Proven **PERFORMANCE.**
Unmatched **SAVINGS.**
Sustainable **SOLUTION.**

Ruud® Commercial Heat Pump Water Heaters (Split System)

RUUD

Super Efficient, Surprisingly Versatile, Smart Decision

Ruud® Commercial Heat Pump Split Systems use heat extracted from the air and transfer it to water, so there's no need to choose between sustainability goals and the hot water needed for the business to operate. Although Ruud Commercial Heat Pump Systems are a relatively new option in the North American market, they've been helping businesses in Australia save energy, save money, and reduce their carbon footprint for more than a decade.

Whether you're interested in its super high efficiency design for saving money, reducing impact on the environment or positively contributing to regional decarbonization goals, Ruud® Commercial Heat Pumps are an ideal choice.

Sustainability, Savings and So Much More

Ruud® Commercial Heat Pumps deliver business advantages that go on and on.

SUSTAINABILITY

Super High Efficiency – Exceeds 4.0 coefficient of performance (COP) at 80°F ambient and 60% relative humidity using less energy than electric, natural gas or propane water heaters. 135k BTU models are ENERGY STAR® certified

Decarbonization Qualification – Up to a 75% reduction in energy use and carbon footprint

Improved Building Ratings – Ideal for green building programs and increased efficiency ratings like LEED

Building Energy Compliance – Supports requirements set forth in legislative bills SB 350, AB 758, SB 1477, AB 3232

SAVINGS

Money & Energy Savings – Super high efficiency with 75% lower operating cost

Decarbonization Incentive Eligibility – Available rebates, incentives and tax credits offset initial capital costs

High ROI – Save upfront with rebates and incentives, and continue to save with energy cost savings

Low Maintenance Costs – With minimum moving parts and only an air filter to change, routine maintenance is fast and inexpensive

PROVEN PERFORMANCE

Proven Performance – While new in the US, this Ruud solution has been used in Australia's challenging environments for over a decade

Suits Most Mild Climates – With automatic defrost and electric tank back-up for lower temps, system provides max hot water outlet temperature up to 150°F

Exceptional Durability – High quality components and epoxy-coated evaporator coils provide protection in corrosive environments. Rated for marine environments

FLEXIBLE INSTALLATION & SERVICE

Multiple Install Options – Reduced system footprint with stackable models. Vertical and Horizontal exhaust options allow a custom fit for layouts

Design Customization – Single or multiple heat pumps and storage units easily meet the facility performance and layout requirements

Faster Servicing – The control panel provides on board diagnostics, system configuration and optional high level BMS connectivity via Modbus or BACnet

How it Works

1. When there is a call for hot water, the evaporator fans, compressor and water pump activate.

2. Evaporator fans draw air through air inlet and over the evaporator.

3. As warm air passes over the evaporator coils, low temperature refrigerant absorbs the heat from the air.

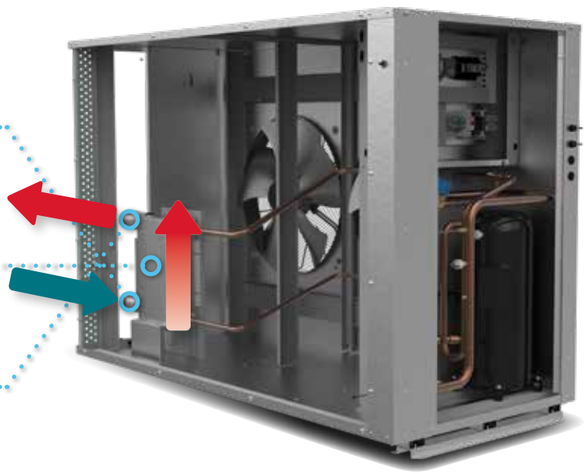
4. Cooled air is exhausted via the top (vertical discharge models) or side (horizontal discharge models) of the heat pump.

