



RC SERIES AIR COOLED CONDENSING UNITS

SPECIFICATIONS Rated in Accordance with ARI Standard 210/240		RC194F			
COOLING	Rated with Optional Air Handler Model	VCH/HCH194			
	Total BTUH	185,400			
	Sensible BTUH	138,300			
	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) 8.0		
		RLA	32.1/32.1	16.4/16.4	16.4/16.4
		LRA	195/195	95/95	86/86
		IPLV	10.2		
	Capacity Reduction (Standard) — (Optional)	Standard 50% — Optional 50% - 30%			
	CONDENSER FAN MOTOR(S)	Horse Power — (Qty)	1 — (2)		
		FLA (ea)	6.2	3.1	2.2
		Total CFM	12,000		
	UNIT	RLA	76.6	34.6	37.2
Unit Minimum Circuit Ampacity		84.7	38.7	41.3	
Max. Time Delay Fuse or HACR Breaker		110	50	50	
PHYSICAL DATA	CONDENSER COIL Alum. Fins on Copper Tubes	Face Area (sq.ft.)	30.8		
		Rows Deep — Fins per Inch	3 — 12		
		Suction Line OD	1 1/8 and 1 1/8		
		Liquid Line OD	1/2 and 1/2		
	WEIGHTS	Unit (lbs)	1035		
		Shipping Weight (lbs)	1155		

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 194	5500	TOTAL BTUH	169,868	178,242	189,264	200,166	179,846	181,180	190,610	201,706
		SENS BTUH	159,444	135,562	111,894	88,068	179,846	164,526	139,534	116,274
		WATTS INPUT	16,542	16,784	17,044	17,308	16,816	16,854	17,078	17,346
		LVG DB/WB	48.7 47.1	52.6 51.6	56.5 56.0	60.5 60.5	50.3 46.3	52.9 51.4	57.0 56.0	60.8 60.3
	6000	TOTAL BTUH	172,710	180,534	191,466	202,324	184,310	189,909	195,508	201,108
		SENS BTUH	166,352	141,726	115,608	90,334	184,310	171,934	145,584	120,430
		WATTS INPUT	16,612	16,776	17,098	17,362	16,922	16,924	17,132	17,402
		LVG DB/WB	49.9 48.0	53.6 52.5	57.5 56.9	61.3 61.3	52.1 47.1	54.0 52.2	58.0 56.9	61.8 61.2
	6500	TOTAL BTUH	176,230	183,082	193,354	204,174	188,274	192,919	197,564	202,208
		SENS BTUH	173,314	147,144	119,228	92,126	188,274	179,096	152,014	124,494
		WATTS INPUT	16,734	16,898	17,142	17,406	17,016	17,160	17,304	17,448
		LVG DB/WB	50.8 48.7	54.5 53.3	58.4 57.6	62.1 62.1	53.7 47.9	55.0 53.0	58.8 57.6	62.6 61.9

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 194	5500	TOTAL BTUH	189,688	189,794	192,606	202,712	199,660	202,870	206,079	209,289
		SENS BTUH	189,688	189,794	168,838	144,718	199,660	199,774	196,246	173,826
		WATTS INPUT	17,050	17,054	17,128	17,372	17,292	17,294	17,330	17,382
		LVG DB/WB	53.7 45.5	53.7 50.7	57.2 55.7	61.1 60.2	57.1 44.6	57.1 49.9	57.6 55.2	61.3 60.0
	6000	TOTAL BTUH	194,474	194,582	195,980	204,962	204,660	204,776	204,908	207,648
		SENS BTUH	194,474	194,582	177,592	151,288	204,660	204,776	204,908	182,288
		WATTS INPUT	17,166	17,168	17,208	17,428	17,384	17,386	17,390	17,496
		LVG DB/WB	55.6 46.4	55.6 51.5	58.2 56.5	62.1 61.1	59.1 45.6	59.0 50.8	59.0 55.9	62.4 60.8
	6500	TOTAL BTUH	198,722	200,520	202,318	204,116	209,206	209,326	209,458	210,944
		SENS BTUH	198,722	198,834	185,208	158,280	209,206	209,326	209,458	191,208
		WATTS INPUT	17,268	17,270	17,274	17,494	17,496	17,500	17,504	17,576
		LVG DB/WB	57.3 47.1	57.3 52.2	59.2 57.2	62.9 61.8	60.8 46.4	60.8 51.5	60.8 56.6	63.3 61.5

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

Applied Research
Laboratories, Inc.



