



Low Height Blower Coil Air Handler Belt Drive

MODEL: LWHA 013-063
800CMH - 6800 CMH
7kW - 50kW



BC-PRC001-E4

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LWHA

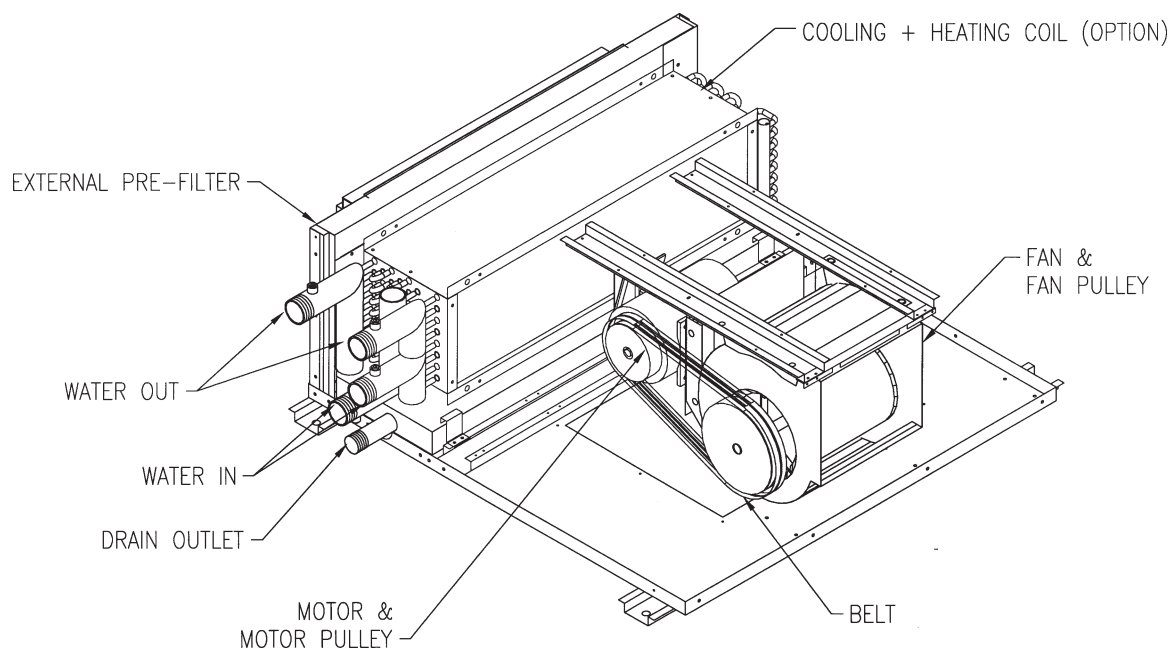
MODEL NOMENCLATURE

DIGIT 1,2	LW	Product Type LW = Low Height Ahu																																								
3	H	Airflow Configuration H = Horizontal Discharge																																								
4	A	Development Sequence A = First																																								
5, 6, 7	033	Model 013 043 023 053 033 063																																								
8	C	Design Sequence A = First B = Second C = Third																																								
9	D	Motor Size In kW Belt driven A = 0.18 B = 0.37 C = 0.55 D = 0.75 E = 1.10 F = 1.50 G = 2.20 H = 3 Direct Drive K = 0.35 L = 0.55 M = 0.6 N = 0.75 P = 1.10 X = No motor S = Special.																																								
		<table><tr><th colspan="4">Motor Size (kW) (For Belt Driven)</th><th>For</th></tr><tr><th>Model</th><th>Low</th><th>Standard</th><th>High</th><th>Direct Drive</th></tr><tr><td>LWHA 013</td><td>0.18</td><td>0.37</td><td>0.75</td><td>0.35</td></tr><tr><td>LWHA 023</td><td>0.37</td><td>0.75</td><td>1.10</td><td>0.55</td></tr><tr><td>LWHA 033</td><td>0.37</td><td>0.75</td><td>1.10</td><td>0.6</td></tr><tr><td>LWHA 043</td><td>0.75</td><td>1.10</td><td>1.50</td><td>0.75</td></tr><tr><td>LWHA 053</td><td>1.10</td><td>1.50</td><td>2.20</td><td>1.1</td></tr><tr><td>LWHA 063</td><td>1.50</td><td>2.20</td><td>3.00</td><td>-</td></tr></table>	Motor Size (kW) (For Belt Driven)				For	Model	Low	Standard	High	Direct Drive	LWHA 013	0.18	0.37	0.75	0.35	LWHA 023	0.37	0.75	1.10	0.55	LWHA 033	0.37	0.75	1.10	0.6	LWHA 043	0.75	1.10	1.50	0.75	LWHA 053	1.10	1.50	2.20	1.1	LWHA 063	1.50	2.20	3.00	-
Motor Size (kW) (For Belt Driven)				For																																						
Model	Low	Standard	High	Direct Drive																																						
LWHA 013	0.18	0.37	0.75	0.35																																						
LWHA 023	0.37	0.75	1.10	0.55																																						
LWHA 033	0.37	0.75	1.10	0.6																																						
LWHA 043	0.75	1.10	1.50	0.75																																						
LWHA 053	1.10	1.50	2.20	1.1																																						
LWHA 063	1.50	2.20	3.00	-																																						
10	2	Electrical Characteristics 1 = 200V / 3Ph / 50Hz 2 = 380-415V/3Ph/50Hz 3 = 230V / 3Ph / 60Hz 4 = 380V / 3Ph / 60 Hz 5 = 220 - 240V / 1Ph / 50Hz (Motor for direct drive fan) S = Special																																								
11	6	Chilled Water Coil 4 = 4 Rows 6 = 6 Rows																																								
12	1	Hot Water Coil 0 = No Heating Coil 1 = 1 Rows																																								
13	R	Coil Connection L = Left R = Right																																								
14	1	Filter 0 = No Filter Media 1 = 1" Standard, Washable Filter 2 = 2" Washable Filter																																								
15	0	Electric Heater 0 = No Electric Heater 1 = With Electric Heater																																								
16	0	Service Indicator 0 = Present Unit																																								
17	0	Future Use 0 = Present Unit																																								

General Specifications

Model			LWHA 013	LWHA 023	LWHA 033	LWHA 043	LWHA 053	LWHA 063
Normal Airflow		CFM	765	1354	1589	2060	2707	3708
		CMH	1300	2300	2700	3500	4600	6300
Cooling Coil								
Coil Face Area		Sq. ft. (m²)	1.72 (0.16)	3.01 (0.28)	3.55 (0.33)	4.52 (0.42)	6.02 (0.56)	7.21 (0.67)
Chilled Water Coil 4 Row	Row/FPI		4 / 12					
	Cooling Capacity	MBH (kW)	23.04 (6.75)	43.14 (12.64)	54.13 (15.86)	70.17 (20.56)	89.86 (26.33)	122.9 (36.0)
	Water Flow Rate	GPM (L/S)	4.60 (0.29)	8.60 (0.54)	10.78 (0.68)	13.95 (0.88)	17.91 (1.13)	24.41 (1.54)
	Water Pressure Drop	ft. wg (kPa)	1.37 (4.08)	2.08 (6.21)	3.45 (10.30)	4.29 (12.81)	3.63 (10.85)	6.17 (18.43)
Chilled Water Coil 6 Row	Row/FPI		6 / 12					
	Cooling Capacity	MBH (kW)	32.73 (9.59)	59.25 (17.36)	71.67 (21.00)	92.87(27.21)	120.89 (35.42)	163.1 (47.8)
	Water Flow Rate	GPM (L/S)	6.50 (0.41)	11.89 (0.75)	14.28 (0.90)	18.55 (1.17)	24.10 (1.52)	32.50 (2.05)
	Water Pressure Drop	ft. wg (kPa)	3.68 (10.99)	5.26 (15.72)	8.18 (24.43)	10.18 (30.43)	8.83 (26.38)	14.63 (43.71)
Hot Water Coil 1 Row	Row/FPI		1 / 12					
	Cooling Capacity	MBH (kW)	14.74 (4.32)	28.23 (8.27)	36.08 (10.57)	50.65 (14.84)	66.72 (19.55)	88.7 (26.0)
	Water Flow Rate	GPM (L/S)	1.74 (0.11)	3.17 (0.20)	3.96 (0.25)	5.71 (0.36)	7.45 (0.47)	9.99 (0.63)
Water Pressure Drop		ft. wg (Pa)	0.07 (204)	0.11 (327)	0.18 (544)	0.38 (1137)	0.38 (1137)	0.70 (2091)
Fins Material			Aluminium					
Header Material			Steel (Copper header as option)					
Tube Size (OD)		in (mm)	3/8" (9.525)					
Header Diameter (OD)		in (mm)	1-1/2 (38.1) BSPT					
Drain Connection Size		in (mm)	1.0 (25.4) BSPT					
Fan / Motor								
Drives Type			Belt-Drive					
Std Motor			3 Phase, 50/60Hz, 4 Poles, TEFC IP55, Class F insulation					
Motor Size - Lo / Std / Hi		kW	0.18 / 0.37 / 0.75	0.37 / 0.75 / 1.1	0.37 / 0.75 / 1.1	0.75 / 1.1 / 1.5	1.1 / 1.5 / 2.2	1.5 / 2.2 /3.0
FLA (3)		Amp	0.68 / 1.21 / 2.10	1.21 / 2.10 / 2.65	1.21 / 2.10 / 2.65	2.10 / 2.65 / 3.80	2.65 / 3.80 / 5.08	3.80 / 5.08 / 6.62
LRA (3)		Amp	2.6 / 5.3 / 11.0	5.3 / 11.0 / 16.0	5.3 / 11.0 / 16.0	11.0 / 16.0 / 21.0	16.0 / 21.0 / 34.0	21.0 / 34.0 / 49.0
Fan Type			Centrifugal Forward-curved Fan					
Fan Size			TM 7-7	TM 9-7	TM 9-7	TM 9-7D	TM 10-8D	TM 10-8D
No of Fans			1	1	1	2	2	2
Available ESP			50 - 300 Pa (0.2 - 1.2 in wg)					
Filters								
Filter Type			1" Washable filters (2" Washable filters as option)					
Quantity - Size		in	1 - 12" x 24"	2 - 16" x 20"	2 - 16" x 20"	3 - 16" x 20"	3 -16" x 20"	2 - 16" x 20"
								1 - 16" x 25"
Approx. Operating Weight		kg	160	200	240	260	300	340
Unit Dimensions :		HxWxL mm	375 x 943 x 960	475 x 1070 x 960	475 x 1223 x 960	475 x 1528 x 960	538 x 1528 x 1080	538 x 1807 x 1080

- Note :
- Cooling coil performances are rated at 26.7°C (80°F) EDB, 19.4°C (67°F) EWB and nominal airflow listed (7.2°C EWT / 12.7°C LWT).
 - Heating coil performances are rated at 15°C (59°F) EAT and nominal airflow listed (60°C EWT / 50°C LWT).
 - Motor current rated as per 380V/3ph/50Hz
- Please refer to the submittal drawing for more details on unit dimension.



Mechanical Specification

General

Unit shall be completely factory assembled, including fan, coil, drain, motor, drives and filters in an insulated casing.

Casing

Unit casing shall be constructed of mainly 1.2 mm galvanized steel. Exterior surface shall be cleaned, chemically treated and finished with baked polyester powder paint. The unit shall be insulated with 6 mm polyethylene foam. The foam insulation shall have a density of 25 kg/m³ and a heat transfer coefficient value of 0.0314 w/mk.

Filter

One inch washable filters shall be provided as standard and 2 inches washable filters as an option. Side shining filter rail shall be provided as standard.

Coil

Coils shall be 9.5 mm O.D. (3/8") copper tubes, mechanically bonded to Wavy-3Bs aluminium fin collars. Standard cooling coil shall be 4 rows 144fpf and 6 rows 144fpf and 2 rows 144fpf. All coils shall be factory pressure tested at 25.9 kg /cm² (375 psi). Recommended working pressure is 13.8 kg / cm² (200 psi). Coils shall be arranged for draw-thru air flow and supplied with an insulated, 1 mm thick galvanized or stainless steel (option) drain pan to allow for proper condensate removal.

The galvanized drain pan shall be painted with antirust for corrosion protection. The header shall be made of round steel pipe with BSPT external threaded (Copper header with straight connection as option). All headers shall be fitted with air venting and water draining plug.

Fan

Double inlets, double width, forward curved, centrifugal fan with constant belt drive shall be provided. Fan and motor bearing shall be permanently lubricated.

Standard Features

FEATURES

- Low height and light weight.
- Trane innovative W3BS fin technology.
- Stainless steel slopping drain pan (optinal).
- Power paint coating.
- Removable quick latched access panel.
- Reduce space requirement and easier to handle.
- Superior heat transfer, higher efficiency and higher moisture carry over tolerance.
- The long lasting stainless steel slopping drain pan to prevent water stagnation. This will provide an excellent condensate management and superior indoor air quality.
- Attractive baked power paint is applied on treated galvanized steel sheet which provide better corrosion resistant coat finish.
- Easier maintenance work. Easy access to filter and adjustable belt drive.

Selection Procedures

The LWHA can be selected by following the steps below:

1) SELECTION EXAMPLE

Design Specification:

LWHA with 1" Prefilter, cooling coil and Fan.

Design airflow = 6300 CMH

Entering air temperature = 25 °C DB.
/ 18 °C WB

Entering water temperature (EWT) = 7 °C

Leaving water temperature (LWT) = 12 °C

Design cooling capacity = 31 kw

External static pressure = 250 Pa.

2) From general specification, based on the design airflow 6300 cmh and cooling capacity given, the unit size LWHA 063 with while cooling will in the most suitable.

3) From the performance data page X, interpolation between points shall be done to get the actual gross capacities. 6300 cmh @ 50 °C WTR.

WTR	WFR	T CAP
5.43	80	30.29
5	Y	X
4.70	100	32.95

Actual Total capacity, kw, x =

$$(5 - 5.43) \times 2.66 / 4.7 - 5.43 + 30.29 = 31.86 \text{ kw}$$

Water flow rate, WFR, Y = 91.78 L/min. Similar method could be used to determine S Cap and water pressure drop (WPD).

4. **Determine the LWHA Total Static Pressure and find out the motor power and fan rpm.**

Fan performance Data is available from page (7-13)

Find out the LWHA internal Static pressure Drop Table (page 8),

Internal Static Pressure = 148 pa casing + prefilter + 4 ran coil = 33 + 148 + 49 = 230 pa

Total Static pressure = External Static pressure + Internal Static pressure Drop

Total Static pressure = 250 pa + 230 pa 480 pa (close to 100 pa)

From Fan performance Table (page 23) (Interpolation is allowed)

Fan rpm = 1334 (interpolation)

Fan Absorbed kW = 1.73 kw (interpolation)

Install Motor = 2.2 kW

5. **Check the Unit Sound Level (page 25-26) And the Unit dimension to meet the design requirement. (Refer to submittal drawing on page 27-32)**

LWHA

Internal Static Pressure Drop

Model	Air Flow		Coil Face Velocity m/s	Casing Pa	Cooling Coil		Heating Coil	Prefilter Pa
	CMH	CFM			4 Row Pa	6 Row Pa		
013	700	412	1.22	10	34	56	15	13
	900	530	1.56	13	50	86	20	20
	1100	647	1.91	18	73	123	28	28
	1300	765	2.26	21	98	164	35	37
	1500	883	2.60	25	125	208	46	49
023	1600	942	1.59	14	60	96	20	21
	1800	1060	1.79	17	75	118	25	25
	2000	1177	1.98	20	91	142	30	30
	2300	1354	2.28	25	115	180	37	39
	2500	1470	2.48	29	140	221	46	48
033	2300	1354	1.94	20	95	140	26	29
	2500	1471	2.10	22	106	163	31	33
	2700	1589	2.27	24	120	185	37	38
	2900	1707	2.44	27	134	207	42	43
	3000	1765	2.53	30	149	231	47	49
043	3000	1766	1.98	28	92	144	28	30
	3200	1883	2.12	29	104	163	32	34
	3400	2001	2.25	30	117	180	36	38
	3600	2119	2.38	31	129	198	40	42
	3800	2236	2.51	32	141	216	44	46
	4000	2354	2.65	33	153	235	48	50
	4200	2472	2.78	35	165	254	55	57
053	3900	2295	1.93	23	87	133	28	29
	4100	2413	2.03	25	97	148	31	32
	4300	2531	2.13	26	106	162	33	34
	4500	2648	2.23	28	115	177	36	37
	4700	2766	2.33	29	124	191	39	40
	4900	2884	2.43	31	133	204	41	43
	5100	3001	2.53	32	142	218	44	46
	5300	3119	2.63	34	151	233	46	50
063	5100	3001	2.11	25	105	158	32	34
	5300	3119	2.20	26	112	170	34	36
	5500	3237	2.28	27	120	182	37	39
	5700	3355	2.36	29	127	194	39	41
	5900	3472	2.45	30	135	205	41	44
	6100	3590	2.53	31	141	216	44	46
	6300	3708	2.61	33	148	228	46	49
	6500	3825	2.69	34	156	241	49	52
	6700	3943	2.78	36	164	252	51	55

