RH SERIES AIR COOLED HEAT PUMP UNITS

SPECIFICATIONS Rated in Accordance with ARI Standard 210/240			RH184F		
PERFORMANCE					
		Rated with Optional Air Handler Model	VCH/HCH184		
		Rated CFM	6,000		
	COOLING	Total BTUH	183,900		
		Sensible BTUH	135,800		
		EER	9.9		
	HEATING	Total BTUH	177,700		
		COP	3.4		
ELECTRICAL	SERVICE	Voltage-Phase-Hz	208/230-3-60	460-3-60	380/415-3-50
	COMPRESSOR	Type (Qty)	Scroll (1)		
		RLA	52.6	23.8	23.8
		LRA	425	187	187
		IPLV	12.4		
	Standard Capacity Reduction % Full load — (Optional)		NA		
	CONDENSER FAN MOTOR(S)	Horse Power — (Qty)	1 — (2)		
		FLA (ea)	6.2	3.1	2.2
		Total CFM	12,000		
	UNIT	RLA	65.0	30.0	28.2
		Unit Minimum Circuit Ampacity	78.2	36.0	34.2
		Max. Time Delay Fuse or HACR Breaker	125	50	50
PHYSICAL DATA	CONDENSER COIL Alum. Fins on Copper Tubes	Face Area (sq.ft.)	25.1		
		Rows Deep — Fins per Inch	3 — 12		
		Suction Line OD In.	1 5/8		
		Liquid Line OD In.	5/8		
	WEIGHTS	Unit (lbs)	1,060		
		Shipping Weight (lbs)	1,160		

Cooling Rating

95°F Air on Outdoor Coil

Rated With Air Handler Model	CFM		Entering Air to Indoor 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
VCH184 or HCH184	5500	TOTAL BTUH	176,400	188,000	200,000	179,400	188,800	201,000	188,500	191,400	201,800
		SENS BTUH	134,400	110,000	85,200	163,400	139,400	115,000	179,500	167,800	144,900
		WATTS INPUT	15,970	16,370	16,800	16,110	16,410	16,820	16,420	16,500	16,850
		LVG DB/WB	52.8/52.0	56.8/56.3	60.9/60.6	53.0/51.8	57.0/56.2	61.0/60.6	55.3/51.2	57.3/56.1	61.0/60.5
	6000	TOTAL BTUH	179,000	190,300	202,300	183,100	191,400	203,300	193,500	195,000	204,500
		SENS BTUH	140,600	114,200	87,700	170,400	146,000	119,600	184,300	177,500	152,000
		WATTS INPUT	16,060	16,450	16,860	16,230	16,520	16,900	16,590	16,650	16,940
		LVG DB/WB	53.7/52.9	57.7/57.1	61.7/61.4	54.2/52.6	57.9/57.1	61.9/61.4	57.1/51.9	58.1/56.9	62.0/61.3
	6500	TOTAL BTUH	181,200	192,200	204,300	186,900	193,700	205,200	198,000	198,400	206,700
		SENS BTUH	146,600	117,900	89,700	178,000	152,500	123,900	188,600	184,800	158,700
		WATTS INPUT	16,140	16,540	16,920	16,360	16,600	16,990	16,750	16,760	17,050
		LVG DB/WB	54.5/53.6	58.5/57.9	62.5/62.2	55.1/53.3	58.7/57.8	62.7/62.1	58.6/52.6	59.2/57.6	62.8/62.1

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

Correction Factor Multiplier for Other Ambients					
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

50 HZ Application and Performance Multipliers		
Capacity	At 60 HZ Evaporator CFM	At 50HZ 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.

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Listed

Form # 0527S-0990 Rev B (0408)
Supersedes Form # 0527S-0990 A (0701

Heating Ratings

70°F Air on Coil of Indoor Air Handler Model VCH184 or HCH184

CFM	Capacity	Ambient Air on Outdoor Coil °F							
		10	17	20	30	40	47	50	60
6,000	BTUH	91,700	103,900	109,600	130,100	152,700	169,700	177,200	203,300
	Watts	9,820	10,560	10,860	11,810	12,730	13,370	13,650	14,600

