



RC SERIES AIR COOLED CONDENSING UNITS

SPECIFICATIONS Rated in Accordance with ARI Standard 210/240				RC074F		
COOLING	Rated with Optional Air Handler Model		VCH/HCH074			
	Total BTUH		80,100			
	Sensible BTUH		58,000			
	EER		9.6			
ELECTRICAL	SERVICE	Voltage-Phase-Hz		208/230-3-60	460-3-60	380/415-3-50
	COMPRESSOR	Type (Qty) HP		Scroll (2) 3.5		
		RLA		13.9/13.9	7.1/7.1	7.1/7.1
		LRA		88/88	44/44	44/44
		IPLV		10.5		
	Capacity Reduction (Standard) — (Optional)		Standard 50% — Optional 50%-30%			
	CONDENSER FAN MOTOR(S)	Horse Power — (Qty)		½ — (1)		
		FLA (ea)		3.5	1.8	2.2
		Total CFM		4,000		
	UNIT	RLA		31.3	16.0	16.4
Unit Minimum Circuit Ampacity		34.8	17.8	18.2		
Max. Time Delay Fuse or HACR Breaker		45	20	25		
PHYSICAL DATA	CONDENSER COIL Alum. Fins on Copper Tubes	Face Area (sq.ft.)		7.7		
		Rows Deep — Fins per Inch		4 — 12		
		Suction Line OD		7/8 and 7/8		
		Liquid Line OD		3/8 and 3/8		
	WEIGHTS	Unit (lbs)		395		
Shipping Weight (lbs)		445				

Rated With Air Handler Model	CFM		ENTERING TEMPERATURE							
			75°F DB				80°F DB			
			59°F WB	63°F WB	67°F WB	71°F WB	59°F WB	63°F WB	67°F WB	71°F WB
VCH/HCH 074	2200	TOTAL BTUH	71,782	75,974	80,582	85,270	76,740	76,826	81,356	86,140
		SENS BTUH	64,608	55,590	46,156	37,042	76,740	66,598	56,900	47,824
		WATTS INPUT	7,224	7,278	7,354	7,412	7,294	7,300	7,366	7,438
		LVG DB/WB	48.4 46.4	52.1 50.8	56.0 55.2	59.7 59.7	48.4 45.4	52.5 50.6	56.5 55.2	60.3 59.5
	2600	TOTAL BTUH	74,550	77,870	82,572	87,162	80,614	82,400	84,187	85,973
		SENS BTUH	70,524	59,500	48,814	38,464	80,614	72,486	61,374	50,800
		WATTS INPUT	7,258	7,314	7,384	7,454	7,352	7,391	7,431	7,470
		LVG DB/WB	50.4 48.1	54.2 52.6	58.0 57.0	61.6 61.4	51.9 47.0	54.7 52.3	58.6 56.9	62.3 61.2
	3000	TOTAL BTUH	77,232	79,380	84,086	88,634	83,700	84,754	85,807	86,861
		SENS BTUH	76,140	63,396	51,298	39,642	83,700	78,186	65,488	53,600
		WATTS INPUT	7,296	7,338	7,408	7,476	7,392	7,426	7,460	7,494
		LVG DB/WB	52.0 49.3	55.8 53.9	59.5 58.2	63.0 62.6	54.7 48.3	56.4 53.5	60.2 58.2	63.8 62.5