5. The compressor increases the temperature of the refrigerant and pumps refrigerant vapor out to the heat exchanger and around the refrigerant system.

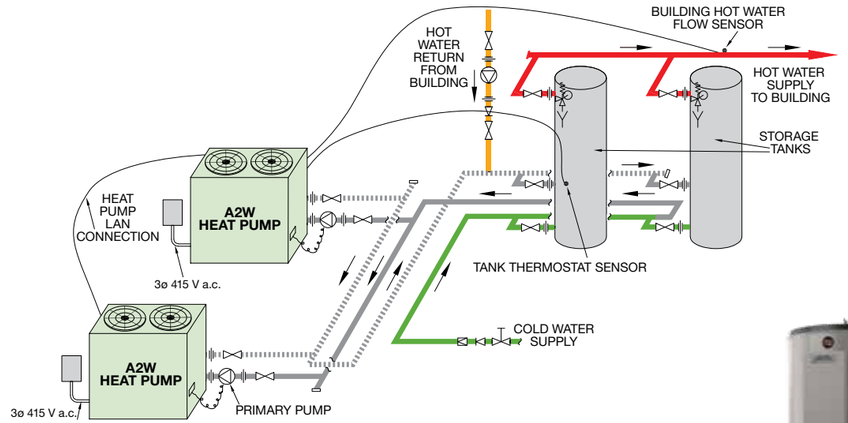
6. Water pump pulls cold water from the storage tanks to the inlet connection.

7. The heat exchanger heats cold inlet water with refrigerant vapor.

8. Hot water is then pumped out to the storage tanks.

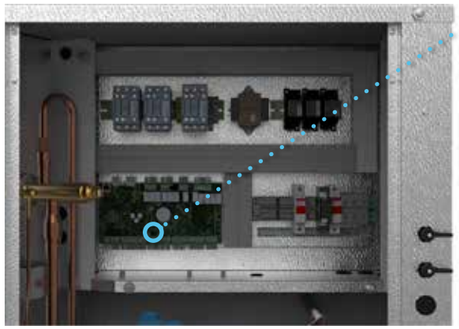


Typical Installation



Accessories – HPHD-60 and HPHD-135 Models

Pump	BMS Card	LAN Cable	Tank Options
AP22760A CM 3-2 (60K BTU) AP22760B CM 10-1 (135K BTU)	17412 BACNET MS/ TP over RS485	17495	ST Models – Storage E Models – Electric backup
	17447 PCOWEB SE Ethernet Card IP Protocols		
	17414 PCOS004850 Serial Card		



BMS Connectivity

Ruud Commercial Heat Pumps (Split System) can be connected to a customer's Building Management System (BMS) or Building Automation System (BAS) via an interface card. Modbus or BACnet interface cards are available as accessories.

With this feature, the system is discoverable and can be remotely monitored and managed, making it easy for facility managers to receive equipment alarms on their dashboard and dispatch maintenance as needed.

