



VCH/HCH AIR HANDLER

SPECIFICATIONS – Performance per ARI Std. 210/240						Model 374				
PERFORMANCE	Applied with	EER	COP	CFM	Cooling Sensible BTUH	Cooling Total BTUH		Heating Total BTUH		
	RC314E	10.2	—	11,000	251,400	300,400		—		
	RC374E	10.1	—	13,000	285,600	378,400		—		
	RC414E	10.2	—	14,000	308,900	414,200		—		
	—	—	—	—	—	—		—		
	RH374E	9.8	3.3	13,000	279,200	362,600		352,300		
	RH414E	9.7	3.4	14,000	300,500	393,700		393,600		
—	—	—	—	—	—		—			
ELECTRICAL DATA	SERVICE		Voltage-Phase-Hz		208/230-1-60	208/230-3-60	460-3-60	380/415-3-50		
	5 HP MOTOR		FLA		—	13.4	6.7	7.8		
			Unit Minimum Circuit Ampacity		—	17	9	10		
			Max. Time Delay Fuse or HACR Breaker		—	30	15	15		
	7 1/2 HP MOTOR		FLA		24.8	20.0	10.0	11.0		
			Unit Minimum Circuit Ampacity		33	25	13	14		
			Max. Time Delay Fuse or HACR Breaker		50	45	20	20		
	10 HP MOTOR		FLA		29.0	25.0	12.5	—		
			Unit Minimum Circuit Ampacity		37	32	16	—		
			Max. Time Delay Fuse or HACR Breaker		60	50	25	—		
	MECHANICAL DATA	EVAPORATOR BLOWER		DWDI, Dia." x Width" (Qty.)		18 x 18 (2)				
		DX Coil		Face Area – Sq. Ft.		25.9				
Rows Deep — Fins per Inch				4 — 13						
Hot Gas Reheat Coil		Face Area – Sq. Ft.		25.9						
		Rows Deep — Fins per Inch		1 / 10						
Liquid Sub Cooling Coil		Face Area – Sq. Ft.		25.9						
		Rows Deep — Fins per Inch		1 / 10						
Chill Water Coil		Face Area – Sq. Ft.		25.0						
		Rows Deep — Fins per Inch		4/12						
Hydronic Heat Coil		Face Area – Sq. Ft.		25.0						
		Rows Deep — Fins per Inch		1/8						
Steam Coil		Face Area – Sq. Ft.		25.0						
		Rows Deep — Fins per Inch		1/8						
Refrigerant Connections		Suction Line (Number) Size		(2) 1 5/8"						
		Liquid Line (Number) Size		(2) 5/8"						
Condensate Drain		(Number) Size		(2) 1 1/4"						
Filters		(Number) Size		(4) 20 x 30 x 2 — (2) 24 x 24 x 2						
WEIGHTS		Unit (lbs)		1,235						
		Shipping Weight(lbs)		1,315						

Blower Performance

		External Static Pressure - Inches H ₂ O													
		0.4		0.6		0.8		1.0		1.2		1.4		1.6	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
10000	615	3.4	665	3.9	720	4.4	750	4.8	780	5.2	840	5.8	880	6.2	
11000	640	4.1	690	4.7	740	5.2	780	5.7	810	6.2	860	6.8	900	7.3	
12000	670	5.0	715	5.5	760	6.1	800	6.7	830	7.2	880	7.8	920	8.4	
13000	695	5.9	735	6.5	780	7.1	820	7.7	860	8.2	900	8.8	940	9.4	
14000	720	6.9	760	7.5	800	8.1	840	8.7	880	9.2	920	9.8	—	—	

- Notes: 1. For units with electric heat, add 0.20 inches External Static Pressure prior to making R.P.M and B.H.P. selection.
 2. For units with discharge plenum, add 0.02 inches to External Static Pressure prior to making R.P.M and B.H.P. selection.
 2. Tables can be interpolated but not extrapolated.

