DUAL AIR

Saving the environment for future generations

WATER SOURCE & GEOTHERMAL HEAT PUMPS

SPECIFICATION DATA SHEET

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DA/ CFF041

WATER SOURCE & GEOTHERMAL HEAT PUMPS
R454B REFRIGERANT

WATER LOOP				GROUND WATER			
Cooling		Heating		Cooling		Heating	
Capacity	EER	Capacity	COP	Capacity	EER	Capacity	COP
40,500	15.5	43,000	4.3	40,500	21.1	37,000	4.1

GROUND LOOP				FLOW RATE	
Cooling		Heating		AIR	WATER
Capacity	EER	Capacity	COP	CFM	GPM
40,500	17.1	26,000	3.6	1,400	10.5

ELECTRICAL SPECIFICATIONS

Electrical Characteristics	Elect. Symbol	Compressor		Min Circuit Ampacity	Max Fuse Size
		RLA	LRA		
230/1/60	A	15.8	96.0	25.7	40.0
265/1/60	B	14.7	109.0	23.4	40.0
230/3/60	C	9.6	90.0	17.9	30.0
460/3/60	D	4.9	36.0	8.3	15.0

	UNIT WEIGHT (lbs)		DIMENSION		
	Unit Weight	Shipping Weight	Length	Width	Height
Vertical	220	240	21.50	21.50	39.00
Horizontal	215	235	33.50	21.50	20.75

FLUID PRESSURE DROP

Fluid Flow	Pressure drop	
(GPM)	(FOH)	(PSIG)
5.3	5.1	2.2
7.0	9.1	4.0
9.2	15.7	6.8
10.5	**20.2**	**8.8**
13.1	31.6	13.8

COOLING

Entering Fluid Temp. (0F)	Entering Air Fluid (0F)	Total Capacity (MBtuH)	Sensible Capacity (MBtuH)	SHF	Power Input (kW)	Heat Rejection (MBtuH)	EER
50	70 db 61 wb	45.71	30.67	0.67	2.37	52.42	23.2
59		43.59	29.72	0.68	2.52	50.83	20.5
70		40.91	28.48	0.70	2.72	48.82	17.6
86		36.85	26.55	0.72	3.03	45.82	14.0
100		33.01	24.79	0.75	3.29	42.89	11.4
50	75 db 63 wb	47.38	34.81	0.73	2.36	54.07	24.1
59		45.18	33.81	0.75	2.52	52.41	21.3
70		42.40	32.58	0.77	2.72	50.32	18.2
86		38.18	30.60	0.80	3.04	47.18	14.5
100		34.22	28.93	0.85	3.31	44.16	11.7
50	**80.6 db 66.2 wb**	36.22	32.22	0.89	3.36	46.31	12.3
59		**47.00**	**36.48**	**0.78**	**2.60**	**54.49**	**21.4**
70		44.84	35.85	0.80	2.73	52.77	19.3
86		**41.00**	**31.01**	**0.76**	**2.96**	**49.74**	**16.0**
100		50.12	38.06	0.76	2.35	56.77	25.7
50	85 db 71 wb	54.17	37.28	0.69	2.32	60.72	28.2
59		51.73	36.30	0.70	2.49	58.86	24.8
70		48.52	35.12	0.72	2.71	56.41	21.0
86		43.57	33.18	0.76	3.06	52.65	16.4
100		39.01	31.32	0.80	3.38	49.17	13.1

As a result of continuing research and development, specifications are subject to change without notice.
Please contact factory for up-to-date values.

HEATING

Entering Fluid Temp. (0F)	Entering Air Fluid (0F)	Total Capacity (MBtuH)	Power Input (kW)	Heat of Absorb. (MBtuH)	COP
50	60	38.86	2.96	30.14	4.5
60		44.52	3.08	35.38	4.9
68		48.98	3.14	39.64	5.2
80		55.39	3.17	45.94	5.9
50	**68**	**37.50**	**3.08**	**28.35**	**4.1**
60		42.90	3.21	33.30	4.5
68		**47.00**	**3.27**	**37.21**	**4.8**
80		53.52	3.35	43.45	5.3
50	80	0.00	0.40	0.00	3.6
60		40.61	3.41	30.33	4.0
68		44.83	3.52	34.19	4.2
80		0.00	0.40	0.00	4.6

LOW TEMP HEATING with Antifreeze by ARI

Entering Fluid Temp. (0F)	Entering Air Fluid (0F)	Total Capacity (MBtuH)	Power Input (kW)	Heat of Absorb. (MBtuH)	COP
25	60	24.30	2.43	17.40	3.5
32		27.75	2.54	20.47	3.8
40		31.58	2.66	23.88	4.1
25	68	22.97	2.49	15.85	3.2
32		**26.50**	**2.62**	**18.93**	**3.5**
40		30.32	2.75	22.28	3.8
25	80	21.49	2.58	14.06	2.9
32		24.13	2.71	16.27	3.1
40		28.34	2.89	19.86	3.3