Cooling Coil Performance Data

EDB / EWB 25 / 18 C

Model	Airflow	WFR	WPD	Entering Water Temperature - C														
				5					7					9				
				LDB	LWB	WTR	S.Cap	T. Cap	LDB	LWB	WTR	S.Cap	T.Cap	LDB	LWB	WTR	S.Cap	T. Cap
LWHA	QMH	L/min	kPa	C	C	C	kW	kW	C	C	C	kW	kW	C	C	C	kW	kW
013 4 Rows	1100	20	5.24	11.51	11.23	4.90	5.07	6.78	12.46	12.17	4.29	4.71	5.94	13.38	13.08	3.67	4.36	5.08
		25	8.07	10.75	10.48	4.22	5.35	7.45	11.85	11.57	3.68	4.94	6.48	12.93	12.64	3.12	4.53	5.50
		30	11.03	10.26	10.00	3.75	5.54	7.86	11.46	11.18	3.25	5.09	6.83	12.64	12.35	2.75	4.64	5.77
		35	14.39	9.89	9.63	3.36	5.68	8.17	11.17	10.89	2.91	5.20	7.08	12.42	12.13	2.45	4.72	5.97
	40	18.66	9.56	9.31	3.00	5.80	8.44	10.92	10.64	2.60	5.29	7.30	12.23	11.95	2.18	4.80	6.14	
	1300	20	5.23	12.26	11.91	5.27	5.65	7.30	13.09	12.72	4.63	5.29	6.41	13.89	13.51	3.98	4.93	5.51
		25	8.05	11.52	11.18	4.58	5.98	8.08	12.50	12.14	4.00	5.55	7.04	13.46	13.08	3.41	5.12	6.00
		30	11.01	11.04	10.70	4.08	6.20	8.57	12.12	11.76	3.55	5.72	7.45	13.17	12.80	3.01	5.25	6.32
		35	14.37	10.66	10.33	3.68	6.36	8.95	11.82	11.47	3.19	5.85	7.76	12.96	12.59	2.69	5.35	6.56
	40	18.63	10.34	10.01	3.30	6.51	9.28	11.56	11.22	2.86	5.96	8.03	12.76	12.40	2.41	5.43	6.77	
	1500	20	5.22	12.89	12.45	5.59	6.20	7.74	13.62	13.17	4.92	5.83	6.81	14.33	13.87	4.26	5.47	5.89
		25	8.04	12.19	11.76	4.88	6.56	8.61	13.06	12.62	4.27	6.12	7.52	13.91	13.46	3.65	5.68	6.44
		30	10.99	11.71	11.29	4.37	6.81	9.18	12.69	12.25	3.81	6.31	7.99	13.64	13.19	3.24	5.82	6.79
		35	14.35	11.34	10.93	3.95	7.00	9.62	12.40	11.97	3.43	6.46	8.35	13.42	12.97	2.91	5.93	7.07
	40	18.61	11.02	10.61	3.55	7.16	10.00	12.14	11.71	3.08	6.59	8.66	13.23	12.78	2.60	6.03	7.31	
	013 6 Rows	1100	20	7.55	9.60	9.54	5.95	5.79	8.24	10.82	10.76	5.20	5.33	7.20	12.03	11.97	4.42	4.87
25			11.59	8.77	8.71	5.07	6.10	8.93	10.16	10.10	4.41	5.58	7.77	11.53	11.47	3.73	5.06	6.57
30			15.81	8.27	8.21	4.45	6.29	9.34	9.75	9.70	3.87	5.73	8.11	11.22	11.16	3.26	5.18	6.84
35			20.60	7.90	7.85	3.95	6.42	9.63	9.46	9.40	3.44	5.84	8.36	11.00	10.94	2.89	5.26	7.04
40		26.65	7.59	7.54	3.51	6.54	9.87	9.21	9.16	3.05	5.93	8.56	10.81	10.75	2.56	5.33	7.21	
1300		20	7.53	10.38	10.30	6.48	6.49	8.98	11.47	11.39	5.67	6.01	7.85	12.53	12.45	4.85	5.53	6.71
		25	11.56	9.54	9.46	5.57	6.86	9.82	10.80	10.72	4.85	6.31	8.55	12.03	11.95	4.12	5.76	7.25
		30	15.78	9.00	8.93	4.93	7.10	10.35	10.37	10.29	4.29	6.49	8.99	11.71	11.63	3.62	5.90	7.60
		35	20.56	8.60	8.53	4.41	7.28	10.73	10.05	9.97	3.83	6.64	9.31	11.47	11.39	3.23	6.01	7.85
40		26.61	8.27	8.20	3.93	7.43	11.05	9.78	9.70	3.41	6.76	9.58	11.27	11.18	2.87	6.10	8.07	
1500		20	7.52	11.05	10.95	6.93	7.14	9.60	12.03	11.91	6.08	6.65	8.41	12.97	12.85	5.22	6.16	7.22
		25	11.54	10.22	10.11	6.00	7.57	10.50	11.36	11.25	5.24	6.99	9.23	12.48	12.36	4.46	6.42	7.85
		30	15.75	9.67	9.57	5.34	7.85	11.21	10.93	10.88	4.65	7.21	9.75	12.15	12.04	3.94	6.58	8.26
		35	20.53	9.26	9.16	4.80	8.06	11.68	10.60	10.49	4.17	7.38	10.14	11.91	11.79	3.52	6.71	8.56
40		26.57	8.90	8.80	4.29	8.25	12.08	10.31	10.21	3.73	7.53	10.48	11.69	11.58	3.14	6.82	8.83	
023 4 Rows		2000	25	4.00	12.56	12.25	6.04	8.50	10.65	13.30	12.98	5.34	7.99	9.41	14.02	13.69	4.63	7.50
	30		5.46	11.95	11.65	5.55	8.91	11.65	12.81	12.50	4.88	8.32	10.23	13.66	13.34	4.19	7.75	8.79
	35		7.12	11.46	11.16	5.11	9.25	12.45	12.42	12.12	4.47	8.59	10.88	13.37	13.05	3.82	7.95	9.29
	40		9.21	11.01	10.72	4.68	9.56	13.16	12.07	11.77	4.08	8.83	11.46	13.10	12.79	3.47	8.13	9.74
	45	11.28	10.68	10.40	4.34	9.78	13.67	11.81	11.51	3.78	9.01	11.88	12.91	12.60	3.20	8.26	10.06	
	2300	25	3.99	13.14	12.76	6.38	9.31	11.25	13.79	13.40	5.66	8.81	9.98	14.42	14.03	4.94	8.31	8.70
		30	5.45	12.57	12.20	5.89	9.77	12.36	13.33	12.95	5.19	9.16	10.88	14.08	13.69	4.48	8.58	9.40
		35	7.10	12.09	11.73	5.44	10.14	13.25	12.96	12.58	4.77	9.46	11.61	13.80	13.41	4.09	8.80	9.96
		40	9.20	11.66	11.30	5.00	10.48	14.05	12.61	12.24	4.36	9.73	12.27	13.54	13.16	3.72	9.00	10.46
	45	11.26	11.34	10.99	4.65	10.73	14.64	12.36	11.99	4.05	9.93	12.75	13.36	12.98	3.44	9.14	10.83	
	2600	25	3.99	13.63	13.19	6.68	10.09	11.77	14.21	13.75	5.95	9.58	10.48	14.77	14.31	5.21	9.08	9.18
		30	5.44	13.09	12.65	6.18	10.57	12.97	13.78	13.33	5.46	9.96	11.45	14.44	13.99	4.74	9.37	9.94
		35	7.09	12.64	12.21	5.73	10.97	13.94	13.42	12.98	5.03	10.28	12.24	14.18	13.72	4.34	9.61	10.55
		40	9.19	12.22	11.80	5.27	11.34	14.83	13.09	12.65	4.61	10.57	12.97	13.93	13.48	3.95	9.83	11.10
	45	11.25	11.91	11.49	4.92	11.62	15.49	12.85	12.41	4.29	10.79	13.50	13.75	13.30	3.66	9.99	11.51	
	2000	35	10.23	9.54	9.49	6.19	10.56	15.07	10.79	10.73	5.40	9.70	13.14	12.01	11.49	4.59	8.87	11.17
40		13.22	9.05	8.99	5.62	10.89	15.82	10.40	10.33	4.90	9.97	13.76	11.72	11.65	4.15	9.07	11.65	
45		16.17	8.70	8.65	5.19	11.13	16.34	10.12	10.05	4.51	10.17	14.20	11.50	11.44	3.81	9.22	12.00	
50		19.37	8.42	8.36	4.81	11.33	16.76	9.88	9.83	4.18	10.33	14.56	11.33	11.27	3.53	9.34	12.28	
55	23.27	8.15	8.10	4.44	11.51	17.14	9.67	9.61	3.85	10.47	14.88	11.17	11.11	3.25	9.44	12.54		
023 6 Rows	2300	35	10.21	10.21	10.13	6.65	11.62	16.20	11.34	11.25	5.81	10.73	14.15	12.44	12.35	4.96	9.87	12.06
		40	13.20	9.71	9.63	6.07	12.01	17.08	10.94	10.85	5.29	11.04	14.88	12.14	12.05	4.50	10.10	12.63
		45	16.14	9.35	9.27	5.63	12.29	17.71	10.65	10.57	4.90	11.27	15.41	11.93	11.84	4.15	10.27	13.04
		50	19.33	9.05	8.97	5.23	12.53	18.23	10.41	10.33	4.55	11.46	15.84	11.75	11.66	3.84	10.41	13.38
	55	23.23	8.77	8.69	4.84	12.75	18.71	10.19	10.10	4.21	11.64	16.24	11.58	11.49	3.55	10.54	13.70	
	2600	35	10.19	10.79	10.69	7.05	12.61	17.17	11.82	11.71	6.18	11.70	15.03	12.81	12.70	5.29	10.82	12.86
		40	13.18	10.30	10.19	6.47	13.06	18.18	11.42	11.31	5.64	12.05	15.86	12.52	12.41	4.81	11.08	13.51
		45	16.11	9.93	9.83	6.01	13.38	18.91	11.13	11.03	5.23	12.31	16.47	12.31	12.19	4.44	11.27	13.98
		50	19.30	9.63	9.52	5.60	13.65	19.52	10.89	10.78	4.87	12.53	16.97	12.12	12.01	4.13	11.43	14.37
	55	23.20	9.34	9.24	5.20	13.91	20.09	10.66	10.55	4.52	12.73	17.45	11.95	11.84	3.82	11.59	14.74	
	2500	40	10.16	11.50	11.18	5.52	11.53	15.53	12.48	12.14	4.82	10.69	13.55	13.42	13.08	4.11	9.88	11.56
		50	14.91	10.89	10.58	4.80	12.05	16.73	11.99	11.66	4.18	11.11	14.54	13.07	12.72	3.54	10.19	12.32
		60	20.83	10.42	10.11	4.20	12.45	17.64	11.62	11.30	3.64	11.42	15.29	12.79	12.45	3.08	10.42	12.90
		70	27.62	10.07	9.77	3.73	12.75	18.30	11.34	11.02	3.23	11.66	15.84	12.58	12.24	2.72	10.60	13.30
	80	34.78	9.80	9.51	3.37	12.97	18.80	11.13	10.82	2.91	11.84	16.25	12.42	12.09	2.45	10.74	13.66	
	033 4 Rows	2700	40	10.15	11.86	11.50	5.72	12.12	16.07	12.78	12.40	5.00	11.27	14.05	13.67	13.28	4.27	10.45
50			14.90	11.25	10.90	4.99	12.68	17.37	12.30	11.93	4.34	11.71	15.11	13.31	12.93	3.68	10.78	12.82
60			20.81	<														

Cooling Coil Performance Data

EDB / EWB 25 / 18 C

Model	Airflow	WFR	WPD	Entering Water Temperature - C															
				5					7					9					
				LDB	LWB	WTR	S.Cap	T. Cap	LDB	LWB	WTR	S.Cap	T.Cap	LDB	LWB	WTR	S.Cap	T. Cap	
LWHA	CMH	L/min	kPa	C	C	C	kW	kW	C	C	C	kW	kW	C	C	C	kW	kW	
043 4 Rows	3100	40	7.96	12.15	11.83	6.26	13.61	17.60	12.98	12.65	5.50	12.73	15.47	13.78	13.45	4.74	11.87	13.32	
		50	11.66	11.44	11.14	5.56	14.35	19.36	12.42	12.10	4.86	12.42	12.10	13.37	13.04	4.15	12.31	14.43	
		60	16.27	10.89	10.59	4.94	14.94	20.72	11.98	11.67	4.30	13.78	18.02	13.05	12.72	3.64	12.65	15.28	
		70	21.55	10.47	10.17	4.42	15.39	21.73	11.65	11.34	3.84	14.13	18.85	12.80	12.48	3.25	12.91	15.92	
	80	27.11	10.16	9.87	4.02	15.71	22.45	11.40	11.10	3.49	14.39	19.45	12.62	12.30	2.94	13.11	16.39		
	3500	40	7.95	12.68	12.30	6.58	14.73	18.50	13.42	13.04	5.80	13.84	16.30	14.15	13.75	5.02	12.97	14.10	
		50	11.65	12.00	11.63	5.87	15.54	20.44	12.89	12.51	5.14	14.47	17.89	13.75	13.36	4.40	13.45	15.32	
		60	16.25	11.46	11.10	5.23	16.19	21.96	12.46	12.09	4.56	14.99	19.13	13.43	13.05	3.88	13.82	16.27	
		70	21.52	11.04	10.69	4.71	16.68	23.11	12.13	11.76	4.09	15.38	20.07	13.19	12.81	3.46	14.11	16.99	
	80	27.08	10.73	10.39	4.29	17.05	23.95	11.89	11.52	3.72	15.67	20.76	13.01	12.63	3.14	14.33	17.53		
	3900	40	7.94	13.14	12.70	6.86	15.79	19.29	13.82	13.37	6.06	14.89	17.05	14.47	14.01	5.27	14.02	14.81	
		50	11.63	12.49	12.06	6.14	16.66	21.39	13.30	12.86	5.39	15.58	18.76	14.09	13.63	4.63	14.53	16.13	
		60	16.23	11.97	11.54	5.49	17.36	23.06	12.89	12.45	4.79	16.13	20.12	13.78	13.33	4.09	14.94	17.17	
		70	21.49	11.56	11.14	4.96	17.91	24.34	12.57	12.14	4.31	16.56	21.16	13.55	13.10	3.66	15.26	17.96	
	80	27.05	11.25	10.84	4.53	18.31	25.28	12.33	11.90	3.93	16.88	21.93	13.37	12.92	3.33	15.49	18.55		
	043 6 Rows	3100	40	11.53	10.37	10.31	7.61	15.48	21.40	11.45	11.38	6.67	14.34	18.74	12.51	12.43	5.71	13.23	16.03
60			23.47	8.95	8.89	5.90	16.99	24.77	10.32	10.25	5.13	15.54	21.53	11.66	11.59	4.34	14.12	18.21	
80			39.00	8.17	8.12	4.75	17.81	26.52	9.70	9.64	4.12	16.20	23.01	11.20	11.13	3.47	14.61	19.38	
100			58.54	7.70	7.64	3.94	18.32	27.59	9.31	9.25	3.41	16.61	23.93	10.90	10.83	2.87	14.93	20.12	
120		80.80	7.37	7.32	3.37	18.66	28.30	9.05	8.99	2.92	16.88	24.53	10.69	10.63	2.46	15.14	20.62		
3500		40	11.50	10.95	10.86	8.05	16.80	22.63	11.92	11.83	7.07	15.63	19.86	12.87	12.78	6.08	14.49	17.07	
		60	23.43	9.52	9.44	6.32	18.50	26.51	10.79	10.71	5.50	16.98	23.06	12.03	11.94	4.66	15.50	19.54	
		80	38.94	8.71	8.64	5.13	19.47	28.61	10.15	10.06	4.45	17.75	24.82	11.55	11.46	3.75	16.07	20.93	
		100	58.46	8.20	8.13	4.27	20.08	29.93	9.73	9.65	3.70	18.25	25.95	11.23	11.14	3.12	16.46	21.83	
120		80.70	7.84	7.77	3.67	20.51	30.82	9.45	9.36	3.18	18.59	26.70	11.01	10.92	2.68	16.72	22.45		
3900		40	11.48	11.45	11.34	8.44	18.05	23.72	12.34	12.22	7.42	16.87	20.86	13.20	13.08	6.41	15.72	18.00	
		60	23.39	10.04	9.94	6.68	19.92	28.04	11.22	11.11	5.82	18.35	24.42	12.37	12.26	4.95	16.82	20.75	
		80	38.89	9.22	9.12	5.46	21.02	30.48	10.57	10.46	4.74	19.22	26.45	11.88	11.77	4.00	17.47	22.33	
		100	58.39	8.67	8.58	4.57	21.74	32.05	10.13	10.03	3.96	19.81	27.78	11.55	11.44	3.34	17.91	23.39	
120		80.61	8.30	8.21	3.94	22.24	33.11	9.82	9.72	3.42	20.21	28.69	11.32	11.21	2.88	18.22	24.13		
053 4 Rows		4200	60	8.86	12.00	11.68	5.81	18.65	24.38	12.86	12.53	5.10	17.42	21.40	13.70	13.36	4.38	16.21	18.38
	80		14.76	11.09	10.79	4.91	19.95	27.41	12.15	11.82	4.28	18.44	23.87	13.17	12.84	3.64	16.96	20.28	
	100		22.20	10.47	10.18	4.20	20.83	29.43	11.66	11.34	3.64	19.14	25.53	12.81	12.48	3.08	17.48	21.56	
	120		30.70	10.06	9.76	3.66	21.43	30.77	11.33	11.01	3.17	19.61	26.64	12.56	12.24	2.67	17.84	22.43	
	140	40.42	9.73	9.45	3.25	21.90	31.78	11.07	10.77	2.81	19.97	27.47	12.37	12.05	2.36	18.11	23.09		
	4600	60	8.85	12.40	12.03	6.04	19.79	25.34	13.20	12.82	5.31	18.54	22.28	13.98	13.59	4.58	17.32	19.20	
		80	14.74	11.52	11.17	5.13	21.18	28.62	12.50	12.14	4.47	19.63	24.95	13.46	13.08	3.81	18.13	21.25	
		100	22.18	10.90	10.56	4.40	22.14	30.84	12.02	11.66	3.82	20.39	26.77	13.10	12.73	3.23	18.69	22.65	
		120	30.68	10.48	10.15	3.85	22.80	32.33	11.69	11.33	3.34	20.91	28.01	12.86	12.48	2.81	19.08	23.60	
	140	40.39	10.16	9.83	3.42	23.31	33.46	11.43	11.08	2.96	21.31	28.94	12.66	12.29	2.49	19.38	24.34		
	5000	60	8.84	12.77	12.35	6.24	20.89	26.21	13.51	13.08	5.50	19.62	23.08	14.23	13.80	4.76	18.39	19.96	
		80	14.73	11.91	11.51	5.32	22.35	29.71	12.83	12.42	4.65	20.78	25.94	13.73	13.30	3.97	19.25	22.14	
		100	22.16	11.30	10.91	4.58	23.39	32.13	12.35	11.95	3.98	21.59	27.91	13.38	12.95	3.38	19.85	23.65	
		120	30.65	10.88	10.50	4.02	24.11	33.77	12.02	11.62	3.49	22.16	29.26	13.13	12.71	2.94	20.27	24.69	
	140	40.36	10.56	10.19	3.58	24.66	35.00	11.77	11.37	3.10	22.60	30.29	12.94	12.52	2.61	20.60	25.50		
	053 6 Rows	4200	60	12.71	10.17	10.10	7.07	21.28	29.68	11.29	11.21	6.19	19.67	25.96	12.38	12.31	5.29	18.09	22.16
80			21.11	9.15	9.08	5.90	22.74	32.94	10.48	10.41	5.14	20.83	28.66	11.78	11.71	4.35	18.96	24.26	
100			31.69	8.48	8.42	4.99	23.69	35.01	9.95	9.88	4.34	21.59	30.39	11.38	11.31	3.66	19.53	25.63	
120			43.73	8.05	7.99	4.33	24.31	36.32	9.60	9.53	3.75	22.09	31.51	11.12	11.05	3.16	19.91	26.52	
140		57.47	7.74	7.68	3.81	24.76	37.26	9.35	9.28	3.30	22.45	32.31	10.93	10.86	2.78	20.19	27.17		
4600		60	12.69	10.60	10.51	7.39	22.63	31.01	11.64	11.55	6.47	20.98	27.16	12.66	12.57	5.55	19.38	23.25	
		80	21.09	9.58	9.50	6.20	24.23	34.63	10.83	10.75	5.40	22.25	30.15	12.06	11.97	4.58	20.33	25.57	
		100	31.65	8.89	8.82	5.28	25.30	36.99	10.29	10.21	4.58	23.11	32.12	11.66	11.57	3.87	20.96	27.11	
		120	43.68	8.44	8.37	4.59	26.01	38.51	9.93	9.85	3.98	23.68	33.40	11.38	11.30	3.35	21.39	28.13	
140		57.41	8.12	8.04	4.05	26.52	39.60	9.66	9.58	3.51	24.10	34.34	11.18	11.09	2.96	21.71	28.89		
5000		60	12.68	10.99	10.89	7.68	23.92	32.21	11.97	11.86	6.74	22.26	28.25	12.92	12.81	5.79	20.63	24.26	
		80	21.06	9.98	9.88	6.48	25.65	36.17	11.16	11.06	5.65	23.63	31.51	12.32	12.21	4.80	21.65	26.78	
		100	31.62	9.28	9.19	5.54	26.84	38.80	10.61	10.51	4.81	24.57	33.70	11.91	11.81	4.07	22.35	28.48	
		120	43.64	8.82	8.73	4.83	27.63	40.53	10.24	10.14	4.19	25.20	35.16	11.63	11.53	3.53	22.83	29.63	
140		57.36	8.48	8.39	4.27	28.22	41.79	9.96	9.87	3.71	25.68	36.23	11.42	11.32	3.12	23.19	30.49		
063 4 Rows		5500	80	14.31	11.88	11.52	5.84	24.64	32.62	12.79	12.42	5.11	22.94	28.53	13.67	13.29	4.38	21.28	24.41
	100		21.52	11.22	10.87	5.07	25.89	35.51	12.27	11.90	4.41	23.92	30.89	13.28	12.91	3.74	22.00	26.23	
	120		29.74	10.76	10.42	4.47	26.75	37.49	11.90	11.55	3.87	24.60	32.52	13.02	12.64	3.27	22.51	27.47	
	140		39.14	10.41	10.08	3.98	27.40	38.95	11.63	11.28	3.45	25.12	33.72	12.81	12.44	2.91	22.89	28.42	
	160	50.01	10.12	9.80	3.58	27.94	40.15	11.40	11.05	3.10	25.54	34.72	12.64	12.27	2.61	23.21	29.20		
	5900	80	14.30	12.20	11.81	6.02	25.79	33.62	13.06	12.65	5.28	24.06	29.44						

