

MISCELLANEOUS ENGINEERING DATA EXPANDED SOUND DATA



Current Commercial Product Only

ENGINEERING DATA

April 2010
Supersedes December 2009

ENERGENCE™ / LANDMARK™ 2 TO 7.5 TONS

2 Test Conditions		External Static Pressure in. w.c.	CFM	Octave Band Sound Power Levels dBA, re 10 ⁻¹² Watts								1 Sound Rating Number (dB)
				Center Frequency - HZ								
				63	125	250	500	1000	2000	4000	8000	
Outdoor Sound Level	KGA/KCA024, 030, 036, 048 LCH/LGH036, 048	---	---	52	63	66	70	71	68	62	53	75
	KGA/KCA060, 072 LCH/LGH060,	---	---	64	67	72	77	76	73	68	61	82
	LCH/LGH072, KGA/KCA090	---	---	67	66	71	73	74	70	65	57	79
	KHA024, Cooling 030, 036, 048 Heating	---	---	52	63	66	70	71	68	62	53	75
		---	---	53	63	66	71	70	68	62	54	75
	KHA060 Cooling Heating	---	---	64	67	72	77	76	73	68	61	82
		---	---	68	70	72	77	76	73	69	60	82
	KHA072 Cooling Heating	---	---	63	67	75	78	78	75	68	59	83
		---	---	61	69	77	79	80	76	69	61	84
	KCA/KGA/KHA024, 030 with 1/4 hp Direct Drive Blower											
Supply Air Only		0.25	800	41	47	45	47	46	44	39	33	---
		0.50	1150	42	51	54	55	54	54	52	44	---
Return Air Only		0.25	800	42	43	38	40	38	37	32	30	---
		0.50	1150	43	46	45	46	44	45	40	34	---
LCH/LGH036 with 1/2 hp Direct Drive Blower, LCH/LGH048 with 3/4 hp Direct Drive Blower KCA/KGA/KHA036, 048 with 1/2 hp Direct Drive Blower												
Supply Air Only		0.25	1200	48	52	53	56	53	52	51	42	---
		0.50	1600	50	60	62	65	64	63	64	58	---
Return Air Only		0.25	1200	47	50	49	47	42	41	39	40	---
		0.50	1600	48	52	53	52	50	51	50	43	---
LCH/LGH060 with 1 hp Direct Drive Blower KCA/KGA/KHA060 with 3/4 hp Direct Drive Blower												
Supply Air Only		0.40	1675	49	60	66	65	63	62	64	60	---
		0.50	2000	50	64	69	69	68	67	68	65	---
Return Air Only		0.40	1675	48	54	55	53	52	51	50	43	---
		0.50	2000	48	56	59	57	55	56	55	48	---
LCH/LGH036, 048, 060 with Belt Drive Blower KCA/KGA/KHA036, 048, 060, 072 with Belt Drive Blower												
Supply Air Only		0.75	1005	49	55	62	65	65	64	62	56	---
		0.75	1200	49	56	63	66	66	66	65	59	---
		0.75	1340	50	56	64	67	67	67	66	61	---
		0.75	1600	50	58	67	69	69	69	69	64	---
		0.75	1675	50	58	67	69	70	70	70	65	---
		0.75	2010	51	62	71	73	74	74	73	68	---
		0.75	2400	53	65	74	76	77	77	78	74	---
		Return Air Only		0.75	1005	49	51	52	52	50	47	41
0.75	1200			49	52	53	53	53	51	47	40	---
0.75	1340			50	53	55	55	54	53	49	42	---
0.75	1600			51	54	56	56	55	55	52	43	---
0.75	1675			51	54	56	56	55	55	52	44	---
0.75	2010			52	55	58	59	59	58	56	48	---
0.75	2400			52	57	60	61	62	61	60	54	---
LCH/LGH072 with Belt Drive Blower KCA/KGA090 with Belt Drive Blower												
Supply Air Only		0.75	2010	42	52	56	67	61	60	59	53	---
		0.75	2400	45	56	60	66	64	64	64	58	---
		0.75	3000	43	58	64	69	69	67	67	63	---
Return Air Only		0.75	2010	41	45	49	50	50	50	48	40	---
		0.75	3400	41	46	50	52	52	52	51	44	---
		0.75	3000	45	51	55	55	57	56	56	50	---

Note - The octave sound power data does not include tonal corrections.

¹ Sound Rating Number according to AHRI Standard 270-2008.

² Indoor tested according to AHRI Standard 260-2001.

³ 63HZ band is not certified and is usually lower than reported.

