VCH/HCH AIR HANDLER

SPECIFICATIONS – Performance per ARI Std. 210/240						Model 074			
PERFORMANCE	Applied with	EER	COP	CFM	Cooling Sensible BTUH	Cooling Total BTUH		Heating Total BTUH	
	RC074E	9.3	—	2,600	58,200	83,200		—	
	—	—	—	—	—	—		—	
	—	—	—	—	—	—		—	
	—	—	—	—	—	—		—	
	RH074E	9.0	3.3	2,600	57,800	79,900		86,500	
	—	—	—	—	—	—		—	
	—	—	—	—	—	—		—	
ELECTRICAL DATA	SERVICE				Voltage-Phase-Hz	208/230-1-60	208/230-3-60	460-3-60	380/415-3-50
	1 HP MOTOR				FLA	6.4	3.6	1.8	1.9
					Unit Minimum Circuit Ampacity	8	5	3	3
					Max. Time Delay Fuse or HACR Breaker	15	15	15	15
	1 ½ HP MOTOR				FLA	7.7	4.6	2.3	2.7
					Unit Minimum Circuit Ampacity	10	6	3	4
					Max. Time Delay Fuse or HACR Breaker	15	15	15	15
	2 HP MOTOR				FLA	13.0	6.2	3.1	3.5
					Unit Minimum Circuit Ampacity	17	8	4	5
					Max. Time Delay Fuse or HACR Breaker	25	15	15	15
MECHANICAL DATA	EVAPORATOR BLOWER				DWDI, Dia." x Width" (Qty.)	12 x 12 (1)			
	DX Coil				Face Area – Sq. Ft.	5.2			
					Rows Deep — Fins per Inch	4 — 12			
	Hot Gas Reheat Coil				Face Area – Sq. Ft.	4.5			
					Rows Deep — Fins per Inch	1 / 10			
	Liquid Sub Cooling Coil				Face Area – Sq. Ft.	4.5			
					Rows Deep — Fins per Inch	1 / 10			
	Chill Water Coil				Face Area – Sq. Ft.	5.2			
					Rows Deep — Fins per Inch	4/12			
	Hydronic Heat Coil				Face Area – Sq. Ft.	5.2			
					Rows Deep — Fins per Inch	1/8			
	Steam Coil				Face Area – Sq. Ft.	5.0			
					Rows Deep — Fins per Inch	1/8			
	Refrigerant Connections				Suction Line (Number) Size	(2) 7/8"			
					Liquid Line (Number) Size	(2) 3/8			
	Condensate Drain				(Number) Size	(1) ¾"			
	Filters				(Number) Size	(2) 18 x 22 x 2			
	WEIGHTS				Unit (lbs)	260			
					Shipping Weight(lbs)	295			

Blower Performance

	External Static Pressure - Inches H_2O													
	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
2200	830	0.8	895	0.9	970	0.9	1035	1.0	1120	1.2	1180	1.3	1230	1.4
2400	860	0.9	920	1.0	990	1.0	1055	1.1	1125	1.3	1185	1.4	1235	1.5
2600	885	1.0	945	1.0	1010	1.2	1070	1.3	1130	1.4	1190	1.5	1240	1.6
2800	910	1.1	965	1.2	1030	1.3	1085	1.4	1140	1.6	1200	1.7	1250	1.8
3000	940	1.2	1000	1.3	1060	1.5	1110	1.6	1150	1.7	1210	1.8	1260	1.9

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
2200	119,090	119.7	74,300	100.9	7.6	1.8
2400	124,880	117.8	77,900	99.6	8.0	2.0
2600	130,360	116.0	81,100	98.5	8.3	2.1
2800	135,550	114.5	84,300	97.5	8.7	2.3
3000	140,490	113.0	87,300	96.6	9.0	2.5

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

Applied Research Laboratories, Inc.
Listed

Form # 0527S-1187 Rev. A (0408)
Supersedes Form # 0527S-1187 (0900)