Cooling Coil Performance Data

EDB / EWB 27 / 19.5 C

Model	Airflow	WFR	WPD	Entering Water Temperature - C														
				5					7					9				
				LDB	LWB	WTR	S.Cap	T. Cap	LDB	LWB	WTR	S.Cap	T.Cap	LDB	LWB	WTR	S.Cap	T.Cap
LWHA	CMH	L/min	kPa	C	C	C	kW	kW	C	C	C	kW	kW	C	C	C	kW	kW
013 4 Rows	1100	20	5.22	12.46	12.16	5.57	5.47	7.71	13.39	13.08	4.95	5.12	6.85	14.31	13.99	4.31	4.78	5.96
		25	8.04	11.58	11.30	4.82	5.80	8.49	12.68	12.38	4.26	5.39	7.51	13.76	13.44	3.69	4.99	6.50
		30	11.00	11.02	10.75	4.28	6.01	8.98	12.22	11.93	3.78	5.56	7.93	13.40	13.09	3.26	5.12	6.84
		35	14.36	10.58	10.32	3.84	6.18	9.35	11.87	11.58	3.38	5.70	8.24	13.12	12.82	2.92	5.22	7.10
		40	18.62	10.21	9.95	3.44	6.32	9.67	11.56	11.28	3.03	5.81	8.51	12.89	12.59	2.60	5.31	7.32
	1300	20	5.21	13.30	12.92	5.98	6.10	8.28	14.11	13.72	5.32	5.73	7.37	14.91	14.51	4.65	5.38	6.44
		25	8.03	12.46	12.09	5.21	6.47	9.19	13.43	13.04	4.62	6.04	8.14	14.38	13.98	4.01	5.61	7.06
		30	10.98	11.90	11.55	4.66	6.72	9.77	12.97	12.60	4.11	6.24	8.63	14.03	13.64	3.56	5.77	7.46
		35	14.34	11.47	11.13	4.20	6.91	10.22	12.62	12.26	3.70	6.39	9.01	13.76	13.37	3.19	5.89	7.77
		40	18.59	11.08	10.75	3.77	7.08	10.62	12.32	11.95	3.32	6.53	9.34	13.51	13.13	2.86	6.00	8.04
	1500	20	5.20	14.00	13.53	6.32	6.67	8.75	14.71	14.23	5.64	6.31	7.81	15.42	14.93	4.95	5.94	6.85
		25	8.02	13.20	12.74	5.55	7.08	9.78	14.06	13.59	4.92	6.64	8.67	14.92	14.43	4.28	6.20	7.54
		30	10.96	12.66	12.22	4.98	7.36	10.44	13.63	13.17	4.40	6.86	9.23	14.58	14.10	3.81	6.38	7.99
		35	14.32	12.24	11.80	4.50	7.58	10.96	13.28	12.83	3.97	7.04	9.67	14.31	13.84	3.43	6.51	8.35
		40	18.57	11.86	11.43	4.06	7.77	11.42	12.98	12.53	3.58	7.20	10.05	14.07	13.60	3.08	6.64	8.66
	013 6 Rows	1100	20	7.52	10.33	10.28	6.78	6.27	9.39	11.55	11.48	6.01	5.82	8.32	12.75	12.68	5.22	5.36
25			11.55	9.38	9.32	5.78	6.63	10.20	10.76	10.70	5.12	6.11	9.02	12.13	12.06	4.43	5.60	7.80
30			15.77	8.80	8.74	5.09	6.85	10.68	10.27	10.22	4.50	6.30	9.44	11.74	11.68	3.88	5.74	8.15
35			20.55	8.37	8.31	4.53	7.01	11.02	9.92	9.87	4.00	6.43	9.74	11.46	11.40	3.45	5.85	8.40
40			26.59	8.00	7.95	4.02	7.15	11.31	9.63	9.57	3.55	6.54	9.99	11.22	11.17	3.06	5.94	8.61
1300		20	7.50	11.23	11.14	7.37	7.02	10.20	12.30	12.21	6.54	6.54	9.05	13.36	13.27	5.70	6.07	7.88
		25	11.53	10.26	10.18	6.35	7.45	11.19	11.51	11.42	5.62	6.89	9.91	12.74	12.65	4.87	6.34	8.58
		30	15.73	9.64	9.57	5.63	7.72	11.81	11.00	10.92	4.97	7.12	10.43	12.34	12.25	4.30	6.52	9.01
		35	20.51	9.18	9.11	5.05	7.93	12.26	10.62	10.54	4.45	7.29	10.83	12.04	11.95	3.84	6.65	9.34
		40	26.54	8.79	8.72	4.49	8.10	12.64	10.30	10.22	3.97	7.43	11.16	11.78	11.69	3.42	6.77	9.62
1500		20	7.49	11.98	11.87	7.86	7.71	10.88	12.94	12.82	6.99	7.22	9.67	13.88	13.76	6.10	6.73	8.44
		25	11.50	11.03	10.92	6.83	8.20	12.04	12.16	12.05	6.05	7.62	10.66	13.27	13.15	5.25	7.04	9.24
		30	15.70	10.41	10.30	6.09	8.52	12.77	11.65	11.54	5.38	7.88	11.29	12.87	12.75	4.66	7.25	9.76
		35	20.47	9.93	9.83	5.47	8.76	13.33	11.26	11.15	4.83	8.08	11.77	12.56	12.45	4.17	7.41	10.15
		40	26.50	9.51	9.41	4.91	8.98	13.80	10.91	10.80	4.33	8.26	12.18	12.29	12.18	3.73	7.55	10.49
023 4 Rows		2000	25	3.98	13.64	13.31	6.84	9.14	12.05	14.36	14.02	6.12	8.65	10.79	15.08	14.74	5.39	8.16
	30		5.44	12.95	12.63	6.30	9.61	13.22	13.80	13.47	5.61	9.03	11.77	14.64	14.30	4.90	8.46	10.28
	35		7.09	12.39	12.08	5.81	10.00	14.15	13.35	13.02	5.16	9.34	12.55	14.29	13.95	4.49	8.70	10.92
	40		9.19	11.88	11.58	5.33	10.35	14.99	12.93	12.61	4.72	9.63	13.26	13.96	13.63	4.09	8.92	11.49
	45		11.25	11.51	11.21	4.95	10.60	15.58	12.62	12.31	4.37	9.84	13.77	13.73	13.40	3.78	9.08	11.90
	2300	25	3.98	14.28	13.88	7.21	10.01	12.70	14.92	14.51	6.47	9.51	11.40	15.55	15.13	5.72	9.01	10.07
		30	5.43	13.64	13.25	6.67	10.51	13.99	14.39	13.99	5.95	9.92	12.48	15.14	14.73	5.22	9.33	10.94
		35	7.08	13.11	12.72	6.17	10.93	15.03	13.96	13.56	5.49	10.26	13.35	14.80	14.39	4.79	9.60	11.65
		40	9.17	12.61	12.24	5.68	11.32	15.98	13.56	13.17	5.03	10.58	14.15	14.49	14.08	4.37	9.85	12.29
		45	11.23	12.24	11.88	5.29	11.61	16.67	13.26	12.87	4.68	10.81	14.74	14.26	13.85	4.06	10.03	12.76
	2600	25	3.97	14.83	14.35	7.52	10.83	13.26	15.40	14.91	6.77	10.32	11.93	15.96	15.46	6.01	9.82	10.58
		30	5.40	14.23	13.76	6.98	11.37	14.65	14.90	14.42	6.24	10.76	13.10	15.57	15.08	5.50	10.17	11.52
		35	7.08	13.72	13.26	6.49	11.82	15.79	14.49	14.01	5.77	11.13	14.05	15.25	14.76	5.05	10.46	12.29
		40	9.16	13.24	12.79	5.99	12.24	16.83	14.10	13.64	5.31	11.47	14.93	14.94	14.46	4.62	10.72	12.99
		45	11.21	12.89	12.45	5.59	12.55	17.60	13.81	13.35	4.95	11.73	15.58	14.72	14.24	4.30	10.92	13.51
	2000	35	10.19	10.28	10.22	7.05	11.44	17.16	11.51	11.44	6.25	10.60	15.20	12.72	12.65	5.42	9.77	13.18
40		13.18	9.71	9.65	6.42	11.84	18.04	11.04	10.98	5.68	10.92	15.96	12.36	12.29	4.91	10.02	13.80	
45		16.12	9.30	9.25	5.93	12.11	18.65	10.71	10.64	5.24	11.15	16.49	12.09	12.03	4.53	10.20	14.24	
50		19.31	8.97	8.92	5.50	12.34	19.15	10.43	10.37	4.86	11.34	16.92	11.88	11.81	4.20	10.35	14.60	
55		23.21	8.67	8.61	5.08	12.54	19.60	10.18	10.12	4.49	11.51	17.31	11.68	11.61	3.87	10.49	14.93	
2300	35	10.17	11.03	10.95	7.56	12.57	18.41	12.15	12.06	6.71	11.69	16.32	13.24	13.15	5.83	10.83	14.18	
	40	13.15	10.46	10.38	6.92	13.02	19.45	11.68	11.59	6.12	12.06	17.21	12.88	12.78	5.31	11.12	14.91	
	45	16.08	10.04	9.96	6.41	13.34	20.19	11.34	11.25	5.67	12.33	17.85	12.61	12.51	4.91	11.33	15.43	
	50	19.27	9.70	9.62	5.97	13.62	20.80	11.05	10.96	5.28	12.55	18.38	12.38	12.29	4.56	11.50	15.87	
	55	23.17	9.37	9.30	5.53	13.87	21.37	10.78	10.70	4.89	12.76	18.86	12.17	12.08	4.22	11.67	16.27	
2600	35	10.15	11.69	11.58	8.00	13.62	19.47	12.70	12.59	7.11	12.72	17.29	13.70	13.57	6.19	11.83	15.06	
	40	13.13	11.13	11.02	7.35	14.12	20.66	12.24	12.13	6.51	13.13	18.30	13.34	13.21	5.65	12.16	15.88	
	45	16.05	10.71	10.60	6.84	14.49	21.53	11.90	11.79	6.05	13.43	19.03	13.07	12.95	5.24	12.39	16.48	
	50	19.24	10.35	10.25	6.39	14.81	22.24	11.61	11.50	5.64	13.69	19.65	12.84	12.72	4.88	12.60	16.99	
	55	23.13	10.02	9.92	5.93	15.11	22.91	11.34	11.22	5.24	13.94	20.23	12.63	12.51	4.53	12.79	17.46	
033 4 Rows	2500	40	10.13	12.44	12.10	6.28	12.45	17.65	13.41	13.05	5.56	11.63	15.63	14.35	13.98	4.83	10.82	13.58
		50	14.87	11.74	11.41	5.47	13.05	19.07	12.84	12.49	4.83	12.12	16.83	13.91	13.55	4.18	11.20	14.55
		60	20.78	11.20	10.89	4.80	13.51	20.13	12.40	12.06	4.23	12.49	17.74	13.57	13.21	3.64	11.49	15.29
		70	27.55	10.79	10.48	4.26	13.87	20.94	12.07	11.73	3.75	12.78	18.42	13.31	12.95	3.23	11.71	15.85
		80	34.71	10.48	10.18	3.86	14.13	21.53	11.81	11.48	3.39	12.99	18.93	13.11	12.75	2.92	11.89	16.27
	2700	40	10.12	12.84	12.46	6.49	13.08	18.25	13.75	13.35	5.76	12.24	16.18	14.64	14.23	5.01	11.42	14.07
		50	14.85	12.15	11.78	5.68	13.72	19.78	13.19	12.80	5.02	12.76	17.47	14.20	13.80	4.34	11.82	15.11
		60	20.76	11.61	11.26	4.99	14.21	20.94	12.75	12.37	4.40	13.16	18.45	13.86	13.46	3.79	12.14	15.91
		70	27.53	11.20	10.85	4.44	14.60	21.82	12.42									