Air to Water 60k BTUh Heat Pump Specifications

Ruud Model Number	HPHD-60HNU-201 (Horizontal)		HPHD-60VNU-201 (Vertical)	
ELECTRICAL INPUT				
Voltage/Phase	208/240 Volt/ 1 Phase / 60 Hz			
Full Load / Locked Rotor (Amps Per Phase)	29.5 FLA / 176 LRA			
Min. Circuit Amperage	40 Amps			
Refrigerant	R134a			
Heating Capacity, BTU/hr*	Up to 87,193			
Power Input, kW	5.2			
COP*	Up to 6.17			
Noise Level, dBa @ 10ft	54			
Rated Load Amps @ 54°F SST / 113°F SCT	22.6			
TECHNICAL DATA				
	Compressor	**Fan**	**Compressor**	**Fan**
Make	Copeland	EBM-Papst	Copeland	EBM-Papst
Type	Scroll 20129	Axial	Scroll 20129	Axial
Number Per Unit	1	2	1	2
FLA (Full Load Amps, each)	27.3	1.06	27.3	1.06
Voltage / Phase	208/240v / 1 P	208/240v / 1 P	208/240v / 1 P	208/240v / 1 P
Pole/RPM	2/3500	6/1060	2/3500	6/1060
Air Flow, CFM	N/A	3240	N/A	3240
HEAT EXCHANGER (Water Side)				
Type of Water Tube	Double Wall			
Design	Vented Brazed Plate			
Flow Rate Excl. By Pass, gpm	17.4			
Max. Outlet Water Temp, °F	150**			
Design Pressure Drop, PSI	4.8			
Max. Operating Pressure, PSI	225			
GENERAL INFORMATION				
Water Connections	1-1/4" Copper			
Drain	3/4" Aluminium			
Defrost	Hot Gas Injection			
Cabinet Construction	18 Gauge Stucco Aluminium			
Approx. Shipping Weight, lbs	500			
Size L x W x H	49.2" x 27.2" x 38.7"		49.2" x 26.2" x 39.8"	

COP Table*

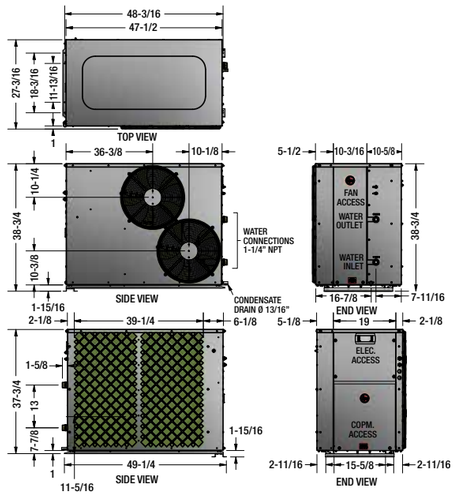
WATER OUT °F	AMBIENT TEMPERATURE								
	40°F	**50°F**	**60°F**	**70°F**	**80°F**	**90°**	**100°F**	**110°F**	**UNITS**
100°F	40,887	47,456	54,025	60,627	67,307	77,555	82,374	87,193	BTU/hr
	3.11	3.62	4.12	4.52	4.65	5.74	5.95	6.17	COP
110°F	37,641	44,565	51,490	58,721	66,667	73,537	80,458	87,380	BTU/hr
	2.75	3.21	3.66	4.06	4.33	5.15	5.34	5.53	COP
120°F	37,893	44,710	51,527	58,282	64,890	71,678	76,318	80,958	BTU/hr
	2.57	2.94	3.31	3.67	4.01	4.47	4.71	4.95	COP
130°F	41,405	46,726	52,048	57,866	64,844	69,604	73,436	77,269	BTU/hr
	2.46	2.70	2.94	3.24	3.69	3.73	3.90	4.07	COP
140°F	39,811	45,518	51,225	57,421	64,761	69,646	73,486	77,326	BTU/hr
	2.00	2.29	2.57	2.88	3.25	3.50	3.63	3.76	COP
150°F	N/A	43,174	48,862	55,590	64,744	67,175	72,308	77,441	BTU/hr
		1.96	2.18	2.51	3.10	2.70	2.99	3.28	COP

Unit Clearances

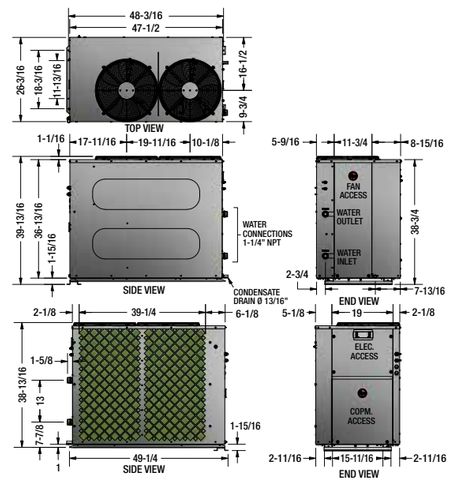
Direction	Description	Minimum Clearance Required	
		Horizontal	Vertical
1	Evaporator Coil	20"	
2	Water Connections	20"	
3	Plain Back	140"	Nil
4	Compressor Access	35"	
5	Top - Fan Discharge	20"	140"