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	Entering Air Temp.			
Temp. °F	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

		Entering Air to Coil								
		75° F DB			80° F DB			85° F DB		
CFM	Capacity	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
2200	Total	45,900	60,800	88,900	57,000	65,100	88,600	67,500	71,900	89,300
	Sensible	43,200	39,600	38,400	56,600	52,500	50,000	67,500	66,000	62,000
	LAT	57.2/55.9	58.7/58.4	59.2/59.1	56.7/54.0	58.3/57.6	59.4/59.1	56.7/52.2	57.8/56.5	59.4/58.9
	GPM	9.1	12.1	17.7	11.3	12.9	17.6	13.4	14.3	17.7
	Δ P	4.0	6.9	14.3	6.1	7.9	14.3	8.5	9.5	14.5
2600	Total	52,300	68,200	98,100	63,900	73,300	97,800	77,300	81,500	98,800
	Sensible	49,600	45,100	42,700	63,900	60,200	56,300	77,300	75,700	70,300
	LAT	57.7/56.2	59.3/58.8	60.1/60.0	57.3/54.5	59.0/58.1	60.4/60.0	57.6/52.5	58.6/57.0	60.5/59.8
	GPM	10.4	13.5	19.5	12.7	14.6	19.4	15.4	16.2	19.6
	Δ P	5.1	8.6	17.3	7.6	9.9	17.2	11.0	12.1	17.6
3000	Total	58,200	75,000	106,200	71,700	81,000	105,900	86,500	90,200	107,400
	Sensible	55,600	50,400	46,600	71,700	67,600	62,200	86,500	84,900	78,200
	LAT	58.2/56.5	59.8/59.3	60.9/60.8	58.0/54.8	59.6/58.5	61.2/60.8	58.4/52.9	59.3/57.4	61.4/60.5
	GPM	11.6	14.9	21.1	14.3	16.1	21.0	17.2	17.9	21.3
	Δ P	6.3	10.3	20.2	9.5	12.0	20.1	13.6	14.7	20.6

6 Row Chilled Water Coil Performance with 45° entering water

		Entering Air to Coil								
		75° F DB			80° F DB			85° F DB		
CFM	Capacity	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
2200	Total	54,400	67,200	95,800	61,200	78,000	99,500	74,700	88,700	105,600
	Sensible	48,300	42,100	40,900	61,200	58,300	54,300	74,700	74,700	68,700
	LAT	55.1/54.5	57.6/57.4	58.1/58.0	54.3/53.3	55.9/55.6	57.6/57.4	53.7/50.9	54.2/53.7	56.7/56.4
	GPM	10.8	13.4	19.0	12.2	15.5	19.7	14.8	17.7	21.0
	Δ P	0.4	0.7	1.3	0.5	0.9	1.4	0.8	1.2	1.6
2600	Total	63,200	77,800	109,200	70,900	89,900	113,700	86,500	101,800	120,800
	Sensible	56,300	49,000	46,700	70,900	67,700	62,500	86,500	86,700	79,400
	LAT	55.4/54.7	57.9/57.6	58.7/58.6	54.9/53.5	56.4/55.9	58.2/58.0	54.3/51.2	54.8/54.2	57.3/56.9
	GPM	12.6	15.5	21.7	14.1	17.9	22.6	17.2	20.2	24.0
	Δ P	0.6	0.9	1.7	0.8	1.2	1.8	1.1	1.5	2.0
3000	Total	71,200	87,500	121,700	80,200	101,100	127,000	97,700	114,200	135,300
	Sensible	63,800	55,400	52,300	80,200	76,800	70,400	97,700	98,300	89,700
	LAT	55.7/54.9	58.2/57.8	59.2/59.1	55.4/53.7	56.8/56.2	58.7/58.4	55.0/51.4	55.3/54.5	57.9/57.4
	GPM	14.1	17.4	24.2	15.9	20.1	25.2	19.4	22.7	26.9
	Δ P	0.8	1.1	2.1	1.0	1.5	2.2	1.4	1.8	2.5