Rated With Air Handler Model	CFM		ENTERING TEMPERATURE							
			85°F DB				90°F DB			
			59°F WB	63°F WB	67°F WB	71°F WB	59°F WB	63°F WB	67°F WB	71°F WB
VCH/HCH 074	2200	TOTAL BTUH	80,946	82,024	83,102	84,180	85,188	86,266	87,344	88,422
		SENS BTUH	80,946	78,206	68,568	58,914	85,188	85,234	79,644	70,458
		WATTS INPUT	7,356	7,387	7,417	7,448	7,416	7,431	7,445	7,460
		LVG DB/WB	51.6 44.5	52.8 50.1	56.7 54.8	60.7 59.3	54.9 43.5	54.9 48.9	57.2 54.5	61.0 59.1
	2600	TOTAL BTUH	85,074	85,731	86,388	87,046	89,648	89,700	89,790	90,140
		SENS BTUH	85,074	85,122	74,676	63,766	89,648	89,700	89,790	77,012
		WATTS INPUT	7,414	7,436	7,458	7,480	7,484	7,489	7,493	7,498
		LVG DB/WB	55.3 46.2	55.3 51.4	58.9 56.6	62.8 61.1	58.7 45.4	58.7 50.6	58.7 55.8	63.1 60.8
	3000	TOTAL BTUH	88,442	88,578	88,714	88,850	93,294	93,430	93,566	93,702
		SENS BTUH	88,442	88,488	80,786	68,576	93,294	93,348	93,376	83,538
		WATTS INPUT	7,464	7,475	7,487	7,498	7,546	7,543	7,541	7,538
		LVG DB/WB	58.3 47.6	58.2 52.6	60.6 57.8	64.3 62.3	61.8 46.9	61.8 51.9	61.8 57.0	64.7 62.1

Note: Above performance data gives gross evaporator capacity with 25' refrigerant lines and full condenser operation at 60 HZ.

Applied Research Laboratories, Inc.



Listed

Rated With Air Handler Model	CFM	ENTERING TEMPERATURE																
		75°F DB						80°F DB										
		59°F WB		63°F WB		67°F WB		71°F WB		59°F WB		63°F WB		67°F WB		71°F WB		
VCH/HCH 104	2600	TOTAL BTUH	75,694	79,542	84,398	89,208	80,358	80,798	85,024	89,920								
		SENS BTUH	71,772	61,134	50,330	39,670	80,358	74,108	62,930	52,320								
		WATTS INPUT	7,130	7,200	7,290	7,380	7,216	7,224	7,302	7,394								
		LVG DB/WB	50.0 47.9	53.7 52.3	57.4 56.7	61.2 61.1	52.0 47.1	54.1 52.1	58.0 56.7	61.7 61.0								
	3000	TOTAL BTUH	78,202	81,062	85,920	90,706	83,426	85,618	87,809	90,001								
		SENS BTUH	76,894	65,330	53,090	41,058	83,426	80,000	67,422	55,410								
		WATTS INPUT	7,176	7,228	7,318	7,408	7,272	7,323	7,373	7,424								
		LVG DB/WB	51.8 49.1	55.2 53.7	58.9 58.0	62.6 62.4	54.8 48.4	55.8 53.4	59.6 58.0	63.2 62.3								
	3400	TOTAL BTUH	81,222	82,750	87,108	91,872	85,954	87,574	89,194	90,814								
		SENS BTUH	81,222	69,692	55,728	42,366	85,954	84,504	72,200	58,378								
		WATTS INPUT	7,230	7,260	7,340	7,430	7,320	7,362	7,404	7,446								
		LVG DB/WB	53.3 50.0	56.4 54.7	60.1 59.1	63.7 63.4	57.1 49.4	57.5 54.4	60.7 59.0	64.4 63.3								

Rated With Air Handler Model	CFM	ENTERING TEMPERATURE																
		85°F DB						90°F DB										
		59°F WB		63°F WB		67°F WB		71°F WB		59°F WB		63°F WB		67°F WB		71°F WB		
VCH/HCH 104	2600	TOTAL BTUH	84,756	84,804	86,092	90,396	89,220	89,272	89,332	91,528								
		SENS BTUH	84,756	84,804	76,364	65,288	89,220	89,272	89,332	78,514								
		WATTS INPUT	7,298	7,300	7,324	7,404	7,382	7,392	7,402	7,412								
		LVG DB/WB	55.4 46.3	55.4 51.4	58.4 56.3	62.2 60.9	58.9 45.5	58.9 50.7	58.8 55.8	62.6 60.7								
	3000	TOTAL BTUH	88,050	88,828	89,605	90,383	92,742	92,798	92,860	93,464								
		SENS BTUH	88,050	88,100	82,340	70,164	92,742	92,798	92,860	84,836								
		WATTS INPUT	7,360	7,385	7,409	7,434	7,448	7,448	7,448	7,448								
		LVG DB/WB	58.4 47.7	58.4 52.7	60.1 57.7	63.8 62.2	62.0 46.9	61.9 52.0	61.9 57.0	64.4 61.9								
	3400	TOTAL BTUH	90,766	91,264	91,763	92,261	95,650	96,148	96,647	97,145								
		SENS BTUH	90,766	90,818	87,890	75,380	95,650	95,708	95,772	91,256								
		WATTS INPUT	7,410	7,429	7,447	7,466	7,504	7,505	7,505	7,506								
		LVG DB/WB	60.8 48.8	60.8 53.7	61.6 58.6	64.9 63.1	64.5 48.1	64.5 53.1	64.5 58.0	65.7 62.9								