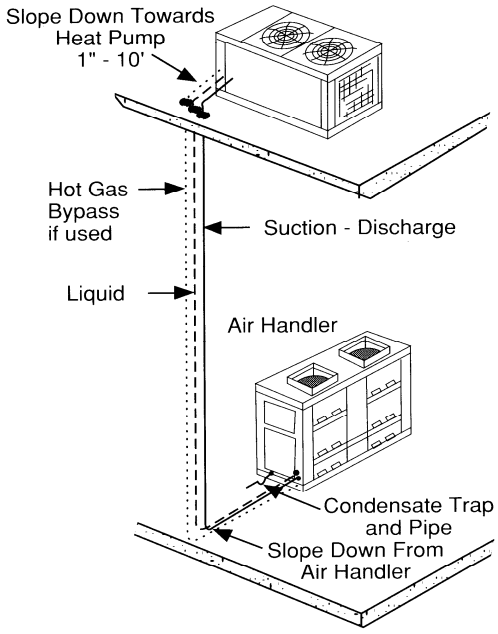
Note: Heating capacities are gross capacities. For net capacities, multiply blower BHP required times 2545 BTU per BHP and add to BTUH in table. Add blower BHP times 746 Watts per BHP to Watts for total power consumption. Refer to Air Handler specification for blower BHP.

Heating Capacity Correction Multiplier To be applied to rated heating capacity to determine capacity at other than rated CFM.	CFM	Multiplier
	- 10%	0.985
	Rated	1.00
	+ 10%	1.015

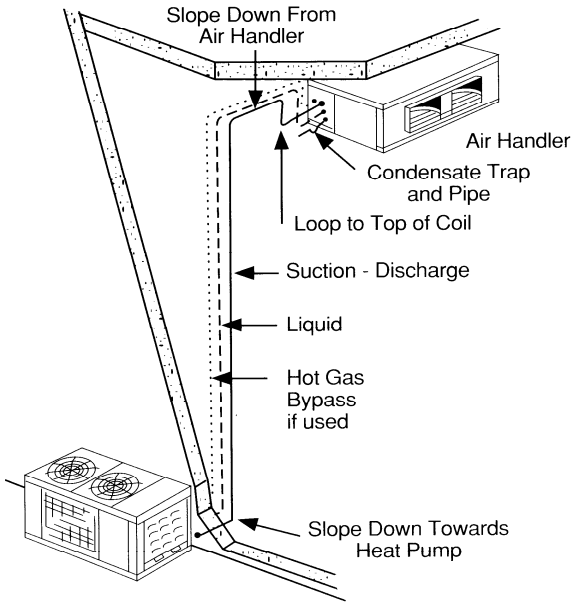
Recommended Refrigerant Line Sizes — Inches O.D.						
Equivalent Line Length – Feet						
0 to 25			26 to 50		51 to 75	
Suction	Liquid	Hot Gas Bypass	Suction	Liquid	Suction	Liquid
1 5/8	5/8	NA	1 5/8	5/8	1 5/8	3/4

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. Over 75 equivalent feet, **consult factory** for sizing recommendations.
4. Liquid line sizes are designed to minimize system refrigerant charge.
5. Hot gas bypass is typically used with the welded hermetic compressor only with an equivalent line length of 25 feet or less.
6. When condensing unit is above air handler, trap suction line at base and every 20 feet of vertical rise. Consult ASHRAE Refrigeration Handbook.