Heating Coil Capacities

CFM	Steam Coil		Hot Water Coil			
	Heating Capacity BTUH*	°F Lvg. Air Temp.	Heating Capacity BTUH**	°F Lvg. Air Temp.	GPM	W.P.D. Ft. Head
10000	564,070	121.8	375,900	104.3	38.6	3.2
11000	594,800	119.7	395,800	102.9	40.7	3.6
12000	623,260	117.7	414,600	101.6	42.6	3.9
13000	649,690	115.9	432,400	100.4	44.4	4.2
14000	647,270	114.2	449,400	99.3	46.2	4.5

Note: Leaving air temperatures are based on 70°F entering air.

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Steam Coil Correction Factors

Steam Pressure		2 PSIG	5 PSIG
Entering Air Temp. °F	40°	1.12	1.25
	50°	1.13	1.18
	60°	1.06	1.11
	70°	1.00	1.05

Hot Water Coil Correction Factors

Entering Water Temp. °F	Entering Air Temp.			
	40°	50°	60°	70°
160°	0.96	0.90	0.82	0.74
180°	1.08	1.02	0.95	0.87
200°	1.23	1.16	1.08	1.00

4 Row Chilled Water Coil Performance with 45° entering water

CFM	Capacity	Entering Air to Coil								
		75° F DB			80° F DB			85° F DB		
		63°F WB	67°F WB	71°F WB	63°F WB	67°F WB	71°F WB	63°F WB	67°F WB	71°F WB
10000	Total	253,900	326,600	435,400	296,300	349,400	442,400	330,100	377,100	429,700
	Sensible	216,100	197,000	185,300	283,100	257,900	240,400	330,100	320,600	301,800
	LAT	55.4/54.3	57.1/56.6	58.2/58.1	54.3/52.6	56.6/55.8	58.2/57.8	54.6/51.3	55.9/54.7	57.6/56.8
	GPM	50.4	64.9	86.5	58.9	69.4	87.9	65.6	75.2	85.5
	Δ P	3.5	5.6	9.6	4.7	6.4	9.9	5.8	7.4	9.4
12000	Total	294,900	369,700	486,400	339,200	395,900	495,600	380,700	429,800	483,100
	Sensible	252,500	226,100	208,300	328,100	297,500	273,500	380,700	371,600	346,600
	LAT	55.9/54.6	57.9/57.3	59.3/59.1	55.2/53.2	57.5/56.5	59.3/58.8	55.7/51.8	56.9/55.4	58.8/57.7
	GPM	58.7	73.7	96.7	67.4	78.7	98.5	75.8	85.4	95.9
	Δ P	4.7	7.1	11.8	6.0	8.1	12.2	7.5	9.4	11.6
14000	Total	331,800	407,300	531,700	373,700	436,700	543,200	427,000	474,900	535,200
	Sensible	286,500	252,800	229,100	367,700	334,100	304,300	427,000	418,100	390,300
	LAT	56.4/54.9	58.6/57.9	60.2/60.0	56.2/53.7	58.4/57.1	60.3/59.6	56.9/52.2	57.9/56.1	59.7/58.4
	GPM	65.9	81.0	105.7	74.2	86.8	108.0	85.0	94.4	106.5
	Δ P	5.8	8.5	13.9	7.2	9.7	14.5	9.3	11.3	14.1