Cooling Coil Performance Data

EDB / EWB 27 / 19.5 C

Model	Airflow	WFR	WPD	Entering Water Temperature - C														
				5					7					9				
				LDB	LWB	WTR	S.Cap	T. Cap	LDB	LWB	WTR	S.Cap	T.Cap	LDB	LWB	WTR	S.Cap	T.Cap
LWHA	CMH	L/min	kPa	C	C	C	kW	kW	C	C	C	kW	kW	C	C	C	kW	kW
043 4 Rows	3100	40	7.93	13.18	12.84	7.09	14.66	19.94	13.99	13.65	6.32	13.80	17.77	14.80	14.44	5.53	12.94	15.55
		50	11.62	12.38	12.05	6.32	15.51	22.01	13.34	13.00	5.60	14.49	19.50	14.29	13.94	4.87	13.48	16.95
		60	16.22	11.74	11.43	5.62	16.18	23.60	12.83	12.50	4.97	15.03	20.86	13.89	13.55	4.30	13.90	18.04
		70	21.49	11.26	10.96	5.05	16.70	24.79	12.43	12.11	4.45	15.45	21.86	13.59	13.25	3.84	14.23	18.86
	80	27.04	10.90	10.60	4.60	17.08	25.67	12.14	11.82	4.05	15.76	22.60	13.36	13.02	3.49	14.47	19.46	
	3500	40	7.92	13.77	13.37	7.44	15.84	20.92	14.50	14.09	6.64	14.97	18.67	15.23	14.80	5.84	14.10	16.39
		50	11.60	13.00	12.61	6.66	16.76	23.19	13.88	13.48	5.91	15.71	20.58	14.74	14.33	5.15	14.68	17.93
		60	16.20	12.39	12.01	5.95	17.50	24.98	13.38	12.98	5.27	16.31	22.09	14.35	13.94	4.56	15.15	19.14
		70	21.46	11.91	11.54	5.36	18.07	26.34	12.99	12.60	4.73	16.78	23.23	14.05	13.65	4.09	15.51	20.06
	80	27.01	11.55	11.19	4.89	18.50	27.33	12.70	12.32	4.31	17.12	24.07	13.83	13.42	3.72	15.78	20.75	
	3900	40	7.91	14.28	13.81	7.75	16.97	21.78	14.95	14.47	6.93	16.08	19.48	15.60	15.11	6.11	15.21	17.15
		50	11.59	13.55	13.10	6.96	17.94	24.23	14.35	13.88	6.18	16.87	21.53	15.14	14.66	5.40	15.83	18.80
		60	16.17	12.95	12.51	6.24	18.74	26.20	13.87	13.41	5.53	17.52	23.18	14.76	14.29	4.80	16.33	20.12
		70	21.43	12.49	12.05	5.64	19.37	27.70	13.49	13.03	4.98	18.03	24.44	14.47	14.00	4.31	16.72	21.14
	80	26.97	12.13	11.71	5.16	19.84	28.81	13.20	12.75	4.55	18.41	25.38	14.25	13.78	3.93	17.02	21.90	
043 6 Rows	3100	40	11.47	11.23	11.16	8.64	16.73	24.28	12.29	12.22	7.68	15.60	21.57	13.34	13.26	6.69	14.49	18.80
		60	23.39	9.59	9.53	6.73	18.47	28.25	10.95	10.88	5.95	17.02	24.97	12.29	12.22	5.15	15.60	21.57
		80	38.89	8.69	8.64	5.43	19.42	30.32	10.21	10.15	4.80	17.81	26.77	11.71	11.64	4.14	16.22	23.08
		100	58.40	8.12	8.07	4.51	20.03	31.62	9.74	9.68	3.98	18.30	27.89	11.33	11.26	3.43	16.62	24.03
	120	80.63	7.75	7.69	3.87	20.42	32.46	9.42	9.36	3.41	18.65	28.65	11.07	11.00	2.94	16.89	24.67	
	3500	40	11.45	11.88	11.78	9.12	18.11	25.63	12.84	12.74	8.12	16.96	22.81	13.79	13.69	7.10	15.83	19.93
		60	23.34	10.25	10.16	7.19	20.06	30.18	11.51	11.42	6.36	18.55	26.68	12.75	12.65	5.51	17.07	23.08
		80	38.82	9.31	9.23	5.85	21.18	32.68	10.74	10.65	5.17	19.47	28.83	12.14	12.05	4.46	17.79	24.86
		100	58.31	8.71	8.63	4.89	21.91	34.25	10.24	10.15	4.31	20.08	30.21	11.74	11.65	3.72	18.28	26.02
	120	80.52	8.28	8.21	4.21	22.41	35.33	9.89	9.81	3.71	20.49	31.14	11.46	11.37	3.20	18.61	26.82	
	3900	40	11.43	12.44	12.32	9.54	19.43	26.81	13.31	13.19	8.50	18.26	23.89	14.17	14.05	7.46	17.11	20.94
		60	23.30	10.84	10.73	7.60	21.57	31.88	12.01	11.90	6.72	20.00	28.20	13.16	13.04	5.83	18.47	24.43
		80	38.76	9.89	9.79	6.23	22.84	34.77	11.23	11.12	5.50	21.05	30.67	12.54	12.43	4.74	19.29	26.46
		100	58.23	9.26	9.16	5.22	23.68	36.62	10.70	10.60	4.61	21.75	32.30	12.13	12.01	3.97	19.85	27.83
	120	80.42	8.81	8.72	4.52	24.28	37.92	10.34	10.23	3.98	22.23	33.41	11.83	11.72	3.43	20.24	28.77	
053 4 Rows	4200	60	8.82	13.00	12.66	6.59	20.12	27.66	13.85	13.50	5.87	18.89	24.61	14.69	14.33	5.13	17.69	21.50
		80	14.71	11.98	11.65	5.59	21.59	31.21	13.02	12.68	4.95	20.09	27.61	14.04	13.69	4.29	18.62	23.91
		100	22.15	11.27	10.96	4.79	22.61	33.59	12.44	12.11	4.23	20.92	29.62	13.60	13.25	3.65	19.26	25.55
		120	30.63	10.77	10.47	4.19	23.32	35.21	12.05	11.72	3.69	21.49	30.98	13.29	12.94	3.18	19.71	26.65
	140	40.34	10.40	10.11	3.72	23.85	36.40	11.74	11.42	3.27	21.93	32.00	13.05	12.71	2.81	20.05	27.50	
	4600	60	8.81	13.46	13.06	6.84	21.32	28.71	14.24	13.84	6.10	20.08	25.57	15.02	14.61	5.34	18.86	22.39
		80	14.70	12.45	12.08	5.83	22.89	32.55	13.43	13.04	5.16	21.36	28.81	14.39	13.98	4.48	19.85	24.98
		100	22.12	11.75	11.39	5.02	24.00	35.17	12.86	12.48	4.43	22.26	31.02	13.94	13.55	3.82	20.55	26.77
		120	30.61	11.26	10.91	4.40	24.78	36.95	12.46	12.09	3.88	22.88	32.52	13.64	13.24	3.34	21.04	28.00
	140	40.31	10.88	10.54	3.92	25.37	38.30	12.16	11.79	3.44	23.36	33.66	13.39	13.00	2.96	21.42	28.95	
	5000	60	8.80	13.86	13.42	7.06	22.48	29.65	14.59	14.14	6.31	21.22	26.45	15.31	14.85	5.53	19.99	23.21
		80	14.68	12.89	12.47	6.05	24.14	33.76	13.81	13.36	5.36	22.57	29.90	14.70	14.25	4.66	21.04	25.97
		100	22.10	12.20	11.79	5.22	25.33	36.60	13.24	12.81	4.61	23.54	32.29	14.27	13.82	3.98	21.79	27.90
		120	30.58	11.71	11.32	4.59	26.15	38.53	12.85	12.43	4.04	24.21	33.94	13.96	13.52	3.48	22.31	29.23
	140	40.27	11.33	10.94	4.09	26.81	40.04	12.54	12.13	3.60	24.73	35.19	13.72	13.28	3.10	22.72	30.27	
4200	60	12.66	10.99	10.91	8.04	23.01	33.72	12.10	12.02	7.14	21.42	29.93	13.19	13.11	6.21	19.85	26.04	
	80	21.04	9.82	9.75	6.73	24.69	37.55	11.14	11.07	5.95	22.79	33.21	12.44	12.36	5.15	20.92	28.72	
	100	31.59	9.05	8.99	5.71	25.80	39.99	10.51	10.44	5.04	23.71	35.32	11.94	11.87	4.35	21.64	30.47	
	120	43.62	8.54	8.49	4.95	26.53	41.55	10.09	10.02	4.37	24.30	36.68	11.61	11.54	3.77	22.12	31.61	
140	57.34	8.17	8.11	4.37	27.06	42.70	9.79	9.72	3.85	24.74	37.66	11.36	11.29	3.32	22.47	32.45		
4600	60	12.64	11.48	11.39	8.38	24.44	35.18	12.51	12.41	7.45	22.81	31.25	13.52	13.43	6.50	21.21	27.24	
	80	21.01	10.31	10.23	7.07	26.27	39.44	11.55	11.47	6.25	24.31	34.88	12.78	12.69	5.41	22.38	30.20	
	100	31.55	9.52	9.44	6.02	27.51	42.22	10.91	10.82	5.32	25.33	37.27	12.27	12.18	4.59	23.18	32.16	
	120	43.57	9.00	8.92	5.24	28.34	44.02	10.47	10.39	4.63	26.01	38.84	11.93	11.84	3.99	23.72	33.48	
140	57.27	8.60	8.53	4.64	28.95	45.35	10.15	10.07	4.09	26.52	39.99	11.67	11.58	3.53	24.13	34.45		
5000	60	12.62	11.92	11.81	8.70	25.80	36.49	12.88	12.77	7.74	24.15	32.46	13.83	13.71	6.76	22.53	28.35	
	80	20.98	10.76	10.66	7.37	27.78	41.14	11.94	11.83	6.52	25.77	36.40	13.09	12.98	5.66	23.79	31.55	
	100	31.51	9.97	9.87	6.31	29.14	44.25	11.29	11.18	5.58	26.88	39.06	12.58	12.47	4.82	24.67	33.73	
	120	43.52	9.43	9.33	5.52	30.07	46.30	10.84	10.74	4.87	27.65	40.84	12.23	12.12	4.20	25.27	35.20	
140	57.21	9.02	8.94	4.89	30.75	47.80	10.51	10.41	4.31	28.22	42.15	11.96	11.86	3.72	25.73	36.31		
063 4 Rows	5500	80	14.26	12.87	12.49	6.63	26.60	37.03	13.76	13.37	5.89	24.91	32.85	14.65	14.24	5.13	23.25	28.59
		100	21.46	12.11	11.75	5.77	28.02	40.43	13.15	12.77	5.10	26.06	35.71	14.17	13.77	4.41	24.14	30.50
		120	29.66	11.58	11.23	5.09	29.01	42.76	12.72	12.35	4.49	26.87	37.69	13.84	13.44	3.87	24.77	32.90
		140	39.04	11.18	10.83	4.55	29.78	44.52	12.40	12.03	4.01	27.48	39.17	13.58	13.19	3.45	25.25	33.71
	160	49.90	10.84	10.51	4.10	30.41	45.95	12.13	11.76	3.60	27.99	40.38	13.37	12.98	3.10	25.66	34.72	
	5900	80	14.25	13.23	12.81	6.83	27.81	38.13	14.07	13.64	6.07	26.10	33.85	14.91	14.46	5.29	24.42	29.51
		100	21.44	12.49	12.08	5.96	29.30	41.75	13.47	13.05	5.27	27.31	36.89	14.44	14.00	4.56	25.36	31.96
		120	29.64	11.96	111													

Cooling Coil Performance Data

EDB / EWB
32.2/22.2

Model	Airflow	WFR	WPD	Entering Water Temperature - C														
				5					7					9				
				LDB	LWB	WTR	S.Cap	T. Cap	LDB	LWB	WTR	S.Cap	T.Cap	LDB	LWB	WTR	S.Cap	T.Cap
LWHA	QMH	L/min	kPa	C	C	C	kW	kW	C	C	C	kW	kW	C	C	C	kW	kW
013 4 Rows	1100	20	5.19	14.21	13.82	6.92	6.79	9.58	15.10	14.69	6.30	6.46	8.72	15.98	15.55	5.66	6.12	7.82
		25	8.00	13.19	12.81	5.98	7.18	10.55	14.42	13.84	5.43	6.78	9.56	15.27	14.86	4.85	6.39	8.54
		30	10.95	12.52	12.16	5.32	7.43	11.16	13.67	13.29	4.81	6.99	10.10	14.82	14.41	4.29	6.56	9.00
		35	14.30	12.00	11.65	4.77	7.62	11.62	13.24	12.87	4.31	7.16	10.50	14.46	14.06	3.84	6.70	9.34
	40	18.55	11.54	11.20	4.28	7.80	12.03	12.87	12.50	3.86	7.30	10.85	14.15	13.76	3.43	6.81	9.64	
	1300	20	5.18	15.21	14.70	7.43	7.58	10.28	15.98	15.46	6.77	7.24	9.37	16.74	16.20	6.10	6.90	8.44
		25	7.98	14.24	13.75	6.47	8.01	11.41	15.16	14.65	5.87	7.60	10.35	16.07	15.55	5.26	7.19	9.26
		30	10.92	13.58	13.11	5.78	8.31	12.14	14.61	14.11	5.24	7.85	10.98	15.63	15.11	4.67	7.39	9.80
		35	14.27	13.07	12.61	5.21	8.53	12.69	14.18	13.69	4.71	8.04	11.47	15.28	14.77	4.20	7.55	10.21
	40	18.51	12.61	12.16	4.69	8.74	13.18	13.80	13.32	4.23	8.21	11.89	14.97	14.46	3.76	7.69	10.57	
	1500	20	5.17	16.04	15.41	7.85	8.32	10.87	16.72	16.07	7.17	7.97	9.93	17.38	16.73	6.48	7.63	8.96
		25	7.97	15.12	14.51	6.88	8.79	12.13	15.94	15.31	6.25	8.37	11.01	16.75	16.11	5.61	7.95	9.87
30		10.90	14.49	13.90	6.18	9.11	12.96	15.41	14.80	5.59	8.64	11.73	16.32	15.69	5.00	8.17	10.48	
35		14.25	13.99	13.42	5.59	9.37	13.60	15.00	14.39	5.05	8.86	12.29	15.98	15.36	4.50	8.35	10.95	
40	18.48	13.55	12.98	5.04	9.60	14.17	14.62	14.03	4.55	9.05	12.79	15.68	15.06	4.05	8.50	11.37		
013 6 Rows	1100	20	7.46	11.66	11.58	8.44	7.75	11.68	12.83	12.75	7.67	7.31	10.61	13.99	13.90	6.87	6.87	9.50
		25	11.48	10.51	10.44	7.20	8.19	12.69	11.86	11.78	6.53	7.68	11.50	13.19	13.11	5.83	7.18	10.27
		30	15.68	9.80	9.73	6.34	8.45	13.30	11.25	11.18	5.74	7.91	12.04	12.69	12.61	5.12	7.36	10.74
		35	20.45	9.28	9.22	5.64	8.65	13.73	10.81	10.73	5.11	8.08	12.44	12.32	12.24	4.56	7.50	11.08
	40	26.47	8.82	8.76	5.01	8.83	14.10	10.43	10.36	4.54	8.22	12.76	12.01	11.93	4.05	7.62	11.37	
	1300	20	7.44	12.73	12.62	9.16	8.69	12.68	13.76	13.64	8.33	8.23	11.53	14.78	14.65	7.48	7.77	10.34
		25	11.45	11.58	11.48	7.90	9.20	13.92	12.79	12.68	7.16	8.66	12.62	13.98	13.86	6.40	8.13	11.27
		30	15.63	10.84	10.74	7.00	9.53	14.69	12.16	12.05	6.34	8.94	13.30	13.47	13.35	5.66	8.36	11.86
		35	20.39	10.28	10.19	6.27	9.78	15.26	11.69	11.58	5.67	9.15	13.81	13.08	12.96	5.06	8.53	12.30
	40	26.41	9.80	9.71	5.60	9.99	15.74	11.28	11.17	5.07	9.33	14.24	12.74	12.62	4.51	8.68	12.68	
	1500	20	7.42	13.63	13.47	9.77	9.56	13.52	14.54	14.38	8.89	9.09	12.31	15.44	15.27	8.00	8.63	11.07
		25	11.42	12.51	12.36	8.49	10.13	14.96	13.60	13.44	7.70	9.57	13.56	14.67	14.51	6.89	9.02	12.13
30		15.60	11.77	11.63	7.57	10.52	15.88	13.97	12.82	6.85	9.90	14.37	14.16	14.00	6.12	9.29	12.82	
35		20.35	11.19	11.06	6.81	10.81	16.57	12.48	12.34	6.16	10.15	14.99	13.76	13.60	5.49	9.49	13.35	
40	26.36	10.69	10.59	6.10	11.07	17.17	12.06	11.91	5.52	10.37	15.52	13.40	13.25	4.92	9.67	13.81		
023 4 Rows	2000	25	3.95	15.59	15.15	8.51	11.40	15.00	16.26	15.81	7.80	10.94	13.73	16.94	16.48	7.06	10.47	12.43
		30	5.40	14.80	14.37	7.83	11.94	16.43	15.60	15.16	7.14	11.39	14.98	16.40	15.95	6.43	10.84	13.48
		35	7.05	14.15	13.73	7.22	12.39	17.58	15.05	14.62	6.56	11.77	15.97	15.95	15.51	5.89	11.15	14.32
		40	9.13	13.55	13.14	6.62	12.80	18.61	14.55	14.13	6.00	12.11	16.87	15.54	15.10	5.37	11.43	15.08
	45	11.18	13.10	12.71	6.15	13.11	19.36	14.18	13.76	5.57	12.37	17.53	15.24	14.80	4.97	11.64	15.63	
	2300	25	3.94	16.35	15.81	8.97	12.51	15.81	16.94	16.39	8.24	12.04	14.51	17.53	16.97	7.48	11.58	13.18
		30	5.39	15.61	15.08	8.29	13.09	17.38	16.32	15.78	7.57	12.53	15.87	17.02	16.47	6.83	11.98	14.32
		35	7.03	15.00	14.48	7.67	13.58	18.66	15.80	15.27	6.98	12.94	16.98	16.60	16.06	6.27	12.31	15.25
		40	9.11	14.42	13.92	7.05	14.03	19.84	15.32	14.80	6.40	13.32	17.99	16.21	15.67	5.73	12.62	16.11
	45	11.16	13.99	13.50	6.57	14.37	20.69	14.96	14.44	5.96	13.61	18.74	15.92	15.38	5.32	12.85	16.74	
	2600	25	3.94	16.99	16.35	9.37	13.57	16.51	17.51	16.86	8.62	13.10	15.19	18.04	17.38	7.86	12.64	13.83
		30	5.38	16.30	15.67	8.68	14.18	18.21	16.93	16.29	7.94	13.62	16.65	17.56	16.91	7.19	13.06	15.07
35		7.02	15.72	15.11	8.05	14.70	19.60	16.45	15.81	7.34	14.05	17.85	17.16	16.52	6.61	13.42	16.08	
40		9.10	15.18	14.57	7.43	15.19	20.89	15.99	15.36	6.75	14.46	18.97	16.79	16.15	6.06	13.75	17.01	
45	11.14	14.76	14.17	6.94	15.56	21.84	15.64	15.03	6.29	14.77	19.79	16.51	15.87	5.63	14.00	17.71		
2000	35	10.11	11.60	11.52	8.77	14.14	21.35	12.79	12.70	7.96	13.32	19.37	13.96	13.87	7.13	12.51	17.32	
	40	13.09	10.92	10.84	7.98	14.61	22.44	12.21	12.13	7.24	13.72	20.34	13.49	13.40	6.46	12.84	18.16	
	45	16.01	10.43	10.35	7.38	14.94	23.21	11.80	11.71	6.68	14.00	21.02	13.15	13.06	5.96	13.07	18.75	
	50	19.20	10.03	9.95	6.84	15.22	23.84	11.46	11.37	6.20	14.24	21.58	12.87	12.78	5.53	13.27	19.23	
55	23.08	9.65	9.58	6.32	15.47	24.41	11.14	11.06	5.73	14.46	22.10	12.60	12.52	5.10	13.45	19.68		
2300	35	10.09	12.51	12.39	9.40	15.54	22.88	13.57	13.45	8.54	14.70	20.77	14.63	14.50	7.66	13.87	18.61	
	40	13.05	11.83	11.72	8.60	16.08	24.18	13.00	12.88	7.80	15.15	21.91	14.16	14.04	6.97	14.24	19.58	
	45	15.97	11.33	11.22	7.98	16.47	25.10	12.58	12.47	7.23	15.48	22.73	13.82	13.69	6.45	14.51	20.29	
	50	19.15	10.91	10.81	7.43	16.80	25.87	12.23	12.11	6.73	15.76	23.41	13.53	13.40	6.00	14.74	20.87	
55	23.03	10.52	10.42	6.88	17.11	26.58	11.89	11.78	6.23	16.03	24.05	13.25	13.13	5.55	14.96	21.42		
2600	35	10.07	13.29	13.14	9.95	16.87	24.50	14.26	14.10	9.04	16.01	21.99	15.21	15.04	8.12	15.16	19.74	
	40	13.03	12.62	12.48	9.13	17.46	25.67	13.70	13.54	8.29	16.51	23.28	14.75	14.59	7.42	15.57	20.83	
	45	15.94	12.13	11.99	8.50	17.91	26.74	13.28	13.13	7.70	16.88	24.22	14.41	14.25	6.88	15.87	21.64	
	50	19.11	11.71	11.57	7.94	18.28	27.64	12.92	12.78	7.19	17.20	25.01	14.12	13.96	6.41	16.13	22.31	
55	22.98	11.31	11.17	7.38	18.64	28.48	12.58	12.44	6.68	17.50	25.76	13.84	13.69	5.95	16.38	22.95		
033 4 Rows	2500	40	10.06	14.21	13.76	7.79	15.43	21.91	15.13	14.66	7.07	14.64	19.88	16.04	15.55	6.34	13.86	17.80
		50	14.78	13.39	12.95	6.80	16.14	23.67	14.44	13.98	6.15	15.23	21.41	15.48	15.00	5.49	14.35	19.09
		60	20.67	12.75	12.33	5.96	16.69	25.01	13.90	13.45	5.38	15.70	22.58	15.04	14.57	4.79	14.72	20.09
		70	27.43	12.26	11.85	5.30	17.11	26.01	13.49	13.05	4.78	16.05	23.46	14.70	14.23	4.25	15.01	20.85
	80	34.57	11.88	11.48	4.80	17.43	26.77	13.18	12.75	4.32	16.32	24.12	14.44	13.98	3.84	15.24	21.42	
	2700	40	10.05	14.69	14.18	8.06	16.22	22.65	15.55	15.02	7.32	15.42	20.56	16.40	15.86	6.56	14.64	18.43
		50	14.76	13.88	13.39	7.05	16.97	24.54	14.88	14.36	6.38	16.05	22.21	15.85	15.32	5.69	15.15	19.82
		60	20.65	13.25	12.77	6.19	17.56	26.00	14.34	13.84	5.60	16.55	23.48	15.42	14.89	4.98	15.55	20.89