Note: Above performance data gives gross evaporator capacity with 25' refrigerant lines and full condenser operation at 60 HZ.

Temperature	95°F	100°F	105°F	110°F	115°F
Total Capacity	1.00	.98	.95	.91	.87
Sensible Capacity	1.00	.99	.97	.95	.93
Watts	1.00	1.03	1.05	1.08	1.11
Gross EER	1.00	.95	.90	.84	.78

Capacity	At 60 HZ	
	Evaporator CFM	Evaporator CFM
Total	0.91	0.88
Sensible	0.95	.086
Watts	0.85	.083

Notes: 50HZ evaporator CFM is 0.83 times full rated CFM shown above.

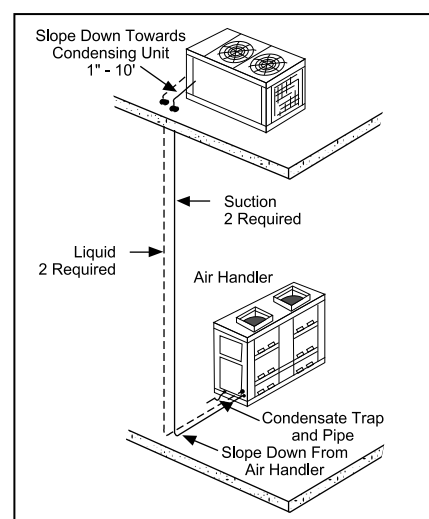
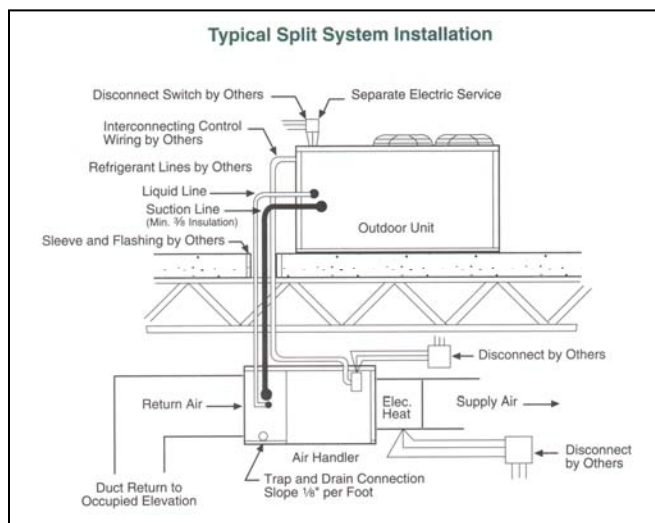
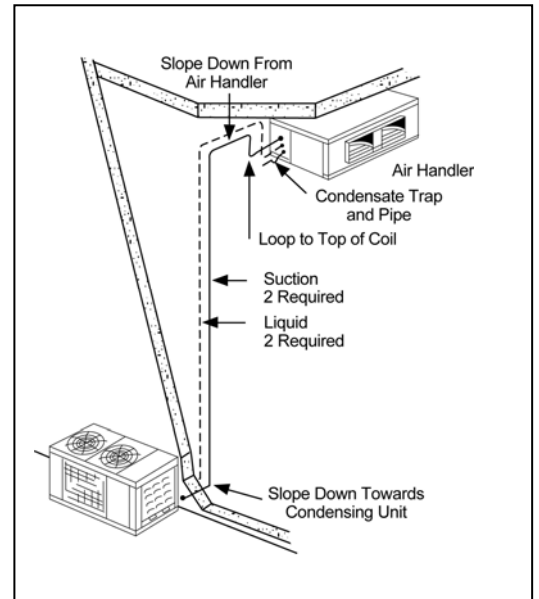
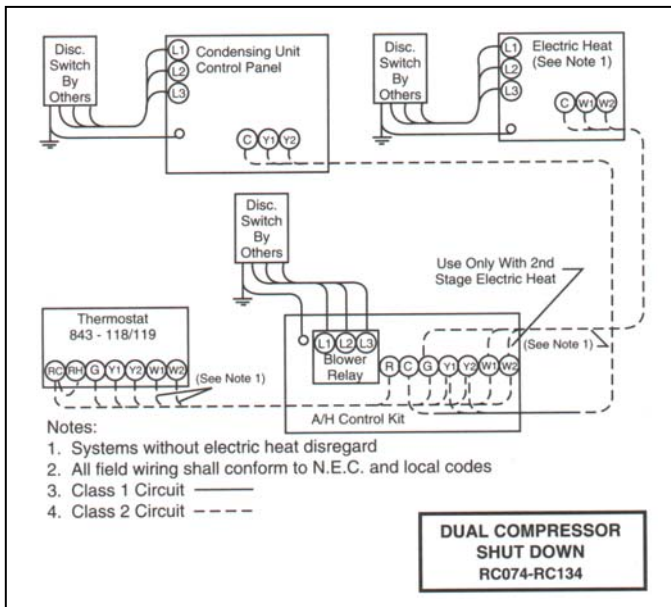
Saturated Suction Temp. at Compressor	85°F		90°F		95°F		100°F		105°F		110°F		115°F		
	MBH	KW	MBH	KW	MBH	KW	MBH	KW	MBH	KW	MBH	KW	MBH	KW	
36°F	Lead	38.5	3.29	37.5	3.44	36.4	3.61	35.4	3.79	34.4	3.97	33.4	4.18	32.4	4.39
	Lag	38.5	3.10	37.5	3.26	36.4	3.42	35.4	3.60	34.4	3.79	33.4	3.99	32.4	4.21
38°F	Lead	39.8	3.31	38.7	3.47	37.7	3.64	36.7	3.81	35.6	4.00	34.6	4.20	33.5	4.42
	Lag	39.8	3.13	38.7	3.28	37.7	3.45	36.7	3.63	35.6	3.82	34.6	4.02	33.5	4.24