6 Row Chilled Water Coil Performance with 45° entering water

CFM	Capacity	Entering Air to Coil								
		75° F DB			80° F DB			85° F DB		
		63°F WB	67°F WB	71°F WB	63°F WB	67°F WB	71°F WB	63°F WB	67°F WB	71°F WB
10000	Total	363,600	447,600	572,800	407,700	469,300	582,700	455,100	498,500	594,900
	Sensible	271,100	249,600	240,200	346,000	313,700	299,300	423,300	381,500	359,600
	LAT	50.4/50.1	52.4/52.2	53.2/53.1	48.6/48.2	51.5/51.3	52.8/52.7	46.6/46.1	50.4/50.0	52.4/52.1
	GPM	72.3	88.8	114.0	81.2	93.5	115.9	90.5	99.2	118.1
	Δ P	9.5	13.9	22.0	11.8	15.2	22.7	14.4	17.0	23.5
12000	Total	416,700	510,200	651,800	468,900	536,200	664,200	458,100	572,500	679,700
	Sensible	315,400	287,500	273,500	404,100	363,800	344,100	458,100	445,000	416,100
	LAT	51.2/50.7	53.3/53.0	54.3/54.3	49.5/48.9	52.5/52.1	54.0/53.8	49.8/49.2	51.4/50.9	53.5/53.2
	GPM	82.9	101.6	129.7	93.2	106.7	132.1	91.2	113.9	134.9
	Δ P	12.2	17.8	28.0	15.2	19.5	28.9	14.6	22.0	30.1
14000	Total	465,900	567,100	723,700	524,700	600,000	738,700	521,200	641,100	759,100
	Sensible	357,500	323,000	304,100	459,200	412,200	386,000	521,200	505,600	470,300
	LAT	51.8/51.3	54.1/53.8	55.3/55.2	50.2/49.5	53.3/52.8	55.0/54.8	50.7/49.6	52.2/51.6	54.5/54.1
	GPM	92.7	112.9	143.9	104.1	119.3	146.8	103.7	127.6	151.2
	Δ P	15.0	21.6	33.9	18.6	24.0	35.2	18.5	27.1	37.2

Optional Factory Installed Electric Heat

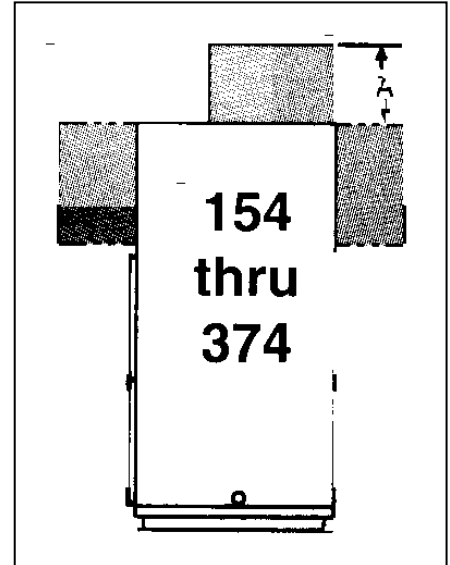
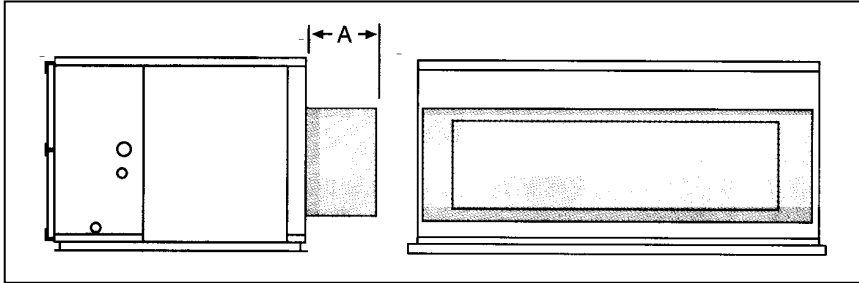
CFM	KW-->	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120
	MBH	153.6	170.7	187.7	204.8	221.8	238.9	256.0	273.0	290.1	307.2	324.2	341.3	358.4	375.4	392.5	409.6
10000	Rise	14.2	15.7	17.3	18.9	20.4	22.0	23.6	25.2	26.7	28.3	29.9	31.5	33.0	34.6	36.2	37.7
11000		12.9	14.3	15.7	17.2	18.6	20.0	21.4	22.9	24.3	25.7	27.2	28.6	30.0	31.5	32.9	34.3
12000		11.8	13.1	14.4	15.7	17.0	18.3	19.7	21.0	22.3	23.6	24.9	26.2	27.5	28.8	30.1	31.5
13000		10.9	12.1	13.3	14.5	15.7	16.9	18.1	19.4	20.6	21.8	23.0	24.2	25.4	26.6	27.8	29.0
14000		10.1	11.2	12.4	13.5	14.6	15.7	16.9	18.0	19.1	20.2	21.3	22.5	23.6	24.7	25.8	27.0
208v 1phase		Amps	NA	240.4	264.4	288.5	312.5	336.5	360.6	384.6	408.7	432.7	456.7	480.8	504.8	528.8	552.9
208v 3 phase	124.9		138.8	152.7	166.5	180.4	194.3	208.2	222.1	235.9	249.8	263.7	277.6	291.5	305.3	319.2	333.1
240v 1 phase	187.5		208.3	229.2	250.0	270.8	291.7	312.5	333.3	354.2	375.0	395.8	416.7	437.5	458.3	479.2	500.0
240v 3 phase	108.3		120.3	132.3	144.3	156.4	168.4	180.4	192.5	204.5	216.5	228.5	240.6	252.6	264.6	276.7	288.7
480v 3 phase	54.1		60.1	66.2	72.2	78.2	84.2	90.2	96.2	102.2	108.3	114.3	120.3	126.3	132.3	138.3	144.3