Cooling Coil Performance Data

EDB / EWB

32.2/22.2

Model	Airflow	WFR	WPD	Entering Water Temperature - C									
				5					7				
				LDB	LWB	WTR	S.Cap	T.Cap	LDB	LWB	WTR	S.Cap	T.Cap
LWHA	CMH	L/min	kPa	C	C	C	kW	kW	C	C	C	kW	kW
043 4 Rows	3100	40	7.87	15.06	14.61	8.82	18.23	24.79	15.83	15.37	8.05	17.41	22.61
		50	11.54	14.13	13.70	7.85	19.22	27.33	15.05	14.60	7.13	18.24	24.81
		60	16.12	13.39	12.97	6.98	20.01	29.31	14.43	13.99	6.33	18.91	26.53
		70	21.37	12.82	12.41	6.27	20.62	30.79	13.95	13.52	5.67	19.42	27.83
	3500	80	26.90	12.39	12.00	5.71	21.07	31.87	13.59	13.17	5.16	19.80	28.78
		40	7.85	15.76	15.22	9.25	19.74	26.01	16.45	15.90	8.45	18.92	23.75
		50	11.52	14.88	14.36	8.27	20.80	28.79	15.71	15.17	7.52	19.80	26.16
		60	16.09	14.16	13.65	7.39	21.67	31.01	15.11	14.58	6.69	20.53	28.08
	3900	70	21.33	13.60	13.10	6.66	22.34	32.69	14.64	14.12	6.02	21.09	29.55
		80	26.86	13.17	12.69	6.08	22.85	33.93	14.28	13.77	5.49	21.52	30.63
		40	7.84	16.37	15.74	9.63	21.19	27.07	16.99	16.35	8.82	20.36	24.77
		50	11.50	15.53	14.92	8.64	22.31	30.08	16.29	15.66	7.86	21.29	27.36
	3100	60	16.06	14.84	14.24	7.74	23.23	32.49	15.71	15.09	7.02	22.07	29.45
		70	21.30	14.29	13.71	7.00	23.97	34.35	15.25	14.65	6.33	22.68	31.06
		80	26.82	13.88	13.31	6.40	24.52	35.74	14.90	14.31	5.78	23.15	32.27
	3500	40	11.37	12.73	12.63	10.75	20.72	30.20	13.75	13.65	9.78	19.63	27.47
		60	23.22	10.78	10.70	8.37	22.78	35.13	12.11	12.02	7.58	21.37	31.81
		80	38.66	9.69	9.62	6.76	23.94	37.75	11.18	11.09	6.12	22.36	34.15
	3900	100	58.11	8.99	8.92	5.62	24.69	39.39	10.58	10.50	5.08	23.00	35.62
		120	80.29	8.51	8.44	4.82	25.20	40.49	10.17	10.09	4.36	23.44	36.62
043 6 Rows	3500	40	11.34	13.49	13.37	11.34	22.47	31.87	14.41	14.28	10.33	21.36	29.02
		60	23.17	11.58	11.46	8.94	24.77	37.51	12.80	12.68	8.10	23.30	33.96
		80	38.58	10.45	10.35	7.28	26.12	40.64	11.84	11.73	6.59	24.45	36.75
		100	58.00	9.71	9.62	6.08	27.01	42.63	11.21	11.10	5.50	25.21	38.55
	3900	120	80.15	9.18	9.09	5.24	27.64	44.02	10.77	10.66	4.74	25.74	39.77
		40	11.32	14.16	14.00	11.86	24.15	33.34	14.88	14.83	10.82	23.18	30.40
		60	23.12	12.29	12.15	9.44	26.64	39.60	13.42	13.27	8.55	25.13	35.86
		80	38.51	11.15	11.02	7.74	28.17	43.21	12.46	12.31	7.00	26.42	39.06
	4200	100	57.91	10.38	10.26	6.50	29.20	45.46	11.80	11.66	5.88	27.31	41.18
		120	80.03	9.84	9.72	5.62	29.93	47.20	11.33	11.20	5.08	27.93	42.64
	4600	60	8.76	14.86	14.40	8.19	24.99	34.38	15.66	15.19	7.47	23.83	31.32
		80	14.62	13.66	13.23	6.94	26.72	38.76	14.66	14.21	6.30	25.28	35.12
		100	22.03	12.82	12.41	5.95	27.93	41.72	13.96	13.52	5.38	26.29	37.71
		120	30.49	12.24	11.84	5.21	28.77	43.74	13.47	13.04	4.70	27.00	39.46
053 4 Rows	4600	140	40.17	11.78	11.39	4.63	29.43	45.26	13.09	12.67	4.17	27.54	40.79
		60	8.75	15.40	14.87	8.50	26.52	35.67	16.14	15.60	7.76	25.35	32.53
		80	14.60	14.24	13.74	7.24	28.36	40.40	15.17	14.65	6.57	26.89	36.63
		100	22.00	13.41	12.93	6.23	29.66	43.66	14.47	13.97	5.63	27.98	39.46
	5000	120	30.46	12.83	12.36	5.46	30.58	45.87	13.99	13.49	4.93	28.75	41.40
		140	40.13	12.37	11.92	4.87	31.30	47.59	13.61	13.12	4.39	29.35	42.88
		60	8.74	15.88	15.29	8.78	28.00	36.84	16.57	15.96	8.02	26.83	33.63
		80	14.58	14.76	14.19	7.51	29.93	41.89	15.63	15.04	6.81	28.44	38.00
	5500	100	21.98	13.94	13.40	6.48	31.32	45.41	14.95	14.38	5.86	29.60	41.05
		120	30.43	13.37	12.84	5.70	32.31	47.84	14.46	13.91	5.15	30.43	43.17
		140	40.09	12.92	12.40	5.08	33.08	49.71	14.09	13.54	4.58	31.08	44.81
	4200	60	12.55	12.44	12.34	10.00	28.48	41.94	13.50	13.40	9.09	26.94	38.12
		80	20.89	11.05	10.97	8.37	30.48	46.70	12.34	12.24	7.58	28.63	42.31
		100	31.40	10.12	10.04	7.10	31.82	49.77	11.55	11.46	6.43	29.77	45.04
		120	43.38	9.51	9.43	6.16	32.70	51.74	11.02	10.93	5.58	30.52	46.41
053 6 Rows	4600	140	57.06	9.05	8.97	5.44	33.37	53.19	10.63	10.55	4.92	31.08	48.10
		60	12.53	13.02	12.90	10.43	30.27	43.74	14.01	13.89	9.49	28.71	39.78
		80	20.85	11.65	11.54	8.78	32.44	49.02	12.85	12.74	7.96	30.54	44.41
		100	31.35	10.70	10.60	7.49	33.94	52.50	12.05	11.94	6.78	31.80	47.50
	5000	120	43.32	10.06	9.96	6.53	34.94	54.79	11.51	11.40	5.90	32.66	49.50
		140	56.99	9.59	9.50	5.77	35.69	56.44	11.10	10.99	5.22	33.31	51.05
		60	12.51	13.55	13.41	10.82	32.00	45.37	14.47	14.32	9.85	30.43	41.30
		80	20.82	12.20	12.06	9.16	34.32	51.11	13.33	13.19	8.31	32.38	46.32
	5500	100	31.31	11.24	11.12	7.85	35.96	54.99	12.52	12.39	7.10	33.76	49.74
		120	43.26	10.59	10.47	6.86	37.08	57.58	11.97	11.84	6.20	34.71	52.05
		140	56.92	10.10	9.98	6.08	37.92	59.48	11.55	11.42	5.50	35.44	53.77
	5900	80	14.16	14.72	14.21	8.24	33.00	45.97	15.57	15.05	7.49	31.39	41.76
		100	21.32	13.84	13.35	7.16	34.66	50.18	14.83	14.32	6.48	32.78	45.41
		120	29.50	13.21	12.74	6.32	35.84	53.09	14.31	13.81	5.71	33.77	47.95
		140	38.85	12.73	12.28	5.65	36.74	55.26	13.90	13.42	5.10	34.53	49.86
063 4 Rows	5900	160	49.70	12.32	11.88	5.09	37.52	57.09	13.57	13.09	4.59	35.17	51.44
		80	14.15	15.14	14.58	8.48	34.33	47.33	15.95	15.37	7.71	32.91	43.02
		100	21.30	14.28	13.74	7.39	36.27	51.80	15.23	14.66	6.69	34.36	46.89
		120	29.47	13.66	13.14	6.54	37.53	54.92	14.71	14.16	5.91	35.41	49.61
	6300	140	38.81	13.19	12.68	5.86	38.49	57.27	14.31	13.77	5.29	36.22	51.67
		160	49.63	12.78	12.28	5.29	39.31	59.23	13.97	13.44	4.77	36.91	53.39
		80	14.13	15.54	14.92	8.71	36.02	48.58	16.30	15.66	7.92	34.38	44.19
		100	21.28	14.70	14.10	7.61	37.84	53.30	15.59	14.97	6.89	35.90	48.27
	5500	120	29.45	14.09	13.51	6.75	39.15	56.62	15.08	14.48	6.10	37.00	51.15
		140	38.78	13.62	13.05	6.05	40.17	59.14	14.69	14.09	5.46	37.86	53.36
		160	49.59	13.22	12.67	5.46	41.03	61.22	14.35	13.76	4.93	38.59	55.21
	5900	100	30.48	11.23	11.12	8.63	39.58	60.47	12.50	12.39	7.81	37.18	54.73
		120	42.10	10.52	10.42	7.57	40.93	63.57	11.90	11.79	6.85	38.32	57.48
		140	55.37	9.99	9.89	6.73	41.92	65.81	11.45	11.34	6.09	39.17	59.50
		160	70.70	9.57	9.47	6.03	42.71	67.57	11.08	10.98	5.46	39.86	61.12
063 6 Rows	5900	180	87.16	9.22	9.13	5.48	43.37	69.01	10.79	10.69	4.95	40.40	62.36
		100	30.44	11.69	11.57	8.95	41.52	62.74	12.90	12.77	8.11	39.07	56.79
		120	42.05	10.97	10.85	7.88	42.98	66.15	12.29	12.17	7.13	40.30	59.81
		140	55.30	10.43	10.32	7.02	44.07	68.65	11.83	11.71	6.35	41.23	62.05
	6300	160	70.62	9.99	9.88	6.30	44.96	70.63	11.46	11.33	5.70	42.00	

Heating Coil Performance Data

EAT 15 C

Model	Airflow	WFR	WPD	Entering Water Temperature - C								
				40			60			80		
				LAT C	WTD C	T. Cap kW	LAT C	WTD C	T. Cap kW	LAT C	WTD C	T. Cap kW
LWHA	CMH	L/min	kPa									
013 1 Rows	1100	10	0.51	22.23	3.77	2.68	28.90	7.26	5.15	35.85	10.85	7.72
		15	1.03	23.23	2.92	3.05	30.39	5.46	5.70	37.76	8.06	8.43
		20	1.70	23.76	2.36	3.25	31.22	4.36	6.04	38.88	6.40	8.85
		25	2.64	24.14	1.93	3.38	31.83	3.56	6.23	39.71	5.20	9.15
		30	3.63	24.37	1.66	3.47	32.22	3.06	6.38	40.23	4.46	9.34
	1300	10	0.51	21.43	3.97	2.82	27.43	7.67	5.44	33.68	11.49	8.18
		15	1.03	22.39	3.10	3.23	28.85	5.81	6.06	35.52	8.58	8.98
		20	1.70	22.90	2.51	3.46	29.66	4.66	6.42	36.62	6.85	9.46
		25	2.64	23.27	2.07	3.62	30.26	3.81	6.68	37.42	5.58	9.81
		30	3.63	23.50	1.78	3.72	30.64	3.28	6.84	37.93	4.79	10.04
	1500	10	0.51	20.81	4.14	2.93	26.26	8.01	5.69	31.95	12.04	8.56
		15	1.03	21.72	3.25	3.39	27.62	6.11	6.38	33.72	9.04	9.46
		20	1.70	22.21	2.65	3.64	28.40	4.91	6.77	34.78	7.23	9.99
		25	2.64	22.56	2.18	3.82	28.98	4.03	7.06	35.57	5.91	10.39
		30	3.63	22.79	1.89	3.93	29.35	3.47	7.25	36.07	5.08	10.64
023 1 Rows	2000	10	0.26	20.33	5.07	3.59	25.90	10.34	7.34	31.92	16.03	11.40
		15	0.51	21.72	4.34	4.53	28.05	8.42	8.79	34.67	12.66	13.24
		20	0.85	22.53	3.68	5.07	29.26	6.97	9.60	36.18	10.33	14.26
		25	1.31	23.09	3.11	5.45	30.09	5.80	10.16	37.30	8.54	15.01
		30	1.80	23.43	2.72	5.67	30.62	5.04	10.51	38.01	7.40	15.50
	2300	10	0.26	19.79	5.23	3.71	24.82	10.72	7.61	30.30	16.67	11.85
		15	0.51	21.08	4.52	4.71	26.86	8.80	9.18	32.90	13.25	13.86
		20	0.85	21.85	3.86	5.31	28.01	7.32	10.08	34.36	10.86	14.99
		25	1.31	22.40	3.27	5.73	28.82	6.10	10.70	35.44	9.01	15.83
		30	1.80	22.72	2.87	5.98	29.33	5.32	11.10	36.14	7.82	16.37
	2600	10	0.26	19.35	5.37	3.80	23.95	11.05	7.84	28.99	17.22	12.24
		15	0.51	20.56	4.67	4.87	25.87	9.12	9.52	31.45	13.77	14.40
		20	0.85	21.30	4.01	5.51	26.98	7.62	10.49	32.85	11.32	15.63
		25	1.31	21.82	3.41	5.97	27.76	6.37	11.17	33.90	9.41	16.55
		30	1.80	22.13	2.99	6.24	28.26	5.56	11.61	34.58	8.19	17.14
033 1 Rows	2500	10	0.28	19.90	5.82	4.12	25.07	11.95	8.47	30.69	18.57	13.20
		15	0.55	21.27	5.06	5.28	27.20	9.85	10.27	33.41	14.82	15.50
		20	0.91	22.08	4.33	5.96	28.43	8.21	11.30	34.96	12.17	16.80
		25	1.40	22.65	3.68	6.44	29.28	6.86	12.02	36.10	10.11	17.76
		30	1.92	22.99	3.23	6.73	29.82	5.98	12.47	36.84	8.79	18.38
	2700	10	0.28	19.61	5.91	4.19	24.50	12.17	8.63	29.83	18.96	13.48
		15	0.55	20.93	5.17	5.39	26.56	10.08	10.51	32.47	15.19	15.88
		20	0.91	21.72	4.44	6.11	27.76	8.42	11.60	33.98	12.50	17.25
		25	1.40	22.27	3.78	6.61	28.59	7.05	12.36	35.10	10.40	18.28
		30	1.92	22.61	3.32	6.92	29.12	6.15	12.84	35.83	9.05	18.93
	2900	10	0.28	19.36	6.00	4.25	23.99	12.38	8.78	29.06	19.31	13.73
		15	0.55	20.62	5.27	5.49	25.99	10.29	10.73	31.62	15.52	16.23
		20	0.91	21.39	4.54	6.24	27.16	8.62	11.87	33.10	12.80	17.67
		25	1.40	21.94	3.87	6.77	27.98	7.23	12.67	34.20	10.67	18.75
		30	1.92	22.27	3.40	7.09	28.49	6.31	13.17	34.92	9.29	19.45
043 1 Rows	3100	20	1.03	22.04	5.34	7.35	28.35	10.12	13.93	34.83	14.99	20.70
		30	2.17	23.01	4.01	8.36	29.84	7.42	15.49	36.87	10.91	22.82
		40	3.69	23.52	3.18	8.89	30.69	5.86	16.38	38.03	8.57	24.04
		50	5.45	23.83	2.66	9.22	31.22	4.89	16.93	38.75	7.14	24.79
		60	7.65	24.08	2.27	9.47	31.62	4.16	17.35	39.30	6.06	25.36
	3500	20	1.03	21.47	5.54	7.63	27.30	10.53	14.50	33.30	15.62	21.56
		30	2.18	22.41	4.19	8.74	28.75	7.76	16.20	35.27	11.42	23.89
		40	3.69	22.90	3.33	9.31	29.58	6.14	17.18	36.41	9.00	25.23
		50	5.45	23.21	2.80	9.68	30.09	5.13	17.79	37.12	7.50	26.07
		60	7.66	23.45	2.39	9.96	30.49	4.37	18.25	37.66	6.38	26.70
	3900	20	1.03	21.00	5.72	7.87	26.42	10.89	14.99	32.00	16.17	22.32
		30	2.18	21.90	4.35	9.06	27.82	8.07	16.83	33.92	11.87	24.84
		40	3.70	22.38	3.47	9.69	28.63	6.40	17.89	35.03	9.38	26.30
		50	5.45	22.68	2.91	10.09	29.13	5.36	18.56	35.73	7.83	27.21
		60	7.66	22.91	2.49	10.39	29.52	4.57	19.07	36.25	6.67	27.91
053 1 Rows	4200	20	0.63	21.02	6.19	8.51	26.78	12.10	16.66	32.82	18.26	25.20
		30	1.32	22.26	4.93	10.27	28.67	9.26	19.33	35.24	13.68	28.61
		40	2.24	22.92	4.01	11.19	29.67	7.42	20.75	36.62	10.91	30.57
		50	3.31	23.29	3.39	11.73	30.31	6.25	21.64	37.50	9.16	31.81
		60	4.66	23.58	2.91	12.14	30.80	5.35	22.34	38.16	7.83	32.76
	4600	20	0.63	20.63	6.34	8.73	26.06	12.44	17.12	31.75	18.80	25.94
		30	1.32	21.83	5.07	10.58	27.87	9.55	19.93	34.07	14.12	29.53
		40	2.25	22.47	4.14	11.56	28.85	7.67	21.45	35.43	11.28	31.64
		50	3.31	22.84	3.51	12.14	29.47	6.47	22.42	36.29	9.49	32.97
		60	4.66	23.12	3.02	12.58	29.96	5.55	23.16	36.95	8.12	33.99
	5000	20	0.63	20.30	6.48	8.92	25.42	12.73	17.53	30.80	19.28	26.60
		30	1.32	21.45	5.21	10.86	27.17	9.82	20.48	33.04	14.52	30.37
		40	2.25	22.07	4.26	11.90	28.13	7.90	22.10	34.37	11.63	32.61
		50	3.32	22.43	3.61	12.51	28.74	6.68	23.13	35.22	9.80	34.03
		60	4.66	22.71	3.11	12.98	29.21	5.73	23.92	35.87	8.39	35.12
063 1 Rows	5500	20	0.70	20.47	7.36	10.13	25.75	14.46	19.90	31.29	21.86	30.16
		30	1.46	21.70	5.95	12.40	27.61	11.19	23.35	33.68	16.54	34.59
		40	2.47	22.36	4.88	13.63	28.64	9.04	25.27	35.11	13.29	37.25
		50	3.64	22.75	4.15	14.35	29.30	7.65	26.49	36.03	11.21	38.94
		60	5.11	23.05	3.57	14.90	29.31	6.57	27.43	36.73	9.62	40.24
	5900	20	0.70	20.19	7.49	10.31	25.21	14.73	20.28	30.49	22.31	30.77
		30	1.46	21.38	6.07	12.67	27.02	11.45	23.88	32.82	16.92	35.39
		40	2.47	22.03	5.00	13.96	28.04	9.26	25.89	34.23	13.63	38.19
		50	3.64	22.41	4.25	14.71	28.68	7.85	27.18	35.13	11.51	39.98
		60	5.11	22.70	3.67	15.30	29.19	6.75	28.18	35.82	9.88	41.36
	6300	20	0.70	19.94	7.61	10.47	24.73	14.99	20.63	29.77	22.72	31.34
		30	1.46	21.09	6.20	12.92	26.50	11.69	24.38	32.04	17.29	36.15
		40	2.47	21.72	5.11	14.26	27.48	9.47	26.48	33.42	13.94	39.08
		50	3.64	22.10	4.35	15.06	28.12	8.04	27.83	34.31	11.79	40.96
		60	5.11	22.39	3.76	15.67	28.62	6.92	28.88	34.99	10.13	42.41