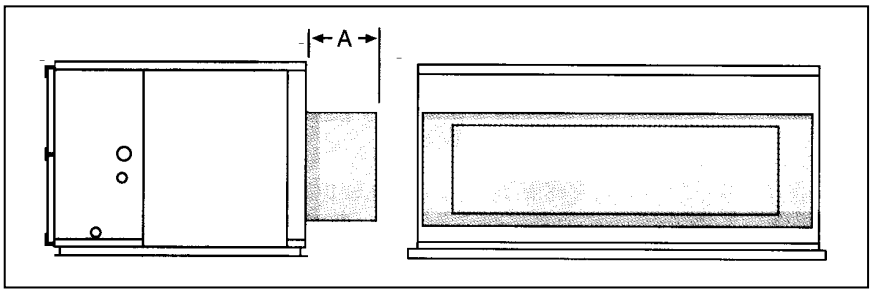
Optional Factory Installed Electric Heat

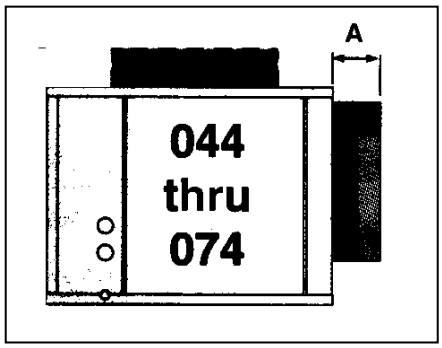
CFM	KW-->	5	10	15	20	25
	MBH	17.1	34.1	51.2	68.3	85.3
2200	Rise	7.1	14.3	21.4	28.6	35.7
2600		6.0	12.1	18.1	24.2	30.2
3000		5.2	10.5	15.7	21.0	26.2
208v 1phase	Amps	24.0	48.1	72.1	96.2	120.2
208v 3 phase		13.9	27.8	41.6	55.5	69.4
240v 1 phase		20.8	41.7	62.5	83.3	104.2
240v 3 phase		12.0	24.1	36.1	48.1	60.1
480v 3 phase		6.0	12.0	18.0	24.1	30.1

Recommended Refrigerant Line Sizes – O.D.

Equivalent Line Length — Feet														
0 to 25					26 to 50					51 to 75				
			Hot Gas Reheat					Hot Gas Reheat					Hot Gas Reheat	
Suction	Liquid	Hot Gas Bypass	S	R	Suction	Liquid	Hot Gas Bypass	S	R	Suction	Liquid	Hot Gas Bypass	S	R
Two 7/8	Two 3/8	1/2	3/8	3/8	Two 7/8	Two 3/8	1/2	3/8	3/8	Two 7/8	Two 3/8	1/2	1/2	3/8

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 hog gas reheat normally not available for heat pump use.

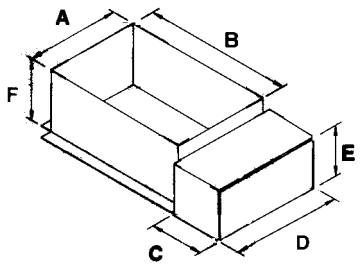




HCH and VCH Discharge electric Heaters
Standard Depth in Direction of Airflow

KW Range	Dim. A (In.)
1 – 25	12

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 Din. 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.