Recommended Refrigerant Line Sizes – O.D.

Equivalent Line Length — Feet

0 to 25					26 to 50					51 to 75				
Suction	Liquid	Hot Gas Bypass	Hot Gas Reheat		Suction	Liquid	Hot Gas Bypass	Hot Gas Reheat		Suction	Liquid	Hot Gas Bypass	Hot Gas Reheat	
			S	R				S	R				S	R
Two 1 5/8	Two 5/8	3/4	5/8	1/2	Two 1 5/8	Two 5/8	3/4	3/4	1/2	Two 1 5/8	Two 3/4	3/4	7/8	1/2

- Notes:
1. Line lengths are equivalent, including all fittings. Use long radius ells only.
 2. Line sizes are for both vertical and horizontal runs.
 3. Liquid line sizes and hot gas reheat return line sizes are designed to minimize system refrigerant charge.
 4. Over 75 equivalent feet, consult factory for sizing recommendations.
 5. Over 75 total feet, a special hot gas bypass system must be installed in the condensing unit **with an oil separator. Contact factory.**
 6. "S" = Hot gas supply line from RC to VC/HC; "R" = Hot gas return line from VC/HC to RC unit. *Hot gas bypass and hot gas reheat only on lead circuit of dual circuit units. Hot gas bypass and hot gas reheat normally not available for heat pump use.

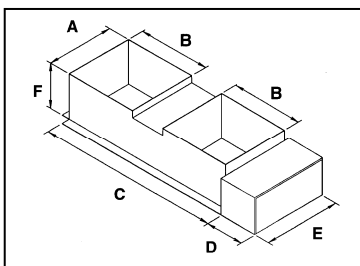


HCH and VCH Discharge electric Heaters Standard Depth in Direction of Airflow

KW Range	Dim. A (In.)
1 – 60	12
61 - 120	15

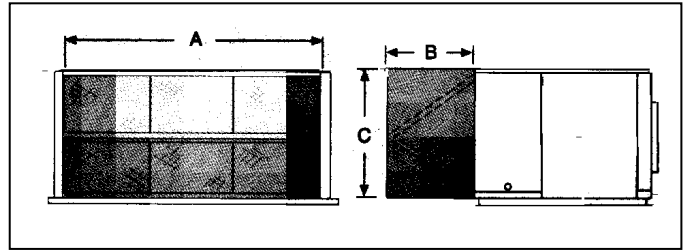
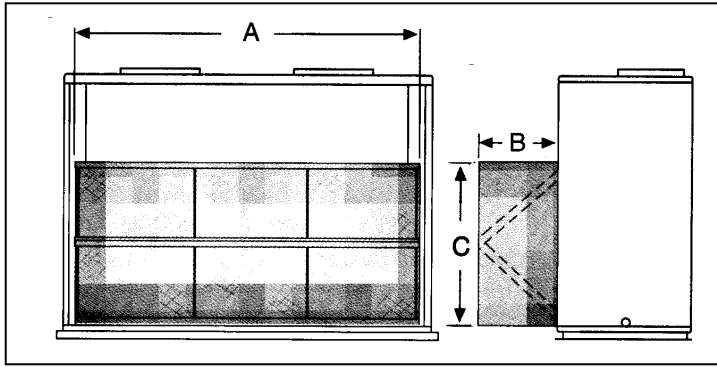
Note: Above values for Dim. A are for standard heaters, with or without air pressure switch, staging relay and non-fused disconnect. Addition of more options may require longer Dim. A. If space considerations are critical, contact factory for exact information.