When units are placed side by side, allow at least 40" between evaporator coils.
Rating Conditions: 80°F ambient, 60% RH, 100°F Water in, 110°F Water out.
** At 60% RH*
***Max outlet temperature when ambient is above 70°F.*

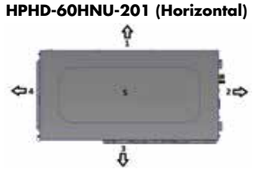
HPHD-60HNU-201 (Horizontal)



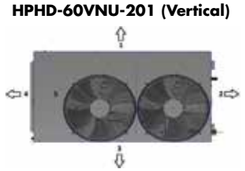
HPHD-60VNU-201 (Vertical)



HPHD-60HNU-201 (Horizontal)



HPHD-60VNU-201 (Vertical)



Air to Water 135k BTUh Heat Pump Specifications

Ruud Model Number	HPHD-135HNU-483 (Horizontal)		HPHD-135VNU-483 (Vertical)	
ELECTRICAL INPUT				
Voltage/Phase	480 Volts / 3 Phase / 60 Hz			
Full Load / Locked Rotor (Amps Per Phase)	26.9 FLA / 150 LRA			
Min. Circuit Amperage	35 Amps			
Refrigerant	R134a			
Heating Capacity, BTU/hr*	Up to 198,305			
Power Input, kW	12.3			
COP*	Up to 5.94			
Noise Level, dBa @ 10ft	62			
Rated Load Amps @ 54°F SST / 113°F SCT	21.9			
TECHNICAL DATA				
	Compressor	**Fan**	**Compressor**	**Fan**
Make	Copeland	EBM-Papst	Copeland	EBM-Papst
Type	Scroll 20133	Axial	Scroll 20133	Axial
Number Per Unit	1	2	1	2
FLA (Full Load Amps, each)	23.7	1.6	23.7	1.6
Voltage / Phase	480 / 3	480 / 3	480 / 3	480 / 3
Pole/RPM	2/3500	6/1065	2/3500	6/1065
Air Flow, CFM	N/A	6316	N/A	6316
HEAT EXCHANGER (Water Side)				
Type of Water Tube	Double Wall			
Design	Vented Brazed Plate			
Flow Rate Excl. By Pass, gpm	34.9			
Max. Outlet Water Temp, °F	150**			
Design Pressure Drop, PSI	5.8			
Max. Operating Pressure, PSI	225			
GENERAL INFORMATION				
Water Connections	2" Copper			
Drain	3/4" Aluminium			
Defrost	Hot Gas Injection			
Cabinet Construction	18 Gauge Stucco Aluminium			
Approx. Shipping Weight, lbs	800			
Size L x W x H	73.1" x 36.6" x 48.0"		73.1" x 31.8" x 53.8"	