40°F	Lead	41.1	3.34	40.0	3.50	39.0	3.66	37.9	3.84	36.8	4.03	35.8	4.23	34.7	4.45
	Lag	41.1	3.15	40.0	3.31	39.0	3.48	37.9	3.66	36.8	3.85	35.8	4.05	34.7	4.27
42°F	Lead	42.4	3.40	41.4	3.52	40.3	3.69	39.2	3.87	38.1	4.06	37.0	4.26	35.9	4.48
	Lag	42.4	3.18	41.4	3.34	40.3	3.51	39.2	3.69	38.1	3.88	37.0	4.08	35.9	4.30
44°F	Lead	43.8	3.39	42.7	3.55	41.6	3.72	40.5	3.90	39.3	4.09	38.2	4.29	37.1	4.51
	Lag	43.8	3.21	42.7	3.37	41.6	3.53	40.5	3.71	39.3	3.91	38.2	4.11	37.1	4.33
46°F	Lead	45.2	3.42	44.0	3.58	42.9	3.75	41.8	3.93	40.6	4.12	39.5	4.32	38.3	4.54
	Lag	45.2	3.23	44.0	3.39	42.9	3.56	41.8	3.74	40.6	3.94	39.5	4.14	38.3	4.36
48°F	Lead	46.6	3.45	45.4	3.61	44.3	3.78	43.1	3.96	41.9	4.15	40.7	4.35	39.6	4.57
	Lag	46.6	3.26	45.4	3.42	44.3	3.59	43.1	3.77	41.9	3.97	40.7	4.17	39.6	4.39
50°F	Lead	48.0	3.48	46.8	3.64	45.6	3.81	44.4	3.99	43.2	4.18	42.0	4.39	40.8	4.61
	Lag	48.0	3.29	46.8	3.45	45.6	3.62	44.4	3.81	43.2	4.00	42.0	4.21	40.8	4.43

Notes: 1. Ratings are for 60 HZ. See above for 50 HZ multipliers.
 2. Ratings assume 15°F subcooling and 12°F superheat at the compressor.