ENERGENCE™ / LANDMARK™ 7.5 TO 12.5 TONS

² Test Conditions		External Static Pressure in. w.c.	CFM	Octave Band Sound Power Levels dBA, re 10 ⁻¹² Watts								¹ Sound Rating Number (dB)	
				Center Frequency - HZ									
				³ 63	125	250	500	1000	2000	4000	8000		
Outdoor Sound Level	LCH/LGH/092 thru 120 KCA/KGA092 thru 120	---	---	63	72	78	81	82	77	71	62	87	
	LCH/LGH150 KCA/KGA150	---	---	62	74	79	82	83	79	73	65	88	
	KHA092 thru 150	Cooling	---	---	64	70	75	80	80	76	71	64	88
		Heating	---	---	64	69	77	81	82	78	72	65	88
	KHA150	Cooling	---	---	64	70	77	81	82	77	71	62	88
		Heating	---	---	64	73	79	83	84	79	73	65	88
Supply Air Only		0.75	2515	51	61	68	71	71	69	67	63	---	
		0.75	2850	52	61	69	72	71	70	68	64	---	
		0.75	3000	52	61	69	72	72	70	69	64	---	
		0.75	3400	52	63	70	73	73	71	70	66	---	
		0.75	3600	53	63	71	73	74	72	71	66	---	
		0.75	4000	53	64	72	74	75	73	72	68	---	
		0.75	4125	53	64	72	74	76	74	72	69	---	
		0.75	4800	54	66	75	76	79	76	74	71		
Return Air Only		0.75	2515	47	52	54	56	56	54	51	44	---	
		0.75	2850	48	52	54	56	57	55	52	46	---	
		0.75	3000	48	51	55	56	57	55	53	47	---	
		0.75	3400	49	53	57	57	58	56	55	50	---	
		0.75	3600	49	54	57	58	59	57	56	51	---	
		0.75	4000	51	55	58	58	60	58	57	52	---	
		0.75	4125	51	56	58	59	61	59	58	53	---	
		0.75	4800	51	55	60	60	63	62	60	56		
Exhaust Fan Only - Return		0.13	---	62	69	72	75	74	72	66	59	---	

Note – The octave sound power data does not include tonal corrections.

¹ Sound Rating Number according to AHRI Standard 270-2008.

² Indoor tested according to AHRI Standard 260-2001.

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ENERGENCE™ / LANDMARK™ 13 TO 25 TONS

² Test Conditions	External Static Pressure in. w.c.	CFM	Octave Band Sound Power Levels dBA, re 10 ⁻¹² Watts								¹ Sound Rating Number (dB)		
			Center Frequency - HZ										
			³ 63	125	250	500	1000	2000	4000	8000			
LCH/LGH													
Outdoor	156	---	---	70	71	78	81	81	76	71	63	86	
Sound	180	---	---	69	80	83	87	88	84	80	71	93	
Level	210, 240, 300	---	---	72	79	84	88	89	85	82	73	94	
KCA/KGA/KHA													
Outdoor Gas/Electric	180, 210	---	---	70	71	78	81	81	76	71	63	86	
Sound & Cooling	240, 300	---	---	69	80	83	87	88	84	80	71	93	
Level	Heat 180 Pump	Cooling Cycle	---	72	75	81	87	89	86	81	69	93	
		Heating Cycle	---	70	76	81	87	89	87	81	70	93	
	240	Cooling Cycle	---	72	77	81	87	89	86	80	67	93	
		Heating Cycle	---	72	78	81	88	89	87	81	67	93	
156, 180, 210, 240, 300 – Indoor Blower with LARMF18/36-14 Standard Roof Curb													
Supply Air Only		0.75	4355	55	60	61	64	62	62	59	50	---	
		0.75	5025	56	61	61	65	64	63	61	52	---	
		0.75	5200	57	63	63	68	66	64	62	53	---	
		0.75	6000	58	63	64	68	66	65	63	54	---	
		0.75	6700	58	64	64	68	67	66	65	56	---	
		0.75	7000	58	65	65	69	68	68	66	58	---	
		0.75	8000	58	68	66	71	71	70	69	62	---	
		0.75	8375	59	68	67	72	72	71	70	63	---	
Return Air Only		0.75	10,000	61	69	70	75	75	75	74	67	---	
		0.75	4355	52	60	53	52	51	48	48	43	---	
		0.75	5025	54	60	53	54	51	49	49	44	---	
		0.75	5200	54	62	56	59	55	52	52	48	---	
		0.75	6000	54	61	54	54	53	51	51	46	---	
		0.75	6700	55	62	55	55	55	52	52	46	---	
		0.75	7000	55	63	56	56	57	56	54	48	---	
		0.75	8000	56	64	59	58	59	58	57	51	---	
	8375	56	64	58	59	60	58	58	52	---			
	10,000	57	66	61	62	62	61	61	55	---			
156, 180, 210, 240, 300 - Indoor Blower with LARMFH18/24 Horizontal Roof Curb													
Supply Air Only		840 rpm	1.04	8000	52	63	66	71	73	72	70	62	---
		1040 rpm	1.80	6500	56	67	68	73	78	76	74	68	---
		1050 rpm	1.72	8300	57	68	69	73	79	77	76	69	---
		1272 rpm	2.72	7800	60	71	72	76	82	81	79	74	---
Return Air Only		840 rpm	1.04	8000	54	62	61	65	63	61	60	53	---
		1040 rpm	1.80	6500	60	66	66	70	69	66	65	60	---
		1050 rpm	1.72	8300	60	67	66	70	68	66	65	60	---
		1272 rpm	2.72	7800	63	71	70	73	72	70	70	65	---

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¹ Sound Rating Number according to AHRI Standard 270-2008.