COP Table*

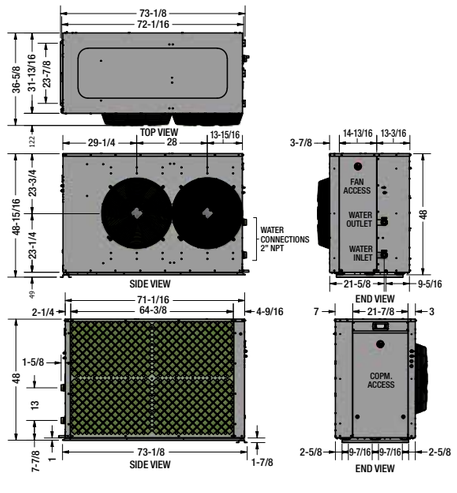
WATER OUT °F	AMBIENT TEMPERATURE								
	40°F	**50°F**	**60°F**	**70°F**	**80°F**	**90°**	**100°F**	**110°F**	**UNITS**
100°F	98,390	110,190	121,989	133,331	143,606	175,783	187,044	198,305	BTU/hr
	3.34	3.54	3.74	3.97	4.27	5.09	5.52	5.94	COP
110°F	96,531	107,241	117,950	129,301	142,153	174,041	183,026	192,011	BTU/hr
	2.75	3.03	3.30	3.59	3.92	4.58	4.65	4.73	COP
120°F	96,182	106,934	117,687	128,788	140,701	161,915	176,746	191,576	BTU/hr
	2.77	2.92	3.07	3.26	3.57	4.07	4.37	4.66	COP
130°F	91,783	102,907	114,030	125,795	139,054	149,793	165,278	180,763	BTU/hr
	2.04	2.32	2.61	2.90	3.22	3.27	3.50	3.74	COP
140°F	93,632	104,038	114,445	124,999	135,894	153,433	166,836	180,239	BTU/hr
	2.24	2.36	2.49	2.65	2.89	3.18	3.24	3.30	COP
150°F	N/A	102,682	111,211	120,373	131,015	145,039	162,508	179,977	BTU/hr
		1.91	2.11	2.31	2.52	2.73	2.87	3.01	COP

Unit Clearances

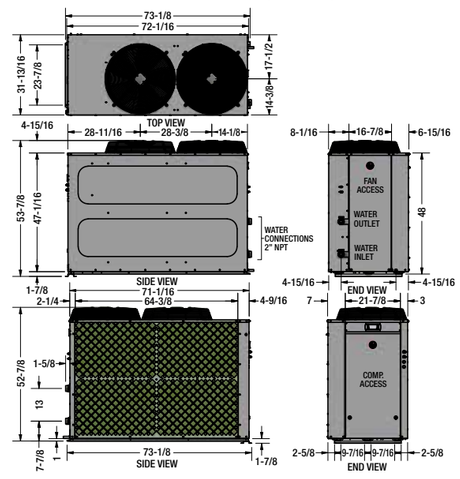
Direction	Description	Minimum Clearance Required	
		Horizontal	Vertical
1	Evaporator Coil	20"	
2	Water Connections	20"	
3	Plain Back	140"	Nil
4	Compressor Access	35"	
5	Top - Fan Discharge	20"	140"

When units are placed side by side, allow at least 40" between evaporator coils.
Rating Conditions: 80°F ambient, 60% RH, 100°F Water in, 110°F Water out.
** At 60% RH*
***Max outlet temperature when ambient is above 70°F.*

HPHD-135HNU-483 (Horizontal)



HPHD-135VNU-483 (Vertical)



HPHD-135HNU-483 (Horizontal)

HPHD-135VNU-483 (Vertical)

Why Ruud Commercial?

Behind every product solution is the support of Ruud commercial experts. Ruud will be with customers every step of the way through application and design, install, start up, maintenance and service—for an unmatched experience.

Sizing Support Application Engineers

Ruud Applications Engineers are standing by to help you determine the right solution for your next project—get help with specifying products and pro-active replacements for location layouts

Installation, Start-up & Technical Support

Training, technical assistance and easily accessible live support when you need help

Stocked Solution

Units and system parts are stocked and available through distributor locations in California and Utah, ensuring quick turnaround on orders, getting you what you need in days versus months

Contractor Network

Our network is trained in every aspect of our commercial heat pump product from application to technical support and servicing

Learn more about Ruud Commercial Heat Pump Solutions at
Ruud.com/CommercialHPWH

To get in touch with our sizing pros, email:
application.engineering@ruud.com

RUUD

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