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	½	³ / ₈	³ / ₈	Two ⁷ / ₈	Two ³ / ₈	½	³ / ₈	³ / ₈	Two ⁷ / ₈	Two ³ / ₈	½	½	³ / ₈	

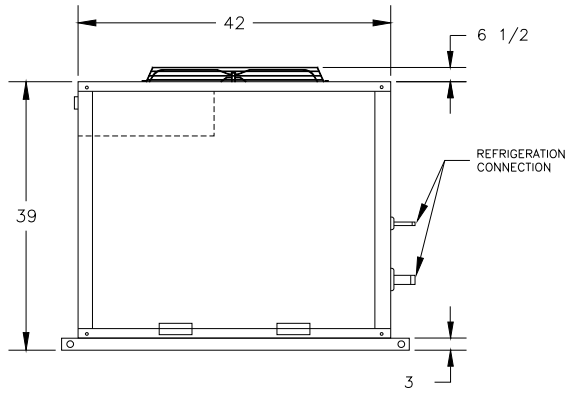
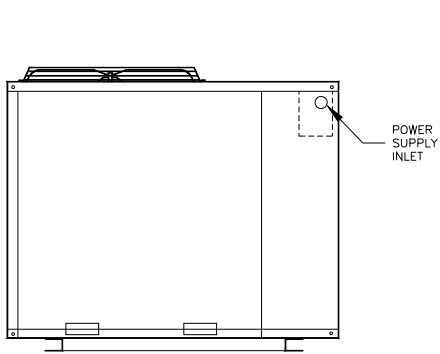
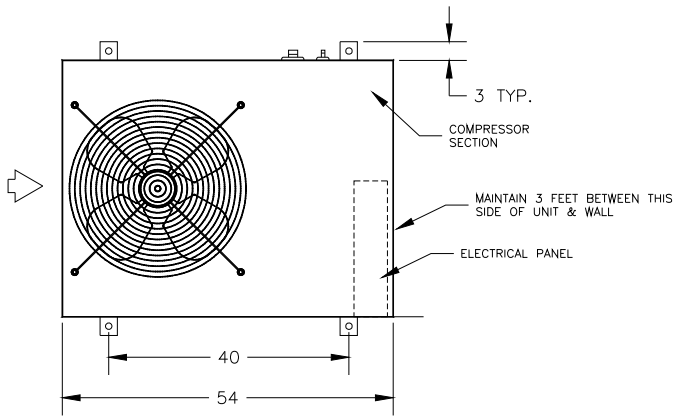
- Notes:
- Line lengths are equivalent, including all fittings. Use long radius ells only.
 - Line sizes are for both vertical and horizontal runs.
 - Over 75 equivalent feet, **consult factory** for sizing recommendations.
 - Liquid line sizes and hot gas reheat return line sizes are designed to minimize system refrigerant charge.
 - Over 75 total feet, a special hot gas bypass system must be installed in the condensing unit with an oil separator. Contact Factory.
 - "S" = Hot gas supply line from RC to VC/HC; "R" = Hot gas return line from VC/HC to RC unit.
 - When condensing unit is above air handler, trap suction line at base and every 20 feet of vertical rise. Consult ASHRAE Refrigeration Handbook.

* Hot gas bypass and hot gas reheat only on lead circuit of dual circuit units.



INDICATES AIR INLET TO CONDENSER
(LEAVE MINIMUM 2 FEET FREE CLEARANCE)

RC074



ALL DIMENSIONS ARE IN INCHES

3 ft. clearance must be left for access to compressor and electrical panel

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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