Listed

Form # 0527S-0957 Rev. B (0408)
Supersedes Form # 0527S-0957 A (0701)

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 314	7000	TOTAL BTUH	183,928		189,041		199,717		210,752		194,886		195,412		201,812		212,399	
		SENS BTUH	179,106		156,514		126,660		96,585		194,886		187,440		161,991		132,484	
		WATTS INPUT	16,892		17,024		17,296		17,552		17,177		17,194		17,348		17,593	
		LVG DB/WB	51.3	48.7	54.4	53.3	58.3	57.7	62.2	62.2	54.0	48.0	55.3	53.0	58.7	57.7	62.5	62.0
	8000	TOTAL BTUH	189,298		193,004		202,529		213,665		201,270		204,826		208,382		211,939	
		SENS BTUH	187,566		167,737		133,954		100,497		201,270		196,304		174,042		140,778	
		WATTS INPUT	17,044		17,135		17,348		17,640		17,332		17,443		17,553		17,664	
		LVG DB/WB	53.2	49.9	55.7	54.5	59.5	58.9	63.3	63.3	56.6	49.2	57.3	54.1	60.0	58.8	63.8	63.1
	9000	TOTAL BTUH	195,053		196,278		204,797		215,796		206,496		209,015		211,533		214,052	
		SENS BTUH	195,053		177,955		141,105		103,778		206,496		204,358		184,916		149,178	
		WATTS INPUT	17,179		17,213		17,402		17,682		17,444		17,540		17,635		17,731	
		LVG DB/WB	54.8	50.7	56.8	55.4	60.6	59.8	64.3	64.1	58.6	50.1	58.9	54.9	61.1	59.7	64.7	63.9

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 314	7000	TOTAL BTUH	205,642		205,748		207,049		214,213		216,532		216,648		216,838		219,371	
		SENS BTUH	205,642		205,748		195,579		168,818		216,532		216,648		216,838		204,176	
		WATTS INPUT	17,424		17,427		17,479		17,641		17,682		17,685		17,706		17,761	
		LVG DB/WB	57.6	47.3	57.6	52.4	59.3	57.3	62.8	61.9	61.2	46.6	61.2	51.7	61.2	56.7	63.2	61.6
	8000	TOTAL BTUH	212,489		212,599		212,684		218,190		223,854		223,972		224,105		225,160	
		SENS BTUH	212,489		212,599		205,391		182,047		223,854		223,972		224,105		214,785	
		WATTS INPUT	17,595		17,597		17,603		17,741		17,868		17,871		17,874		17,912	
		LVG DB/WB	60.3	48.5	60.3	53.5	61.2	58.3	64.1	63.0	63.9	47.9	63.9	52.8	63.9	57.8	65.2	62.6
	9000	TOTAL BTUH	218,158		218,688		219,218		219,749		229,977		230,507		231,037		231,568	
		SENS BTUH	218,158		218,269		214,626		193,822		229,977		230,097		230,235		223,775	
		WATTS INPUT	17,737		17,765		17,792		17,820		18,040		18,043		18,047		18,056	
		LVG DB/WB	62.4	49.5	62.4	54.3	62.9	59.2	65.2	63.8	66.2	48.9	66.1	53.8	66.1	58.6	67.0	63.4

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		At 50HZ	
	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.