Fan Curve Application

LWHA 013, 023, 033

Y Axis (Ht) Total Pressure in Pa & mmAq (Total Static Pressure + Velocity Pressure)

X 1 Axis (V) Air Flow in M³/h

X 2 Axis (C) Fan outlet Velocity in m/s

X 3 Axis (Hd) Velocity Pressure in mmAq

Maximum fan rpm = 2500 rpm,
Maximum Absorbed Power = 3.0kW

Example:

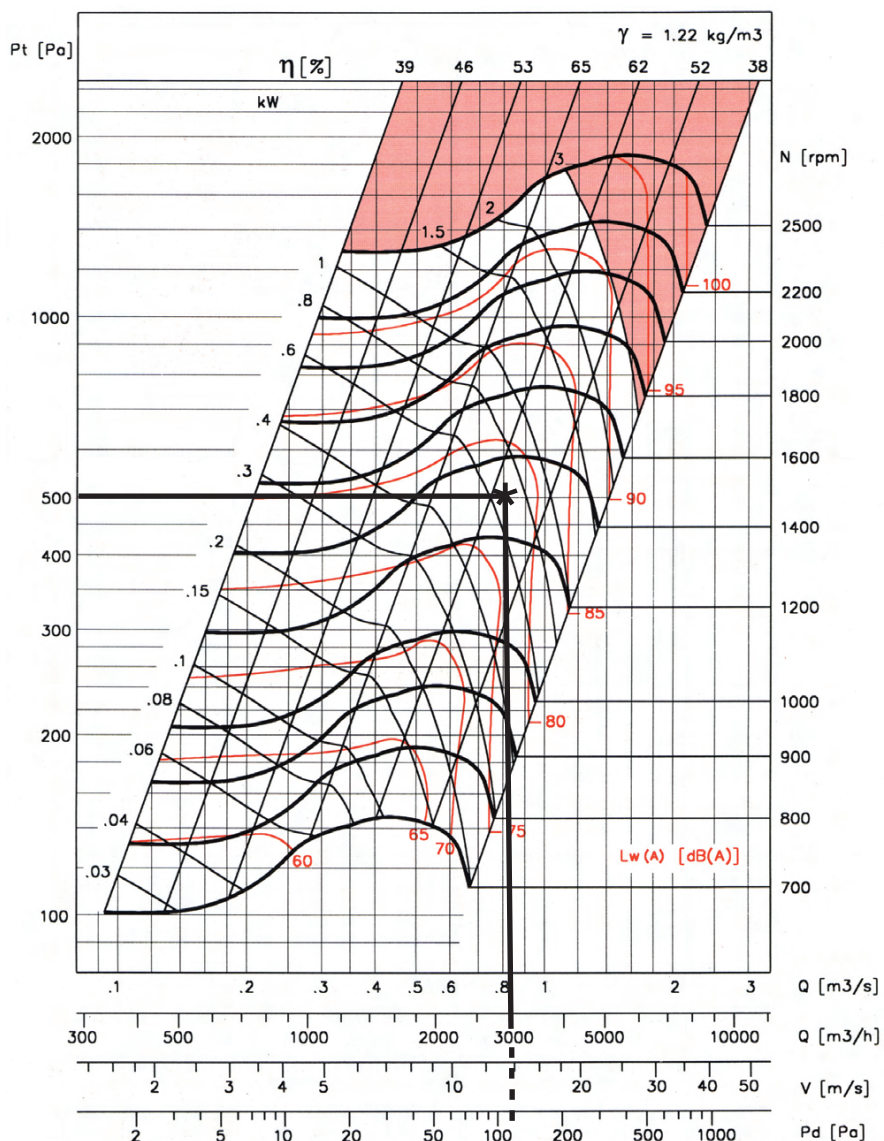
LWHA with Air Flow 3000cmh, External Static Pressure = 200 Pa and Internal Pressure Drop 180 Pa

Total Pressure = Total Static Pressure + Velocity Pressure (from Fan chart)

Total Pressure = (200 Pa + 180 Pa) + 120 Pa = 500 Pa

From Fan Curve, Fan Absorbed Power = 0.70 kW, Fan rpm = 1300 rpm

Install Motor Power = 0.70 x 1.20 = 0.84 kW, Nearest motor is 1.10 kW



Fan Curve Application

LWHA 043, 053, 063

TWIN FAN

Double Air Flow Capacity, Fan r.p.m. = x 1.05, Fan Absorbed Power = x 2.15

**Maximum Fan rpm = 2500 rpm,
Maximum Absorbed Power = 3.0 kW**

Y Axis (Ht) Total Pressure in Pa & mmAq (Total Static Pressure + Velocity Pressure)

X 1 Axis (V) Air Flow in M³/h

X 2 Axis (C) Fan outlet Velocity in m/s

X 3 Axis (Hd) Velocity Pressure in mmAq

Example:

LWHA designed Air Flow 6000 cmh,
External Static Pressure = 300 Pa and
Internal Pressure Drop 228 Pa

Air Flow = 6000/2 = 3000 cmh

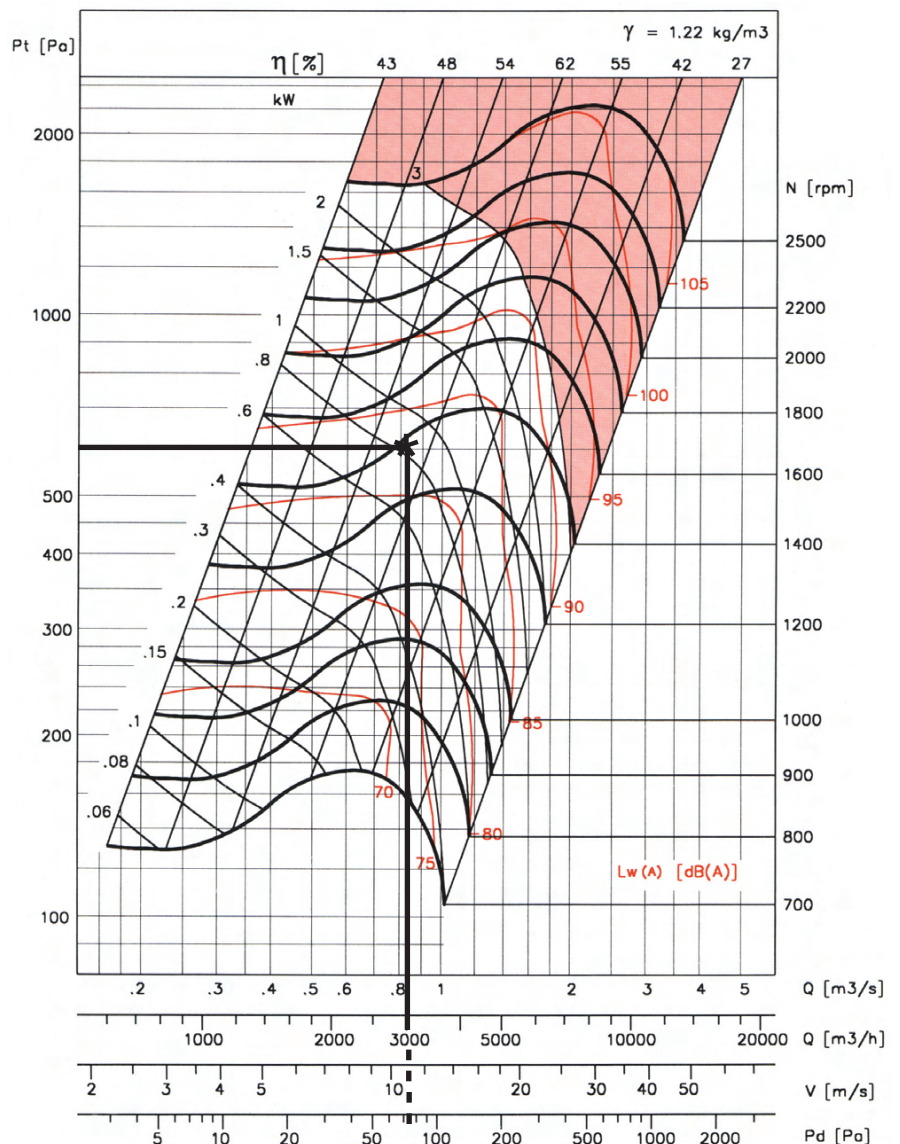
Total Pressure = Total Static Pressure
+ Velocity Pressure (from Fan chart)

Total Pressure = (300 Pa + 228 Pa) +
72 Pa = 600 Pa

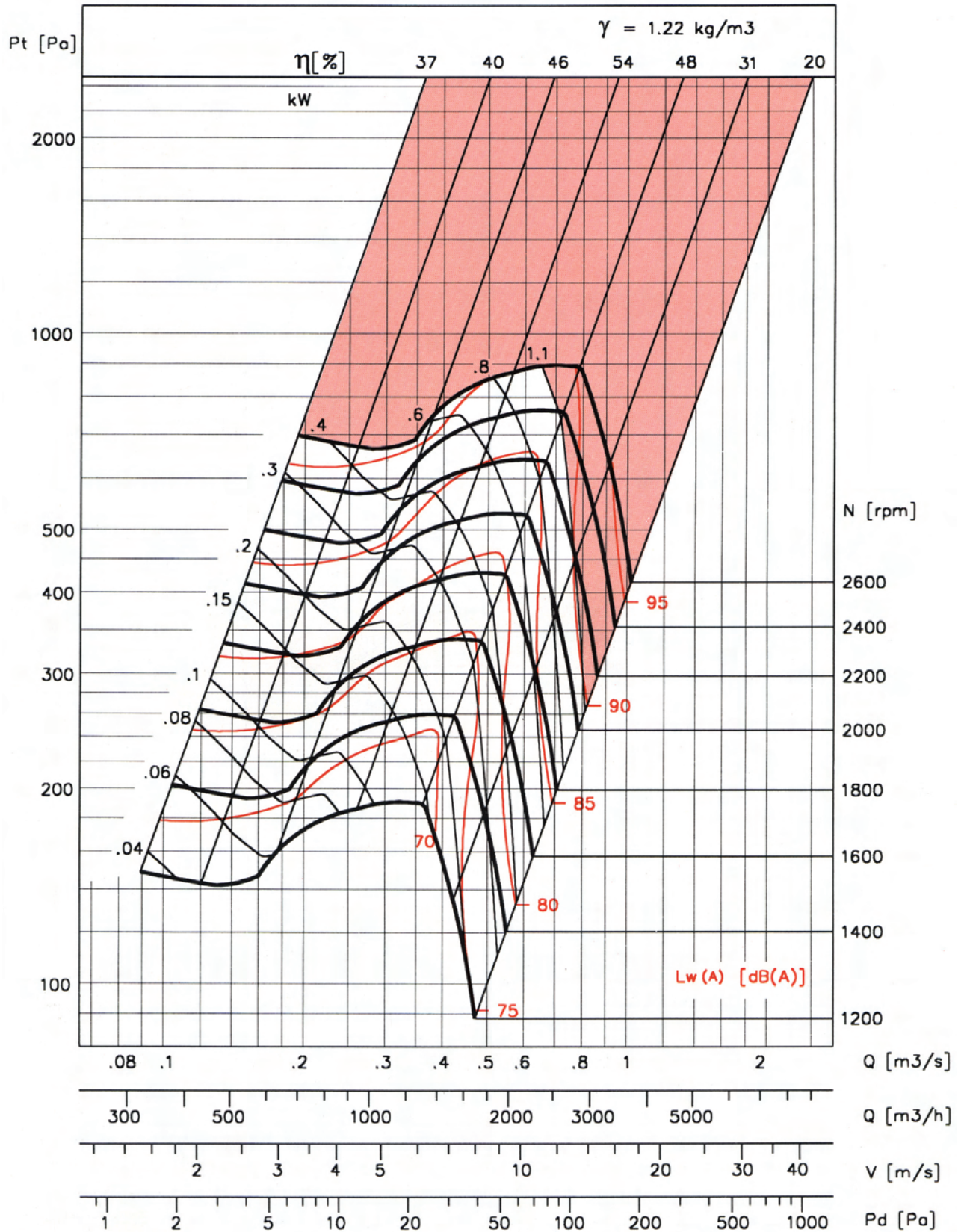
From Fan Curve, Fan Absorbed Power
= 0.84 kW, Fan rpm = 1350 rpm

After correction made: Fan Absorbed
Power = 1.81 kW, Fan rpm = 1418 rpm

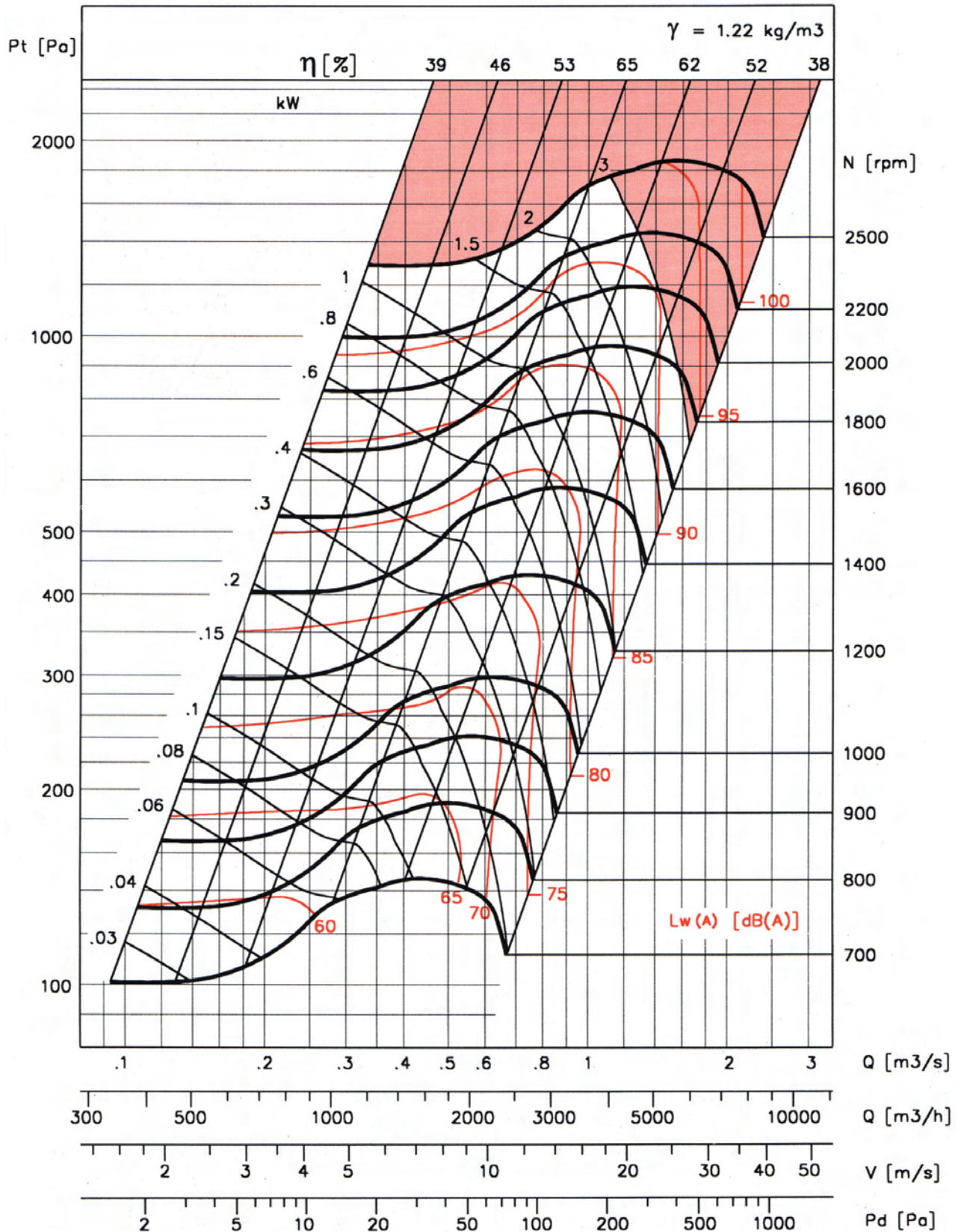
Install Motor Power = 1.81 x 1.20 = 2.17
kW, Nearest motor is 2.20kW



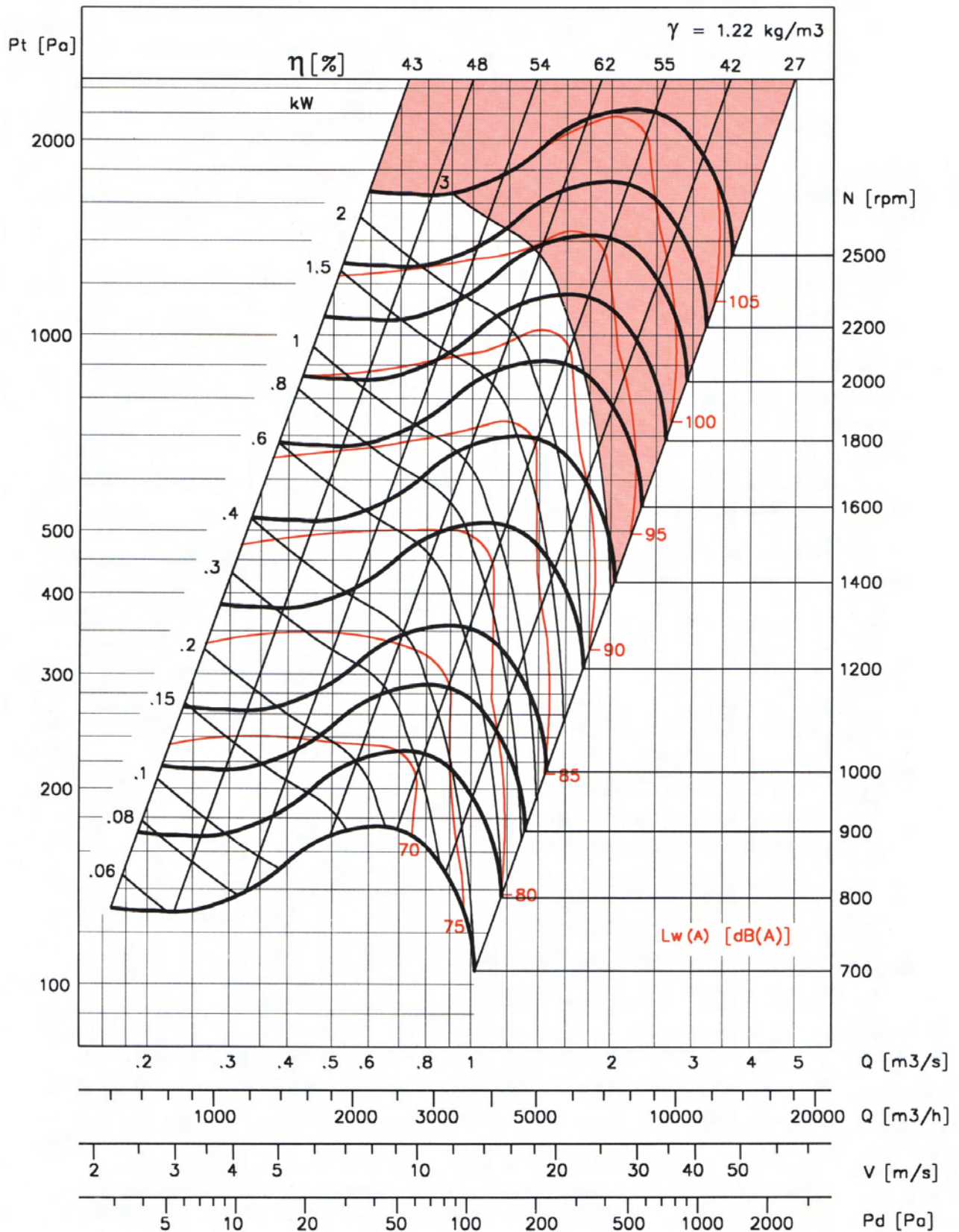
Fan Performance Curve LWHA 013



Fan Performance Curve LWHA 023, 033, 043



Fan Performance Curve LWHA 053, 063



Fan Performance Data

LWHA 013

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)											
			100			150			200			250		
			RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA
013 KAT7/7/S	700	3.29	912	0.04	60	1142	0.06	65	1387	0.09	68	1605	0.12	73
	900	4.23	908	0.05	60	1116	0.08	65	1292	0.10	68	1476	0.12	71
	1100	5.17	972	0.08	63	1111	0.10	64	1287	0.13	68	1443	0.16	71
	1300	6.12	1073	0.12	67	1168	0.14	67	1285	0.16	68	1433	0.19	71
	1500	7.06	1180	0.18	71	1267	0.19	70	1348	0.21	70	1446	0.23	71
	1700	8.00	1290	0.24	74	1370	0.26	73	1447	0.29	73	1518	0.30	73