Note: electric heat sections are designed for mounting directly to air handler cabinet. Electrical box is on the same end as air handler fan motor. Sub-circuit fusing is included when required. Disconnect to be furnished and filed installed by contractor.



	Electric Heaters						
	kW Range	A	B	C*	D*	E	F
VCH	1 – 60	19 1/8	22 1/8	67 5/8	12	21 1/8	12
	61 - 90	19 1/8	22 1/8	67 5/8	15	21 1/8	15
	91 – 120	19 1/8	22 1/8	67 5/8	18	21 1/8	15
HCH	1 – 60	21 3/4	24	69 5/8	12	23 3/4	12
	61 - 120	21 3/4	24	69 5/8	18	23 3/4	15

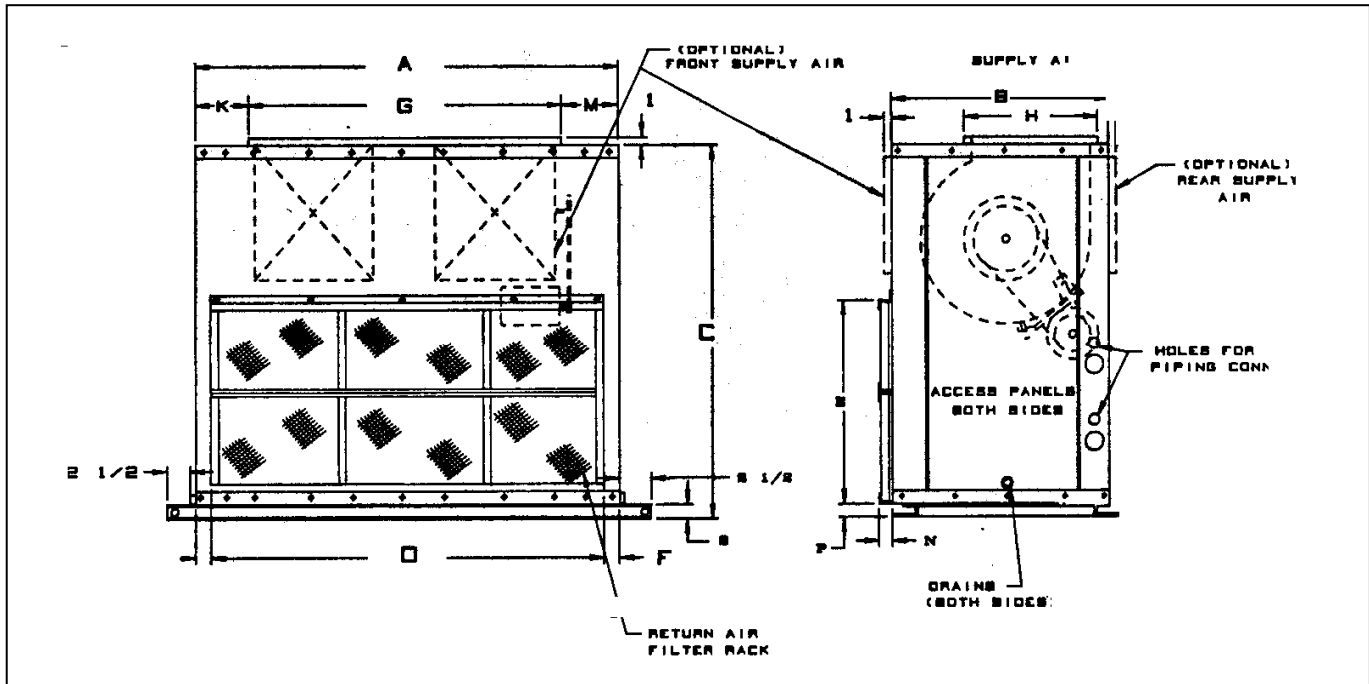
* These dimensions may vary with added heater options. Contact factory if space considerations are critical.