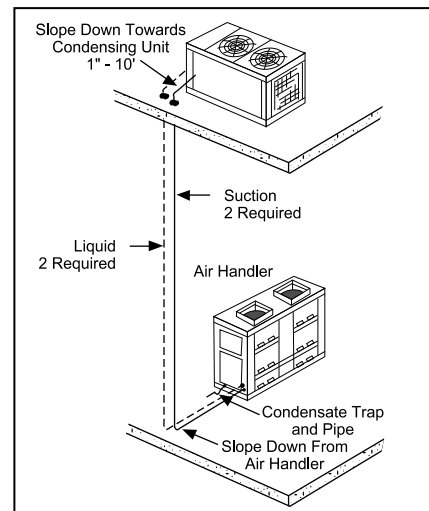
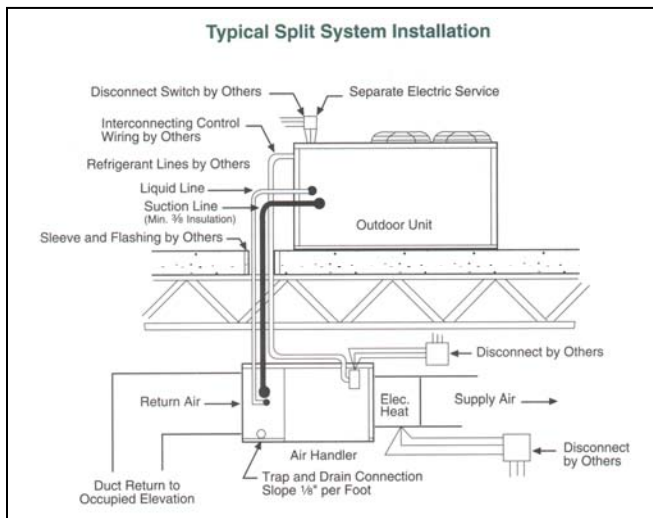
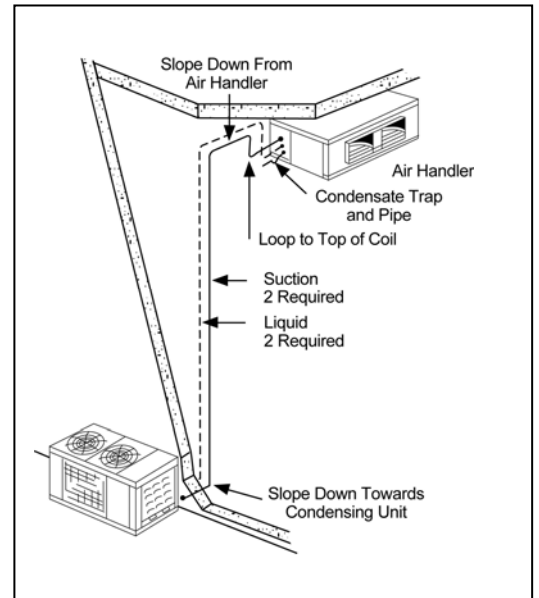
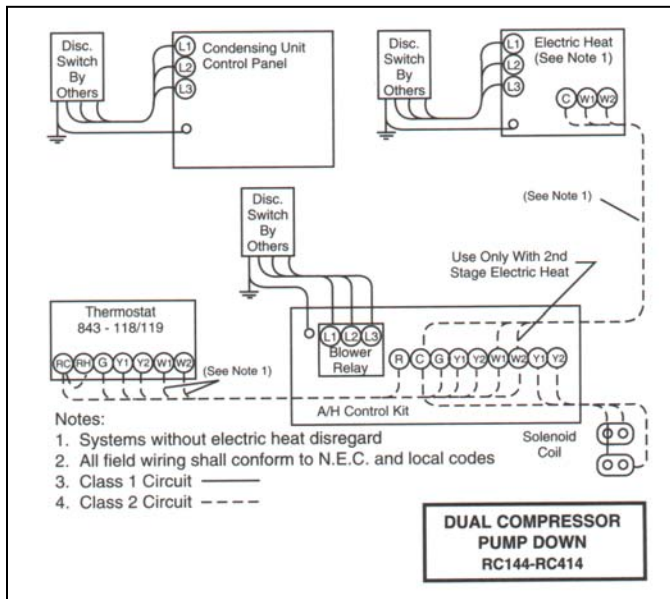
Saturated Suction Temp. at Compressor	85°F		90°F		95°F		100°F		105°F		110°F		115°F		
	MBH	KW	MBH	KW	MBH	KW	MBH	KW	MBH	KW	MBH	KW	MBH	KW	
36°F	Lead	86.8	7.46	84.4	7.78	82.0	8.12	79.6	8.48	77.2	8.68	74.8	9.28	72.4	9.73
	Lag	86.8	6.68	84.4	7.00	82.0	7.34	79.6	7.70	77.2	8.09	74.8	8.51	72.4	8.96
38°F	Lead	89.8	7.53	87.3	7.84	84.9	8.18	82.5	8.55	80.0	8.93	77.6	9.35	75.1	9.80
	Lag	89.8	6.74	87.3	7.06	84.9	7.40	82.5	7.77	80.0	8.16	77.6	8.58	75.1	9.02
40°F	Lead	92.8	7.59	90.3	7.91	87.9	8.25	85.4	8.61	82.9	9.00	80.4	9.42	77.8	9.86
	Lag	92.8	6.81	90.3	7.13	87.9	7.47	85.4	7.84	82.9	8.23	80.4	8.64	77.8	9.09
42°F	Lead	95.8	7.66	93.4	7.98	90.8	8.32	88.3	8.68	85.8	9.07	83.2	9.49	80.7	9.93
	Lag	95.8	6.88	93.4	7.20	90.8	7.54	88.3	7.90	85.8	8.29	83.2	8.71	80.7	9.16
44°F	Lead	99.0	7.73	96.4	8.05	93.9	8.39	91.3	8.75	88.7	9.14	86.1	9.56	83.5	10.00
	Lag	99.0	6.95	96.4	7.27	93.9	7.61	91.3	7.97	88.7	8.36	86.1	8.78	83.5	9.23
46°F	Lead	102.1	7.80	99.5	8.12	96.9	8.46	94.3	8.82	91.7	9.21	89.0	9.63	86.4	10.01
	Lag	102.1	7.02	99.5	7.34	96.9	7.68	94.3	8.04	91.7	8.43	89.0	8.86	86.4	9.31
48°F	Lead	105.3	7.87	102.7	8.19	100.0	8.53	97.4	8.90	94.7	9.29	89.0	9.71	89.3	10.15
	Lag	105.3	7.09	102.7	7.41	100.0	7.75	97.4	8.12	94.7	8.51	89.0	8.93	89.3	9.48
50°F	Lead	108.5	7.95	105.8	8.27	103.2	8.61	100.4	8.97	97.7	9.36	95.0	9.78	92.2	10.23
	Lag	108.5	7.16	105.8	7.48	103.2	7.82	100.4	8.19	97.7	8.58	95.0	9.00	92.2	9.46