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)								
			300			350			400		
			RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA
013 KAT7/7/S	700	3.29	1749	0.15	76	1880	0.18	78	2003	0.21	79
	900	4.23	1671	0.16	74	1851	0.20	77	2020	0.24	79
	1100	5.17	1583	0.18	73	1725	0.21	76	1891	0.25	78
	1300	6.12	1578	0.23	73	1707	0.26	76	1827	0.29	78
	1500	7.06	1569	0.26	73	1702	0.30	76	1822	0.35	78
	1700	8.00	1597	0.33	74	1699	0.36	76	1812	0.40	77

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)								
			450			500			550		
			RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA
013 KAT7/7/S	700	3.29	2117	0.24	80	2226	0.27	81	2329	0.29	82
	900	4.23	2149	0.28	81	2258	0.32	82	2361	0.35	83
	1100	5.17	2048	0.30	80	2197	0.35	81	2339	0.40	83
	1300	6.12	1940	0.31	79	2071	0.35	80	2211	0.41	81
	1500	7.06	1935	0.39	79	2042	0.43	80	2143	0.46	81
	1700	8.00	1930	0.44	79	2037	0.49	80	2138	0.54	81

Fan Performance Data

LWHA 023

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)											
			200			250			300			350		
			RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA
023 KAT9/7/S	1600	7.31	897	0.16	67	1000	0.20	69	1103	0.24	72	1208	0.28	74
	1800	8.23	904	0.19	67	1003	0.23	70	1096	0.27	72	1183	0.30	74
	2000	9.14	915	0.23	68	1010	0.27	70	1100	0.31	72	1185	0.35	74
	2200	10.05	934	0.27	69	1020	0.31	71	1107	0.35	72	1189	0.40	74
	2300	10.51	945	0.29	70	1028	0.34	71	1111	0.37	73	1192	0.42	74
	2400	10.97	958	0.32	71	1037	0.36	72	1117	0.40	73	1196	0.45	74
	2600	11.88	985	0.38	72	1060	0.42	73	1133	0.47	74	1207	0.51	75
	2800	12.80	1013	0.44	74	1087	0.49	74	1155	0.53	75	1223	0.59	76
	3000	13.71	1041	0.51	75	1114	0.56	76	1181	0.61	76	1245	0.66	77

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)								
			400			450			500		
			RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA
023 KAT9/7/S	1600	7.31	1325	0.33	75	1432	0.38	76	1526	0.44	78
	1800	8.23	1280	0.36	75	1373	0.40	76	1478	0.47	77
	2000	9.14	1264	0.39	75	1346	0.44	77	1433	0.49	78
	2200	10.05	1268	0.45	75	1342	0.49	77	1413	0.54	78
	2300	10.51	1270	0.47	76	1344	0.52	77	1414	0.57	78
	2400	10.97	1272	0.50	76	1346	0.55	77	1416	0.60	78
	2600	11.88	1280	0.56	76	1351	0.62	77	1420	0.67	78
	2800	12.80	1292	0.63	76	1360	0.68	77	1427	0.74	78
	3000	13.71	1308	0.72	77	1373	0.77	78	1435	0.82	78

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)					
			550			600		
			RPM	kW	dBA	RPM	kW	dBA
023 KAT9/7/S	1600	7.31	1614	0.48	79	1697	0.53	80
	1800	8.23	1578	0.52	79	1663	0.58	80
	2000	9.14	1515	0.54	79	1610	0.61	80
	2200	10.05	1490	0.59	79	1568	0.65	80
	2300	10.51	1482	0.62	79	1556	0.67	80
	2400	10.97	1483	0.65	79	1548	0.70	80
	2600	11.88	1487	0.73	79	1551	0.78	80
	2800	12.80	1491	0.80	79	1555	0.86	80
	3000	13.71	1499	0.89	79			

Fan Performance Data

LWHA 033

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)											
			200			250			300			350		
			RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA
033 KAT9/7/S	1900	8.68	908	0.21	68	1006	0.25	70	1098	0.29	72	1183	0.33	74
	2100	9.60	922	0.25	68	1014	0.29	70	1102	0.33	72	1187	0.38	74
	2300	10.51	945	0.29	70	1028	0.34	71	1111	0.37	73	1192	0.42	74
	2500	11.42	971	0.35	72	1048	0.39	72	1124	0.44	73	1200	0.48	75
	2700	12.34	999	0.41	73	1073	0.45	74	1144	0.50	74	1214	0.55	75
	2900	13.25	1027	0.47	75	1100	0.52	75	1168	0.57	76	1234	0.63	76
	3100	14.17	1056	0.55	76	1128	0.60	76	1195	0.66	77	1257	0.70	77
	3300	15.08	1087	0.63	78	1156	0.68	78	1222	0.74	78	1284	0.80	78
	3500	15.99	1127	0.72	79	1186	0.78	79	1250	0.84	79	1311	0.90	79

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)								
			400			450			500		
			RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA
033 KAT9/7/S	1900	8.68	1267	0.37	75	1359	0.42	77	1447	0.47	78
	2100	9.60	1266	0.42	75	1341	0.46	77	1420	0.51	78
	2300	10.51	1270	0.47	76	1344	0.52	77	1414	0.57	78
	2500	11.42	1276	0.53	76	1348	0.58	77	1418	0.64	78
	2700	12.34	1285	0.59	76	1355	0.65	77	1423	0.70	78
	2900	13.25	1299	0.68	77	1365	0.72	77	1431	0.78	78
	3100	14.17	1319	0.76	78	1380	0.82	78	1442	0.87	79
	3300	15.08	1342	0.85	78	1400	0.92	79			
	3500	15.99									

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)					
			550			600		
			RPM	kW	dBA	RPM	kW	dBA
033 KAT9/7/S	1900	8.68	1546	0.54	79	1642	0.60	80
	2100	9.60	1502	0.57	79	1581	0.62	80
	2300	10.51	1482	0.62	79	1556	0.67	80
	2500	11.42	1485	0.69	79	1549	0.74	80
	2700	12.34	1489	0.77	79	1553	0.82	80
	2900	13.25	1495	0.84	79	1557	0.90	80
	3100	14.17	1503	0.93	80			
	3300	15.08						
	3500	15.99						

Fan Performance Data

LWHA 043

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)											
			200			250			300			350		
			RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA
043 KAT9/7/S2	2800	6.40	929	0.29	69	1055	0.37	69	1189	0.47	72	1316	0.56	74
	3000	6.85	931	0.32	69	1042	0.39	72	1161	0.48	72	1288	0.59	74
	3200	7.31	933	0.35	69	1040	0.42	72	1147	0.51	72	1256	0.60	73
	3400	7.77	935	0.38	69	1041	0.46	72	1138	0.53	74	1243	0.63	73
	3600	8.23	940	0.41	70	1044	0.50	72	1140	0.58	74	1230	0.66	76
	3800	8.68	944	0.45	70	1046	0.53	72	1142	0.62	74	1230	0.71	76
	4000	9.14	952	0.49	70	1050	0.57	72	1144	0.67	74	1232	0.75	76
	4200	9.60	959	0.54	71	1055	0.61	73	1146	0.71	75	1234	0.81	76
	4300	9.83	965	0.56	71	1057	0.64	73	1149	0.73	75	1235	0.83	76
	4400	10.05	971	0.58	72	1061	0.67	73	1151	0.76	75	1236	0.86	76

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)								
			400			450			500		
			RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA
043 KAT9/7/S2	2800	6.40	1425	0.66	76	1527	0.75	77	1617	0.86	79
	3000	6.85	1406	0.69	75	1508	0.79	77	1606	0.88	79
	3200	7.31	1378	0.71	75	1490	0.83	77	1587	0.94	78
	3400	7.77	1346	0.72	75	1460	0.85	76	1568	0.97	78
	3600	8.23	1331	0.76	75	1428	0.86	76	1537	1.00	78
	3800	8.68	1318	0.79	78	1413	0.91	76	1505	1.01	78
	4000	9.14	1315	0.85	77	1400	0.94	79	1490	1.06	77
	4200	9.60	1316	0.90	77	1394	0.99	79	1477	1.10	80
	4300	9.83	1317	0.93	77	1395	1.03	79	1470	1.12	80
	4400	10.05	1318	0.96	78	1396	1.06	79	1469	1.15	80

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)					
			550			600		
			RPM	kW	dBA	RPM	kW	dBA
043 KAT9/7/S2	2800	6.40	1703	0.97	80	1785	1.08	82
	3000	6.85	1693	1.00	80	1775	1.12	81
	3200	7.31	1679	1.04	80	1765	1.14	81
	3400	7.77	1660	1.09	80	1748	1.20	81
	3600	8.23	1641	1.13	79	1729	1.25	81
	3800	8.68	1608	1.16	79	1707	1.29	81
	4000	9.14	1576	1.17	79			
	4200	9.60	1562	1.23	79			
	4300	9.83	1556	1.25	79			
	4400	10.05	1549	1.27	81			

Fan Performance Data

LWHA 053

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)											
			200			250			300			350		
			RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA
053 KAT10/8/S2	3700	6.71	869	0.42	67	992	0.54	70	1104	0.67	72	1206	0.78	73
	3900	7.07	865	0.44	68	982	0.56	70	1094	0.70	72	1197	0.82	73
	4100	7.44	860	0.47	68	973	0.58	70	1084	0.72	72	1187	0.86	74
	4300	7.80	859	0.50	68	968	0.61	70	1075	0.74	72	1177	0.89	74
	4500	8.16	858	0.52	68	963	0.64	71	1066	0.76	72	1168	0.92	74
	4700	8.52	862	0.56	68	961	0.68	71	1061	0.80	73	1158	0.94	74
	4900	8.89	867	0.60	67	960	0.71	71	1056	0.84	73	1150	0.97	74
	5100	9.25	873	0.64	73	960	0.74	71	1053	0.88	73	1145	1.02	74
	5300	9.61	880	0.69	73	965	0.80	71	1052	0.92	73	1140	1.06	75
	5500	9.97	887	0.74	74	970	0.85	75	1051	0.96	73	1137	1.10	75
	5700	10.34	894	0.79	74	976	0.90	76	1054	1.01	73	1136	1.15	75
	5900	10.70	903	0.84	75	983	0.96	76	1060	1.08	73	1136	1.20	75

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)								
			400			450			500		
			RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA
053 KAT10/8/S2	3700	6.71	1300	0.92	75	1387	1.04	77	1461	1.18	78
	3900	7.07	1292	0.95	75	1380	1.09	77	1462	1.22	78
	4100	7.44	1283	0.98	75	1372	1.12	77	1455	1.27	78
	4300	7.80	1273	1.03	75	1364	1.15	77	1477	1.31	78
	4500	8.16	1263	1.07	75	1354	1.21	77	1439	1.34	78
	4700	8.52	1254	1.10	75	1344	1.26	77	1429	1.41	78
	4900	8.89	1244	1.14	75	1334	1.30	77	1419	1.47	78
	5100	9.25	1235	1.16	76	1324	1.34	77	1409	1.51	78
	5300	9.61	1228	1.20	76	1315	1.37	77	1399	1.55	78
	5500	9.97	1223	1.25	76	1306	1.40	77	1390	1.59	78
	5700	10.34	1218	1.30	76	1300	1.46	77	1381	1.62	78
	5900	10.70	1216	1.35	76	1296	1.51	77	1373	1.67	79

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)					
			550			600		
			RPM	kW	dBA	RPM	kW	dBA
053 KAT10/8/S2	3700	6.71	1531	1.31	80	1599	1.44	81
	3900	7.07	1532	1.36	80	1599	1.50	81
	4100	7.44	1533	1.41	80	1600	1.56	81
	4300	7.80	1526	1.47	80	1601	1.61	81
	4500	8.16	1518	1.51	80	1594	1.67	81
	4700	8.52	1510	1.55	80	1585	1.72	81
	4900	8.89	1500	1.61	80	1577	1.76	81
	5100	9.25	1490	1.68	80	1568	1.83	81
	5300	9.61	1480	1.73	80	1558	1.90	81
	5500	9.97	1470	1.78	80			
	5700	10.34	1461	1.82	80			
	5900	10.70	1452	1.86	80			

Fan Performance Data

LWHA 063

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)											
			200			250			300			350		
			RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA
063 KAT10/8/S2	4700	8.52	862	0.56	68	961	0.68	71	1061	0.80	73	1158	0.94	74
	4900	8.89	867	0.60	67	960	0.71	71	1056	0.84	73	1150	0.97	74
	5100	9.25	873	0.64	73	960	0.74	71	1053	0.88	73	1145	1.02	74
	5300	9.61	880	0.69	73	965	0.80	71	1052	0.92	73	1140	1.06	75
	5500	9.97	887	0.74	74	970	0.85	75	1051	0.96	73	1137	1.10	75
	5700	10.34	894	0.79	74	976	0.90	76	1054	1.01	73	1136	1.15	75
	5900	10.70	903	0.84	75	983	0.96	76	1060	1.08	73	1136	1.20	75
	6100	11.06	913	0.90	75	990	1.02	76	1065	1.14	77	1137	1.26	75
	6300	11.43	923	0.95	76	997	1.08	76	1071	1.20	78	1142	1.33	74
	6500	11.79	933	1.01	76	1006	1.14	77	1078	1.28	78	1148	1.41	74
	6700	12.15	943	1.07	77	1015	1.21	77	1085	1.35	78	1153	1.48	79
	6900	12.51	954	1.14	77	1025	1.28	78	1092	1.42	78	1160	1.56	79
	7100	12.88	965	1.20	78	1034	1.35	78	1101	1.49	79	1167	1.64	80

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)								
			400			450			500		
			RPM	kW	dBA	RPM	kW	dBA	RPM	kW	dBA
063 KAT10/8/S2	4700	8.52	1254	1.10	75	1344	1.26	77	1429	1.41	78
	4900	8.89	1244	1.14	75	1334	1.30	77	1419	1.47	78
	5100	9.25	1235	1.16	76	1324	1.34	77	1409	1.51	78
	5300	9.61	1228	1.20	76	1315	1.37	77	1399	1.55	78
	5500	9.97	1223	1.25	76	1306	1.40	77	1390	1.59	78
	5700	10.34	1218	1.30	76	1300	1.46	77	1381	1.62	78
	5900	10.70	1216	1.35	76	1296	1.51	77	1373	1.67	79
	6100	11.06	1215	1.41	76	1291	1.56	78	1369	1.74	79
	6300	11.43	1214	1.46	76	1289	1.63	78	1364	1.80	79
	6500	11.79	1215	1.53	76	1288	1.69	78	1359	1.85	79
	6700	12.15	1220	1.61	76	1288	1.75	78	1359	1.93	79
	6900	12.51	1226	1.70	76	1289	1.82	78	1358	2.00	79
	7100	12.88	1231	1.78	80	1294	1.92	77	1357	2.06	79

MODEL	CMH	VEL.	TOTAL STATIC PRESSURE (Pa)					
			550			600		
			RPM	kW	dBA	RPM	kW	dBA
063 KAT10/8/S2	4700	8.52	1510	1.55	80	1585	1.72	81
	4900	8.89	1500	1.61	80	1577	1.76	81
	5100	9.25	1490	1.68	80	1568	1.83	81
	5300	9.61	1480	1.73	80	1558	1.90	81
	5500	9.97	1470	1.78	80	1548	1.96	81
	5700	10.34	1461	1.82	80	1538	2.01	81
	5900	10.70	1452	1.86	80	1529	2.07	81
	6100	11.06	1443	1.89	80	1519	2.11	81
	6300	11.43	1438	1.97	80	1510	2.14	81
	6500	11.79	1433	2.04	80	1504	2.21	81
	6700	12.15	1428	2.10	80	1499	2.29	81
	6900	12.51	1425	2.17	80	1494	2.36	81
	7100	12.88	1425	2.26	80	1489	2.42	81

