12.1	12.3	12.5	12.7	12.9
		1.0	0.15	16.6	17.2	17.7	18.1	18.6	18.9	19.3
		2.0	0.47	19.6	20.4	21.1	21.8	22.5	23.0	23.7
		4.0	1.75	21.4	22.3	23.2	24.1	24.9	25.6	26.4
		Airside ΔPs		0.05	0.06	0.07	0.07	0.09	0.09	0.11
	Two-Row	1.0	0.31	27.4	28.4	29.3	30.0	30.8	31.4	32.1
		2.0	0.89	34.1	35.8	37.3	38.6	40.0	41.0	42.4
		3.0	1.91	36.8	38.7	40.5	42.2	43.9	45.2	46.8
		4.0	3.29	38.2	40.4	42.3	44.2	46.1	47.5	49.4
		Airside ΔPs		0.09	0.11	0.13	0.15	0.17	0.19	0.22

- Connection: All coils are 1/2-inch O.D. male solder

ALHK, DLHK / SOUND APPLICATION DATA / NC VALUES

Radiated Sound	Octave Bands					
	2	3	4	5	6	7
Environmental Effect	2	1	0	0	0	0
Ceiling/Space Effect	29	33	33	35	35	36
Total dB reduction	31	34	33	35	35	36

Per AHRI 885-2008
Assumed effect for Double Gypsum Board roughly equal to access floor tile

Discharge Sound	Octave Bands					
	2	3	4	5	6	7
Environmental Effect	2	1	0	0	0	0
Duct Lining	2	6	12	25	29	18
End Reflection	9	5	2	0	0	0
Flex Duct	6	10	18	20	21	12
Space Effect	5	6	7	8	9	10
Total dB reduction	24	28	39	53	59	40

Per AHRI 885-2008
Flex Duct - Vinyl Core Flex
End Reflection - 8-inch Termination to Diffuser
Fiberglass Flex Duct - 5-foot length, 1-inch duct work
Room Size - 2400 Cubic foot Room, 5 feet from sound source

The following dB adjustments are used, per AHRI 885-2008 for the calculation of NC above 300 cfm

	Octave Bands					
	2	3	4	5	6	7
300-700 cfm	2	1	1	-2	-5	-1
Over 700 cfm	4	3	2	-2	-7	-1

ALHK, DLHK / RADIATED SOUND POWER DATA

Size	CFM	Discharge Ps	Min ΔPs	Octave Band Sound Power, Lw																															
				Fan Only								0.5" ΔPs								1.0" ΔPs								1.5" ΔPs							
				2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC				
309	500	0.25	0.09	68	51	50	47	38	26	15	68	54	50	47	41	31	15	70	58	54	50	43	38	18	70	61	55	51	46	42	18				
	600		0.13	69	54	53	49	41	30	17	69	57	53	49	43	34	17	71	60	56	52	45	40	19	72	64	57	53	47	43	20				
	700		0.18	70	57	55	52	43	33	18	70	60	55	52	43	36	18	73	63	58	54	47	40	22	74	66	60	55	49	44	23				
	800		0.23	70	59	56	53	46	36	18	72	62	56	53	46	36	20	74	65	60	56	49	41	23	75	68	61	57	51	45	24				
	850		0.26	71	60	57	54	47	37	19	73	63	57	54	47	37	22	75	66	61	56	50	42	24	76	69	62	57	52	46	25				
410	800	0.25	0.08	65	57	56	52	46	38	17	73	66	61	56	50	43	22	75	69	65	59	54	48	26	77	72	67	62	56	51	28				
	875		0.10	66	58	58	54	48	41	19	74	67	62	57	52	45	23	76	70	66	60	55	49	27	78	73	68	63	58	52	29				
	950		0.12	67	60	59	56	50	42	20	75	68	63	59	53	46	24	77	71	67	61	55	50	28	79	74	69	63	58	52	30				
	1025		0.13	68	61	60	57	51	44	21	75	69	64	60	54	47	25	78	72	67	62	56	50	28	80	74	70	64	59	54	31				
	1100		0.15	69	62	61	59	53	46	22	76	69	65	61	55	48	26	79	73	68	63	57	51	29	80	75	71	64	59	54	32				

- Radiated sound is the noise transmitted through the unit casing and emitted from the induction port
- Min ΔPs is the difference between atmospheric pressure and the inlet static pressure with the primary damper full open and the unit fan set to match the primary flow
- Sound power levels are in dB, ref 10⁻¹² watts
- All performance based on tests conducted in accordance with ASHRAE 130-2008 and AHRI 880-2011
- All NC levels determined using the ceiling space effect of a double layer of 5/8 in gypsum (Ceiling Type 10 from Table D14, AHRI Standard 885-2008) to approximate the access floor panels
- Dash (-) in space denotes NC value less than NC10
- Only highlighted data points are AHRI certified. See page S68 for AHRI Certified Performance Listings.

ALHK, DLHK / DISCHARGE SOUND POWER DATA

Size	CFM	Discharge Ps	Min ΔPs	Octave Band Sound Power, Lw																															
				Fan Only								0.5" ΔPs								1.0" ΔPs								1.5" ΔPs							
				2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC				
309	500	0.25	0.09	69	58	59	55	56	52	22	69	60	61	58	58	52	22	69	60	61	58	58	52	22	71	60	61	58	58	52	25				
	600		0.13	71	61	62	59	59	56	25	71	61	64	62	59	56	25	73	61	64	62	59	56	28	73	61	64	62	59	56	28				
	700		0.18	73	64	64	62	62	60	28	73	66	64	65	62	60	28	75	66	64	65	62	60	30	75	66	64	65	62	60	30				
	800		0.23	75	66	66	64	65	63	28	77	66	66	67	65	63	30	77	66	66	67	65	63	30	77	66	66	67	65	63	30				
	850		0.26	75	67	67	65	66	65	29	75	67	67	68	66	67	30	77	67	67	68	66	67	30	77	67	67	68	66	67	30				
410	800	0.25	0.08	78	72	71	71	70	68	31	81	74	71	71	70	68	35	81	75	73	71	70	68	35	81	75	73	71	70	68	35				
	875		0.10	78	73	72	72	71	69	32	81	75	72	72	71	69	35	81	76	74	72	71	69	36	81	76	75	72	71	69	36				
	950		0.12	79	74	73	73	72	71	34	82	76	75	73	72	71	36	82	77	76	73	72	71	37	82	78	76	73	72	71	38				
	1025		0.13	79	75	74	74	73	72	35	82	78	76	74	73	72	38	82	78	77	74	73	72	38	82	79	77	74	75	72	39				
	1100		0.15	79	76	75	75	74	73	36	82	79	77	75	74	73	39	82	79	78	75	76	73	39	82	80	78	75	76	75	40				

- Discharge sound is the noise emitted from the unit discharge into the downstream ductwork
- Min ΔPs is the difference between atmospheric pressure and the inlet static pressure with the primary damper full open and the unit fan set to match the primary flow
- Sound power levels are in dB, ref 10⁻¹² watts
- All performance based on tests conducted in accordance with ASHRAE 130-2008 and AHRI 880-2011
- All NC levels determined using AHRI 885-2008 Appendix E. See Terminal Unit Engineering Guidelines.
- Dash (-) in space denotes NC value less than NC10
- Only highlighted data points are AHRI Certified. See page S63 for AHRI Certified Performance Listings.