Heat Pump Above Air Handler



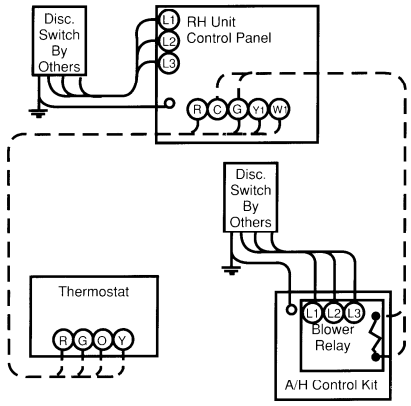
Heat Pump Below Air Handler



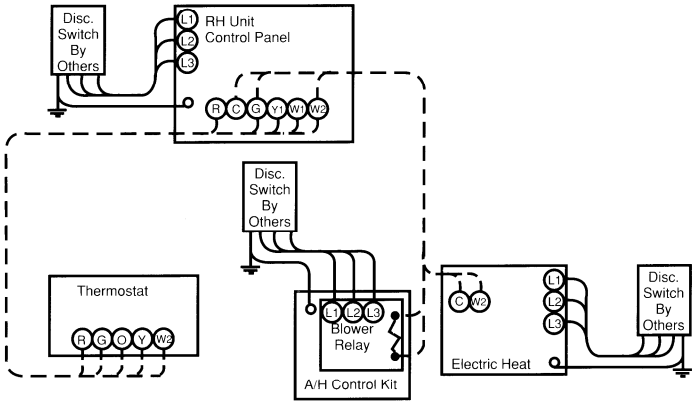
Field Piping: One of the most critical considerations in the installation of a split system heat pump is the proper sizing of piping so that oil will freely circulate with the refrigerant and not be trapped. In order to assure oil being carried upward in a vertical riser along with the refrigerant vapor, a velocity of 1,000 FPM must be maintained. Proper sizing is particularly important in a heat pump system because the discharge pipe on the heating cycle becomes the suction pipe in cooling and line velocities will be different in each cycle. Experience indicated 75 **equivalent** feet of pipe as the maximum practical length on heat pump installations. Pump down solenoids can not be used with heat pumps. When the air handler is installed above the compressor the vertical line must be properly sized to carry oil. The above tabulation indicates proper sizing.
Each refrigerant line run underground in a chase should be insulated with ¾" minimum thickness closed cell foamed plastic insulation. Each line must be insulated separately.

Typical Field Wiring

without Electric Heat



with Electric Heat



Notes:

All field wiring shall conform to N.E.C. and local codes

Line voltage power source ————————

24 volt control circuit – – – – – – –

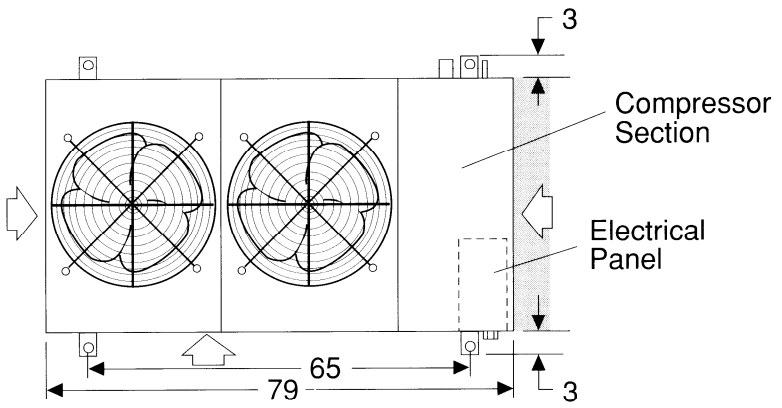
Field Wiring

The power distribution system should be sized based on the minimum circuit ampacities in this specification sheet. The heat pumps and air handlers should be fused in accordance with the maximum fuse sizes.

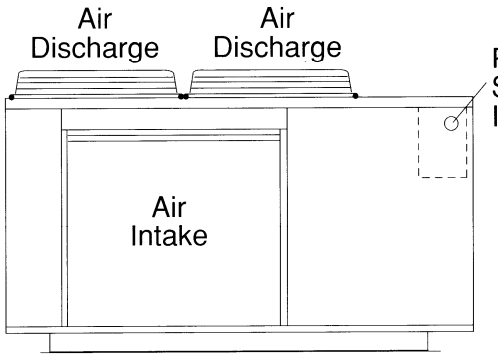
Disconnects may be optionally mounted by the factory or may be furnished and installed by the contractor. Time delay fuses should be used.

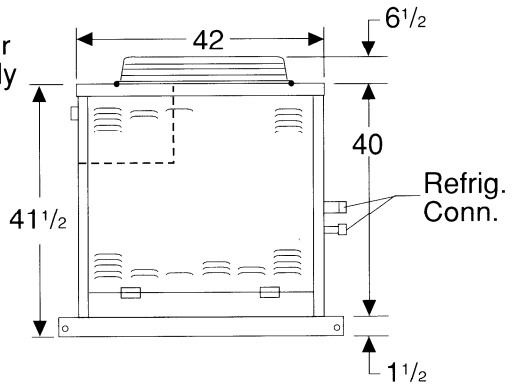
All field installed control wiring must be adequate to assure 24 volts to all controls.

Dimensions



RH184





Indicates air inlet to condenser (leave minimum 2' free clearance).

Shaded area indicates 3' clearance must be left for access to compressor and electrical panel.

Specifications subject to change without notice.

RH184 0203

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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