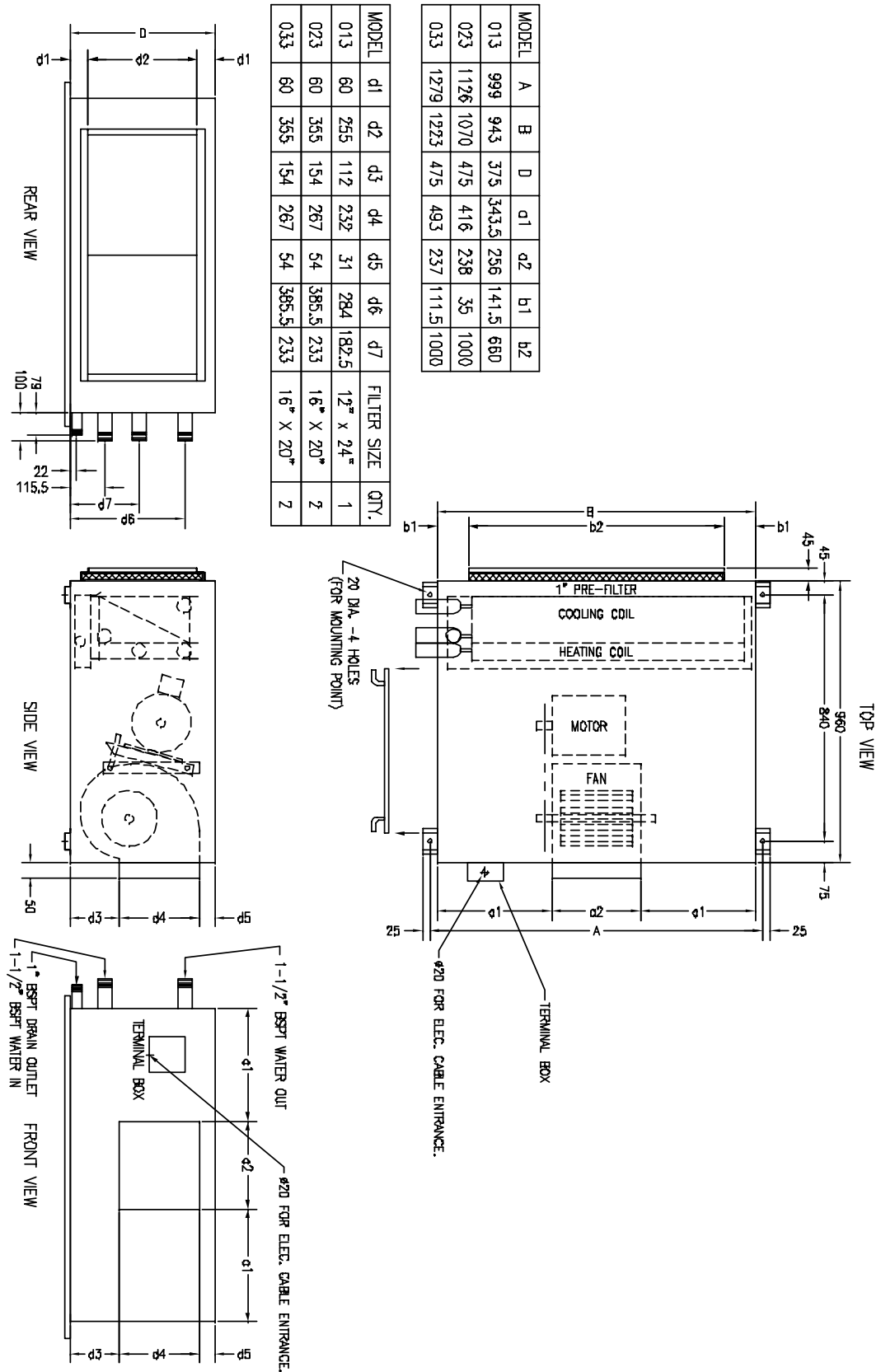
Sound Power Level

MODEL	AIR VOLUME (cmh)	STATIC P.SURE (Pa)	(rpm)	SOUND POWER FREQUENCY RANGE							
				63	125	250	Lw (A) 500	1K	2K	4K	8K
013	900	400	2020	41	54	68	75	76	69	63	52
		500	2258	42	55	69	77	79	71	67	56
		550	2361	43	56	69	78	80	71	68	58
	1300	400	1827	39	52	64	72	73	70	68	63
		500	2071	41	54	66	75	76	72	70	63
		550	2211	42	55	67	76	78	73	70	63
	1700	400	1812	38	52	63	72	73	70	67	62
		500	2037	41	54	65	74	76	72	70	65
		550	2138	42	55	66	75	77	73	72	67
023	1800	400	1280	45	58	64	68	71	68	68	60
		500	1478	48	62	68	72	72	71	68	61
		600	1663	51	64	72	75	74	73	68	62
	2300	400	1270	44	57	64	67	71	69	68	61
		500	1414	46	59	66	70	72	71	70	64
		600	1556	48	61	68	72	74	74	73	67
	2800	400	1292	45	58	65	68	72	70	69	62
		500	1427	47	60	67	70	73	72	71	65
		600	1555	48	61	68	72	74	74	73	67
033	2500	400	1276	45	58	64	68	71	69	69	61
		500	1418	46	59	66	70	72	72	71	64
		600	1549	48	61	68	72	74	74	72	67
	2900	400	1299	45	58	65	69	72	70	70	63
		500	1431	47	60	67	71	73	72	71	65
		600	1557	48	61	69	72	74	74	73	67
	3300	400	1342	46	59	66	70	73	72	72	65
		500	1457	47	60	67	71	73	73	72	66
		600	1573	48	61	69	73	75	75	73	68
043	3200	400	1378	48	62	67	70	69	66	62	55
		500	1587	51	65	71	74	72	69	64	56
		600	1765	53	67	75	77	75	72	66	58
	3800	400	1318	45	59	65	69	72	71	71	64
		500	1505	49	62	69	72	72	70	67	60
		600	1707	51	65	73	76	75	73	67	60
	4300	400	1317	45	59	65	69	72	71	71	64
		500	1470	47	61	68	72	74	74	73	67
		600	1638	50	64	71	74	74	73	69	63
053	4700	400	1254	48	62	69	72	66	66	61	54
		500	1429	50	64	73	75	69	68	62	55
		600	1585	53	66	76	77	73	70	63	56
	5300	400	1228	47	61	68	72	67	67	64	57
		500	1399	49	63	72	75	70	69	64	58
		600	1558	52	65	75	77	73	71	65	58
	5700	400	1218	46	60	68	72	68	68	65	58
		500	1381	49	63	72	75	70	70	66	60
		600	1538	51	65	75	77	74	72	66	60
063	5700	400	1218	46	60	68	72	68	68	65	58
		500	1381	49	63	72	75	70	70	66	60
		600	1538	51	65	75	77	74	72	66	60
	6300	400	1214	46	60	68	72	68	68	65	59
		500	1364	48	62	71	75	70	71	68	61
		600	1510	50	64	74	77	74	73	69	63
	6700	400	1220	46	60	68	72	68	68	65	58
		500	1359	48	62	71	75	71	71	68	62
		600	1499	50	63	74	77	75	73	69	64

Sound Pressure Level

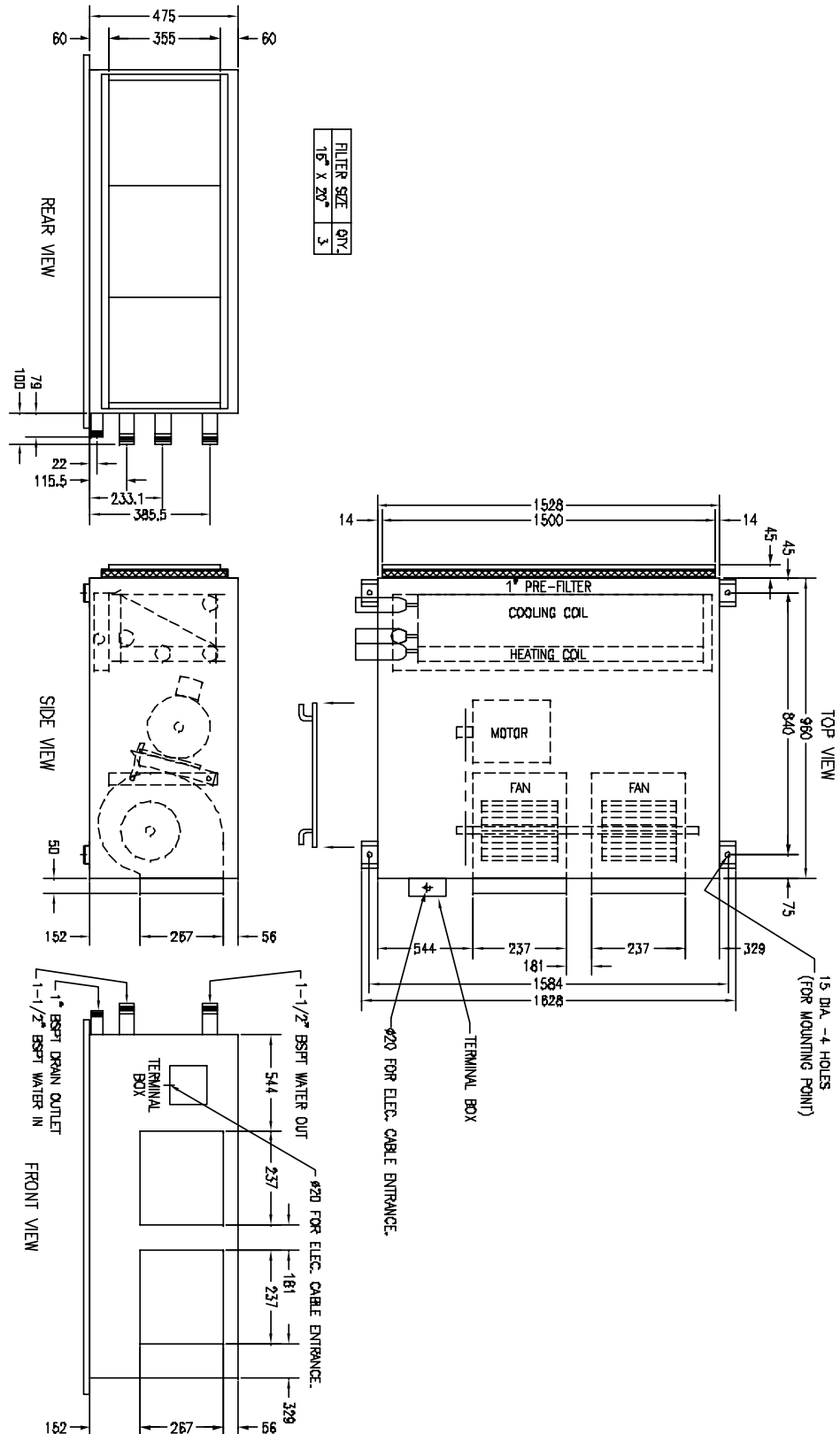
MODEL	AIR VOLUME (cmh)	STATIC P.SURE (Pa)	(rpm)	ESTIMATED SOUND PRESSURE FREQUENCY RANGE							
				63	125	250	Lp (A) 500	1K	2K	4K	8K
013	900	400	2020	34	47	61	68	68	62	56	45
		500	2258	35	48	62	70	71	64	60	49
		550	2361	36	49	62	71	72	64	61	51
	1300	400	1827	32	45	57	65	65	63	61	56
		500	2071	34	47	59	68	68	65	63	56
		550	2211	35	48	60	69	70	66	63	56
	1700	400	1812	31	45	56	65	65	63	60	55
		500	2037	34	47	58	67	68	65	63	58
		550	2138	35	48	59	68	69	66	65	60
023	1800	400	1280	38	51	57	61	63	61	61	53
		500	1478	41	55	61	65	64	64	61	54
		600	1663	44	57	65	68	66	66	61	55
	2300	400	1270	37	50	57	60	63	62	61	54
		500	1414	39	52	59	63	64	64	63	57
		600	1556	41	54	61	65	66	67	66	60
	2800	400	1292	38	51	58	61	64	63	62	55
		500	1427	40	53	60	63	65	65	64	58
		600	1555	41	54	61	65	66	67	66	60
033	2500	400	1276	38	51	57	61	63	62	62	54
		500	1418	39	52	59	63	64	65	64	57
		600	1549	41	54	61	65	66	67	65	60
	2900	400	1299	38	51	58	62	64	63	63	56
		500	1431	40	53	60	64	65	65	64	58
		600	1557	41	54	62	65	66	67	66	60
	3300	400	1342	39	52	59	63	65	65	65	58
		500	1457	40	53	60	65	65	66	65	59
		600	1573	41	54	62	66	67	68	66	61
043	3200	400	1378	41	55	60	63	61	59	55	48
		500	1587	44	58	64	67	64	62	57	49
		600	1765	46	60	68	70	67	65	59	51
	3800	400	1318	38	52	58	62	64	64	64	57
		500	1505	42	55	62	65	64	63	60	53
		600	1707	44	58	66	69	67	66	60	53
	4300	400	1317	38	52	58	62	64	64	64	57
		500	1470	40	54	61	65	66	67	66	60
		600	1638	43	57	64	67	66	66	62	56
053	4700	400	1254	41	55	62	65	58	59	54	47
		500	1429	43	57	66	68	61	61	55	48
		600	1585	46	59	69	70	65	63	56	49
	5300	400	1228	40	54	61	65	59	60	57	50
		500	1399	42	56	65	68	62	62	57	51
		600	1558	45	58	68	70	65	64	58	51
	5700	400	1218	39	53	61	65	60	61	58	51
		500	1381	42	56	65	68	62	63	59	53
		600	1538	44	58	68	70	66	65	59	53
063	5700	400	1218	39	53	61	65	60	61	58	61
		500	1381	42	56	65	68	62	63	59	53
		600	1538	44	58	68	70	66	65	59	53
	6300	400	1214	39	53	61	65	60	61	58	52
		500	1364	41	55	64	68	62	64	61	54
		600	1510	43	57	67	70	66	66	62	56
	6700	400	1220	39	53	61	65	60	61	58	51
		500	1359	41	55	64	68	63	64	61	55
		600	1499	43	56	67	70	67	66	62	57

Submittal Drawing LWHA - B013 / 023 / 033 (1" Filter)

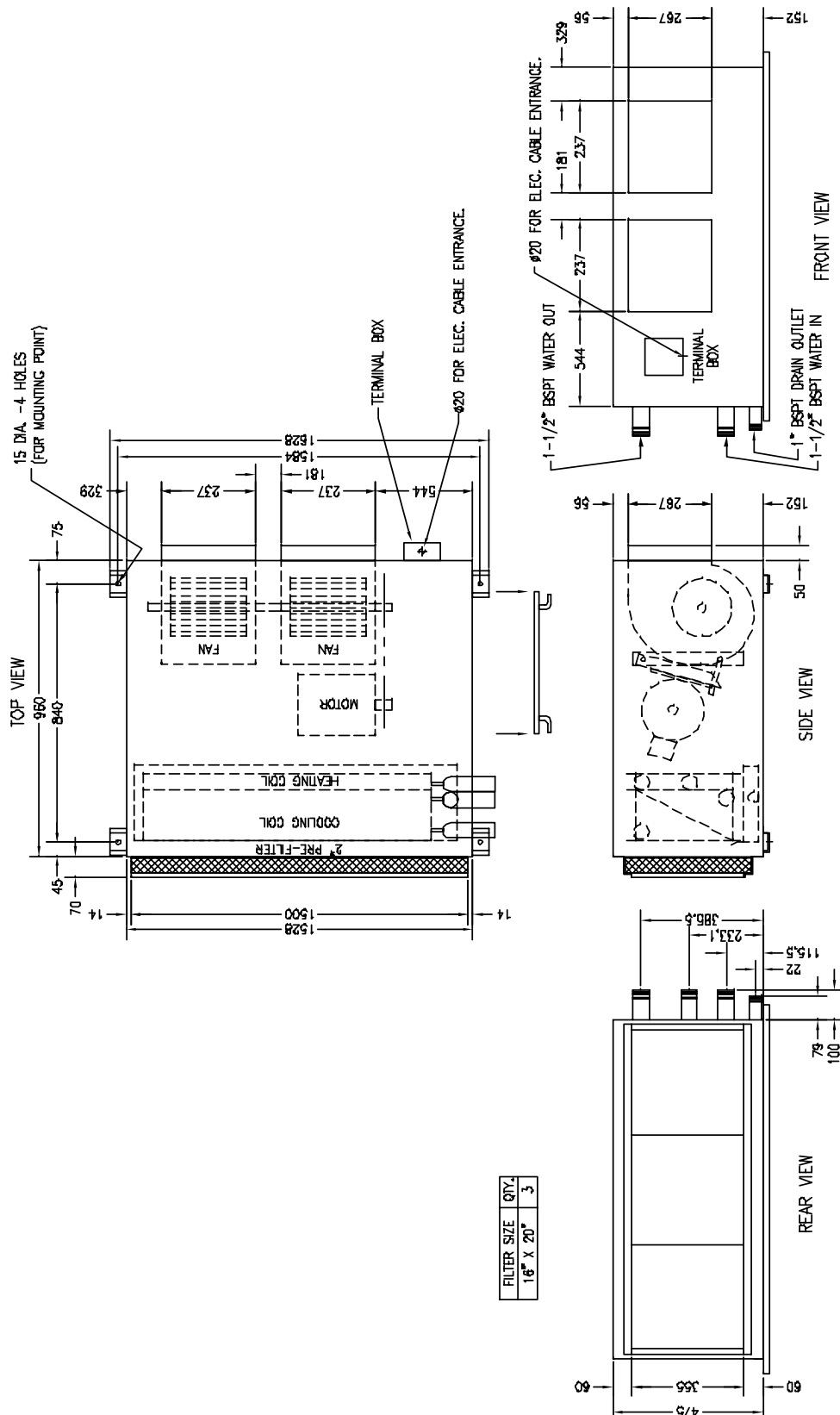




Submittal Drawing LWHA - B043 (1" Filter)



Submittal Drawing LWHA - B043 (2" Filter)



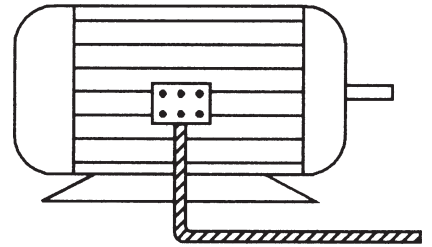


Wiring Diagram

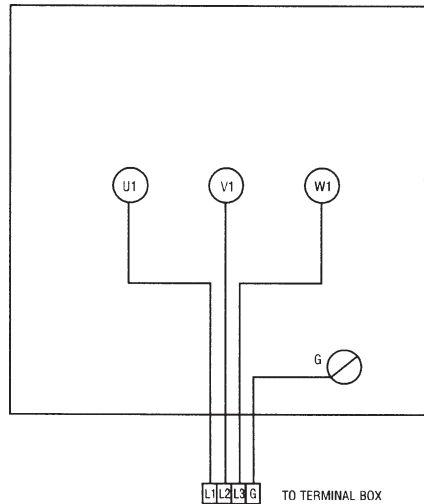
Below are the wiring diagrams for LWHA.

Motors up to 2.2 kW or 3.0 HP are suitable for Direct-On-Line starting.

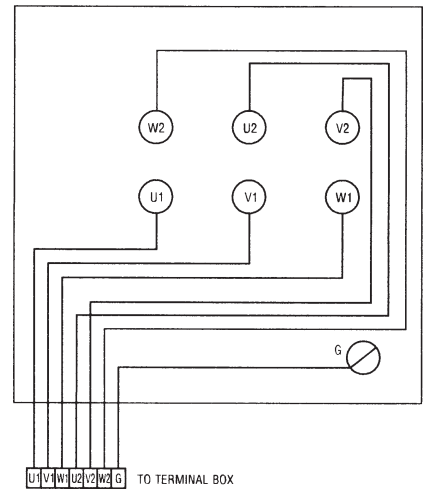
Larger Motors are suitable for both autotransformer and Star-Delta starting.



Fan Motor Wiring Termination (Three Terminal)



Fan Motor Wiring Termination (Six Terminal)





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Literature Order Number BC-PRC001-E4 (October 2007)

File Number

Supersedes BC-PRC001-E4 (November 2005)

Stocking Location Malaysia

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