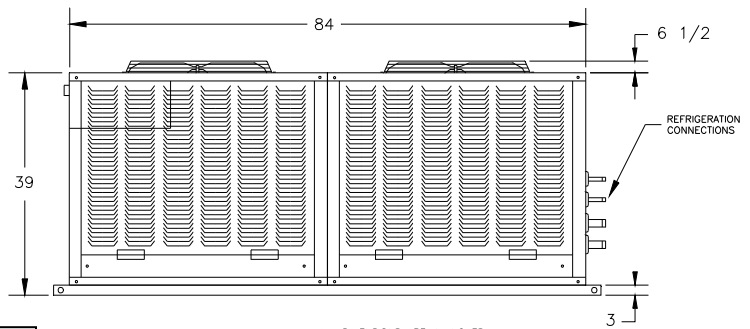
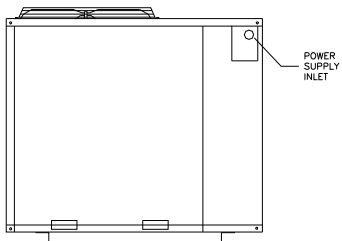
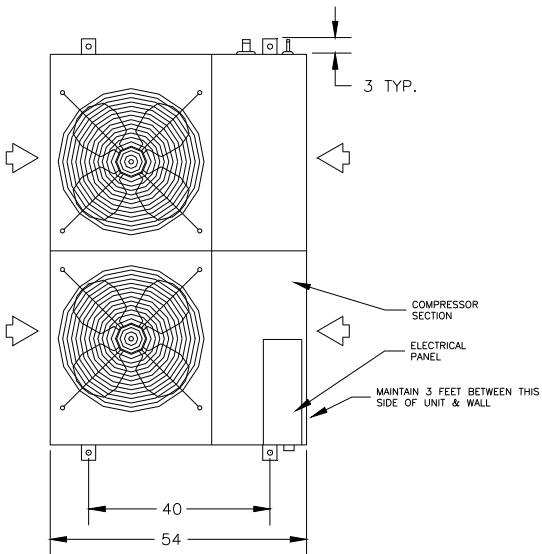
Notes: 1. Ratings are for 60 HZ. See above for 50 HZ multipliers.
 2. Ratings assume 15°F subcooling and 12°F superheat at the compressor.

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									
Suction	Liquid	Hot Gas* Bypass	S	R	Suction	Liquid	Hot Gas* Bypass	S	R	Suction	Liquid	Hot Gas* Bypass	S	R
Two 1 ¹ / ₈	Two 1/2	5/8	5/8	3/8	Two 1 ¹ / ₈	Two 1/2	5/8	5/8	3/8	Two 1 ³ / ₈	Two 1/2	5/8	5/8	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.





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

ALL DIMENSIONS ARE IN INCHES

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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