² Indoor tested according to AHRI Standard 260-2001.

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L SERIES® 25 TO 30 TONS

1 Test Conditions	External Static Pressure in. w.c.	CFM	Octave Band Sound Power Levels dBA, re 10 ⁻¹² Watts								1 Sound Rating Number (dB)	
			Center Frequency - HZ									
			2 63	125	250	500	1000	2000	4000	8000		
Outdoor Sound Level - 248, 300, 360												
Gas/Electric & Cooling -	248, 300	---	---	72	79	84	88	89	85	82	73	94
	360	---	---	70	78	85	90	91	87	82	74	95
248/300 - Indoor Blower												
Supply Air only	790 rpm	1.15	8750	57	67	66	73	72	73	70	63	---
	900 rpm	1.50	10,000	59	71	71	76	76	76	73	67	---
Return Air only	790 rpm	1.15	8750	55	63	58	60	59	60	58	52	---
	900 rpm	1.50	10,000	57	67	61	63	63	63	62	56	---
360 - Indoor Blower												
Supply Air only	860 rpm	1.15	10,500	59	71	71	76	76	77	73	66	---
	985 rpm	1.50	12,000	61	74	75	79	80	80	77	70	---
Return Air only	860 rpm	1.15	10,500	56	67	61	63	62	63	61	55	---
	985 rpm	1.50	12,000	59	70	65	66	67	67	66	59	---

Note – The octave sound power data does not include tonal corrections.

¹ Indoor tested according to AHRI Standard 260-2001.

² 63HZ band is not certified and is usually lower than reported.

SPLIT SYSTEMS - TAA AIR HANDLERS

1 Test Conditions	External Static Pressure in. w.c.	CFM	Octave Band Sound Power Levels dBA, re 10 ⁻¹² Watts							
			Center Frequency - HZ							
			2 63	125	250	500	1000	2000	4000	8000
TAA072										
Supply	0.75	1920	59.2	66.4	70.7	74.2	75.1	74.2	72.0	64.9
	0.75	2400	59.0	67.2	71.5	75.0	75.9	75.0	72.8	66.7
Return	0.75	1920	53.2	63.7	56.4	61.1	58.1	55.2	53.0	45.9
	0.75	2400	54.0	63.6	57.2	60.9	58.9	56.0	53.8	46.7
TAA090										
Supply	0.75	2400	59.2	68.4	71.7	75.2	77.1	75.2	72.0	65.9
	0.75	3000	62.2	70.4	73.7	77.2	79.1	78.2	76.0	69.9
Return	0.75	2400	55.2	63.7	57.4	62.1	59.1	56.2	54.0	46.9
	0.75	3000	55.2	65.7	59.4	63.1	62.1	58.2	57.0	49.9
TAA120, TAA150										
Supply	0.75	3200	64.1	71.4	74.6	78.2	77.1	76.2	75.0	70.9
	0.75	4000	61.1	70.4	75.6	80.2	80.1	79.2	78.0	73.9
	0.75	5000	60.1	70.4	76.6	82.2	83.1	82.2	81.0	75.9
Return	0.75	3200	58.0	68.0	65.1	65.0	62.1	59.2	59.0	49.9
	0.75	4000	55.0	67.0	64.1	67.0	65.1	62.2	62.0	54.9
	0.75	5000	55.0	67.0	64.1	68.0	66.1	63.2	63.0	56.9
TAA180										
Supply	0.75	4800	60.1	69.1	74.1	78.0	79.1	78.2	76.0	69.9
	0.75	6000	63.1	71.1	76.1	80.0	81.1	81.2	80.0	73.9
	0.75	8000	62.1	71.1	78.1	83.0	82.1	82.2	82.0	77.9
Return	0.75	4800	55.4	65.7	60.0	64.0	62.0	59.2	57.0	49.9
	0.75	6000	55.4	67.7	62.0	65.0	65.0	61.2	60.0	52.9
	0.75	8000	56.4	69.7	67.0	69.0	68.0	65.2	65.0	57.9
TAA240										
Supply	0.75	6400	65.1	73.1	77.1	81.0	80.1	79.2	78.0	73.9
	0.75	8000	62.1	72.1	78.1	83.0	83.1	82.2	81.0	76.9
	0.75	10,000	61.1	72.1	79.1	85.0	86.1	85.2	84.0	78.9
Return	0.75	6400	60.4	65.7	59.4	63.1	62.1	58.2	57.0	49.9
	0.75	8000	57.4	69.7	67.0	70.0	68.0	65.2	65.0	57.9
	0.75	10,000	57.4	69.7	67.0	71.0	69.0	66.2	66.0	59.9

Note – The octave sound power data does not include tonal corrections.

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REVISIONS

Sections	Description of Change
Split Systems	Added Indoor Sound Data for TAA Air Handlers.



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