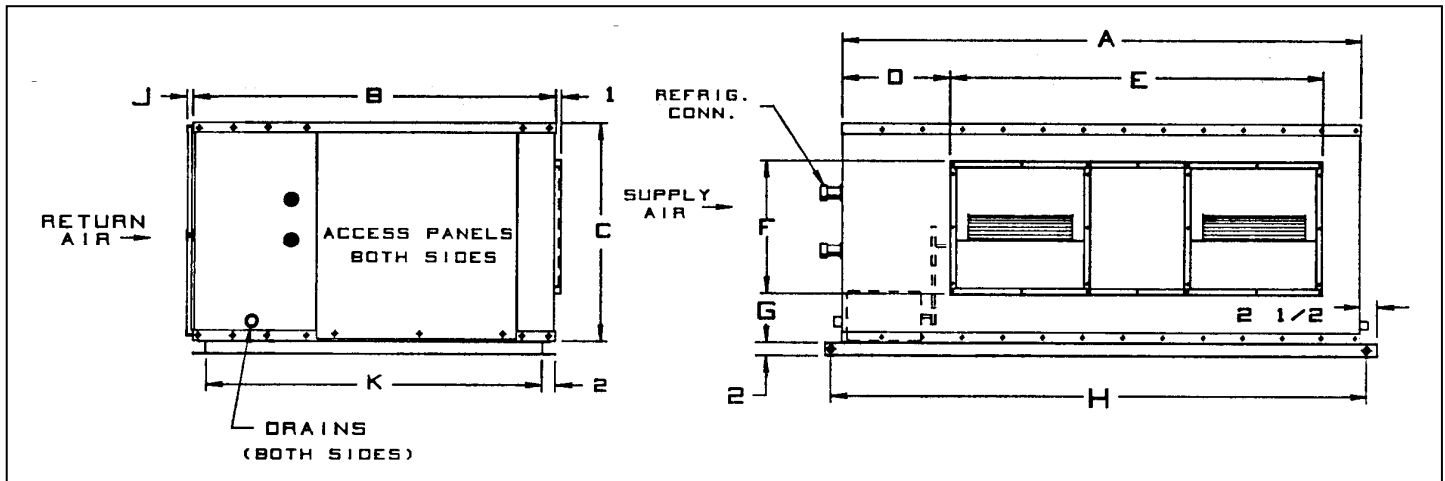
Angle Filter Section

	A	B	C	Filters, Qty. - Size
HCH	91	30	48 1/2	9 - 25 x 25 / 3 - 16 x 25
VCH	91	30	48 1/2	9 - 25 x 25 / 3 - 16 x 25

Filter sections are fully insulated and shipped separate for field assembly to the air handler. 2-inch glass fiber media filters standard.



Dimensions													
Model	A	B	C	D	E	F	G	H	J	K	M	N	P
374	93	32	79	86	48 1/2	3 1/2	69 1/4	20 7/8	1	11 7/8	11 7/8	3 3/8	3 1/2



Model	Dimensions											Return Air	
	A	B	C	D	E	F	G	H	J	K	Width	Height	
374	93	56	49	12 5/8	67 3/4	20 7/8	11 1/2	92 1/2	1 1/4	52	86	80	

Specifications subject to change without notice

Installation Code and Annual Inspections:

All installations and service of ADDISON equipment must be performed by a contractor qualified in the installation and service of equipment sold and supplied by Addison and conform to all requirements set forth in the ADDISON manuals and all applicable governmental authorities pertaining to the installation, service and operation of the equipment. To help facilitate optimum performance and safety, Addison recommends that a qualified contractor annually inspect your ADDISON equipment and perform service where necessary, using only replacement parts sold and supplied by ADDISON.

Further Information: Applications, engineering and detailed guidance on systems design, installation and equipment performance is available through ADDISON representatives. Please contact us for any further information you may require, including the Installation, Operation and Service Manual.

These products are not for residential use.

This document is intended to assist licensed professionals in the exercise of their professional judgment.



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