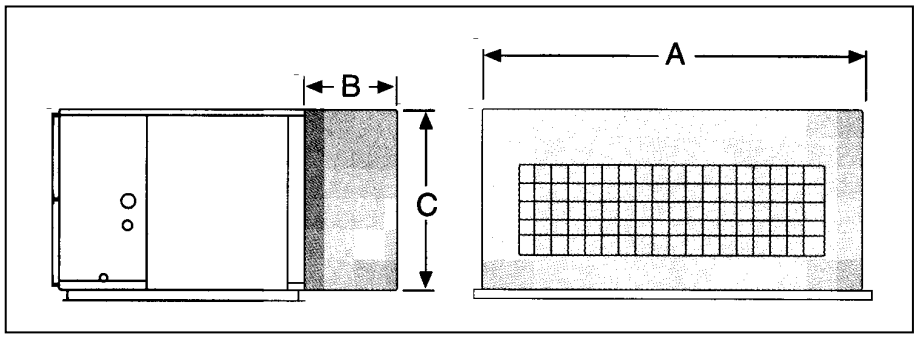
Electric Heaters						
kW Range	A	B	C*	D*	E	F
1 – 20	20 1/4	20 1/4	10	22 1/4	11	12
21 - 25	20 1/4	20 1/4	12	22 1/4	11	12

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

Discharge Plenum with 4 way Adjustable Grill

	A	B	C
HCH Model	38 1/2	14	25
VCH Model	—	—	—

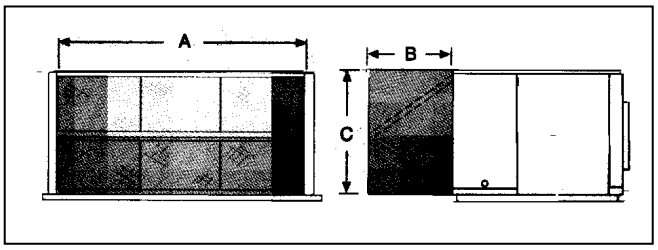
Plenums are fully insulated and shipped separate for field assembly to the air handler and can be installed 180 degrees from the view shown on the drawing.

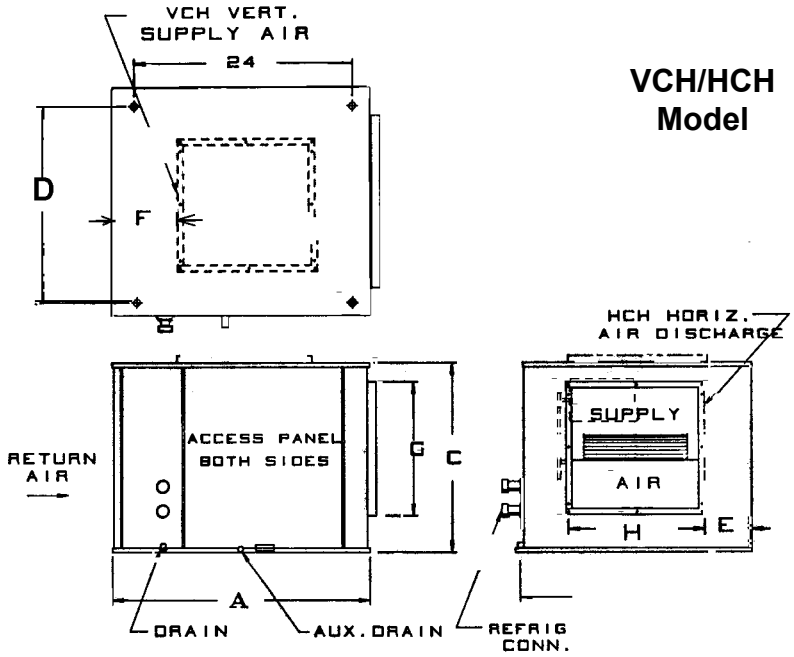


Angle Filter Section

	A	B	C	Filters, Qty. - Size
HCH	36 1/2	25	23	2 - 20 x 20/ 2 – 16 x 20
VCH	—	—	—	—

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





VCH/HCH Model

Dimensions								Return Air Size	
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**Width**	**Height**
33	38 1/2	25	36	10 3/16	6 7/8	16 1/8	18	34	20

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.

7050 Overland Road
Orlando, FL 32810 USA
Telephone: 407.292.4400
Fax: 407.290.1329
www.addison-hvac.com

Printed in the USA

0408